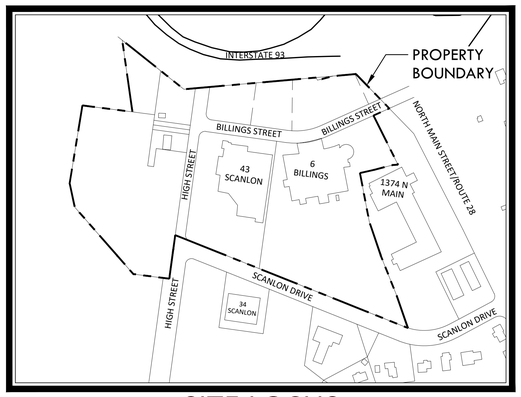
VERTEX®
400 Libbey Parkway
Weymouth, MA 02189
Main: 781.952.6000
VERTEXENG.COM

SITE DEVELOPMENT PLANS FOR PROPOSED DEVELOPMENT NORTH OF SCANLON DRIVE

Submitted to the: Town of Randolph



SITE LOCUS

SCALE: 1"= 200'

OWNER

CIVIL ENGINEER
THE VERTEX COMPANIES, LLC.
400 Libbey Parkway
Weymouth, MA 02189

TRAFFIC ENGINEER
HOWARD STEIN HUDSON ENGINEERS + PLANNERS
11 BEACON STREET, SUITE 1010
BOSTON, MA 02108

ARCHITECT
STANTEC ARCHITECTURE & ENGINEERING P.C.
40 WATER STREET, 3RD FLOOR
BOSTON, MA 02109

LANDSCAPE ARCHITECT
STANTEC ARCHITECTURE & ENGINEERING P.C.
40 WATER STREET, 3RD FLOOR
BOSTON, MA 02109

PERMITTING SPECIALIST
VHB, INC.
99 HIGH STREET, 13TH FLOOR
BOSTON, MA 02110

MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION ENGINEER
CONSENTINI CONSULTING ENGINEERING
100 FEDERAL STREET, 6TH FLOOR
BOSTON, MA 02110

STRUCTURAL ENGINEER
DESIMONE CONSULTING ENGINEERS
31 MILK STREET, SUITE 1016
BOSTON, MA 02109

GEOTECHNICAL ENGINEER
MCPHAIL ENGINEERS
2269 MASSACHUSETTS AVENUE
CAMBRIDGE, MA 02140

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DECEMBER 26, 2023
DEVELOPMENT NORTH OF SCANLON DRIVE
VERTEX PROJECT NO. 78000

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Norwell, MA 02061-1620
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PREPARED FOR:

VERTEX

400 LIBBEY PARKWAY

WEYMOUTH, MA 02189

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION 'ALTERED BY' FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

PROJECT TITLE:

EXISTING CONDITIONS PLAN

HIGH STREET AND BILLINGS STREET

RANDOLPH, MA

No.	Submittal / Revision	App'd	By	Date
0	Issued as Final	WJD	MWC	12/20/2023

Designed By:	Drawn By:	Checked By:
---	CHA	WJD
Issue Date:	Project No:	Scale:
12/20/2023	068668	1" = 40'

Drawing No.:

SHEET 1 OF 1

PARCEL A
IS MADE UP OF A PORTION OF PARCEL 01-B-2, PARCEL 02-A-2 PARCEL 02-B-1.LA AND PARCEL 02-C-1.438 AND ALL OF PARCEL 02-A-1.136 FOR A TOTAL AREA OF 262,315 SQ. FT./6.022 ACRES

PARCEL B
IS MADE UP OF A PORTION OF PARCEL 02-B-1.LA AND PARCEL 02-C-1.438 AND ALL OF PARCEL 02-C-002.2 FOR A TOTAL AREA OF 321,427 SQ. FT./7.379 ACRES

SCALE: 1" = 40'

File: V:\PROJECTS\ANY\KS\068668.000\09_DESIGN\SURVEY\068668- EC PLAN SENT TO ANDY STREET.DWG

REFERENCE

1. EXISTING CONDITION AND PROPERTY INFORMATION PROVIDED BY CHA CONSULTING, INC. IN APRIL OF 2022.

GENERAL NOTES

1. THE STATE OF MASSACHUSETTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES 1995 EDITION AND THE SUPPLEMENTAL SPECIFICATIONS 2002 EDITION, OR LATEST REVISION, AND THE MASSACHUSETTS STANDARD DETAILS AND TOWN OF RANDOLPH STANDARD DETAILS AND CONSTRUCTION STANDARDS ARE MADE A PART HEREOF AS FULLY AND COMPLETELY AS IF ATTACHED HERETO. THE 1995 EDITION OF THE STANDARD SPECIFICATIONS AND THE 2002 EDITION OF THE SUPPLEMENTAL SPECIFICATIONS MAY BE OBTAINED AT THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION.
2. THE CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY CONSTRUCTION PERMITS, PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH THE SAME, AND COORDINATE WITH THE OWNER AND THE ENGINEER. THE CONTRACTOR IS REQUIRED TO FILE ANY DOCUMENTS REQUIRED BY NPDES GENERAL PERMIT OR PUBLIC WORKS ORDER OF CONDITIONS APPLICABLE TO THE SITE.
3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AND/OR BARRIERS AROUND ALL OPEN EXCAVATED AREAS, AND CONDUCT ALL WORK IN ACCORDANCE WITH OSHA STANDARDS AND TOWN OF RANDOLPH REQUIREMENTS.
4. AFTER THE INSTALLATION OF THE EROSION CONTROLS, THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS IN WRITING AT LEAST 48 HOURS PRIOR TO THE START OF ANY WORK.
5. IF ANY DEVIATION OR ALTERATION OF THE WORK PROPOSED ON THESE DRAWINGS IS REQUIRED, THE CONTRACTOR SHALL IMMEDIATELY CONTACT AND COORDINATE WITH THE ENGINEER, THE OWNER AND TOWN OF RANDOLPH PUBLIC WORKS OR THEIR AGENT.
6. ANY AREA OUTSIDE OF THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
7. ALL EXISTING CONDITIONS SHOWN SHALL BE CONSIDERED APPROXIMATE AND ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER, THE ENGINEER AND TOWN OF RANDOLPH PUBLIC WORKS OR THEIR AGENT PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK WHICH WOULD BE AFFECTED. NO FIELD ADJUSTMENTS IN THE LOCATION OF SITE ELEMENTS SHALL BE MADE WITHOUT THE ENGINEERS, AND TOWN OF RANDOLPH PUBLIC WORKS OR THEIR AGENT APPROVAL.
8. ALL UTILITIES (LOCATION AND ELEVATION) SHOWN SHALL BE CONSIDERED APPROXIMATE ONLY. BEFORE COMMENCING SITE WORK IN ANY AREA, CONTACT "DIG SAFE" AT 1-888-344-7233 AND ALL UTILITY COMPANIES NOT COVERED BY "DIG SAFE". TO ACCURATELY LOCATE UNDERGROUND UTILITIES. ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES AS SHOWN ON THE PLANS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. COSTS OF SUCH DAMAGE SHALL BE THE CONTRACTOR'S RESPONSIBILITY. NO EXCAVATION SHALL BE DONE UNTIL COMPANIES ARE PROPERLY NOTIFIED IN ADVANCE. NOTE THAT NOT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO CONTACT ALL RESPECTIVE UTILITY COMPANIES TO VERIFY AND LOCATE EXISTING UTILITIES.
9. ALL WORK WITHIN THE RIGHT OF WAY SHALL CONFORM TO TOWN OF RANDOLPH DEPARTMENT OF PUBLIC WORKS REQUIREMENTS, AND MASSACHUSETTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES 1995 EDITION AND THE 2002 EDITION OF THE SUPPLEMENTAL SPECIFICATIONS, OR LATEST REVISIONS TO BOTH.
10. PAVEMENT MARKINGS ARE TO BE WATERBOURNE AND CONFORM TO THE SPECIFICATIONS.
11. PRIOR TO THE PLACEMENT OF THE FINAL COAT OF PAVEMENT, ALL EXISTING PAVEMENT IS TO BE SWEPT CLEAN AND ASPHALT EMULSION TACK COAT IS TO BE APPLIED.
12. ALL CURB RAMPS SHALL HAVE DETECTABLE WARNING MATS IN ACCORDANCE WITH MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) GUIDELINES. DETECTABLE WARNING PANELS SHALL BE CAST IRON, SEE SPECIFICATION SECTION 32 13 12.
13. IN AREAS CALLED OUT AS SIDEWALKS FINISHES ARE DETAILED ON THE LANDSCAPE PLANS.
14. CONTRACTOR TO INSTALL A VISUAL BARRIER SCREENING COVERING THE CHAIN LINK FENCE WITH A MINIMUM 85% OPACITY. CONTRACTOR TO INSTALL THE SCREENING ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
15. IN ADDITION TO TYPICAL DESIGN STANDARDS, THE CONSTRUCTION GATE/FENCE SUPPORT SYSTEM (POSTS, UPRIGHTS, RODS, RAILS, TIES, FOUNDATIONS, ETC.) SHALL BE DESIGNED FOR A LATERAL WIND PRESSURE WITH THE FENCE ASSUMED TO BE SOLID I.E., WITHOUT PENETRATIONS. CONTRACTOR SHALL SUBMIT CALCULATIONS STAMPED BY A MA REGISTERED PROFESSIONAL ENGINEER DEMONSTRATING THE DESIGN TO BE IN COMPLIANCE WITH ALL LOADS NOTED AND THE STATE BUILDING CODE.
16. WORK DEPICTED ON THE CIVIL AND LANDSCAPE PLANS (C-SERIES AND L-SERIES) SHALL BE FURNISHED AND INSTALLED BY THE SITE CONTRACTOR UNLESS OTHERWISE NOTED.

DEMOLITION NOTES

1. ALL DEMOLITION SHALL BE COORDINATED WITH THE OWNER PRIOR TO START OF WORK.
2. PAVEMENT DEMOLITION SHALL BE SAW CUT AND DISPOSED OF PROPERLY. WHERE NEW PAVEMENT ABUTS EXISTING, CONTRACTOR SHALL PROVIDE CLEAN SAW CUT WITH A 2' OVERLAP OF NEW TOP COURSE OVER ADJACENT EXISTING BASE COURSE.
3. ALL UTILITIES REMOVED FROM THE SITE SHALL BE REMOVED ALL THE WAY TO THE MAIN LINE, UNLESS OTHERWISE NOTED ON THE PLANS, WITH ANY ASSOCIATED TEES AND FITTINGS REMOVED AND REPLACED WITH A NEW SECTION OF PIPE.
4. THE CONTRACTOR SHALL COORDINATE ALL DEMOLITION OF STRUCTURES, PAVEMENT AND CONCRETE MATERIALS, AND UTILITIES WITH APPROPRIATE PROPOSED SITE, GENERAL, AND UTILITY DRAWINGS.
5. THE CONTRACTOR SHALL REMOVE ALL UNSUITABLE SOILS IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT FOR THE PROPOSED SITE.

STORMWATER MAINTENANCE

1. PREVENTATIVE MAINTENANCE SHOULD BE PERFORMED AT LEAST TWICE A YEAR, AND IDEALLY SEDIMENT SHOULD BE REMOVED FROM PRETREATMENT BMPS AFTER EVERY MAJOR STORM EVENT. THE SYSTEMS SHOULD BE INSPECTED AFTER THE FIRST SEVERAL RAINFALL EVENTS, AFTER ALL MAJOR STORMS, AND ON REGULAR BI-ANNUAL SCHEDULED DATES IDENTIFIED DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY. THE CONTRACTOR SHALL SUBMIT INSPECTION REPORTS AT LEAST EVERY TWO WEEKS TO TOWN OF RANDOLPH PUBLIC WORKS (VIA E-MAIL, HAND DELIVERED OR FAX).
2. PRETREATMENT BMPS SHOULD BE INSPECTED AND CLEANED DURING THE REGULAR SCHEDULED INSPECTIONS. WATER QUALITY INLETS SHOULD BE CLEARED OF ACCUMULATED SEDIMENT, LEAVES, AND DEBRIS AT EACH REGULAR INSPECTION, AND MORE FREQUENTLY WHERE APPROPRIATE. INLET AND OUTLET PIPES SHOULD BE CHECKED FOR CLOGGING.
3. RAIN GARDENS SHOULD BE CLEANED OF TRASH MONTHLY. REMOVE WEED GROWTH FROM MULCHED BEDS AND RIVER STONE AREAS MONTHLY. HERBACEOUS PLANT MATERIAL SPECIFIED FOR THE RAIN GARDEN AREAS SHOULD BE CUT BACK ONCE IN THE LATE FALL OR EARLY SPRING BEFORE NEW GROWTH DEVELOPS. SHRUBS AND TREES SHOULD BE MONITORED TO ENSURE PROPER AND HEALTHY GROWTH. OUTLET STRUCTURES SHALL BE CLEARED OF DEBRIS. ANY EROSION SHOULD BE NOTED. PLANTING BEDS SHOULD HAVE A FRESH LAYER OF MULCH ADDED EACH SPRING.

SURVEY NOTES

1. INFORMATION SHOWN HEREON IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY CHA CONSULTING, INC. IN APRIL OF 2022.
2. ALL DEED REFERENCES ARE TO NORFOLK COUNTY REGISTRY OF DEEDS UNLESS OTHERWISE NOTED.
3. LOCUS OWNER OF RECORD:

RANDOLPH REALTY TRUST II DEED BOOK 27987 PAGE 53 PARCEL ID: 02-B-1.LA	RANDOLPH REALTY TRUST I DEED BOOK 27628, PAGE 53 PARCEL ID: 02-B-1.LA

4. TOPOGRAPHY, CONTOURS AND BENCHMARKS ARE BASED ON THE NORTH AMERICAN 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 ARE PUBLISHED ON THE 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 "X" (AREAS OF MINIMAL FLOODINGS) AS SHOWN ON FLOOD INSURANCE RATE MAP FOR NORFOLK COUNTY, COMMUNITY PANEL NUMBER 25021C0204E, EFFECTIVE DATE JULY 17, 2012.
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 OCNSTRUCTION, CONTACT DIG-SAFE (811) TO FIELD VERIFY LOCATION OF ALL UTILITIES.
7. PLAN REFERENCES:

LAND COURT PLAN 4921S	PLAN BOOK 382 PAGE 570	PLAN BOOK 437 PAGE 117
PLAN BOOK 541 PAGE 682	PLAN BOOK 480 PAGE 645	PLAN BOOK 67 PAGE 3227
PLAN BOOK 4915 PAGE 153	PLAN BOOK 4998 PAGE 667	PLAN BOOK 4709 PAGE 407
PLAN BOOK 221 PAGE 683	PLAN BOOK 1773 PAGE END	PLAN BOOK 4813 PAGE 209
PLAN BOOK 4899 PAGE 700	PLAN BOOK 4842 PAGE 385	PLAN BOOK 4335 PAGE 354
PLAN BOOK 230 PAGE 164	PLAN BOOK 204 PAGE 1072-1076	PLAN BOOK 4707 PAGE 50
PLAN BOOK 596 PAGE 30	PLAN BOOK 480 PAGE 645	PLAN BOOK 5116 PAGE 585
PLAN BOOK 253 PAGE 91	PLAN BOOK 694 PAGE 99	

8. THE WORD "CERTIFY" IS UNDERSTOOD TO BE AN EXPRESSION OF PROFESSIONAL OPINION BY THE LAND SURVEYOR WHICH IS BASED ON HIS BEST KNOWLEDGE, INFORMATION AND BELIEF, FORMULATED IN ACCORDANCE WITH COMMONLY ACCEPTED PROCEDURES CONSISTENT WITH APPLICABLE STANDARDS OF PRACTICE, AND AS SUCH IT CONSTITUTES NEITHER A GUARANTEE NOR WARRANTY, EITHER EXPRESS OR IMPLIED. THE CERTIFICATIONS SHOWN ARE NOT CERTIFICATIONS TO THE TITLE OR OWNERSHIP OF THE PROPERTIES.
9. THE LOCUS PARCEL IS LOCATED IN THE TOWN OF RANDOLPH BLUE HILL RIVER HIGHWAY DISTRICT (BRHD) AND RESIDENTIAL SINGLE FAMILY HIGH DENSITY DISTRICT (RSFHD) AS DEFINED BY THE TOWN OF RANDOLPH ZONING MAP.

EROSION AND SEDIMENTATION CONTROL NOTES

1. SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE "MASSACHUSETTS SOIL EROSION AND SEDIMENT CONTROL HANDBOOK" THE NPDES GENERAL PERMIT FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITY AND THE NOTES AND DETAILS SHOWN IN THIS PLAN SET.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR FILING THE STORMWATER POLLUTION PREVENTION PLAN AND ANY NECESSARY DOCUMENTS REQUIRED BY THE NPDES GENERAL PERMIT.
3. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS AS NECESSARY, OR AS DIRECTED BY THE OWNER OR ENGINEER.
4. THE CONTRACTOR SHALL SCHEDULE HIS/HER WORK TO ALLOW THE FINISHED SUB GRADE ELEVATIONS TO DRAIN PROPERLY WITHOUT PONDING. SPECIFICALLY, ALLOW WATER TO ESCAPE WHERE PROPOSED CURB MAY RETAIN RUNOFF PRIOR TO APPLICATION OF SURFACE PAVING. PROVIDE TEMPORARY POSITIVE DRAINAGE, AS REQUIRED, TO STABILIZED DISCHARGE POINTS. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY UTILITY CONNECTIONS.
5. THE CONTRACTOR SHALL MAINTAIN A SUFFICIENT RESERVE OF VARIOUS EROSION CONTROL MATERIALS ONSITE AT ALL TIMES FOR EMERGENCY PURPOSES.
6. ANY DEWATERING WASTE WATERS PUMPED FROM EXCAVATIONS SHALL BE CONVEYED BY HOSE TO AN UPLAND AREA AND DISCHARGED INTO HAYBALE ENCLOSURES OR SEDIMENTATION BAGS OUTSIDE ALL WETLAND AND WETLAND BUFFER AREAS AS REQUIRED.
7. CONSTRUCTION SITE WASTE MATERIALS SHALL BE PROPERLY CONTAINED ONSITE AND DISPOSED OFF SITE IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE REGULATIONS.
8. ALL DISTURBED OR EXPOSED SOIL SURFACES SHALL BE TEMPORARILY STABILIZED AFTER EACH WORK DAY WITH HAY, STRAW, MULCH OR ANY OTHER PROTECTIVE COVERING AND/OR METHOD APPROVED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
9. ALL DRAINAGE STRUCTURES SHALL BE CLEARED OF ACCUMULATED SEDIMENT PRIOR TO ACCEPTANCE OF FINAL PROJECT.
10. THE CONTRACTOR SHALL MAINTAIN SURFACE DRAINAGE DURING CONSTRUCTION. STORMWATER SHALL BE MAINTAINED AWAY FROM WORK SITES WHILE PREVENTING AREAS OF EROSION.
11. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING NECESSARY TEMPORARY EROSION CONTROL MEASURES.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING OR INSTALLING ALL TEMPORARY SEDIMENT AND EROSION CONTROLS AS SHOWN ON THESE PLANS AND SHALL MAINTAIN ALL EROSION CONTROL MEASURES AS NECESSARY DURING THE ENTIRE CONSTRUCTION PERIOD.
13. TEMPORARY DIVERSION SWALES SHALL BE PROVIDED AS NECESSARY TO DIRECT RUNOFF TO THE SEDIMENT BASINS DURING CONSTRUCTION.
14. ANTI-TRACKING PADS AND WHEEL WASH STATIONS SHALL BE PROVIDED AT ALL POINTS OF EGRESS OR INGRESS AND SHALL BE MAINTAINED TO LIMIT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS AND INTO THE REST OF THE SITE.
15. EROSION CONTROL BARRIERS SHALL BE INSTALLED AS SHOWN ON THE EROSION CONTROL PLAN PRIOR TO COMMENCEMENT OF CONSTRUCTION OPERATIONS. CONTRACTOR SHALL NOTIFY IN WRITING TOWN OF RANDOLPH PUBLIC WORKS PRIOR TO THE START OF ANY WORK.
16. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED ON A WEEKLY BASIS AND AFTER EACH STORM EVENT OF 0.25 INCH OR GREATER DURING CONSTRUCTION TO ENSURE CHANNELS, DITCHES AND PIPES ARE CLEAR OF DEBRIS AND THAT THE EROSION CONTROL BARRIERS ARE INTACT. IDENTIFIED DEFICIENCIES SHALL BE CORRECTED IMMEDIATELY. THE CONTRACTOR SHALL SUBMIT INSPECTION REPORTS AT LEAST EVERY TWO WEEKS TO TOWN OF RANDOLPH PUBLIC WORKS (VIA E-MAIL, HAND DELIVERED OR FAX).
17. THE CONTRACTOR SHALL CLEAN AND MAINTAIN EROSION CONTROL BARRIER WHEN SEDIMENT ACCUMULATES TO ONE HALF THE HEIGHT OF THE HAYBALES OR ONE THIRD THE HEIGHT OF SILT FENCE. MATERIAL COLLECTED FROM THE SILTATION BARRIERS SHALL BE REMOVED AS NECESSARY AND DISPOSED IN AN UPLAND AREA.
18. INSTALLATION OF THE EROSION CONTROL BARRIERS AS ILLUSTRATED IS INTENDED TO REPRESENT THE MINIMUM SEDIMENTATION CONTROL FACILITIES NECESSARY TO MEET ANTICIPATED SITE CONDITIONS. ADDITIONAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
19. REQUIRED SEDIMENTATION CONTROL FACILITIES MUST BE PROPERLY ESTABLISHED, CLEARLY VISIBLE AND IN OPERATION PRIOR TO INITIATING ANY LAND CLEARING ACTIVITY AND/OR OTHER CONSTRUCTION RELATED WORK. SUCH FACILITIES SHALL REPRESENT THE LIMIT OF WORK. WORKERS SHALL BE INFORMED THAT NO CONSTRUCTION ACTIVITY IS TO OCCUR BEYOND THE LIMIT OF WORK AT ANY TIME THROUGHOUT THE CONSTRUCTION PERIOD.
20. CATCH BASINS AND STORM DRAIN INLETS SHALL BE PROTECTED WITH INLET PROTECTION WITHIN LIMITS OF DISTURBANCE.
21. THE CONTRACTOR SHALL NOT REMOVE ANY HAYBALES, SILT FENCE OR OTHER EROSION CONTROLS UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.
22. RIP-RAP OR OTHER ENERGY DISSIPATERS SHALL BE USED WHERE NECESSARY TO PREVENT SCOUR.
23. NO STORAGE OF MATERIAL INCLUDING BUT NOT LIMITED TO COMPOST OR GRASS CLIPPINGS WITHIN 100' WETLAND BUFFER.
24. SHOULD ANY EROSION OR SEDIMENTATION CONTROL MEASURES FAIL, IMMEDIATE ATTENTION SHALL BE GIVEN BY THE CONTRACTOR TO CORRECTING THE FAILURE AND TO RECTIFYING ANY ADVERSE IMPACT FROM THE FAILURE. THE COMMISSION AND ENGINEER MUST BE NOTIFIED WITHIN 24 HOURS OF THE FAILURE.

