SHINGLE MILL MULTI-FAMILY DEVELOPMENT

75 - 79 POND STREET ROCKLAND, MASSACHUSETTS COMPREHENSIVE PERMIT DRAWINGS JULY 13, 2020 LAST REVISED: FEBRUARY 19, 2021

	LIST OF DRAWINGS	
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	02/19/2021
G-101	GENERAL NOTES, ABBREVIATIONS & LEGEND SHEET	02/19/2021
1	EXISTING CONDITIONS SHEET	01/29/2021
2	EXISTING CONDITIONS SHEET	01/29/2021
3	EXISTING CONDITIONS SHEET	01/29/2021
4	EXISTING CONDITIONS SHEET	01/29/2021
C-101.1	EXISTING CONDITIONS / DEMOLITION PLAN	02/19/2021
C-101.2	EXISTING CONDITIONS / DEMOLITION PLAN	02/19/2021
C-101.3	EXISTING CONDITIONS / DEMOLITION PLAN	02/19/2021
C-102	OVERLAY SITE LAYOUT PLAN	02/19/2021
C-102.1	SITE PLAN	02/19/2021
C-102.2	SITE PLAN	02/19/2021
C-102.3	SITE PLAN	02/19/2021
C-103.1	GRADING, DRAINAGE, & EROSION CONTROL PLAN	02/19/2021
C-103.2	GRADING, DRAINAGE, & EROSION CONTROL PLAN	02/19/2021
C-103.3	GRADING, DRAINAGE, & EROSION CONTROL PLAN	02/19/2021
C-104.1	UTILITY PLAN	02/19/2021
C-104.2	UTILITY PLAN	02/19/2021
C-201	DRIVEWAY PLAN & PROFILE	02/19/2021
C-202	DRIVEWAY SECTION VIEW	02/19/2021
C-203	DRIVEWAY SECTION VIEW	02/19/2021
C-204	DRIVEWAY SECTION VIEW	02/19/2021
C-205	DRIVEWAY SECTION VIEW	02/19/2021
C-206	DRIVEWAY SECTION VIEW	02/19/2021
C-207	DRIVEWAY SECTION VIEW	02/19/2021
C-208	DRIVEWAY SECTION VIEW	02/19/2021
C-501	EROSION CONTROL NOTES AND DETAILS SHEET	02/19/2021
C-502	DETAILS SHEET	02/19/2021
C-503	DETAILS SHEET	02/19/2021
C-504	DETAILS SHEET	02/19/2021
C-505	DETAILS SHEET	02/19/2021
C-506	DETAILS SHEET	02/19/2021
C-507	DETAILS SHEET	02/19/2021
C-701.1	FIRE TRUCK TURNING PLAN	02/19/2021
C-701.2	FIRE TRUCK TURNING PLAN	02/19/2021



AERIAL PROJECT LOCATION MAP

APPLICANT:

Shinglemill, LLC 4 First Street Bridgewater, Massachusetts 02324

OWNER:

Caparrotta Maurice Trustee 195 Libbey Parkway Unit #2 Weymouth, Massachusetts 02189

PREPARED FOR:

Jones Street Resdential 100 High Street, Suite 2500 Boston, Massachusetts 02110

PREPARED BY:

Tighe&Bond
Engineers | Environmental Specialists



UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAYS WITH THE TOWN OF ROCKLAND.

- THE CONTRACTOR SHALL EMPLOY A MASSACHUSETTS LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES AND COMPLY WITH
- THE CONDITIONS OF ALL OF THE PERMIT APPROVALS. THE CONTRACTOR SHALL OBTAIN AND PAY FOR AND COMPLY WITH ADDITIONAL PERMITS NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
- THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.
- ALL WORK SHALL CONFORM TO THE TOWN OF ROCKLAND EXCAVATION AND CONSTRUCTION SPECIFICATIONS, STANDARD SPECIFICATIONS AND WITH THE COMMONWEALTH OF MASSACHUSETTS HIGHWAY DEPARTMENT "STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES," 1988 EDITION AS AMENDED.
- CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A MASSACHUSETTS LICENSED LAND SURVEYOR.
- .. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
- SEE EXISTING CONDITIONS PLANS FOR BENCH MARK INFORMATION
- 13. PRIOR TO OCCUPANCY APPLICANT SHALL PROVIDE TEST RESULTS TO THE TOWN OF ROCKLAND FIRE AND POLICE DEPARTMENT DEMONSTRATING THAT ALL REQUIRED FREQUENCIES CAN BE TRANSMITTED AND RECEIVED WITHOUT INTERFERENCE. IF THE RESULTS ARE NOT SUFFICIENT THE APPLICANT SHALL PROVIDE A BI-DIRECTIONAL AMPLIFIER PER THE ROCKLAND FIRE DEPARTMENT REQUIREMETNS.

EXISTING CONDITIONS PLAN NOTES:

- TOPOGRAPHIC INFOMATION IS A RESULT OF A COMBINATION OF LIDAR TERRAIN AND ELEVATION DATA FROM MASSGIS, AND AN ON THE GROUND TOPOGRAPHIC SURVEY PERFORMED BY CONECO ENGINEERS & SCIENTISTS.
- WETLAND DELINEATED BY WETLANDS STRATEGIES, INC. MAY & SEPTEMBER 2018 AND FIELD LOCATED BY ATLANTIC DESIGN ENGINEERS, INC.
- ORDER OF RESOURCE AREA DELINEATION WAS APPROVED BY THE TOWN OF ROCKLAND CONSERVATION COMMISSION ON OCTOBER 23, 2018
- ELEVATIONS REFER TO NAVD 88. LOCUS PROPERTY IN ZONE X AND ZONE A, AS SHOWN ON FLOOD INSURANCE RATE MAP NO.
- 25023C0092J DATED JULY 17, 2012. FLOOD PLAIN LINES SHOWN ON THESE PLANS WERE DIGITIZED FROM THE "REQUEST FOR LETTER OF MAP REVISION, 1 POND STREET, ROCKLAND, MA" DATED JUNE 11, 2013 BY BSC GROUP. THE LETTER OF MAP REVISION CASE. NO. 12-01-2134P WAS ISSUED NOVEMBER 21 2013 AND EFFECTIVE ON THE FEMA MAP APRIL 14, 2014.

DEMOLITION NOTES:

- EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
- ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS ORDINANCES AND CODES.
- COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
- ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER
- SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
- UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY AND TOWN OF ROCKLAND STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
- PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
- . THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO:
- PAVEMENT, UNDER GROUND PIPING, TREES AND LANDSCAPING. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK, CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
- CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A MASSACHUSETTS LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
- . PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INLET PROTECTION BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SACK" BY ACF ENVIRONMENTAL OR EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN EVENT OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED OR SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE BARRIER.
- THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
- . SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.

SITE NOTES:

- 1. PAVEMENT MARKINGS SHALL BE INSTALLED AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, FIRE LANES, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES. ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE PAVEMENT MARKINGS. ALL THERMOPLASTIC PAVEMENT MARKINGS INCLUDING LEGENDS, ARROWS, CROSSWALKS AND STOP BARS SHALL MEET THE REOUIREMENTS OF AASHTO M249. ALL PAINTED PAVEMENT MARKINGS INCLUDING CENTERLINES, LANE LINES AND PAINTED MEDIANS SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F".
- 2. 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.
- 3. SEE DETAILS FOR PAVEMENT MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
- 4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES.
- 5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
- 6. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE, WHITE THERMOPLASTIC AND CONFORM TO CURRENT MUTCD STANDARDS.
- 7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1
- EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE. 8. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS
- CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED. COORDINATE WITH BUILDING
- 10. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW
- 11. COORDINATE ALL WORK ADJACENT TO BUILDING WITH BUILDING CONTRACTOR
- 12. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RETAINING WALL DESIGN FROM STRUCTURAL ENGINEER AND/OR WALL MANUFACTURER. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO CONSTRUCT WALL IN ACCORDANCE WITH DESIGN APPROVED BY THE ENGINEER.
- 13. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- 14. PROPERTY MANAGER WILL BE RESPONSIBLE FOR TIMELY SNOW REMOVAL FROM ALL PRIVATE SIDEWALKS, DRIVEWAYS, AND PARKING AREAS. SNOW REMOVAL WILL BE HAULED OFF-SITE AND LEGALLY DISPOSED OF WHEN NECESSARY.

GRADING AND DRAINAGE NOTES:

1. COMPACTION REQUIREMENTS:

BELOW PAVED OR CONCRETE AREAS TRENCH BEDDING MATERIAL AND

SAND BLANKET BACKFILL BELOW LOAM AND SEED AREAS 90%

- * ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
- 2. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
- 3. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
- 4. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
- 5. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE COMMONWEALTH OF MASSACHUSETTS HIGHWAY DEPARTMENT "STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES," 1988 EDITION AS AMENDED.
- 6. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4'

EROSION CONTROL NOTES:

1. SEE SHEET C-501 FOR GENERAL EROSION CONTROL NOTES AND DETAILS.

UTILITY NOTES:

- COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
- NATURAL GAS NATIONAL GRID
- WATER ABINGTON ROCKLAND JOINT WATER WORKS DEPARTMENT • SEWER - ROCKLAND SEWER DEPARTMENT
- ELECTRIC NATIONAL GRID
- COMMUNICATIONS COMCAST
- 2. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE. 3. ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE
- CHLORINATION AND TESTING WITH THE ROCKLAND WATER DEPARTMENT. 4. ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.
- 5. CONNECTION TO EXISTING WATER MAIN SHALL BE CONSTRUCTED TO ABINGTON & ROCKLAND JOINT WATER WORKS DEPARTMENT STANDARDS.
- 6. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
- 7. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
- 8. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE APPLICABLE UTILITY COMPANIES.
- 9. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING
- CABLES. 10. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
- 11. CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.
- 12. A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS.
- 13. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN
- 14. HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE TOWN OF
- 16. ALL SEWER PIPE WITH LESS THAN 6' OF COVER IN PAVED AREAS OR LESS THAT 4' OF COVER

15. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE TOWN OF ROCKLAND.

- IN UNPAVED AREAS SHALL BE INSULATED. 17. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, AND TRANSFORMER CONSTRUCTION
- WITH POWER COMPANY. 18. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL
- ENGINEER. 19. CONTRACTOR SHALL CONSTRUCT ALL UTILITIES AND DRAINS TO WITHIN 10' OF THE FOUNDATION WALLS AND CONNECT THESE TO SERVICE STUBS FROM THE BUILDING.

LANDSCAPE NOTES:

REFERENCE PLANS:

- "SHINGLEMILL APARTMENTS COMPREHENSIVE PERMIT PLANS" PREPARED BY CONECO ENGINEERS & SCIENTISTS, DATED MAY 14, 2020.
- 2. "WETLAND LOCATION PLAN" PREPARED BY ATLANTIC DESIGN ENGINEERS LAST REVISED

ABBREVIATIONS

AMERICAN ASSOCIATION OF AASHTO STATE HIGHWAY & TRANSPORTATION OFFICIALS ACRES

AMERICANS WITH **DISABILITIES ACT** AGGREGATE BLDG BUILDING

BEST MANAGEMENT PRACTICE(S) BOTTOM OF CURB

BOTTOM OF WALL CB CATCH BASIN CAPE COD BERM

CORRUGATED METAL PIPE CONST CONSTRUCT

DIA DIAMETER DIP DUCTILE IRON PIPE

COORD COORDINATE

DMH

DRAWING ELEV ELEVATION

EDGE OF PAVEMENT FES FLARED END SECTION

DRAINAGE MANHOLE

FINISHED FLOOR HIGH DENSITY POLYETHYLENE HOT MIX ASPHALT

HW HEADWALL HYD HYDRANT INSIDE DIAMETER

INV INVERT LENGTH LINEAR FEET

MAXMAXIMUM MIN MINIMUM MONOLITHIC SIDEWALK /

NATIONAL COOPERATIVE NORTHEAST REGIONAL

CLIMATE CENTER NATURAL RESOURCES CONSERVATION SERVICE

ON CENTER OD OUTSIDE DIAMETER PC POINT OF CURVATURE

PCB PROPOSED CATCH BASIN PROPOSED DRAINAGE MANHOLE

POINT OF INTERSECTION PROPOSED OUTLET

STRUCTURE PROP PROPOSED PSMH PROPOSED SEWER MANHOLE

POINT OF TANGENCY PVC POLYVINYL CHLORIDE PVMT PAVEMENT

RADIUS ROOF LEADER RL

ROW RIGHT OF WAY SQUARE FEET SOCIETY OF SOIL SCIENTISTS

OF NORTHERN NEW ENGLAND

STD STANDARD TBR TO BE REMOVED TOC TOP OF CURB

TOW TOP OF WALL TYP TYPICAL

UNIFIED SOIL CLASSIFICATION SYSTEM UNITED STATES DEPARTMENT

OF AGRICULTURE W WIDTH

WITH

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LEGEND

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44.45---X

44.45 —X

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EXISTING CHAINLINK FENCE PROPOSED FENCE EXISTING OVERHEAD WIRES PROPOSED OVERHEAD WIRES EXISTING UNDERGROUND ELECTRIC LINE PROPOSED UNDERGROUND ELECTRIC LINE EXISTING UNDERGROUND TELECOMMUNICATION LINE PROPOSED UNDERGROUND ELECTRIC & COMMUNICATION LINE EXISTING DRAIN LINE PROPOSED DRAIN LINE EXISTING GAS LINE PROPOSED GAS LINE EXISTING WATER LINE PROPOSED WATER LINE EXISTING SEWER LINE PROPOSED SEWER LINE EXISTING MAJOR CONTOUR LINE EXISTING MINOR CONTOUR LINE PROPOSED CONTOUR LINE APPROXIMATE LIMIT OF WORK APPROXIMATE LIMIT OF SAWCUT PROPOSED PERIMETER EROSION CONTROL

EXISTING PROPERTY LINE

APPROXIMATE LIMIT OF EXISTING PAVEMENT/CONCRETE TO BE REMOVED

APPROXIMATE LIMIT OF CLEARING

AND GRUBBING

PROPOSED CONCRETE

PROPOSED STANDARD DUTY PAVEMENT SECTION

EXISTING CONCRETE

EXISTING UTILITY POLE EXISTING UTILITY POLE & GUY WIRE EXISTING UTILITY POLE W/ LIGHT EXISTING LIGHT POLE (ONE ARM) EXISTING SIGN PROPOSED SIGN **EXISTING POST** EXISTING BOLLARD EXISTING FIRE HYDRANT PROPOSED FIRE HYDRANT EXISTING WATER GATE VALVE PROPOSED WATER GATE VALVE EXISTING WATER SHUTOFF VALVE PROPOSED WATER SHUTOFF VALVE PROPOSED THRUST BLOCK EXISTING GAS GATE VALVE PROPOSED GAS GATE VALVE EXISTING ELECTRIC BOX PROPOSED ELECTRIC MANHOLE EXISTING CATCH BASIN PROPOSED CATCH BASIN EXISTING DRAIN MANHOLE PROPOSED DRAIN MANHOLE EXISTING MANHOLE

EXISTING TELEPHONE MANHOLE

EXISTING SEWER MANHOLE

EXISTING CLEANOUT

PROPOSED CLEANOUT

EXISTING HAND HOLE

PROPOSED SEWER MANHOLE

EXISTING CONIFEROUS TREE

EXISTING DECIDUOUS TREE

EXISTING DECIDUOUS BUSH

EXISTING IRON PIPE FOUND

PROPOSED FLOW DIRECTION/SLOPE

EXISTING SPOT SHOT ELEVATION

PROPOSED SPOT SHOT ELEVATION

APPROXIMATE BORING LOCATIONS

APPROXIMATE EXISTING BORING

EXISTING BOUND FOUND

LOCATIONS

EXISTING CONIFEROUS SHRUB

Shingle Mill **Multi-Family** Development

Shinglemill, LLC

75 - 79 Pond Street Rockland, Massachusetts

F 2/19/2021 Rev Con Com Submission Supplemental Comprehen E 12/8/2020 D 11/30/2020 C 9/16/2020 NoI Submission supplemental Comprehens B 9/4/2020 A 7/13/2020 Submitted for Comprehensi MARK DATE DESCRIPTION

