

GENERAL INFORMATION

OWNER/APPLICANT

MAP 198 LOTS 11, 12, 14, 15, 16
COLBEA ENTERPRISES, LLC
695 GEORGE WASHINGTON HIGHWAY
LINCOLN, RI 02802
(401) 490-2209

RESOURCE LIST

PLANNING/ZONING DEPARTMENT

12 SCHOOL STREET
HUDSON, NH 03051
(603) 886-6008

CONSERVATION COMMISSION

12 SCHOOL STREET
HUDSON, NH 03051
000-000-0000
WILLIAM COLLINS, CHAIRMAN

INSPECTIONAL SERVICES DEPT.

12 SCHOOL SCHOOL
HUDSON, NH 03051

CODE ENFORCEMENT

12 SCHOOL SCHOOL
HUDSON, NH 03051
(603) 886-6008
CHRIS SULLIVAN

PUBLIC WORKS

2 CONSTITUTION DRIVE
HUDSON, NH 03051
(603) 886-6018
JAY TWARDOSKY

POLICE DEPARTMENT

1 CONSTITUTION DRIVE
HUDSON, NH 03051
(603) 886-6011
TAD DIONNE, POLICE CHIEF

FIRE DEPARTMENT

39 FERRY STREET
HUDSON, NH 03051
(603) 886-6021
SCOTT TICE, FIRE CHIEF

NHDES AOT

29 HAZEN DRIVE; PO BOX 95
CONCORD, NH 03302
603-271-3501

LIBERTY UTILITIES

116 NORTH MAIN STREET
CONCORD, NH 03301
(603) 782-2321
ANDREW MORGAN, MANAGER III

ASSOCIATED PROFESSIONALS

ARCHITECT

HARRISON FRENCH & ASSOCIATES
31 HAYWARD STREET, SUITE E-1
FRANKLIN, MA 02038
(401) 265-2535
STEVE PEDRO, SR. ARCHITECT

GEOTECHNICAL SERVICES

SW COLE ENGINEERING, INC.
13 DELTA DRIVE, UNIT 8
LONDONDERRY, NH 03053
(603) 716-2111 x4965
COURTNEY MATTISON, PE

TRAFFIC ENGINEER

TFMORAN INC.
48 CONSTITUTION DRIVE
BEDFORD, NH 03110
(603) 472-4488
JEN PORTER, PE

LIGHTING DESIGN

LSI INDUSTRIES
10000 ALLIANCE ROAD
CINCINNATI, OH 45242
(513) 372-3368
MIKE ELLISON, TECHNICAL DESIGN SERVICES
SPECIALIST

UNDERGROUND FUEL STORAGE SYSTEM

GPI - GREENMAN PEDERSEN, INC.
21 DANIEL SQUARE, 2ND FLOOR
PORTSMOUTH, NH 03801
(603) 527-7488
HUSEYIN SEVINGCIL

CANOPY DESIGN

AUSTIN MOHAWK AND COMPANY, LLC
2175 BEECHGROVE PLACE
UTICA, NY 13501
(315) 793-3000
SUSANNE M. WILSON

PROPOSED GAS STATION, CONVENIENCE STORE & CAR WASH

91-97 LOWELL ROAD
HUDSON, NEW HAMPSHIRE

DECEMBER 13, 2023
(LAST REVISED OCTOBER 14, 2024)

INDEX OF SHEETS

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-	CANOPY PLANS (BY AUSTIN MOHAWK)

PERMITS/APPROVALS

	NUMBER	APPROVED	EXPIRES
HUDSON PLANNING BOARD SITE PLAN REVIEW APPROVAL	SP# 09-23	-	-
HUDSON ZONING BOARD VARIANCE REQUEST (SIGNS - ARTICLE XII)	198-012	6/27/2024	6/27/2026
NHDES AOT PERMIT	-	-	-
NHDES SEWER CONNECTION PERMIT	-	-	-
NHDES OIL REMEDIATION & COMPLIANCE AOT PERMIT	-	-	-
NHDES UNDERGROUND STORAGE TANK (UST) CONSTRUCTION	-	-	-
HUDSON DRIVEWAY PERMIT	-	-	-
EPA NPDES ENOI CGP & SWPPP	-	-	-

VARIANCES

THE FOLLOWING RELIEF WAS RECEIVED FROM THE TOWN OF HUDSON ZONING BOARD OF ADJUSTMENT ON JUNE 27, 2024:

- TOWN OF HUDSON ZONING ORDINANCE ARTICLE XII: SIGNS; SECTION 334-63
A VARIANCE TO ALLOW THREE (3) BUSINESS AND INDUSTRIAL WALL SIGNS WHERE ONLY ONE (1) IS PERMITTED.
- TOWN OF HUDSON ARTICLE XII: SIGNS; SECTION 334-64A AND SECTION 334-64
A VARIANCE TO ALLOW A FREESTANDING "PYLON" SIGN WITH 146.9 SQUARE FEET WHERE A MAXIMUM SIZE OF 100 SQUARE FEET IS PERMITTED AND; TO ALLOW FIVE (5) FREESTANDING SIGNS WHERE EACH INDIVIDUAL SITE MAY HAVE NO MORE THAN ONE (1) FREESTANDING POLE OR GROUND SIGN.
- TOWN OF HUDSON ZONING ORDINANCE ARTICLE XII: SIGNS; SECTION 334-68
A VARIANCE TO ALLOW SEVERAL DIRECTIONAL AND DIRECTORY SIGNS TO BE LARGER THAN THREE (3) S.F. WHERE NO GREATER THAN THREE (3) SQUARE FEET IN AREA IS PERMITTED AND DO NOT CONTAIN ANY ADDITIONAL ADVERTISING OR MESSAGES OTHER THAN INCIDENTAL CORPORATE OR INSTITUTIONAL SYMBOLS OR LOGOS.

WAIVERS

THE FOLLOWING WAIVERS FROM THE TOWN OF HUDSON GENERAL LEGISLATION SITE REVIEW REGULATIONS ARE BEING REVIEWED BY THE PLANNING BOARD:

- TOWN OF HUDSON GENERAL LEGISLATION CHAPTER 193 - DRIVEWAYS SECTION 193-10(G.)
ONLY ONE DRIVEWAY PER PARCEL HAVING ADEQUATE FRONTAGE. AS REQUIRED BY CHAPTER 334, ZONING, IS ALLOWED, EXCEPT IN THE CASE OF TWO-UNIT RESIDENTIAL BUILDINGS (DUPLICES); ONE DRIVEWAY SHALL BE ALLOWED.
- TOWN OF HUDSON GENERAL LEGISLATION CHAPTER 276 ADMINISTRATIVE REQUIREMENTS AND DEFINITIONS SECTION 276-11.1(12)(c)
IN ALL ZONING DISTRICTS OTHER THAN THE GENERAL (G) AND THE GENERAL-ONE ZONING DISTRICTS, WHERE A COMMERCIAL OR INDUSTRIAL USE OR ZONING DISTRICT, THERE SHALL BE A ONE-HUNDRED-FOOT DISTANCE BETWEEN THE RESIDENTIAL USE OR ZONING DISTRICT AND ANY IMPROVED PART OF THE NONRESIDENTIAL DEVELOPMENT.
- TOWN OF HUDSON GENERAL LEGISLATION CHAPTER 276 ADMINISTRATIVE REQUIREMENTS AND DEFINITIONS SECTION 276-11.1(25)
NO PARKING AREA OR TRAVELWAY SHALL BE PROPOSED WITHIN THE AREA BETWEEN THE SIDE LOT LINES OR REAR LOT LINES AND THE CORRESPONDING SETBACK LINES. THE PLANNING BOARD MAY ALLOW USE OF SUCH AREAS FOR PARKING OR TRAVELWAYS, PROVIDED THAT AN EQUAL AMOUNT OF FRONTAGE GREEN AREA IS ADDED TO THE MINIMUM GREEN AREA REQUIRED OR WHERE SHARED ACCESS IS REQUIRED.
- TOWN OF HUDSON GENERAL LEGISLATION CHAPTER 275 SITE PLAN REVIEW ARTICLE II SECTION 275-9.A.1
NO STORMWATER RUNOFF IN EXCESS OF RATES EXISTING PRIOR TO NEW CONSTRUCTION SHALL BE ALLOWED TO BE DISCHARGED ONTO A PUBLIC WAY OR INTO A DRAINAGE SYSTEM UNLESS THERE IS SUFFICIENT CAPACITY TO HANDLE THE ADDITIONAL RUNOFF. ALL DRAINAGE SHALL BE DESIGNED TO ACHIEVE A ZERO INCREASE IN RUNOFF FOR BOTH PEAK AND VOLUME WHERE PRACTICABLE, EXCEPT WHERE THE OFF-SITE DRAINAGE SYSTEM HAS BEEN DESIGNED TO ACCOMMODATE THE SITE DRAINAGE.
- TOWN OF HUDSON GENERAL LEGISLATION CHAPTER 193 - DRIVEWAYS SECTION 193-10(F.)
MAXIMUM DRIVEWAY WIDTH OF 50 FEET, EXCEPT THAT A DRIVEWAY MAY BE FLARED BEYOND A WIDTH OF 50 FEET, AT AND NEAR ITS JUNCTION WITH THE HIGHWAY, TO ACCOMMODATE THE TURNING RADIUS OF VEHICLES EXPECTED TO USE THE PARTICULAR DRIVEWAY.

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____

CHAIRMAN _____ SIGNATURE DATE _____ AND

SECRETARY _____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

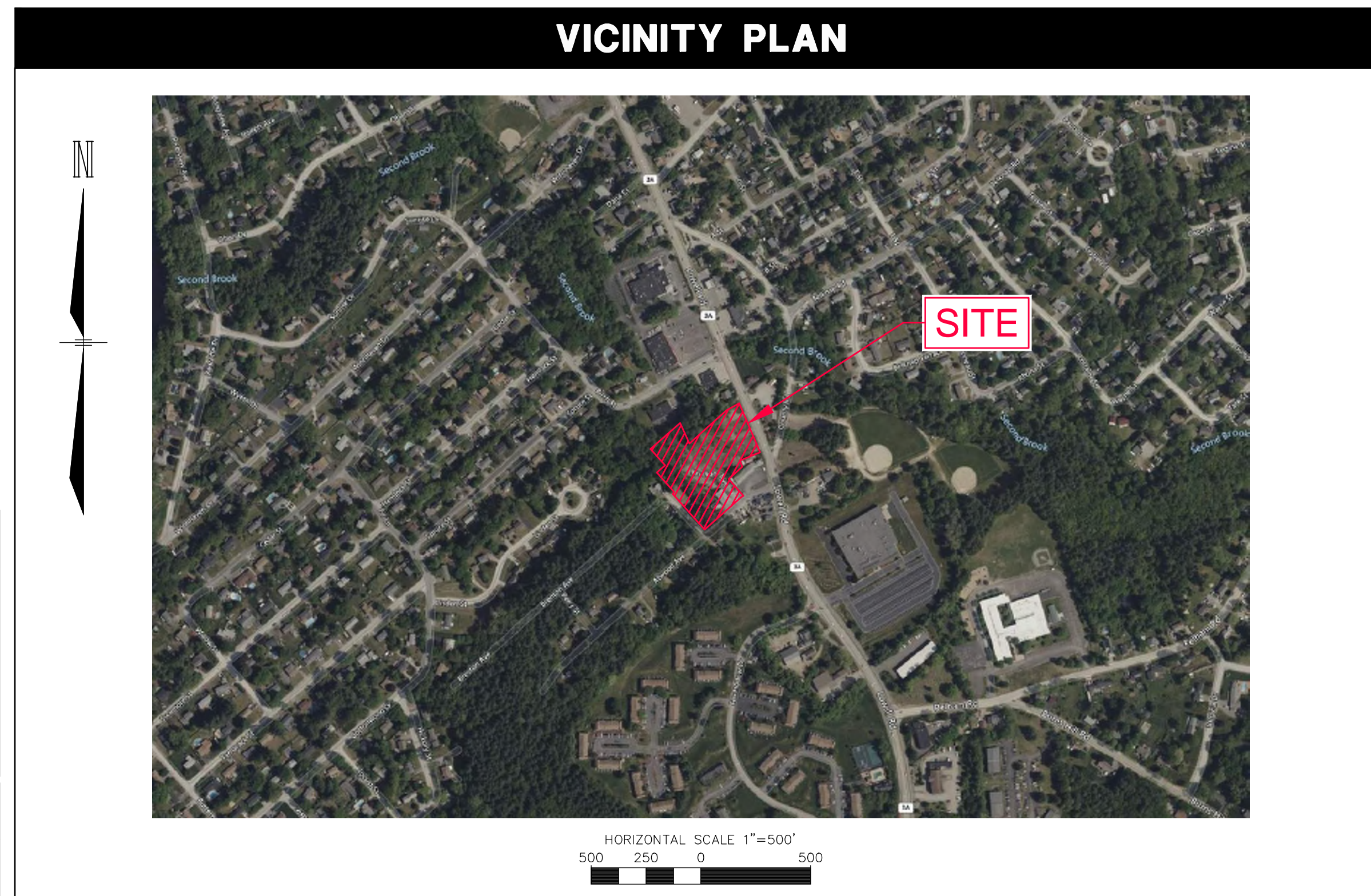
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This plan is not effective unless signed by a duly authorized officer of TFMoran, Inc.

THESE PLANS ARE PERMIT DRAWINGS ONLY AND HAVE NOT BEEN DETAILED FOR CONSTRUCTION OR BIDDING.

VICINITY PLAN



REV	DATE	DESCRIPTION	DR	CK
5	10/14/2024	REVISED PER PLANNING BOARD COMMENTS	JKC	CRR
4	9/4/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR
3	7/31/2024	REVISED PER AOT REQUIREMENTS	JKC	CRR
2	7/18/2024	REVISED PER TOWN INTERNAL REVIEW COMMENTS	JKC	CRR
1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
COVER
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

SCALE: NTS

DECEMBER 13, 2023

Seacoast Division



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

170 Commerce Way, Suite 102
Portsmouth, NH 03801
Phone (603) 431-2222
Fax (603) 431-0910
www.tfmoran.com

FILE	18149.00	DR	JKC	FB	-	C-00
		CK	CRR	CADFILE	18149-00_COVER	

Oct 09, 2024 - 4:10pm \\fr-befor40\projects\civil\survey\MSC Projects\18149-Lowell Rd-Hudson\18149-00 Colbea - Seasons Market - Hudson, NH\Design\PRODUCTION DRAWINGS\18149-00_Notes & Legends.dwg

LEGEND

PROPOSED

- PROPERTY LINE
ZONING LINE
EASEMENT
BASELINE
FLOODPLAIN
EDGE OF WATERBODY
EDGE OF WETLAND
SETBACK (WETLAND)
SETBACK (STRUCTURE)
SETBACK (PARKING)
SETBACK (LANDSCAPE)
GRAVEL ROAD
EDGE OF PAVEMENT
VERTICAL GRANITE CURB
SLOPED GRANITE CURB
CONCRETE CURB
INTEGRATED CONCRETE CURB
BITUMINOUS ASPHALT CURB
CAPE COD BERM
SAWCUT
BUILDING
BUILDING ROOF OVERHANG
BUILDING FOUNDATION
BUILDING ENTRANCE
OVERHEAD DOOR
TREE LINE
FENCE (CHAIN LINK)
FENCE (WIRE)
FENCE (STOCKADE)
GUARDRAIL
STONE WALL
RETAINING WALL
SILT FENCE
SILT SOCK
SOIL BOUNDARY
LIMIT OF GRADING
CONTOUR
SPOT GRADE
PARKING COUNT
YELLOW DOUBLE SOLID LINE
YELLOW SINGLE SOLID LINE
WHITE SINGLE SOLID LINE
WHITE SINGLE BROKEN LINE
STOP BAR
CROSSWALK
ACCESSIBLE PARKING SYMBOL
PAVEMENT ARROW
TRAFFIC FLOW ARROW (NOT PAINTED)
SIGN (SINGLE POST)
SIGN (DOUBLE POST)
SIGN (PYLON)
SIGN (MONUMENT)
BOLLARD
DUMPSTER PAD

PROPOSED

- CONCRETE
GRAVEL
HEAVY DUTY PAVEMENT
CONSTRUCTION ENTRANCE
SNOW STORAGE
RIPRAP
INLET PROTECTION
FLOW ARROW
GRADE BREAK RIDGE
DRAIN LINE
DRAINAGE SWALE
STORMWATER BMP
SEWER LINE
SEWER FORCE MAIN LINE
WATER LINE
GAS LINE
OVERHEAD UTILITY LINE
UNDERGROUND UTILITY LINE
CATCH BASIN
DRAIN INLET
OUTLET CONTROL STRUCTURE
ROOF DRAIN
DRAIN CLEANOUT
DRAIN MANHOLE
FARED END SECTION
SEWER CLEAN OUT
SEWER MANHOLE
SEWER VENT
DRAIN/SEWER/WATER PLUG OR CAP
HYDRANT
FIRE DEPARTMENT CONNECTION
WATER GATE VALVE
WATER SHUTOFF
THRUST BLOCK
WATER METER
WATER MANHOLE
WELL
GAS GATE VALVE
GAS SHUT OFF
GAS METER
TELEPHONE MANHOLE
ELECTRIC MANHOLE
TRAFFIC CONTROL CABINET
ELECTRIC HANDHOLE
ELECTRIC PULL BOX
ELECTRIC METER
FLOOD LIGHT
LIGHT POLE
UTILITY POLE
GUY POLE
TRANSFORMER PAD
BORING LOCATION
TEST PIT LOCATION
INFILTRATION TEST LOCATION
MONITORING WELL

ABBREVIATIONS

- GENERAL: ABAN ABANDON, AC ACRES, ADJ ADJUST, APPROX APPROXIMATE, BC BOTTOM OF CURB, BIT BITUMINOUS, BK/PG BOOK & PAGE, BLDG BUILDING, BMP BEST MANAGEMENT PRACTICE, BS BOTTOM OF SLOPE, BW BOTTOM OF WALL, CONC CONCRETE, COORD COORDINATE, DIA DIAMETER, ELEV ELEVATION, EP EDGE OF PAVEMENT, EXIST EXISTING, FFE FINISHED FLOOR ELEVATION, FND FOUNDATION, HP HIGH POINT, INV INVERT ELEVATION, IT INFILTRATION TEST, L LENGTH, LF LINEAR FEET, LSA LANDSCAPE AREA, MAX MAXIMUM, MIN MINIMUM, N/F NOW OR FORMERLY, NHFG NEW HAMPSHIRE FISH & GAME, NTS NOT TO SCALE, OC ON CENTER, PAVE PAVEMENT, PERF PERFORATED, PROP PROPOSED, R RADIUS, R&D REMOVE AND DISPOSE, R&R REMOVE AND RESET, REM REMOVE, RET RETAIN, RIM RIM ELEVATION, ROW RIGHT OF WAY, S SLOPE, SF SQUARE FEET, SIDEWALK SIDEWALK, TEMP TEMPORARY BENCHMARK, TM TOP OF CURB, TP TEST PIT, TW TOP OF WALL, TYP TYPICAL, UG UNDERGROUND, WCR ACCESSIBLE WHEELCHAIR RAMP, W WITH, CB CATCH BASIN, CIP CAST IRON PIPE, CMP CORRUGATED METAL PIPE, CO CLEANOUT, COND CONDUIT, DCB DOUBLE CATCH BASIN, DIP DUCTILE IRON PIPE, DMH DRAIN MANHOLE, F&C FRAME AND COVER, F&G FRAME AND GRATE, FES FLARED END SECTION, GT GREASE TRAP, HDPE HIGH DENSITY POLYETHYLENE PIPE, HH HANDHOLE, HW HEADWALK, HYD HYDRANT, LP LIGHT POLE, OCS OUTLET CONTROL STRUCTURE, PVC POLYVINYL CHLORIDE PIPE, RCP REINFORCED CONCRETE PIPE, RD ROOF DRAIN, SEMW SEWER MANHOLE, SOS SEDIMENT OIL SEPARATOR, TSV TAPPING SLEEVE, VALVE, AND BOX, UP UTILITY POLE

GENERAL NOTES

- 1. THESE PLANS ARE PERMIT DRAWINGS ONLY AND HAVE NOT BEEN DETAILED FOR CONSTRUCTION OR BIDDING.
2. THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER, TF MORAN, INC. ASSUMES NO LIABILITY AS A RESULT OF ANY CHANGES OR NON-CONFORMANCE WITH THESE PLANS EXCEPT UPON THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
3. AN ON-SITE PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE TOWN ENGINEER OR DESIGNATED REPRESENTATIVE PRIOR TO INITIATING EARTH MOVING ACTIVITIES AND AFTER PERIMETER EROSION CONTROL MEASURES, PROTECTIVE FENCING, WASTE DISPOSAL AND CONSTRUCTION ACCESS PADS HAVE BEEN INSTALLED.
4. THE SITE LAYOUT PLAN SHALL BE RECORDED IN THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS.
5. ALL IMPROVEMENTS SHOWN ON THE SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE HUDSON PLANNING BOARD.
6. ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF HUDSON, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL WORK TO CONFORM TO TOWN OF HUDSON DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS. ALL WORK WITHIN THE RIGHT-OF-WAY OF THE TOWN AND/OR STATE SHALL COMPLY WITH APPLICABLE STANDARDS. COORDINATE ALL WORK WITHIN THE RIGHT-OF-WAY WITH APPROPRIATE TOWN, COUNTY, AND/OR STATE AGENCY.
7. THE SITE CONTRACTOR SHALL ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH APPLICABLE SECTIONS OF ENV-WQ 1500. THE SITE CONTRACTOR SHALL NOTIFY THE ENGINEER IN ADVANCE OF CONSTRUCTION OF EACH STORMWATER FACILITY TO COORDINATE REQUIRED INSPECTIONS. THE CONTRACTOR SHALL TAKE PROGRESS PHOTOS DURING CONSTRUCTION OF ALL STORMWATER DRAINAGE COMPONENTS AND SEND TO THE ENGINEER.
8. SEE EXISTING CONDITIONS PLAN FOR THE HORIZONTAL AND VERTICAL DATUM.
9. SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION. VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.
10. CONTACT EASEMENT OWNERS PRIOR TO COMMENCING ANY WORK WITHIN THE EASEMENTS.
11. PRIOR TO COMMENCING ANY SITE WORK, ALL LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD.
12. SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
13. TF MORAN, INC. ASSUMES NO LIABILITY FOR WORK PERFORMED WITHOUT AN ACCEPTABLE PROGRAM OF TESTING AND INSPECTION AS APPROVED BY THE ENGINEER OF RECORD.
14. TEMPORARY FENCING SHALL BE PROVIDED AND COVERED WITH A FABRIC MATERIAL TO CONTROL DUST MITIGATION.
15. ALL DEMOLITION SHALL INSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKWAYS, AND ANY OTHER ADJACENT OPERATING FACILITIES. PRIOR WRITTEN PERMISSION FROM THE OWNER/DEVELOPER AND LOCAL PERMITTING AUTHORITY IS REQUIRED IF CLOSURE/OBSTRUCTIONS TO ROADS, STREET, WALKWAYS, AND OTHERS IS DEEMED NECESSARY. CONTRACTOR TO PROVIDE ALTERNATE ROUTES AROUND CLOSURES/OBSTRUCTIONS PER LOCAL/STATE/FEDERAL REGULATIONS.
16. REFER TO ARCHITECTURAL PLANS FOR LAYOUT OF BUILDING FOUNDATIONS AND CONCRETE ELEMENTS WHICH ABUT THE BUILDING SUCH AS STAIRS, SIDEWALKS, LOADING DOCK RAMPS, PADS, AND COMPACTOR PADS. DO NOT USE SITE PLANS FOR LAYOUT OF FOUNDATIONS.
17. IN THE EVENT OF A CONFLICT BETWEEN PLANS, SPECIFICATIONS, AND DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
18. IF CONDITIONS AT THE SITE ARE DIFFERENT THAN SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
19. CONTRACTOR'S GENERAL RESPONSIBILITIES:
A. BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES, SPECIFICATIONS, REGULATIONS, AND STANDARDS AND CONDITIONS OF ALL PROJECT-SPECIFIC PERMITS AND APPROVALS AS LISTED ON THE COVER SHEET TO THESE PLANS OR OTHERWISE REQUIRED.
B. NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES OF PROPOSED LAYOUT AND/OR EXISTING FEATURES.
C. EMPLOY A LICENSED SURVEYOR TO DETERMINE ALL LINES AND GRADES AND LAYOUT OF SITE ELEMENTS AND BUILDINGS.
D. THE CONTRACTOR SHALL BE RESPONSIBLE TO BECOME FAMILIAR WITH THE SITE AND ALL SURROUNDING CONDITIONS. THE CONTRACTOR SHALL ADVISE THE APPROPRIATE AUTHORITY OF INTENTIONS AT LEAST 48 HOURS IN ADVANCE.
E. TAKE APPROPRIATE MEASURES TO REDUCE, TO THE FULLEST EXTENT POSSIBLE, NOISE, DUST, AND UNSIGHTLY DEBRIS. CONSTRUCTION ACTIVITIES SHALL BE CARRIED OUT MONDAY - SATURDAY BETWEEN THE HOURS OF 7:00 AM AND 7:00 PM, IN ACCORDANCE WITH THE APPLICABLE MUNICIPAL ORDINANCES AND REGULATIONS OF THE TOWN OF HUDSON, NEW HAMPSHIRE.
F. MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY WORK AT ALL TIMES.
G. IN ACCORDANCE WITH RSA 430:53 AND AGR 3800, THE CONTRACTOR SHALL NOT REMOVE INVASIVE SPECIES OFF THE PROPERTY, AND SHALL DISPOSE OF INVASIVE SPECIES ON-SITE IN A LEGAL MANNER.
H. COORDINATE WITH ALL UTILITY COMPANIES AND CONTACT DIGSAFE (811 OR 888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
I. PROTECT NEW AND EXISTING BURIED UTILITIES DURING INSTALLATION OF ALL SITE ELEMENTS. DAMAGED UTILITIES SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
J. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY TF MORAN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR OR ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE US OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
K. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING, CONTAINING, AND DULY REMOVING ALL CONSTITUENTS OF CONCERN BROUGHT TO THE SITE BY THE CONTRACTOR, SUBCONTRACTORS, SUPPLIER, OR ANYONE ELSE FOR WHOM THE CONTRACTOR IS RESPONSIBLE, AND FOR ANY ASSOCIATED COSTS; AND FOR THE COSTS OF REMOVING AND REMEDIATING AND HAZARDOUS ENVIRONMENTAL CONDITION CREATED BY THE PRESENCE OF ANY SUCH CONSTITUENTS OF CONCERN.
L. CONTRACTOR SHALL NOT IMPORT ANY FILL OVER THE AMOUNT OF 10 CUBIC YARDS CUMULATIVE TOTAL PER SOURCE TO ANY JOB SITE IN THE TOWN OF HUDSON WITHOUT PRIOR APPROVAL BY ENGINEERING DEPARTMENT STAFF. DOCUMENTATION SUCH AS TEST REPORTS, CERTIFICATIONS AND SIEVE ANALYZES OF FILL SHALL BE PROVIDED TO THE ENGINEERING DEPARTMENT FOR APPROVAL PRIOR TO TRANSPORTING THE MATERIAL TO HUDSON.
M. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
N. VERIFY LAYOUT OF PROPOSED BUILDING FOUNDATIONS WITH ARCHITECT AND THAT PROPOSED FOUNDATION MEETS PROPERTY LINE AND/OR WETLAND SETBACKS PRIOR TO COMMENCING ANY FOUNDATION CONSTRUCTION.
O. PROVIDE AN AS-BUILT PLAN AT THE COMPLETION OF THE PROJECT TO THE PLANNING DIRECTOR AND PER TOWN REGULATIONS.