GRADING AND UTILITY NOTES

1. ALL WORK PERFORMED AND ALL MATERIALS FURNISHED SHALL CONFORM WITH THE LINES AND GRADES ON THE PLANS AND SITE WORK SPECIFICATIONS, UNLESS OTHERWISE DIRECTED.
2. AT ALL LOCATIONS WHERE EXISTING CURBING OR PAVEMENT ABUT NEW CONSTRUCTION, THE EDGE OF THE EXISTING CURB OR PAVEMENT SHALL BE SAW CUT TO A CLEAN, SMOOTH EDGE. BLEND NEW PAVEMENT AND CURBS SMOOTHLY INTO EXISTING BY MATCHING LINES, GRADES AND JOINTS.
3. ALL EXISTING AND PROPOSED UTILITY COVERS, GRATES, ETC. SHALL BE ADJUSTED TO BE FLUSH WITH THE SURROUNDING SURFACE OR PAVEMENT FINISH GRADE OF THIS CONTRACT. RIM ELEVATIONS OF STRUCTURES AND MANHOLES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH THE PROPOSED FINAL GRADES.
4. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION OF PRIVATE UTILITIES BY THE UTILITY COMPANIES, AS REQUIRED.
5. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR AND THE INFORMATION FURNISHED TO THE ENGINEER, AND TOWN OF RANDOLPH PUBLIC WORKS OR THEIR AGENT.
6. THE CONTRACTOR SHALL PROTECT ALL UNDERGROUND DRAINAGE, SEWER AND UTILITY FACILITIES FROM EXCESSIVE VEHICULAR LOADS DURING CONSTRUCTION. ANY DAMAGE TO THESE FACILITIES RESULTING FROM CONSTRUCTION LOADS WILL BE RESTORED TO ORIGINAL CONDITION AT NO COST TO THE OWNER.
7. DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES BY PROVIDING TEMPORARY SUPPORTS OR SHEETING AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
8. EXCAVATION REQUIRED WITHIN THE PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE OWNER.
9. PITCH EVENLY BETWEEN SPOT GRADES. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MIN. OF 1/8" PER FOOT UNLESS SPECIFIED.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION SEWER EXTENSION/CONNECTION COMPLIANCE CERTIFICATION WITHIN SIXTY (60) DAYS OF THE SEWER INSTALLATION.
11. SITE GRADES SHALL CONFORM WITH ADA AND MAAB REQUIREMENTS.
12. ALL TRANSITIONS BETWEEN GROUND COVERING MATERIALS SHALL BE SMOOTH AND MEET 521 CMR 20.10 REQUIREMENTS.
13. ALL PLUMBING/MECHANICAL UTILITIES WITHIN 10 FEET OF THE BUILDING ARE SHOWN ON THE PLUMBING/MECHANICAL PLANS.
14. CONTRACTOR IS REQUIRED TO APPLY FOR, OBTAIN, AND PAY ALL FEES ASSOCIATED WITH CONSTRUCTION PHASE PERMITS. PERMITS MAY INCLUDE, BUT NOT LIMITED TO:
    - NPDES CONSTRUCTION GENERAL PERMIT
    - TOWN OF RANDOLPH STREET OPENING PERMIT

LAYOUT NOTES

1. ALL LINES ARE PERPENDICULAR OR PARALLEL TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
2. DIMENSIONS OF PARKING SPACES AND DRIVEWAYS ARE FROM FACE OF CURB TO FACE OF CURB UNLESS OTHERWISE NOTED.
3. ACCESSIBLE RAMPS SHALL BE PER THE (ADA) ACCESSIBILITY AND (MAAB) GUIDELINES AND INCLUDE DETECTABLE WARNING MATS. DETECTABLE WARNING PANELS SHALL BE CAST IRON, SEE SPECIFICATION SECTION 32 13 12.

EXISTING LEGEND

- LOCUS PROPERTY LINE
- INTERNAL PROPERTY LINE
- ABUTTER PROPERTY LINE
- EASEMENT LINE
- ____ ZONING
- INDEX CONTOUR
- INTERMEDIATE CONTOUR
- SPOT GRADE
- EDGE OF WOODS
- EDGE OF SCRUB BRUSH
- STONEWALL
- FENCE
- GUARDRAIL
- UNDERGROUND SEWER LINE
- UNDERGROUND DRAIN LINE
- UNDERGROUND WATER LINE
- UNDERGROUND GAS LINE
- UNDERGROUND ELECTRIC LINE
- OVER HEAD WIRE
- WETLAND LINE
- ROAD/PARKING STRIPES
- CONCRETE
- BUILDING
- EDGE OF PAVEMENT
- CURB LINE
- ____ ZONING LINE
- FEMA LINE
- 100 FT. WETLAND BUFFER
- WETLAND EDGE
- DRILL HOLE
- CONCRETE BOUND WITH DRILL HOLE
- STONE BOUND WITH DRILL HOLE
- UNKNOWN MANHOLE
- ELECTRIC MANHOLE
- ELECTRIC CONDUIT
- ELECTRIC HAND HOLE
- UTILITY POLE
- LIGHT POLE
- GUY WIRE
- TELEPHONE/CABLE MANHOLE
- TELEPHONE/CABLE HAND HOLE
- TELEPHONE/CABLE PEDESTAL
- GAS VALVE
- GAS METER
- SEWER MANHOLE
- DRAIN MANHOLE
- CATCH BASIN
- TOP OF HOOD
- TOP OF WATER
- INVERT
- VENT
- HYDRANT
- WATER VALVE
- WATER SHUT OFF
- WELL
- IRRIGATION CONTROL VALVE
- AIR CONDITIONER AND AG HEATING
- SIGN
- CONIFEROUS TREE
- DECIDUOUS TREE
- SHRUB
- WETLAND FLAG
- BOLLARD
- TEST PIT
- TEST BORING
- FLAG POLE
- ROCK
- EDGE OF PAVEMENT
- CAPE COD BERM
- GRANITE CURB
- SLOPE GRANITE CURB
- CROSS WALK
- CONCRETE RETAINING WALL
- CONCRETE HEADWALL
- WOOD FENCE
- CHAIN LINK FENCE
- POST & RAIL FENCE
- METAL HANDRAIL
- HANDI-CAP RAMP
- CONCRETE PAD
- METAL
- WOOD GUARDRAIL
- UPPER BONNET BOLT
- AMERICANS WITH DISABILITIES ACT
- MASSACHUSETTS ARCHITECTURAL ACCESS BOARD
- BEST MANAGEMENT PRACTICES

PROPOSED LEGEND

- CURBING(TYPE)
- EDGE OF PAVEMENT
- RETAINING WALL
- INTERMEDIATE CONTOUR
- INDEX CONTOUR
- SPOT ELEVATION
- WATER LINE
- SEWER LINE
- DRAIN LINE
- GAS LINE
- DRAIN MANHOLE
- CATCH BASIN
- HYDRODYNAMIC SEPARATOR
- AREA / YARD DRAIN
- RAIN GARDEN OUTLET
- SEWER MANHOLE
- WATER VALVE
- HYDRANT
- SIGN
- CHAIN LINK FENCE
- GUARDRAIL
- TREE LINE (LIMIT OF CLEARING)
- BITUMINOUS PAVEMENT
- CONCRETE WALK (SEE LANDSCAPE PLANS FOR FINISHES)
- CONSTRUCTION ENTRANCE TRACKING CONTROL
- EROSION CONTROL
- LIMIT OF DISTURBANCE
- INLET PROTECTION

- AD–1 = AREA DRAIN (SEE DETAIL)
- ATG = ADJUST TO GRADE
- BB = BITUMINOUS BERM
- BCP = BITUMINOUS CONCRETE PAVEMENT
- BCW = BITUMINOUS CONCRETE WALK AND WIDTH
- CB–1 = PROPOSED CATCH BASIN NUMBER
- CM = SAWCUT AND MATCH EXISTING GRADES
- CW = CEMENT CONCRETE SIDEWALK AND WIDTH
- DAM = DIRECTIONAL ARROW MARKING
- DMH–1 = PROPOSED DRAIN MANHOLE NUMBER AND DIAMETER
- DW = 4" DASHED WHITE EPOXY RESIN PAVEMENT MARKING
- FES = FLARED END SECTION
- GC = GRANITE CURB (SEE DETAIL)
- GCF = GRANITE CURB FLUSH (SEE DETAIL)
- GTC = GRANITE TRANSITION CURB (SEE DETAIL)
- HDS–1 = HYDRODYNAMIC SEPARATOR NUMBER
- ICS = INLET CONTROL STRUCTURE
- IP = INLET PROTECTION
- LA = LANDSCAPED AREA (SEE LANDSCAPE PLANS)
- LS = LOAM AND SEED (SEE LANDSCAPE PLANS)
- OCS = OUTLET CONTROL STRUCTURE NUMBER
- PP = POROUS PAVEMENT
- R&D = REMOVE AND DISPOSE
- R&R = REMOVE AND RELOCATE
- R&S = REMOVE AND STOCKPILE
- SG = 4" SOLID GREEN EPOXY RESIN PAVEMENT MARKING - COORDINATE COLOR W/OWNER
- SCW = STRIPED CROSS WALK (SEE DETAIL)
- SHP = HANDICAP EPOXY RESIN PAVEMENT MARKING
- SMH–1 = PROPOSED SEWER MANHOLE NUMBER
- SW = 4" SOLID WHITE EPOXY RESIN PAVEMENT MARKING
- SW12 = 12" SOLID WHITE EPOXY RESIN PAVEMENT MARKING
- VC = VEHICULAR CONCRETE (TYP)
- WQS–1 = WATER QUALITY STRUCTURE NUMBER
- 107.2.0 = WHEELCHAIR RAMPS, MASSDOT CONSTRUCTION STANDARDS DETAIL
- 107.3.0 = WHEELCHAIR RAMPS, MASSDOT CONSTRUCTION STANDARDS DETAIL
- 107.6.0 = WHEELCHAIR RAMPS, MASSDOT CONSTRUCTION STANDARDS DETAIL
- 107.6.5 = DETECTABLE WARNING PANEL FOR WHEELCHAIR RAMPS, MASSDOT CONSTRUCTION STANDARDS DETAIL
- 201.4.0 = PRECAST CONCRETE CATCH BASIN, MASSDOT CONSTRUCTION STANDARDS DETAIL

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Key Plan

PROJECT NORTH

Notes

2	DESIGN DEVELOPMENT	2023.12.15
1	SCHEMATIC DESIGN	2023.10.06
Issued/Revision		YYYY.MM.DD

Permit/Seal

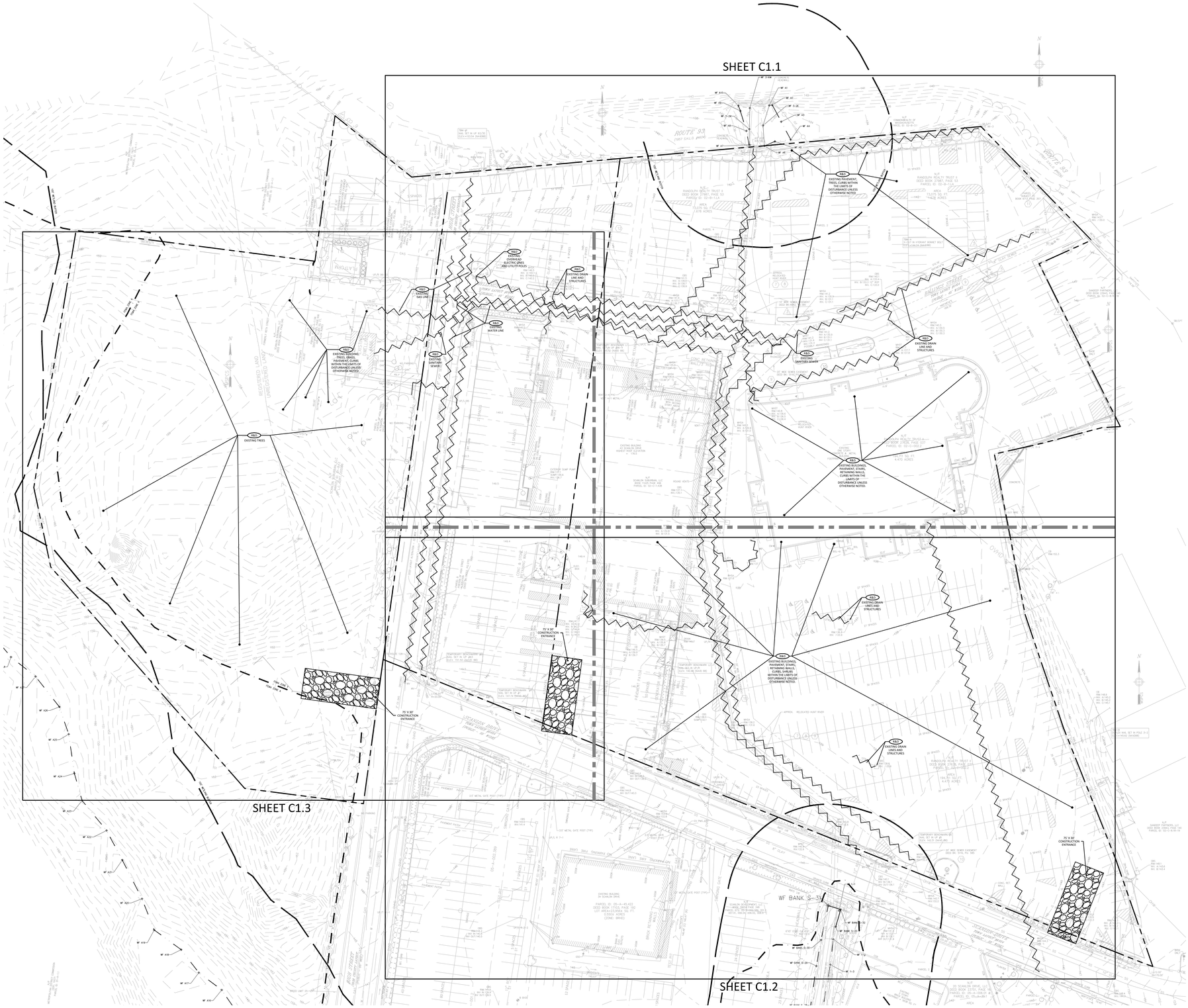
PRELIMINARY NOT FOR CONSTRUCTION

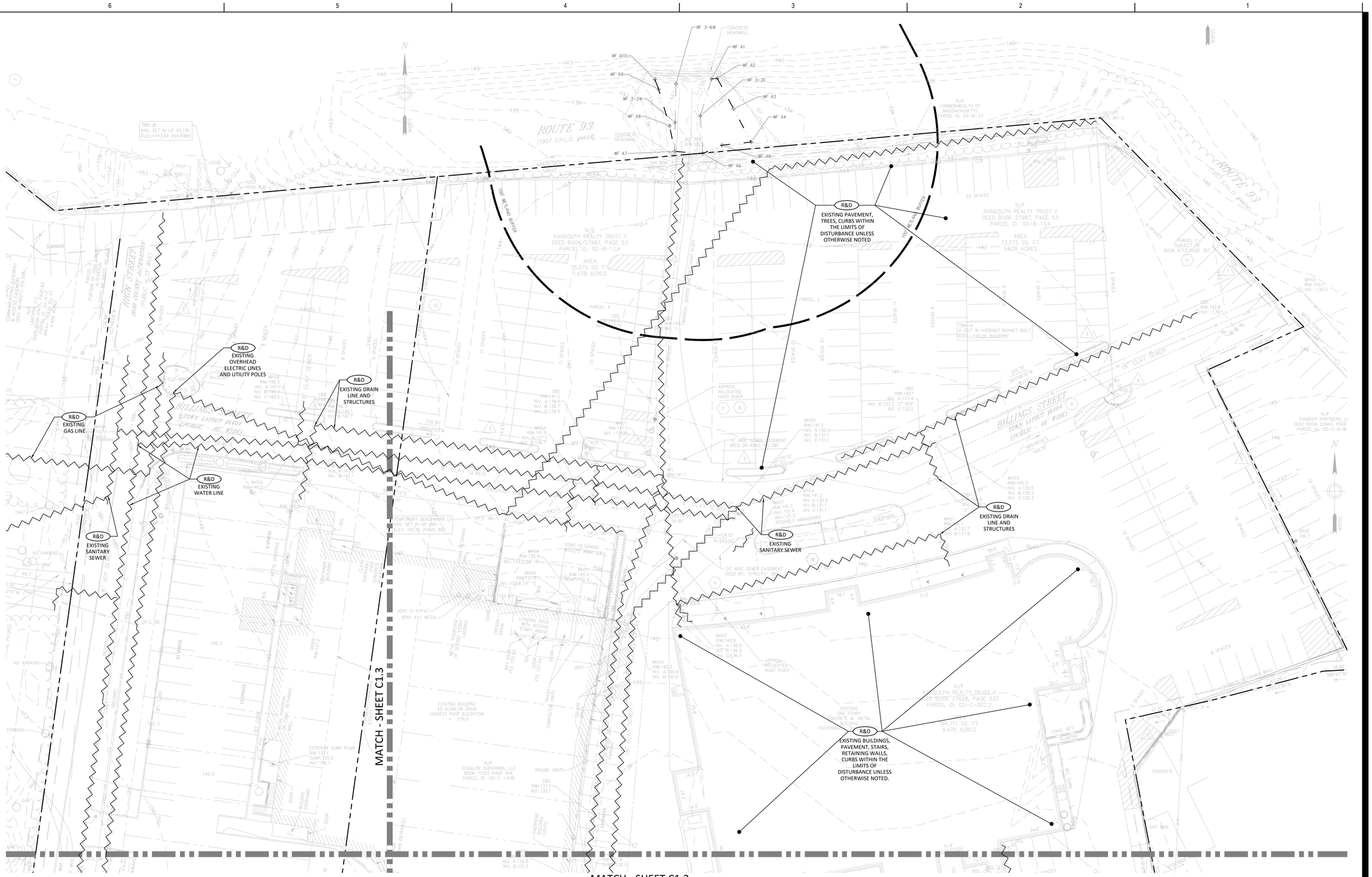
Scale	AS NOTED
Project No.	78000

GENERAL NOTES AND LEGEND

C0.1

Z:\Shared\Projects\78000-78999\78000-78999\78000.05 Randolph North - Assemblage (Civil)\05 Engineering\Vertex Drawings\78000_C0.1 General Notes and Legend.dwg Wednesday, December 20, 2023 3:07:50 PM
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Date/Time: 2023
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SHEET C1.1
SHEET C1.3
SHEET C1.2
N1
EXISTING OVERHEAD WIRES, POLES AND UTILITY POLES
EXISTING DRAIN LINE AND STRUCTURES
EXISTING GAS LINE
EXISTING WATER LINE
EXISTING SANITARY SEWER
EXISTING SANITARY SEWER
EXISTING BUILDING, TREES, GRASS, PAVEMENT, CURBS AND UTILITIES WITHIN LIMITS OF DISTURBANCE UNLESS OTHERWISE NOTED
EXISTING TREES
EXISTING PAVEMENTS, TREES, CURBS WITHIN THE LIMITS OF DISTURBANCE UNLESS OTHERWISE NOTED
EXISTING DRAIN LINE AND STRUCTURES
EXISTING BUILDINGS, PAVEMENT, STAIRS, RETAINING WALLS, CURBS AND UTILITIES WITHIN LIMITS OF DISTURBANCE UNLESS OTHERWISE NOTED
EXISTING DRAIN LINES AND STRUCTURES
EXISTING BUILDINGS, PAVEMENT, STAIRS, RETAINING WALLS, CURBS AND UTILITIES WITHIN THE LIMITS OF DISTURBANCE UNLESS OTHERWISE NOTED
EXISTING DRAIN LINES AND STRUCTURES
75' X 30' CONSTRUCTION ENTRANCE
75' X 30' CONSTRUCTION ENTRANCE
75' X 30' CONSTRUCTION ENTRANCE
ROUTE 93
(1997 SAUL MAP)
RANDOLPH REALTY TRUST II
DEED BOOK 27997, PAGE 53
PARCEL ID: 02-B-1-A
AREA
7,575 SQ. FT.
0.421 ACRES
RANDOLPH REALTY TRUST III
DEED BOOK 27997, PAGE 53
PARCEL ID: 02-B-1-B
AREA
7,575 SQ. FT.
0.421 ACRES
RANDOLPH REALTY TRUST II
DEED BOOK 27997, PAGE 53
PARCEL ID: 02-B-1-C
AREA
7,575 SQ. FT.
0.421 ACRES
RANDOLPH REALTY TRUST III
DEED BOOK 27997, PAGE 53
PARCEL ID: 02-B-1-D
AREA
7,575 SQ. FT.
0.421 ACRES
COMMONWEALTH OF MASSACHUSETTS
DEED BOOK 27997, PAGE 53
PARCEL ID: 02-B-1-E
AREA
7,575 SQ. FT.
0.421 ACRES
PARCEL ID: 05-A-45.420
DEED BOOK 17503, PAGE 192
LOT AREA: 1.0 ACRES (43,560 SQ. FT.)
(ZONE: BRHO)
WF BANK S-30
WF BANK S-29
WF BANK S-28
WF BANK S-27
WF BANK S-26
WF BANK S-25
WF BANK S-24
WF BANK S-23
WF BANK S-22
WF BANK S-21
WF BANK S-20
WF BANK S-19
WF BANK S-18
WF BANK S-17
WF BANK S-16
WF BANK S-15
WF BANK S-14
WF BANK S-13
WF BANK S-12
WF BANK S-11
WF BANK S-10
WF BANK S-9
WF BANK S-8
WF BANK S-7
WF BANK S-6
WF BANK S-5
WF BANK S-4
WF BANK S-3
WF BANK S-2
WF BANK S-1
WF A1
WF A2
WF A3
WF A4
WF A5
WF A6
WF A7
WF A8
WF A9
WF A10
WF A11
WF A12
WF A13
WF A14
WF A15
WF A16
WF A17
WF A18
WF A19
WF A20
WF



NOTES:

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2. DEMOLITION OF EXISTING BUILDING AND SITE FEATURES SHOWN ON SHEETS C1.1 THROUGH C1.3 ARE INCLUSIVE OF ALL PHASES. PROPOSED DEMOLITION ACTIVITIES SHOWN ON THESE SHEETS ARE NOT INTENDED TO INDICATE THE PHASE IN WHICH THEY OCCUR. SEE PHASING DRAWINGS FOR DEMOLITION SPECIFIC TO PHASING.
3. THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE PLANS ARE INTENDED TO REPRESENT THE MINIMUM CONTROLS NECESSARY TO MEET ANTICIPATED SITE CONDITIONS. ADDITIONAL MEASURES SHALL BE IMPLEMENTED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.
4. INSTALL EROSION CONTROLS DOWNSTREAM OF ANY DISTURBED AREAS TO REDUCE POTENTIAL FOR EROSION. CONTRACTOR SHALL INDICATE LOCATIONS OF EROSION CONTROLS FOR REVIEW WITH GENERAL CONTRACTOR AND OWNER'S REPRESENTATIVE PRIOR TO COMMENCING DISTURBANCE. THE DEMOLITION IS PROPOSED TO BE CONDUCTED IN PHASES. EROSION CONTROLS SHALL BE RELOCATED AS NECESSARY DURING EACH PHASE.
5. INSTALL CHAIN LINK FENCE TREE PROTECTION PER DETAIL AT THE LOCATIONS SHOWN ON THE PLAN TO PROTECT EXISTING TREES SPECIFICALLY INDICATED ON THE PLAN. LAYOUT OF FENCE SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT. TREE PROTECTION SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF CONSTRUCTION.
6. ALL EXISTING DRAINAGE AND SEWER SHALL BE MAINTAINED OR REROUTED AS NECESSARY UNTIL PERMANENT PIPING IS INSTALLED.
7. ELECTRICAL DEMOLITION IS SHOWN FOR INFORMATION ONLY. REFER TO ELECTRICAL PLANS FOR COMPLETE EXTENT OF ELECTRICAL DEMOLITION.
8. PROVIDE INLET PROTECTION AT ALL EXISTING DRAINAGE INLETS.
9. ALL ITEMS TO BE REMOVED AND STOCKPILED SHALL BE COORDINATED WITH OWNER FOR STOCKPILE LOCATIONS. AT THIS TIME, THE OWNER HAS NOT IDENTIFIED ITEMS FOR STOCKPILE.
10. ALL ITEMS MARKED FOR RE-USE SHALL BE STOCKPILED ONSITE, PROTECTED AND RE-INSTALLED AS SHOWN ON THE LANDSCAPE PLANS.
11. DRAINAGE FEATURES AND UTILITIES TO BE MAINTAINED UNLESS OTHERWISE NOTED.
12. TOTAL AREA OF DISTURBANCE: 13.18 ACRES.
13. CONTRACTOR TO REESTABLISH BENCHMARKS IN ALTERNATE LOCATION PRIOR TO CONSTRUCTION.
14. CONTRACTOR SHALL COORDINATE CLEARING OF ALL ABUTTER ENCROACHMENTS WITH THE OWNER PRIOR TO CONSTRUCTION. IT IS NOT EXPECTED THAT ENCROACHMENTS WILL BE ENCOUNTERED ON THIS SITE.
15. INSTALL CONSTRUCTION ENTRANCE AT ALL ENTRY/EXIT POINT FOR VEHICULAR TRAFFIC FOR EACH PHASE OF THE PROJECT. LOCATION TO BE DETERMINED BY PHASING. IT SHALL BE ASSUMED THAT TWO (2) WILL BE NECESSARY THROUGHOUT CONSTRUCTION.
16. ALL EARTH DISTURBANCE SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
17. ACTIVE UTILITY LINES (INCLUDING SEWER, WATER, AND DRAINAGE), CONTRACTOR SHALL PROVIDE 1 WEEK NOTIFICATION FOR ANY POSSIBLE DISRUPTION OF SERVICE TO OWNER, OWNER'S PROJECT MANAGER AND ARCHITECT; PROVIDE NOTIFICATION FOR CONNECTING, DISCONNECTING, TURNING ON OR TURNING OFF ANY SERVICE WHICH MAY AFFECT OWNER'S OPERATIONS.
18. CONTRACTOR SHALL PROVIDE 72 HOUR (3 WORKING DAYS) NOTICE TO LOCAL FIRE DEPARTMENT OF DISRUPTIONS.
19. DISTURBANCE ON ACTIVE GAS LINES SHALL BE COORDINATED WITH UTILITY PROVIDER.
20. THE CONTRACTOR SHALL CONFIRM LOCATION AND ELEVATION OF THE EXISTING DRAINAGE MANHOLES AND PIPES INDICATED. IT SHALL BE ASSUMED THAT AN ADDITIONAL 60 FEET OF PIPE WILL NEED TO BE REMOVED AND DISPOSED.
21. ANY UNFORESEEN UNDERGROUND TRANSIT PIPE OR OTHER UNFORESEEN HAZARDOUS MATERIAL SHALL BE ABATED IN ACCORDANCE WITH THE SPECIFICATIONS AND ALL LOCAL, STATE AND FEDERAL REGULATIONS.
22. CONTRACTOR SHALL COMPLY WITH ALL LEED REQUIREMENTS FOR DEMOLITION.
23. ALL EXISTING MANHOLES OR CATCH BASINS TO REMAIN SHALL BE ADJUSTED TO FINISHED GRADE ELEVATION.
24. ALL EXISTING UTILITIES WITHIN TREE PROTECTION AREAS NOT SCHEDULED FOR RE-USE SHALL BE CUT, CAPPED, AND ABANDONED IN PLACE.
25. DEMOLITION WORK SHOWN ON THIS SHEET IS INDEPENDENT OF PROJECT PHASING OR SEQUENCING. CONTRACTOR SHALL BE RESPONSIBLE FOR SEQUENCING ALL WORK AS OUTLINED IN THE PROJECT SPECIFICATIONS.
26. CONTRACTOR SHALL SCHEDULE PRECONSTRUCTION MEETING WITH ARCHITECT, LANDSCAPE ARCHITECT, CIVIL ENGINEER, STRUCTURAL ENGINEER, AND OWNER'S REPRESENTATIVE PRIOR TO DEMOLITION OF EXISTING SERVICE AREA TO CONFIRM EXTENT OF DEMOLITION AND SAWCUT LOCATIONS.
27. PERIMETER EROSION CONTROL SHALL BE PROVIDED.

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Key Plan

PROJECT NORTH

Notes

2	DESIGN DEVELOPMENT	2023.12.15
1	SCHEMATIC DESIGN	2023.10.06
	Issued/Revision	YYYY.MM.DD

Permit/Seal

PRELIMINARY NOT FOR CONSTRUCTION

Scale	AS NOTED
Project No.	78000

EXISTING CONDITIONS AND DEMOLITION PLAN 1

C1.1

Z:\Shared\Projects\78000-78999\78000-78999\78000-78099\78000.05_Randolph North - Assemblage (Civil)\05-Engineering\Vertex Drawings\78000_C1.0 Existing Conditions and Demo Plan.dwg Wednesday, December 20, 2023 3:08:04 PM
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MATCH - SHEET C1.1

MATCH - SHEET C1.3

75' X 30' CONSTRUCTION ENTRANCE

75' X 30' CONSTRUCTION ENTRANCE

R&D
EXISTING BUILDINGS, PAVEMENT, STAIRS, RETAINING WALLS, CURBS, SHRUBS WITHIN THE LIMITS OF DISTURBANCE UNLESS OTHERWISE NOTED.

R&D
EXISTING DRAIN LINES AND STRUCTURES

R&D
EXISTING DRAIN LINES AND STRUCTURES

75' X 30' CONSTRUCTION ENTRANCE

WF BANK S-31

WF BANK S-32

WF BANK S-33

WF BANK S-30

WF BANK S-29

WF 1-1

WF 1-2

WF 1-3

SCANLON DRIVE
TOWN LAYOUT #6784
(PUBLIC - 50' WIDE)

EXISTING BUILDING
34 SCANLON DRIVE

PARCEL ID: 05-A-45.422
DEED BOOK 17103, PAGE 192
LOT AREA=23,956± SQ. FT.
0.550± ACRES
(ZONE: BRHD)

N/F
RANDOLPH REALTY TRUST II
DEED BOOK 27626, PAGE 037
PARCEL ID: 022-E-002.2
AREA
194,711 SQ.I FT
4.470 ACRES

N/F
SCANLON DEVELOPMENT, LLC
BOOK 39654 PAGE 348
PARCEL ID'S: 007-H-002.389, 001.2, 007.01, 006.04, 006.02, 006.A

TEMPORARY BENCHMARK #1
NAIL SET IN UP #13
ELEV. 151.50 (NAVD 88)

TEMPORARY BENCHMARK #2
NAIL SET IN UP #7
ELEV. 147.74 (NAVD 88)

TEMPORARY BENCHMARK #3
NAIL SET IN UP/R
ELEV. 140.98 (NAVD 88)

TEMPORARY BENCHMARK #5
NAIL SET IN UP #5
ELEV. 142.31 (NAVD 88)

TO ROUTE 128

APPROX. RELOCATED HUNT RIVER

NOTES:

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27. PERIMETER EROSION CONTROL SHALL BE PROVIDED.

0' 20' 40' 60'
SCALE: 1" = 20'

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Key Plan

PROJECT NORTH

Notes

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1	SCHEMATIC DESIGN	2023.10.06
Issued/Revision		YYYY.MM.DD

Permit/Seal

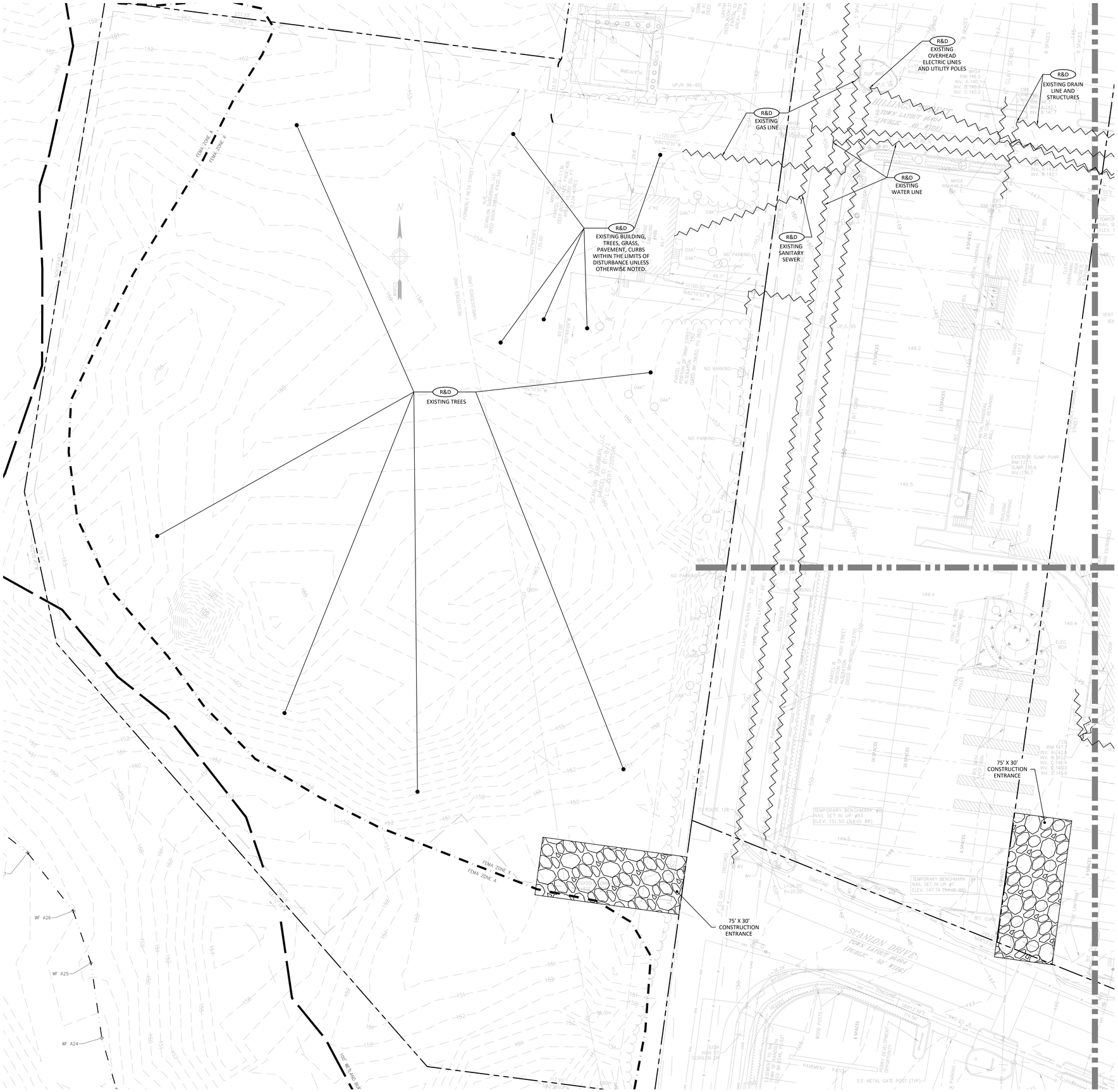
PRELIMINARY NOT FOR CONSTRUCTION

Scale	AS NOTED
Project No.	78000

EXISTING CONDITIONS AND DEMOLITION PLAN 2

C1.2

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5. INSTALL CHAIN LINK FENCE TREE PROTECTION PER DETAIL AT THE LOCATIONS SHOWN ON THE PLAN TO PROTECT EXISTING TREES SPECIFICALLY INDICATED ON THE PLAN. LAYOUT OF FENCE SHALL BE REVIEWED AND APPROVED BY THE LANDSCAPE ARCHITECT. TREE PROTECTION SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF CONSTRUCTION.
6. ALL EXISTING DRAINAGE AND SEWER SHALL BE MAINTAINED OR REROUTED AS NECESSARY UNTIL PERMANENT PIPING IS INSTALLED.
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8. PROVIDE INLET PROTECTION AT ALL EXISTING DRAINAGE INLETS.
9. ALL ITEMS TO BE REMOVED AND STOCKPILED SHALL BE COORDINATED WITH OWNER FOR STOCKPILE LOCATIONS. AT THIS TIME, THE OWNER HAS NOT IDENTIFIED ITEMS FOR STOCKPILE.
10. ALL ITEMS MARKED FOR RE-USE SHALL BE STOCKPILED ONSITE, PROTECTED AND RE-INSTALLED AS SHOWN ON THE LANDSCAPE PLANS.
11. DRAINAGE FEATURES AND UTILITIES TO BE MAINTAINED UNLESS OTHERWISE NOTED.
12. TOTAL AREA OF DISTURBANCE: 13.18 ACRES.
13. CONTRACTOR TO REESTABLISH BENCHMARKS IN ALTERNATE LOCATION PRIOR TO CONSTRUCTION.
14. CONTRACTOR SHALL COORDINATE CLEARING OF ALL ABUTTER ENCROACHMENTS WITH THE OWNER PRIOR TO CONSTRUCTION. IT IS NOT EXPECTED THAT ENCROACHMENTS WILL BE ENCOUNTERED ON THIS SITE.
15. INSTALL CONSTRUCTION ENTRANCE AT ALL ENTRY/EXIT POINT FOR VEHICULAR TRAFFIC FOR EACH PHASE OF THE PROJECT. LOCATION TO BE DETERMINED BY PHASING. IT SHALL BE ASSUMED THAT TWO (2) WILL BE NECESSARY THROUGHOUT CONSTRUCTION.
16. ALL EARTH DISTURBANCE SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
17. ACTIVE UTILITY LINES (INCLUDING SEWER, WATER, AND DRAINAGE), CONTRACTOR SHALL PROVIDE 1 WEEK NOTIFICATION FOR ANY POSSIBLE DISRUPTION OF SERVICE TO OWNER, OWNER'S PROJECT MANAGER AND ARCHITECT; PROVIDE NOTIFICATION FOR CONNECTING, DISCONNECTING, TURNING ON OR TURNING OFF ANY SERVICE WHICH MAY AFFECT OWNER'S OPERATIONS.
18. CONTRACTOR SHALL PROVIDE 72 HOUR (3 WORKING DAYS) NOTICE TO LOCAL FIRE DEPARTMENT OF DISRUPTIONS.
19. DISTURBANCE ON ACTIVE GAS LINES SHALL BE COORDINATED WITH UTILITY PROVIDER.
20. THE CONTRACTOR SHALL CONFIRM LOCATION AND ELEVATION OF THE EXISTING DRAINAGE MANHOLES AND PIPES INDICATED. IT SHALL BE ASSUMED THAT AN ADDITIONAL 60 FEET OF PIPE WILL NEED TO BE REMOVED AND DISPOSED.
21. ANY UNFORESEEN UNDERGROUND TRANSIT PIPE OR OTHER UNFORESEEN HAZARDOUS MATERIAL SHALL BE ABATED IN ACCORDANCE WITH THE SPECIFICATIONS AND ALL LOCAL, STATE AND FEDERAL REGULATIONS.
22. CONTRACTOR SHALL COMPLY WITH ALL LEED REQUIREMENTS FOR DEMOLITION.
23. ALL EXISTING MANHOLES OR CATCH BASINS TO REMAIN SHALL BE ADJUSTED TO FINISHED GRADE ELEVATION.
24. ALL EXISTING UTILITIES WITHIN TREE PROTECTION AREAS NOT SCHEDULED FOR RE-USE SHALL BE CUT, CAPPED, AND ABANDONED IN PLACE.
25. DEMOLITION WORK SHOWN ON THIS SHEET IS INDEPENDENT OF PROJECT PHASING OR SEQUENCING. CONTRACTOR SHALL BE RESPONSIBLE FOR SEQUENCING ALL WORK AS OUTLINED IN THE PROJECT SPECIFICATIONS.
26. CONTRACTOR SHALL SCHEDULE PRECONSTRUCTION MEETING WITH ARCHITECT, LANDSCAPE ARCHITECT, CIVIL ENGINEER, STRUCTURAL ENGINEER, AND OWNER'S REPRESENTATIVE PRIOR TO DEMOLITION OF EXISTING SERVICE AREA TO CONFIRM EXTENT OF DEMOLITION AND SAWCUT LOCATIONS.
27. PERIMETER EROSION CONTROL SHALL BE PROVIDED.

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Key Plan

PROJECT NORTH

Notes

2	DESIGN DEVELOPMENT	2023.12.15
1	SCHEMATIC DESIGN	2023.10.06
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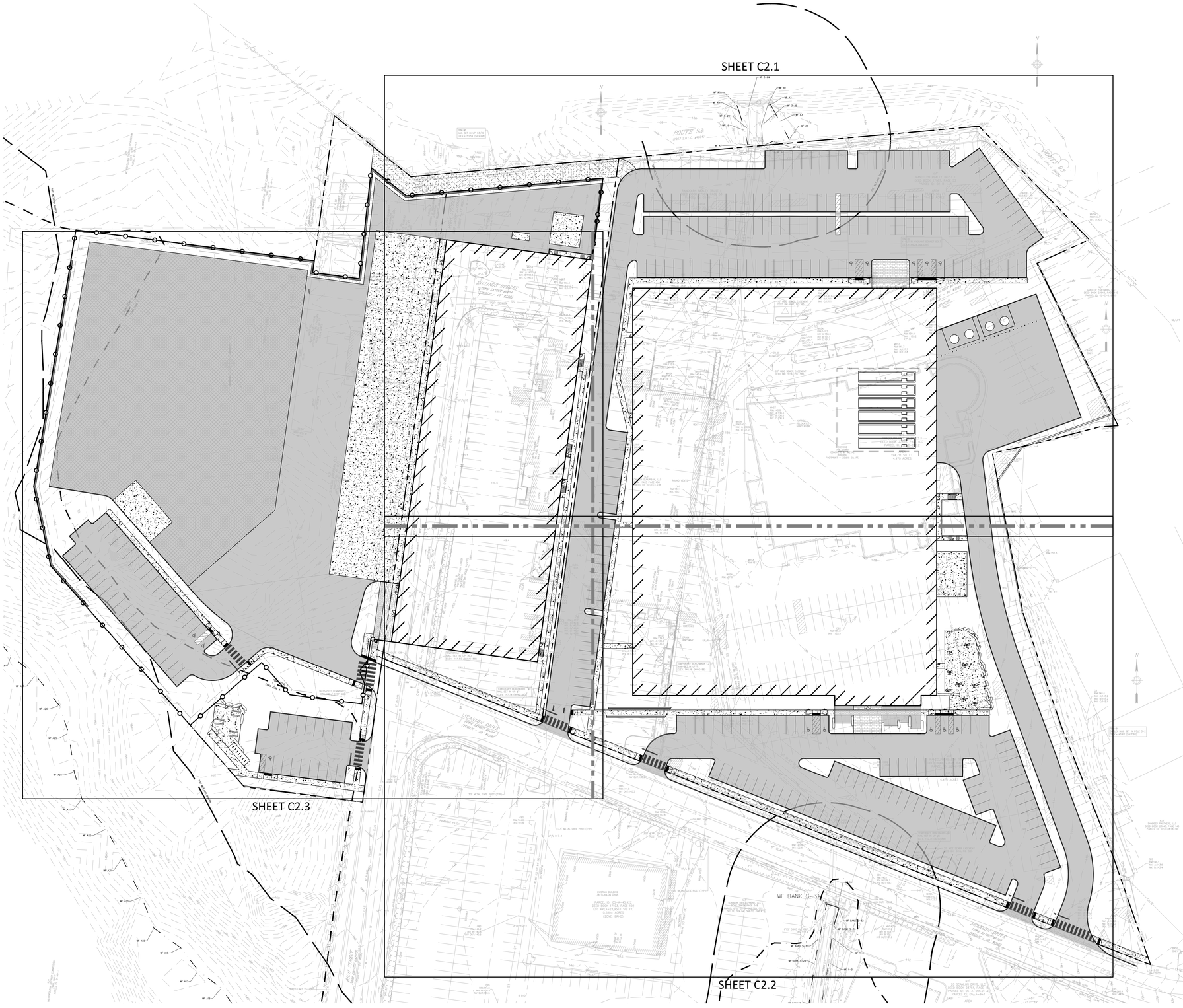
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EXISTING CONDITIONS AND DEMOLITION PLAN 3

C1.3

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OVERALL SITE IMPROVEMENT PLAN

C2.0

0' 40' 80' 120'
SCALE: 1" = 40'

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NOTES:

1. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED FOR THE DURATION OF CONSTRUCTION. AT A MINIMUM, PERIMETER HAY BALES, VEHICLE TRACKING CONTROL, INLET PROTECTION, CONCRETE WASHOUT AREAS AND TEMPORARY SEDIMENTATION BASINS SHOULD BE CONSIDERED
2. GRANITE CURB SHALL BE PROVIDED IN ALL PARKING AREAS AT THE EDGE OF THE PAVEMENT AND ADJACENT TO SIDEWALKS
3. CURB, BERM, AND WALKWAY RADII SHALL BE 2 FEET UNLESS NOTED ON PLANS.
4. WHERE SIDEWALKS INTERSECT CURB LINES, ADA, MAAB COMPLIANT CURB RAMP WITH DETECTABLE WARNING MAT SHALL BE INSTALLED. DETECTABLE WARNING PANELS SHALL BE CAST IRON, SEE SPECIFICATION SECTION 32 13 12.
5. CURB & GUTTER RELATED DIMENSIONS ARE TO FLOWLINE UNLESS OTHERWISE NOTED.
6. ALL PAVEMENT MARKINGS ONSITE SHALL BE WATERBOURNE, CONFORMING TO MASSACHUSETTS STANDARD SPECIFICATIONS.
7. CONCRETE WALKWAY MATERIALS SHOWN FOR CLARITY ONLY. REFER TO LANDSCAPE PLANS FOR ALL WALKWAY MATERIALS, FINISHES, AND SCORING.

