TOWN OF SCITUATE, MASSACHUSETTS 453 CHIEF JUSTICE CUSHING HIGHWAY STEARNS MEADOW DRINKING WATER TREATMENT PLANT

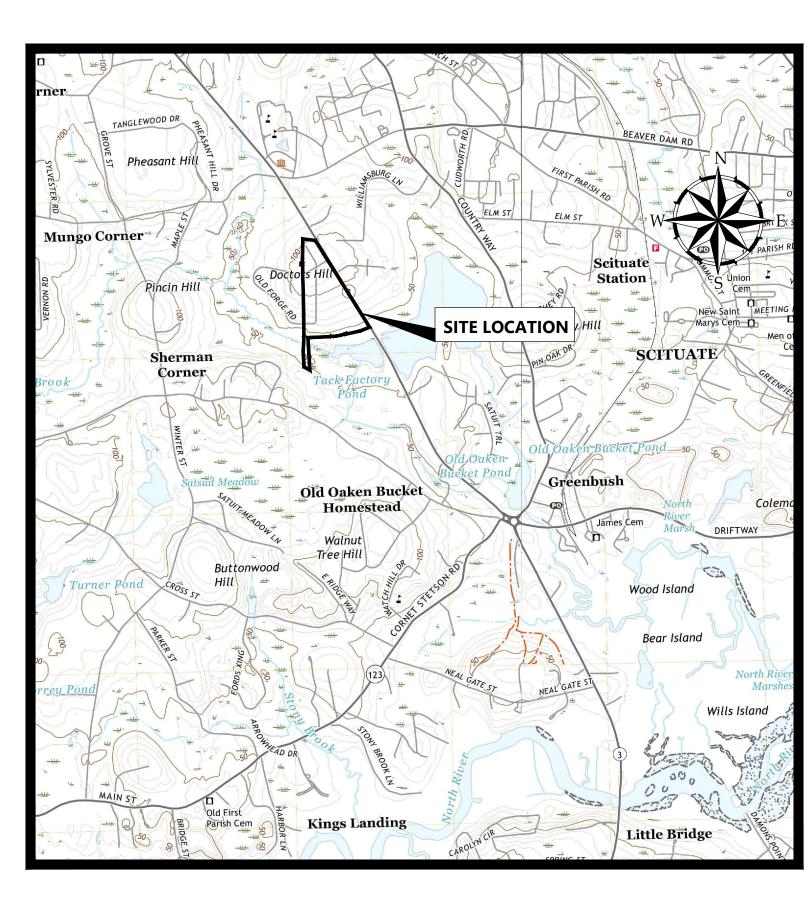
SITE PLAN APPROVAL REVISION 1 - OCTOBER 6, 2023



PROJECT LOCATION MAP

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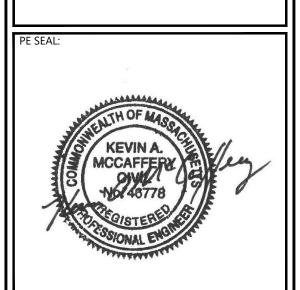
SITE LOCATION MAP

SOURCE: USGS TOPO QUADRANGLE

SCALE: 1"=2000'



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SITE PLAN APPROVAL

TOWN OF SCITUATE,
MASSACHUSETTS
453 CHIEF JUSTICE
CUSHING HIGHWAY

STEARNS MEADOW DRINKING WATER TREATMENT PLANT

1	10/06/2023	PEER REVIEW RESPONSE				
REV	MM/DD/YY	DESCRIPTION				
	_					
JOB NO:		0233681.02				
DATE:		AUGUST 2023				
		1001101111				

REV MM/DD/YY DESCRIPTION

JOB NO: 0233681.02

DATE: AUGUST 2023

SCALE: AS SHOWN

DESIGNED BY: JC

DRAWN BY: MB

CHECKED BY: SK/KM

DRAWING TITLE:

COVER SHEET

DRAWING NO:

G-000

2. BENCH MARK USED:

ELEVATIONS WERE OBTAINED BY GPS OBSERVATIONS ON DECEMBER 8, 2021.

TEMPORARY BENCH MARKS SET:

TBM-JC-1: X-CUT ON LEFT FRONT BOLT OVER OUTLET OF HYDRANT ON NORTH OF DOCTORS HILL ROAD. 1.8' ABOVE GRADE. ELEVATION = 106.87

TBM-JC-2: X-CUT ON LEFT FRONT BOLT OVER OUTLET OF HYDRANT IN FRONT OF 439 CUSHING HIGHWAY.

- THE HORIZONTAL DATUM DEPICTED ON THE MAPS HEREON IS BASED ON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM, MAINLAND ZONE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983. THE VERTICAL DATUM IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- 4. WETLAND DELINEATION WAS PREPARED BY LEC ENVIRONMENTAL CONSULTANTS, INC. IN 2022 AND FIELD SURVEYED BY FELDMAN LAND SURVEYORS.
- 5. COORDINATE CONSTRUCTION ACTIVITY WITH UTILITY COMPANIES, EMERGENCY SERVICES AND THE TOWN.
 CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK, ALLOWING SUFFICIENT TIME TO LOCATE
 AND MARK THE LOCATION OF BURIED UTILITIES. CONTRACTOR SHALL CONTACT "DIG SAFE", PRIOR TO
 EXCAVATION.
 TO EXCAVATION.
- 6. ALL DISTURBANCES WITHIN PUBLIC ROADWAYS SHALL BE RESTORED TO SPECIFIED MASSDOT REQUIREMENTS, SEE MASSDOT CONSTRUCTION ACCESS PERMIT. RESTORE ALL OTHER NON—LAWN AREAS DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL FINISH (GRAVEL, PAVEMENT, ETC.) UNLESS NOTED OTHERWISE ON THE PLANS. RESTORATION OF PAVED SURFACES, GRAVEL SURFACES, AND DRIVEWAYS, DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE PERFORMED AT NO ADDITIONAL COST TO OWNER.
- 7. PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT SHALL BE RESET AT THE CONTRACTOR'S EXPENSE BY A LICENSED LAND SURVEYOR ACCEPTABLE TO
- 8. ALL TREES NOT NOTED TO BE REMOVED SHALL BE PROTECTED BY CONTRACTOR DURING CONSTRUCTION.
 CONTRACTOR SHALL NOTIFY OWNER IF ANY TREES NOT IDENTIFIED FOR REMOVAL ARE FOUND TO BE IN CONFLICT
- 9. THE CONTRACTOR SHALL SUBMIT A PROPOSED TRAFFIC CONTROL PLAN TO THE TOWN ENGINEER AND MASSDOT BEFORE BEGINNING CONSTRUCTION. THE TRAFFIC CONTROL PLAN SHALL PROVIDE FOR SAFE MOVEMENT OF BOTH VEHICLES AND PEDESTRIANS DURING CONSTRUCTION ACTIVITIES. THE PROPOSED TRAFFIC CONTROL PLAN SHALL BE SUBJECT TO APPROVAL BY THE TOWN ENGINEER AND MASSDOT, WHO MAY ATTACH SPECIAL CONDITIONS TO, OR REQUIRE MODIFICATIONS OF, THE TRAFFIC CONTROL PLAN.
- 10. DO NOT PARK, ENTER, IMPEDE ACCESS TO, OR STORE EQUIPMENT BEYOND LIMIT OF WORK, UNLESS PERMISSION HAS BEEN GRANTED IN WRITING BY THE ENGINEER.
- 11. COORDINATE DISRUPTION OF PRIVATE UTILITY SERVICES WITH LANDOWNERS AT LEAST TWO DAYS (48 HOURS) PRIOR TO DISRUPTION. ALL UTILITY COORDINATION IS RESPONSIBILITY OF CONTRACTOR.
- 12. RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON—WORKING HOURS. INSTALL ORANGE CONSTRUCTION FENCING AROUND ALL WORK ZONES AT THE END OF EVERY DAY. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON—WORKING HOURS.
- 13. ALL DISTURBANCE TO THE SITE SHALL BE WITHIN THE DEFINED LIMIT OF WORK. IF A CONFLICT OR SITE CONDITION REQUIRES THAT THE LIMIT OF WORK BE CHANGED, CONTRACTOR SHALL COORDINATE WITH THE FNGINFER
- 14. STAGING AREAS, INCLUDING STOCKPILING OF MATERIALS, SHALL OCCUR FULLY WITHIN THE LIMITS OF WORK. AND BE LOCATED AS FAR AWAY FROM THE WETLAND RESOURCE AREAS AS POSSIBLE.
- 15. IMPACT WITHIN THE WETLAND BUFFER ZONES SHALL BE MINIMIZED. IF WORK SHALL RESULT IN ADDITIONAL IMPACT WITHIN THE BUFFER ZONE BEYOND WHAT IS SHOWN ON THE DRAWINGS, CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE DISTURBING THE AREA.
- 16. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING EROSION AND SEDIMENTATION CONTROL IN ACCORDANCE WITH THE LATEST STATE OF MASSACHUSETTS EROSION & SEDIMENT CONTROL GUIDELINES AND DESIGN DRAWINGS. RECOMMENDED EROSION CONTROL MEASURES ARE SHOWN ON THE PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR SEQUENCING CONSTRUCTION WITH APPROPRIATE EROSION CONTROL. IF ANY EARTHWORK IS TO BE COMPLETED PRIOR TO INSTALLATION OF SHEET PILE WALL, SEDIMENTATION BARRIER SHALL BE PLACED IN OR NEAR THE LOCATION OF THE SHEET PILE WALL UNTIL IT IS INSTALLED. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL EROSION AND SEDIMENT CONTROL, INCLUDING STABILIZED CONSTRUCTION EXITS, WITHIN THE PROJECT AREA AS NECESSARY. ANY ACCUMULATION OF SEDIMENT IN STRUCTURES OR ON THE GROUND DUE TO THE CONSTRUCTION PROJECT SHALL BE REMOVED AND DISPOSED OF IMMEDIATELY BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL THE RESTORATION IS COMPLETE AND UPON APPROVAL FOR REMOVAL BY THE SCITUATE CONSERVATION COMMISSION.
- 17. ALL DISTURBED LAWN AREAS WITHIN THE LIMIT OF WORK SHALL BE RESTORED WITH 6 INCHES OF LOAM AND SEED UNLESS OTHERWISE NOTED ON PLANS.
- 18. TREES AND VEGETATION LOCATED WITHIN THE LIMIT OF WORK, AND ON THE LANDWARD SIDE OF DELINEATED BORDERING VEGETATED WETLANDS OR BANK MAY BE REMOVED AS NECESSARY TO COMPLETE THE WORK UNLESS OTHERWISE NOTED.
- 19. ADDITIONAL SITE FEATURES (SIGNS, MAILBOXES, LIGHTS, WALLS, ETC.) SHALL BE REMOVED AS REQUIRED TO COMPLETE THE WORK. FOLLOWING COMPLETION OF WORK, SITE FEATURES SHALL BE RE—INSTALLED PER THE DIRECTION OF THE OWNER. ANY SITE FEATURED OUTSIDE OF LIMIT OF WORK SHALL BE PROTECTED, AND IF DISTURBED. SHALL BE REPLACED AT NO ADDITIONAL COST TO OWNER.
- 20. PRIOR TO THE COMMENCEMENT OF ANY ACTIVITIES ON THIS SITE THERE MUST BE A PRE-CONSTRUCTION MEETING WITH THE TOWN REPRESENTATIVE. THE TOWN REPRESENTATIVE SHALL BE NOTIFIED IN WRITING WHEN EROSION CONTROL AND LIMIT OF WORK FLAGGING HAS BEEN INSTALLED AND IS READY TO BE INSPECTED BY THE TOWN REPRESENTATIVE.
- 21. ALL DEBRIS, FILL, AND EXCAVATED MATERIALS SHALL BE STOCKPILED IN A LOCATION FAR ENOUGH AWAY FROM THE WETLAND RESOURCE AREA TO PREVENT SEDIMENT FROM ENTERING WETLAND RESOURCE AREA.
- 22. THE CONTRACTOR SHALL MANAGE AND LEGALLY DISPOSE OFF—SITE ALL EXCESS EXCAVATED MATERIALS, INCLUDING, BUT NOT LIMITED TO, SOIL, ROCK, BOULDERS, WATER, DEMOLITION WASTE, AND DEBRIS THAT CANNOT BE REUSED ON—SITE.
- 23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ALL LINES, GRADES AND OTHER SURVEY CONTROL TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS.
- 24. ALL MATERIAL SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR UNLESS OTHERWISE NOTED.
- 25. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS PRIOR TO START OF CONSTRUCTION.
- 26. CONTRACTOR SHALL MAINTAIN EROSION CONTROL AND STORMWATER POLLUTION PREVENTION SYSTEMS IN COMPLIANCE WITH THE REQUIREMENTS OF THE MASSACHUSETTS STORMWATER MANUAL EROSION AND SEDIMENT CONTROLS AND SITE SPECIFIC STORMWATER POLLUTION PREVENTION PLAN DURING CONSTRUCTION.
- 27. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
- 28. SEE DETAILS FOR PAVEMENT MARKINGS, SIGNS AND SIGN POSTS.

EROSION AND SEDIMENTATION CONTROL NOTES

THESE MEASURES ARE INTENDED TO PROVIDE GENERAL REQUIREMENTS FOR EROSION AND SEDIMENTATION CONTROL. A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER POLLUTION PREVENTION PLAN (SWPPP) WILL BE ISSUED PRIOR TO CONSTRUCTION AND MAY REQUIRE ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES. CONTRACTOR SHALL FOLLOW ALL MEASURES REQUIRED FOR THE PROJECT.

THE PURPOSE OF EROSION CONTROLS IS TO PREVENT SEDIMENT FROM MOVING ONTO, AROUND, OR OFF OF THE CONSTRUCTION SITE. PROPERLY INSTALLED AND MAINTAINED EROSION CONTROLS ARE THE PRIMARY DEFENSE AGAINST SEDIMENT POLLUTION. SEDIMENTATION CONTROLS ARE A SECOND LINE OF DEFENSE AGAINST MOVING SEDIMENT. THE PURPOSE IS TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE AND ENTERING ENVIRONMENTALLY SENSITIVE AREAS. RUNOFF CONTROLS ARE USED TO SLOW THE VELOCITY OF CONCENTRATED WATER FLOWS. BY INTERCEPTING AND DIVERTING STORMWATER RUNOFF TO A STABILIZED OUTLET OR TREATMENT BMP, EROSION AND SEDIMENTATION ARE REDUCED. THIS SECTION DESCRIBES THE SET OF MEASURES THAT WILL BE INSTALLED BEFORE AND DURING THE CONSTRUCTION PROJECT TO CONTROL POLLUTANTS IN STORMWATER DISCHARGES THAT WILL OCCUR AT THE SITE. SUCH MEASURES MAY INCLUDE: PERIMETER CONTROLS, STOCK PILE COVERING, STORM DRAIN INLET PROTECTION, CHECK DAMS, AND TEMPORARY SEEDING. PLEASE NOTE: THE OPERATOR SHOULD INITIATE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN THREE (3) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED.

. MINIMIZE DISTURBED AREAS AND PROTECT NATURAL FEATURES AND SOIL

AS FAR AS IS PRACTICABLE, EXISTING VEGETATION SHALL BE PROTECTED AND LEFT IN PLACE, IN ACCORDANCE WITH THE CLEARING LIMITS SHOWN ON THE APPROVED PLANS. PRIOR TO ANY LAND DISTURBANCE ACTIVITIES COMMENCING ON THE SITE, THE CONTRACTOR SHALL PHYSICALLY MARK LIMITS OF WORK (LOW) ON THE SITE AND ANY AREAS TO BE PROTECTED WITHIN THE SITE, SO THAT WORKERS CAN CLEARLY IDENTIFY THE AREAS TO BE PROTECTED. THE APPENDED PROJECT DRAWINGS IDENTIFY THE LIMIT OF WORK ALONG WITH AREAS AND OBJECTS TO BE PROTECTED.

2. PHASE CONSTRUCTION ACTIVITY

PROPER SEQUENCING OF CONSTRUCTION ACTIVITIES IS ESSENTIAL TO MAXIMIZE THE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES. CONSTRUCTION SEQUENCING AND TIMING OF CONSTRUCTION ACTIVITIES WILL INCLUDE:

- 2.1. INSTALLATION OF ALL EROSION AND SEDIMENT CONTROLS THAT ARE REQUIRED TO BE IN PLACE AND FUNCTIONAL BEFORE ANY EARTHWORK BEGINS. THIS SHALL BE DONE IN ACCORDANCE WITH THE NPDES SWPPP FOR THIS PROJECT, THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, AND THE MASSACHUSETTS STORMWATER HANDBOOK. UPON ACCEPTABLE COMPLETION OF SITE PREPARATION AND INSTALLATION OF EROSION AND SEDIMENT CONTROLS, SITE CONSTRUCTION ACTIVITIES MAY COMMENCE. ROUTINE INSPECTION AND MAINTENANCE AND/OR MODIFICATION OF EROSION AND SEDIMENT CONTROLS WHILE EARTHWORK IS BEING DONE IS REQUIRED.
- 2.2. UPON COMMENCEMENT OF SITE CONSTRUCTION ACTIVITIES, THE OPERATOR SHALL INITIATE APPROPRIATE STABILIZATION PRACTICES ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN THREE (3) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY
- 2.3. FINAL STABILIZATION OF ANY DISTURBED AREAS AFTER EARTHWORK HAS BEEN COMPLETED.