7/13/2020 J5019-002-C-DESIGN.DWG DRAWN BY CML CHECKED: PMC PPROVED: BLM GENERAL NOTES,

J5019-002

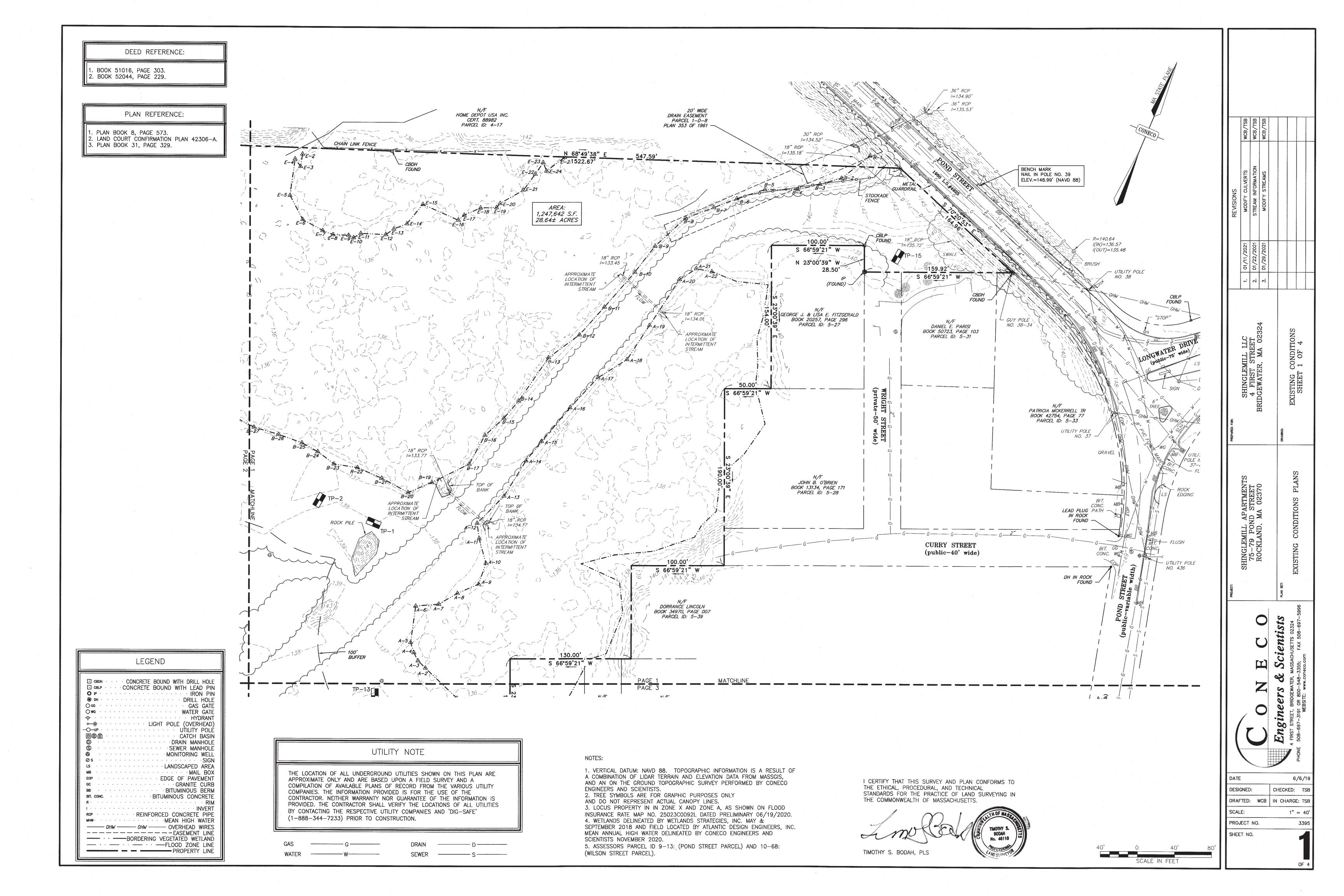
ABBREVIATIONS, & LEGEND SHEET

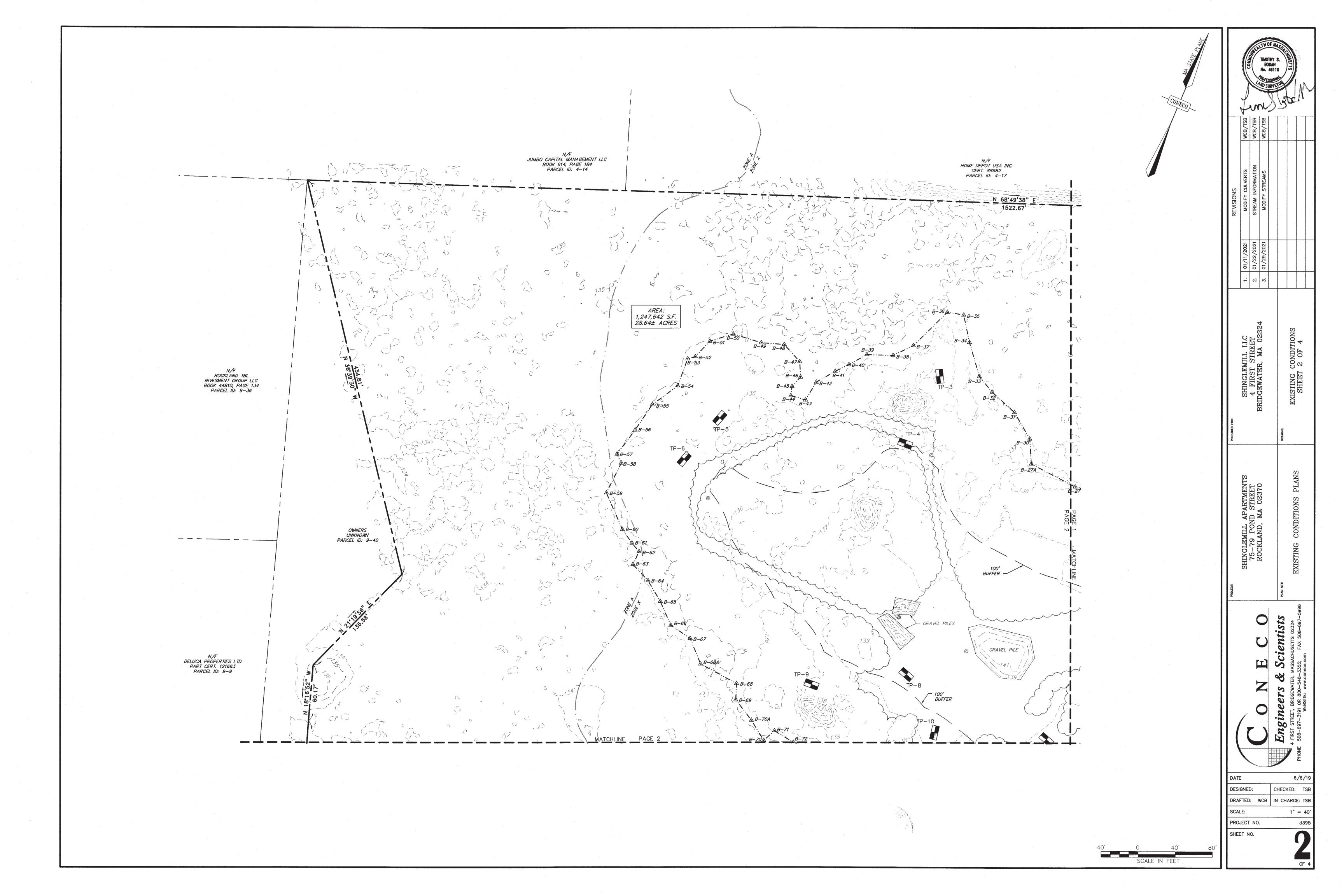
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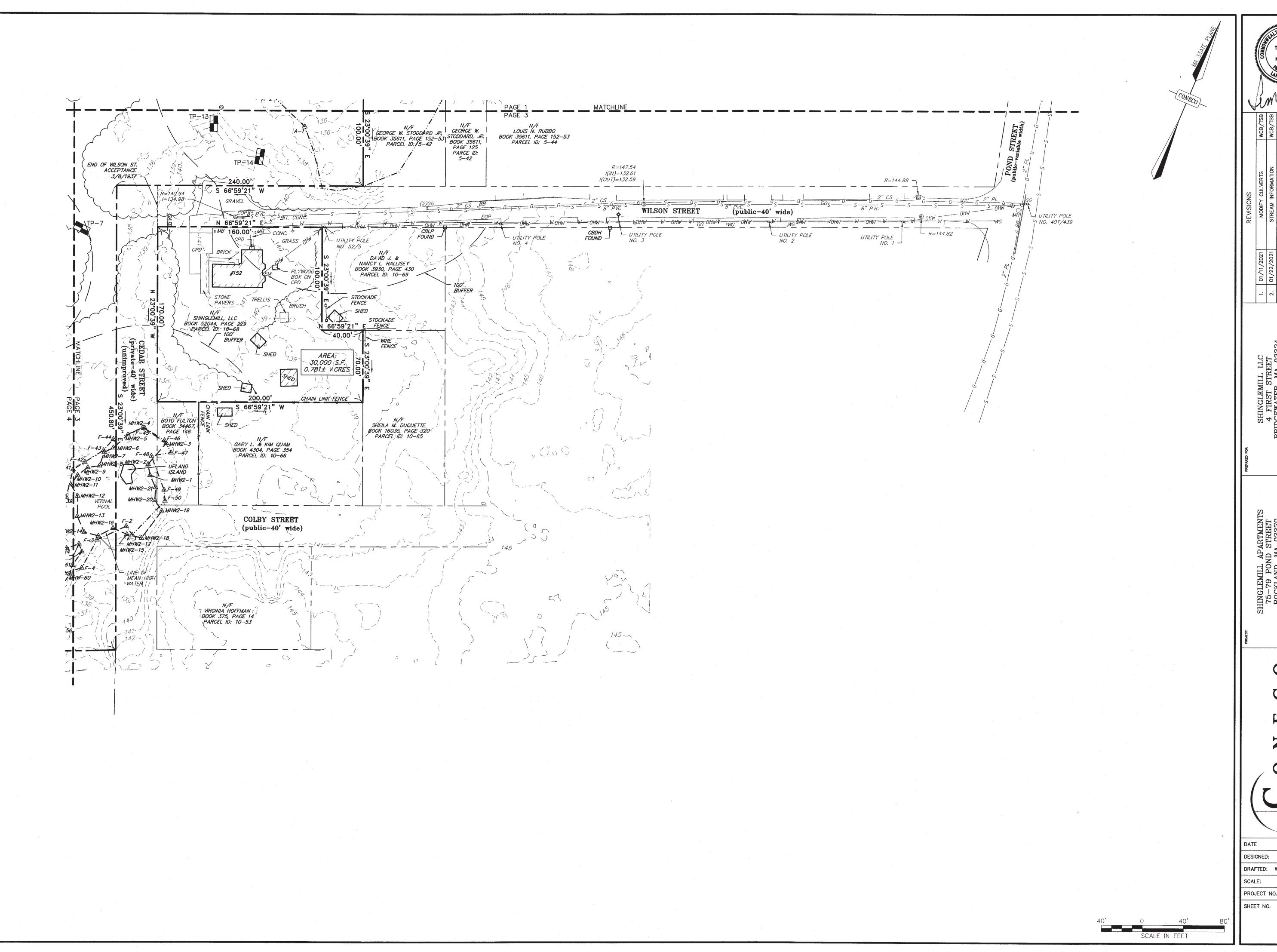
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G-101

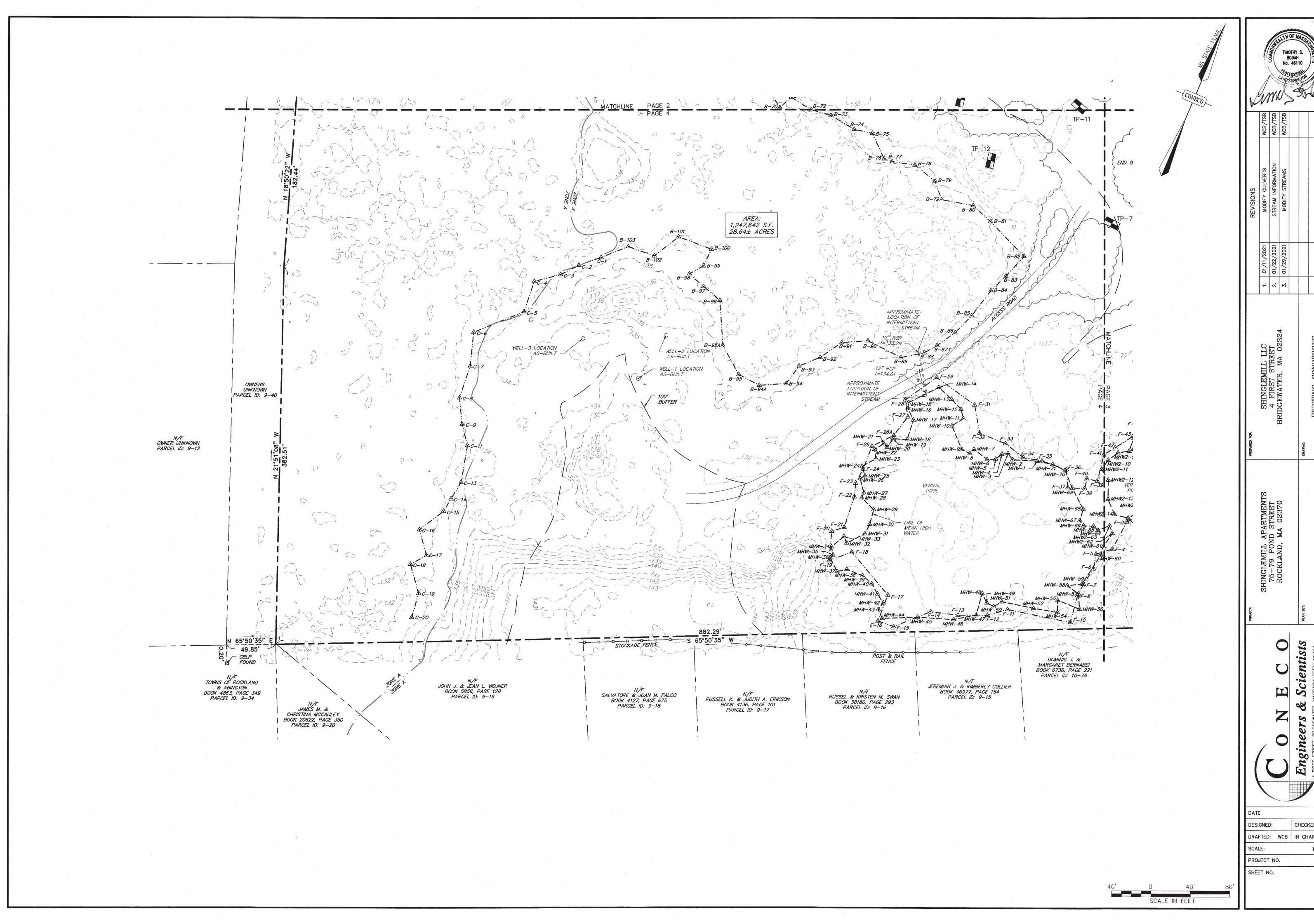
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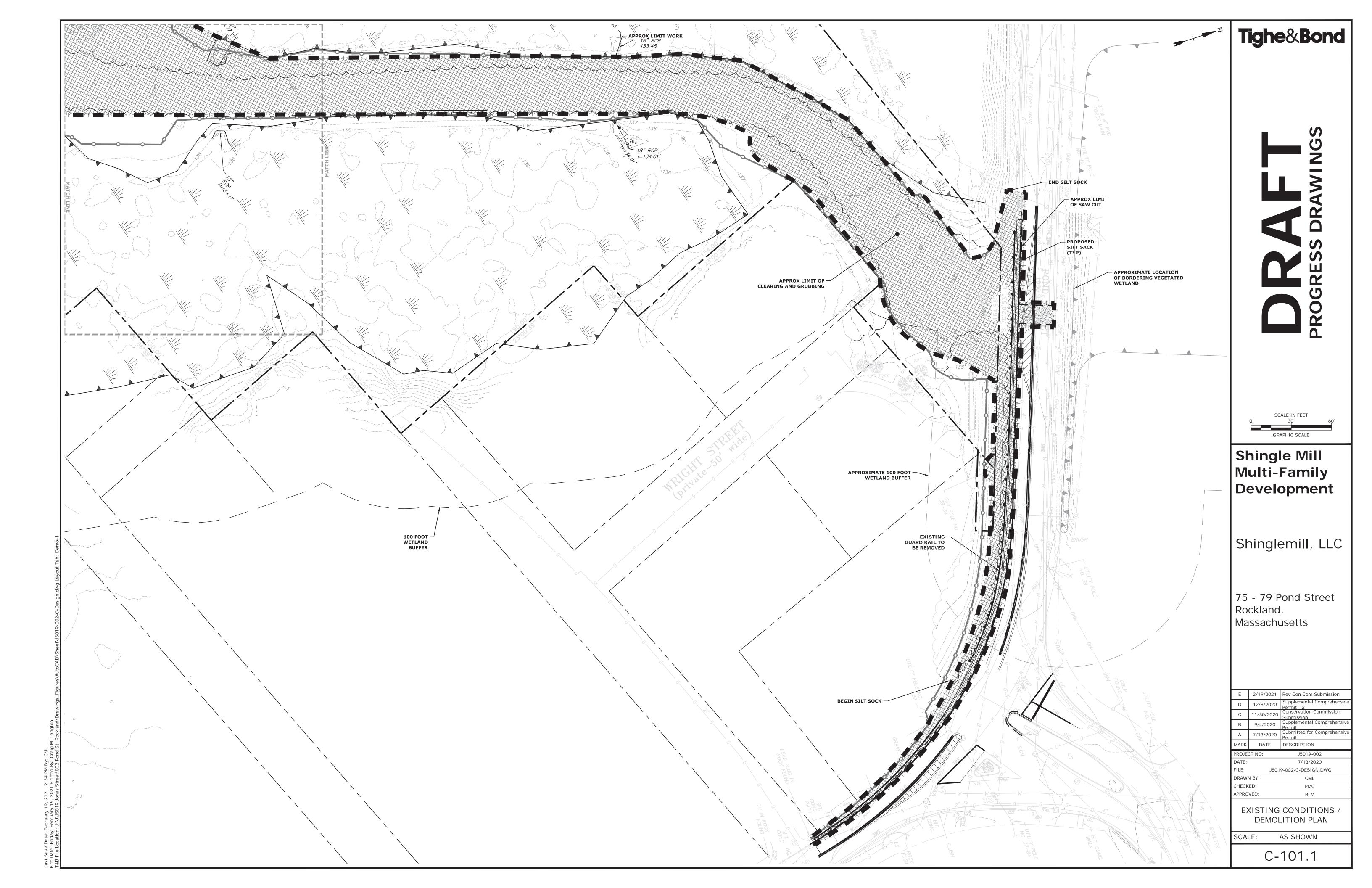


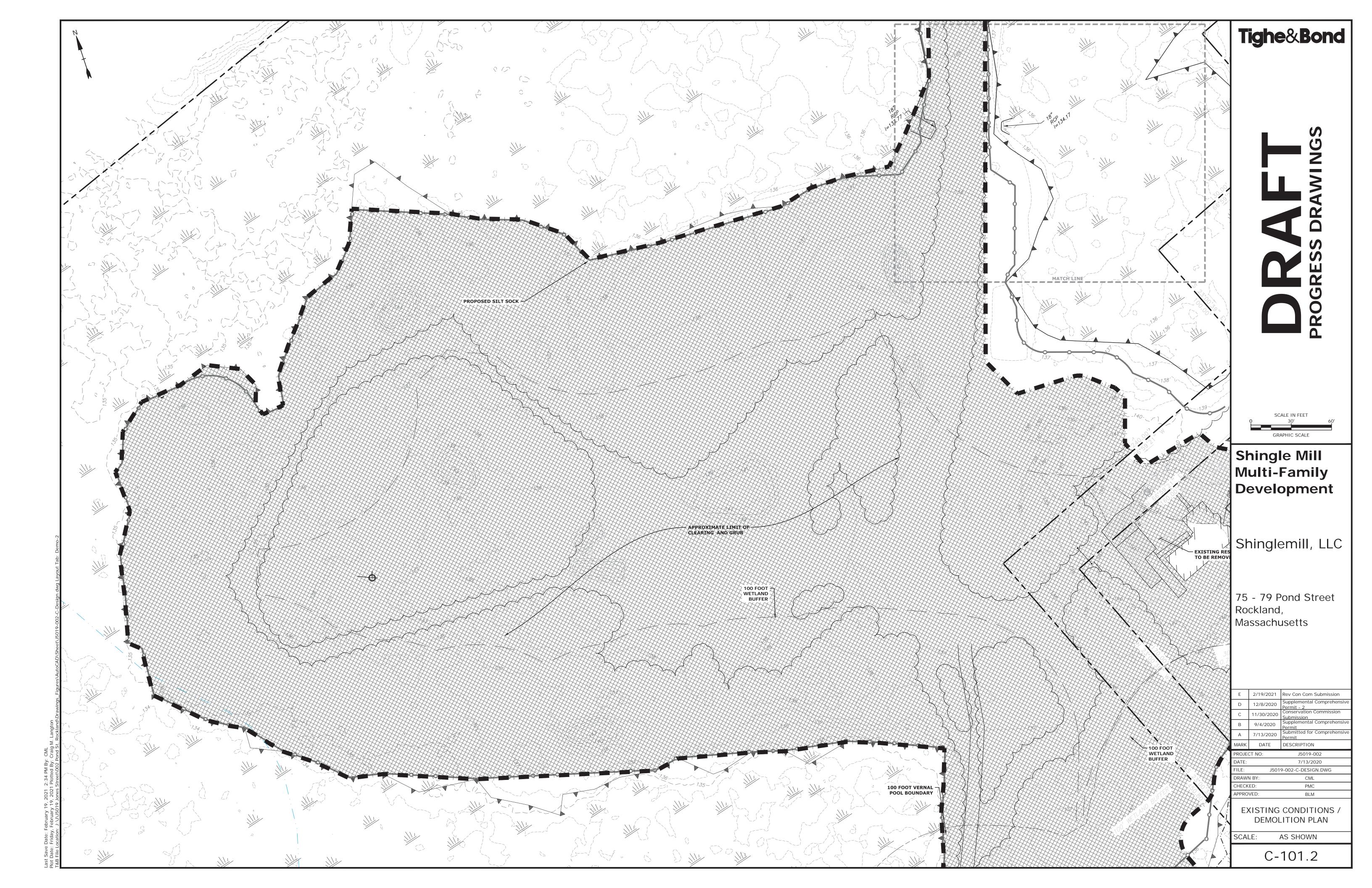


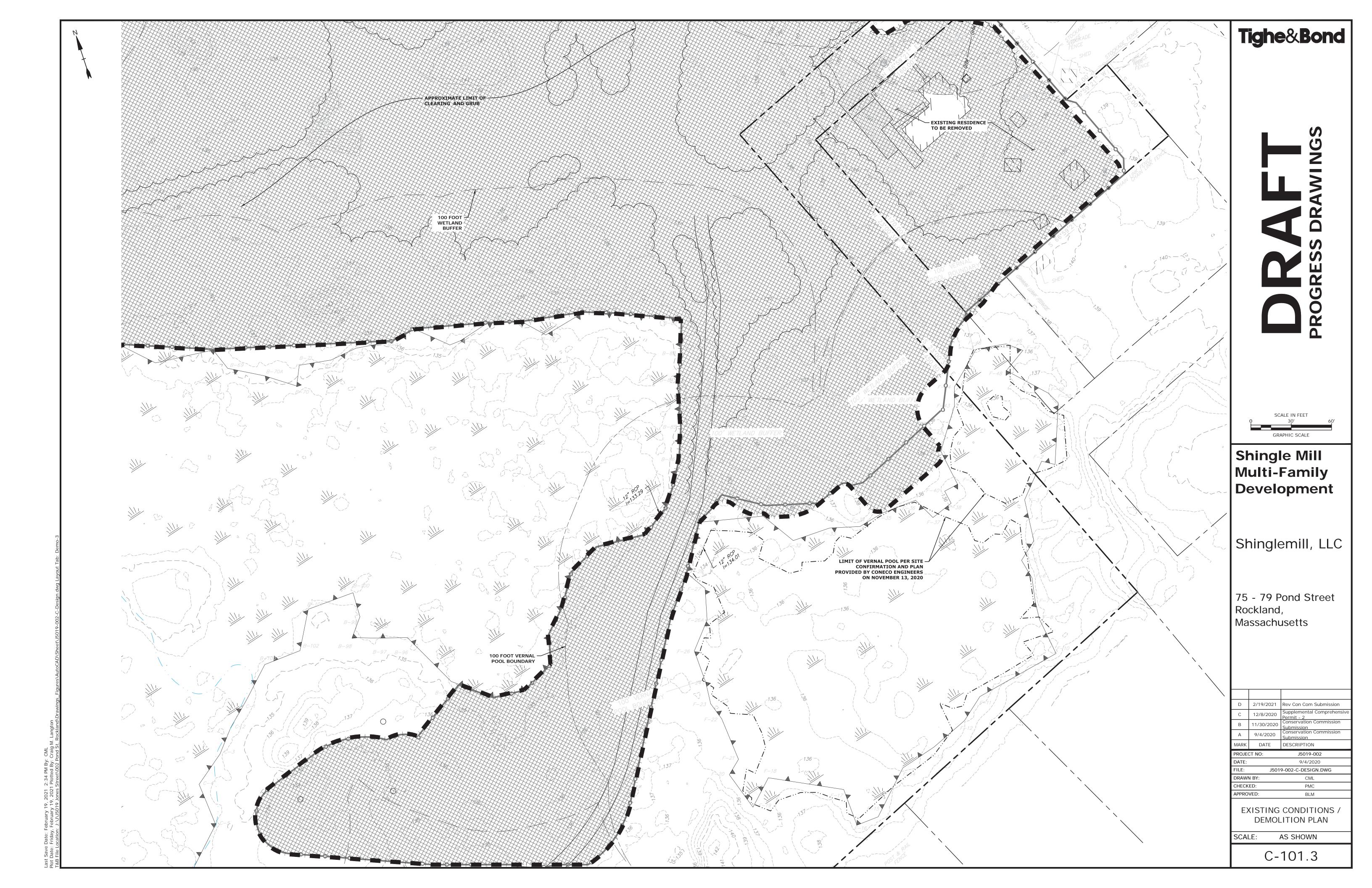
CONDITIONS 3 OF 4 EXISTING SHEET 6/6/19 CHECKED: TSE DRAFTED: WCB IN CHARGE: TSB 1" = 40PROJECT NO.