HEAVY-DUTY BITUMINOUS CONCRETE PAVEMENT:
1.5" FINISH COURSE OVER
2" BINDER COURSE OVER
8.5' PROCESSED GRAVEL OVER
12" COMPACTED SUBGRADE

SIDEWALK CONCRETE
RE: LANDSCAPE FOR CONCRETE TYPE

POROUS PAVEMENT
RE: SITE DETAILS

0' 20' 40' 60'
SCALE: 1" = 20'

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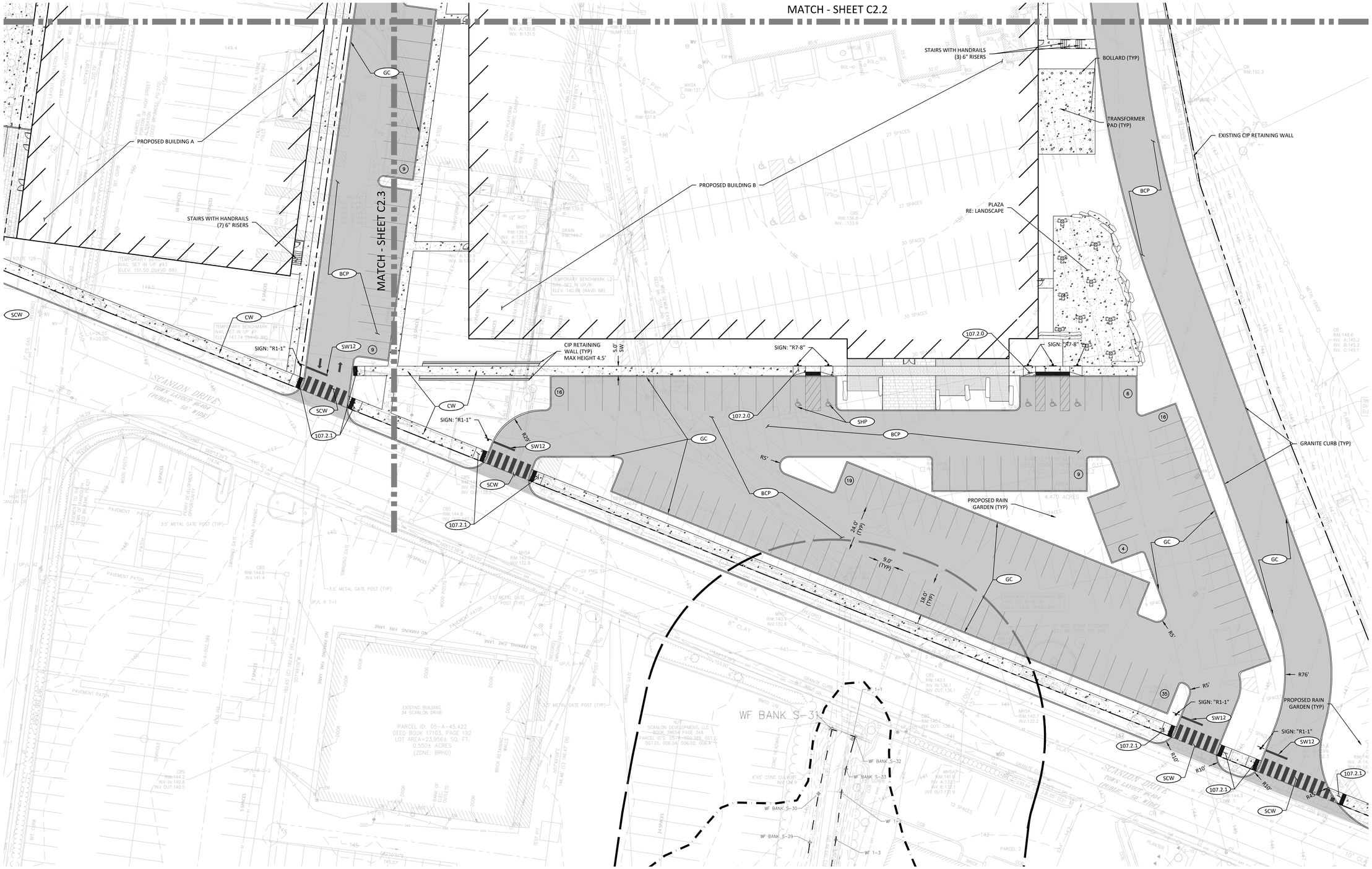
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SITE IMPROVEMENT PLAN 1

C2.1

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POROUS PAVEMENT
RE: SITE DETAILS

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SITE IMPROVEMENT PLAN 2

C2.2

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12" COMPACTED SUBGRADE

SIDEWALK CONCRETE
RE: LANDSCAPE FOR CONCRETE TYPE

POROUS PAVEMENT
RE: SITE DETAILS

PROJECT NORTH

0' 20' 40' 60'
SCALE: 1" = 20'

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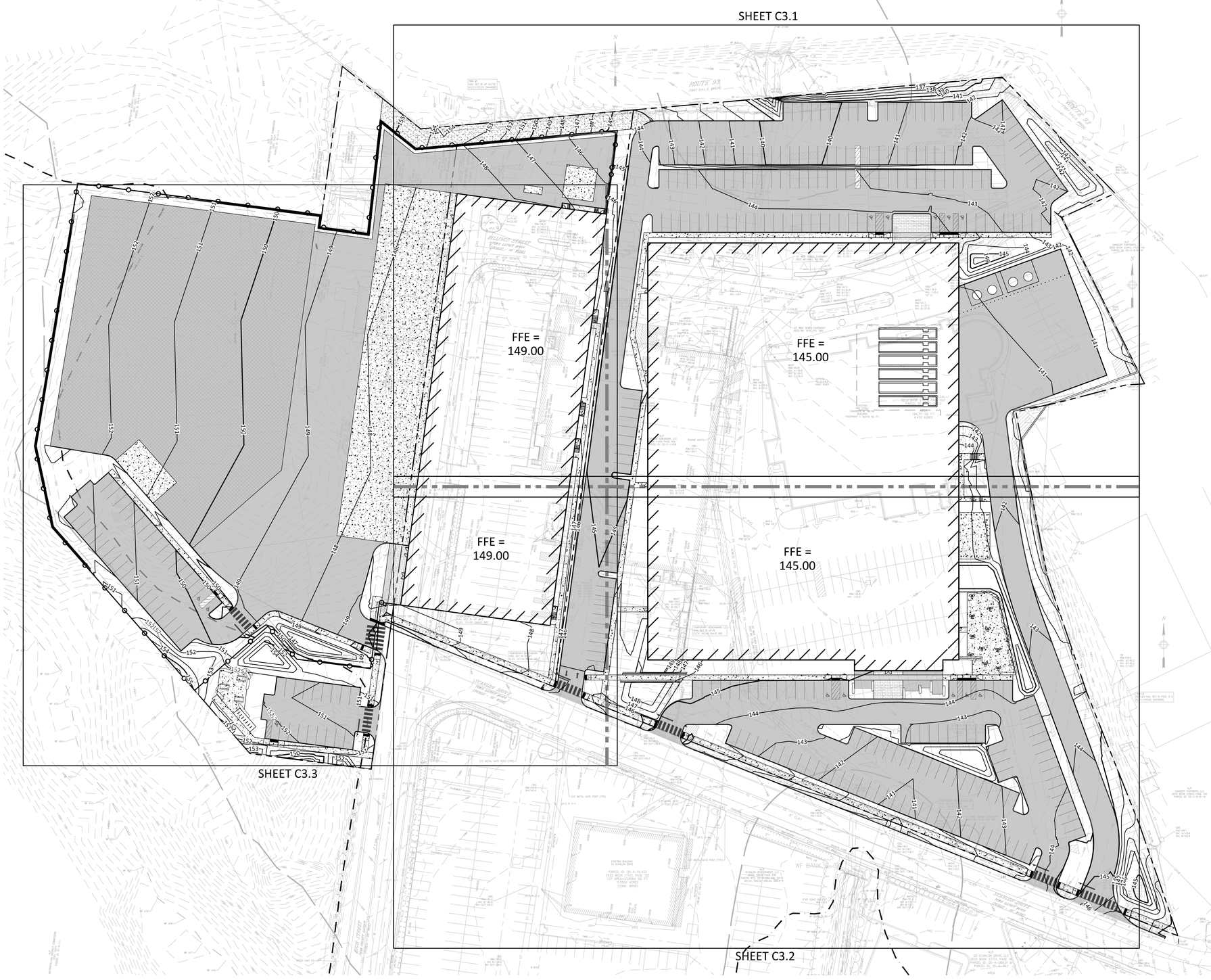
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SITE IMPROVEMENT PLAN 3

C2.3

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0' 40' 80' 120'

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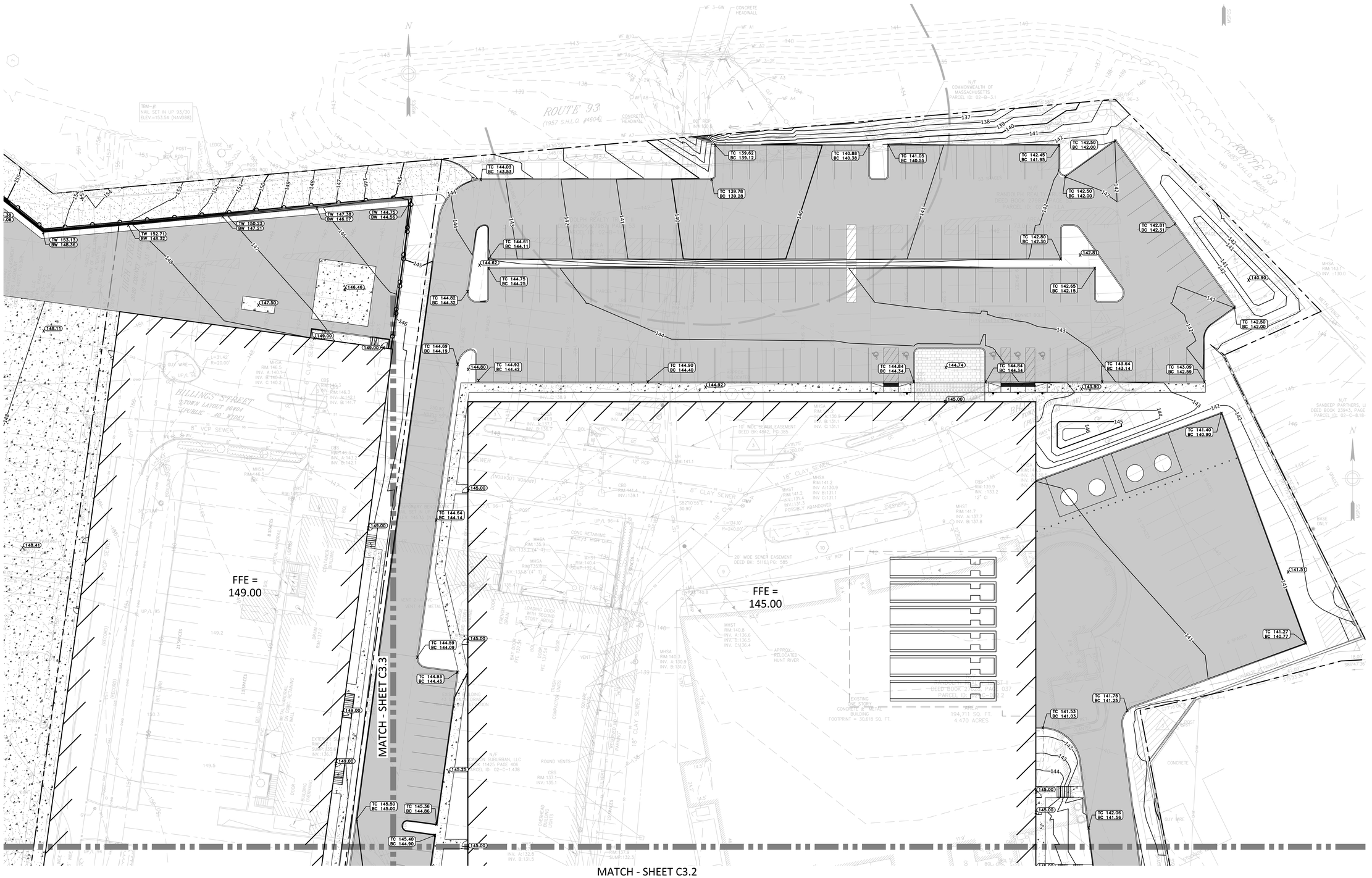
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OVERALL GRADING PLAN

C3.0

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NOTES:

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2. SITE GRADES SHALL CONFORM WITH ADA AND MAAB REQUIREMENTS. IN AREAS WHERE THESE REQUIREMENTS CANNOT BE MET, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING FOR RESOLUTION.
3. ALL TRANSITIONS BETWEEN GROUND COVERING MATERIALS SHALL BE SMOOTH AND MEET 521 CMR 20.10 REQUIREMENTS.
4. CROSS SLOPES FOR ALL WALKWAYS SHALL NOT EXCEED 2% AND RUNNING SLOPES FOR ALL WALKWAYS SHALL NOT EXCEED 5%.
5. REFER TO GRADING PLANS FOR ALL GRADING STRUCTURE RIM ELEVATIONS.

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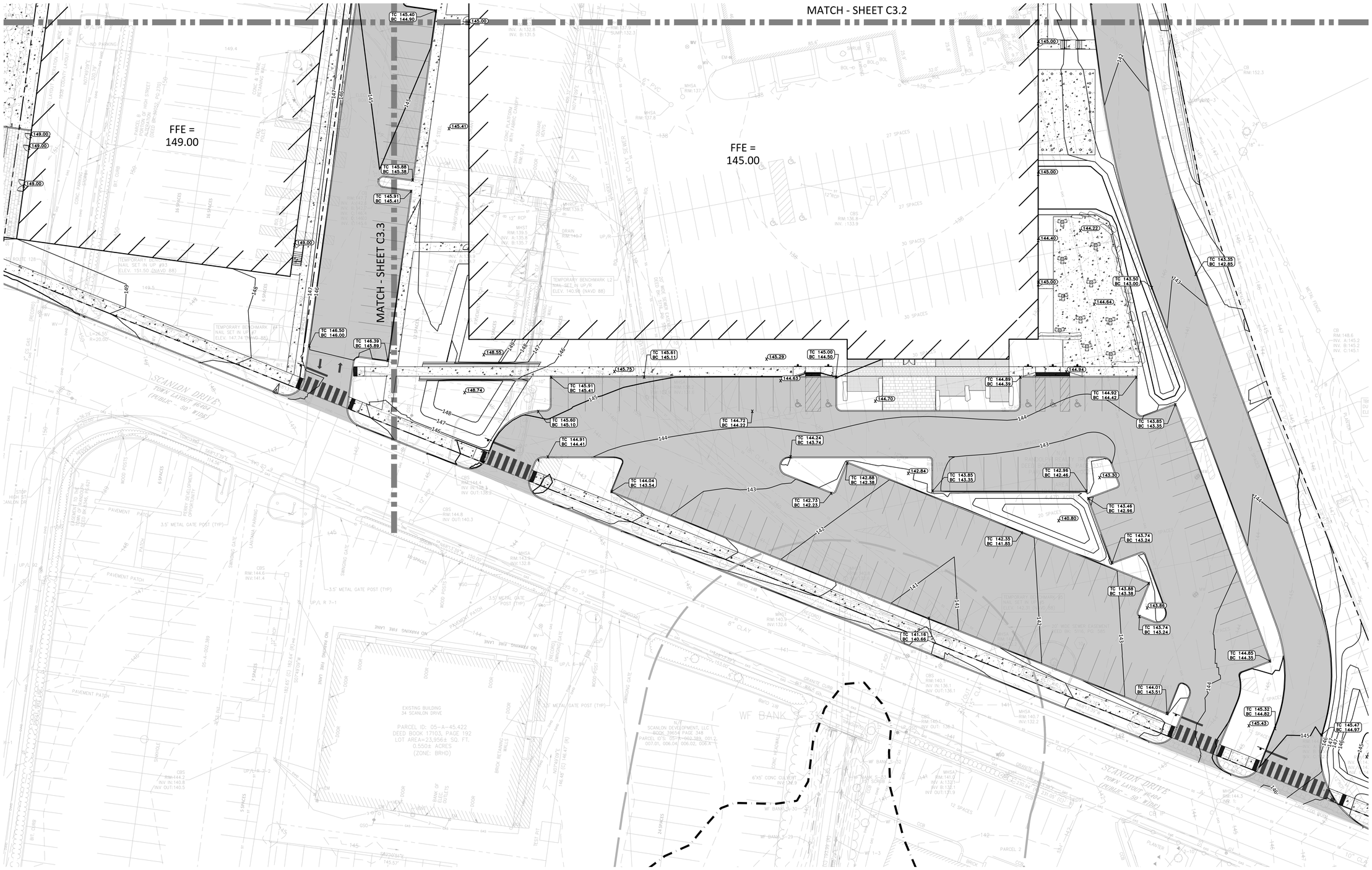
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GRADING PLAN 1

C3.1

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0' 20' 40' 60'

SCALE: 1" = 20'

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GRADING PLAN 2

C3.2

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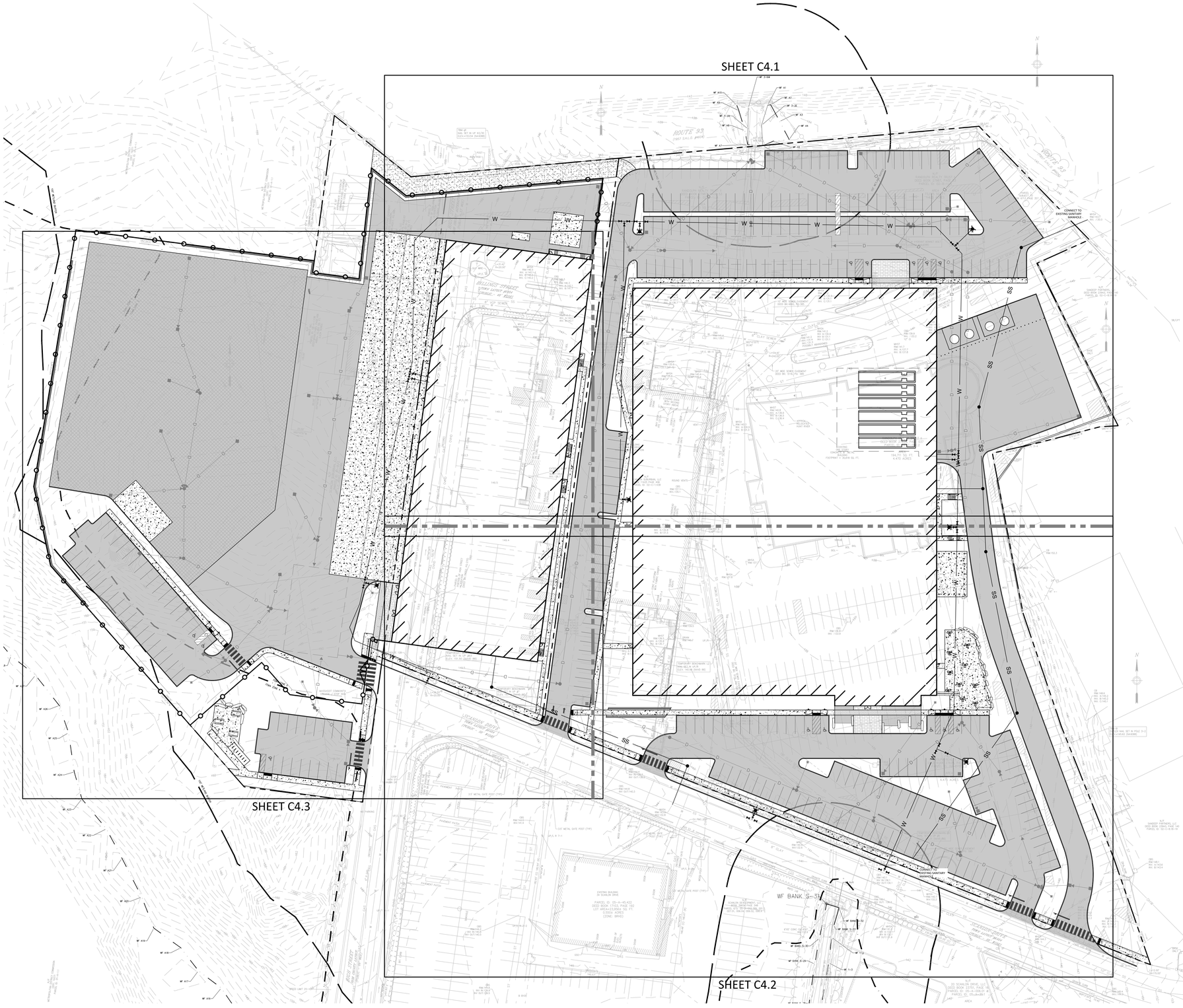
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GRADING PLAN 3

C3.3

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SCALE: 1" = 40'

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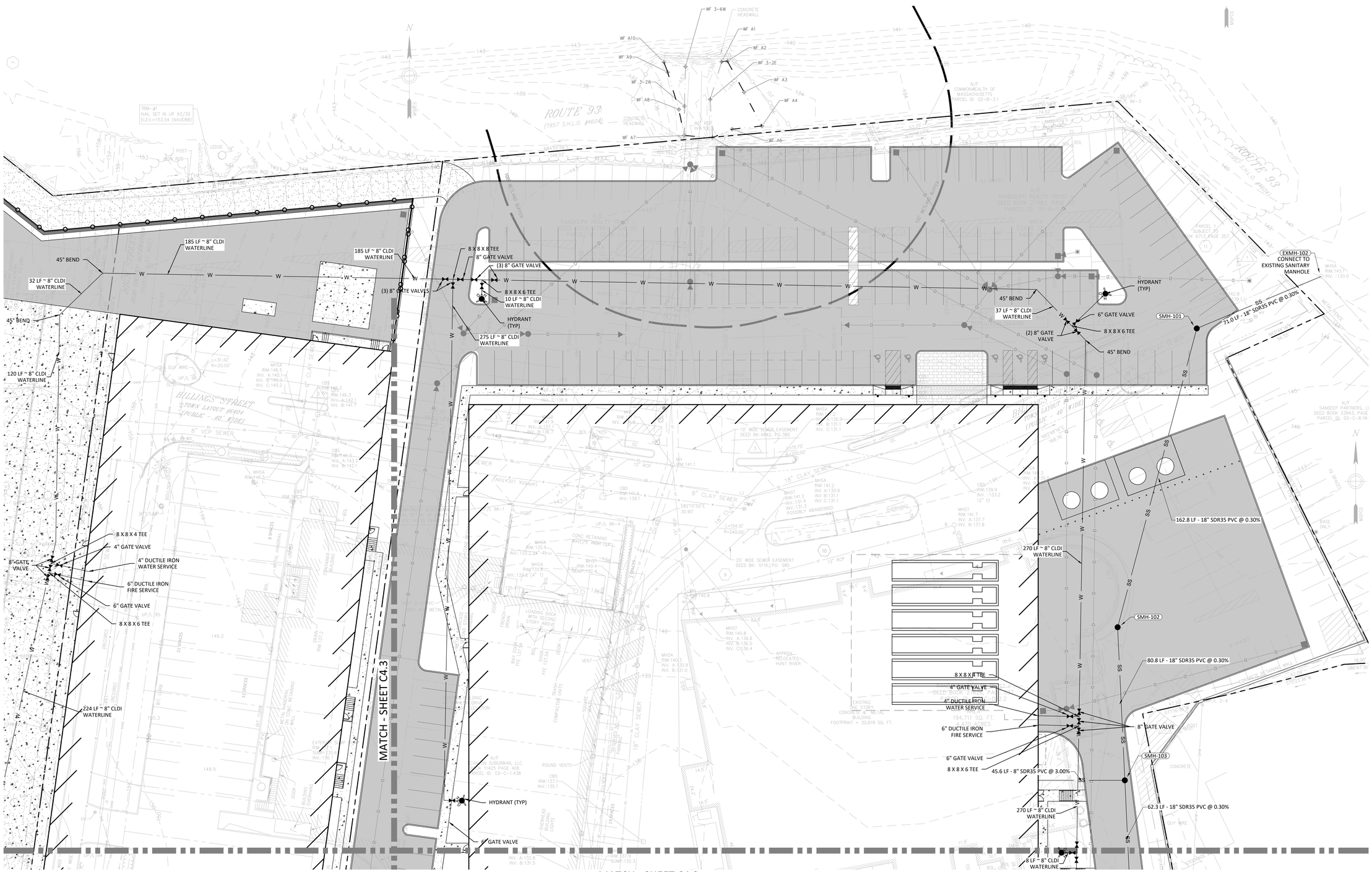
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OVERALL UTILITY PLAN

