# The Riverway Condominium Sewer Improvement Plan



### **OWNER/APPLICANT: RIVERWAY CONDOMINIUM**

TRUST **60 NEW DRIFTWAY** SCITUATE, MA 02066



CIVIL ENGINEER:

CHA CONSULTING, INC. 141 LONGWATER DRIVE, SUITE 104 NORWELL, MA 02061

## 60 New Driftway, Scituate, MA

LOCUS MAP SCALE: 1" = 2

DRAWING INDEX				
Sheet Number	Sheet Title			
C-001	TITLE SHEET			
C-002	GENERAL NOTES & LEGEND			
C-101	DEMOLITION AND EROSION CONTROL PLAN			
C-301	UTILITY PLAN			
C-401	PROPOSED SEWER PLAN AND PROFILE - PHASE 1			
C-402	PROPOSED SEWER PLAN AND PROFILE - PHASE 2			
C-601	DETAILS - 1			
C-602	DETAILS - 2			
C-603	DETAILS - 3			

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#### GENERAL

- I. PROTECTIONS
- A. PROVIDE PROTECTION NECESSARY TO PREVENT DAMAGE TO EXISTING IMPROVEMENTS, TREES, OR VEGETATION.
- B. PROTECT IMPROVEMENTS ON ADJOINING PROPERTIES AND ON OWNER'S PROPERTY.
- C. RESTORE DAMAGED IMPROVEMENTS TO ORIGINAL CONDITION AS ACCEPTABLE TO PARTIES HAVING JURISDICTION.
- D. CONDUCT OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH OPERATIONS, STREETS, WALKS, AND OTHER ADJACENT FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION. STREETS AND ROADWAYS SHALL BE THOROUGHLY CLEANED AND/OR SWEPT ON A DAILY BASIS OR MORE FREQUENTLY AS REQUIRED BY THE GOVERNING AUTHORITY.
- 2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MASSACHUSETTS DOT SPECIFICATIONS FOR HIGHWAYS AND BRIDGES AND/OR THE APPROPRIATE LOCAL AUTHORITIES.
- 3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL MAKE CERTAIN THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLAN AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
- 4. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABALITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES, MINOR ADJUSTMENTS TO FINISH GRADE TO ACCOMPLISH SPOT DRAINAGE ARE ACCEPTABLE, IF NECESSARY, UPON PRIOR APPROVAL OF ENGINEER. PAVING INSTALLED SHALL "FLUSH OUT' AT ANY JUNCTURE WITH EXISTING PAVING.
- 5. ANY CONTRACTOR PERFORMING WORK ON THE PROJECT SHALL PERFORM THE WORK WITH STRICT ADHERENCE TO ALL APPLICABLE OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION) SAFETY STANDARDS. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL APPLICABLE OSHA STANDARDS ARE BEING OBSERVED. THE OWNER ASSUMES NO RESPONSIBILITY FOR THE CONTRACTOR VIOLATING OSHA RULES OR FOR ANY INJURIES OR DAMAGES RESULTING FROM ANY VIOLATIONS OF THE RULES
- 6. ALL SLOPES, UNLESS OTHERWISE SPECIFIED, SHALL BE LOAMED AND SEEDED FOR STABILIZATION AS SOON AS POSSIBLE TO PREVENT EROSION INTO WETLAND RESOURCE AREAS, ABUTTING PROPERTIES, OR PUBLIC WAYS. EROSION CONTROL BLANKETS ARE REQUIRED FOR ALL 2H:1V SLOPES. SLOPES MAY NOT EXCEED 2H:1V.
- 7. ANY DEVIATIONS, I.E. "FIELD CHANGES" FROM THE DESIGN PLAN(S) MUST BE APPROVED BY THE DESIGN ENGINEER IN WRITING. CONTRACTOR SHOULD BE AWARE THAT LOCAL AND STATE AUTHORITIES HAVE JURISDICTION AND APPROVALS MUST BE OBTAINED FROM THE APPROPRIATE AUTHORITY PRIOR TO THE IMPLEMENTATION OF THE "FIELD CHANGE." CHA, INC. ASSUMES NO LIABILITY OR RESPONSIBILITY FOR WORK ASSOCIATED WITH FIELD CHANGES COMPLETED WITHOUT REGARD TO THE "FIELD CHANGE" PROCEDURE.
- 8. RELOCATION OF ANY UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROPRIATE UTILITY COMPANY AND/OR REGULATORY AGENCY.
- 9. \*\*\* DIG SAFE NOTE \*\*\* IN ACCORDANCE WITH MGL. CH. 82, SEC. 40 INCLUDING AMENDMENTS, ALL CONTRACTORS SHALL NOTIFY UTILITY COMPANIES AND GOVERNMENT AGENCIES, IN WRITING, OF THE INTENT TO EXCAVATE, BLAST, DEMOLISH, BORE, OR PERFORM OTHER EARTH MOVING OPERATIONS NO LESS THAN 72 HOURS AND NO MORE THAN 30 DAYS PRIOR TO THE COMMENCEMENT OF SUCH WORK (EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS) OR CALL "DIG SAFE" AT 1-888-DIG-SAFE.
- 10. ADDITIONAL BENCHMARKS TO BE SET BY CONTRACTOR PRIOR TO CONSTRUCTION TO ENSURE QUALITY WORKMANSHIP.
- 11. ANY SEDIMENTATION BASINS SHOULD RECEIVE PERIODIC MAINTENANCE DURING CONSTRUCTION TO REMOVE DEPOSITED SILTS AND DEBRIS TO ENSURE PROPERTY DRAINAGE AND SETTLING OF PARTICULATE MATTER.
- 12. ALL MANHOLE COVERS FOR CROSS-COUNTRY LOCATIONS OR IN PUBLIC GATHERING LOCATIONS SHALL BE FITTED WITH BOLT LOCKS OR EQUIVALENT.
- 13. UNLESS OTHERWISE LABELED, ALL REINFORCED CONCRETE PIPE, RCP, SHALL BE CLASS V: ALL DUCTILE IRON PIPE SHALL BE CEMENT LINED CLASS 52; ALL PVC SEWER SHALL BE SDR35. ALL HDPE PIPE TO BE HDPE STORM (WATERTIGHT JOINTS).