3. PHASED CLEARING/GRUBBING

ONLY AREAS THAT CAN BE REASONABLY EXPECTED TO HAVE ACTIVE CONSTRUCTION WORK BEING PERFORMED WITHIN 3-DAYS OF DISTURBANCE WILL BE CLEARED/GRUBBED AT ANY ONE TIME. IT IS NOT ACCEPTABLE TO CLEAR AND GRUB THE ENTIRE CONSTRUCTION SITE IF PORTIONS WILL NOT BE ACTIVE WITHIN THE 3- DAY TIME-FRAME. PROPER PHASING OF CLEARING AND GRUBBING ACTIVITIES SHALL INCLUDE TEMPORARY STABILIZATION TECHNIQUES FOR AREAS CLEARED AND GRUBBED THAT WILL NOT BE ACTIVE WITHIN THE 3 DAY TIME FRAME. NO UNDISTURBED AREAS SHALL BE CLEARED OF EXISTING VEGETATION AFTER OCTOBER 15TH OF ANY CALENDAR YEAR OR DURING ANY PERIOD OF FULL OR LIMITED WINTER SHUTDOWN. ALL DISTURBED SOILS EXPOSED PRIOR TO OCTOBER 15 OF ANY CALENDAR YEAR SHALL BE SEEDED OR PROTECTED BY THAT DATE. ANY SUCH AREAS THAT DO NOT HAVE ADEQUATE VEGETATIVE STABILIZATION, AS DETERMINED BY THE SITE OPERATOR OR DESIGNATED INSPECTOR. BY NOVEMBER 15 OF ANY CALENDAR YEAR, MUST BE STABILIZED THROUGH THE USE OF EROSION CONTROL MATTING OR HAY MULCH, IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS. IF WORK CONTINUES WITHIN ANY OF THESE AREAS DURING THE PERIOD FROM OCTOBER 15 THROUGH APRIL 15, CARE MUST BE TAKEN TO ENSURE THAT ONLY THE AREA REQUIRED FOR THAT DAY'S WORK IS EXPOSED, AND ALL ERODIBLE SOIL MUST BE RESTABILIZED WITHIN 5 WORKING DAYS. CLEARING/GRUBBING SHALL NOT TAKE PLACE DURING A RAIN EVENT IF EROSION IS LIKELY TO OCCUR; NOR SHALL IT OCCUR IF A RAIN EVENT IS FORECASTED AND APPROPRIATE EROSION CONTROLS CANNOT BE INSTALLED PRIOR TO THE STORM. AFTER CLEARING, AND BY THE END OF EACH DAY'S GRUBBING OPERATION. THE SITE OPERATOR SHALL INSTALL EROSION CONTROL MEASURES THAT ARE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. SUCH EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS.

4. MONITORING WEATHER CONDITIONS

CARE SHALL BE TAKEN TO AVOID HAVING UNSTABILIZED AREAS EXPOSED DURING PRECIPITATION EVENTS. WEATHER FORECASTS SHALL BE ROUTINELY CHECKED, AND IN THE CASE OF AN EXPECTED PRECIPITATION EVENT OF OVER 0.25-INCHES OVER A 24-HOUR PERIOD, ALL BMPS SHALL BE INSPECTED, AND MAINTAINED AS NECESSARY, PRIOR TO THE WEATHER EVENT. DISTURBED SOIL AREAS, MATERIAL STORAGE, AREAS EXPOSED TO PRECIPITATION, AND IN-PLACE EROSION CONTROL MEASURES SHALL BE INSPECTED BY THE CONTRACTOR AND THE ENGINEER A MINIMUM OF ONCE EVERY 7 DAYS, WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES OF RAINFALL, AND AT LEAST ONCE DAILY DURING PROLONGED RAINFALL OR SNOWMELT. DEFICIENCIES IN THE EROSION CONTROL MEASURES IDENTIFIED BY THE INSPECTIONS SHALL BE CORRECTED WITHIN THREE (3) CALENDAR DAYS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE WEATHER GAUGE STATION AND WEBSITE THAT SHALL BE UTILIZED TO MONITOR WEATHER CONDITIONS ON THE CONSTRUCTION SITE IS AS FOLLOWS: THE CONTRACTOR CAN MONITOR THE WEATHER CONDITIONS ON WWW.WUNDERGROUND.COM, WWW.WEATHER.COM, OR SIMILAR WEATHER INFORMATION SOURCE. THE LOGAN INTERNATIONAL AIRPORT WEATHER GAUGE OR SIMILAR. REPRESENTATIVE WEATHER GAUGE SHALL BE THE WEATHER GAUGE UTILIZED FOR THIS

5. INITIATING STABILIZATION PROCEDURES

UPON COMPLETION AND ACCEPTANCE OF SITE PREPARATION AND INITIAL INSTALLATION OF EROSION AND SEDIMENT CONTROLS THE OPERATOR SHALL INITIATE APPROPRIATE STABILIZATION PRACTICES DURING ALL PHASES OF CONSTRUCTION ON ALL DISTURBED AREAS AS SOON AS POSSIBLE BUT NOT MORE THAN THREE (3) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA HAS TEMPORARILY OR PERMANENTLY CEASED.

6. CONTROL STORMWATER FLOWING ONTO AND THROUGH THE PROJECT
STRUCTURAL BMPS ARE USED TO DIVERT FLOWS FROM EXPOSED SOILS, RETAIN OR
DETAIN FLOWS, OR OTHERWISE LIMIT RUNOFF AND THE DISCHARGE OF POLLUTANTS FROM
EXPOSED AREAS OF THE SITE.
BMPS SHALL BE INSTALLED AS DEPICTED ON THE APPROVED PLAN SET AND IN

ACCORDANCE WITH MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS OR THE MASSACHUSETTS STORMWATER HANDBOOK. THE CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES SUCH AS DIVERSION CHANNELS, SEDIMENTATION OR FILTRATION SYSTEMS, BERMS, STAKED HAY BALES, SEEDING, MULCHING OR OTHER SPECIAL SURFACE TREATMENTS AS ARE REQUIRED TO PREVENT SILTING AND MUDDYING OF STREAMS, RIVERS, IMPOUNDMENTS, LAKES, ETC. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE IN AN AREA PRIOR TO ANY CONSTRUCTION ACTIVITY IN THAT AREA.

7. <u>STABILIZE SOILS</u>

DISTURBED AREAS THAT WILL NOT HAVE ACTIVE CONSTRUCTION ACTIVITY OCCURRING WITHIN THREE (3) DAYS MUST BE STABILIZED USING THE BMPS DEPICTED ON THE APPROVED SWPPP PLAN SET AND IN ACCORDANCE WITH APPLICABLE MEASURES SPECIFIED IN THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS OR THE MASSACHUSETTS STORMWATER HANDBOOK. THE CONTRACTOR SHALL STABILIZE THE DISTURBED SOILS THROUGH SEEDING, HYDROSEEDING, MULCHING AND DUST CONTROL THROUGH USE OF WATER. FOR TURFS AND GRASSES, STABILIZE FINAL GRADED AREAS WITHIN SEVEN DAYS OF GRADE PREPARATION BY PREPARING TOPSOIL AND THEN APPLYING SEED AND MULCH. FOR DUST CONTROL, STABILIZE EXPOSED SOILS DURING DRY WEATHER BY APPLYING WATER SITE—WIDE.

8. PROTECT SLOPES

SLOPES THAT WILL HAVE CONCENTRATED STORMWATER FLOW MUST BE PROTECTED USING THE BMPS DEPICTED ON THE APPROVED SWPPP PLAN SET AND IN ACCORDANCE WITH THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS OR THE MASSACHUSETTS STORMWATER HANDBOOK. IF THE SLOPE STABILIZATION BMPS FAIL AND EROSION OCCURS, THEN ALTERNATIVE CONTROL MEASURES MAY BE USED UPON APPROVAL OF THE SITE OWNER, WHICH MAY INCLUDE COMPOST FILTER SOCKS, FIBER ROLLS, GRAVEL BAG BERMS, EROSION CONTROL MATS/BLANKETS, AND TEMPORARY VEGETATIVE COVER.

9. PROTECT STORM DRAIN INLETS

STORM DRAIN INLET PROTECTION MEASURES PREVENT SOIL AND DEBRIS FROM ENTERING STORM DRAIN INLETS. THESE MEASURES ARE USUALLY TEMPORARY AND ARE IMPLEMENTED BEFORE A SITE IS DISTURBED. ALL STORMWATER INLETS AND/OR CATCH BASINS THAT ARE OPERATIONAL DURING CONSTRUCTION AND MAY RECEIVE SEDIMENT—LADEN STORMWATER FLOW FROM THE CONSTRUCTION SITE MUST BE PROTECTED USING ANY OF THE BMPS OUTLINED IN THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS OR THE MASSACHUSETTS STORMWATER HANDBOOK.

POSSIBLE CONTROL MEASURES THAT MAY BE USED INCLUDE COMPOST FILTER SOCKS, FIBER ROLLS, GRAVEL BAG BERMS, OR CATCH BASIN INSERTS. (PLEASE NOTE: HAYBALE/SILT FENCE PROTECTION MEASURES DO NOT WORK ON PAVED SURFACES). THE CONTRACTOR SHALL PROTECT THE STORM DRAIN INLETS WITH BALED HAY CATCH BASIN INLET PROTECTION DETAIL DEPICTED IN THE CONTRACT DRAWINGS. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE IN AN AREA PRIOR TO ANY CONSTRUCTION ACTIVITY IN THAT AREA.

10. ESTABLISH PERIMETER CONTROLS AND SEDIMENT BARRIERS

PERIMETER CONTROLS SHALL BE INSTALLED, AND MAINTAINED, AS DEPICTED ON THE APPROVED SWPPP PLAN SET AND IN ACCORDANCE WITH THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS OR THE MASSACHUSETTS STORMWATER HANDBOOK.

IF THE BALED HAY AND/OR SILT FENCE EROSION CHECKS FAIL TO CONTAIN THE SEDIMENT ON—SITE, THEN ALTERNATIVE CONTROL MEASURES MAY BE SUBSTITUTED WITH APPROVAL OF THE SITE OWNER. SUCH MEASURES MAY INCLUDE (BUT ARE NOT LIMITED TO) COMPOST FILTER SOCKS OR STRAW WATTLES (FIBER ROLLS). THE CONTRACTOR SHALL ESTABLISH PERIMETER CONTROLS AND SEDIMENT BARRIERS AT LEAST 48 HOURS BEFORE SITE CLEARING AND SOIL DISTURBANCE. THE SEDIMENT CONTROLS SHALL BE DOWNHILL OF DISTURBED AREAS IN ACCORDANCE WITH THE DETAILS DEPICTED IN THE DRAWINGS. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE IN AN AREA PRIOR TO ANY CONSTRUCTION ACTIVITY IN THAT AREA.

11. RETAIN SEDIMENT ON-SITE AND CONTROL DEWATERING PRACTICES

SEDIMENT TRAPS, BASINS, AND BARRIERS ARE USED TO RETAIN SEDIMENT ON THE SITE TO PROTECT STREAMS, LAKES, DRAINAGE SYSTEMS, AND ADJACENT PROPERTY. THESE DEVICES ARE USED AT THE OUTLETS OF CHANNELS, DIVERSIONS, AND OTHER RUNOFF CONVEYANCE MEASURES TO ALLOW SEDIMENT—FILLED WATER TO POOL AND THE SEDIMENT TO SETTLE. THESE MEASURES ARE OFTEN USED AS THE LAST LINE OF DEFENSE TO STOP SEDIMENT FROM LEAVING THE SITE. DISCHARGE OF SEDIMENT—LADEN WATER INTO STORM DRAINS, STREAMS, RIVERS, LAKES OR WETLANDS PRIOR TO SEDIMENT REMOVAL IS PROHIBITED. A TEMPORARY SEDIMENT TRAP OR BASIN MAY BE INSTALLED AND MAINTAINED AS NECESSARY WITHIN THE SITE BOUNDARIES AND IN ACCORDANCE WITH THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS OR THE MASSACHUSETTS STORMWATER HANDBOOK.

GRADING AND DRAINAGE NOTES:

- 1. PROPOSED DRAINAGE STRUCTURES SHALL BE SET TO CORRESPOND TO THE PROPOSED ELEVATIONS SHOWN ON THE DRAWINGS. ANY CONFLICTS AND OR DISCREPANCIES AND SHALL NOTIFY THE ENGINEER IN WRITING.
- 2. UNSUITABLE FILL AND BACKFILL MATERIALS ARE MATERIALS CONTAINING EXCESSIVE AMOUNT OF WATER, PLASTIC, CLAY, SILT, VEGETATION, ORGANIC MATTER, DEBRIS, PAVEMENT, STONES OR BOULDERS OVER 6 INCHES IN GREATEST DIMENSION, FROZEN MATERIAL, AND MATERIAL WHICH, IN THE OPINION OF THE ENGINEER, WILL NOT PROVIDE A SUITABLE FOUNDATION OR SUBGRADE.
- 3. SUITABLE SOIL SHALL BE PLACED IN LAYERS TO THE REQUIRED ELEVATIONS AS SHOWN ON THE DRAWINGS. FILL, BACKFILL AND COMPACT TO PRODUCE MINIMUM SUBSEQUENT SETTLEMENT OF THE MATERIAL AND PROVIDE ADEQUATE SUPPORT FOR THE SURFACE TREATMENT OR STRUCTURE TO BE PLACED ON THE MATERIAL. PLACE MATERIAL IN APPROXIMATELY HORIZONTAL LAYERS OF BEGINNING AT LOWEST AREA TO BE FILLED. DO NOT IMPAIR DRAINAGE. DO NOT USE ON—SITE TOPSOIL AS FILL MATERIAL.
- 4. FOR GROUND SURFACE PREPARATION, REMOVE VEGETATION, DEBRIS, UNSUITABLE SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACEMENT OF FILL. REMOVE MATERIAL TO THE FULL EXTENT OF ROOT PENETRATION. PROOF—ROLL EXISTING GROUND SURFACE PRIOR TO PLACEMENT OF FILL TO PROVIDE A DENSE, STABLE BASE FOR THE FIRST LIFTS OF THE FILL.
- 5. PRIOR TO THE START OF CONSTRUCTION, HAND DIG TEST PITS TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL VERIFY LOCATION, PIPE MATERIAL, AND ELEVATION OF ALL EXISTING UTILITIES AT PROPOSED UTILITY CROSSINGS, AND ADVISE THE ENGINEER IN WRITING OF ANY DISCREPANCIES.
- 6. ALL PROPOSED UTILITIES AND THEIR CONNECTIONS, DISCONNECTION AND RELOCATION OF EXISTING UTILITIES SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY OWNER HAVING JURISDICTION. ANY COORDINATION WITH THE MUNICIPALITY AND/OR UTILITY OWNER, PERMITS, FEES, OR APPROVALS REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 7. EROSION CONTROL BARRIERS SHALL BE INSTALLED PRIOR TO COMMENCING ANY WORK ON THE SITE. KEEP ALL STREETS FREE OF DUST, MUD, AND DEBRIS, STREETS AND WALKWAYS SHALL BE SWEPT REGULARLY, AND TEMPORARY CONSTRUCTION ENTRANCE—EXITS SHALL BE UTILIZED DURING CONSTRUCTION.
- 8. MAINTAIN VEHICULAR AND PEDESTRIAN FLOW ALONG ROUTE 3A AT ALL TIMES DURING CONSTRUCTION. COORDINATE ALL TRAFFIC CONTROL AS WELL AS ANY SIDEWALK OR LANE CLOSURES WITH THE TOWN AND MASSDOT AS REQUIRED. OBTAIN WRITTEN APPROVAL FROM THE OWNER IN ADVANCE FOR ANY PROPOSED ROAD CLOSURES AS REQUIRED TO COMPLETE THE WORK. COORDINATE AND PROVIDE POLICE DETAILS AS REQUIRED, AT NO ADDITIONAL COST TO THE OWNER.
- 9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION AND BUILDING PERMITS.
 PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.