C4.0

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NOTES:

1. WORK ON ACTIVE UTILITY LINES (INCLUDING SEWER, WATER, AND DRAINAGE) SHALL BE COORDINATED AND SCHEDULED WITH THE OWNER PRIOR TO EXECUTION OF THE WORK.
2. THE CONTRACTOR SHALL MAINTAIN SANITARY SEWER SERVICE TO THE EXISTING SANITARY MAIN FROM THE START OF CONSTRUCTION TO THE START OF BUILDING DEMOLITION.
3. WORK ON EXISTING AND PROPOSED GAS LINES SHALL BE COORDINATED WITH LOCAL GAS COMPANY.
4. POLYVINYL CHLORIDE PIPE AND FITTINGS (PVC) SHALL BE MINIMUM SDR 35 WITH FULL DIAMETER DIMENSIONS CONFORMING TO THE SPECIFICATIONS FOR TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION D3034 LATEST REVISION, FOR SIZES 18 INCHES TO 27 INCHES THE PIPE SHALL COMPLY WITH ASTM F679, LATEST RECORD.
5. MANHOLE FRAMES AND COVERS SHALL BE MINIMUM CLASS 25 CONFORMING TO ASTM "STANDARD SPECIFICATION FOR GRAY IRON CASTINGS," DESIGNATION: A48.
6. ALL WATER MAINS SHALL BE DUCTILE IRON CLASS 52 WITH PUSH ON JOINTS (UNLESS OTHERWISE SPECIFIED) MEETING THE REQUIREMENTS OF ANSI/AWWA C151/A21.51. ALL DUCTILE IRON WATER MAIN PIPE SHALL BE CEMENT LINED, WITH AN ASPHALTIC SEAL COAT MEETING THE REQUIREMENTS OF ANSI/AWWA C104/A21.4.
7. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL WATERLINE BENDS AND TEES IN ACCORDANCE WITH THE SPECIFICATIONS.
8. ALL EXISTING STRUCTURES TO REMAIN WITHIN THE LIMITS OF WORK SHALL BE ADJUSTED TO FINISH GRADE. MINIMUM AND MAXIMUM NUMBER OF SEWER BRICK COURSES USED FOR GRADE ADJUSTMENT SHALL BE IN ACCORDANCE WITH TOWN STANDARDS
9. ALL PRECAST CONCRETE MANHOLES FOR SANITARY AND DRAINAGE SHALL CONFORM TO THE ASTM "SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS," DESIGNATION D478. THE BARREL SHALL BE 4-FOOT WITH A 1-FOOT COLLAR TO PREVENT FLOTATION
10. ALL DUCTILE IRON WATER PIPE SHALL BE PRESSURE TESTED FOR 2 HOURS.
11. ALL DOMESTIC AND FIRE SUPPLY PIPES AND MAINS MUST BE DISINFECTED AND SAMPLED FOR COLIFORM BACTERIA 2X24 HOURS APART BE A MASSACHUSETTS CERTIFIED LAB.
12. ALL WATERLINE CONNECTIONS SHALL REQUIRE A SHUTDOWN. LIVE TAPS SHALL NOT BE PERMITTED. CONTRACTOR IS RESPONSIBLE FOR COORDINATING SHUTDOWN WITH RANDOLPH DPW TWO WEEKS IN ADVANCE OF WORK.
13. ALL UTILITY AND DRAINAGE INSTALLATION SHALL BE INSPECTED BY RANDOLPH DPW. CONTRACTOR SHALL PROVIDE 48 HOUR NOTICE TO DPW PRIOR TO INSTALLATION.
14. CONTRACTOR TO PROVIDE CONCRETE ENCASEMENT FOR WATER AND DRAINAGE CROSSINGS.
15. ALL WATERLINE GATE VALVES SHALL TURN TO THE RIGHT.

Structure Table	
Structure Name	Structure Details
EXMH-101	141.80 INV OUT = 132.20
EXMH-102	134.47 INV IN = 130.05
EXMH-103	133.99 INV IN = 132.80
SMH-101	141.97 INV IN = 130.27 INV OUT = 130.26
SMH-102	141.09 INV IN = 130.75 INV OUT = 130.75
SMH-103	141.43 INV IN = 131.00 INV IN = -4.15 INV OUT = 131.00

Structure Table	
Structure Name	Structure Details
SMH-104	142.01 INV IN = 131.18 INV OUT = 131.18
SMH-105	143.25 INV IN = 131.67 INV OUT = 131.67
SMH-201	148.36 INV IN = 137.98 INV OUT = 137.89
SMH-202	144.73 INV IN = 133.72 INV OUT = 133.62

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Key Plan

PROJECT NORTH

Notes

2	DESIGN DEVELOPMENT	2023.12.15
1	SCHEMATIC DESIGN	2023.10.06
	Issued/Revision	YYYY.MM.DD

Permit/Seal

PRELIMINARY NOT FOR CONSTRUCTION

Scale AS NOTED
Project No. 78000

UTILITY PLAN 1

C4.1

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NOTES:

1. WORK ON ACTIVE UTILITY LINES (INCLUDING SEWER, WATER, AND DRAINAGE) SHALL BE COORDINATED AND SCHEDULED WITH THE OWNER PRIOR TO EXECUTION OF THE WORK.
2. THE CONTRACTOR SHALL MAINTAIN SANITARY SEWER SERVICE TO THE EXISTING SANITARY MAIN FROM THE START OF CONSTRUCTION TO THE START OF BUILDING DEMOLITION.
3. WORK ON EXISTING AND PROPOSED GAS LINES SHALL BE COORDINATED WITH LOCAL GAS COMPANY.
4. POLYVINYL CHLORIDE PIPE AND FITTINGS (PVC) SHALL BE MINIMUM SDR 35 WITH FULL DIAMETER DIMENSIONS CONFORMING TO THE SPECIFICATIONS FOR TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION D3034 LATEST REVISION, FOR SIZES 18 INCHES TO 27 INCHES THE PIPE SHALL COMPLY WITH ASTM F679, LATEST RECORD.
5. MANHOLE FRAMES AND COVERS SHALL BE MINIMUM CLASS 25 CONFORMING TO ASTM "STANDARD SPECIFICATION FOR GRAY IRON CASTINGS," DESIGNATION: A48.
6. ALL WATER MAINS SHALL BE DUCTILE IRON CLASS 52 WITH PUSH ON JOINTS (UNLESS OTHERWISE SPECIFIED) MEETING THE REQUIREMENTS OF ANSI/AWWA C151/A21.51. ALL DUCTILE IRON WATER MAIN PIPE SHALL BE CEMENT LINED, WITH AN ASPHALTIC SEAL COAT MEETING THE REQUIREMENTS OF ANSI/AWWA C104/A21.4.
7. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL WATERLINE BENDS AND TEES IN ACCORDANCE WITH THE SPECIFICATIONS.
8. ALL EXISTING STRUCTURES TO REMAIN WITHIN THE LIMITS OF WORK SHALL BE ADJUSTED TO FINISH GRADE. MINIMUM AND MAXIMUM NUMBER OF SEWER BRICK COURSES USED FOR GRADE ADJUSTMENT SHALL BE IN ACCORDANCE WITH TOWN STANDARDS
9. ALL PRECAST CONCRETE MANHOLES FOR SANITARY AND DRAINAGE SHALL CONFORM TO THE ASTM "SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS," DESIGNATION D478. THE BARREL SHALL BE 4-FOOT WITH A 1-FOOT COLLAR TO PREVENT FLOTATION
10. ALL DUCTILE IRON WATER PIPE SHALL BE PRESSURE TESTED FOR 2 HOURS.
11. ALL DOMESTIC AND FIRE SUPPLY PIPES AND MAINS MUST BE DISINFECTED AND SAMPLED FOR COLIFORM BACTERIA 2X24 HOURS APART BE A MASSACHUSETTS CERTIFIED LAB.
12. ALL WATERLINE CONNECTIONS SHALL REQUIRE A SHUTDOWN. LIVE TAPS SHALL NOT BE PERMITTED. CONTRACTOR IS RESPONSIBLE FOR COORDINATING SHUTDOWN WITH RANDOLPH DPW TWO WEEKS IN ADVANCE OF WORK.
13. ALL UTILITY AND DRAINAGE INSTALLATION SHALL BE INSPECTED BY RANDOLPH DPW. CONTRACTOR SHALL PROVIDE 48 HOUR NOTICE TO DPW PRIOR TO INSTALLATION.
14. CONTRACTOR TO PROVIDE CONCRETE ENCASEMENT FOR WATER AND DRAINAGE CROSSINGS.
15. ALL WATERLINE GATE VALVES SHALL TURN TO THE RIGHT.

Structure Table	
Structure Name	Structure Details
EXMH-101	141.80 INV OUT = 132.20
EXMH-102	134.47 INV IN = 130.05
EXMH-103	133.99 INV IN = 132.80
SMH-101	141.97 INV IN = 130.27 INV OUT = 130.26
SMH-102	141.09 INV IN = 130.75 INV OUT = 130.75
SMH-103	141.43 INV IN = 131.00 INV IN = -4.15 INV OUT = 131.00

Structure Table	
Structure Name	Structure Details
SMH-104	142.01 INV IN = 131.18 INV OUT = 131.18
SMH-105	143.25 INV IN = 131.67 INV OUT = 131.67
SMH-201	148.36 INV IN = 137.98 INV OUT = 137.89
SMH-202	144.73 INV IN = 133.72 INV OUT = 133.62

0' 20' 40' 60'

SCALE: 1" = 20'

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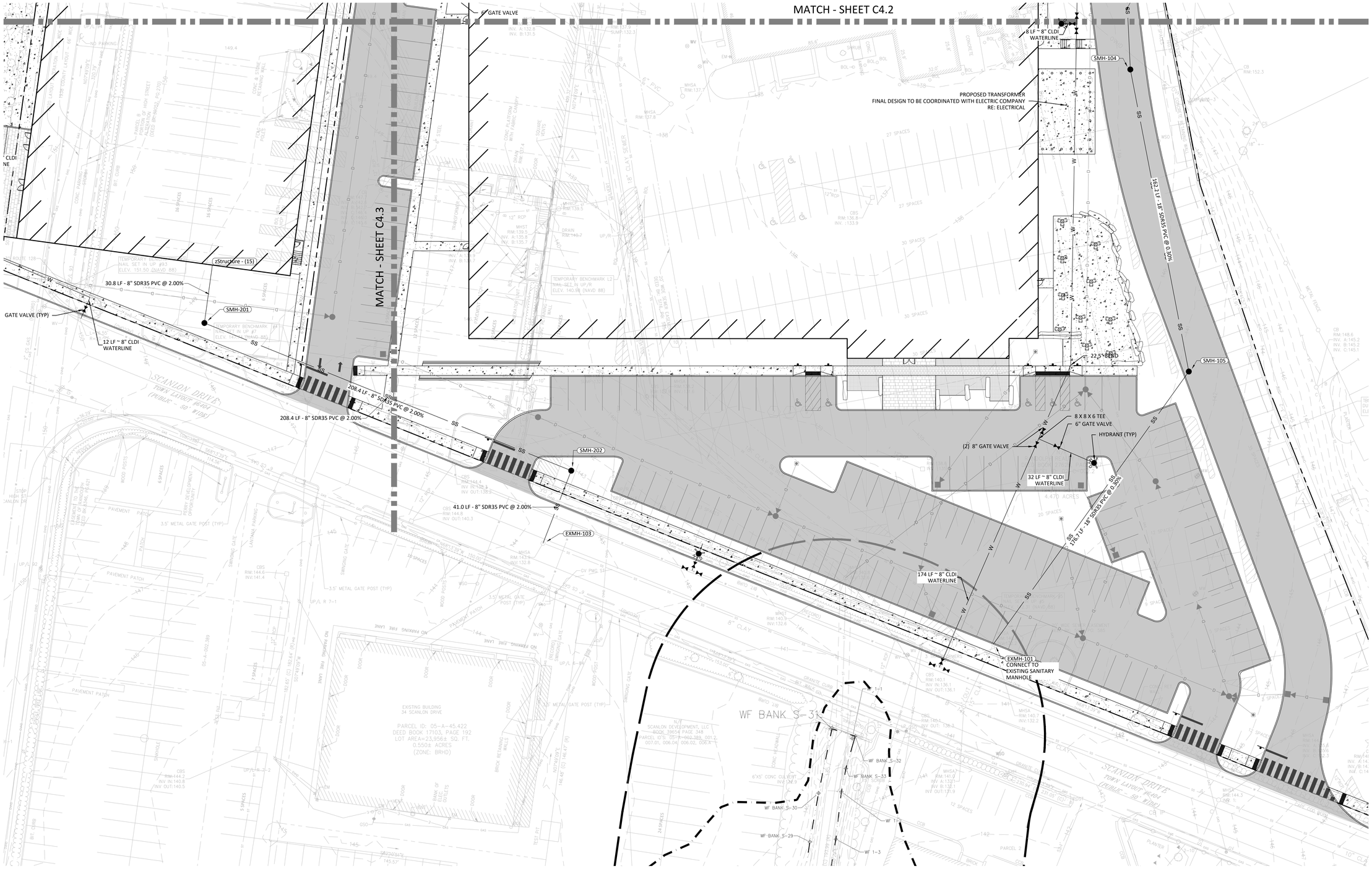
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Project No. 78000

UTILITY PLAN 3

C4.3

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Key Plan

PROJECT NORTH

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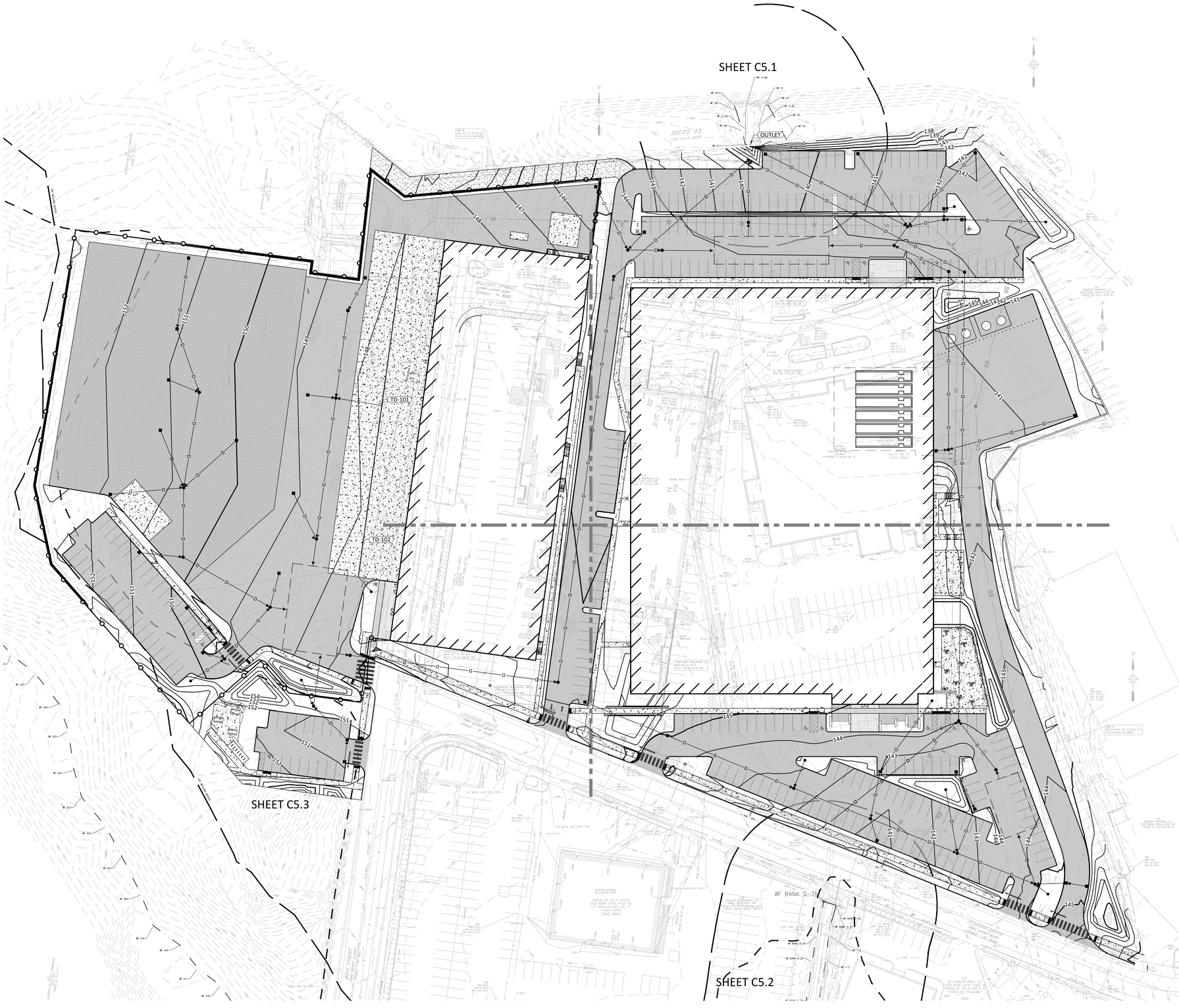
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UTILITY PLAN 2

C4.2

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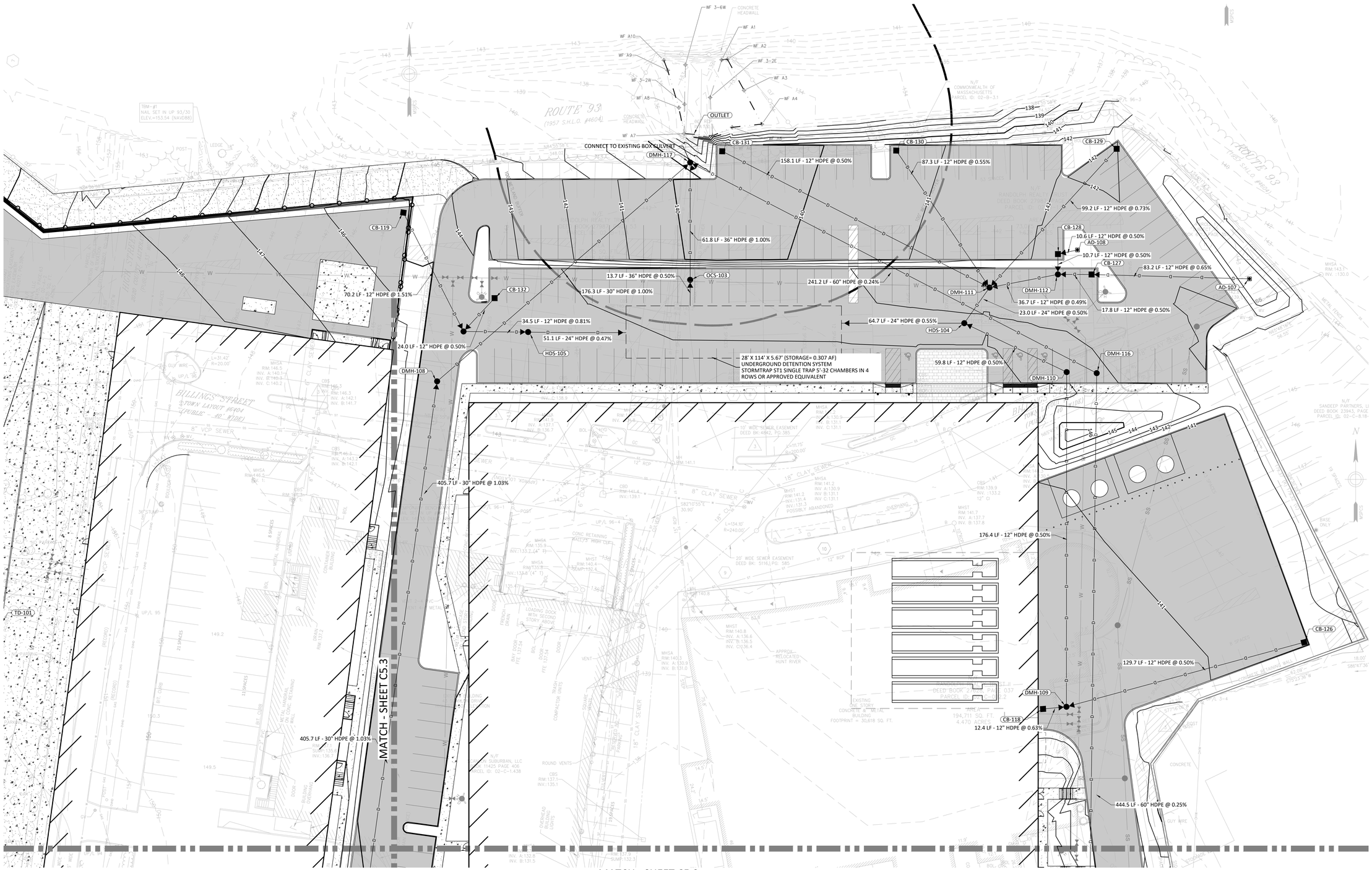
Scale	AS NOTED
Project No.	78000

OVERALL DRAINAGE PLAN

C5.0

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MATCH - SHEET C5.2

NOTE:

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3. ALL UTILITIES WITHIN THE FOOTPRINT OF PROPOSED BUILDING ADDITIONS SHOULD BE ANTICIPATED TO BE REMOVED AND RELOCATED. SERVICE SHALL BE MAINTAINED TO EXISTING BUILDINGS TO REMAIN FOR THE DURATION OF CONSTRUCTION
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8. ALL DRAIN LINES SHALL BE 12" UNLESS OTHERWISE NOTED. ALL DRAIN LINES SHALL BE RCP UNLESS OTHERWISE NOTED
9. ALL CATCH BASINS TO BE 4' DIAMETER (UNLESS OTHERWISE NOTED) SHALL CONFORM TO MHD STANDARD DETAIL 201.4.0 AND ALL CATCH BASIN FRAMES AND GRATES SHALL CONFORM TO 201.6.0 UNLESS OTHERWISE NOTED.
10. ALL MANHOLES TO BE 4' DIAMETER (UNLESS OTHERWISE NOTED) AND SHALL CONFORM TO MHD STANDARD DETAIL 202.4.0 AND ALL MANHOLE FRAMES AND COVERS SHALL CONFORM TO 202.6.0 UNLESS OTHERWISE NOTED. CONCRETE ANTI-FLOTATION COLLARS SHALL BE PROVIDED AT ALL MANHOLES.
11. REINFORCED CONCRETE PIPE AND FLARED ENDS SHALL CONFORM TO THE AASHTO M170 FOR STANDARD STRENGTH REINFORCED CONCRETE CULVERT PIPE FOR CLASS III PIPE, WALL B. OR ASTM C76 FOR REINFORCED CONCRETE CULVERT AND STORM DRAIN PIPE UNLESS NOTED OTHERWISE. ALL PIPE 24 INCHES IN DIAMETER OR SMALLER SHALL BE OF THE BELL AND SPIGOT TYPE. PIPES LARGER THAN 24 INCHES IN DIAMETER SHALL BE TONGUE AND GROOVE OR BELL AND SPIGOT. ALL DRAINAGE PIPING SHALL BE GASKETED.
12. RCP PIPE LOCATED IN VEHICULAR AREAS WITH LESS THAN 6" OF COVER BELOW SUBGRADE ELEVATION SHALL BE CLASS V
13. CONCRETE VAULT DETENTION SYSTEMS SHALL INCLUDE AN 8" EXTENDED CONCRETE SLAB WITH UNITS ANCHORED INTO SLAB, AND SHALL BE LINED WITH AN IMPERVIOUS LINER
14. HIGH-DENSITY POLYETHYLENE PIPE AND FITTINGS SHALL BE ADS N-12 IB ST SMOOTH INTERIOR PIPE, ADS N-12 IB ST HIGH CAPACITY LARGE DIAMETER PIPE OR APPROVED EQUIVALENT. JOINTS SHALL BE SOIL-TIGHT AND INCLUDE A RUBBER GASKET ON THE SPIGOT END OF THE PIPE. WHEN INSTALLED INTO THE BELL END, THE JOINT SHALL BE SEALED.
15. MANHOLES OVER 12 FEET IN DEPTH SHALL HAVE MINIMUM OF 5 FEET INSIDE DIAMETER. ALL MANHOLES SHALL HAVE A SUMP OF AT LEAST 30 INCHES BELOW INVERT OF OUTLET PIPE. RISERS SHALL BE CLAY OR SHALE BRICK, AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 91, GRADE MM OR AS SPECIFIED IN MASSDOT M4.05.
16. ALL CATCH BASINS SHALL HAVE A SUMP OF AT LEAST 48 INCHES (4 FEET) BELOW THE INVERT OF THE OUTLET PIPE, OR OTHERWISE APPROVED BY THE DPW, AND AN INSIDE DIAMETER OF 4 FEET MINIMUM.
17. LIVE LOAD DESIGN FOR CATCH BASINS SHALL BE HS-25 LOADING. CATCH BASINS WHICH ARE LIMITED BY HEIGHT SHALL BE INSTALLED WITH A FLAT TOP SLAB, CAST IN PLACE, DESIGNED FOR HS-25 LOADING AND CAST IRON FRAME CAST IN PLACE.
18. MANHOLE FRAMES AND COVERS SHALL BE AT LEAST CLASS 25 CONFORMING TO ASTM A48 "STANDARD SPECIFICATION FOR GRAY IRON CASTINGS.
19. CATCH BASIN HOODS SHALL BE USED TO MINIMIZE THE ENTRY OF OIL, GASOLINE, AND DEBRIS INTO DRAINAGE PIPES.
20. WHERE PROPOSED DRAIN LINES CROSS SANITARY OR WATER LINES WITH LESS THAN 1.5' CLEARANCE, ENCASE BOTH UTILITIES IN FLOWABLE FILL FOR A DISTANCE OF 10' ON EITHER SIDE OF CROSSING. CENTER PIPE LENGTH AT CROSSING. REFER TO CROSSING DETAIL ON SHEET C6_ ON DETAIL SHEETS.
21. HYDRODYNAMIC SEPARATORS SHALL BE CONTECH CDS2025-5-C, UNLESS OTHERWISE NOTED, OR APPROVED EQUIVALENT.
22. CONCRETE ANTI-FLOTATION COLLARS SHALL BE PROVIDED AT ALL MANHOLES IN AREAS OF HIGH GROUNDWATER.