#### SURVEY NOTES:

- 1. THE EXISTING CONDITIONS INFORMATION SHOWN HEREON ARE COMPILED FROM VARIOUS PARTIAL SURVEYS OF THE SITE PERFORMED BY CHA CONSULTING, INC. AND PLANS OF RECORD. THERE MAY BE ADDITIONAL SITE FEATURES THAT EXIST THAT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
- 2. ALL DEED REFERENCES ARE TO PLYMOUTH COUNTY REGISTRY OF DEEDS UNLESS OTHERWISE NOTED.
- 3. LOCUS OWNER OF RECORD:

RIVERWAY CONDOMINIUM TRUST DEED BOOK 36461 PAGE 213 PARCEL ID: 53-3-2-C

- 4. TOPOGRAPHY, CONTOURS AND BENCHMARKS ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAVD88). TEMPORARY BENCHMARKS, REFERENCED TO THE DATUM ARE INDICATED ON THE SURVEY. IN THE EVENT THAT BENCHMARKS (TBM'S), ESTABLISHED FOR THIS PROJECT AND PUBLISHED ON THIS SURVEY ARE DESTROYED, NOT RECOVERABLE OR A DISCREPANCY IS FOUND, THE USER SHOULD NOTIFY THIS FIRM IN WRITING PRIOR TO COMMENCING OR CONTINUING ANY WORK.
- 5. THE PROJECT AREA IS LOCATED IN FLOOD ZONES "AE" & "X" AS SHOWN ON FLOOD INSURANCE RATE MAP FOR PLYMOUTH COUNTY, COMMUNITY PANEL NUMBER 25023C0136K, EFFECTIVE DATE NOVEMBER 4, 2016.
- 6. LOCATION OF SUBSURFACE UTILITIES SHOWN HEREON ARE APPROXIMATE AND ADDITIONAL UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THIS PLAN. LOCATIONS ARE COMPILED FROM UTILITY PLANS OF RECORD AND DIG-SAFE FIELD MARKINGS. RIM AND INVERT INFORMATION HAS BEEN COMPILED AND FIELD VERIFIED WHERE POSSIBLE. THIS INFORMATION IS NOT TO BE USED FOR CONSTRUCTION. PRIOR TO ANY CONSTRUCTION, CONTACT DIG-SAFE (1-800-344-7233) TO FIELD VERIFY LOCATION OF ALL UTILITIES.

#### SITE WORK

1. CAUTION - NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON DESIGN PLANS AND LIMITED AS-BUILT INFORMATION. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS (EXCLUSIVE OF SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS) PRIOR TO ANY EXCAVATION BLASTING, DEMOLITION, BORING, OR OTHER EARTH MOVING OPERATIONS TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS AT NO ADDITIONAL EXPENSE TO OWNER.

- 2. FILL MATERIAL
- A. ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH, AND DEBRIS PRIOR TO FILL PLACEMENT.
- B. PLACE APPROPRIATE FILL MATERIAL AS DESIGNATED BY THE GEOTECHNICAL ENGINEER IN HORIZONTAL LAYERS NOT EXCEEDING EIGHT INCHES (8") IN LOOSE DEPTH AND COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT TO THE GREATER OF:
- B.1. ADJACENT UNDISTURBED SOIL, OR
- B.2. 95% OF THE MAXIMUM DRY DENSITY OF THE EMBANKMENT MATERIAL AS DETERMINED BY AASHTO STANDARD METHOD T99, METHOD C.

#### SITE WORK cont.

#### 3. FINISH GRADING

- A. GRADE ALL AREAS WHERE FINISH GRADE ELEVATIONS ARE INDICATED ON DRAWINGS, OTHER THAN PAVED AREAS AND BUILDINGS, INCLUDING EXCAVATED AREAS, FILLED AND TRANSITION AREAS, AND LANDSCAPED AREAS. GRADED AREAS SHALL BE UNIFORM AND SMOOTH, FREE FROM DEBRIS, OR IRREGULAR SURFACE CHANGES. FINISHED SUBGRADE SURFACE SHALL NOT BE MORE THAN 0.10 FEET ABOVE OR BELOW ESTABLISHED SUBGRADE ELEVATIONS, AND ALL GROUND SURFACES SHALL VARY UNIFORMLY BETWEEN INDICATED ELEVATIONS. FINISH DITCHES SHALL BE GRADED TO ALLOW FOR PROPER DRAINAGE WITHOUT PONDING AND IN A MANNER THAT WILL MINIMIZE EROSION POTENTIAL
- B. GRADE SURFACE TO MATCH ADJACENT GRADES AND TO PROVIDE FLOW TO SURFACE DRAINAGE STRUCTURES, OR GRADE AS DESIGNATED ON THE PLANS AFTER FILL PLACEMENT AND COMPACTION.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR GENERAL CLEANUP OF THE PROJECT ON A DAILY BASIS AND AT THE COMPLETION OF THE PROJECT. OPEN TRENCHES, DITCHES, EXCAVATIONS, ETC. SHALL NOT BE PERMITTED TO BE LEFT OPEN OVERNIGHT, CONTRACTOR, WILL BACKFILL OR UTILIZE SUITABLE STEEL PLATES FOR THE SECURING OF THE PROJECT SITE PRIOR TO CEASING WORK EACH DAY.
- 5. APPROPRIATE TRAFFIC CONTROL. I.E. SIGNAGE, BARRICADES, AND OTHER MEANS, WILL BE SUPPLIED BY THE CONTRACTOR IN ACCORDANCE WITH ALL FEDERAL. STATE AND LOCAL AGENCIES AT NO ADDITIONAL COST TO THE OWNER.
- 6. UNDER NO CIRCUMSTANCES MAY ANY UTILITY, STRUCTURE, AND/OR REPAIR BE BACKFILLED UNLESS INSPECTED AND APPROVED BY THE TOWN OFFICIALS AND/OR REPRESENTATIVE. RECEIPT OF APPROVAL TO BACKFILL WILL NOT RELEASE THE CONTRACTOR FROM ANY RESPONSIBILITY OR LIABILITY FOR PERFORMANCE TESTS REQUIRED AS PART OF THIS PROJECT.
- 7. PROPER SHORING AND TRENCH BOXES SHALL BE UTILIZED AS REQUIRED BY LOCAL, STATE, AND FEDERAL REGULATORY AGENCIES TO PROVIDE A SAFE WORKING ENVIRONMENT. SHORING SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MASSACHUSETTS WITH EXPERIENCE IN SHORING DESIGN.
- 8. ALL UTILITIES DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR IN ACCORDANCE WITH THE APPLICABLE UTILITY PURVEYOR AT NO ADDITIONAL COST TO THE OWNER.

#### SITE DEMOLITION, EROSION & SEDIMENTATION CONTROL

1. ALL TEMPORARY STOCKPILE AREAS SHALL HAVE EROSION CONTROLS (FILTER SOCKS AND SILT FENCE) AROUND THE PERIMETER.

2. UNDERGROUND UTILITIES MAY EXIST THAT ARE NOT SHOWN ON THIS PLAN. DIG SAFE MUST BE NOTIFIED (1-800-344-7233) AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION.

3. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN PLACE AND OBSERVED PRIOR TO ANY WORK STARTING ON THE PROJECT.

4. SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON A PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY. WHEN WASHING IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE TO A PUBLIC ROADWAY. IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ALL FINES IMPOSED FOR TRACKING ONTO PUBLIC ROADS SHALL BE PAID BY THE CONTRACTOR.

TEMPORARY SEEDING OR OTHER METHOD OF STABILIZATION SHALL BE INITIATED WITHIN 14 DAYS OF THE LAST DISTURBANCE ON ANY AREA OF THE SITE, UNLESS ADDITIONAL CONSTRUCTION OF THE AREAS IS EXPECTED WITHIN 21 DAYS OF THE LAST DISTURBANCE.

