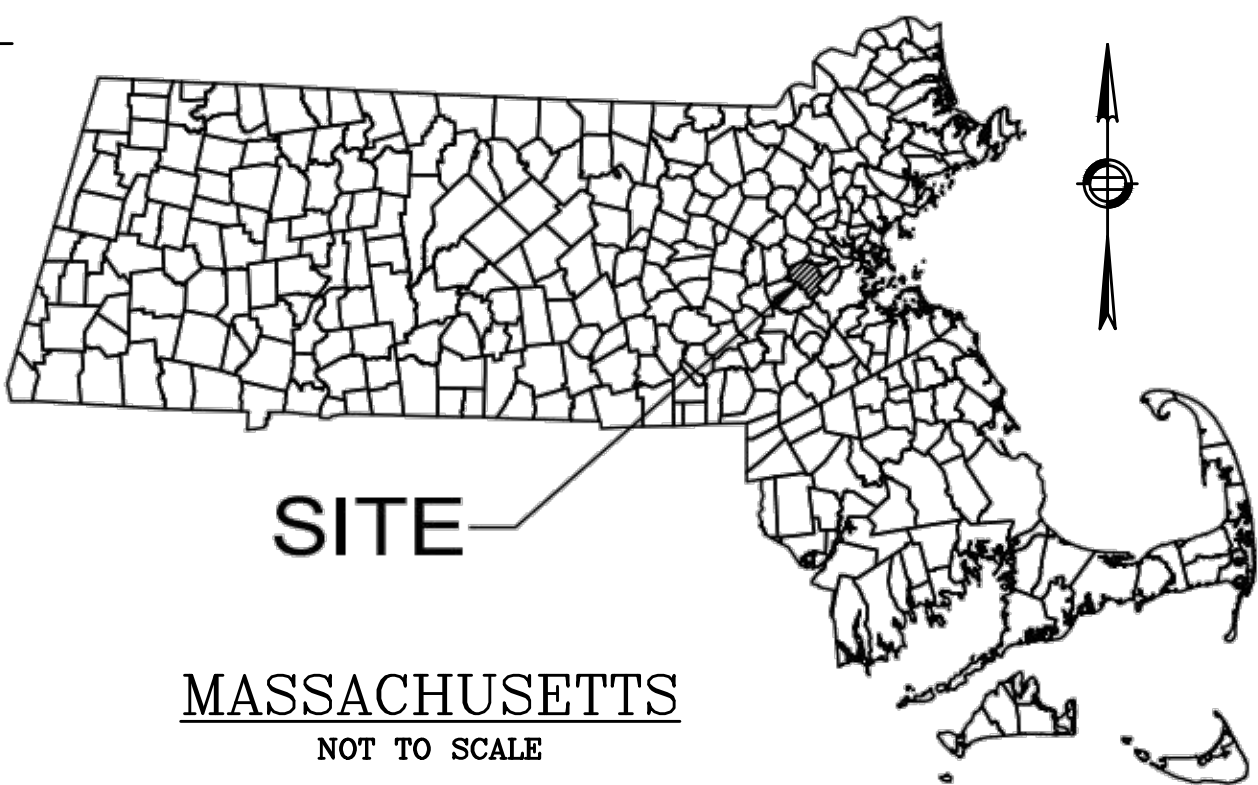


NEWTON EARLY CHILDHOOD EDUCATION
PROGRAM
687 WATERTOWN STREET
NEWTON, MASSACHUSETTS 02460
SITE PLAN REVIEW
APRIL 19, 2019, REVISED MAY 9, 2019
CITY OF NEWTON



MASSACHUSETTS
NOT TO SCALE

NAME OF PLAN	SHEET NO.
EXISTING CONDITIONS PLAN	EX-1
CIVIL NOTES, LEGEND & ABBREVIATIONS	C001
SITE EROSION & SEDIMENTATION CONTROL PLAN	C100
SITE LAYOUT & GRADING PLAN	C200
SITE UTILITY PLAN	C300
SITE EROSION & SEDIMENTATION CONTROL DETAILS	C400
SITE LAYOUT DETAILS	C401
SITE UTILITY DETAILS I	C402
SITE UTILITY DETAILS II	C403

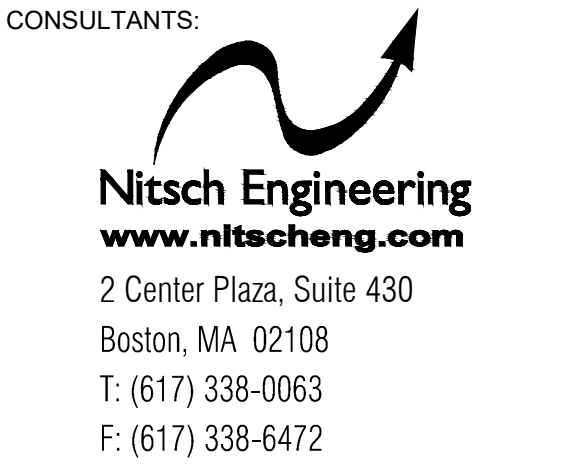
CLIENT:



ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700N
BOSTON MA 02109
617.623.5555
www.arrowstreet.com

CONSULTANTS:



PROJECT INFORMATION:

NECP

687 Watertown Street
Newton, MA 00000

ISSUANCE:

FEASIBILITY

STAMP:

REVISIONS:

No.	Date	Description

DRAWING TITLE:

**SITE PLAN
COVER SHEET**

Project No.	19001
Dwn/Chk By	SB/DMD
Date	05/10/2019
Scale	1"=20'

DRAWING NUMBER:

C000

CITY OF NEWTON NOTES:

1. ALL NEW SEWER SERVICES AND STRUCTURES SHALL BE PRESSURE TESTED AND VIDEOTAPED AFTER FINAL INSPECTION IS COMPLETE. METHOD OF FINAL INSPECTION SHALL BE DETERMINED SOLELY BY THE CONSTRUCTION INSPECTOR FROM THE CITY ENGINEERING DIVISION. ALL SEWER MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE TO THE CITY'S CONSTRUCTION STANDARDS AND SPECIFICATIONS. THE SEWER SERVICE WILL NOT BE ACCEPTED UNTIL ONE OF THE TWO METHODS STATED ABOVE IS COMPLETED. ALL TESTING MUST BE WITNESSED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION. A CERTIFICATE OF OCCUPANCY WILL NOT BE RECOMMENDED UNTIL THIS TEST IS COMPLETED AND A WRITTEN REPORT IS RECEIVED BY THE CITY ENGINEER.
2. THE EXISTING WATER SERVICES TO THE BUILDING SHALL BE CUT AND CAPPED AT THE MAIN AND BE COMPLETELY REMOVED FROM THE MAIN AND THE SITE THEN PROPERLY BACK FILLED. THE ENGINEERING DIVISION MUST INSPECT THIS WORK; FAILURE TO HAVING THIS WORK INSPECTED MAY RESULT IN THE DELAY OF ISSUANCE OF THE UTILITY CONNECTION PERMIT.
3. ALL SEWER MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE TO THE CITY'S CONSTRUCTION STANDARDS AND SPECIFICATIONS. ALL TESTING MUST BE WITNESSED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION. A CERTIFICATE OF OCCUPANCY WILL NOT BE RECOMMENDED UNTIL THIS TEST IS COMPLETED AND A WRITTEN REPORT IS RECEIVED BY THE CITY ENGINEER.
4. ALL WATER CONNECTIONS SHALL BE CHLORINATED AND PRESSURE TESTED IN ACCORDANCE TO AWWA AND THE CITY OF NEWTON CONSTRUCTION STANDARDS AND SPECIFICATIONS PRIOR TO THE OPENING THE CONNECTION TO EXISTING PIPES.
5. APPROVAL OF THE FINAL CONFIGURATION OF THE WATER SERVICE(S) SHALL BE DETERMINED BY THE UTILITIES DIVISION, THE ENGINEER OF RECORD SHOULD SUBMIT A PLAN TO THE DIRECTOR OF UTILITIES FOR APPROVAL.
6. AS OF JANUARY 1, 2009, ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. TRENCH EXCAVATION PERMIT REQUIRED. THIS APPLIES TO ALL TRENCHES ON PUBLIC AND PRIVATE PROPERTY.
7. UTILITY WORK PERFORMED WITHIN A PUBLIC STREET THAT HAS BEEN PAVED OR RECONSTRUCTED WITHIN THE PAST FIVE (5) YEARS WILL REQUIRE THE CONTRACTOR TO MILL (COLD PLANE) A MINIMUM OF 1-1/2" OFF THE EXISTING SURFACE 25' ON BOTH SIDES OF THE TRENCH(ES) FROM CURB LINE TO CURB LINE AND BE PAVED WITH TYPE I-1 BITUMINOUS CONCRETE.
8. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE ENGINEERING DIVISION AND SCHEDULING AN APPOINTMENT 48 HOURS PRIOR TO THE DATE WHEN THE UTILITIES WILL BE MADE AVAILABLE FOR AN INSPECTION OF WATER SERVICES, SEWER SERVICE, AND DRAINAGE SYSTEM INSTALLATION. THE UTILITY IN QUESTION SHALL BE FULLY EXPOSED FOR THE INSPECTOR TO VIEW; BACKFILLING SHALL ONLY TAKE PLACE WHEN THE CITY'S INSPECTOR HAS GIVEN THEIR APPROVAL.
9. THE CONTRACTOR WILL HAVE TO APPLY FOR STREET OPENING, SIDEWALK CROSSING, AND UTILITIES CONNECTING PERMITS WITH THE DEPARTMENT OF PUBLIC WORKS PRIOR TO ANY CONSTRUCTION.
10. THE APPLICANT WILL HAVE TO APPLY FOR A BUILDING PERMITS WITH THE DEPARTMENT OF INSPECTIONAL SERVICE PRIOR TO ANY CONSTRUCTION.
11. PRIOR TO OCCUPANCY PERMIT BEING ISSUED AN AS-BUILT PLAN SHALL BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES LAYOUT AND ELEVATION AND FINAL GRADES, ANY EASEMENTS AND FINAL GRADING.
12. IF A CERTIFICATE OF OCCUPANCY IS REQUESTED PRIOR TO ALL SITE WORK BEING COMPLETED, THE APPLICANT WILL BE REQUIRED TO PROVIDE A CERTIFIED BANK CHECK IN THE AMOUNT TO COVER THE REMAINING WORK. THE CITY ENGINEER SHALL DETERMINE THE VALUE OF THE UNCOMPLETED WORK.
13. WHEN PLANS ARE UPDATED IT IS THE RESPONSIBILITY OF THE APPLICANT TO PROVIDE ALL CITY DEPARTMENTS (CONSERVATION COMMISSION, ISD, PLANNING, AND ENGINEERING) INVOLVED IN THE PERMITTING AND APPROVAL PROCESS COMPLETE AND CONSISTENT PLANS.
14. WITH THE EXCEPTION OF NATURAL GAS SERVICE(S), ALL UTILITY TRENCHES WITHIN THE RIGHT OF WAY SHALL BE BACKFILLED WITH CONTROL DENSITY FILL (CDF) EXCAVATABLE TYPE I-E, DETAIL IS AVAILABLE IN THE CITY OF NEWTON CONSTRUCTION STANDARDS DETAIL BOOK.
15. WHEN A CONNECTION TO THE CITY'S DRAINAGE SYSTEM IS PROPOSED, PRIOR TO APPROVAL OF THE BUILDING PERMIT A CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION SHALL BE PERFORMED AND WITNESSED BY THE ENGINEERING DIVISIONS. THE APPLICANT SHALL RETAIN A CONTRACTOR THAT SPECIALIZES IN CCTV INSPECTION. THE APPLICANT SHALL CONTACT THE ENGINEERING DIVISION 48 HOURS IN ADVANCE TO SCHEDULE AN APPOINTMENT. AT THE END OF THE INSPECTION, THE VIDEO OR CD SHALL BE GIVEN TO THE INSPECTOR. FURTHERMORE, UPON COMPLETION OF THE CONNECTION TO THE DRAINAGE SYSTEM A POST-CONSTRUCTION VIDEO INSPECTION SHALL ALSO TAKE PLACE AND WITNESSED AS DESCRIBED ABOVE. THIS IS REQUIRED REGARDLESS OF THE CONNECTION POINT, THE INTENT IS TO ENSURE THAT THERE ARE NO DOWNSTREAM BLOCKAGES OR DAMAGED PIPE SO THAT THE CONTRACTOR OF RECORD IS NOT HELD ACCOUNTABLE FOR PREEXISTING CONDITIONS.

EARTH MOVING AND GRADING NOTES:

1. ALL TOPSOIL ENCOUNTERED WITHIN THE WORK AREA SHALL BE STRIPPED TO ITS FULL DEPTH AND STOCKPILED FOR REUSE. EXCESS TOPSOIL SHALL BE REMOVED FROM THE SITE UNLESS OTHERWISE DIRECTED BY THE OWNER. TOPSOIL PILES SHALL REMAIN SEGREGATED FROM EXCAVATED SUBSURFACE SOIL MATERIALS.
2. GRADES WITHIN HANDICAP PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 1.5% IN ANY DIRECTION.
3. CROSS SLOPES OF ALL PEDESTRIAN WALKS SHALL NOT EXCEED 1.5%.
4. RUNNING SLOPE OF ALL PEDESTRIAN WALKS SHALL NOT EXCEED 4.5%, UNLESS OTHERWISE NOTED.
5. THE CONTRACTOR SHALL EXERCISE CAUTION IN ALL EXCAVATION ACTIVITY DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES.
6. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM OF 1% UNLESS OTHERWISE NOTED.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM FACE OF BUILDINGS AT ALL LOCATIONS.
8. PITCH EVENLY BETWEEN CONTOUR LINES AND BETWEEN SPOT GRADES. SPOT GRADE ELEVATIONS TAKE PRECEDENCE OVER CONTOUR LINES.
9. ALL PROPOSED TOP OF CURB ELEVATIONS ARE SIX INCHES (6") ABOVE BOTTOM OF CURB ELEVATIONS UNLESS OTHERWISE NOTED. ALL PROPOSED TOP OF CAPE COD BERM ELEVATIONS ARE FOUR INCHES (4") ABOVE BOTTOM OF CURB ELEVATION UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL BLEND NEW GRADING SMOOTHLY INTO EXISTING GRADING AT LIMITS OF GRADING.
11. WHERE NEW PAVING MEETS EXISTING PAVING, MEET LINE AND GRADE OF EXISTING PAVING WITH SMOOTH TRANSITION BETWEEN EXISTING AND NEW SURFACES.
12. THE CONTRACTOR SHALL VERIFY EXISTING GRADES IN THE FIELD AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ARCHITECT OR OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
13. PITCH TOPS OF ALL WALLS AT ONE-EIGHTH INCH (1/8") PER FOOT FROM BACK OF WALL TO FACE OF WALL.
14. SURPLUS MATERIALS SHALL BE REMOVED FROM THE SITE UNLESS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE. REFER TO EARTHWORK SPECIFICATIONS.
15. ANY AREAS OUTSIDE OF THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED BY THE CONTRACTOR TO THE PRE-CONSTRUCTION CONDITION/GRADE AT NO COST TO THE OWNER.
16. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO COMMONWEALTH/OWNER.

GENERAL NOTES:

1. TOPOGRAPHIC DATA, PROPERTY LINE INFORMATION, AND EXISTING SITE FEATURES WERE OBTAINED FROM A PLAN ENTITLED "EXISTING CONDITIONS PLAN", PREPARED BY NITSCH ENGINEERING, DATED FEBRUARY 15, 2019, LAST REVISED MARCH 4, 2019.
2. FLOODPLAIN INFORMATION WAS OBTAINED FROM THE FLOOD INSURANCE RATE MAP (FIRM) NO. 2502SC0018J. THE SITE IS LOCATED IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE ANNUAL FLOODPLAIN).
3. THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82, SECTION 40, AS AMENDED, WHICH STATES THAT NO ONE MAY EXCAVATE IN THE COMMONWEALTH OF MASSACHUSETTS EXCEPT IN AN EMERGENCY WITHOUT 72 HOURS NOTICE, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, TO NATURAL GAS PIPELINE COMPANIES, AND MUNICIPAL UTILITY DEPARTMENTS THAT SUPPLY GAS, ELECTRICITY, TELEPHONE, OR CABLE TELEVISION SERVICE IN OR TO THE CITY OR TOWN WHERE THE EXCAVATION IS TO BE MADE. THE CONTRACTOR SHALL CALL "DIG SAFE" AT 1-888-DIG-SAFE.
4. THE CONTRACTOR SHALL COMPLY WITH MASSACHUSETTS GENERAL LAWS CHAPTER 82A, ALSO REFERRED TO AS JACKIE'S LAW, AS DETAILED IN SECTION 520 CMR 14.00 OF THE CODE OF MASSACHUSETTS REGULATIONS.
5. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, REGULATIONS AND SAFETY CODES IN THE CONSTRUCTION OF ALL IMPROVEMENTS.
6. THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES ARE APPROXIMATE AND ALL UTILITIES MAY NOT BE SHOWN. PRESENCE AND LOCATIONS OF ALL UTILITIES WITHIN THE LIMIT OF WORK MUST BE DETERMINED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND CONTACTING THE CONTROLLING AUTHORITIES AND/OR UTILITY COMPANIES RELATIVE TO THE LOCATIONS AND ELEVATIONS OF THEIR LINES. THE CONTRACTOR SHALL KEEP A RECORD OF ANY DISCREPANCIES OR CHANGES IN THE LOCATIONS OF ANY UTILITIES SHOWN OR ENCOUNTERED DURING CONSTRUCTION. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND NITSCH ENGINEERING. ANY DAMAGE RESULTING FROM THE FAILURE OF THE CONTRACTOR TO MAKE THESE DETERMINATIONS AND CONTACTS SHALL BE BORNE BY THE CONTRACTOR.
7. THE CONTRACTOR SHALL, THROUGHOUT CONSTRUCTION, TAKE ADEQUATE PRECAUTIONS TO PROTECT ALL WALKS, GRADING, SIDEWALKS AND SITE DETAILS OUTSIDE OF THE LIMIT OF WORK AS DEFINED ON THE DRAWINGS AND SHALL REPAIR AND REPLACE OR OTHERWISE MAKE GOOD AS DIRECTED BY THE ENGINEER OR OWNER'S DESIGNATED REPRESENTATIVE ANY SUCH OR OTHER DAMAGE SO CAUSED.
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AND ALL CONSTRUCTION MEANS AND METHODS.
9. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE AND CONSTRUCTION DOCUMENTS TO DEVELOP A THOROUGH UNDERSTANDING OF THE PROJECT, INCLUDING ANY SPECIAL CONDITIONS AND CONSTRAINTS.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PROJECT SITE AND TO VERIFY ALL CONDITIONS IN THE FIELD AND REPORT DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE OWNER OR OWNER'S REPRESENTATION IMMEDIATELY.
11. THE CONTRACTOR SHALL CONDUCT ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS.
12. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE ESTABLISHMENT AND USE OF ALL VERTICAL AND HORIZONTAL CONSTRUCTION CONTROLS.
13. ELEVATIONS REFER TO NAVD88.
14. THE CONTRACTOR SHALL COMPLY WITH THE ORDER OF CONDITIONS DATED XXXX XX, XXXX AND ISSUED BY THE CITY OF NEWTON CONSERVATION COMMISSION (DEP #XXX-XXX).
15. FOR SOIL INFORMATION REFER TO GEOTECHNICAL REPORT.