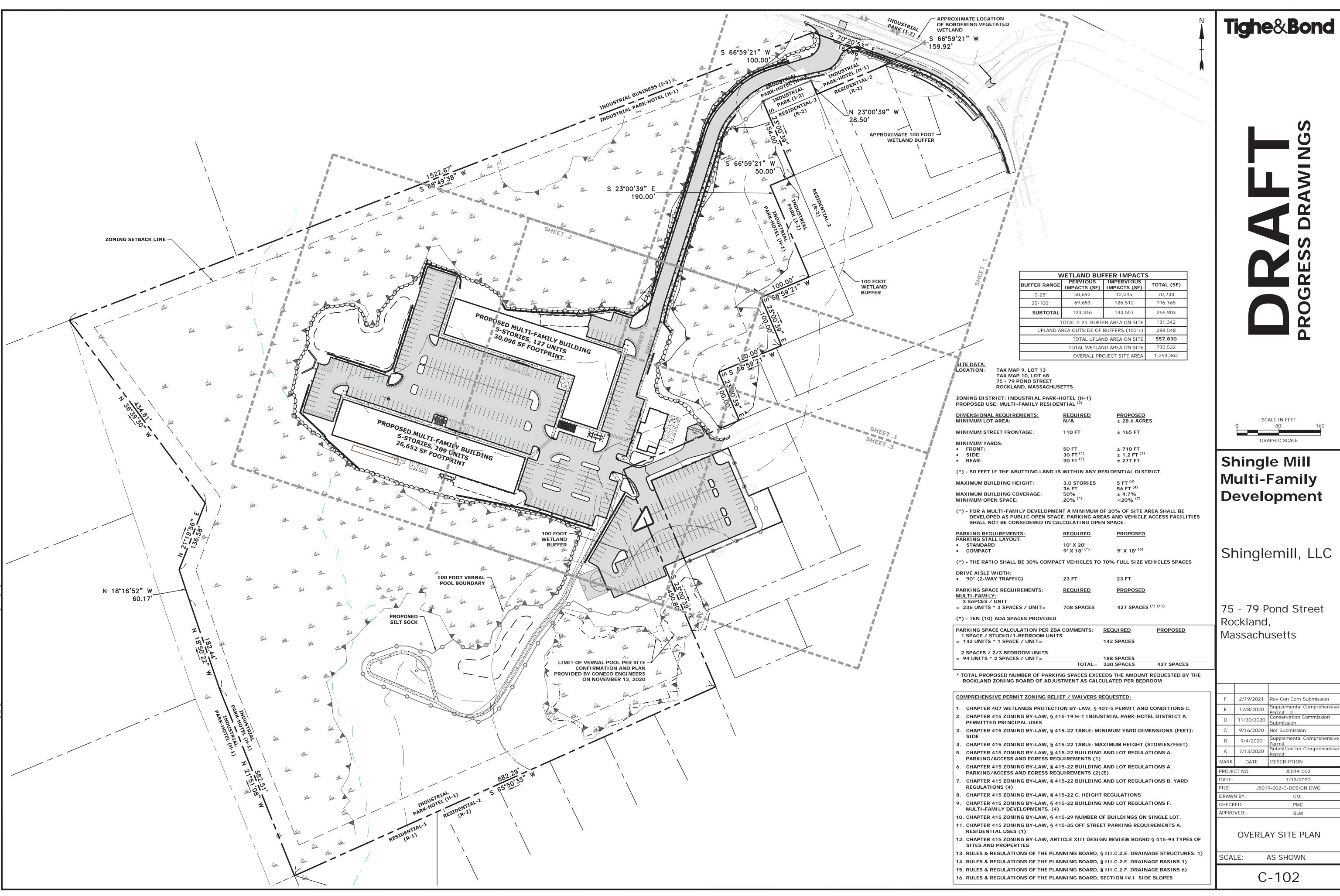


6/6/19 CHECKED: TSB DRAFTED: WCB IN CHARGE: TSB 1" = 40'

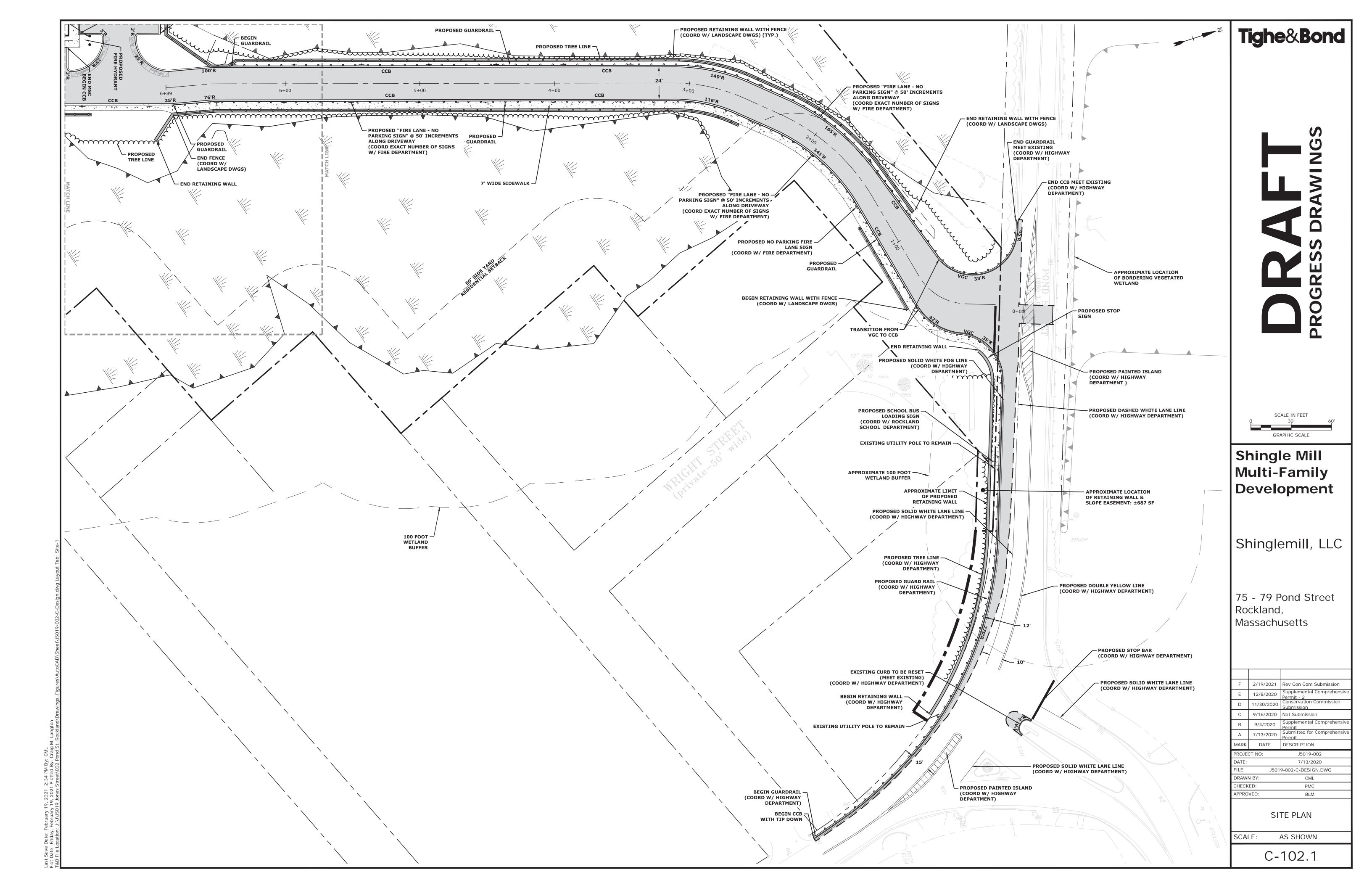


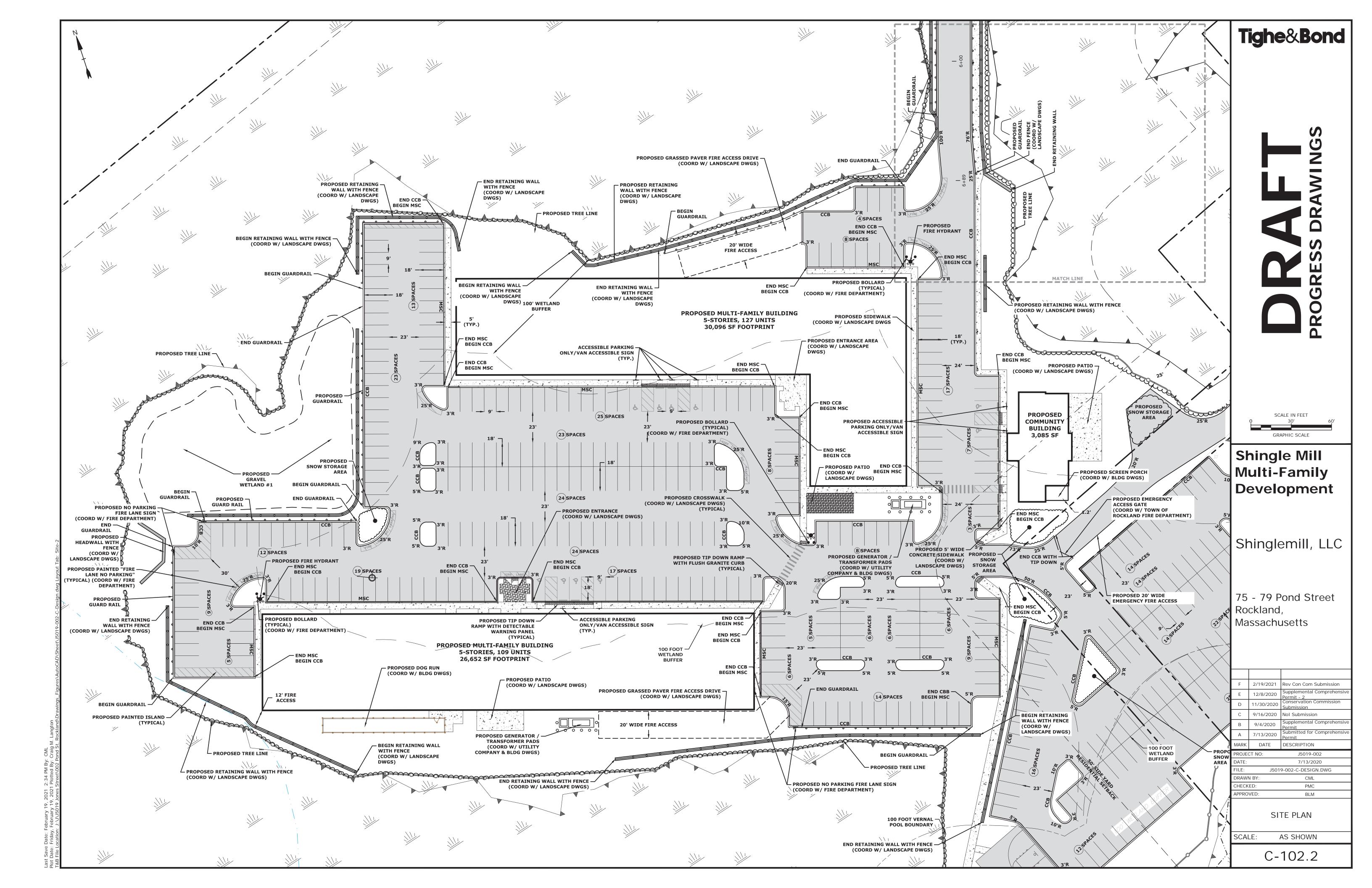


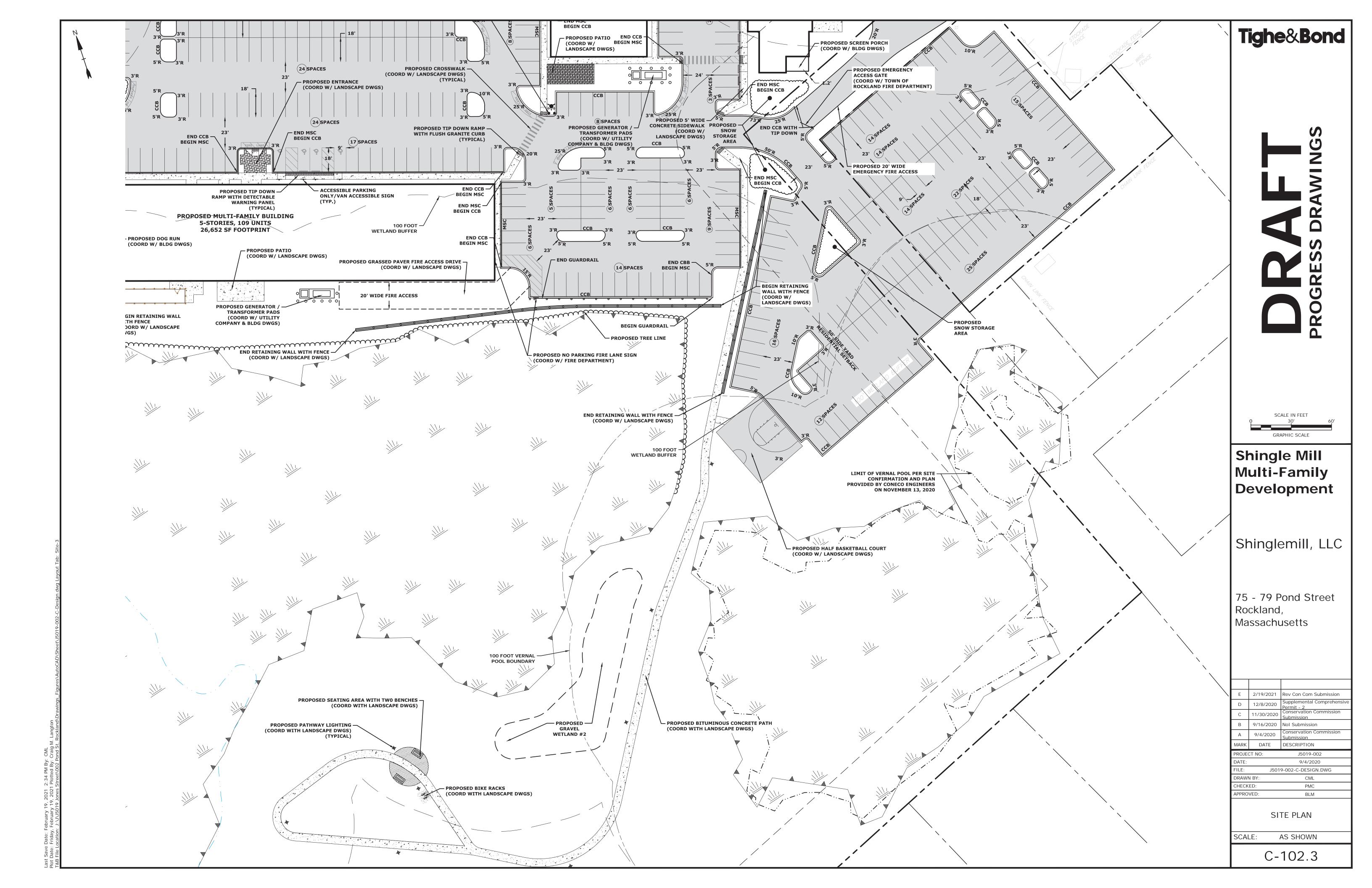


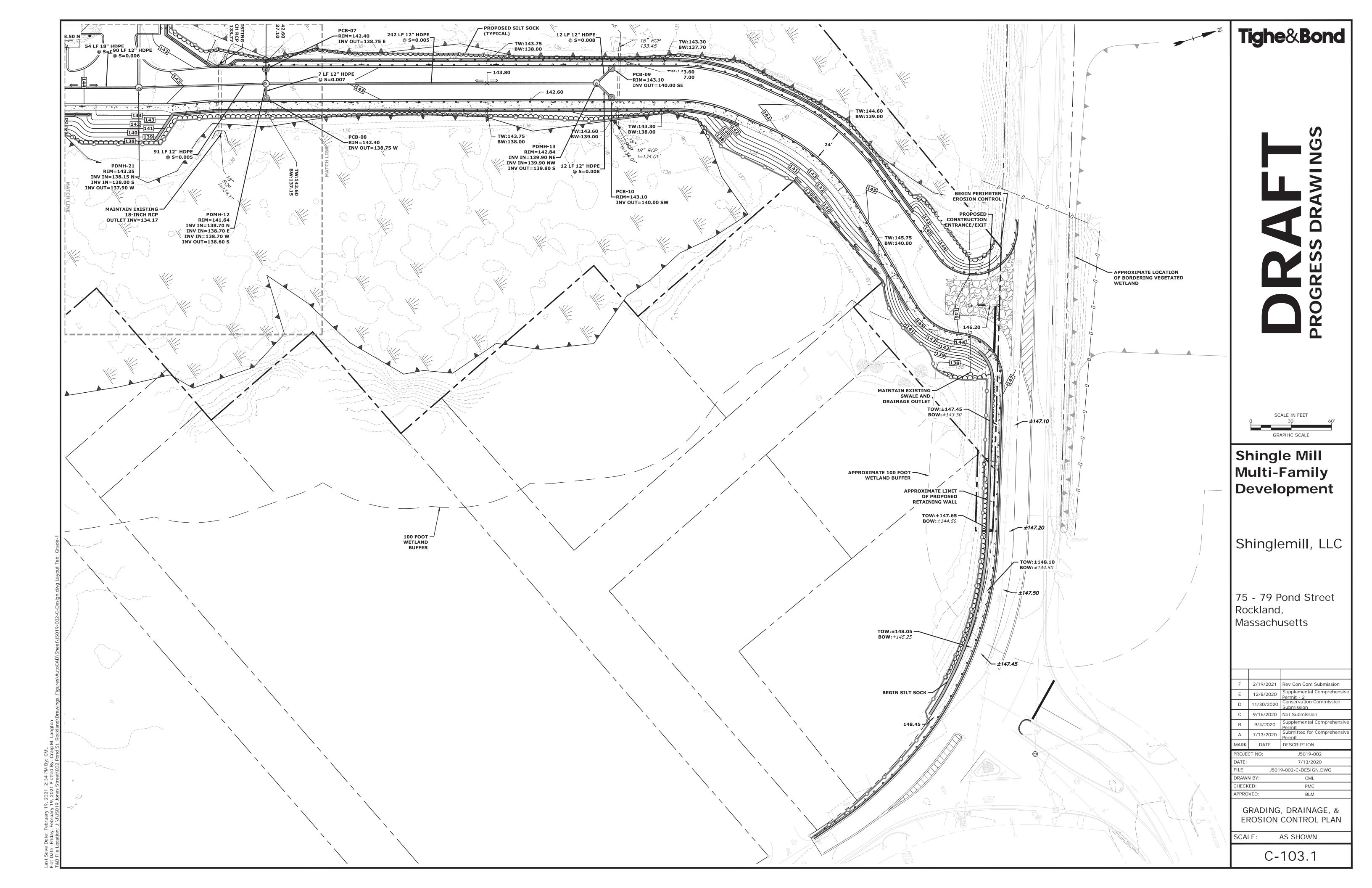


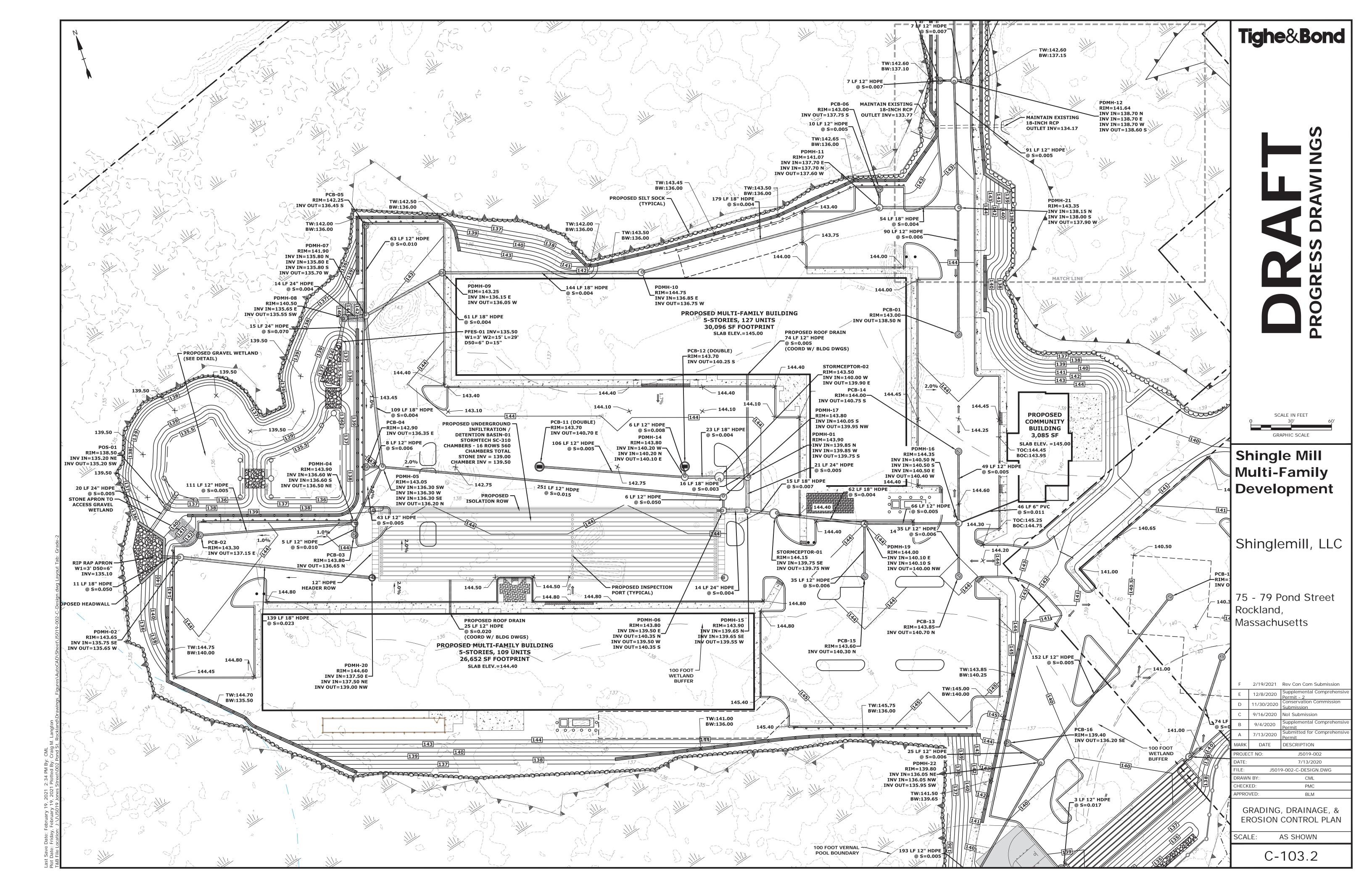
F	2/19/2021	Rev Con Com Submission
Е	12/8/2020	Supplemental Comprehensive Permit - 2
D	11/30/2020	Conservation Commission Submission
С	9/16/2020	NoI Submission
В	9/4/2020	Supplemental Comprehensive Permit
Α	7/13/2020	Submitted for Comprehensive Permit
MARK	DATE	DESCRIPTION
PROJECT NO:		J5019-002
DATE:		7/13/2020