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DRAINAGE PLAN 1

C5.1

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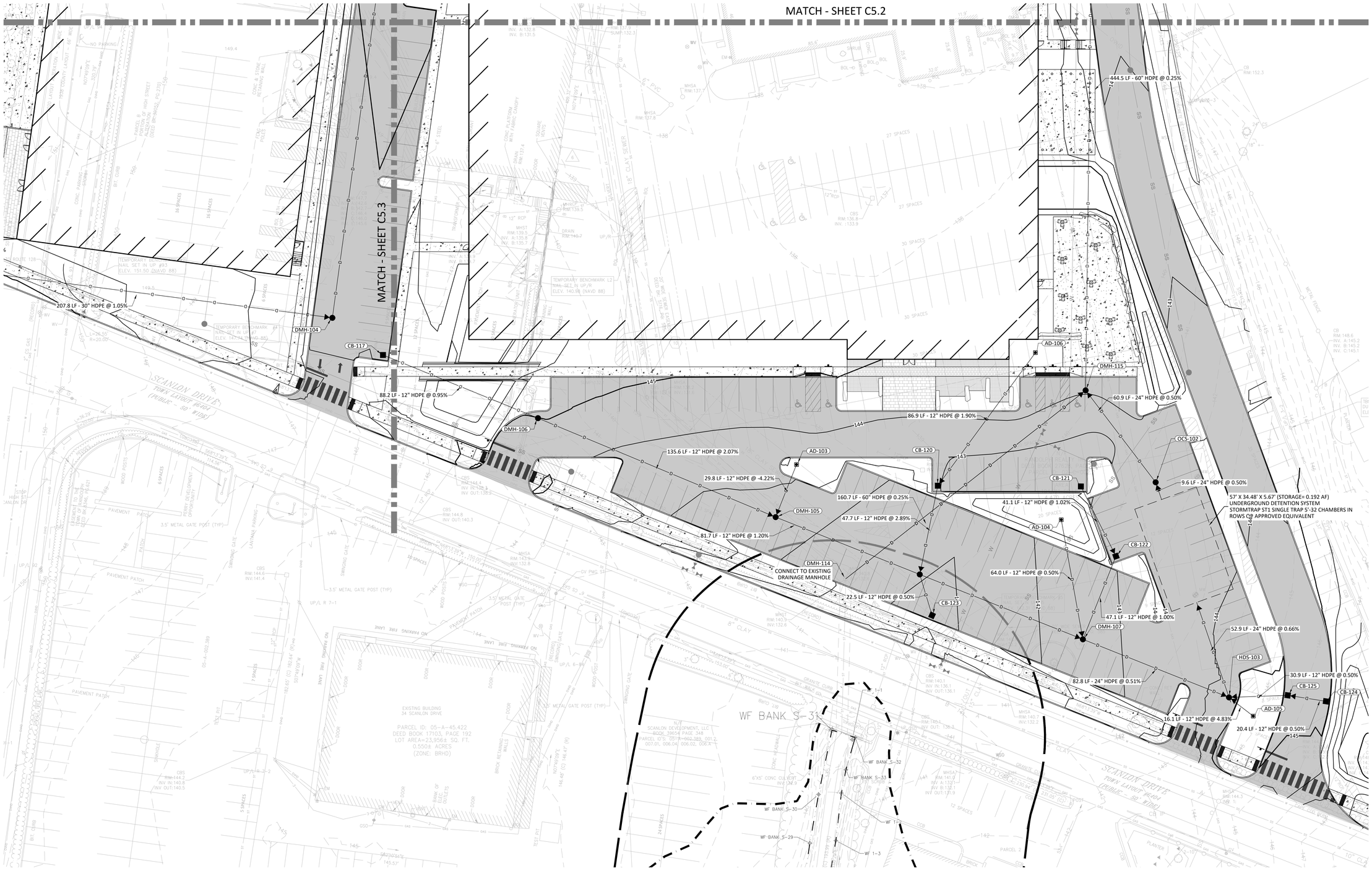
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DRAINAGE PLAN 3

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10. ALL MANHOLES TO BE 4' DIAMETER (UNLESS OTHERWISE NOTED) AND SHALL CONFORM TO MHD STANDARD DETAIL 202.4.0 AND ALL MANHOLE FRAMES AND COVERS SHALL CONFORM TO 202.6.0 UNLESS OTHERWISE NOTED. CONCRETE ANTI-FLOTATION COLLARS SHALL BE PROVIDED AT ALL MANHOLES.
11. REINFORCED CONCRETE PIPE AND FLARED ENDS SHALL CONFORM TO THE AASHTO M170 FOR STANDARD STRENGTH REINFORCED CONCRETE CULVERT PIPE FOR CLASS III PIPE, WALL B. OR ASTM C76 FOR REINFORCED CONCRETE CULVERT AND STORM DRAIN PIPE UNLESS NOTED OTHERWISE. ALL PIPE 24 INCHES IN DIAMETER OR SMALLER SHALL BE OF THE BELL AND SPIGOT TYPE. PIPES LARGER THAN 24 INCHES IN DIAMETER SHALL BE TONGUE AND GROOVE OR BELL AND SPIGOT. ALL DRAINAGE PIPING SHALL BE GASKETED.
12. RCP PIPE LOCATED IN VEHICULAR AREAS WITH LESS THAN 6" OF COVER BELOW SUBGRADE ELEVATION SHALL BE CLASS V
13. CONCRETE VAULT DETENTION SYSTEMS SHALL INCLUDE AN 8" EXTENDED CONCRETE SLAB WITH UNITS ANCHORED INTO SLAB, AND SHALL BE LINED WITH AN IMPERVIOUS LINER
14. HIGH-DENSITY POLYETHYLENE PIPE AND FITTINGS SHALL BE ADS N-12 IB ST SMOOTH INTERIOR PIPE, ADS N-12 IB ST HIGH CAPACITY LARGE DIAMETER PIPE OR APPROVED EQUIVALENT. JOINTS SHALL BE SOIL-TIGHT AND INCLUDE A RUBBER GASKET ON THE SPIGOT END OF THE PIPE. WHEN INSTALLED INTO THE BELL END, THE JOINT SHALL BE SEALED.
15. MANHOLES OVER 12 FEET IN DEPTH SHALL HAVE MINIMUM OF 5 FEET INSIDE DIAMETER. ALL MANHOLES SHALL HAVE A SUMP OF AT LEAST 30 INCHES BELOW INVERT OF OUTLET PIPE. RISERS SHALL BE CLAY OR SHALE BRICK, AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 91, GRADE MM OR AS SPECIFIED IN MASSDOT M4.05.
16. ALL CATCH BASINS SHALL HAVE A SUMP OF AT LEAST 48 INCHES (4 FEET) BELOW THE INVERT OF THE OUTLET PIPE, OR OTHERWISE APPROVED BY THE DPW, AND AN INSIDE DIAMETER OF 4 FEET MINIMUM.
17. LIVE LOAD DESIGN FOR CATCH BASINS SHALL BE HS-25 LOADING. CATCH BASINS WHICH ARE LIMITED BY HEIGHT SHALL BE INSTALLED WITH A FLAT TOP SLAB, CAST IN PLACE, DESIGNED FOR HS-25 LOADING AND CAST IRON FRAME CAST IN PLACE.
18. MANHOLE FRAMES AND COVERS SHALL BE AT LEAST CLASS 25 CONFORMING TO ASTM A48 "STANDARD SPECIFICATION FOR GRAY IRON CASTINGS.
19. CATCH BASIN HOODS SHALL BE USED TO MINIMIZE THE ENTRY OF OIL, GASOLINE, AND DEBRIS INTO DRAINAGE PIPES.
20. WHERE PROPOSED DRAIN LINES CROSS SANITARY OR WATER LINES WITH LESS THAN 1.5' CLEARANCE, ENCASE BOTH UTILITIES IN FLOWABLE FILL FOR A DISTANCE OF 10' ON EITHER SIDE OF CROSSING. CENTER PIPE LENGTH AT CROSSING. REFER TO CROSSING DETAIL ON SHEET C6_ ON DETAIL SHEETS.
21. HYDRODYNAMIC SEPARATORS SHALL BE CONTECH CDS2025-5-C, UNLESS OTHERWISE NOTED, OR APPROVED EQUIVALENT.
22. CONCRETE ANTI-FLOTATION COLLARS SHALL BE PROVIDED AT ALL MANHOLES IN AREAS OF HIGH GROUNDWATER.

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Key Plan

PROJECT NORTH

Notes

2	DESIGN DEVELOPMENT	2023.12.15
1	SCHEMATIC DESIGN	2023.10.06
Issued/Revision		YYYY.MM.DD

Permit/Seal

PRELIMINARY NOT FOR CONSTRUCTION

Scale	AS NOTED
Project No.	78000

DRAINAGE PLAN 2

C5.2

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Structure Table	
Structure Name	Structure Details
AD-101	RIM = 151.47 INV OUT = 148.43
AD-102	RIM = 146.80 INV OUT = 144.75
AD-103	RIM = 143.65 INV OUT = 138.85
AD-104	RIM = 140.80 INV OUT = 138.75
AD-105	RIM = 145.35 INV OUT = 143.30
AD-106	RIM = 144.98 INV OUT = 142.15
AD-107	RIM = 140.90 INV OUT = 138.85
AD-108	RIM = 142.84 INV OUT = 140.00
CB-101	RIM = 151.27 INV OUT = 149.22
CB-102	RIM = 151.08 INV IN = 148.86 INV OUT = 148.76
CB-103	RIM = 148.70 INV OUT = 146.65
CB-104	RIM = 151.02 INV OUT = 148.97
CB-105	RIM = 151.17 INV OUT = 149.12
CB-106	RIM = 150.00 INV OUT = 147.95
CB-107	RIM = 151.84 INV OUT = 149.79
CB-108	RIM = 148.50 INV IN = 146.16 INV OUT = 145.44
CB-109	RIM = 148.84 INV OUT = 145.98
CB-110	RIM = 149.11 INV OUT = 147.06
CB-111	RIM = 148.74 INV OUT = 146.07
CB-112	RIM = 150.79 INV OUT = 148.74
CB-113	RIM = 149.89 INV OUT = 147.49
CB-114	RIM = 150.35 INV OUT = 147.68
CB-115	RIM = 150.87 INV OUT = 148.82
CB-116	RIM = 150.12 INV IN = 148.07 INV OUT = 147.97
CB-117	RIM = 145.92 INV OUT = 143.76
CB-118	RIM = 141.02 INV OUT = 138.96
CB-119	RIM = 145.17 INV OUT = 141.57
CB-120	RIM = 143.12 INV IN = 140.49 INV OUT = 139.73
CB-121	RIM = 142.24 INV OUT = 140.19
CB-122	RIM = 143.41 INV IN = 139.77 INV OUT = 139.67
CB-123	RIM = 140.68 INV OUT = 138.62
CB-124	RIM = 144.72 INV OUT = 142.67
CB-125	RIM = 144.70 INV IN = 142.57 INV OUT = 142.47
CB-126	RIM = 140.78 INV OUT = 138.73
CB-127	RIM = 142.18 INV IN = 138.31 INV OUT = 138.21

Structure Table	
Structure Name	Structure Details
CB-128	RIM = 142.27 INV IN = 139.95 INV OUT = 139.85
CB-129	RIM = 141.99 INV OUT = 139.94
CB-130	RIM = 140.61 INV OUT = 138.56
CB-131	RIM = 139.18 INV OUT = 137.13
CB-132	RIM = 144.31 INV OUT = 142.26
DMH-101	RIM = 150.22 INV IN = 147.15 INV IN = 147.62 INV OUT = 147.05
DMH-102	RIM = 150.78 INV IN = 147.85 INV IN = 148.73 INV IN = 148.72 INV IN = 147.60 INV OUT = 147.50
DMH-103	RIM = 148.37 INV IN = 144.96 INV IN = 145.67 INV OUT = 144.86
DMH-104	RIM = 145.71 INV IN = 139.88 INV OUT = 139.78
DMH-105	RIM = 143.99 INV IN = 140.10 INV IN = 139.99 INV OUT = 139.89
DMH-106	RIM = 144.99 INV IN = 142.92 INV OUT = 142.80
DMH-107	RIM = 142.53 INV IN = 137.33 INV IN = 139.20 INV IN = 138.43 INV OUT = 137.23
DMH-108	RIM = 144.43 INV IN = 135.59 INV OUT = 135.61
DMH-109	RIM = 142.77 INV IN = 138.08 INV IN = 138.89 INV OUT = 137.98
DMH-110	RIM = 143.45 INV IN = 137.10 INV OUT = 137.00
DMH-111	RIM = 142.57 INV IN = 137.84 INV IN = 136.34 INV IN = 138.07 INV IN = 139.22 INV OUT = 136.71
DMH-112	RIM = 142.30 INV IN = 139.79 INV IN = 138.12 INV OUT = 138.02
DMH-113	RIM = 150.55 INV IN = 148.43 INV IN = 148.50 INV OUT = 148.33
DMH-114	RIM = 141.46 INV OUT = 132.60
DMH-115	RIM = 144.09 INV IN = 135.55 INV IN = 132.20 INV OUT = 132.21
DMH-116	RIM = 143.15 INV IN = 131.09 INV OUT = 131.10
DMH-117	RIM = 139.46 INV IN = 130.52 INV IN = 132.99 INV IN = 133.86 INV OUT = 130.53
HDS-101	RIM = 148.70 INV IN = 146.13 INV IN = 146.57 INV IN = 145.73 INV OUT = 144.34
HDS-102	RIM = 148.45 INV IN = 144.16 INV IN = 145.61 INV IN = 144.88 INV IN = 145.16 INV OUT = 144.07
HDS-103	RIM = 144.57 INV IN = 136.80 INV IN = 142.32 INV IN = 142.52 INV OUT = 136.70
HDS-104	RIM = 143.31 INV IN = 136.60 INV IN = 136.70 INV OUT = 136.60
HDS-105	RIM = 144.94 INV IN = 140.13 INV OUT = 140.03
HDS-201	RIM = 151.62 INV IN = 147.74 INV IN = 144.61 INV OUT = 144.51
INF-101	RIM = 145.60 INV IN = 144.26
INF-102	RIM = 144.42 INV OUT = 142.24
INF-103	RIM = 145.35 INV IN = 144.25
INF-104	RIM = 144.90 INV IN = 143.79
OCS-101	RIM = 149.29 INV IN = 142.17 INV OUT = 142.07
OCS-102	RIM = 143.42 INV IN = 135.95 INV OUT = 135.85
OCS-103	RIM = 143.58 INV IN = 135.20 INV OUT = 133.61

Structure Table	
Structure Name	Structure Details
OUTLET	RIM = 136.30 INV IN = 130.50
TD-101	RIM = 134.71
TD-102	RIM = 146.27
UDS-101	RIM = 138.18 INV OUT = 136.00
UDS-102	RIM = 138.54 INV IN = 136.36
UDS-201	RIM = 141.97 INV IN = 139.79
UDS-202	RIM = 138.53 INV OUT = 135.27
UDS-203	RIM = 138.43 INV IN = 136.24

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Key Plan

PROJECT NORTH

Notes

2	DESIGN DEVELOPMENT	2023.12.15
1	SCHEMATIC DESIGN	2023.10.06
Issued/Revision		YYYY.MM.DD

Permit/Seal

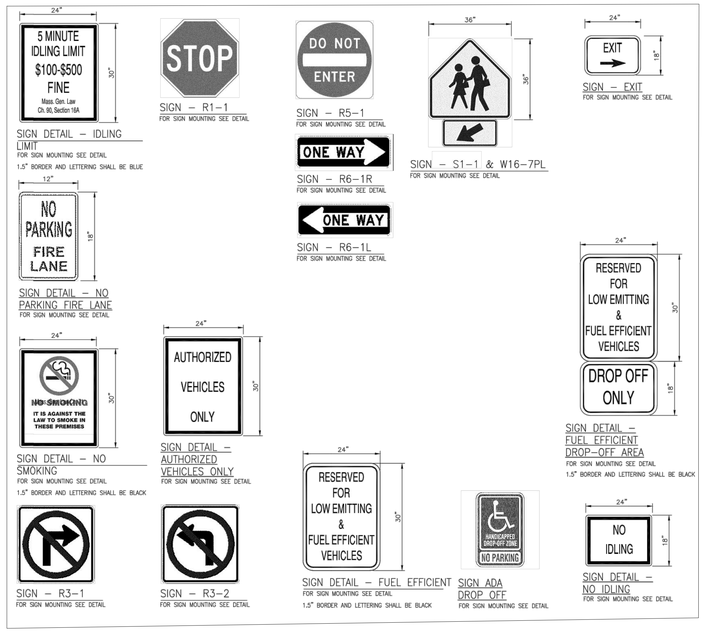
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Scale	AS NOTED
Project No.	78000

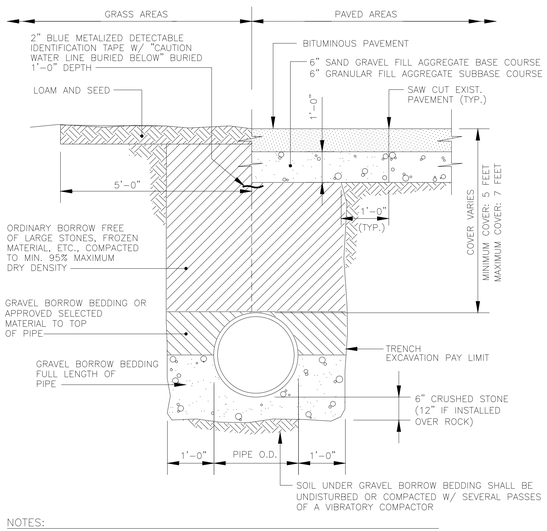
DRAINAGE PLAN 4

C5.4

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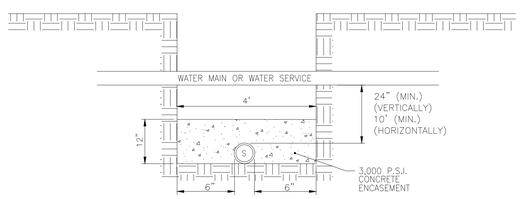
TYPICAL MISCELLANEOUS SIGNS ①
NOT TO SCALE



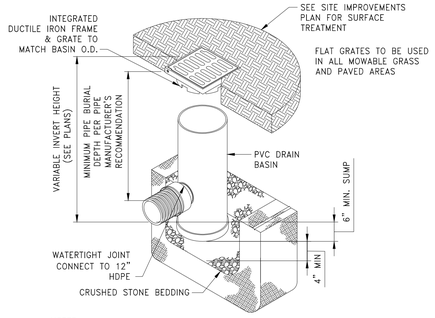
NOTES:

1. FOR PIPE INSTALLATION IN ROCK OR LEDGE MINIMUM TRENCH WIDTH SHOULD EQUAL THE DIAMETER OF THE PIPE PLUS 18 INCHES ON EACH SIDE.
2. MINIMUM WIDTH OF TRENCH SHOULD BE 3 FEET.
3. PLACE 6" OF DRAINAGE STONE FROM BASE OF TRENCH TO TOP OF PIPE IF PIPE IS INSTALLED BELOW SEASONAL HIGH GROUND WATER TABLE.

TYPICAL WATER MAIN TRENCH ⑦
NOT TO SCALE



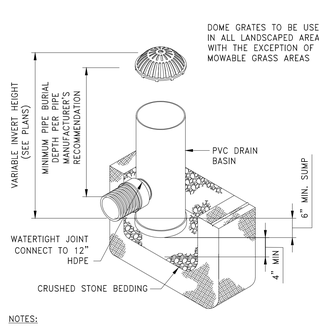
MINIMUM DISTANCES FOR SEWER AND WATER LINE CROSSINGS ⑩
NOT TO SCALE



NOTES:

1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70–50–05 AND ADA COMPLIANT
2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70–50–05.
3. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE.

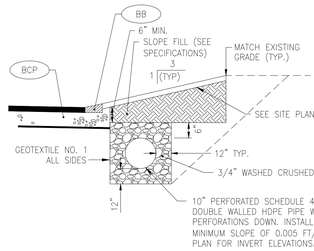
AD 12" AREA DRAIN BASIN ②
NOT TO SCALE



NOTES:

1. DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70–50–05.
2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70–50–05.
3. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE.