UTILITY NOTES:

1. ALL UTILITY CONNECTIONS ARE SUBJECT TO THE APPROVAL OF, AND GRANTING OF PERMITS BY, THE LOCAL MUNICIPALITY. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS AND APPROVALS RELATED TO UTILITY WORK PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ALL PERMISSIONS FOR, AND FOR CONDUCTING ALL PREPARATIONS RELATED TO, WORK AFFECTING ANY UTILITIES WITHIN THE JURISDICTION OF ANY NON-MUNICIPAL UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO ELECTRIC, TELEPHONE, AND/OR GAS. THE CONTRACTOR SHALL NOTIFY ALL APPROPRIATE AGENCIES, DEPARTMENTS, AND UTILITY COMPANIES, IN WRITING, AT LEAST 7 DAYS (OR PER UTILITY COMPANY REQUIREMENT) AND NOT MORE THAN 30 DAYS PRIOR TO ANY CONSTRUCTION.
3. THE CONTRACTOR SHALL MAINTAIN UTILITIES SERVICING BUILDINGS AND FACILITIES WITHIN OR OUTSIDE THE PROJECT LIMIT UNLESS THE INTERRUPTION OF SERVICE IS COORDINATED WITH THE OWNER.
4. ALL WATER, SEWER, AND DRAIN WORK SHALL BE PERFORMED ACCORDING TO THE REQUIREMENTS AND STANDARD SPECIFICATIONS OF THE LOCAL MUNICIPALITY.
5. GAS, TELECOMMUNICATIONS AND ELECTRIC SERVICES ARE TO BE DESIGNED BY EACH UTILITY COMPANY IN COORDINATION WITH THE MECHANICAL, ELECTRIC, AND PLUMBING CONSULTANTS.
6. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES OF NEW UTILITIES WITH GAS, TELECOMMUNICATION AND ELECTRICAL SERVICES.
7. INSTALL WATER LINES WITH A MINIMUM OF FIVE FEET OF COVER AND A MAXIMUM OF SEVEN FEET COVER FROM THE FINAL DESIGN GRADES.
8. MAINTAIN 10 FEET HORIZONTAL SEPARATION AND 18 INCHES VERTICAL SEPARATION (WATER OVER SEWER) BETWEEN SEWER AND WATER LINES. WHEREVER THERE IS LESS THAN 10 FEET OF HORIZONTAL SEPARATION AND 18 INCHES OF VERTICAL SEPARATION BETWEEN A PROPOSED OR EXISTING SEWER LINE TO REMAIN AND A PROPOSED OR EXISTING WATER LINE TO REMAIN BOTH WATER MAIN AND SEWER MAIN SHALL BE CONSTRUCTED OF MECHANICAL JOINT CEMENT LINED DUCTILE IRON PIPE FOR A DISTANCE OF 10- FEET ON EITHER SIDE OF THE CROSSING. ONE (1) FULL LENGTH OF WATER PIPE SHALL BE CENTERED OVER THE SEWER AT THE CROSSING.
9. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITIES EXCEPT THOSE NOTED TO BE ABANDONED AND/OR REMOVED & DISPOSED.
10. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR TRENCHING, BACKFILLING, AND SURFACE RESTORATION FOR GAS UTILITY SYSTEMS.
11. ALL ONSITE UTILITIES SHALL BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
12. ALL EXISTING AND PROPOSED MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, CASTINGS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL GRADING AND PAVING CONSTRUCTION.
13. ALL GRATES IN WALKWAYS SHALL BE ADA COMPLIANT.

PROPOSED LEGEND

	LIMIT OF WORK
	EXISTING UTILITY TO BE ABANDONED, REMOVED AND DISPOSED IF IN CONFLICT WITH NEW SITE IMPROVEMENTS, OR AS INDICATED ON DRAWINGS
	EROSION CONTROL BARRIER
	CONSTRUCTION FENCE
	DOMESTIC WATER PIPE
	FIRE PROTECTION PIPE
	SANITARY SEWER PIPE
	STORM DRAIN PIPE
	GAS PIPE
	ELECTRIC DUCTBANK
	TELECOM DUCTBANK
	CHILLED WATER PIPE
	STEAM PIPE
	CONDENSATE RETURN PIPE
	HOT WATER PIPE/RETURN
	HEATING HOT WATER
	REUSE WATER PIPE
	GREY WATER PIPE
	FUTURE UTILITY, SHOWN FOR INFORMATION ONLY
	INLET PROTECTION
	ELEVATION CONTOURS
	MATCH LINE
	CENTERLINE
	CLEANOUT
	AREA DRAIN
	ACCESS BASIN
	DRAIN MANHOLE
	WATER QUALITY STRUCTURE
	CATCH BASIN
	DOUBLE CATCH BASIN
	WATER QUALITY INLET
	SEWER MANHOLE
	STEAM MANHOLE
	TELECOM MANHOLE
	ELECTRIC MANHOLE
	CHILLED WATER VALVE
	WATER VALVE
	FIRE HYDRANT

ABBREVIATIONS

AB	ACCESS BASIN
AD	AREA DRAIN
BC	BOTTOM OF CURB ELEVATION
CB	CATCH BASIN
CCB	CAPE COD BERM
CI	CAST IRON
CJ	CONTROL JOINT
CL	CENTER LINE
CO	CLEANOUT
COP	CENTER OF PIPE
CP	CARRIER PIPE
OPP	CORRUGATED POLYETHYLENE PIPE
DCB	DOUBLE CATCH BASIN
DI	DUCTILE IRON PIPE CEMENT LINED
DMH	DRAIN MANHOLE
EHH	ELECTRIC HANDHOLE
EJ	EXPANSION JOINT
EMH	ELECTRIC MANHOLE
FD	FOUNDATION DRAIN
FFE	FINISHED FLOOR ELEVATION
HP	HIGH POINT
HYD	FIRE HYDRANT
INV	INVERT ELEVATION
LF	LINEAR FEET
LOW	LIMIT OF WORK
LP	LOW POINT
LW	LAB WASTE
M&P	MAINTAIN AND PROTECT
NIC	NOT IN CONTRACT
OC	ON CENTER
OCS	OUTLET CONTROL STRUCTURE
PD	PERIMETER DRAIN
PERF	PERFORATED
PVC	POLYVINYL CHLORIDE PIPE
R&D	REMOVE AND DISPOSE
R&S	REMOVE AND STOCKPILE
RD	ROOF DRAIN
RIM	RIM ELEVATION
SMH	SEWER MANHOLE
SS	SEWER SERVICE
TC	TOP OF CURB ELEVATION
THH	TELECOM HANDHOLE
TMH	TELECOM MANHOLE
TOP	TOP OF PIPE
TOD	TOP OF DUCT BANK
TYP	TYPICAL
UD	UNDERDRAIN
USD	UNDERSLAB DRAIN
VGC	VERTICAL GRANITE CURB
WQI	WATER QUALITY INLET
WQS	WATER QUALITY STRUCTURE
WV	WATER VALVE

CLIENT:



ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700N
BOSTON MA 02109
617.623.5555
www.arrowstreet.com

CONSULTANTS:

Nitsch Engineering
www.nitscheng.com
2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472

PROJECT INFORMATION:

NECP

**687 Watertown Street
Newton, MA 00000**

ISSUANCE:

FEASIBILITY

STAMP:

REVISIONS:		
No.	Date	Description

DRAWING TITLE:

**CIVIL NOTES,
LEGEND &
ABBREVIATIONS**

Project No.	19001
Dwn/Chk By	SB/DMD
Date	05/10/2019
Scale	1"=20'

DRAWING NUMBER:

C001

SEDIMENTATION AND EROSION CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH PUBLISHED EROSION CONTROL AND SEDIMENT GUIDELINES FOR MASSACHUSETTS (SEE REFERENCE BELOW, NOTE #7).

2. ANY EROSION AND SEDIMENT CONTROL MEASURES FOR THE STABILIZATION OF SLOPES ARE TEMPORARY FOR CONSTRUCTION PHASES ONLY. SEE GRADING PLAN FOR FINAL STABILIZATION OF SLOPES.

3. SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF AND DURING ALL PHASES OF CONSTRUCTION AND BE CONSTRUCTED PRIOR TO AND IMMEDIATELY AFTER ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

4. PERIODIC INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL STRUCTURES SHALL BE PROVIDED TO ENSURE THAT THE INTENDED PURPOSE IS ACCOMPLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SEDIMENT LEAVING THE LIMIT OF WORK. SEDIMENT CONTROL MEASURES SHALL BE IN WORKING CONDITION AT THE END OF EACH WORKING DAY.

5. ALL POINTS OF CONSTRUCTION INGRESS OR EGRESS WILL BE PROTECTED WITH A STABILIZED CONSTRUCTION ENTRANCE TO PREVENT TRACKING OF MUD ONTO PUBLIC WAYS.

6. ALL SEDIMENT WILL BE PREVENTED FROM ENTERING ANY STORM DRAINAGE SYSTEM (I.E. THROUGH THE USE OF STRAW BALES, CATCH BASIN SEDIMENT TRAPS, GRAVEL, BOARDS OR OTHER APPLICABLE METHODS).

7. THE CONTRACTOR INSTALLING THE ABOVE SHALL OBTAIN AND FOLLOW THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" PREPARED BY DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF RESOURCE PROTECTION, DATED MAY 1997, REPRINTED MAY 2003 (OR LATEST EDITION) AND THE 2012 NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES, OR LATEST EDITION.

8. ALL DRAINAGE SWALES AND GROUND SURFACES WITHIN THE LIMIT OF WORK SHALL BE PROTECTED.

9. AFTER ANY SIGNIFICANT RAINFALL (0.25" OR GREATER), SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED FOR INTEGRITY. ANY DAMAGED DEVICES SHALL BE CORRECTED IMMEDIATELY.

10. ALL STOCKPILES SHALL BE PROTECTED AND LOCATED A MINIMUM OF 100' AWAY FROM EXISTING WATER BODIES OR WETLANDS & WITHIN THE LIMIT OF WORK. SOIL STOCKPILES SHALL BE PROTECTED FROM CONTACT WITH ONSITE STORMWATER RUNOFF USING TEMPORARY PERIMETER SEDIMENT BARRIERS. A COVER (TARP) OR APPROPRIATE TEMPORARY STABILIZATION WILL BE PROVIDED TO MINIMIZE SEDIMENT DISCHARGE.

11. STABILIZED PORTIONS OF A SITE SHALL BE INSPECTED AT LEAST ONCE PER MONTH.

12. ANY SEDIMENT TRACKED ONTO PAVED AREAS SHALL BE SWEEPED AT THE END OF EACH WORKING DAY.

13. ALL DEBRIS GENERATED DURING SITE PREPARATION ACTIVITIES SHALL BE LEGALLY DISPOSED OF OFF-SITE.

14. ALL TOPSOIL ENCOUNTERED WITHIN THE WORK AREA SHALL BE STRIPPED TO ITS FULL DEPTH AND STOCKPILED FOR REUSE. TOPSOIL NOT NEEDED AFTER COMPLETION OF ALL FINAL TOPSOIL SPREADING AND GRASSING SHALL BE REMOVED FROM THE SITE AND LEGALLY RECYCLED OR DISPOSED OF. TOPSOIL PILES SHALL REMAIN SEGREGATED FROM EXCAVATED SUBSURFACE SOIL MATERIALS.

15. TEMPORARY DIVERSION DITCHES, PERMANENT DITCHES, CHANNELS, EMBANKMENTS AND ANY DENUDED SURFACE WHICH WILL BE EXPOSED FOR A PERIOD OF 14 CALENDAR DAYS OR MORE SHALL BE CONSIDERED CRITICAL VEGETATION AREAS. THESE AREAS SHALL BE MULCHED WITH STRAW. MULCH SHALL BE SPREAD UNIFORMLY IN A CONTINUOUS BLANKET OF SUFFICIENT THICKNESS TO COMPLETELY HIDE THE SOIL FROM VIEW.

16. AN EROSION CONTROL BARRIER SHALL BE INSTALLED ALONG THE EDGE OF PROPOSED DEVELOPMENT AS INDICATED IN THE PLAN PRIOR TO COMMENCEMENT OF DEMOLITION OR CONSTRUCTION OPERATIONS.

17. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL EROSION AND SEDIMENT CONTROLS AT THE COMPLETION OF SITE CONSTRUCTION.

18. MEANS OF EROSION AND SEDIMENT PROTECTION AS NOTED ON THE DRAWINGS INDICATE THE MINIMUM PROVISIONS NECESSARY. ADDITIONAL MEANS OF PROTECTION SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED FOR CONTINUED OR UNFORESEEN EROSION PROBLEMS, AT NO ADDITIONAL EXPENSE TO THE OWNER.

19. THE CONTRACTOR SHALL USE TEMPORARY SEEDING, MULCHING OR OTHER APPROVED STABILIZATION MEASURES TO PROTECT EXPOSED AREAS DURING PROLONGED CONSTRUCTION OR OTHER LAND DISTURBANCE. STOCKPILES THAT WILL BE EXPOSED FOR LONGER THAN 14 CALENDAR DAYS SHALL BE SEEDED WITH AN ANNUAL RYE.

LEGEND

- EROSION CONTROL BARRIER

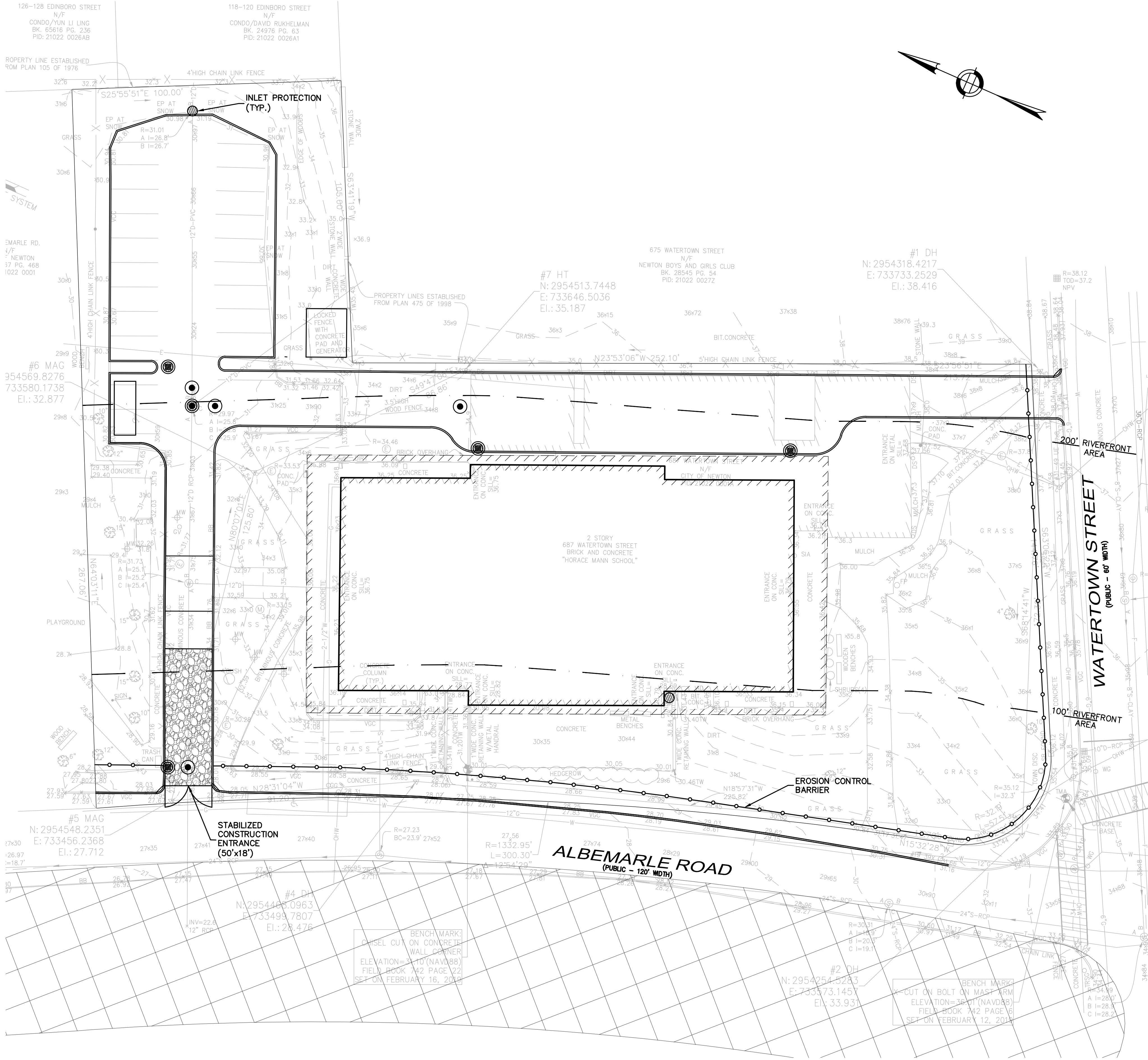
INLET PROTECTION (PROVIDE ON ALL EXISTING AND PROPOSED CATCH BASINS AND AREA DRAINS)