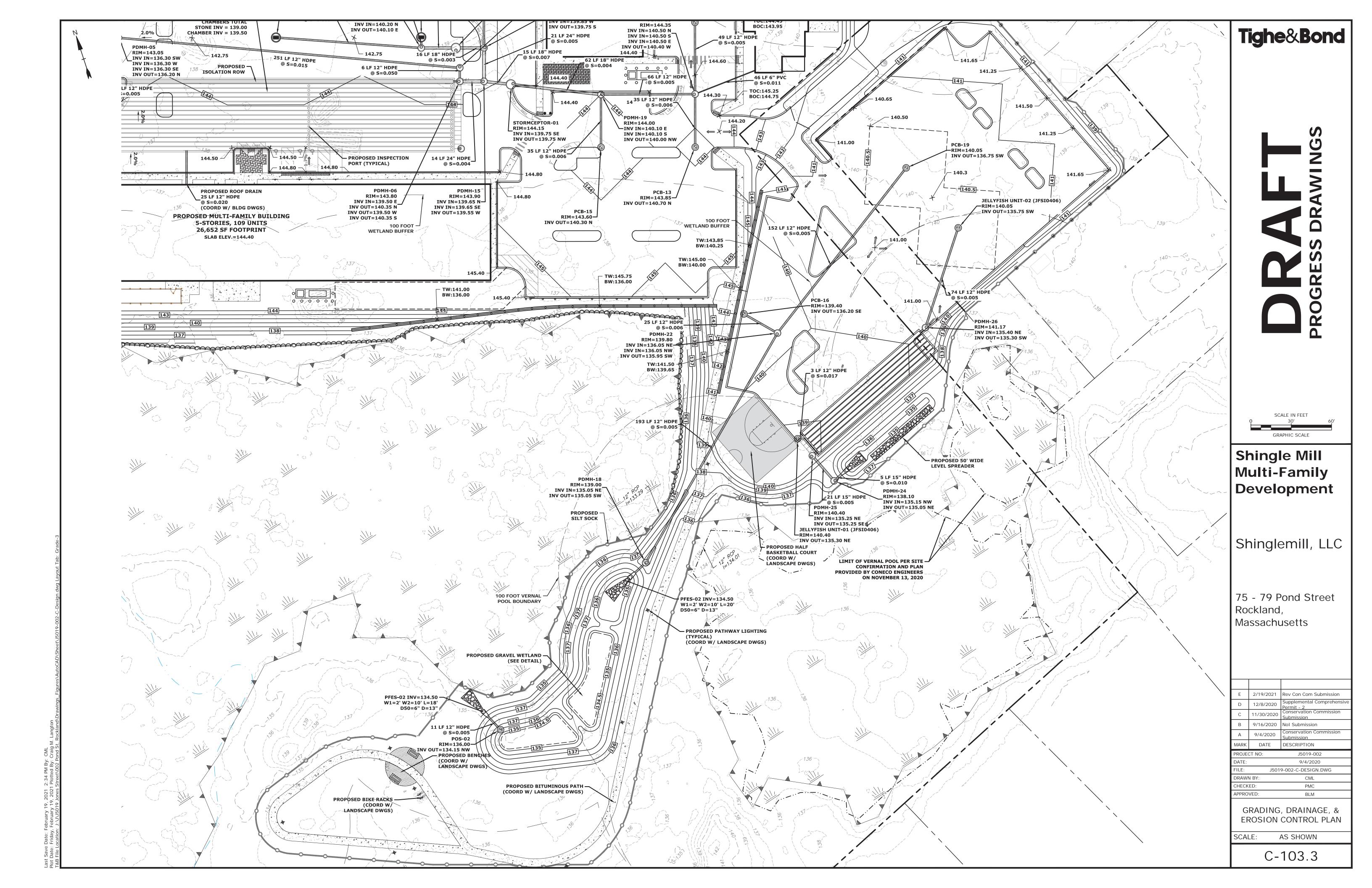


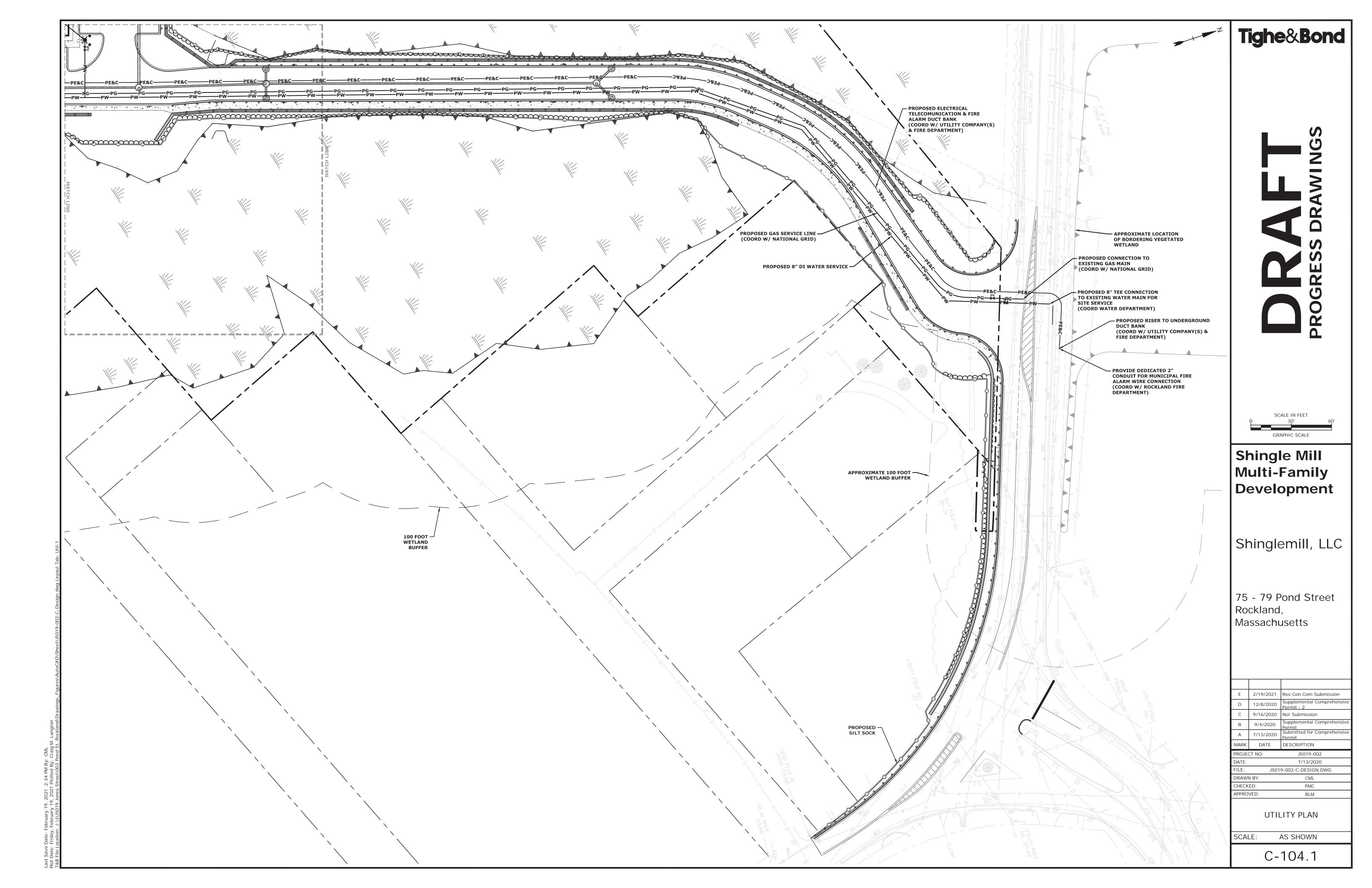


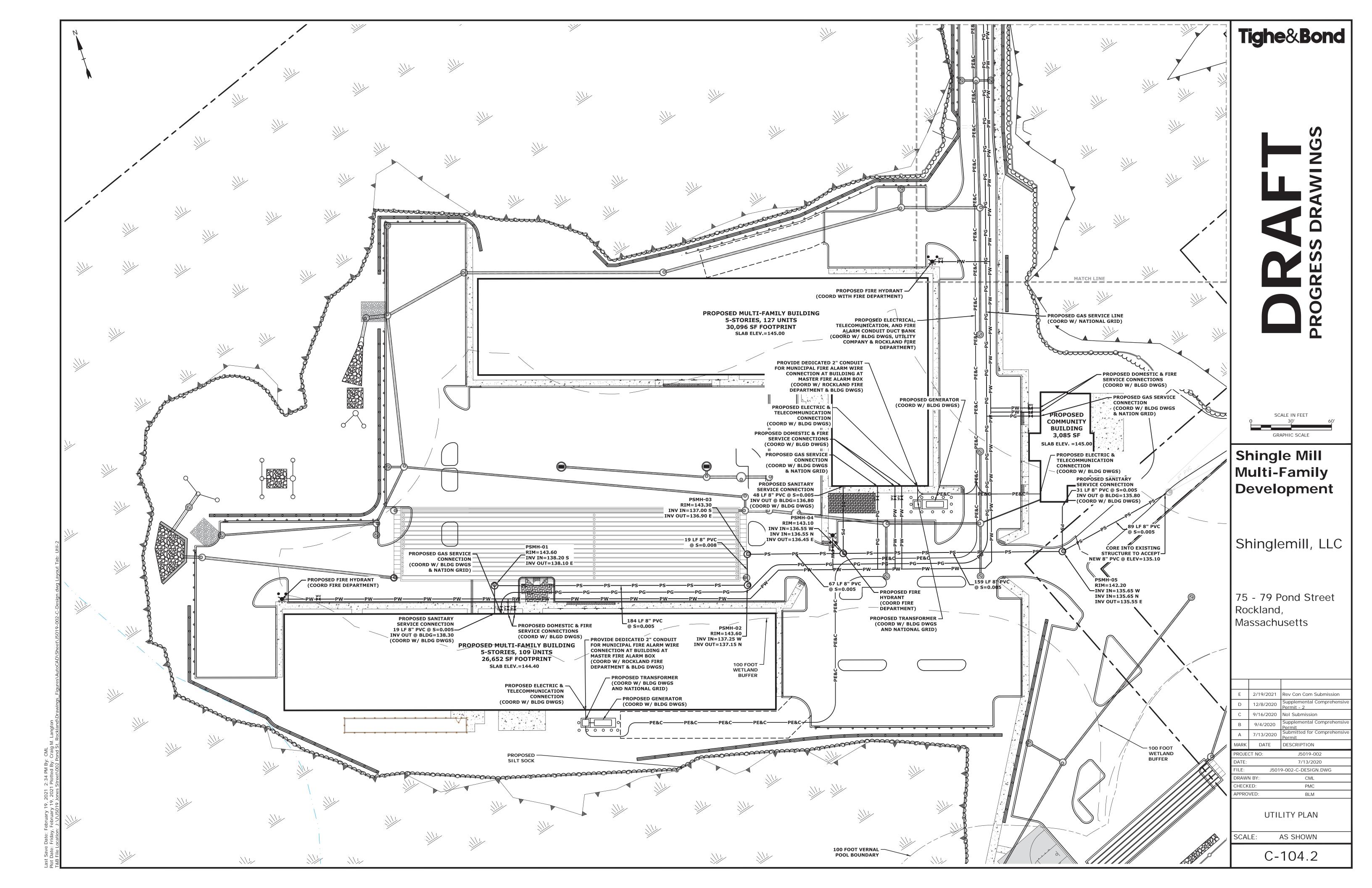


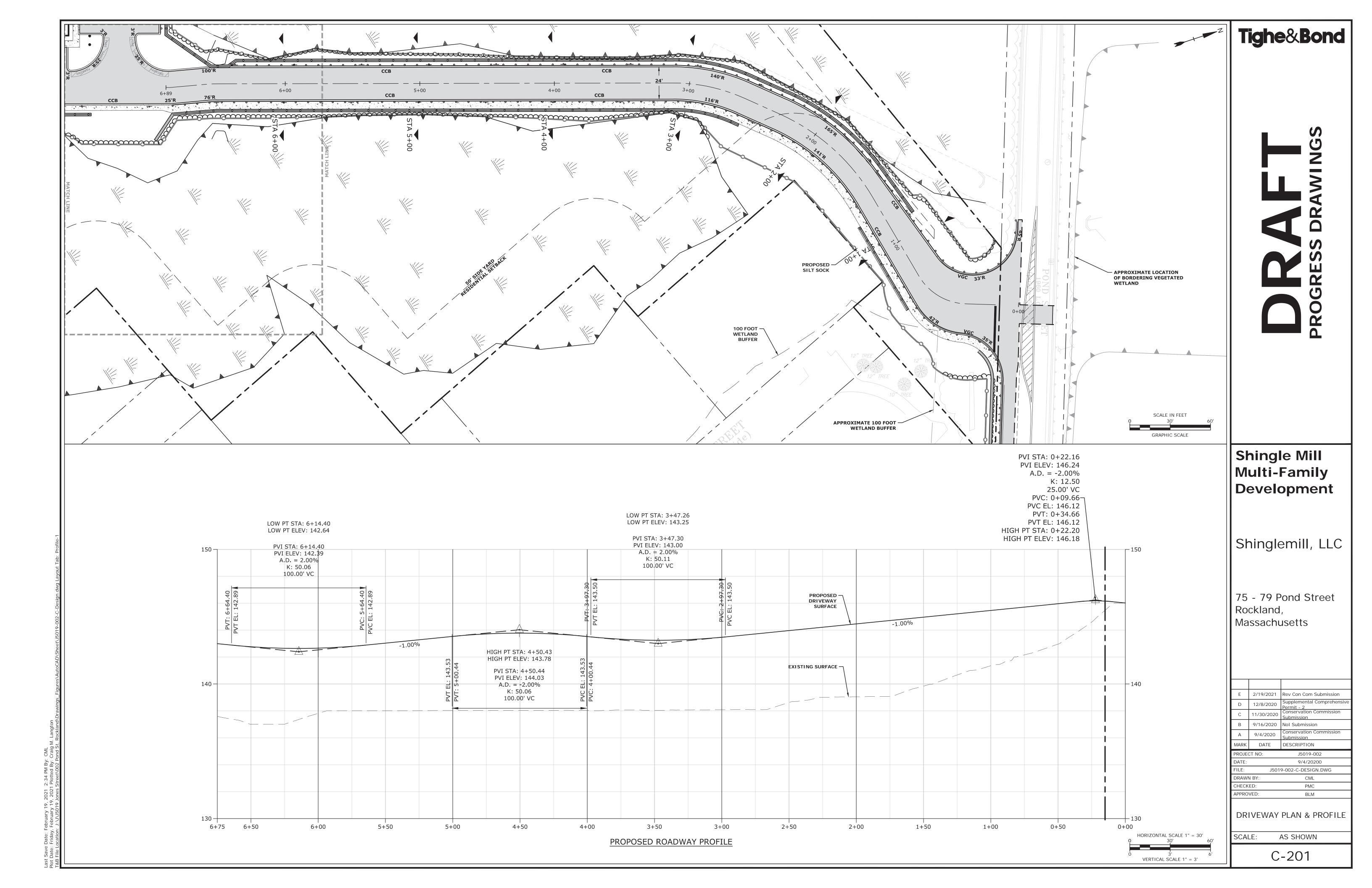


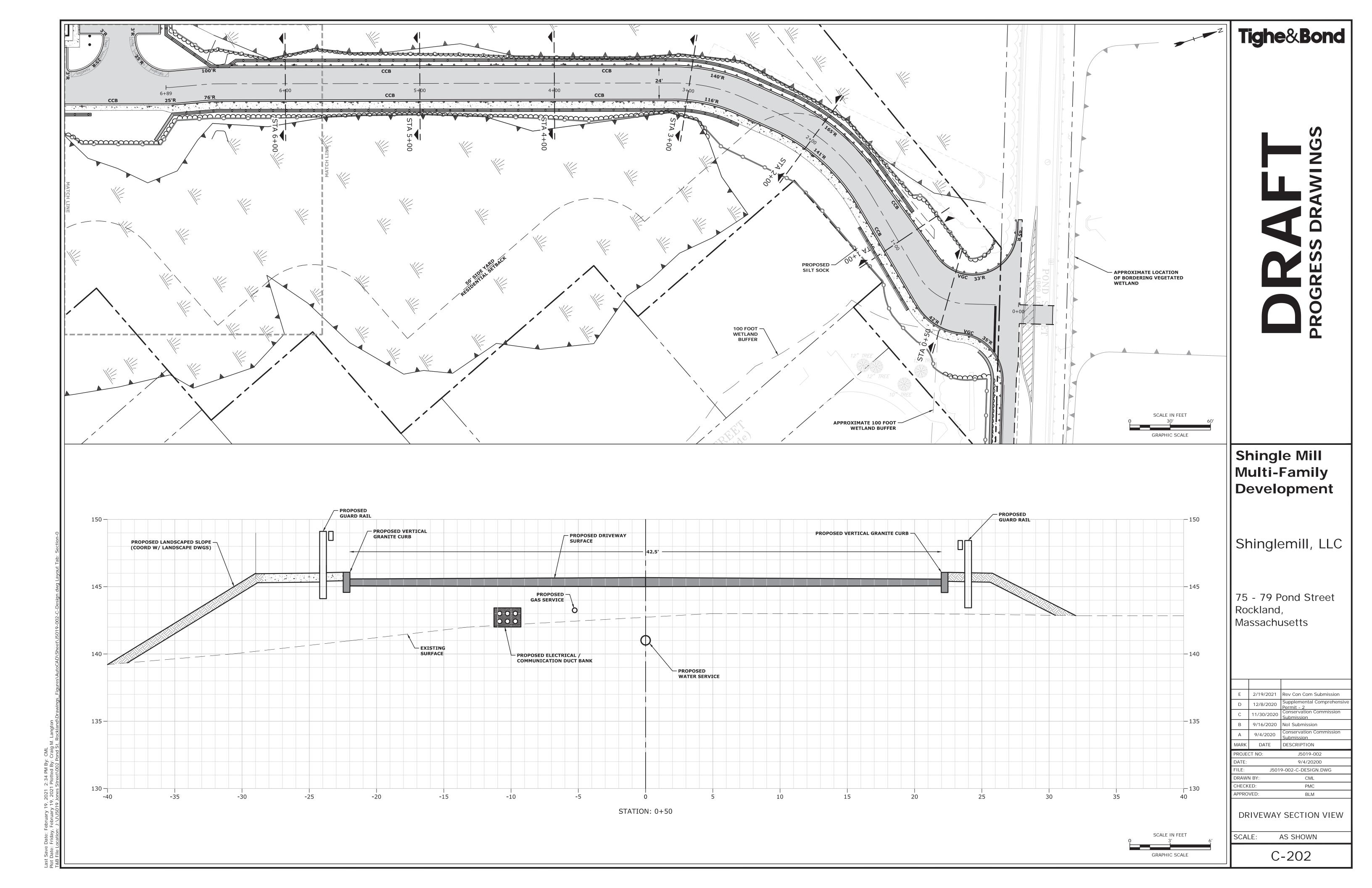


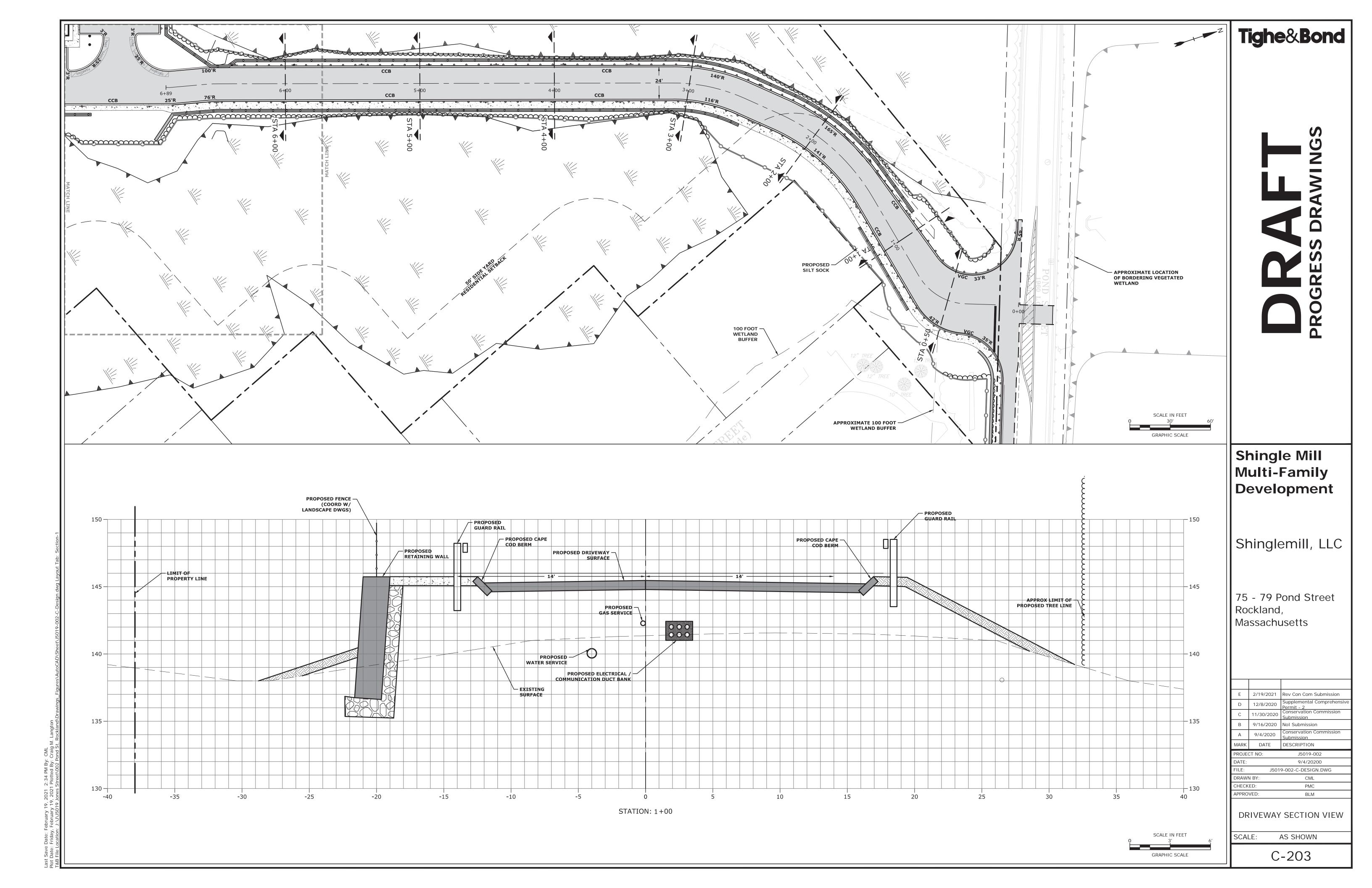


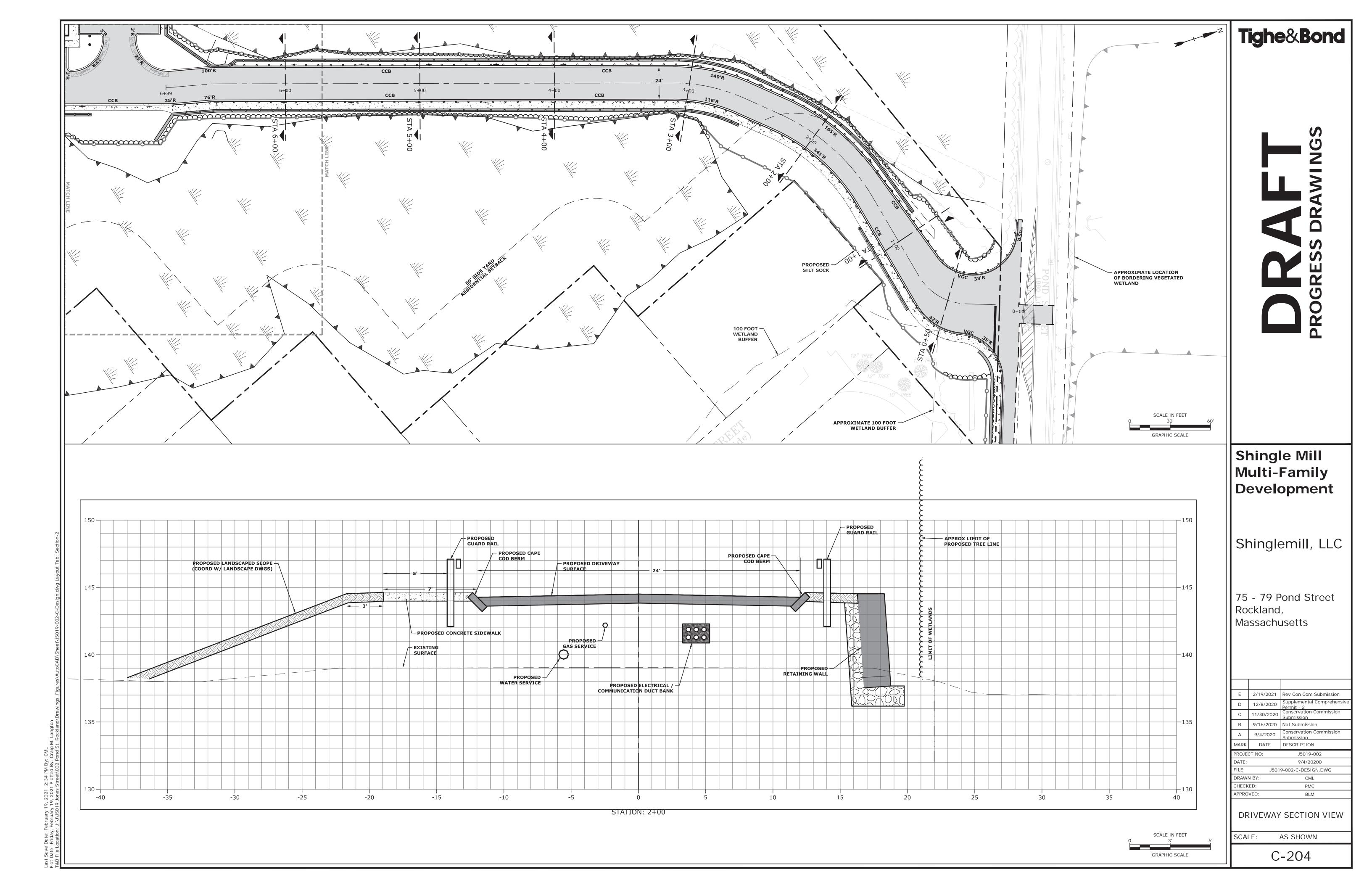


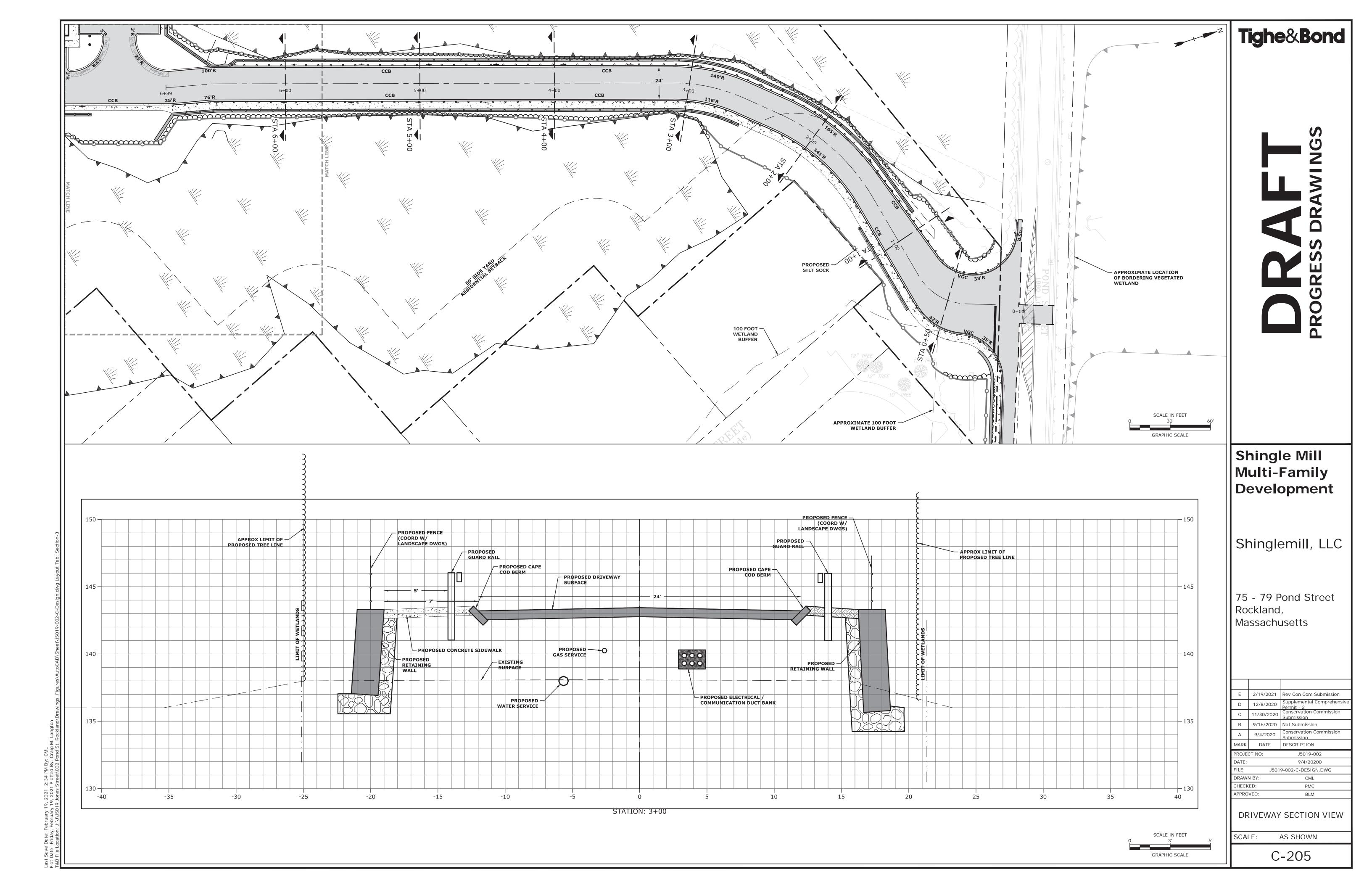


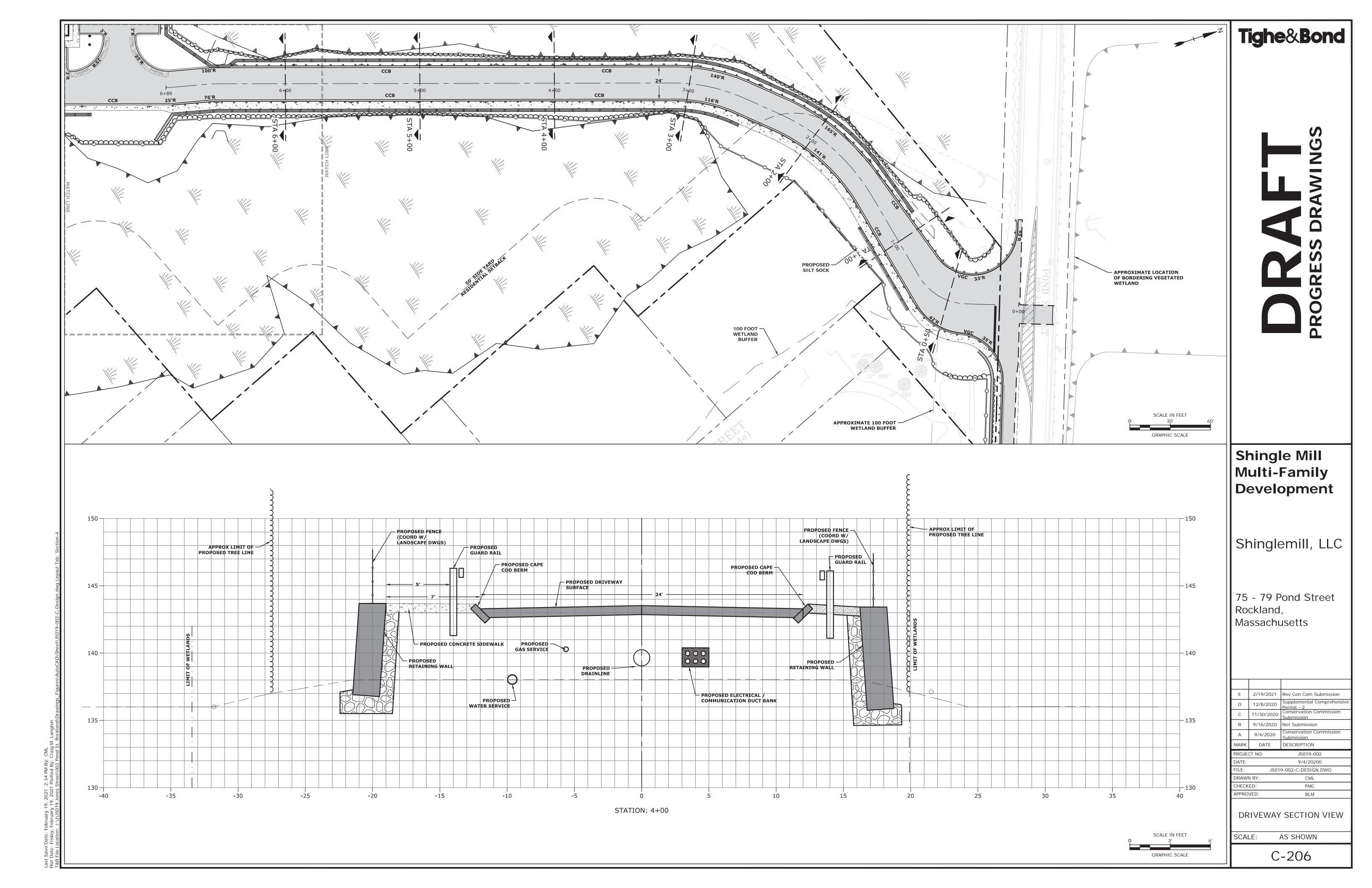


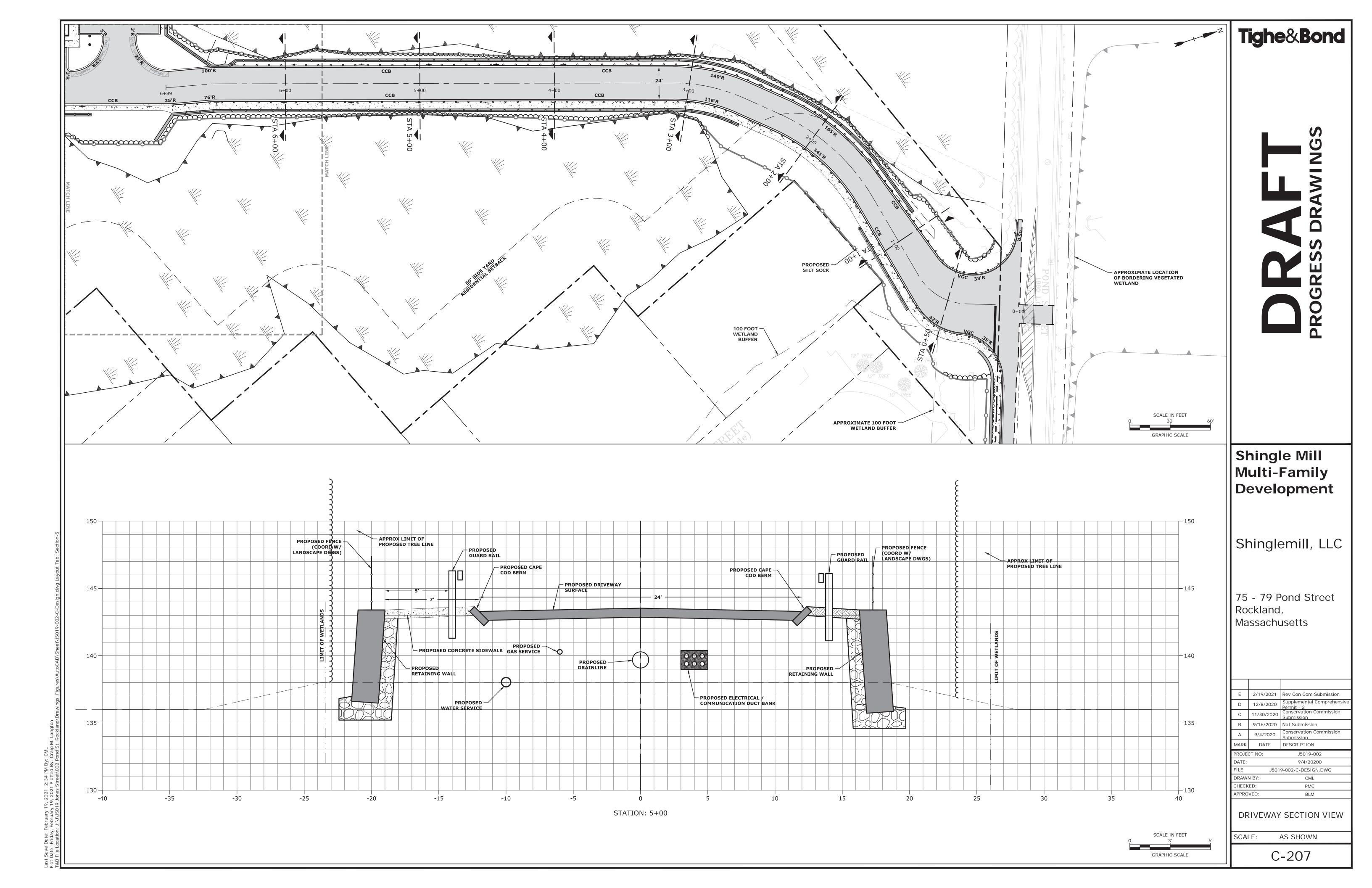


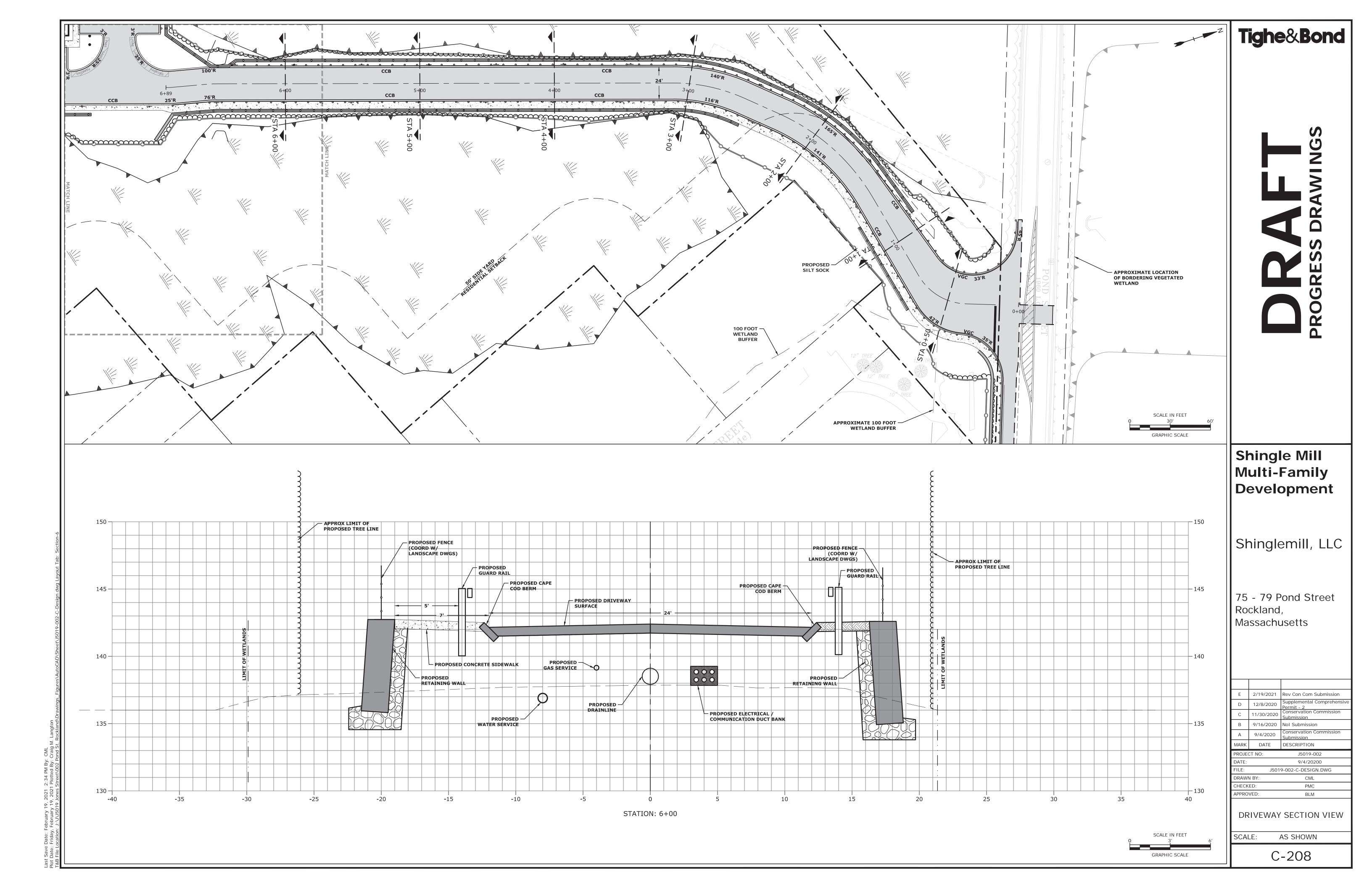












 PROJECT APPLICANT: JONES STREET RESIDENTIAL 100 HIGH STREET, SUITE 2500

BOSTON, MASSACHUSETTS 02110 PROJECT NAME SHINGLE MILLS MULTI-FAMILY DEVELOPMENT PROJECT ADDRESS:

75 - 79 POND STREET ROCKLAND, MASSACHUSETTS

PROJECT DESCRIPTION THE PROJECT CONSISTS OF A MULTI-FAMILY DEVELOPMENT WITH ASSOCIATED SITE

IMPROVEMETNS DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 9 ACRES.

SOIL CHARACTERISTICS BASED ON THE NRCS WEB SOIL SURVEY FOR PLYMOUTH COUNTY - MASSACHUSETTS, THE SOILS ON SITE CONSIST OF TIHONET COURSE SOAD AND FREETOWN MUCH WHICH ARE EXCESSIVELY WELL DRAINED TO MODERALTLY WELL DRAINED SOILS WITH HYDROLOGIC SOIL

NAME OF RECEIVING WATERS

THE STORMWATER RUNOFF FROM THE PROPOSED SITE WILL DISCHARGE VIA OVERLAND FLOW THROUGH THE PROPOSED ON-SITE DRAINAGE SYSTEMS TO THE EXISTING WETLAND. CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

- 1. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
 - 1.1. NEW CONSTRUCTION
 - 1.2. DISPOSAL OF SEDIMENT SPOIL, STUMP AND OTHER SOLID WASTE
 - 1.3. FLOOD PLAIN EXCAVATION WORK

GROUP RATING(S) OF A/D AND B/D RESPECTIVELY.

- 1.4. CONTROL OF DUST
- 1.5. NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
- 1.6. CONSTRUCTION DURING LATE WINTER AND EARLY SPRING 2. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
- CLEAR AND DISPOSE OF DEBRIS.
- CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED
- GRADE AND GRAVEL ROADWAYS AND PARKING AREAS ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE
- DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
- 8. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
- 9. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.

DRAWINGS AS THE FIRST ORDER OF WORK.

- 10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
- 11. COMPLETE PERMANENT SEEDING AND LANDSCAPING
- 12. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES

SPECIAL CONSTRUCTION NOTES:

1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE. **EROSION CONTROL NOTES:**

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND

- SUBURBAN AREAS" PREPARED BY THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
- 2. PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL 3. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALES, SILT FENCES, MULCH BERMS, SILT SACKS AND SILT SOCKS AS SHOWN IN THESE
- 4. SILT SACK INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE MAINTAINED FOR THE DURATION OF THE PROJECT.
- 5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL NON-PAVED AREAS HAVE BEEN STABILIZED.
- THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
- 7. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED
- INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
- 9. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

STABILIZATION:

- 1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED: 1.1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - 1.2. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED:
 - 1.3. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS
 - BEEN INSTALLED; 1.4. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.;
- 1.5. IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF COMMONWEALTH OF MASSACHUSETTS HIGHWAY
- DEPARTMENT "STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES," 1988 EDITION AS AMENDED.
- 2. WINTER STABILIZATION PRACTICES:
- 2.1. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER
- OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL
- BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS; 2.2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL
- BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS; 2.3. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
- 3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO
 - BE USED INCLUDE: 3.1. TEMPORARY SEEDING;
- 3.2. MULCHING.
- ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE
- WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT
- MEASURES ARE ESTABLISHED. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH

DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

DUST CONTROL

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE
- CONSTRUCTION PERIOD. 2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.

STOCKPILES:

- 1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS
- 2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
- 3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
- 4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES

OFF SITE VEHICLE TRACKING:

THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

- SEE LANDSCAPE PLANS FOR SITE VEGETATION NOTES. **CONCRETE WASHOUT AREA:**
- 1. THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE 1.1. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT
- FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY 1.2. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT
- AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER; 1.3. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM
- STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS; 1.4. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:

- FIRE-FIGHTING ACTIVITIES;
- FIRE HYDRANT FLUSHING:
- WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
- WATER USED TO CONTROL DUST;
- 5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
- PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED
- 7. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION
- 8. UNCONTAMINATED GROUND WATER OR SPRING WATER;
- 9. UNCONTAMINATED EXCAVATION DEWATERING;

LANDSCAPE IRRIGATION.

WASTE DISPOSAL WASTE MATERIAL

- 1.1. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
- 1.2. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE 1.3. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR **EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES**
- WASTE DISPOSAL BY THE SUPERINTENDENT.
- 2. HAZARDOUS WASTE: 2.1. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
- 2.2. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.

3.1. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM

3. SANITARY WASTE:

- OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. SPILL PREVENTION 1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY
- THE REST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW 2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND

LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW

- SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF: 2.1. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
 - 2.1.1. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
 - 2.1.2. ALL REGULATED MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE;
 - 2.1.3. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;

2.1.4. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE

- AND DISPOSAL OF MATERIALS; 2.1.5. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
- 2.1.6. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER. 2.1.7. THE TRAINING OF ON-SITE EMPLOYEES AND THE ON-SITE POSTING OF

RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT

- OF A SPILL OF REGULATED SUBSTANCES. 3. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
- 3.1. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE; 3.2. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR
- IMPORTANT PRODUCT INFORMATION; 3.3. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING
- TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL 4. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:
- 4.1. PETROLEUM PRODUCTS:

TANKS OTHERWISE REGULATED.

