

# PROPOSED SITE PLAN DOCUMENTS

FOR



PROPOSED

## TEAM HOYT COMMUNITY YMCA

LOCATION OF SITE

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

REVISIONS		
#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS



TEAM HOYT  
COMMUNITY YMCA

MEMORIAL DRIVE  
ASHLAND, MA

cbt

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Suite 200  
Boston, MA 02129  
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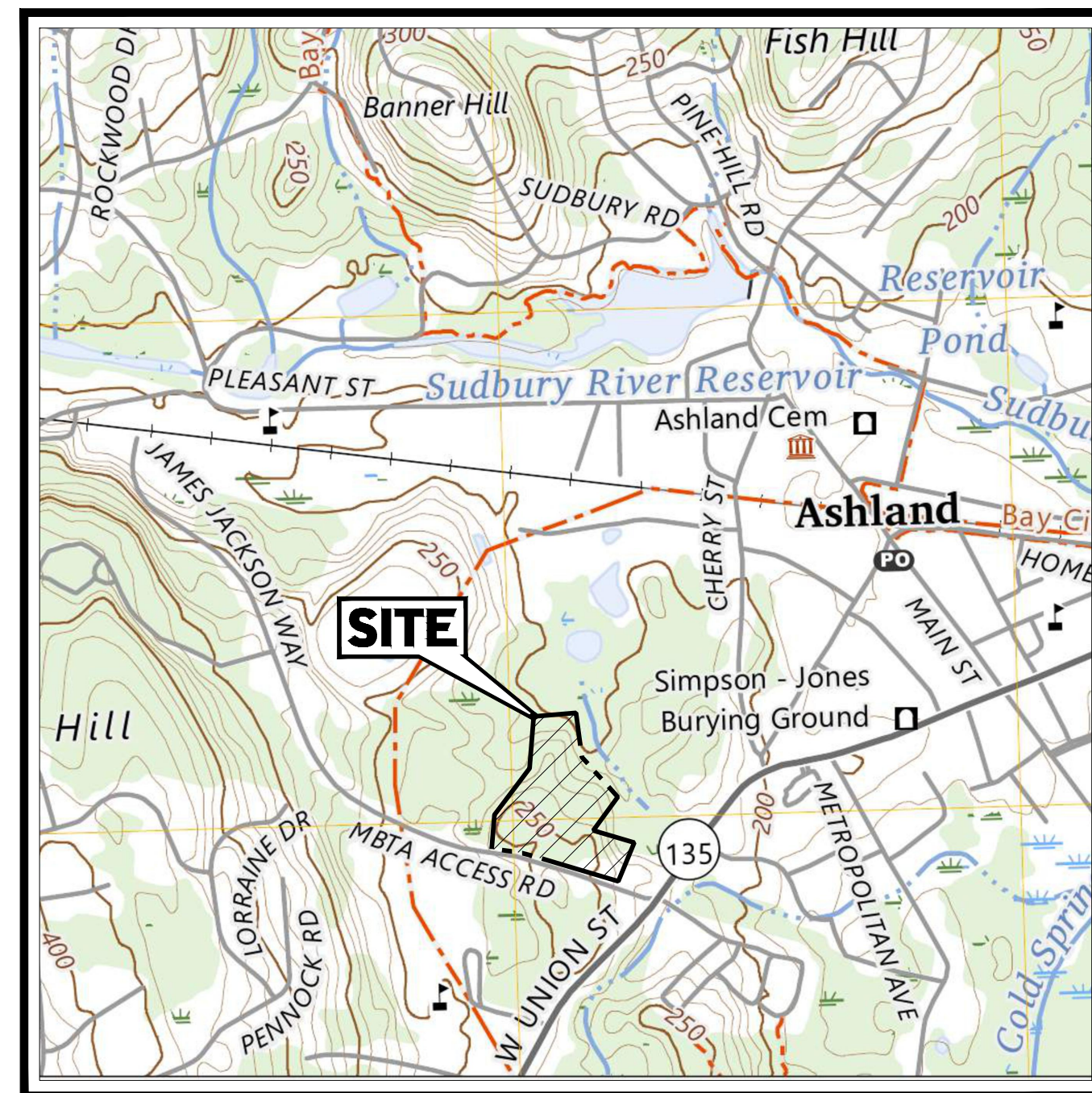
50 WASHINGTON ST., SUITE 2000  
WESTBOROUGH, MA 01581  
Phone: (508) 480-9900

www.BohlerEngineering.com

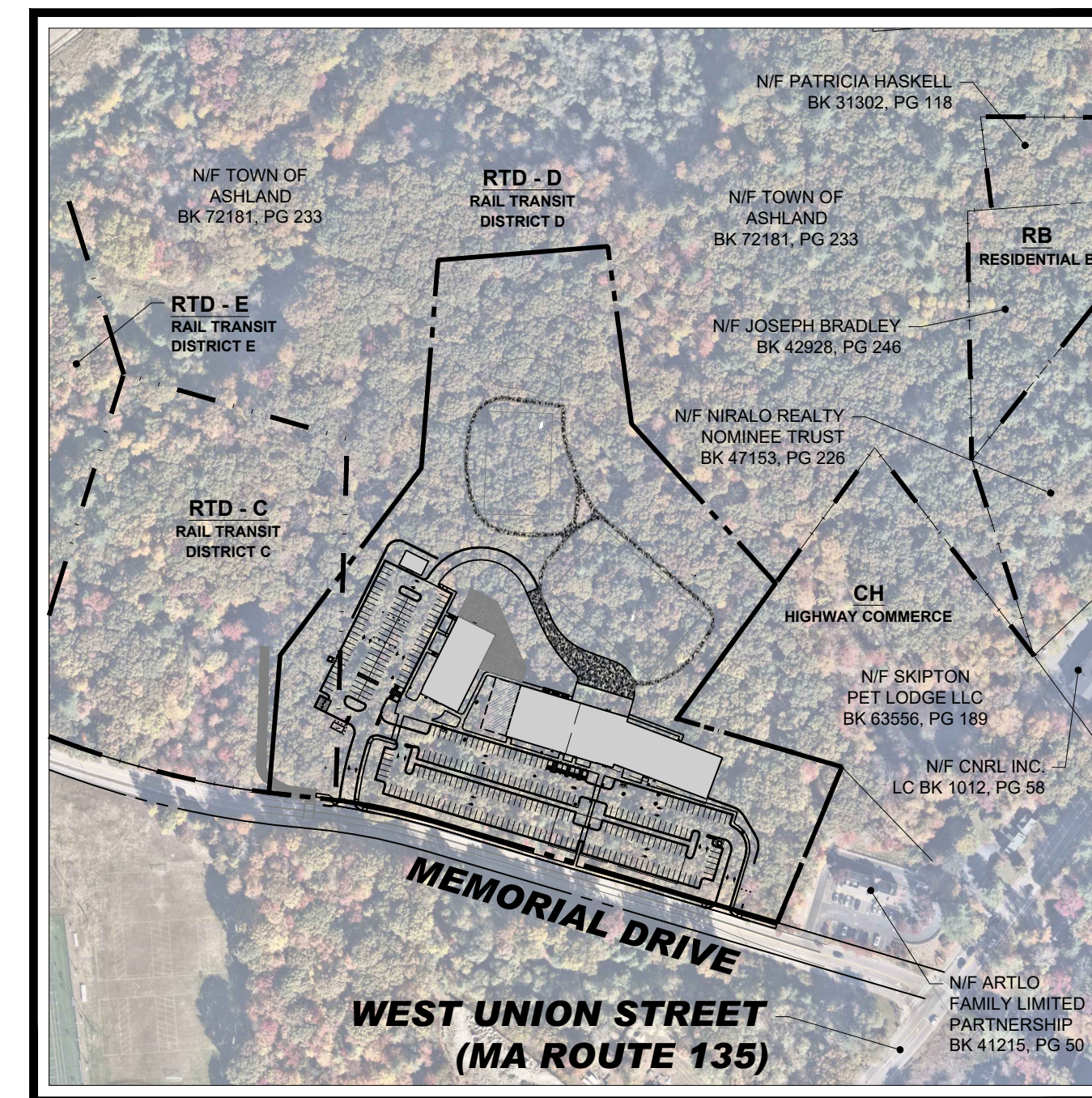
### REFERENCES AND CONTACTS

- REFERENCES**
- EXISTING CONDITIONS PLAN:  
ALLEN & MAJOR ASSOCIATES, INC.  
100 COMMERCE WAY  
WOBURN, MA 01801-8501  
DATED: 02/06/2025  
SURVEY JOB # 2591-010C  
ELEVATIONS: NAVD 1988
  - GEOTECHNICAL ENGINEERING REPORT:  
GEOTECHNICALS 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.



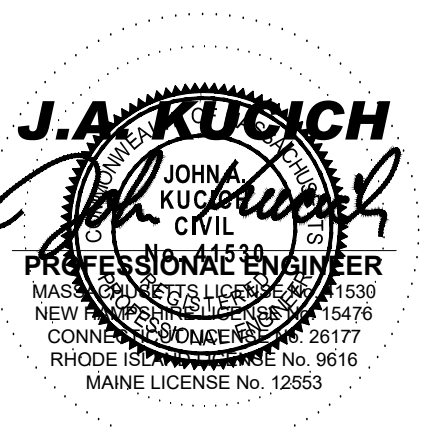
**USGS MAP**  
SCALE: 1" = 1,000'  
SOURCE: FRAMINGHAM, MA  
USGS QUADRANGLE, 2024



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

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BUILDING ELEVATION CALCULATIONS (BY CBT)	1 SHEET



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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 COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL CODES.

COVER SHEET

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**C-101**



## 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 BRACINGS, 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.
  - 7.1. 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 (DI) 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 AND VERIFY SUITABILITY FOR REUSE. 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 IMPEDS 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 DESIGNER 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. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL ADA GUIDELINES AND REQUIREMENTS.
7. 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/AB 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

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2	9/19/25		PEER REVIEW COMMENTS
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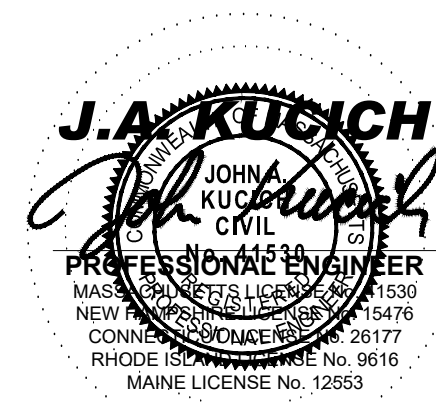
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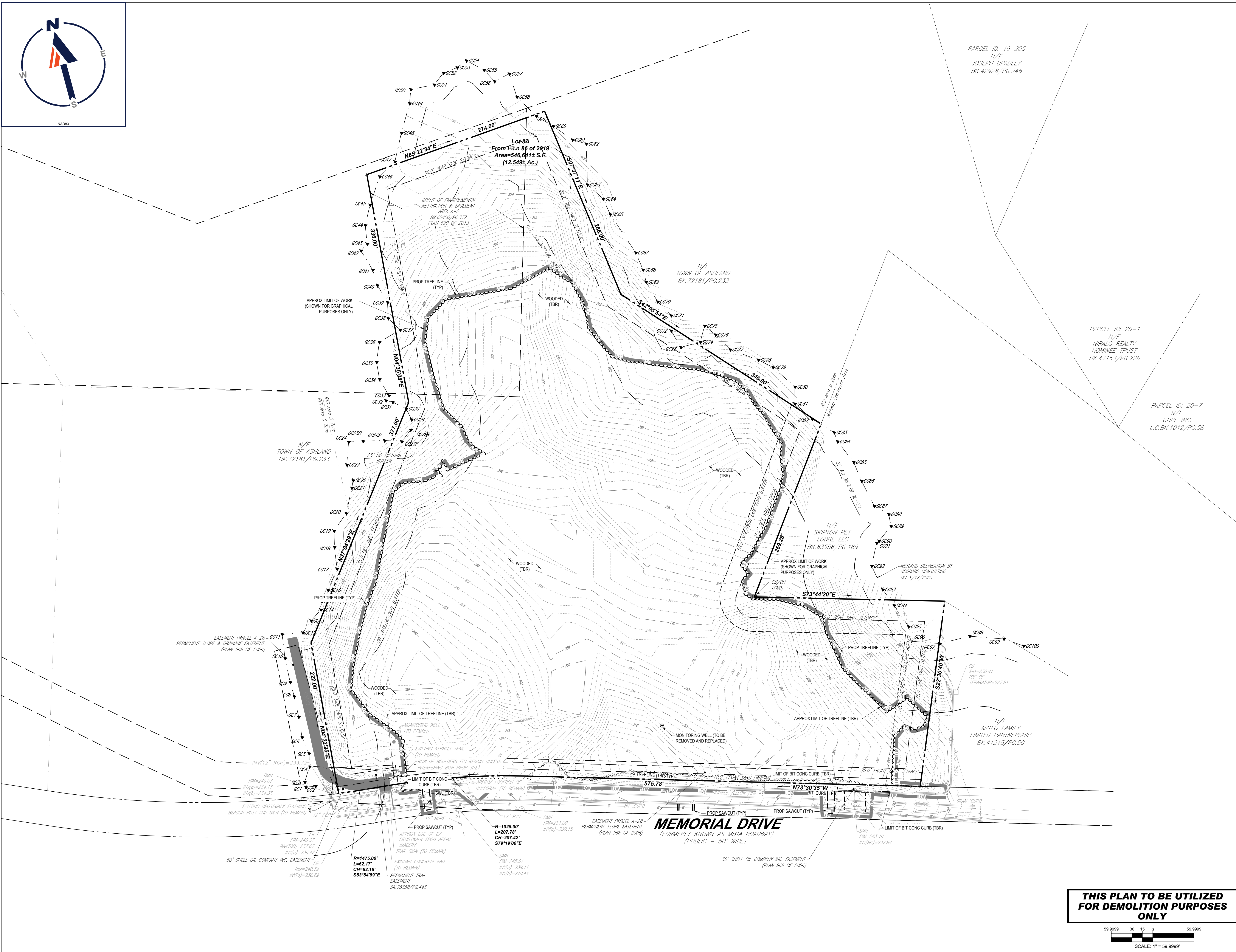
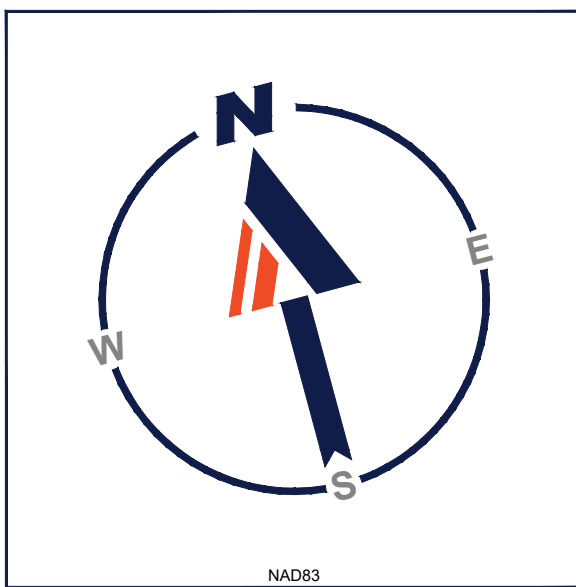


ISSUED FOR  
PERMIT

JURISDICTIONAL  
NOTES

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

C-103



PARCEL ID: 19-205  
N/F  
JOSEPH BRADLEY  
BK.42928/PG.246

PARCEL ID: 20-1  
N/F  
MIRALO REALTY  
NOMINEE TRUST  
BK.47153/PG.226

PARCEL ID: 20-7  
N/F  
CNRL INC.  
L.C.BK.1012/PG.58

N/F  
ARTLO FAMILY  
LIMITED PARTNERSHIP  
BK.41215/PG.50

REVISIONS	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
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**TEAM HOYT  
COMMUNITY YMCA**

MEMORIAL DRIVE  
ASHLAND, MA

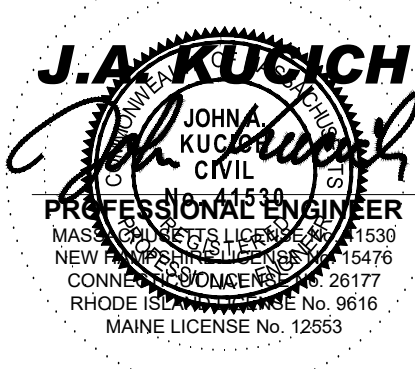
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cbtarchitects.com  
617.262.4354

**BOHLER**

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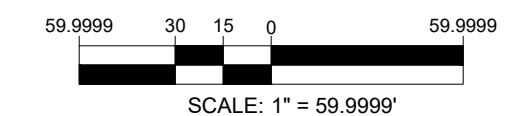


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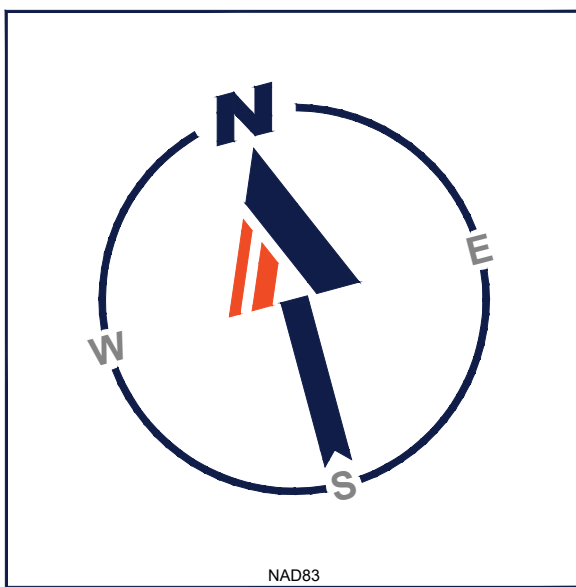
EXISTING CONDITIONS/  
DEMOLITION PLAN

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**THIS PLAN TO BE UTILIZED  
FOR DEMOLITION PURPOSES  
ONLY**

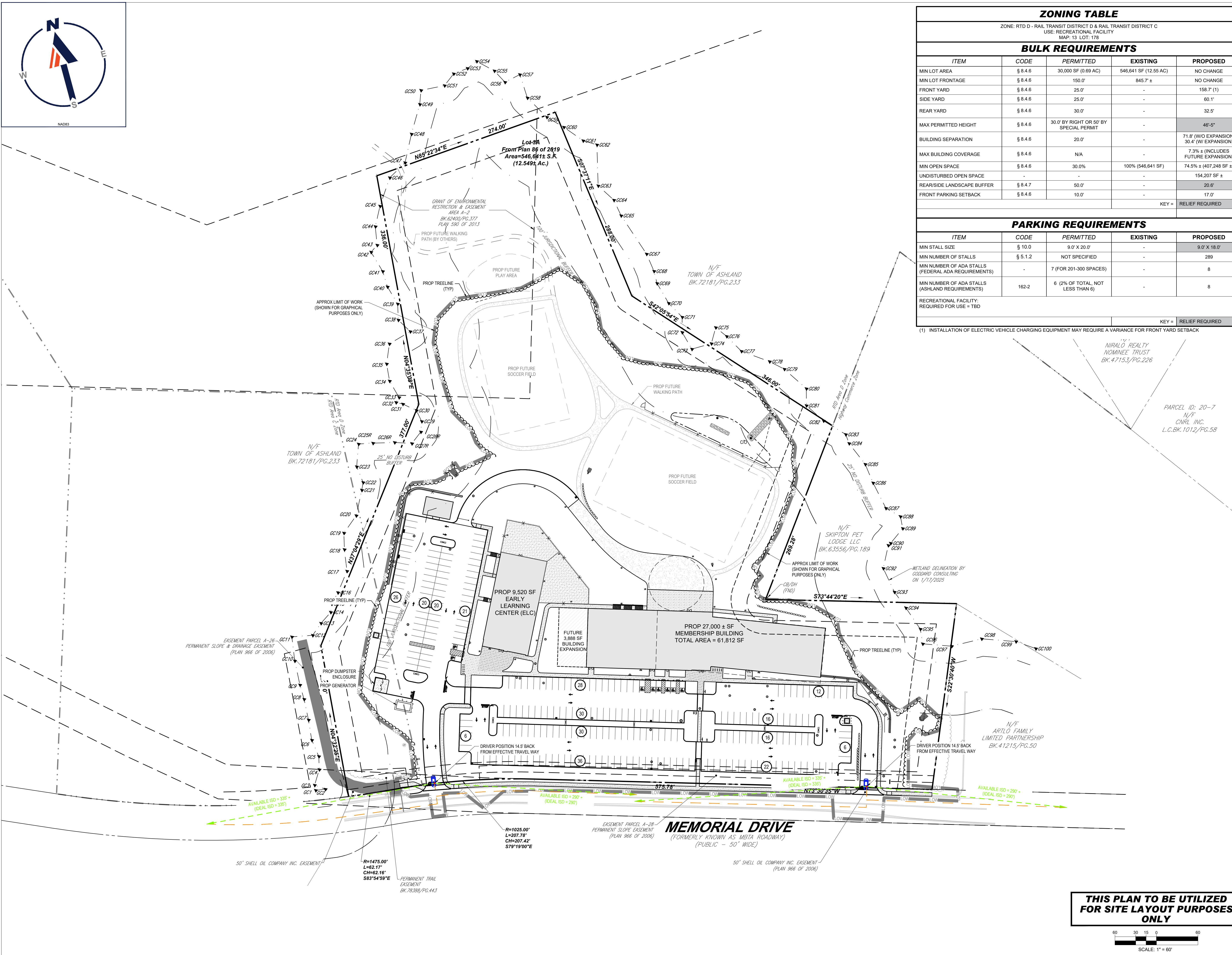


**C-201**



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



REVISIONS		
#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS

**TEAM HOYT**  
COMMUNITY YMCA

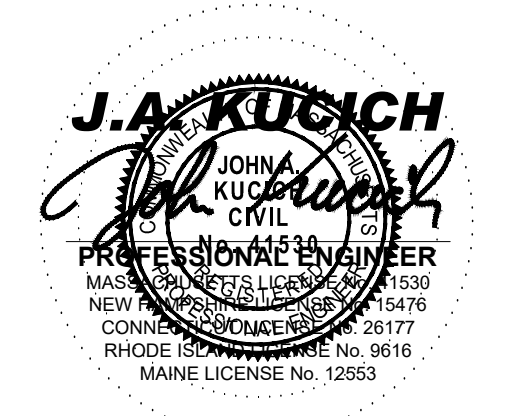
MEMORIAL DRIVE  
ASHLAND, MA

**cbt**

One Constitution Road  
Suite 200  
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617.262.4354

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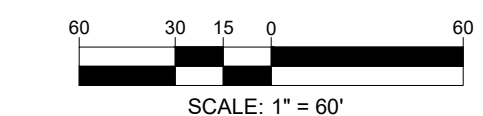
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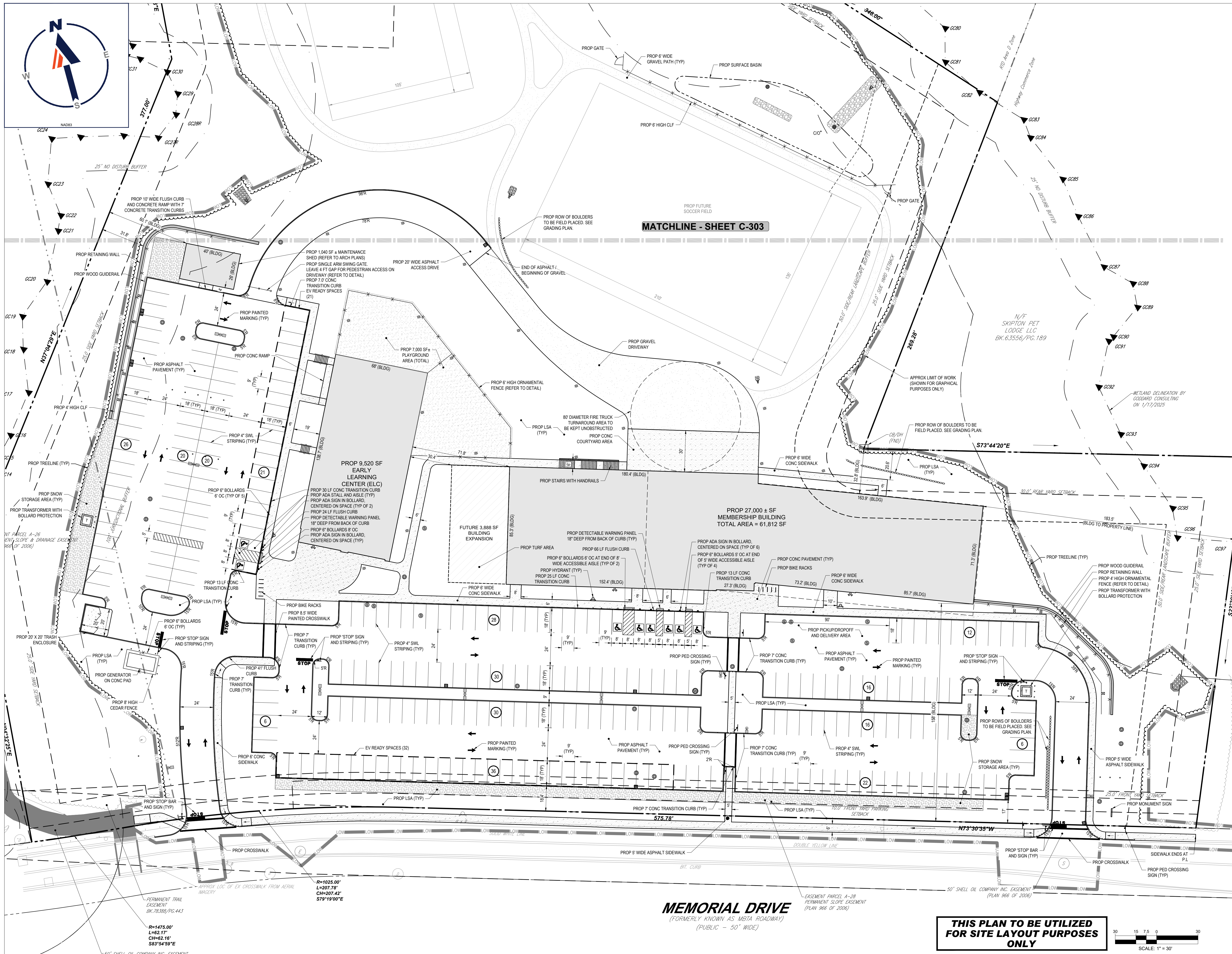
OVERALL SITE PLAN

**THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY**



SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**C-301**



**REVISIONS**

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS

**TEAM HOYT**  
COMMUNITY YMCA

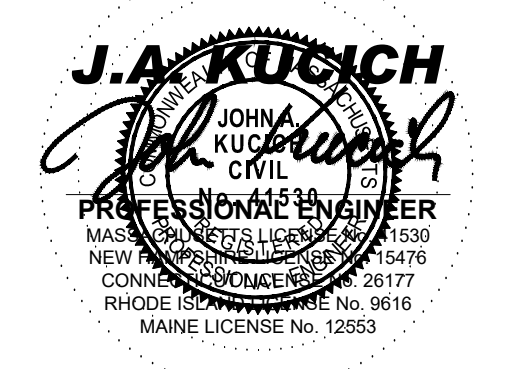
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ASHLAND, MA

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SITE PLAN A

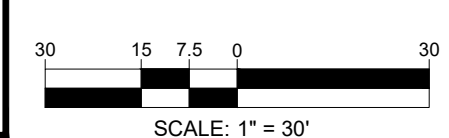
SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**C-302**

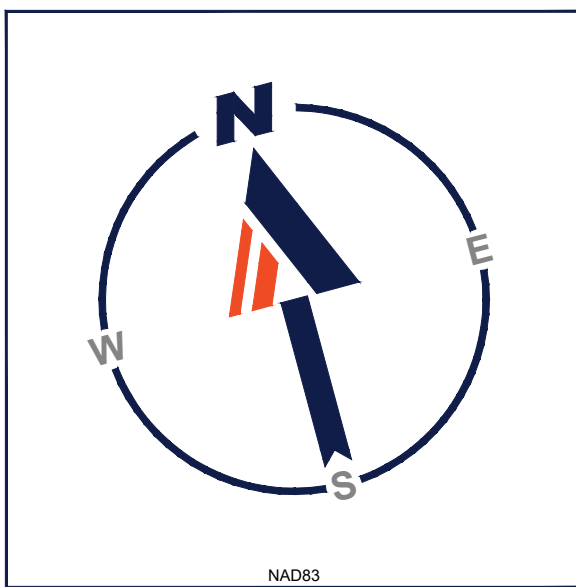
MATCHLINE - SHEET C-303

**MEMORIAL DRIVE**  
(FORMERLY KNOWN AS MBTA ROADWAY)  
(PUBLIC - 50' WIDE)

**THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY**







PARCEL ID: 19-205  
N/F  
JOSEPH BRADLEY  
BK.42928/PG.246

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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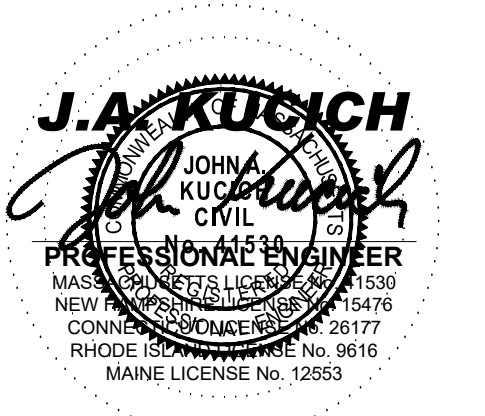
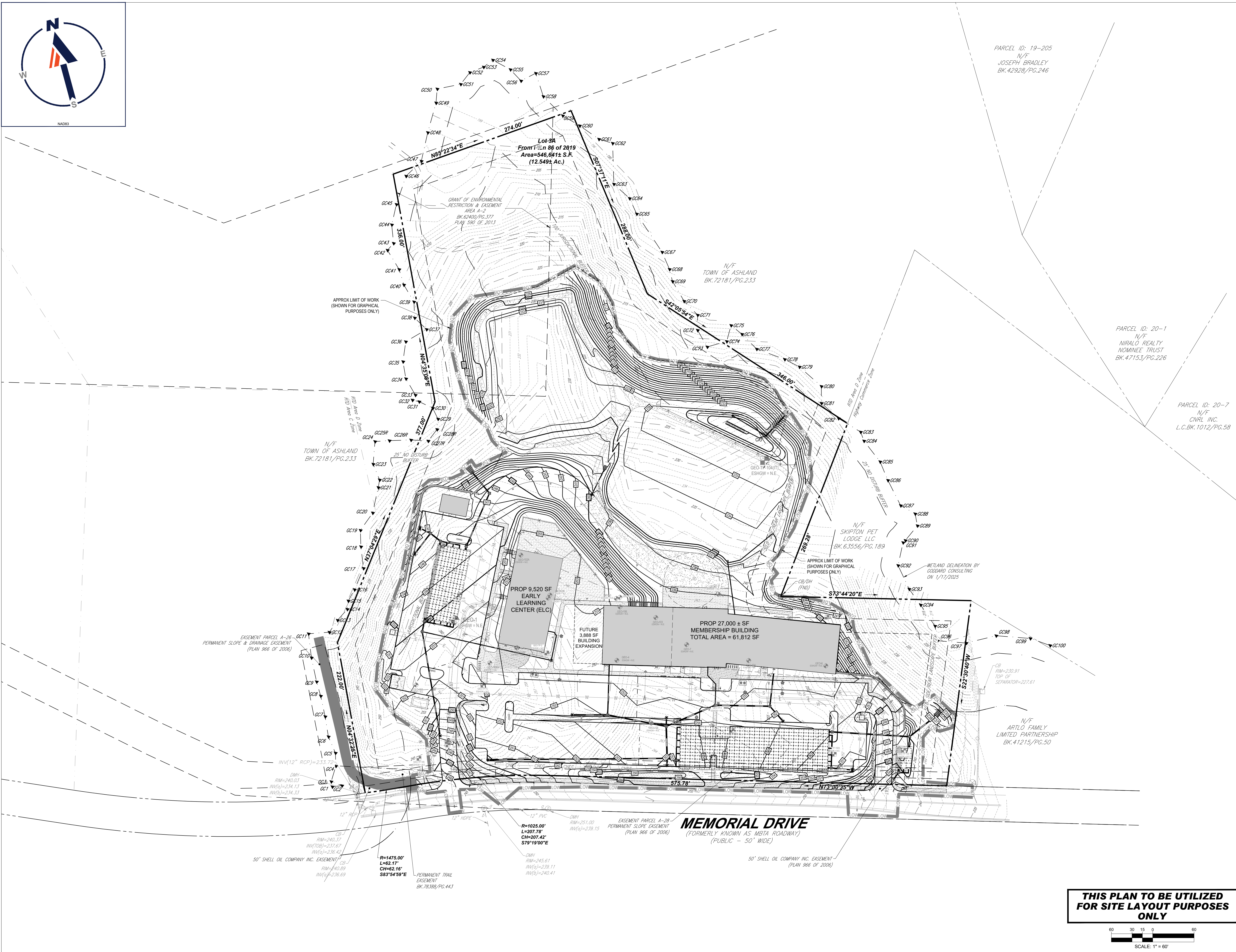
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PARCEL ID: 20-1  
N/F  
NIRALO REALTY  
NOMINEE TRUST  
BK.47153/PG.226

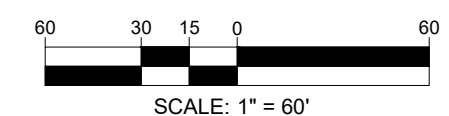
PARCEL ID: 20-7  
N/F  
CNRL INC.  
L.C.BK.1012/PG.58



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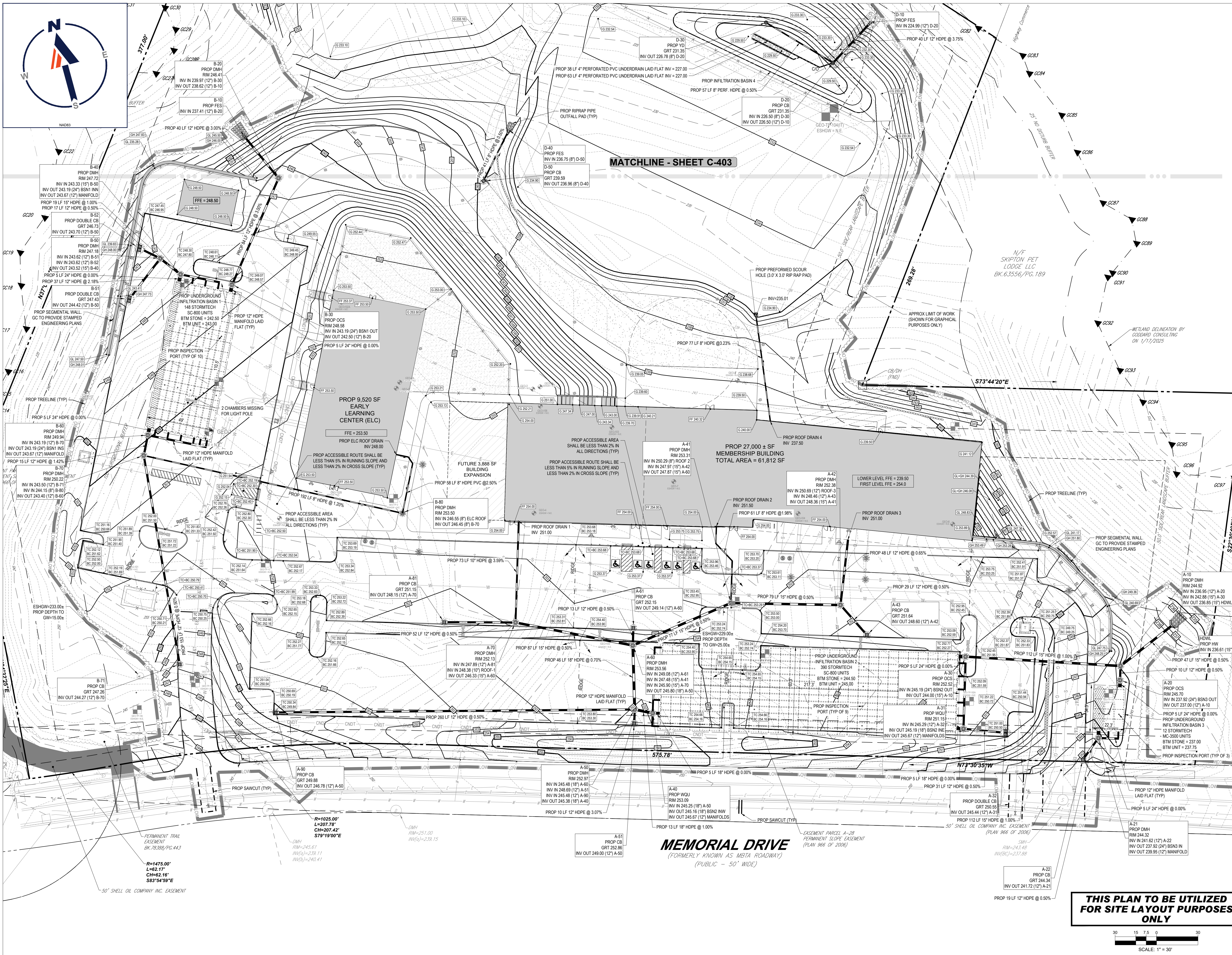
OVERALL GRADING  
AND DRAINAGE PLAN

**THIS PLAN TO BE UTILIZED  
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ONLY**



SCALE AS NOTED PROJECT # DATE ISSUED  
MAA240220.01 06.24.2025

**C-401**



MATCHLINE - SHEET C-403

**MEMORIAL DRIVE**  
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(PUBLIC - 50' WIDE)

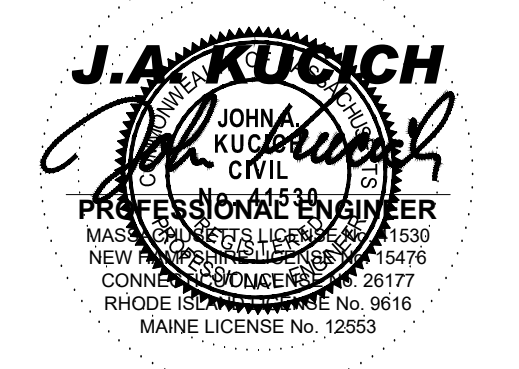
**THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY**

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

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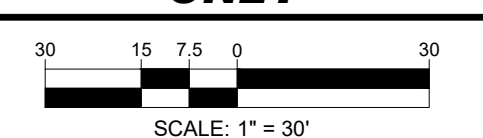


ISSUED FOR PERMIT

GRADING AND DRAINAGE PLAN A

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**C-402**





REVISIONS		
#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
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3	11/24/25	PEER REVIEW COMMENTS



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COMMUNITY YMCA

MEMORIAL DRIVE  
ASHLAND, MA

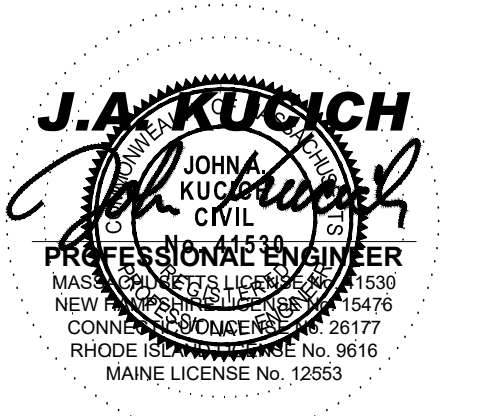
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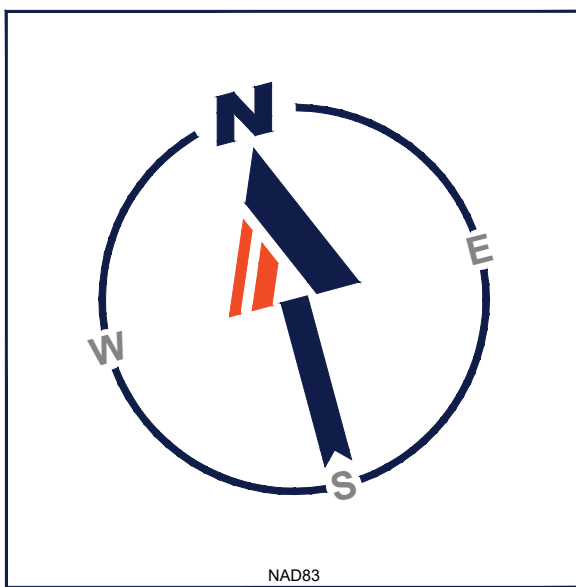
GRADING AND DRAINAGE PLAN B

**THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY**

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**C-403**





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

EASEMENT PARCEL A-26  
PERMANENT SLOPE & DRAINAGE EASEMENT  
(PLAN 966 OF 2006)

BEGIN 9" COMPOST OR  
STRAW FILTER LOG ON  
UPGRADIENT SIDE OF  
SILT FENCE (TYP)  
PROX. LIMIT OF  
PROP SILT FENCE  
(SHOWN OFFSET  
FOR CLARITY) (TYP)

50' SHELL OIL COMPANY INC. EASEMENT

PERMANENT TRAIL  
EASEMENT  
BK.78389/PG.443

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)

N/F  
ARTLO FAMILY  
LIMITED PARTNERSHIP  
BK.41215/PG.50

BEGIN 9" COMPOST OR STRAW  
FILTER LOG ON UPGRADIENT  
SIDE OF SILT FENCE (TYP)  
APPROX. LIMIT OF  
PROP SILT FENCE

WETLAND DELINEATION BY  
GODDARD CONSULTING  
ON 1/11/2025

N/F  
SKIPTON PET  
LODGE LLC  
BK.63556/PG.183

APPROX. LIMIT OF WORK  
(SHOWN FOR GRAPHICAL  
PURPOSES ONLY)

TEMP BASIN #2  
DRAINAGE AREA = 2.21 AC  
STORAGE VOL. REQUIRED = 7,956 CF  
VOL. PROVIDED = 12,974 CF

PROP DIVERSION SWALE (TYP.)

TEMP BASIN #1  
DRAINAGE AREA = 2.20 AC  
STORAGE VOL. REQUIRED = 7,920 CF  
VOL. PROVIDED = 9,968 CF

PROP DIVERSION SWALE (TYP.)

GRANT OF ENVIRONMENTAL  
RESTRICTION & EASEMENT  
AREA A-2  
BK.62400/PG.377  
PLAN 590 OF 2013

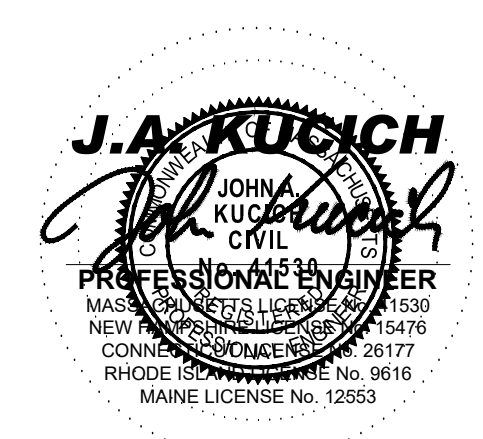
Lot 3A  
From 1st n 86 of 2019  
Area=546,641± S.F.  
(12.549± Ac.)

