MEDWAY BATTERY ENERGY STORAGE SYSTEM
NOI PLAN SET
PARCELS: 046-005, 046-0056, 046-0057, 0056-0006
TOWN OF MEDWAY, NORFOLK COUNTY, MASSACHUSETTS

PROJECT NO. 151033401

CIVIL DRAWING INDEX

SHEET NUMBER	DRAWING TITLE	DATE	LAST REVISED
CS001	SITE COVER SHEET	06/08/2023	08/01/2024
CS002	MASTER LEGEND & NOTES	06/08/2023	10/04/2023
EX101	RESOURCE DELINEATION PLAN I	10/04/2023	
EX102	RESOURCE DELINEATION PLAN II	10/04/2023	
CS101	OVERALL SITE PLAN	06/08/2023	08/01/2024
CS102	UNDERGROUND TRANSMISSION LINE SITE PLAN	06/08/2023	08/01/2024
CS501	SITE DETAILS	06/08/2023	
CD101	SITE PREPARATION PLAN	06/08/2023	10/04/2023
CG101	GRADING & DRAINAGE PLAN	06/08/2023	08/01/2024
CG501	GRADING & DRAINAGE DETAILS I	06/08/2023	08/01/2024
CG502	GRADING & DRAINAGE DETAILS II	06/08/2023	08/01/2024
CG503	GRADING & DRAINAGE DETAILS III	06/08/2023	08/01/2024
CE101	SOIL & EROSION CONTROL PLAN – PHASE I	06/08/2023	08/01/2024
CE102	SOIL & EROSION CONTROL PLAN – PHASE II	06/08/2023	08/01/2024
CE501	SOIL & EROSION CONTROL DETAILS I	06/08/2023	08/24/2023
CE502	SOIL & EROSION CONTROL DETAILS II	06/08/2023	10/04/2023
CU101	UTILITY PLAN	06/08/2023	08/01/2024
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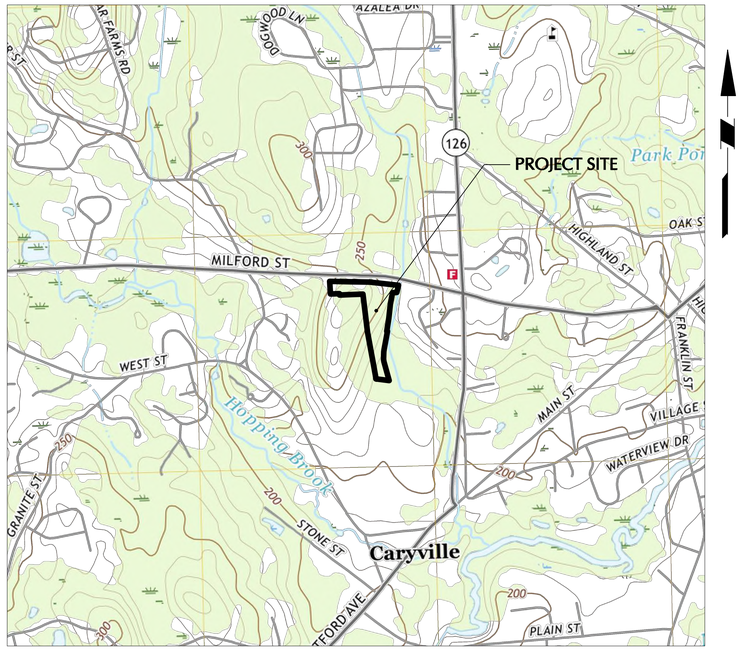
TM101	TANKER TRUCK TURNING MOVEMENT PLAN	08/24/2023	08/01/2024
TM102	LADDER TRUCK TURNING MOVEMENT PLAN	08/24/2023	08/01/2024
LL101	SITE LIGHTING PLAN	06/08/2023	08/01/2024
LL501	SITE LIGHTING DETAILS	06/08/2023	
LP101	PLANTING PLAN	06/08/2023	08/01/2024
LP501	PLANTING DETAILS	06/08/2023	10/04/2023



MAP REFERENCE: USGS 2021 HOLLISTON, MA QUADRANGLES (7.5 MINUTE SERIES)

LOCATION MAP

SCALE: 1" = 1000'

RELEASE DATES

DATE	ISSUED FOR
06/08/2023	NOTICE OF INTENT
08/24/2023	NOI COMMENT REVISIONS
10/04/2023	NOI COMMENT REVISIONS
08/01/2024	NOI REVISIONS

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LANGAN

GENERAL NOTES

1. PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS BY "LAND PLANNING, INC." CONDUCTED ON NOVEMBER 12, 2021.
2. THE SITE LIES IN FLOOD ZONE X AS SHOWN ON THE FLOOD INSURANCE RATE MAP NORFOLK COUNTY, FEMA MAP NUMBER 25021C0139E, EFFECTIVE 7/17/2012.
3. THE BOUNDARIES OF THE WETLAND RESOURCE AREAS ON THE PROJECT SITE AND ON ADJACENT PARCELS INCLUDING; 55 AND 61 MILFORD STREET (EVERSOURCE PARCELS TO THE WEST OF PROJECT SITE) AND 9 SUMMER STREET (CONSTELLATION PARCELS TO THE SOUTH OF THE PROJECT SITE) HAVE BEEN REVIEWED AND VERIFIED THROUGH EITHER AN ORDER OF RESOURCE AREA DELINEATION ("ORAD"), ISSUED ON FEBRUARY 27, 2020 OR BY REVIEW OF A THIRD-PARTY WETLAND CONSULTANT (ECOTEC, INC) ON AUGUST 3, 2023.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING DIG SAFE (WWW.DIGSAFE.COM), EXCAVATION TEST HOLES, PERFORMING TEST BORINGS, AND PERFORMING WHATEVER ADDITIONAL INVESTIGATION NECESSARY TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES TO REMAIN THROUGHOUT THE CONSTRUCTION PERIOD. ANY CONFLICTS BETWEEN EXISTING UTILITIES AND PROPOSED UTILITIES DISCOVERED DURING CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.
5. CONTRACTOR SHALL PREVENT DUST, SEDIMENT AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS. ADJOINING STREETS AND PROPERTIES TO BE KEPT FREE OF DEBRIS RESULTING FROM DEMOLITION AND SHALL BE CLEANED ON A DAILY BASIS OR AS NEEDED.
6. DUST CONTROL TREATMENTS SHALL BE APPLIED AS NECESSARY TO CONTROL AND REDUCE THE AMOUNT OF DUST WHICH MAY CAUSE OFF-SITE DAMAGE, BE A HEALTH HAZARD TO HUMANS, WILDLIFE AND PLANT LIFE, OR POSE A HAZARD TO TRAFFIC SAFETY.
7. PROPOSED SITE WORK IMPROVEMENTS SHALL CONFORM TO THE STANDARD DETAILS AND SPECIFICATIONS OF THE TOWN OF MEDWAY. IN THE ABSENCE OF LOCAL STANDARDS, SITE WORK SHALL CONFORM TO THE REQUIREMENTS OF MASSACHUSETTS DOT STANDARD DETAILS.
8. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.
9. ANY UTILITY EASEMENTS REQUIRED BY ANY OF THE VARIOUS UTILITY COMPANIES, THE CONTRACTOR SHALL OBTAIN, EXECUTE, AND RECORD PRIOR TO ANY OF THE AFFECTED UTILITY WORK BEING PERFORMED.
10. ALL IMPROVEMENTS CONSTRUCTED IN THE TOWN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO TOWN OF MEDWAY STANDARD DETAILS. IN THE ABSENCE OF LOCAL DETAILS & REQUIREMENTS AND WORK IN THE STATE RIGHT-OF-WAY SHALL COMPLY WITH THE STATE OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (2021 EDITION) AND THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION OF TRANSPORTATION SUPPLEMENTAL SPECIFICATIONS (DATED SEPTEMBER 30, 2021).
11. FOR AREAS OUTSIDE THE PROPERTY LINES, REPAIR AND/OR REPLACE ALL DAMAGE DONE TO EXISTING ELEMENTS (SIDEWALKS, PAVING, LANDSCAPING, ETC) AS REQUIRED BY OWNER AND/OR GOVERNING AUTHORITY.
12. ALL SIGNS AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE MUTCD AND MASSACHUSETTS DEPARTMENT OF TRANSPORTATION REGULATIONS.
13. THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON IS TAKEN FROM DESIGN PLANS, AS-BUILT SKETCHES, EXISTING UTILITY COMPANY RECORDS, AND OTHER SOURCES OF INFORMATION AND IS NOT TO BE CONSTRUED AS AN ACCURATE "AS-BUILT" SURVEY AND IS SUBJECT TO SUCH CORRECTIONS THAT A MORE ACCURATE SURVEY MAY DISCLOSE.IN ADDITION, OTHER UTILITIES NOT SHOWN HEREON MAY BE PRESENT. ANY DISCREPANCIES DISCOVERED DURING THE COURSE OF CONSTRUCTION SHALL BE PROMPTLY REPORTED TO THE PROJECT ENGINEER.
14. ALL UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS/DETAILS OF THE UTILITY COMPANY HAVING AUTHORITY OVER THE PROPOSED WORK. ALL PROPOSED UTILITY WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL ORDINANCES/REQUIREMENTS GOVERNING THE PROPOSED WORK.
15. ALL PROPOSED UTILITIES WILL BE LOCATED UNDERGROUND UNLESS OTHERWISE NOTED.
16. RESET ALL EXISTING SANITARY AND DRAINAGE STRUCTURES TO MASSACHUSETTS STATE STANDARDS AND AS REQUIRED BY REPAIRING, MILLING OR OVERLAYING.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK.
18. CONCRETE JOINTS ON SITE ARE TO BE FILLED WITH HOT-APPLIED JOINT FILLER, TO INCLUDE CONCRETE PAVEMENTS, MONOLITHIC CURBING AND MONOLITHIC SIDEWALKS.
19. BOTTOM AND TOP OF RETAINING WALL ELEVATION SPOT SHOTS REPRESENT THE BASE OF THE WALL AT FINISHED GROUND LEVEL AND THE TOP OF THE FACE OF THE WALL RESPECTIVELY.
20. ALL ON-SITE CONCRETE TO BE 4,500 PSI WITH 5% TO 7% AIR ENTRAPMENT UNLESS OTHERWISE NOTED.