- 4.1.1. ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE
- REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE; 4.1.2. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- 4.1.3. SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY;
- 4.1.4. INSPECT FUEL STORAGE AREAS WEEKLY; 4.1.5. WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS,
- 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS; 4.1.6. COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS; 4.1.7. SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE

- 4.1.8. THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
 - 4.1.8.1. EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED;
 - 4.1.8.2. PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS;
 - 4.1.8.3. HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY
 - AVAILABLE IN ALL WORK AREAS; 4.1.8.4. USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED

 - 4.1.8.5. PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
- 4.1.9. FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL
- 4.2. FERTILIZERS: 4.2.1. FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS
 - DIRECTED BY THE SPECIFICATIONS; 4.2.2. ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT
 - EXPOSURE TO STORMWATER; 4.2.3. STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE
- 4.3. PAINTS 4.3.1. ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT

TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

- REQUIRED FOR USE; 4.3.2. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM; 4.3.3. EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO
- MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS. 5. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING
- PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP: 5.1. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE
- PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES; 5.2. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE;
- 5.3. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY; 5.4. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR
- APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
- 5.5. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED:
- 5.6. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
- 6. VEHICLE FUELING AND MAINTENANCE PRACTICE: 6.1. CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPTMENT/VEHICAL FUELING AND MAINTENANCE AT AN OFF-SITE FACILITY;
- 6.2. CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY
- 6.3. IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED; 6.4. CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA;
- 6.5. CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE;
- 6.6. CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.
- THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A SWPPP. THE SWPPP SHALL BE PREPARED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL
- 2. THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT
- 2.1. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY THE CONTRACTOR AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER; 2.2. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND

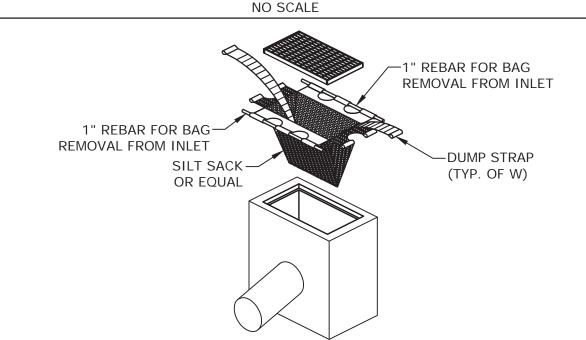
DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;

2.3. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES: 2.4. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

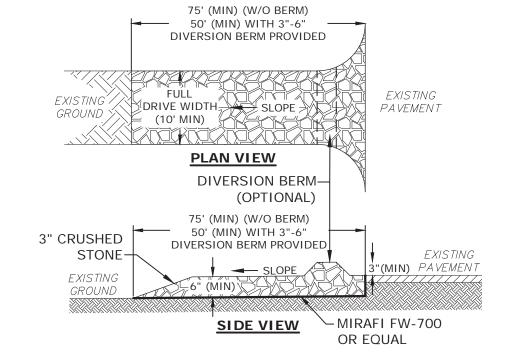
-2" X 2" WOODEN STAKE SILT SOCK-(12" TYPICAL) AREA TO BE WORK AREA PROTECTED SILT-SOCK WATER MIN. LINEAL SPACING FLOW \angle AREA TO BE WORK AREA SIDE VIEW PROTECTED PLAN VIEW

1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR APPROVED EQUAL INSTALL SILT SOCK IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS

SILT SOCK



SILT SACK NO SCALE



1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT FROM THE SITE. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO RUNOFF DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM

STABILIZED CONSTRUCTION EXIT

NO SCALE

Shinglemill, LLC ENTERING STORM DRAINS, DITCHES, OR WATERWAYS

75 - 79 Pond Street Rockland, Massachusetts

Shingle Mill

Multi-Family

Development

Е	2/19/2021	Rev Con Com Submission
D	12/8/2020	Supplemental Comprehensiv Permit - 2
С	11/30/2020	Conservation Commission Submission
В	9/4/2020	Supplemental Comprehensiv Permit
_		Submitted for Comprehensive

THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE.

- ACRE OF DRAINAGE AREA. TRAP OUTLET SHALL BE MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP.
- TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED. MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND
- SEDIMENT TRAPS MUST BE USED AS NEEDED TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.

SEDIMENT TRAP

A 7/13/2020

MARK DATE DESCRIPTION J5019-002 PROJECT NO: 7/13/2020 J5019-002-C-DETAILS.DWG RAWN BY CML HECKED: PMC

BLM

EROSION CONTROL NOTES AND DETAILS SHEET

PPROVED:

SCALE:

AS SHOWN

C-501

->| 2"|<-

NOTES: 1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY

- APPLICATION OF LIME, FERTILIZER AND SEED. BEGIN AT THE TOP OF THE SLOPE, 36" OVER THE GRADE BREAK, BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UPSLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF TAPLES/STAKES 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES SPACED 12" APART ACROSS THE WIDTH OF THE
- ROLL THE BLANKETS DOWN THE SLOPE. ALL BLANKETS MUST BE SECURELY FASTENED TO THE SOIL SURFACE BY PLACING STAPLES IN APPROPRIATE LOCATIONS AS SHOWN ON THE STAPLE PATTERN GUIDE.
- 4. STAPLE LENGTHS SHALL BE A MINIMUM OF 8 INCHES. **EROSION CONTROL BLANKET FOR SLOPE PROTECTION**

BLANKET.

NO SCALE

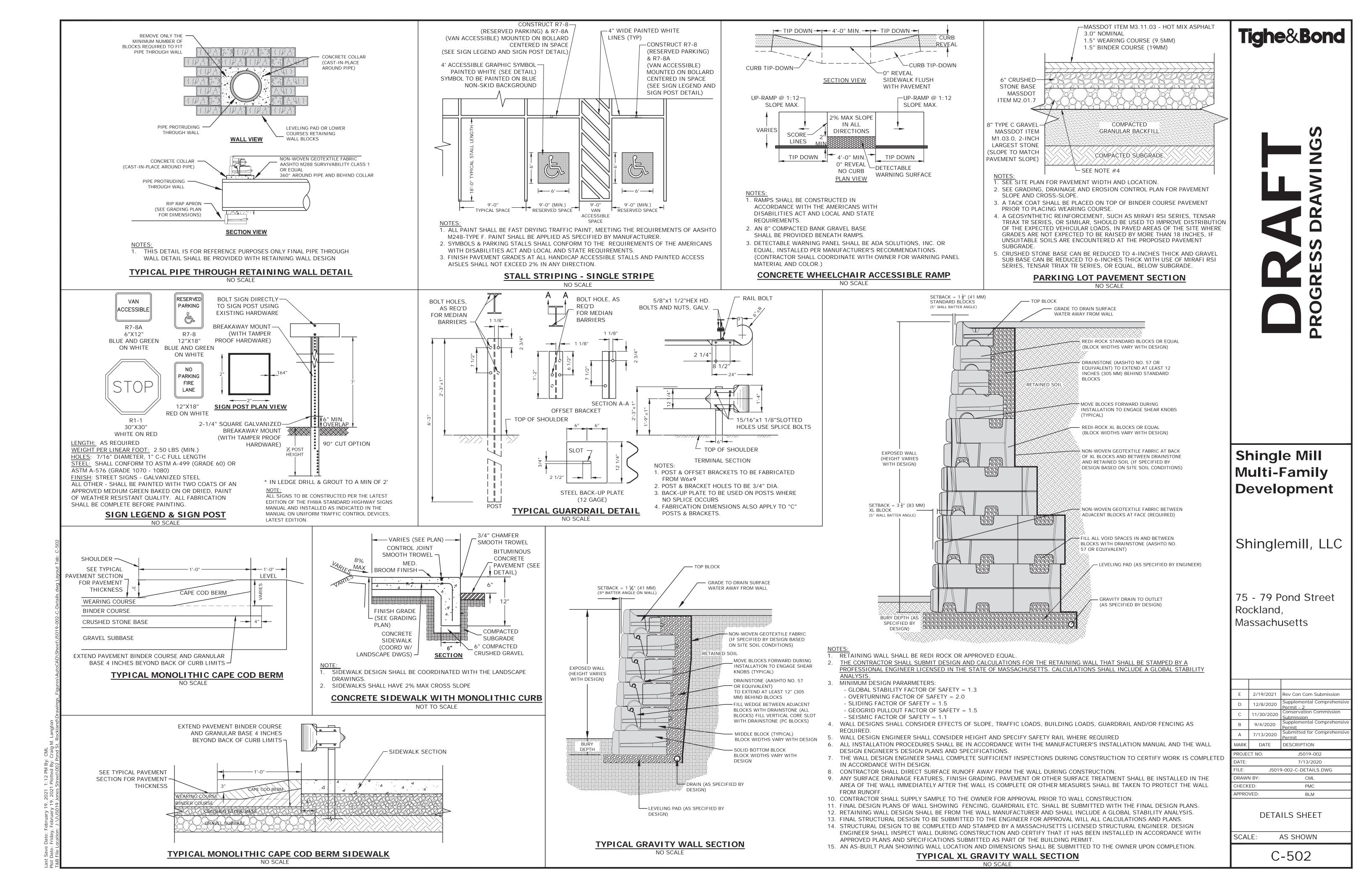
-PERFORATED RISER **PLAN VIEW** DIKE, IF IF USING PIPE **NECESSARY** WEIR OR OUTLET TO DIVERT EMBANKMENT IF FLOW INTO **USING STONE** -EXCAVATION FOR **OUTLET OR PIPE** REQUIRED STORAGE OUTLET 3:1 MAX. SLOPE SIDE-SLOPES TO BE STABILIZED **SECTION VIEW**

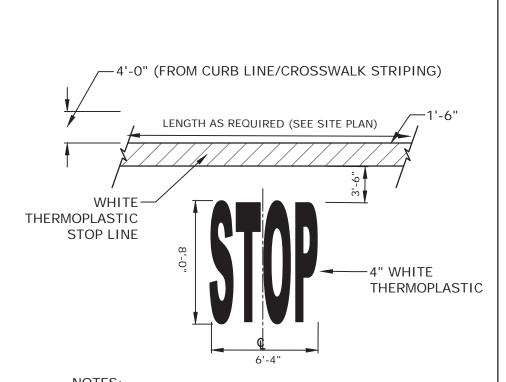
THE MAXIMUM CONTRIBUTING AREA TO A SINGLE TRAP SHALL BE LESS THAN 5 ACRES. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH

TRAP SHALL DISCHARGE TO A STABILIZED AREA.

STABILIZED.

NO SCALE



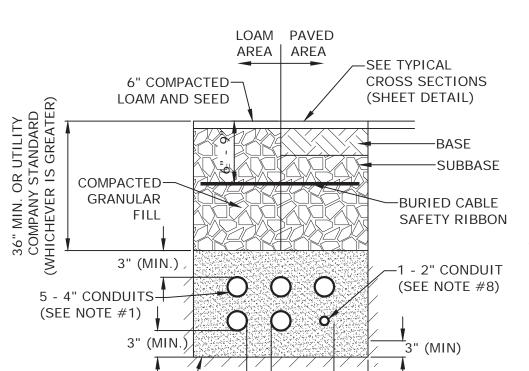


1. PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN

2. STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

STOP BAR AND LEGEND

NO SCALE



TYPICAL ELECTRICAL AND **COMMUNICATION CONDUIT** NO SCALE

REQUIRED

2-NOTCH

OPENINGS

-GATE BOX BOTTOM SECTION

└─D.I. WATER MAIN

(CLASS 52)

WATER GATE VALVE

NO SCALE

2'-0" (MIN.

3" MIN.

3" MIN.

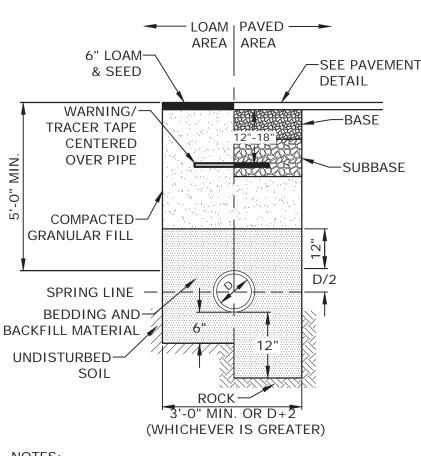
UNDISTURBED SOIL-

1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL

- UTILITY. 2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT
- BE LESS THAN THOSE SHOWN. 3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS
- 4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT
- 5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
- 6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE. 7. ALL 90° SWEEPS WILL BE MADE USING RIGID

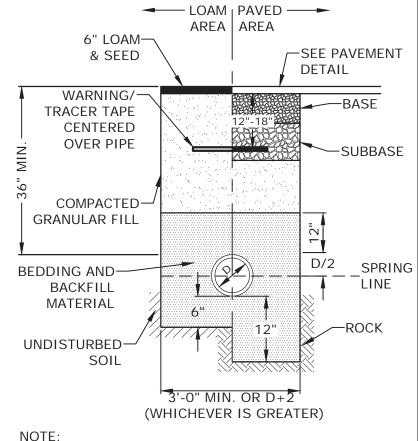
GALVANIZED STEEL. SWEEPS WITH A 36 TO 48

INCH RADIUS 8. PROVIDE 2" CONDUIT FOR FIRE ALARM WIRE CONNECTION. (COORDINATE WITH FIRE DEPARTMENT)



 SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE. 2. WATER MAIN SHALL BE INSTALLED PER TOWN OF ROCKLAND STANDARD.

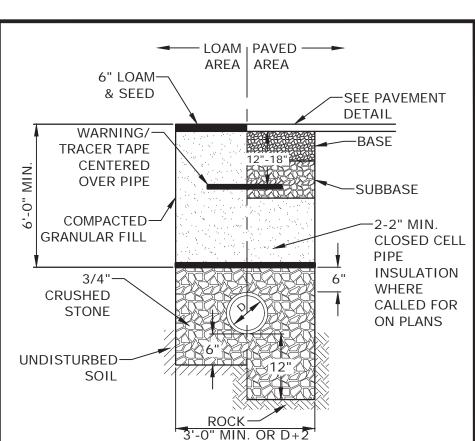
> **WATER TRENCH** NO SCALE



1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE

GAS SHALL BE INSTALLED PER NATIONAL GRID STANDARDS, COORDINATE ALL INSTALLATIONS WITH NATIONAL GRID AND THE TOWN OF ROCKLAND.

> **GAS TRENCH** NO SCALE



CRUSHED STONE BEDDING FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK. CRUSHED STONE SHALL ALSO COMPLETELY ENCASE THE PIPE AND COVER THE PIPE TO A GRADE 6" OVER THE TOP OF THE PIPE FOR THE ENTIRE WIDTH OF THE TRENCH.

(WHICHEVER IS GREATER)

2. COORDINATE ALL INSTALLATIONS WITH THE TOWN OF **ROCKLAND**

3. ALL (PIPE JOINTS) LATERAL CONNECTIONS OR UNIONS BE ENCASED IN CONCRETE (OR SOME OTHER AGREED UPON MATERIAL) TO ENSURE THE INTEGRITY OF THE CONNECTION(S) SHOULD THERE BE ANY SHIFTING OR FURTHER SETTLING OF THE PACKED SOIL ON-SITE. PHOTOGRAPHS SHOULD BE TAKEN BEFORE AND AFTER

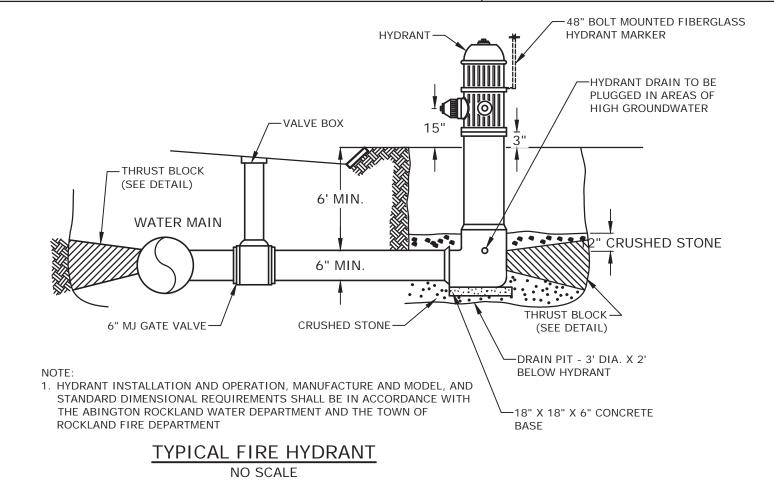
SEWER SERVICE TRENCH

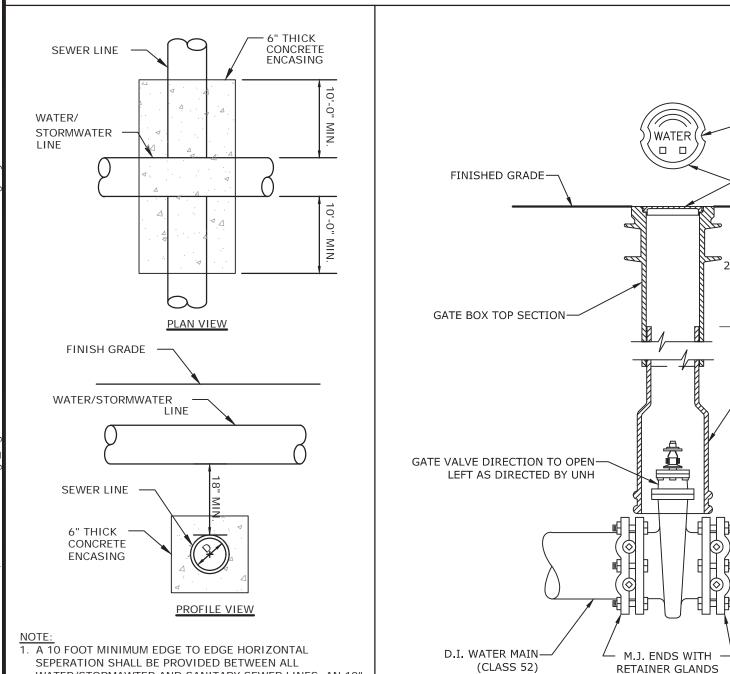
THE INSTALLATION(S), INSPECTED AND SIGNED OFF BY

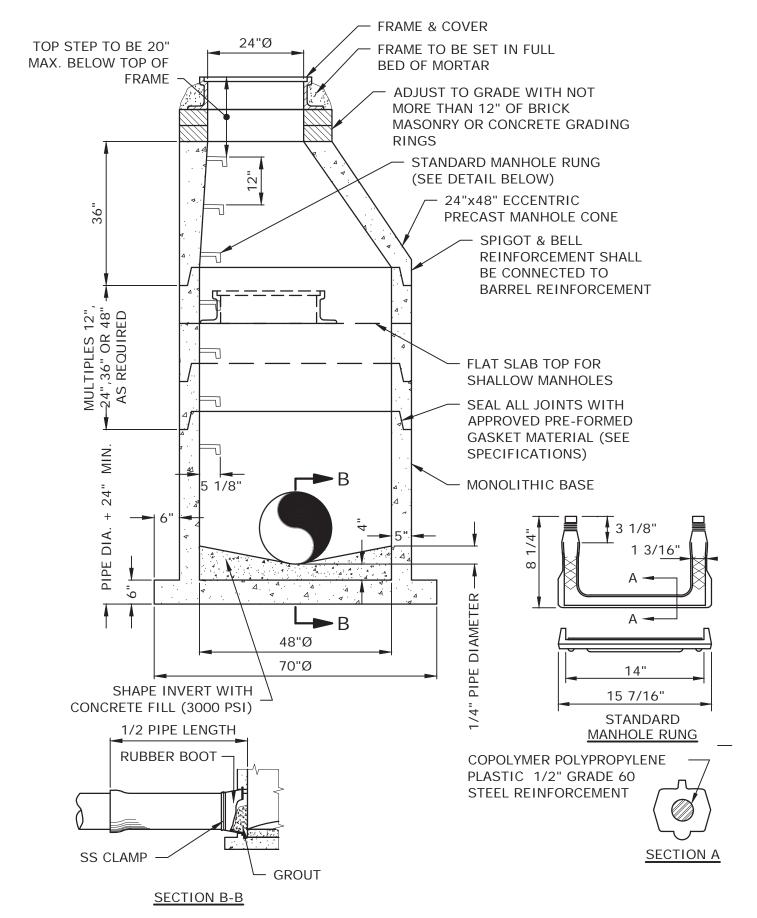
NO SCALE

THE ROCKLAND SEWER SUPERINTENDENT.

Tighe&Bond

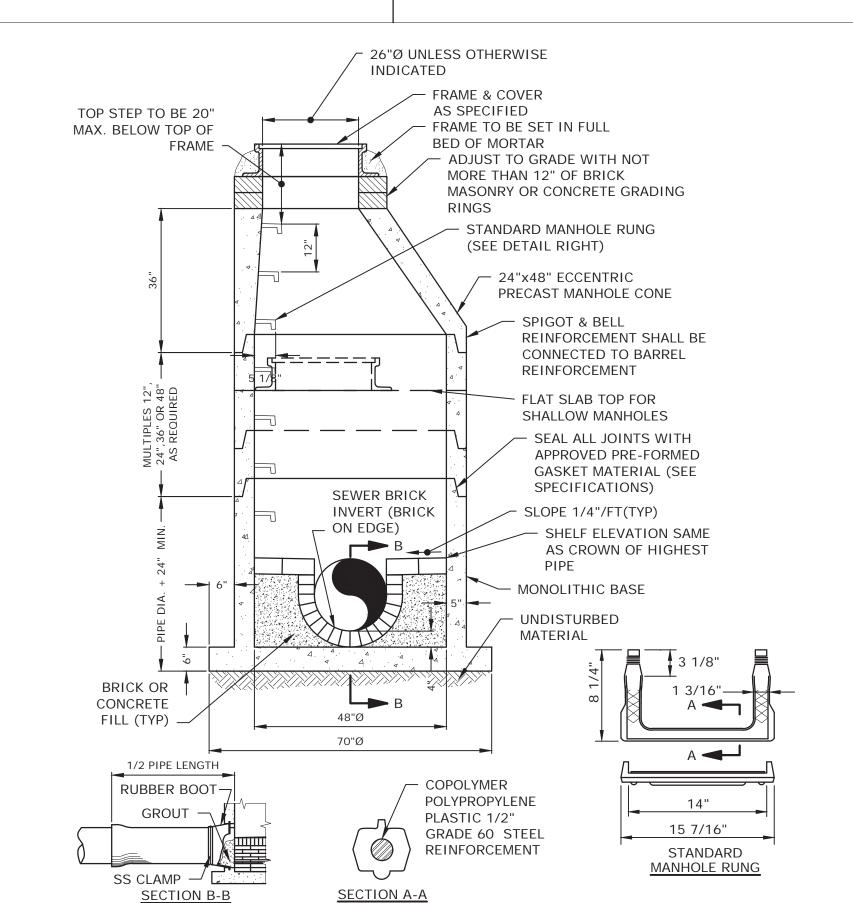






- ALL SECTIONS SHALL BE 4,000 PSI CONCRETE 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL
- SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL
- REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT. 4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING
- 5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
- THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT. 7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
- 8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF
- 9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE **SEALANT IN JOINTS**
- 10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZNTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

48" PRECAST DRAIN MANHOLE



. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE

- 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL
- THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT
- 4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING
- CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
- THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT
- PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
- 8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE 9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS
- 10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZNTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

48" PRECAST SANITARY SEWER MANHOLE

Shingle Mill Multi-Family Development

Shinglemill, LLC

75 - 79 Pond Street Rockland, Massachusetts

Е	2/19/2021	Rev Con Com Submission
D	12/8/2020	Supplemental Comprehensive Permit - 2
С	11/30/2020	Conservation Commission Submission
В	9/4/2020	Supplemental Comprehensive Permit
Α	7/13/2020	Submitted for Comprehensive Permit
MARK	DATE	DESCRIPTION
DDO IE	T NO:	I5010 002

7/13/2020 J5019-002-C-DETAILS.DWG RAWN BY CML HECKED: PMC PPROVED: BLM

DETAILS SHEET

SCALE: AS SHOWN

C-503

WATER & SEWER CROSSING NOT TO SCALE

WATER/STORMAWTER AND SANITARY SEWER LINES. AN 18'

SANITARY SEWER CROSSINGS. WHERE SEWER AND WATER

JOINTS FOR A MINIMUM DISTANCE OF 10 FEET EACH SIDE OF

THE CROSSING. CROSSING SHALL CONFORM TO TOWN OF ROCKLAND WATER DEPARTMENT STANDARDS AND

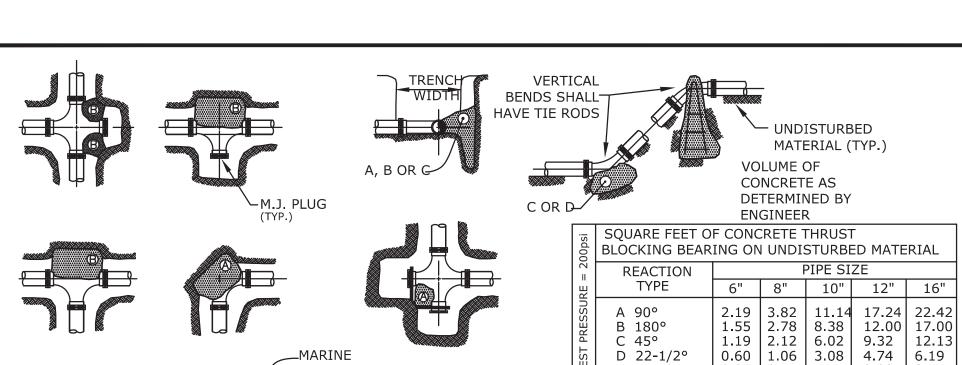
MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION

SHALL BE PROVIDED AT ALL WATER/STORMWATER AND

CROSS, ENCASE SEWER IN CONCRETE 6" THICK OR

SUBSTITUTE RUBBER GASKETED PRESSURE PIPE WITH

SPECIFICATIONS.