6. UPON COMPLETION OF FINE GRADING, ALL AREAS NOT OTHERWISE PERMANENTLY STABILIZED SHALL BE SEEDED AND MAINTAINED UNTIL A UNIFORM COVERAGE OF 80%± MINIMUM DENSITY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE. IS ACHIEVED.

7. MAINTENANCE - EROSION CONTROLS SHALL BE REPAIRED OR REPLACED AS INSPECTION DEEMS NECESSARY OR AS DIRECTED BY THE ENGINEER OR ARCHITECT. ACCUMULATED SILT AT ANY EROSION CONTROL DEVICE SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6", AND SHALL BE DISTRIBUTED ON-SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL SILTATION.

8. ANY CONTRACTOR IS RESPONSIBLE FOR REESTABLISHING ANY EROSION CONTROL DEVICE WHICH HE DISTURBS. EACH CONTRACTOR SHALL NOTIFY THE ENGINEER/ARCHITECT OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES WHICH MAY LEAD TO UNAUTHORIZED DISCHARGE OR STORM WATER POLLUTION, SEDIMENTATION OR OTHER POLLUTANTS, UNAUTHORIZED POLLUTANTS INCLUDE, BUT ARE NOT LIMITED TO, EXCESS CONCRETE DUMPING OR CONCRETE RESIDUE, PAINTS, SOLVENTS, GREASE, FUEL, AND LUBE OIL, PESTICIDES, ANY SOLID WASTE MATERIALS.

9. ALL SIDE SLOPES SHALL BE SEEDED WITH GRASS OR INSTALL JUTE NETTING TO PREVENT EROSION. SIDE SLOPES ALONG THE PERIMETER OF THE DEVELOPED AREA SHALL BE STABILIZED IMMEDIATELY FOLLOWING CONSTRUCTION

10. MAINTENANCE: EROSION CONTROLS SHALL BE REPAIRED OR REPLACED AS INSPECTION DEEMS NECESSARY OR AS DIRECTED BY THE ENGINEER OR ARCHITECT. ACCUMULATED SILT AT ANY EROSION CONTROL DEVICE SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6", AND SHALL BE DISTRIBUTED ON-SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL SILTATION.

11. INSPECTIONS: INSPECTIONS ARE TO BE PERFORMED BY QUALIFIED PERSONNEL. DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED, AREAS USED FOR STORAGE, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, MUST BE INSPECTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF A STORM EVEN OF 0.5 INCHES OR GREATER. STABILIZED AREAS ARE TO BE INSPECTED ONCE PER MONTH DISTURBED AREAS AND STORAGE AREAS EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF OR POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM. CONTROL MEASURES SHALL BE OBSERVED TO ENSURE THEY ARE WORKING PROPERLY. DISCHARGE LOCATIONS AND POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER CONTROLS ARE PREVENTING SIGNIFICANT IMPACT. BASED ON THE RESULTS OF THE ABOVE INSPECTIONS, ANY NECESSARY CHANGES TO THE PLAN WILL BE MADE WITHIN 7 DAYS OF THE INSPECTION. THE CHANGES MUST BE IMPLEMENTED IN THE FIELD BEFORE THE NEXT STORM EVEN IF PRACTICABLE, OTHERWISE AS SOON AS POSSIBLE.

12. INSTALL AND MAINTAIN CATCH BASIN INSERTS IN ALL EXISTING CATCH BASINS.

13. STOCKPILES ARE TO BE AT LEAST 100 FEET FROM WETLAND AREAS. STOCKPILES NOT TO BE REUSED WITHIN 30 DAYS ARE TO BE STABILIZED WITH SEED OR MULCH.

14. POTENTIAL STOCK PILE AREA TO BE PROTECTED WITH EROSION CONTROL MEASURES.

15. THE CONTRACTOR SHALL HAVE A WATER TRUCK ON-SITE AT ALL TIMES AND SHALL PROVIDE TEMPORARY PLANTINGS OR OTHER COVERINGS SUCH AS WOOD CHIPS TO MINIMIZE THE AMOUNT OF DUST LEAVING THE PREMISES.

16. IF DEWATAERING IS REQUIRED, CONTRACTOR TO UTILIZE SEDIMENTATION BASINS PRIOR TO DISCHARGE. TEMPORARY SEDIMENT BASINS SHALL BE SEEDED AND MAINTAINED UNTIL A UNIFORM COVERAGE OF 80%± MINIMUM DENSITY, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, IS ACHIEVED PRIOR TO RECEIVING STORM WATER RUNOFF.

17. EQUIPMENT WILL BE REFUELED AND LUBRICATED OUTSIDE OF THE 100-FOOT BUFFER ZONE TO ALL WATERBODIES AND WETLANDS.

#### **LEGEND - PROPOSED**

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	MAJOR CONTOUR	
	MINOR CONTOUR	0
	DOMESTIC WATER	<b>†</b>
<i>FP</i>	FIRE PROTECTION	M
— — UE— — ——	UNDERGROUND ELECTRIC	Ø
<i>s</i>	SANITARY SEWER	Ο
FM	FORCEMAIN	
sr	STORM SEWER	● DH
	BIORETENTION LIMIT LINE	CB/DH
- — GAS — — —	NATURAL GAS	
x x	CHAINLINK FENCE	

STORM SEWER DRAIN BASIN STORM MANHOLE HYDRANT ASSEMBLY LINE VALVE POST INDICATOR VALVE SANITARY MANHOLE ELECTRIC MANHOLE DRILL HOLE CONCRETE BOUND w/DRILL HOLE

#### **SEWER**

- EQUAL.

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THESE NOTES ARE INTENDED TO SUPPLEMENT THE LOCAL REQUIREMENTS FOR MATERIALS AND WORKMANSHIP.

SEWER MAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST LOCAL AND STATE CODES INCLUDING THE RECOMMENDATIONS OF THE AMERICAN WATER WORKS ASSOCIATION AND THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION TECHNICAL REPORT 16. CONSTRUCTION SHALL PROCEED IN A WORKMANLIKE MANNER WITH STATE-OF-THE-ART CONSTRUCTION TECHNIQUES.

3. THE CONTRACTOR SHALL INSULATE SEWER MAINS AS INDICATED ON THE PLANS OR WHEN DESIGN OR CONSTRUCTION ENCLMBRANCES DICTATE ALIGNMENT TO OCCUR ABOVE THE FROST LINE. PROCUREMENT AND INSTALLATION OF PIPE INSULATION SHALL CONFORM TO THE REQUIREMENTS LISTED IN THE LATEST MASS. DOT STANDARD SPECIFICATIONS FOR SECTION 301.60P AND MATERIAL SPECIFICATION M9.11.1. THE PIPE INSULATION SHALL BE PRE-MOLDED TYPE CELLULAR GLASS INSULATION WITH ALUMINUM JACKET CONFORMING TO THE LATEST REQUIREMENTS OF ASTM-522 OR APPROVED

4. THE DEFLECTION IN ALL GRAVITY SEWER PIPE SHALL BE TESTED USING A GO, NO-GO MANDREL TEST TO ENSURE THAT PROPER INSTALLATION HAS OCCURED. TEST SHALL CONFORM WITH PIPE MANUFACTURER'S RECOMMENDATIONS AND SHALL NOT INDICATE MORE THAN 5.0% DEFLECTION, U.O.N.