REVISIONS	#	DATE	DESCRIPTION
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**TEAM HOYT**  
COMMUNITY YMCA  
MEMORIAL DRIVE  
ASHLAND, MA

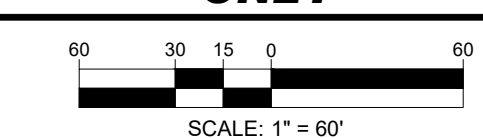
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OVERALL EROSION  
AND SEDIMENT  
CONTROL PLAN: PHASE 1  
SCALE AS NOTED PROJECT # DATE ISSUED  
MAA240220.01 06.24.2025

**C-801**



PARCEL ID: 19-205  
N/F  
JOSEPH BRADLEY  
BK.42928/PG.246

REVISIONS	
#	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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COMMUNITY YMCA**

MEMORIAL DRIVE  
ASHLAND, MA

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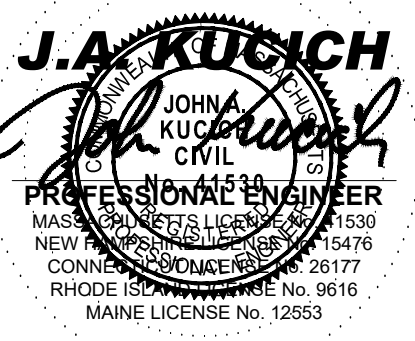
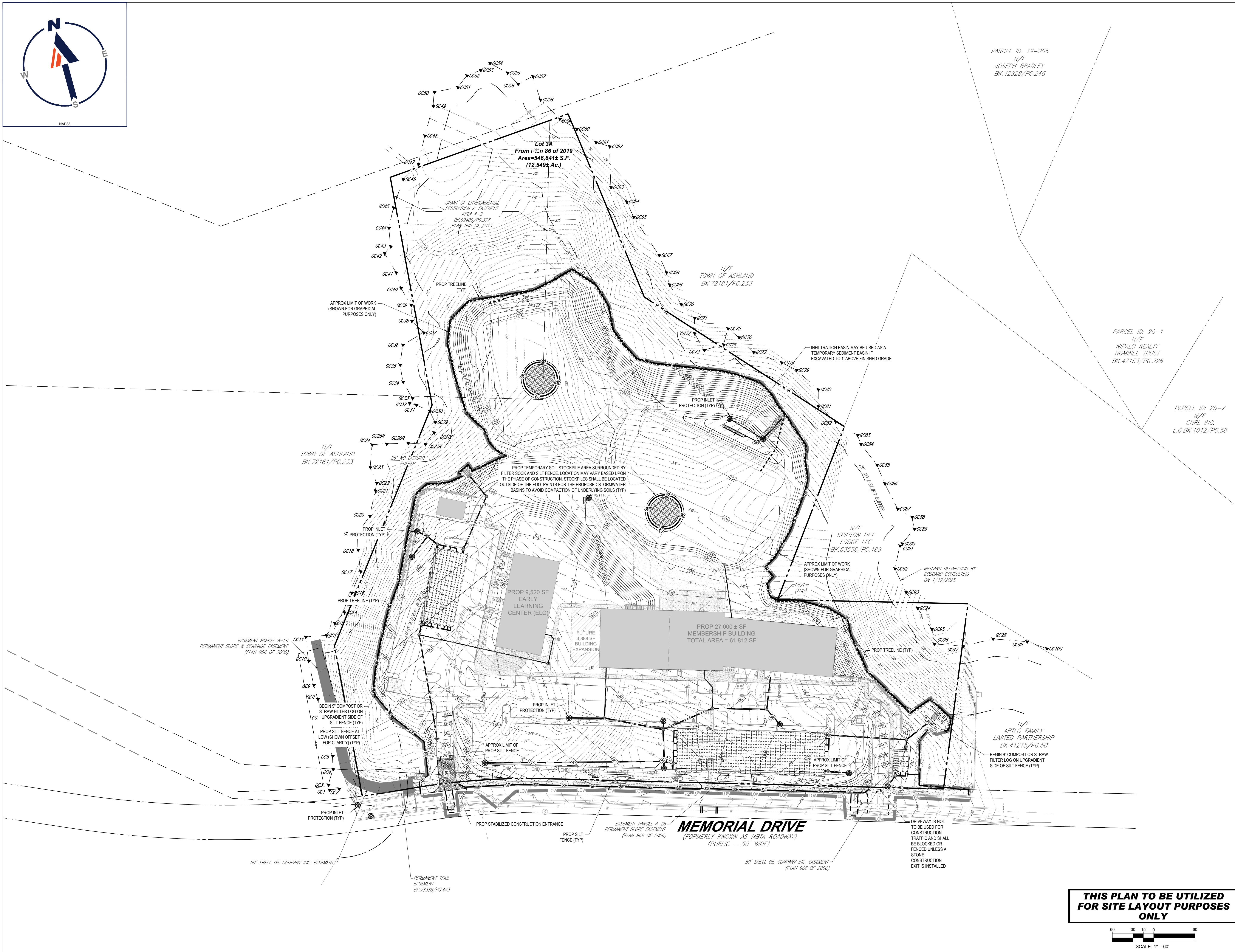
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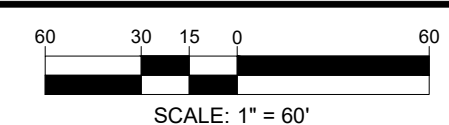
PARCEL ID: 20-1  
N/F  
NIRALO REALTY  
NOMINEE TRUST  
BK.47153/PG.226

PARCEL ID: 20-7  
N/F  
CNRL INC.  
L.C.BK.1012/PG.58



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OVERALL EROSION  
AND SEDIMENT  
CONTROL PLAN: PHASE 2

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MAA240220.01 06.24.2025

**C-802**

**MASSACHUSETTS EROSION AND SEDIMENT CONTROL NOTES**

- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL. THE GENERAL NOTES ARE REFERENCED HEREIN AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY.
- 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.
- SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE IN THE CONTRIBUTING AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 8%.
- INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE NETTING BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #6.
- 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.
- 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.
- 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.
- 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.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL STANDARDS.
- 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:
  - SIX INCHES, OR DEPTH SPECIFIED ON THE LANDSCAPE PLAN, OF LOAM WILL BE SPREAD OVER DISTURBED AREAS TO A UNIFORM SURFACE.
  - 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).
  - FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 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 SOGGED.
- 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.
- 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.
- WETLANDS WILL BE PROTECTED WITH BARRIERS CONSISTING OF STRAW BALES, COMPOST TUBES, SILT FENCE OR A COMBINATION THEREOF.
- ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS.
- 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
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1	STRAW (ANCHORED)*	100 POUNDS AS REQUIRED
	JUTE MESH OR EXCELSIOR MAT	

\* 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.

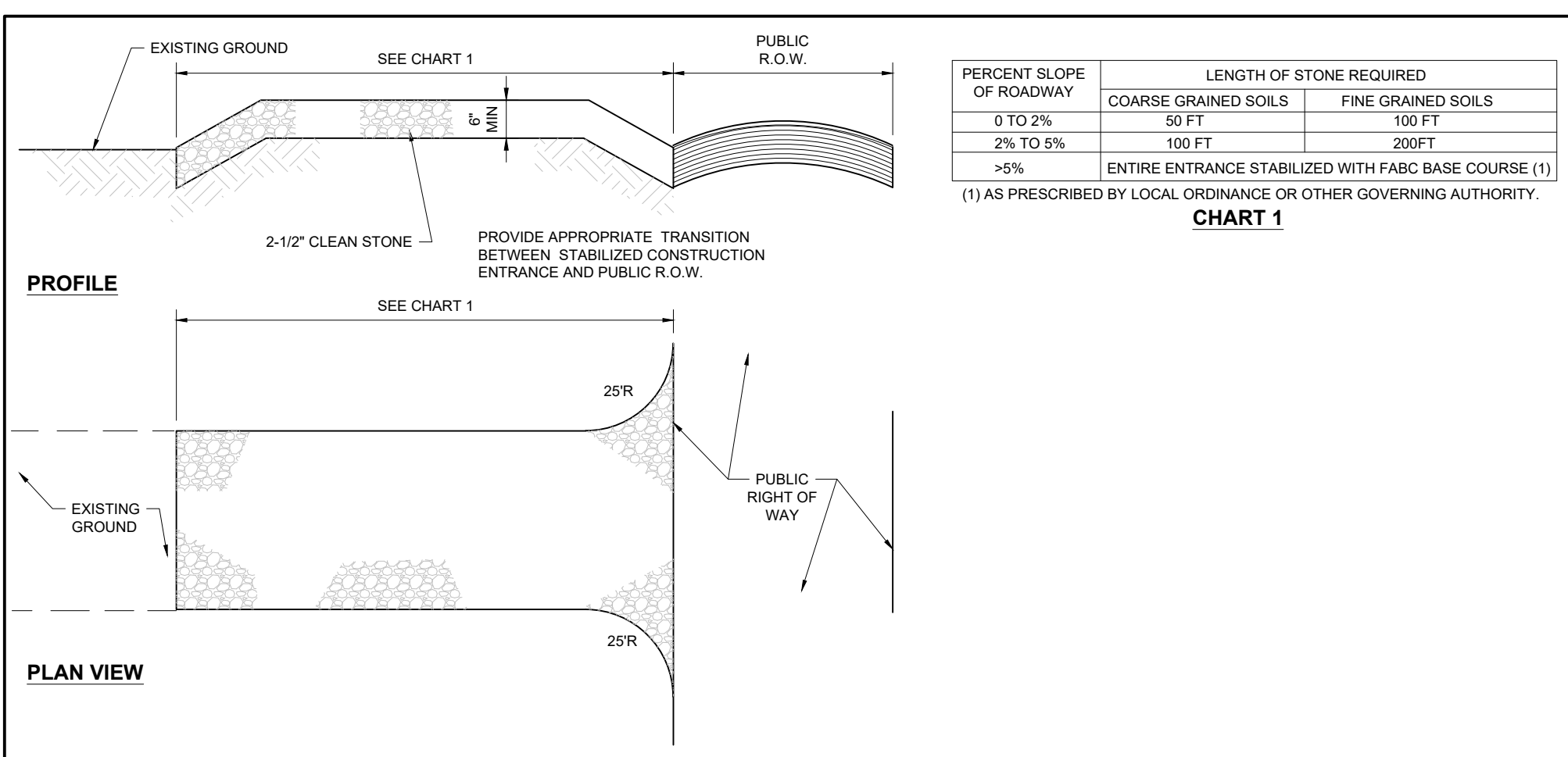
- PROPOSED LOCATIONS OF SURFACE STORMWATER MANAGEMENT BASINS CAN BE UTILIZED AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION. SEDIMENT TRAPS SHALL BE SIZED AND CONSTRUCTED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- TEMPORARY SEDIMENT TRAPS SHALL BE SIZED PER THE CURRENT EDITION 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.
- 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.
- EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.
- 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.
- 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.
- EROSION CONTROL NOTES DURING WINTER CONSTRUCTION
  - WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
  - 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.
  - 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.
  - 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 SEED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
  - 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 FINELY GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEED. IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEED 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.
  - MULCHING REQUIREMENTS:
    - BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
    - 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%.
    - 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%.
    - ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE STORMWATER PREVENTION PLAN.
    - DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.
    - 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**

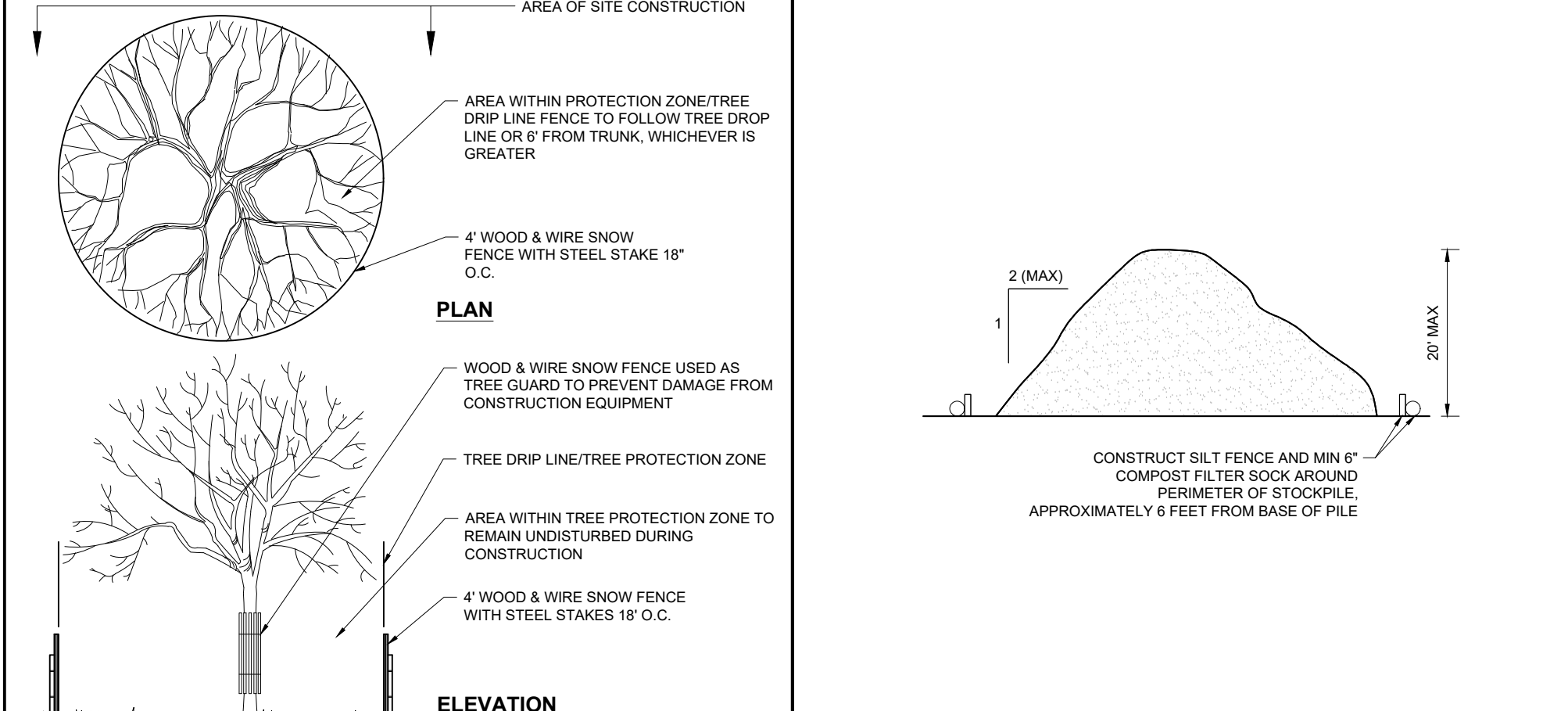
- THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT - A TEMPORARY GROUND 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.
- SEDIMENT FENCE - INSTALL SILT FENCES) AND/OR SILT SOCK AROUND ALL OF THE DOWNSLOPE PERIMETERS OF THE SITE, TEMPORARY FILL AND SOIL STOCKPILES.
- 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.
- INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY. THE CONTRACTOR MUST REMOVE ANY SILT DEPOSITS GREATER THAN 6 INCHES OR HALF THE EROSION CONTROL BARRIERS HEIGHT COLLECTED ON THE FILTER FABRIC AND/OR SILT SOCK BARRIERS AND EXCAVATE AND REMOVE ANY SILT FROM DRAINAGE INLET PROTECTION.
- 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.
- 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 THE SITE.
- THE CONTRACTOR MUST BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT PAVING AND TURFLANDSCAPING 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.
- THE CONTRACTOR MUST CONTINUE TO MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE COMPLETION OF CONSTRUCTION AND THE ESTABLISHMENT OF VEGETATION.
- THE CONTRACTOR MUST REMOVE EROSION CONTROL MEASURES AND DEBRIS AFTER ESTABLISHING PERMANENT VEGETATION COVER OR OTHER INSTALLING A DIFFERENT, SPECIFIED METHOD OF STABILIZATION.
- 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 EXITTING THE SITE.
- 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.
- THE CONTRACTOR MUST REFER TO GRADING PLANS FOR ADDITIONAL INFORMATION.
- 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.
- 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.
- 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:

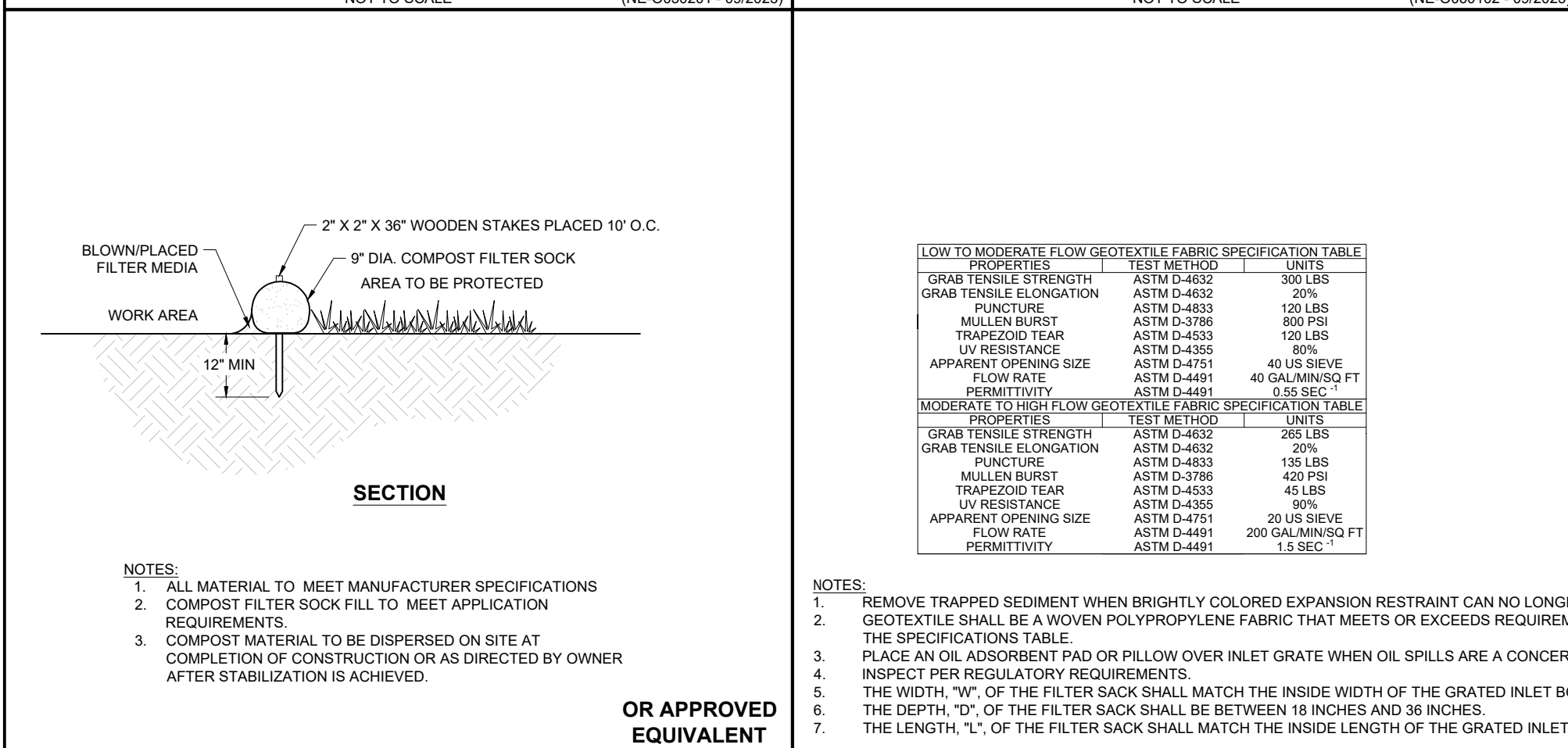
- INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT (AS SHOWN)
- INSTALLATION OF EROSION CONTROL BARRIER (STRAW BALES AND SILT FENCE) (AS SHOWN)
- INSTALLATION OF INLET PROTECTION IN STREET (AS SHOWN)
- DEMOLITION OF EXISTING SITE STRUCTURES (SEE DEMOLITION PLAN)
- DEMOLITION OF EXISTING SITE PAVEMENT 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



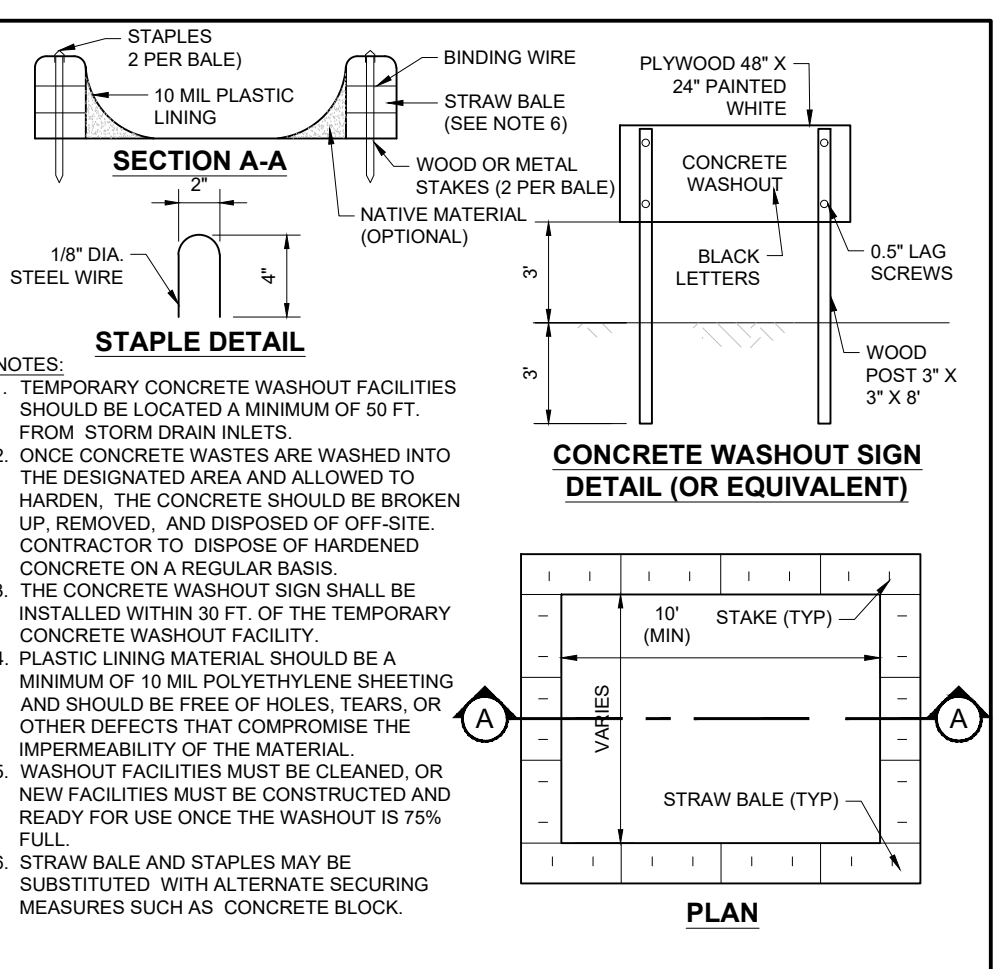
**STABILIZED CONSTRUCTION ENTRANCE**



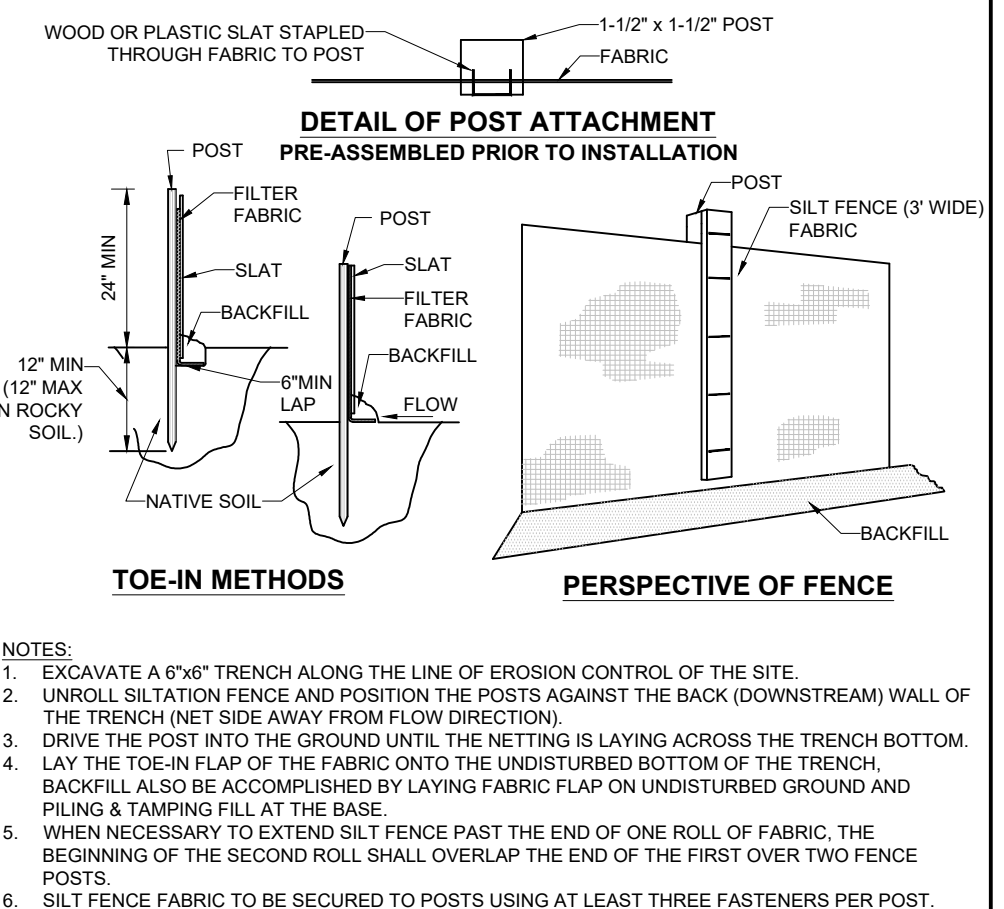
**TEMPORARY STOCK PILE WITH SILT FENCE AND FILTER SOCK**



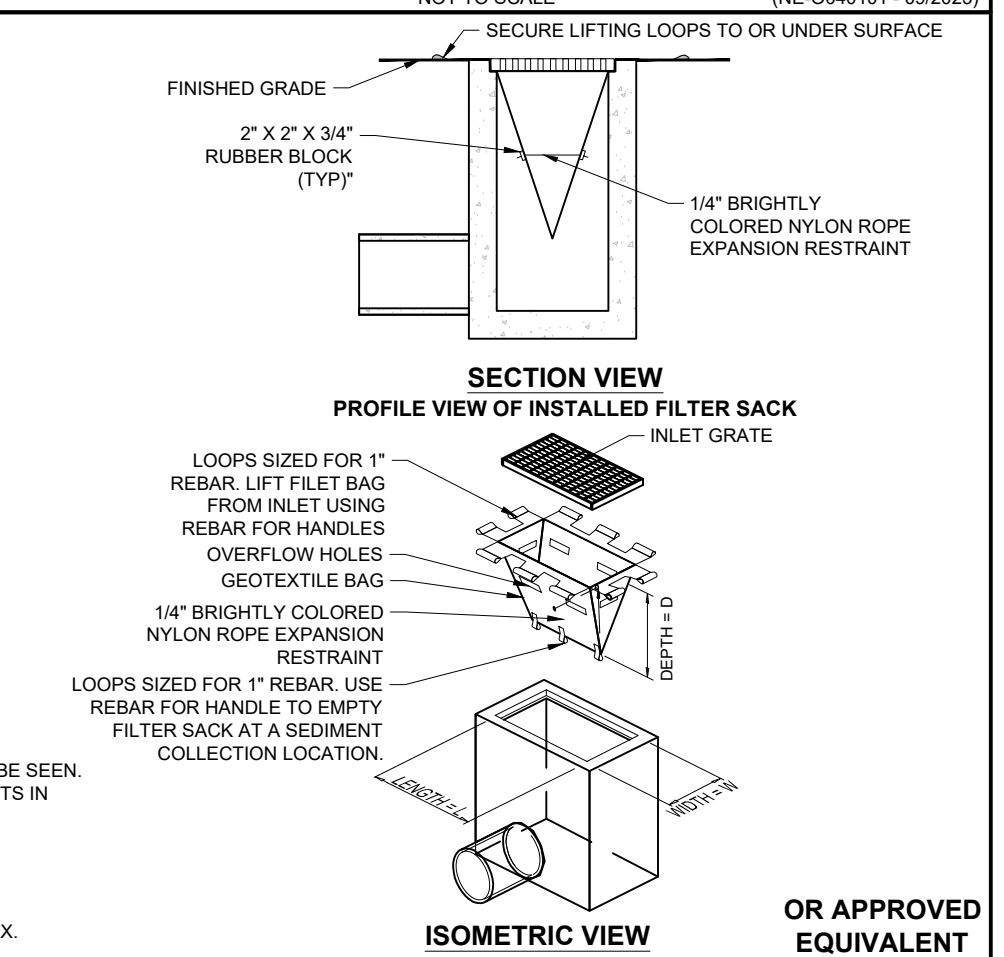
**COMPOST FILTER SOCK**



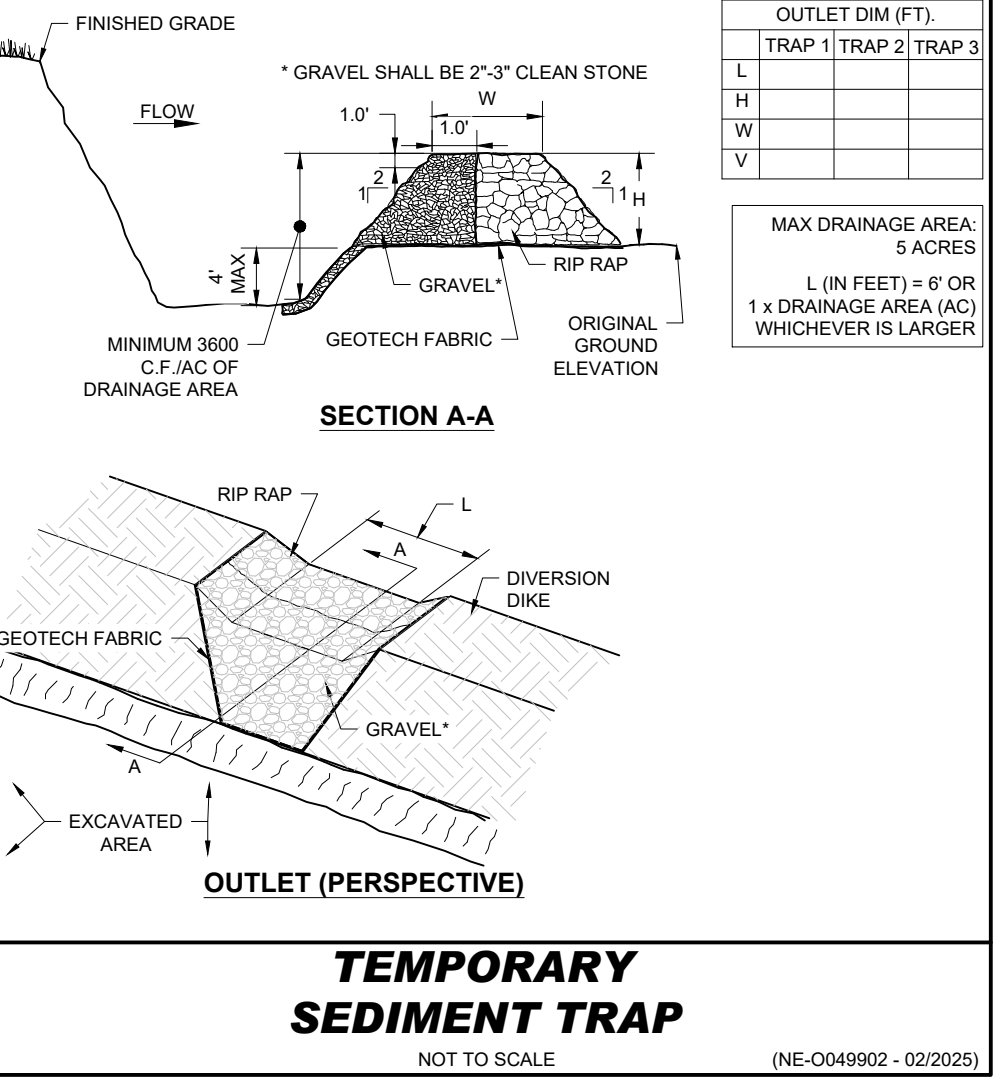
**CONCRETE WASTE MANAGEMENT AREA**



**SILT FENCE**



**INLET PROTECTION WITH MANUFACTURED INSERT**



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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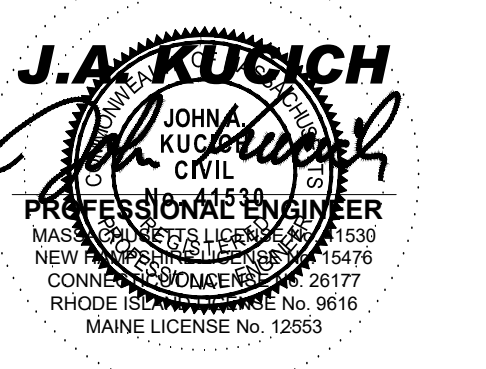
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**EROSION AND SEDIMENT CONTROL NOTES AND DETAILS**

SCALE AS NOTED PROJECT# MAA240220.01 DATE ISSUED 06.24.2025

**C-803**

<p><b>PAVEMENT SECTION</b> NOT TO SCALE (NE-S010101 - 10/2024)</p>	<p><b>PAVEMENT SECTION WITHIN MEMORIAL DRIVE</b> NOT TO SCALE (NE-S010101 - 10/2024)</p>	<p><b>PAVEMENT SECTION WITHIN MEMORIAL DRIVE MULTI-USE PATH</b> NOT TO SCALE (NE-S010101 - 10/2024)</p>	<p><b>PRECAST CONCRETE CURB</b> NOT TO SCALE (NE-S020201 - 10/2024)</p>	<p><b>PRECAST CONCRETE TRANSITION CURB</b> NOT TO SCALE (NE-S020206 - 09/2023)</p>
<p><b>ACCESSIBLE RAMP TYPE B</b> NOT TO SCALE (NE-S030205 - 10/2024)</p>	<p><b>ACCESSIBLE RAMP TYPE C</b> NOT TO SCALE (NE-S030206 - 10/2024)</p>	<p><b>WOOD GUIDERAIL</b> NOT TO SCALE (NE-S090101 - 10/2024)</p>	<p><b>SIGN IN BOLLARD</b> NOT TO SCALE (NE-S060201 - 12/2024)</p>	<p><b>SIGN IN BOLLARD</b> NOT TO SCALE (NE-S060201 - 12/2024)</p>
<p><b>ACCESSIBLE PARKING STALL</b> NOT TO SCALE (NE-S050101 - 10/2024)</p>	<p><b>ACCESSIBLE PARKING SIGNS</b> NOT TO SCALE (NE-S060101 - 10/2024)</p>	<p><b>BOLLARD</b> NOT TO SCALE (NE-S070101 - 09/2023)</p>	<p><b>BIKE RACK</b> NOT TO SCALE (NY-S999903 - 08/2023)</p>	<p><b>STOP SIGN</b> NOT TO SCALE (NE-S060202 - 09/2023)</p>
<p><b>ACCESSIBLE PARKING SYMBOL</b> NOT TO SCALE (NE-S050102 - 10/2024)</p>	<p><b>TRASH ENCLOSURE PAD</b> NOT TO SCALE (NE-S100201 - 12/2024)</p>	<p><b>STOP BAR</b> NOT TO SCALE (NE-S050301 - 12/2024)</p>	<p><b>TRAFFIC FLOW ARROW</b> NOT TO SCALE (NE-S050302 - 10/2024)</p>	<p><b>CROSSWALK LADDER</b> NOT TO SCALE (NE-S050401 - 07/2024)</p>
<p><b>ACCESSIBLE PARKING SYMBOL</b> NOT TO SCALE (NE-S050102 - 10/2024)</p>	<p><b>TRASH ENCLOSURE PAD</b> NOT TO SCALE (NE-S100201 - 12/2024)</p>	<p><b>STOP BAR</b> NOT TO SCALE (NE-S050301 - 12/2024)</p>	<p><b>TRAFFIC FLOW ARROW</b> NOT TO SCALE (NE-S050302 - 10/2024)</p>	<p><b>CROSSWALK LADDER</b> NOT TO SCALE (NE-S050401 - 07/2024)</p>

**REVISIONS**

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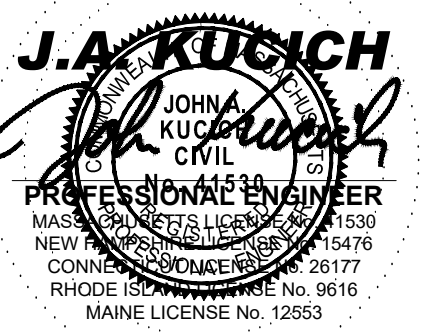
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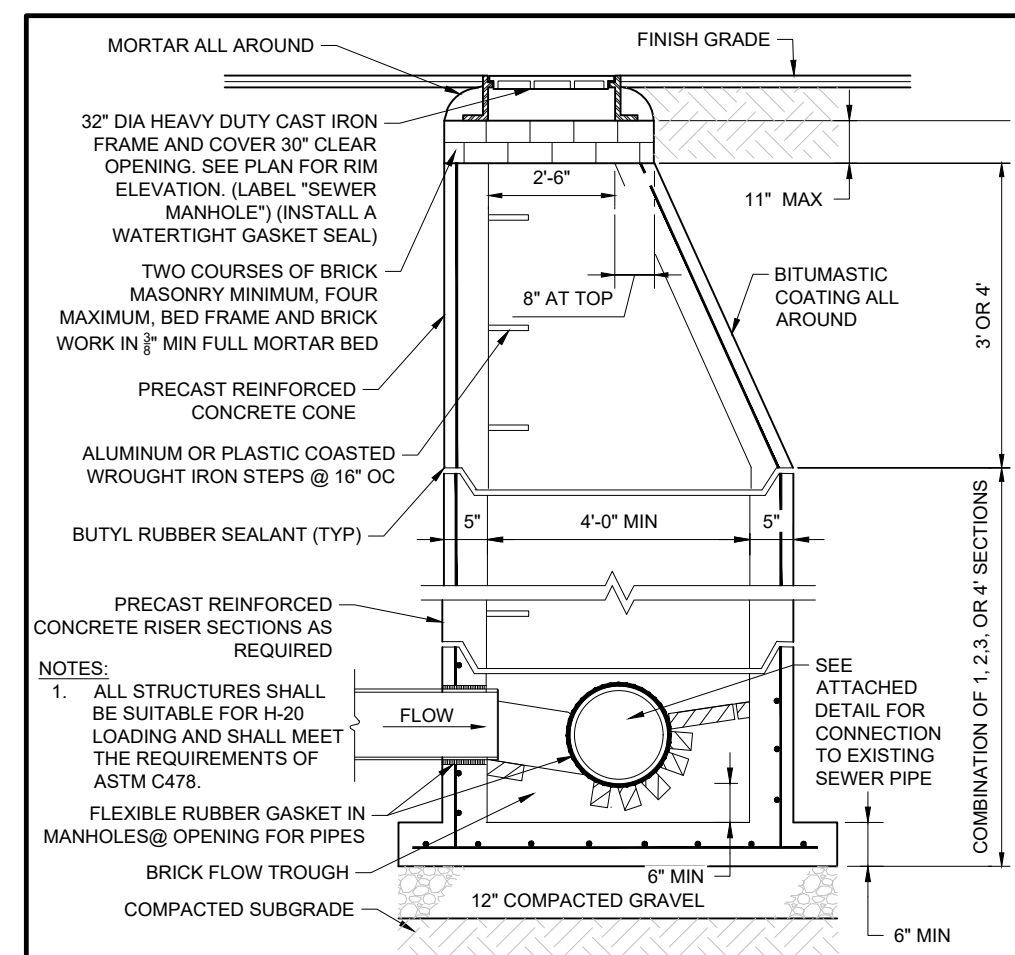


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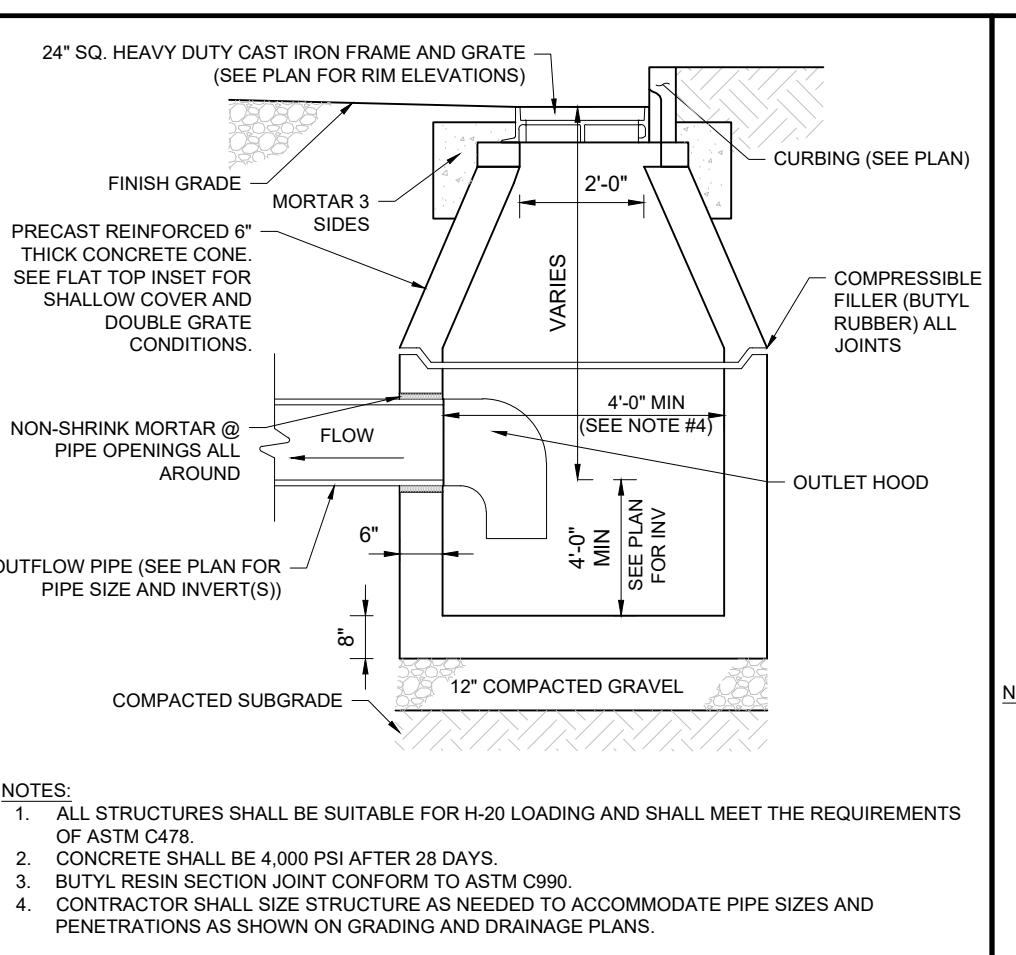
CONSTRUCTION  
DETAILS