UTILITY NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF THE FIRE SERVICE LINE CONNECTIONS TO EXISTING MAINS.
2. TEST PITS ARE TO BE PERFORMED PRIOR TO INSTALLATION OF FIRE SERVICE LINE CONNECTIONS TO CONFIRM THE SIZE AND MATERIAL OF THE MAIN.
3. TAPPING SLEEVES AND GATE VALVE ASSEMBLIES SHALL BE INSTALLED AT EACH FIRE SERVICE LINE CONNECTION AND SHALL BE MANUFACTURED BY CLOW VALVE CO., MUELLER CO., OR AMERICAN VALVE AND HYDRANT.
4. SCHEDULING OF ALL FIRE SERVICE LINE CONNECTION WORK SHALL BE COORDINATED WITH THE TOWN OF MEDWAY TO ALLOW FOR A REPRESENTATIVE FROM THE AGENCY TO BE ONSITE TO OVERSEE THE CONNECTIONS AND PERFORM A WATER SHUTDOWN AS NEEDED.
5. THE DEPARTMENT SHALL APPROVE ALL MATERIALS USED IN MAKING A SERVICE CONNECTION AND SHALL INSPECT ALL WORK UPON COMPLETION AND PRIOR TO BACKFILL OF TRENCH. ALL PIPE FITTINGS, AND APPURTENANCES SHALL MEET AWWA AND DEPARTMENT STANDARDS.
6. ALL MAINS SHALL BE AT LEAST EIGHT (8) INCHES IN DIAMETER AT A DEPTH OF FIVE (5) FEET AND SHALL BE CEMENT LINED DUCTILE IRON THICKNESS CLASS 52. ALL MAINS OR SERVICES SHALL BE INSTALLED NO CLOSER THAN THREE (3) FEET VERTICALLY OR TEN (10) FEET HORIZONTALLY FROM SEWER LINE OR ENCASED IN CONCRETE OR SLEEVE SEGMENTS NOT MEETING THESE CRITERIA.
7. VALVE BOXES SHALL BE MANUFACTURED IN THE UNITED STATES AND BE CAST IRON, TAR COATED, SLIDING, HEAVY PATTERN TYPE, CONSISTING OF THREE (3) PIECES; A FLANGED BOTTOM PIECE, A FLANGED TOP PIECE, AND A COVER WITH TOW (2) LIFTING HOLES AND THE WORD "WATER" CAST ON THE TOP. A MINIMUM 6 INCH OVERLAP IS REQUIRED BETWEEN SLIDING SECTIONS. THE INSIDE DIAMETER OF BOXES SHALL BE AT LEAST 5-1/4 INCHES AND LENGTHS SHALL BE AS NECESSARY TO SUIT GROUND ELEVATION.
8. WATER SHUT-OFF BOX AND CURB STOP BOX SHALL BE ERIE STYLE.
9. ALL HYDRANTS SHALL BE STANDARDIZED TYPE AND SPECIFICATIONS OF OF THE MEDWAY WATER DIVISION. HYDRANTS SHALL BE LOCATED AT PROPERTY LINES WHEN POSSIBLE AND SHALL NOT BE SPACED MORE THAN FIVE HUNDRED (500) FEET APART. THERE SHALL ALSO BE A GATE VALVE FOR EVERY HYDRANT. ALL HYDRANTS SHALL BE BACKED WITH 0.25 CUBIC YARDS OF CONCRETE OR APPROVED THRUST BLOCK AGAINST TRENCH WALL. HYDRANTS SHALL ALSO BE SURROUNDED WITH 1 CUBIC YARD OF 3/4-INCH STONE FOR DRAINAGE. SEE CONSTRUCTION DETAIL.
10. ALL FIRE HYDRANTS SHALL RECEIVE AN ISOLATION VALVE ALONG THE HYDRANT LATERAL AND A MINIMUM OF TWO PROTECTIVE BOLLARDS.
11. HYDRANTS - AMERICAN, DARLING MODEL B-84B, OPEN LEFT. FACTORY PAINTED IN TOWN OF MEDWAY STANDARD COLOR WITH NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) STANDARD THREADS AND TWO 2-1/2 INCH NOZZLES AND ONE 4-1/2 INCH NOZZLE.
12. THE DEVELOPER SHALL PROVIDE AS-BUILT RECORD DRAWINGS OF ALL NEW AND EXISTING WATER INFRASTRUCTURE TO THE TOWN OF MEDWAY AT THE COMPLETION OF CONSTRUCTION.
13. WATER MAINS SHALL BE PRESSURE AND LEAK TESTED AS PER AMERICAN WATER WORKS ASSOCIATION (AWWA) SPECIFICATIONS AT 50 PSI OVER STATIC PRESSURE OR 150 PSI, WHICHEVER IS GREATER, FOR A PERIOD OF TWO (2) HOURS.
14. THE DEVELOPER SHALL SUBMIT AN AS-BUILT PLAN, GATE TIE CARDS, AND WATER SERVICE CARDS, PREPARED BY A REGISTERED CIVIL ENGINEER IN THE STATE OF MASSACHUSETTS TO THE MEDWAY ENGINEERING DIVISION AT THE CONCLUSION OF THE PROJECT.
15. ALL NEW CONSTRUCTION OR ALL CEMENT LINED DUCTILE IRON JOINTS AT FITTINGS (CLASS 52), VALVES AND HYDRANT LATERALS SHALL BE MECHANICAL WITH NEOPRENE GASKETS. JOINTS AT OTHER LOCATIONS SHALL BE PUSH-ON TYPE WITH NEOPRENE OR SYNTHETIC RUBBER GASKETS. ALL WATER GATES SHALL OPEN PER MUNICIPAL REQUIREMENTS. ALL WATER LINES SHALL HAVE A MINIMUM OF 5' OF GROUND COVER AND A MINIMUM HORIZONTAL SEPARATION OF 10' FROM THE SEWER SYSTEM. AT WATER AND SEWER CROSSINGS, THE SEWER LINE SHALL BE ENCASED IN 6" OF CONCRETE FOR A DISTANCE OF 10' ON EITHER SIDE OF THE CROSSING IF A MINIMUM VERTICAL SEPARATION OF 18" IS NOT MAINTAINED.
16. ENSURE ALL EXISTING (TO REMAIN) AND PROPOSED MANHOLES PROPERLY IDENTIFY UTILITIES SERVICED.
17. WHERE AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK, THE CONTRACTOR SHALL ACCURATELY DETERMINE THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY AND TRANSMIT THIS INFORMATION TO THE ENGINEER WITHOUT DELAY.
18. THE LOCATIONS OF EXISTING ELECTRICAL LINES AND GAS MAINS ARE APPROXIMATE. THE CONTRACTOR MUST CONSULT THE LOCAL UTILITY COMPANIES FOR ADDITIONAL INFORMATION. ALL PROPOSED GAS AND ELECTRICAL WORK SHALL BE IN CONFORMANCE WITH LOCAL COUNTY, STATE AND FEDERAL GUIDELINES AND REQUIREMENTS.

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
LEASE AREA		
SETBACK LINE		
WETLAND LIMITS		
25' WETLAND NO DISTURB ZONE		
100' WETLAND BUFFER ZONE		
100' RIVERFRONT AREA LIMITS		
200' RIVERFRONT AREA LIMITS		
LIMIT OF RIVER		
WETLAND BUFFER IMPACTS		
EXISTING IMPERVIOUS AREA TO BE REMOVED		
LOCAL WETLAND REGULATION (SECTION 23) VEGETATION REPLACEMENT AREA		
BUILDING LINE		
PEDESTRIAN DOOR LOCATION		
SIGN		
BOLLARD		
CONCRETE		
ASPHALT		
GRAVEL		
STORMWATER MANAGEMENT FEATURE		
WATER LINE	W*	W
FIRE SERVICE LOOP	UFW*	FW
OVERHEAD ELECTRIC	OHW	
UNDERGROUND ELECTRIC	E*	UE
STORM PIPE		
STORM CURBLESS CATCH BASIN		
STORM MANHOLE		
CONTOUR	137	135
SPOT ELEVATION	X192.54	X135.19
CHAIN LINK FENCE		
RETAINING WALL		
SOUND WALL		
LIMIT OF WORK		LOW
SILT FENCE & SILT SOCK		
SILT FENCE		
INLET PROTECTION		
SEDIMENT BASIN/TRAP		
STABILIZED DIVERSION CHANNEL WITH STONE CHECK DAMS		
GUARDRAIL		
TREELINE		
TREE		
PARKING ROW COUNT		58
MANHOLES		
STORM FLARED END SECTION		
CLEANOUT		C.O.
FIRE HYDRANT		
GATE VALVE		
TRANSFORMER		T
POWER POLE		
GUY WIRE		
LIGHT POLE		
GAS LINE	G	G
TEMPORARY STOCKPILE AREA		
SNOW STORAGE AREA		

ABBREVIATIONS

BC	BOTTOM OF CURB
BIT.	BITUMINOUS
BW	BOTTOM OF WALL
CB	CATCHBASIN
CC	CONCRETE CURB
CO	CLEAN OUT
CONC.	CONCRETE
CP	CONCRETE PAD
CPY	CANOPY DRAIN
DIP	DUCTILE IRON PIPE
DW	DETECTABLE WARNING
DYL	DOUBLE YELLOW LINE
EL	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
FES	FLARED END SECTION
GR	GRADE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGHPOINT
INV	INVERT
LA	LANDSCAPED AREA
LF	LINEAR FEET
MH	MANHOLE
N.T.S.	NOT TO SCALE
OCS	OUTLET CONTROL STRUCTURE
PR	PROPOSED
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
RET.	RETAINING
R.O.W	RIGHT OF WAY
R&D	REMOVE & DISPOSE
R&R	REMOVE & REPLACE
SD	STORM DRAIN
TC	TOP OF CURB
TD	TRENCH DRAIN
TF	TOP OF FRAME
TW	TOP OF WALL
TYP.	TYPICAL
WQU	WATER QUALITY UNIT
YD	YARD DRAIN

DEMOLITION NOTES

1. DEMOLITION CONTRACTOR SHALL COORDINATE ALL DEMOLITION SEQUENCING WITH THE GENERAL CONTRACTOR FOR TEMPORARY CONDITIONS AND PHASING.
2. THE CONTRACTOR IS TO REFER TO THE REMAINING CONSTRUCTION DRAWING SET FOR REMOVAL LIMIT COORDINATION WITH OTHER DESIGN ELEMENTS.
3. THE CONTRACTOR IS TO REMOVE AND DISPOSE OR RECYCLE ALL SITE FEATURES WITHIN THE LIMITS OF CLEARING, UNLESS OTHERWISE DIRECTED IN THE PLANS, SPECIFICATIONS AND THE SITE CONSTRUCTION DRAWINGS.
4. THE CONTRACTOR SHALL NOTIFY AND OBTAIN ALL SHUTOFFS FOR ALL APPLICABLE UTILITIES PRIOR TO THE COMMENCEMENT OF DEMOLITION.
5. THE CONTRACTOR SHALL LOCATE/CONFIRM ALL DRAINAGE INFRASTRUCTURE AND MAINTAIN ADEQUATE STORM DRAINAGE THROUGHOUT CONSTRUCTION.
6. THE CONTRACTOR SHALL COORDINATE ANY PARTIAL DEMOLITION OF DRAINAGE OR UTILITY INFRASTRUCTURE WITH THE FINAL CONDITION. SEE CONSTRUCTION DRAWINGS.
7. THE CONTRACTOR SHALL FIELD LOCATE AND PROPERLY DISCONNECT APPROPRIATE LATERALS TO LIVE MAINS PRIOR TO DEMOLITION AND IN ACCORDANCE WITH UTILITY COMPANY STANDARDS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY DEMOLITION ASSOCIATED PERMITS.
9. THE CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL STRUCTURES WITHIN THE PROJECT LIMITS UNLESS INDICATED TO REMAIN.
10. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL TEMPORARY FACILITIES AND SERVICES NECESSARY TO SATISFY FEDERAL, STATE & LOCAL REQUIREMENTS INCLUDING BUT NOT NECESSARILY LIMITED TO BRACING, SHORING, PAVEMENT REPAIR, FENCING, PEDESTRIAN AND VEHICLE ACCESS, CONCRETE PADS, ETC.
11. THE CONTRACTOR SHALL REFER TO THE SOIL EROSION & SEDIMENT CONTROL PLANS PROVIDED BY LANGAN INCLUDED AS PART OF THIS PLAN SET.
12. ALL SIGNS WITHIN LIMIT OF CLEARING TO BE REMOVED UNLESS OTHERWISE NOTED.
13. EXISTING FOUNDATIONS/BUILDING SLABS TO BE LEFT IN PLACE IF DEEPER THAN 3 VERTICAL FEET BELOW PROPOSED BUILDING SLAB, FOOTINGS, HARDSCAPE FEATURES, OR UTILITIES. ANY SLABS LEFT IN PLACE SHALL BE BROKEN UP TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
14. BASEMENTS AND BELOW GRADE STRUCTURES EXIST IN VARIOUS LOCATIONS ON SITE, INCLUDING BELOW EXISTING SLABS AND PAVED AREAS.
15. IF GROUNDWATER IS ENCOUNTERED ACROSS THE EXISTING SITE. DEWATERING OF EXCAVATIONS MAY BE REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS.