PLYWOOD

WRAPPED IN

C 45° D 22-1/2°

 POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.

0.30 | 0.54 | 1.54 | 2.38 | 3.11

- ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH 3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING
- THRUST BLOCKS. 4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND
- MAY BE SUBSTITUTED FOR END BLOCKINGS.
- 5. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE PER ROCKLAND WATER DEPARTMENT STANDARDS.

THRUST BLOCKING DETAIL NOT TO SCALE VARIES SEE PLANS #3 BARS @ 12" GROUND LINE BARS CLASS "A" FRONT ELEVATION CEMENT

PIPE DIAM.	1 1/	/2:1 SL	OPE	TRENCH EXCAV. 1'-0" DEPTH	2	2:1 SLOPE		TRENCH EXCAV. 1'-O" DEPTH
D	L	CONC. OR F.S.M. CU. YDS.	STEEL LBS.	CU. FT.	L	CONC. OR F.S.M. CU. YDS.	STEEL LBS.	CU. FT.
8"	4'-2"	0.77	15	21.60	5'-10"	1.08	21	27.40
10"	4'-10"	0.92	20	23.91	6'-8"	1.28	23	30.35
12"	5'-6"	1.08	21	26.25	7'-6"	1.49	29	33.25
15"	6'-6"	1.34	24	29.75	8'-9"	1.82	32	37.63
18"	7'-6"	1.61	30	33.25	10'-0"	2.18	39	42.00
21"	8'-6"	1.95	34	37.35	11'-6"	2.62	43	47.25
24"	9'-3"	2.16	35	39.38	12'-6"	2.97	50	50.75
30"	10'-6"	2.63	44	43.75	15'-0"	3.86	62	59.50

Q 4" FOR 1 1/2:1 SLOPE 6" FOR 2:1 SLOPE

END ELEVATION

18"

CONCRETE

NOTES:
1. PORTLAND CEMENT CONCRETE SHALL BE 3000 PSI, 1 1/2" MAX AGGREGATE.

1 1/2" CLEAR →

- 2. STEEL REINFORCEMENT SHALL CONFORM TO AASHTO M-31, GRADE 400.
- 3. ALL CONCRETE DIMENSIONS SHOWN ARE MINIMUM.
- 4. FOR ADDITIONAL DETAILS SEE MHD 206.4.0

END ON INLET END SECTION

2000

FABRIC REINFORCEMENT

LONGITUDINAL SECTION

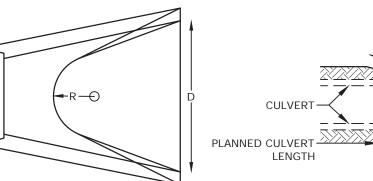
-BAR OR STEEL

(OR END SECTION TO FIT PIPE USED)

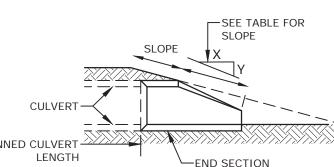
-GROOVED END ON OUTLET END SECTION TONGUE

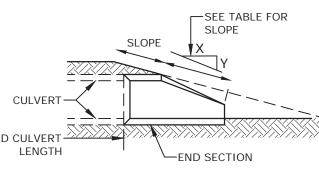
TYPICAL HEADWALL DETAIL

PIPE Ø	APPROX. SLOPE X to Y	А	В	С	D	R	Т
12"	3 to 1	4"	24"	48-7/8"	24"	9"	2"
15"	3 to 1	6"	27"	46"	30"	11"	2-1/4"
18"	3 to 1	9"	27"	46"	36"	12"	2-1/2"
24"	3 to 1	9-1/2"	43-1/2"	30"	48"	14"	3"
30"	3 to 1	12"	54"	19-3/4"	60"	15"	3-1/2"
36"	3 to 1	15"	63"	33"	72"	20"	4"
42"	3 to 1	21"	63"	33"	78"	22"	4-1/2"
48"	3 to 1	24"	72"	24"	84"	22"	5"



PLAN VIEW





SLOPE DETAIL

1. DESIGN OF END SECTION SHALL CONFORM TO STANDARD REINFORCED CONCRETE PIPE. 2. CUT OFF WALL TO BE POURED IN FIELD, IF NECESSARY, AS

-OPTIONAL CONCRETE CUTOFF -

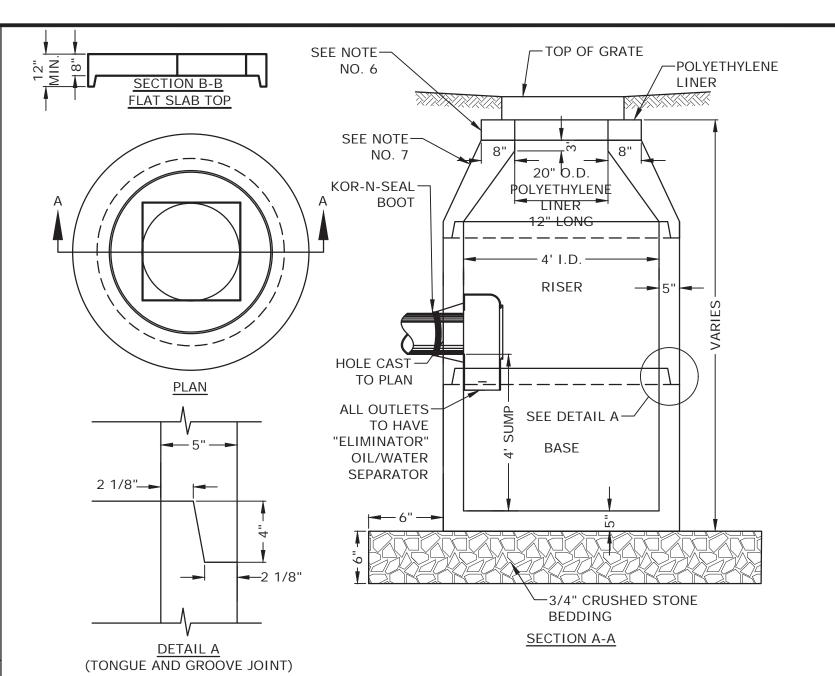
END VIEW

(WHEN ORDERED)

DIRECTED BY THE ENGINEER.

CONCRETE END SECTION

NOT TO SCALE

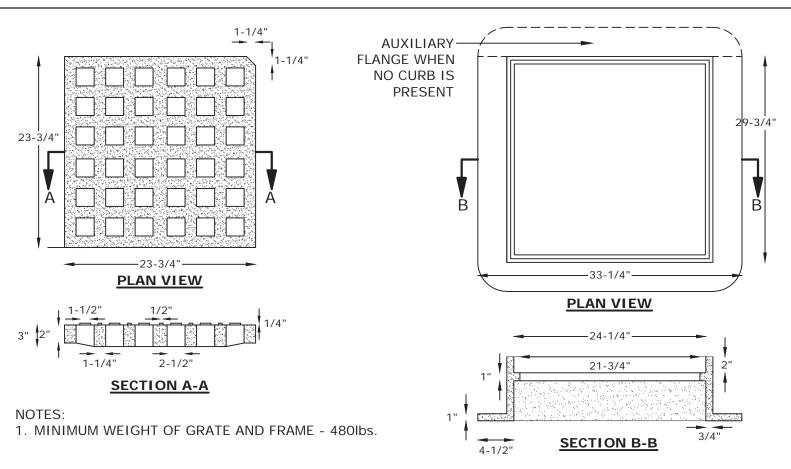


ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 psi).

- CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN
- THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
- RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
- THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING
- 6. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES
- CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD
- PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING
- OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE 10. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH
- OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS 11. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT
- 12. "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.

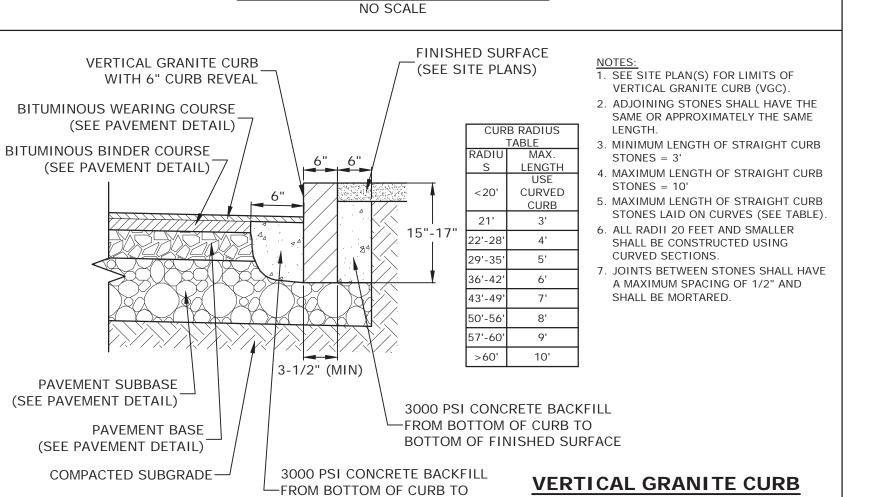
4' DIAMETER CATCHBASIN



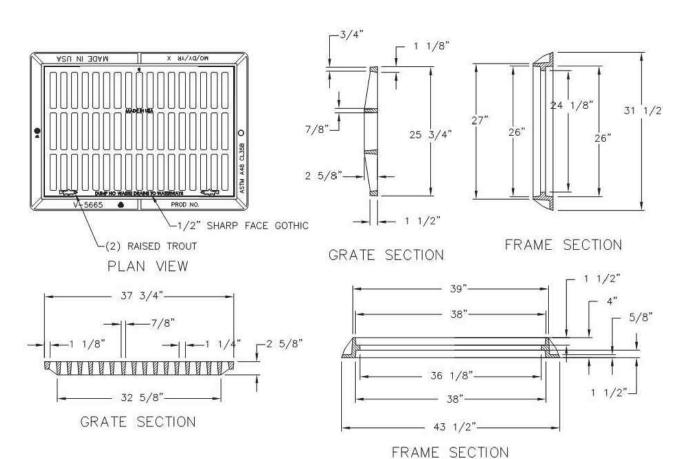


CATCHBASIN FRAME & GRATE

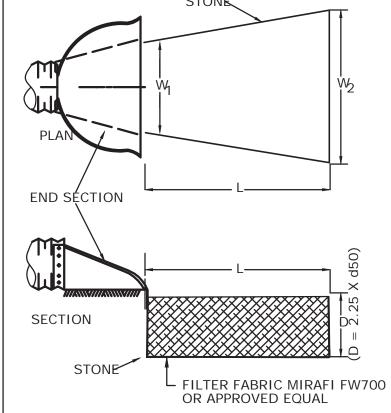
TOP OF BINDER COURSE



NO SCALE

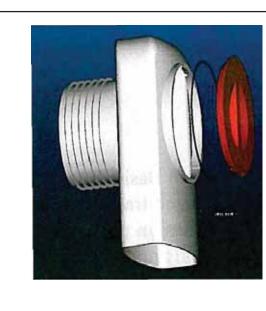


TYPICAL DOUBLE CATCH BASIN FRAME & GRATE DETAIL



1. STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. FLAT OR ROUND ROCKS ARE NOT ACCEPTABLE. THE STONE SHALL BE HARD AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE AND IT SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) OF THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5. 2. RIP RAP STONE SHALL MEET THE REQUIREMENTS OF MASSDOT ITEM M2.02.3

RIP-RAP APRON NO SCALE



- 1. ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP MANUFACTURED BY
- KLEANSTREAM (NO EQUAL) 2. INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.
- 3. 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP

"ELIMINATOR" OIL FLOATING DEBRIS TRAP

Shingle Mill Multi-Family Development

Tighe&Bond

Shinglemill, LLC

75 - 79 Pond Street Rockland, Massachusetts

- -3"		Г	T		
	Е	2/19/2021	Rev Con Com Submission		
20" MAX	D	12/8/2020	Supplemental Comprehensive Permit - 2		
	С	11/30/2020	Conservation Commission Submission		
	В	9/4/2020	Supplemental Comprehensive Permit		
	А	7/13/2020	Submitted for Comprehensiv Permit		
SEE STRUCTURE	MARK	DATE	DESCRIPTION		
JOINT DETAILS	PROJE	PROJECT NO: J5019-002			
33111 32 17 1123	DATE:	DATE: 7/13/2020			
	FILE:	J501	9-002-C-DETAILS.DWG		
Ţ │	DRAWI	N BY:	CML		
MAX	CHECK	ŒD:	PMC		
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DETAILS SHEET

SCALE: AS SHOWN

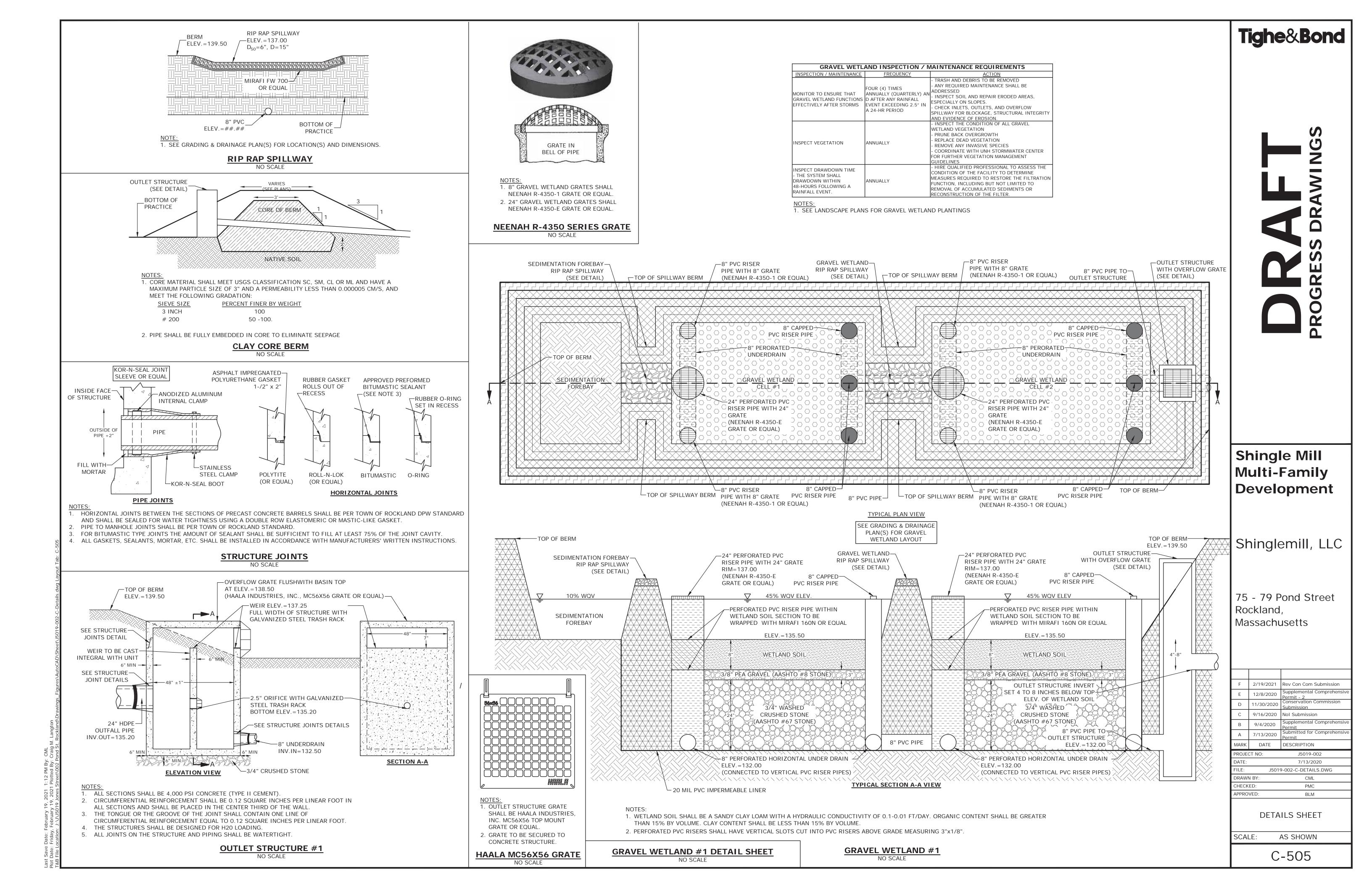
C-504

42" O.D. 24" ID → **─** 36"DIA ─ **►** TOP SLAB PLAN VIEW FRAME AND GRATE (NEENAH R-2556 OR EQUAL) _____ <u>RISER</u> TOP SLAB SECTION VIEW 36"DIA 1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE. 2. THE STRUCTURES SHALL BE DESIGNED FOR H20 3. ALL JOINTS ON THE STRUCTURE AND PIPING 2' SUMP SHALL BE WATERTIGHT.

PHOENIX PRECAST PRODUCTS OR EQUAL AREA DRAIN

NO SCALE

4. PRECAST CONCRETE YARD DRAINS SHALL BE 6"MIN→ 6"MIN -CRUSHED STONE

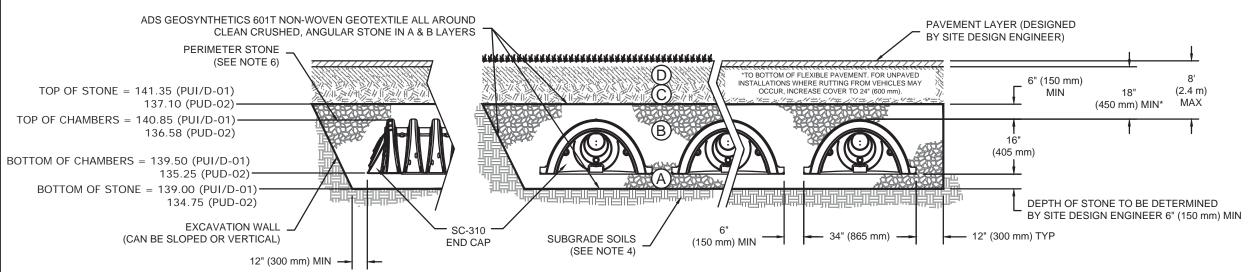


ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

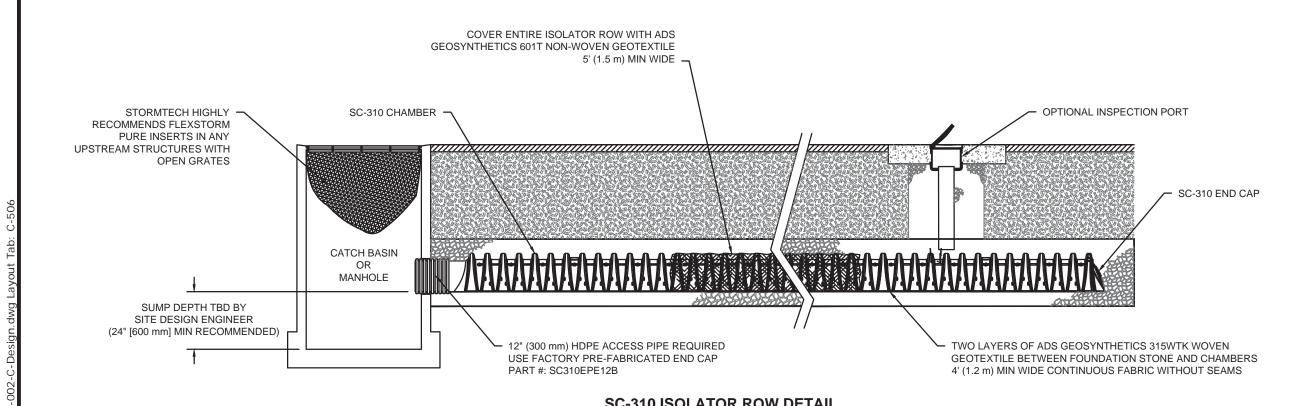
	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
С	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	OR	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
А	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ²³

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



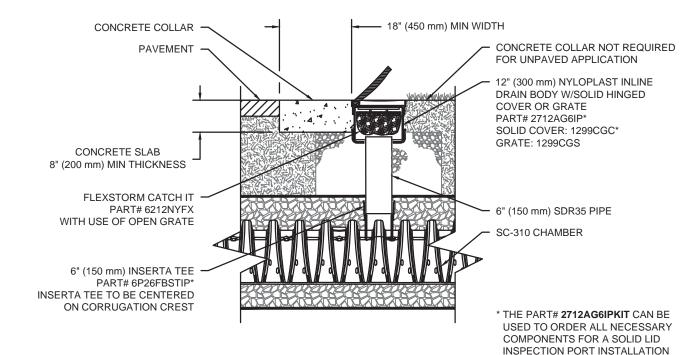
- . STORMTECH CHAMBERS ARE DESIGNED IN ACCORDANCE WITH SECTION 12.12 OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LRFD BRIDGE DESIGN SPECIFICATIONS. THIS DOCUMENT ESTABLISHES REQUIREMENTS FOR DESIGN OF PROFILE WALL THERMOPLASTIC STRUCTURES FOR BOTH LIVE LOADS AND PERMANENT EARTH LOADS. PROPER USE OF THE AASHTO DESIGN METHOD REQUIRES THAT LOAD MULTIPLIERS FOR IMPACT AND MULTIPLE PRESENCES ARE APPLIED TO THE AASHTO DESIGN TRUCK (HS20) LIVE LOAD. ADDITIONAL FACTORS ARE APPLIED TO THE LOAD AND EARTH LOADS TO PROVIDE THE FULL SAFETY FACTORS FOR BOTH LIVE AND EARTH LOADS. WHEN INSTALLED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS SPECIFIED IN THE STORMTECH INSTALLATION INSTRUCTIONS, STORMTECH CHAMBERS MEET OR EXCEED THE AASHTO REQUIREMENTS FOR BOTH LIVE LOAD AND EARTH LOAD DESIGN. 2. SC-310 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM
- F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" 3. SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION
- 4. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS 5. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS
- 6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS. 7. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT A. INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON
 - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS
 - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3. B. ALL ISOLATOR ROWS B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
- B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3. STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