5. ALL TESTING SHALL CONFORM TO APPLICABLE TOWN OR DEPARTMENT REQUIREMENTS AND THE RECOMMENDATIONS OF THE AMERICAN WATER WORKS ASSOCIATION AND THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION TECHNICAL REPORT 16.

6. EACH SEGMENT OF THE SEWER MAIN INCLUDING EXISTING SEWER FORCE MAIN AND MANHOLES SHALL BE LEAK TESTED AND OBSERVED BY A REPRESENTATIVE OF THE TOWN AND/OR ENGINEER.

7. SAW CUT EXISTING PAVEMENT TO INSTALL PROPOSED SEWER. MATCH EXISTING PAVEMENT THICKNESS.

8. INVERTS AND SLOPES FOR PROPOSED PIPES DETERMINED USING AVAILABLE EXISTING INFORMATION. INVERTS TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE ENGINEER SHOULD BE NOTIFIED IF INVERTS VARY FROM THOSE SHOWN ON THE PLAN.

9. UNLESS OTHERWISE AUTHORIZED, SEWER WORK PERFORMED WITHIN THE RIGHT OF WAY SHALL BE PERFORMED BY CONTRACTORS APPROVED BY THE TOWN OF SCITUATE. CONTRACTOR IS RESPONSIBLE FOR OBTAINING LICENSING WITH THE TOWN OF SCITUATE.

10. CONTRACTOR SHALL NOTIFY THE SCITUATE TOWN ENGINEER AND ENGINEER 48 HOURS BEFORE THE CONNECTION IS READY FOR INSPECTION AND TIE-IN TO THE PUBLIC SEWER. THE TIE-IN SHALL BE MADE UNDER THE SUPERVISION OF THE TOWN ENGINEER OR THEIR REPRESENTATIVE AND IN ACCORDANCE WITH THE TOWN SPECIFICATIONS.

11. AN AS-BUILT DRAWING OF THE WORK SHALL BE PROVIDED TO THE ENGINEER AND OWNER AT THE COMPLETION OF THE PROJECT. ALL PHOTOGRAPHS OF THE WORK SHALL BE PROVIDED IN DIGITAL FORMAT FOR THE ENGINEER AND OWNERS RECORDS.

12. WHEN WATER IS PRESENT IN THE TRENCH, A SUMP OF CRUSHED STONE SHALL BE CONSTRUCTED AND WATER SHALL BE PUMPED, IN ACCORDANCE WITH CONSERVATION COMMISSION REGULATION AND REQUIREMENTS TO A SEDIMENTATION BASIN. THE TRENCH SHALL BE KEPT DRY AT ALL TIMES DURING CONSTRUCTION. AT NO TIME SHALL GROUNDWATER IN THE TRENCH BE ALLOWED TO ENTER THE SYSTEM. AT TIMES WHEN PIPE INSTALLATION IS NOT IN PROGRESS, THE OPEN ENDS OF THE PIPE SHALL BE CLOSED WITH TEMPORARY, WATERTIGHT PLUGS.

13. CONTRACTOR TO COORDINATE WITH FR MAHONY FOR ELECTRICAL INFORMATION RELATED TO CONTROLS FOR THE PUMP STATIONS AND BACKUP POWER. CONTRACTOR TO COORDINATE WITH OWNER ON LOCATIONS FOR THE CONTROL PANELS AND BACKUP GENERATORS FOR THE PUMP STATIONS.

14. 3RD PARTY TESTING - CONTRACTOR IS RESPONSIBLE FOR HIRING AND PAYING FOR A 3RD PARTY TESTING COMPANY TO TEST FORCE MAIN AND GRAVITY MAIN INSTALLATION. REPORTS FROM THE TESTING COMPANY SHALL BE SENT FROM THE TESTING COMPANY DIRECTLY TO THE OWNER AND ENGINEERS.

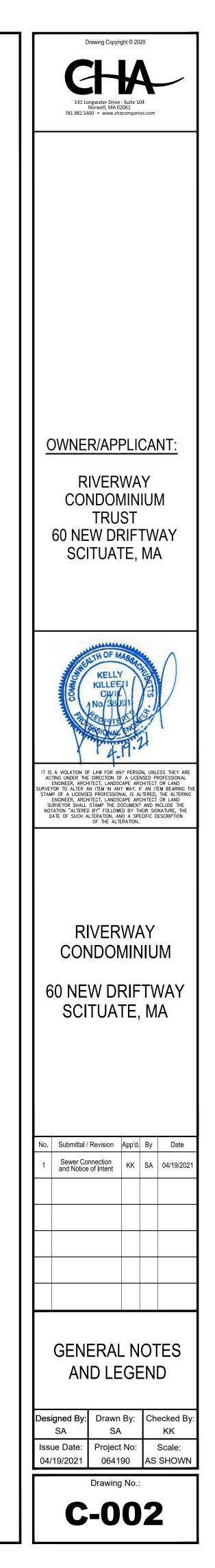
14.1. CONTRACTOR RESPONSIBLE FOR TESTING THE ENTIRE SEWER SYSTEM INCLUDING EXISTING FORCE MAIN AND EXISTING SEWER MANHOLE.