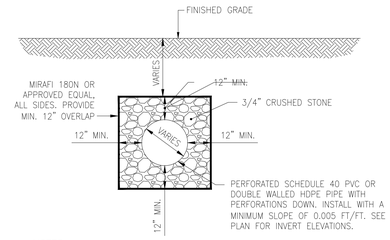
AD 12" AREA DRAIN BASIN WITH DOME GRATE ③
NOT TO SCALE



NOTES:

1. SEE UNDERDRAIN PLANS FOR LOCATION OF UNDERDRAIN.
2. SEE GRADING PLAN 2 FOR LOCATION AND EXTENT OF SLOPE FILL.
3. OVERLAP GEOTEXTILE NO. 1 A MINIMUM OF 1 FOOT.
4. DISTURBED AND REMOVED MATERIAL FROM EXISTING SLOPE SHALL BE REPLACED WITH GRANULAR FILL UNLESS OTHERWISE APPROVED BY THE ENGINEER.

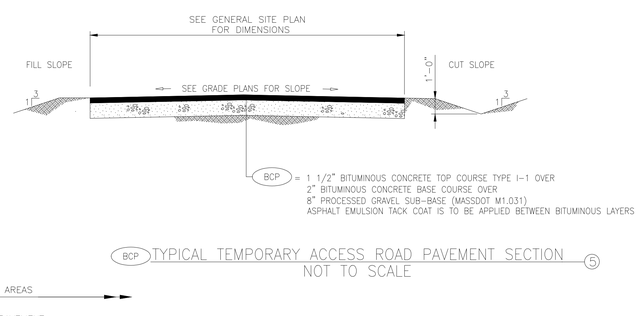
SLOPE UNDERDRAIN ④
NOT TO SCALE



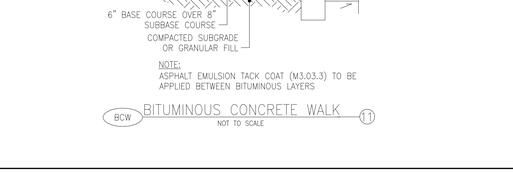
NOTES:

1. PIPE SHALL BE PERFORATED SDR–35 PVC UNDER LANDSCAPED AREAS AND PERFORATED SCHEDULE 40 PVC UNDER PAVED AREAS UNLESS OTHERWISE SPECIFIED.
2. SEE UNDERDRAIN PLANS FOR PIPE SIZES, LOCATIONS AND INVERTS.
3. PIPE PERFORATIONS SHALL BE DOWN.

UNDERDRAIN ⑥
NOT TO SCALE



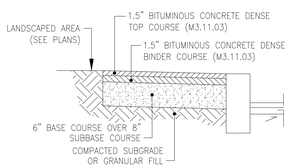
BCP TYPICAL TEMPORARY ACCESS ROAD PAVEMENT SECTION ⑤
NOT TO SCALE



NOTES:

1. FOR PIPE INSTALLATION IN ROCK OR LEDGE MINIMUM TRENCH WIDTH SHOULD EQUAL THE DIAMETER OF THE PIPE PLUS 18 INCHES ON EACH SIDE.
2. MINIMUM WIDTH OF TRENCH SHOULD BE 3 FEET.
3. PLACE 6" OF DRAINAGE STONE FROM BASE OF TRENCH TO TOP OF PIPE IF PIPE IS INSTALLED BELOW SEASONAL HIGH GROUND WATER TABLE.

TYPICAL ONSITE SEWER TRENCH ⑧
NOT TO SCALE



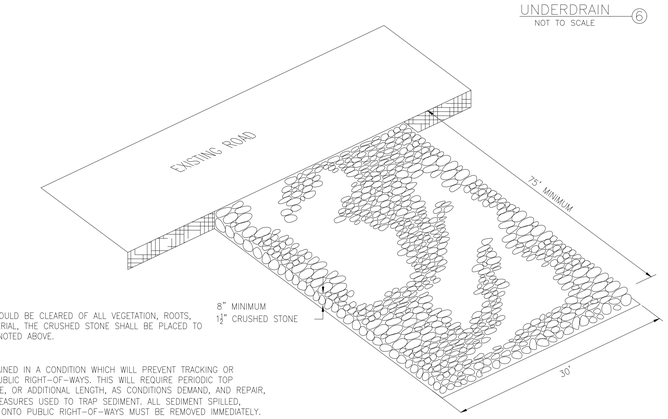
NOTE:
ASPHALT EMULSION TACK COAT (M3.03.3) TO BE APPLIED BETWEEN BITUMINOUS LAYERS

BCW BITUMINOUS CONCRETE WALK ⑪
NOT TO SCALE

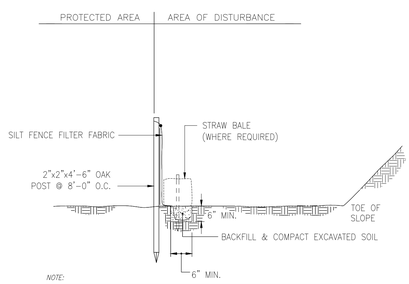
INSTALLATION
THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. THE CRUSHED STONE SHALL BE PLACED TO THE SPECIFIED DIMENSIONS, AS NOTED ABOVE.

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

LOCATION
SEE PROJECT PLANS FOR LOCATION OF CONSTRUCTION ENTRANCE. EXISTING SIDEWALK SHALL BE MAINTAINED INTACT AND FREE OF SEDIMENT FOR THE DURATION OF CONSTRUCTION.



CONSTRUCTION ENTRANCE PROTECTION STONE STABILIZATION PAD ⑨
NOT TO SCALE



NOTE:
SILT FENCE FABRIC SHALL NOT BE SLIT. STRAW BALE POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC.

SILT FENCE ⑫
NOT TO SCALE

NOTE:
ANY MANUFACTURER'S NAMES AND/OR MODEL NUMBERS IDENTIFIED HEREIN ARE INTENDED TO ASSIST IN ESTABLISHING A GENERAL LEVEL OF QUALITY, CONFIGURATION, FUNCTIONALITY, AND APPEARANCE REQUIRED. THIS IS NOT A PROPRIETARY SPECIFICATION AND IT SHOULD BE NOTED THAT "OR APPROVED EQUIVALENT" APPLIES TO ALL PRODUCTS DENOTED HEREIN. IT IS UNDERSTOOD THAT ALL MANUFACTURERS WILL HAVE MINOR VARIATIONS IN CONFIGURATION, APPEARANCE, AND PRODUCT SPECIFICATION TO ENCOURAGE OPEN AND COMPETITIVE INVOLVEMENT FROM MULTIPLE MANUFACTURERS THAT ARE ABLE TO SUPPLY SIMILAR PRODUCTS.

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Key Plan

PROJECT NORTH

Notes

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	Issued/Revision	YYYY.MM.DD

Permit/Seal

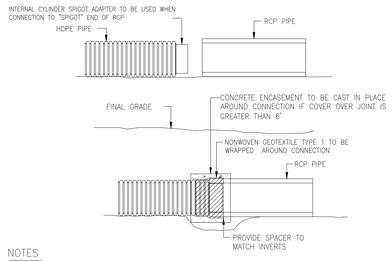
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Scale	AS NOTED
Project No.	78000

SITE DETAILS 3

C6.2

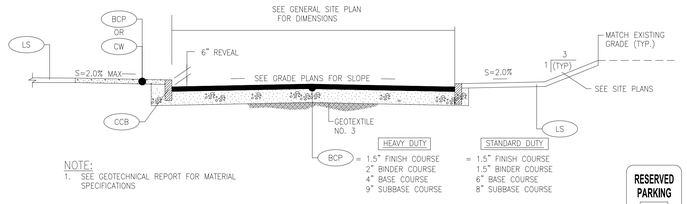
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NOTES

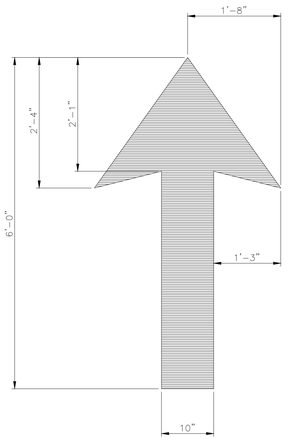
1. INTERNAL CYLINDER ADAPTER TO BE WELDED TO HDPE, OUTSIDE DIAMETER TO BE INSERTED TO INSIDE DIAMETER OF CONCRETE PIPE.
2. NON-WOVEN GEOTEXTILE TO BE WRAPPED AROUND CONNECTION WITH FULL SEAM OVERLAP TO PROVIDE FULL PROTECTION FROM SOIL INTRUSION.
3. CONNECTION TO BE MADE IN ACCORDANCE WITH PIPE MANUFACTURER'S REQUIREMENTS.
4. INTERNAL CYLINDER SPIGOT ADAPTER NOT REQUIRED IF HDPE IS CONNECTED TO "BELL" END OF RCP.

HDPE/RCP PIPE JOINT ①
NOT TO SCALE

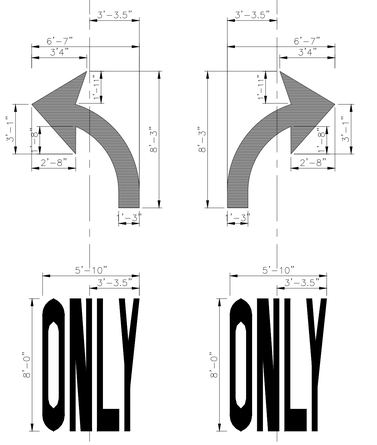


NOTE:
1. SEE GEOTECHNICAL REPORT FOR MATERIAL SPECIFICATIONS

BCP TYPICAL BITUMINOUS CONCRETE PAVEMENT SECTIONS ⑦
NOT TO SCALE

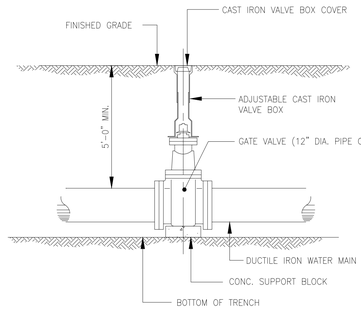


DIRECTIONAL ARROW PAVEMENT MARKINGS ②
NOT TO SCALE
STRIPING SHOULD BE EPOXY RESIN AND WHITE IN COLOR

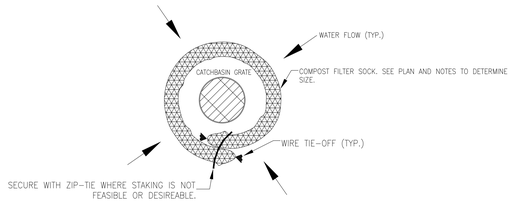


PAVEMENT MARKING ③
NOT TO SCALE

PAVEMENT MARKING ④
NOT TO SCALE

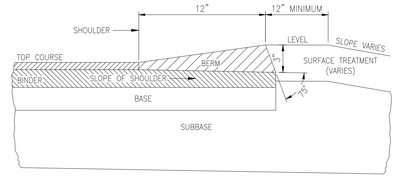


VALVE BOX ⑤
NOT TO SCALE

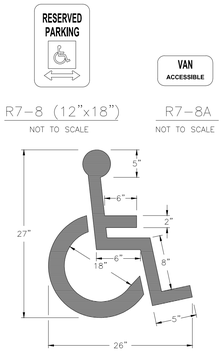


NOTES:
1. OVERLAP ENDS OF SOCK PER MANUFACTURERS RECOMMENDATIONS – ONE FOOT MINUMUM, 3 FEET MAXIMUM.
2. USE 8"-12" DIA. SOCK IN CURBSIDE OR TRAFFICED AREAS.
3. USE 12"-18" DIA. SOCK IN NON-TRAFFICED AREAS.
4. INSPECT AND MAINTAIN THROUGHOUT CONSTRUCTION.
5. SOCK AND COMPOST MATERIAL TO BE REMOVED FROM SITE WHEN CONSTRUCTION IS COMPLETE.

INLET PROTECTION ⑥
NOT TO SCALE



BB HOT MIX ASPHALT BERM ⑧
NOT TO SCALE

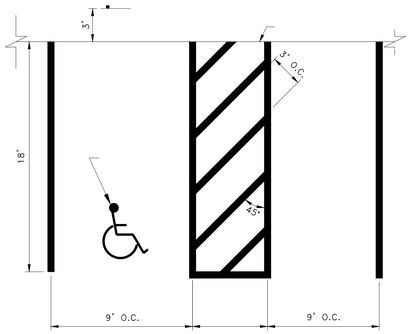


R7-8 (12"x18")
NOT TO SCALE

R7-8A
NOT TO SCALE

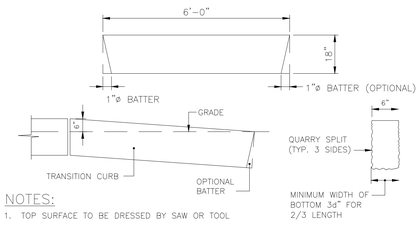
NOTE:
1. ALL HANDICAP PARKING AND SIGNAGE SHALL BE IN CONFORMANCE WITH THE RULES & REGULATIONS OF THE ARCHITECTURAL BARRIERS BOARD & A.D.A.

SHP HANDICAP PAVEMENT MARKING ⑨
NOT TO SCALE



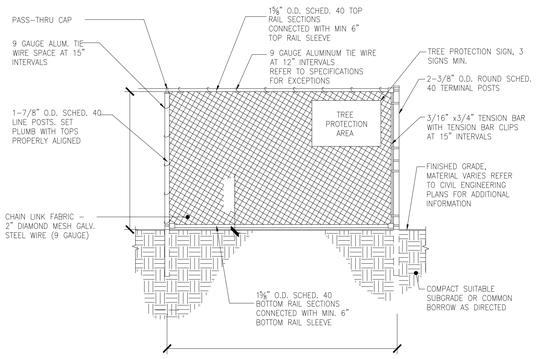
NOTE:
1. WHERE STALLS ABUT SIDEWALK, PARKING SIGNS SHOULD BE PLACED AT BACK EDGE OF SIDEWALK.
2. STRIPING SHOULD BE WHITE IN COLOR

SHP VAN HANDICAP PARKING STALLS @ 90° ⑩
NOT TO SCALE



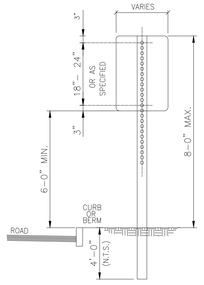
NOTES:
1. TOP SURFACE TO BE DRESSED BY SAW OR TOOL
2. GRANITE CURB SHALL CONFORM TO M.H.D. STD. SPECIFICATION MATERIALS SECTION M9.04.1 GRANITE CURB, TYPE VA4.

6' GRANITE TRANSITION CURB ⑪
NOT TO SCALE



NOTE:
1. FOR TREE PROTECTION ONLY, SEE CIVIL PLANS FOR LOCATION.
2. FENCE POST TO BE BURIED 2 FEET BELOW GRADE.
3. ADJUST POST LOCATIONS IN THE FIELD ACCORDING TO LOCATION OF TREE ROOTS.
4. PROTECTION FENCING LOCATED ON SIDEWALKS AS SHOWN ON THE PLANS SHALL HAVE CONCRETE BLOCKS.
5. INSTALLATION TO BE APPROVED BY TOWN TREE WARDEN AND LANDSCAPE ARCHITECT

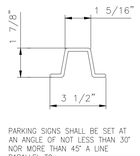
6 FOOT CHAIN LINK TREE PROTECTION FENCE ⑫



NOTE:
5/16" x 2-1/2" GALVANIZED BOLTS & WASHERS

STEEL SPECIFICATION – A.S.T.M. DESIGNATION A499-64 ZINC (HOT GALVANIZED) SPECIFIED BY- A.S.T.M. A 123.

WT./FT.	3.00 #
Mom. Ix-x	0.484in 4
Sec Mod x-x	0.569in 3
Mom Iy-y	0.886in 4
Sec Mod y-y	0.506in 3

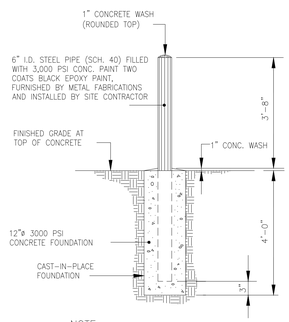


PARKING SIGNS SHALL BE SET AT AN ANGLE OF NOT LESS THAN 30° NOR MORE THAN 45° A LINE PARALLEL TO THE FLOW OF TRAFFIC.

SIGN MOUNTING NOTES:
1. ALL LAG SCREWS, BOLTS AND WASHERS SHALL BE GALVANIZED 5/16"x2 1/2" LONG UNLESS OTHERWISE NOTED.
2. WASHERS SHALL BE 0.07" THICK. 3. ALL SIGN COLORS, RADII AND BORDERS AS SPECIFIED IN "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

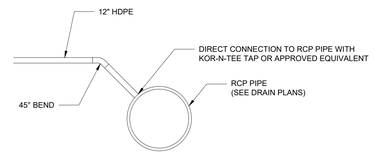
HANDICAP SIGN NOTES:
1. ALL HANDICAP PARKING AND SIGNAGE SHALL BE IN CONFORMANCE WITH THE RULES & REGULATIONS AS SPECIFIED BY THE AMERICAN DISABILITIES ACT (ADA)
2. SIGN(S) SHALL BE LOCATED SO THEY CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.
3. FOR HANDICAPPED VAN SPACE, USE SIGN AS DETAILED.
4. FOR HANDICAPPED SPACE FOR AUTOMOBILES, USE ONLY HANDICAPPED PARKING SIGN. (WITHOUT ADDITIONAL "VAN ACCESSIBLE" SIGN)

SIGN MOUNTING DETAIL ⑬

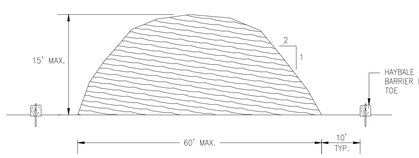


NOTE:
1. SEE LANDSCAPE PLANS FOR DECORATIVE BOLLARDS.
2. SITE CONTRACTOR IS RESPONSIBLE FOR INSTALLING CONCRETE BOLLARDS.

CONCRETE BOLLARD ⑭
NOT TO SCALE



DIRECT CONNECTION DETAIL ⑮
NOT TO SCALE



NOTES:
1. STOCKPILE AREA SHALL NOT EXCEED SPECIFIED DIMENSIONS WITHOUT APPROVAL FROM ENGINEER.
2. STOCKPILED ERODIBLE MATERIAL THAT WILL NOT BE USED FOR GREATER THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION OR COVERED IMMEDIATELY FOLLOWING PLACEMENT.
3. NO STOCKPILE SHALL BE PLACED WITHIN THE 100 FOOT WETLAND BUFFER.

ERODIBLE MATERIAL STOCKPILE ⑯
NOT TO SCALE

NOTE:
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www.vertexeng.com

Key Plan

PROJECT NORTH

Notes

2	DESIGN DEVELOPMENT	2023.12.15
1	SCHEMATIC DESIGN	2023.10.06
Issued/Revision		YYYY.MM.DD

Permit/Seal

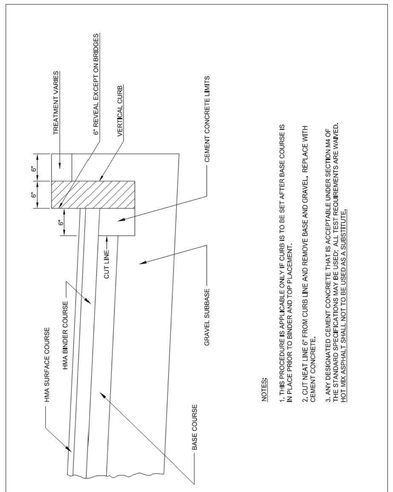
PRELIMINARY NOT FOR CONSTRUCTION

Scale	AS NOTED
Project No.	78000

SITE DETAILS 1

C6.1

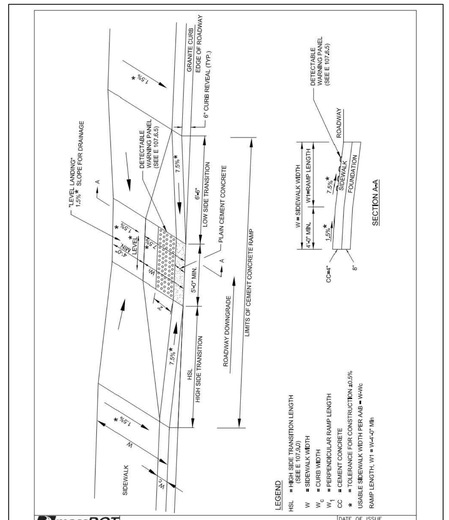
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Date/Time: 2023.12.20 15:11:03
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massDOT Highway Division — CONSTRUCTION STANDARDS

METHOD OF SETTING VERTICAL CURB

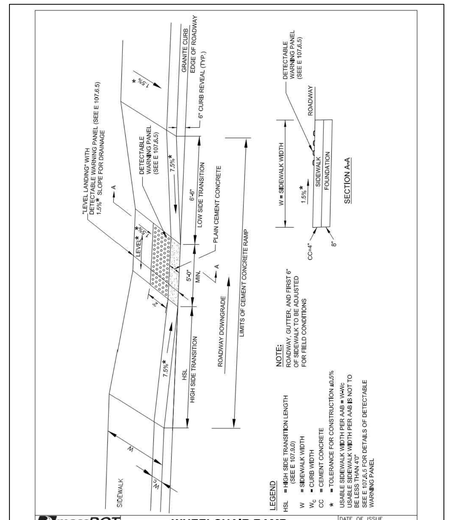
DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 106.3.0**



massDOT Highway Division — CONSTRUCTION STANDARDS

WHEELCHAIR RAMPS LESS THAN 12'-4" SIDEWALK

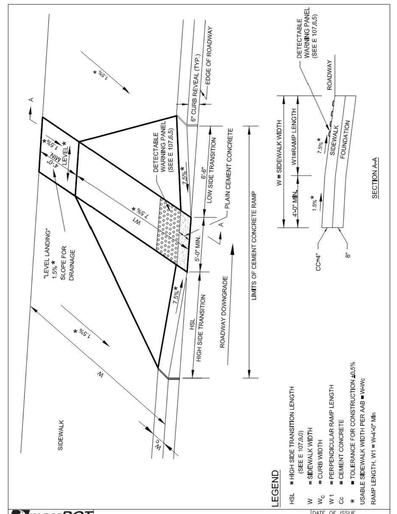
DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 107.2.0**



massDOT Highway Division — CONSTRUCTION STANDARDS

WHEELCHAIR RAMP ON NARROW SIDEWALK WITH DETECTABLE WARNING PANEL

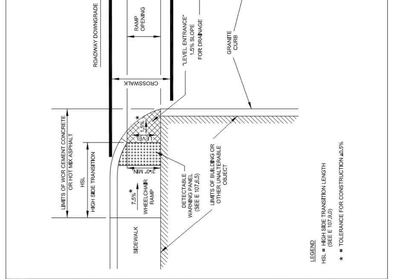
DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 107.2.1**



massDOT Highway Division — CONSTRUCTION STANDARDS

WHEELCHAIR RAMPS GREATER THAN 12'-4" SIDEWALK

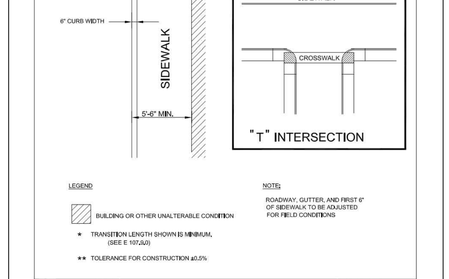
DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 107.3.0**



massDOT Highway Division — CONSTRUCTION STANDARDS

WHEELCHAIR RAMP FOR ONE CONTINUOUS DIRECTION OF PEDESTRIAN TRAVEL

DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 107.6.0**



massDOT Highway Division — CONSTRUCTION STANDARDS

"T" INTERSECTION WHEELCHAIR RAMP

DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 107.6.4**

* HIGH SIDE TRANSITION LENGTH	ENGLISH UNITS
	6'-6"
	7'-8"
	9'-0"
	11'-0"
	14'-0"
	15'-0" Max

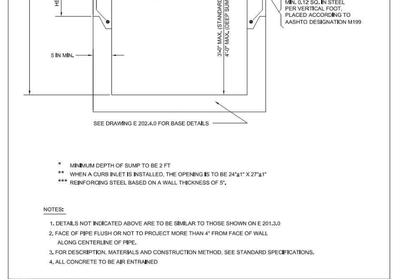
ROADWAY PROFILE GRADE	%
	=0%
	>0% TO 1%
	>1% TO 2%
	>2% TO 3%
	>3% TO 4%
	>4% TO 5%