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

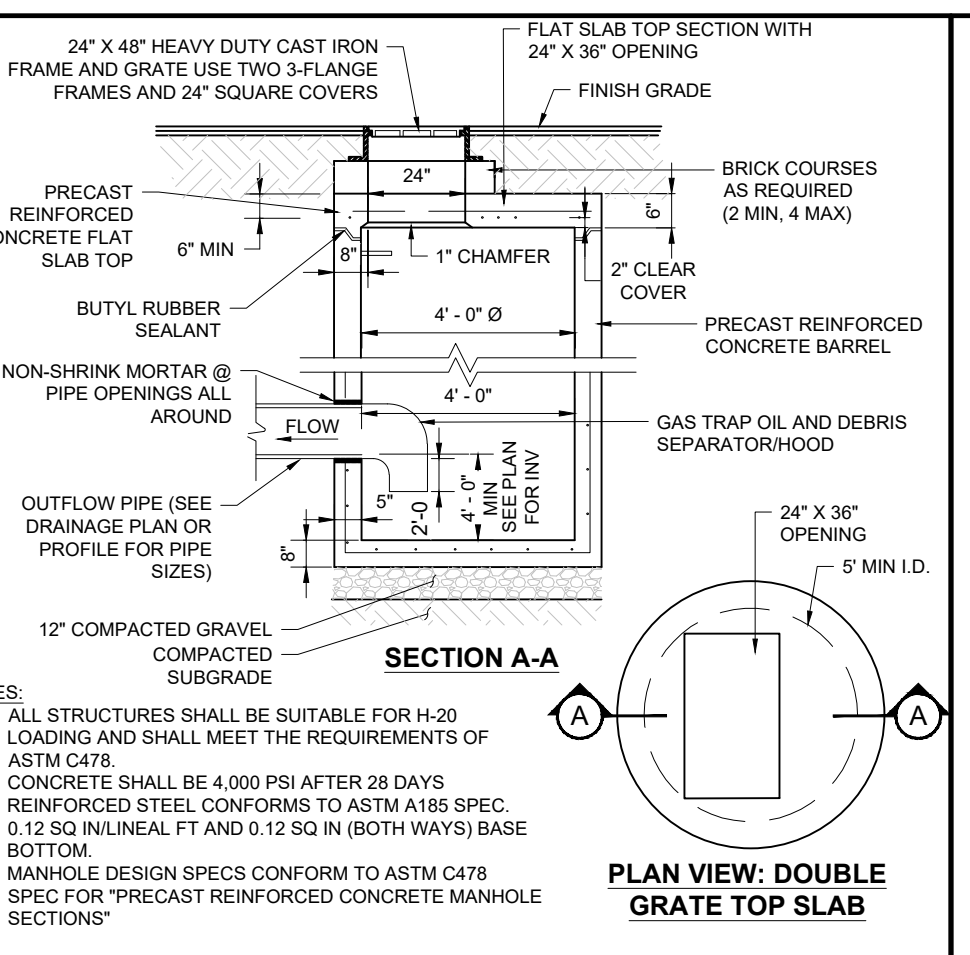
**C-901**



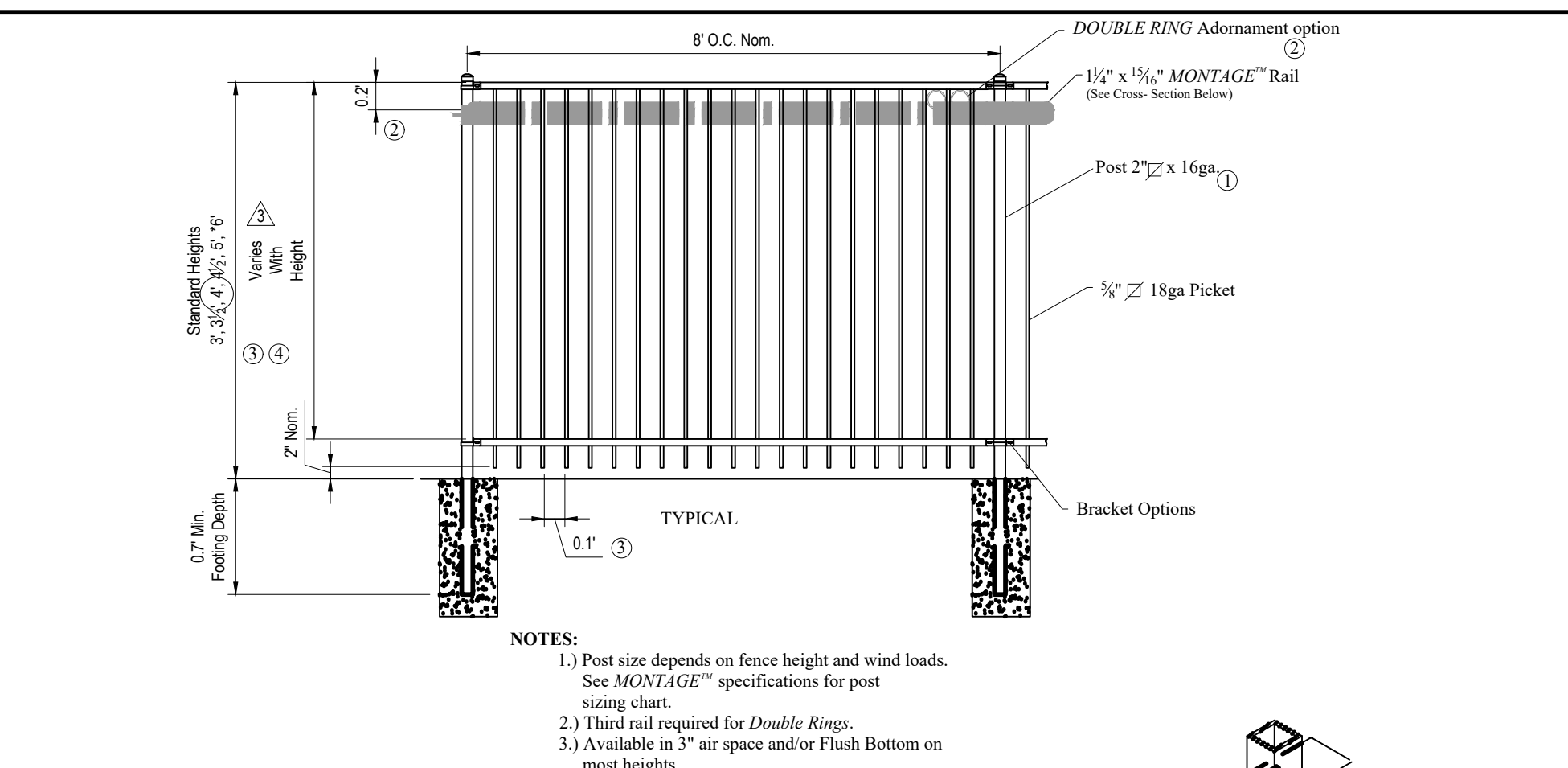
**PRECAST CONCRETE SANITARY MANHOLE**  
NOT TO SCALE (NE-U020101 - 11/2024)



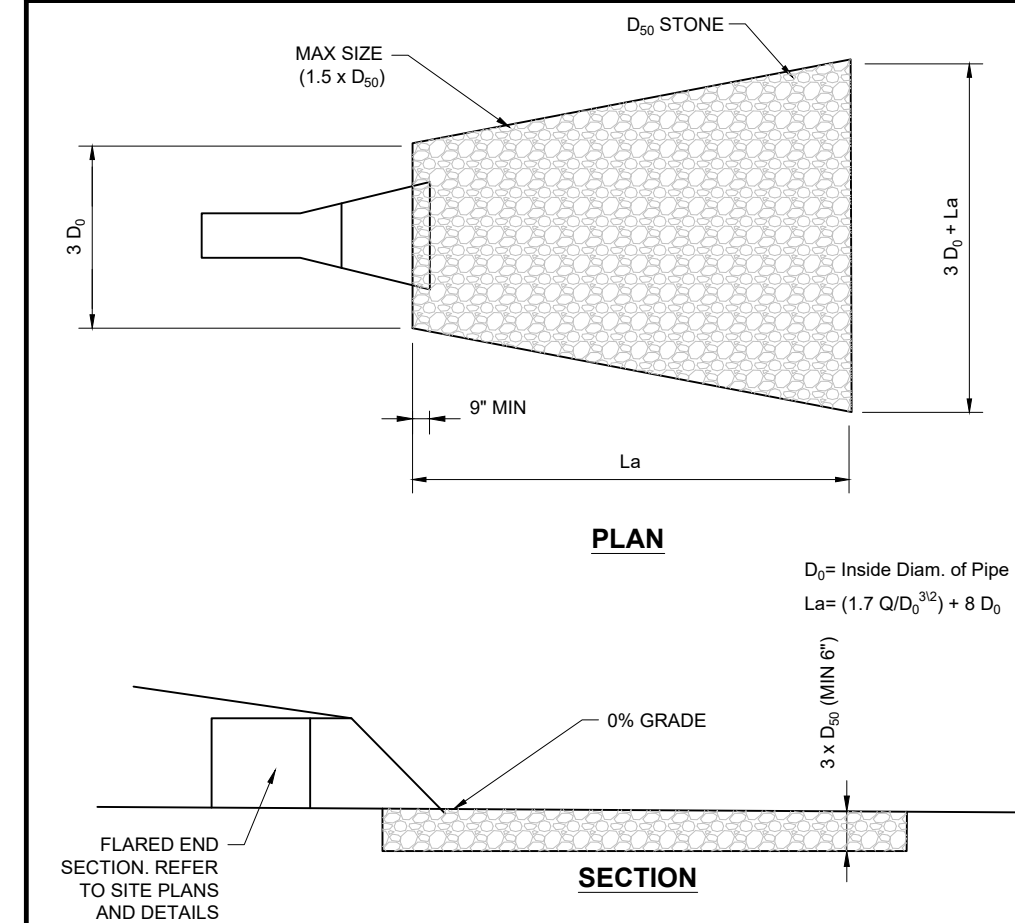
**PRECAST CONCRETE DEEP SUMP CATCH BASIN**  
NOT TO SCALE (NE-U010201 - 02/2025)



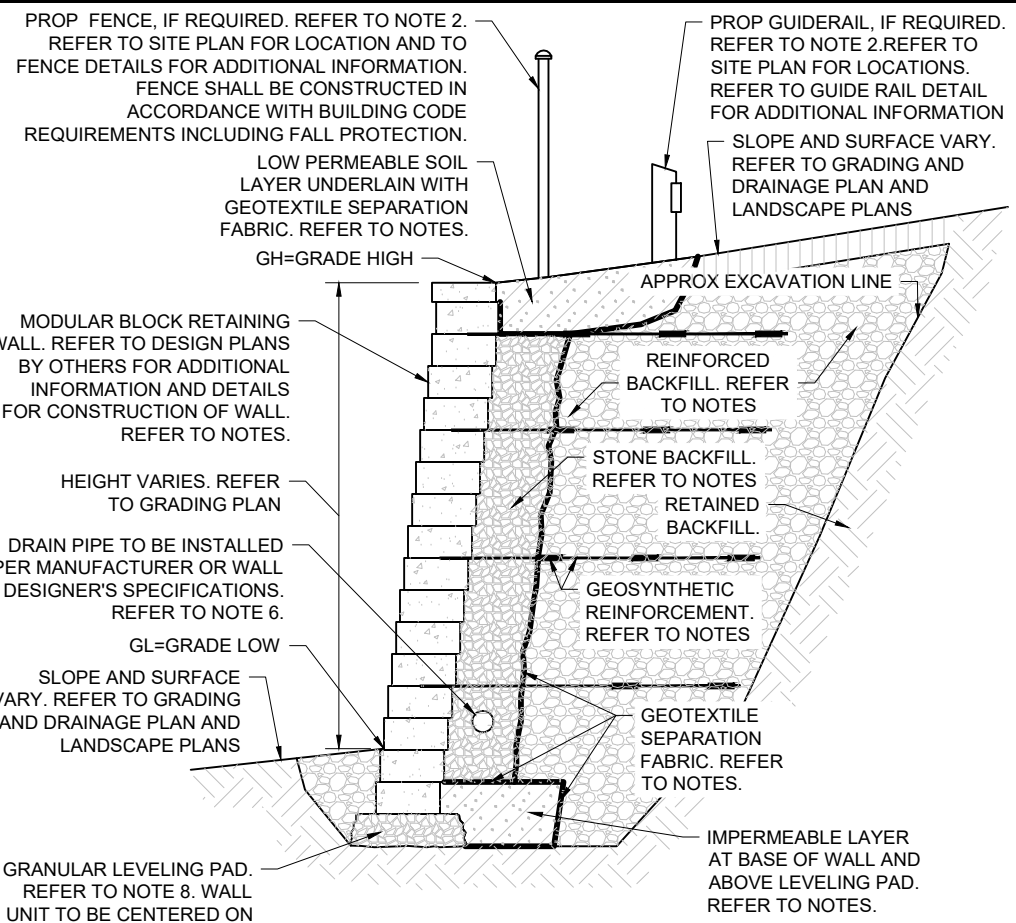
**PRECAST CONCRETE CATCH BASIN WITH DOUBLE GRATE**  
NOT TO SCALE (NE-U010202 - 11/2024)



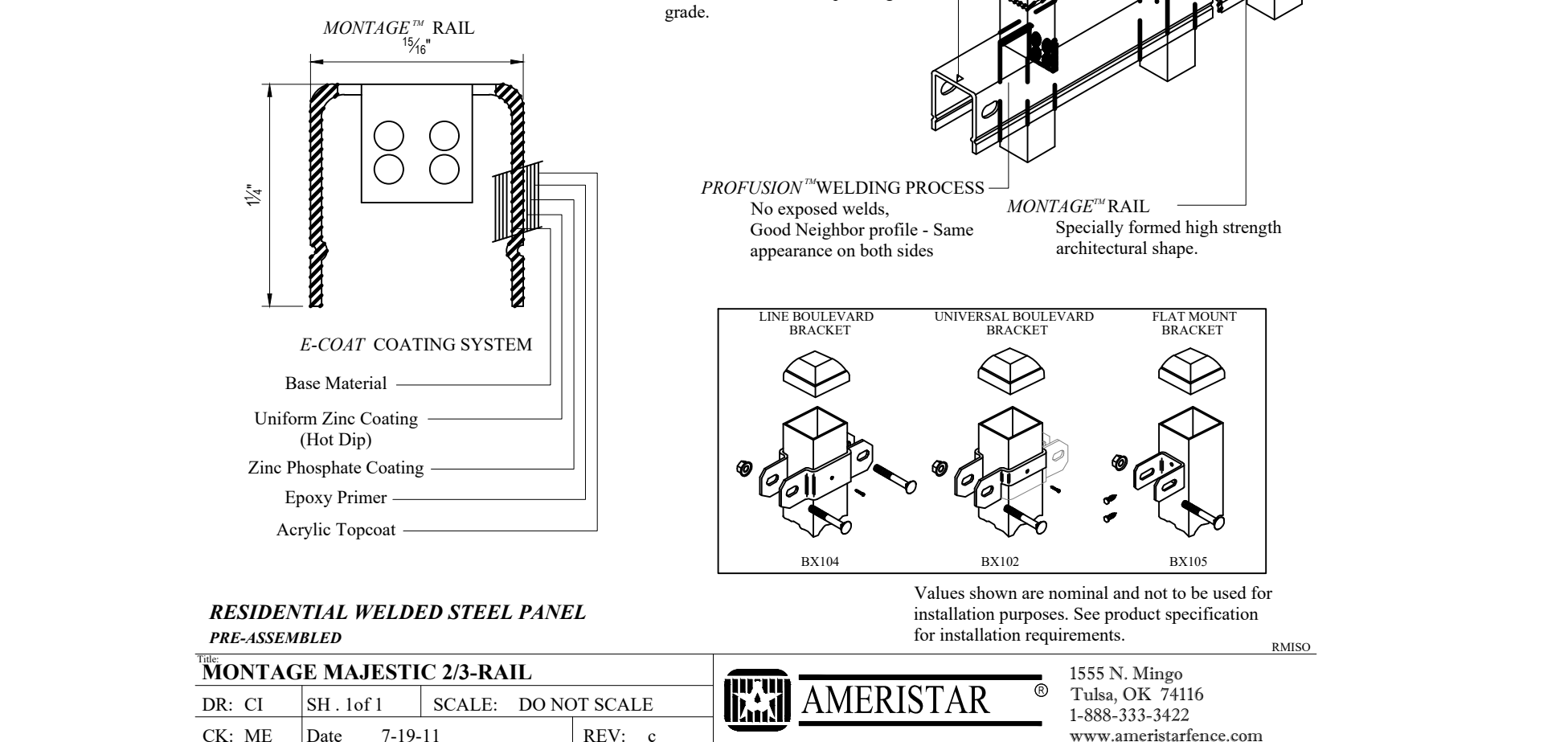
**ORNAMENTAL FENCE DETAIL**  
NOT TO SCALE (NE-S110501 - 02/2024)



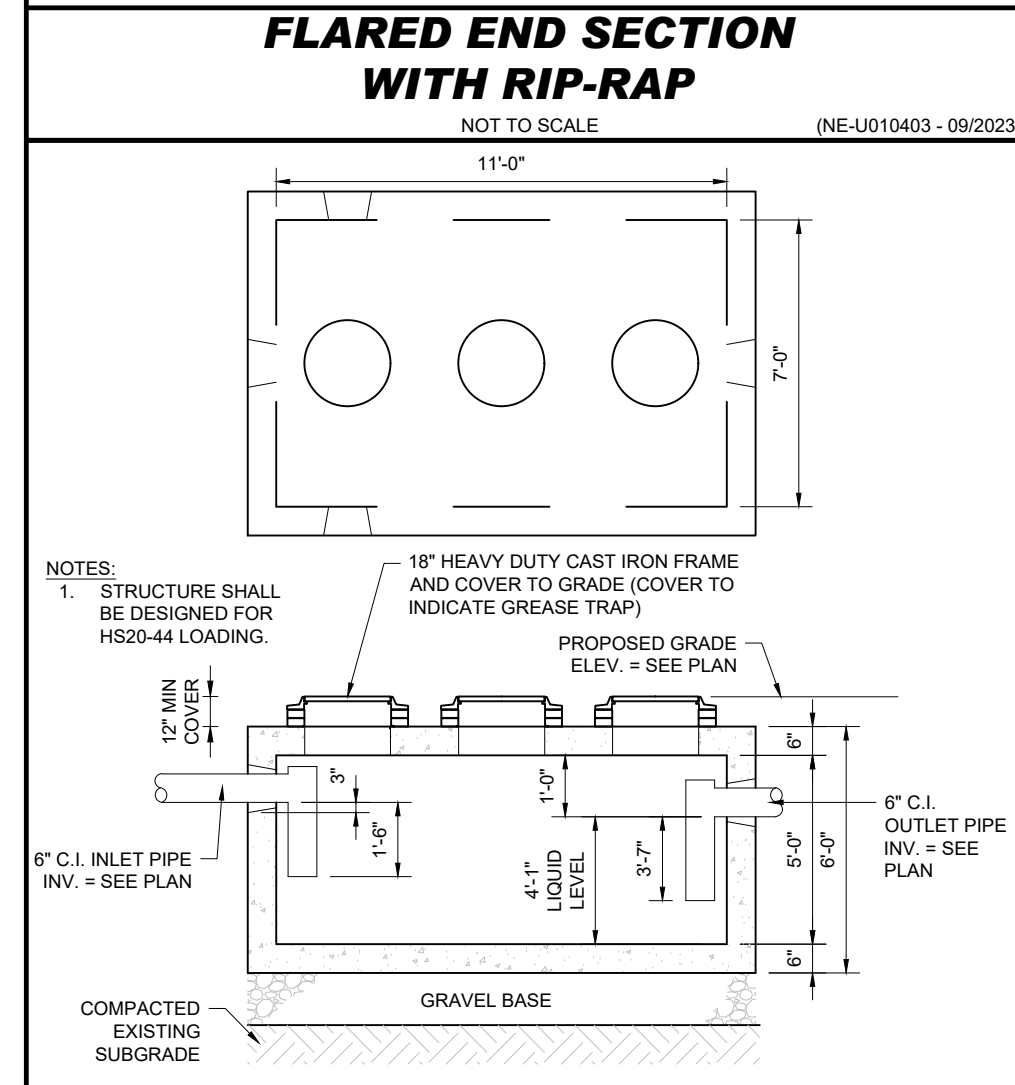
**FLARED END SECTION WITH RIP-RAP**  
NOT TO SCALE (NE-U010403 - 09/2023)



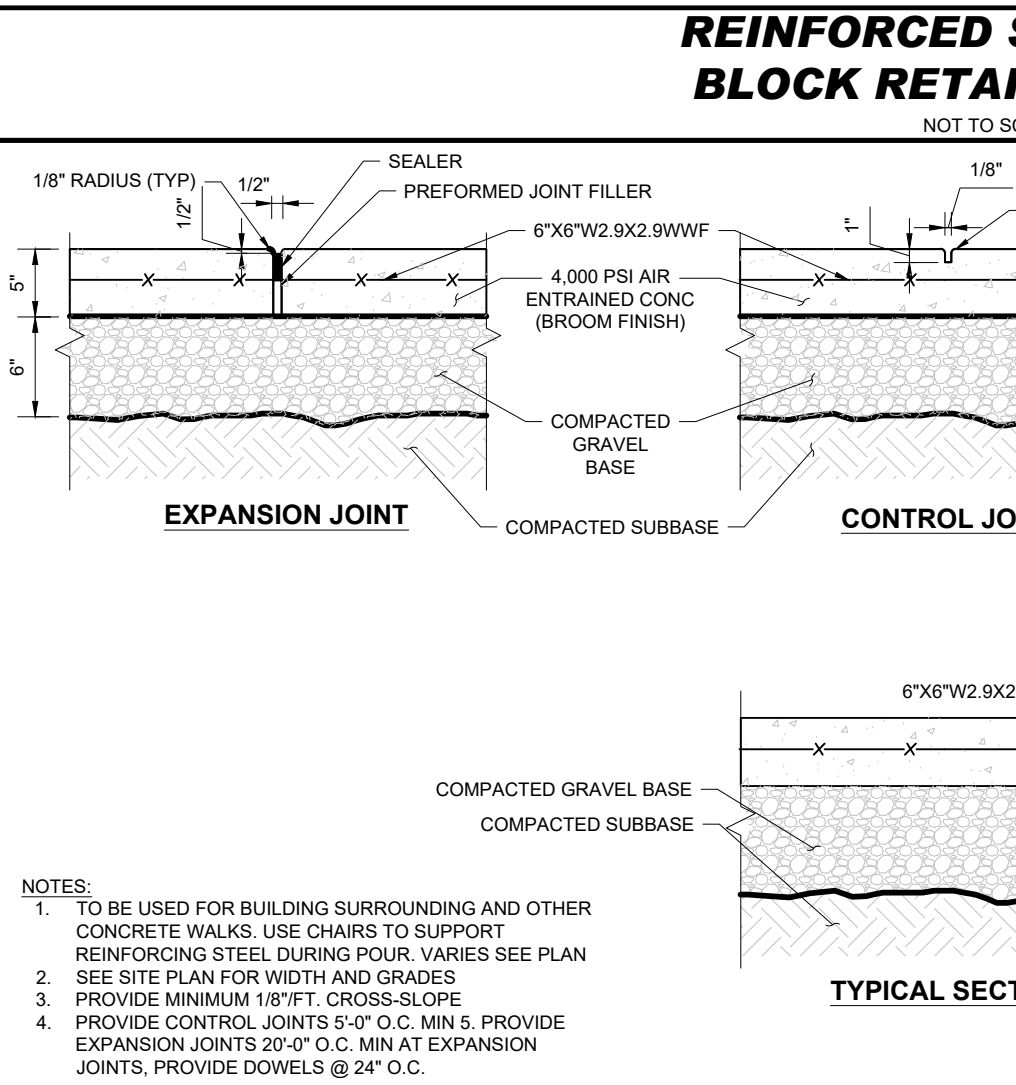
**REINFORCED SEGMENTAL BLOCK RETAINING WALL**  
NOT TO SCALE (NE-S110501 - 02/2024)



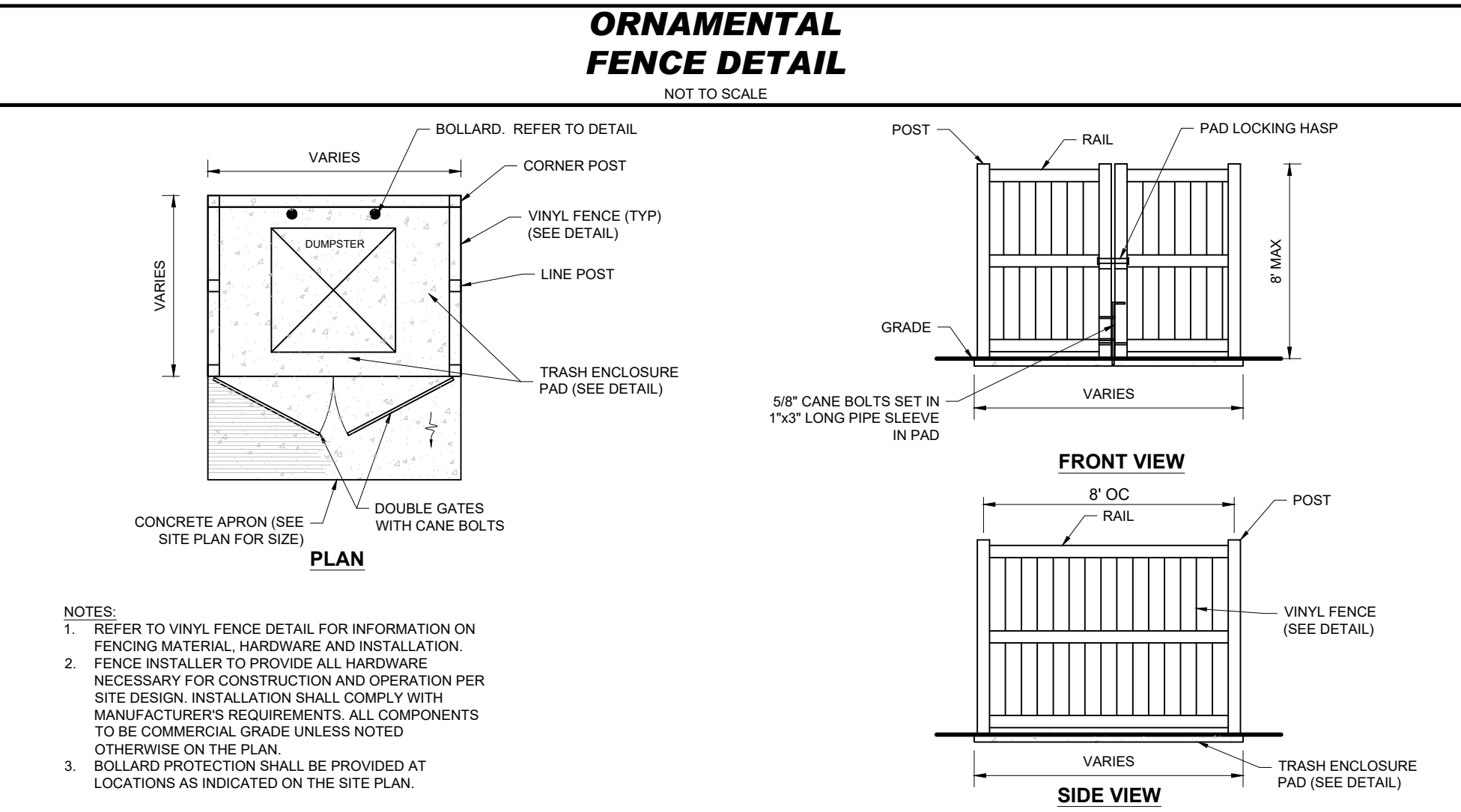
**RESIDENTIAL WELDED STEEL PANEL**  
PRE-ASSEMBLED  
MONTAGE MAJESTIC 2/3-RAIL  
NOT TO SCALE (NE-S110501 - 02/2024)



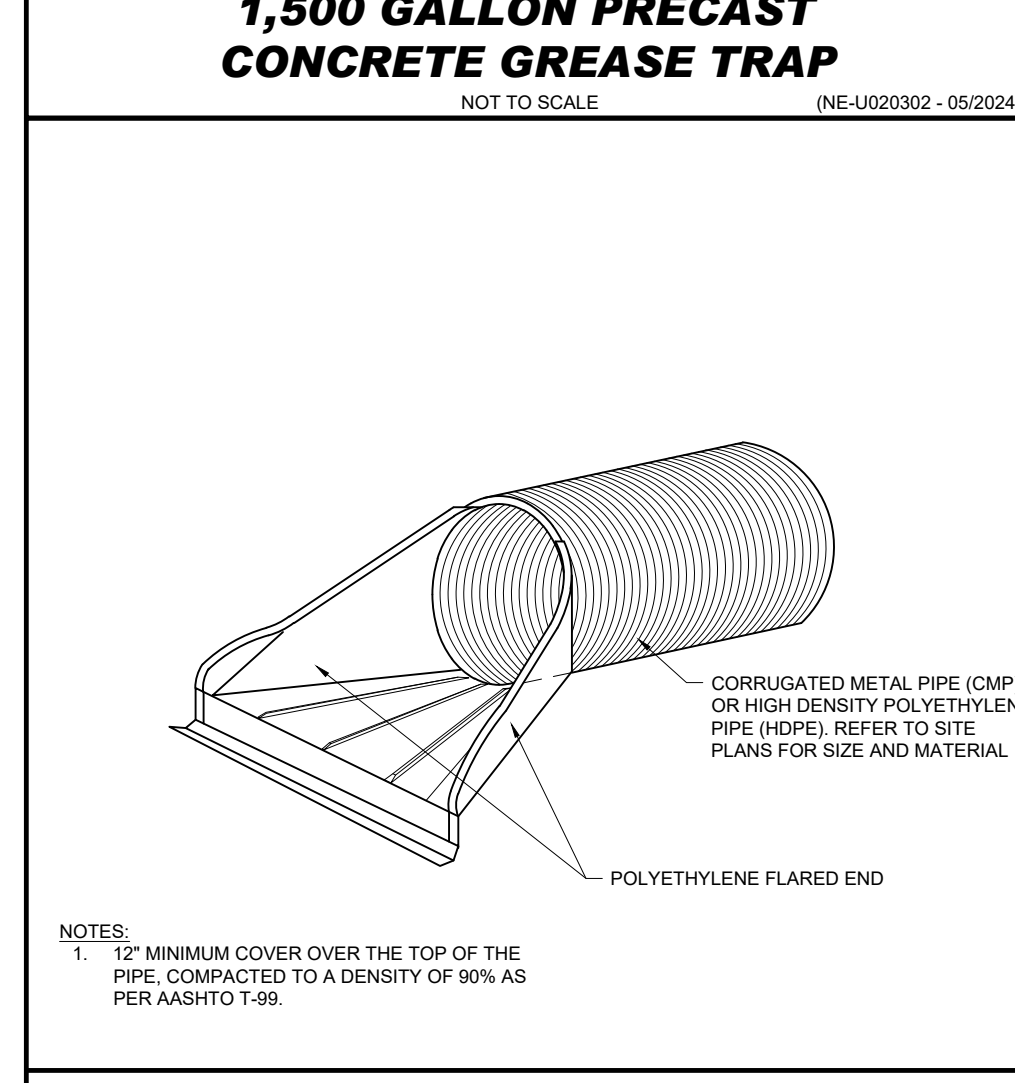
**1,500 GALLON PRECAST CONCRETE GREASE TRAP**  
NOT TO SCALE (NE-U020302 - 05/2024)



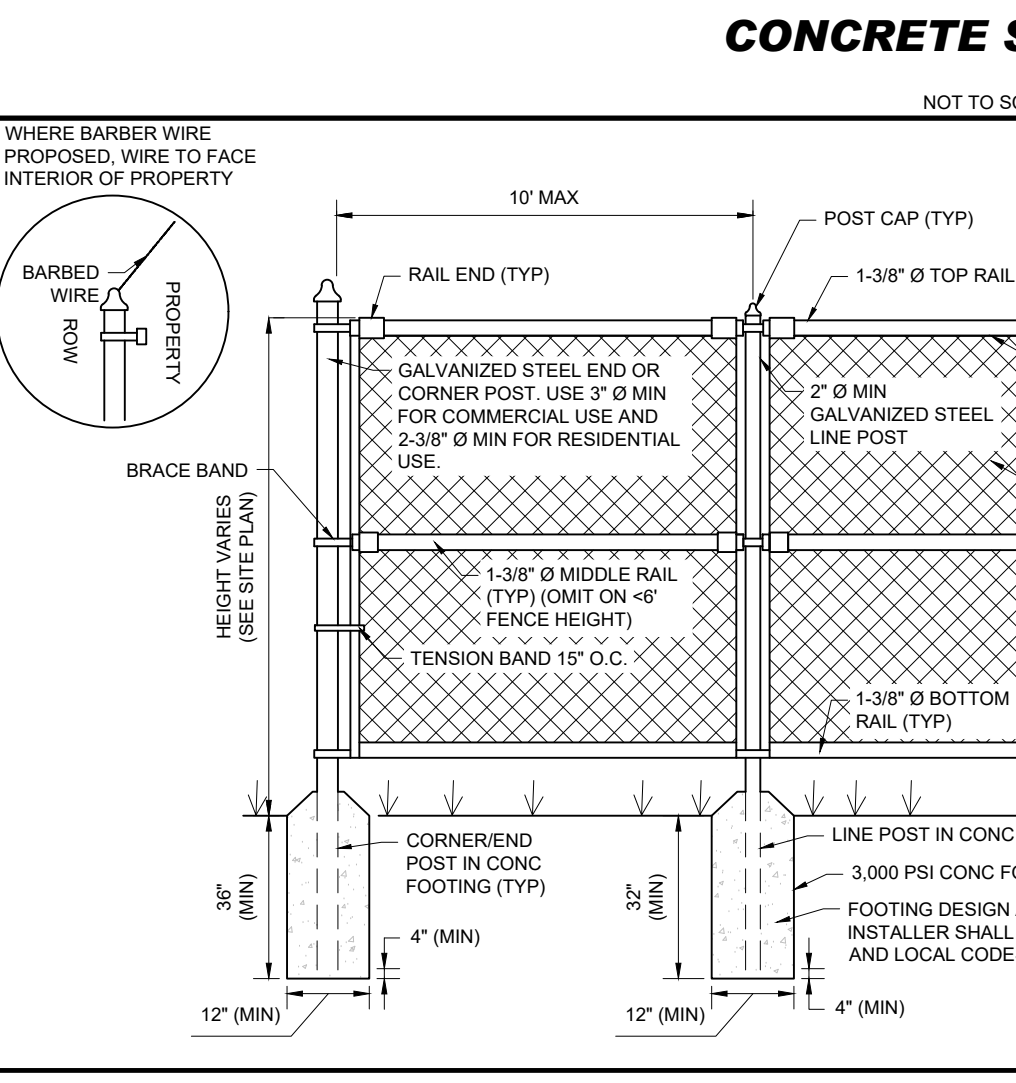
**CONCRETE SIDEWALK**  
NOT TO SCALE (NE-S030201 - 10/2024)



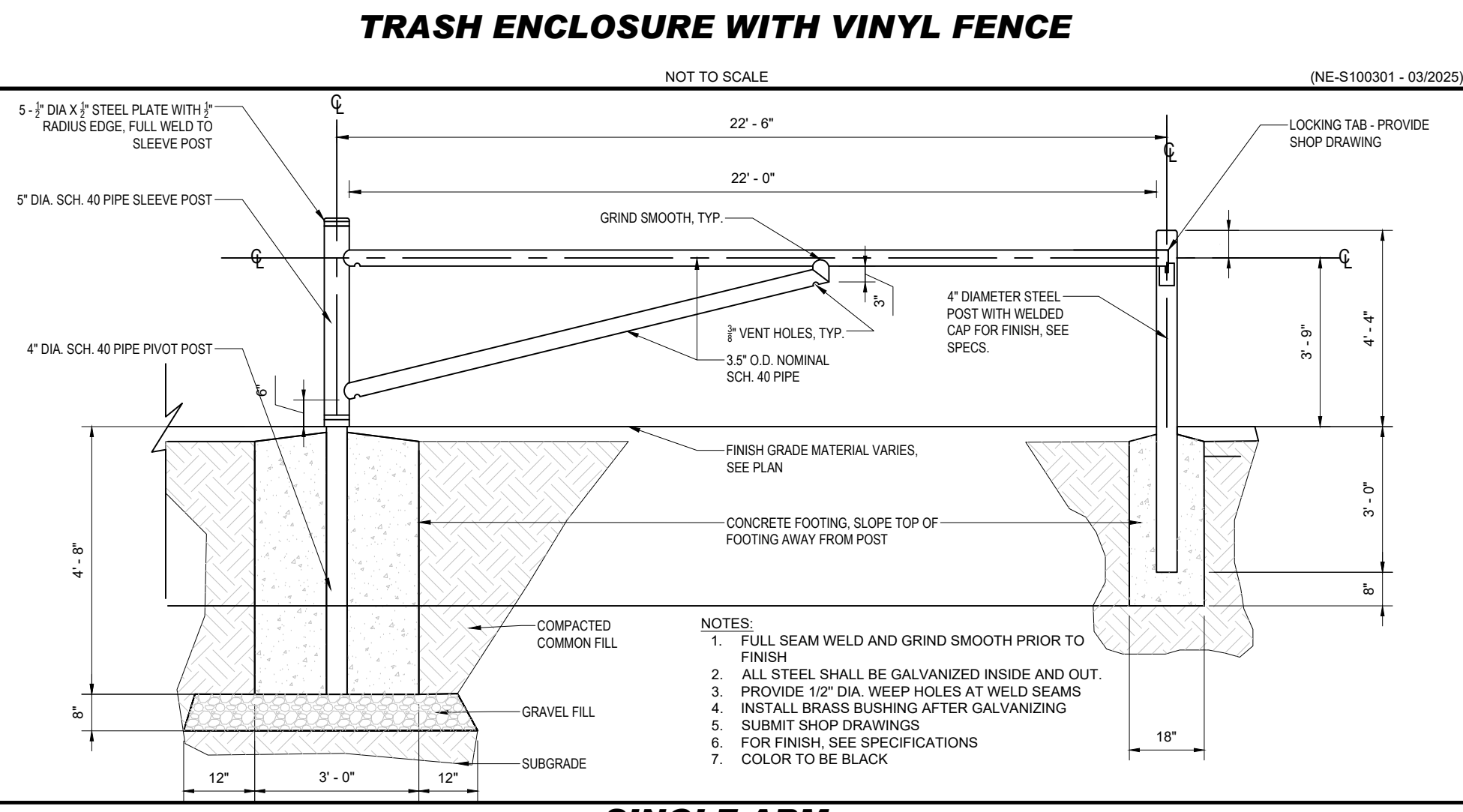
**TRASH ENCLOSURE WITH VINYL FENCE**  
NOT TO SCALE (NE-S100301 - 03/2025)



**POLYETHYLENE FLARED END SECTION**  
NOT TO SCALE (NE-U010401 - 09/2023)



**CHAIN LINK FENCE**  
NOT TO SCALE (NE-S080204 - 10/2024)



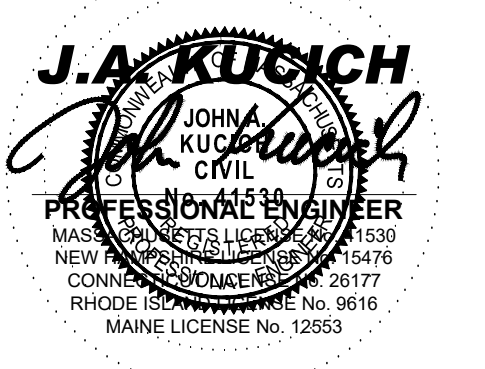
**SINGLE ARM SWING GATE**  
NOT TO SCALE (NE-S080901 - 09/2023)

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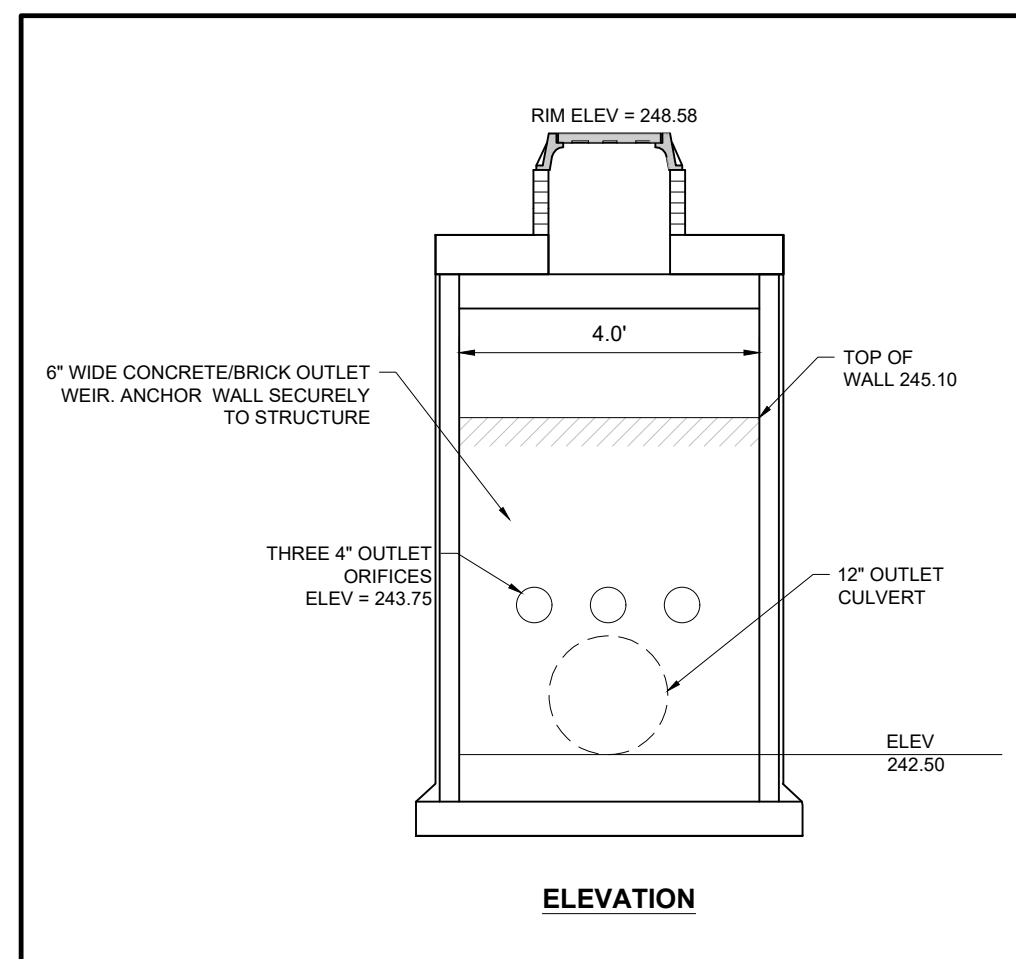


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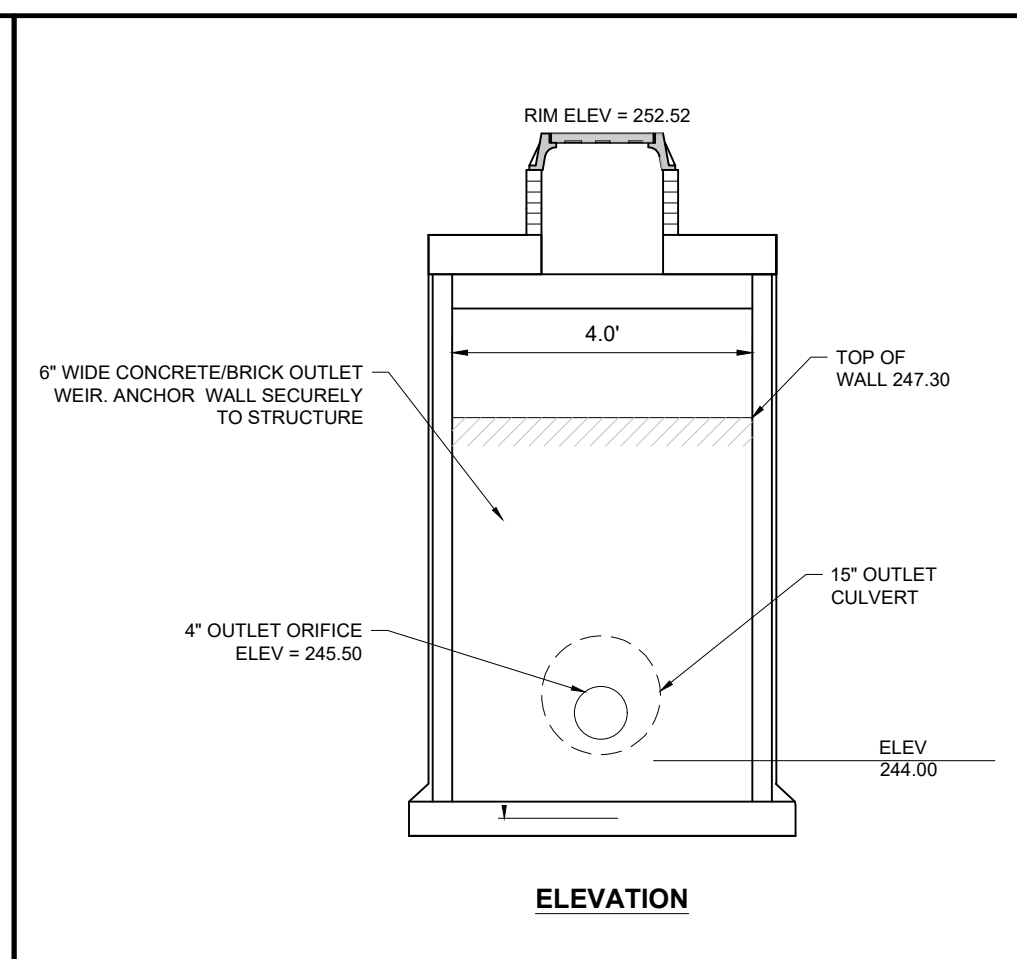
CONSTRUCTION DETAILS