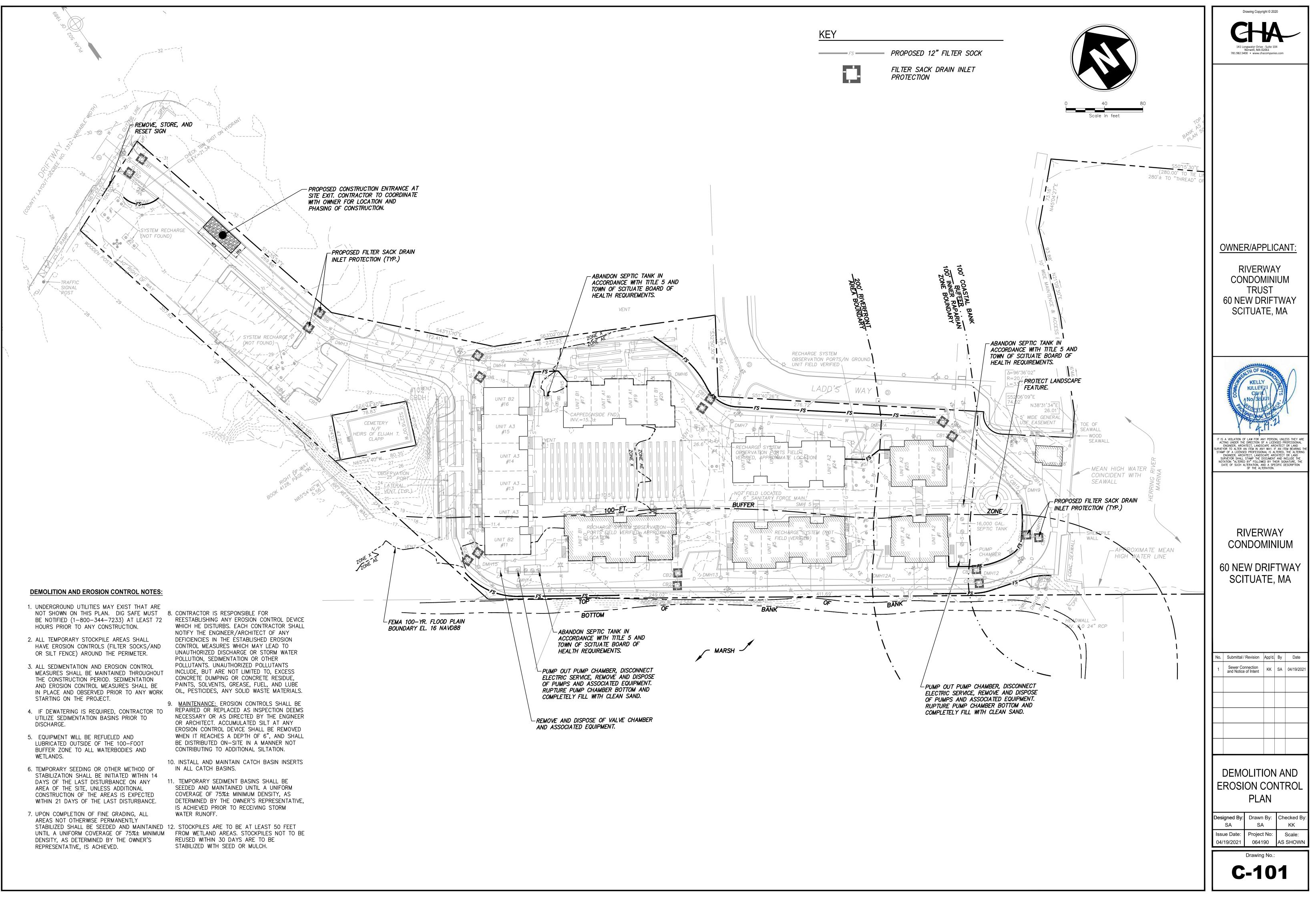
14.2. EXISTING FORCE MAIN TO BE TESTED AND RESULTS REPORTED TO OWNER AND ENGINEERS.

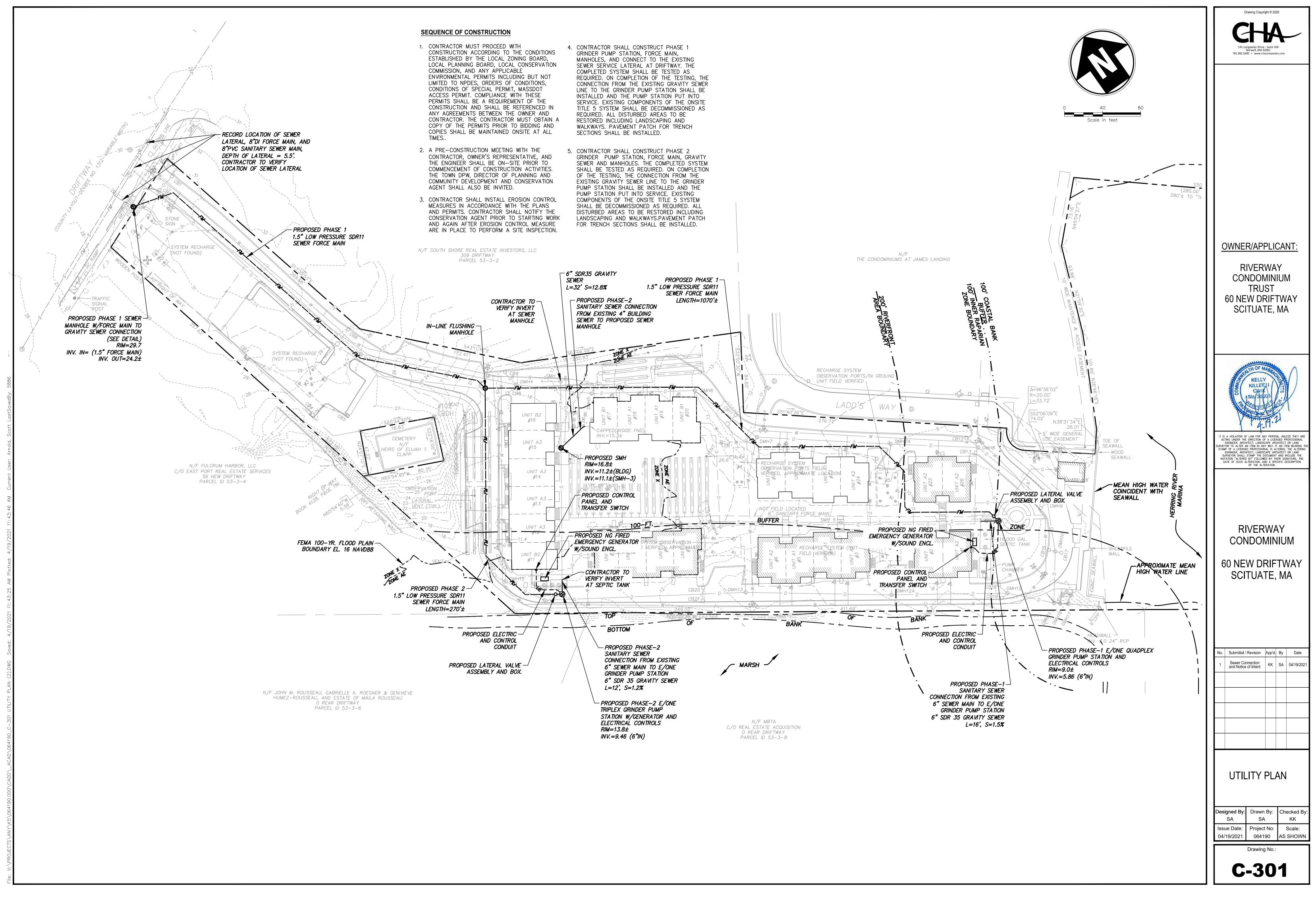
14.3. AFTER INSTALLATION AND CONNECTING TO EXISTING FORCE MAIN, THE ENTIRE FORCE MAIN SYSTEM SHOULD BE TESTED AS A WHOLE. CONTRACTOR TO PROVIDE PLAN FOR TESTING ENTIRE SYSTEM (INCLUDING PUMPS) FOR REVIEW AND APPROVAL BY OWNER AND ENGINEER.