GRADING & DRAINAGE NOTES

1. ALL PROPOSED STORM DRAINAGE PIPING TO UTILIZE WATER-TIGHT JOINTS.
2. CLEANOUTS SHALL BE PROVIDED FLUSH TO GRADE AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
3. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE APPROPRIATE SIZES OF THE DRAINAGE STRUCTURES (CATCH BASINS, MANHOLES, YARD DRAINS, ETC.) TO ACCOMMODATE THE PIPING SHOWN.
4. STORM DRAINAGE PIPING INSTALLATION SHALL COMMENCE AT THE FURTHEST DOWNSTREAM POINT AND PROCEED UPSTREAM "IN THE DRY".
5. THE CONTRACTOR WILL BE REQUIRED TO CLEAN THE ENTIRE DRAINAGE SYSTEM OF ALL DEBRIS AND OBSTRUCTIONS BOTH DURING CONSTRUCTION AND AT THE END OF CONSTRUCTION PRIOR TO ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, REMOVAL OF ALL FORMWORK FROM STRUCTURES, CONCRETE AND MORTAR DROPPINGS, CONSTRUCTION DEBRIS, AND DIRT. THE SYSTEM SHALL BE THOROUGHLY FLUSHED CLEAN AND THE CONTRACTOR SHALL FURNISH ALL NECESSARY HOSE, PUMPS, PIPE, AND OTHER EQUIPMENT THAT MAY BE REQUIRED FOR THIS PURPOSE. NO DEBRIS SHALL BE FLUSHED INTO EXISTING STORM DRAINS, WETLANDS, OR WATERCOURSES; ALL DEBRIS SHALL BE REMOVED FROM THE SYSTEM AND DISPOSED OF IN ACCORDANCE WITH ALL GOVERNING AGENCIES.
6. ALL MANHOLE COVERS, GRATES, INLETS, AND RIMS TO REMAIN SHALL BE ADJUSTED TO PROPOSED GRADE.
7. CONTRACTOR TO PROVIDE ALL FITTINGS AND BENDS NECESSARY TO ACCOMPLISH WORK.
8. REFER TO THE "STORMWATER OPERATION AND MAINTENANCE PLAN - MEDWAY BATTERY ENERGY STORAGE SYSTEM" FOR OPERATION OF THE STORMWATER MANAGEMENT SYSTEM.

SOIL EROSION-SEDIMENT CONTROL NOTES

PROPOSED DEVELOPMENT

1. CONSTRUCTION WILL INCLUDE EARTHWORK, CURBING, PAVING, UTILITY INSTALLATION, LANDSCAPING AND BUILDING CONSTRUCTION. ALL DEMOLITION DEBRIS AND SOIL REMOVAL RELATED TO CONSTRUCTION SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL LAWS GOVERNING SUCH ACTIVITIES.
2. THE DETAILED EROSION AND SEDIMENT CONTROL MEASURES ARE SHOWN ON DRAWINGS CE101 AND CE102. THE PROPOSED MEASURES HAVE BEEN DESIGNED TO LIMIT THE MIGRATION OF SOIL SEDIMENT FROM THE SITE. HOWEVER, THE SITE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION AND SEDIMENT CONTROLS AND SHALL SUPPLEMENT AND ADJUST THE PLAN AS NEEDED TO PREVENT SOIL EROSION TO THE MAXIMUM EXTENT FEASIBLE. TEMPORARY SEDIMENT BASINS ARE NOT SHOWN ON THE PLANS AS THE EXACT LOCATIONS ARE TO BE DETERMINED IN THE FIELD. THE CONTRACTOR SHALL CONSTRUCT AND IMPLEMENT TEMPORARY SEDIMENT BASINS THROUGHOUT THE SITE AS NEEDED TO CONTROL SITE RUNOFF AND PREVENT SEDIMENT MIGRATION.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE SOIL AND SEDIMENT CONTROL PRACTICES MUST BE INSTALLED IN ACCORDANCE WITH THE LOCAL GOVERNING AUTHORITY, THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES AND THE MASSACHUSETTS STORMWATER STANDARDS.
2. EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO START OF DEMOLITION AND CONSTRUCTION AND DISTURBANCE OF SITE CONTRIBUTORY DRAINAGE AREAS. THE OWNER OR ITS CONTRACTOR SHALL INSPECT, REPAIR AND REMOVE ALL SEDIMENT AND EROSION CONTROL DEVICES, AS INDICATED HEREIN. ALL EARTH CHANGES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED IN SUCH A MANNER SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST POSSIBLE PERIOD OF TIME. CLEARING SHALL BE PHASED TO THE EXTENT FEASIBLE TO LIMIT POTENTIAL FOR SOIL EROSION.
3. DISPOSAL OF COLLECTED SEDIMENT SHALL BE MADE TO AREA DESIGNATED BY THE OWNER'S SOIL ENGINEER.
4. FILTER FABRIC/SILT FENCE WILL BE INSTALLED ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES.
5. EROSION CONTROL BLANKET BIONET SC150BN OR APPROVED EQUAL AND SEEDING AS SPECIFIED ON THE PLANTING PLAN MUST BE PROVIDED ON ALL SLOPES 4H:1V TO 3:1V. FOR SLOPES 2.5H:1V TO 3H:1V, SLOPES SHALL BE STABILIZED WITH A 12-INCH THICK LAYER OF MODIFIED ROCK FILL (MASSDOT M2.02.4) PLACED ON A 6-INCH THICK BEDDING LAYER OF 3/4-INCH CRUSHED STONE OVER MIRAFI FW700 WOVEN GEOTEXTILE. ALL SITE SLOPES SHALL BE LESS THAN 2.5H:1V.
6. ALL TOPSOIL NOT TO BE USED FOR FINAL GRADING/LANDSCAPED AREAS SHALL BE REMOVED FROM THE SITE IMMEDIATELY, IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL LAW. ALL TOPSOIL TO BE USED IN LANDSCAPED AREAS SHALL BE STORED/STOCKPILED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL LAW STANDARDS.
7. THE SITE SHALL BE WETTED AS NECESSARY TO PROVIDE DUST CONTROL.
8. PAVEMENT BASE COURSE MUST BE PLACED IN ALL NEW ROADWAY AREAS UPON COMPLETION OF FINE GRADING.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL PAVED ROADWAYS, ON AND OFF-SITE, WHICH MUST BE KEPT FREE OF SITE GENERATED SEDIMENT AT ALL TIMES. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHOD.
10. ALL STORM DRAINAGE OUTLETS MUST BE STABILIZED, AS REQUIRED, BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
11. SILT FENCES AND BARRIERS MUST BE CLEANED OR REPLACED PERIODICALLY TO REMOVE BUILT-UP SILT.
12. ALL EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSPECTED EVERY 14 CALENDAR DAYS AND WITHIN 24 OF EITHER A STORM EVENT THAT PRODUCES 0.25 INCHES OR MORE OF RAIN WITHIN A 24 HOUR PERIOD, OR A STORM EVENT THAT PRODUCES 0.25 INCHES OR MORE OF RAIN WITHIN A 24-HOUR PERIOD ON THE FIRST DAY OF A STORM AND CONTINUES TO PRODUCE 0.25 INCHES OR MORE OF RAIN ON SUBSEQUENT DAYS, OR A DISCHARGE CAUSED BY SNOWMELT FROM A STORM EVENT THAT PRODUCES 3.25 INCHES OR MORE OF SNOW WITHIN A 24-HOUR PERIOD..
13. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED FOR THE CONVEYANCE OF WATER AROUND, THROUGH, OR FROM DISTURBED AREAS SHALL BE DESIGNED TO LIMIT THE WATER FLOW TO A NON-EROSIVE VELOCITY.
14. THE CONTRACTOR SHALL CORRECT ANY OMISSIONS, ERRORS, OR FIELD OPERATIONS IMMEDIATELY AND IN ACCORDANCE WITH THE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
15. THE PROPERTY OWNER AND/OR HIS/HER AGENTS MUST MAINTAIN (REPAIR/REPLACE), WHEN NECESSARY, THE SILTATION CONTROL UNTIL ALL DEVELOPMENT ACTIVITY IS COMPLETED AND ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.

TEMPORARY STABILIZATION

SEDIMENT DISPOSAL AREAS AND TOPSOIL STOCKPILES NOT SCHEDULED FOR CONSTRUCTION ACTIVITIES WITHIN FOURTEEN (14) DAYS OF DISTURBANCE SHALL BE STABILIZED AS FOLLOWS:

A. SOIL AMENDMENTS AS NECESSARY.
B. ANNUAL RYE GRASS SEEDING APPLIED AT A RATE OF NOT LESS THAN 1 LB. PER 1,000 SF.
C. MULCH ALL NEWLY SEEDED AREAS WITHIN 80 LBS. OF SALT HAY OR SMALL GRAIN STRAW PER 1,000 SF.
D. WHEN DISTURBED AREAS ARE SCHEDULED FOR IMMEDIATE LANDSCAPING THEY MAY BE MULCHED AND SEEDED PER ITEM C ABOVE.

PERMANENT STABILIZATION

REFER TO PLANS FOR PERMANENT STABILIZATION METHODS + PROPOSED SEED MIXES.

A. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL DISTURBED LAND AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADING. MULCH AS NECESSARY FOR SEED PROTECTION AND ESTABLISHMENT. AMEND SOIL AS NEEDED PRIOR TO PERMANENT SEEDING. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER COMPLETION OF AN EARTH CHANGE OR WHEN SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED. ALL DISTURBED AREAS, STOCKPILES OF FILL OR EXCAVATED MATERIAL SHALL BE STABILIZED IN SUCH A MANNER AS NOT TO CAUSE UNREASONABLE HAZARD TO PERSONS OR PROPERTY.
B. MATERIALS SPECIFICATION: LAWN + MEADOW AREAS

   (i) ANY SOIL HAVING A pH OF FOUR OR LESS CONTAINING IRON SULFIDES SHALL BE COVERED WITH A MINIMUM OF TWELVE INCHES OF SOIL HAVING A pH OF FIVE OR MORE PRIOR TO SEED BED PREPARATION.
C. MULCHING SHALL BE DONE AT THE RATE OF SEVENTY TO NINETY POUNDS (70-90 LBS) PER 1,000 SQUARE FEET WITH UNROTTED SALT HAY.
D. LIQUID MULCH BINDERS MUST BE USED TO ANCHOR SALT HAY, HAY OR STRAY MULCHES.
   (i) APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH IN VALLEYS AND AT CREATED BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
   (ii) USE ONE OF THE FOLLOWING: SYNTHETIC OR ORGANIC BINDERS, BINDERS SUCH AS CURASOL DCA-70, PETRO SET, TERRA TACH, HYDRO MULCH AND AEROSPRAY MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER OF ANCHOR MULCH MATERIALS. BINDERS CONTAINING PETROLEUM PRODUCTS SHALL NOT BE USED.

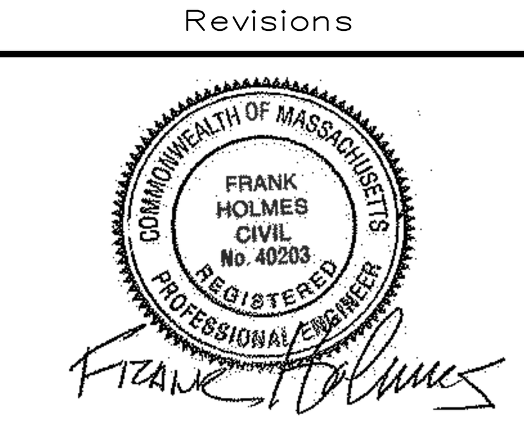
   NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE TO THE EXCLUSION OF OTHER PRODUCTS.
D. FILL MATERIAL SHALL BE FREE FROM DEBRIS, PERISHABLE OR COMBUSTIBLE MATERIAL AND FROZEN OR WET EARTH OR STONES LARGER THAN THREE INCHES IN MAXIMUM DIMENSION.
E. CONSTRUCTION AREAS SHALL BE PERIODICALLY SPRAYED WITH WATER UNTIL THE SURFACE IS WET TO CONTROL THE GENERATION OF DUST.
F. ALL REVISIONS AFTER APPROVAL HAS BEEN GRANTED SHALL BE FORWARDED TO THE APPROPRIATE DISTRICT FOR REVIEW.
G. THE LOCAL GOVERNING AUTHORITY SHALL RECEIVE WRITTEN NOTIFICATION SEVENTY TWO HOURS BEFORE THE START OF ANY CONSTRUCTION.
H. SEEDBED PREPARATION:
   (i) TOPSOIL SHOULD BE A MINIMUM OF SIX INCHES DEEP (LIGHTLY COMPACTED) BEFORE SEEDING.
   (ii) TOPSOIL SHALL BE TESTED PRIOR TO SEEDING.
   (iii) WORK SOIL AMENDMENTS INTO SOIL AS NECESSARY AS NEARLY AS PRACTICAL TO A DEPTH OF FOUR INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE ALL CLAY OR SILTY SOIL AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEED BED WHEREVER FEASIBLE.
   (iv) REMOVE FROM THE SURFACE ALL STONES ONE INCH OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.
   (v) INSPECT SEED BED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT SOIL COMPACT, THE AREA MUST BE RETILLED AND FIRMED AS ABOVE.