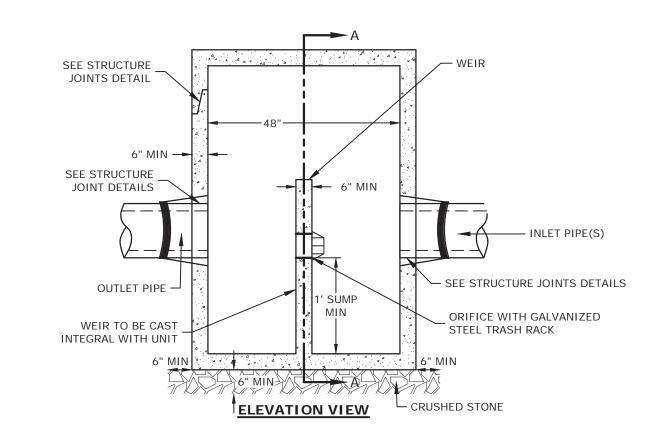
- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS

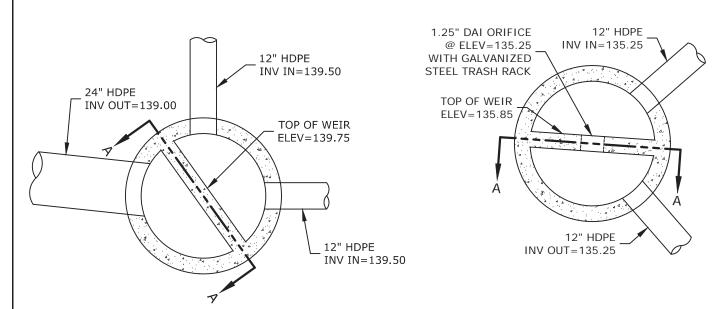


SC-310 6" INSPECTION PORT DETAIL

STORMTECH SC-310 CHAMBER SYSTEM

NOT TO SCALE



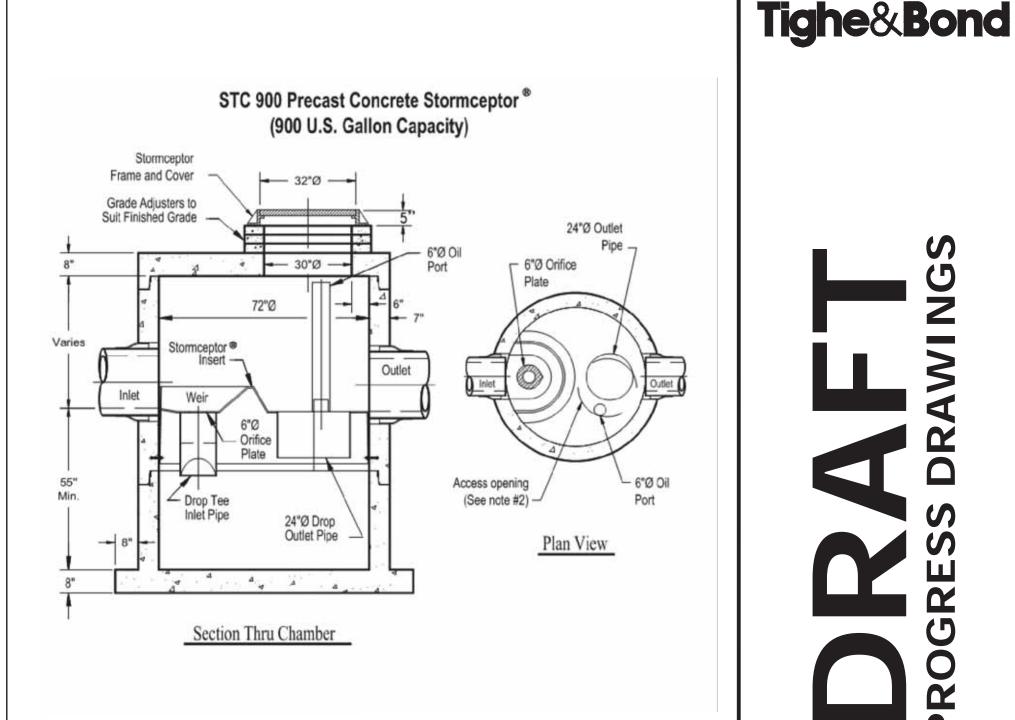


1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).

PDHM-20 WEIR PLAN VIEW

- 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE THIRD WALL.
- 3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT. 4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
- 5. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT

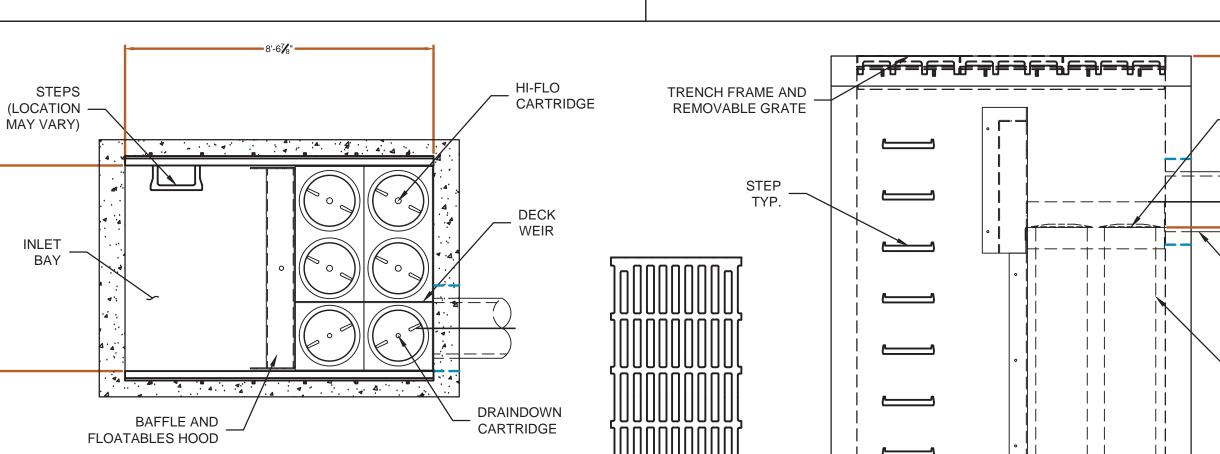
PDMH-20 & PDMH-25 WEIR DETAIL



1. STORMCEPTOR SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

> **STORMCEPTOR** NOT TO SCALE

ELEVATION VIEW



TRENCH GRATE

JELLYFISH TREATM

LENGTH AND THE N

INLET STYLE WITH

CURB INLET OR PIP

CAPACITY TO BE D

CARTRIDGE SELECT

CARTRIDGE LENGT

OUTLET INVERT TO

MAX. TREATMENT (CFS)

OUTLET INVERT TO RIM (MIN) (B)

FLOW RATE HIGH-FLO / DRAINDOWN (CFS) (PER CART)

PDHM-25 WEIR PLAN VIEW

PLAN VIEW

(TOP SLAB NOT SHOWN FOR CLARITY)

- 1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE
- 2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS REPRESENTATIVE. www.ContechES.com
- 3. JELLYFISH WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- 4. STRUCTURE SHALL MEET AASHTO HS-20 OR PER APPROVING JURISDICTION REQUIREMENTS, WHICHEVER IS MORE STRINGENT, ASSUMING EARTH COVER OF 0', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 LOAD RATING AND BE CAST WITH
- 5. STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND AASHTO LOAD FACTOR DESIGN METHOD.
- 6. OUTLET PIPE INVERT IS EQUAL TO THE CARTRIDGE DECK ELEVATION. 7. THE OUTLET PIPE DIAMETER FOR NEW INSTALLATIONS IS RECOMMENDED TO BE ONE PIPE SIZE LARGER THAN THE INLET PIPE (WHERE APPLICABLE) AT EQUAL OR GREATER
- 8. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECT BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

Shingle Mill Multi-Family Development

Shinglemill, LLC

75 - 79 Pond Street Rockland, Massachusetts

E 2/19/2021 Rev Con Com Submission

			D	12/8/2020	Supplemental Comprehensiv Permit - 2
			С	9/16/2020	NoI Submission
		[В	9/4/2020	Supplemental Comprehensiv Permit
ELLYFISH DESIGN NO		А	7/13/2020	Submitted for Comprehensiv Permit	
MENT CAPACITY IS A FUNCTION OF TH			MARK	DATE	DESCRIPTION
NUMBER OF CARTRIDGES. THE STAN TRENCH GRATE AND COVER IS SHOW		PROJE	CT NO:	J5019-002	
PE INLET OPTIONS ARE AVAILABLE. F		DATE:		7/13/2020	
FE INLET OF HONS ARE AVAILABLE. F	'EAK CONVEYANCE				
DETERMINED BY ENGINEER OF RECOF			FILE:	J501	9-002-C-DESIGN.DWG
			FILE:		9-002-C-DESIGN.DWG
DETERMINED BY ENGINEER OF RECOF				N BY:	
DETERMINED BY ENGINEER OF RECOF	RD.		DRAWI	N BY: ED:	CML

0.178 / 0.089

0.89

3'-4"

CARTRIDGE

— OUTLET P<mark>I</mark>PI

— CARTRIDGE

DECK

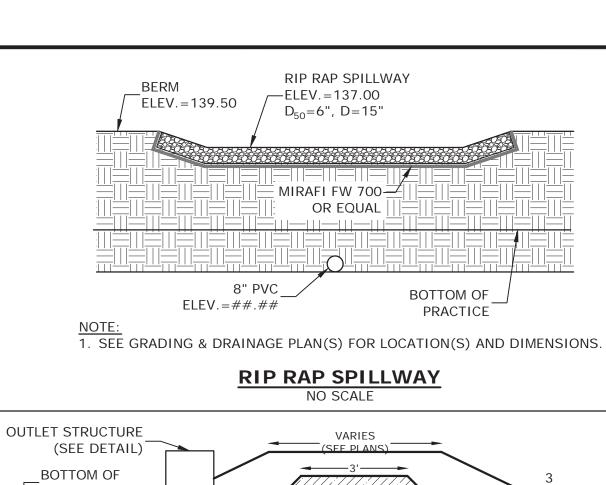
DETAILS SHEET

AS SHOWN

SCALE:

STANDARD DETAIL

C-506 SURFACE INLET CONFIGURATION



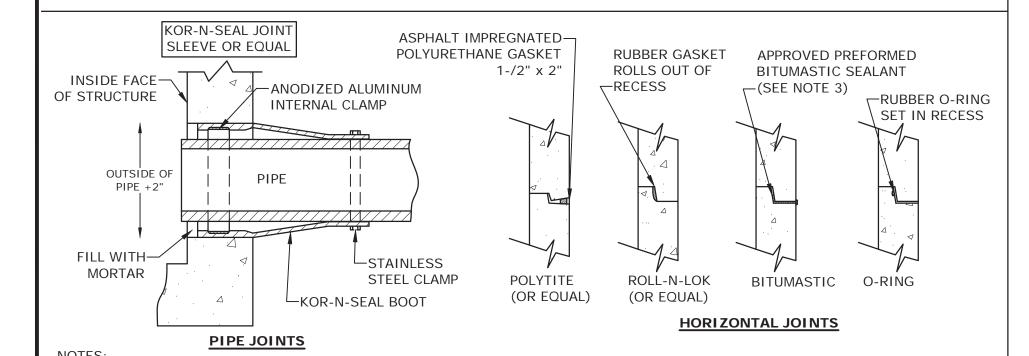
OUTLET STRUCTURE PRACTICE NATIVE SOIL

1. CORE MATERIAL SHALL MEET USGS CLASSIFICATION SC, SM, CL OR ML AND HAVE A MAXIMUM PARTICLE SIZE OF 3" AND A PERMEABILITY LESS THAN 0.000005 CM/S, AND MEET THE FOLLOWING GRADATION:

SIEVE SIZE PERCENT FINER BY WEIGHT 3 INCH 50 -100. # 200

2. PIPE SHALL BE FULLY EMBEDDED IN CORE TO ELIMINATE SEEPAGE

CLAY CORE BERM



- HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER TOWN OF ROCKLAND DPW STANDARD AND SHALL BE SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET. PIPE TO MANHOLE JOINTS SHALL BE PER TOWN OF ROCKLAND STANDARD.
- FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY. 4. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

STRUCTURE JOINTS

NO SCALE —OVERFLOW GRATE FLUSHWITH BASIN TOP AT ELEV. = 136.00 TOP OF BERM ELEV.=137.00 (HAALA INDUSTRIES, INC., MC56X56 GRATE OR EQUAL)— -WEIR ELEV. = 135.00 FULL WIDTH OF STRUCTURE WITH GALVANIZED STEEL TRASH RACK SEE STRUCTURE-JOINTS DETAIL WEIR TO BE CAST INTEGRAL WITH UNIT 6" MIN → SEE STRUCTURE— JOINT DETAILS -2.5" ORIFICE WITH GALVANIZED— STEEL TRASH RACK BOTTOM ELEV.=134.20 18" HDPE-─SEE STRUCTURE JOINTS DETAILS OUTFALL PIPE INV.OUT=134.20 -8" UNDERDRAIN INV.IN=131.00 SECTION A-A

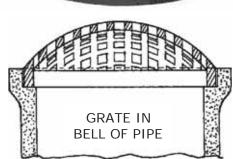
- ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).
- CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN
- ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.

ELEVATION VIEW

- THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
- THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING. 5. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT.

OUTLET STRUCTURE #2





HAALA MC56X56 GRATE

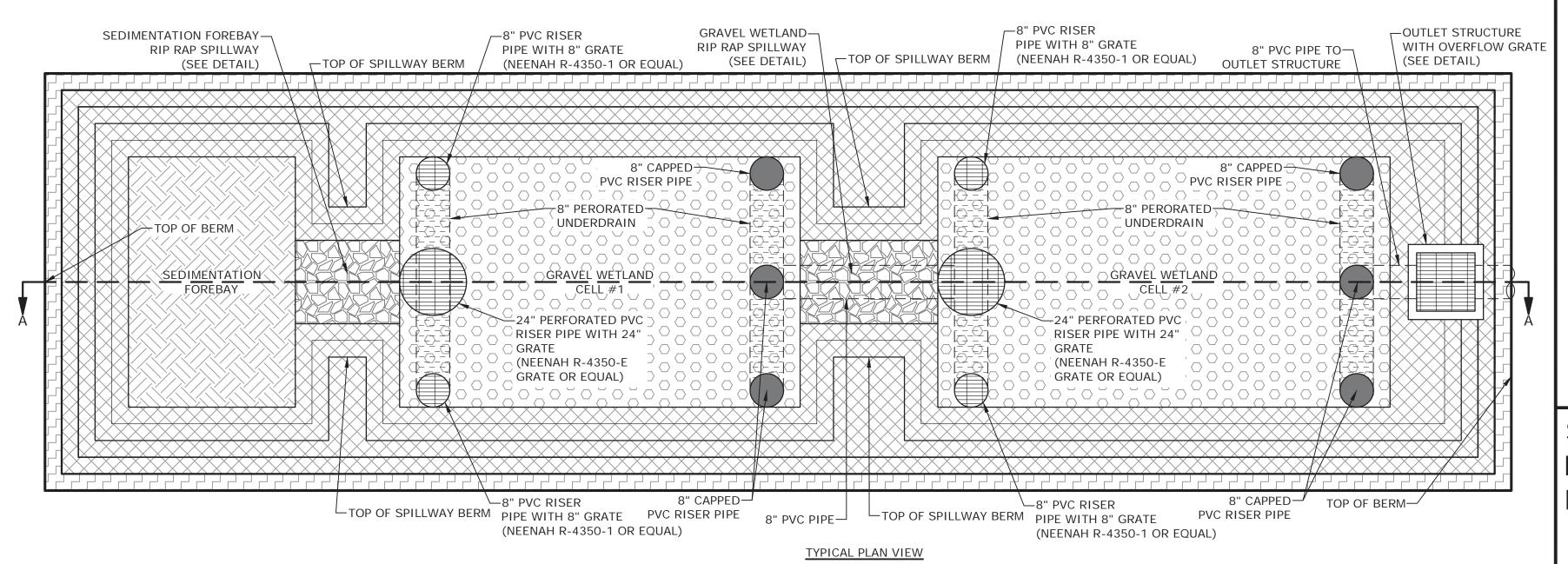
NOTES: 1. 8" GRAVEL WETLAND GRATES SHALL NEENAH R-4350-1 GRATE OR EQUAL 2. 24" GRAVEL WETLAND GRATES SHALL NEENAH R-4350-E GRATE OR EQUAL.

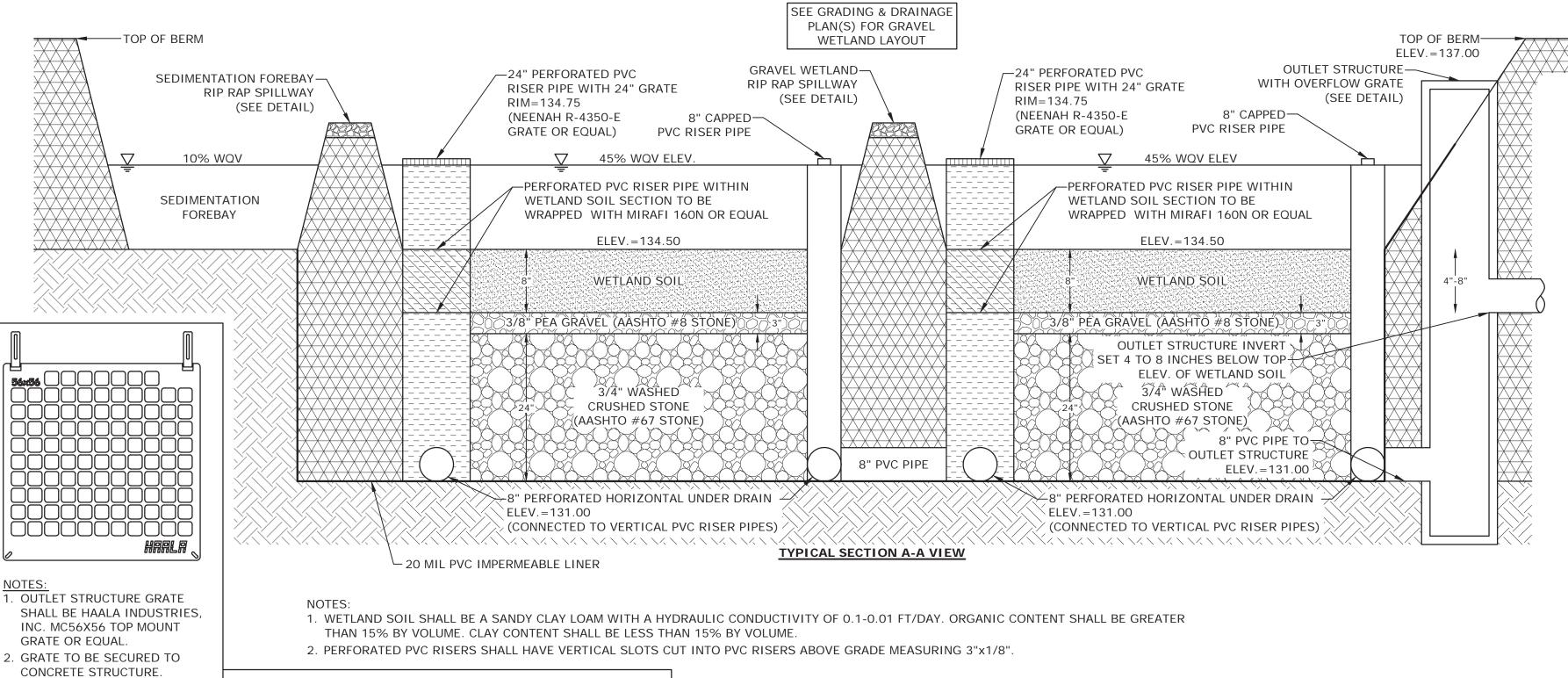
NEENAH R-4350 SERIES GRATE NO SCALE

INSPECTION / MAINTENANCE	FREQUENCY	ACTION
MONITOR TO ENSURE THAT GRAVEL WETLAND FUNCTIONS EFFECTIVELY AFTER STORMS	FOUR (4) TIMES ANNUALLY (QUARTERLY) AN D AFTER ANY RAINFALL EVENT EXCEEDING 2.5" IN A 24-HR PERIOD	- TRASH AND DEBRIS TO BE REMOVED - ANY REQUIRED MAINTENANCE SHALL BE ADDRESSED - INSPECT SOIL AND REPAIR ERODED AREAS, ESPECIALLY ON SLOPES CHECK INLETS, OUTLETS, AND OVERFLOW SPILLWAY FOR BLOCKAGE, STRUCTURAL INTEGRITY AND EVIDENCE OF EROSION.
INSPECT VEGETATION	ANNUALLY	- INSPECT THE CONDITION OF ALL GRAVEL WETLAND VEGETATION - PRUNE BACK OVERGROWTH - REPLACE DEAD VEGETATION - REMOVE ANY INVASIVE SPECIES - COORDINATE WITH UNH STORMWATER CENTER FOR FURTHER VEGETATION MANAGEMENT GUIDELINES
INSPECT DRAWDOWN TIME - THE SYSTEM SHALL DRAWDOWN WITHIN 48-HOURS FOLLOWING A RAINFALL EVENT.	ANNUALLY	- HIRE QUALIFIED PROFESSIONAL TO ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE THE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER.

NOTES:

1. SEE LANDSCAPE PLANS FOR GRAVEL WETLAND PLANTINGS





GRAVEL WETLAND #2

GRAVEL WETLAND #2 DETAIL SHEET

Tighe&Bond

Shingle Mill **Multi-Family Development**

Shinglemill, LLC

75 - 79 Pond Street Rockland, Massachusetts

C 2/19/2021 Rev Con Com Submission B 12/8/2020 A 11/30/2020 MARK DATE DESCRIPTION ROJECT NO: J5019-002 11/30/2020 J5019-002-C-DETAILS.DWG RAWN BY CML

DETAILS SHEET

PMC

BLM

SCALE: AS SHOWN

HECKED:

PPROVED:

C-507

─3/4" CRUSHED STONE