	<u>LEGEND</u>	
<u>DESCRIPTION</u>	EXISTING	<u>PROPOSED</u>
PROPERTY LINE		
FLOOD PLAIN & WATERSHED PROTECTION DISTRICT		
BANK BOUNDARY OF POND		
WETLAND LINE		
WETLAND BUFFER LINE	-·-·-	
MassDOT BASE LINE		
CONTOUR (MAJOR)		80
CONTOUR (MINOR)	——————————————————————————————————————	
STORM DRAIN	D	SD
SANITARY SEWER	SS	———s———s—
FORCE MAIN LINE		— — FM — —
WATER LINE	——————————————————————————————————————	——— W ———
ELECTRIC LINE	E	————E———
OVERHEAD ELECTRIC	——————————————————————————————————————	OE
EDGE OF VEGETATION		
CLEANOUT		0
STORM DRAIN MANHOLE		0
CATCH BASIN		
INLET PROTECTION		
UTILITY POLE	б	ø
SIGN	_0_	
SPOT GRADE	×110.60	+93.83
STONE WALL	000000000000000000000000000000000000000	
EDGE OF PAVEMENT		
CURB		
BUILDING		
BITUMINOUS CONCRETE		
GRAVEL/RIP RAP		
, RETAINING WALL		
CHAIN LINK FENCE		xx
LIMIT OF WORK		Lw
SILT SOCK		
DIVERSION DITCH		
		[+-+-+
SOIL STOCKPILE		XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SNOW STORAGE		

ROOF DRAIN

UNDERDRAIN

HYDRANT

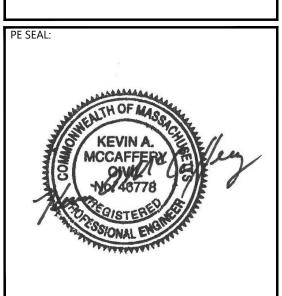
LIGHTPOST

DOWNSPOUT

ROCK CHECK DAM



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ISSUE FOR PERMIT

IENIT INIEO:

— — RD— — —

___ UD__ __

TOWN OF SCITUATE,
MASSACHUSETTS
453 CHIEF JUSTICE
CUSHING HIGHWAY

STEARNS MEADOW DRINKING WATER TREATMENT PLANT

1	10/06/2023	PEER REVIEW RESPONSE
REV	MM/DD/YY	DESCRIPTION
JOB	NO:	0233681.02

JOB NO: 0233681.02

DATE: AUGUST 2023

SCALE: AS SHOWN

DESIGNED BY: JC

DRAWN BY: MB

CHECKED BY: SK/KM

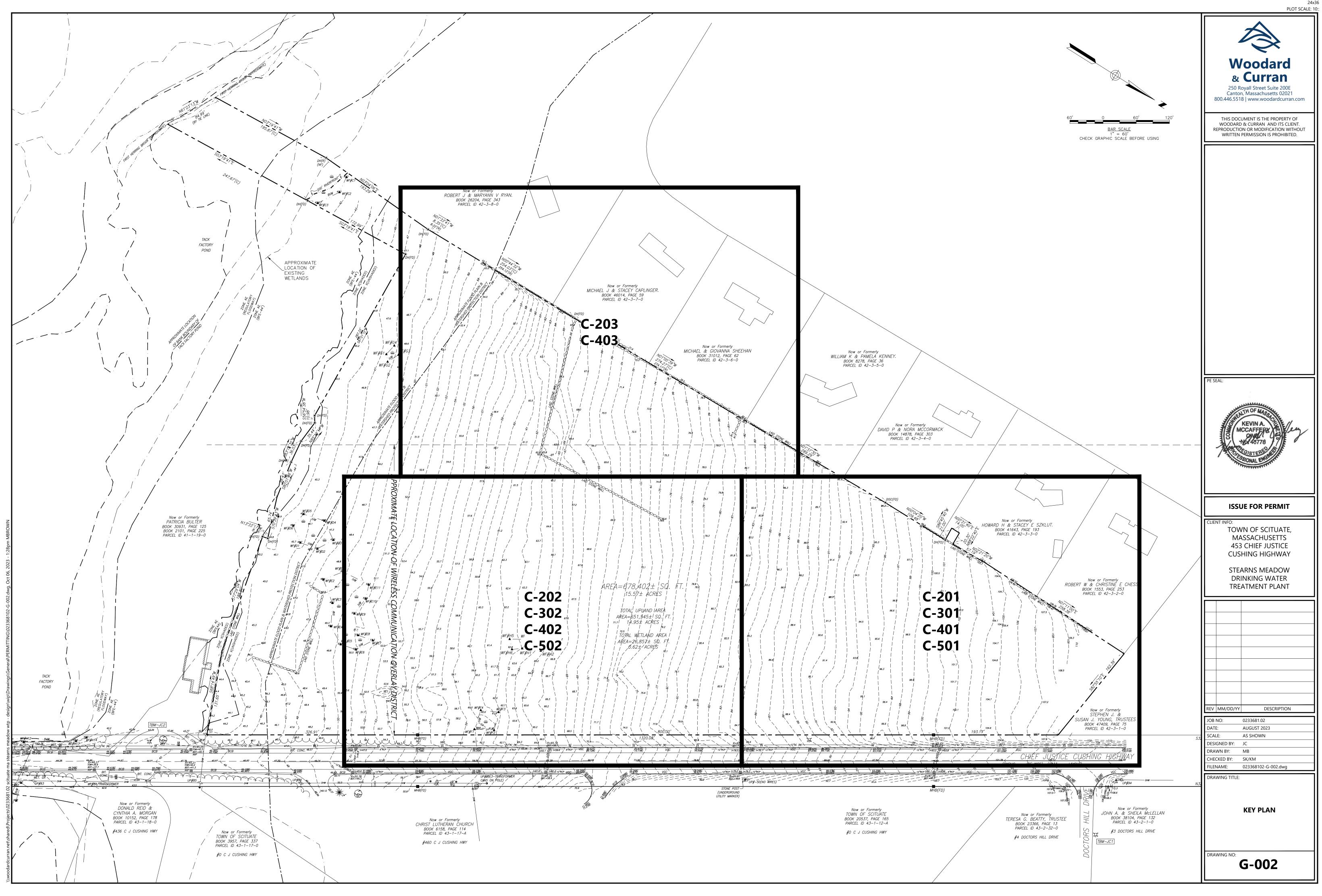
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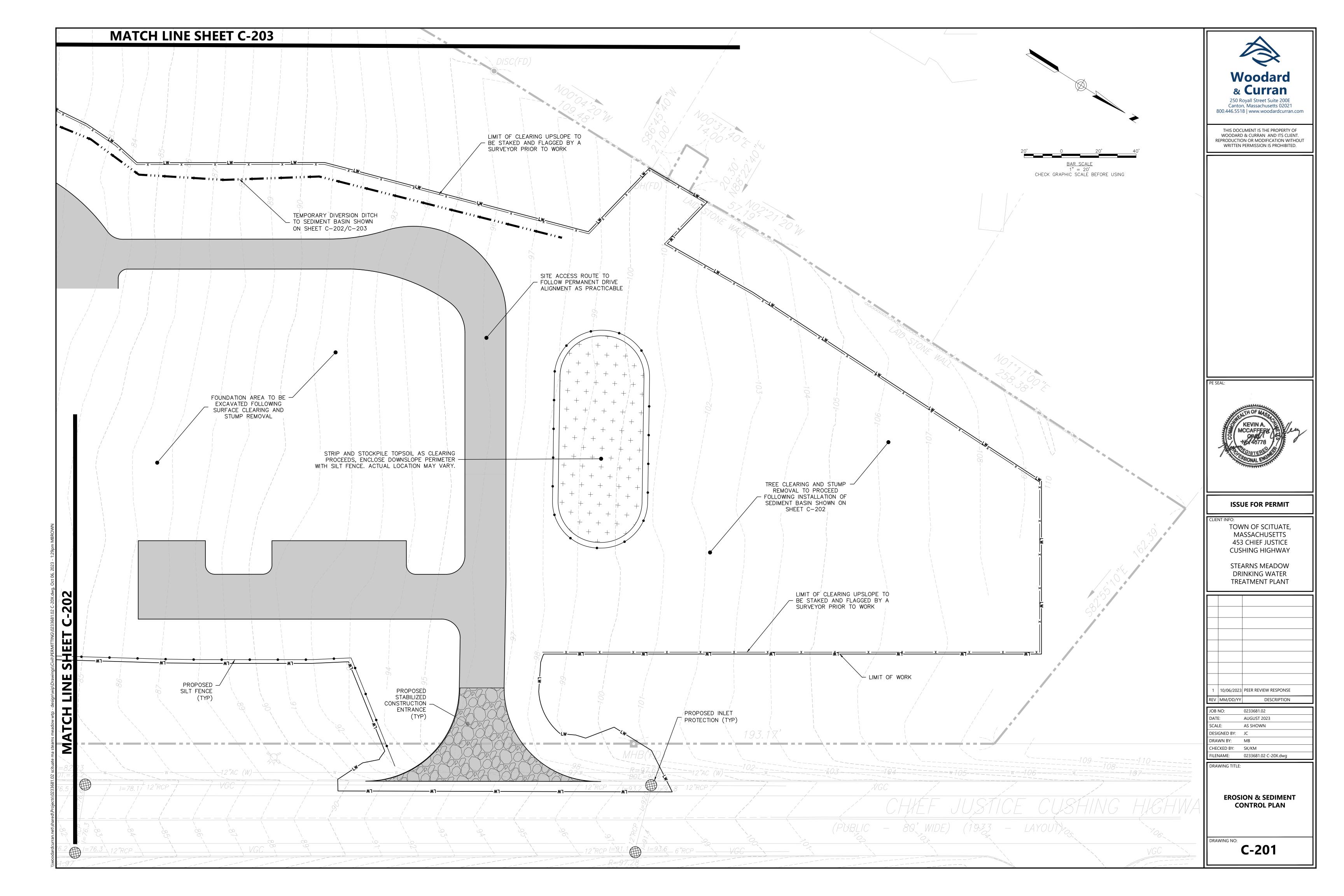
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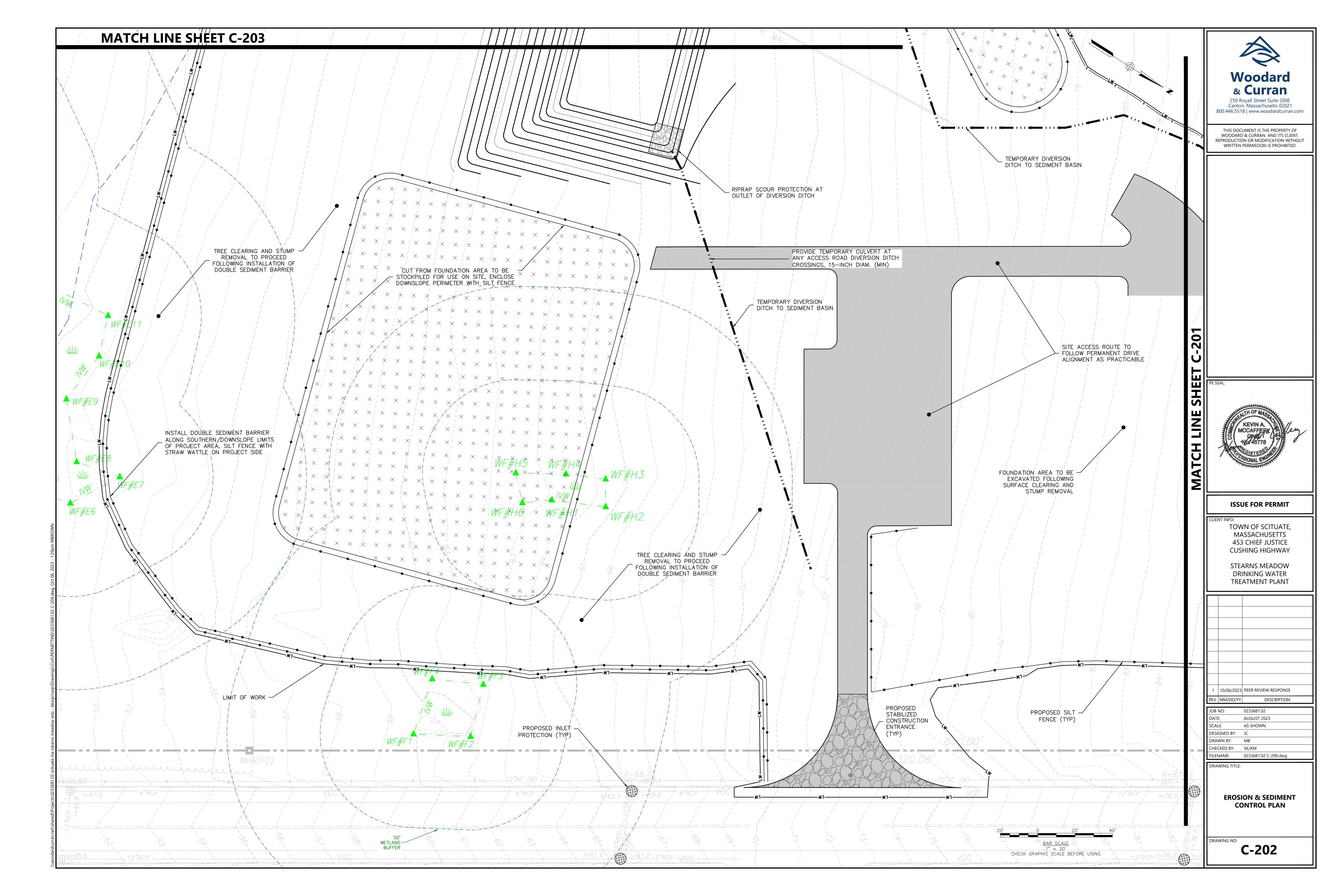
GENERAL NOTES, ABBREVIATIONS & LEGENDS