CONTINGENCY SOIL EROSION AND SEDIMENT CONTROL NARRATIVE

1. THE GENERAL CONTRACTOR WILL DESIGNATE PERSONNEL FOR 24 HOUR EMERGENCY RESPONSE IN THE EVENT OF SEVERE WEATHER AND INCREASED POTENTIAL FOR SEVERE EROSION.
2. THE GENERAL CONTRACTOR IS REQUIRED TO MAINTAIN ON SITE OR HAVE THE ABILITY TO RETRIEVE WITHIN 12 HOURS THE FOLLOWING MATERIALS IN THE EVENT THAT THERE ARE DEFICIENCIES IN THE SESC MEASURES:
   A. 25% OF THE INSTALLED LENGTH OF SILT FENCE
   B. EQUIVALENT TONNAGE OF STONE FOR STABILIZATION OF 2 STABILIZATION ENTRANCES. STONE COULD BE USED FOR SLOPE REPAIRS, ENERGY DISSIPATER ENHANCEMENTS, ETC.
   C. HEAVY EQUIPMENT CAPABLE OF TRENCHING/EXCAVATING LARGE AREAS TO DIVERT AND CONTROL RUNOFF IN A CONTROLLED MANNER.
   D. HAVE DESIGNATED A HYDRO-SEED CONTRACTOR CAPABLE OF RESPONDING TO THE SITE WITHIN 12 HOURS
3. ANY STUMP GRINDINGS OR WOOD CHIPS GENERATED ON-SITE SHOULD BE RETAINED FOR USE TO BACK UP SILT FENCES.

Date	Description	No.
10/04/23	NOI COMMENT REVISIONS	2
08/24/23	NOI COMMENT REVISIONS	1

Revisions



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Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS

Drawing Title
MASTER LEGEND AND NOTES

Project No. 151033401
Date 06/08/2023
Drawn By JNW
Checked By FH
Drawing No. CS002

Project No. 151033401

LANGAN

Project No. 151033401

Date	Description	No.
Revisions		

COMMONWEALTH OF MASSACHUSETTS
FRANK HOLMES
CIVIL
No. 40203
REGISTERED PROFESSIONAL ENGINEER
FRANK HOLMES

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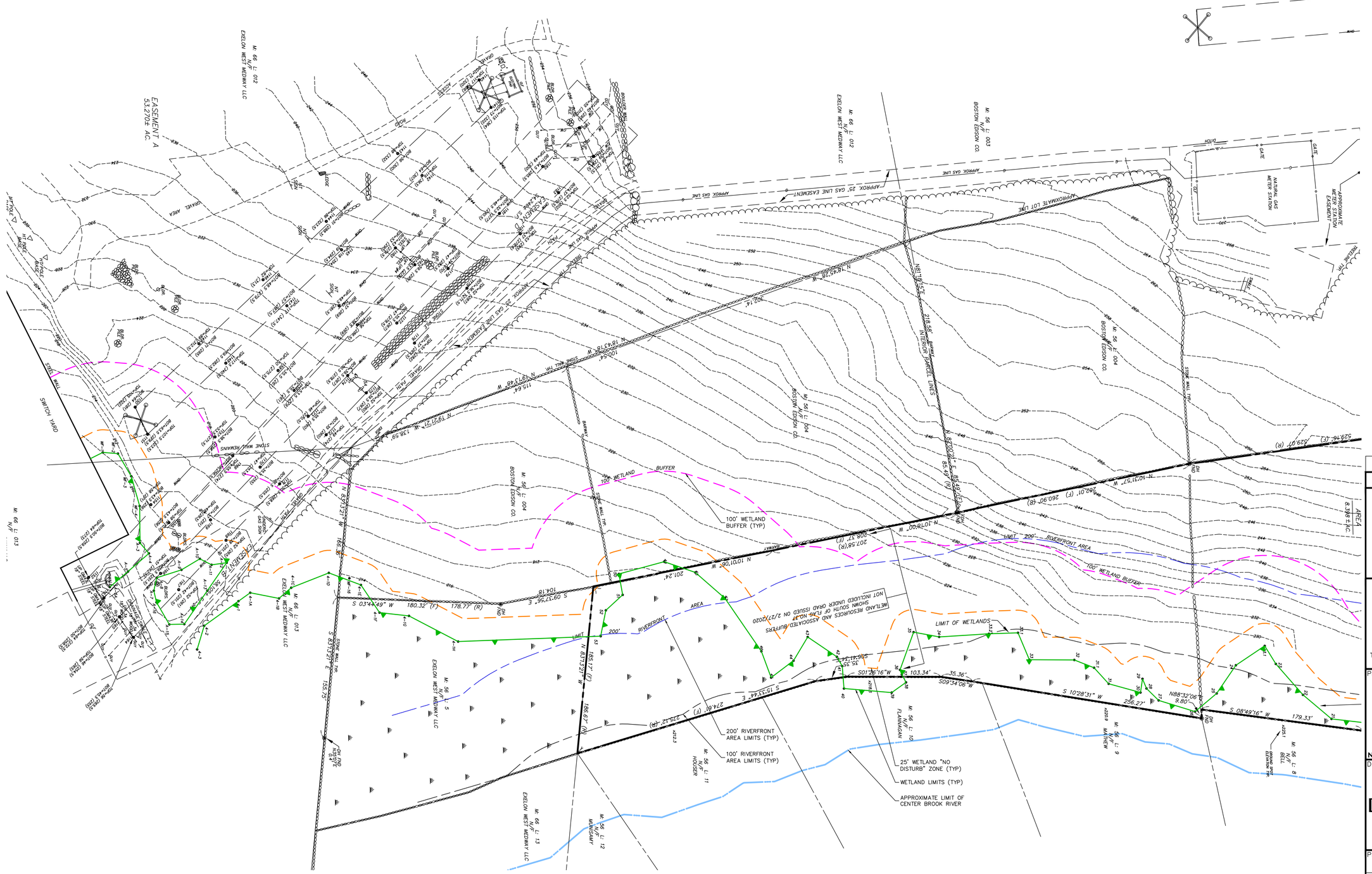
Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS

Drawing Title
RESOURCE DELINEATION PLAN I

Project No.	Drawing No.
151033401	EX101
Date: 10/04/2023	
Drawn By: JSP	
Checked By: FH	



Date	Description	No.
Revisions		

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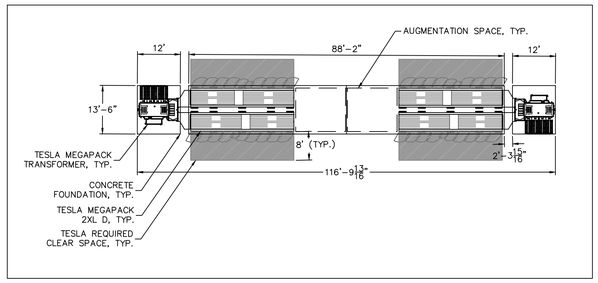
Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS

Drawing Title
RESOURCE DELINEATION PLAN II

Project No.	Drawing No.
151033401	EX102
Date: 10/04/2023	
Drawn By: JSP	
Checked By: FH	



BATTERY ENERGY STORAGE SYSTEM INSET

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

50 0 25 50
SCALE: 1 INCH = 50 FEET

Date	Description	No.
08/01/24	NOI REVISIONS	5
07/05/24	EPC REVISIONS	4
01/25/24	CLIENT REVISIONS	3
10/04/23	NOI COMMENT REVISIONS	2
08/24/23	NOI COMMENT REVISIONS	1

Revisions

COMMONWEALTH OF MASSACHUSETTS
FRANK HOLMES
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8/6/2024

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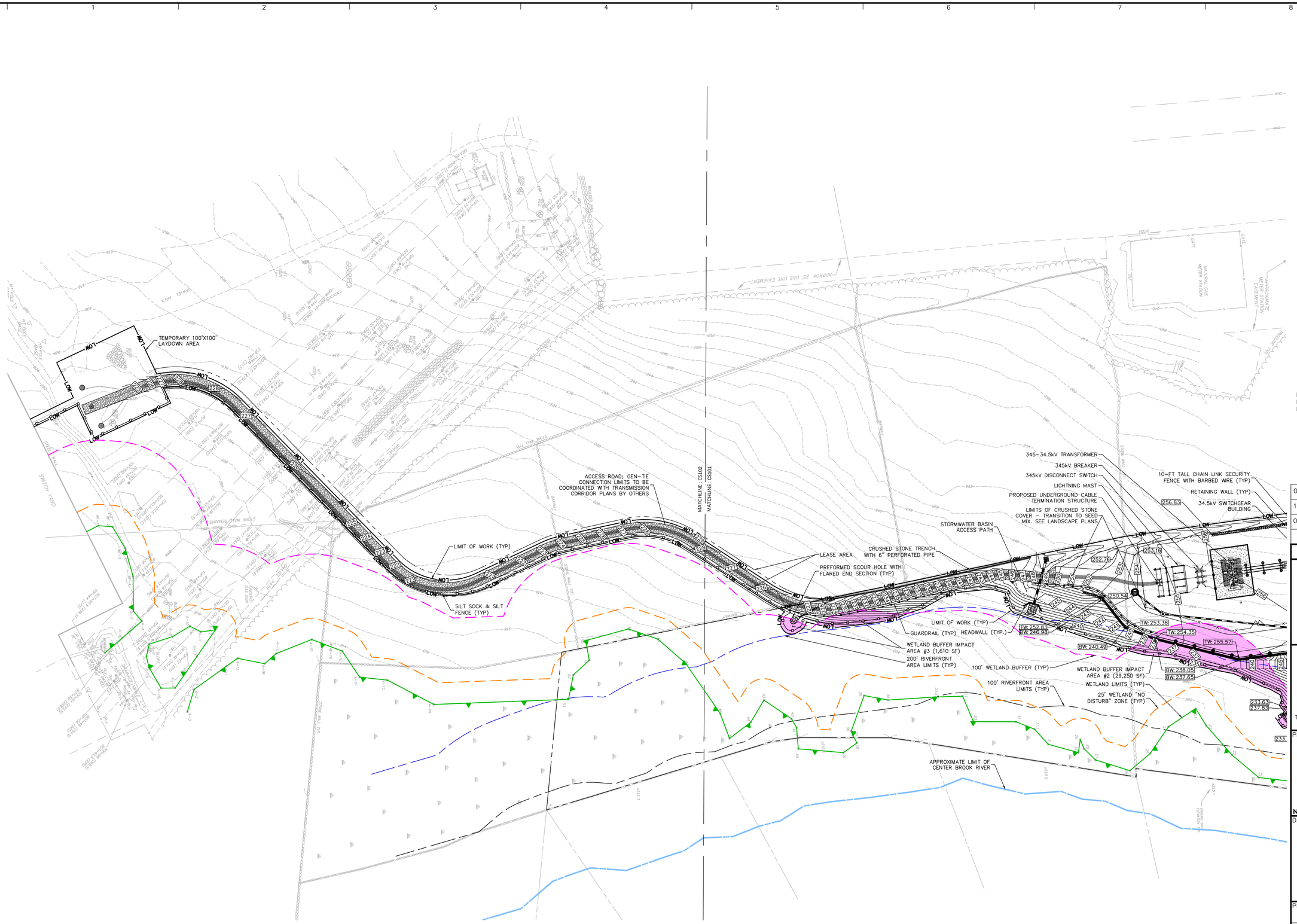
Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS

Drawing Title
SITE PLAN

Project No.	Drawing No.
151033401	CS101
Date: 06/08/2023	
Drawn By: JNW	
Checked By: FH	



NOTE: PLEASE REFER TO POWER ENGINEER'S PROPOSED 345kV UNDERGROUND TRANSMISSION LINE PLANS FOR ADDITIONAL INFORMATION.