- N. IF ANY DEVIATIONS FROM THE APPROVED PLANS AND SPECIFICATIONS HAVE BEEN MADE, THE SITE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS STAMPED BY A LICENSED SURVEYOR OR QUALIFIED ENGINEER ALONG WITH A LETTER STAMPED BY A QUALIFIED ENGINEER DESCRIBING ALL SUCH DEVIATIONS, AND BEAR ALL COSTS FOR PREPARING AND FILING ANY NEW PERMITS OR PERMIT AMENDMENTS THAT MAY BE REQUIRED.
O. THIS PROJECT IS SUBJECT TO THE AOT PERMIT LISTED ON THE COVER SHEET. THE CONTRACTOR SHALL CONFORM TO ALL CONDITIONS OF THE PERMIT AND PROVIDE THE FOLLOWING DOCUMENTATION TO OWNER AND ENGINEER:
1) ADVANCE WRITTEN NOTICE AT LEAST ONE WEEK PRIOR TO COMMENCING ANY WORK UNDER THE PERMIT AND NOTIFICATION TO AOT VIA THE START OF CONSTRUCTION FORM.
2) IF ANY UNDERGROUND DETENTION SYSTEMS, INFILTRATION SYSTEMS, OR FILTERING SYSTEMS WERE INSTALLED, FOR EACH SUCH SYSTEM:
A) REPRESENTATIVE PHOTOGRAPHS OF THE SYSTEM AFTER COMPLETION BUT PRIOR TO BACKFILLING; AND
B) A LETTER SIGNED BY A QUALIFIED ENGINEER WHO OBSERVED THE SYSTEM PRIOR TO BACKFILLING, THAT THE SYSTEM CONFORMS TO THE APPROVED PLANS AND SPECIFICATIONS.
3) UPON COMPLETION OF CONSTRUCTION, NOTIFICATION TO AOT VIA THE COMPLETION OF CONSTRUCTION FORM AND WRITTEN CERTIFICATION THAT:
A) ALL WORK UNDER THE PERMIT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
B) IF ANY DEVIATIONS FROM THE APPROVED PLANS WERE MADE, WRITTEN DESCRIPTIONS AND AS-BUILT DRAWINGS OF ALL SUCH DEVIATIONS, STAMPED BY A QUALIFIED ENGINEER, SHALL BE PROVIDED.

GRADING & DRAINAGE NOTES

- 1. THE CONTRACTOR SHALL ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF NHDES ENV-WQ 1500 AS APPLICABLE.
2. THE CONTRACTOR SHALL PREPARE, MAINTAIN, AND EXECUTE A S.W.P.P.P. IN ACCORDANCE WITH EPA REGULATIONS AND THE CONSTRUCTION GENERAL PERMIT.
3. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO SUBMIT AN eNOI AT LEAST 14 DAYS IN ADVANCE OF ANY EARTHWORK ACTIVITIES AT THE SITE.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE ACCURACY OF THE TOPOGRAPHY AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO ANY EARTHWORK BEING PERFORMED ON THE SITE. NO CLAIM FOR EXTRA WORK WILL BE CONSIDERED FOR PAYMENT AFTER EARTHWORK HAS COMMENCED.
5. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR INFORMATION ABOUT SOIL AND GROUNDWATER CONDITIONS. THE CONTRACTOR SHALL FOLLOW THE GEOTECHNICAL ENGINEER'S RECOMMENDED METHODS TO ADDRESS ANY SOIL AND GROUNDWATER ISSUES THAT ARE FOUND ON SITE, INCLUDING AND NOT LIMITED TO DEWATERING METHODS, PERIMETER DRAINS AND TIE INTO STORMWATER MANAGEMENT SYSTEM, ETC.
6. COORDINATE WITH GEOTECHNICAL/STRUCTURAL PLANS FOR SITE PREPARATION AND OTHER BUILDING INFORMATION.
7. COORDINATE WITH ARCHITECTURAL PLANS FOR DETAILED GRADING AT BUILDING, AND SIZE AND LOCATION OF ALL BUILDING SERVICES.
8. COORDINATE WITH MECHANICAL AND PLUMBING PLANS FOR ROOF DRAIN INFORMATION.
9. LIMITS OF WORK ARE SHOWN AS APPROXIMATE. THE CONTRACTOR SHALL COORDINATE ALL WORK TO PROVIDE SMOOTH TRANSITIONS. THIS INCLUDES GRADING, PAVEMENT, CURBING, SIDEWALKS, AND ALIGNMENTS.
10. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE, RAMPS, AND LOADING AREAS.
11. THE SITE SHALL BE GRADED SO ALL FINISHED PAVEMENT HAS POSITIVE DRAINAGE AND SHALL NOT POND WATER DEEPER THAN 1/4" FOR A PERIOD OF MORE THAN 15 MINUTES AFTER FLOODING.
12. ALL ELEVATIONS SHOWN AT CURB ARE TO THE BOTTOM OF CURB UNLESS OTHERWISE NOTED. CURBS HAVE A 6" REVEAL UNLESS OTHERWISE NOTED.
13. ALL SIDEWALK AND OTHER CURB REVEALS SHALL BE 6" WITH A TOLERANCE OF PLUS OR MINUS 3/8". WHERE SIDEWALK IS TO BE FLUSH, THE PAVEMENT REVEAL SHALL BE 1/4" WITH A TOLERANCE OF 1/8".
14. THE FINISHED GRADE AT BOTTOM OF ALL ACCESSIBLE RAMPS SHALL BE FLUSH WITH PAVEMENT WITH A TOLERANCE OF PLUS OR MINUS 1/4".
15. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE PRIOR TO INSTALLATION OF FINISHED PAVEMENT.
16. ACCESS DRIVE AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS AND SHALL MEET LOCAL STANDARDS AND THE REQUIREMENTS OF THE LATEST NHDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGE CONSTRUCTION AND THE NHDOT STANDARD STRUCTURE DRAWINGS UNLESS OTHERWISE NOTED.
17. STORMWATER DRAINAGE SYSTEM SHALL BE CONSTRUCTED TO LINE AND GRADE AS SHOWN ON THE PLANS. CONSTRUCTION METHODS SHALL CONFORM TO NHDOT STANDARD SPECIFICATIONS, SECTION 603; CATCH BASINS AND DRAIN MANHOLES SHALL CONFORM TO SECTION 604. ALL CATCH BASIN GRATES SHALL BE TYPE B AND CONFORM TO NHDOT STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.
18. NO FILL SHALL BE PLACED IN ANY WETLAND AREA.
19. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
20. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER, AND MULCH.
21. DENSITY REQUIREMENTS:
MINIMUM DENSITY* LOCATION
95% BELOW PAVED OR CONCRETE AREAS
95% TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL
90% BELOW LOAM AND SEED AREAS
*ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C. FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM D-6938.

UTILITY NOTES

- 1. LENGTH OF PIPE IS FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED IN THE FIELD.
2. ALL PROPOSED UTILITY WORK, INCLUDING MATERIAL, INSTALLATION, TERMINATION, EXCAVATION, BEING, BACKFILL, COMPACTION, TESTING, CONNECTIONS, AND CONSTRUCTION SHALL BE COORDINATED WITH AND COMPLETED IN ACCORDANCE WITH THE APPROPRIATE REQUIREMENTS, CODES, AND STANDARDS OF ALL CORRESPONDING UTILITY ENTITIES AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE DIGGING.
4. COORDINATE ALL WORK ADJACENT TO PROPOSED BUILDINGS WITH ARCHITECTURAL BUILDING DRAWINGS. CONFIRM UTILITY PENETRATIONS AND INVERT ELEVATIONS ARE COORDINATED PRIOR TO INSTALLATION.
5. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
6. THE EXACT LOCATION OF NEW UTILITY CONNECTIONS SHALL BE DETERMINED BY THE CONTRACTOR IN COORDINATION WITH UTILITY COMPANY, COUNTY AGENCY, AND/OR PRIVATE UTILITY COMPANY.
7. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE UTILITY INSTALLATION COMPLETE AND OPERATIONAL.
8. ALL UTILITY COMPANIES REQUIRE INDIVIDUAL CONDUITS. CONTRACTOR TO COORDINATE WITH TELEPHONE, CABLE, AND ELECTRIC COMPANIES REGARDING NUMBER, SIZE, AND TYPE OF CONDUITS REQUIRED PRIOR TO INSTALLATION OF ANY CONDUIT.
9. SANITARY SEWER SHALL BE CONSTRUCTED TO THE STANDARDS AND SPECIFICATIONS AS SHOWN ON THESE PLANS. ALL SEWER MAINS AND FITTINGS SHALL BE PVC AND SHALL CONFORM TO ASTM F 679 (SDR 35 MINIMUM). FORCE MAINS AND FITTINGS SHALL CONFORM TO NH CODE OF ADMINISTRATIVE RULES ENV-WQ 700. ALL SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH NH CODE OF ADMINISTRATIVE RULES ENV-WQ 700. SANITARY MANHOLES SHALL CONFORM TO NHDES WATER DIVISION WASTEWATER ENGINEERING BUREAU STANDARDS AND SPECIFICATIONS SHOWN HEREON.
10. ON-SITE WATER DISTRIBUTION SHALL BE TO TOWN OF HUDSON STANDARDS AND SPECIFICATIONS. WATER MAINS SHALL HAVE A MINIMUM OF 5.5' COVER. WHERE WATER PIPES CROSS SEWER LINES A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN THE TWO OUTSIDE PIPE WALLS SHALL BE OBSERVED. HORIZONTAL SEPARATION BETWEEN WATER AND SEWER SHALL BE 10' MINIMUM. WHERE A SANITARY LINE CROSSES A WATER LINE, SEWER LINE MUST BE CONSTRUCTED OF FORCE MAIN MATERIALS (PER ENV-WQ 704.08) FROM BUILDING OR MANHOLE TO MANHOLE, OR SUBSTITUTE RUBBER-GASKETED PRESSURE PIPE FOR THE SAME DISTANCE. WHEN SANITARY LINES PASS BELOW WATER LINES, LAY PIPE SO THAT NO JOINT IN THE SANITARY LINE WILL BE CLOSER THAN 6" HORIZONTALLY TO THE WATER LINE.
11. THRUST BLOCKS SHALL BE PROVIDED AT ALL LOCATIONS WHERE WATER LINE CHANGES DIRECTIONS OR CONNECTS TO ANOTHER WATER LINE.
12. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT AND WIRING TO ALL SIGNS AND LIGHTS. CONDUIT TO BE A MINIMUM OF 24" BELOW FINISH GRADE.
13. ALL PROPOSED UTILITIES SHALL BE UNDERGROUND. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON FULLED ROPES.
14. THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL INSPECTIONS, TESTING, AND RELATED SERVICES AND SUBMIT COPIES OF ACCEPTANCE TO THE OWNER, UNLESS OTHERWISE INDICATED.
15. PROVIDE PERMANENT PAVEMENT REPAIR FOR ALL UTILITY TRENCHES IN EXISTING ROAD OR PAVEMENT TO REMAIN. SAW CUT TRENCH, PAVEMENT, AND GRANULAR BASE THICKNESS TO MATCH EXISTING PAVEMENT. OBTAIN ALL PERMITS REQUIRED FOR TRENCHING.
16. UNLESS OTHERWISE SPECIFIED, ALL UNDERGROUND STRUCTURES, PIPES, CHAMBERS, ETC. SHALL BE COVERED WITH A MINIMUM OF 18" OF COMPACTED SOIL BEFORE EXPOSURE TO VEHICLE LOADS.
17. THE PROPERTY WILL BE SERVICED BY THE FOLLOWING:
PRIVATE/MUNICIPAL SEWER
PRIVATE/MUNICIPAL WATER
MUNICIPAL GAS
LIBERTY UTILITIES
EVERSOURCE
CONSOLIDATED COMMUNICATIONS
CONSOLIDATED COMMUNICATIONS

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
NOTES & LEGEND
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

SCALE: NTS DECEMBER 13, 2023

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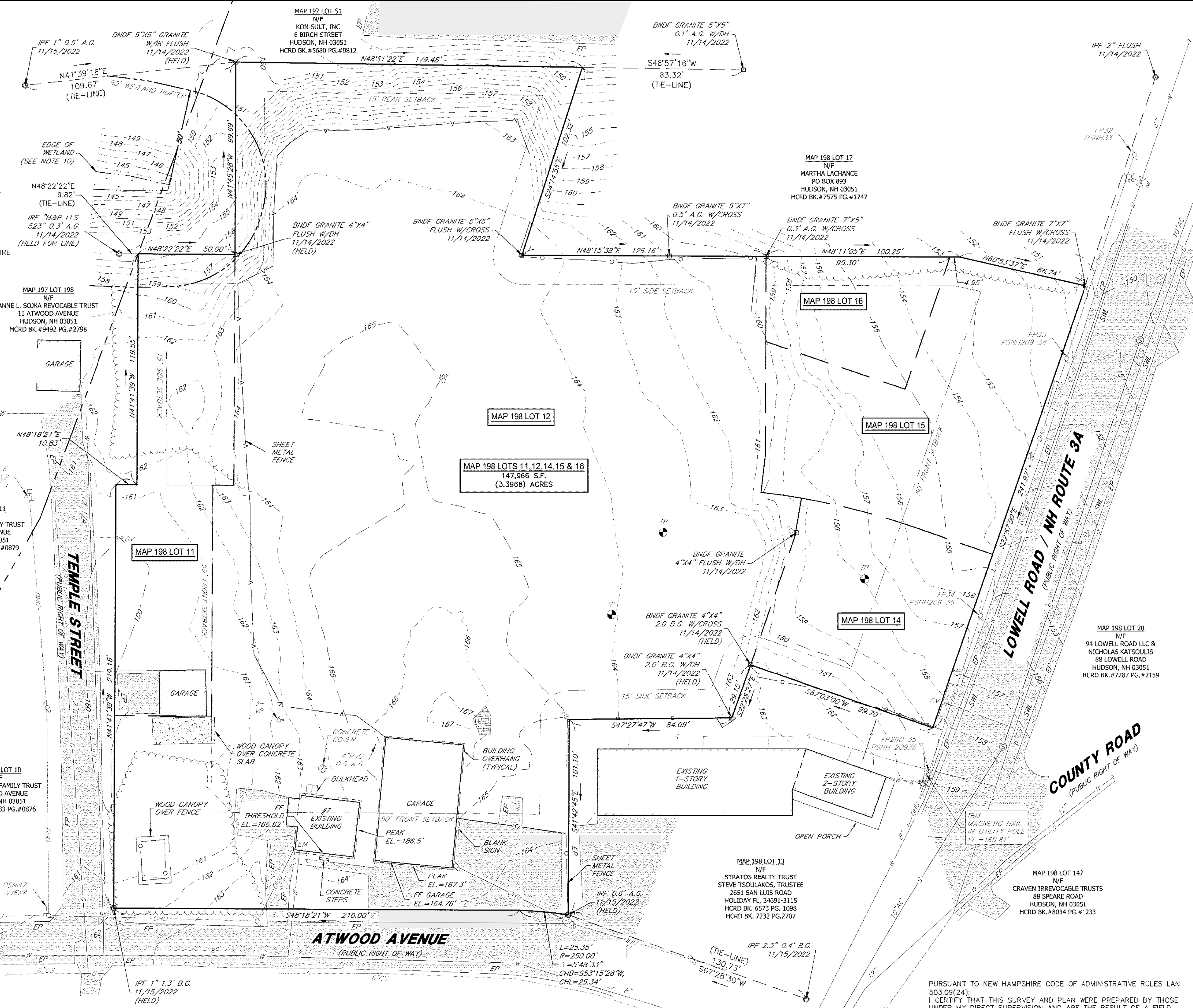
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18149.00 DR JKC FB - C-01
CK CK CADFILE 18149-00_NOTES & LEGENDS

LEGEND

- MAP 281 LOT 29 ASSESSORS MAP & PARCEL NUMBER
AC ASBESTOS CEMENT PIPE
A.G. ABOVE GRADE
BK./PG. BOOK NO./PAGE NO.
B.G. BELOW GRADE
B.N.D.F. BOUND FOUND
C.H.B. CHORD BEARING
C.H.L. CHORD LENGTH
C.S. COATED STEEL PIPE
D.H. DRILL HOLE
E.L. ELEVATION
E.M. ELECTRIC METER
E.P. EDGE OF PAVEMENT
F.F. FINISHED FLOOR
F.P. FAIRPOINT UTILITY COMPANY
H.C.R.D. HILLSBOROUGH COUNTY REGISTRY OF DEEDS
I.P.F. IRON PIPE FOUND
I.R. IRON ROD
I.R.F. IRON ROD FOUND
L. LENGTH
N.F. NOW OR FORMERLY
P.S.N.H. PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
P.V.C. POLYVINYL CHLORIDE PIPE
R. RADIUS
S.W.L. SINGLE WHITE LINE
S.F. SQUARE FEET
T.B.M. TEMPORARY BENCH MARK
U.P. UTILITY POLE
V.P. VENT PIPE
W. WITH
Δ CENTRAL ANGLE

- PROPERTY LINE
INTERIOR LOT LINE
YARD SETBACK
EDGE OF WETLAND
WETLAND BUFFER
ZONE LINE
OVERHEAD UTILITIES
W. WATER LINE
G. GAS LINE
S. SEWER LINE
EXISTING CONTOUR
TREE LINE
A. SHEET METAL FENCE
O. CHAIN LINK FENCE
D. STOCKADE FENCE
SPLIT RAIL FENCE
UTILITY POLE
UTILITY POLE WITH LIGHT
SEWER MANHOLE
VENT PIPE
GAS VALVE
WATER VALVE
WATER SHUTOFF
MONITORING WELL
HYDRANT
SIGN POST
TEST PIT
WETLAND
CONCRETE
EXPOSED LEDGE
PAVEMENT



NOTES:

- 1. THE PARCELS ARE LOCATED IN THE BUSINESS (B) ZONING DISTRICT AND PARTIALLY WITHIN THE WETLANDS CONSERVATION OVERLAY DISTRICT.
2. THE PARCELS ARE SHOWN ON THE TOWN OF HUDSON ASSESSORS MAP 198 AS LOTS 11, 12, 14, 15 & 16.
3. THE PARCELS ARE LOCATED IN FLOOD ZONE X (AREAS OF MINIMAL FLOODING) AS SHOWN ON NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP (FIRM) HILLSBOROUGH COUNTY, NEW HAMPSHIRE, PANEL 518 OF 701, MAP NUMBERS 33011C0518D WITH EFFECTIVE DATE OF SEPTEMBER 25, 2009.
4. OWNERS OF RECORD: MAP 198 LOTS 11, 12, 14, 15 & 16 COLBEA ENTERPRISES, LLC 695 GEORGE WASHINGTON HIGHWAY LINCOLN, RI 02885 HCRD BK.#8896 PG.#1847
5. ZONING DIMENSIONAL REQUIREMENTS: MINIMUM LOT AREA: WITH TOWN WATER AND SEWER 30,000 S.F. WITHOUT TOWN WATER OR SEWER 43,560 S.F. MINIMUM LOT FRONTAGE: LOCAL ROADWAYS WITH TOWN WATER AND SEWER 150' ARTERIAL AND COLLECTOR 150' PRINCIPAL BUILDING SETBACK REQUIREMENTS: ARTERIAL AND COLLECTOR ROADWAYS FRONT 50' SIDE 15' REAR 15' LOCAL ROADWAYS FRONT 50' SIDE 15' REAR 15'
6. PARCEL AREA: MAP 198 LOTS 11, 12, 14, 15, & 16 147,966 S.F. (3.3968) ACRES
7. HORIZONTAL DATUM IS NAD83 (2011). THE VERTICAL DATUM IS NAVD88. THE CONTOUR INTERVAL IS 1' FOOT.
8. THE PURPOSE OF THIS PLAN IS TO SHOW THE BOUNDARY, TOPOGRAPHY AND CURRENT SITE FEATURES OF MAP 198 LOTS 11, 12, 14, 15 & 16.
9. FIELD SURVEY COMPLETED BY TCE & R.H.B. IN NOVEMBER & DECEMBER 2022 USING A LEICA TS-16, A TOPCON HPR AND A CARLSON RT-4 DATA COLLECTOR.
10. WETLANDS DEPICTED ON THIS PLAN WERE DELINEATED ON NOVEMBER 11, 2022 BY JASON R. AUBE CWS #313. THE WETLANDS WERE DELINEATED ACCORDING TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (JANUARY 1987) AND THE REGIONAL SUPPLEMENT TO THE U.S. CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2.0 (JANUARY 2012). THE PRESENCE OF HYDROPHYTIC VEGETATION WAS DETERMINED USING THE NORTHCENTRAL AND NORTHEAST 2016 REGIONAL WETLAND PLANT LIST, VERSION 3.3, 2016, PUBLISHED BY THE ARMY CORPS OF ENGINEERS. THE HYDRIC SOILS COMPONENT OF THE DELINEATION WAS DETERMINED USING THE NH HYDRIC SOILS TECHNICAL COMMITTEE'S "FIELD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND", VERSION 4, 2017, PUBLISHED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.
11. THE INTENT OF THIS PLAN IS TO SHOW LOCATION OF BOUNDARIES IN ACCORDANCE WITH THE CURRENT LEGAL DESCRIPTIONS. IT IS NOT ATTEMPTED TO DEFINE UNWRITTEN RIGHTS, DETERMINE THE EXTENT OF OWNERSHIP OR DEFINE THE LIMITS OF TITLE.
12. UTILITIES SHOWN HEREON ARE BASED ON OBSERVED EVIDENCE AND RECORD PLANS. THEY ARE APPROXIMATE LOCATIONS ONLY. CONTACT DIG SAFE @ 1-888-DIGSAFE TO VERIFY UTILITIES.
13. A PORTION OF BRENTON STREET WAS ABANDONED BY THE TOWN OF HUDSON BY TOWN WARRANT PUBLISHED BY THE NASHUA TELEGRAPH ON FEBRUARY 25, 1960. (SEE PLAN REFERENCES 1 & 7).

EASEMENT NOTE:

TAX MAP 198 LOT 16 IS SUBJECT TO AND HAS THE BENEFIT OF A RIGHT OF WAY TO LOWELL ROAD. SEE HCRD BK. 8011 PG. 644.

TAX MAP 198 LOTS 11, 12, 14, 15 & 16
EXISTING CONDITIONS PLAN
SEASONS MARKET
LOWELL ROAD (NH ROUTE 3A)/ATWOOD AVENUE/TEMPLE STREET
HUDSON, NEW HAMPSHIRE
COUNTY OF HILLSBOROUGH
OWNED BY
COLBEA ENTERPRISES, LLC

SCALE: 1" = 30' (22x34)
1" = 60' (11x17)
FEBRUARY 9, 2023

PLAN REFERENCES:

- 1. "PLAN OF LAND IN: HUDSON, N.H. "ELMHURST" OWNED BY WM. J. COUGHLIN ESQ." DATED JUNE, 1897; BY FRANCIS A. TRACY, CE." HCRD PLAN #301.
2. "SUBDIVISION OF LAND OF CANFIELD REALTY, INC. 89 LOWELL RD." BY F.G. SPRAGUE, C.E., DATED MAY 1980. HCRD PLAN #17061.
3. "REVISED SITE PLAN 99-101 LOWELL RD. PHASE II" BY F.G. SPRAGUE, C.E., DATED AUG. 1984. HCRD PLAN #17349.
4. "SUBDIVISION PLAN - LOT 149/MAP 45 & LOT 116-2/MAP 44 LINDEN STREET ESTATES OFF COTTONWOOD DRIVE HUDSON, NEW HAMPSHIRE PREPARED FOR: LITCHFIELD PROPERTIES" BY MAYNARD & PAQUETTE, INC., DATED AUGUST 1, 1988. HCRD PLAN #23215.
5. "BOUNDARY AND CONSOLIDATION PLAN - MAP 45/ LOTS 182, 182-1, 186-1 & 189 ATWOOD AVENUE HUDSON, NEW HAMPSHIRE PREPARED FOR: ETCSTONE PROPERTIES, INC. AND JAYRON REALTY, INC." BY MAYNARD & PAQUETTE, INC., DATED JULY 19, 1996. HCRD PLAN #28102.
6. "BOUNDARY PLAN MAP 198 / LOTS 11, 12, 14, 15 & 16 ERIC C. SOLKA & 91-95 LOWELL ROAD, LLC 91, 95, 97 LOWELL ROAD, 5-7 ATWOOD AVENUE & 14 BRENTON AVENUE TOWN OF HUDSON HILLSBOROUGH COUNTY, NEW HAMPSHIRE" BY SANDFORD SURVEYING AND ENGINEERING, DATED 9-07-15. HCRD PLAN #39005.
7. "ALTA/ACSM LAND TITLE SURVEY MAP 198 / LOTS 11, 12, 14, 15 & 16 91, 95, 97 LOWELL ROAD, 5 - 7 ATWOOD ROAD & 14 BRENTON AVENUE TOWN OF HUDSON HILLSBOROUGH COUNTY, NEW HAMPSHIRE" BY SANDFORD SURVEYING AND ENGINEERING DATED JUNE 26, 2015 WITH REVISION 1 DATED JANUARY 22, 2016. PLAN NOT RECORDED.