NOTE:
* BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".

massDOT Highway Division — CONSTRUCTION STANDARDS

CURB TRANSITION LENGTH FOR WHEELCHAIR RAMPS

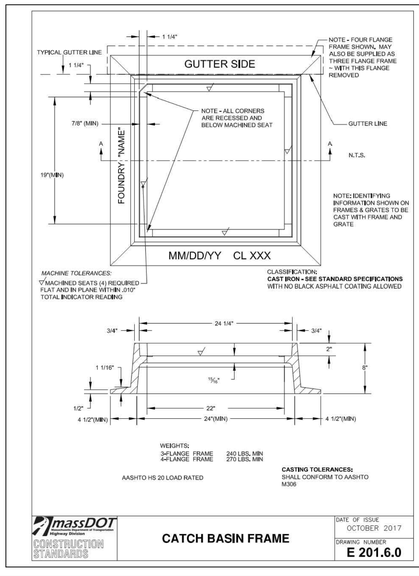
DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 107.9.0**



massDOT Highway Division — CONSTRUCTION STANDARDS

PRECAST CONCRETE CATCH BASIN

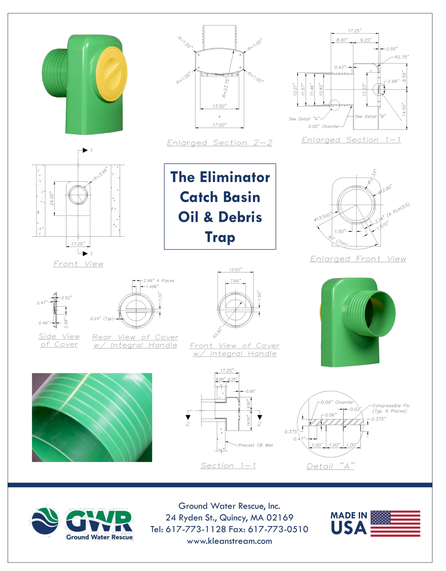
DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 201.4.0**

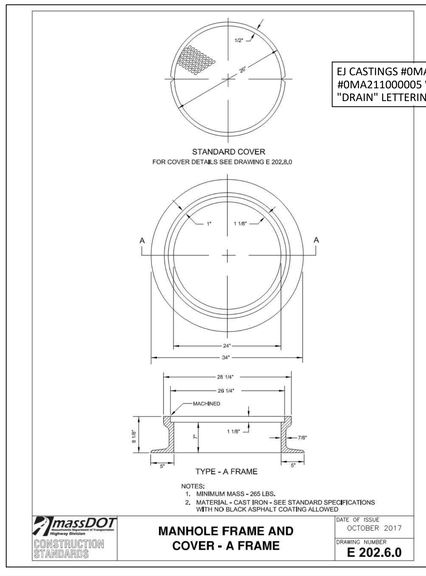


massDOT Highway Division — CONSTRUCTION STANDARDS

CATCH BASIN FRAME

DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 201.6.0**





massDOT Highway Division — CONSTRUCTION STANDARDS

PRECAST CONCRETE MANHOLES 9' OR LESS IN DEPTH

DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 202.4.0**

massDOT Highway Division — CONSTRUCTION STANDARDS

MANHOLE FRAME AND COVER - A FRAME

DATE OF ISSUE: OCTOBER 2017
DRAWING NUMBER: **E 202.6.0**

NOTE:
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Key Plan

PROJECT NORTH

Notes

2	DESIGN DEVELOPMENT	2023.12.15
1	SCHEMATIC DESIGN	2023.10.06
Issued/Revision		YYYY.MM.DD

Permit/Seal

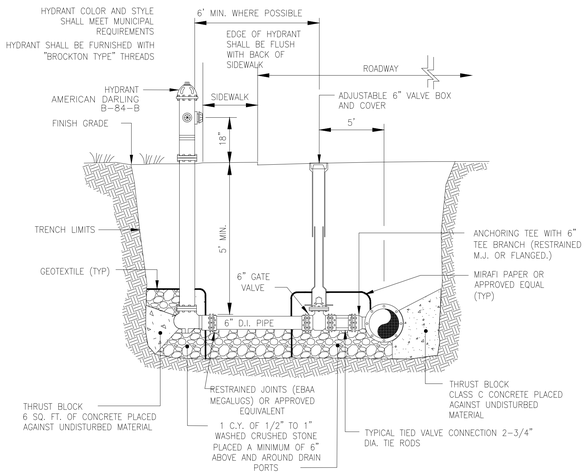
PRELIMINARY NOT FOR CONSTRUCTION

Scale: AS NOTED
Project No.: 78000

SITE DETAILS 3

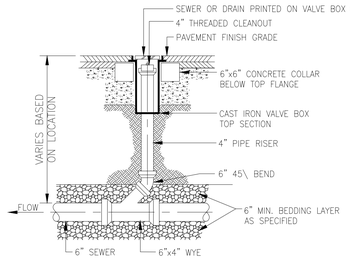
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Plotted by: Jeffrey Lewis
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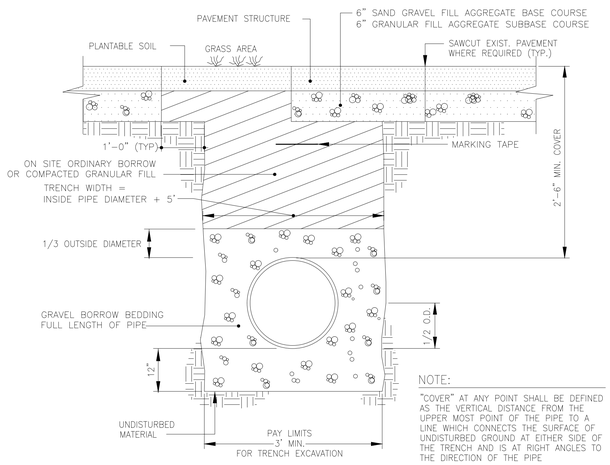
HYDRANT DETAIL ①

NOT TO SCALE



PIPE CLEANOUT DETAIL ②

NOT TO SCALE

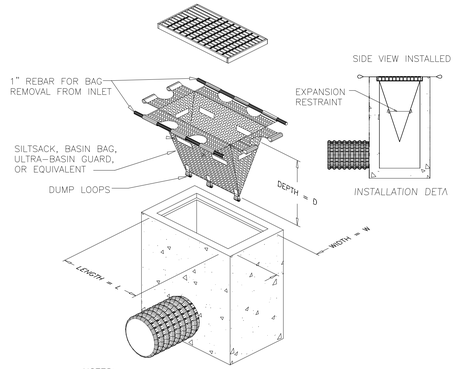


NOTE:

"COVER" AT ANY POINT SHALL BE DEFINED AS THE VERTICAL DISTANCE FROM THE UPPER MOST POINT OF THE PIPE TO A LINE WHICH CONNECTS THE SURFACE OF UNDISTURBED GROUND AT EITHER SIDE OF THE TRENCH AND IS AT RIGHT ANGLES TO THE DIRECTION OF THE PIPE.

TYPICAL TRENCH FOR DRAINAGE INSTALLATION ③

NOT TO SCALE

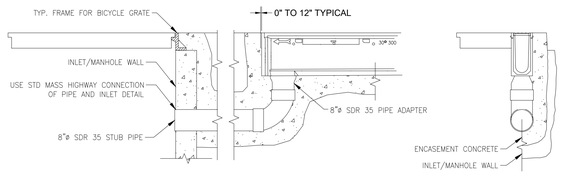


NOTES:

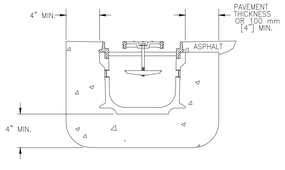
1. INLET PROTECTION SHALL BE CLEANED OF SILT AND DEBRIS ON A REGULAR BASIS AS REQUIRED BY PROJECT SPECIFIC SWPPP.
2. INSPECTIONS SHALL BE DONE AFTER EACH RAIN EVENT AND AS REQUIRED BY PROJECT SPECIFIC SWPPP.

SS INLET PROTECTION DETAIL ④

NOT TO SCALE



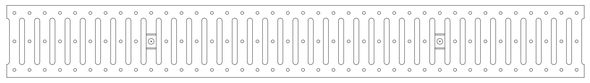
STANDARD INSTALLATION DETAIL
6" WIDE CHANNEL



PRESLOPED TRENCH DRAIN
TYPICAL INSTALLATION



TYPICAL PRE-MOLDED, PRE-SLOPED TRENCH DRAIN



TYPICAL GRATE

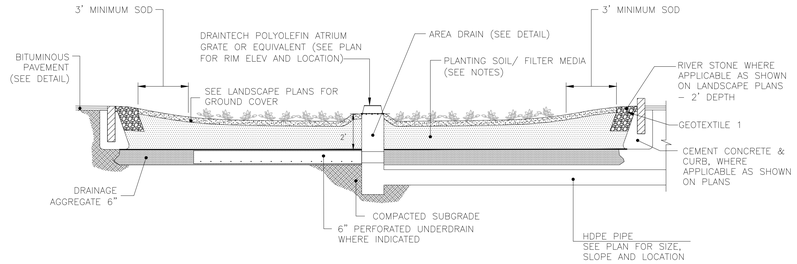
NOTE: GRATE SHALL BE LOCKABLE, HEEL-PROOF, ADA COMPLIANT, AND APPROVED BY LANDSCAPE ARCHITECT.

NOTES:

1. TRENCH DRAIN SYSTEM SHALL BE CAPABLE OF A MINIMUM HYDRAULIC FLOW OF 650 GPM.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF PROPOSED TRENCH DRAIN LAYOUT. ACCEPTABLE PRODUCTS FOR THIS APPLICATION INCLUDE POLYDRAIN BY ABT INC., SPORT SYSTEM 4000, KLASSIKDRAIN, OR POWERDRAIN BY ACO, DURASLOPE BY NDS, OR APPROVED EQUIVALENT.
3. TRENCH DRAIN SHALL HAVE MINIMUM SLOPE OF 0.6%.
4. AT ACCESSIBLE ROUTES, GRATE OPENINGS SHALL NOT EXCEED ½" AND ELONGATED OPENINGS MUST BE PERPENDICULAR TO THE PRIMARY PATH OF TRAVEL

TRENCH DRAIN ⑤

NOT TO SCALE

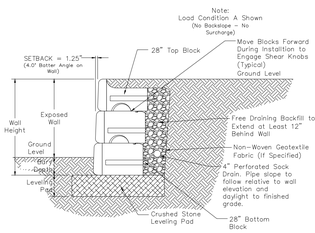


BIORETENTION AREA DETAIL ⑦

NOT TO SCALE

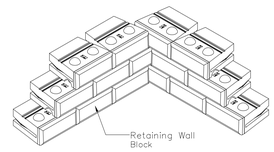
BIO-RETENTION AREA NOTES :

1. FOR PLANTING SOIL/FILTER MEDIA AND BARK MULCH SPECIFICATIONS, REFER TO LANDSCAPE SPECIFICATIONS



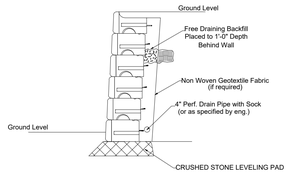
TYPICAL SECTION-REINFORCED RETAINING WALL

MODULAR CONCRETE UNIT
SCALE: NONE



90° INSIDE CORNER (41" AND 28" SERIES)

SCALE: NONE



4" DRAIN DETAIL

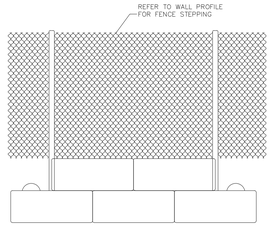
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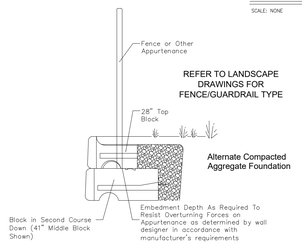


28" MIDDLE BLOCK FOR SRWALL

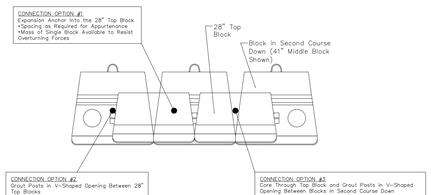
SCALE: NONE



Front View
(NO SCALE)



Side View
(NO SCALE)



Top View
(NO SCALE)

SEGMENTAL RETAINING WALL DETAIL ⑥

NOT TO SCALE

1. RETAINING WALLS SHALL BE REDI-ROCK, OR STRONG STONE, RE-CON RETAINING WALL SYSTEMS, INC., SERIES 50, NORTH SHORE GRANITE TEXTURE OR EQUIVALENT

2. THESE DETAILS ARE FOR REFERENCE PURPOSES ONLY. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS COMPLETED AND STAMPED BY A MASSACHUSETTS REGISTERED STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION. SHOP DRAWINGS SHALL INCLUDE ALL DETAILS AND INFORMATION NECESSARY FOR CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE THE STRUCTURAL ENGINEER ALL APPURTENANT INFORMATION FOR THEIR DESIGN AND CALCULATIONS.

NOTE:

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Key Plan

PROJECT NORTH

Notes

2	DESIGN DEVELOPMENT	2023.12.15
1	SCHEMATIC DESIGN	2023.10.06
Issued/Revision		YYYY.MM.DD

Permit/Seal

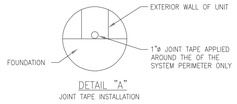
PRELIMINARY NOT FOR CONSTRUCTION

Scale	AS NOTED
Project No.	78000

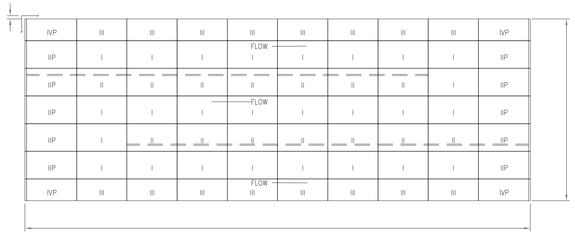
SITE DETAILS 4

C6.4

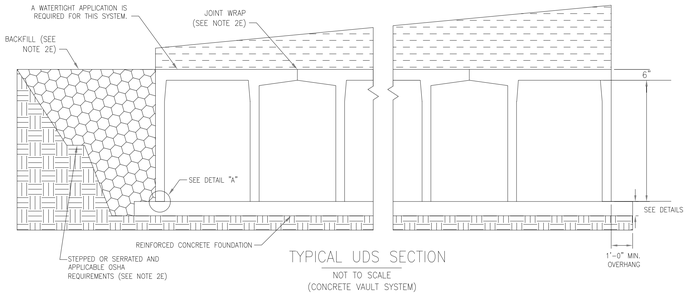
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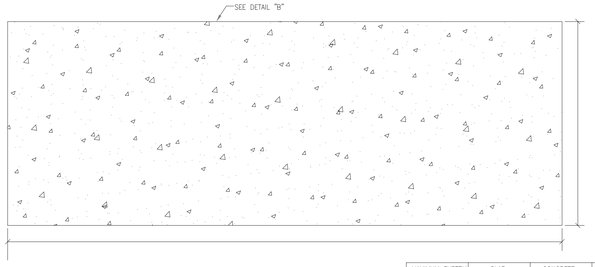
DETAIL "A"
JOINT TAPE INSTALLATION



TYPICAL UDS LAYOUT
NOT TO SCALE



TYPICAL UDS SECTION
NOT TO SCALE
(CONCRETE VAULT SYSTEM)



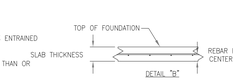
SYSTEM SPECIFICATION

1. MANUFACTURER SHALL BE STORMTRAP, LLC, UNITED CONCRETE PRODUCTS, CONCRETE SYSTEMS INC, OR APPROVED EQUIVALENT.
2. CONTRACTOR SHALL SUBMIT MANUFACTURERS SHOP DRAWINGS, INCLUDING PLANS, ELEVATIONS, SECTIONS, AND DETAILS, INDICATING LAYOUT, DIMENSIONS, FOUNDATION, COVER, AND JOINTS. INDICATE SIZE AND LOCATION OF ROOF OPENINGS AND INLET AND OUTLET PIPE OPENINGS.
3. CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS INCLUDING STORMWATER VOLUME SIZING, STRUCTURAL CALCULATIONS, AND BUOYANCY CALCULATIONS.
4. TOTAL COVER: MIN. 2.25' MAX. 3.75' CONSULT MANUFACTURER FOR ADDITIONAL COVER OPTIONS.
5. THE SYSTEM SHALL BE WATER TIGHT.
6. CONCRETE CHAMBER SHALL BE DESIGNED FOR AASHTO HS-20 HIGHWAY LOADING. MIN. SOIL PRESSURE 2000 PSF.
7. ALL DIMENSIONS AND SOIL CONDITIONS, INCLUDING BUT NOT LIMITED TO GROUNDWATER AND SOIL BEARING CAPACITY ARE TO BE VERIFIED IN THE FIELD BY OTHERS PRIOR TO UNIT INSTALLATION.
8. FOR STRUCTURAL CALCULATIONS THE GROUND WATER TABLE SHALL BE ASSUMED TO BE AT ELEVATION 18.62.
9. FOR STRUCTURAL CALCULATIONS THE SOIL DENSITY IS ASSUMED TO BE 120 PCF.
10. FOR FLOTATION CALCULATIONS THE GROUND WATER TABLE SHALL BE ASSUMED TO BE AT ELEVATION 18.62.
11. SYSTEM VOLUME =

UNDERGROUND CONCRETE VAULT DETENTION SYSTEM (UDS) ①
NOT TO SCALE

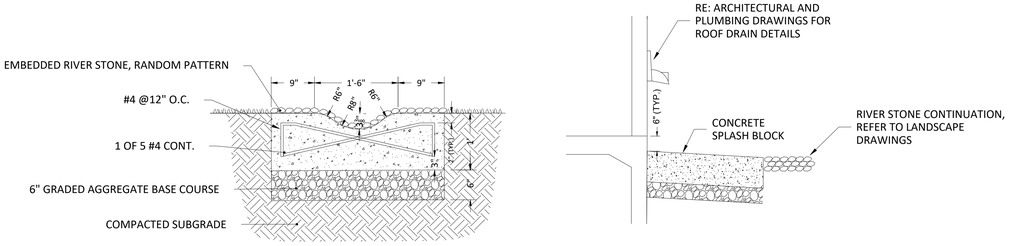
NOTES:

1. CONCRETE STRENGTH @ 28 DAYS, 5%-8% ENTRAINED AIR, 4" MAX. SLUMP.
2. NET ALLOWABLE SOIL PRESSURE GREATER THAN OR EQUAL TO 2000 PSF.
3. SOIL CONDITIONS TO BE VERIFIED ON SITE.
4. 1'-0" OVERHANG AROUND OUTSIDE OF SYSTEM.
5. REBAR: ASTM A-615 GRADE 60, BLACK BAR.
6. DIMENSION OF FOUNDATION MUST HAVE 1'-0" OVERHANG BEYOND EXTERNAL FACE OF UNITS.
7. DIMENSION OF SYSTEM ALLOW FOR A 3/4" GAP BETWEEN EACH UNIT.
8. ALL DIMENSIONS TO BE VERIFIED IN THE FIELD.
9. THE CONTROL JOINTS CAN BE 16'-0" TO 24'-0" MAX APART.



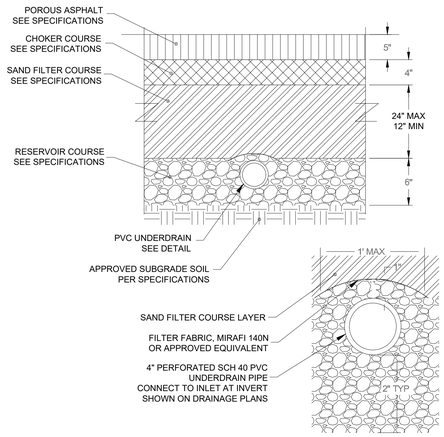
MAXIMUM SYSTEM COVER	SLAB THICKNESS	CONCRETE STRENGTH	REINFORCEMENT (BOTH DIRECTIONS)
6" – 1'-0"	8"	4000 psi	#4 @ 18" o.c.
>1'-0" – 2'-0"	8"	4000 psi	#4 @ 16" o.c.
>2'-0" – 3'-0"	8"	4000 psi	#4 @ 12" o.c.
>3'-0" – 4'-0"	8"	4000 psi	#4 @ 12" o.c.
>4'-0" – 5'-0"	8"	4000 psi	#5 @ 18" o.c.
>5'-0" – 6'-0"	8"	4000 psi	#5 @ 16" o.c.
>6'-0" – 7'-0"	8"	4000 psi	#5 @ 16" o.c.
>7'-0" – 8'-0"	9"	4000 psi	#5 @ 12" o.c.
>8'-0" – 9'-0"	10"	4000 psi	#5 @ 12" o.c.
>9'-0" – 10'-0"	10"	4500 psi	#5 @ 12" o.c.

TYPICAL UDS FOUNDATION PLAN ②
NOT TO SCALE
(CONCRETE VAULT SYSTEM)



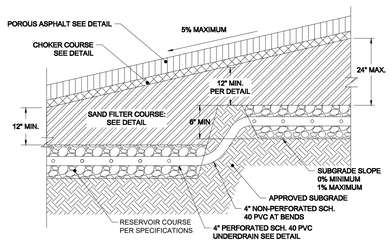
CONCRETE SPLASH BLOCK ④
NOT TO SCALE

*NOTE: CONTRACTOR SHALL SUBMIT MOCKUP OF SPLASH BLOCK FOR APPROVAL BY THE LANDSCAPE ARCHITECT



UNDERDRAIN
NOT TO SCALE

TYPICAL POROUS ASPHALT CROSS-SECTION ③
NOT TO SCALE



POROUS ASPHALT SUBBASE & UNDERDRAIN ⑤
NOT TO SCALE

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Issued/Revision YYYY.MM.DD

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Scale AS NOTED
Project No. 78000

SITE DETAILS 5

C6.5

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