50 0 25 50
SCALE: 1 INCH = 50 FEET

Date	Description	No.
08/01/24	NOI REVISIONS	3
10/04/23	NOI COMMENT REVISIONS	2
08/24/23	NOI COMMENT REVISIONS	1

Revisions

COMMONWEALTH OF MASSACHUSETTS
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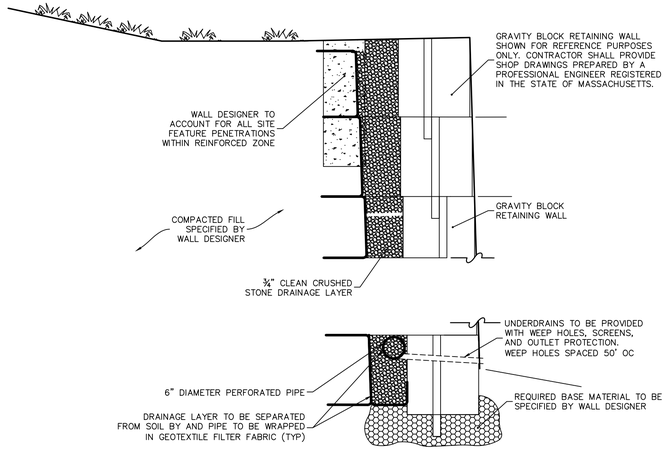
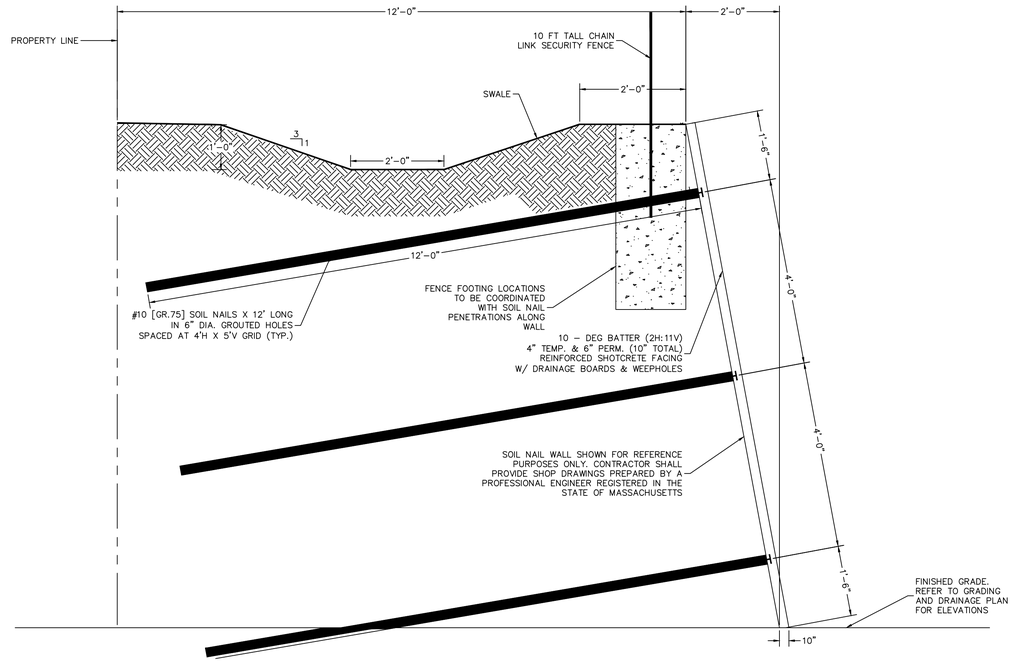
Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS

Drawing Title
UNDERGROUND TRANSMISSION LINE SITE PLAN

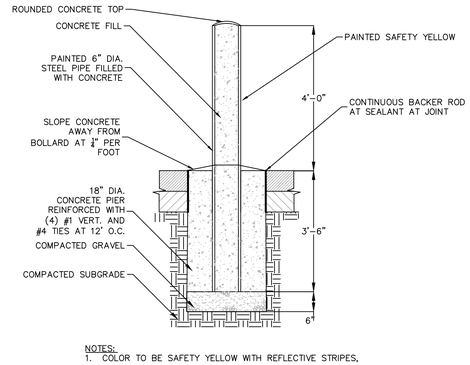
Project No.	Drawing No.
151033401	CS102
Date: 06/08/2023	
Drawn By: JSP	
Checked By: FH	



1 TYPICAL RETAINING WALL SECTION (FOR REFERENCE ONLY)
N.T.S.

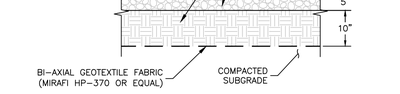


2 SOIL NAIL WALL (FOR REFERENCE ONLY)
N.T.S.

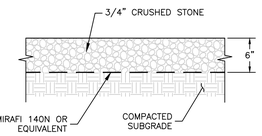


NOTES:
1. COLOR TO BE SAFETY YELLOW WITH REFLECTIVE STRIPES.

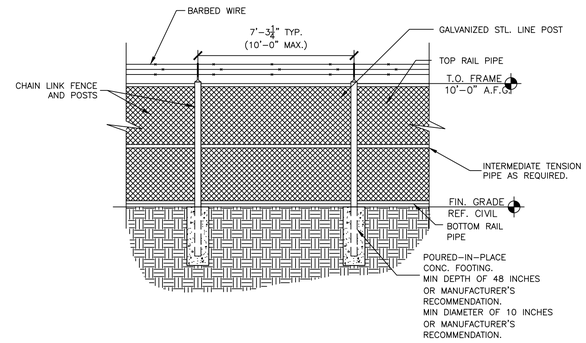
3 CONCRETE BOLLARD
N.T.S.



4 CRUSHED STONE ACCESS ROAD
N.T.S.

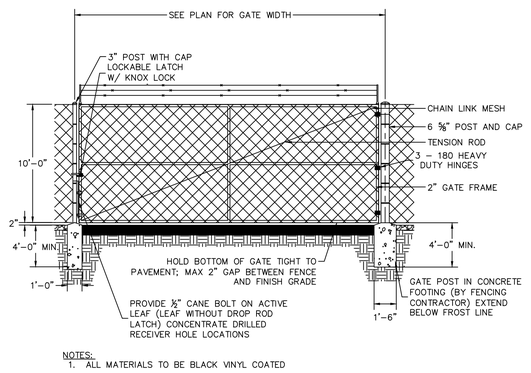


5 CRUSHED STONE SECTION
N.T.S.



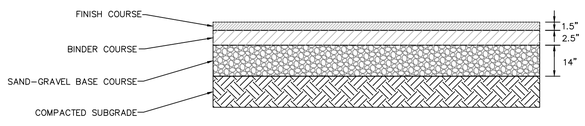
NOTES:
1. FENCE AND POSTS TO BE GALVANIZED AND BLACK VINYL COATED.

6 10 FT TALL CHAIN LINK SECURITY FENCE WITH BARBED WIRE
N.T.S.



NOTES:
1. ALL MATERIALS TO BE BLACK VINYL COATED

7 CHAIN LINK SWING GATE
N.T.S.



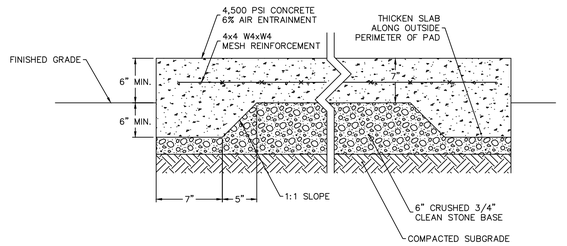
NOTES:

1. PAVING COURSES SHALL BE CONSTRUCTED IN LAYERS NOT LESS THAN 1.5 INCHES THICK PER LIFT.
2. ALL FILL MATERIALS SHALL BE FREE FROM ICE AND SNOW, ROOTS, SOD, RUBBISH AND OTHER DELETERIOUS OR ORGANIC MATTER. STRUCTURAL FILL SHALL CONFORM TO THE GRADATION REQUIREMENTS.
3. ALL AREAS TO BE PAVED SHALL BE PROOFROLLED WITH AT LEAST 4 PASSES OF A SMOOTH ROLLER HAVING A MINIMUM STATIC DRUM WEIGHT OF 10 TONS. ANY SOFT AREAS SHALL BE REMOVED AND REPLACED WITH CLEAN, GRANULAR, FREE–DRAINING SOIL. FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 12–INCHES AND SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY THE GEOTECHNICAL REPORT.
4. REFER TO GEOTECHNICAL REPORT TITLED, "UPDATED GEOTECHNICAL REPORT PROPOSED ENERGY STORAGE INSTALLATION 50–53 MILFORD STREET MEDWAY, MASSACHUSETTS" BY GZA GEOENVIROMENTAL, INC. FOR FURTHER DETAIL.
5. REFER TO TABLE 1:GRADATION REQUIREMENTS FOR RECOMMENDED BASE COURSE.

TABLE 1: GRADATION REQUIREMENTS

SIEVE SIZE	% FINER BY WEIGHT
SAND–GRAVEL	
3 INCH	10
½ INCH	50 – 85
No. 4	40 – 75
No. 40	10 – 35
No. 200	0 – 8

8 ASPHALT PAVEMENT
N.T.S.



9 CONCRETE PAD
N.T.S.

Date	Description	No.
Revisions		

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Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS

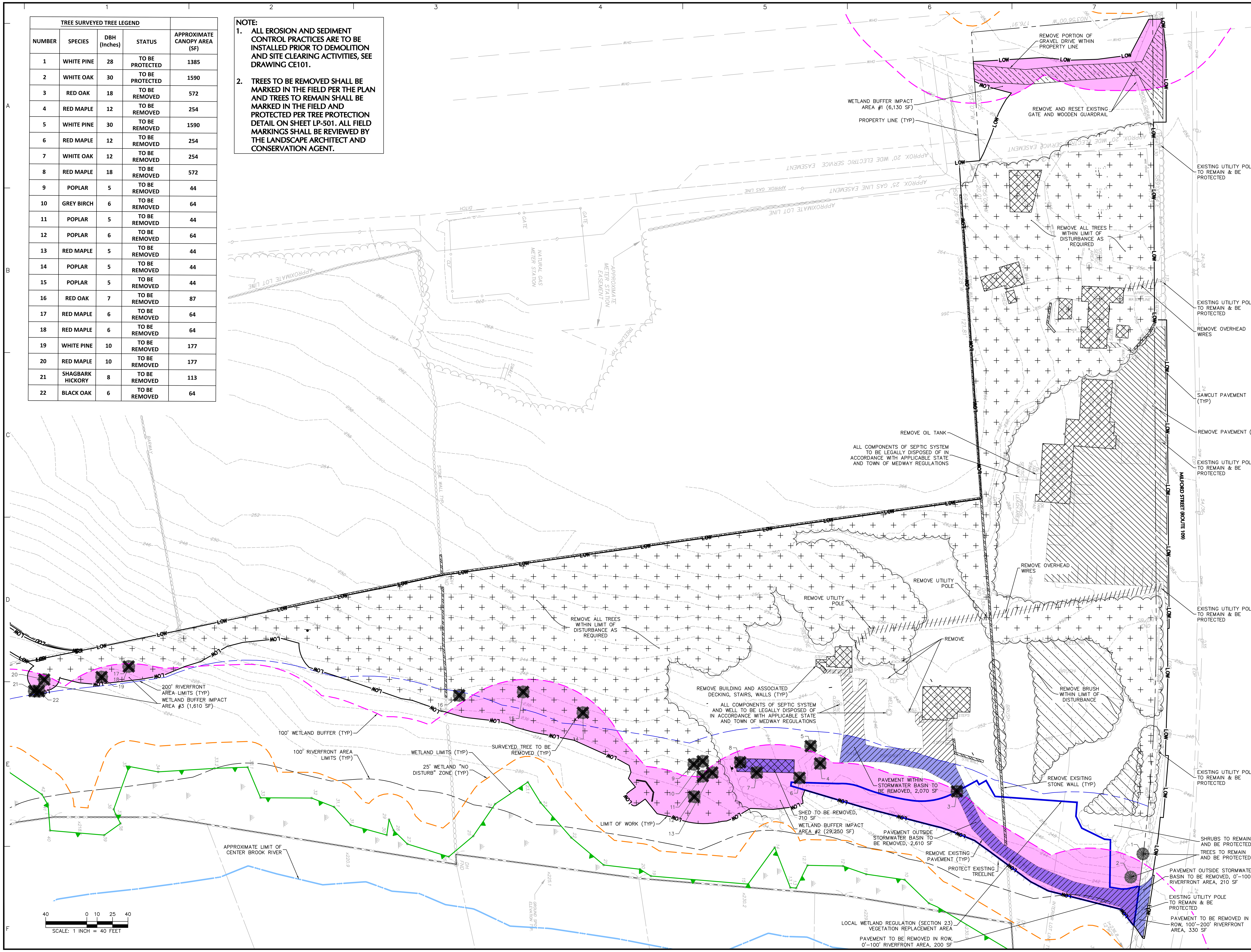
Drawing Title
SITE DETAILS

Project No.	Drawing No.
151033401	CS501
Date: 06/08/2023	
Drawn By: JNW	
Checked By: FH	