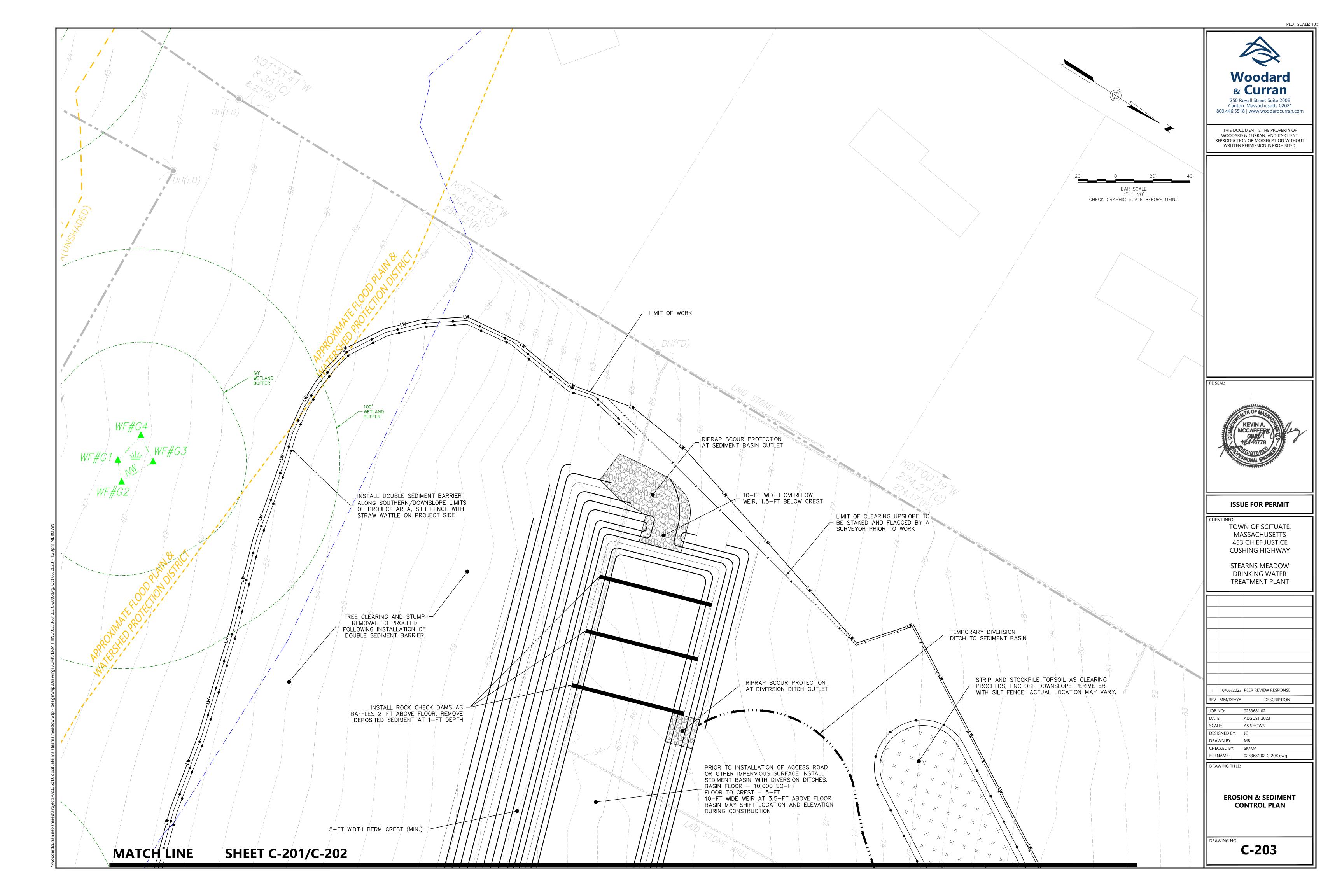
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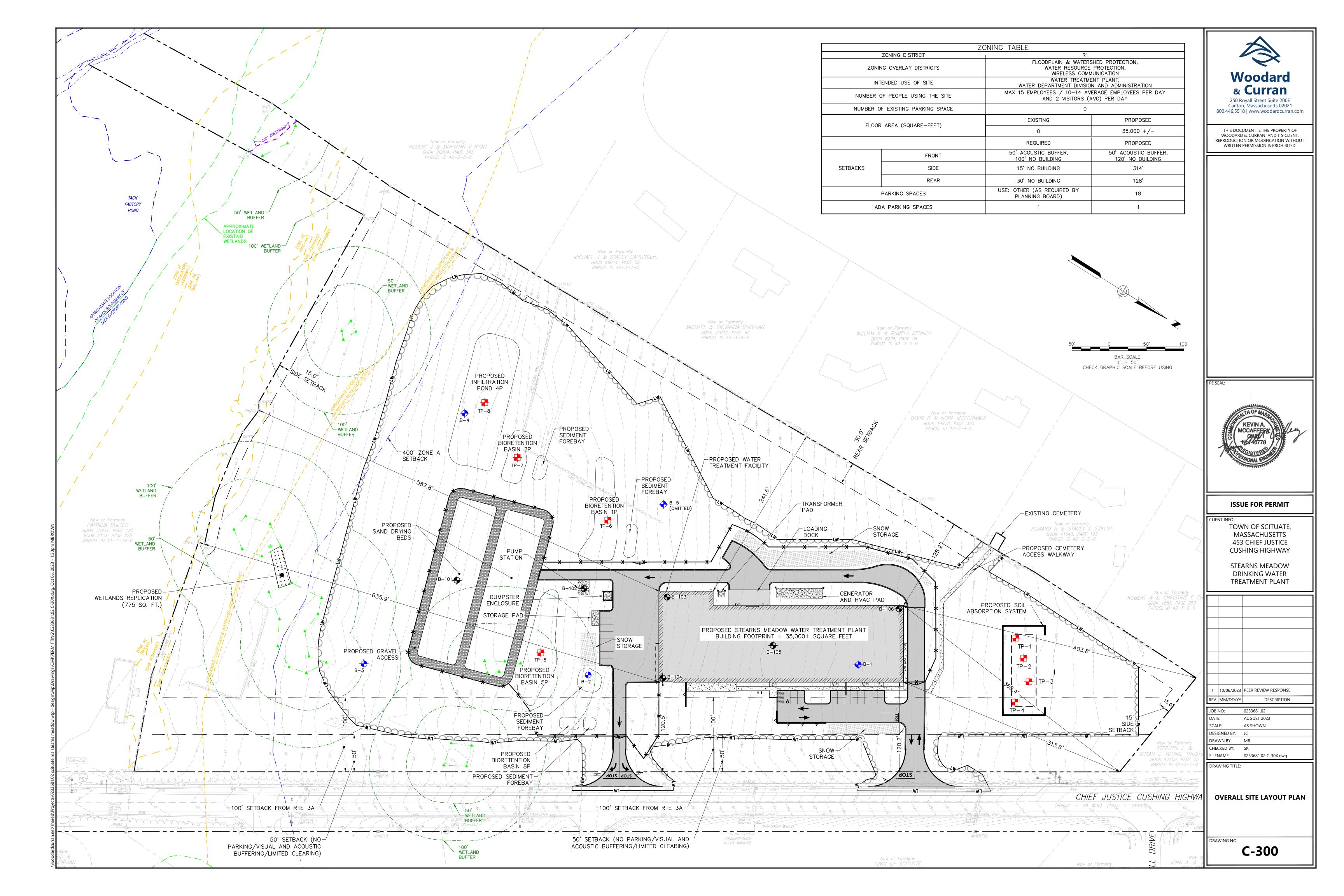
G-001