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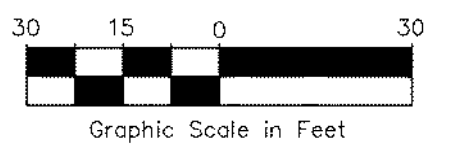
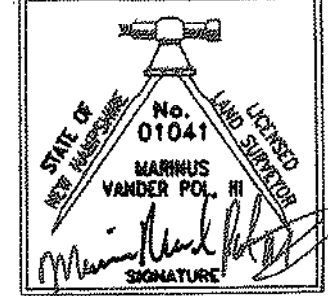


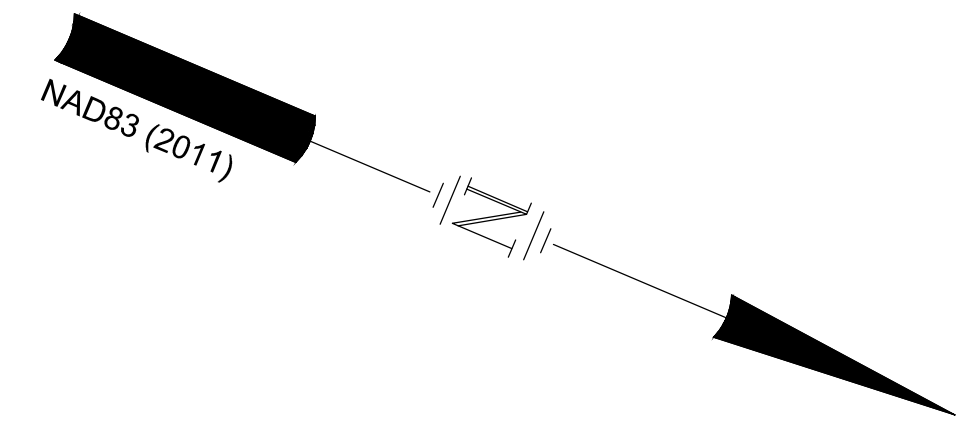
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2-9-2023 DATE

Seacoast Division
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
170 Commerce Way, Suite 102
Portsmouth, NH 03801
Phone (603) 431-2222
Fax (603) 431-0910
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Feb 09, 2023 - 8:19am
F:\MSC Projects\18149-Lowell Rd-Hudson\18149-00 Colbea - Seasons Market - Hudson, NH\Carlson Survey\Drawings\18149-00 Survey.dwg



SITE DEVELOPMENT PLANS
 TAX MAP 198 LOTS 11, 12, 14, 15, & 16
AERIAL PLAN
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=200' (11"x17")
SCALE: 1"=100' (22"x34") **DECEMBER 13, 2023**

Oct 08, 2024 - 4:10pm
 \\fmr-bedford4\projects\civil\survey\MSC Projects\18149_Lowell Rd-Hudson\18149-00 Colbea - Seasons Market - Hudson, NH\Design\PRODUCTION DRAWINGS\18149-00 Aerial.dwg

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____

CHAIRMAN _____ SIGNATURE DATE _____ AND
 SECRETARY _____ SIGNATURE DATE _____

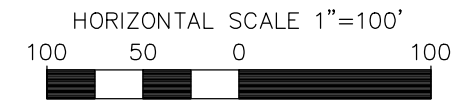
SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

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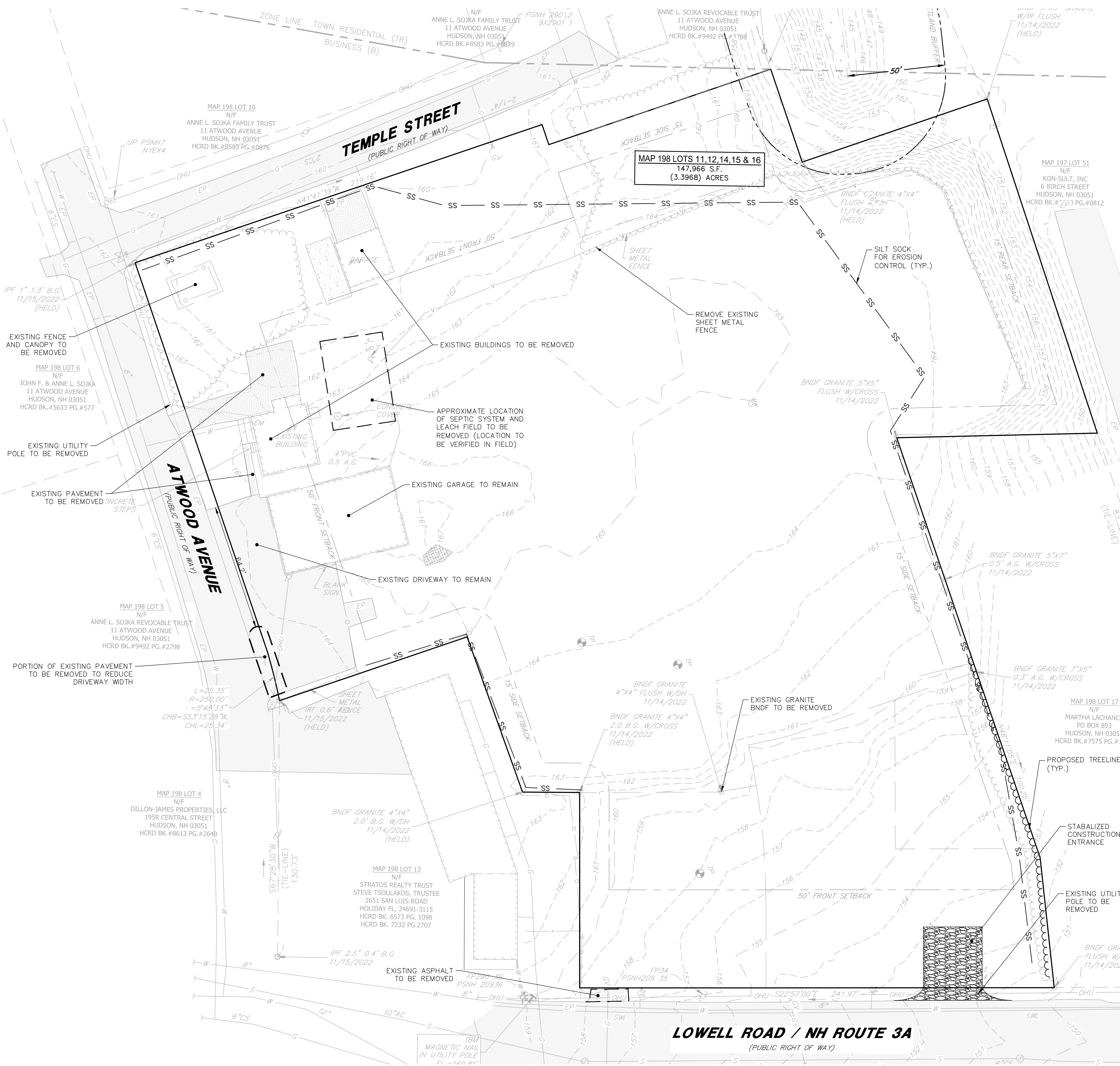


REV	DATE	DESCRIPTION	DR	CK
5	10/14/2024	REVISED PER PLANNING BOARD COMMENTS	JKC	CRR
4	9/4/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR
3	7/31/2024	REVISED PER AOT REQUIREMENTS	JKC	CRR
2	7/18/2024	REVISED PER TOWN INTERNAL REVIEW COMMENTS	JKC	CRR
1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR

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		DR	JKC		
FILE	18149.00	CK	CRR	CADFILE	18149-00 AERIAL
					S-02

ROCK BLASTING AND WATER QUALITY NOTES

- IDENTIFY DRINKING WATER WELLS LOCATED WITHIN 2000 FEET OF THE PROPOSED BLASTING ACTIVITIES. DEVELOP A GROUNDWATER QUALITY SAMPLING PROGRAM TO MONITOR FOR NITRATE AND NITRITE EITHER IN THE DRINKING WATER SUPPLY WELLS OR IN OTHER WELLS THAT ARE REPRESENTATIVE OF THE DRINKING WATER SUPPLY WELLS IN THE AREA. THE PLAN MUST INCLUDE PRE AND POST BLAST WATER QUALITY MONITORING AND BE APPROVED BY NHDES PRIOR TO INITIATING BLASTING. THE GROUNDWATER SAMPLING PROGRAM MUST BE IMPLEMENTED ONCE APPROVED BY NHDES.
- ALL ACTIVITIES RELATED TO BLASTING SHALL FOLLOW BEST MANAGEMENT PRACTICES (BMPs) TO PREVENT CONTAMINATION OF GROUNDWATER INCLUDING PREPARING, REVIEWING, AND FOLLOWING AN APPROVED BLASTING PLAN; PROPER DRILLING, EXPLOSIVE HANDLING AND LOADING PROCEDURES; OBSERVING THE ENTIRE BLASTING PROCEDURES; EVALUATING BLASTING PERFORMANCE; AND HANDLING AND STORAGE OF BLASTED ROCK.
 - LOADING PRACTICES. THE FOLLOWING BLASTHOLE LOADING PRACTICES TO MINIMIZE ENVIRONMENTAL EFFECTS SHALL BE FOLLOWED:
 - DRILLING LOGS SHALL BE MAINTAINED BY THE DRILLER AND COMMUNICATED DIRECTLY TO THE BLASTER. THE LOGS SHALL INDICATE DEPTHS AND LENGTHS OF VOIDS, CAVITIES, AND FAULT ZONES OR OTHER WEAK ZONES ENCOUNTERED AS WELL AS GROUNDWATER CONDITIONS.
 - EXPLOSIVE PRODUCTS SHALL BE MANAGED ON SITE SO THAT THEY ARE EITHER USED IN THE BOREHOLE, RETURNED TO THE DELIVERY VEHICLE, OR PLACED IN SECURE CONTAINERS FOR OFF-SITE DISPOSAL.
 - SPILLAGE AROUND THE BOREHOLE SHALL EITHER BE PLACED IN THE BOREHOLE OR CLEANED UP AND RETURNED TO AN APPROPRIATE VEHICLE FOR HANDLING OR PLACEMENT IN SECURED CONTAINERS FOR OFF-SITE DISPOSAL.
 - LOADED EXPLOSIVES SHALL BE DETONATED AS SOON AS POSSIBLE AND SHALL NOT BE LEFT IN THE BOREHOLES OVERNIGHT, UNLESS WEATHER OR OTHER SAFETY CONCERNS REASONABLY DICTATE THAT DETONATION SHOULD BE POSTPONED.
 - LOADING EQUIPMENT SHALL BE CLEANED IN AN AREA WHERE WASTEWATER CAN BE PROPERLY CONTAINED AND HANDLED IN A MANNER THAT PREVENTS RELEASE OF CONTAMINANTS TO THE ENVIRONMENT.
 - EXPLOSIVES SHALL BE LOADED TO MAINTAIN GOOD CONTINUITY IN THE COLUMN LOAD TO PROMOTE COMPLETE DETONATION. INDUSTRY ACCEPTED LOADING PRACTICES FOR PRIMING, STEMMING, DECKING, AND COLUMN RISE NEED TO BE ATTENDED TO.
 - EXPLOSIVE SELECTION. THE FOLLOWING BMPs SHALL BE FOLLOWED TO REDUCE THE POTENTIAL FOR GROUNDWATER CONTAMINATION WHEN EXPLOSIVES ARE USED:
 - EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT ARE APPROPRIATE FOR SITE CONDITIONS AND SAFE BLAST EXECUTION.
 - EXPLOSIVE PRODUCTS SHALL BE SELECTED THAT HAVE THE APPROPRIATE WATER RESISTANCE FOR THE SITE CONDITIONS PRESENT TO MINIMIZE THE POTENTIAL FOR HAZARDOUS EFFECT OF THE PRODUCT UPON GROUNDWATER.
 - PREVENTION OF MISFIRES. APPROPRIATE PRACTICES SHALL BE DEVELOPED AND IMPLEMENTED TO PREVENT MISFIRES.
 - MUCK PILE MANAGEMENT. MUCK PILES (THE BLASTED PIECES OF ROCK) AND ROCK PILES SHALL BE MANAGED IN A MANNER TO REDUCE THE POTENTIAL FOR CONTAMINATION BY IMPLEMENTING THE FOLLOWING MEASURES:
 - REMOVE THE MUCK PILE FROM THE BLAST AREA AS SOON AS REASONABLY POSSIBLE.
 - MANAGE THE INTERACTION OF BLASTED ROCK PILES AND STORMWATER TO PREVENT CONTAMINATION OF WATER SUPPLY WELLS OR SURFACE WATER.
 - SPILL PREVENTION MEASURES AND SPILL MITIGATION. SPILL PREVENTION AND SPILL MITIGATION MEASURES SHALL BE IMPLEMENTED TO PREVENT THE RELEASE OF FUEL AND OTHER RELATED SUBSTANCES TO THE ENVIRONMENT. THE MEASURES SHALL INCLUDE AT A MINIMUM:
 - THE FUEL STORAGE REQUIREMENTS SHALL INCLUDE:
 - STORAGE OF REGULATED SUBSTANCES ON AN IMPERVIOUS SURFACE.
 - SECURE STORAGE AREAS AGAINST UNAUTHORIZED ENTRY.
 - LABEL REGULATED CONTAINERS CLEARLY AND VISIBLY.
 - INSPECT STORAGE AREAS WEEKLY.
 - COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS.
 - WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS.
 - SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.
 - THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
 - EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED.
 - PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS.
 - HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS.
 - USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES.
 - PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
 - THE TRAINING OF ONSITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.
 - FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING, AND OTHER CONSTRUCTION RELATED EQUIPMENT WILL COMPLY WITH THE REGULATIONS OF NHDES (NOTE THESE REQUIREMENTS ARE SUMMARIZED IN WD DWG# 22.6: BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT OR ITS SUCCESSOR DOCUMENT).



NOTES

- SEE NOTES ON SHEET C-01.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATIONS, SIZE, AND ELEVATIONS OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS PRIOR TO THE START OF ANY DEMOLITION. THE LOCATIONS SHOWN ON THESE PLANS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES INTERFERING WITH THE PROPOSED DEMOLITION TO DETERMINE APPROPRIATE ACTION TO BE TAKEN BEFORE PROCEEDING WITH THE WORK. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO ANTICIPATE CONFLICTS AND REPAIR EXISTING UTILITIES AS NECESSARY TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY WORK AT ALL TIMES.
- THE CONTRACTOR SHALL VERIFY ALL SURVEY INFORMATION IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- EXISTING UTILITY SERVICES TO BE DISCONTINUED ARE TO BE CAPPED AS REQUIRED BY THE RESPECTIVE UTILITY COMPANIES. TIES AND GPS LOCATIONS FOR ALL CAPPED UTILITIES SHOULD BE PROVIDED TO TOWN FOLLOWING COMPLETION.
- CONSTRUCTION DEBRIS AND INVASIVE SPECIES SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.
- PRIOR TO THE START OF WORK, THE CONTRACTOR SHALL PLACE ORANGE CONSTRUCTION FENCING AROUND EACH TREE TO BE RETAINED THROUGHOUT CONSTRUCTION. NO STOCKPILES OF MATERIAL ARE PERMITTED WITHIN THE DRIP LINE OF THE TREES TO BE SAVED.
- CONTACT THE LANDSCAPE ARCHITECT IMMEDIATELY IF ANY TREES ARE DAMAGED DURING CONSTRUCTION.

CONSTRUCTION SEQUENCE NOTES

TO MINIMIZE EROSION AND SEDIMENTATION DUE TO CONSTRUCTION, CONSTRUCTION SHALL FOLLOW THIS GENERAL CONSTRUCTION SEQUENCE.

MODIFICATIONS TO THE SEQUENCE NECESSARY DUE TO THE CONTRACTOR'S SCHEDULE SHALL INCLUDE APPROPRIATE TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL MEASURES.

THE CONTRACTOR SHALL SCHEDULE WORK SUCH THAT ANY CONSTRUCTION AREA IS STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE EXCEPT AS NOTED BELOW. NO MORE THAN 5 ACRES OF DISTURBED LAND SHALL BE UNSTABILIZED AT ANY ONE TIME.

THE PROJECT SHALL BE MANAGED SO THAT IT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER ARG 3800 RELATIVE TO INVASIVE SPECIES.

DO NOT TRAFFIC EXPOSED SOIL SURFACE OF INFILTRATION SYSTEMS WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF WATER FROM EXCAVATIONS) TO STORMWATER BMP'S DURING ANY STAGE OF CONSTRUCTION. STORMWATER RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMP'S ARE STABILIZED.

AFTER THE INFILTRATION SYSTEM IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHOULD BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE THE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.

DO NOT PLACE STORMWATER BMP'S INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.

DO NOT PLACE STORMWATER BMP'S INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED, IF NECESSARY, AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.

- NOTIFY EASEMENT OWNERS PRIOR TO COMMENCEMENT OF WORK.
- INSTALL ALL PERIMETER EROSION PROTECTION MEASURES AS INDICATED ON THE PLANS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- STORMWATER TREATMENT PONDS AND SWALES SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
- DURING CONSTRUCTION EVERY EFFORT SHALL BE MADE TO MANAGE SURFACE RUNOFF QUALITY.
- DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT BARRIERS, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED. (TEMPORARY SEED MIXTURE OF WINTER RYE APPLIED AT A RATE OF 2.5 LBS/1000 SF SHALL BE USED).
- CONDUCT MAJOR EARTHWORK, INCLUDING CLEARING AND GRUBBING, WITHIN THE LIMITS OF WORK. ALL CUT AND FILL SLOPES SHALL BE SEEDED WITHIN 72 HOURS AFTER GRADING.
- ALL STRIPPED TOPSOIL AND OTHER EARTH MATERIALS SHALL BE STOCKPILED OUTSIDE THE IMMEDIATE WORK AND WETLAND AREAS. A SILT BARRIER SHALL BE CONSTRUCTED AROUND THESE PILES IN A MANNER TO PROVIDE ACCESS AND AVOID SEDIMENT OUTSIDE OF THE WORK AREA.
- CONSTRUCT BUILDING PAD AND COMMENCE NEW BUILDING CONSTRUCTION.
- CONSTRUCT TEMPORARY CULVERTS AND DIVERSIONS AS REQUIRED.
- BEGIN PERMANENT AND TEMPORARY INSTALLATION OF SEED AND MULCH.
- PERFORM EARTHWORK NECESSARY TO ESTABLISH ROUGH GRADING AROUND PARKING FIELDS AND ACCESS DRIVES. MANAGE EXPOSED SOIL SURFACES TO AVOID TRANSPORTING SEDIMENTS INTO WETLANDS. PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- INSTALL SUBSURFACE UTILITIES (WATER, SEWER, GAS, ELECTRIC, COMMUNICATIONS, DRAINAGE, DRAINAGE FACILITIES, ETC.).
- CONSTRUCT PROPOSED ACCESS RIVES, INFILTRATION BASINS AND DRAINAGE SWALES, ALL DITCHES, SWALES, AND INFILTRATION BASINS SHALL BE FULLY STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
- COMPLETE BUILDING AND ALL OFF-SITE IMPROVEMENTS.
- COMPLETE SEEDING AND MULCHING. SEED TO BE APPLIED WITH BROADCAST SPREADER OR BY HYDRO-SEEDING, THEN ROLLED, RAKED, OR DRAGGED TO ASSURE SEED/SOIL CONTACT.
- REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER SEEDED AREAS HAVE BECOME FIRMLY ESTABLISHED AND SITE IMPROVEMENTS ARE COMPLETE.
- DURING THE COURSE OF THE WORK AND UPON COMPLETION, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT DEPOSITS, EITHER ON OR OFF SITE, INCLUDING CATCH BASINS, AND SUMPS, DRAIN PIPES AND DITCHES, CURB LINES, ALONG SILT BARRIERS, ETC. RESULTING FROM SOIL AND/OR CONSTRUCTION OPERATIONS.
- SEE WINTER CONSTRUCTION SEQUENCE FOR WORK CONDUCTED AFTER OCTOBER 15TH.

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
SITE PREPARATION & DEMOLITION PLAN
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=60' (11"x17')

SCALE: 1"=30' (22"x34')

DECEMBER 13, 2023

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____

CHAIRMAN _____ SIGNATURE DATE _____ AND _____

SECRETARY _____ SIGNATURE DATE _____

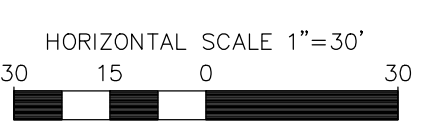
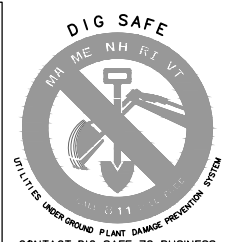
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PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

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1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR

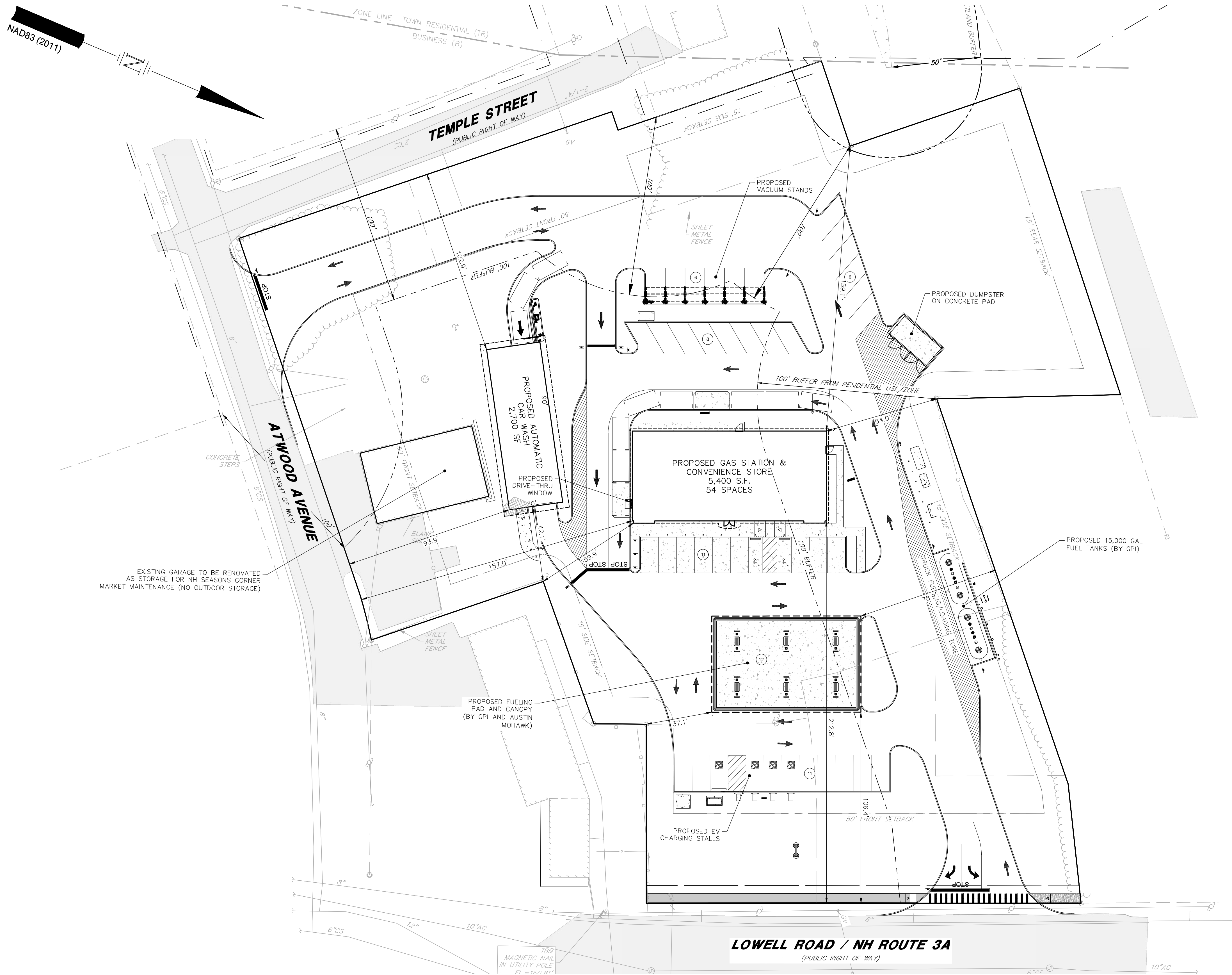
F	FILE	DR	JKC	FB	CK	CRR	CADFILE	18149--00_SITE PREP & DEMO	C-02
	18149.00		JKC	FB		CRR			

Seacoast Division

Civil Engineers
 Structural Engineers
 Traffic Engineers
 Land Surveyors
 Landscape Architects
 Scientists

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Oct 08, 2024 - 4:11pm \\lfm-beford\projects\civil\survey\MSC Projects\18149_00 Lowell Rd-Hudson\18149-00 Colbea - Seasons Market - Hudson, NH\Design\PRODUCTION DRAWINGS\18149-00_Overall Site Plan.dwg



SITE DATA

OWNER OF RECORD OF MAP 198 LOT 11, 12, 14, 15, 16: COLBEA ENTERPRISES, LLC - 695 GEORGE WASHINGTON HIGHWAY, LINCOLN, R.I. 02802
DEED REFERENCE TO PARCEL IS BK 8896 PG 1847
AREA OF PARCEL = 147,966± SF OR 3.3968± ACRES

ZONED: BUSINESS
EXISTING USE: COMMERCIAL/RESIDENTIAL
PROPOSED USE: GAS STATION/CONVENIENCE STORE WITH DRIVE-THRU AND CAR WASH

1. THE PURPOSE OF THIS PLAN IS TO DEPICT CONSTRUCTION A SINGLE STORY, 5,400 S.F. GAS STATION AND CONVENIENCE STORE, ALONG WITH A FUELING CANOPY (CONSISTING OF SIX DISPENSER ISLANDS FOR A TOTAL OF 12 FUELING STATIONS), WITHIN THE BUILDING IS A CO-TENANT OF 637 S.F. WITH A DRIVE-THRU WINDOW. IN ADDITION, A 2,700 S.F. AUTOMATIC CAR WASH BUILDING IS PROPOSED. THE PLAN ALSO DEPICTS THE RENOVATION OF AN EXISTING GARAGE ON SITE TO BE USED FOR STORAGE OF SEASONS CORNER MARKET STORE AND GAS PUMP MAINTENANCE ITEMS.