STABILIZED CONSTRUCTION ENTRANCE

CONSTRUCTION GATE

- NOTES:
1. REFER TO SHEET C001 FOR CIVIL NOTES, LEGEND AND ABBREVIATIONS

2. REFER TO SHEET C400 FOR EROSION AND SEDIMENTATION CONTROL DETAILS



CLIENT:



ARCHITECT:

ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700N
BOSTON MA 02109
617.623.5555
www.arrowstreet.com

CONSULTANTS:



PROJECT INFORMATION:

NECP

687 Watertown Street
Newton, MA 00000

ISSUANCE:

FEASIBILITY

STAMP:

REVISIONS:

No.	Date	Description

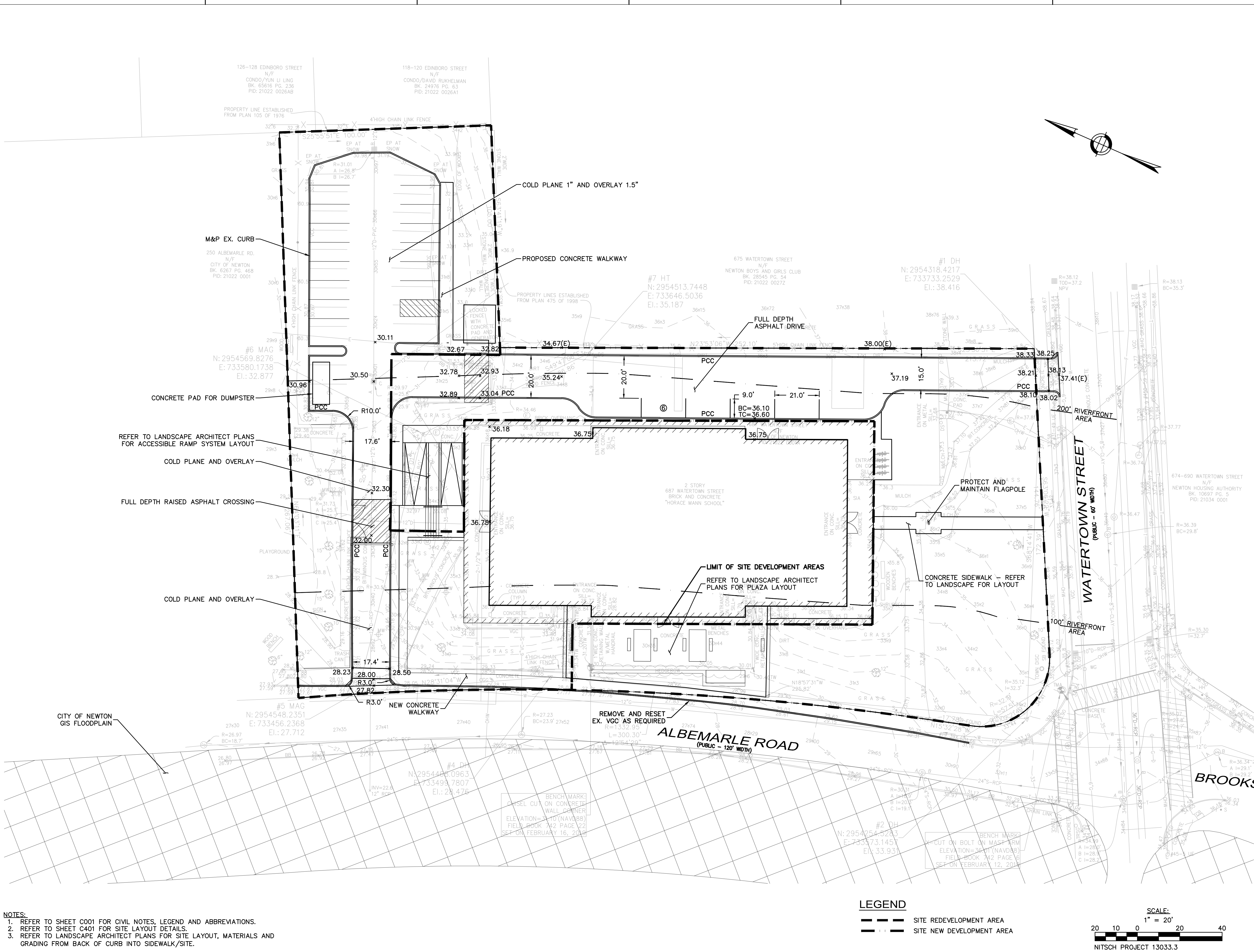
DRAWING TITLE:

SITE EROSION &
SEDIMENTATION
CONTROL PLAN

Project No.	19001
Dwn/Chk By	SB/DMD
Date	05/10/2019
Scale	1"=20'

DRAWING NUMBER:

C100



CLIENT:



ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700N
BOSTON MA 02109
617.623.5555
www.arrowstreet.com

CONSULTANTS:



PROJECT INFORMATION:

NECP

687 Watertown Street
Newton, MA 00000

ISSUANCE:

FEASIBILITY

STAMP:

REVISIONS:

No.	Date	Description

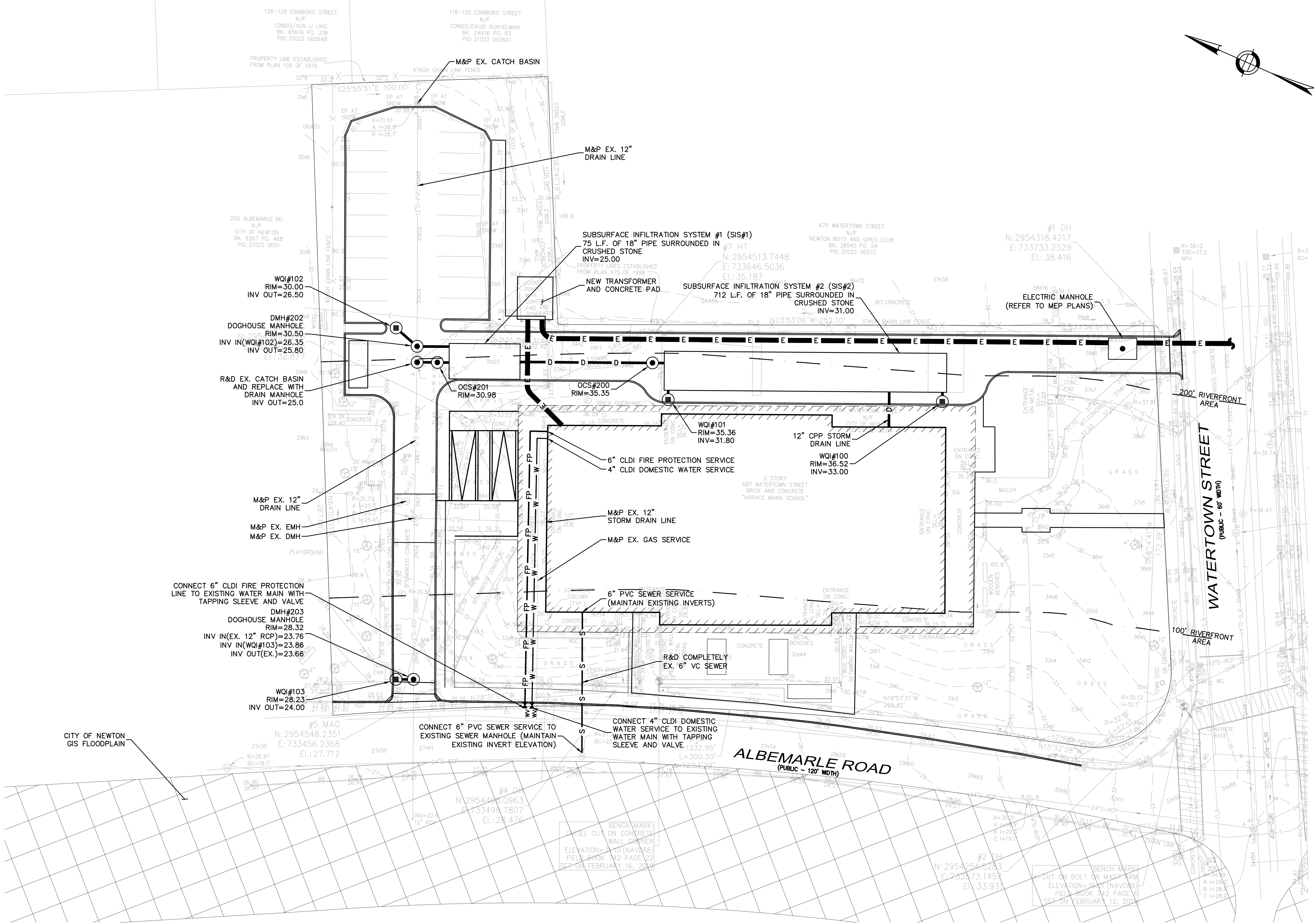
DRAWING TITLE:

**SITE LAYOUT &
GRADING PLAN**

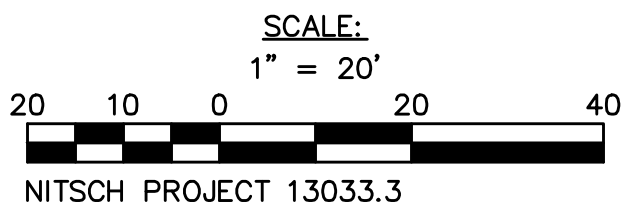
Project No.	19001
Dwn/Chk By	SB/DMD
Date	05/10/2019
Scale	1"=20'

DRAWING NUMBER:

C200



- NOTES:
1. REFER TO SHEET C001 FOR CIVIL NOTES, LEGEND AND ABBREVIATIONS.
 2. REFER TO SHEET C200 FOR SITE ROADWAY GRADING.
 3. REFER TO SHEETS C402 AND C403 FOR SITE UTILITY DETAILS.
 4. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR ADDITIONAL INFRASTRUCTURE REQUIREMENTS, SPECIFICATIONS AND DETAILS.



NITSCH PROJECT 13033.3

CLIENT:



ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700N
BOSTON MA 02109
617.623.5555
www.arrowstreet.com

CONSULTANTS:



PROJECT INFORMATION:

NECP

687 Watertown Street
Newton, MA 00000

ISSUANCE:

FEASIBILITY

STAMP:

REVISIONS:

No.	Date	Description

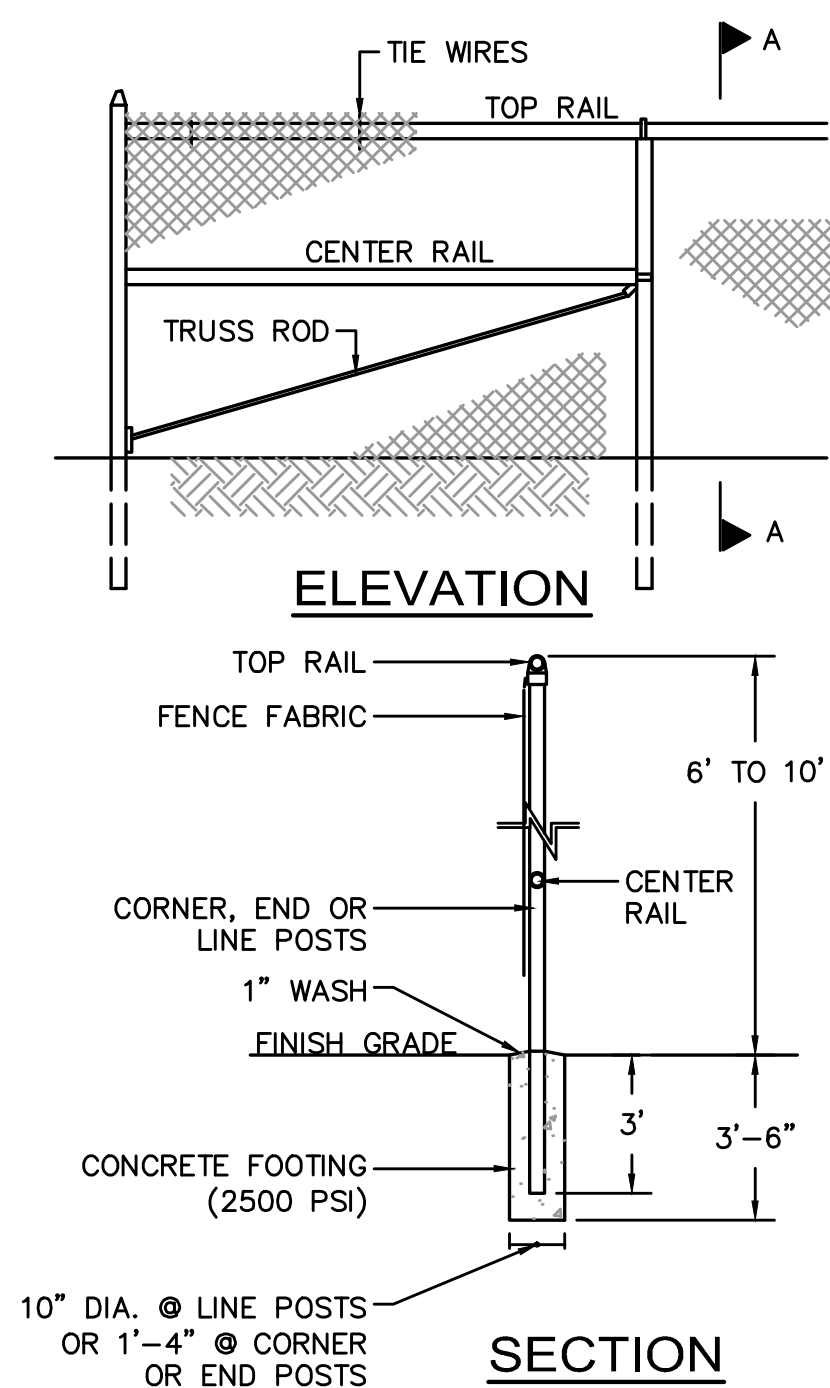
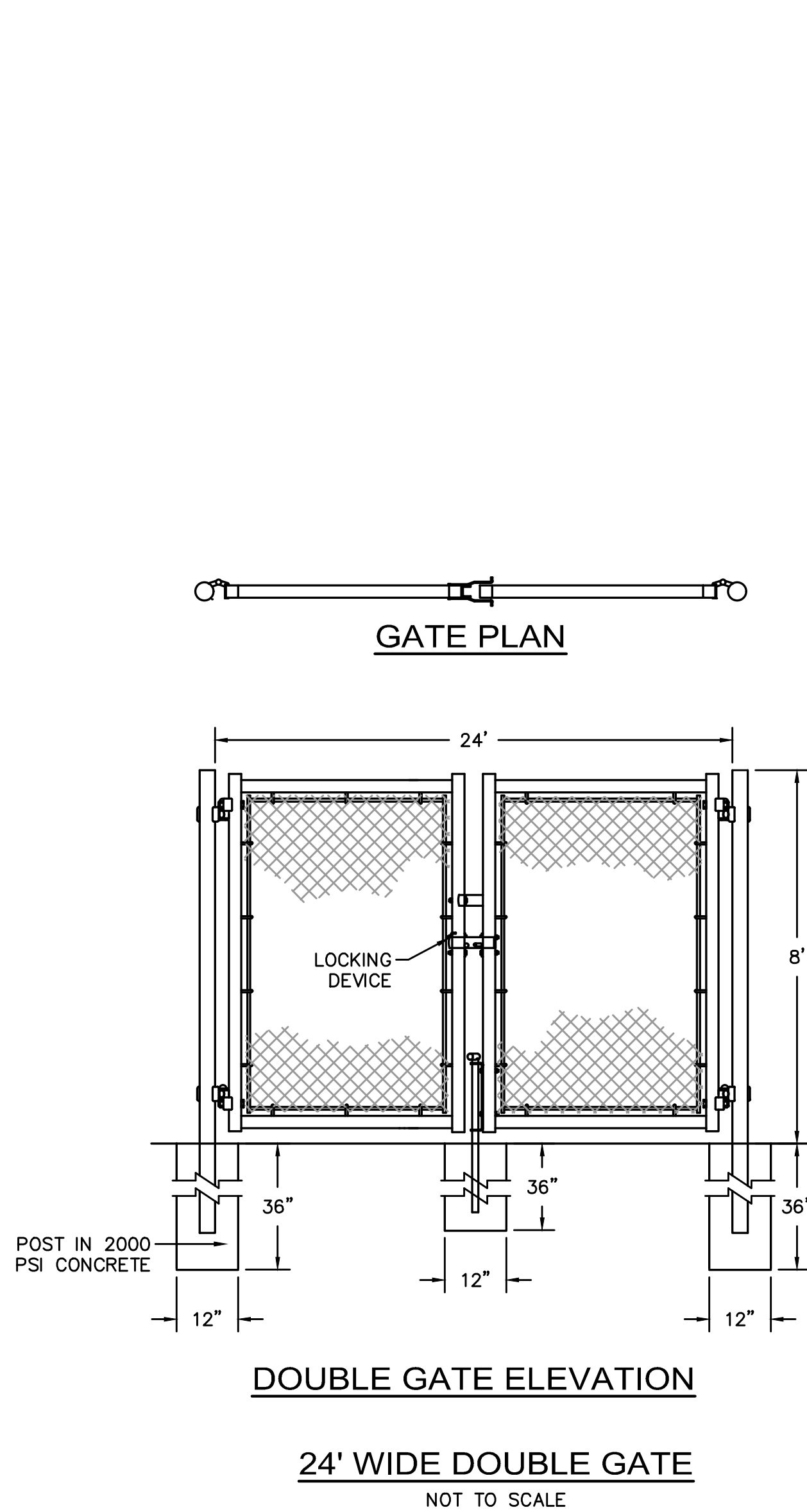
DRAWING TITLE:

**SITE UTILITY
PLAN**

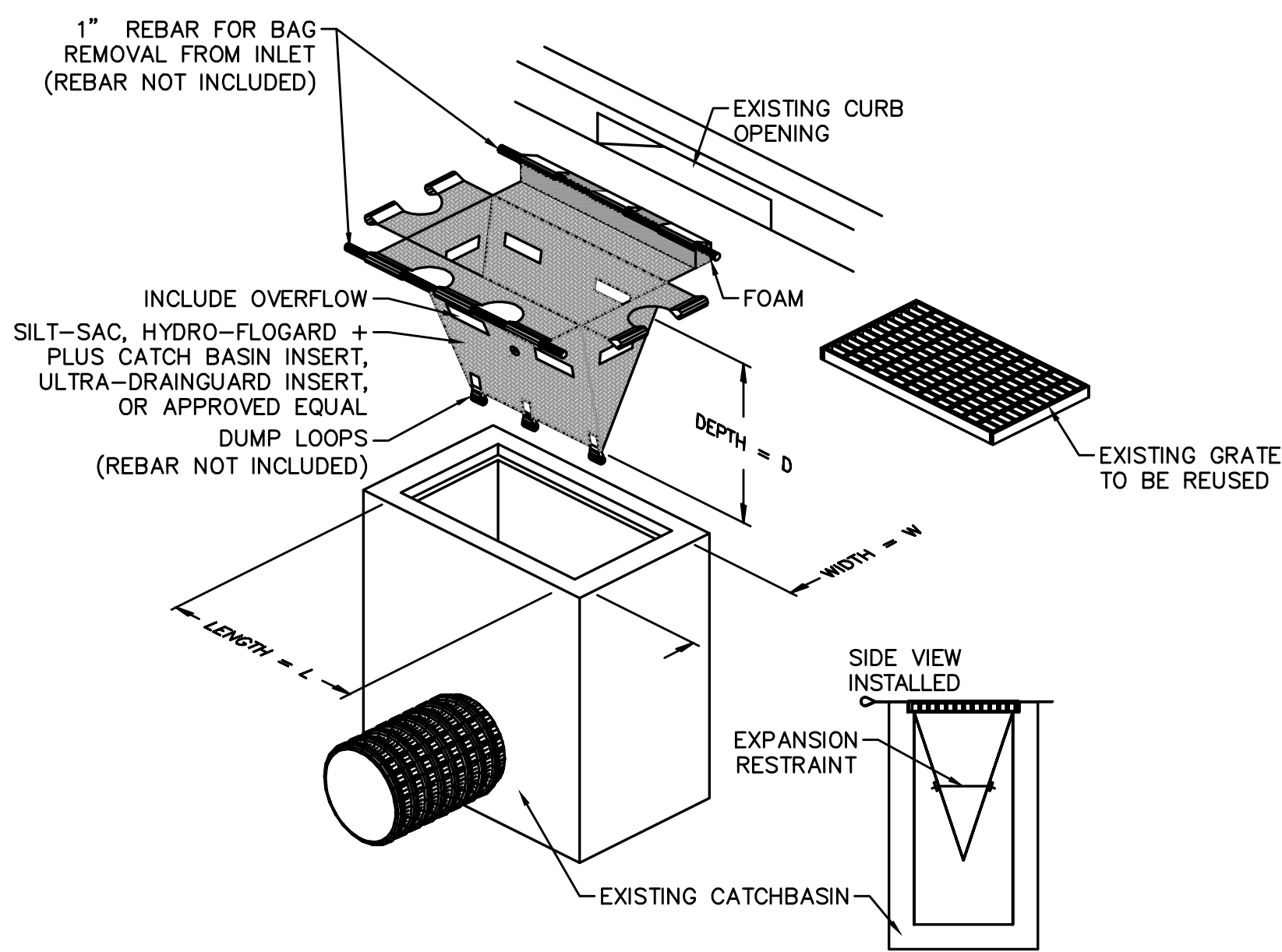
Project No.	19001
Dwn/Chk By	SB/DMD
Date	05/10/2019
Scale	1"=20'

DRAWING NUMBER:

C300

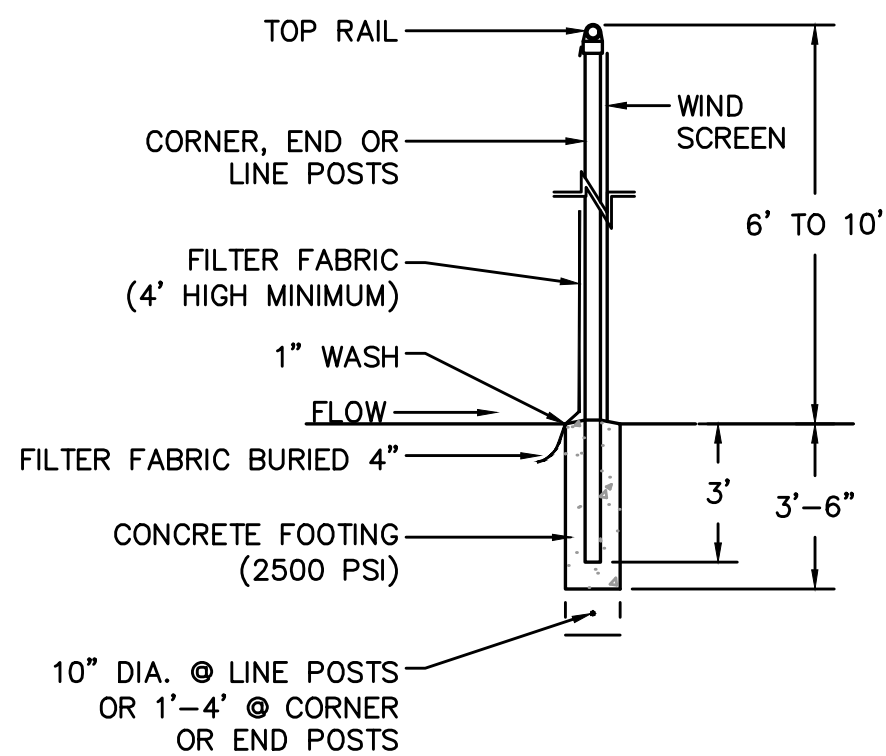
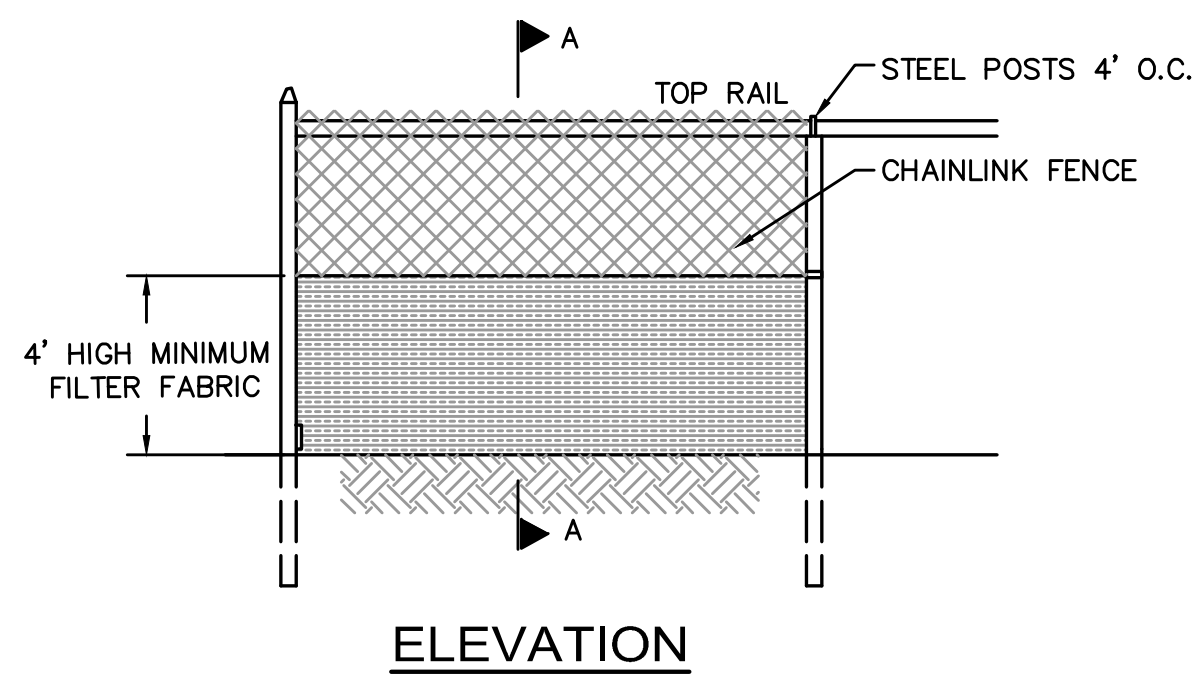


- NOTES**
1. PULL POSTS SHALL BE SPACED AT INTERVALS NOT EXCEEDING 500 FEET.
 2. END, GATE AND CORNER POSTS SHALL BE BRACED TO ADJACENT LINE POSTS. (MORE THAN 30° CHANGE IN DIRECTION CONSTITUTES A CORNER)
 3. FABRIC SHALL BE 0.148" WIRE, WOVEN INTO APPROXIMATELY 2" DIAMOND MESH.
 4. ZINC-COATED STEEL FABRIC BASE METAL SHALL BE COATED WITH PRIME WESTERN SPELTER OR EQUAL.
 5. ALUMINUM COATED STEEL FABRIC BASE METAL SHALL BE COATED WITH ALUMINUM ALLOY.
 6. FENCE POSTS AND RAILS SHALL RECEIVE THE SAME COATING AND TREATMENT AS THE FENCE FABRIC (DESCRIBED ABOVE).
 7. SEE SPECIFICATIONS FOR POST DIMENSIONS.
 8. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE TEMPORARY CONSTRUCTION FENCE AT THE CONCLUSION OF THE PROJECT IF NECESSARY.



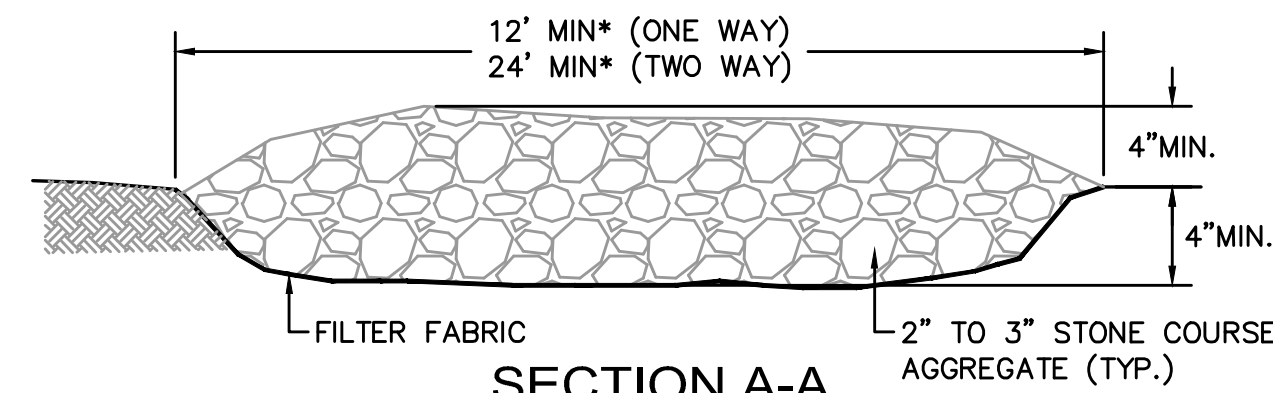
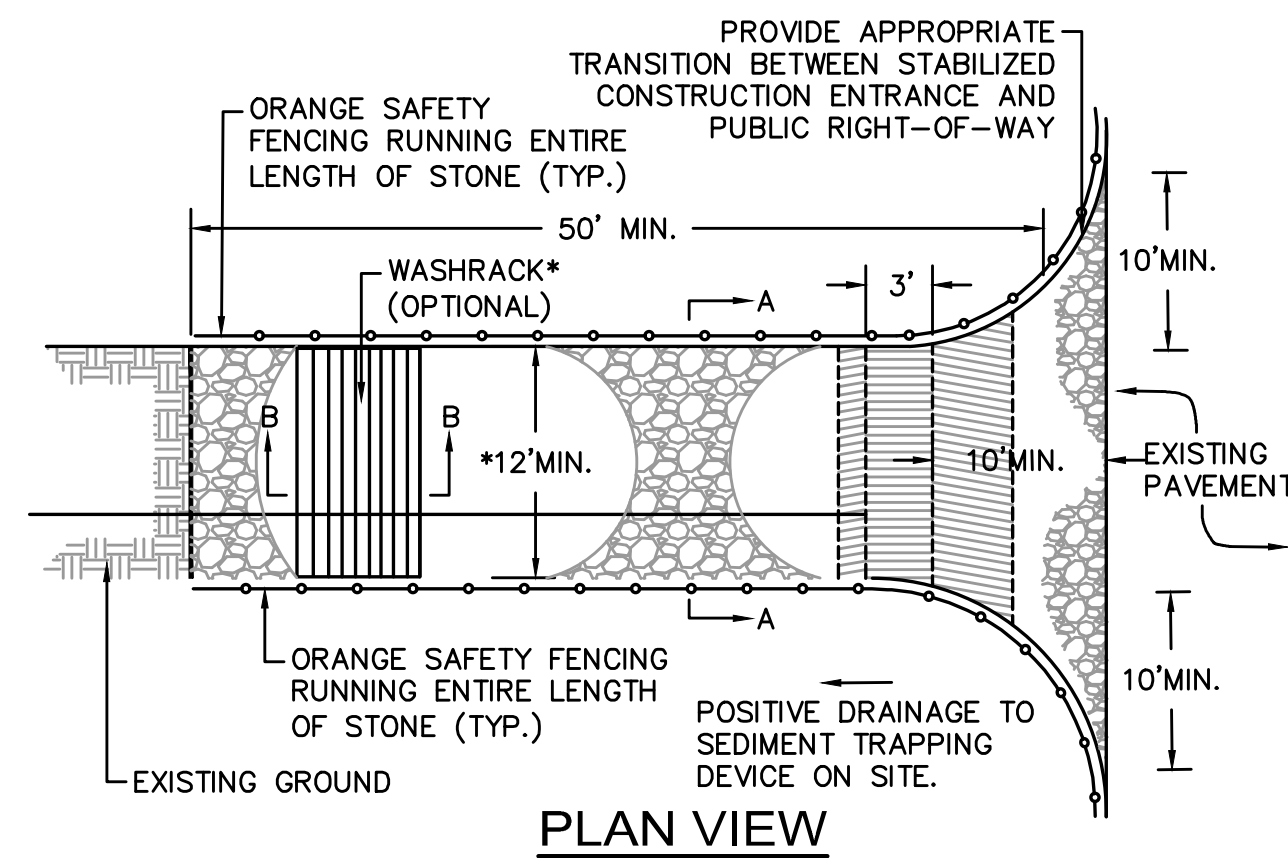
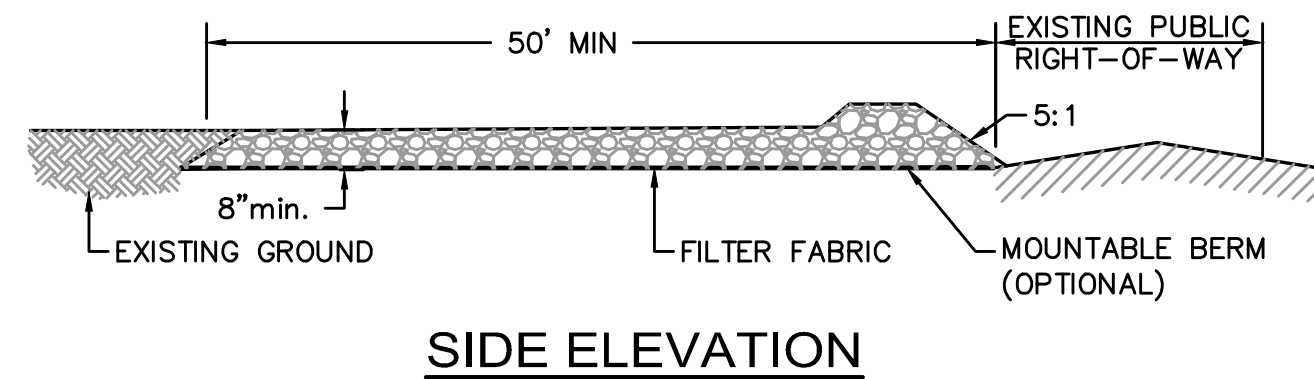
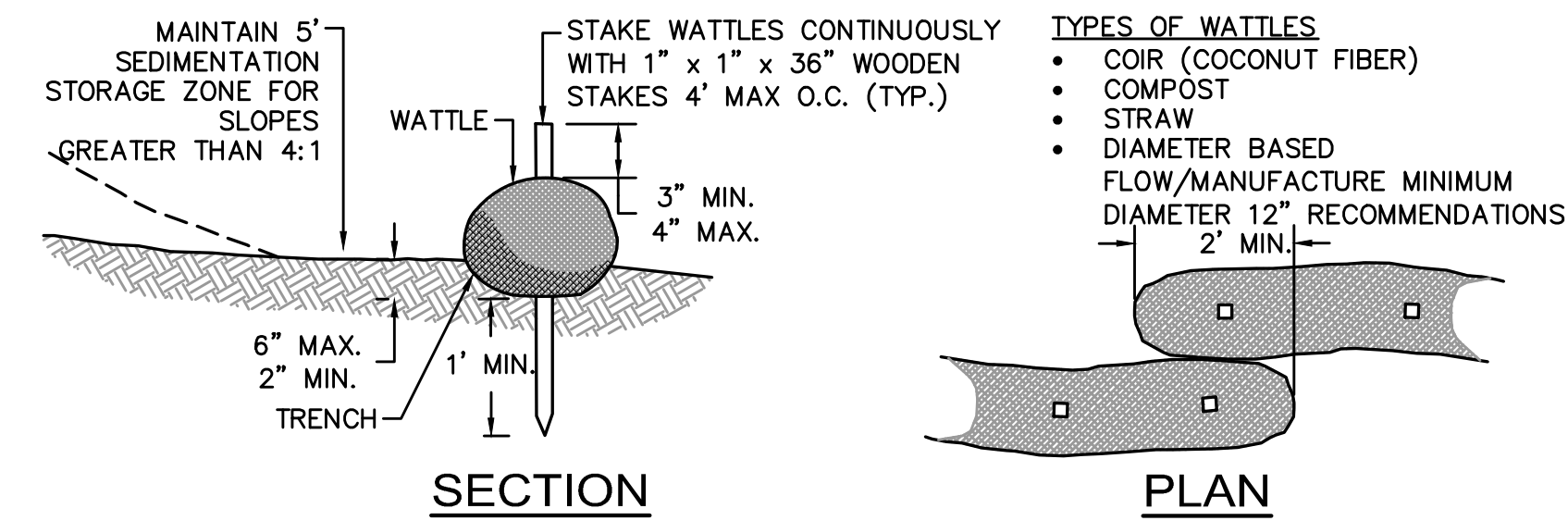
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS SHEET, OVERLAND OR CONCENTRATED FLOWS (NOT GREATER THAN 1 CFS). THE METHOD CAN DRAIN FLAT AREA TO STEEP SLOPES. INLET CAPACITY WILL BE DECREASED WITH THIS METHOD AND THE CONTRACTOR SHALL EXPECT PONDING DURING HIGH FLOW EVENTS.