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

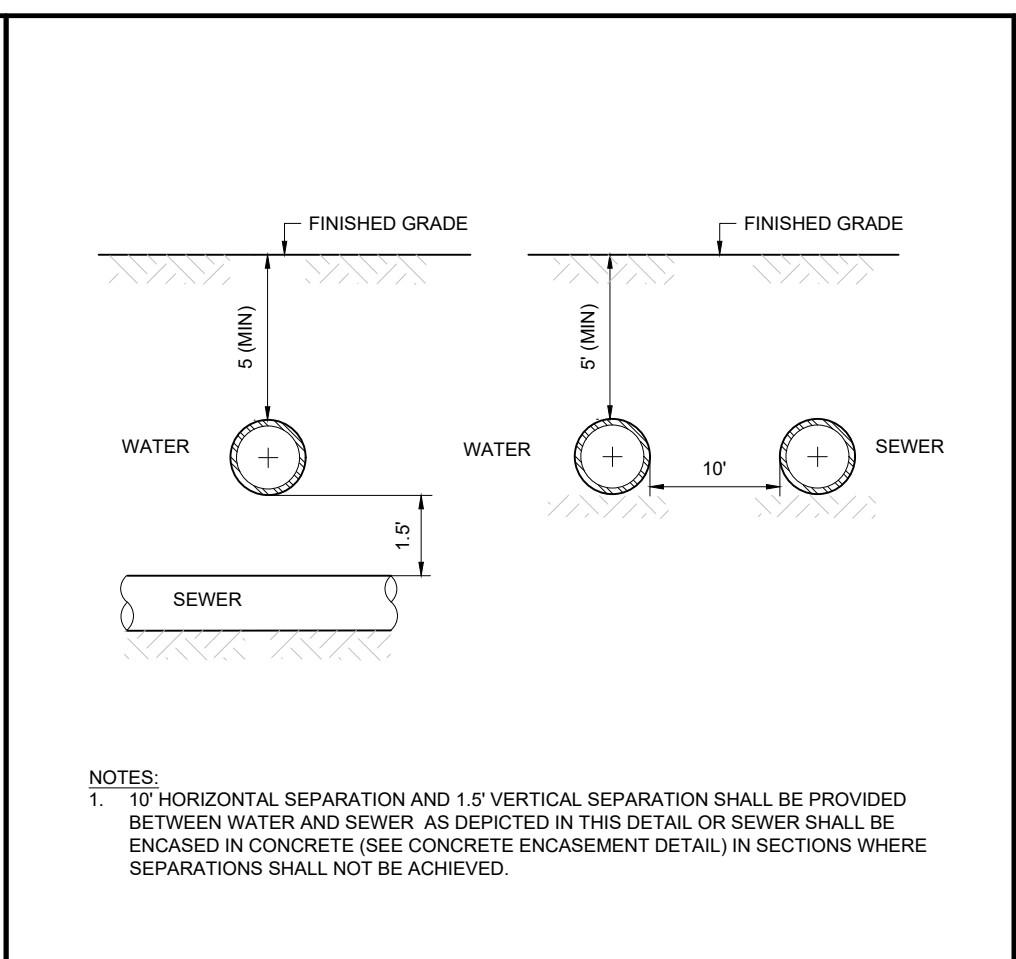
**C-902**



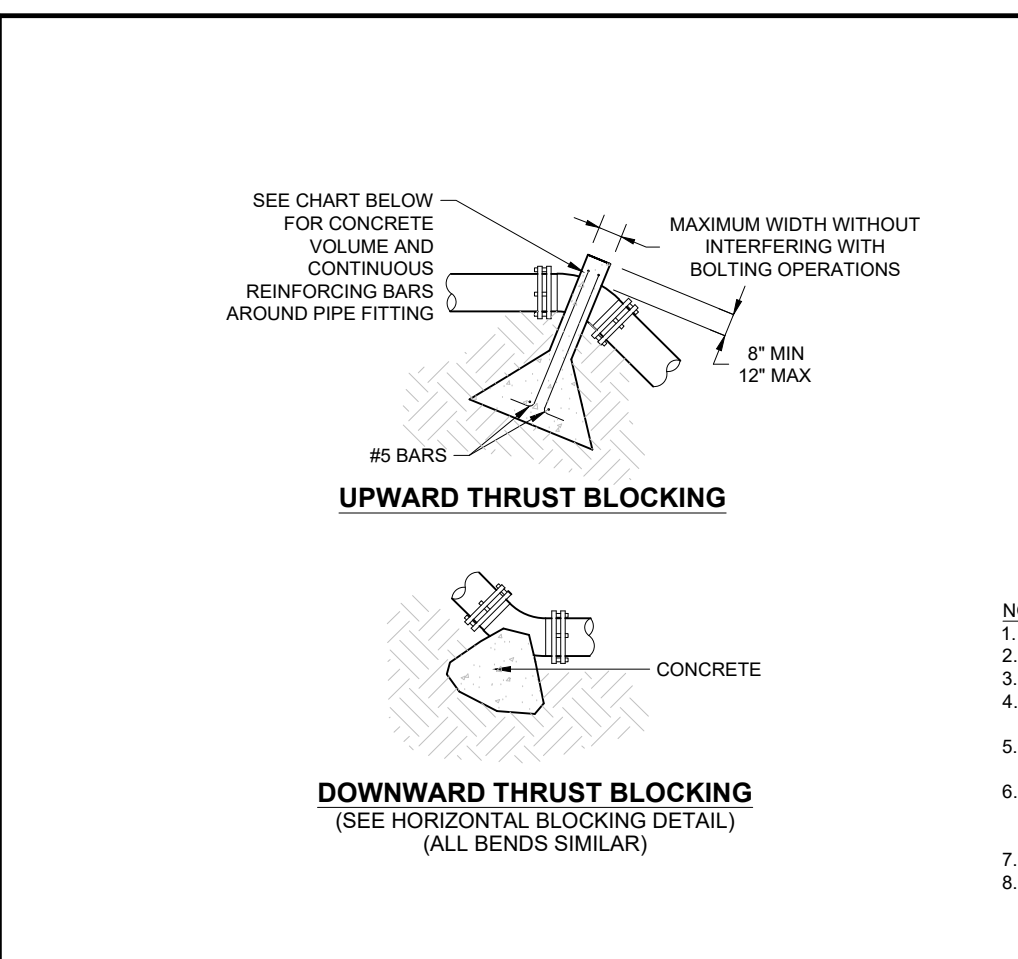
**OUTLET CONTROL STRUCTURE B-30 (BASIN 1)**  
NOT TO SCALE (NE-U010103 - 11/2024)



**OUTLET CONTROL STRUCTURE A-30 (BASIN 2)**  
NOT TO SCALE (NE-U010103 - 11/2024)



**WATER AND SEWER UTILITY CROSSING**  
NOT TO SCALE (NE-U050101 - 09/2023)

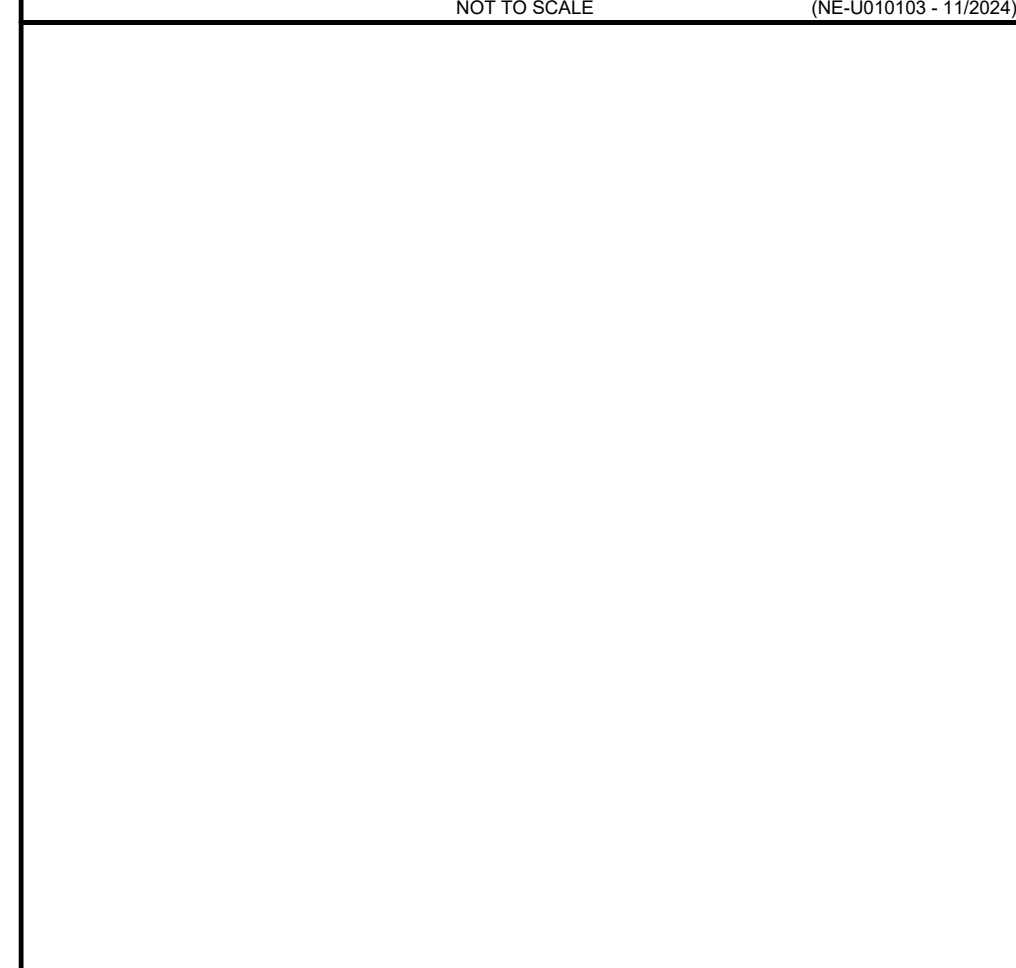


**VERTICAL THRUST BLOCKING**  
NOT TO SCALE (NE-U030502 - 11/2024)

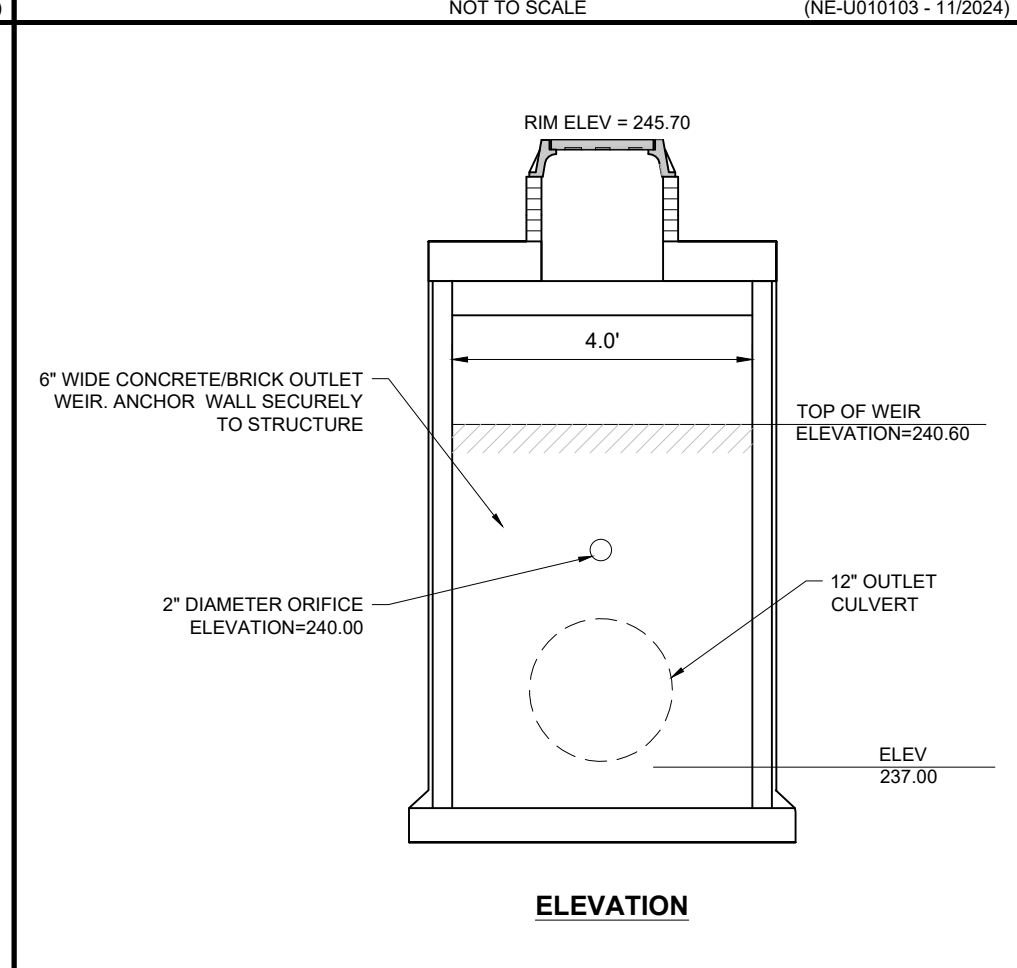
UPWARD THRUST BLOCKING  
(REQUIRED REINFORCING BARS & CUBIC YARDS OF P.C. CONCRETE)

PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND	
	CONC. CY	REINF. QTY	CONC. CY	REINF. QTY	CONC. CY	REINF. QTY	CONC. CY	REINF. QTY
6"	1.5	3	1.5	3	1.25	2	1.25	2
8"	2	3	2	3	1.5	2	1.5	2
10"	2.5	3	2.5	3	2	3	2	3
12"	3	3	3	3	2.5	3	2.5	3

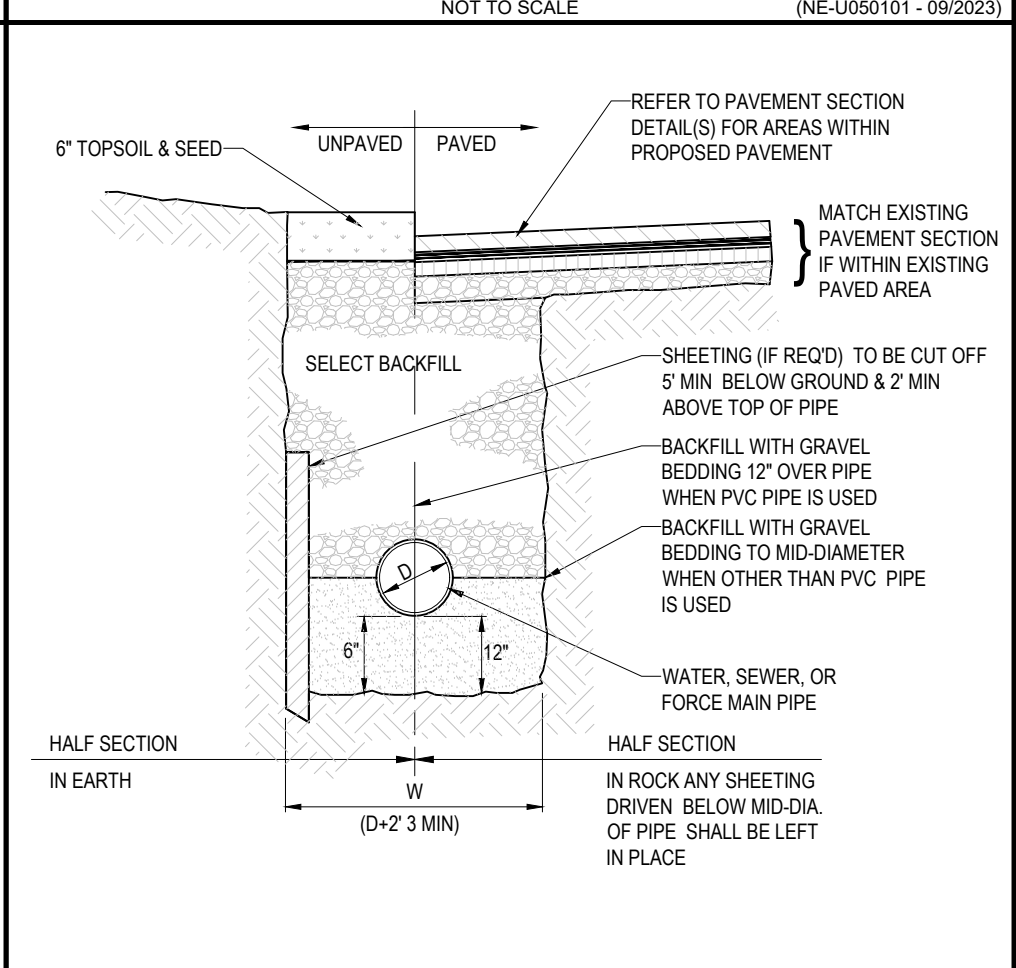
NOTES:  
1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE.  
2. WRAP ALL FITTINGS WITH VISQUEEN.  
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.  
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.  
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE 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.



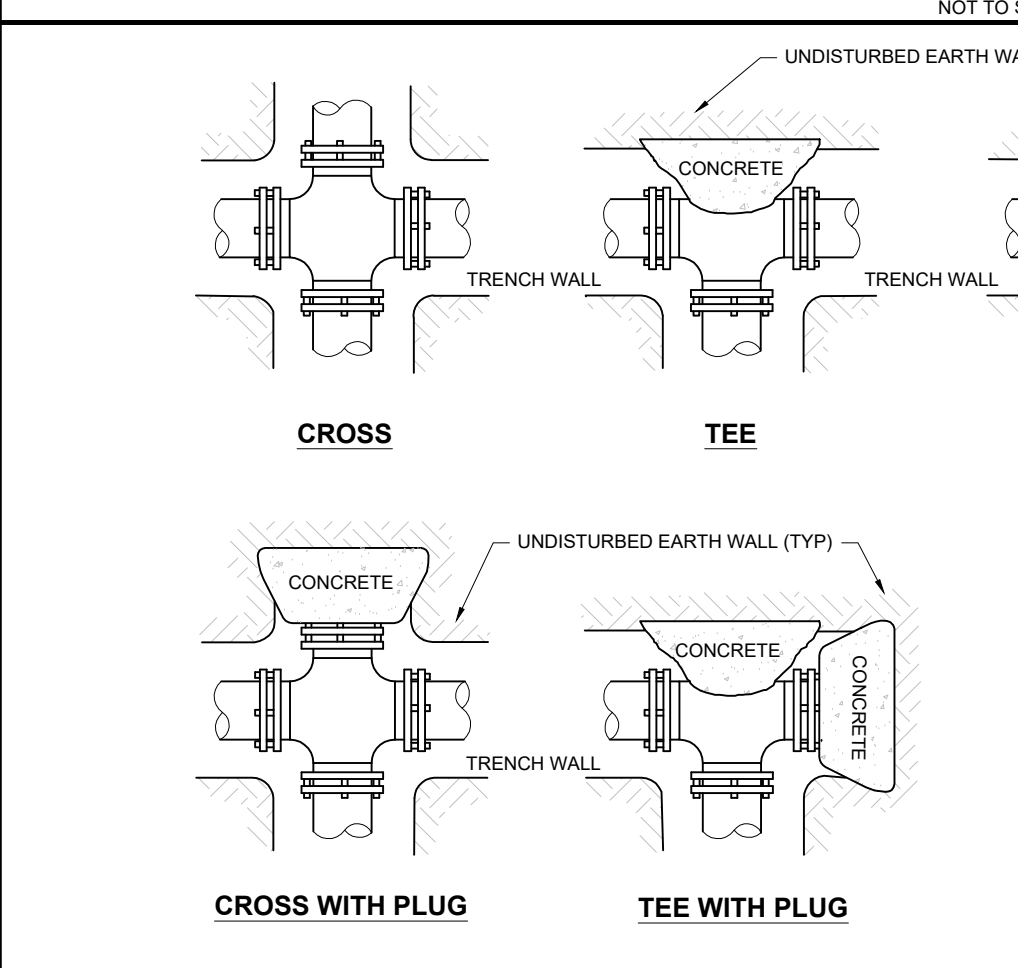
**OUTLET CONTROL STRUCTURE A-20 (BASIN 3)**  
NOT TO SCALE (NE-U010103 - 11/2024)



**TYPICAL UTILITY TRENCH**  
NOT TO SCALE (NE-U050201 - 09/2024)



**HORIZONTAL THRUST BLOCKING**  
NOT TO SCALE (NE-U030501 - 11/2024)

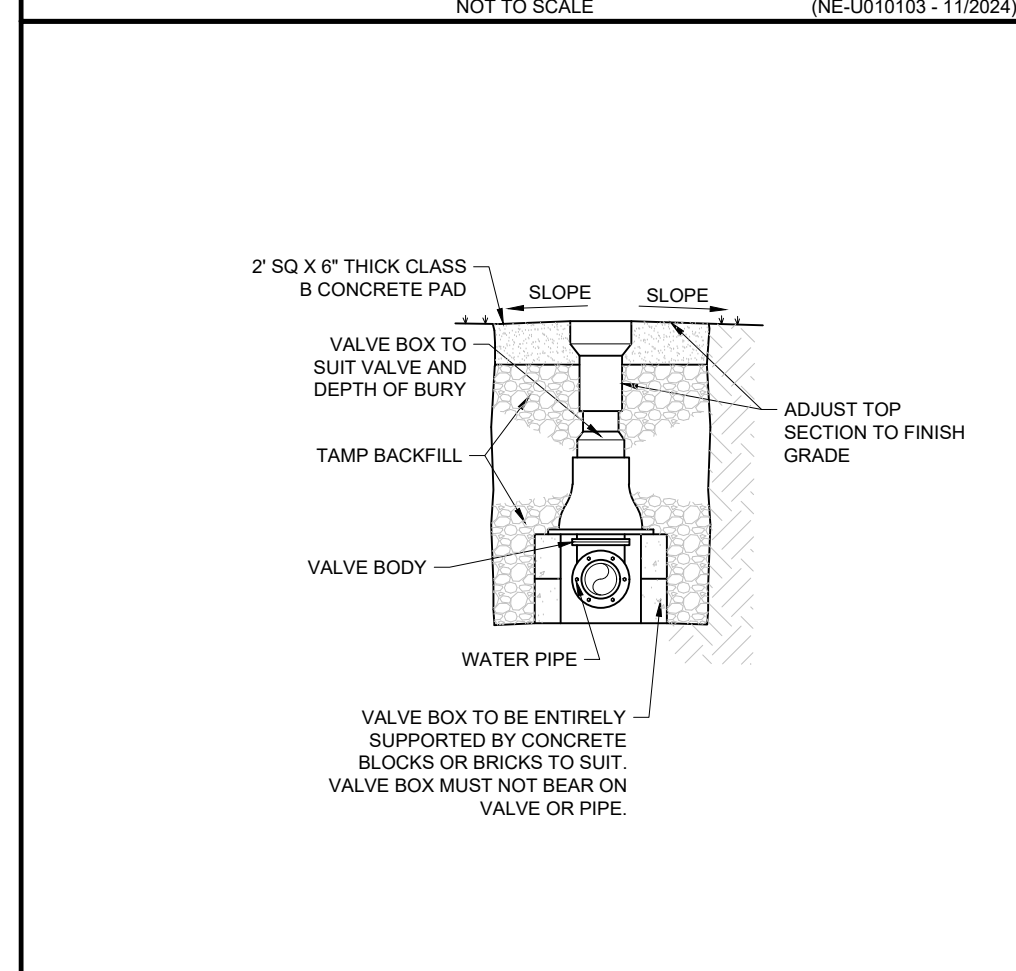


**PRECAST CONCRETE STORM DRAIN MANHOLE**  
NOT TO SCALE (NE-U010101 - 11/2024)

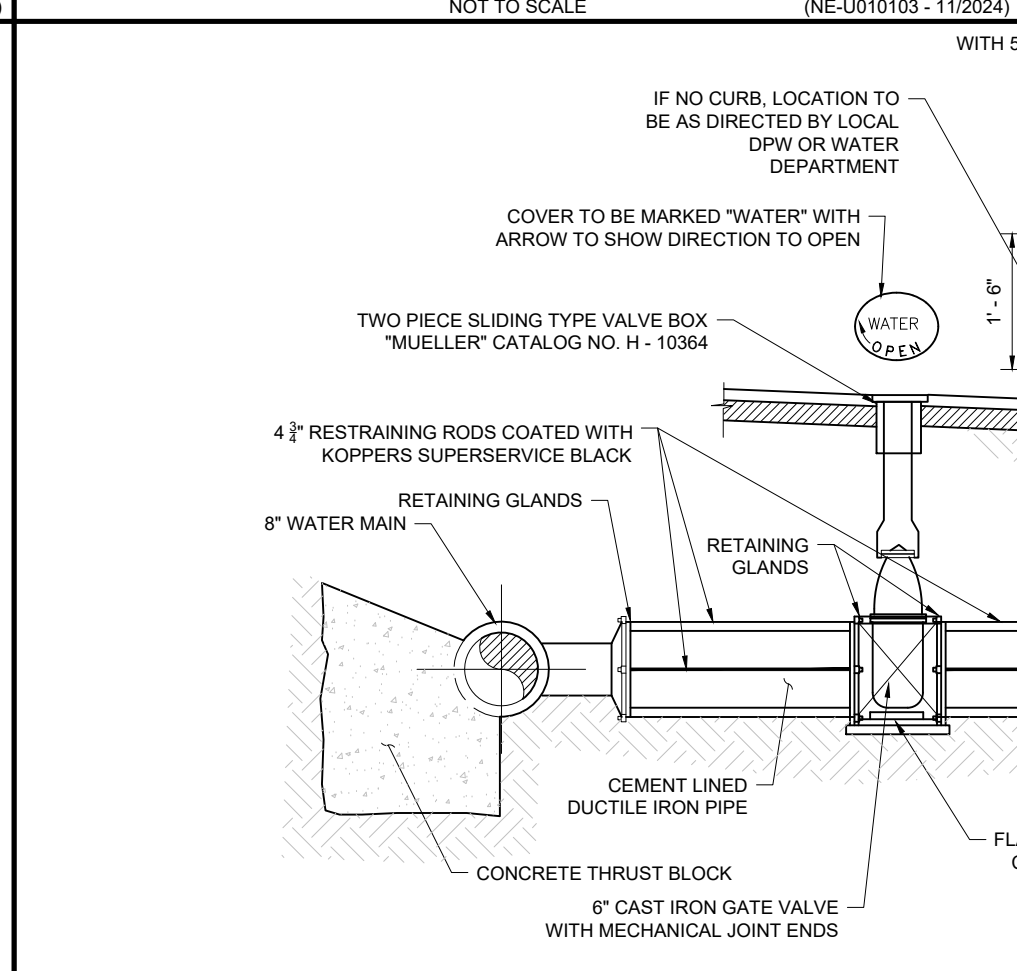
HORIZONTAL THRUST BLOCKING  
(BLOCKING HEIGHT GREATER THAN PIPE OD)  
(BLOCKING WIDTH BETWEEN 1 & 2 TIMES HEIGHT)  
REQUIRED SF OF UNDISTURBED EARTH WALL FOR REACTION BACKING

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

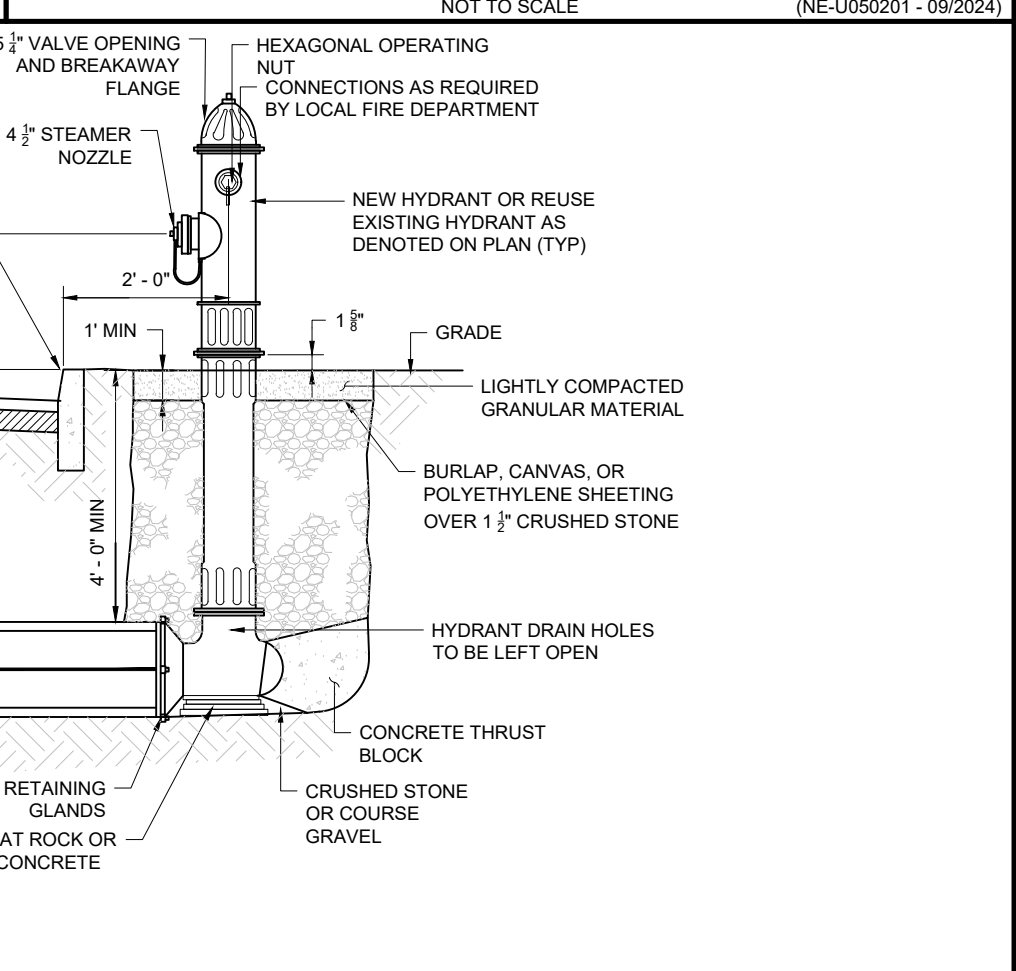
NOTES:  
1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE.  
2. WRAP ALL FITTINGS WITH VISQUEEN.  
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.  
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.  
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE 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.



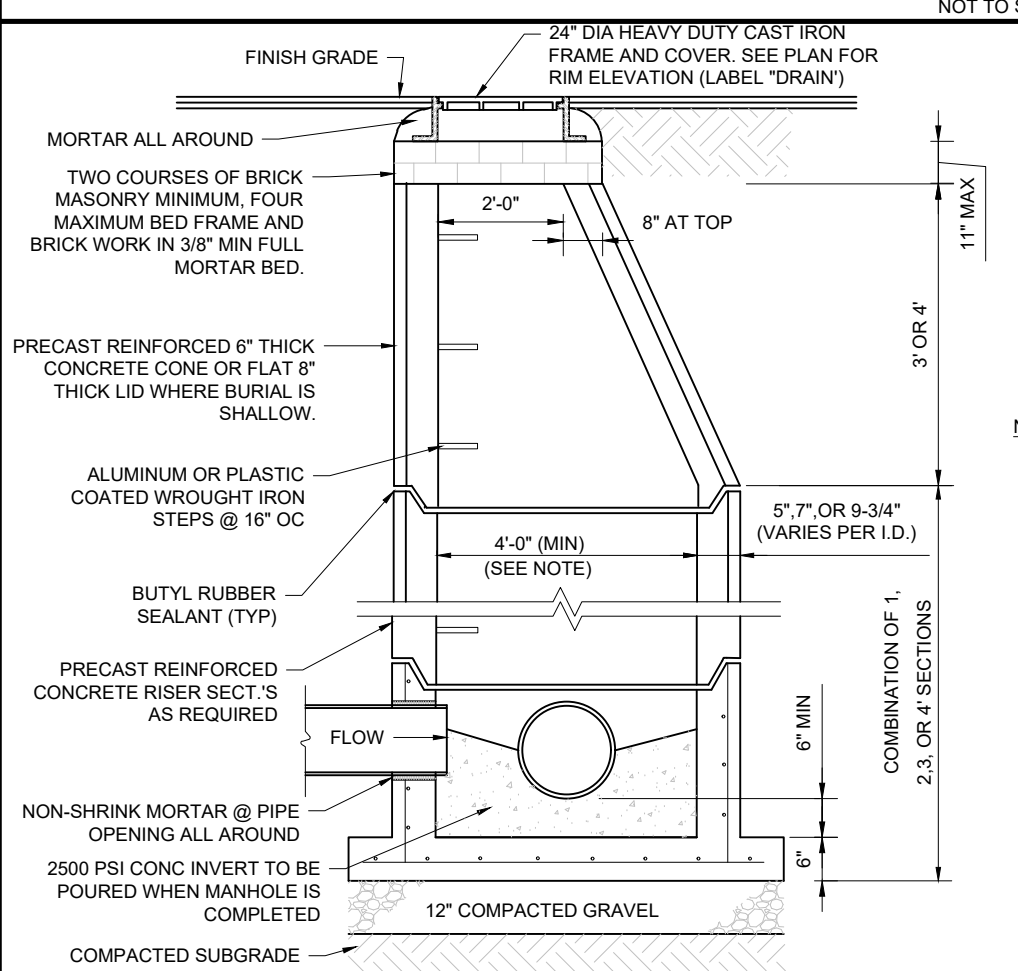
**GATE VALVE**  
NOT TO SCALE (NE-U030201 - 09/2023)



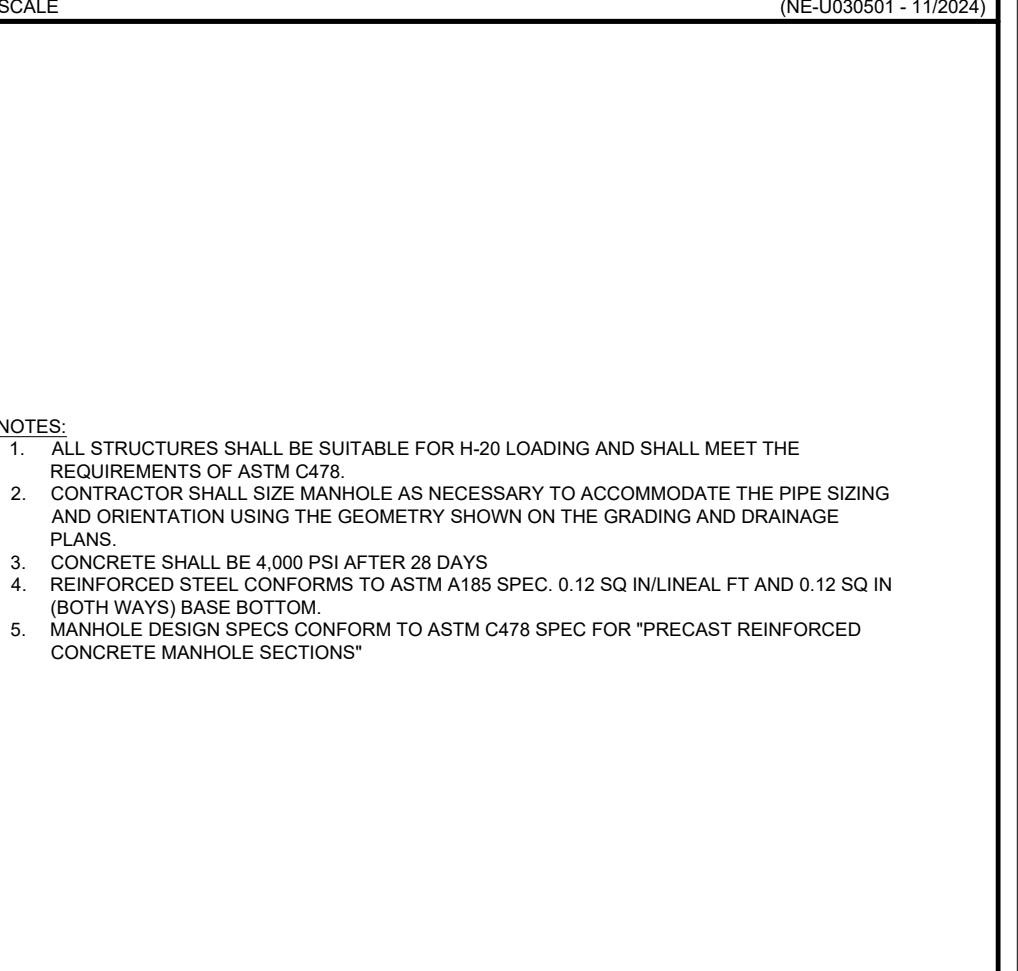
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NOT TO SCALE (NE-U030101 - 11/2024)



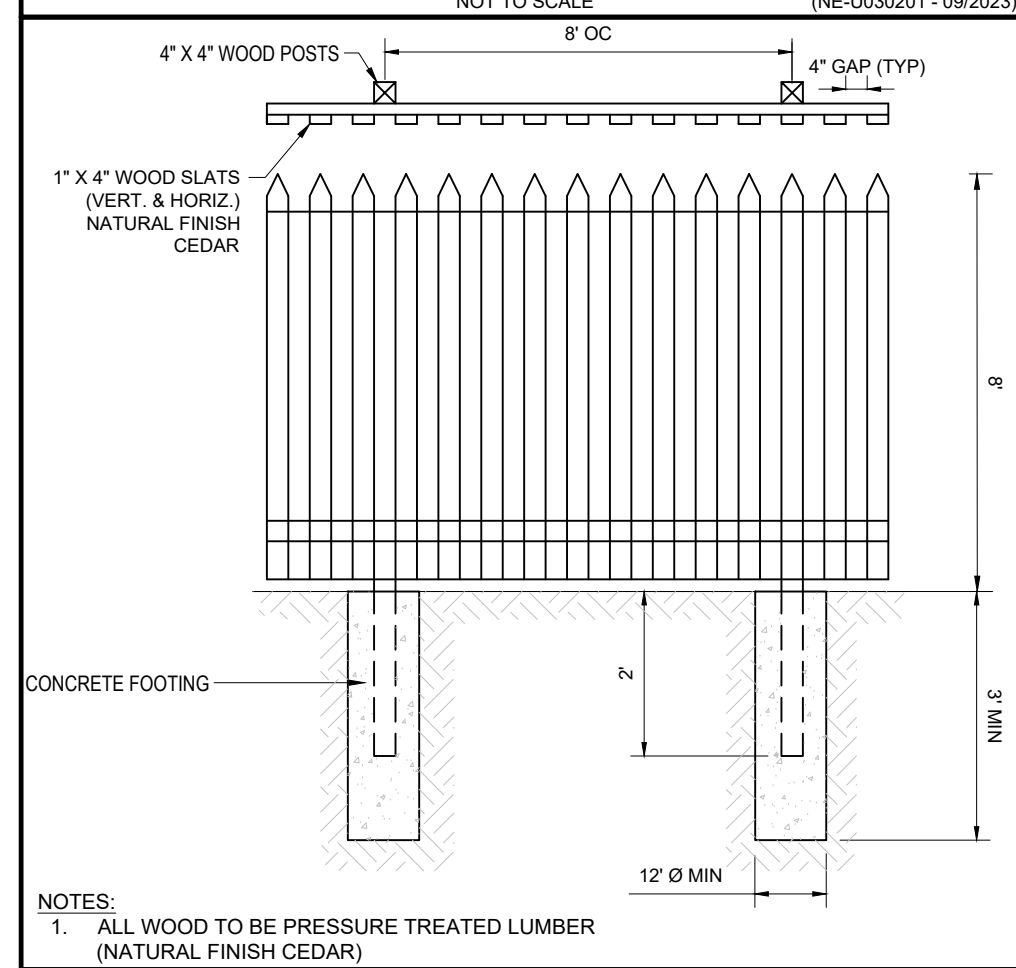
**CLEANOUT (IN-LINE)**  
NOT TO SCALE (NE-U010302 - 11/2024)



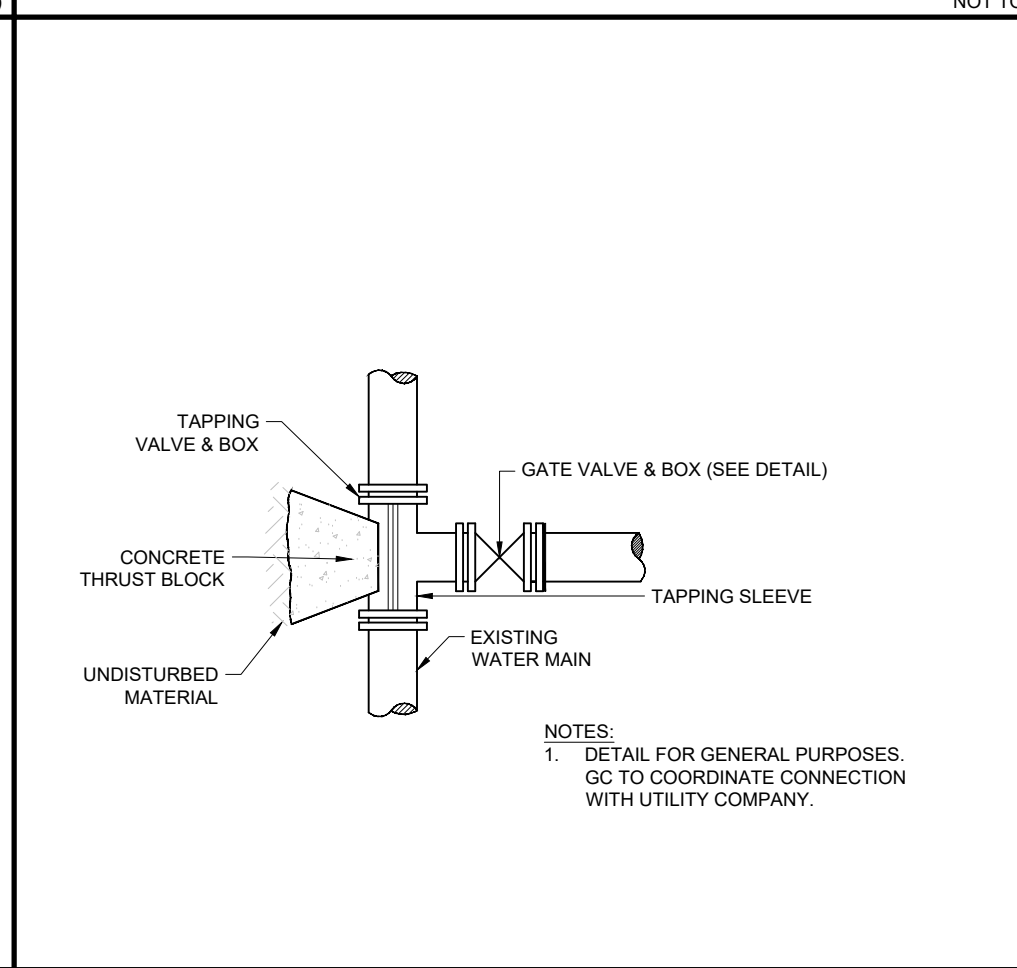
**GRAVEL TRAIL SURFACE DETAIL**  
NOT TO SCALE



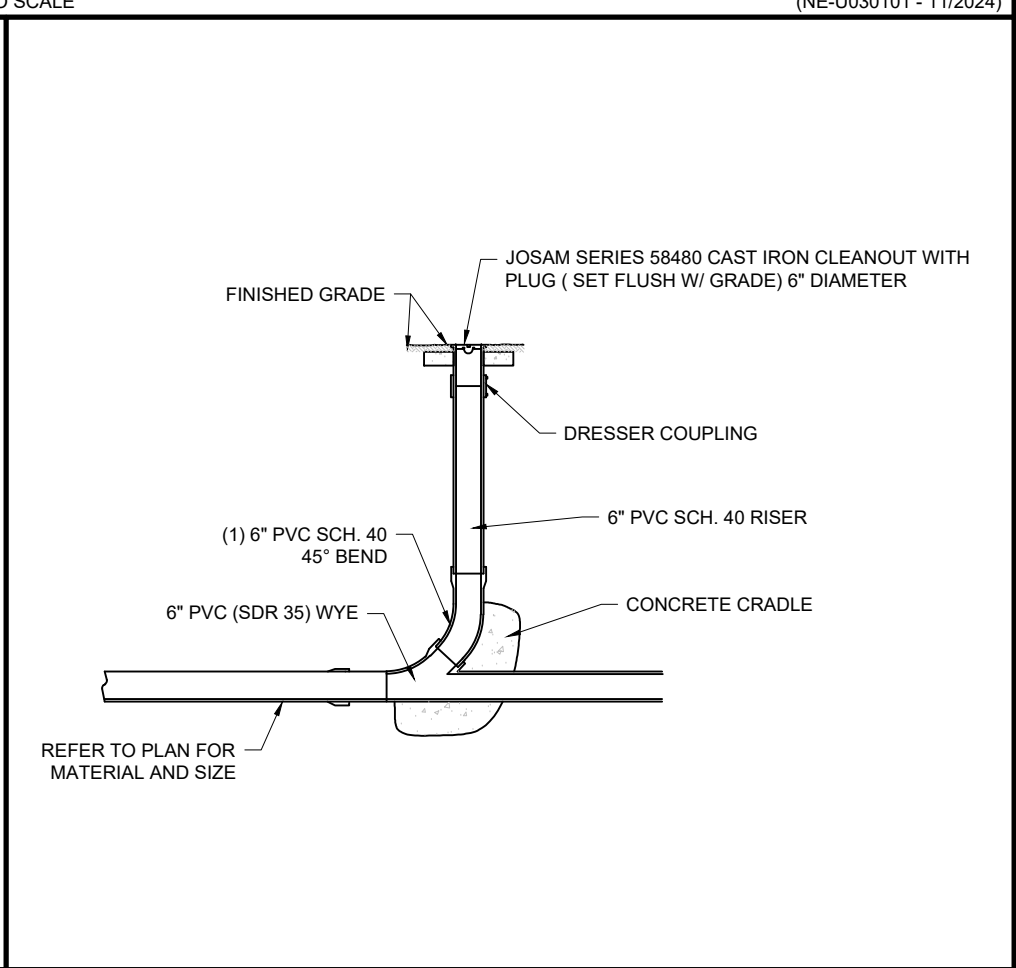
**TAPPING SLEEVE AND GATE VALVE**  
NOT TO SCALE (NE-U030401 - 11/2024)