2. TYPICAL HOURS OF OPERATION: 24 HRS.

3. DIMENSIONAL REQUIREMENTS (CURRENT ZONING)

	REQUIRED:	PROVIDED:
MINIMUM LOT DIMENSIONS:		
LOT AREA	30,000 SF (0.69± AC)	148,104 SF (3.4± AC)
LOT FRONTAGE	150 FT	>150 FT
MINIMUM YARD DIMENSIONS:		
FRONT	50 FT	157 FT
SIDE	15 FT	59.9 FT
REAR	15 FT	159.1 FT
MAXIMUM STRUCTURE DIMENSIONS:		
STRUCTURE HEIGHT	50 FT	<50 FT (22.54 EXISTING)
LOT COVERAGE	60%	47.3±%
MINIMUM LANDSCAPE BUFFER:		
BUFFER FRONT	35 FT	35 FT
BUFFER SIDE	15 FT	5 FT *WAIVER REQUIRED
BUFFER REAR	15 FT	>15 FT
MINIMUM RESIDENTIAL BUFFER:	50 FT	5 FT *WAIVER REQUIRED
MINIMUM OPEN SPACE	40%	49.5±%

4. PARKING REQUIREMENTS

PARKING SPACES (SEE CALCULATION)	47 SPACES	54 SPACES
ACCESSIBLE SPACES (REQ'D BY ADA)	2 SPACES	2 SPACES
PARKING SPACE SIZE	10 FT X 20 FT	10 FT X 20 FT
aisle WIDTH	24 FT	24 FT

5. PARKING CALCULATIONS

REQUIRED PARKING RATIO:		
AUTOMOTIVE FUEL STATION:	1 SPACE/PUMP PLUS 1 SPACE/EMPLOYEES	
FAST FOOD W/ DRIVE-THRU:	1 SPACE/100 S.F.	
RETAIL:	1 SPACE/200 S.F.	
CAR WASH:	NO REQUIREMENTS (PER PLANNING BOARD)	
TOTAL REQUIRED = 12 PUMPS * 1 SPACE/PUMP	= 12	SPACES +
5 EMPLOYEES * 1 SPACE/1 EMPLOYEES	= 5	SPACES +
540 S.F. * 1 SPACE/100 S.F.	= 5.4	SPACES +
4,880 S.F. * 1 SPACE/200 S.F.	= 24.3	SPACES
TOTAL	= 47	SPACES

NOTES

- 1. SEE NOTES ON SHEET C-01.
- 2. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
- 3. LIGHTING, SIGNAGE, LANDSCAPING, AND SCREENING SHALL MEET THE REQUIREMENTS OF THE HUDSON ZONING ORDINANCE AND SITE PLAN REGULATIONS.
- 4. SNOW SHALL NOT BE STOCKPILED IN STORMWATER BMP'S, WETLAND BUFFERS, OR WETLANDS. SEE SNOW STORAGE LOCATIONS. IN THE EVENT THAT THE SNOW STORAGE AREAS PROVIDED ON THE SITE ARE COMPLETELY UTILIZED, EXCESS SNOW SHALL BE TRANSPORTED OFF SITE FOR DISPOSAL IN ACCORDANCE WITH NHDES REGULATION. IF SNOW IS STORED WITHIN PARKING AREA, KEEP CATCH BASINS CLEAR. SEE SHEET C-04 AND C-05 FOR SNOW STORAGE AREAS.
- 5. THE PROPOSED CO-TENANT ASSOCIATED WITH THE CONVENIENCE STORE WILL NOT INCLUDE ANY INDOOR OR OUTDOOR SEATING.

SITE DEVELOPMENT PLANS

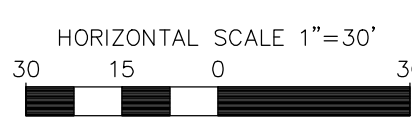
TAX MAP 198 LOTS 11, 12, 14, 15, & 16
OVERALL SITE LAYOUT PLAN
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=60' (11"x17')
SCALE: 1"=30' (22"x34') **DECEMBER 13, 2023**

APPROVED BY THE HUDSON, NH PLANNING BOARD
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CHAIRMAN _____ SIGNATURE DATE _____ AND
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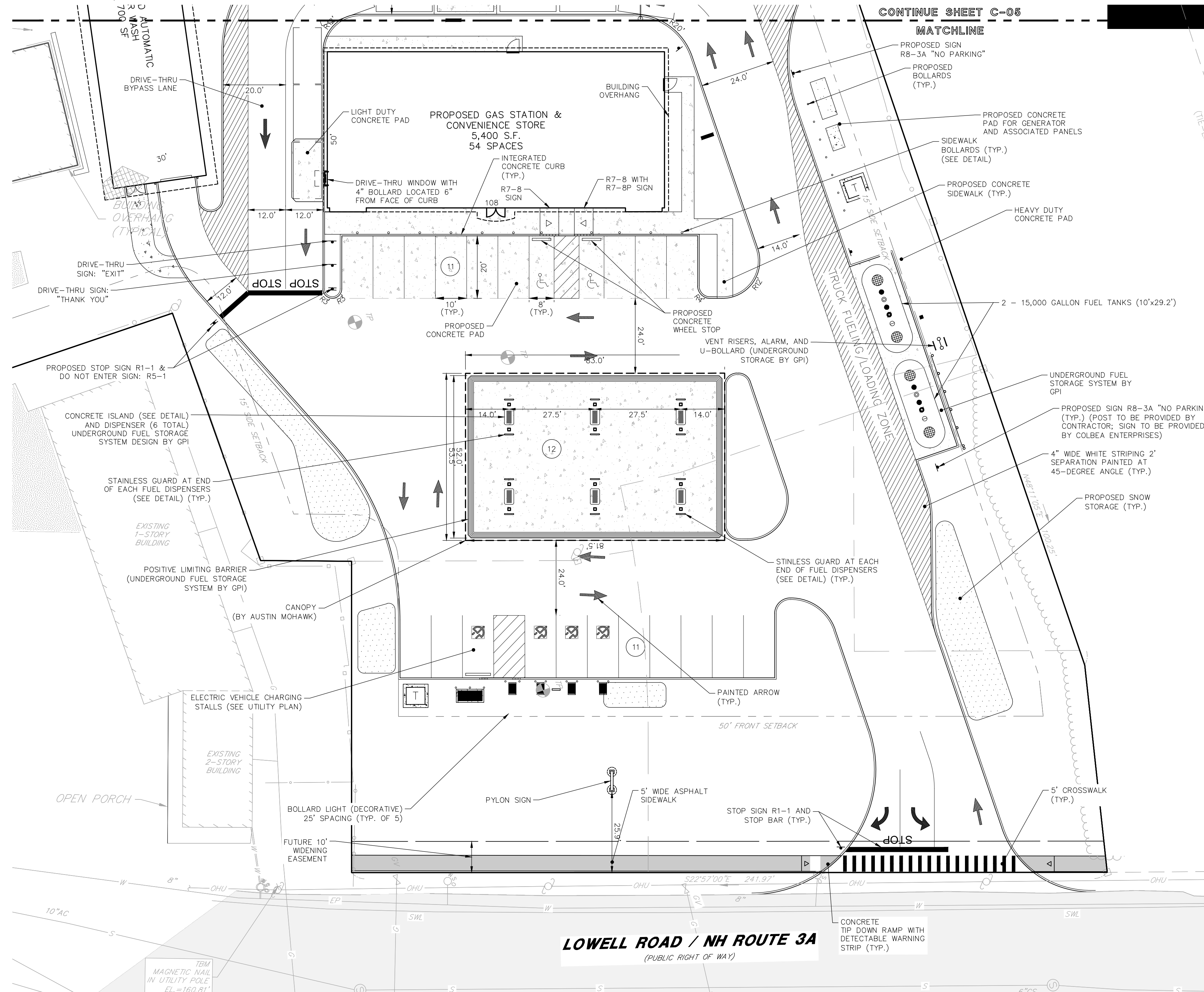
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TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
170 Commerce Way, Suite 102
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FILE 18149.00 DR JKC FB
CK CRR CADFILE 18149-00_OVERALL SITE PLAN C-03

NAD83 (2011)

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SIGN LEGEND					
ID	SIGN	SIZE (INCHES)		DESIGN (COLORING, TEXT SIZE, SPACING, SHAPE, RETROFLECTIVITY, ETC.)	NO. OF SIGNS
		WIDTH	HEIGHT		
R1-1		30	30	REFER TO THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS	6
R7-8 ¹		12	18		2
R7-8P ²		18	9		1
R8-3A		24	30		3
R5-1		30	30		7

- NOTE:
 1. HANDICAP PARKING SIGNS SHALL BE IN ACCORDANCE WITH TOWN OR HUDSON STANDARDS AND ADA REGULATIONS.
 2. PER ADA STANDARDS, A "VAN ACCESSIBLE" PLAQUE DOES NOT RESTRICT USE OF ACCESSIBLE SPACES TO VAN USERS ONLY.

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16

SITE LAYOUT PLAN

GAS STATION/CONVENIENCE STORE/CAR WASH

91-97 LOWELL ROAD, HUDSON, NH

OWNED BY & PREPARED FOR
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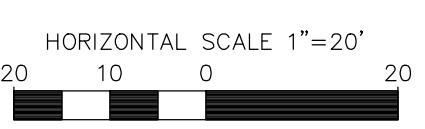
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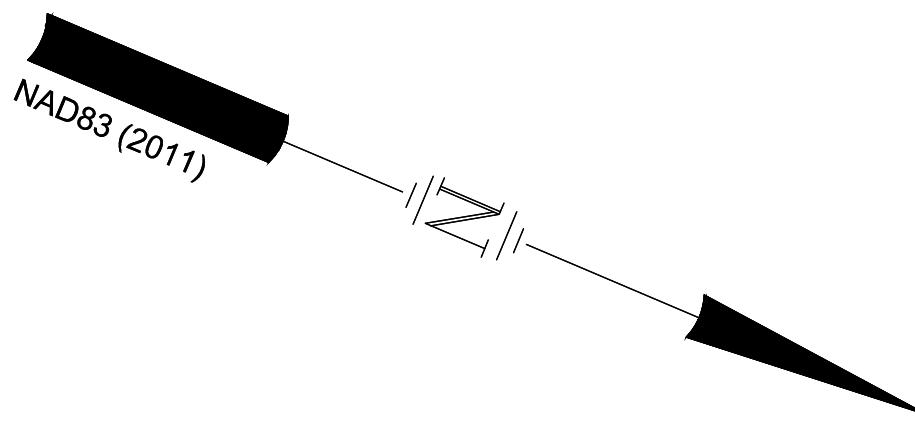
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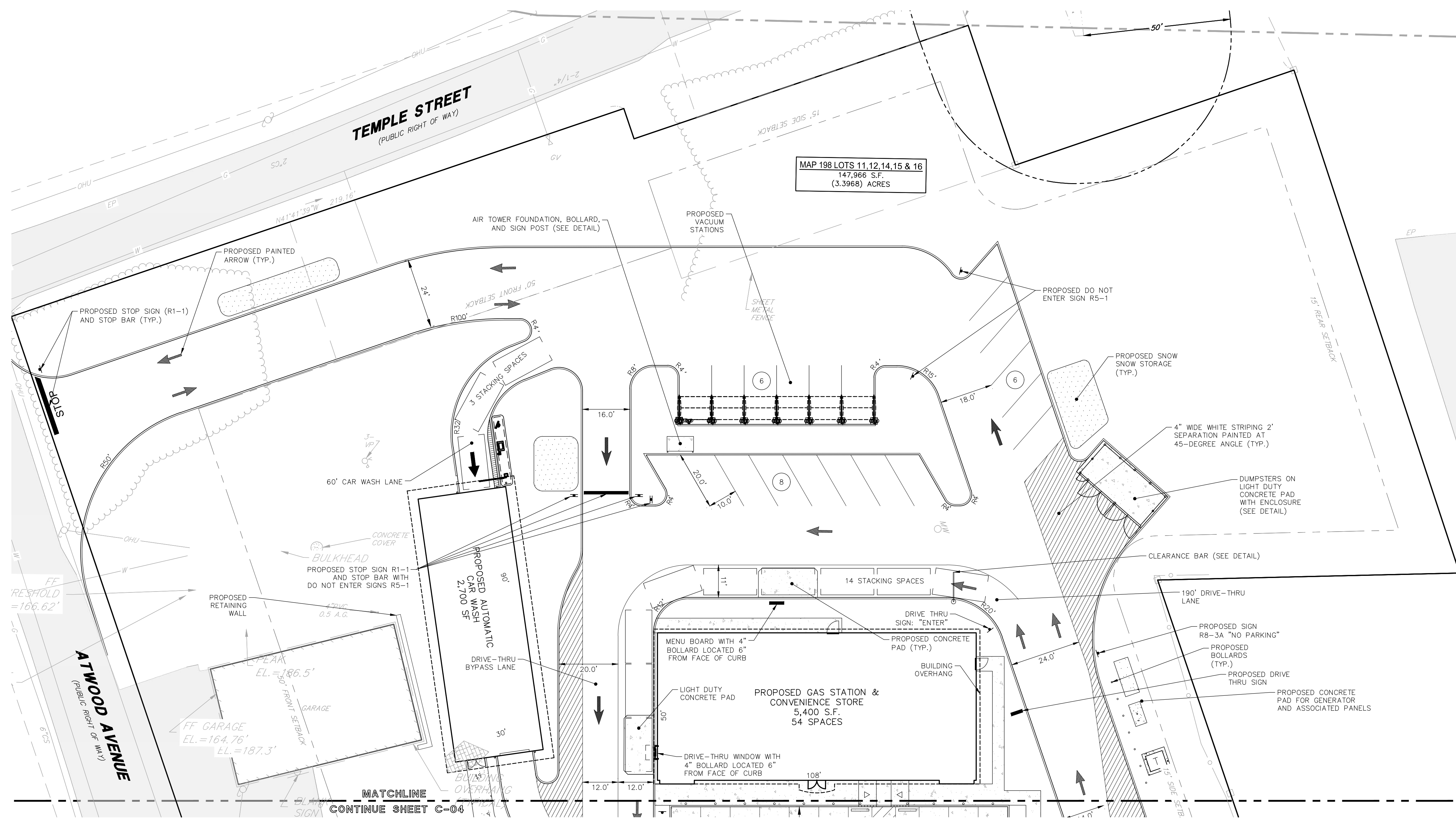
FILE 18149.00 DR JKC FB
 CK CRR CADFILE 18149-00_SITE LAYOUT PLAN C-04

Oct 08, 2024 - 4:11pm \\tfr-beford04\projects\civil\survey\MSC Projects\18149_Lowell Rd-Hudson\18149-00 Colbea - Seasons Market - Hudson, NH\Design\PRODUCTION DRAWINGS\18149-00_Site Layout Plan.dwg



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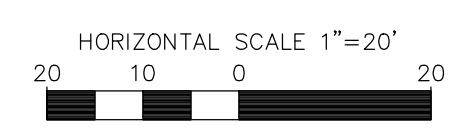
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Seacoast Division

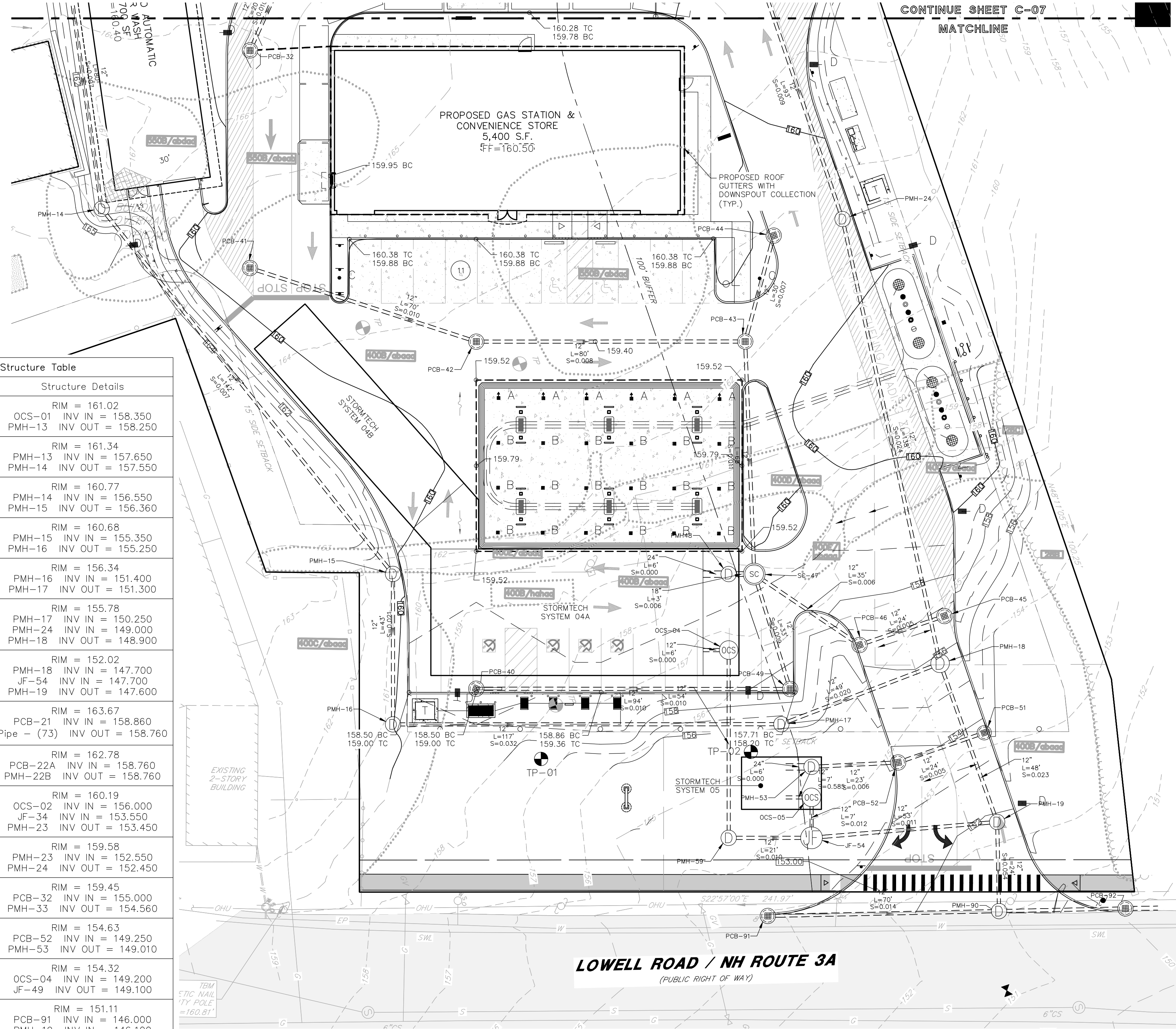
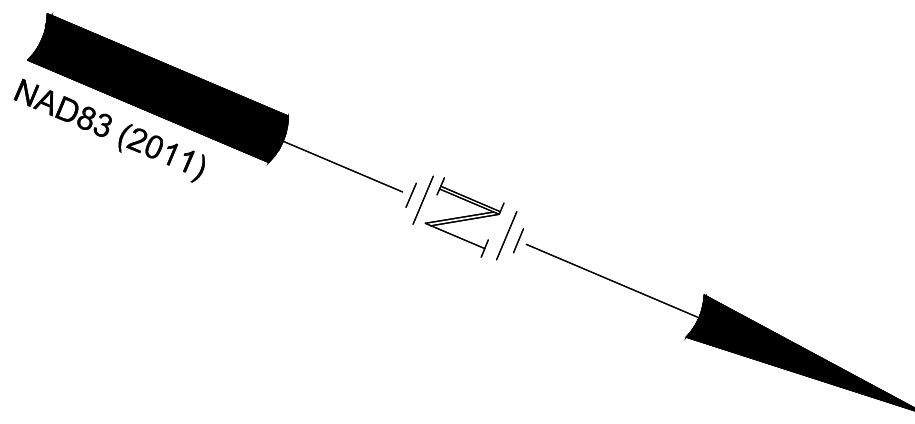
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FILE 18149.00 DR JK FB CK CRR CADFILE 18149-00_SITE LAYOUT PLAN C-05

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SOIL LEGEND (PER SITE SPECIFIC SOIL SURVEY)				
SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP	SLOPE CLASS	DRAINAGE CLASS
26B	WINDSOR LOAMY SAND	A	0-8%	EXCESSIVELY
26C	WINDSOR LOAMY SAND	A	8-15%	EXCESSIVELY
26D	WINDSOR LOAMY SAND	A	15-25%	EXCESSIVELY
26E	WINDSOR LOAMY SAND	A	25%+	EXCESSIVELY
400B/abaaa	UDORTHERTS, SANDY	A	0-8%	EXCESSIVELY
400C/abaaa	UDORTHERTS, SANDY	A	8-15%	EXCESSIVELY
400D/abaaa	UDORTHERTS, SANDY	A	15-25%	EXCESSIVELY
400E/abaaa	UDORTHERTS, SANDY	A	25%+	EXCESSIVELY
400B/hbhaa	UDORTHERTS, SANDY	A	0-8%	UNDETERMINABLE
500B/abdad	UDORTHERTS, BEDROCK SUBSTRATUM	D	0-8%	EXCESSIVELY
550B/abeab	UDORTHERTS, BEDROCK SUBSTRATUM	B	0-8%	EXCESSIVELY

NOTES

- SEE NOTES ON SHEET C-01.
- ALL DOORS SHALL BE AT FINISHED FLOOR ELEVATION UNLESS OTHERWISE NOTED.
- PROPOSED SPOT GRADES ARE PROVIDED TO THE NEAREST 0.05'. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE FINISHED GRADES MEET ADA STANDARDS FOR WHEEL CHAIR RAMPS, HANDICAP SPACES AND ACCESS AISLES, CROSSWALKS, SIDEWALKS, ETC.
- ALL ELEVATIONS SHOWN AT CURB ARE TO THE BOTTOM OF CURB UNLESS OTHERWISE NOTED. CURBS HAVE A 6" REVEAL UNLESS OTHERWISE NOTED.
- LENGTH OF PIPE IS FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED IN THE FIELD.
- ALL PROPOSED DRAINAGE PIPES SHALL BE 12" AND HDPE, UNLESS OTHERWISE NOTED ON THE PLAN.
- DRAINAGE PIPES WITH LESS THAN 3' COVER SHALL BE INSULATED (SEE UTILITY TRENCH DETAILS) AND DRAINAGE CATCH BASINS WITH LESS THAN 3.5' OF COVER OVER INVERTS SHALL USE SLAB TOP CATCH BASIN (SEE DETAILS).
- THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT AND ARCHITECTURAL PLANS FOR SUBDRAINAGE SYSTEMS FOR THE BUILDING FOUNDATION. SUBDRAINAGE MUST DAYLIGHT OR TIE INTO THE STORMWATER MANAGEMENT SYSTEM. COORDINATE SUBDRAINAGE SYSTEM DESIGN WITH THE ENGINEER OF RECORD.

Structure Table	
Structure Name	Structure Details
JF-34	RIM = 159.68 OCS-03 INV IN = 154.450 JF-34 INV OUT = 154.350
JF-54	RIM = 153.80 OCS-05 INV IN = 148.850 JF-49 INV IN = 148.850 JF-54 INV OUT = 148.350
OCS-01	RIM = 162.34 OCS-01 INV OUT = 158.500
OCS-02	RIM = 162.84 ST-02 INV IN = 158.850 OCS-02 INV OUT = 158.750
OCS-03	RIM = 159.48 ST-03 INV IN = 154.650 OCS-03 INV OUT = 154.550
OCS-04	RIM = 158.55 ST04 INV IN = 151.150 OCS-04 INV OUT = 149.800
OCS-05	RIM = 154.28 ST-05 INV IN = 149.100 OCS-05 INV OUT = 149.000
PCB-11	RIM = 161.52 PCB-11 INV OUT = 158.000
PCB-12 (WITH OIL SEPARATOR)	RIM = 161.52 PCB-11 INV IN = 157.850 PCB-12 INV OUT = 157.750
PCB-21A (WITH OIL SEPARATOR)	RIM = 162.45 PCB-21 INV IN = 159.160
PCB-22A (WITH OIL SEPARATOR)	RIM = 161.79 PCB-22A INV OUT = 158.890
PCB-31 (WITH OIL SEPARATOR)	RIM = 158.36 PCB-31 INV OUT = 154.980
PCB-32	RIM = 158.93 PCB-32 INV OUT = 155.250
PCB-40	RIM = 158.31 PCB-40 INV OUT = 154.000
PCB-41	RIM = 159.14 PMH41 INV OUT = 155.050
PCB-42	RIM = 159.10 PMH41 INV IN = 154.300 PCB-42 INV OUT = 154.200
PCB-43	RIM = 159.10 PCB-42 INV IN = 153.500 PCB-44 INV IN = 153.500 PCB-43 INV OUT = 153.400
PCB-44	RIM = 159.14 PCB-44 INV OUT = 153.750
PCB-45	RIM = 156.93 PCB-45 INV OUT = 153.100
PCB-46	RIM = 156.32 PCB-45 INV IN = 152.950 PCB-46 INV OUT = 152.850
PCB-49	RIM = 157.76 PCB-40 INV IN = 153.050 PCB-49 INV OUT = 152.950
PCB-51	RIM = 153.65 PCB-51 INV OUT = 149.650
PCB-52	RIM = 153.64 PCB-51 INV IN = 149.500 PCB-52 INV OUT = 149.400
PCB-91	RIM = 153.08 PCB-91 INV OUT = 147.000
PCB-92	RIM = 151.28 PMH-91 INV IN = 145.500 PCB92 INV OUT = 145.900

Structure Table	
Structure Name	Structure Details
PMH-13	RIM = 161.02 OCS-01 INV IN = 158.350 PMH-13 INV OUT = 158.250
PMH-14	RIM = 161.34 PMH-13 INV IN = 157.650 PMH-14 INV OUT = 157.550
PMH-15	RIM = 160.77 PMH-14 INV IN = 156.550 PMH-15 INV OUT = 156.360
PMH-16	RIM = 160.68 PMH-15 INV IN = 155.350 PMH-16 INV OUT = 155.250
PMH-17	RIM = 156.34 PMH-16 INV IN = 151.400 PMH-17 INV OUT = 151.300
PMH-18	RIM = 155.78 PMH-17 INV IN = 150.250 PMH-24 INV IN = 149.000 PMH-18 INV OUT = 148.900
PMH-19	RIM = 152.02 PMH-18 INV IN = 147.700 JF-54 INV IN = 147.700 PMH-19 INV OUT = 147.600
PMH-21B	RIM = 163.67 PCB-21 INV IN = 158.860 Pipe - (73) INV OUT = 158.760
PMH-22B	RIM = 162.78 PCB-22A INV IN = 158.760 PMH-22B INV OUT = 158.760
PMH-23	RIM = 160.19 OCS-02 INV IN = 156.000 JF-34 INV IN = 153.550 PMH-23 INV OUT = 153.450
PMH-24	RIM = 159.58 PMH-23 INV IN = 152.550 PMH-24 INV OUT = 152.450
PMH-33	RIM = 159.45 PCB-32 INV IN = 155.000 PMH-33 INV OUT = 154.560
PMH-53	RIM = 154.63 PCB-52 INV IN = 149.250 PMH-53 INV OUT = 149.010
PMH-59	RIM = 154.32 OCS-04 INV IN = 149.200 JF-49 INV OUT = 149.100
PMH-90	RIM = 151.11 PCB-91 INV IN = 146.000 PMH-19 INV IN = 146.100 PMH-91 INV OUT = 145.900
PMH48	RIM = 159.30 SC-47 INV IN = 152.100 PMH45 INV OUT = 151.010
SC-47	RIM = 159.27 PCB-43 INV IN = 152.600 PCB-46 INV IN = 152.600 PCB-49 INV IN = 152.600 SC-47 INV OUT = 152.150

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
GRADING & DRAINAGE PLAN
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=40' (11"X17')
SCALE: 1"=20' (22"X34') **DECEMBER 13, 2023**

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____
 CHAIRMAN _____ SIGNATURE DATE _____ AND
 SECRETARY _____ SIGNATURE DATE _____