INLET PROTECTION CATCH BASIN W/ SILTATION SACK
NOT TO SCALE

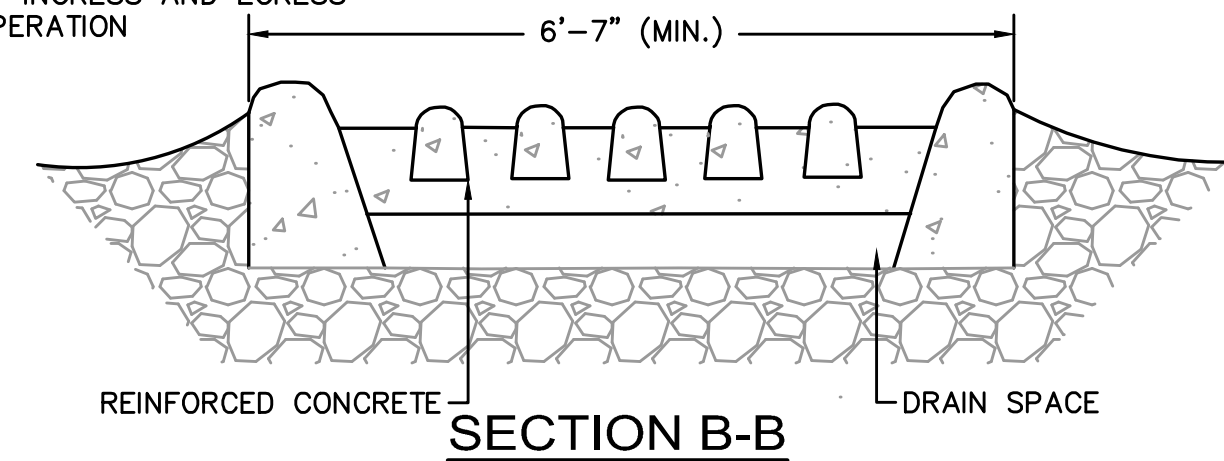


1. CHAINLINK FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES.
2. FILTER FABRIC SHALL BE FASTENED SECURELY TO CHAINLINK FENCE WITH TIES SPACED HORIZONTALLY 24" AS THE TOP AND MIDSECTION.
3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6"
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL SHALL BE REMOVED WHEN SEDIMENT BUILD-UP REACHES 50% OF THE HEIGHT OF THE FILTER FABRIC.
5. MAINTENANCE OF SILT FENCE SHALL BE RECORDED TO IN THE SWPPP

EROSION CONTROL BARRIER SUPER SILT FENCE
NOT TO SCALE



* MUST EXTEND FULL WIDTH OF INGRESS AND EGRESS OPERATION



CONSTRUCTION SPECIFICATIONS

CONSTRUCTION SPECIFICATIONS

LENGTH - GREATER THAN OR EQUAL TO 50 FEET

WIDTH - TWELVE FOOT MINIMUM (ONE WAY), TWENTY FOUR FOOT MINIMUM (TWO WAY), BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.

SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM SHALL BE PERMITTED.

THICKNESS - 8"

MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.

PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED.

STABILIZED CONSTRUCTION ENTRANCE

CLIENT:



ARCHITECT:

ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700N
BOSTON MA 02109
617.623.5555
www.arrowstreet.com

CONSULTANTS:



Nitsch Engineering
www.nitscheng.com

2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472

PROJECT INFORMATION:

NECP

687 Watertown Street
Newton, MA 00000

ISSUANCE:

FEASIBILITY

STAMP:

REVISIONS:

No.	Date	Description

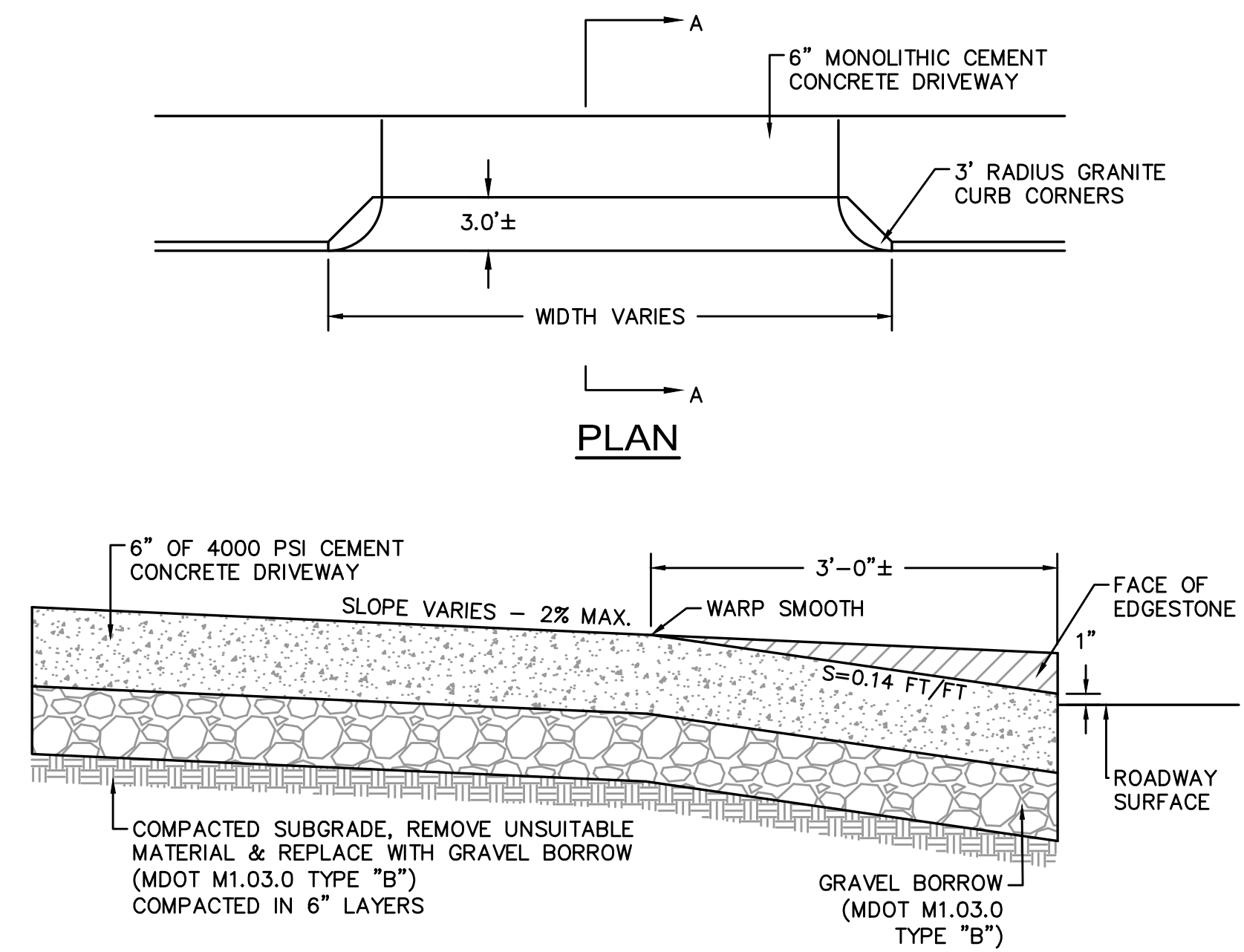
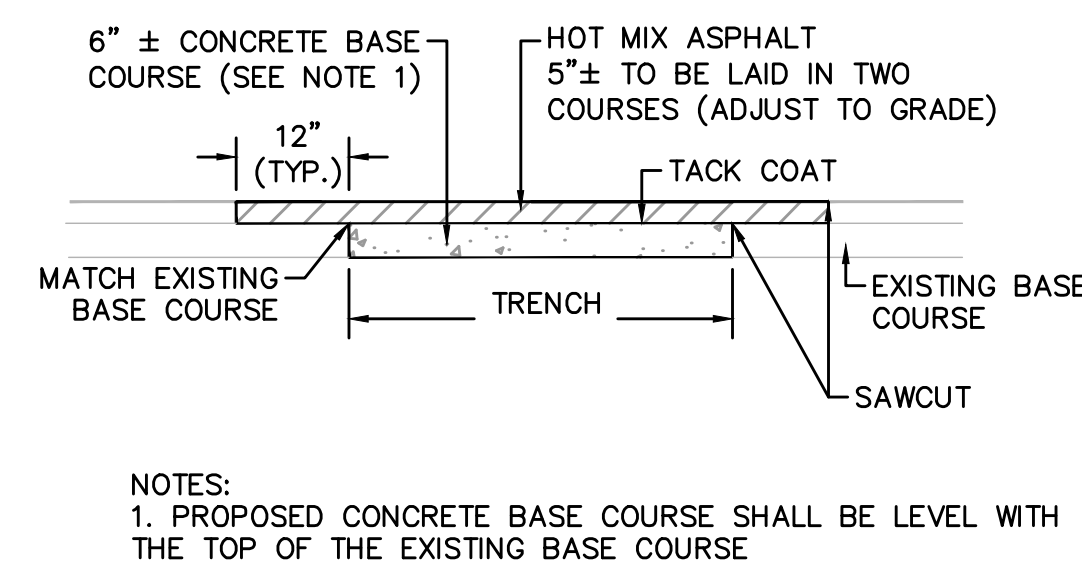
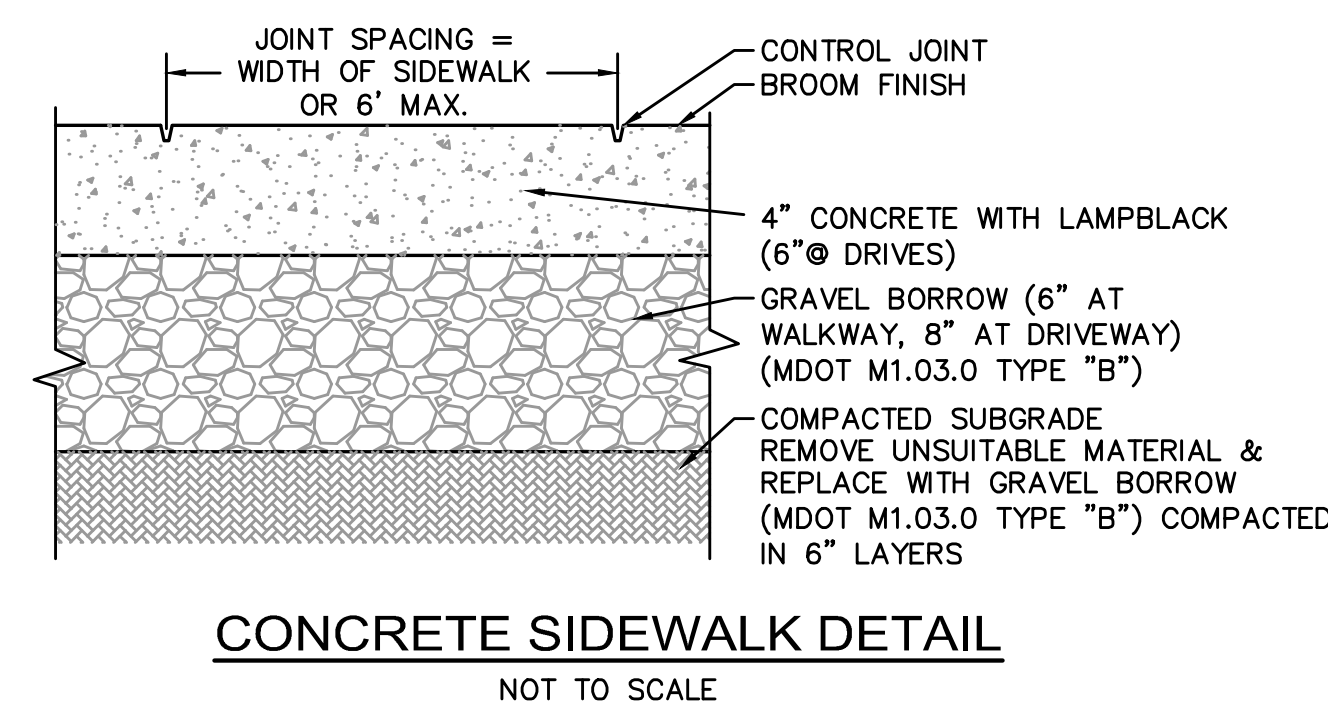
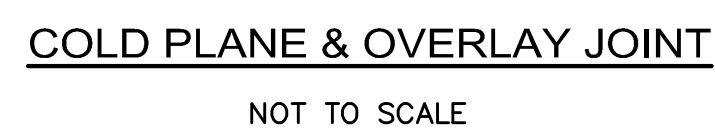
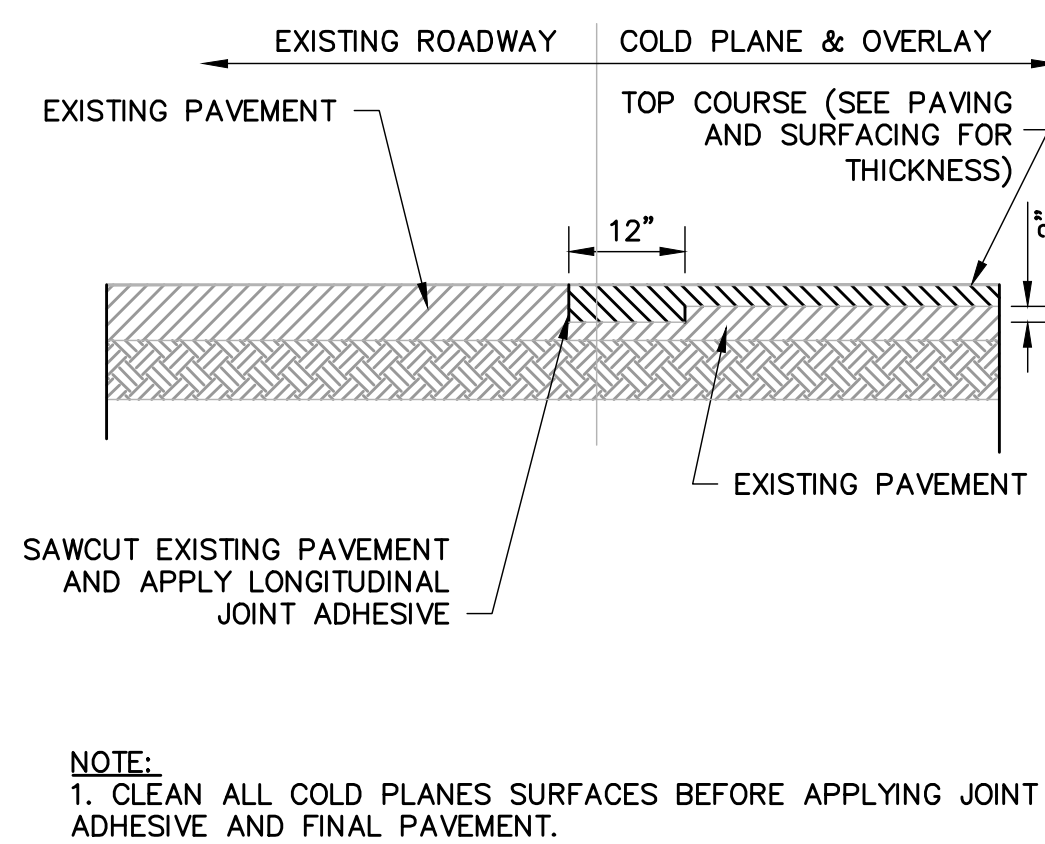
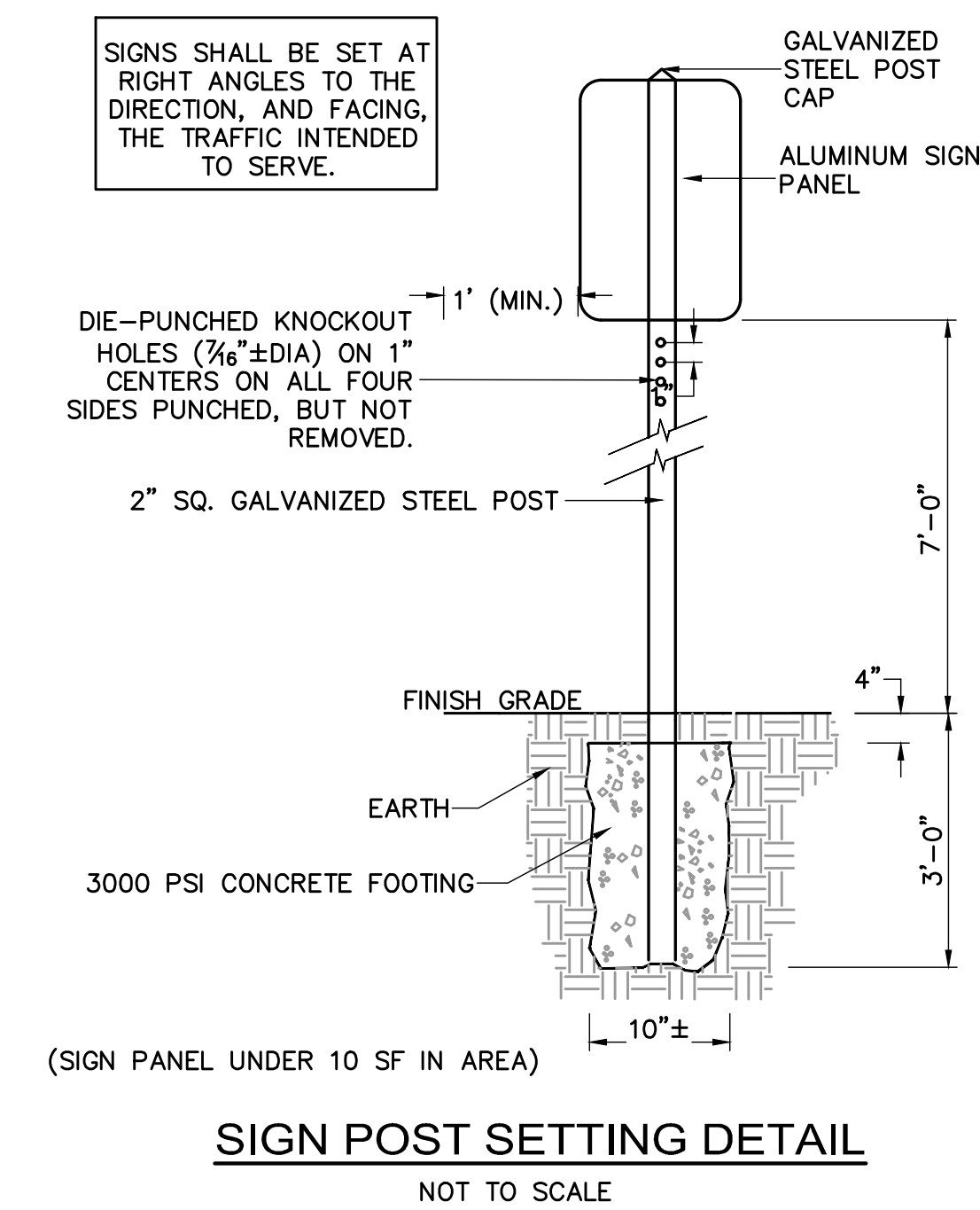
DRAWING TITLE:

SITE EROSION & SEDIMENTATION CONTROL DETAILS

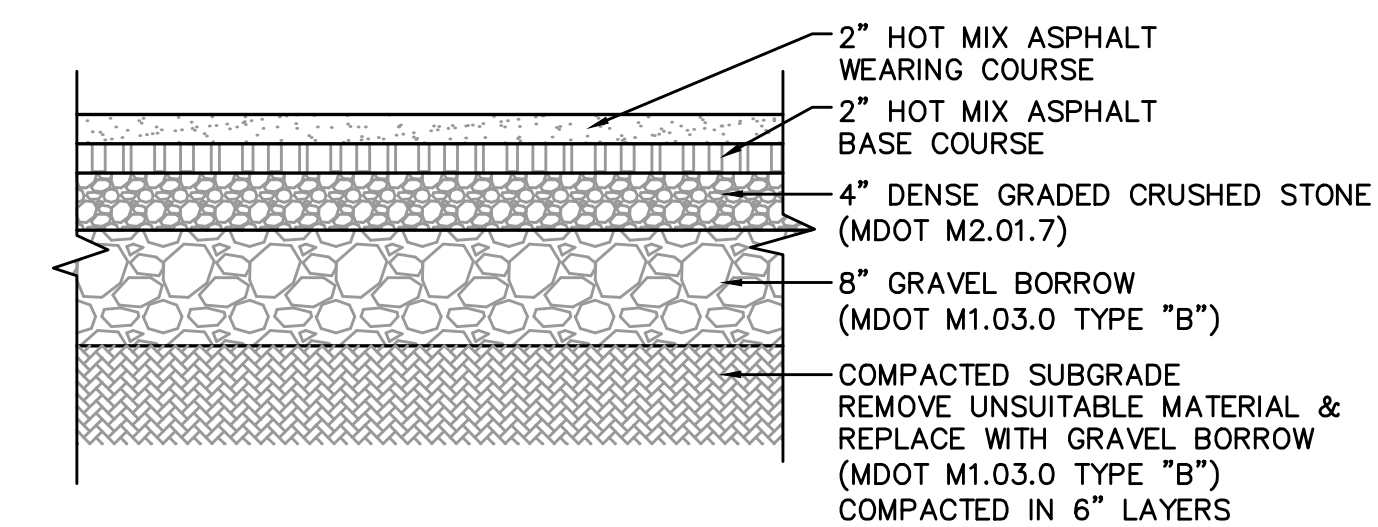
Project No.	19001
Dwn/Chk By	SB/DMD
Date	05/10/2019
Scale	AS SHOWN

DRAWING NUMBER:

C400

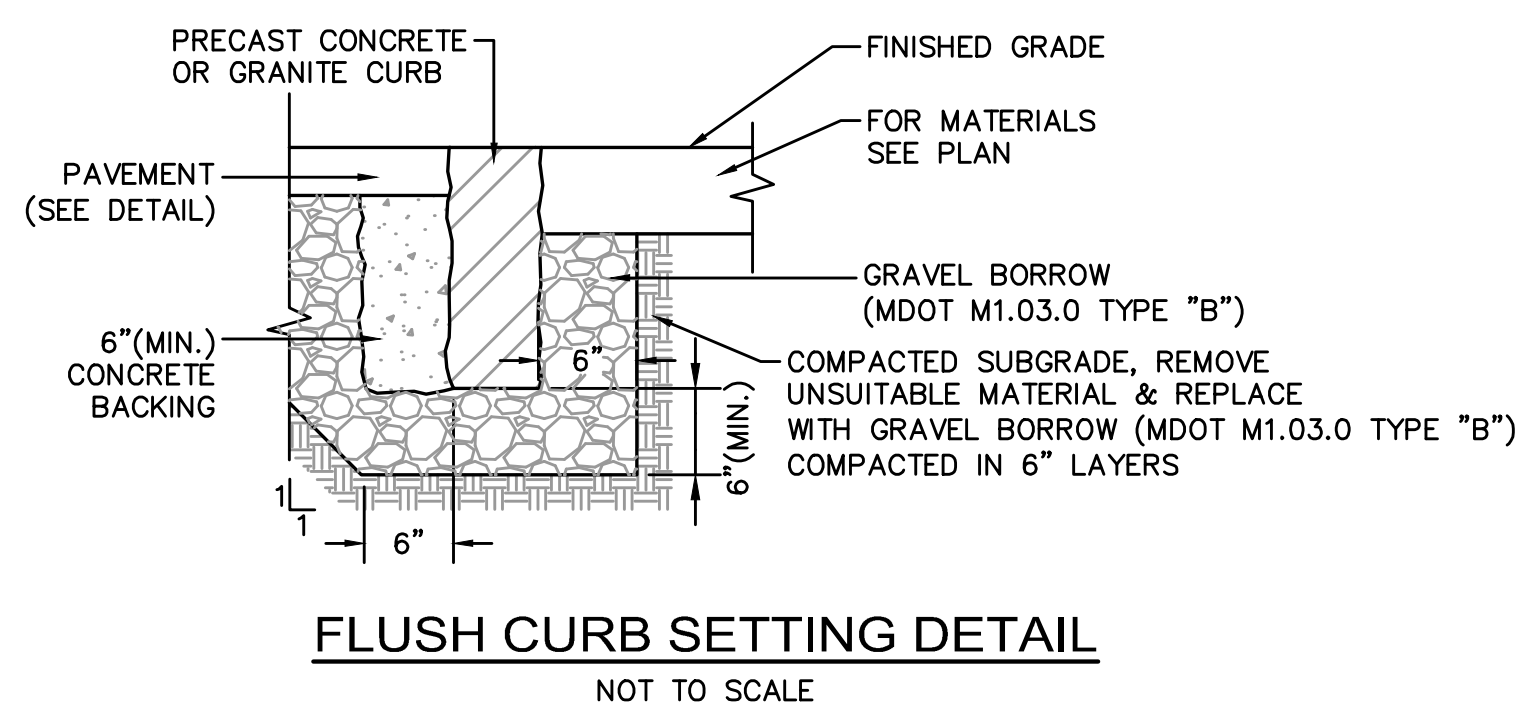
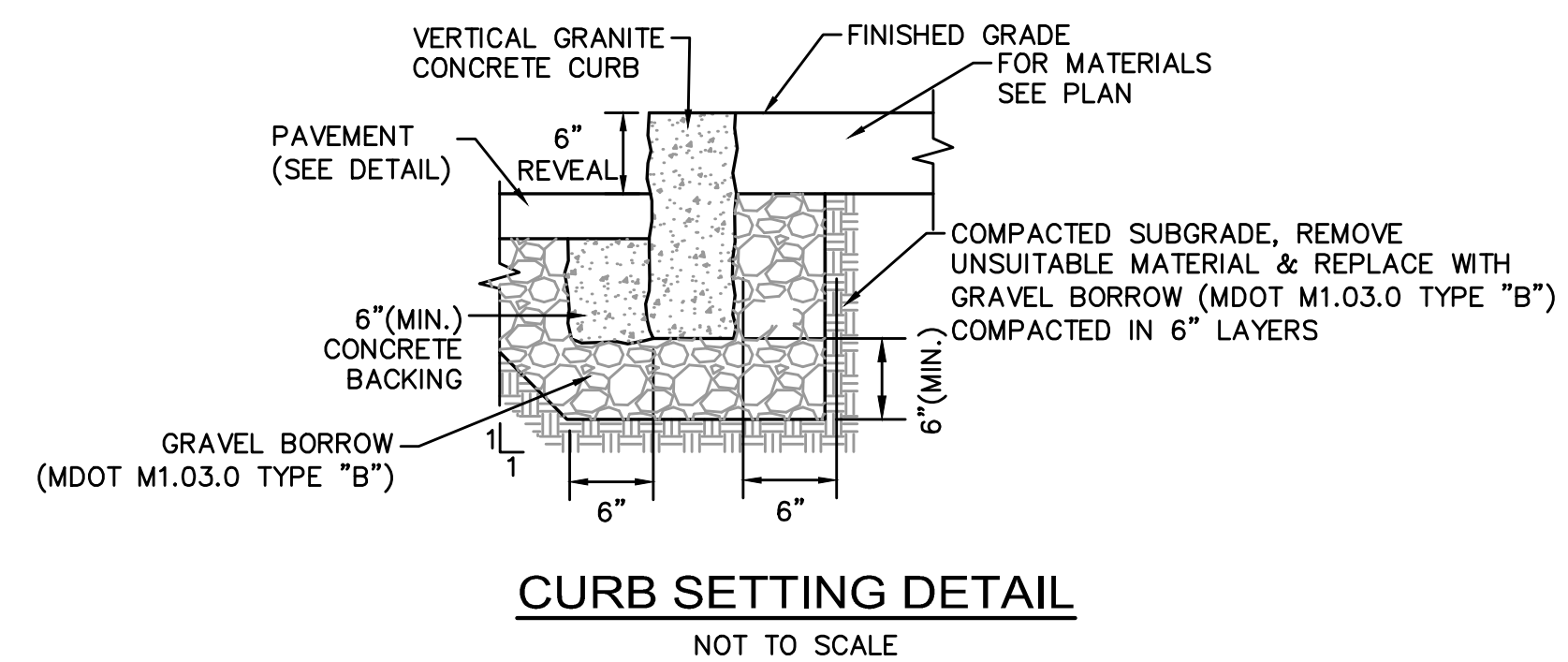


SECTION A-A CONCRETE DRIVEWAY
TYPICAL DRIVEWAY WITH 3' CURB RETURN DETAIL
NOT TO SCALE



HOT MIX ASPHALT PAVING (TWO COURSES) DETAIL

NOT TO SCALE



CLIENT:



ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN

**10 POST OFFICE SQUARE
SUITE 700N
BOSTON MA 02109
617.623.5555
www.arrowstreet.com**

CONSULTANTS:



Nitsch Engineering
www.nitscheng.com

2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472

PROJECT INFORMATION:

NECP

687 Watertown Street
Newton, MA 00000

ISSUANCE:

FEASIBILITY

STAMP:

REVISIONS:

[illegible]

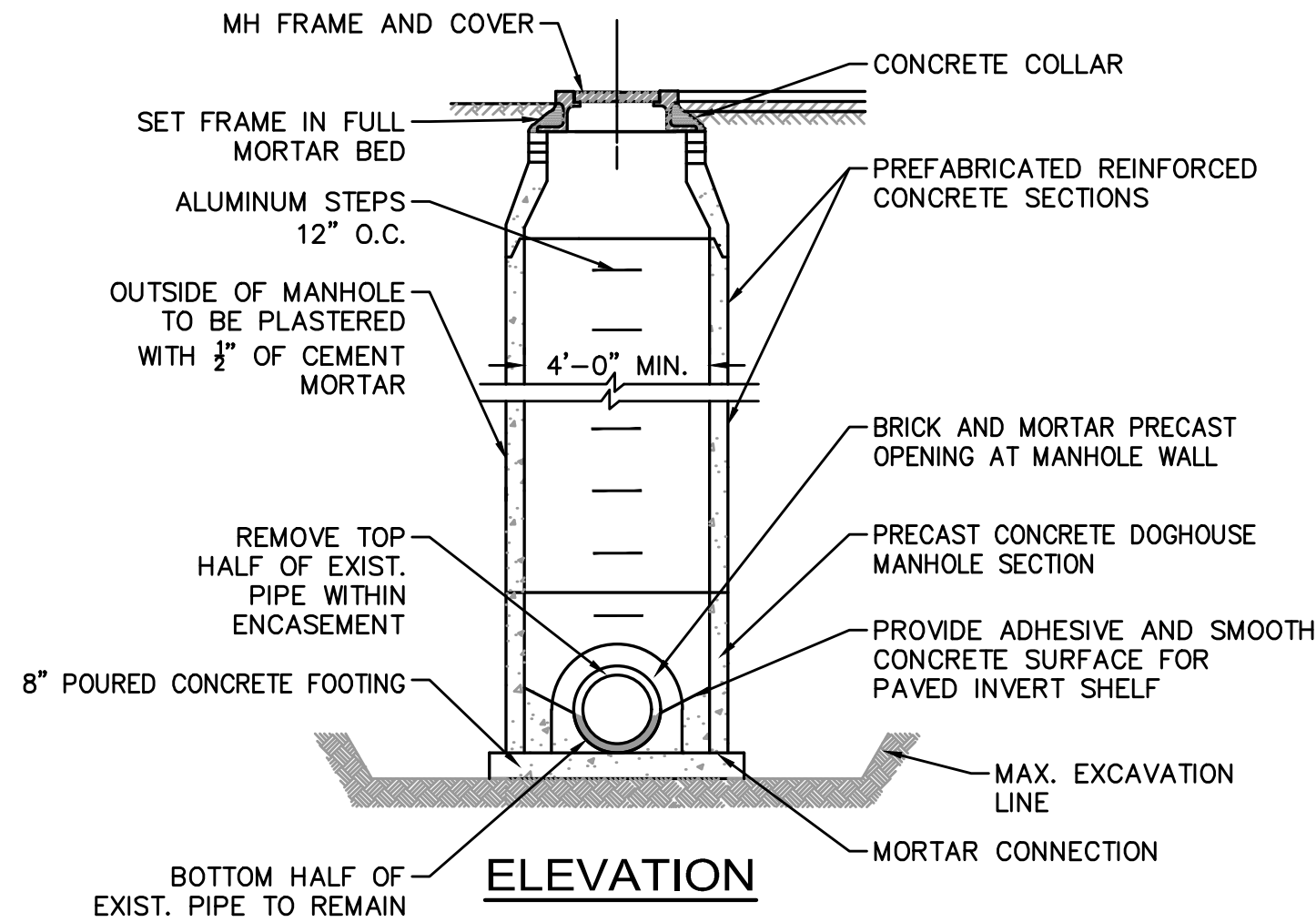
DRAWING TITLE:

SITE LAYOUT DETAILS

Project No.	19001
Dwn/Chk By	SB/DMD
Date	05/10/2019
Scale	AS SHOWN

DRAWING NUMBER:

C401

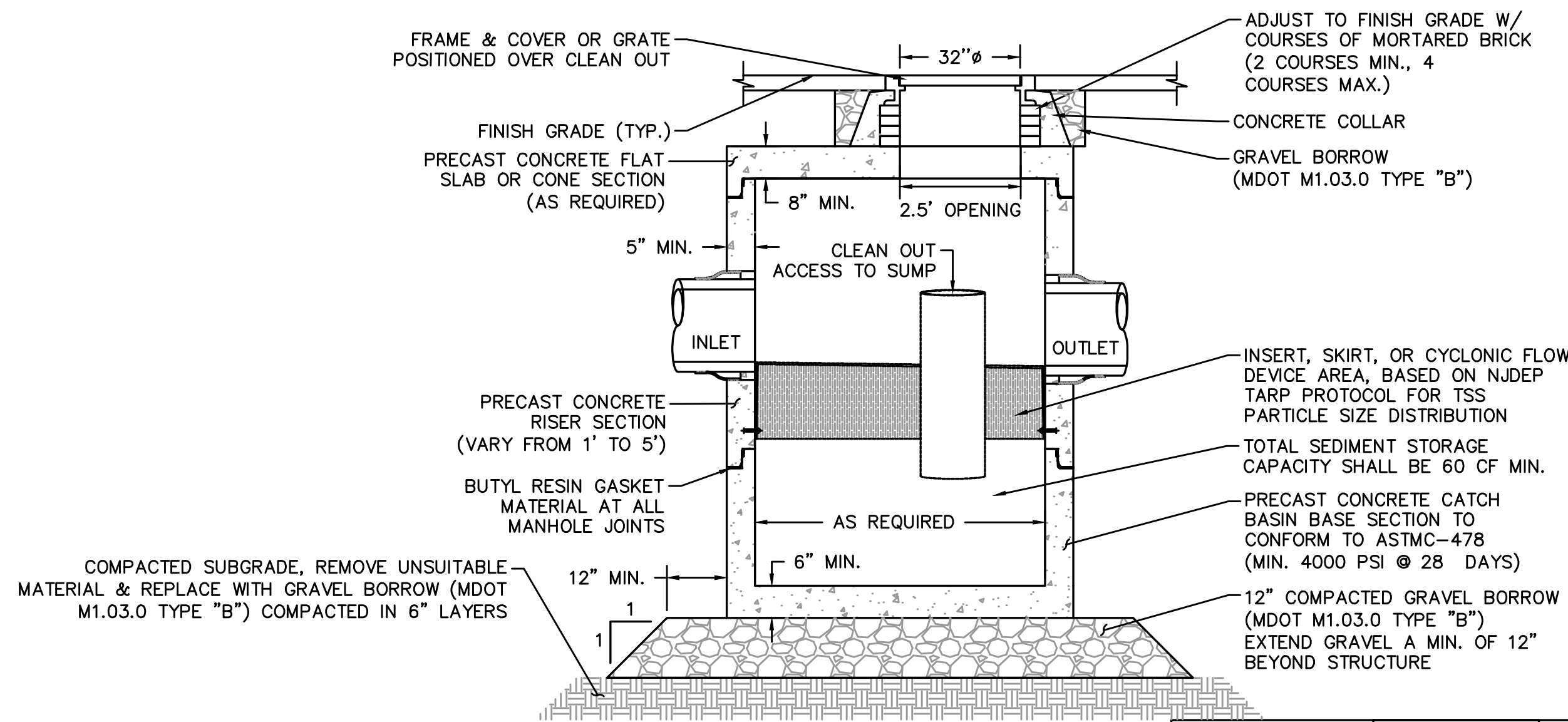


NOTES:

1. PREFABRICATED REINFORCED CONCRETE MANHOLE SECTIONS SHALL BE USED. THEY SHALL BE DESIGNED TO WITHSTAND AASHTO HS-20-44 LOADING.
2. SHOP DRAWINGS WILL BE REQUIRED TO BE SUBMITTED FOR APPROVAL. THE SHOP DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN MASSACHUSETTS.

DOGHOUSE DRAIN MANHOLE DETAIL

NOT TO SCALE



NOTE :

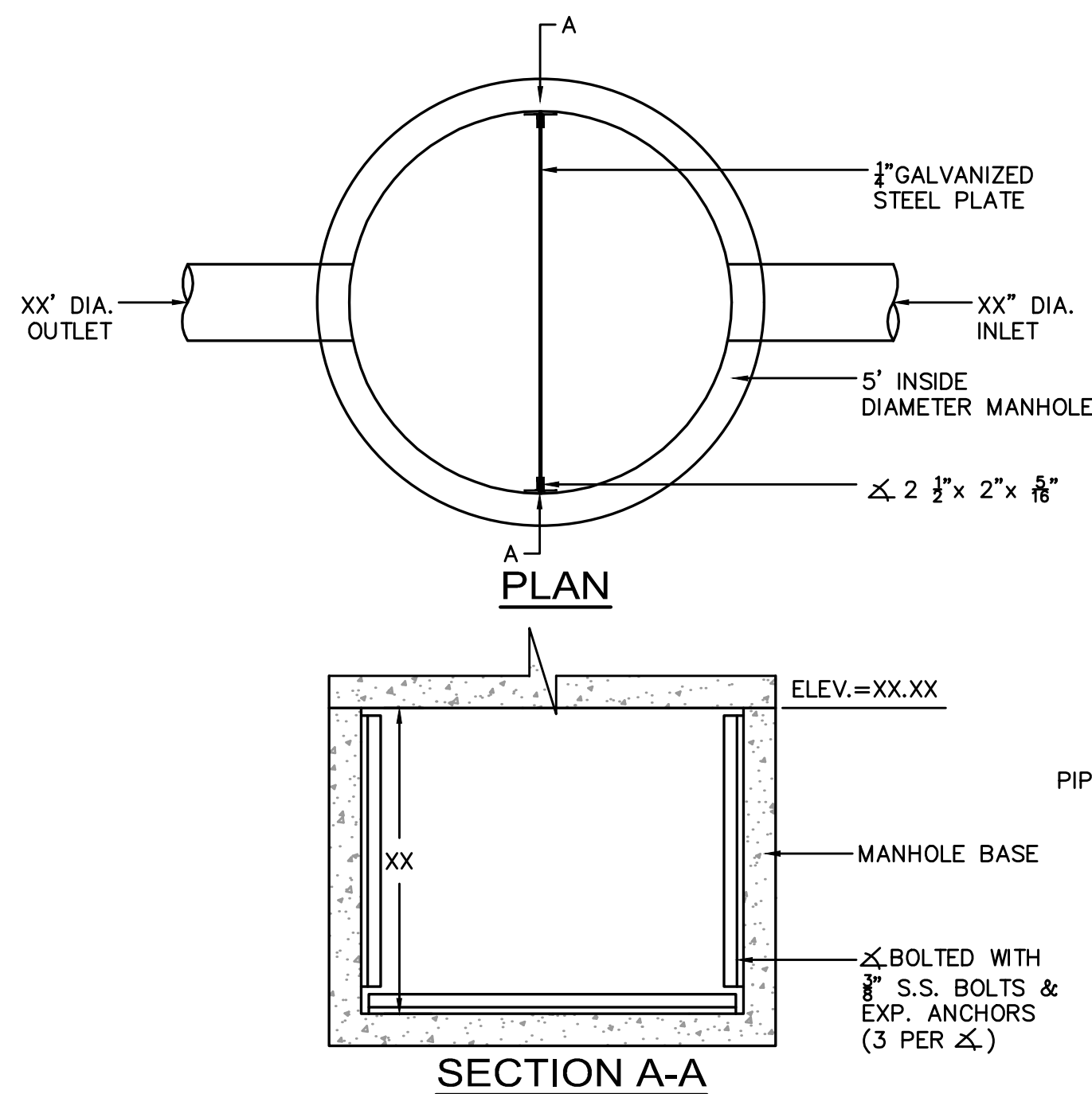
1. THE USE OF FLEXIBLE CONNECTIONS IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.
2. THE COVER SHOULD BE POSITIONED OVER THE OUTLET DROP PIPE AND THE OIL CLEANOUT PIPE.
3. STRUCTURE DESIGNED FOR H2O LOADING

WATER QUALITY STRUCTURE DETAIL

NOT TO SCALE

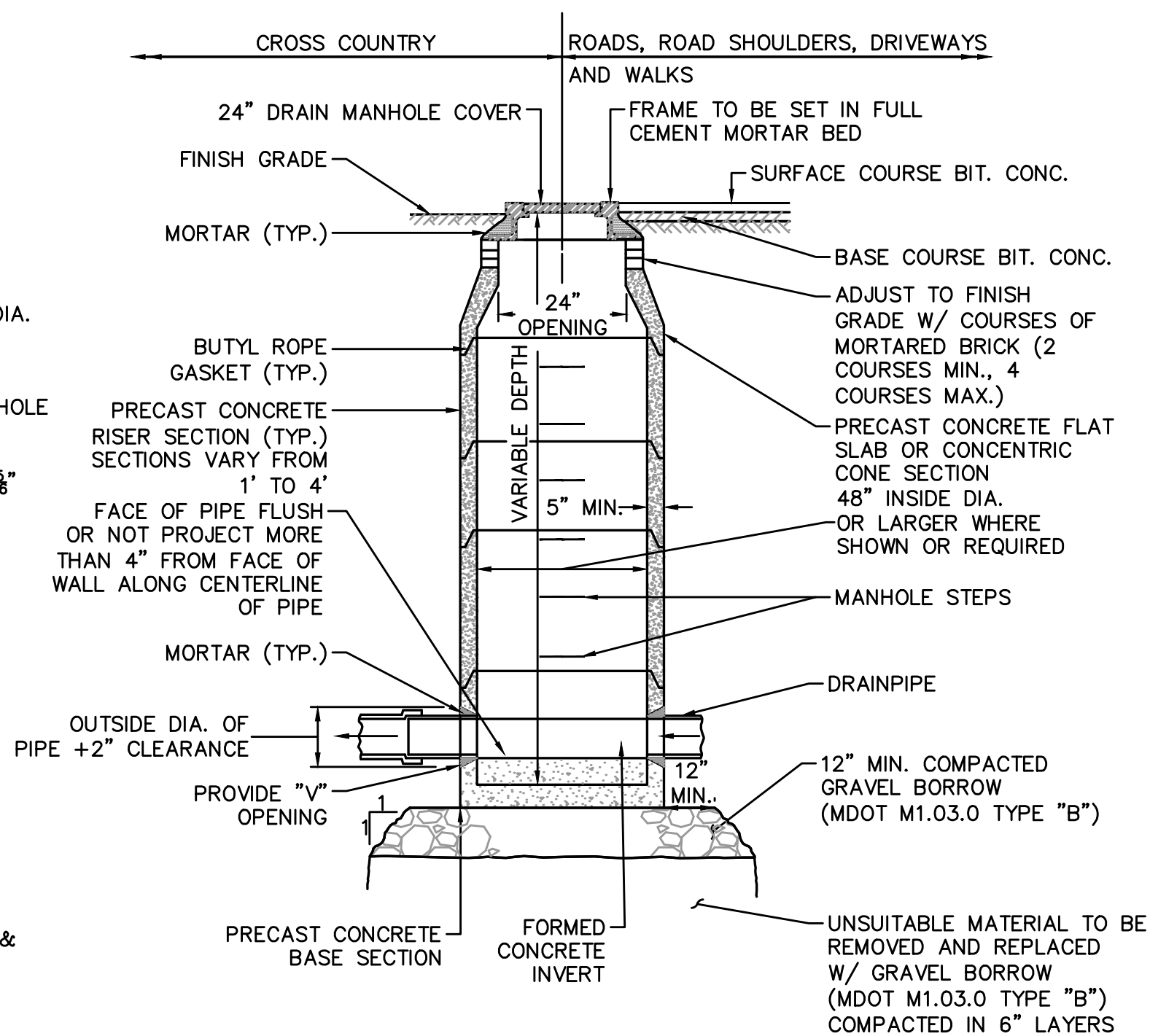
STRUCTURE NAME	MINIMUM WQF	PEAK FLOW RATE*	MINIMUM SEDIMENT STORAGE CAPACITY
WQS#XXX	X.XX CFS	X.XX CFS	XX CF
WQS#XXX	X.XX CFS	X.XX CFS	XX CF

* PEAK FLOW RATE BASED ON RATIONAL ANALYSIS FOR A 25-YEAR STORM EVENT. STRUCTURE SHALL BE ABLE TO PASS PEAK FLOW RATE WITHOUT CAUSING A BACKWATER CONDITION.



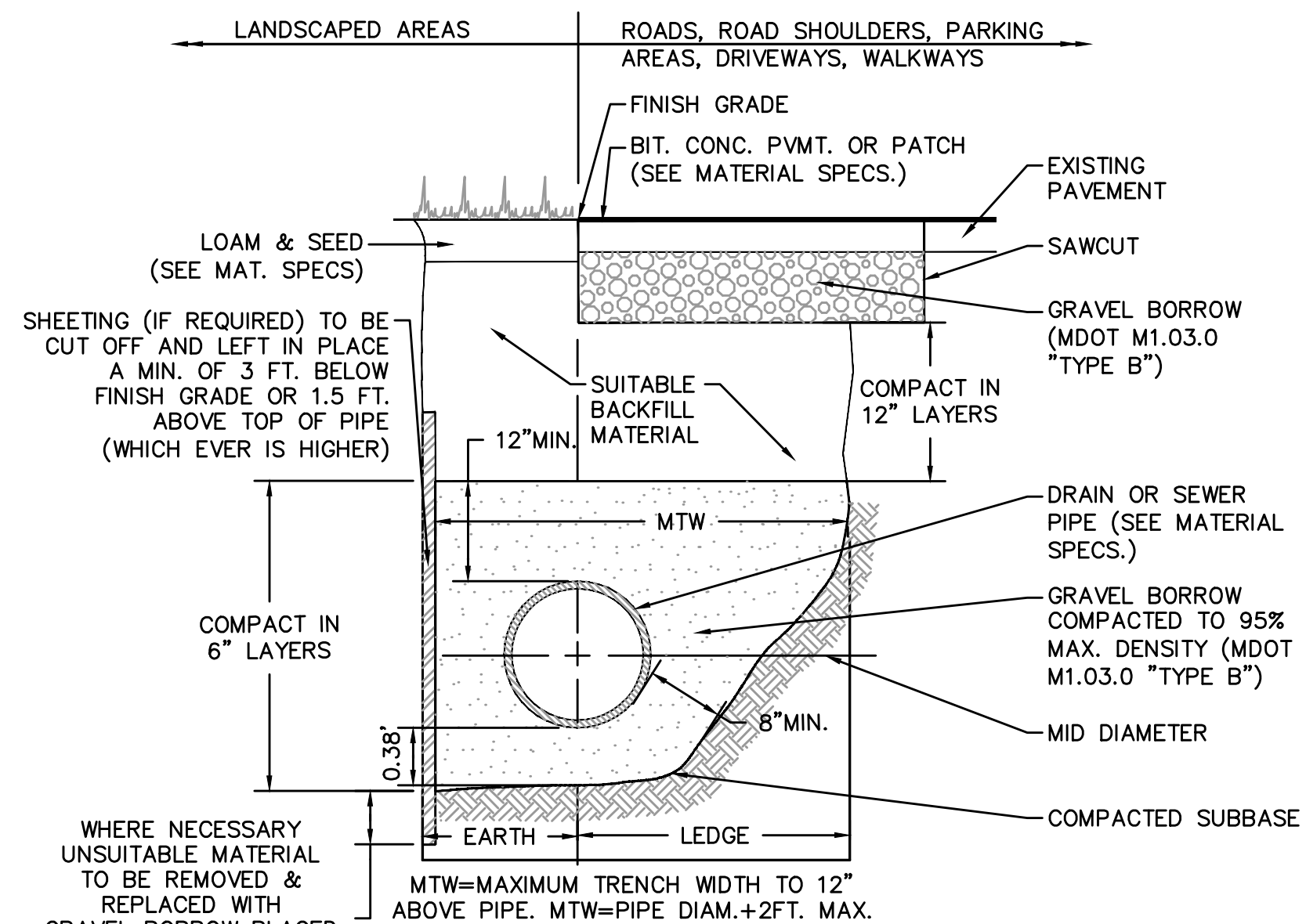
OUTLET CONTROL STRUCTURE

NOT TO SCALE



TYPICAL DRAIN MANHOLE DETAIL

NOT TO SCALE



STANDARD TRENCH DETAIL FOR UTILITY PIPE

NOT TO SCALE

CLIENT:



ARCHITECT:

ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700N
BOSTON MA 02109
617.623.5555
www.arrowstreet.com

CONSULTANTS:



Nitsch Engineering
www.nitscheng.com

2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472

PROJECT INFORMATION:

NECP

687 Watertown Street
Newton, MA 00000

ISSUANCE:

FEASIBILITY

STAMP:

REVISIONS:

No.	Date	Description

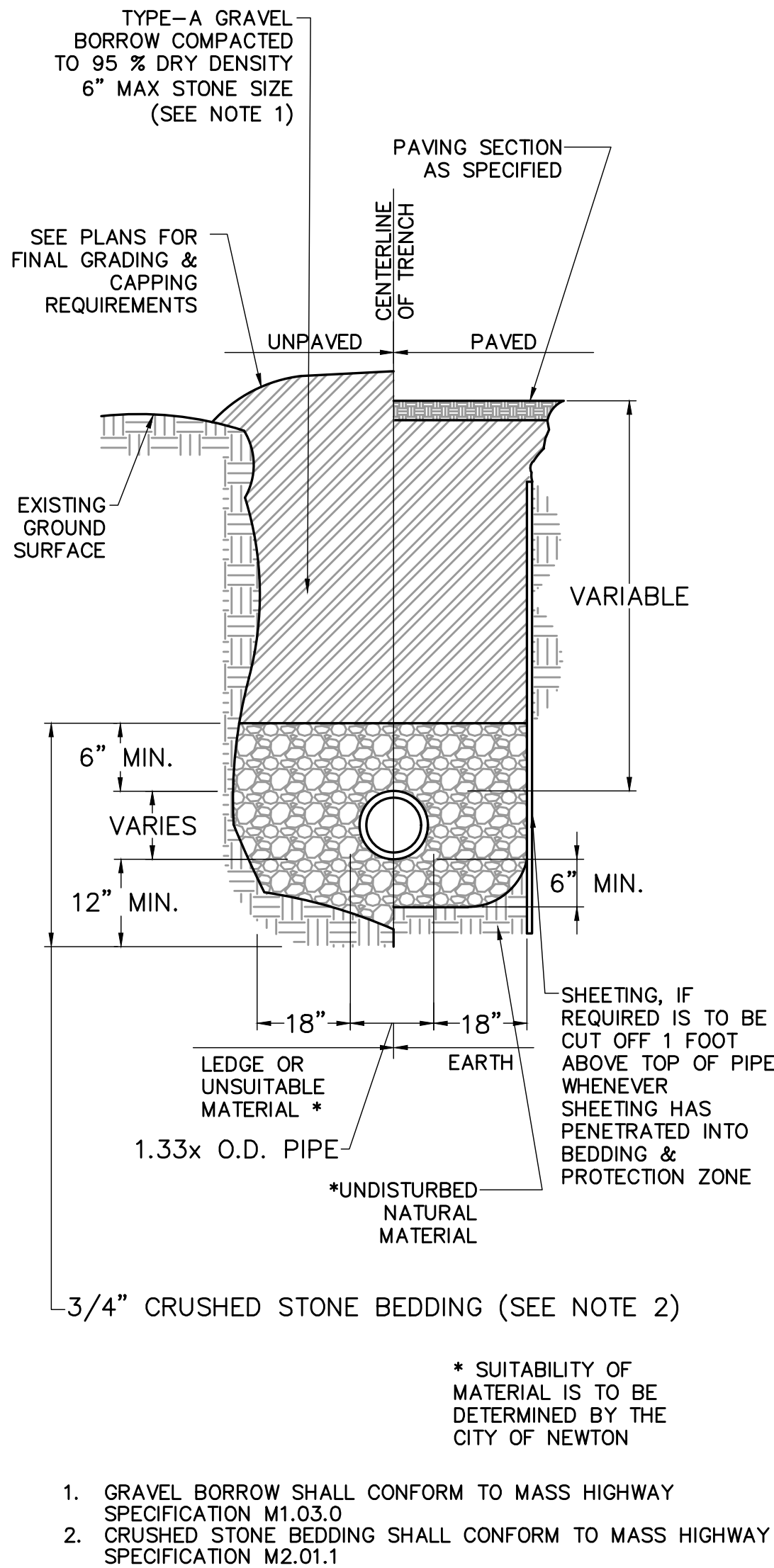
DRAWING TITLE:

**SITE UTILITY
DETAILS I**

Project No. 19001
Dwn/Chk By SB/DMD
Date 05/10/2019
Scale AS SHOWN

DRAWING NUMBER:

C402



GRAVITY SEWER TRENCH DETAIL
NOT TO SCALE

- NOTES:**
- THRUST BLOCKS TO BE USED ON ALL PRESSURE PIPES AT HORIZONTAL AND VERTICAL BENDS GREATER OR EQUAL TO 45°, TEES AND DEAD ENDS.
 - FOR FITTINGS WITH LESS THAN 45° DEFLECTION USE BEARING AREAS FOR 45° BEND.
 - BEARING AREAS BASED ON HORIZONTAL PASSIVE SOIL PRESSURE OF 2000 PSF AND A MINIMUM INTERNAL WATER PRESSURE OF 175 PSIG. JOINTS SHALL NOT BE ENCASED IN CONCRETE, BEARING AREAS MAY BE DISREGARDED FOR TRENCHES IN ROCK WHERE THE TOP OF THE ROCK FACE IS AT OR ABOVE THE CROWN OF THE PIPE. HOWEVER, CONCRETE BACKING SHALL BE PLACED BETWEEN THE PIPE AND ROCK FACE.

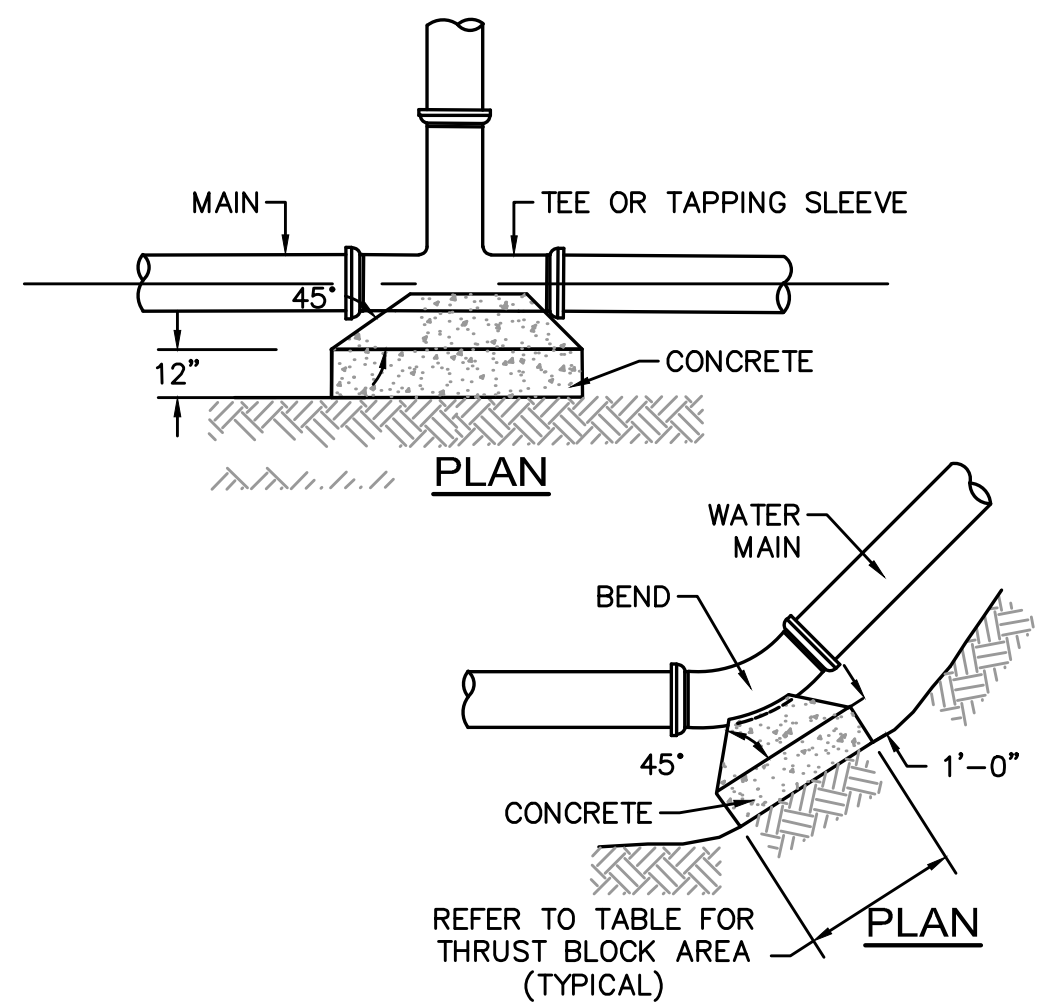
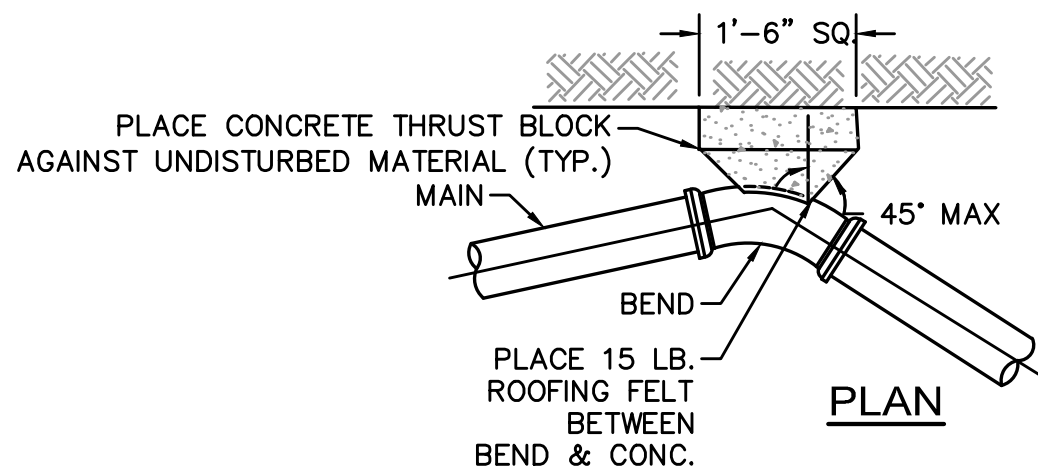
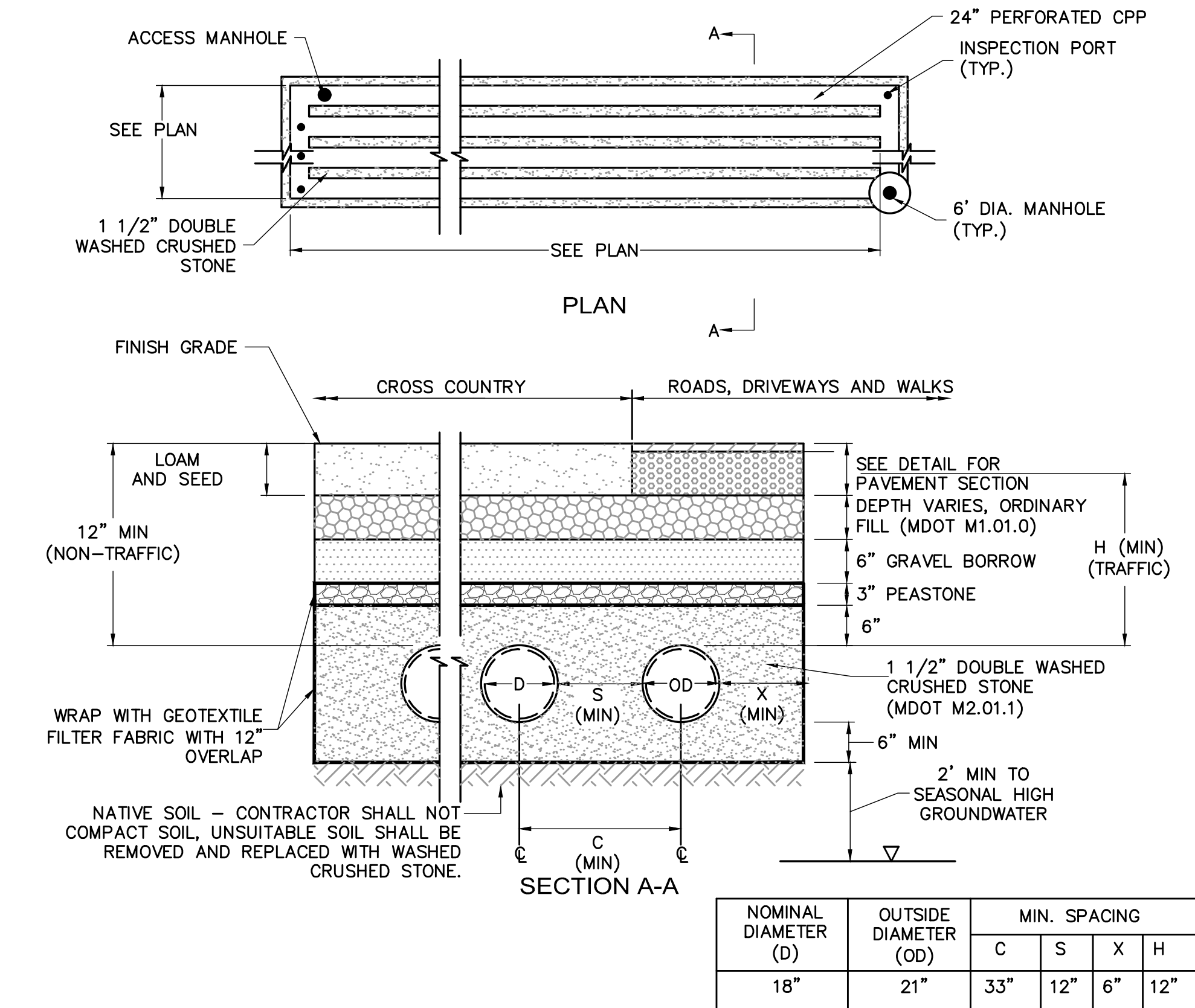


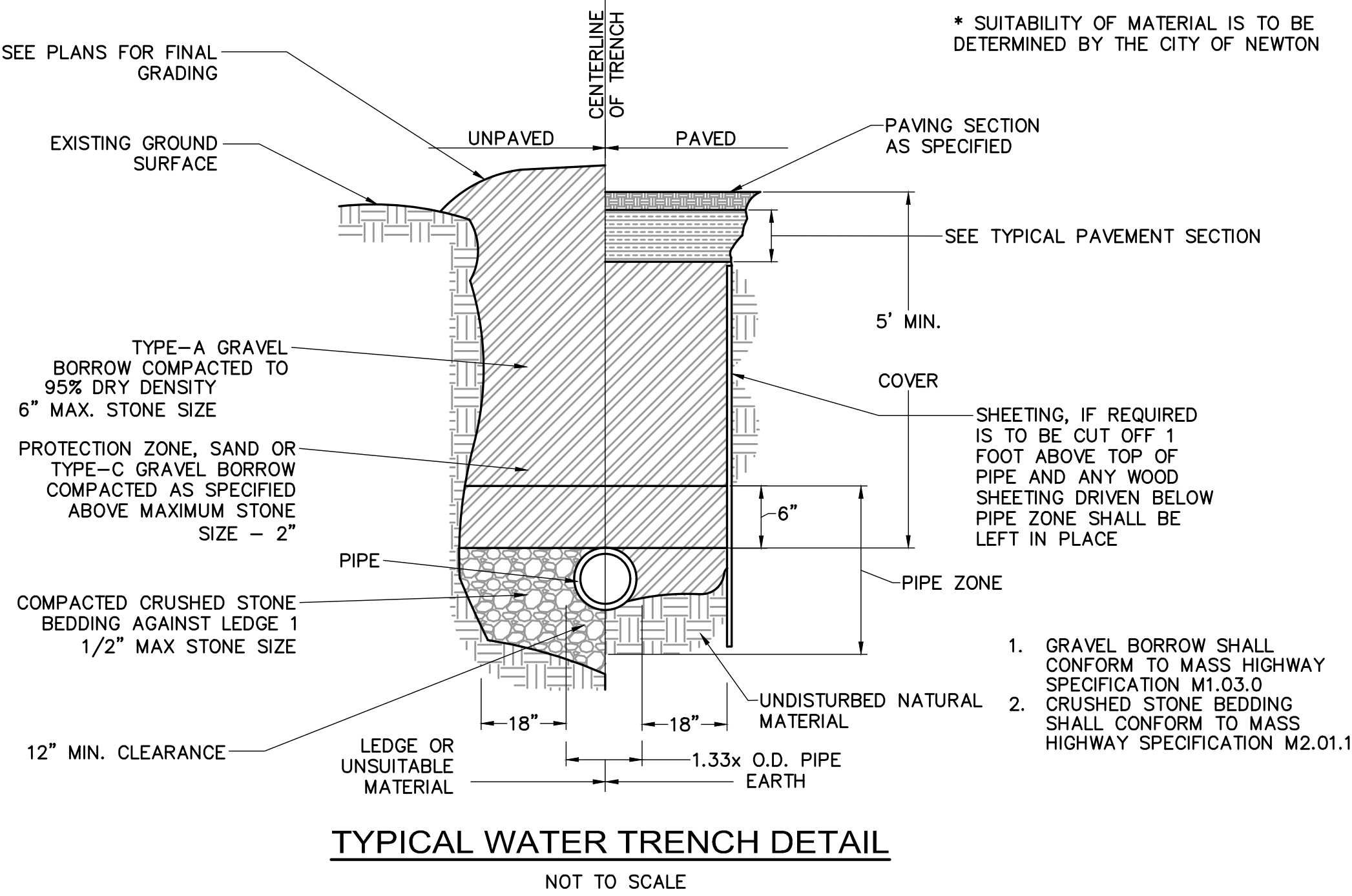
TABLE OF BEARING AREAS IN SQUARE FEET AGAINST UNDISTURBED MATERIAL FOR FITTING. *

SIZE OF MAIN (INCHES)	90° BEND (S.F.)	45° BEND (S.F.)	DEAD END (S.F.)
4	2.3	1.3	1.6
6	4.7	2.5	3.3
8	8.0	4.5	6.0
12	17.0	9.5	12.0

THRUST BLOCK DETAILS
NOT TO SCALE



UNDERGROUND STORMWATER RECHARGE SYSTEM DETAIL
NOT TO SCALE



TYPICAL WATER TRENCH DETAIL
NOT TO SCALE

CLIENT:



ARCHITECT:
ARROWSTREET
ARCHITECTURE & DESIGN

10 POST OFFICE SQUARE
SUITE 700N
BOSTON MA 02109
617.623.5555
www.arrowstreet.com

CONSULTANTS:

Nitsch Engineering
www.nitscheng.com
2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472

PROJECT INFORMATION:

NECP

687 Watertown Street
Newton, MA 00000

ISSUANCE:

FEASIBILITY

STAMP:

REVISIONS:

No.	Date	Description

DRAWING TITLE:

**SITE UTILITY
DETAILS II**

Project No. 19001
Dwn/Chk By SB/DMD
Date 05/10/2019
Scale AS SHOWN

DRAWING NUMBER:

C403