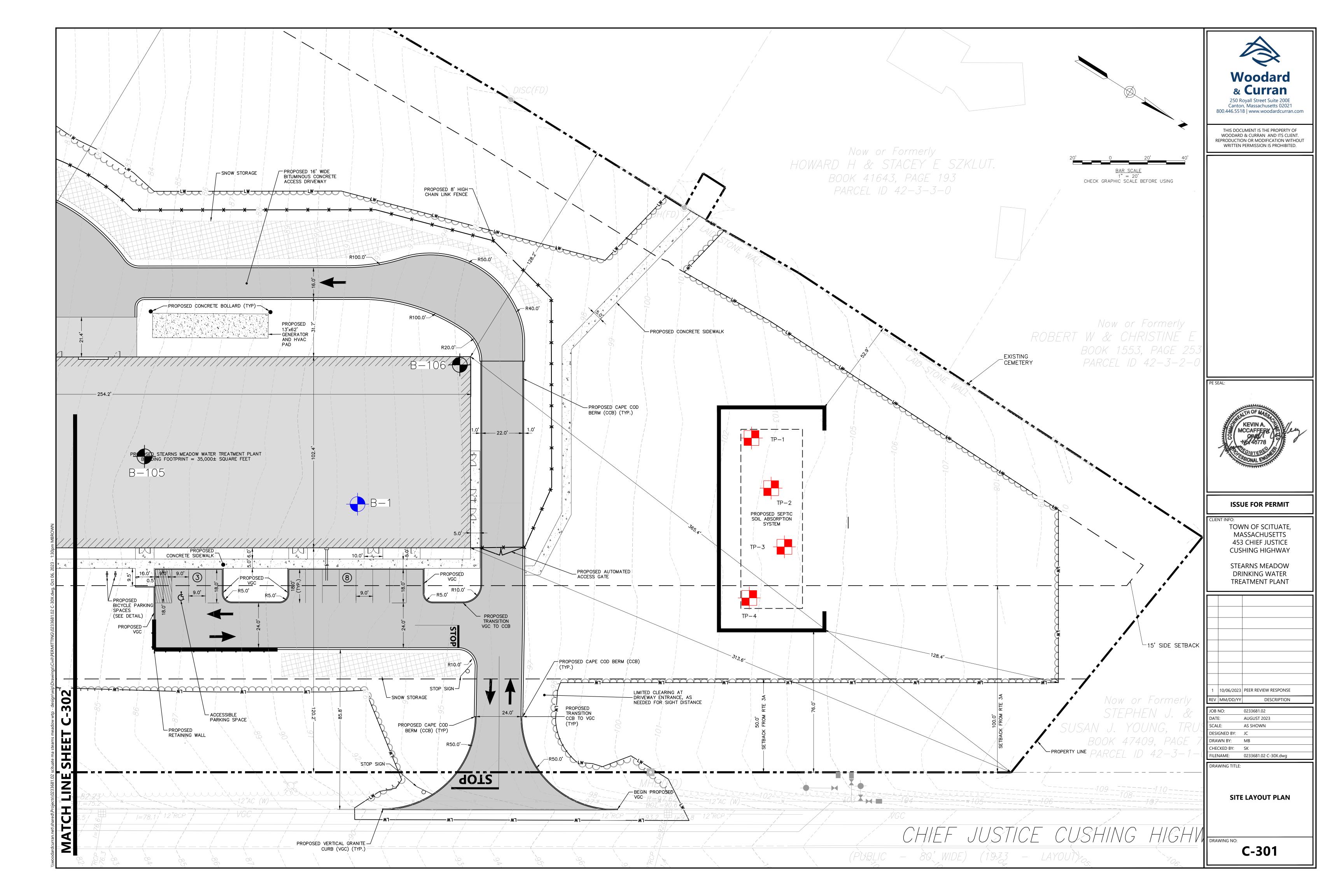


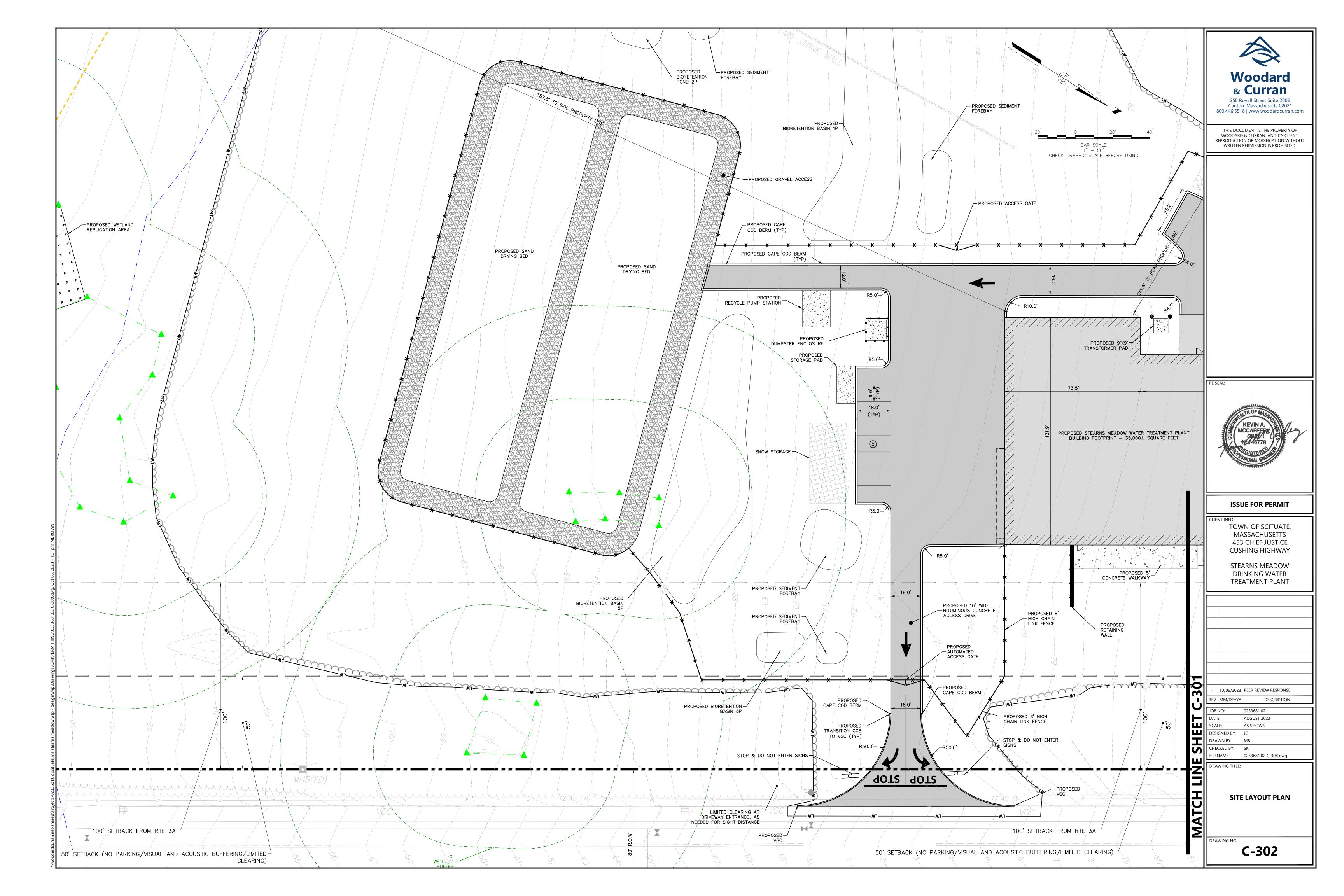


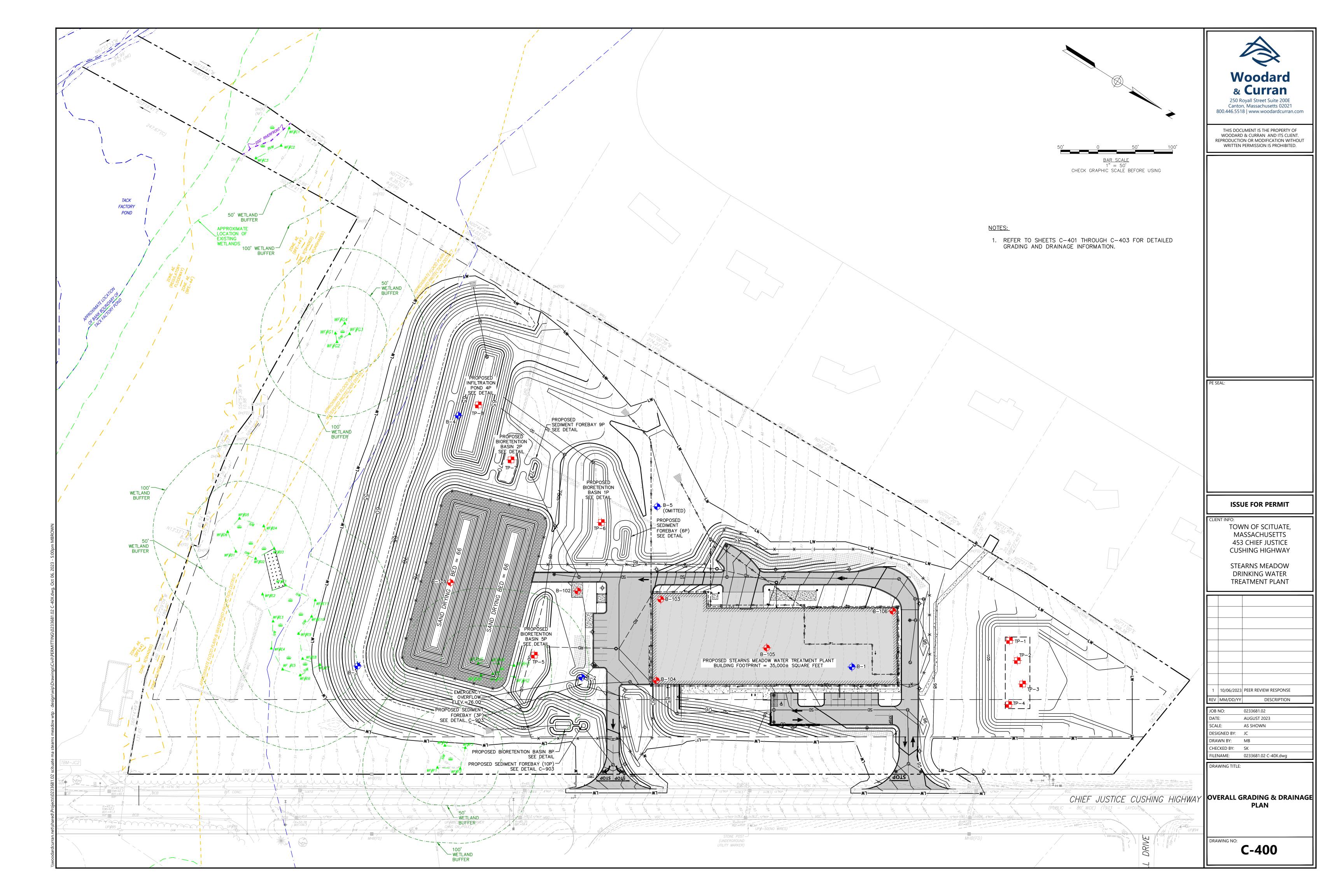


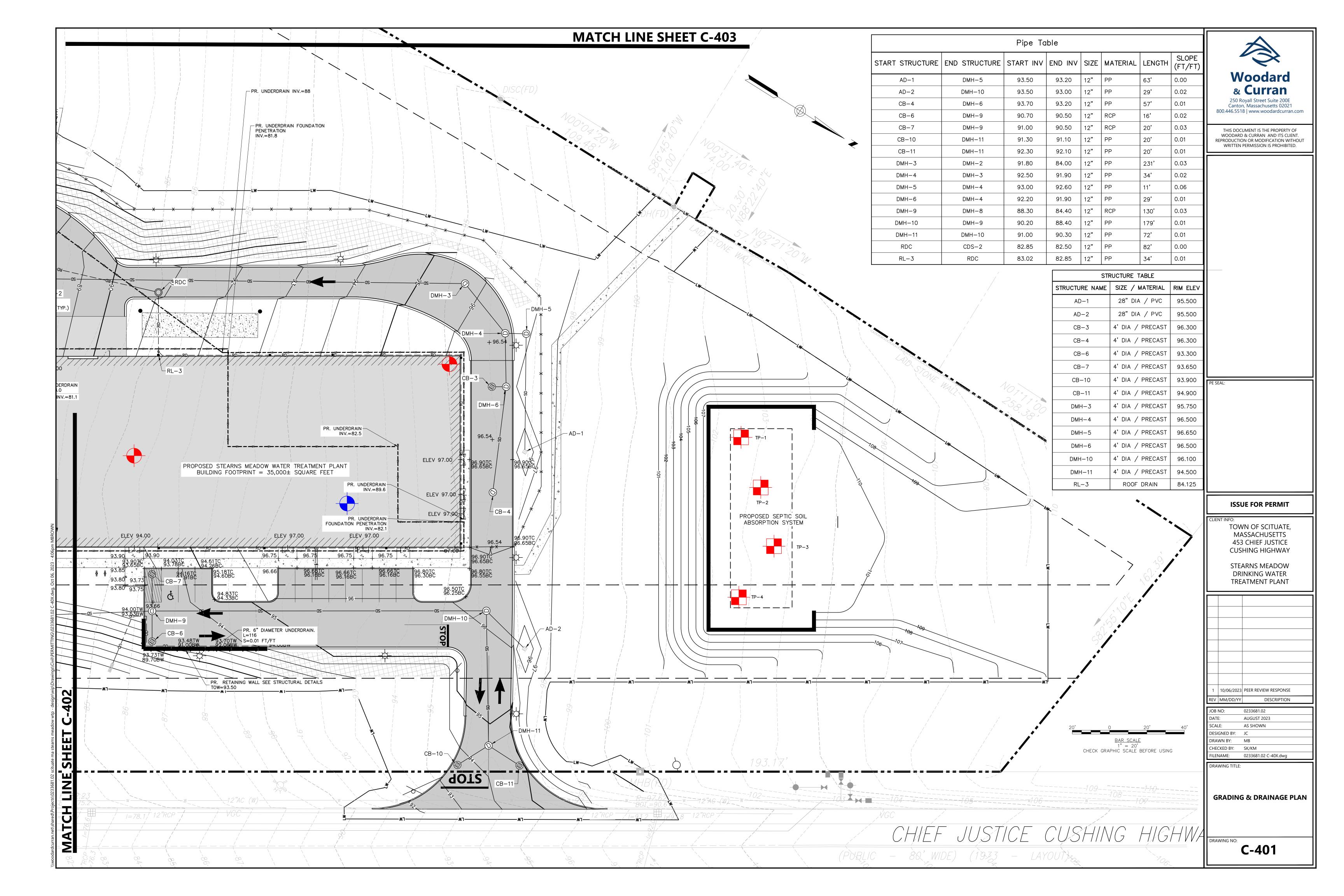


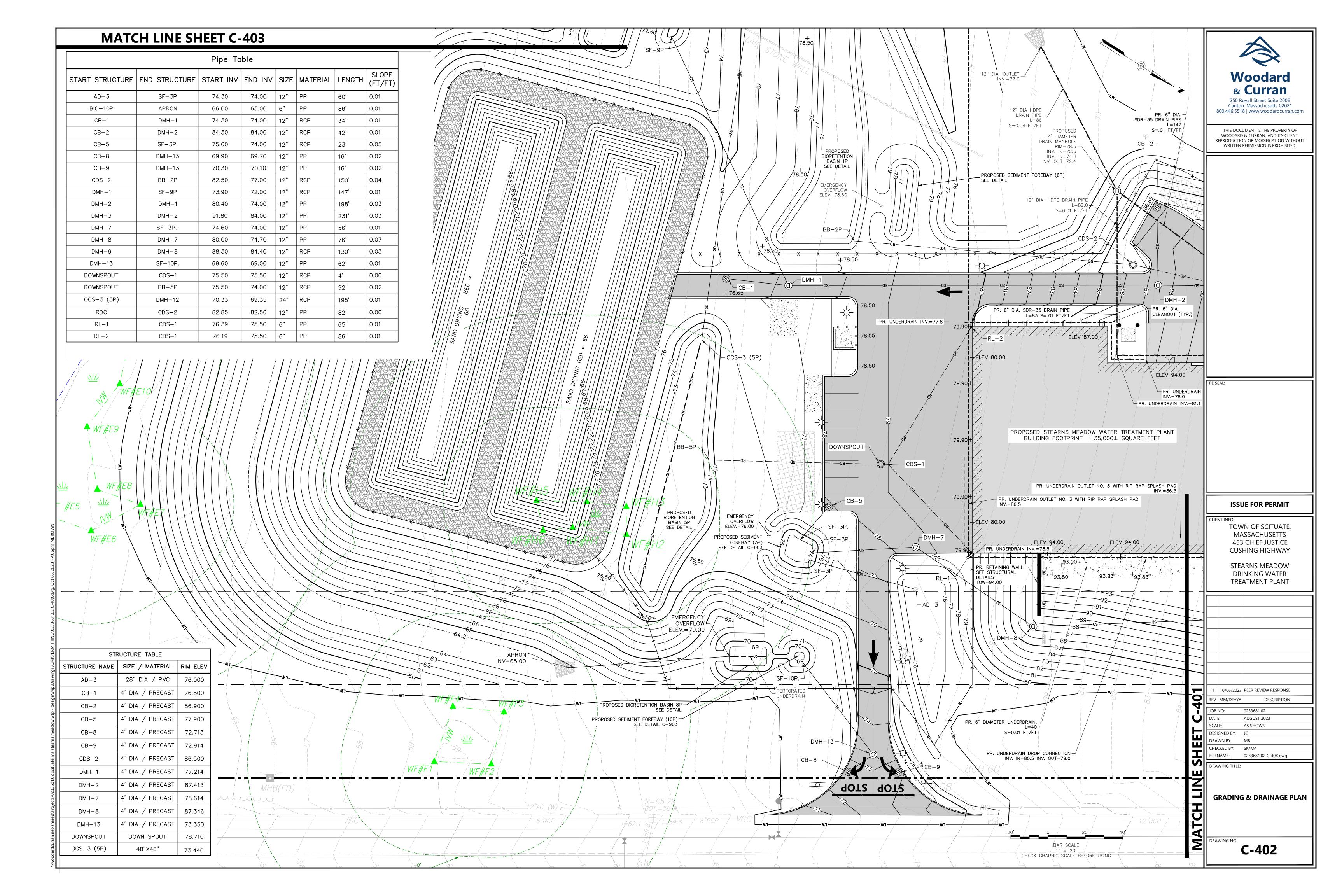


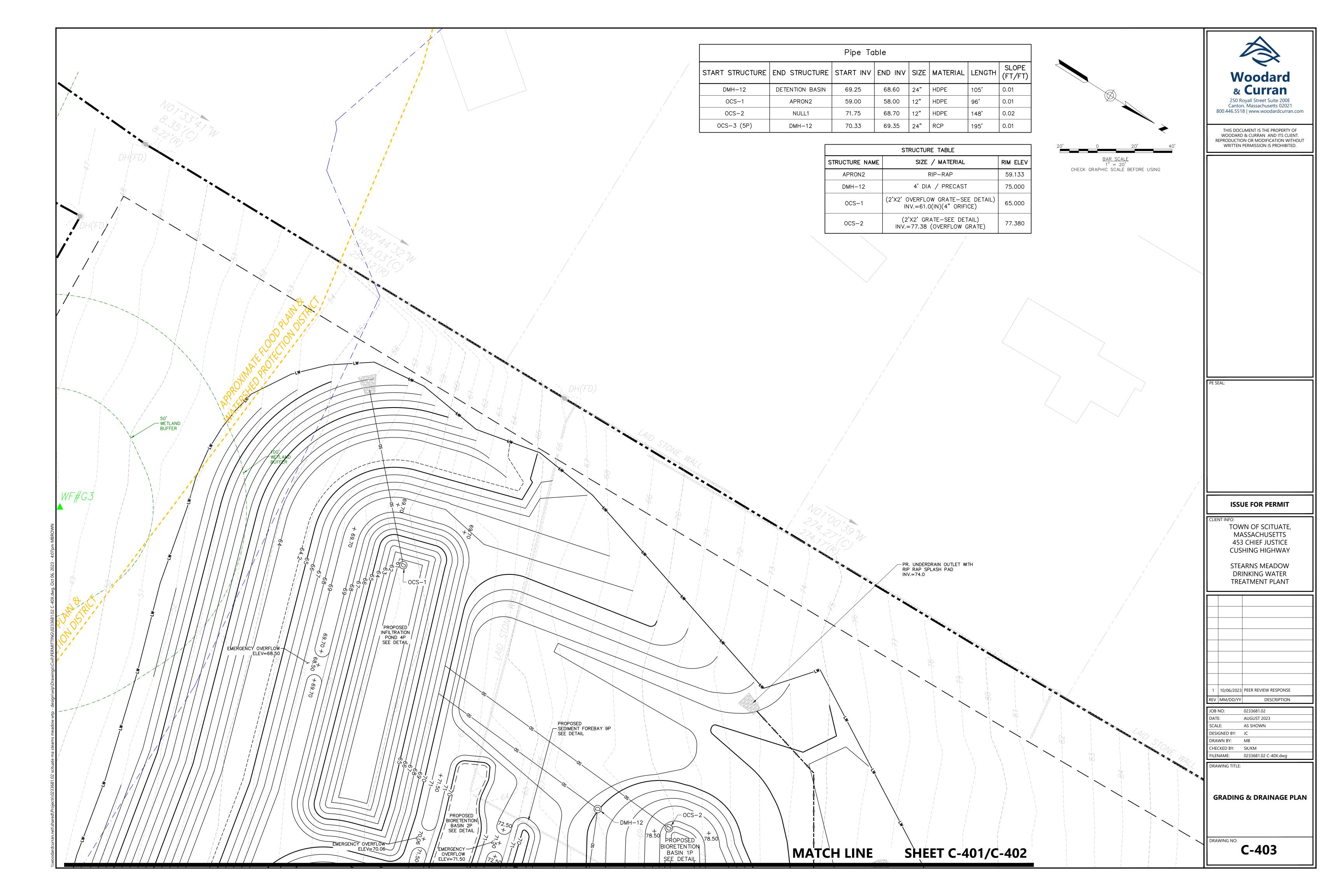


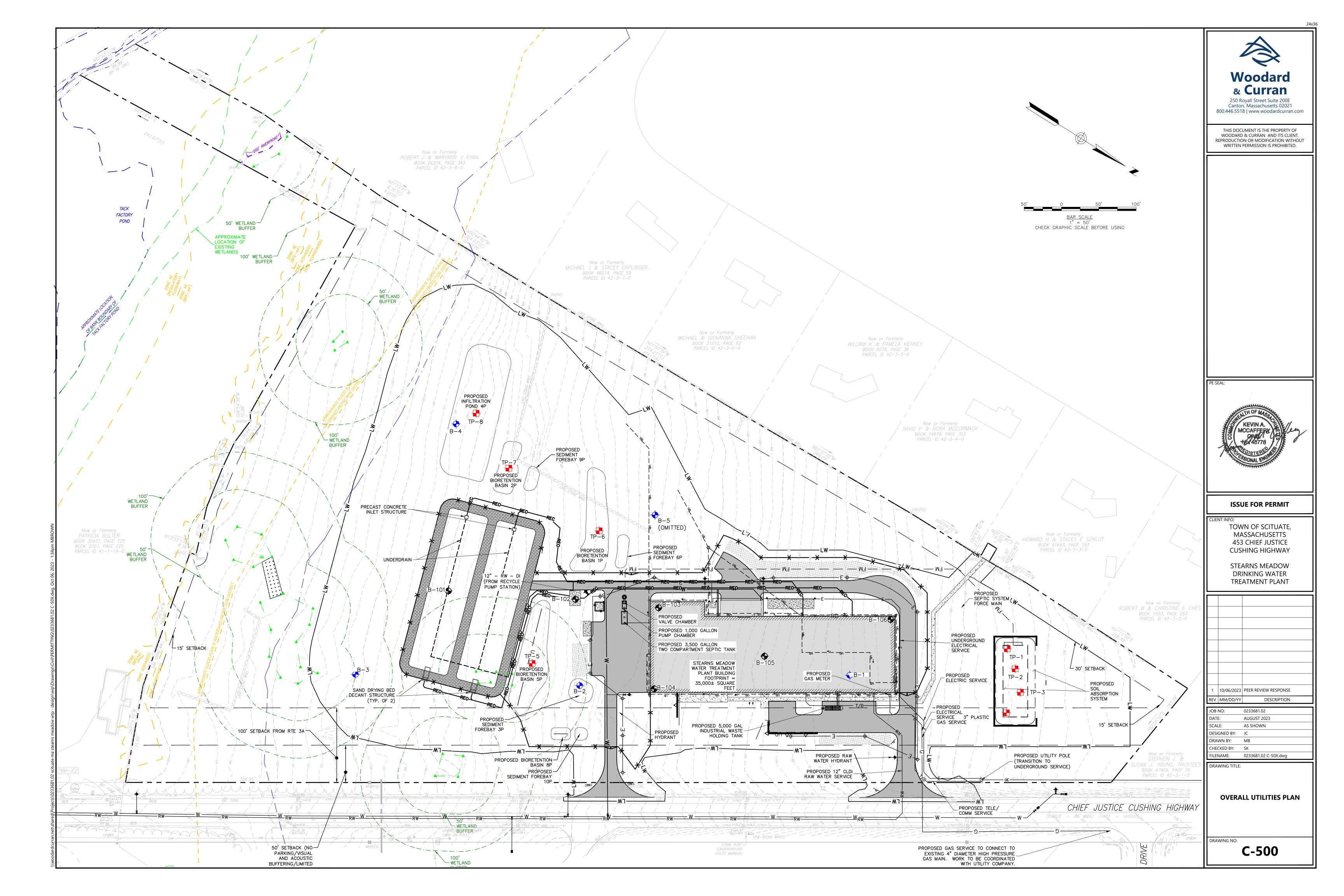


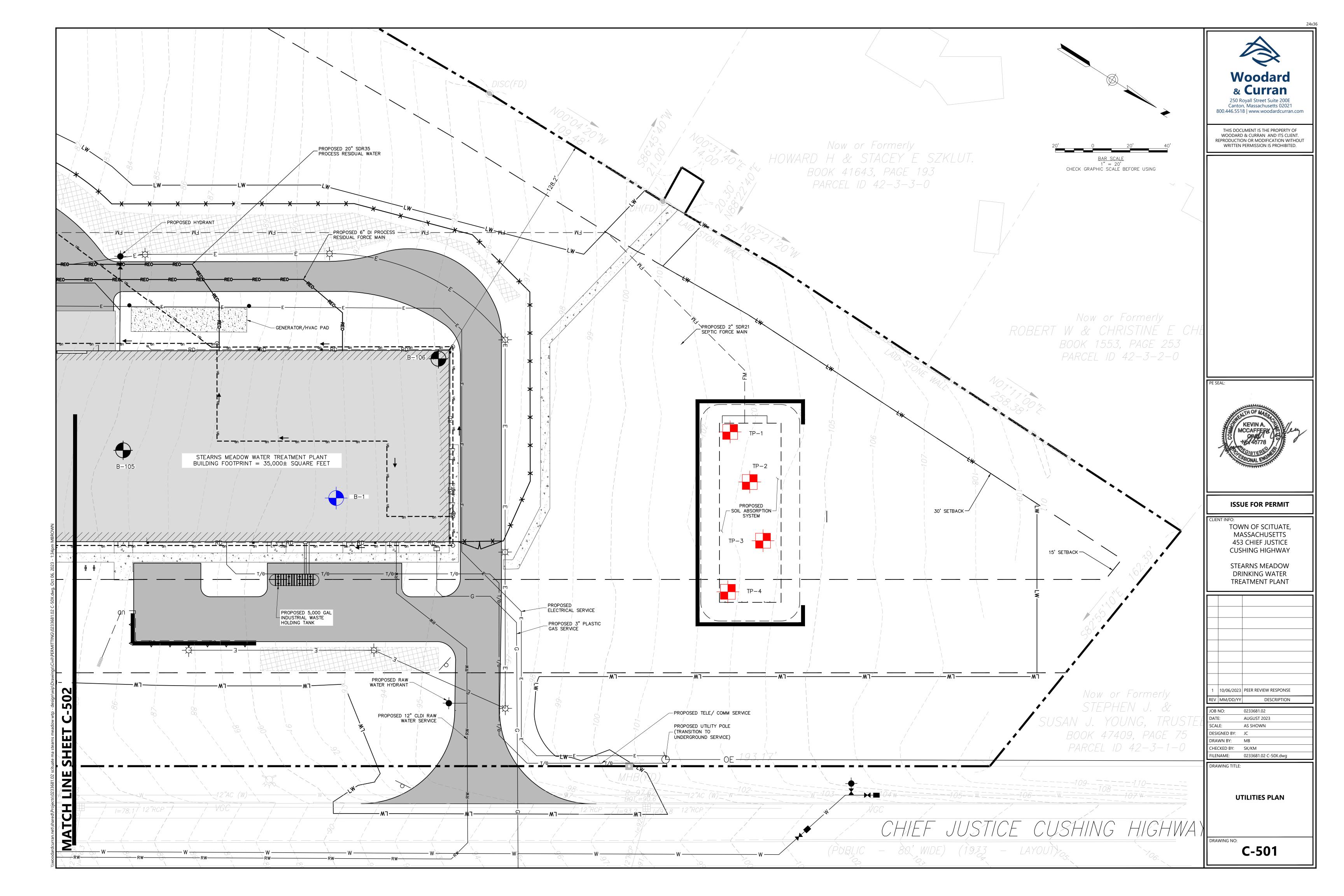


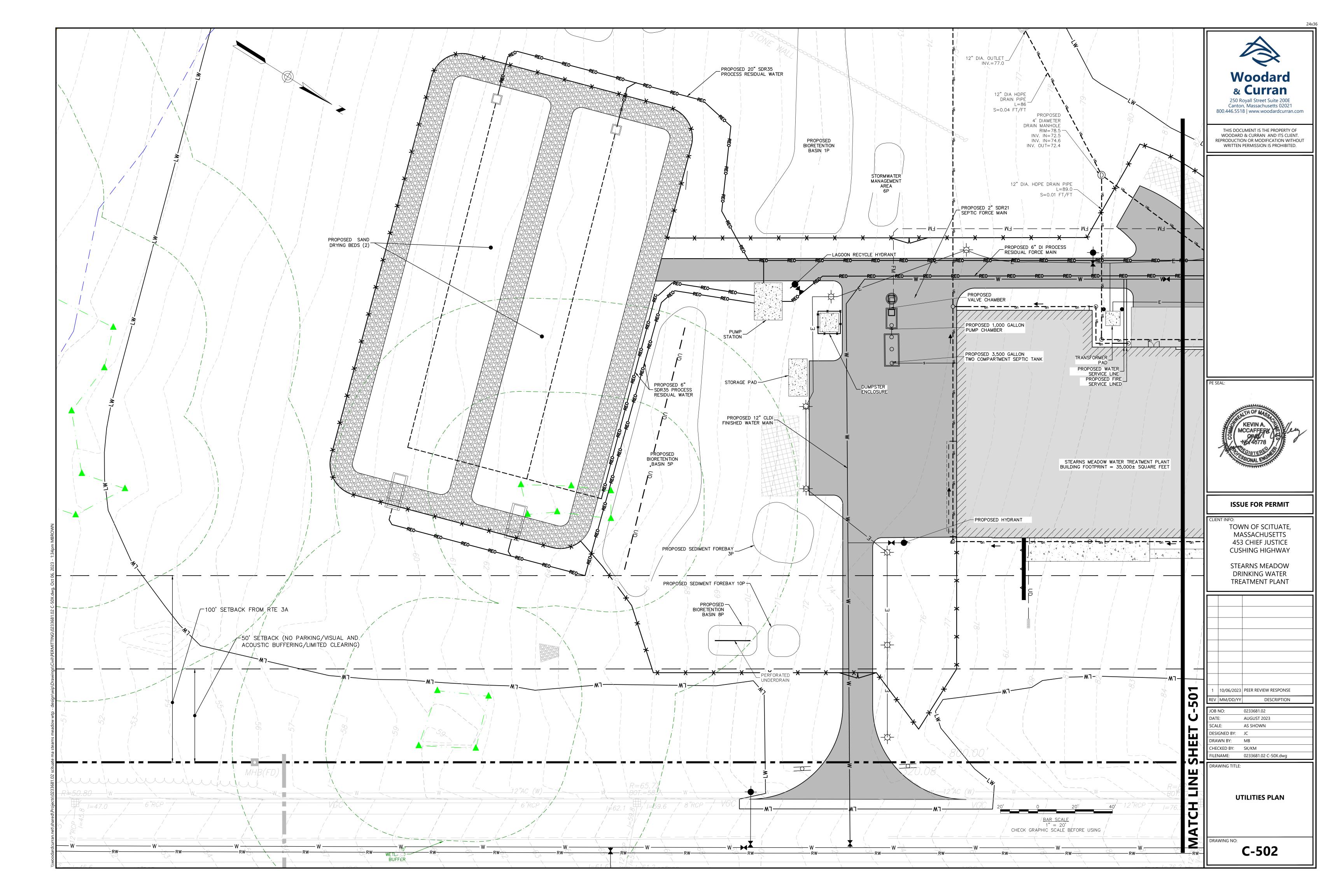






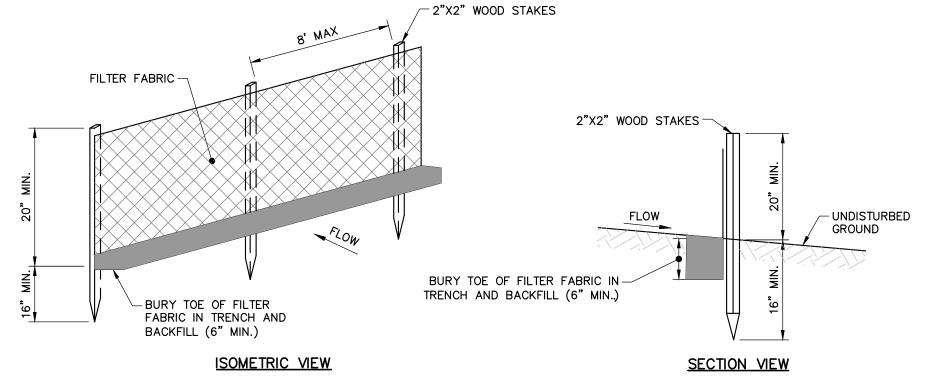






1. WHEN STAKING IS NOT POSSIBLE, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT CONTROL TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS.

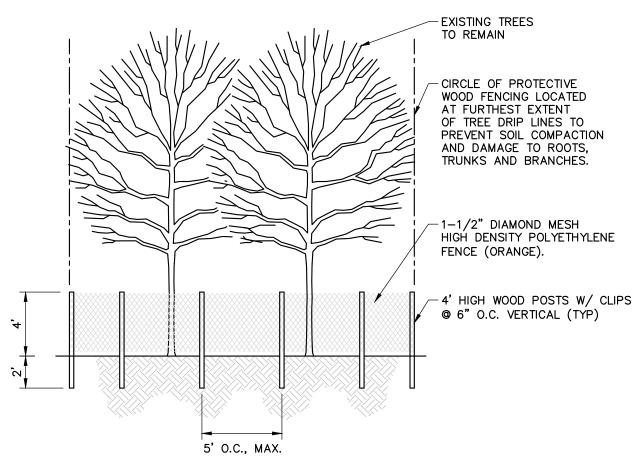
<u>SEDIMENT BARRIER - SILT SOCK</u>



NOTES:

- 1. INSTALL FABRIC ON UPHILL SIDE OF WOOD STAKES.
- 2. SPACING BETWEEN WOOD STAKES PER MANUFACTURER'S RECOMMENDATION.
- 3. SILT FENCE WILL NOT BE USED IN DRAINAGE WAYS.
- 4. MAINTENANCE: INSPECT FOR TEARS IN THE FABRIC OR DAMAGE TO SUPPORTS. REPAIR AS NECESSARY. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES A DEPTH OF SIX-INCHES OR MORE.
- 5. REMOVAL: WHEN UPSLOPE AREAS ARE STABILIZED, THE STRUCTURE AND ANY ACCUMULATED SEDIMENT WILL BE REMOVED.

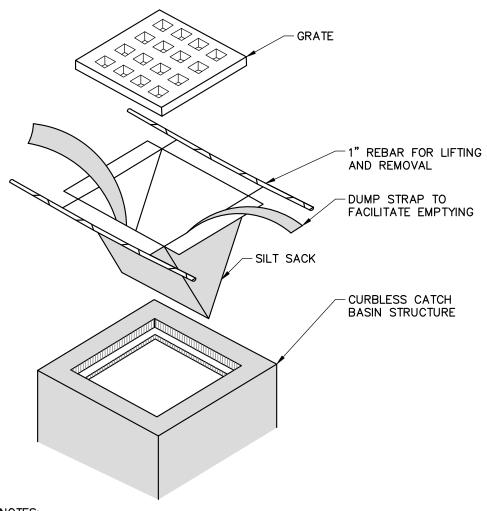
<u>SEDIMENT BARRIER - SILT FENCE</u> NOT TO SCALE



NOTES:

- 1. LOCATE FENCING AS SHOWN ON PLANS.
- NO MATERIAL OR EQUIPMENT SHALL BE STORED OR STOCKPILED WITHIN THE AREA SURROUNDED BY TREE PROTECTION FENCING.
- 3. FENCE MUST REMAIN AND BE MAINTAINED THROUGHOUT ENTIRE BUILDING PHASES DURING WHICH CONSTRUCTION MAY AFFECT TREES.

TREE PROTECTION NOT TO SCALE

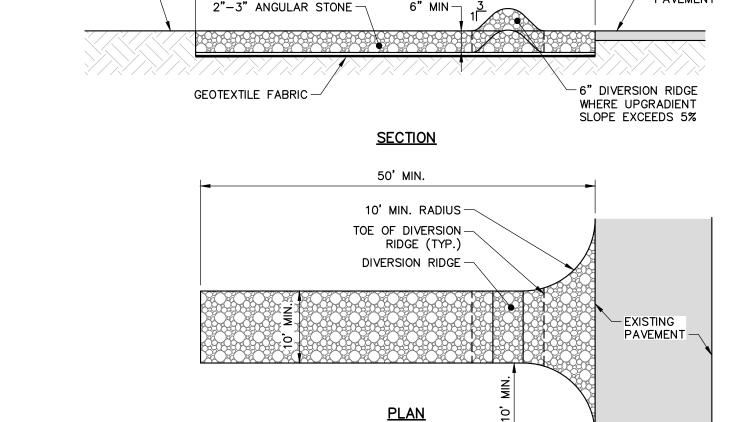


- 1. INSTALL SILTSACK PER MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
- 2. EMPTY OR REMOVE SEDIMENT FROM SILTSACK WHEN RESTRAINT CORD IS NO LONGER VISIBLE. CLEAN, RINSE, AND REPLACE AS NEEDED.