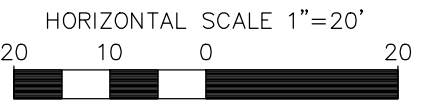
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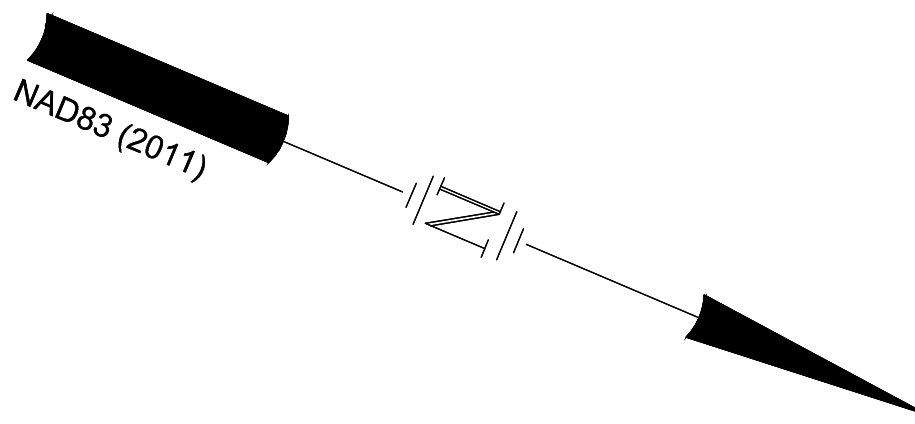
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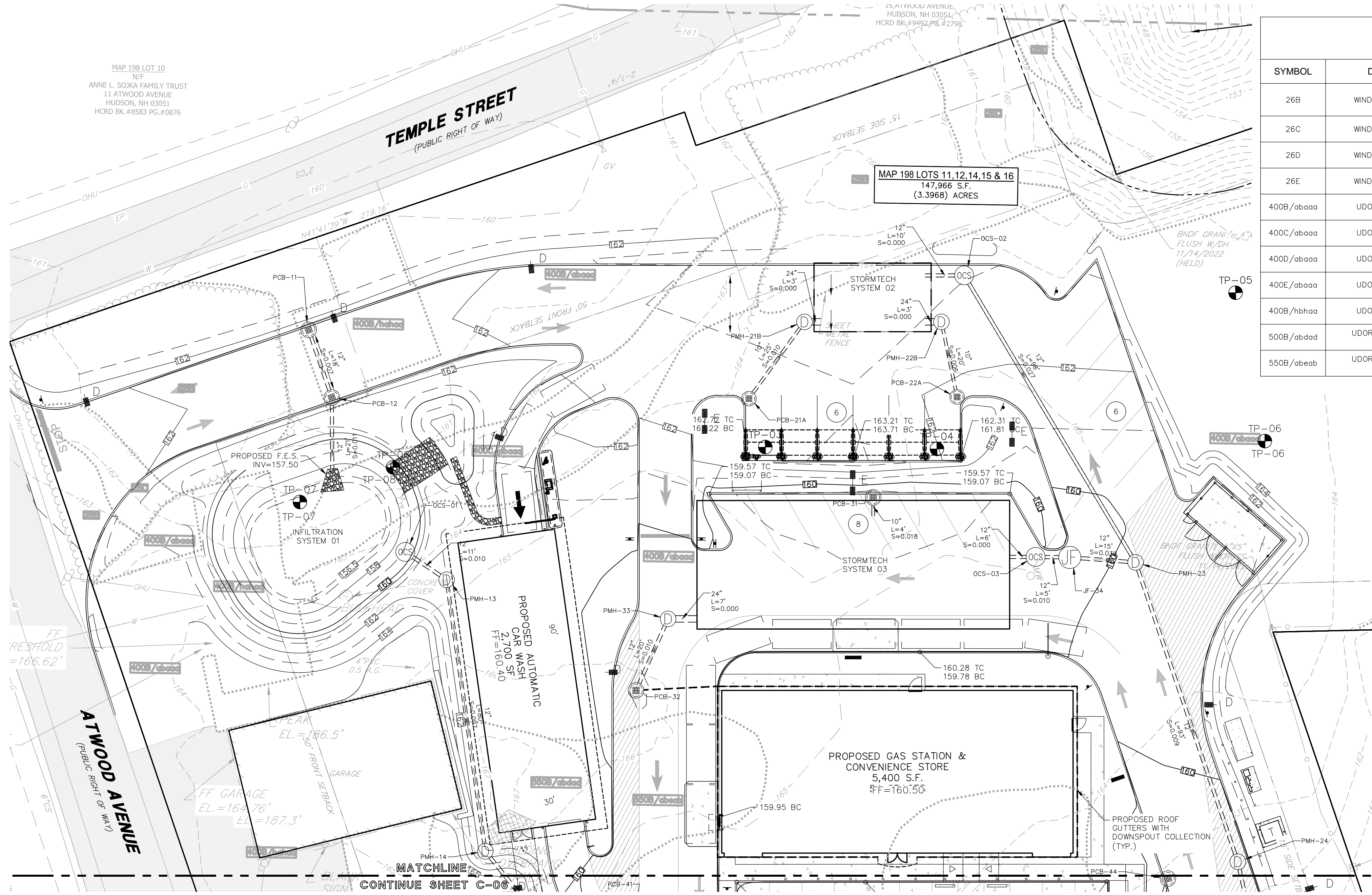


MAP 198 LOT 10
N/F
ANNE L. SOJKA FAMILY TRUST
11 ATWOOD AVENUE
HUDSON, NH 03051
HCRD BK.#8583 PG.#0876

TEMPLE STREET
(PUBLIC RIGHT OF WAY)

MAP 198 LOTS 11, 12, 14, 15 & 16
147,968 S.F.
(3.3968) ACRES

- TEST PIT #1**
0 - 14" 10YR 3/2 Very Dark Grayish Brown, Sandy Loom, Massive, Friable, Homogenous
14 - 35" 10YR 5/4 Yellowish Brown, Loom, Massive, Friable, Few Rounded Stones, Homogenous
35 - 62" 10YR 7/4 Very Pale Brown, Fine Sand, Single Grained, Very Friable, Homogenous
62 - 107" 10YR 5/4 Yellowish Brown, Medium Sand, Many Stones, Heterogenous, Inclusions of Coarse Sand, Saturation at Depth, Redoximorphic Features Common (10R 4/6 Red), Heterogenous
REDOX OBS: Many @ 62" Below Grade 10R 4/6 Red
107" Below Grade, ESHWT: 62" Below Grade
Roots: Many 14" Below Grade, No Refusal
- Test Pit # 2**
0 - 55" 10YR 2/2 Very Dark Brown, Sandy Loom, Massive, Very Friable, Anthropogenic Detritus, Fill, Heterogenous
55 - 72" 10YR 6/2 Light Brownish Gray, Fine Sand, Many Gravels, Very Firm, Homogenous, Stratified
72 - 111" 10YR 5/4 Yellowish Brown, Medium Sand, Single Grained, Heterogenous, Many Stones, Many Gravels, Inclusions of Coarse Sand, Redoximorphic Features Common (2.5Y 7/6 Yellow)
REDOX OBS: Common @ 62" Below Grade 10R 4/6 Red
OBSWT: None Obs, ESHWT: 72" Below Grade
Roots: Common 5" Below Grade, Ledge: NR
- Test Pit # 3**
0 - 8" 10YR 3/3 Dark Brown, Sandy Loom, Massive, Friable, Many Gravels, Many Stones, Anthropogenic Detritus, Inclusions of Loom (10YR 3/2 Very Dark Grayish Brown), Heterogenous
8 - 115" 10YR 7/2 Light Gray, Very Fine Sand, Single Grained, Slightly Firm, Many Gravels, Common Stones, False Water Table, Heterogenous
REDOX OBS: N/A
OBSWT: None Obs, ESHWT: None Obs
Roots: common 8" Below Grade, Ledge: NR
- Test Pit # 4**
0 - 9" 10YR 4/4 Dark Yellowish Brown, Sandy Loom, Massive, Very Friable, Many Gravels, Few Stones, Heterogenous
9 - 78" 10YR 7/4 Very Pale Brown, Very Fine Loomy Sand, Massive, Homogenous, Many Gravels, Slightly Firm
78 - 117" 10YR 7/1 Light Gray, Fine Sand, Single Grained, Many Rounded Stones, Firm, Homogenous
REDOX OBS: N/A
OBSWT: None Obs, ESHWT: None Obs
Roots: Common 6" Below Grade, Ledge: NR
- Test Pit # 5**
0 - 20" 10YR 4/4 Dark Yellowish Brown, Sandy Loom, Massive, Friable, Few Gravels, Few Stones, Heterogenous
20 - 34" 10YR 2/2 Very Dark Brown, Loom, Massive, Slightly Firm, Odorless, Homogenous
34 - 53" 10YR 6/3 Pale Brown, Fine Sand, Single Grained, Inclusions of Loom (10YR 2/2 Very Dark Brown), Few Stones, Heterogenous
53 - 106" 10YR 5/6 Yellowish Brown, Medium Sand, Single Grained, Many Stones, Many Gravels, Loose, Homogenous
REDOX OBS: None Obs, N/A, ESHWT: None Obs
Roots: Common 34" Below Grade, Ledge: NR
- Test Pit # 6**
0 - 6" 10YR 4/3 Brown, Sandy Loom, Massive, Very Friable, Few Stones, Homogenous
6 - 12" 10YR 7/3 Very Pale Brown, Very Fine Sand, Single Grained, Friable, Few Stones, Homogenous
12 - 24" 10YR 7/3 Very Pale Brown, Fine Sand, Single Grained, Friable, Many Stones, Many Gravels, Heterogenous
24 - 108" 10YR 6/2 Light Brownish Gray, Fine Loomy Sand, Massive, Many Gravels, Common Stones, Slightly Firm, Decaying Stone, Homogenous
REDOX OBS: None Obs
OBSWT: None Obs, ESHWT: None Obs
Roots: Common 24" Below Grade, Ledge: NR
- Test Pit # 7**
0 - 23" 10YR 4/3 Brown, Sandy Loom, Massive, Very Friable, Few Stones, Homogenous
23 - 36" 10YR 2/2 Very Dark Brown, Sandy Loom, Massive, Friable, Few Gravels, Many Roots, Homogenous
36 - 46" 10YR 5/6 Yellowish Brown, Loomy Sand, Massive, Friable, Common Roots, Few Gravels, Homogenous
46 - 94" 10YR 7/2 Light Gray, Fine Sand, Single Grained, Loose, Inclusions of Silt (Gley 1 6/N Gray), Heterogenous
94 - 96" 10YR 6/3 Pale Brown, Sandy Loom, Massive, Many Gravels, Features (10R 4/6 Red), Homogenous
REDOX OBS: Common @ 94" Below Grade 10R 4/6 Red
OBSWT: None Obs, ESHWT: 94"
Roots: Common 48" Below Grade, Ledge: NR
- Test Pit # 8**
0 - 21" 10YR 4/6 Dark Yellowish Brown, Sandy Loom, Massive, Very Friable, Few Stones, Heterogenous
21 - 38" 10YR 7/3 Very Pale Brown, Fine Sand, Single Grained, Loose, Homogenous
38 - 72" 10YR 6/3 Pale Brown, Sandy Loom, Massive, Many Gravels, Many Stones, Few Boulders, Heterogenous
72 - 110" 10YR 6/2 Light Brownish Gray, Loomy Sand, Massive, Firm, Few Boulders, Many Gravels, Heterogenous
REDOX OBS: N/A
OBSWT: None Obs, ESHWT: None Obs
Roots: Common 50" Below Grade, Ledge: NR



SOIL LEGEND (PER SITE SPECIFIC SOIL SURVEY)				
SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP	SLOPE CLASS	DRAINAGE CLASS
26B	WINDSOR LOAMY SAND	A	0-8%	EXCESSIVELY
26C	WINDSOR LOAMY SAND	A	8-15%	EXCESSIVELY
26D	WINDSOR LOAMY SAND	A	15-25%	EXCESSIVELY
26E	WINDSOR LOAMY SAND	A	25%+	EXCESSIVELY
400B/abaaa	UDORTHERTS, SANDY	A	0-8%	EXCESSIVELY
400C/abaaa	UDORTHERTS, SANDY	A	8-15%	EXCESSIVELY
400D/abaaa	UDORTHERTS, SANDY	A	15-25%	EXCESSIVELY
400E/abaaa	UDORTHERTS, SANDY	A	25%+	EXCESSIVELY
400B/hbhaa	UDORTHERTS, SANDY	A	0-8%	UNDETERMINABLE
500B/abddd	UDORTHERTS, BEDROCK SUBSTRATUM	D	0-8%	EXCESSIVELY
550B/abeeb	UDORTHERTS, BEDROCK SUBSTRATUM	B	0-8%	EXCESSIVELY

- NOTES**
- SEE NOTES ON SHEET C-01.
 - ALL DOORS SHALL BE AT FINISHED FLOOR ELEVATION UNLESS OTHERWISE NOTED.
 - PROPOSED SPOT GRADES ARE PROVIDED TO THE NEAREST 0.05. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE FINISHED GRADES MEET ADA STANDARDS FOR WHEEL CHAIR RAMPS, HANDICAP SPACES AND ACCESS AISLES, CROSSWALKS, SIDEWALKS, ETC.
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 - LENGTH OF PIPE IS FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED IN THE FIELD.
 - ALL PROPOSED DRAINAGE PIPES SHALL BE 12" AND HDPE, UNLESS OTHERWISE NOTED ON THE PLAN.
 - DRAINAGE PIPES WITH LESS THAN 3' COVER SHALL BE INSULATED (SEE UTILITY TRENCH DETAIL) AND DRAINAGE CATCH BASINS WITH LESS THAN 3.5' OF COVER OVER INVERTS SHALL USE SLAB TOP CATCH BASIN (SEE DETAILS).
 - THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT AND ARCHITECTURAL PLANS FOR SUBDRAINAGE SYSTEMS FOR THE BUILDING FOUNDATION. SUBDRAINAGE MUST DAYLIGHT OR TIE INTO THE STORMWATER MANAGEMENT SYSTEM. COORDINATE SUBDRAINAGE SYSTEM DESIGN WITH THE ENGINEER OF RECORD.
 - OIL SEPARATORS SHALL BE INSTALLED ON CATCH BASINS DISCHARGING TO INFILTRATION SYSTEM 01 AND STORMTECH SYSTEM 02 (SEE DETAIL).

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
GRADING & DRAINAGE PLAN
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=40' (11"X17')
SCALE: 1"=20' (22"X34') **DECEMBER 13, 2023**

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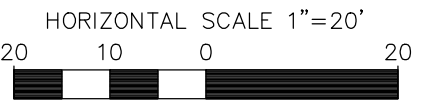
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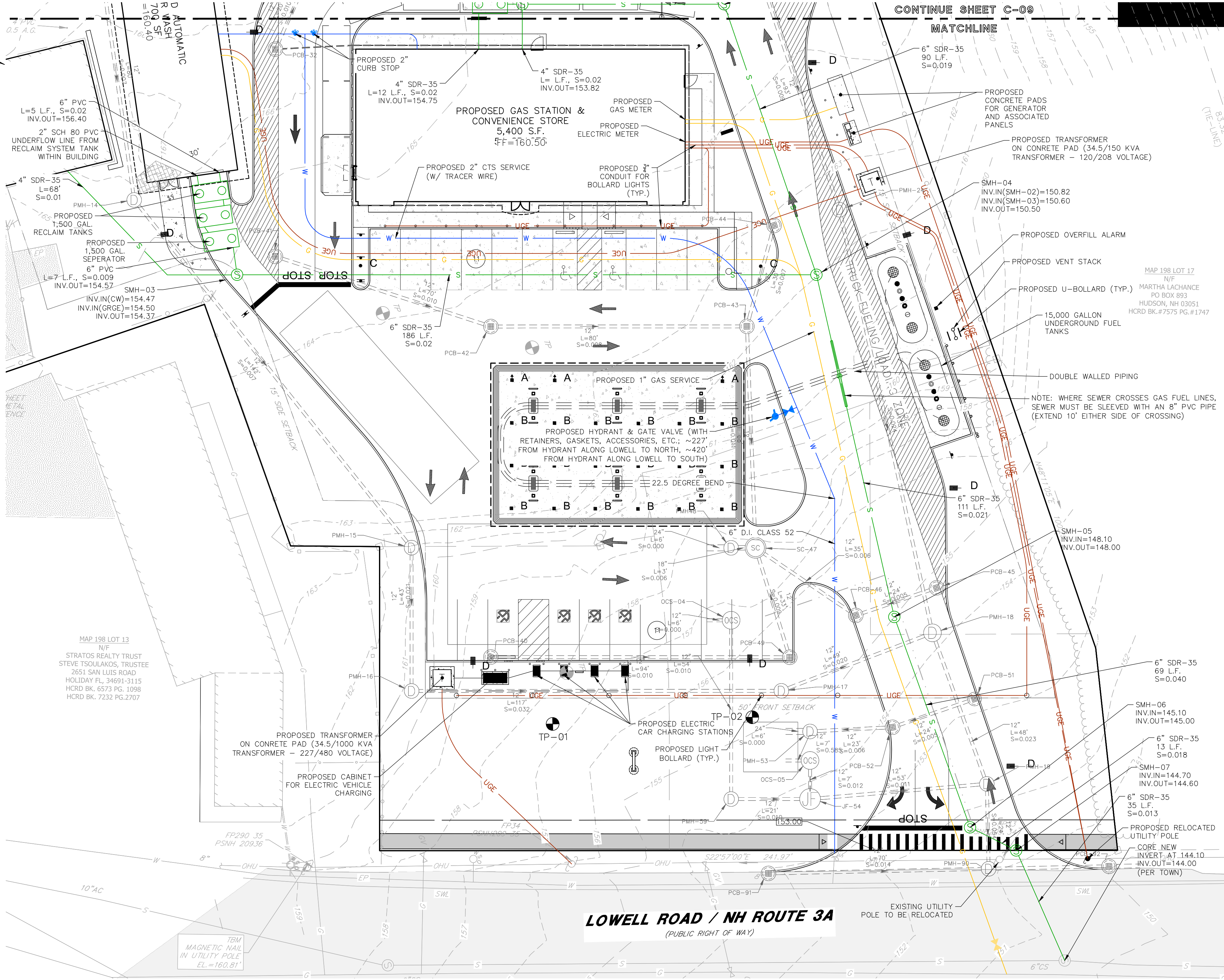
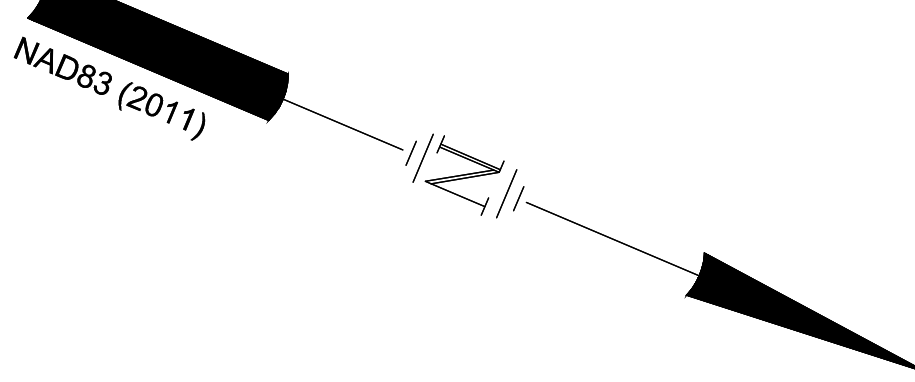
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CK CRR CADFILE 18149-00_GRADING & DRAINAGE C-07

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- ### NOTES
- SEE NOTES ON SHEET C-01.
 - THE NATIONAL FIRE PROTECTION AGENCY AND NEW HAMPSHIRE FIRE CODE REQUIRES FIRE HYDRANTS TO BE NO MORE THAN 500 FEET APART AND AT LEAST ONE FIRE HYDRANT WITHIN 400 FEET OF THE BUILDING IN AREAS WHERE BUILDINGS OTHER THAN ONE- AND TWO-FAMILY DWELLINGS ARE PRESENT.

LEGEND	
	S SEWER LINE
	FM SEWER FORCE MAIN LINE
	W WATER LINE
	G GAS LINE
	OHE OVERHEAD UTILITY LINE
	UGE UNDERGROUND UTILITY LINE

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16

UTILITY PLAN

GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=40' (11"X17')
SCALE: 1"=20' (22"X34') **DECEMBER 13, 2023**

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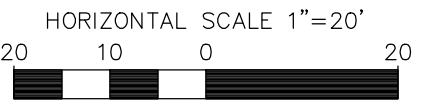
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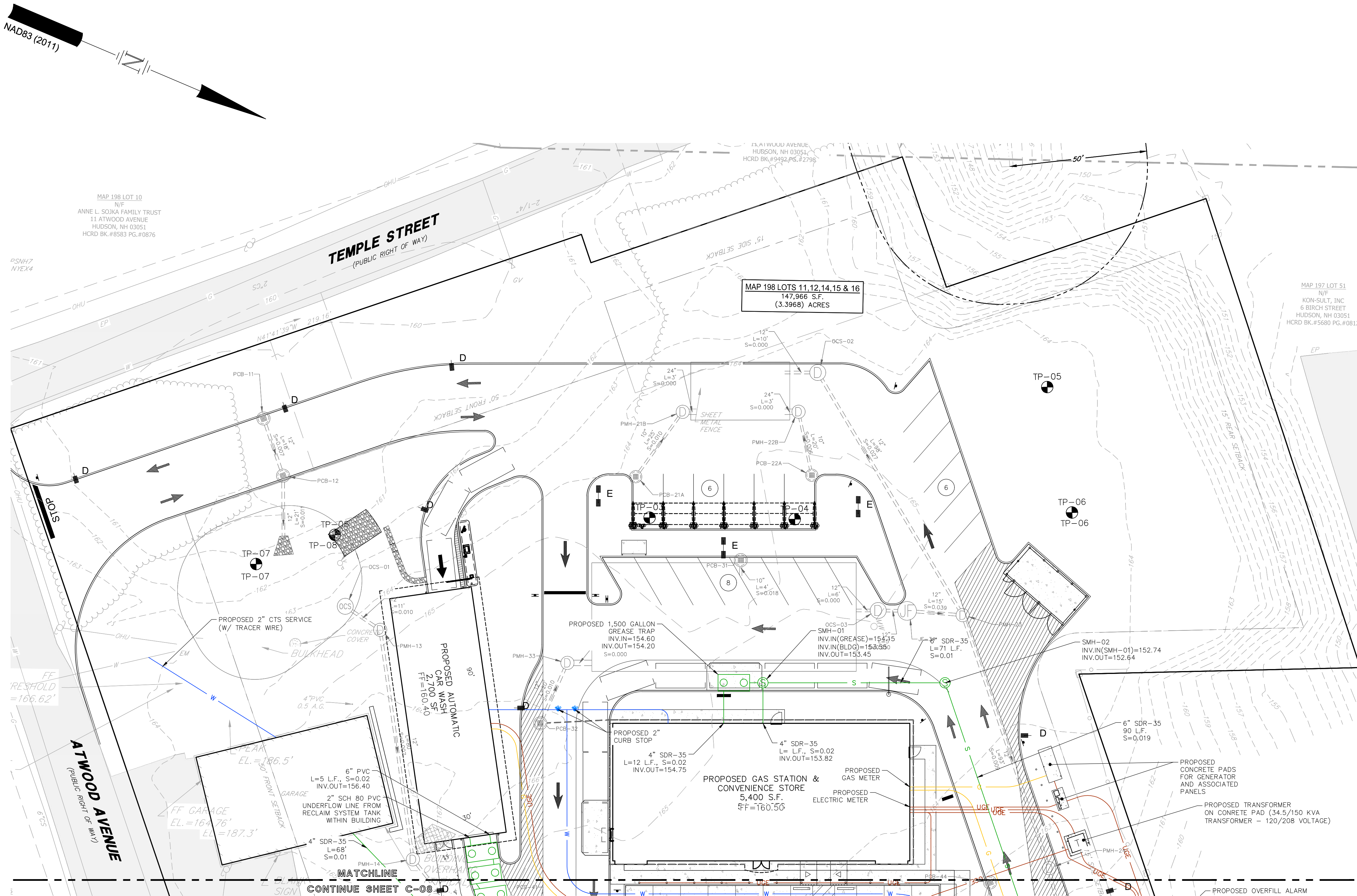
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C-08

NOTES

1. SEE NOTES ON SHEET C-01.



SITE DEVELOPMENT PLANS
 TAX MAP 198 LOTS 11, 12, 14, 15, & 16
UTILITY PLAN
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
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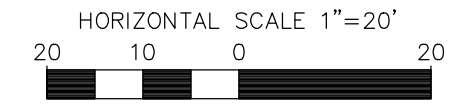
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2	7/18/2024	REVISED PER TOWN INTERNAL REVIEW COMMENTS	JKC	CRR
1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR

Seacoast Division

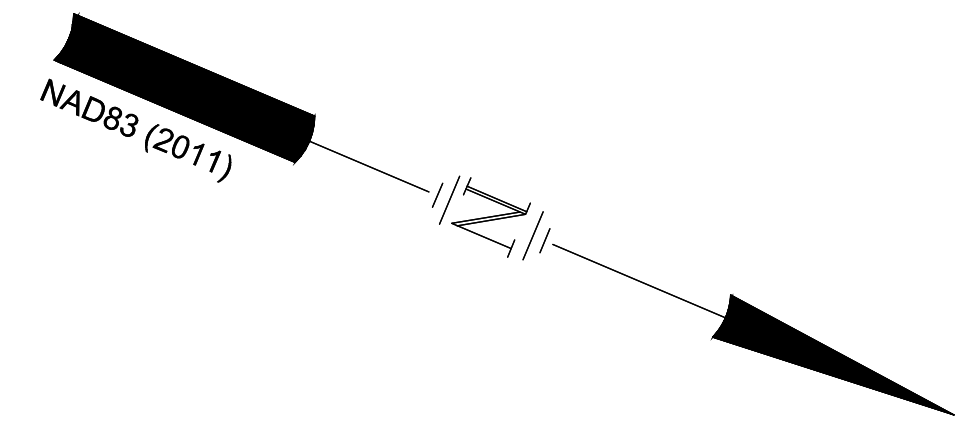
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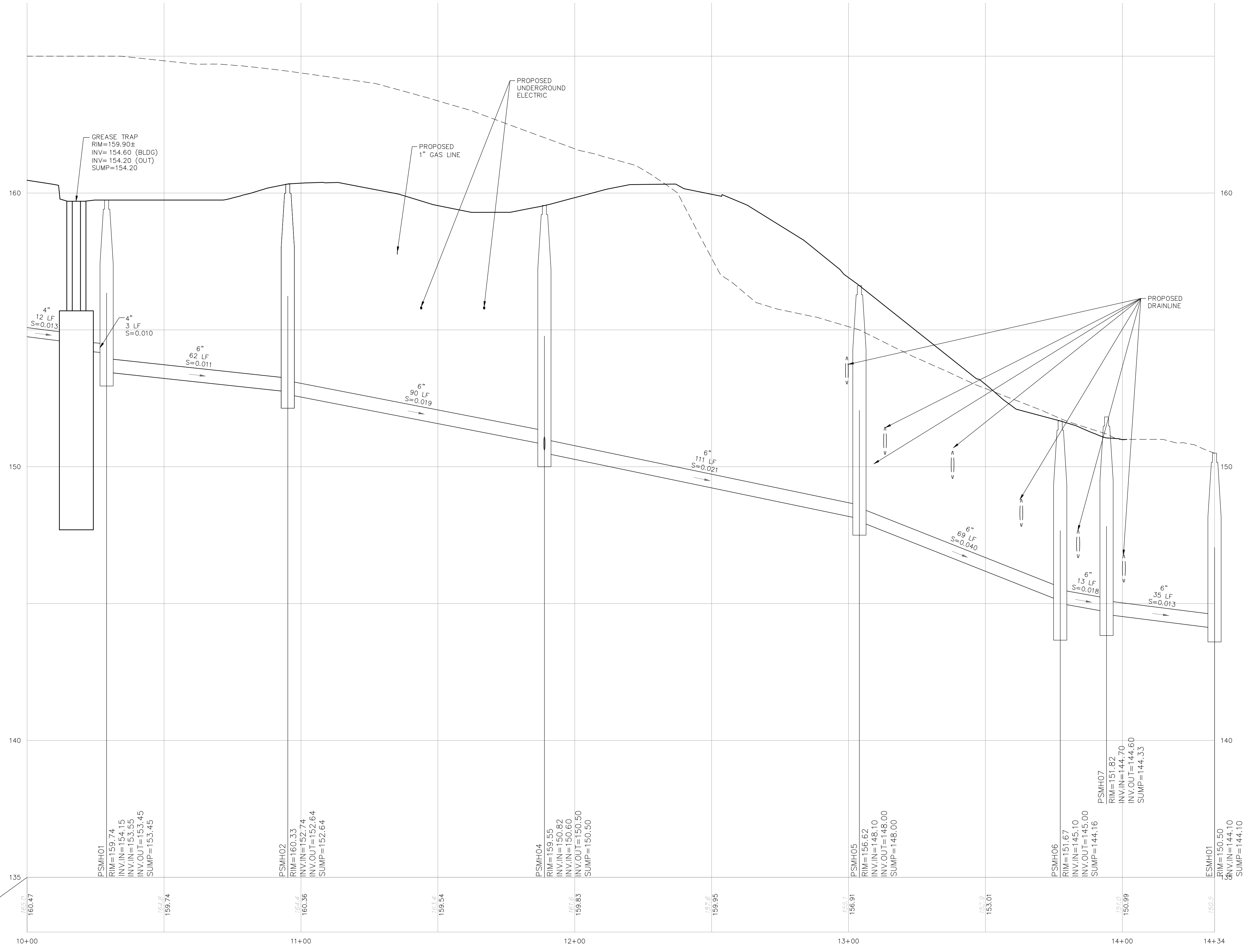
FILE 18149.00 DR JKJ FB CK CRR CADFILE 18149-00_UTILITY C-09

Oct 08, 2024 - 4:12pm \\lfm-beford04\projects\civil\survey\MSC Projects\18149-00 Colbea - Seasons Market - Hudson, NH\Design\PRODUCTION DRAWINGS\18149-00_UTILITY.dwg



SEWER STRUCTURE TABLE

GREASE TRAP RIM=159.90± INV=154.60 (BLDG) INV=154.20 (OUT) SUMP=154.20	SMH-04 RIM=160.00± INV=150.82 (IN) INV=150.50 (OUT)	SMH-07 RIM=151.80± INV=144.70 (IN) INV=144.60 (OUT)
SMH-01 RIM=159.90± INV=154.14 (GREASE) INV=153.55 (BLDG) INV=153.45	SMH-05 RIM=156.60± INV=148.10 (IN) INV=148.00 (OUT)	
SMH-02 RIM=160.30± INV=152.74 (IN) INV=152.64 (OUT)	SMH-06 RIM=151.40± INV=145.10 (IN) INV=145.00 (OUT)	



PSW01

SITE DEVELOPMENT PLANS
 TAX MAP 198 LOTS 11, 12, 14, 15, & 16
UTILITY PROFILE (SEWER)
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=40' (11'X17')
SCALE: 1"=20' (22'X34') **DECEMBER 13, 2023**

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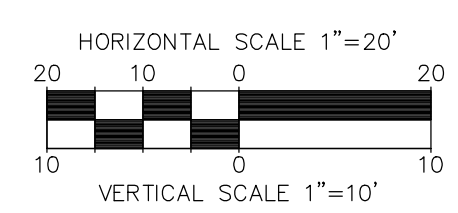
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Seacoast Division

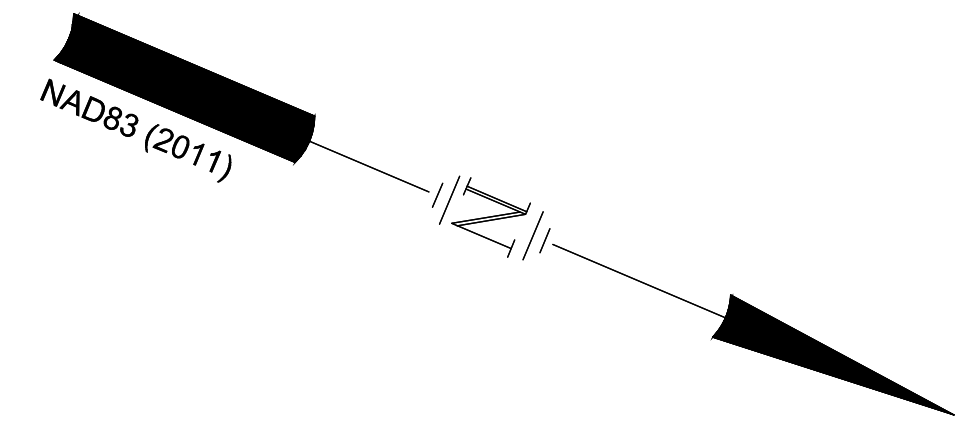
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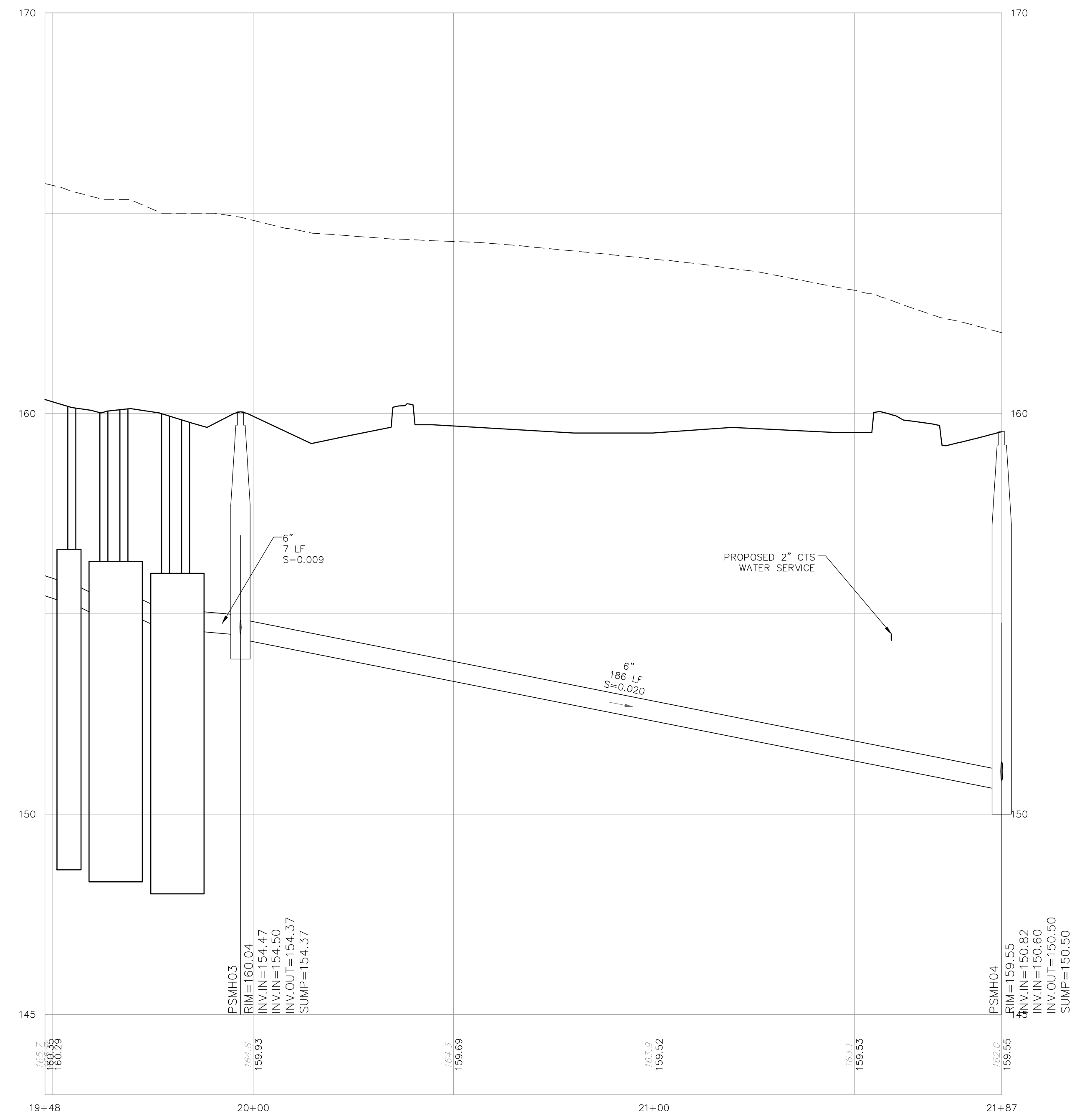
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SEWER STRUCTURE TABLE

SMH-04
 RIM=160.00±
 INV=150.82 (IN)
 INV=150.50 (OUT)



PSW02

SITE DEVELOPMENT PLANS

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GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
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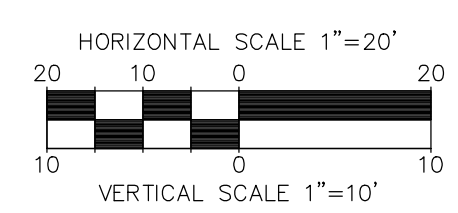
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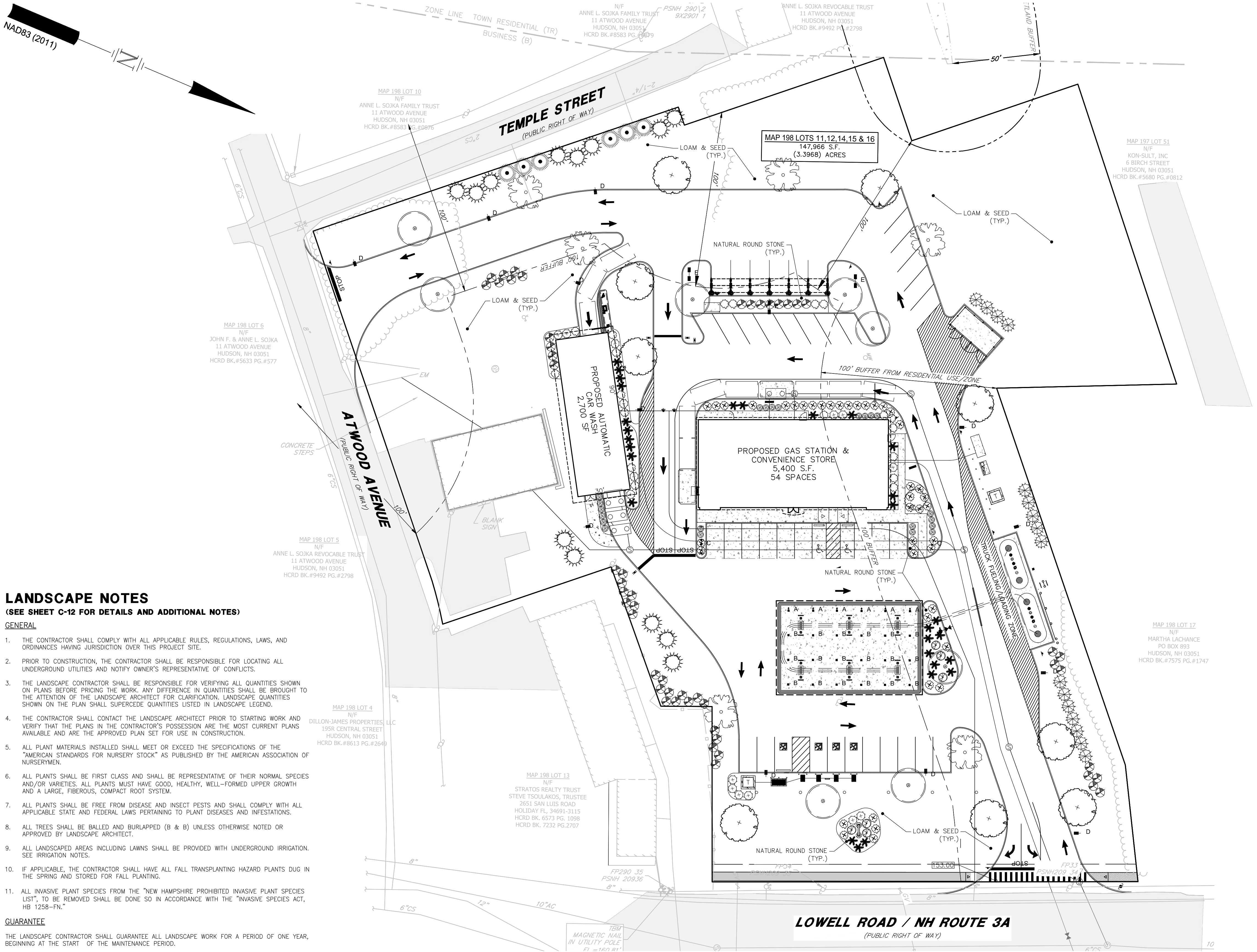
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LANDSCAPE LEGEND

SYMBOL (TREES)	QTY	BOTANICAL NAME COMMON NAME	SIZE	REMARKS
	6	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2 1/2" TO 3" CAL.	B&B
	9	QUERCUS RUBRA RED OAK	2 1/2" TO 3" CAL.	B&B
	8	ULMUS AMERICANA 'PRINCETON' PRINCETON AMERICAN ELM	2 1/2" TO 3" CAL.	B&B
	6	PICEA GLAUCA WHITE SPRUCE	6' TO 7'	B&B
	13	PINUS STROBUS WHITE PINE	6' TO 7'	B&B
	16	THUJA P. 'GREEN GIANT' WESTERN GREEN GIANT ARBORVITAE	5' TO 6'	B&B
	1	AMELANCHIER CANADENSIS SHADBLow SERVICEBERRY	4' TO 5' MULTI-STEM	B&B
SYMBOL (SHRUBS)	QTY	BOTANICAL NAME COMMON NAME	SIZE	REMARKS
	22	CALAMAGROSTIS A. 'KARL FOERSTER' KARL FOERSTER FEATHER REED GRASS	3 GAL.	CONT.
	51	FORSYTHIA 'LYNWOOD GOLD' LYNWOOD GOLD FORSYTHIA	3 GAL.	CONT.
	15	ILEX G. 'DENSE' DENSE INKBERRY	3 GAL.	CONT.
	41	JUNIPERUS H. 'PLUMOSA COMPACTA' YOUNGTOWN JUNIPER	3 GAL.	CONT.
	19	JUNIPERUS C. 'SEAGREEN' SEAGREEN JUNIPER	3 GAL.	CONT.
	6	PINUS MUGO 'PUMILIO' DWARF MUGO PINE	5 GAL.	CONT.
	29	SPIRAEA X B. 'ANTHONY WATERER' ANTHONY WATERER SPIREA	3 GAL.	CONT.

LANDSCAPE REQUIREMENTS

- INTERIOR PARKING LANDSCAPE AREA REQUIREMENTS:**
(275-8.C(7) OF SITE PLAN REG.'S)
INTERIOR PARKING LOT: 10% LANDSCAPE AREA REQUIRED.
TOTAL PAVED PARKING AREAS = 36,691 SF (10%) = 3,669 SF
REQUIRED: 3,669 SF
PROVIDED: 3,837 SF (10.4%)
- REQUIRED SHADE TREES:** 1 TREE PER 1,600 SF OR 1 TREE PER 5 SPACES, WHICHEVER IS GREATER.
TOTAL PAVED PARKING AREA = 36,691 SF / 1,600 SF = 23 TREES
REQUIRED: 23 SHADE TREES
PROVIDED: 24 SHADE TREES
- REQUIRED SHRUBS:** 1 SHRUB PER 200 SF OR 1 SHRUB PER 1.6 SPACES.
TOTAL PARKING = 55 SPACES (1.6) = 88 SHRUBS OR 36,691 SF / 200 SF = 183 SHRUBS
REQUIRED: 183 SHRUBS
PROVIDED: 183 SHRUBS
- LANDSCAPE SCREENING REQUIREMENTS:**
(275-8.C(8) OF SITE PLAN REG.'S)
SCREENING SHALL BE PROVIDED FOR VISUAL SEPARATION OF INCOMPATIBLE USES. SCREENING SHALL BE REQUIRED BETWEEN PARKING OR LOADING AREAS AND, IF PRESENT, AN ADJACENT RESIDENTIAL ZONE. SCREENING MAY ALSO BE REQUIRED BETWEEN ADJACENT NONRESIDENTIAL SITES.
PROVIDED: 34 EVERGREEN TREES

LANDSCAPE NOTES
(SEE SHEET C-12 FOR DETAILS AND ADDITIONAL NOTES)

- GENERAL**
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE RULES, REGULATIONS, LAWS, AND ORDINANCES HAVING JURISDICTION OVER THIS PROJECT SITE.
 - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND NOTIFY OWNER'S REPRESENTATIVE OF CONFLICTS.
 - THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON PLANS BEFORE PRICING THE WORK. ANY DIFFERENCE IN QUANTITIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION. LANDSCAPE QUANTITIES SHOWN ON THE PLAN SHALL SUPERCEDE QUANTITIES LISTED IN LANDSCAPE LEGEND.
 - THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT PRIOR TO STARTING WORK AND VERIFY THAT THE PLANS IN THE CONTRACTOR'S POSSESSION ARE THE MOST CURRENT PLANS AVAILABLE AND ARE THE APPROVED PLAN SET FOR USE IN CONSTRUCTION.
 - ALL PLANT MATERIALS INSTALLED SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
 - ALL PLANTS SHALL BE FIRST CLASS AND SHALL BE REPRESENTATIVE OF THEIR NORMAL SPECIES AND/OR VARIETIES. ALL PLANTS MUST HAVE GOOD, HEALTHY, WELL-FORMED UPPER GROWTH AND A LARGE, FIBEROUS, COMPACT ROOT SYSTEM.
 - ALL PLANTS SHALL BE FREE FROM DISEASE AND INSECT PESTS AND SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL LAWS PERTAINING TO PLANT DISEASES AND INFESTATIONS.
 - ALL TREES SHALL BE BALLED AND BURLAPPED (B & B) UNLESS OTHERWISE NOTED OR APPROVED BY LANDSCAPE ARCHITECT.
 - ALL LANDSCAPED AREAS INCLUDING LAWNS SHALL BE PROVIDED WITH UNDERGROUND IRRIGATION. SEE IRRIGATION NOTES.
 - IF APPLICABLE, THE CONTRACTOR SHALL HAVE ALL FALL TRANSPLANTING HAZARD PLANTS DUG IN THE SPRING AND STORED FOR FALL PLANTING.
 - ALL INVASIVE PLANT SPECIES FROM THE "NEW HAMPSHIRE PROHIBITED INVASIVE PLANT SPECIES LIST", TO BE REMOVED SHALL BE DONE SO IN ACCORDANCE WITH THE "INVASIVE SPECIES ACT, HB 1258-FN."

GUARANTEE
THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE WORK FOR A PERIOD OF ONE YEAR, BEGINNING AT THE START OF THE MAINTENANCE PERIOD.

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16

LANDSCAPE PLAN

GAS STATION/CONVENIENCE STORE/CAR WASH

91-97 LOWELL ROAD, HUDSON, NH

OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=60' (11"x17')

SCALE: 1"=30' (22"x34')

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DIG SAFE

CONTACT ONE WEEK BEFORE COMMENCING CONSTRUCTION

HORIZONTAL SCALE 1"=30'

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LANDSCAPE NOTES

SITE AND SOIL PREPARATION

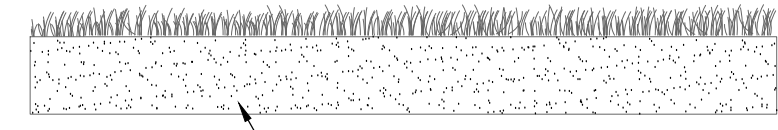
- WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR LEDGE, NOTIFY LANDSCAPE ARCHITECT/ENGINEER BEFORE PLANTING.
- ALL DISTURBED AREAS & PLANTING AREAS, INCLUDING AREAS TO BE SODDED, SHALL RECEIVE THE FOLLOWING SOIL PREPARATION PRIOR TO PLANTING: A MINIMUM OF 6 INCHES OF LIGHTLY COMPACTED TOPSOIL SHALL BE INSTALLED OVER THE SUBSOIL IF TOPSOIL HAS BEEN REMOVED OR IS NOT PRESENT.
- LOAM SHALL CONSIST OF LOOSE FRIABLE TOPSOIL WITH NO ADMIXTURE OF REFUSE OR MATERIAL TOXIC TO PLANT GROWTH. LOAM SHALL BE FREE FROM STONES, LUMPS, STUMPS, OR SIMILAR OBJECTS LARGER THAN TWO INCHES (2") IN GREATEST DIAMETER, SUBSOIL, ROOTS, AND WEEDS. THE MINIMUM AND MAXIMUM PH VALUE SHALL BE FROM 5.5 TO 7.0. LOAM SHALL CONTAIN A MINIMUM OF TWO PERCENT (2%) AND A MAXIMUM OF FIVE PERCENT (5%) ORGANIC MATTER AS DETERMINED BY LOSS BY IGNITION. SOIL TEXTURE SHALL BE SANDY CLAY LOAM OR SANDY LOAM WITH CLAY CONTENT BETWEEN 15 AND 25%, AND A COMBINED CLAY/SILT CONTENT OF NO MORE THAN 55%. NOT MORE THAN SIXTY-FIVE PERCENT (65%) SHALL PASS A NO. 200 SIEVE AS DETERMINED BY THE WASH TEST IN ACCORDANCE WITH ASTM D1140. IN NO INSTANCE SHALL MORE THAN 20% OF THAT MATERIAL PASSING THE #4 SIEVE CONSIST OF CLAY SIZE PARTICLES.
- NATURAL TOPSOIL NOT CONFORMING TO THE PARAGRAPH ABOVE OR CONTAINING EXCESSIVE AMOUNTS OF CLAY OR SAND SHALL BE TREATED BY THE CONTRACTOR TO MEET THOSE REQUIREMENTS.
- SUBMIT TEST RESULTS OBTAINED FROM SOURCE TO ENGINEER/LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL, PRIOR TO SPREADING OPERATIONS.
- APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT TO USE THE TOPSOIL WILL DEPEND UPON THE RESULTS OF THE SOIL TESTS.
- THE BURDEN OF PROOF OF SOIL AMENDMENT INSTALLATION RESTS WITH THE CONTRACTOR. SOIL TESTS MAY BE REQUIRED AT THE CONTRACTOR'S EXPENSE IN ORDER TO CONFIRM AMENDMENT INSTALLATION.