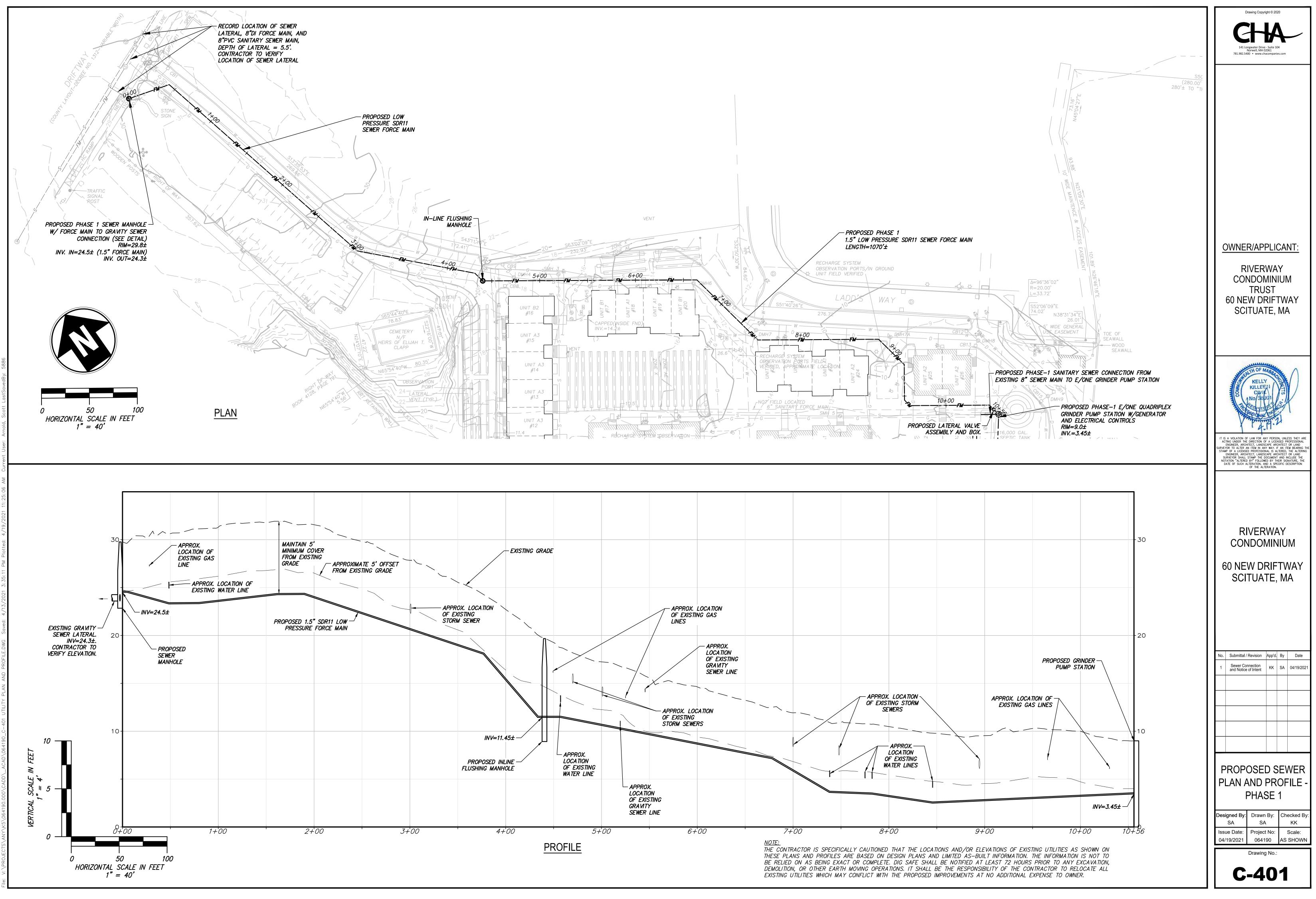
#### **LEGEND - EXISTING**

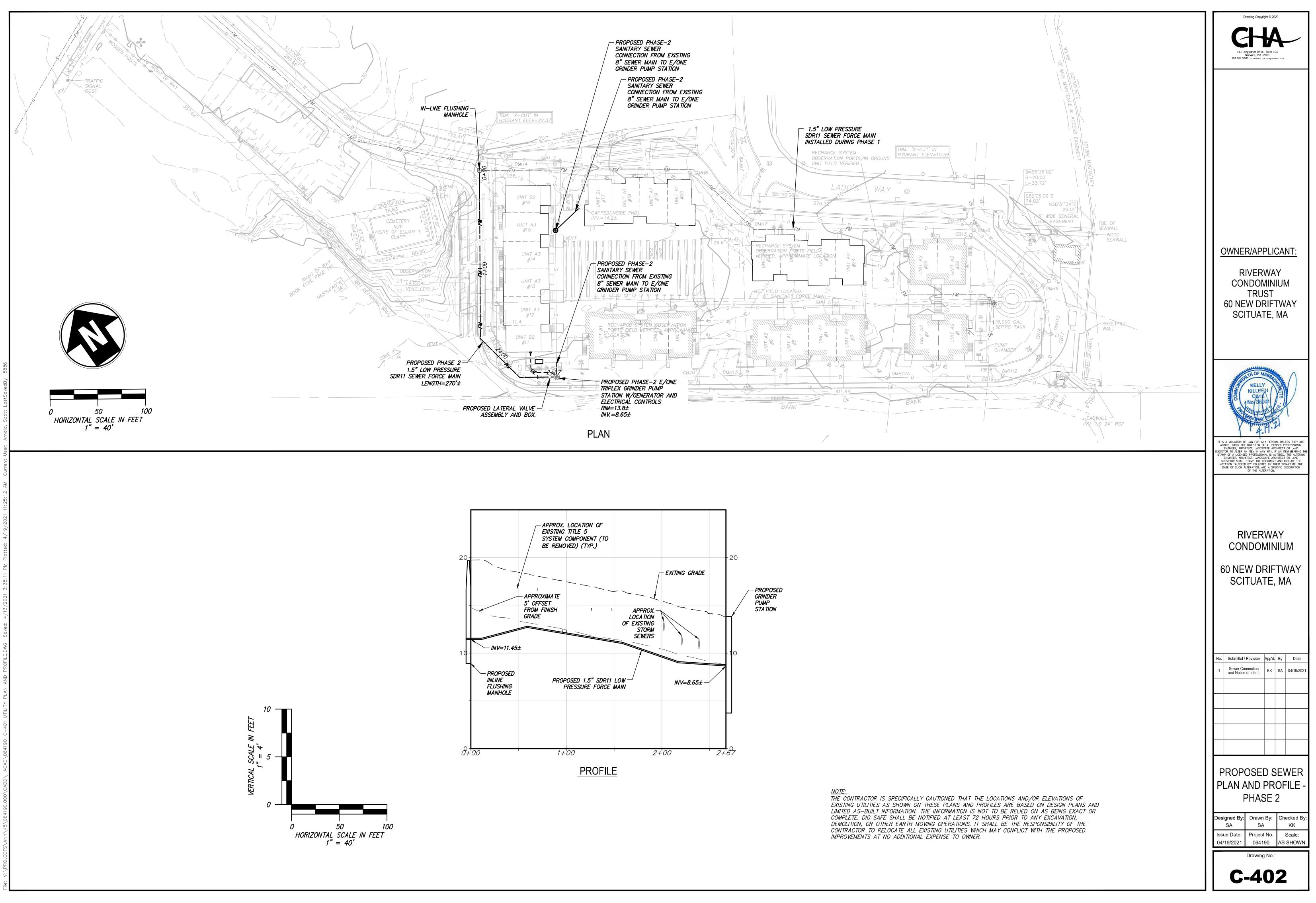
	LOCUS PROPERTY LINE	ET	ELECTRIC TRANSFORMER
	RIGHT OF WAY LINE	EC	ELECTRIC CONDUIT
	ABUTTER LINE	EHH	ELECTRIC HAND HOLE
	LEASE LINE	EM	ELECTRIC METER
— 315 ————	MAJOR CONTOUR	JUPR	UTILITY POLE W/RISER
- 316	MINOR CONTOUR	<del>}_</del>	GUY ANCHOR AND WIRE
— он	OVERHEAD WIRE	*	LIGHT POLE
0 <i>CLF</i>	CHAIN LINK FENCE (CLF)	ф.	GROUND LIGHT
WDF	WOODEN FENCE (WDF)	$\bigcirc$	MONITORING WELL
Wp	UNDERGROUND WATER LINE		DECIDUOUS TREE
D	UNDERGROUND DRAIN LINE	and a start	ARBORVITAE TREE
G	UNDERGROUND GAS LINE		DO NOT ENTER SIGN
—— E ———	UNDERGROUND ELECTRIC LINE	ъ́с	IRRIGATION CONTROL VALVE
S	UNDERGROUND SEWER LINE	XWALK	PEDESTRIAN CROSSING
T	UNDERGROUND TELEPHONE LINE	FFE	FINISH FLOOR ELEVATION
× 31.0	SPOT ELEVATION	EOP	EDGE OF PAVEMENT
CTB	CATCH BASIN	CC	CONCRETE CURB
D DMH	DRAIN MANHOLE	GC	GRANITE CURB
(S) SMH	SEWER MANHOLE	CWK	CONCRETE WALK
$\bigcirc$	TELEPHONE MANHOLE	CONC	CONCRETE
E	ELECTRIC MANHOLE	CRW	CONCRETE RETAINING WALL
GM	GAS METER	HRLM	METAL HANDRAIL
¥	WALL HYDRANT	ROH	ROOF OVERHANG
жу.	HYDRANT	SYL	SINGLE YELLOW LINE
Ď	DOWN SPOUT	AG	ABOVE GROUND
GV	GAS GATE	⊐ SBDH/CBDH	STONE BOUND/CONC. BOUND
	WATER GATE		w/DRILL HOLE