TREE SURVEYED TREE LEGEND				
NUMBER	SPECIES	DBH (Inches)	STATUS	APPROXIMATE CANOPY AREA (SF)
1	WHITE PINE	28	TO BE PROTECTED	1385
2	WHITE OAK	30	TO BE PROTECTED	1590
3	RED OAK	18	TO BE REMOVED	572
4	RED MAPLE	12	TO BE REMOVED	254
5	WHITE PINE	30	TO BE REMOVED	1590
6	RED MAPLE	12	TO BE REMOVED	254
7	WHITE OAK	12	TO BE REMOVED	254
8	RED MAPLE	18	TO BE REMOVED	572
9	POPLAR	5	TO BE REMOVED	44
10	GREY BIRCH	6	TO BE REMOVED	64
11	POPLAR	5	TO BE REMOVED	44
12	POPLAR	6	TO BE REMOVED	64
13	RED MAPLE	5	TO BE REMOVED	44
14	POPLAR	5	TO BE REMOVED	44
15	POPLAR	5	TO BE REMOVED	44
16	RED OAK	7	TO BE REMOVED	87
17	RED MAPLE	6	TO BE REMOVED	64
18	RED MAPLE	6	TO BE REMOVED	64
19	WHITE PINE	10	TO BE REMOVED	177
20	RED MAPLE	10	TO BE REMOVED	177
21	SHAGBARK HICKORY	8	TO BE REMOVED	113
22	BLACK OAK	6	TO BE REMOVED	64

NOTE:

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO DEMOLITION AND SITE CLEARING ACTIVITIES, SEE DRAWING CE101.
2. TREES TO BE REMOVED SHALL BE MARKED IN THE FIELD PER THE PLAN AND TREES TO REMAIN SHALL BE MARKED IN THE FIELD AND PROTECTED PER TREE PROTECTION DETAIL ON SHEET LP-501. ALL FIELD MARKINGS SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AND CONSERVATION AGENT.



Date	Description	No.
10/04/23	NOI COMMENT REVISIONS	2
08/24/23	NOI COMMENT REVISIONS	1

Revisions

COMMONWEALTH OF MASSACHUSETTS
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Project

MEDWAY BATTERY ENERGY STORAGE SYSTEM

MEDWAY
NORFOLK COUNTY MASSACHUSETTS

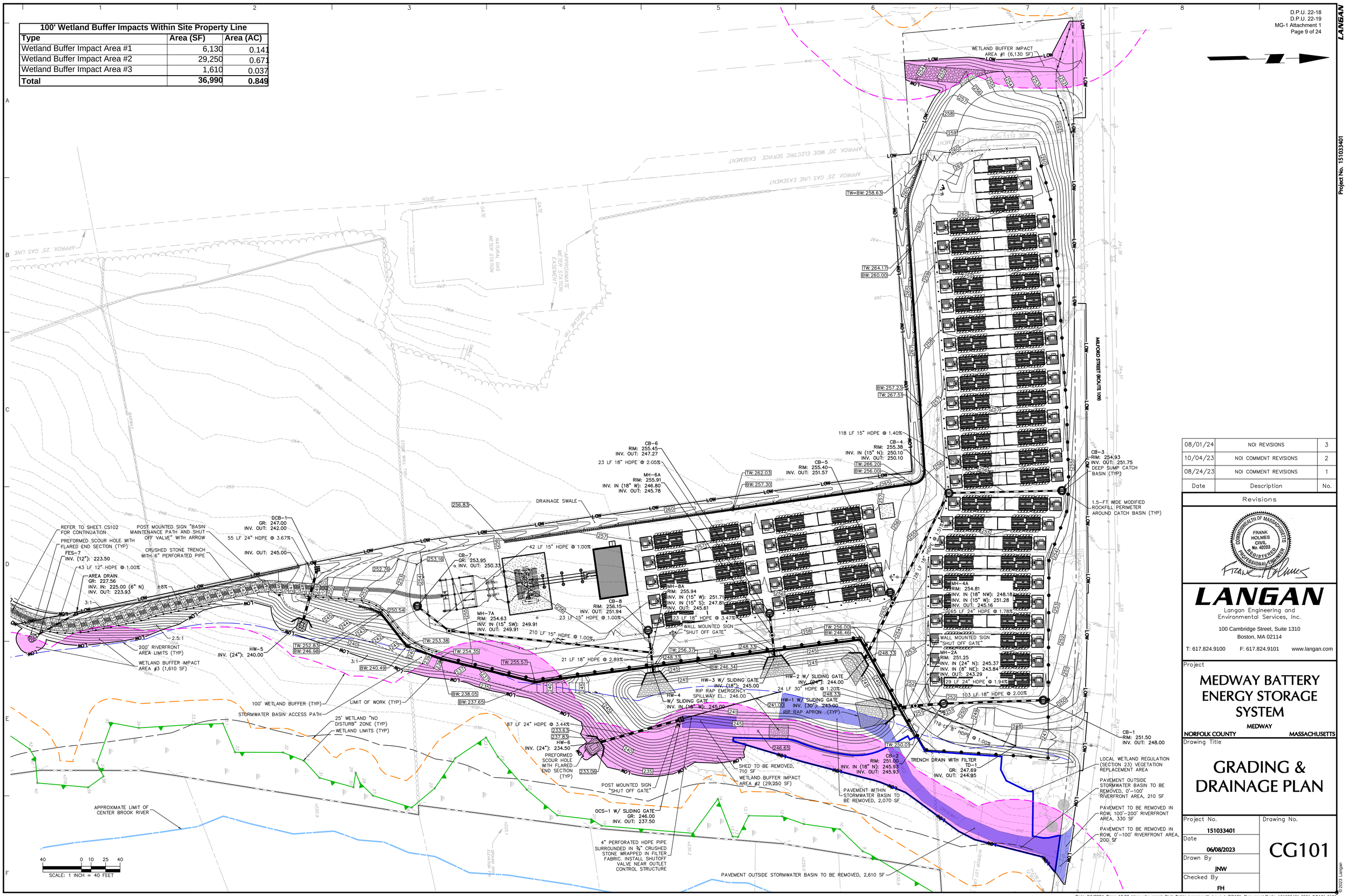
Drawing Title

SITE PREPARATION PLAN

Project No. 151033401	Drawing No. CD101
Date 06/08/2023	
Drawn By JNW	
Checked By FH	

Project No. 151033401

100' Wetland Buffer Impacts Within Site Property Line		
Type	**Area (SF)**	**Area (AC)**
Wetland Buffer Impact Area #1	6,130	0.141
Wetland Buffer Impact Area #2	29,250	0.671
Wetland Buffer Impact Area #3	1,610	0.037
Total	**36,990**	**0.849**



08/01/24	NOI REVISIONS	3
10/04/23	NOI COMMENT REVISIONS	2
08/24/23	NOI COMMENT REVISIONS	1
Date	Description	No.

Revisions

COMMONWEALTH OF MASSACHUSETTS
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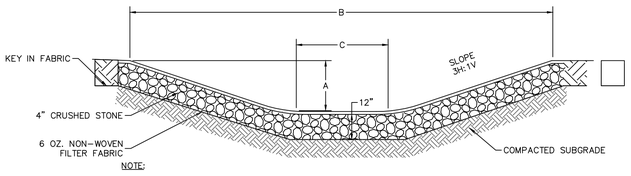
Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS

Drawing Title
GRADING & DRAINAGE PLAN

Project No.	Drawing No.
151033401	CG101
Date: 06/08/2023	
Drawn By: JNW	
Checked By: FH	

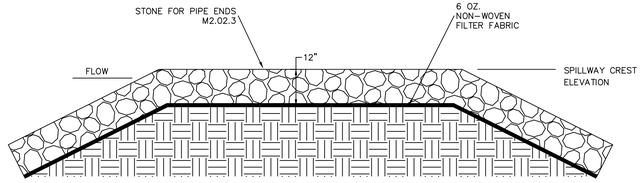
Date: 8/1/2024 Time: 10:07 User: gbrummel Style Table: Langan.stb Layout: CG101 Document Code: 151033401-0501-CG101-0101



NOTE:
1. SWALE SHALL BE CRUSHED STONE.

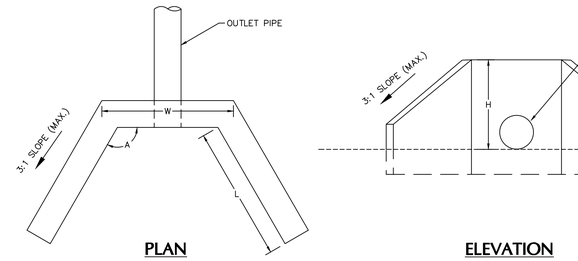
SWALE DESIGN SCHEDULE				
SWALE LOCATION	LENGTH (FT)	A MIN. DEPTH (FT)	B MIN. TOP WIDTH (FT)	C BOTTOM WIDTH (FT)
WESTERN PROPERTY LINE	PER PLAN	1.0	8.0	2.0

1 SWALE
N.T.S.



RIP-RAP SPILLWAY SCHEDULE					
LOCATION	SPILLWAY CREST ELEVATION (FT)	SPILLWAY CREST ELEVATION WIDTH (FT)	SPILLWAY TOP WIDTH (FT)	SPILLWAY SIDE SLOPES	SPILLWAY LENGTH (FT)
INFILTRATION BASIN	246	20	23	3:1	36

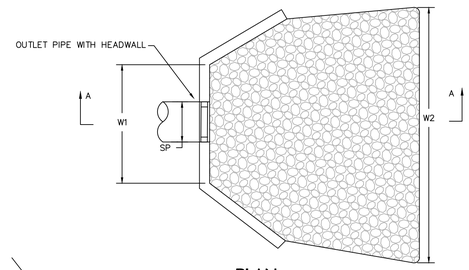
2 RIP RAP EMERGENCY SPILLWAY
N.T.S.

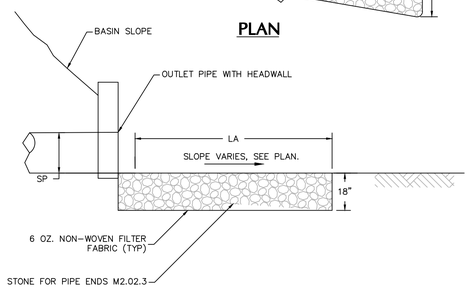


NOTES:
1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR HEADWALL STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE COMMONWEALTH OF MASSACHUSETTS FOR THE HEADWALLS INDICATING CONCRETE THICKNESS, REINFORCEMENT, AND EMBEDMENT DEPTH.
2. ALL HEADWALLS SHALL HAVE A GUARDRAIL AT THE TOP OF THE WALL. THE GUARDRAIL SHALL BE 42" IN HEIGHT WITH A MIDRAIL INSTALLED AT A HEIGHT MIDWAY BETWEEN THE TOP EDGE OF THE GUARD RAIL AND HEADWALL SURFACE. GUARDRAIL POST AND MIDRAIL TO BE 1-1/2" GALVANIZED STEEL PIPE. POST SPACING TO BE EQUIDISTANT AND NO MORE THAN 5 FEET.