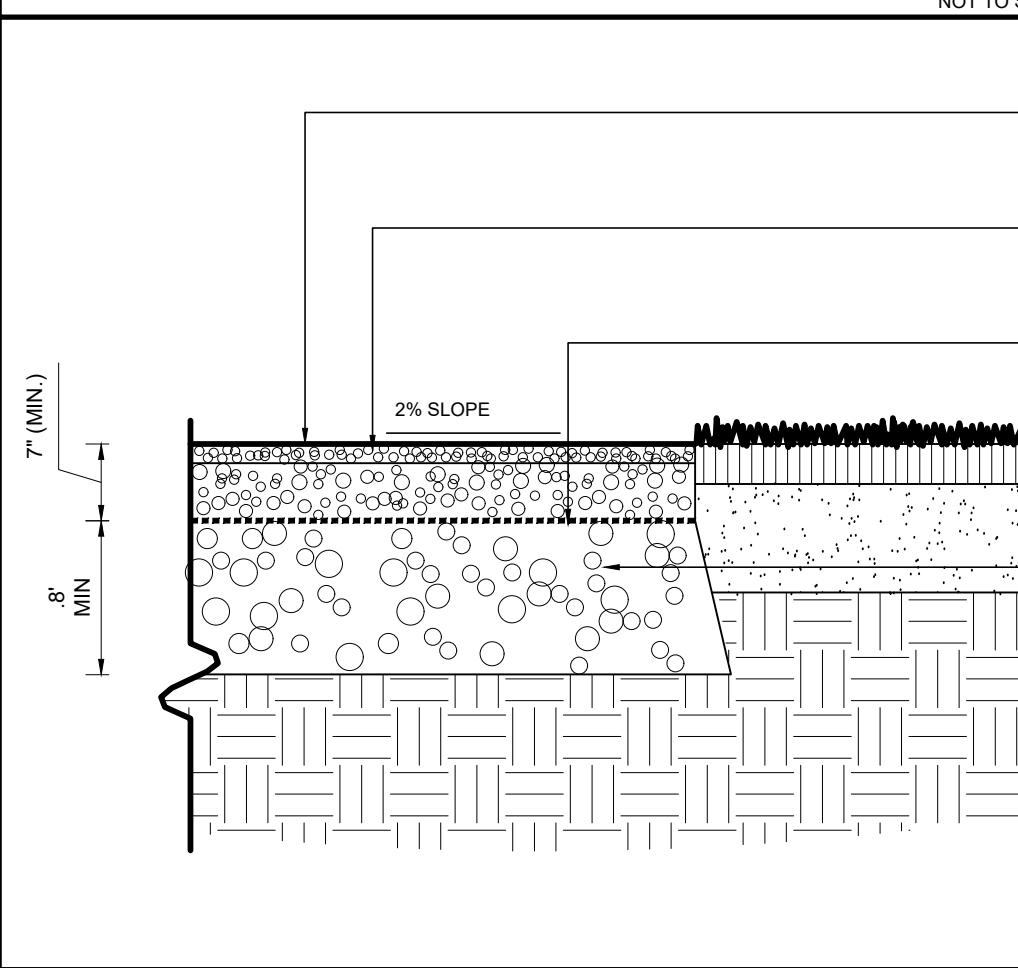
**CEDAR FENCE**  
NOT TO SCALE (NE-S080102 - 09/2023)



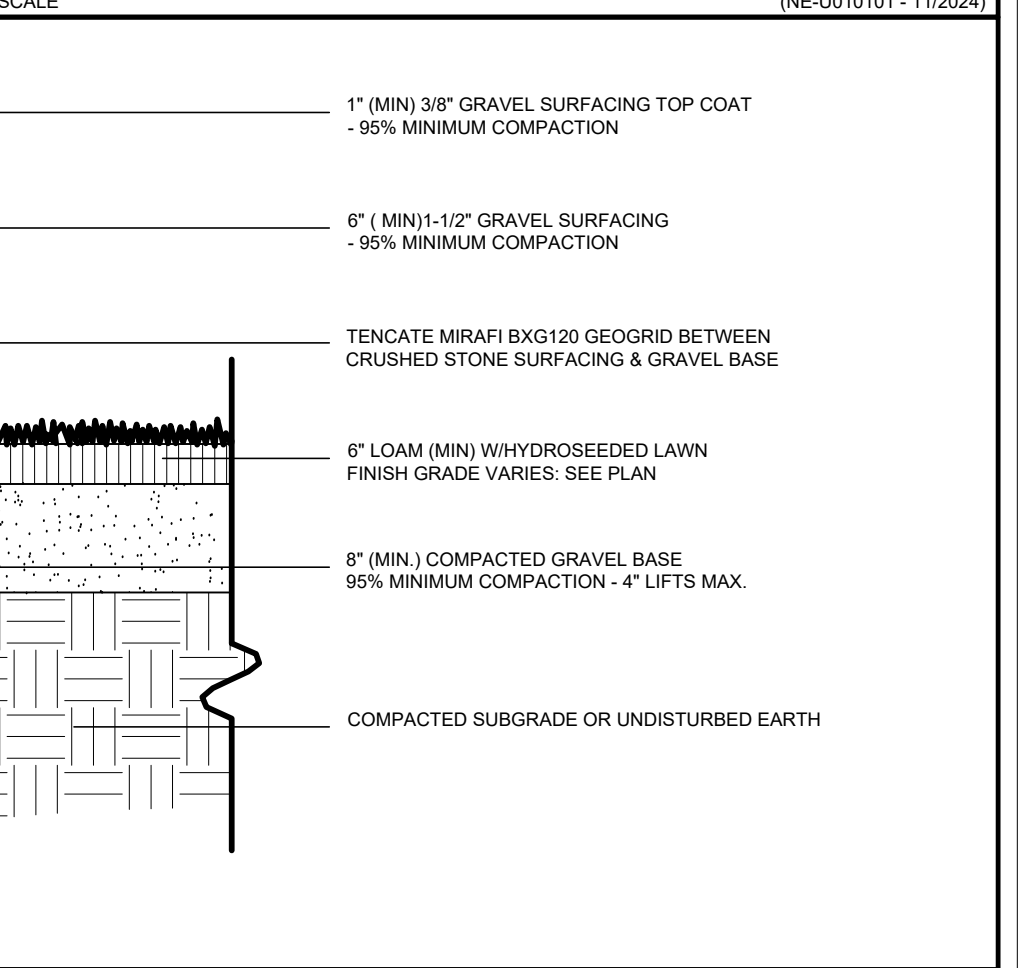
**TAPPING SLEEVE AND GATE VALVE**  
NOT TO SCALE (NE-U030401 - 11/2024)



**TAPPING SLEEVE AND GATE VALVE**  
NOT TO SCALE (NE-U030401 - 11/2024)



**TAPPING SLEEVE AND GATE VALVE**  
NOT TO SCALE (NE-U030401 - 11/2024)



**TAPPING SLEEVE AND GATE VALVE**  
NOT TO SCALE (NE-U030401 - 11/2024)

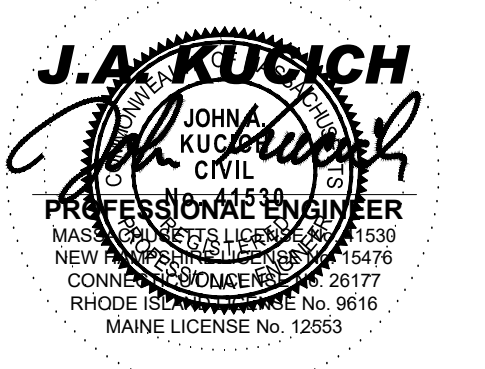
REVISIONS

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS

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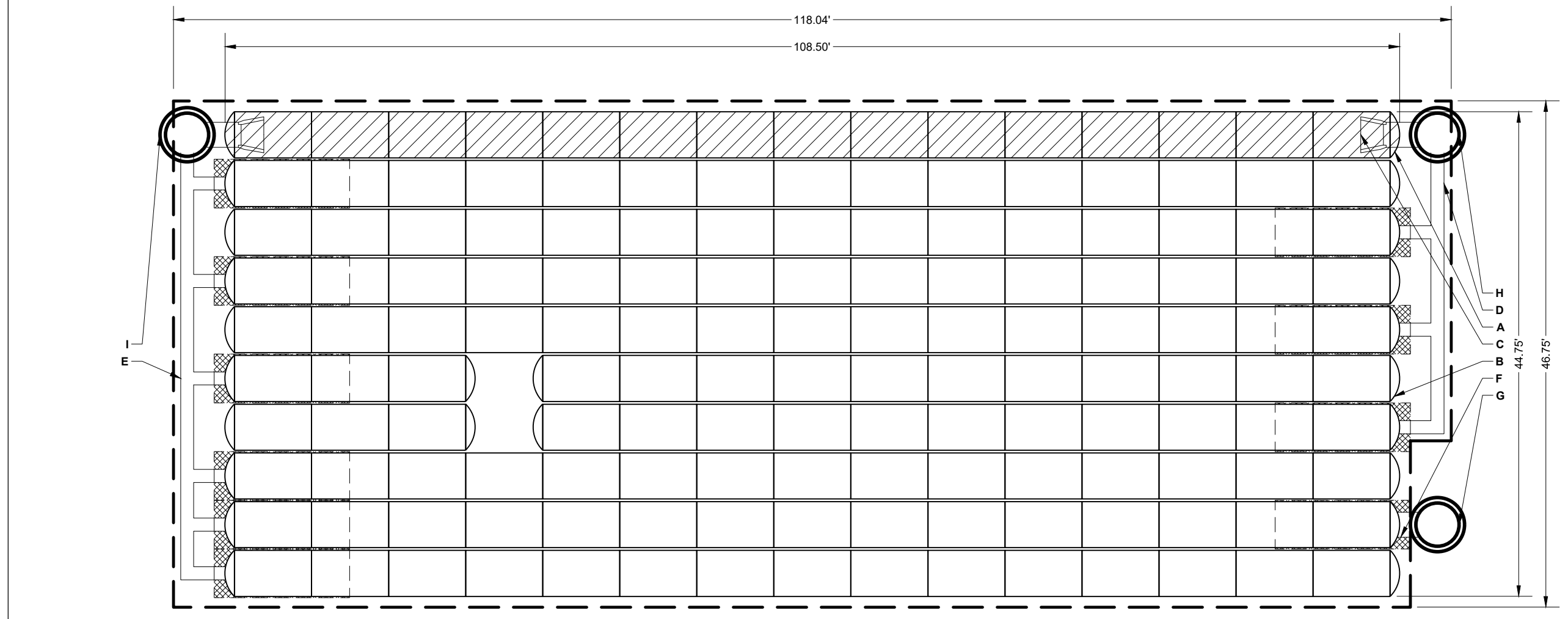
ISSUED FOR PERMIT

CONSTRUCTION DETAILS

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**C-903**

PROPOSED LAYOUT		PROPOSED ELEVATIONS		PART TYPE		ITEM ON LAYOUT		DESCRIPTION		INVERT		MAX FLOW	
148	STORMTECH SC-800 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT UNPAVED)	253.75	A	24" BOTTOM PREFABRICATED EZ END CAP PART# SC800ECEZ / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.30'							
24	STORMTECH SC-800 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)	247.00	B	12" TOP PRE-CORED END CAP PART# SC800E12PC / TYP OF ALL 12" TOP CONNECTIONS	14.40'							
6	STONE ABOVE (IN)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT)	247.00	C	INSTALL FLAMP ON 24" ACCESS PIPE / PART# SC80024RAMP (TYP 2 PLACES)	14.40'							
6	STONE BELOW (IN)	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)	247.00	D	12" x 12" TOP MANIFOLD ADS N-12	14.40'							
40	STONE VOID		246.50	E	12" x 12" TOP MANIFOLD ADS N-12	14.40'							
12710	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED)	TOP OF STONE	244.20	F	24" BOTTOM CONNECTION	2.30'							
4443	SYSTEM AREA (SF) (BASE STONE INCLUDED)	12" x 12" TOP MANIFOLD INVERT	244.20	G	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)							2.8 CFS IN	
3264	SYSTEM PERIMETER (ft)	24" ISOLATOR ROW PLUS INVERT	243.19	H	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)							5.9 CFS IN	
		24" BOTTOM CONNECTION INVERT	243.19	I	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)							5.9 CFS IN	
		BOTTOM OF SC-800 CHAMBER	243.19										
		BOTTOM OF STONE	242.50										

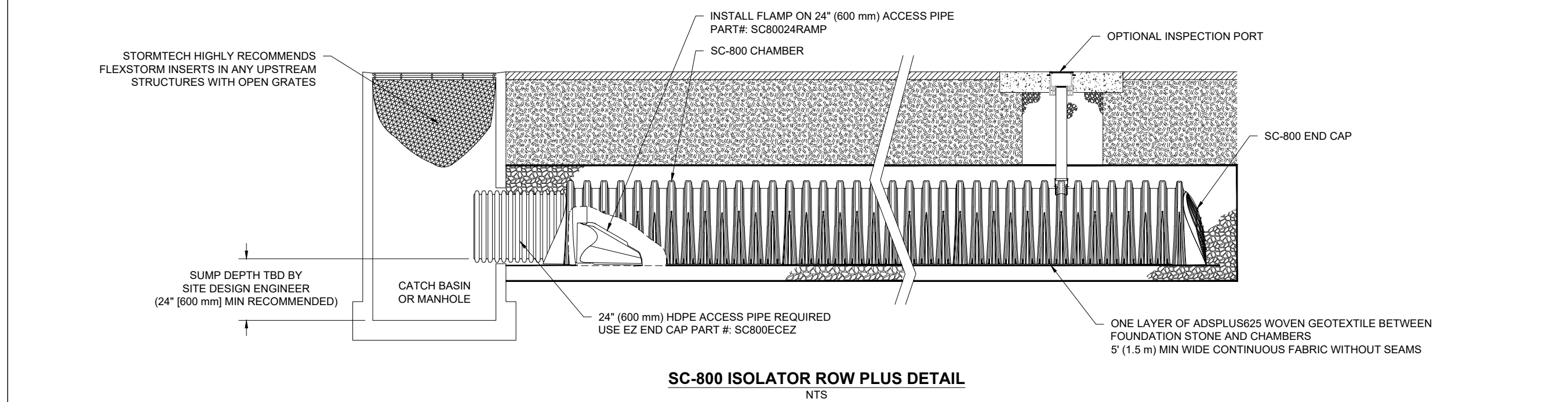


**NOTES**  
 THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.  
 NOT FOR CONSTRUCTION. THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

**INFILTRATION BASIN #1 LAYOUT**

- 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

**3 SC-800 ISOLATOR ROW PLUS DETAIL**



**INSPECTION & MAINTENANCE**

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT

A. INSPECTION PORTS (IF PRESENT)

- REMOVE/OPEN LID ON NYLON PLAST IN-LINE DRAIN
- REMOVE AND CLEAN FLEXTORM FILTER IF INSTALLED
- USING A FLASHLIGHT AND STADA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
- LOWER A CAMERA INTO JETVAC ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
- IF SEDIMENT IS AT OR ABOVE 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

B. ALL ISOLATOR PLUS ROWS

- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
- USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
  - MIRRORS OR POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
  - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - 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 FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- 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**

- 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.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

SPACE INTENTIONALLY LEFT BLANK

SPACE INTENTIONALLY LEFT BLANK

**2 SC-800 TECHNICAL SPECIFICATION**

**SC-800 TECHNICAL SPECIFICATION**

**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	58.8 CUBIC FEET (1.43 m³)
MINIMUM INSTALLED STORAGE*	75.4 CUBIC FEET (2.12 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" (75 mm) BETWEEN ROWS, 12" (300 mm) BEYOND END CAPS

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

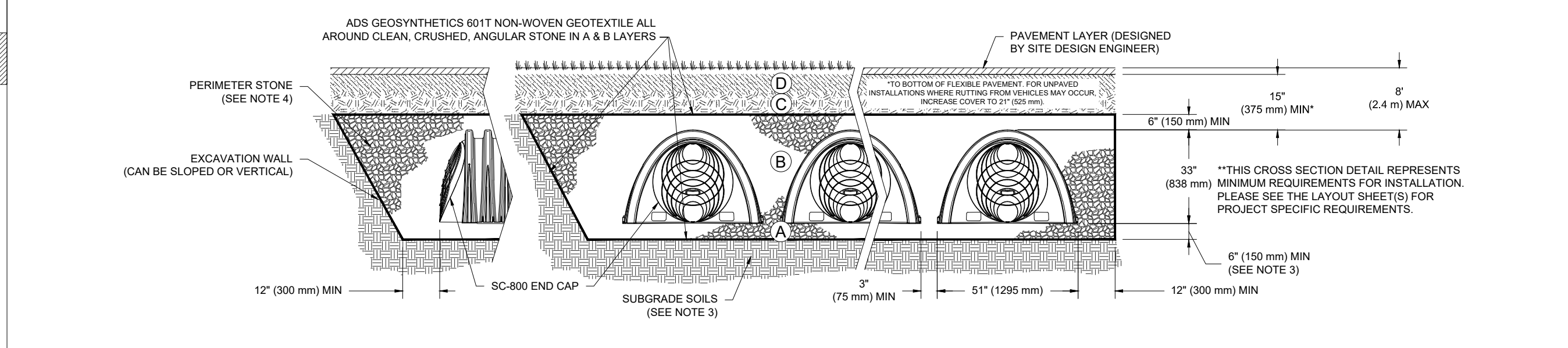
PART #	STUB	B	C
SC800PE06TPC	6" (150 mm)	21.4" (544 mm)	---
SC800PE06BPC	---	---	0.9" (23 mm)
SC800PE08TPC	8" (200 mm)	19.2" (488 mm)	1.0" (25 mm)
SC800PE08BPC	---	---	---
SC800PE10TPC	10" (250 mm)	17.0" (432 mm)	1.2" (30 mm)
SC800PE10BPC	---	---	---
SC800PE12TPC	12" (300 mm)	14.4" (366 mm)	1.6" (41 mm)
SC800PE12BPC	---	---	---
SC800PE15TPC	15" (375 mm)	11.3" (287 mm)	---
SC800PE15BPC	---	---	1.7" (43 mm)
SC800PE18TPC	18" (450 mm)	8.0" (203 mm)	2.0" (51 mm)
SC800PE18BPC	---	---	2.3" (58 mm)
SC800PE24BPC	24" (600 mm)	---	---
SC800PE	NONE	---	SOLID END CAP

NOTE: ALL DIMENSIONS ARE NOMINAL

**ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	<b>FINAL FILL:</b> FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYERS TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	<b>INITIAL FILL:</b> FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 'D' LAYER ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2, A-3 OR AASHTO M43 <sup>2</sup> 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	<b>EMBEDMENT STONE:</b> FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	<b>FOUNDATION STONE:</b> FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>3,4</sup>

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".



**NOTES:**

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 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.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 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<sup>2</sup> (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

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

**StormTech**  
 Chamber System

**ADS**

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

**TEAM HOYT**  
 COMMUNITY YMCA

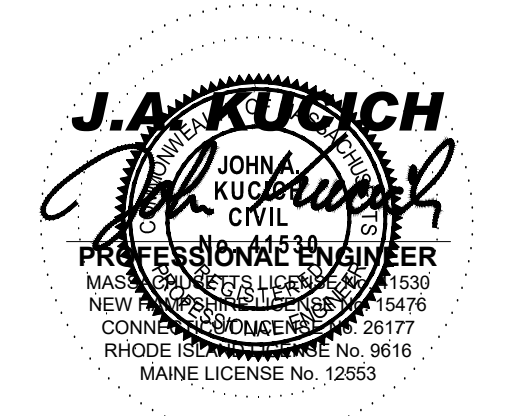
MEMORIAL DRIVE  
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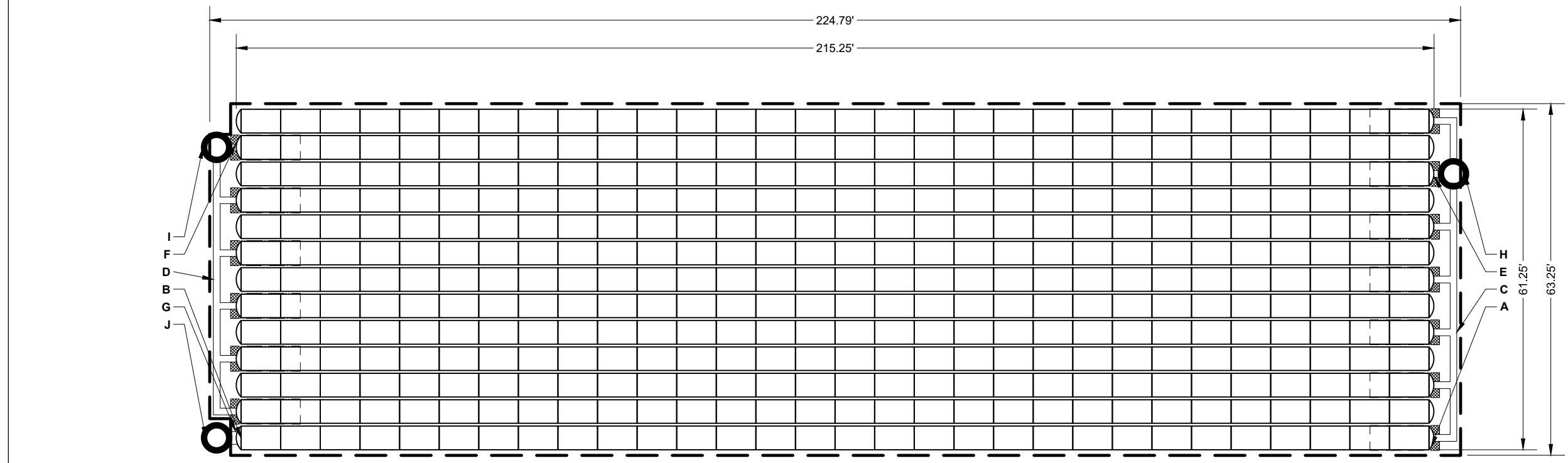
ISSUED FOR PERMIT

CONSTRUCTION DETAILS

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

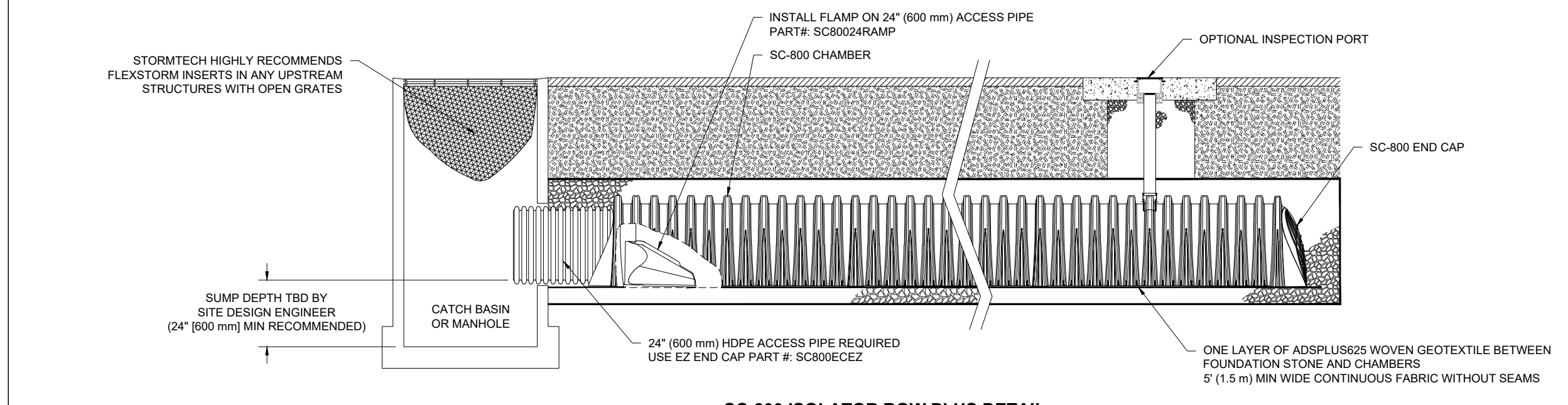
**C-904**

PROPOSED LAYOUT		PROPOSED ELEVATIONS		PART TYPE		ITEM ON LAYOUT		DESCRIPTION		INVERT		MAX FLOW	
390	STORMTECH SC-800 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)	255.75										
26	STONE ABOVE (IN)	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)	255.75										
6	STONE BELOW (IN)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)	249.00										
6	STONE VOID	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT)	249.00										
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)	249.00										
INSTALLED SYSTEM VOLUME (CF)		TOP OF STONE	248.50										
(PERIMETER STONE INCLUDED)		TOP OF SC-800 CHAMBER	247.75										
(COVER STONE INCLUDED)		24" BOTTOM CONNECTION INVERT	245.10										
(BASE STONE INCLUDED)		12" x 12" BOTTOM MANIFOLD INVERT	245.10										
14118 SYSTEM AREA (SF)		12" x 12" BOTTOM MANIFOLD INVERT	245.13										
576.1 SYSTEM PERIMETER (ft)		12" BOTTOM CONNECTION INVERT	245.13										
		BOTTOM OF SC-800 CHAMBER	245.00										
		BOTTOM OF STONE	244.50										



**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 #2 LAYOUT**



**SC-800 ISOLATOR ROW PLUS DETAIL**

**3 SC-800 ISOLATOR ROW PLUS DETAIL**

**INSPECTION & MAINTENANCE**

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- INSPECTION PORTS (IF PRESENT)
  - REMOVE/OPEN LID ON NYLON/PLASTIC INLINE DRAIN
  - REMOVE AND CLEAN FLEXTORM FILTER IF INSTALLED
  - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - LOWER A CAMERA INTO JETVAC ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - IF SEDIMENT IS AT OR ABOVE 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROW PLUS
- REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - MIRRORS OR POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
    - 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 FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
  - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
  - 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**

- 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.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

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**SC-800 TECHNICAL SPECIFICATION**

**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	58.8 CUBIC FEET (1.43 m³)
MINIMUM INSTALLED STORAGE*	75.4 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)

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

PART #	STUB	B	C
SC800PE06TPC	6" (150 mm)	21.4" (544 mm)	---
SC800PE08BPC	8" (200 mm)	19.2" (488 mm)	0.9" (23 mm)
SC800PE08TPC	8" (200 mm)	19.2" (488 mm)	1.0" (25 mm)
SC800PE10TPC	10" (250 mm)	17.0" (432 mm)	---
SC800PE10BPC	10" (250 mm)	---	1.2" (30 mm)
SC800PE12TPC	12" (300 mm)	14.4" (366 mm)	---
SC800PE12BPC	12" (300 mm)	---	1.6" (41 mm)
SC800PE15TPC	15" (375 mm)	11.3" (287 mm)	---
SC800PE15BPC	15" (375 mm)	---	1.7" (43 mm)
SC800PE18TPC	18" (450 mm)	8.0" (203 mm)	---
SC800PE18BPC	18" (450 mm)	---	2.0" (51 mm)
SC800PE24BPC	24" (600 mm)	---	2.3" (58 mm)
SC800PE	NONE	---	SOLID END CAP

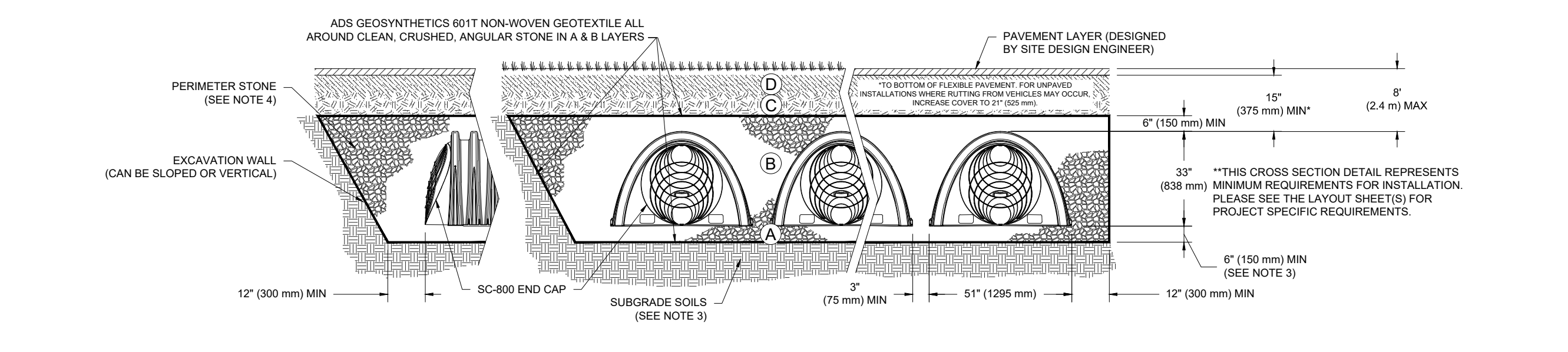
NOTE: ALL DIMENSIONS ARE NOMINAL

**2 SC-800 TECHNICAL SPECIFICATION**

**ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	<b>FINAL FILL:</b> FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYERS TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	<b>INITIAL FILL:</b> 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.	AASHTO M145 <sup>1</sup> A-1, A-2, A-3 OR AASHTO M43 <sup>2</sup> 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	<b>EMBEDMENT STONE:</b> FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	<b>FOUNDATION STONE:</b> FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>2</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

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 COVERS 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".



**NOTES:**

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 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.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- 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<sup>2</sup> (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  
 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

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 JOHN A. KUBICH  
 CIVIL  
 PROFESSIONAL ENGINEER  
 MAINE LICENSE NO. 15330  
 NEW HAMPSHIRE LICENSE NO. 15476  
 RHODE ISLAND LICENSE NO. 9616  
 MAINE LICENSE NO. 12553

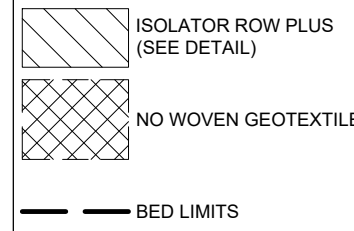
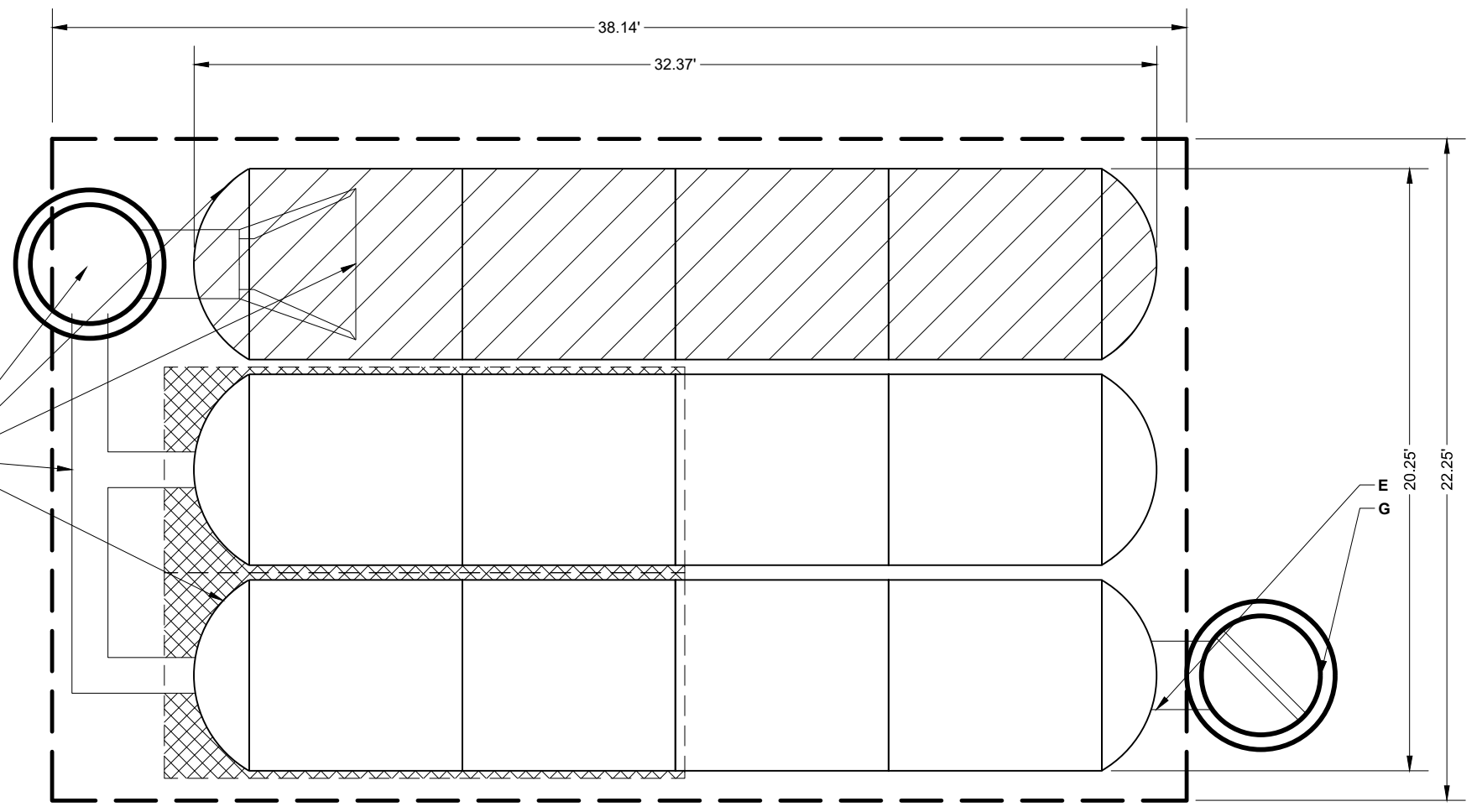
ISSUED FOR PERMIT

CONSTRUCTION DETAILS

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**C-905**

PROPOSED LAYOUT		PROPOSED ELEVATIONS		PART TYPE		ITEM ON LAYOUT		DESCRIPTION		*INVERT ABOVE BASE OF CHAMBER		
											INVERT	MAX FLOW
17	STORMTECH MC-3500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)	249.50									
6	STONE ABOVE (IN)	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)	243.00								2.06'	
9	STONE BELOW (IN)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT)	243.00									
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)	243.00								1.35'	
2712	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED)	TOP OF STONE	242.50									
849	SYSTEM AREA (SF) (BASE STONE INCLUDED)	TOP OF MC-3500 CHAMBER	241.50									
1208	SYSTEM PERIMETER (ft)	24" ISOLATOR ROW PLUS INVERT	237.50									
		17" x 17" BOTTOM MANFOLD INVERT	237.60									7.0 CFS OUT
		BOTTOM OF MC-3500 CHAMBER	237.70									
		BOTTOM OF STONE	237.00									3.7 CFS IN



**NOTES**  
 1. THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.  
 2. 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**

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**MC-3500 TECHNICAL SPECIFICATION**

**NOMINAL CHAMBER SPECIFICATIONS**  
 SIZE (W X H X INSTALLED LENGTH)  
 CHAMBER STORAGE  
 MINIMUM INSTALLED STORAGE\*  
 WEIGHT

77'0" X 45'0" X 66'0"	(1966 mm X 1143 mm X 2184 mm)
109.9 CUBIC FEET	(3.11 m <sup>3</sup> )
175.0 CUBIC FEET	(4.96 m <sup>3</sup> )
154 lbs.	(69.8 kg)

**NOMINAL END CAP SPECIFICATIONS**  
 SIZE (W X H X INSTALLED LENGTH)  
 END CAP STORAGE  
 MINIMUM INSTALLED STORAGE\*  
 WEIGHT

75'0" X 45'0" X 22'2"	(1905 mm X 1143 mm X 564 mm)
14.9 CUBIC FEET	(0.42 m <sup>3</sup> )
45.1 CUBIC FEET	(1.26 m <sup>3</sup> )
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
MC3500EP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500EP06B	---	---	0.66" (17 mm)
MC3500EP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500EP08B	---	---	0.81" (21 mm)
MC3500EP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500EP10B	---	---	0.93" (24 mm)
MC3500EP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500EP12B	---	---	1.35" (34 mm)
MC3500EP15T	15" (375 mm)	23.30" (594 mm)	---
MC3500EP15B	---	---	1.50" (38 mm)
MC3500EP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500EP18TW	---	---	1.77" (45 mm)
MC3500EP18BC	---	---	---
MC3500EP18BW	---	---	---
MC3500EP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500EP24TW	---	---	---
MC3500EP24BC	---	---	2.06" (52 mm)
MC3500EP24BW	---	---	---
MC3500EP30BC	30" (750 mm)	---	2.75" (70 mm)

CUSTOM PRECURED INVERTS ARE AVAILABLE UPON REQUEST. INVERT ORBED MANIFOLDS INCLUDE 12" X 24" (300 X 600 mm) SIZE ON SIZE AND 15" X 48" (375 X 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.

NOTE: ALL DIMENSIONS ARE NOMINAL.

DATE: 10/03/2025  
 PROJECT #:  
 NOT TO SCALE  
 DRAWN: SB  
 CHECKED: N/A  
 REV:  
 ASHLAND BASIN 3  
 ASHLAND, MA, USA

**2 MC-3500 TECHNICAL SPECIFICATION**

**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 FLEXFORM 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 USING A FLASHLIGHT. INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE  
 B.2. I. MEMPHOS OR PILES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY  
 B.3. FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE  
 IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.  
 C. VACUUM STRUCTURE SLUMP AS REQUIRED

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS  
 A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 40° (1.1 m) OR MORE IS PREFERRED  
 B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN  
 C. VACUUM STRUCTURE SLUMP AS REQUIRED

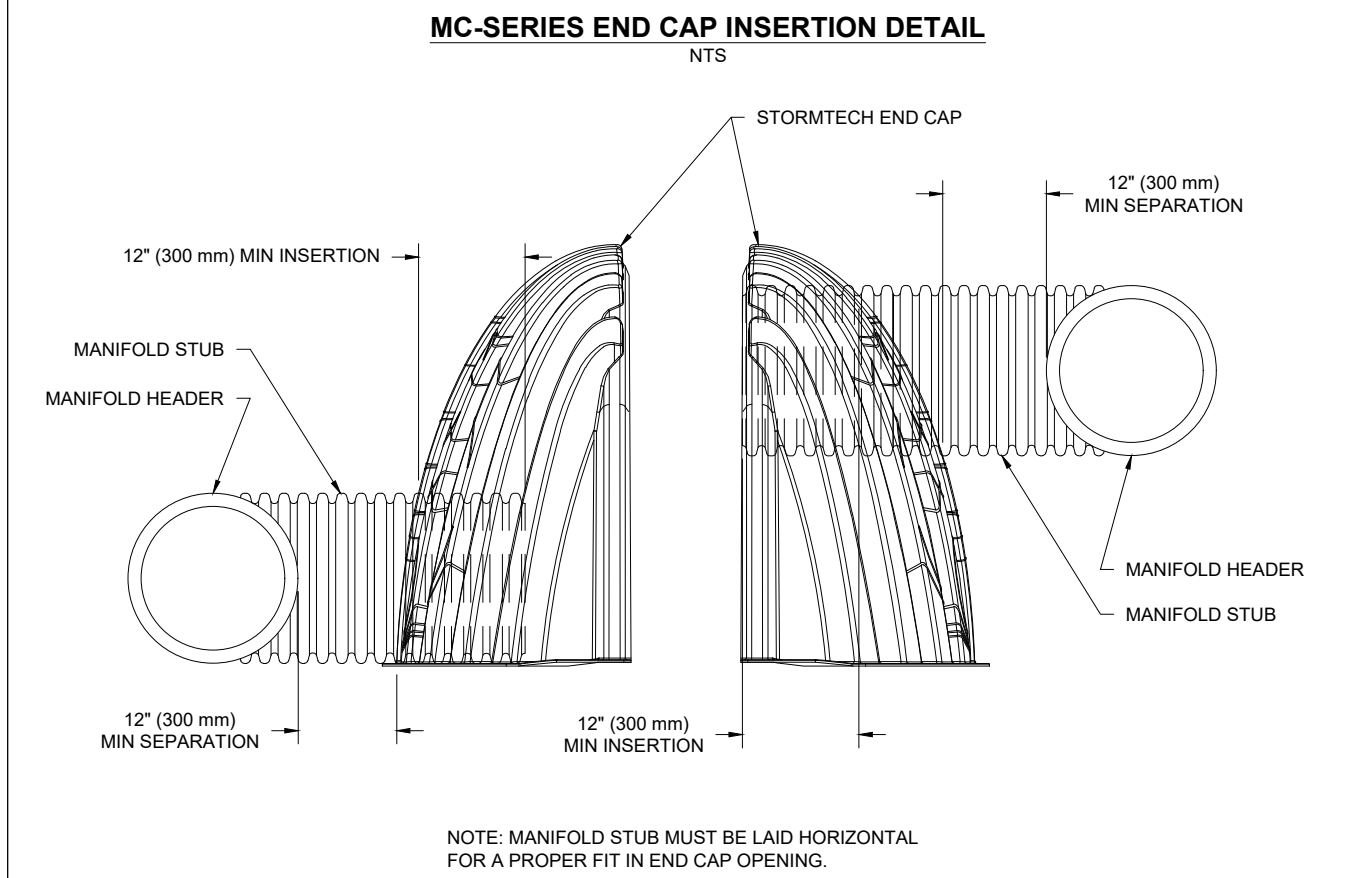
STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

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 VACUUMING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

**3 MC-3500 ISOLATOR ROW PLUS DETAIL**

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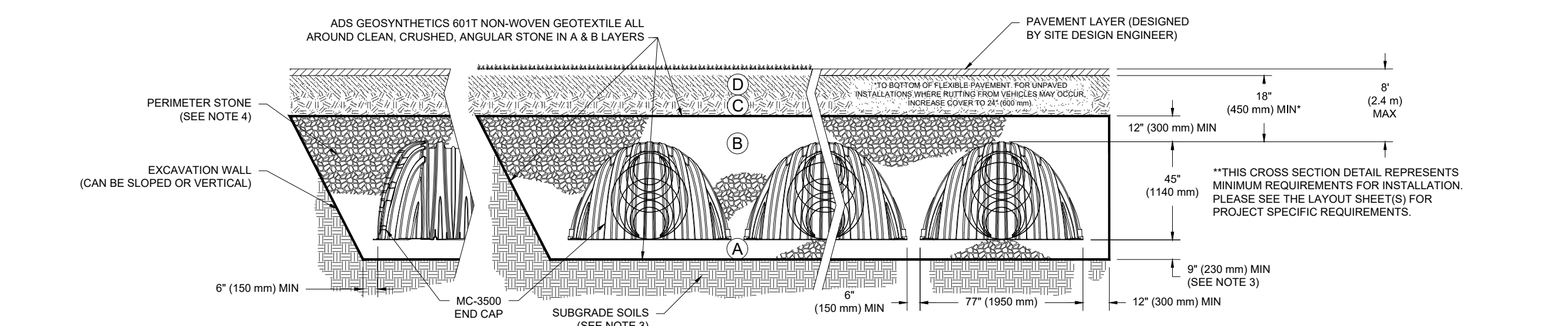


**4 MC-SERIES END CAP INSERTION DETAIL**

**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 SUBGRADE 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 ('A' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBGRADE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE.  MOST PAVEMENT SUBGRADE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2-4, A-3 OR AASHTO M28 <sup>2</sup> 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 CONCRETE <sup>1</sup>	AASHTO M43 <sup>1</sup> 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 <sup>1</sup>	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

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" (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 SUBGRADE 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".