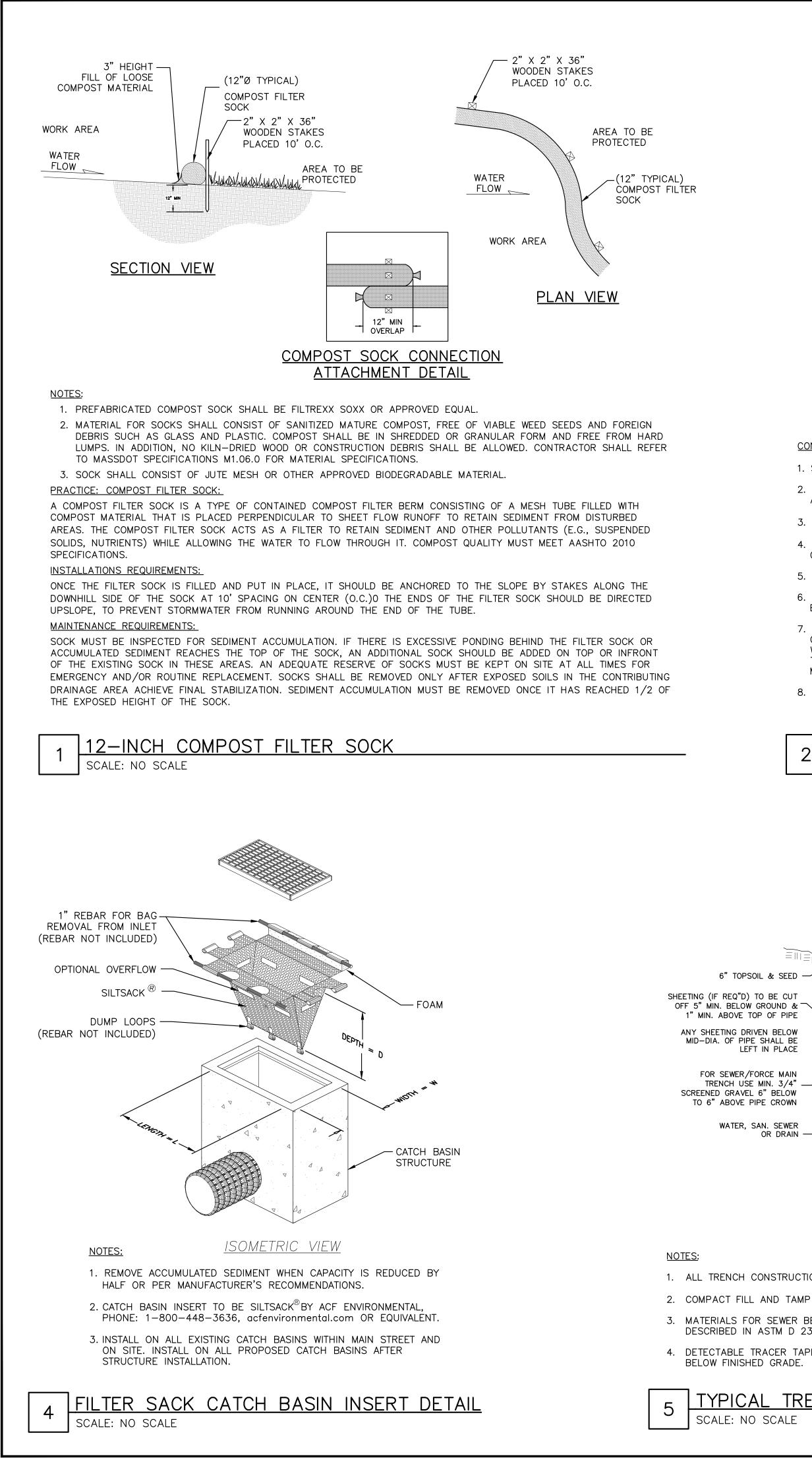








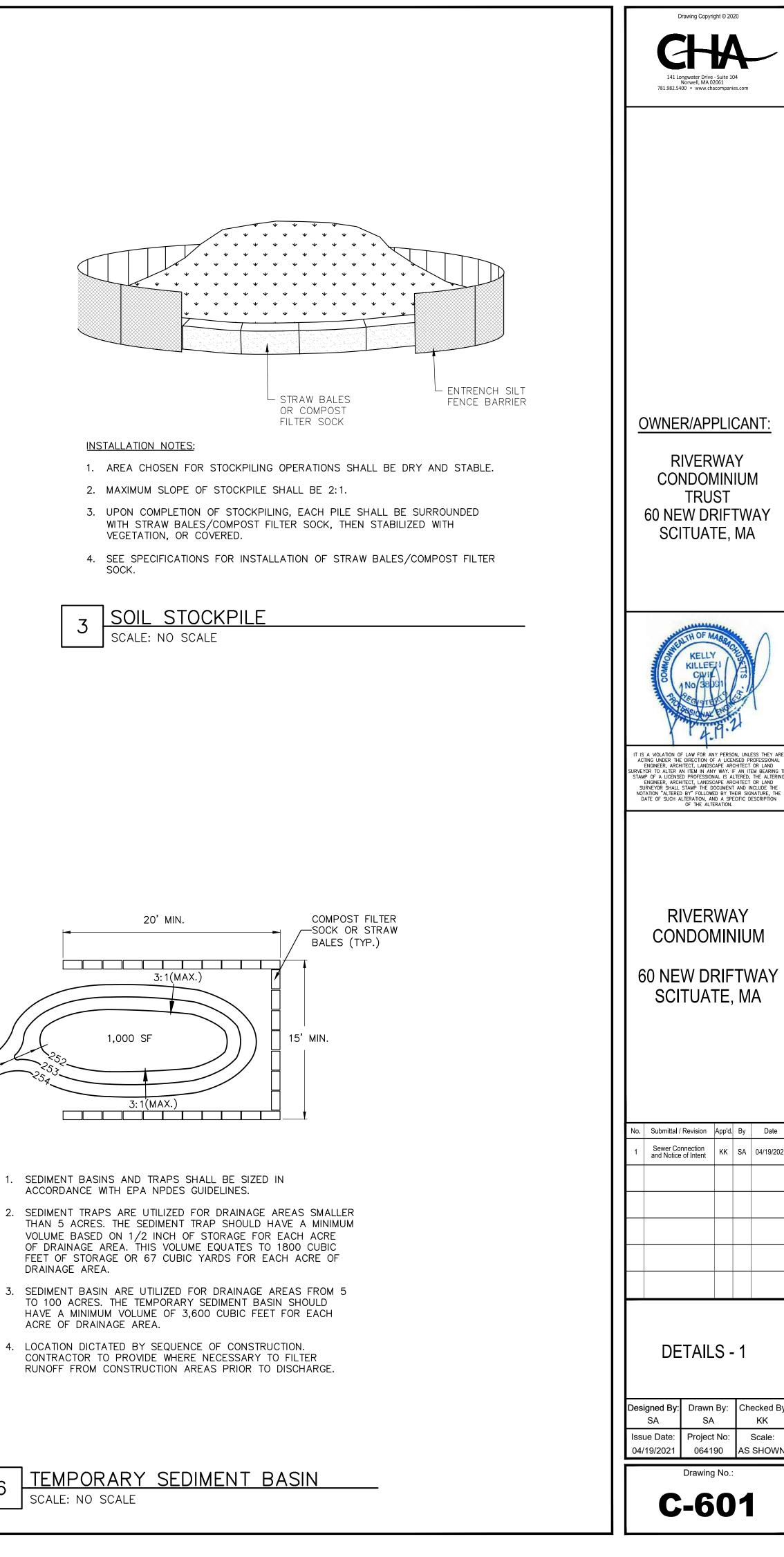


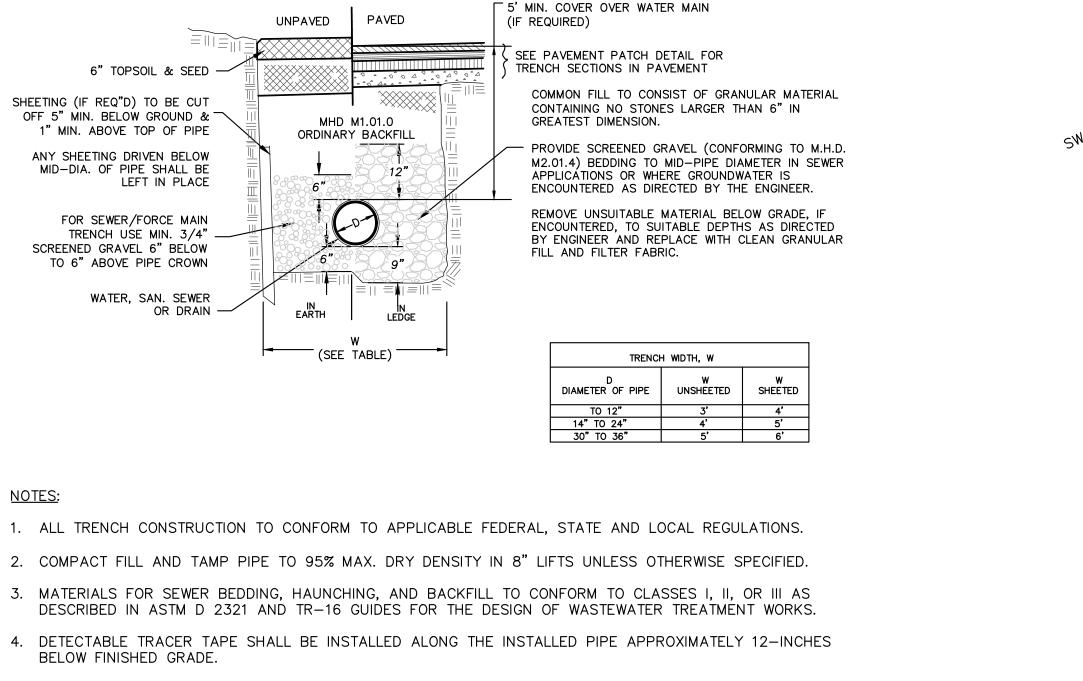


#### TYPICAL TRENCH SECTION

SCALE: NO SCALE

6





5. FILTER CLOTH: SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. 6. 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 INSTALLED. 7. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OF 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 AND ON AN ON GOING BASIS. 8. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED.

STABILIZED CONSTRUCTION ENTRANCE

MAINTAIN 5' MIN. COVER

OVER FORCE MAIN

- 2. LENGTH: RECOMMEND GREATER THAN OR EQUAL TO 50 FEET WHERE SOILS ARE SANDS AND GRAVELS AND 100 FEET IN SILTS AND CLAYS. 3. THICKNESS: NOT LESS THAN SIX (6) INCHES. 4. WIDTH: FIFTEEN (15) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OF EGRESS OCCURS.
- 12' <u>PLAN</u> SEE SITE PLAN -EXISTING PAVEMENT 6" STONE (MIN.) ۰**۵** FILTER CLOTH-MOUNTABLE BERM

SEE SITE PLAN

• • •

5 MIN.

EXISTING .

PAVEMENT 🔪

#### **CONSTRUCTION SPECIFICATIONS:**

SCALE: NO SCALE

0 Ζ EXISTING

GROUND

- 1. STONE SIZE: USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- **SECTION**

- (OPTIONAL SEE NOTE 6)