SEEDING

- ROUGH GRADING SHALL BE COMPLETED PRIOR TO THE START OF PLANTING IN ANY GIVEN AREA OF THE PROJECT SITE.
 - SEEDING SHALL BE DONE BETWEEN APRIL 1 TO JUNE 15 OR AUGUST 15 TO OCTOBER 15, EXCEPT FOR RESEEDING OF BARE SPOTS AND MAINTENANCE. ALL DISTURBED AREAS NOT COVERED BY BUILDINGS, PAVING OR AREAS THAT HAVE NOT BEEN OTHERWISE DEVELOPED SHALL BE SEEDED OR SODDED. SLOPES GREATER THAN 3:1 SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET. AFTER OCTOBER 15 DISTURBED SOILS SHALL BE PROTECTED IN ACCORDANCE WITH THE WINTER CONSTRUCTION NOTES.
- ACCEPTABLE SEED MIXES ARE AS FOLLOWS:
- PARK SEED MIX (NHDOT TYPE 44) MIN. 135 LBS/ACRE:**
 33% CREEPING RED FESCUE (MIN. 45 LBS/ACRE)
 42% PERENNIAL RYEGRASS (MIN. 55 LBS/ACRE)
 21% KENTUCKY BLUEGRASS (MIN. 30 LBS/ACRE)
 4% REDTOP (MIN. 5 LBS/ACRE)
- TEMPORARY LAWN MIX (MIN. 47 LBS/ACRE)**
 100% ANNUAL RYE

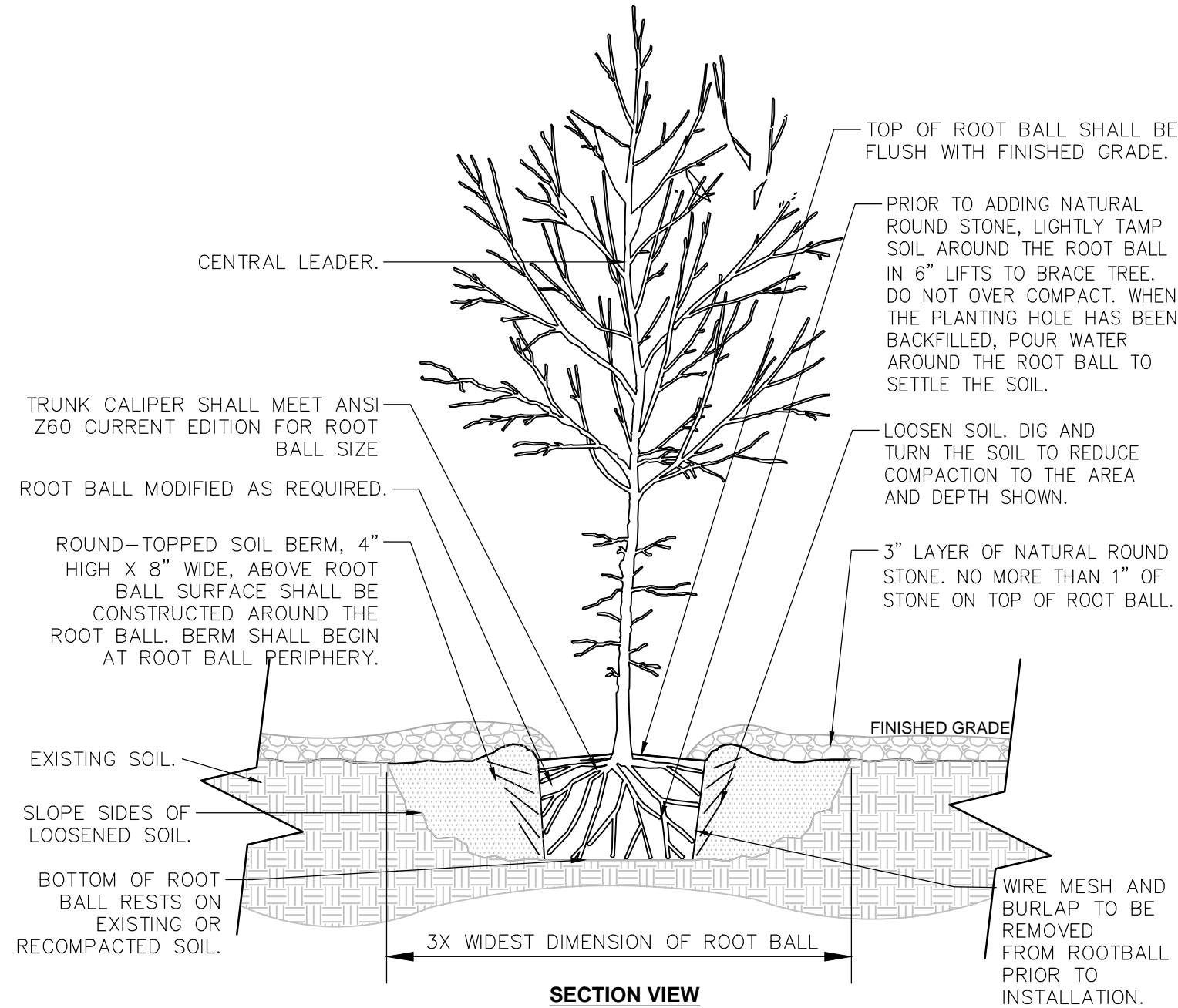
PLANTING

- EXCAVATE PITS, PLANTERS, BEDS AND TRENCHES WITH VERTICAL SIDES AND WITH BOTTOM OF EXCAVATION SLIGHTLY RAISED AT CENTER TO PROVIDE PROPER DRAINAGE. LOOSEN HARD SUBSOIL IN BOTTOM OF EXCAVATION.
- ANY LEDGE OR RUBBLE MATERIAL SHALL BE FRACTURED TO A DEPTH OF 3 FEET AND EXCAVATED TO A DEPTH OF 30 INCHES FOR TREE POCKETS AND 18 INCHES FOR SHRUB BEDS. THIS PROCEDURE SHALL BE HANDLED BY THE SITE CONTRACTOR. SITE TOPSOIL SHALL BE DEPOSITED IN ALL EXCAVATED POCKETS.
- DISPOSE OF SUBSOIL REMOVED FROM PLANTING EXCAVATIONS. DO NOT MIX WITH PLANTING SOIL OR USE AS BACKFILL.
- FILL EXCAVATIONS FOR TREES AND SHRUBS WITH WATER AND ALLOW TO PERCOLATE OUT BEFORE PLANTING.
- TREEGATOR WATERING SYSTEM OR APPROVED EQUAL SHALL BE INSTALLED FOR ALL DECIDUOUS TREES AT TIME OF PLANTING AND REMOVED BEFORE FROST. WATERING RATE TO BE APPLIED PER MANUFACTURER'S SPECIFICATIONS.
- ALL PLANT MATERIALS SHALL HAVE DEAD OR DAMAGED BRANCHES REMOVED AT TIME OF PLANTING. ALL TAGS AND RIBBONS SHALL BE REMOVED AT THIS TIME.
- THE CONTRACTOR SHALL REQUEST A FINAL OBSERVATION BY THE OWNER'S REPRESENTATIVE UPON COMPLETION OF INSTALLATION.



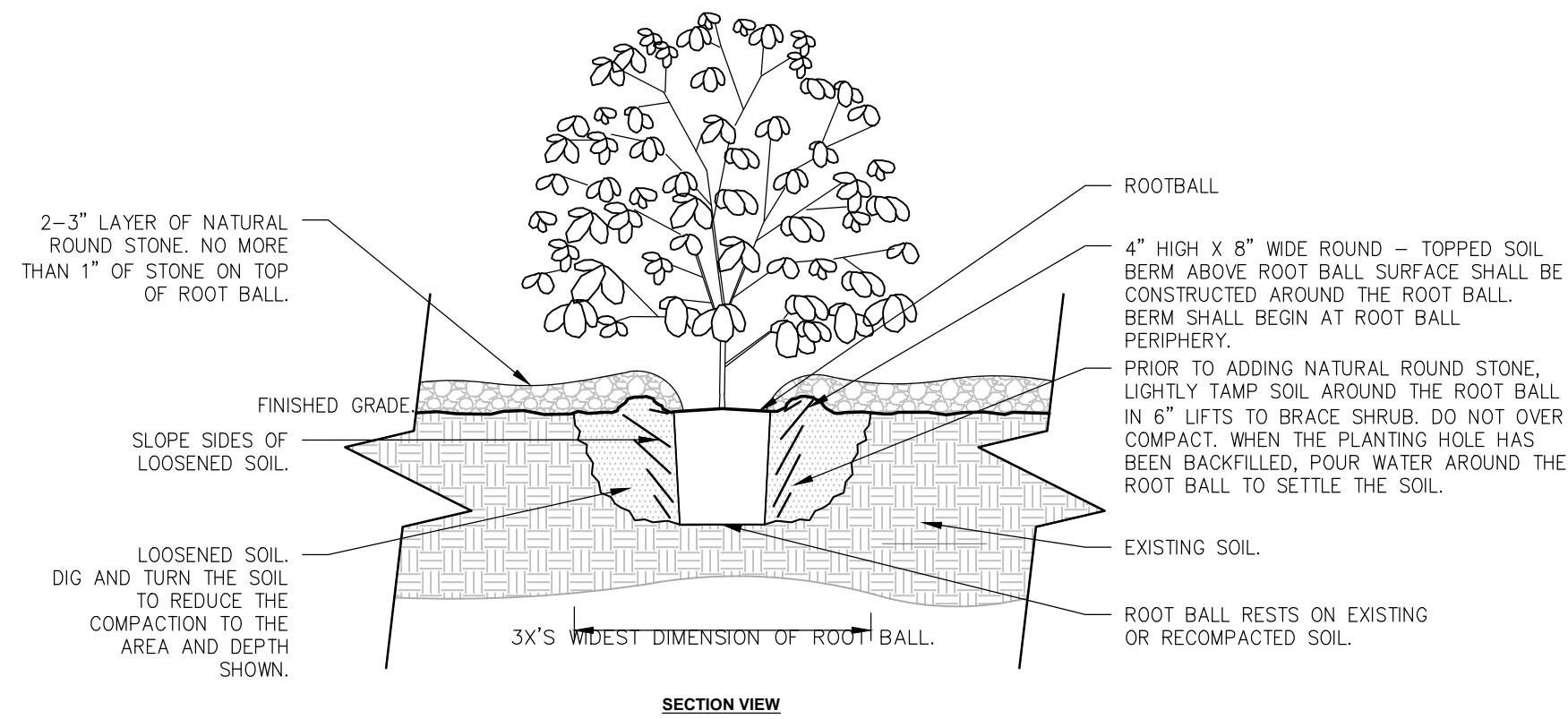
LOAM & SEED

NOT TO SCALE



TREE PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING

NOT TO SCALE

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SCALE: NTS

DECEMBER 13, 2023



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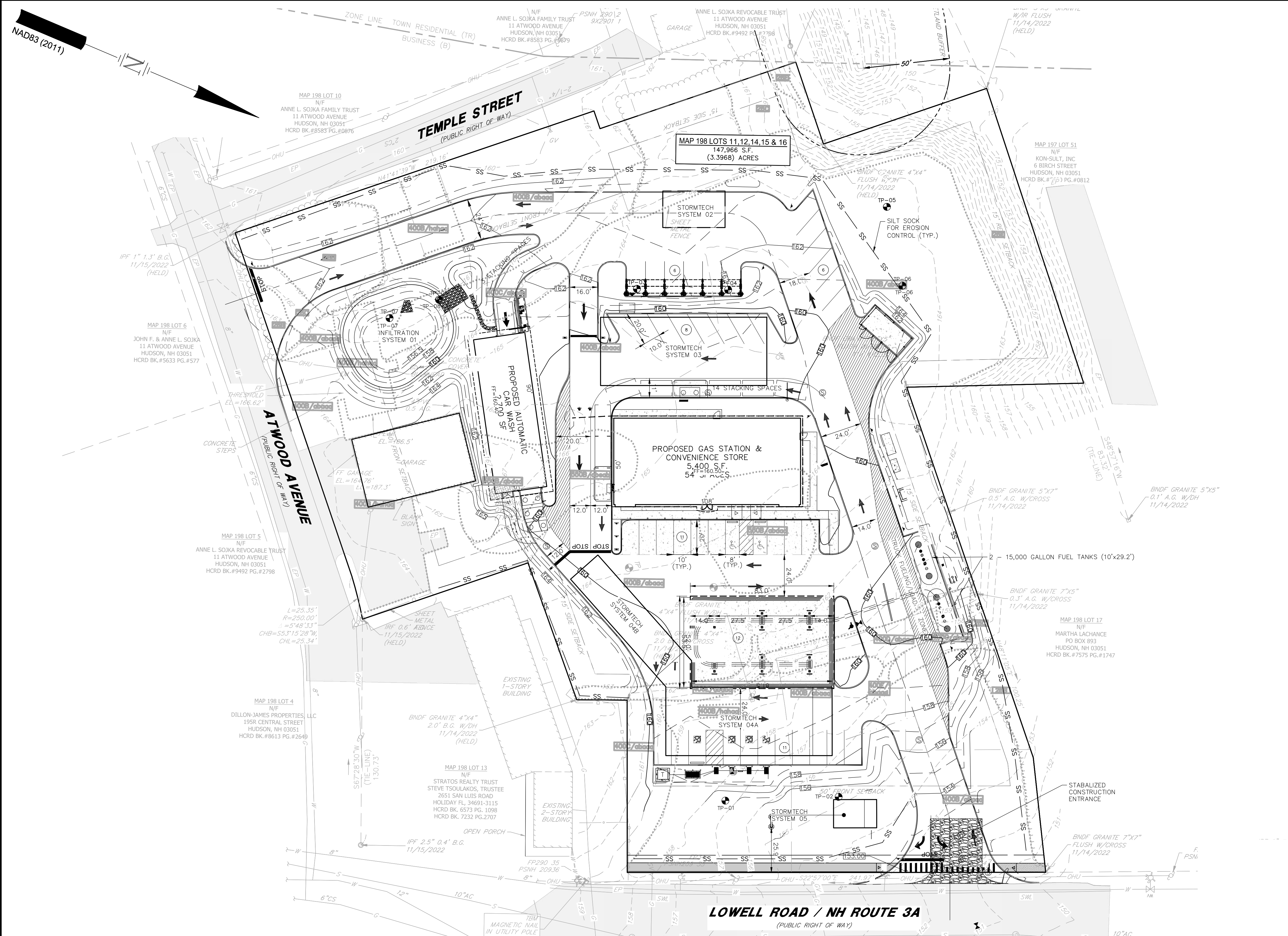
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NAD83 (2011)

NOTES

- SEE NOTES ON SHEET C-01, EROSION CONTROL NOTES ON SHEET C-15, EROSION CONTROL DETAILS, AND THE APPROVED SWPPP, AS APPLICABLE.
- INSTALL SILT BARRIER ALONG THE PERIMETER OF THE AREA TO BE DISTURBED AS FIRST ORDER OF WORK.
- PROVIDE INLET PROTECTION BARRIERS AROUND ALL EXISTING AND PROPOSED DRAINAGE INLETS WITHIN THE WORK LIMITS AND MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED. INLET PROTECTION BARRIERS SHALL BE IN PLACE AT ALL CATCH BASINS PRIOR TO THE DISTURBANCE OF SOIL.
- DUST CONTROL SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. IT SHALL BE ACCOMPLISHED BY THE UNIFORM APPLICATION OF CALCIUM CHLORIDE AT THE RATE OF 1-1/2 POUNDS PER SQUARE YARD BY MEANS OF A LIME SPREADER OR OTHER APPROVED METHOD. WATER MAY ALSO BE USED FOR DUST CONTROL, AND APPLIED BY SPRINKLING WITH WATER TRUCK DISTRIBUTORS, AS REQUIRED.
- THE SITE WILL REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION IF THE DISTURBANCE EXCEEDS ONE ACRE. THE CONSTRUCTION SITE OPERATOR SHALL DEVELOP AND IMPLEMENT A CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH EPA REGULATIONS AND THE CONSTRUCTION GENERAL PERMIT WHICH SHALL REMAIN ON SITE AND MADE ACCESSIBLE TO THE PUBLIC. THE SITE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO SUBMIT AN NOI AT LEAST 14 DAYS IN ADVANCE OF ANY EARTHWORK ACTIVITIES AT THE SITE. A COMPLETED NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO NPDES PERMITTING AUTHORITY WITHIN 30 DAYS AFTER EITHER OF THE FOLLOWING CONDITIONS HAVE BEEN MET: FINAL STABILIZATION HAS BEEN ACHIEVED ON ALL PORTIONS OF THE SITE FOR WHICH THE PERMITTEE IS RESPONSIBLE FOR, OR ANOTHER OPERATOR/PERMITTEE HAS ASSUMED CONTROL OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED.
- SILT PROTECTION MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS CONTAINED IN THIS PLAN SET.
- CONSTRUCT JUTE MATTING ON ALL SLOPES STEEPER THAN 3:1, DISTURBED AREAS SLOPING TOWARDS WETLANDS AND ALL LOCATIONS SHOWN ON PLAN.
- INSPECT EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RAIN STORM OF 0.10" OR GREATER. REPAIR/MODIFY SILT BARRIER AS NECESSARY TO MAXIMIZE FILTER EFFICIENCY. REMOVE SEDIMENT WHEN SEDIMENT IS 1/3 THE STRUCTURE HEIGHT.
- PROVIDE SILT BARRIERS AT THE BASE OF CUT AND FILL SLOPES UNTIL COMPLETION OF THE PROJECT OR UNTIL VEGETATION BECOMES ESTABLISHED ON SLOPES. EROSION PROTECTION BELOW FILL SLOPES SHALL BE PLACED IMMEDIATELY AFTER CLEARING, PRIOR TO EMBANKMENT CONSTRUCTION.
- ALL DISTURBED AREAS SHALL BE REVEGETATED AS QUICKLY AS POSSIBLE. ALL CUT AND FILL SLOPES SHALL BE SEEDED WITHIN 72 HOURS AFTER GRADING.
- ALL WORK AREAS TO BE STABILIZED AT THE END OF EACH WORK DAY AND PRIOR TO ANY PREDICTED SIGNIFICANT RAIN EVENT.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - BASE COURSE GRAVELS, WHICH MEET THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2, ARE INSTALLED IN AREAS TO BE PAVED
 - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED
 - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED
- ALL CATCH BASINS, MANHOLES, AND DRAIN LINES SHALL BE THOROUGHLY CLEANED OF ALL SEDIMENT AND DEBRIS AFTER ALL AREAS HAVE BEEN STABILIZED.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SLOPE STABILITY DURING CONSTRUCTION.
- THE EROSION CONTROL PRACTICES SHOWN ON THESE PLANS ARE ILLUSTRATIVE ONLY AND SHALL BE SUPPLEMENTED BY THE SITE CONTRACTOR AS NEEDED.



SITE DEVELOPMENT PLANS
 TAX MAP 198 LOTS 11, 12, 14, 15, & 16
EROSION CONTROL PLAN
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

SCALE: _____ **DECEMBER 13, 2023**

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____
 CHAIRMAN _____ SIGNATURE DATE _____ AND
 SECRETARY _____ SIGNATURE DATE _____

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PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

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Seacoast Division

TFM

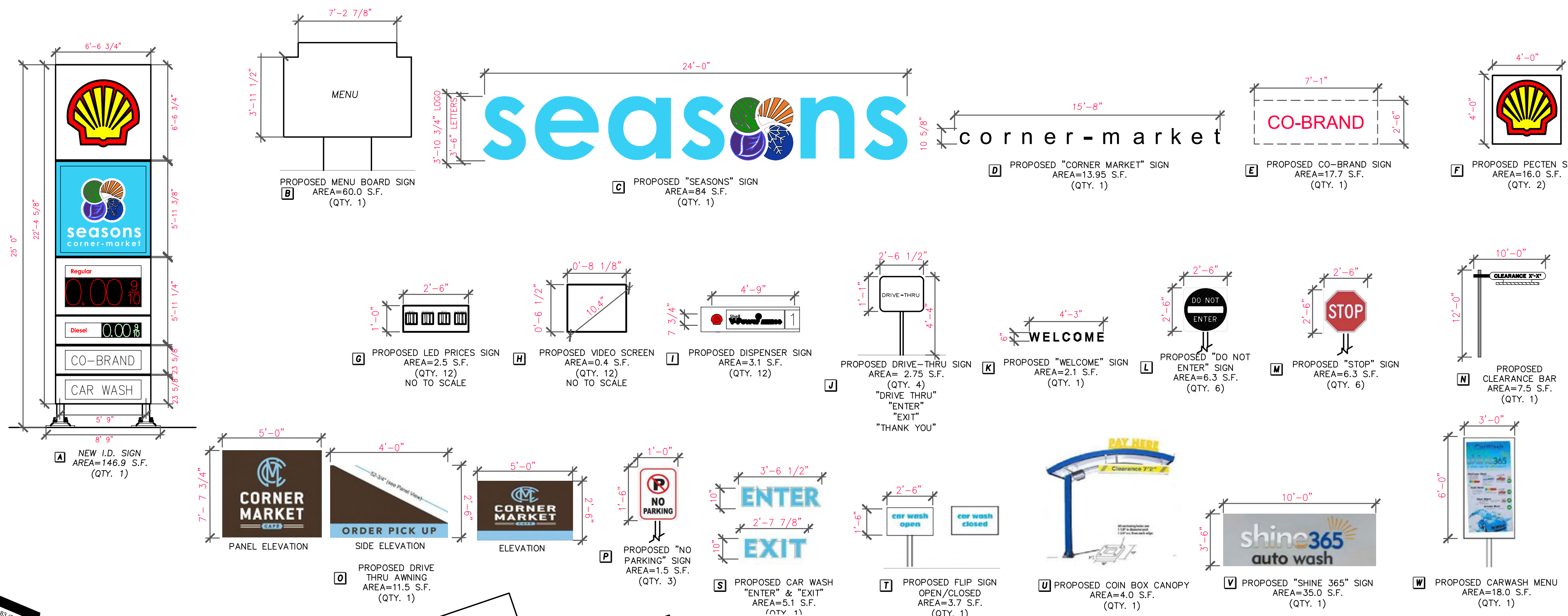
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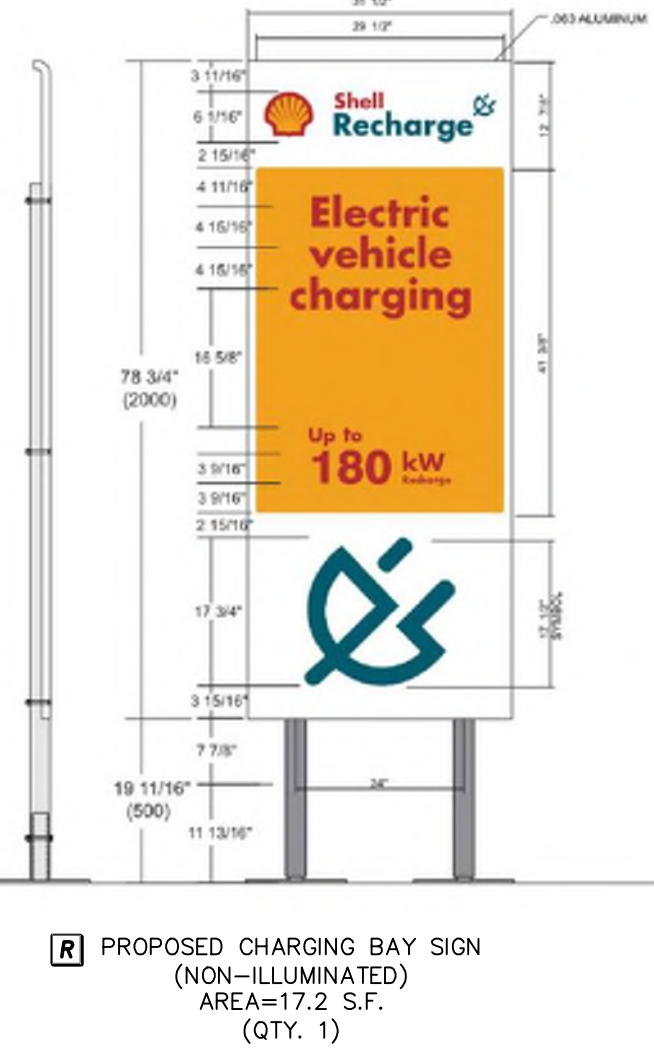
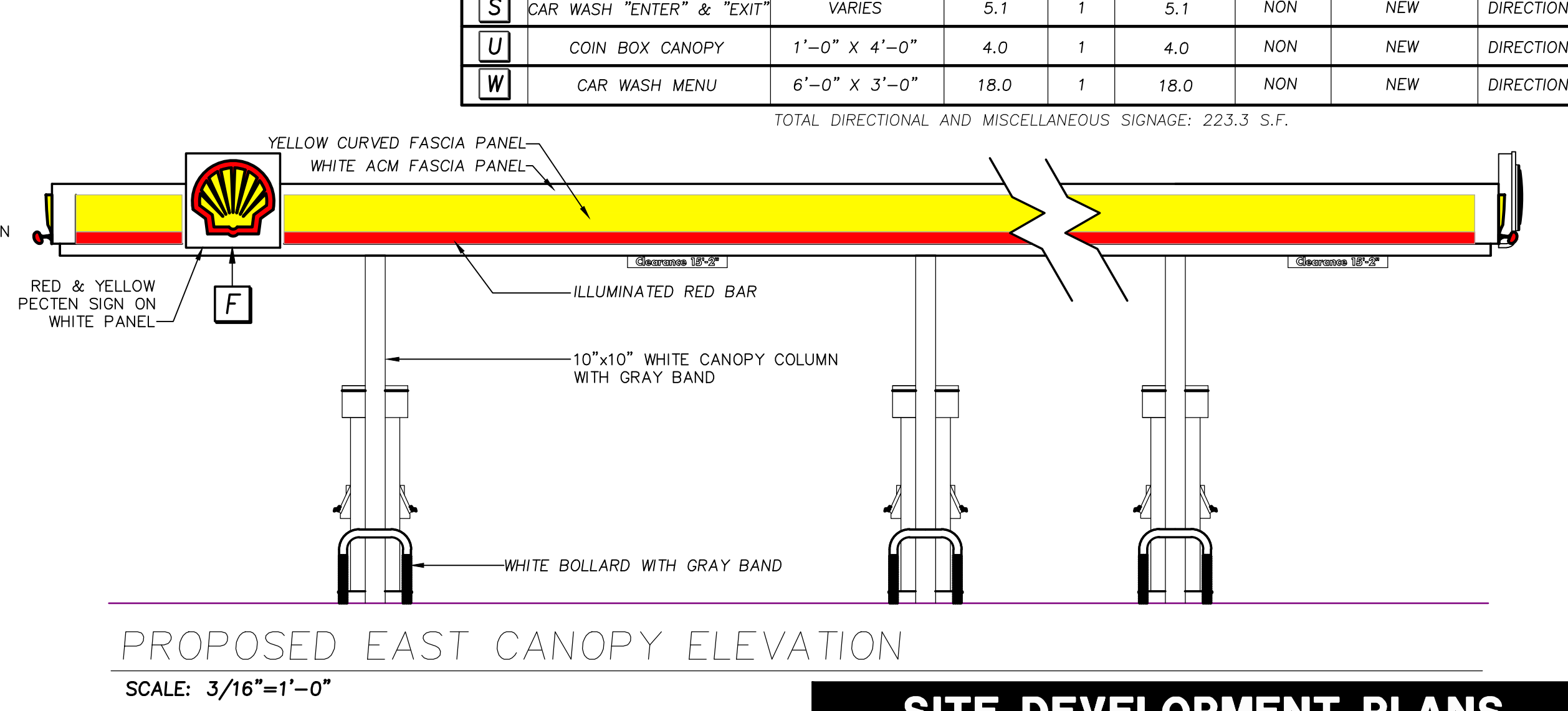
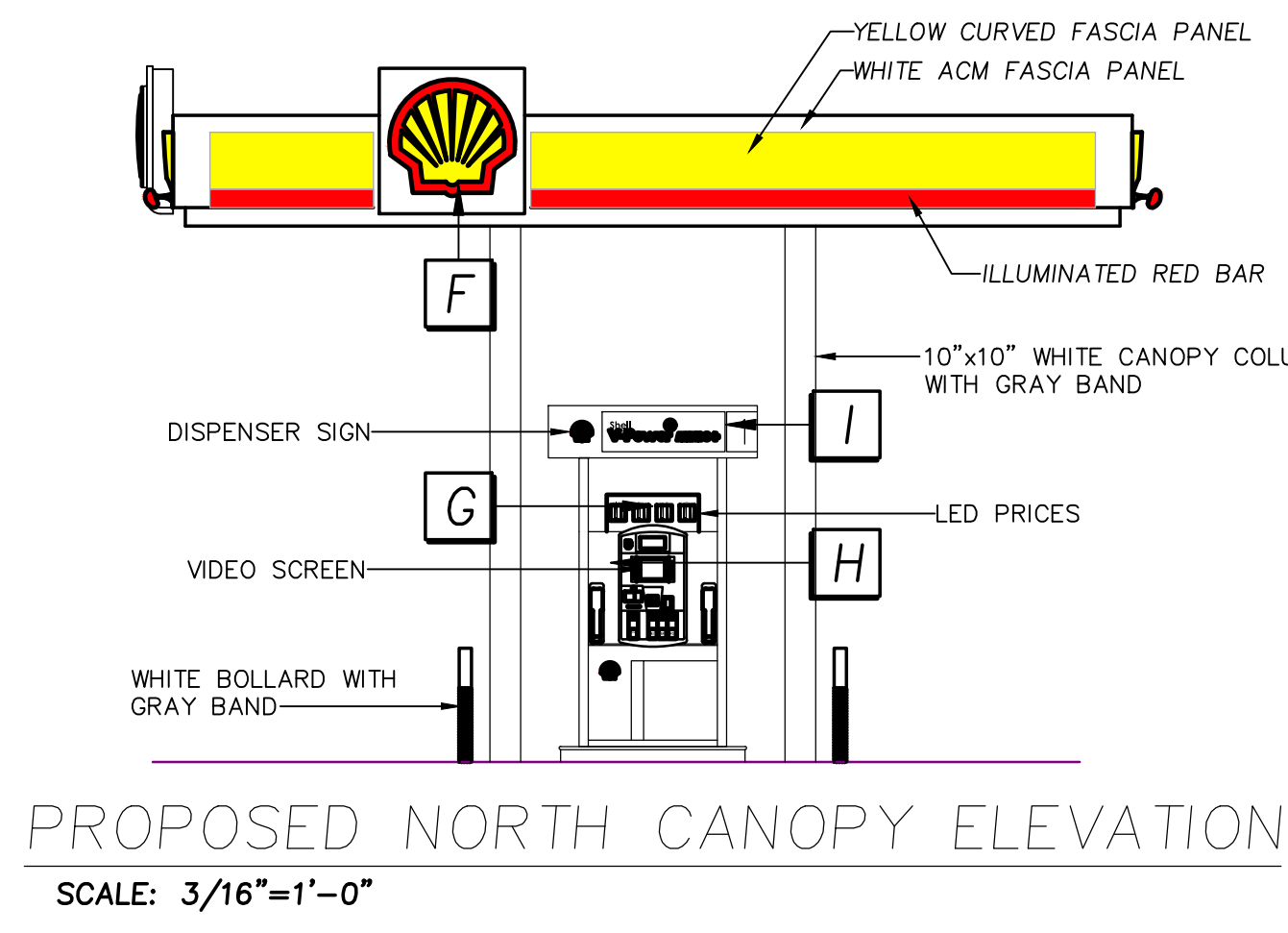
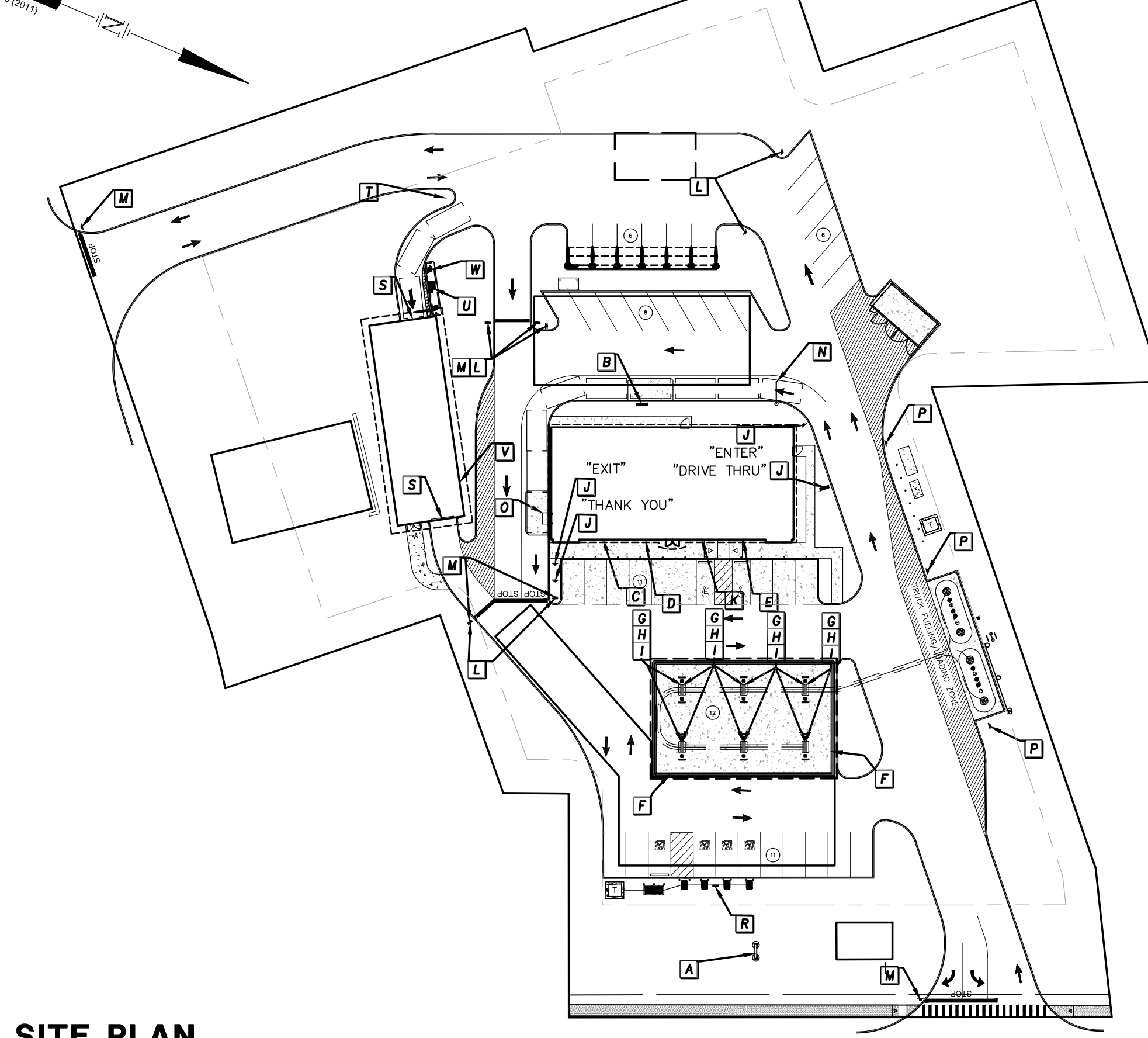
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 CK CRR CADFILE
 18149-00_EROSION