**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<sup>2</sup>. 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.

**1 MC-3500 CROSS SECTION DETAIL**

StormTech Chamber System  
 4640 TRUEMAN BLVD  
 HILLIARD, OH 43026  
 1-800-733-7473  
 SHEET 1 OF 1

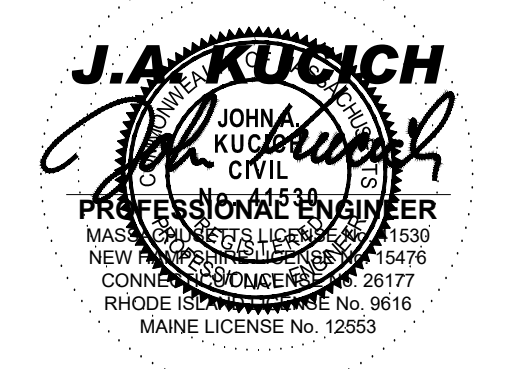
**REVISIONS**

#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS

**TEAM HOYT COMMUNITY YMCA**  
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 ASHLAND, MA

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 Phone: (508) 480-9900  
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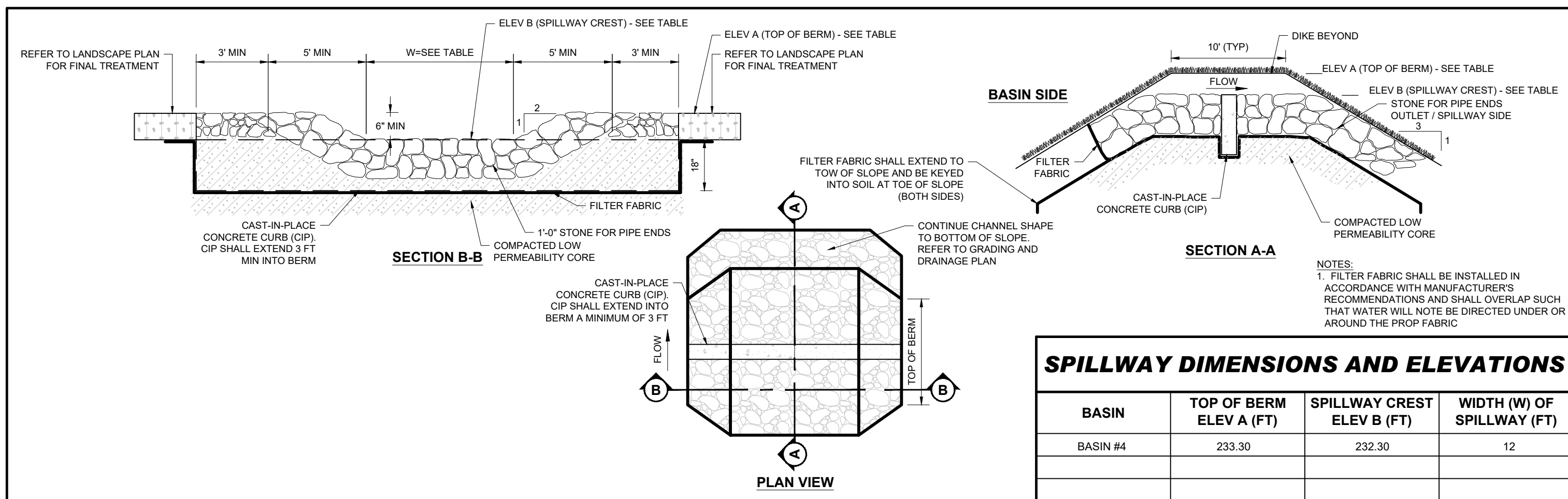


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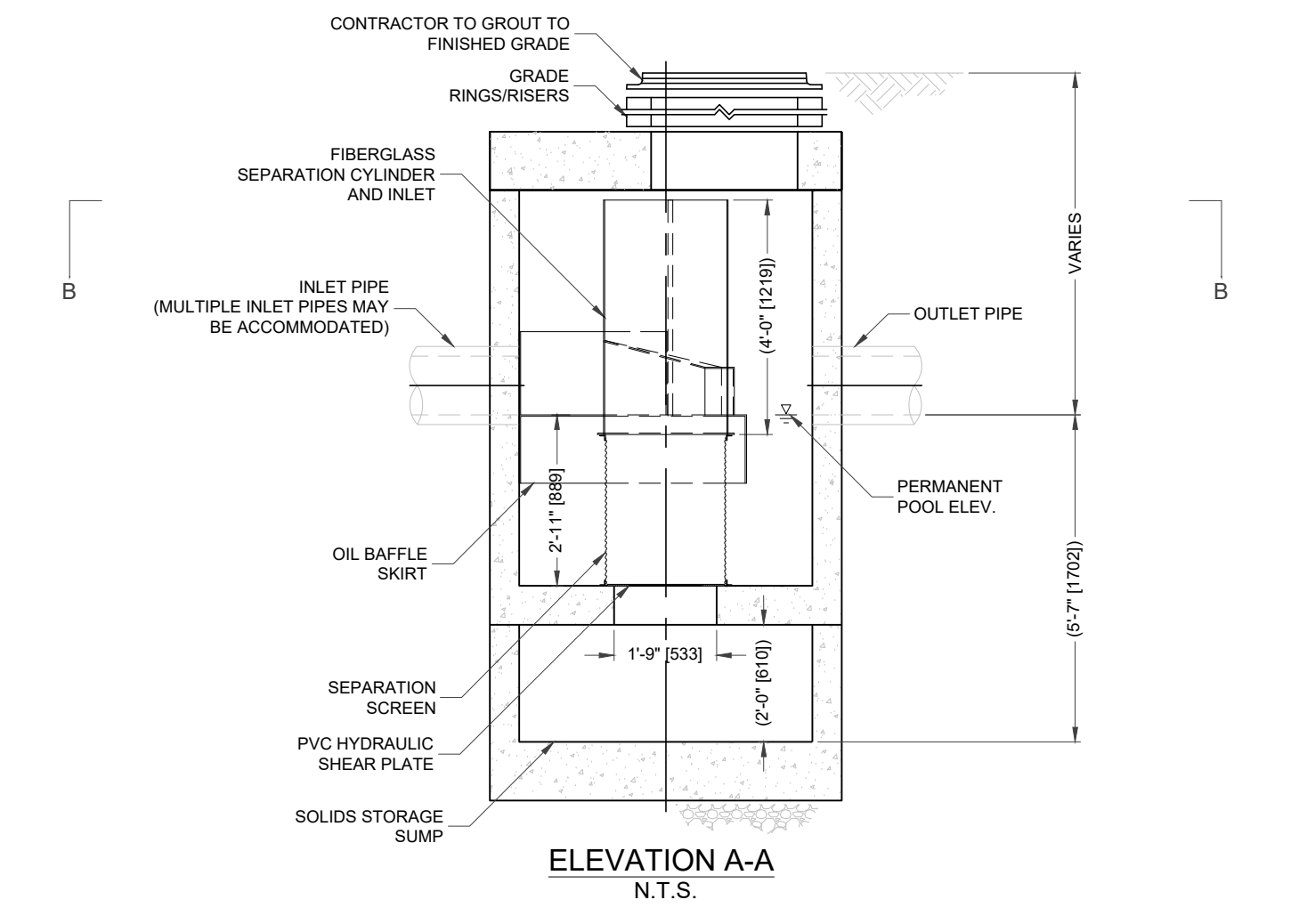
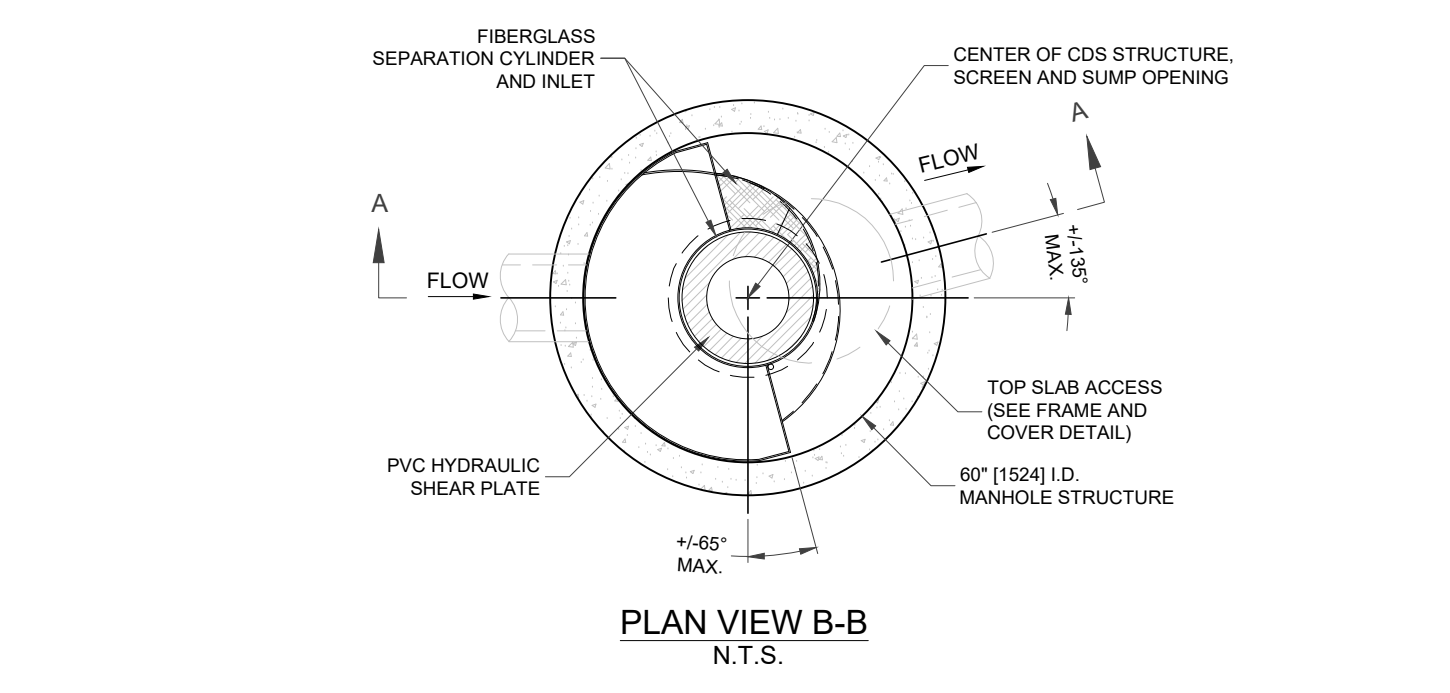
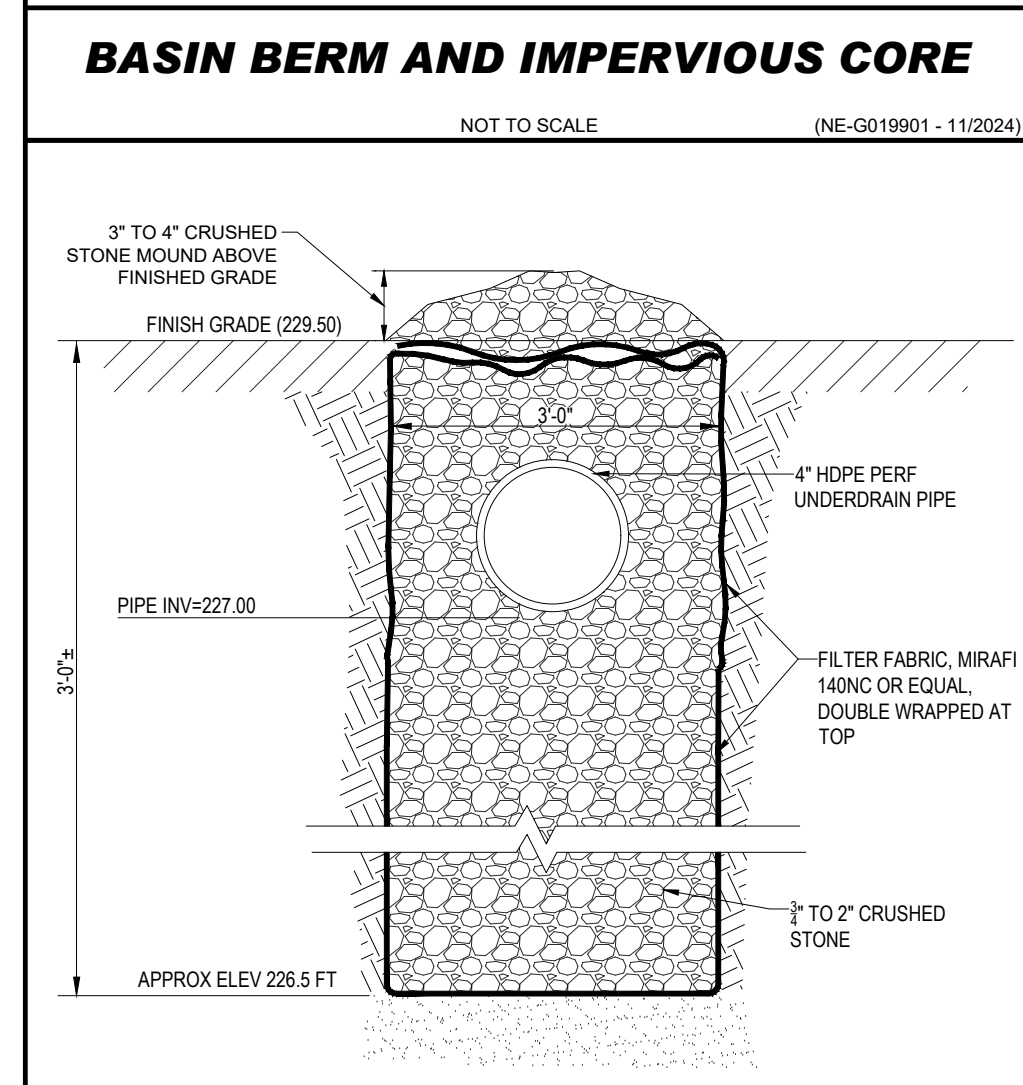
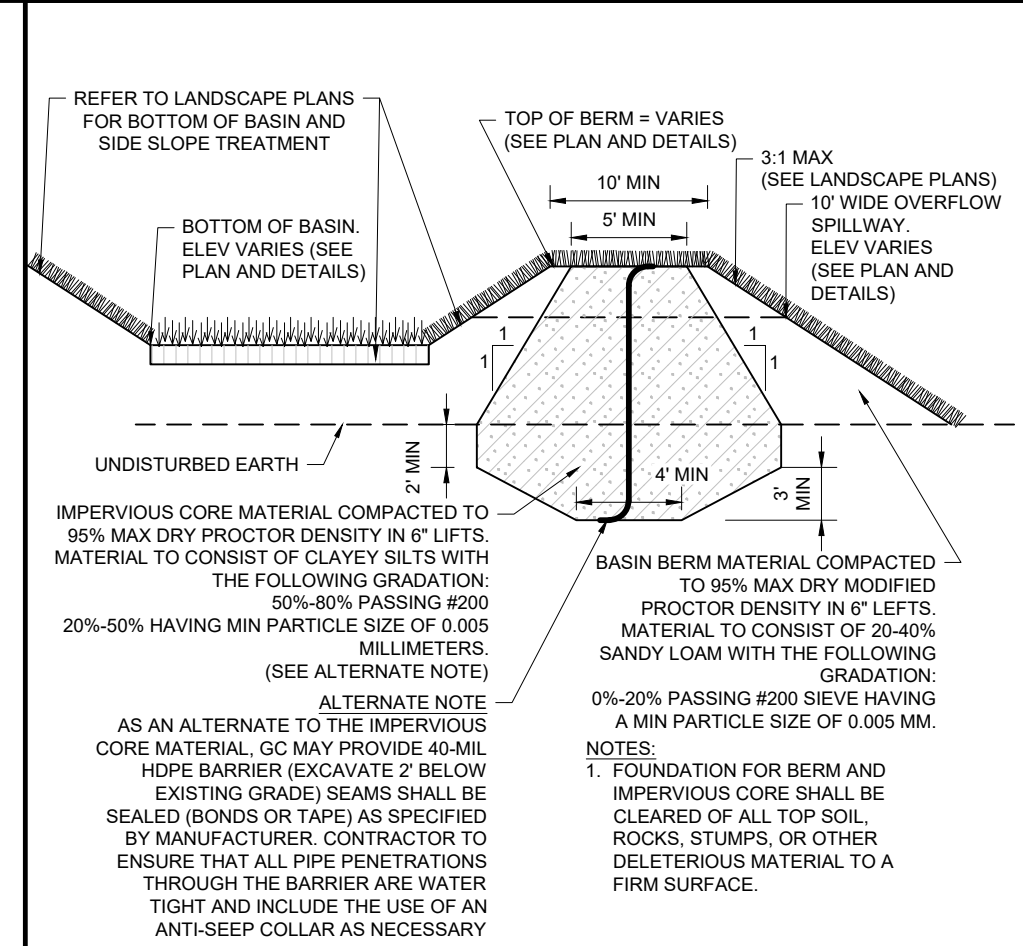
CONSTRUCTION DETAILS

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**C-906**



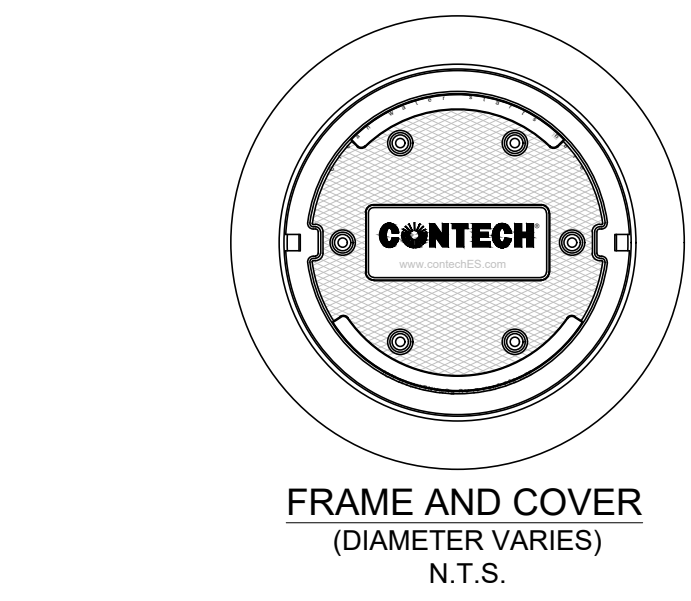
**BASIN EMERGENCY SPILLWAY**  
NOT TO SCALE (NE-G010101 - 05/2025)



**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 NUDEP / NJCAT CONFORMING UNITS



**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	*	*	*

ANTH-FLOTATION BALLAST	WIDTH	HEIGHT
*	*	*

NOTES/SPECIAL REQUIREMENTS:  
\* PER ENGINEER OF RECORD

- GENERAL NOTES**
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
  - DIMENSIONS MARKED WITH ( ) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
  - FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE: [www.contechES.com](http://www.contechES.com)
  - CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
  - STRUCTURE SHALL MEET AASHTO H20 AND CASTINGS SHALL MEET H20 (AASHTO M 300) LOAD RATINGS, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.
  - PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
- INSTALLATION NOTES**
- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
  - CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
  - CONTRACTOR TO ADD JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS, AND ASSEMBLE STRUCTURE.
  - CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
  - 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 45390  
800-338-1122 513-845-7000 513-845-7993 FAX

CDS2025-5-C  
INLINE CDS  
STANDARD DETAIL

**CONTECH CDS2025-5-C STANDARD DETAIL (WQU)**  
NOT TO SCALE

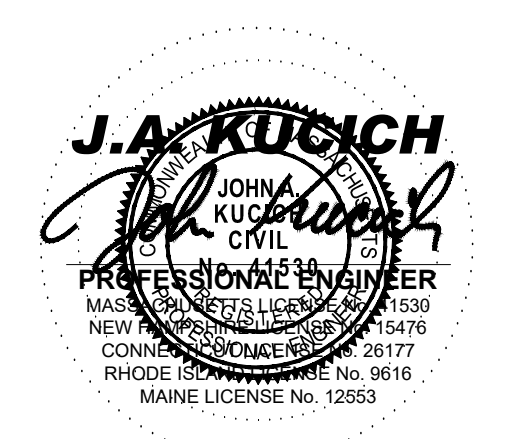
**REVISIONS**

#	DATE	DESCRIPTION
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CONSTRUCTION DETAILS

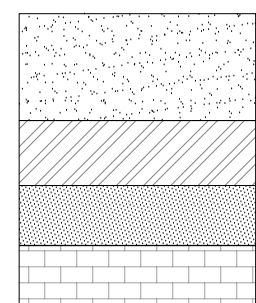
SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**C-907**



**PLANT SCHEDULE**

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CC
<b>CANOPY TREES</b>					
AORG	15	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2.5"-3" CAL.	B&I
AS	16	ACER SACCHARUM 'BONFIRE'	BONFIRE SUGAR MAPLE	2.5"-3" CAL.	B&I
CC	14	CERCIS CANADENSIS	EASTERN REDBUD	8-10"	B&I
CF	20	CORNUS FLORIDA	EASTERN DOGWOOD	8-10"	B&I
CO	7	CARYA OVATA	SHAGBARK HICKORY	2.5"-3" CAL.	B&I
LS	9	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	2.5"-3" CAL.	B&I
LS2	15	LIQUIDAMBAR STYRACIFLUA 'SLENDER SILHOUETTE'	SLENDER SILHOUETTE SWEET GUM	2.5"-3" CAL.	B&I
LT	21	LIRIODENDRON TULPIFERA	TULIP TREE	2.5"-3" CAL.	B&I
LT2	8	LIRIODENDRON TULPIFERA 'ARNOLD'	ARNOLD TULIP POPLAR	2.5"-3" CAL.	B&I
QP	7	QUERCUS PALUSTRIS	PIN OAK	2.5"-3" CAL.	B&I
QR	6	QUERCUS RUBRA	NORTHERN RED OAK	2.5"-3" CAL.	B&I
UP	35	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	2.5"-3" CAL.	B&I
	173	SUBTOTAL:			
<b>EVERGREEN TREES</b>					
AB	20	ABIES BALSAMEA	BALSAM FIR	6-8"	B&I
AF	12	ABIES FRASERI	FRASER FIR	6-8"	B&I
LL	5	LARIX LARICINA	TAMARACK	6-8"	B&I
	37	SUBTOTAL:			
<b>SHRUBS</b>					
AM	40	ARONIA MELANOCARPA 'UCONNAM166'	LOW SCAPE HEDGER® BLACK CHOKEBERRY	24-36"	CG
IGC	124	ILEX GLABRA 'COMPACTA'	COMPACT INKBERRY	24-30"	CO
VWR	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	MYRTICA PENNSYLVANICA	NORTHERN BAYBERRY	30-36"	CO
RA	332	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	15-18"	CO
	593	SUBTOTAL:			
<b>PERENNIALS</b>					
ACWG	25	ASARUM CANADENSE	WILD GINGER	1 GAL.	CG
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.	CG
RFG	128	RUDBECKIA FULGIDA SULLIVANTII 'GOLDSTURM'	GOLDSTURM CONEFLOWER	1 GAL.	CO
TGF	24	TIARELLA CORDIFOLIA	FOAMFLOWER	1 GAL.	CO
	389	SUBTOTAL:			



|||||

EASEMENT PARCEL A-26  
PERMANENT SLOPE & DRAINAGE EASEMENT  
(PLAN 966 OF 2006)

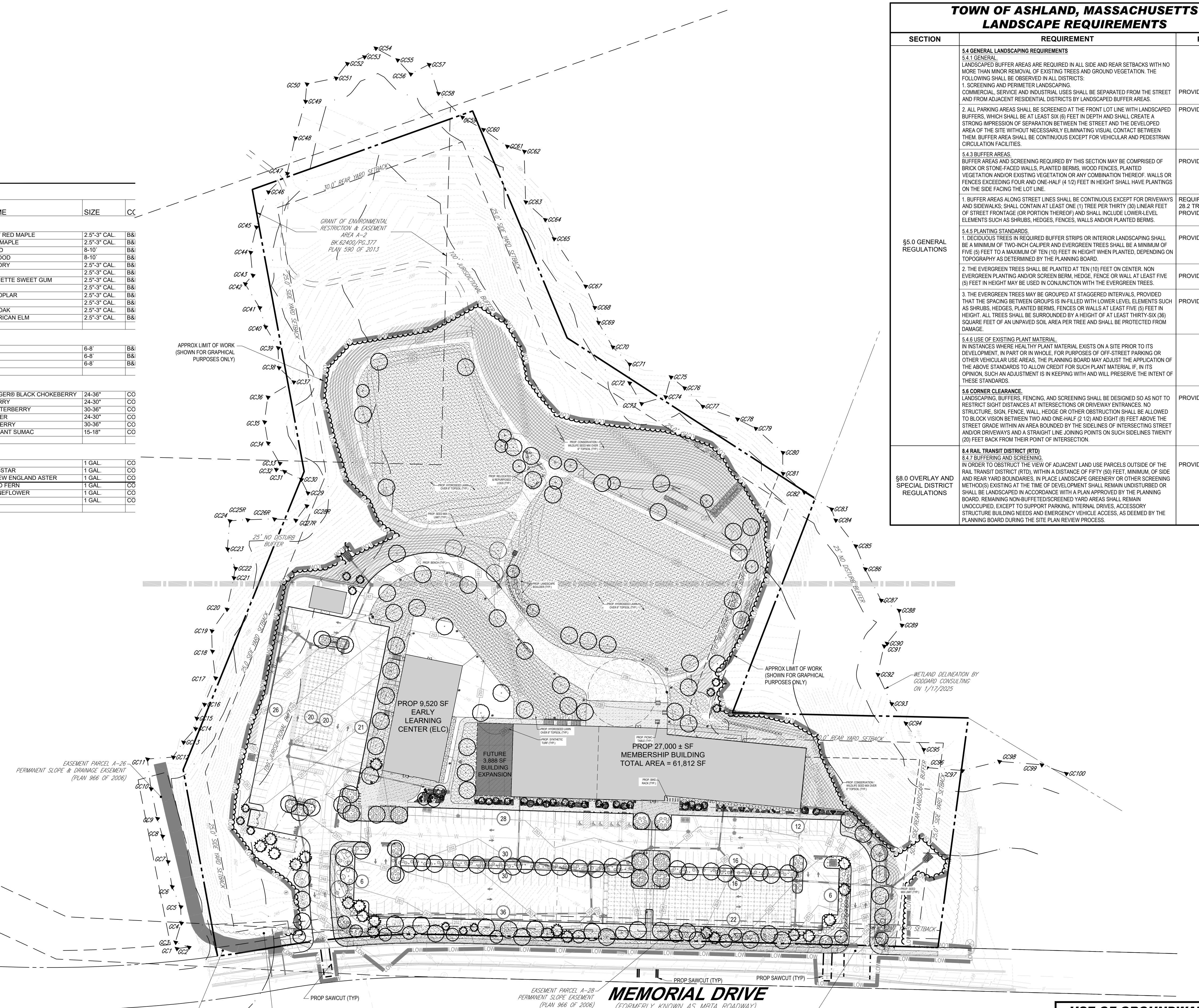
50' SHELL OIL COMPANY INC. EASEMENT

PERMANENT TRAIL EASEMENT  
BK. 78388/PIC. 443

EASEMENT PARCEL A-28  
PERMANENT SLOPE EASEMENT  
(PLAN 966 OF 2006)

**MEMORIAL DRIVE**  
(FORMERLY KNOWN AS MBTA ROADWAY)  
(PUBLIC - 50' WIDE)

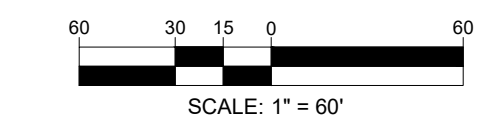
50' SHELL OIL COMPANY INC. EASEMENT  
(PLAN 966 OF 2006)



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. 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
\$8.0 OVERLAY AND SPECIAL DISTRICT REGULATIONS	3. THE EVERGREEN TREES MAY BE GROUPED AT STAGGERED INTERVALS. PROVIDED THAT THE SPACING BETWEEN GROUPS IS INFILLED 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. 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.	PROVIDED
	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
	8.4 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-BUFFERED 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

**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**



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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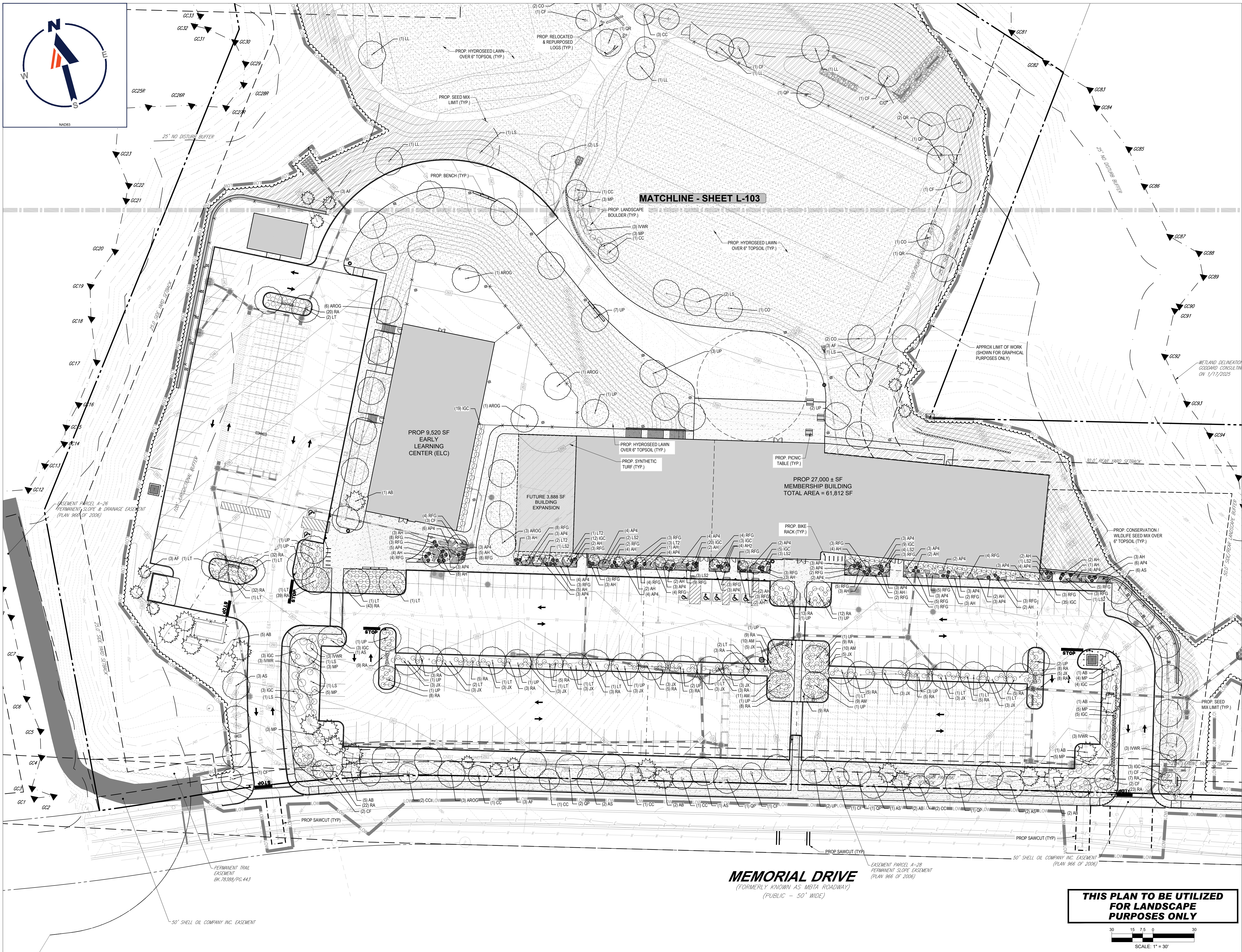


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OVERALL LANDSCAPE PLAN

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**L-101**



**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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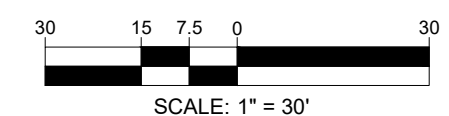
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LANDSCAPE PLAN A

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**L-102**

**THIS PLAN TO BE UTILIZED  
FOR LANDSCAPE  
PURPOSES ONLY**



**MEMORIAL DRIVE**  
(FORMERLY KNOWN AS MBTA ROADWAY)  
(PUBLIC - 50' WIDE)

EASEMENT PARCEL A-28  
PERMANENT SLOPE EASEMENT  
(PLAN 966 OF 2006)

50' SHELL OIL COMPANY INC. EASEMENT  
(PLAN 966 OF 2006)

PERMANENT TRAIL  
EASEMENT  
BK.78388/PG.443

50' SHELL OIL COMPANY INC. EASEMENT

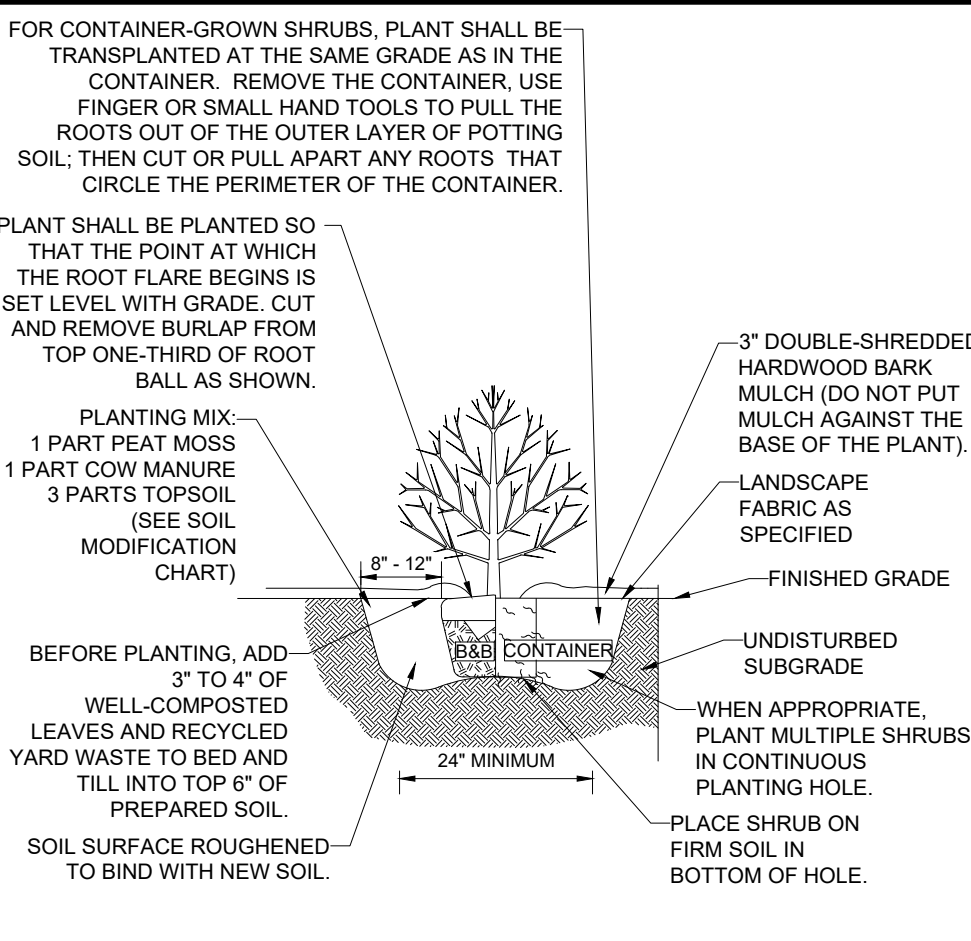
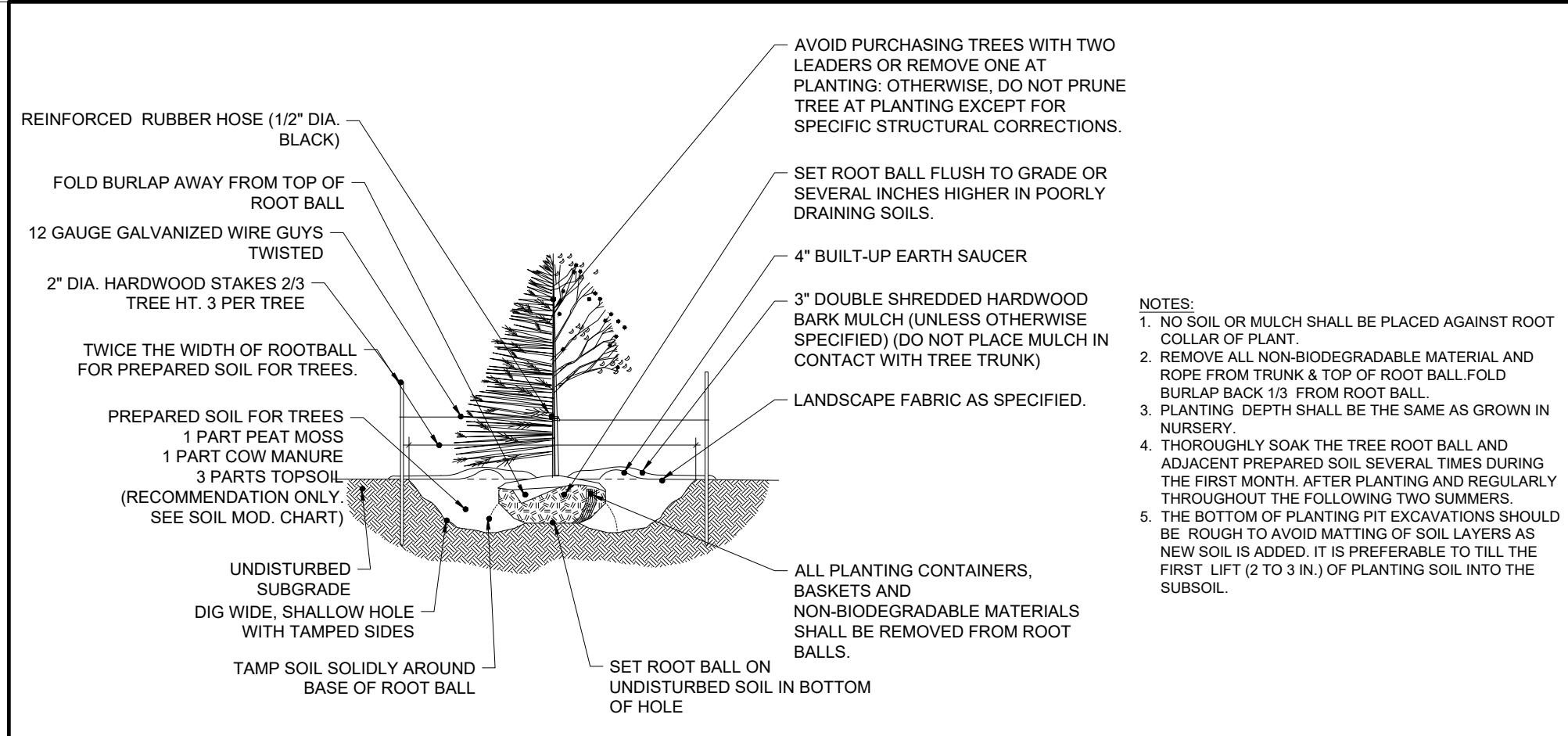


# MASSACHUSETTS LANDSCAPE SPECIFICATION

- SCOPE OF WORK:
  - THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING, OR PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.
- MATERIALS:
  - GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.
  - 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.
  - LAWN:
    - 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.
    - LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
    - SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.
    - 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.
  - FERTILIZER:
    - 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.
    - 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.
  - PLANT MATERIAL:
    - 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).
    - IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.
    - 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.
    - TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1", WHICH HAVE NOT BEEN COMPLETELY CALLED, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
    - 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.
    - 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.
    - SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.
    - TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.
- GENERAL WORK PROCEDURES:
  - 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.
  - 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.
  - SITE PREPARATIONS:
    - 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.
    - ALL EXISTING TREES TO REMAIN SHALL BE MAINTAINED THROUGH CONSTRUCTION AND THROUGHOUT 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 EXISTING TREES TO BE MAINTAINED TO PROTECT THEM FROM DAMAGE 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.
    - 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.
  - 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.
    - 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.
    - 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.
    - AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.
- SOIL MODIFICATIONS:
  - 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.
  - 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.
  - 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.
  - TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6"-12" (USE WELL-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.
  - TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (OR MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYP-SUM. 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.
  - MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
- FINISHED GRADING:
  - 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.
  - 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").
  - 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 ARCHITECT OR LANDSCAPE ARCHITECT.
  - 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.
- TOPSOILING:
  - 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.
  - ON-SITE TOPSOIL MAY BE USED TO THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.
  - 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.
  - 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.]):
    - 20 POUNDS GRG-POWER OR APPROVED SOIL CONDITIONER/FERTILIZER
    - 20 POUNDS NITRO-FORM (COARSE) 38-0-0 BLUE CHIP OR APPROVED NITROGEN FERTILIZER
  - THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.
- PLANTING:
  - INSOFARE 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.
  - 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.
  - 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.
  - 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.
  - 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. 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:
    - PLANTS: MARCH 15 TO DECEMBER 15
    - LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1
    - 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.
  - 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:
 