STRUCTURE	W [FT]	L [FT]	H	A [DEG]
HW-1	16.0	13.5	6'-4"	120
HW-2	15.5	13.5	5'-4"	120
HW-3	15.0	13.5	4'-4"	120
HW-4	15.0	13.5	4'-4"	120
HW-5	11.0	8.0	4'-2"	135
HW-6	13.33	9.0	5'-4"	135

3 HEADWALL
N.T.S.

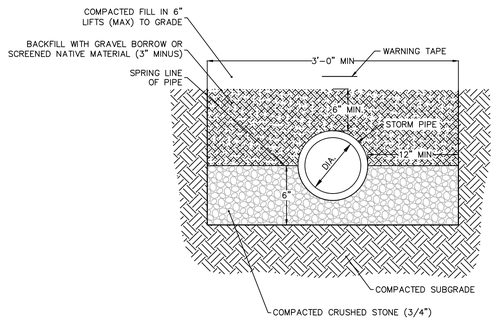




NOTES:
1. SEE GRADING AND DRAINAGE PLAN FOR SIZES/DIMENSIONS

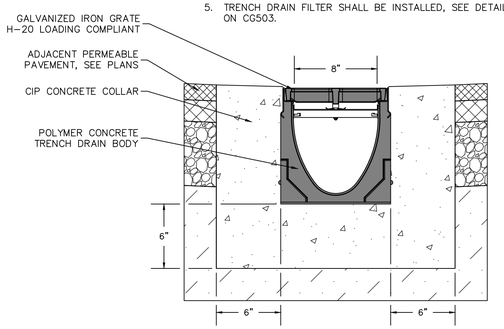
STRUCTURE	LA [FT]	W1 [FT]	W2 [FT]	SP [FT]
HW-1	36	14.5	27	2.5
HW-2	21	14	31	2
HW-3	20	13.5	37	1.5
HW-4	23	13.5	40	1.5

4 RIPRAP APRON
N.T.S.

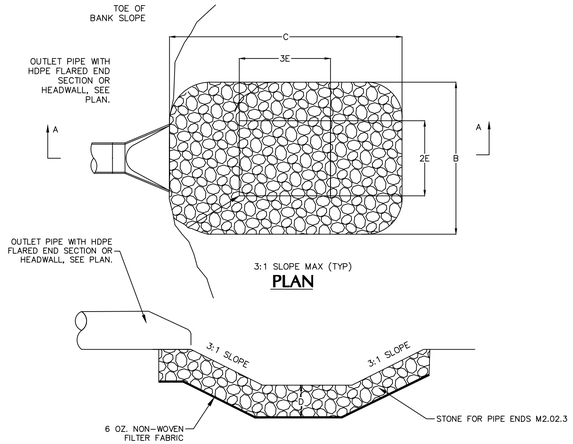


5 STORM PIPE BEDDING
N.T.S.

NOTES:
1. MINIMUM CONCRETE STRENGTH OF 4,000 PSI. VIBRATE TO ELIMINATE AIR POCKETS.
2. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" [3mm] ABOVE THE TOP OF THE CHANNEL EDGE.
3. INSTALL PER MANUFACTURER INSTRUCTIONS.
4. MINIMUM TRENCH DRAIN DEPTH SHALL BE 6.5" FROM THE BOTTOM OF THE GRATE.
5. TRENCH DRAIN FILTER SHALL BE INSTALLED, SEE DETAIL 8 ON CG503.



6 TRENCH DRAIN
N.T.S.



NOTE:
1. SIDE SLOPES SHALL BE 3:1 OR FLATTER.

STRUCTURE	E [FT]	2E [FT]	3E [FT]	DEPTH [FT]	B [FT]	C [FT]	D [FT]
HW-5	2	4	6	1	10	12	1
HW-6	2.5	5	7.5	1.25	12.5	15	1
FES-7	1.5	3	4.5	0.75	7.5	9	1

7 PREFORMED SCOUR HOLE
N.T.S.

Date	Description	No.
08/01/24	NOI REVISIONS	2
08/24/23	NOI COMMENT REVISIONS	1

Revisions

COMMONWEALTH OF MASSACHUSETTS
FRANK HOLMES
CIVIL
No. 40203
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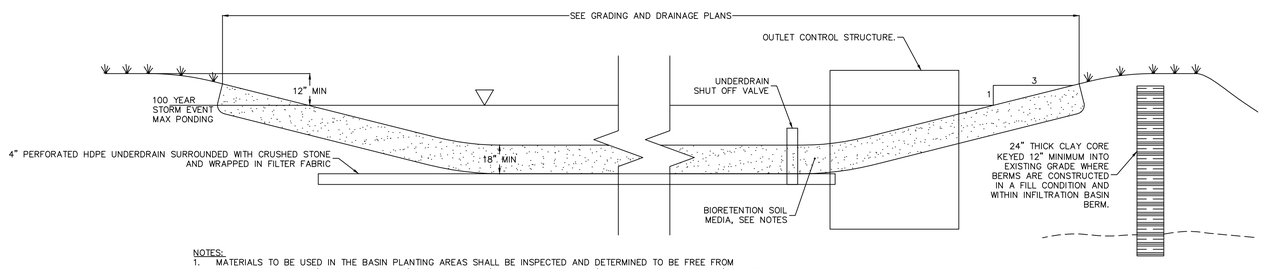
Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS

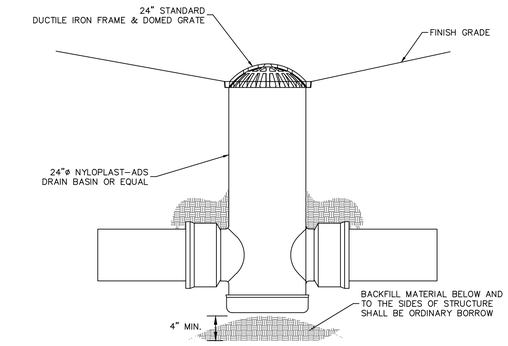
Drawing Title
GRADING & DRAINAGE DETAILS

Project No. 151033401
Date 06/08/2023
Drawn By JNW
Checked By FH
Drawing No. CG501



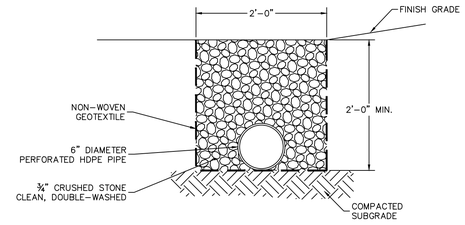
NOTES:
1. MATERIALS TO BE USED IN THE BASIN PLANTING AREAS SHALL BE INSPECTED AND DETERMINED TO BE FREE FROM PURPLE LOOSESTRIFE (LYTHRUM SALICARIA), COMMON REED (PHRAGMITES AUSTRALIS), OR REED CANARYGRASS (PHALARIS ARUNDINACEA).
2. BASIN SOIL MIX SHALL BE PLACED A MINIMUM OF 18" DEEP.
3. ENGINEER TO OBSERVE INFILTRATION BASIN SOILS DURING EXCAVATION TO ENSURE ALL UNSUITABLE SOILS HAVE BEEN REMOVE PRIOR TO FINAL GRADING.
4. COMPACTION OF BASINS AREAS AND REQUIRED BACKFILL SHALL BE MINIMIZED TO THE MAXIMUM EXTENT FEASIBLE BY THE USE OF EXCAVATION HOES, LIGHT EQUIPMENT WITH TURF TYPE TIRES, OR WIDE TRACK EQUIPMENT.
5. IF COMPACTION DOES OCCUR IN BASIN, THE COMPACTED ZONE SHALL BE TILLED TO REFRACTURE AT LEAST 12" OF NATURAL SOIL BEFORE BACKFILLED WITH SOIL MIX.
6. WHEN BACKFILLING BASIN, PLACE SOIL IN LIFTS OF 12-18" AND USE LIGHT EQUIPMENT ONLY WHEN GRADING WITHIN THE BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN.
7. ALLOW SOIL MIXTURE TO SETTLE NATURALLY THROUGH RAIN EVENTS OR PRESOAK AFTER PLACEMENT.
8. BIORETENTION SOIL MIX SHALL BE PER SHEET LP501.
9. SEED BASIN WITH MEADOW MIX A PER SHEET LP501.
10. SEED SHOULDERS OF BASINS WITH MEADOW MIX B PER SHEET LP501.
11. PLANTS AND SEED MIXES SHALL BE FIELD LOCATED BY A WETLAND SCIENTIST.

1 INFILTRATION BASIN
N.T.S.

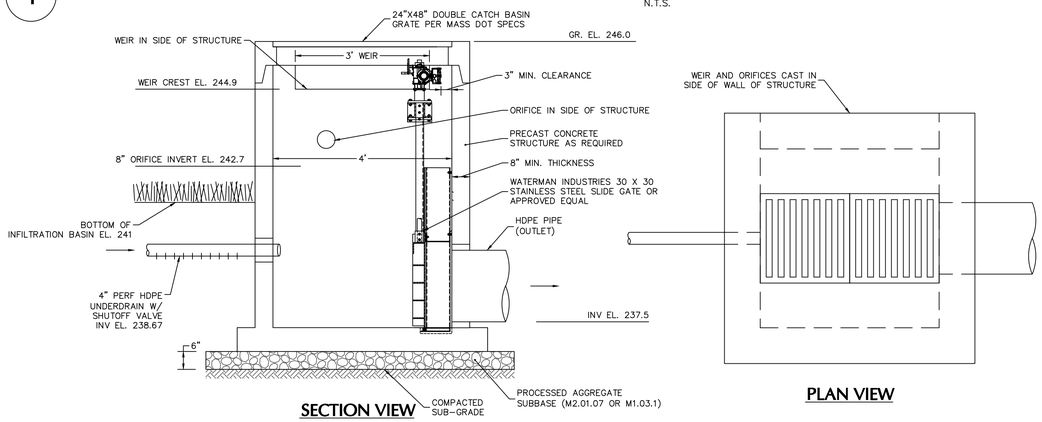


NOTES:
1. GRATE SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.2
2. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS.
3. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°.

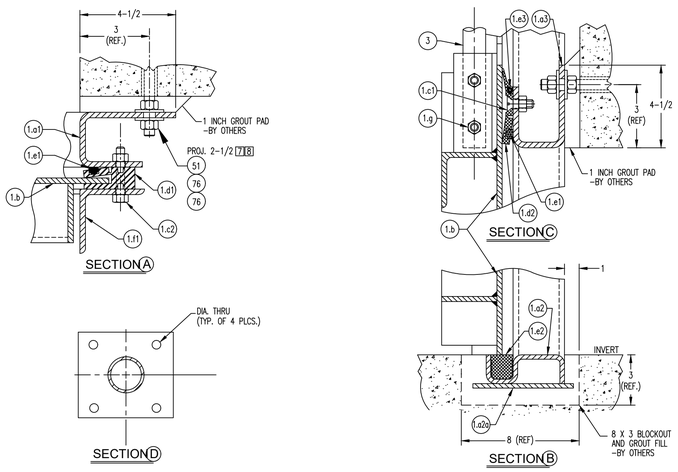
2 AREA DRAIN
N.T.S.



3 STONE TRENCH WITH PERFORATED PIPE
N.T.S.



4 OUTLET CONTROL STRUCTURE - INFILTRATION BASIN
N.T.S.



FINISH KEY	PAINT KEY
1. AS CAST 2. MILL 3. MACHINED 4. GALVANIZE-ASTM A-123 5. GALVANIZE-ASTM A-153 6. SEE PAINT KEY	6T VENDOR STANDARD SHOPCOAT

ITEM DESCRIPTION	FINISH KEY
1. GATE ASSEMBLY (___ x ___ QSS-251-1-Y)	
a) FRAME WELDMENT	2
1) GUIDE RAIL	2
2) FLUSH BOTTOM RAIL	2
a) FLUSH BOTTOM ANCHOR TAB	2
3) CROSS RAIL	2
b) COVER WELDMENT	2
c) ASSEMBLY HARDWARE	
1) CROSS RAIL HARDWARE	2
2) GUIDE RAIL HARDWARE	2
d) SEATS & SPACER	
1) SIDE SEAL	2
2) CROSSRAIL SEAT	2
e) SEALS	
1) SEAL	2
2) FLUSH BOTTOM SEAL	2
3) SCRAPER SEAL	2
f) RETAINER WELDMENT	
1) RETAINER ANGLE	2
2) HEADRAIL W/ GUSSETS (BOLT-ON)	2
a) HEX HEAD BOLT, NUT & WASHER	2
g) STEM BOLT & NUT	2
3. STEM (RISING)	2,3
7. LIFT ASSEMBLY	
a) LIFT (ELECTRIC MOTOR OPERATOR)	
b) PEDESTAL	
c) HEX HEAD BOLT & WASHER	2
d) HEX HEAD BOLT, NUT & WASHER	2
8. STEM COVER (W/ MYLAR STRIP)	2,3
51. ALL THREADED STUD [8]	2,3
75. HEX NUT	2
76. WASHER	2

NOTES: UNLESS OTHERWISE SPECIFIED.
1. (GATE CAPACITY) DESIGN SEATING HEAD = ____ FT.; DESIGN UNSEATING HEAD = ____ FT. (S.P. = ____ LB/IN.)
2. OPERATING HEAD FROM GATE CENTER LINE: MAXIMUM SEATING HEAD = ____ FT. ; MAXIMUM UNSEATING HEAD = ____ FT. [6]
3. LIFT CAPACITY = _____ LBS. @ _____ IN./MIN. (_____ FT./LBS.; _____ RPM)
4. TURN HANDWHEEL CCW TO OPEN (RAISE) GATE.
5. 2¾" STUB ACME THREADS. (___ PITCH, ___ LEAD, ___L)
6. CONTRACTOR TO VERIFY OR SUPPLY.
7. DIMENSION INCLUDES GASKET THICKNESS.
8. CONTRACTOR TO PROVIDE HILTI HIT-RE 500-V3 (WET OR DRY CONDITIONS), HILTI HY-200 (DRY CONDITIONS ONLY); OR EQUAL EPOXY FOR ANCHORS.