- SILT SACKS TO BE INSTALLED WHEN THE POTENTIAL FOR SEDIMENT TO ENTER EXISTING & PROPOSED BASINS EXISTS.

SILTSACK - CURBLESS INLET NOT TO SCALE

50' MIN.

PAVEMENT



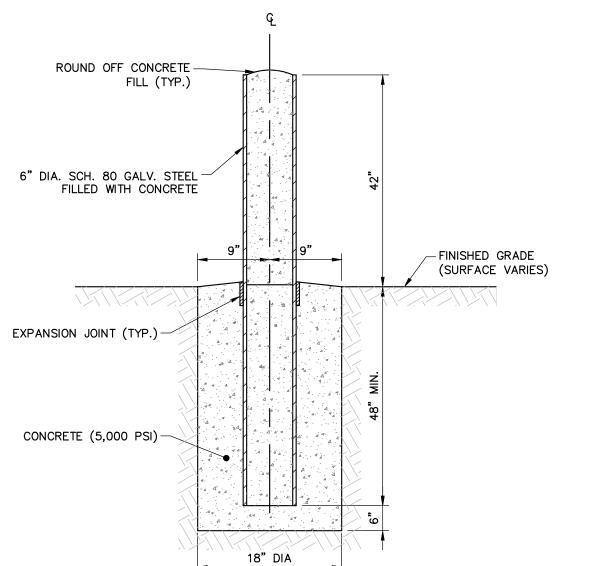
NOTES:

GROUND

SURFACE/ WORK AREA

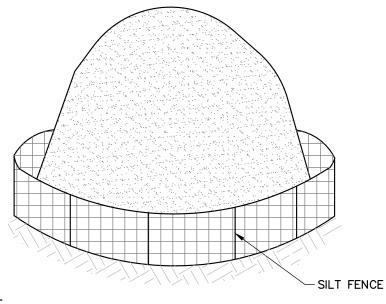
- 1. GRADE TOWARDS SEDIMENT BARRIER WHEN NECESSARY TO MANAGE FLOW.
- 2. INCREASE MINIMUM LENGTH TO 100' WHERE TRACKED SEDIMENTS CONTAIN LESS THAN 80% SAND OR AS NECESSARY FOR HEAVY CONSTRUCTION.

STABILIZED CONSTRUCTION ENTRANCE/EXIT NOT TO SCALE



1. ALL BOLLARDS SHALL BE PAINTED. COLOR SELECTED BY OWNER.

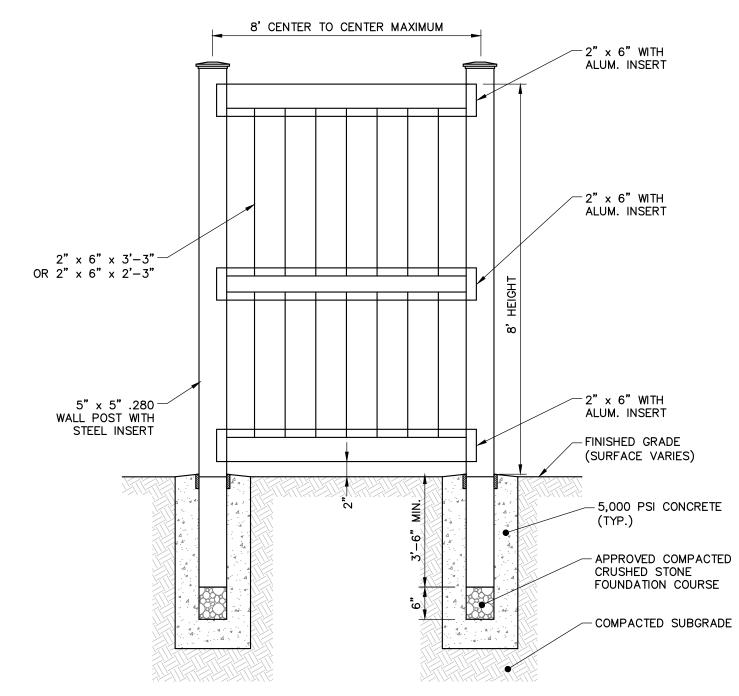
6" DIA. BOLLARD



NOTES: 1. STOCKPILES SHALL BE SURROUNDED BY SILT FENCE.

- 2. STOCKPILES SHALL HAVE A MAXIMUM 2:1 (H: V) SIDE SLOPE.
- 3. REPAIR OR REPLACE DAMAGED SILT FENCE DUE TO CONSTRUCTION ACTIVITIES OR STOCKPILE MITIGATION.
- 4. STOCKPILE SHALL BE LOCATED IN AREAS AS SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER.

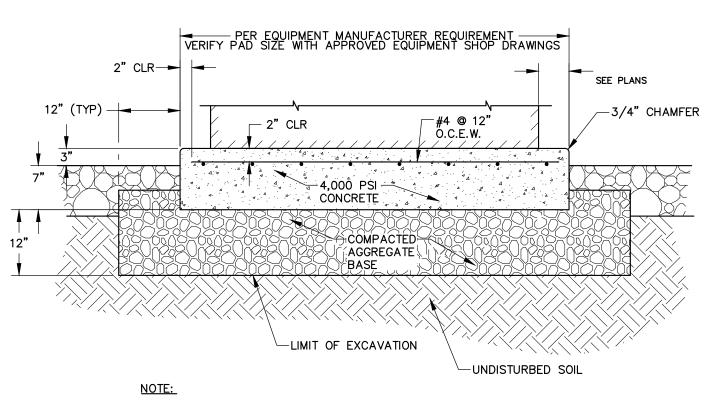
TEMPORARY SOIL STOCKPILE



NOTE:

1. FENCE TO BE PLACED AROUND DUMPSTER PAD TO PROVIDE ADEQUATE SCREENING OF TRASH CONTAINERS. SEE PLANS FOR

PVC PRIVACY FENCE FOR **DUMPSTER ENCLOSURE** NOT TO SCALE



1. PAD REQUIREMENTS TO BE COORDINATED WITH UTILITY OWNER AND OR EQUIPMENT MANUFACTURER.

> UTILITY PAD DETAIL NOT TO SCALE



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ISSUE FOR PERMIT

TOWN OF SCITUATE, MASSACHUSETTS 453 CHIEF JUSTICE **CUSHING HIGHWAY**

STEARNS MEADOW DRINKING WATER TREATMENT PLANT

10/06/2023 PEER REVIEW RESPONSE REV MM/DD/YY

0233681.02 JOB NO: AUGUST 2023 SCALE: **AS SHOWN** DESIGNED BY: JC DRAWN BY: MB CHECKED BY: SK

DRAWING TITLE:

CIVIL DETAILS 1

FILENAME: 0233681.02 C-90X.dwg

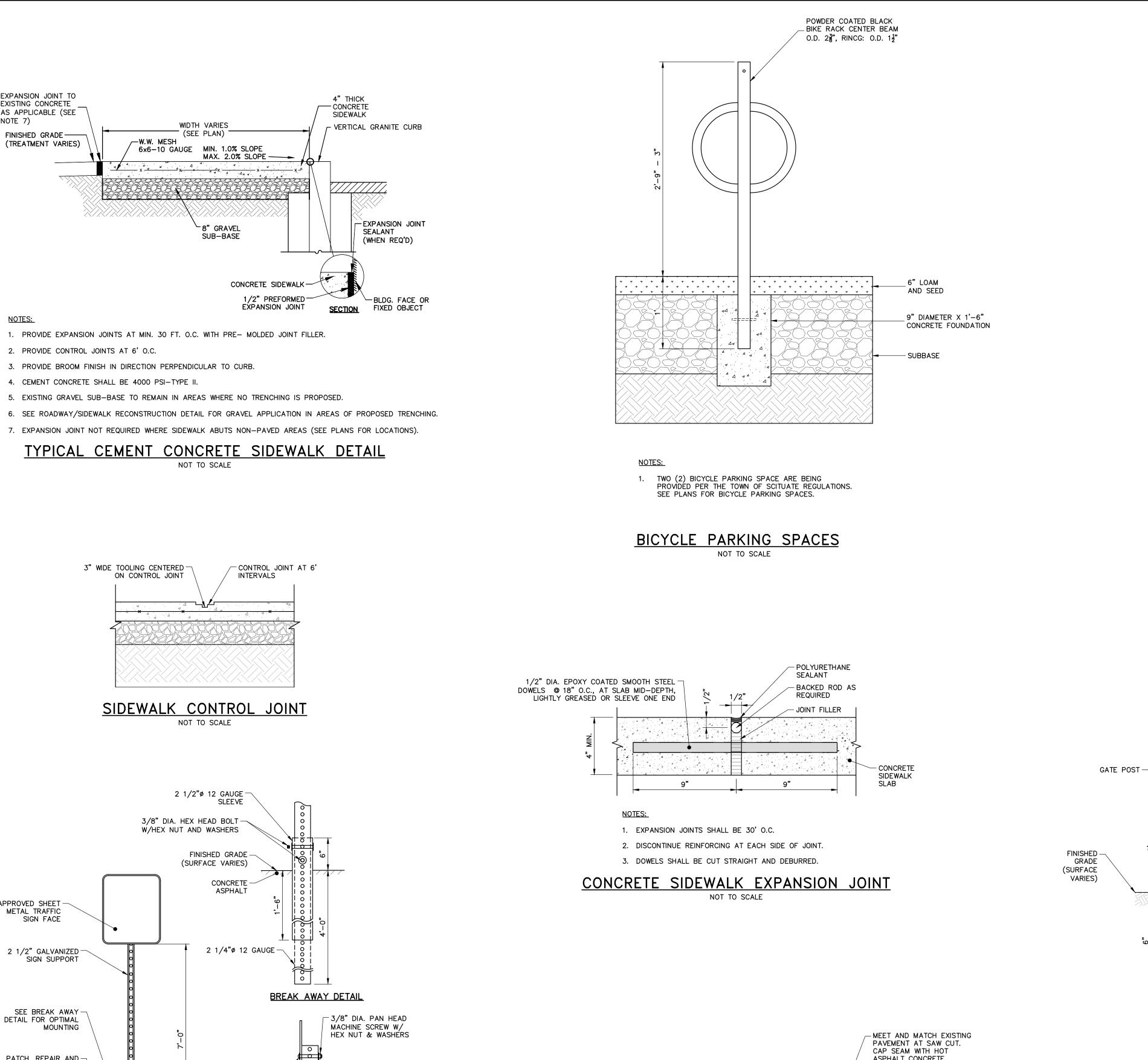
C-900

JOB NO:

SCALE:

DRAWING NO:

C-901



EXPANSION JOINT TO

EXISTING CONCRETE

FINISHED GRADE -(TREATMENT VARIES)

APPROVED SHEET -METAL TRAFFIC

SIGN FACE

2 1/2" GALVANIZED -SIGN SUPPORT

SEE BREAK AWAY-

MOUNTING

FIBER OR PVC-

4' LANDSCAPE AREA

(1/3 POST HEIGHT)

(IN LEDGE, DRILL AND GROUT

TO A MIN. 2' DEPTH)

1. ALL HARDWARE SHALL BE STAINLESS STEEL.

TRAFFIC SIGN POST

NOT TO SCALE

2. FOR USE WITH MUTCD "STOP" AND "DO NOT ENTER" SIGNS.

NOTES:

WASHER

SIGN -

DETAIL FOR OPTIMAL

PATCH, REPAIR AND-

AND BLEND TO MATCH

DISTURBED AREAS OF

LOAM/ SEED-SOD OR

LANDSCAPING

REPLACE EXISTING PAVING

EXISTING OR REPAIR ANY

2. PROVIDE CONTROL JOINTS AT 6' O.C.

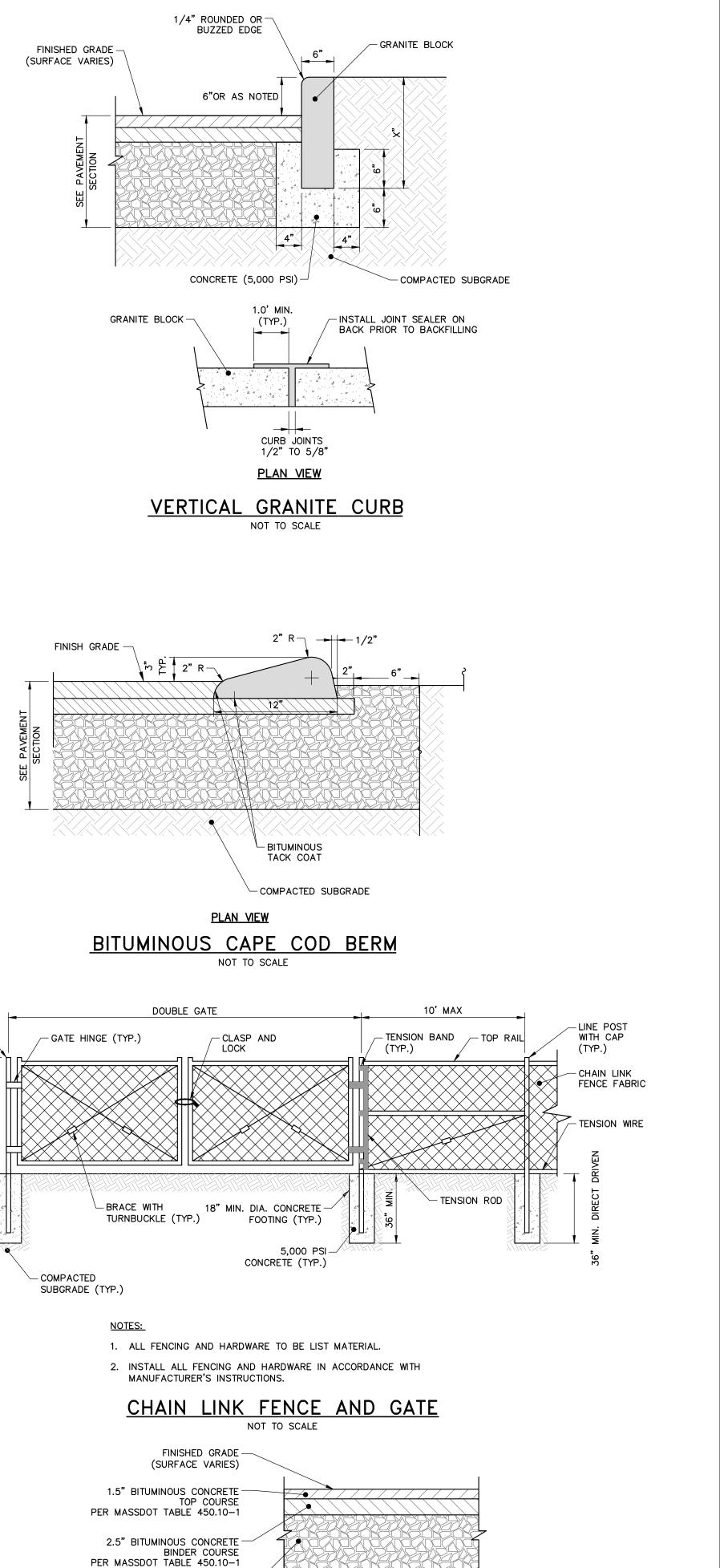
4. CEMENT CONCRETE SHALL BE 4000 PSI-TYPE II.

3" WIDE TOOLING CENTERED -

ON CONTROL JOINT

NOTE 7)

AS APPLICABLE (SEE



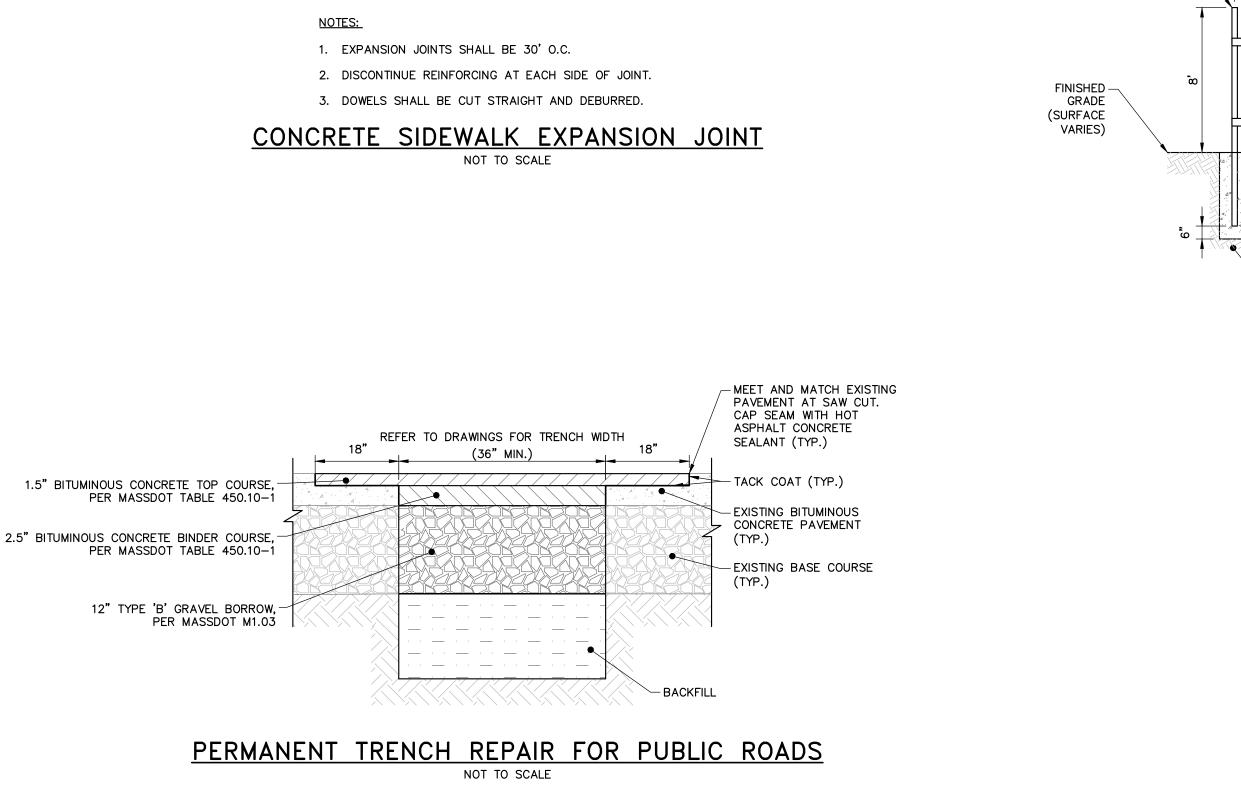
12" TYPE "B" GRAVEL BORROW -

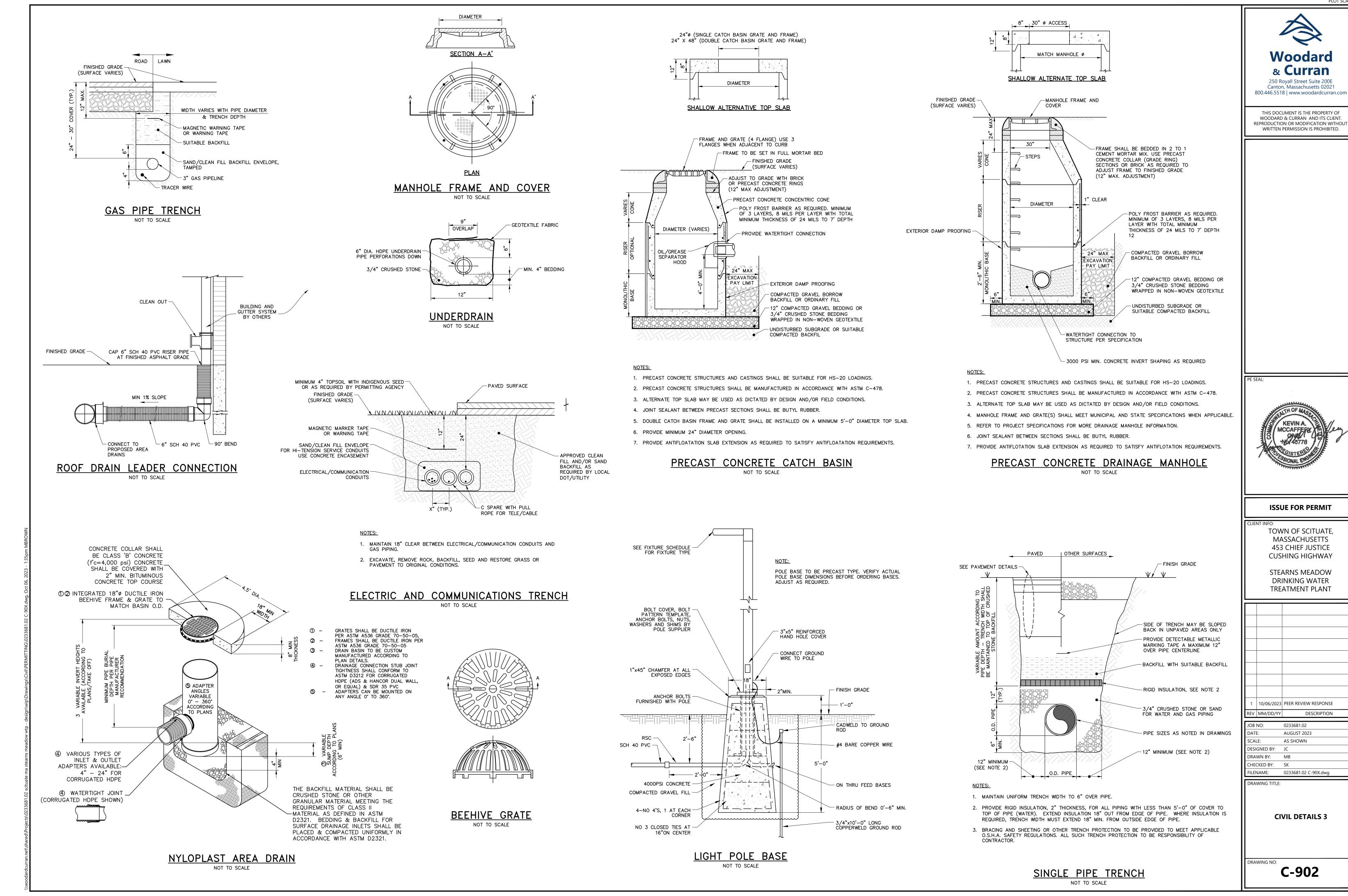
PER MASSDOT M1.03

BITUMINOUS CONCRETE PAVEMENT SECTION

NOT TO SCALE

COMPACTED SUBGRADE -





Woodard

& Curran

250 Royall Street Suite 200E

Canton, Massachusetts 02021

800.446.5518 | www.woodardcurran.com

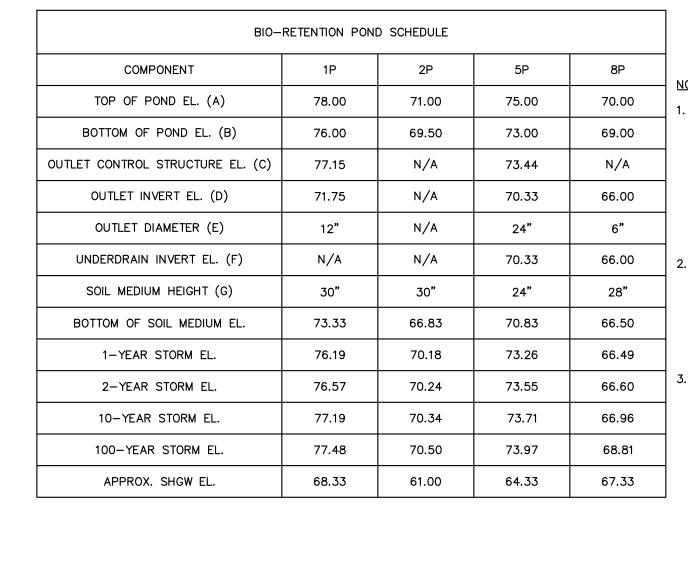
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WATER SERVICE



OPTIONAL ANTI-FLOTATION

COLLAR

OPTIONAL

-FINISHED GRADE

EL. 70.00

SHGWT EL. 57.33 ∇

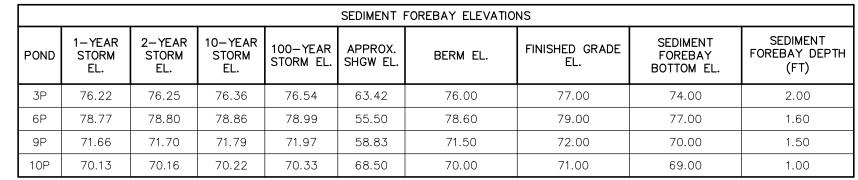
ANTI-FLOTATION

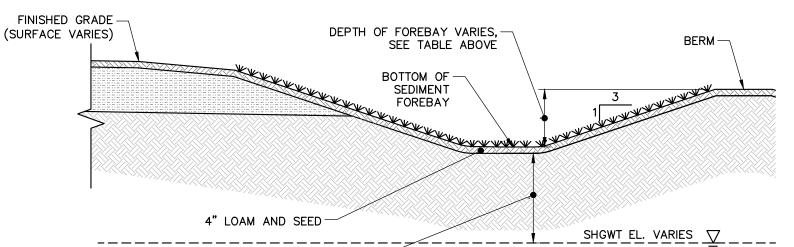
24" FRAME AND

(H-20 LOADING)

INLET PIPE Ø

COVER





2' MIN. FROM SHGWT (BOTTOM OF FOREBAY) SEDIMENT FOREBAY

ELEVATIONS/DIMENSIONS										
LOCATION	A (ELEV)	B (ELEV)	C (ELEV)	D (ELEV)	E (ELEV)	F (ELEV)	G (INCHES)	H (INCHES)	J (INCHES)	K (INCHES)
OUTLET CONTROL STRUCTURE (OCS-1)	66.00	64.00	60.00	59.00	59.00	58.50	18	48(MIN.)	VARIES SEE DETAIL	N/A
OUTLET CONTROL STRUCTURE (OCS-2)	77.15	N/A	N/A	71.75	70.75	70.25	12	48(MIN.)	N/A	N/A
OUTLET CONTROL STRUCTURE (OCS-1)	73.44	N/A	N/A	70.33	69.83	69.33	24	48(MIN.)	N/A	N/A

63.50 63.00

₹ 62.50' 62.00

SEE DETAIL 1

CONCRETE WEIR WALL

1/2" THICK

STAINLESS

BOLT STEEL

PLATE TO

STEEL PLATE.