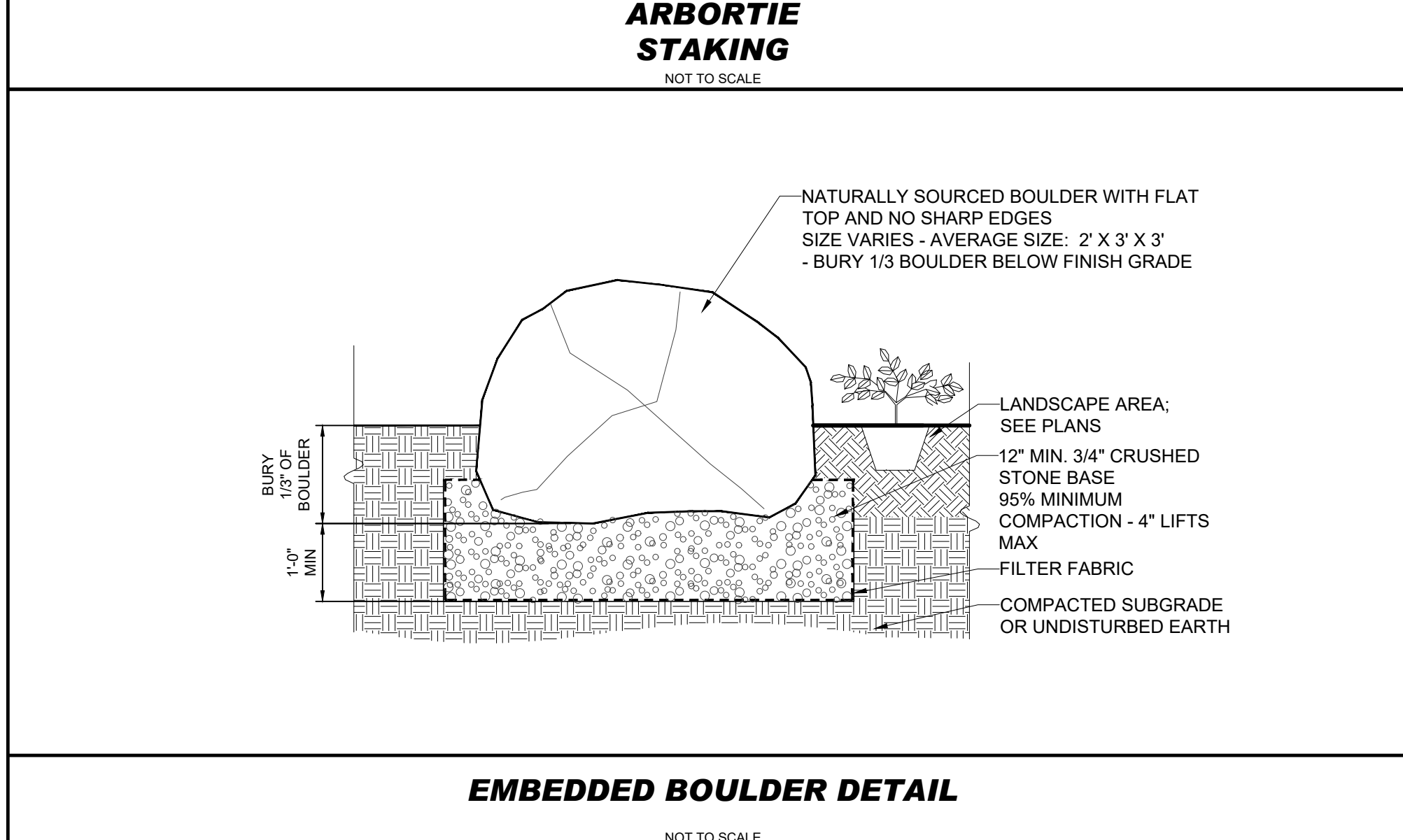
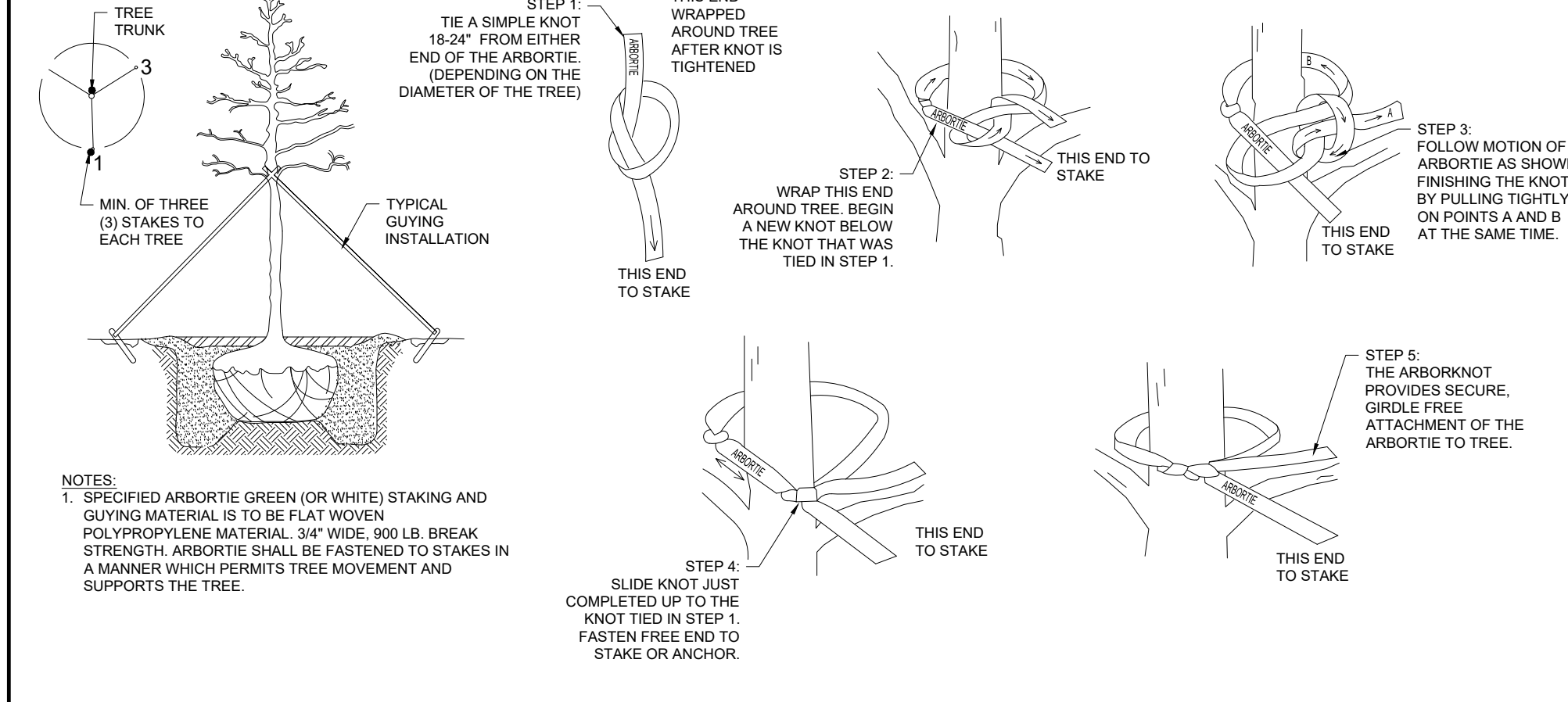
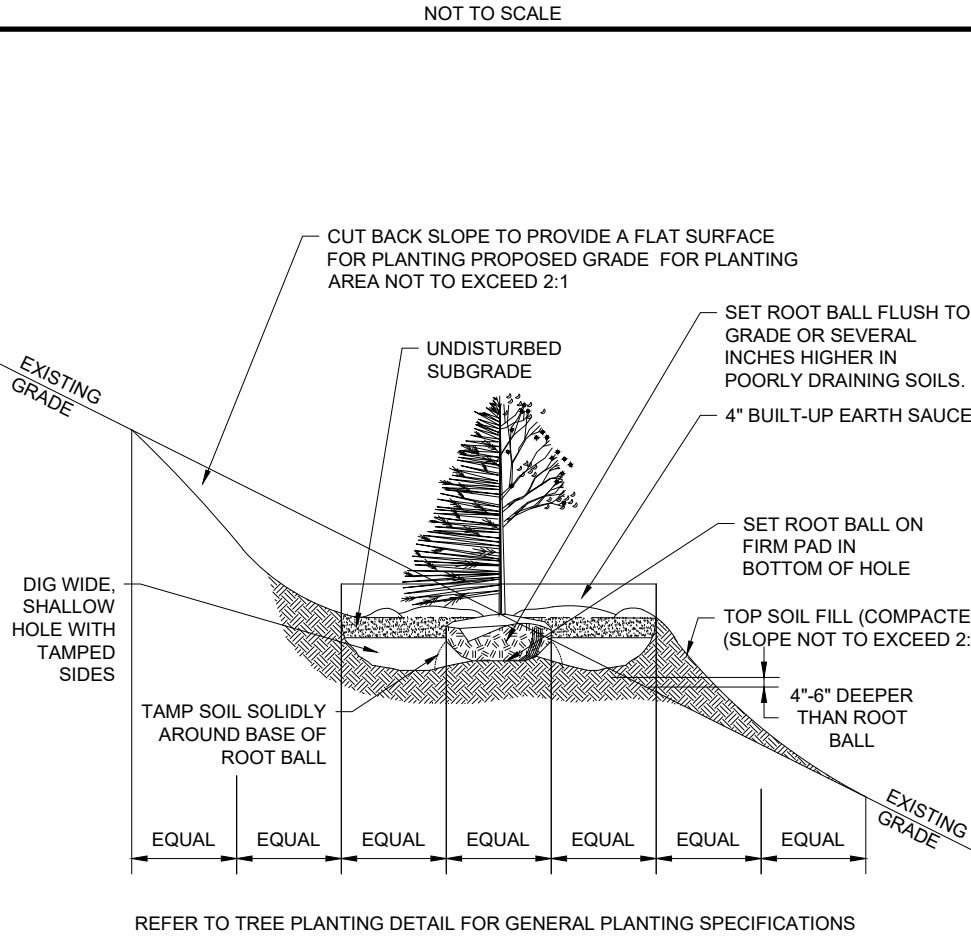
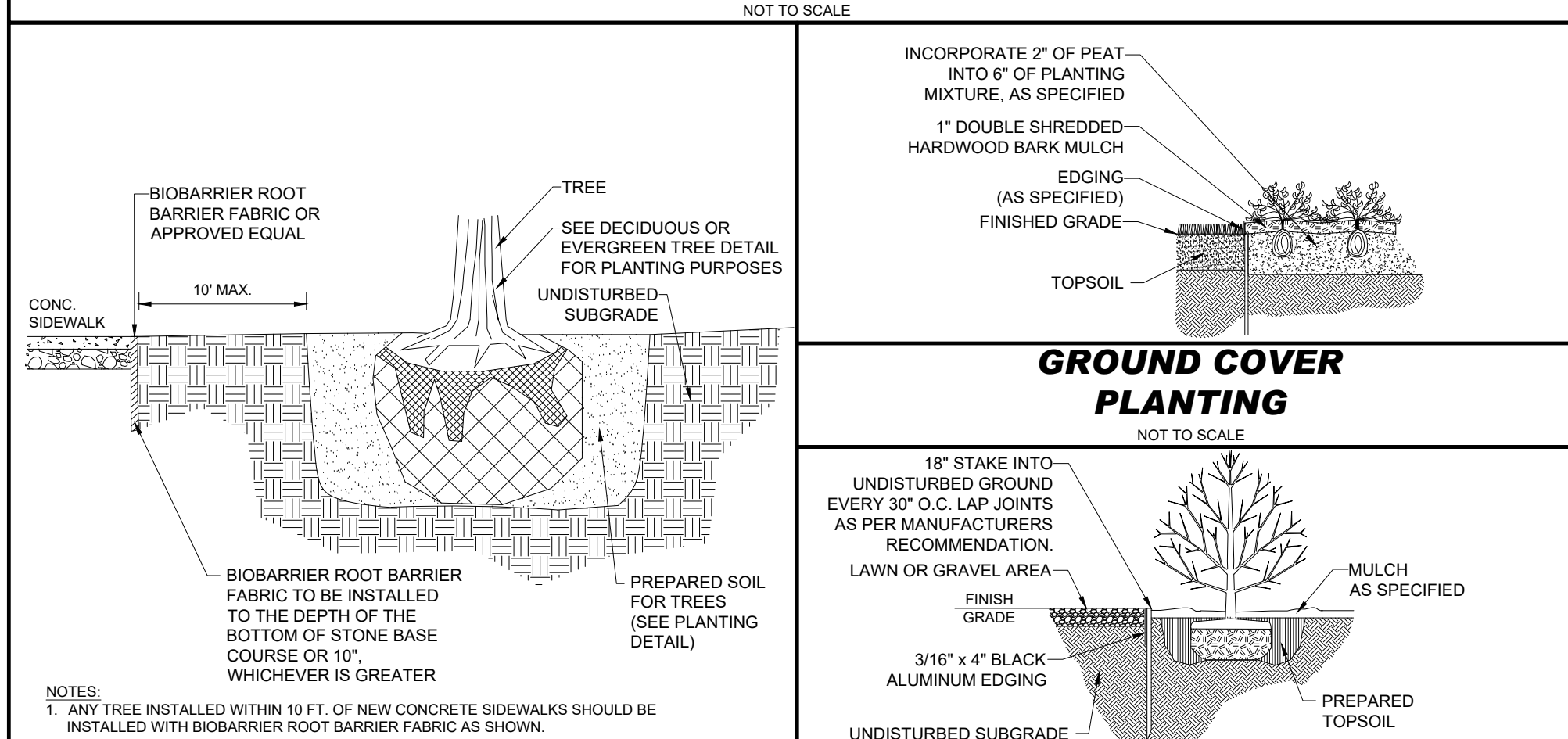
ACER RUBRUM	PLATANUS X ACERIFOLIA
BETULA VARIETIES	POPULUS VARIETIES

- |  |  |
|--|--|
| CARPINUS VARIETIES<br>CRATAEGUS VARIETIES<br>KOEHLERIA<br>LIQUIDAMBAR STYRACIFLUA<br>LIRIODENDRON TULIPIFERA | PRUNUS VARIETIES<br>PYRUS VARIETIES<br>QUERCUS VARIETIES<br>TILIA TOMENTOSA<br>ZELKOVA VARIETIES |
|--|--|
- 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:
    - 1 PART PEAT MOSS
    - 1 PART COMPOSTED COW MANURE BY VOLUME
    - 3 PARTS TOPSOIL BY VOLUME
  - 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
    - 2 TABLETS PER 1 GALLON PLANT
    - 3 TABLETS PER 5 GALLON PLANT
    - 4 TABLETS PER 15 GALLON PLANT
    - LARGER PLANTS: 2 TABLETS PER 1/2" CALIPER OF TRUNK
  - PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.
  - 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.
  - ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.
  - GROUND COVER AREAS SHALL RECEIVE A 1/2" 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.
  - NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.
  - 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.
  - ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.
  - TRANSPLANTING (WHEN REQUIRED):
    - ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT.
    - 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.
    - PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.
    - UPON TRANSPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND NOT GROWTH HORMONE.
    - TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.
    - IF TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH WILL BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.
  - WATERING:
    - 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.
    - 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.
    - 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 TREES.
  - GUARANTEE:
    - 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.
    - 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.
    - 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.
    - LAWN SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
    - MAINTENANCE (ALTERNATIVE BID):
      - 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.



## TREE PLANTING

## SHRUB PLANTING



- ### TREE PLANTING ON SLOPE
- PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 2" DIAMETER.
  - PRIOR TO SEEDING, CONSULT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
  - 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	20 TO 100 SQ FT
  - GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDING 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@NEWMP.COM  
WEBSITE: WWW.NEWP.COM
- APPLICATION RATE: 1750 SQ FT/LB OR 25LB/ACRE
- MINIMUM ORDER: 2 LBS
  - SPECIES:
    - VIRGINIA WILD RYE (ELYMUS VIRGINICUS)
    - LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM)
    - BIG BLUESTEM (ANDROPOGON GERARDII)
    - RED FESCUE (FESTUCA RUBRA)
    - SWITCH GRASS (PANICUM VIRGATUM)
    - PARTRIDGE PEA (CHAMAECRISTA FASCICULATA)
    - PANICLELEAF TICK TREFOLI (DESMODIUM PANICULATUM)
    - INDIAN GRASS (SORGHASTRUM NUTANS)
    - BLUE VERVAIN (VERBENA HASTATA)
    - BUTTERFLY MILKWEED (ASCLEPIAS TUBEROSA)
    - BLACK EYED SUSAN (RUDBECKIA HIRTA)
    - COMMON SNEEZEWEED (HELENIUM AUTUMNALE)
    - HEATH ASTER (ASTERILOPUS/SYMPHYOTRICHUM PILOSUM)
    - EARLY GOLDENROD (SOLIDAGO JUNCEA)
    - UPLAND BENTGRASS (AGROSTIS PERENNANS)

REVISIONS	
#	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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ISSUED FOR PERMIT

### NEW ENGLAND CONSERVATION / WILDLIFE SEED MIX SPECIFICATION

LANDSCAPE NOTES AND DETAILS

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

# 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 III® 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](http://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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1 Revised May 16, 2023 | Landscape Forms Inc. | 800.521.2546 | F 269.381.3455 | 7800 E. Michigan Ave., Kalamazoo, MI 49048

## LANDSCAPE FORMS NORTHPORT BIKE RACK

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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LANDSCAPE  
DETAILS

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

L-105



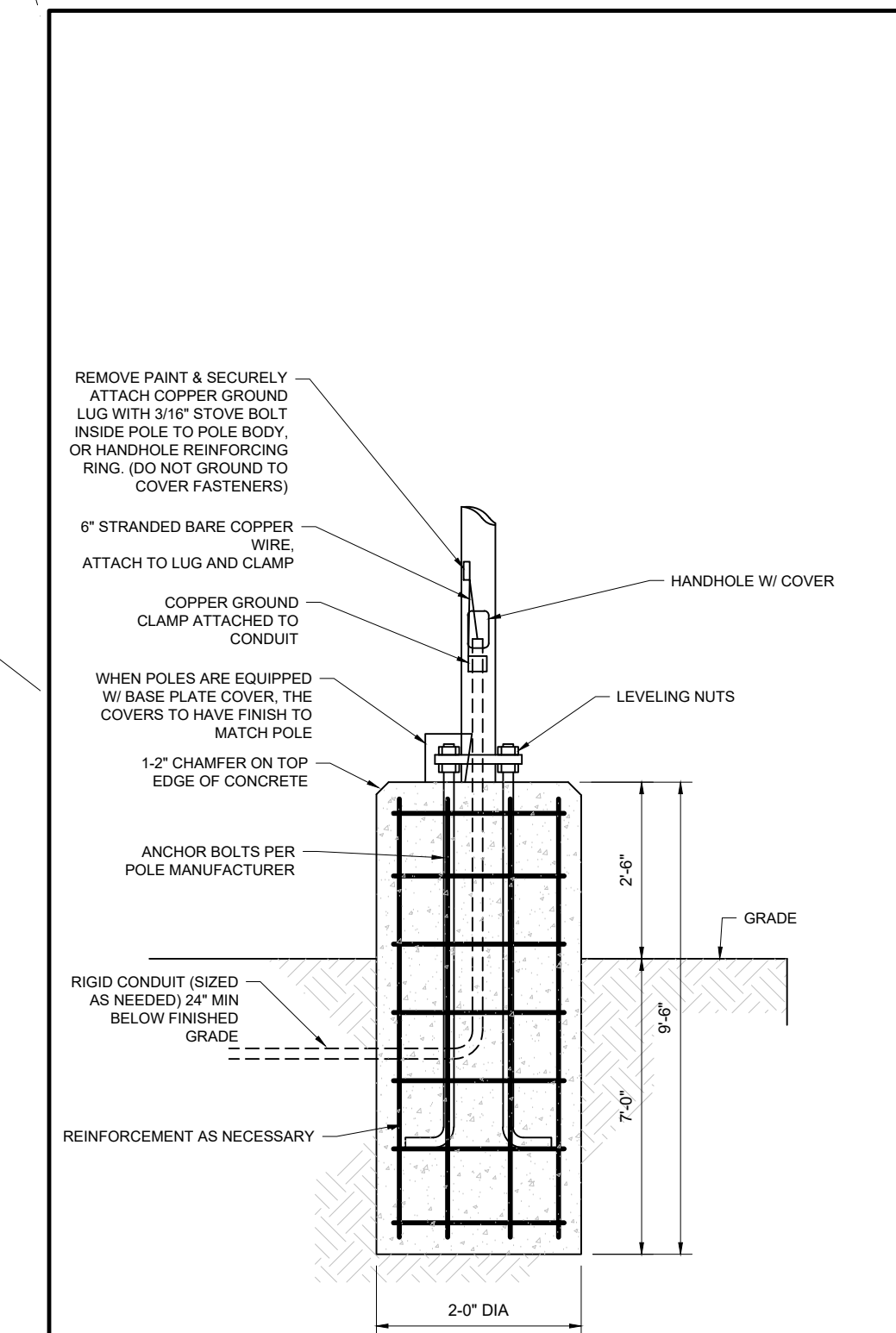
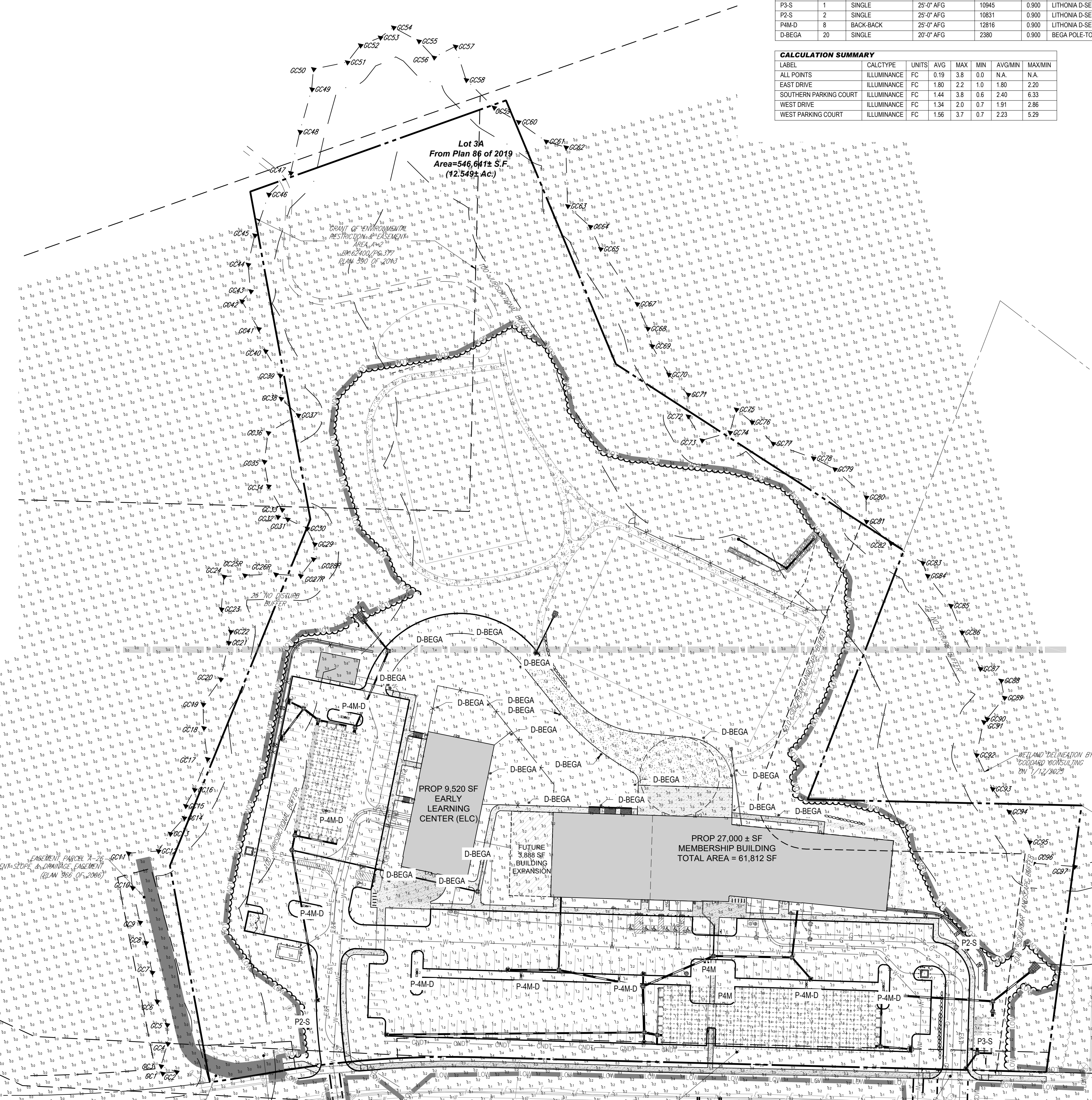
**GENERAL LIGHTING NOTES:**

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 FOOT-CANDLES (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 ARCHITECTS, ELECTRICAL ENGINEERS 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 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.
7. 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.
8. 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.
9. 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)			
P3S	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)			
P2S	2	SINGLE	25'-0" AFG	10931	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)			

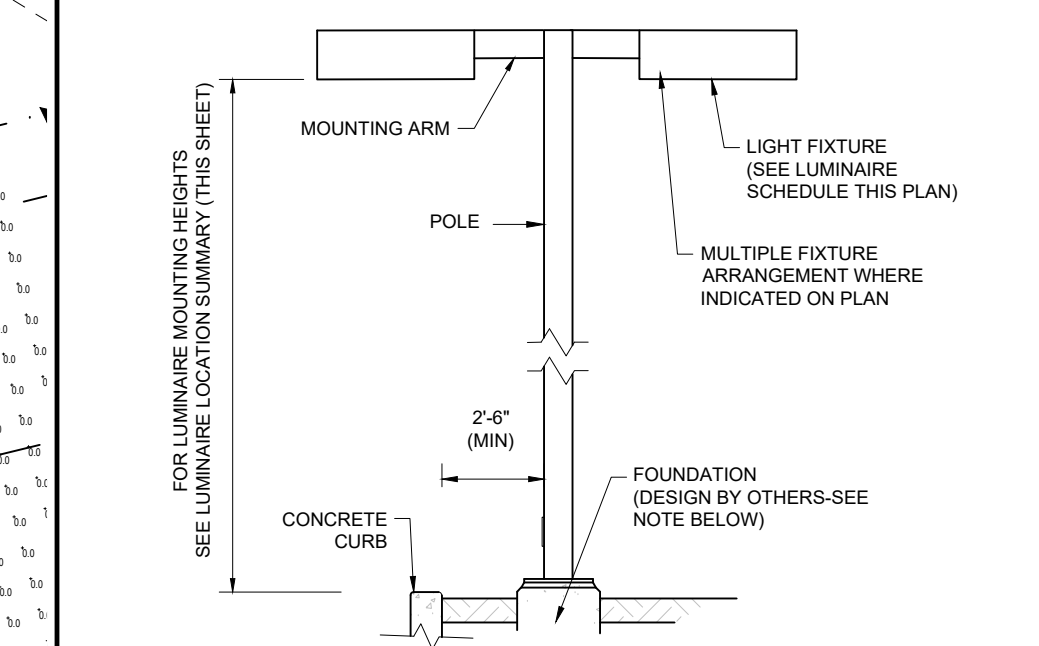
CALCULATION SUMMARY						
LABEL	CALCTYPE	UNITS	AVG	MAX	MIN	AVG/MIN
ALL POINTS	ILLUMINANCE	FC	0.19	3.8	0.0	N/A
EAST DRIVE	ILLUMINANCE	FC	1.80	2.2	1.0	1.80
SOUTHERN PARKING COURT	ILLUMINANCE	FC	1.44	3.8	0.6	2.40
WEST DRIVE	ILLUMINANCE	FC	1.34	2.0	0.7	1.91
WEST PARKING COURT	ILLUMINANCE	FC	1.56	3.7	0.7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

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



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.

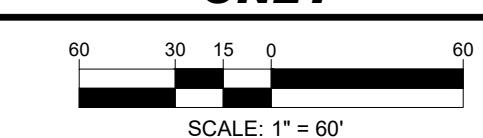
**LIGHT POLE FOUNDATION**  
 NOT TO SCALE (PA-1010101 - 11/2023)



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-1020101 - 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

**TEAM HOYT**  
**COMMUNITY YMCA**  
 MEMORIAL DRIVE  
 ASHLAND, MA

**cbt**  
 One Constitution Road  
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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

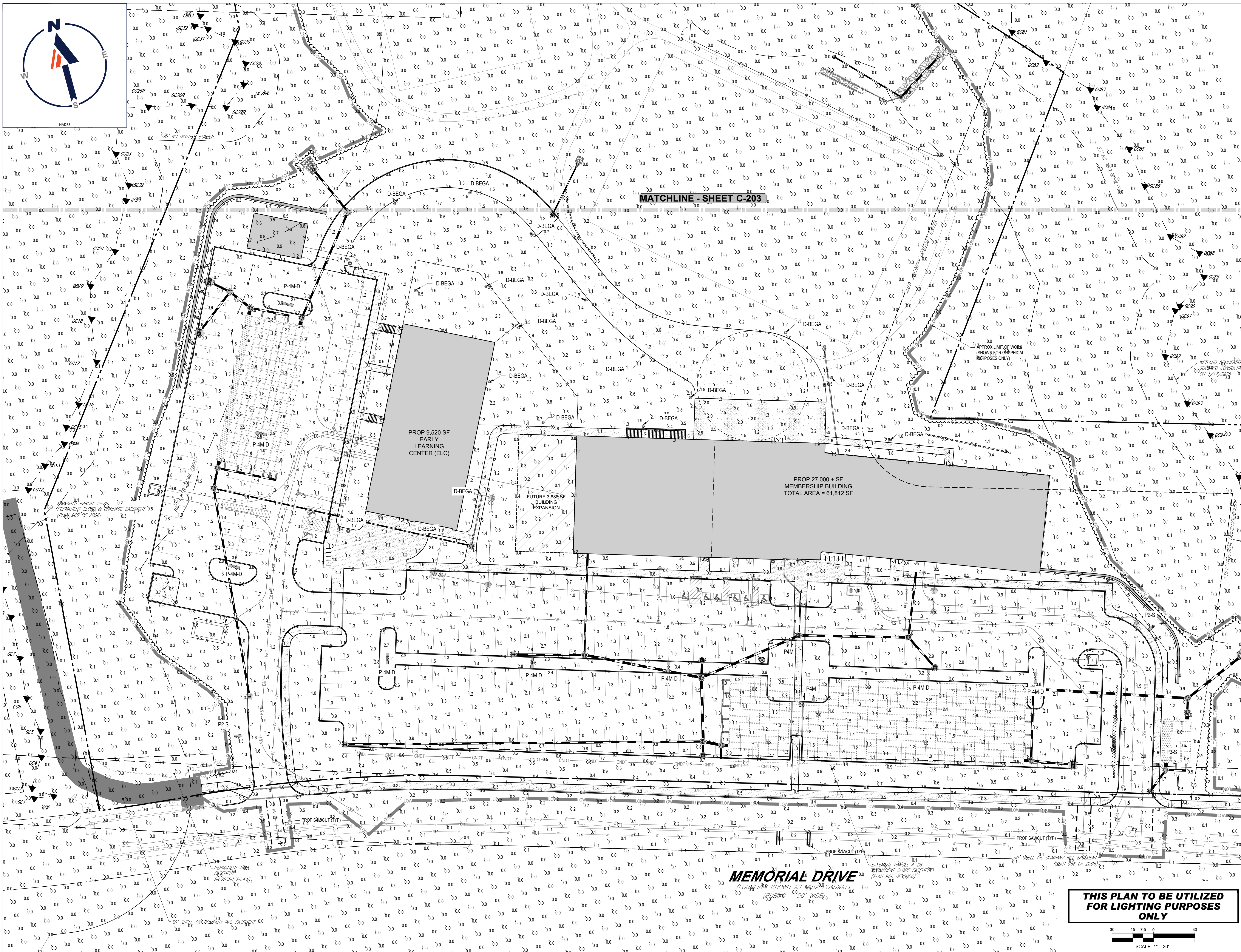


ISSUED FOR PERMIT

OVERALL LIGHTING PLAN

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**L-201**



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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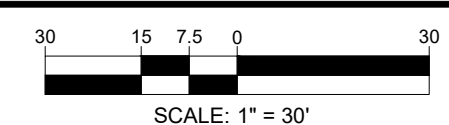


ISSUED FOR  
PERMIT

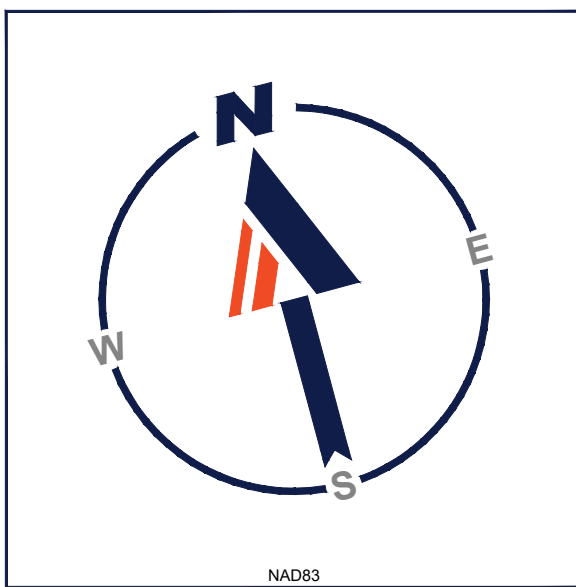
LIGHTING PLAN A

**THIS PLAN TO BE UTILIZED  
FOR LIGHTING PURPOSES  
ONLY**

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025



**L-202**



#	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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617.262.4354

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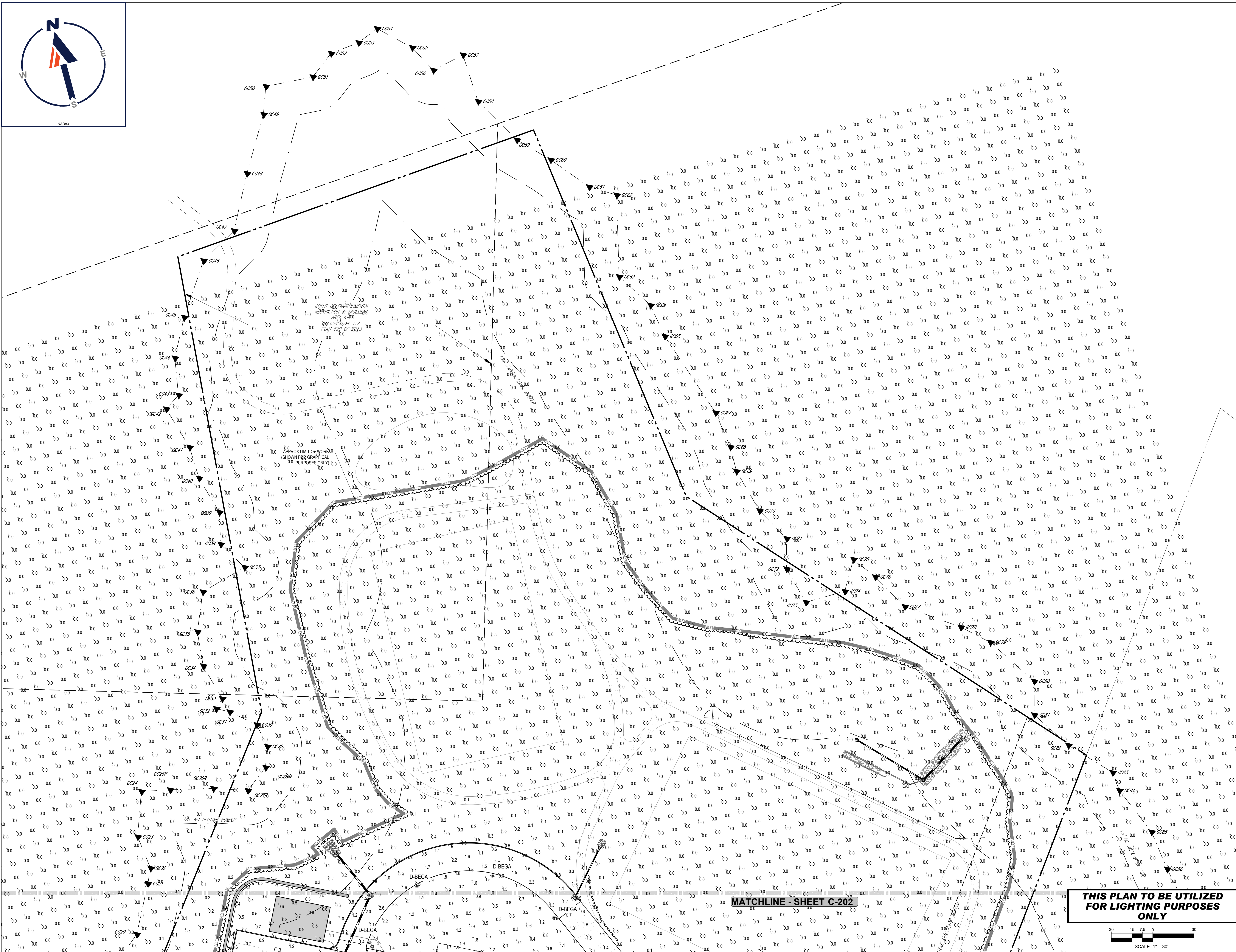
50 WASHINGTON ST., SUITE 200  
WESTBOROUGH, MA 01581  
Phone: (508) 480-9900

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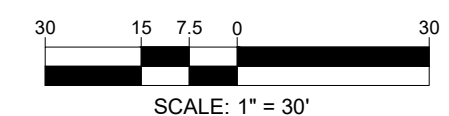


ISSUED FOR  
PERMIT

LIGHTING PLAN B



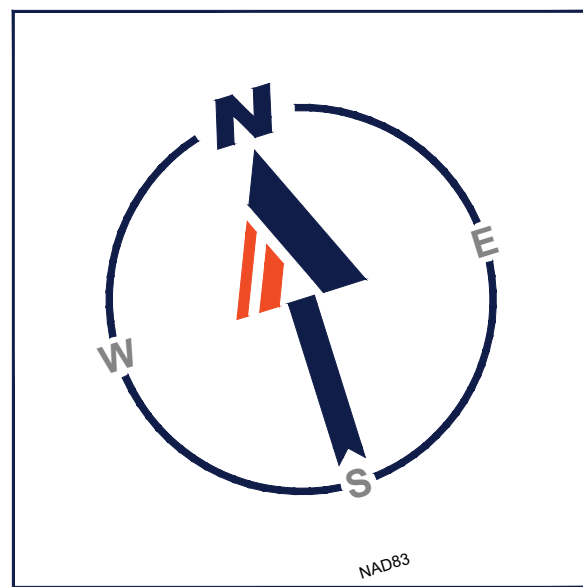
**THIS PLAN TO BE UTILIZED  
FOR LIGHTING PURPOSES  
ONLY**



SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

**L-203**





REVISIONS		
#	DATE	DESCRIPTION
1	6/24/25	NOI AND SMP
2	9/19/25	PEER REVIEW COMMENTS
3	11/24/25	PEER REVIEW COMMENTS



**TEAM HOYT**  
COMMUNITY YMCA

MEMORIAL DRIVE  
ASHLAND, MA

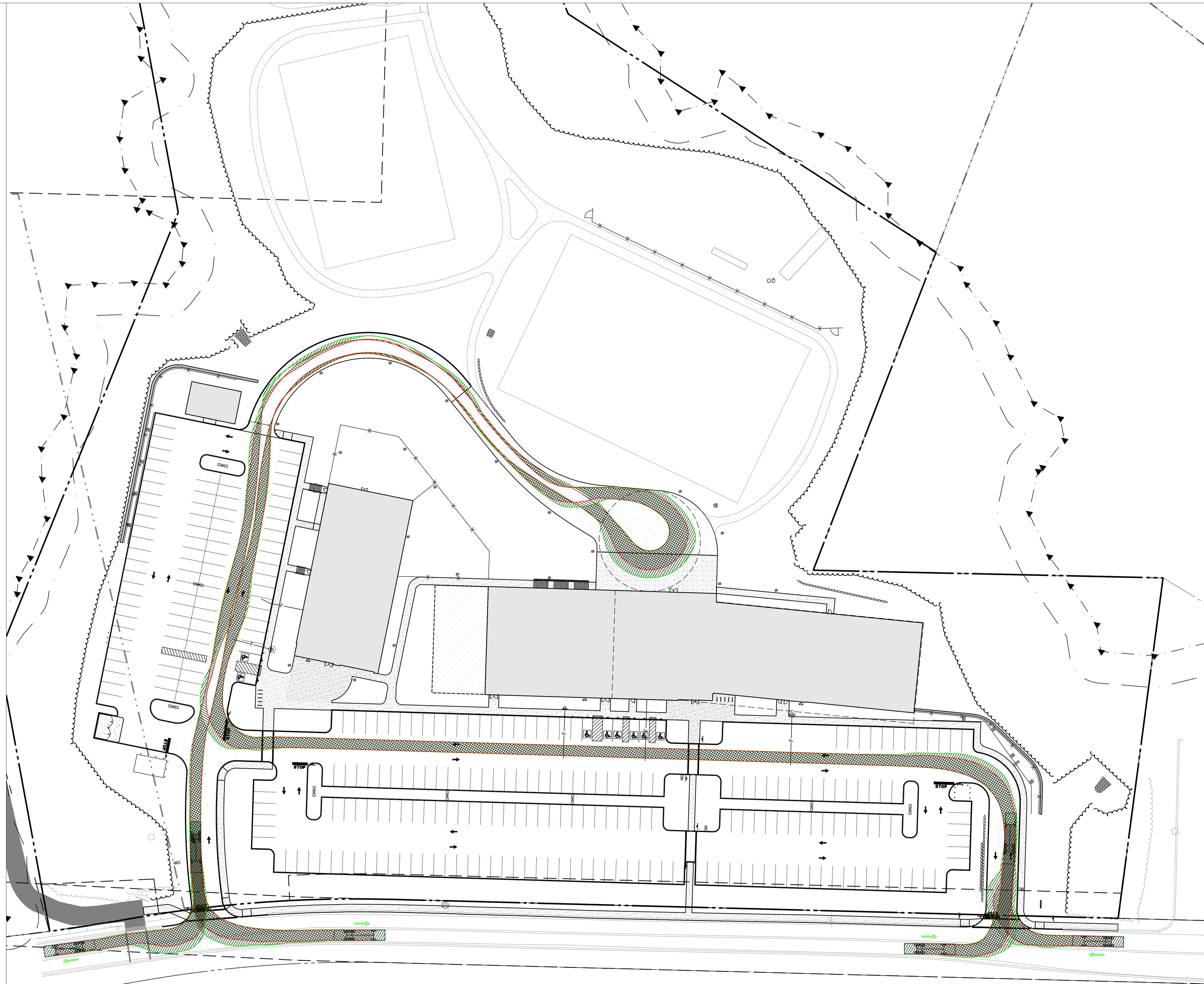
**cbt**

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Suite 200  
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617.262.4354

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LEGEND	
○	EXISTING HYDRANT
○	PROPOSED HYDRANT
—	TRUCK WHEEL PATH
—	FIRE TRUCK BODY

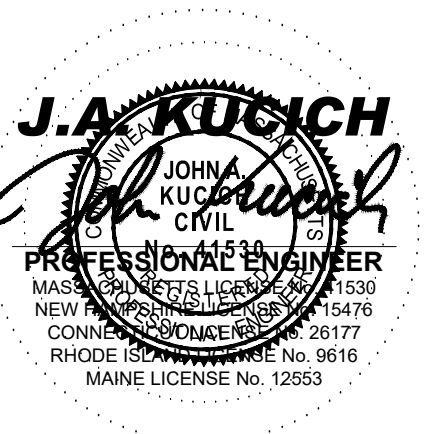
PIERCE ENFORCER 100' ASCENDANT AERIAL TOWER FIRE TRUCK

Overall Width	8.270ft
Overall Body Height	10.601ft
Min Body Ground Clearance	1.159ft
Track Width	8.000ft
Lock-to-lock time	6.00s
Max Slewing 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**