5 SLIDING GATE
N.T.S.

08/01/24	NOI REVISIONS	3
10/04/23	NOI COMMENT REVISIONS	2
08/24/23	NOI COMMENT REVISIONS	1
Date	Description	No.

Revisions

COMMONWEALTH OF MASSACHUSETTS
FRANK HOLMES
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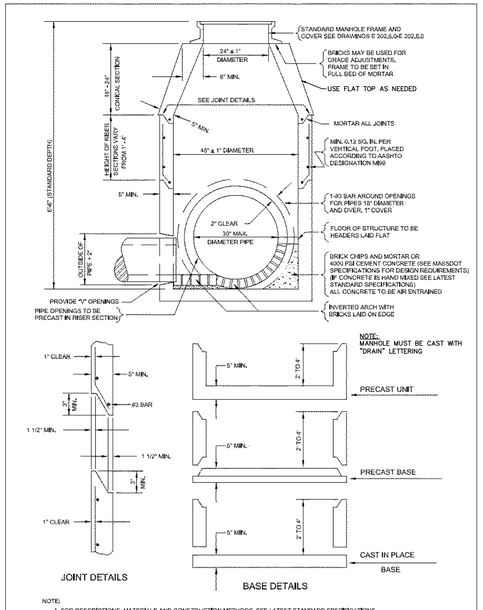
Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS

Drawing Title
GRADING & DRAINAGE DETAILS II

Project No.	Drawing No.
151033401	CG502
Date: 06/08/2023	
Drawn By: JNW	
Checked By: FH	

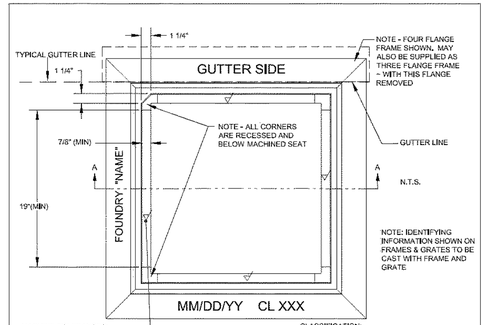


NOTE:
1. FOR DESCRIPTIONS, MATERIALS AND CONSTRUCTION METHODS, SEE LATEST STANDARD SPECIFICATIONS.

MassDOT Highway Division — CONSTRUCTION STANDARDS	PRECAST CONCRETE MANHOLES 9' OR LESS IN DEPTH	DATE OF ISSUE: OCTOBER 2017 DRAWING NUMBER: E 202.4.0

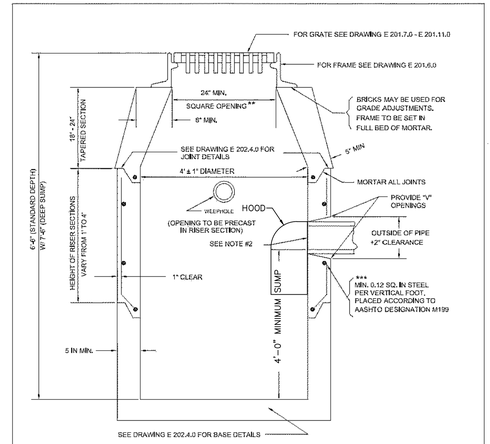
CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING MANHOLES AND PIPE PENETRATIONS PRIOR TO ISSUING SHOP DRAWINGS FOR REVIEW TO ENSURE CONSTRUCTABILITY.

1 PRECAST CONCRETE MANHOLES 9' OR LESS IN DEPTH
N.T.S.



MassDOT Highway Division — CONSTRUCTION STANDARDS	CATCH BASIN FRAME	DATE OF ISSUE: OCTOBER 2017 DRAWING NUMBER: E 201.6.0

2 CATCH BASIN FRAME
N.T.S

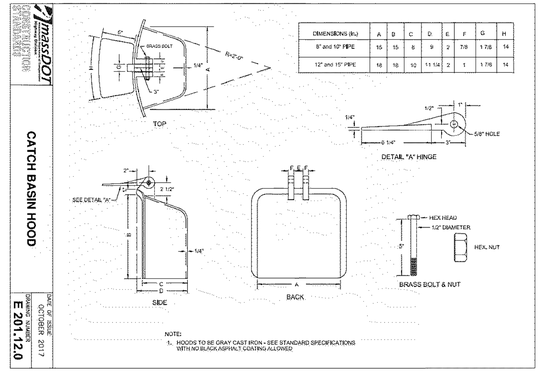


** WHEN A CURB INLET IS INSTALLED, THE OPENING IS TO BE 24"±1" X 27"±1"
*** REINFORCING STEEL BASED ON A WALL THICKNESS OF 5".

NOTES:
1. DETAILS NOT INDICATED ABOVE ARE TO BE SIMILAR TO THOSE SHOWN ON E 201.3.0
2. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE.
3. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHOD, SEE STANDARD SPECIFICATIONS.
4. ALL CONCRETE TO BE AIR ENTRAINED

MassDOT Highway Division — CONSTRUCTION STANDARDS	PRECAST CONCRETE CATCH BASIN	DATE OF ISSUE: OCTOBER 2017 DRAWING NUMBER: E 201.4.0

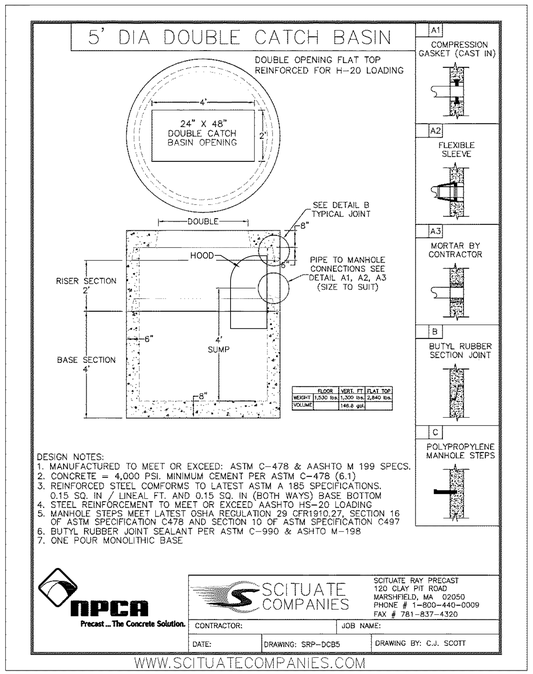
3 PRECAST CONCRETE CATCH BASIN
N.T.S.



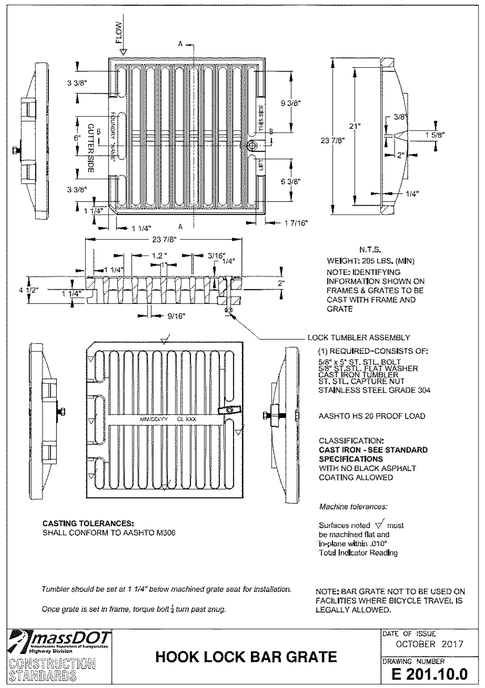
4 CATCH BASIN HOOD
N.T.S.

Date	Description	No.
08/01/24	NOI REVISIONS	3
10/04/23	NOI COMMENT REVISIONS	2
08/24/23	NOI COMMENT REVISIONS	1

Revisions

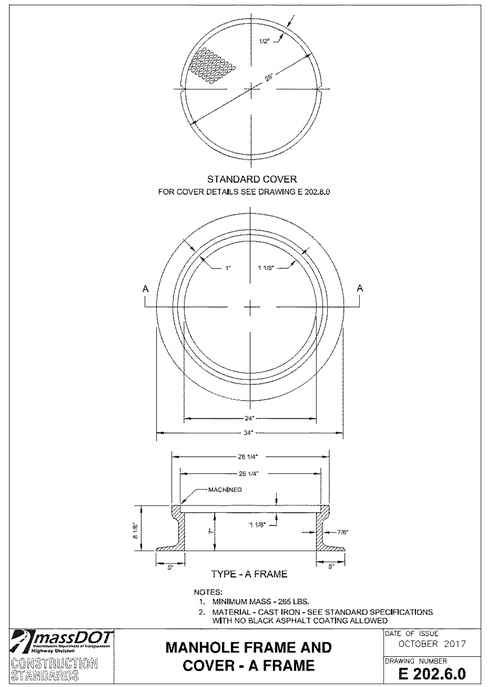


5 5' DIA DOUBLE CATCH BASIN
N.T.S.



MassDOT Highway Division — CONSTRUCTION STANDARDS	HOOK LOCK BAR GRATE	DATE OF ISSUE: OCTOBER 2017 DRAWING NUMBER: E 201.10.0

6 CATCH BASIN LOCK BAR GRATE
N.T.S.

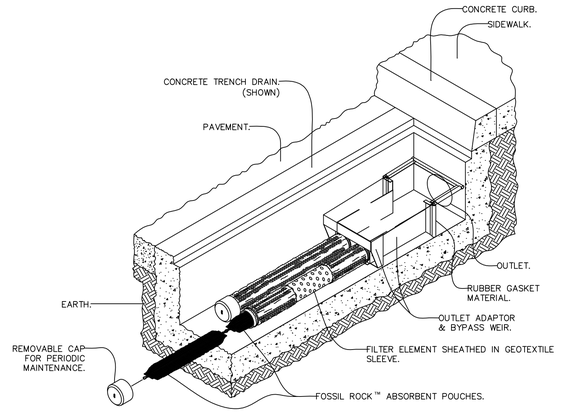


NOTES:
1. MINIMUM MASS - 255 LBS.
2. MATERIAL - CAST IRON - SEE STANDARD SPECIFICATIONS WITH NO BLACK ASPHALT COATING ALLOWED

MassDOT Highway Division — CONSTRUCTION STANDARDS	MANHOLE FRAME AND COVER - A FRAME	DATE OF ISSUE: OCTOBER 2017 DRAWING NUMBER: E 202.6.0

CONTRACTOR SHALL USE SHALLOW RIMS AS NEEDED IN AREAS WITH MINIMAL COVER.

7 MANHOLE FRAME AND COVER
N.T.S.



NOTES:
1. FILTER INSERT SHALL HAVE A HIGH FLOW BYPASS FEATURE.
2. FILTER OUTLET ADAPTER SHALL BE CONSTRUCTED FROM STAINLESS STEEL TYPE 304. ALTERNATE OUTLET ADAPTOR FOR SHALLOW INSTALLATIONS SHALL BE PVC SCH-40.
3. FILTER MEDIUM SHALL BE FOSSIL ROCK™, INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.

8 TRENCH DRAIN FILTER (MODEL FG-TDOF8)
N.T.S. SOURCE: OLDCASTLE

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Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS

Drawing Title
GRADING & DRAINAGE DETAILS III

Project No. 151033401	Drawing No. CG503
Date 06/08/2023	
Drawn By JNW	
Checked By FH	