CONCRETE WITH

1/2" STAINLESS

STEEL BOLTS

AND THREADED

IF UNSUITABLE

MATERIAL IS

OBSERVED BELOW THE

MINIMUM IT SHALL BE

REMOVED TO A DEPTH

CLEAN SAND AND THE

ENGINEER SHOULD BE

BIO-RETENTION AREA

TO BE PLACED, DO

TO BE LIGHTLY

WATERED TO

COMPACTION.

J = 0.04

FLOW

NOT COMPACT, LIFTS

ENCOURAGE NATURAL

FLEXIBLE MEMBRANE

BIO-RETENTION POND

OCS-1 ORIFICE

<u>INSET A</u>

/ OUTLĖ

LINER PROPOSED

POND DEPTH, AT A

OF TWO FEET AND

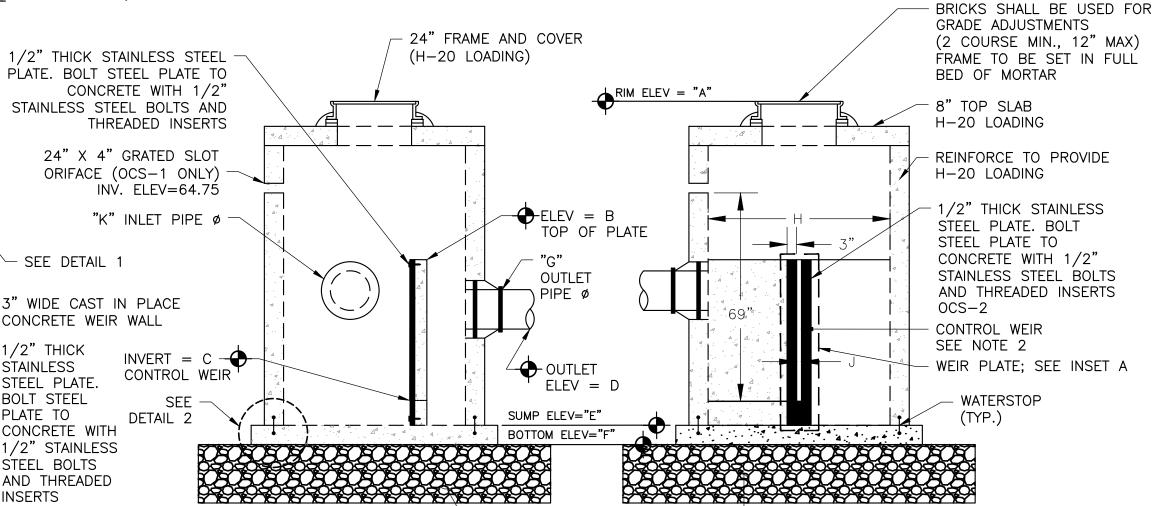
REPLACED WITH

NOTIFIED.

SOIL WITHIN

1) ALL CEMENT CONCRETE TO BE 4000 PSI (MIN).

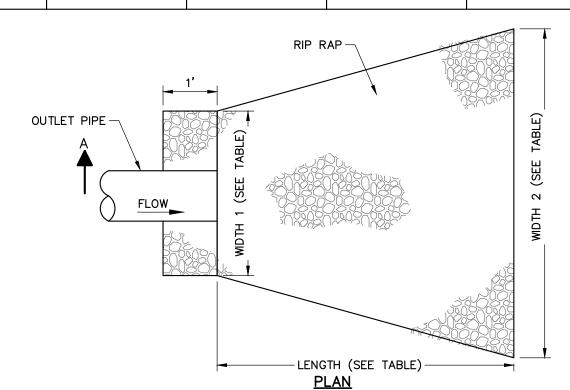
- 2) CONTROL WEIR SHALL BE SIZED TO MITIGATE DESIGN STORM AS REQUIRED BY THE REGULATIONS AND IN ACCORDANCE WITH THE APPROVED DRAINAGE CALCULATIONS. STAINLESS STEEL PLATE SHALL BE USED FOR CONTROL WEIRS LESS THAN 2 INCHES WIDE.
- 3) ALL STAINLESS STEEL SHALL BE GRADE 316.
- 4) MINIMUM EMBANKMENT ELEVATION TO BE 12" ABOVE 50-YEAR STORM ELEVATION.



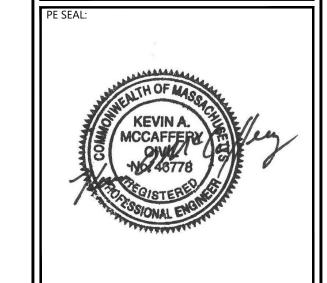
- 6" $rac{3}{4}$ " CRUSHED STONE BEDDING ightharpoons Section 2 (12" MIN. IN LEDGE)

OUTLET CONTROL STRUCTURE NOT TO SCALE

POND TYPE	PIPE DIAMETER (FT)	MEDIAN STONE DIAMETER D50 (IN)	LENGTH (FT)	DEPTH (FT)	WIDTH 1 (FT)	WIDTH 2 (FT)
INFILTRATION POND	1.5'	10"	10'	2'	5'	10'
BIORETENTION POND	0.5'	9"	10'	2'	5'	8'
UNDERDRAIN OUTLET NO. 1	1'	9"	10'	2'	5'	10'
UNDERDRAIN OUTLET	0.5'	9"	10'	2'	5'	8'



RIPRAP APRON FOR OUTLETS



ISSUE FOR PERMIT

TOWN OF SCITUATE, MASSACHUSETTS **453 CHIEF JUSTICE CUSHING HIGHWAY**

STEARNS MEADOW DRINKING WATER TREATMENT PLANT

1	10/06/2023	PEER REVIEW RESPONSE				
REV	MM/DD/YY	DESCRIPTION				
JOB	NO:	0233681.02				
DATE:		AUGUST 2023				
SCALE:		AS SHOWN				
DESIGNED BY:		JC				
DRAWN BY:		MB				
CHECKED BY:		SK				
FILENAME:		0233681.02 C-90X.dwg				
DRAWING TITLE:						

CIVIL DETAILS 4

C-903

SANITARY SEWER/STORM DR	RAIN
A'	
WATER LINE	6" (MI
	6" (MI ENCAS ALL S
10' MIN	
TYP.	
PERPENDICULAR CROSSING	
SANITARY SEWER/STORM DRAI	IN
10' MIN. (TYP.)	
	4

INSERTS L_6" (MIN) CONCRETE ENCASEMENT TYP. ALL SIDES. —SANITARY SEWER/STORM DRAIN - 6" (MIN) SEPARATION WATER LINE ENCASEMENT TYP. ALL SIDES. SECTION A-A' - WATER BELOW 1. WHEN POSSIBLE, CONTRACTOR SHALL INSTALL DRAIN WATER MAIN CROSSINGS WITH MINIMUM SEPARATION AS SPECIFIED IN DETAIL 8 IN LIEU OF PROTECTING WATER MAIN AS SHOWN IN THIS 2. INSTALL FULL 20-FOOT LENGTH OF WATER MAIN AT ALL CROSSINGS, CENTERED OVER SEWER OR STORM DRAIN. 6" (MIN) CONCRETE 3. CONTRACTOR MAY SUBSTITUTE CARRIER PIPE ENCASEMENT TYP. FOR CONCRETE TO PROTECT WATER MAIN. ALL SIDES. 6" (MIN) CONCRETE VARIES VARIES ENCASEMENT TYP.

BASED ON BASED ON ANGLE OF ANGLE OF CROSSING CROSSING CROSSING AT ANGLE

WATER MAIN AND STORM OR SANITARY CROSSING ENCASEMENT

NOT TO SCALE

WATER MAIN AND STORM OR SANITARY SEPARATION NOT TO SCALE

UNUSUAL CONDITION

PARALLEL INSTALLATION

1. NORMAL CONDITIONS: THE INSIDE EDGE OF A WATER MAIN SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM THE INSIDE EDGE OF ANY SANITARY SEWER, STORM SEWER OR SEWER MANHOLE.

SEPARATION OF 10 FEET, THE INSIDE EDGE OF A WATER MAIN MAY BE LAID A MINIMUM

OF 5 FEET FROM THE INSIDE EDGE OF A SEWER PROVIDED THAT THE BOTTOM OF THE

2. UNUSUAL CONDITIONS: IF A WATER MAIN MUST CROSS UNDER A SEWER, THE TOP OF

THE WATER MAIN SHALL BE AT LEAST 18 INCHES LOWER THAN THE BOTTOM OF THE

SEWER, THE WATER MAIN PIPE SHALL BE CENTERED AT THE CROSSING SO THAT THE

STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE

JOINTS ARE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER, AND ADEQUATE

THE SEPARATION OF WATER MAINS AND SEWERS SHALL COMPLY WITH THE

2. UNUSUAL CONDITIONS: WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL

WATER MAIN IS AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER.

1. NORMAL CONDITIONS: WHENEVER POSSIBLE, THE BOTTOM OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER.

DEFLECTION OF THE SEWER AT THE CROSSING.

SEWER —__

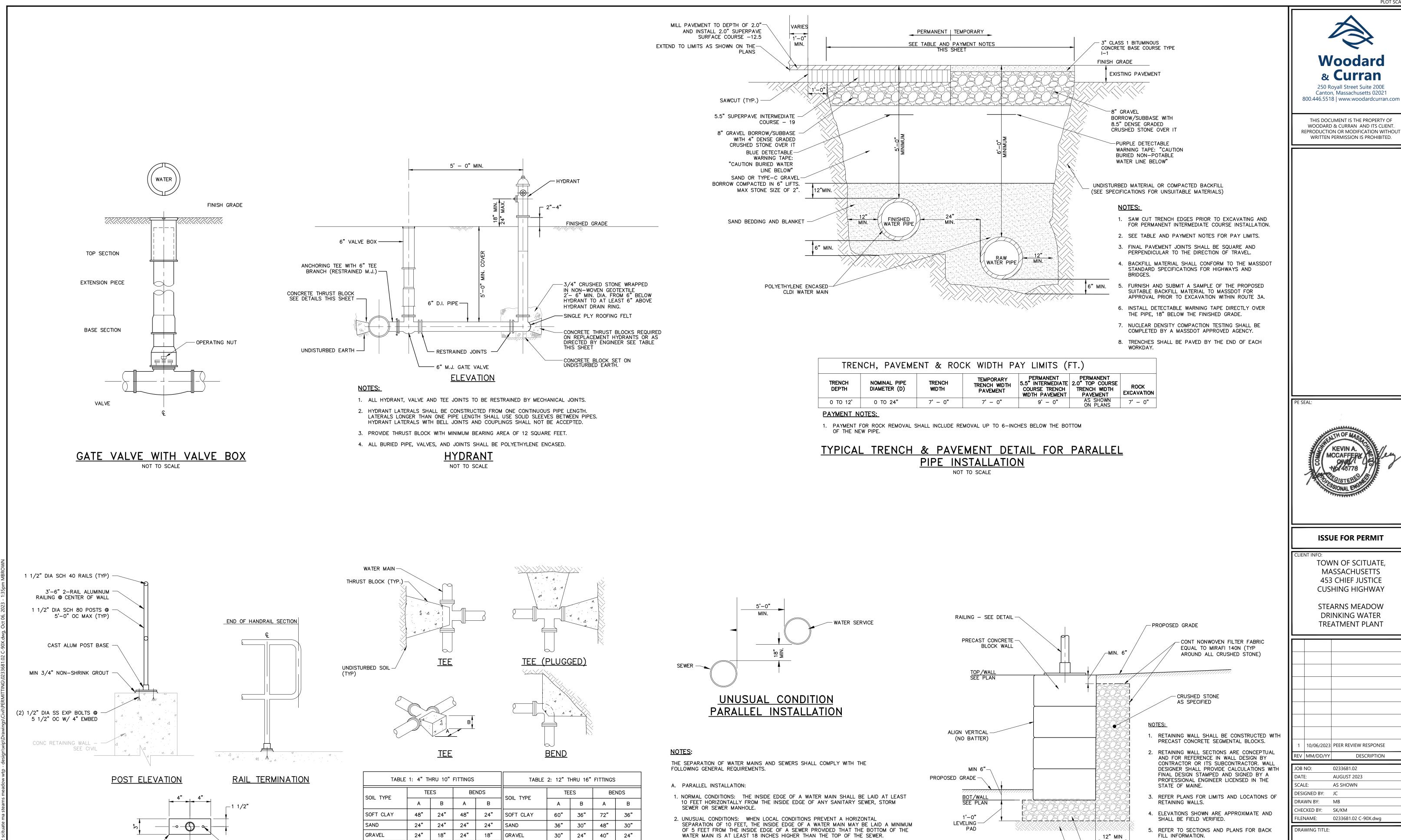
FOLLOWING GENERAL REQUIREMENTS.

A. PARALLEL INSTALLATION:

B. CROSSINGS:

ALL SIDES SANITARY SEWER/STORM DRAIN

SECTION A-A' - WATER ABOVE



B. CROSSINGS:

1. NORMAL CONDITIONS: WHENEVER POSSIBLE, THE BOTTOM OF THE WATER MAIN

2. UNUSUAL CONDITIONS: IF A WATER MAIN MUST CROSS UNDER A SEWER, THE TOP OF

THE WATER MAIN SHALL BE AT LEAST 18 INCHES LOWER THAN THE BOTTOM OF THE

SEWER, THE WATER MAIN PIPE SHALL BE CENTERED AT THE CROSSING SO THAT THE

JOINTS ARE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER, AND ADEQUATE

STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE

WATER MAIN AND STORM OR SANITARY SEPARATION

SHALL BE AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER.

DEFLECTION OF THE SEWER AT THE CROSSING.

COMPACTED CRUSHED STONE LEVELING PAD

-RECOMPACTED SUBRADE

RETAINING WALL DETAIL

SCALE: NOT TO SCALE

CIVIL DETAILS 5

C-904

1. CONCRETE FOR ALL THRUST BLOCKS TO BE MINIMUM 3,000 PSI., 28 DAY STRENGTH, TYPE I

WHERE POSSIBLE, CONSTRUCT THRUST BLOCKS AGAINST UNDISTURBED SOIL. WHERE NOT POSSIBLE

PLACE FILL BETWEEN THE THRUST BLOCK AND THE UNDISTURBED SOIL COMPACTED TO 90%

3. WRAP FITTINGS WITH POLYETHYLENE PRIOR TO CONSTRUCTING THRUST BLOCKS. NO JOINTS SHALL

4. THRUST BLOCK DIMENSIONS ARE BASED ON A MAXIMUM WATER MAIN PRESSURE OF 150 PSI.

TYPICAL THRUST BLOCK

NOT TO SCALE

CEMENT, 3/4" STONE.

STANDARD PROCTOR DENSITY.

BE COVERED WITH CONCRETE.

CAST ALUM -

POST BASE

POST PLAN

1. REFER TO PLANS FOR EXTENTS OF RAILINGS.

2. MINIMUM CLEARANCE BETWEEN RAILING SECTIONS

SHALL BE 3" PER OSHA 29 CFR 1910.23(e)(6).

RAILING DETAIL

(2) 9/16" DIA HOLES

FOR 1/2" DIA BOLTS