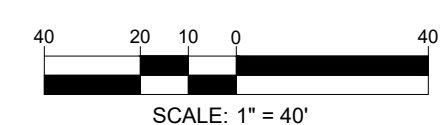
**REFER TO GENERAL NOTES  
SHEET FOR NOTES**



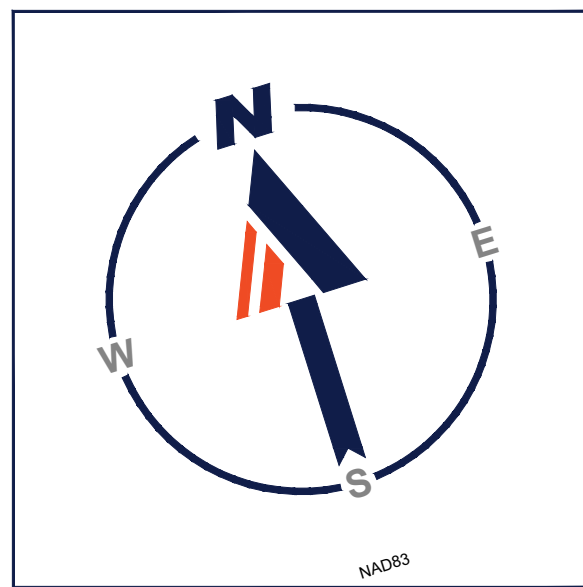
ISSUED FOR  
PERMIT

FIRE TRUCK TURNING  
PLAN

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025



**EX-101**



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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MEMORIAL DRIVE  
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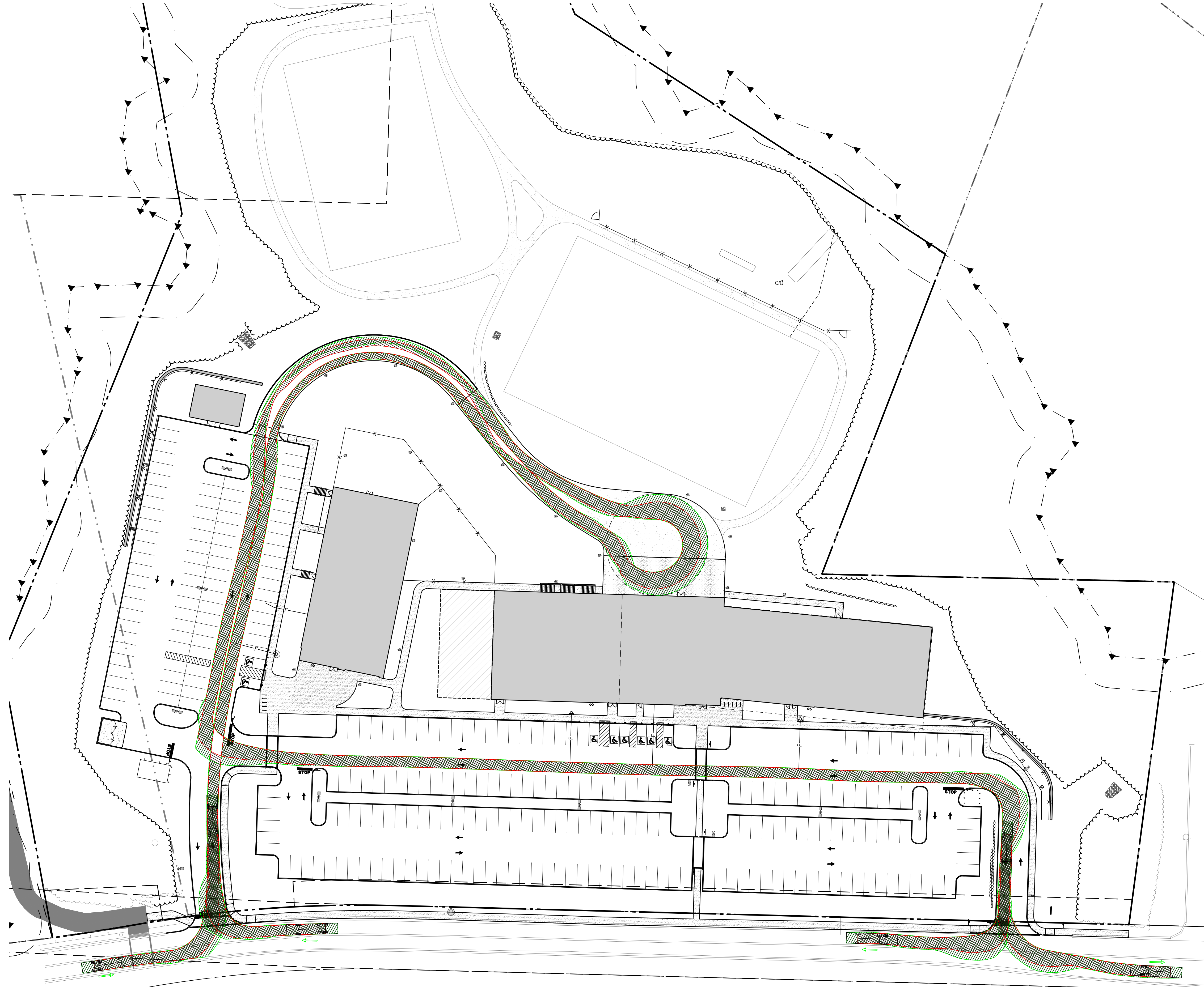
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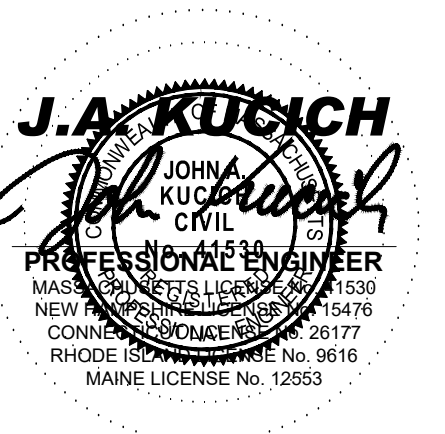
LEGEND	
○	EXISTING HYDRANT
○	PROPOSED HYDRANT
—	TRUCK WHEEL PATH
—	FIRE TRUCK BODY

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	1.159ft
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**

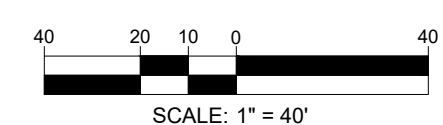
**REFER TO GENERAL NOTES  
SHEET FOR NOTES**



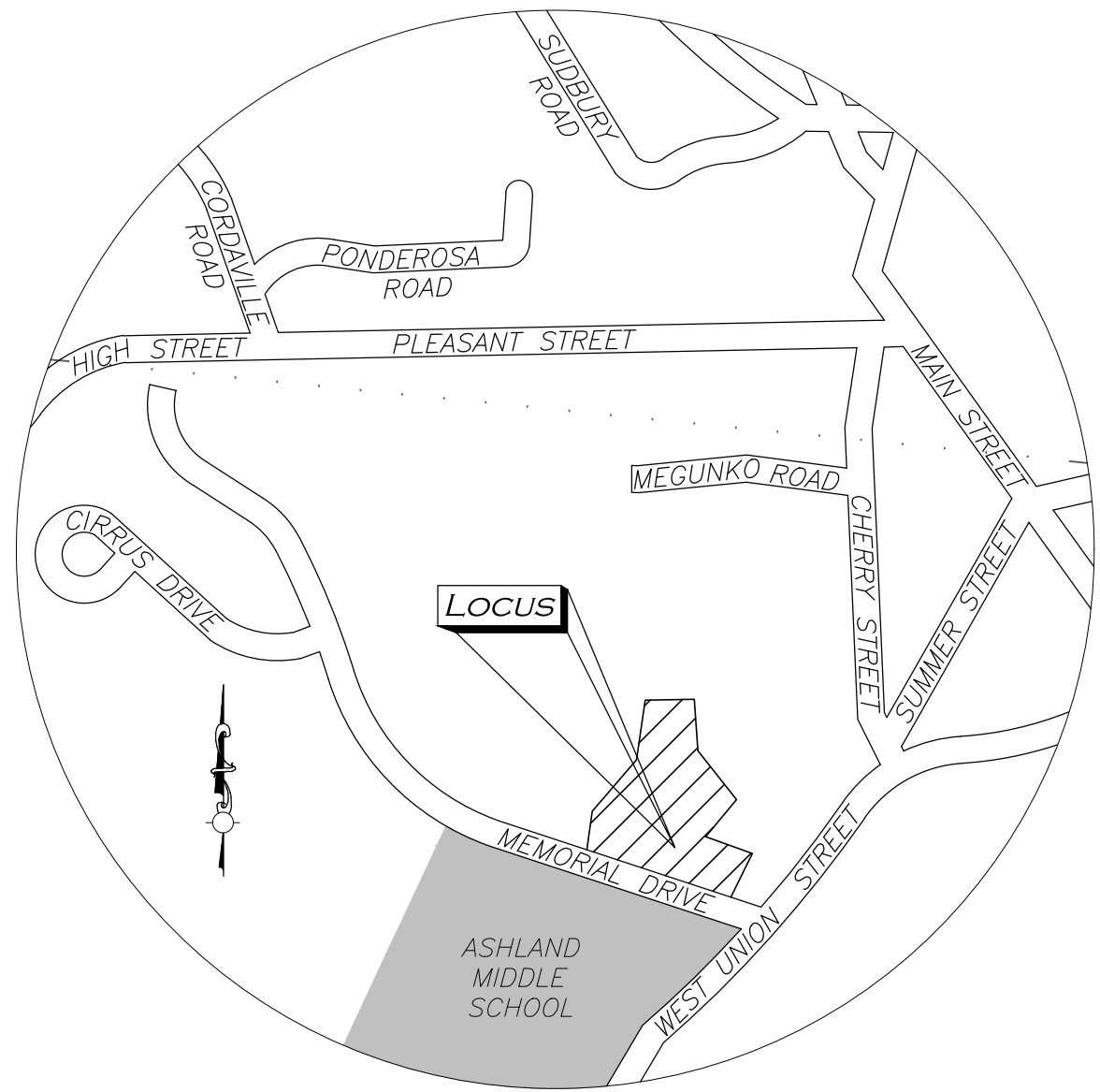
ISSUED FOR  
PERMIT

FIRE TRUCK TURNING  
PLAN

SCALE AS NOTED PROJECT # MAA240220.01 DATE ISSUED 06.24.2025

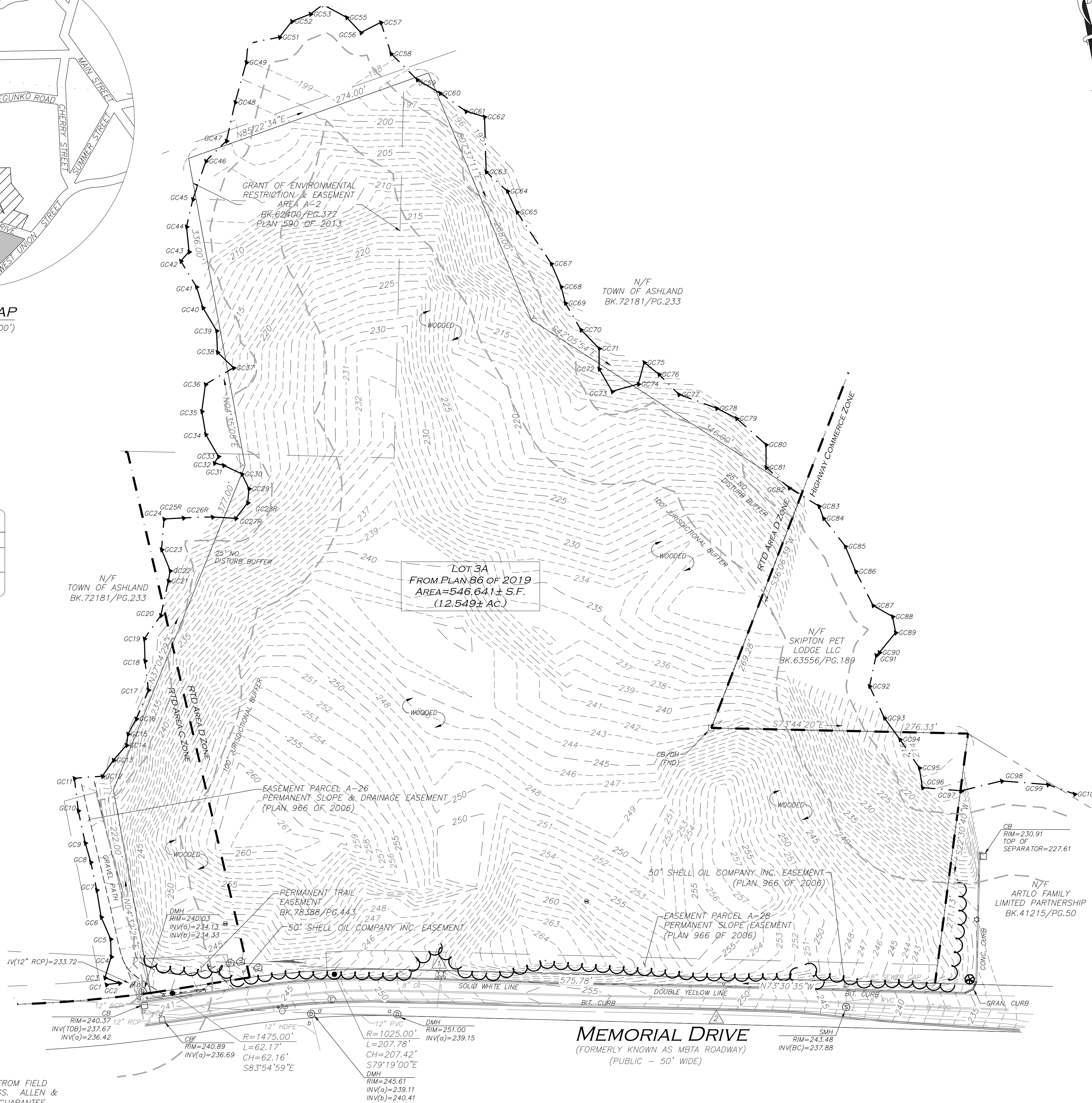


**EX-102**



**LOCUS MAP**  
(SCALE: 1" = 1,000')

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



**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.

**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	---
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.

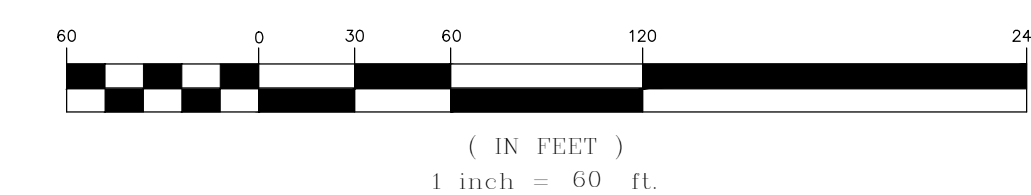
**LOCUS REFERENCES**

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

**NOTES**

- NORTH ARROW IS BASED ON MASSACHUSETTS GRID COORDINATE SYSTEM (MAINLAND ZONE) (NAD 83).
- BOOK/PAGE AND PLAN REFERENCES ARE TAKEN FROM MIDDLESEX (SOUTH) REGISTRY OF DEEDS IN CAMBRIDGE, MA.
- VERTICAL DATUM IS NAVD 88.
- CONTOUR INTERVAL IS ONE FOOT (1').
- EASEMENTS AFFECTING OR IN THE VICINITY OF LOT 3A ARE SHOWN HEREON. SEE PLAN 966 OF 2006 FOR ADDITIONAL EASEMENTS OF RECORD AFFECTING LOT 38.
- WETLAND LINE SHOWN HEREON DELINEATED BY GODDARD CONSULTING LLC AND FIELD LOCATED BY ALLEN & MAJOR ASSOCIATES, INC.

**GRAPHIC SCALE**



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.

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.**

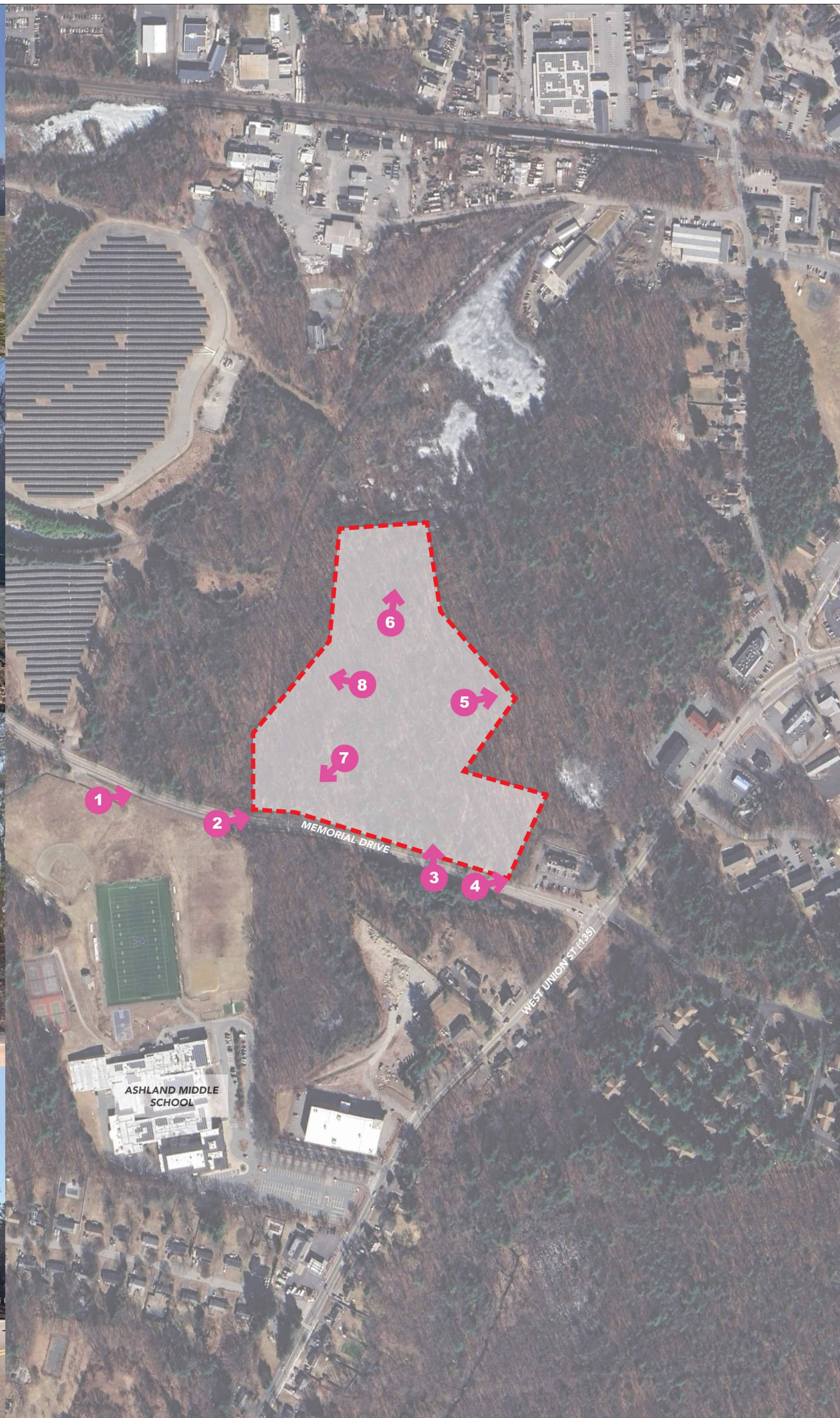
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FAX: (781) 935-2896

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EXISTING CONDITIONS V-101



REVISIONS		
#	DATE	DESCRIPTION



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**cbt**

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cbtarchitects.com  
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SITE PLAN REVIEW



EXISTING SITE PHOTOS

SCALE PROJECT # DATE ISSUED  
249037.00 04.25.2025

**A0.1**

REVISIONS		
#	DATE	DESCRIPTION



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SITE PLAN REVIEW



LOWER LEVEL PLAN

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

**A1.1**

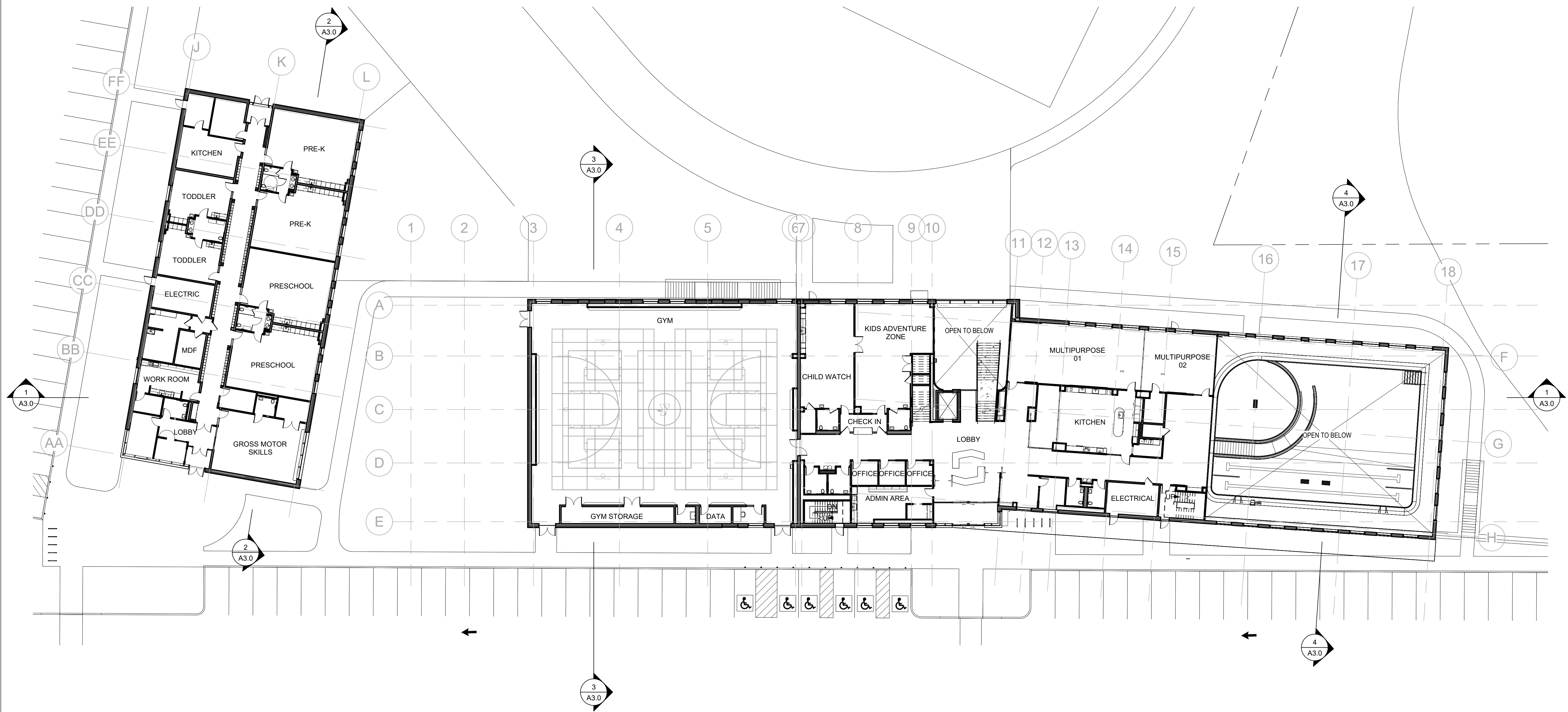
REVISIONS		
#	DATE	DESCRIPTION



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SITE PLAN REVIEW



LEVEL 01 PLAN

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

**A1.2**

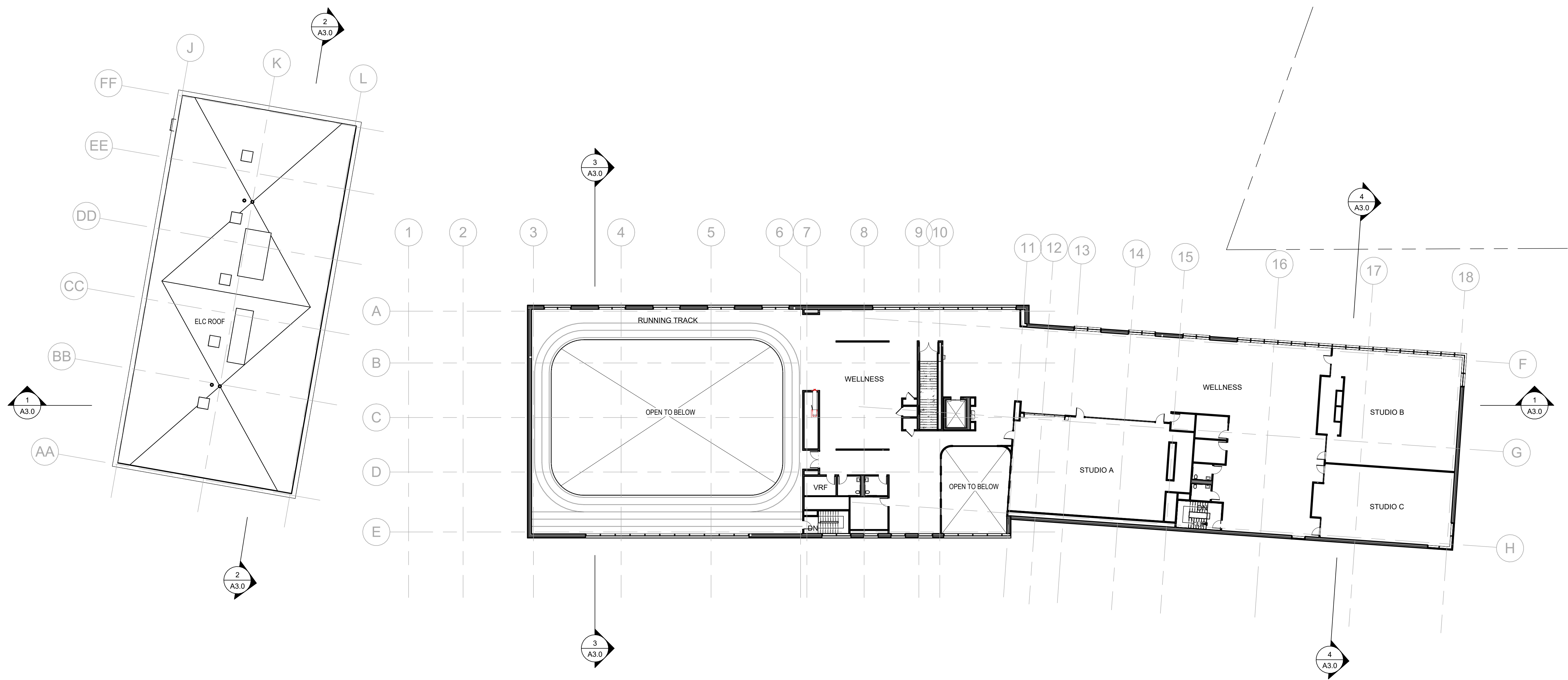
REVISIONS		
#	DATE	DESCRIPTION



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SITE PLAN REVIEW



LEVEL 02 PLAN

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

**A1.3**

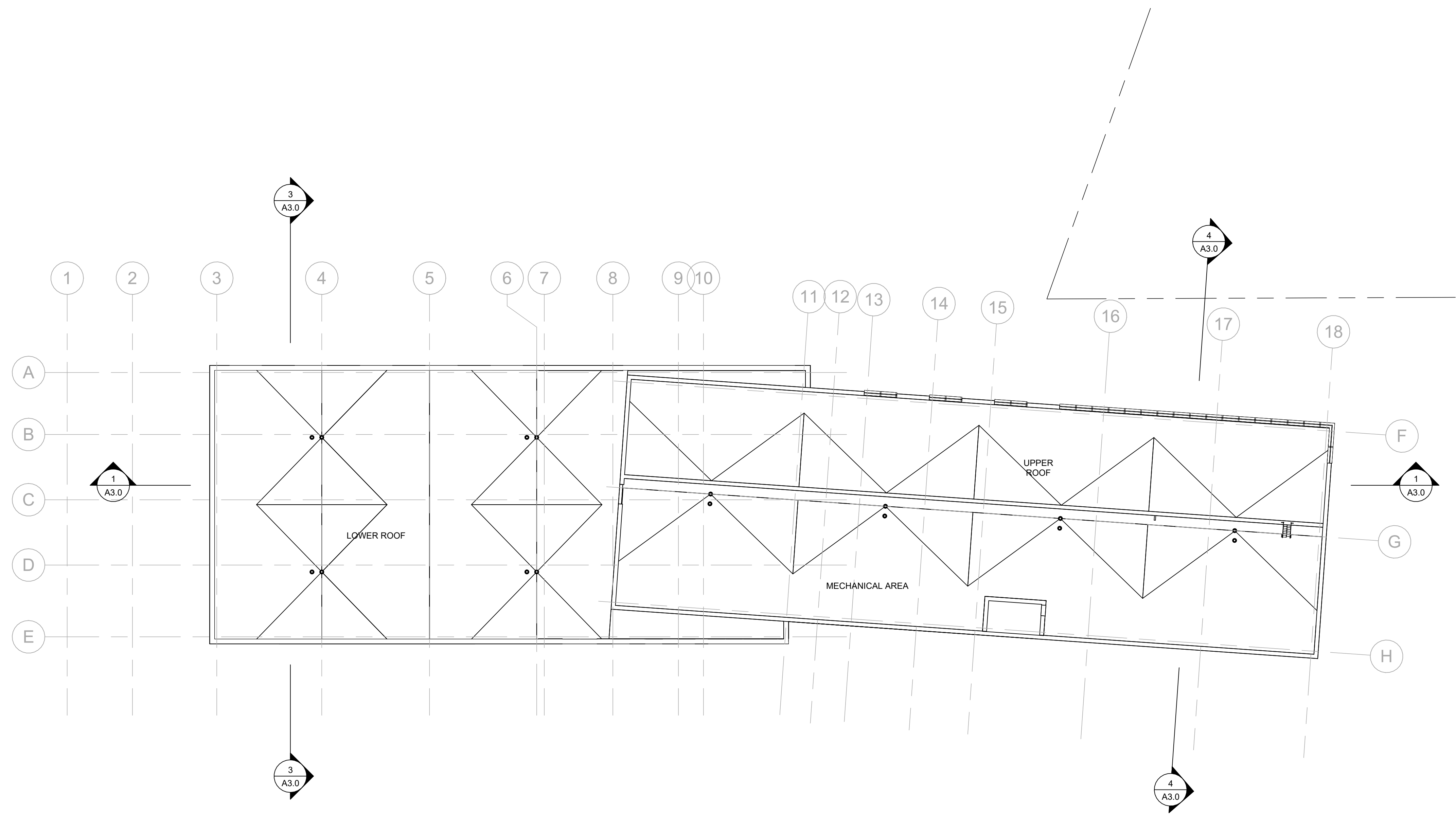
REVISIONS		
#	DATE	DESCRIPTION



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**COMMUNITY YMCA**  
 MEMORIAL DRIVE  
 ASHLAND, MA

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SITE PLAN REVIEW



ROOF PLAN

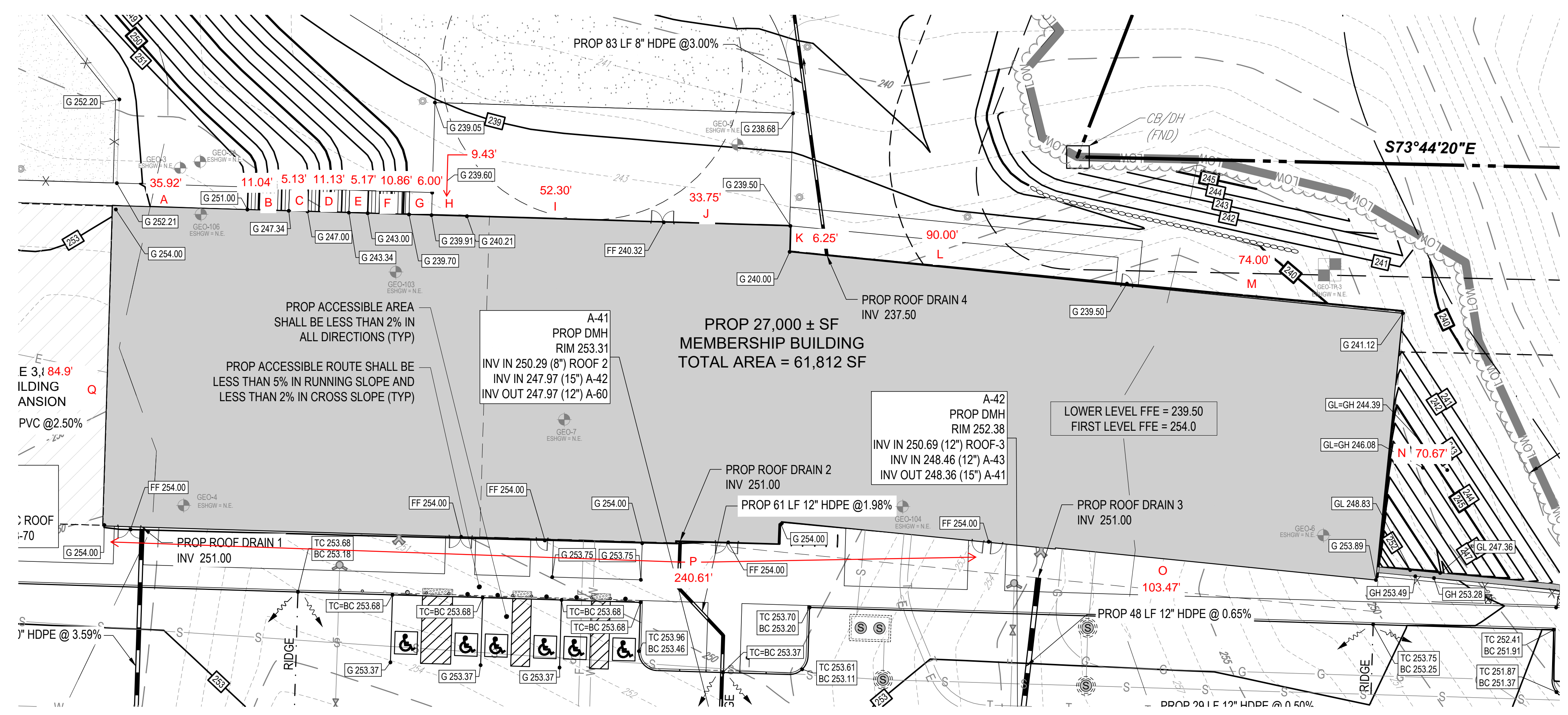
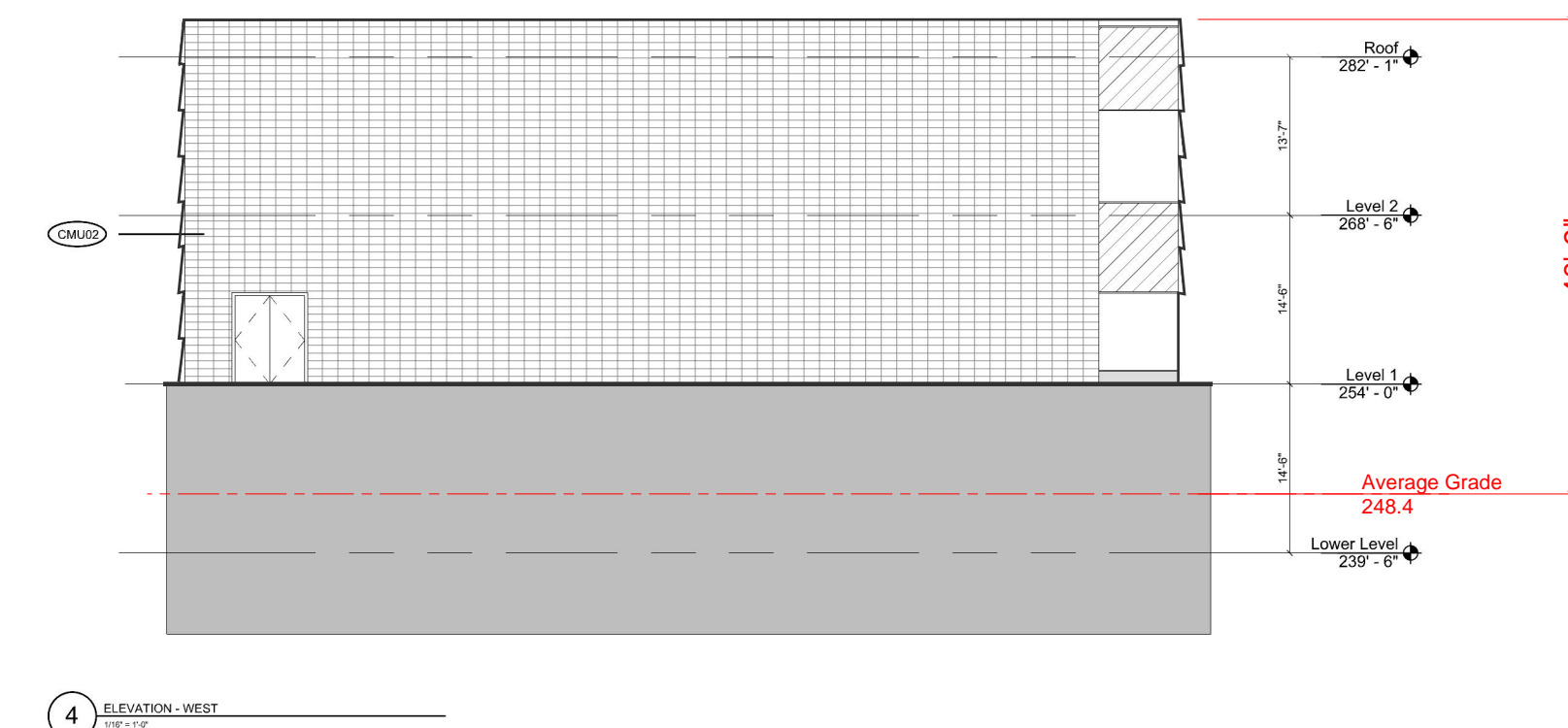
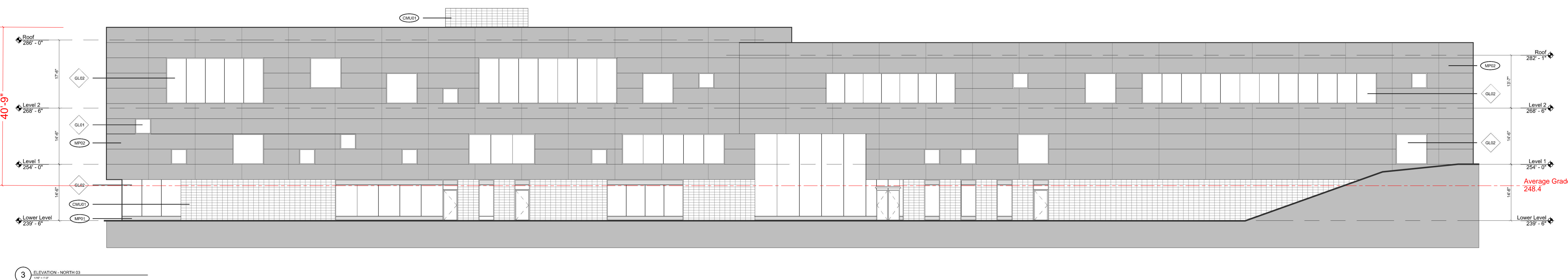
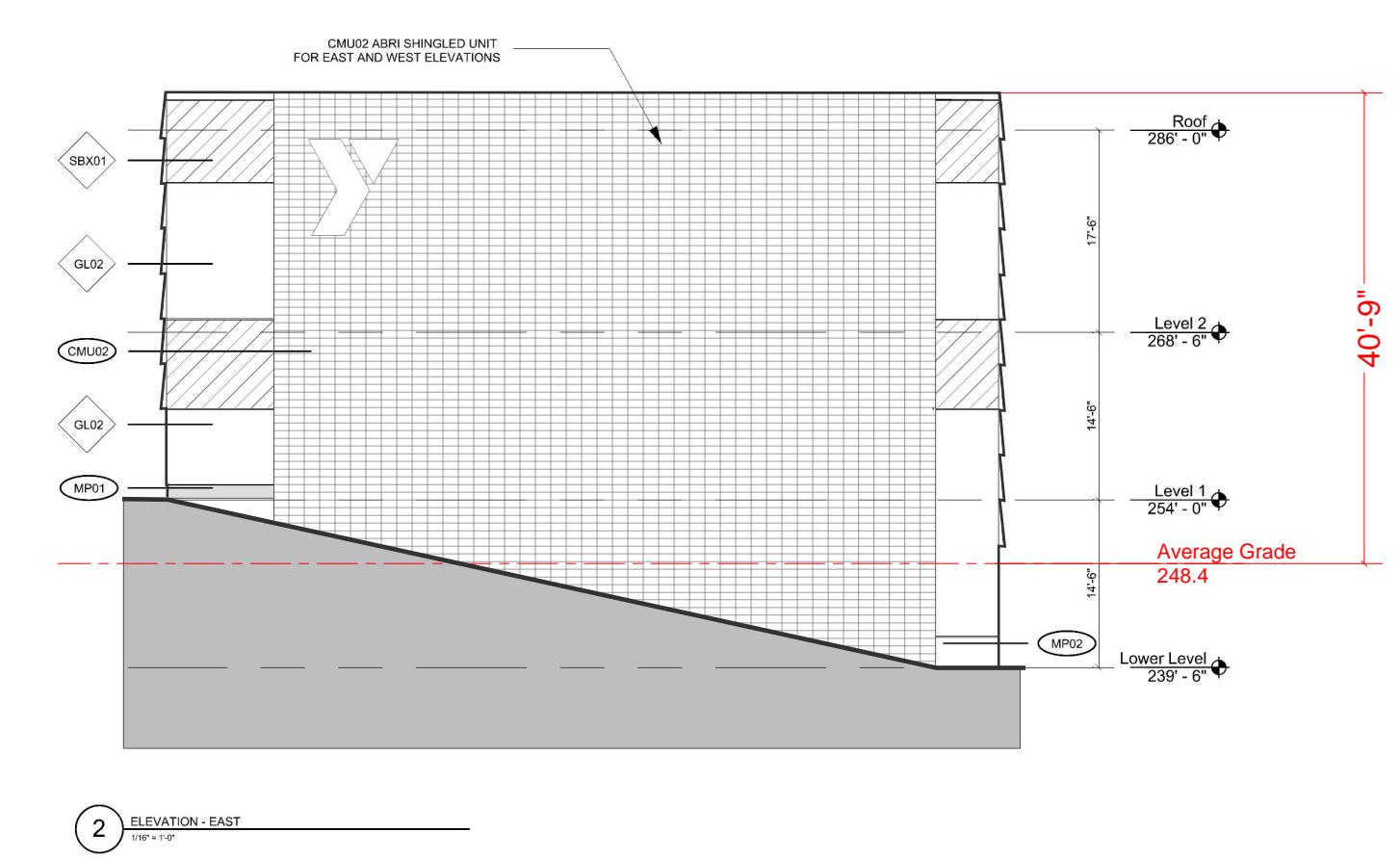
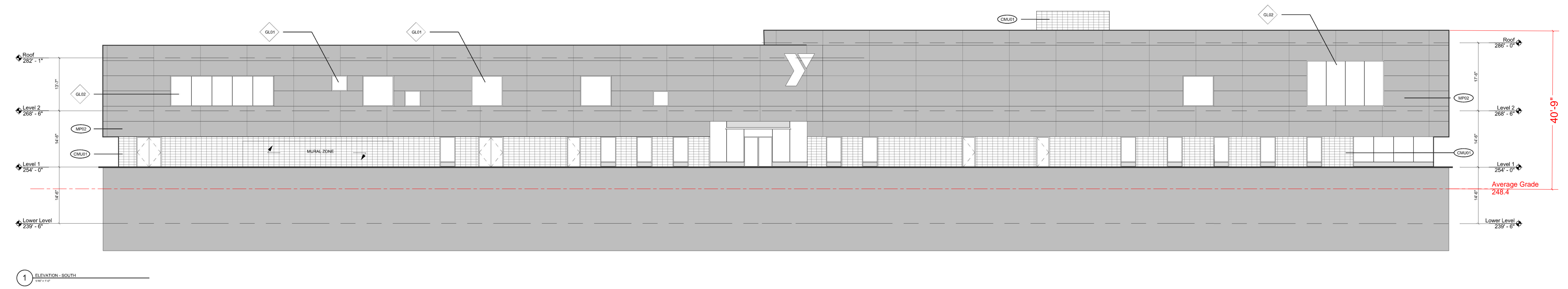
SCALE 1" = 20'-0"  
 PROJECT # 249037.00  
 DATE ISSUED 04.25.2025

**A1.4**

# Elevations

**EXTERIOR MATERIAL LEGEND**

- CMU: CONCRETE BLOCK MASONRY
- EIFS: EXTERIOR INSULATION FINISH SYSTEM
- SP: ALUMINUM PANEL
- SPB: ALUMINUM PANEL BRIDLED
- SG: TRIPLE GLAZED INSULATED GLAZING UNIT
- SGG: TRIPLE GLAZED INSULATED GLAZING UNIT BRIDLED



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
<b>Totals:</b>			<b>850.63</b>	<b>211300.15</b>
<b>Average Grade (Avg. Grade * Length)/Total Length</b>			<b>248.40 ft</b>	

Excerpt from Grading Plan (not to scale)