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Oct 08, 2024 - 4:14pm \\fmr-bedford\projects\civil\survey\MSC Projects\18149-00 Colbea - Seasons Market - Hudson, NH\Design\PRODUCTION DRAWINGS\18149-00_Erosion.dwg



PROPOSED SIGN SCHEDULE							
MARK	DESCRIPTION	SIZE	AREA (SF)	QUAN.	SIZE (SF)	ILLUMINATION	REMARKS
FREESTANDING SIGNS							
A	I.D. SIGN	6'-6 3/4" X 25'-0"	146.9	1	146.9	INT	NEW
TOTAL FREESTANDING SIGNAGE: 146.9 S.F., 25.0' TALL (100 S.F. TOTAL PERMITTED; MAXIMUM HEIGHT 30')							
B	MENU BOARD SIGN	3'-11 1/2" X 7'-2 7/8"	60.0	1	60.0	INT	NEW
TOTAL MENU BOARD SIGNAGE: 60 S.F.							
WALL SIGNS							
C	"SEASONS" SIGN	24' X 3'-6"	84	1	84	INT	NEW
D	"CORNER MARKET" SIGN	15'-8" X 0'-10 5/8"	13.95	1	13.95	NON	NEW
E	CO-BRAND SIGN	7'-1" X 2'-6"	17.7	1	17.7	INT	NEW
F	CANOPY SIGN	4'-0" X 4'-0"	16.0	2	32.0	INT	NEW
O	DRIVE-THRU AWNING	4'-4 1/2" X 5'-0"	11.5	1	11.5	NON	NEW
T	FLIP SIGN OPEN/CLOSED	1'-6" X 2'-6"	3.7	1	3.7	NON	NEW
V	"SHINE 365" SIGN	3'-6" X 10'-0"	35.0	1	35.0	NON	NEW
TOTAL WALL SIGNAGE: 197.85 S.F. (276 S.F. PERMITTED - 2X BUILDING FRONTAGE) (CONVENIENCE STORE FRONTAGE = 108'; CAR WASH FRONTAGE = 30')							
DIRECTIONAL AND MISCELLANEOUS SIGNS							
G	LED PRICES	2'-6" X 1'-0"	2.5	12	30.0	INT	NEW
H	VIDEO SCREEN	0'-8 1/2" X 0'-6 1/2"	0.4	12	4.8	INT	NEW
J	DISPENSER SIGN	4'-9" X 0'-7 3/4"	3.1	12	37.2	NON	NEW
K	DRIVE-THRU SIGN	2'-6" X 2'-0"	2.75	4	11.0	INT	NEW
L	"WELCOME" SIGN	4'-3" X 0'-6"	2.1	1	2.1	INT	NEW
M	"DO NOT ENTER" SIGN	2'-6" X 2'-6"	6.3	7	44.1	NON	NEW
N	"STOP" SIGN	2'-6" X 2'-6"	6.3	6	37.8	NON	NEW
P	CLEARANCE BAR	7'-10 1/2" X 0'-11 1/2"	7.5	1	7.5	NON	NEW
R	"NO PARKING" SIGN	1'-0" X 1'-6"	1.5	3	4.5	NON	NEW
S	CHARGING BAY SIGN	6'-6 1/2" X 2'-7 1/2"	17.2	1	17.2	NON	NEW
S	CAR WASH "ENTER" & "EXIT"	VARIABLE	5.1	1	5.1	NON	NEW
U	COIN BOX CANOPY	1'-0" X 4'-0"	4.0	1	4.0	NON	NEW
W	CAR WASH MENU	6'-0" X 3'-0"	18.0	1	18.0	NON	NEW
TOTAL DIRECTIONAL AND MISCELLANEOUS SIGNAGE: 223.3 S.F.							



APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____

CHAIRMAN _____ SIGNATURE DATE _____ AND _____

SECRETARY _____ SIGNATURE DATE _____

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CONTACT OUR SALES DEPARTMENT FOR A QUOTE ON ANY SIGNAGE PROJECTS. WE ARE AVAILABLE 7-11 P.M. DURING BUSINESS HOURS PRIOR TO CONSTRUCTION.

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2	7/18/2024	NO REVISIONS THIS SHEET		
1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
SIGNAGE PLAN & ELEVATIONS
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

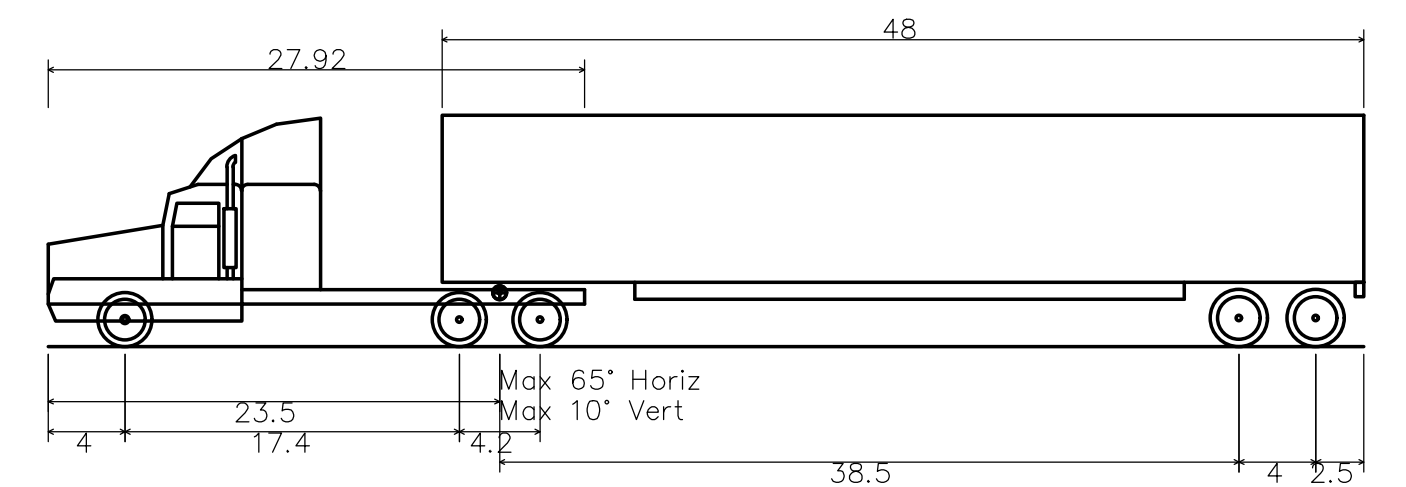
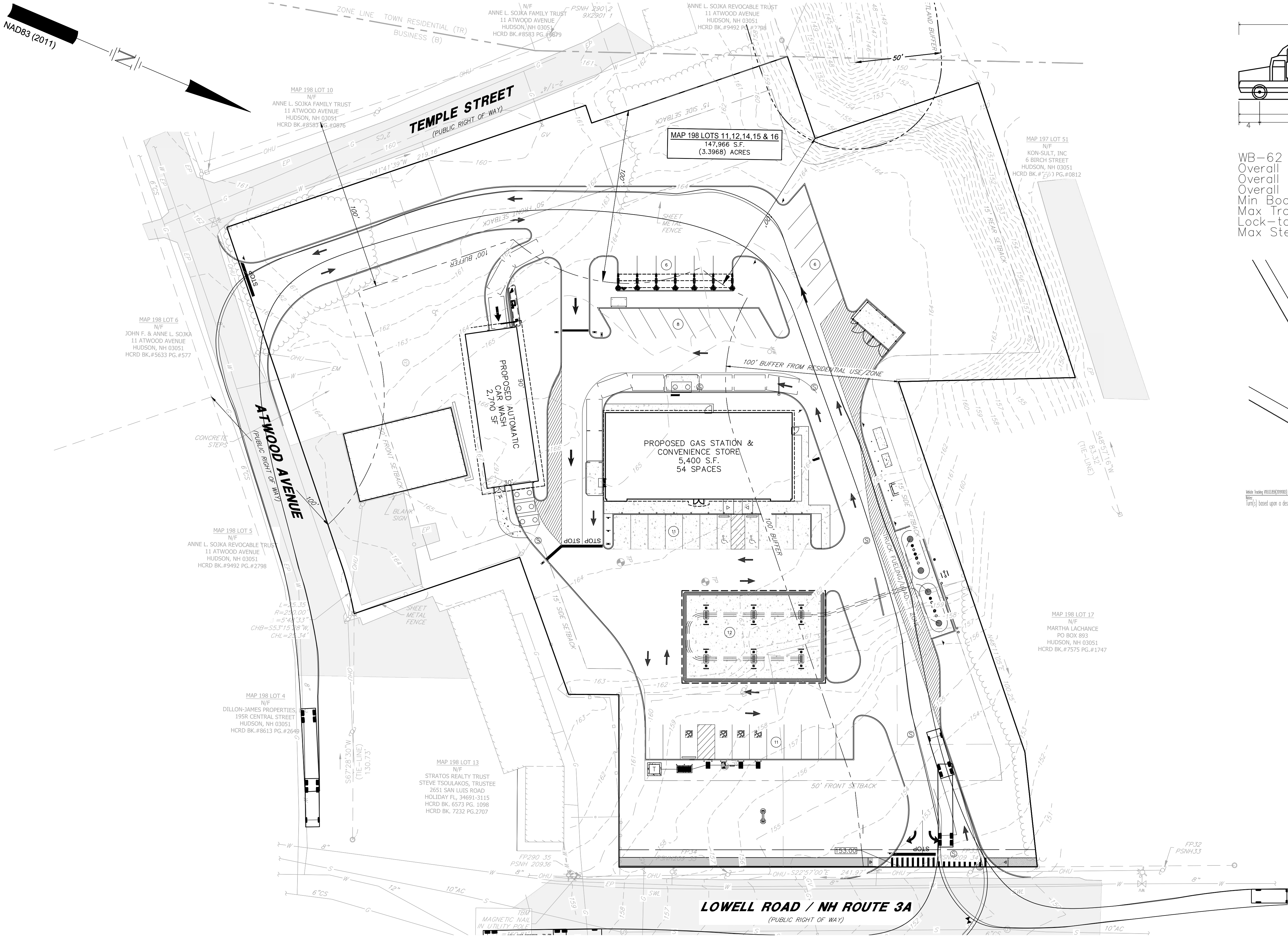
SCALE: NTS APRIL 18, 2024

TFM	Seacoast Division Civil Engineers Structural Engineers Traffic Engineers Land Surveyors Landscape Architects Scientists	170 Commerce Way, Suite 102 Portsmouth, NH 03801 Phone (603) 431-2222 Fax (603) 431-0910 www.tfmoran.com
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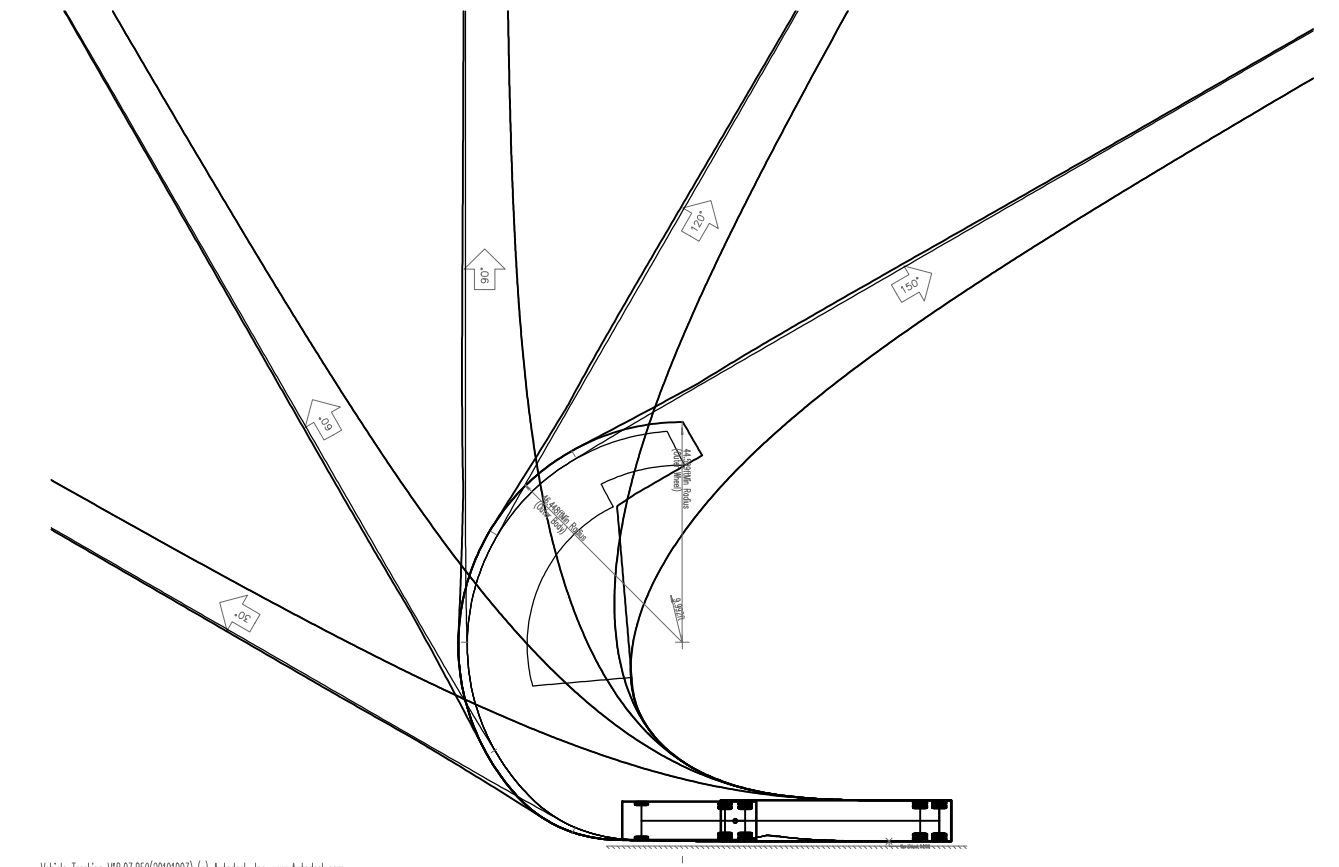
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	CK	CRR	CADFILE		18149-00_SIGN				

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WB-62 – Interstate Semi-Trailer
 Overall Length 68.500ft
 Overall Width 8.500ft
 Overall Body Height 12.052ft
 Min Body Ground Clearance 1.334ft
 Max Track Width 8.500ft
 Lock-to-lock time 6.00s
 Max Steering Angle (Virtual) 28.40°



WB-62 – Interstate Semi-Trailer
 Turn(s) based upon a design speed of 5.00mph.

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
WB-62 TRUCK MOVEMENT PLAN
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=60' (11"x17')
SCALE: 1"=30' (22"x34') **DECEMBER 13, 2023**

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HORIZONTAL SCALE 1"=30'
 30 15 0 30

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Seacoast Division

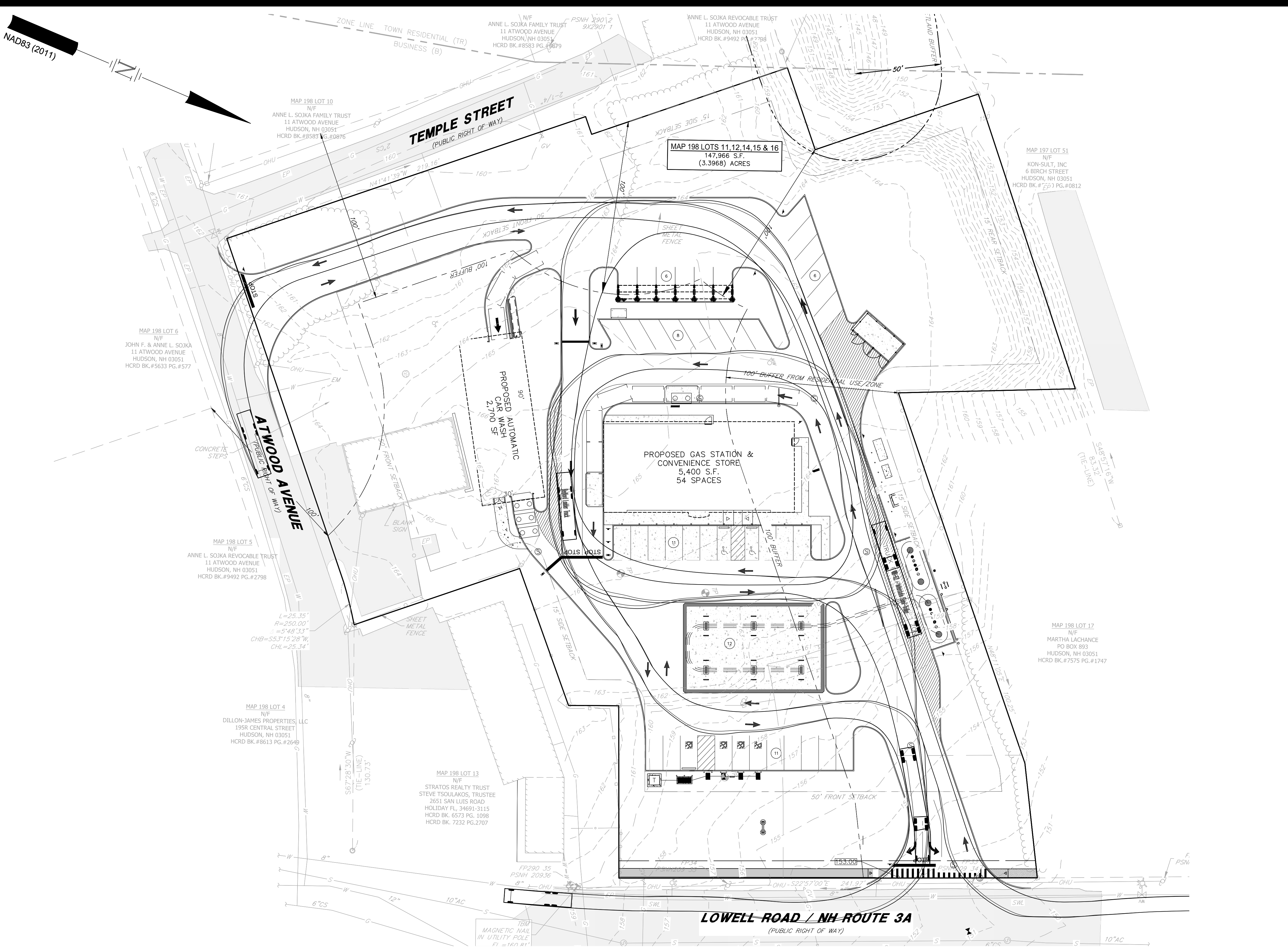
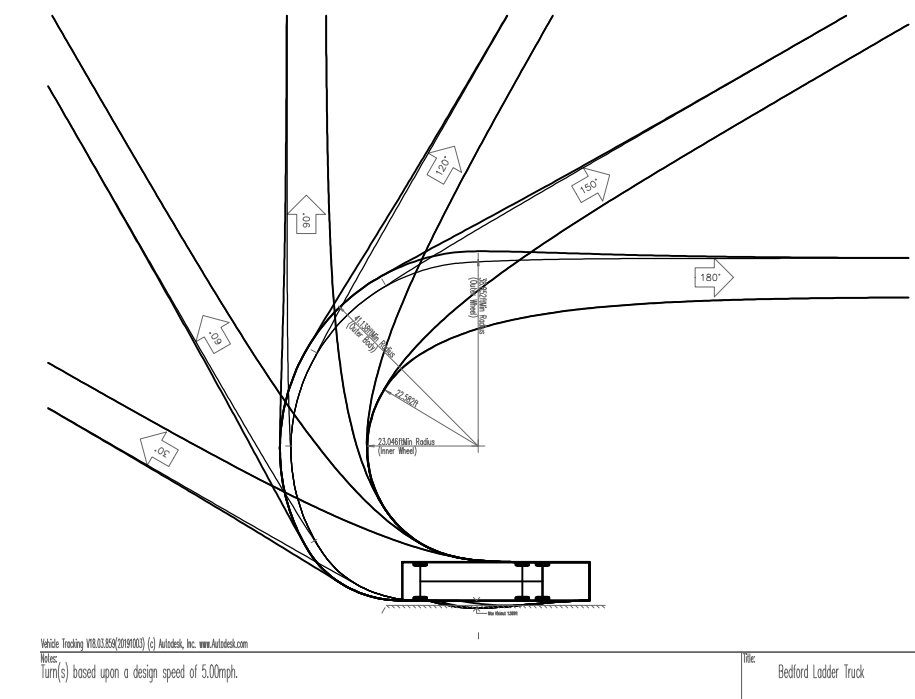
Civil Engineers
 Structural Engineers
 Traffic Engineers
 Land Surveyors
 Landscape Architects
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C-16

NAD83 (2011)



SITE DEVELOPMENT PLANS
 TAX MAP 198 LOTS 11, 12, 14, 15, & 16
FIRE TRUCK MOVEMENT PLAN
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=60' (11'x17')
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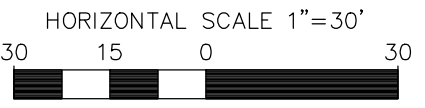
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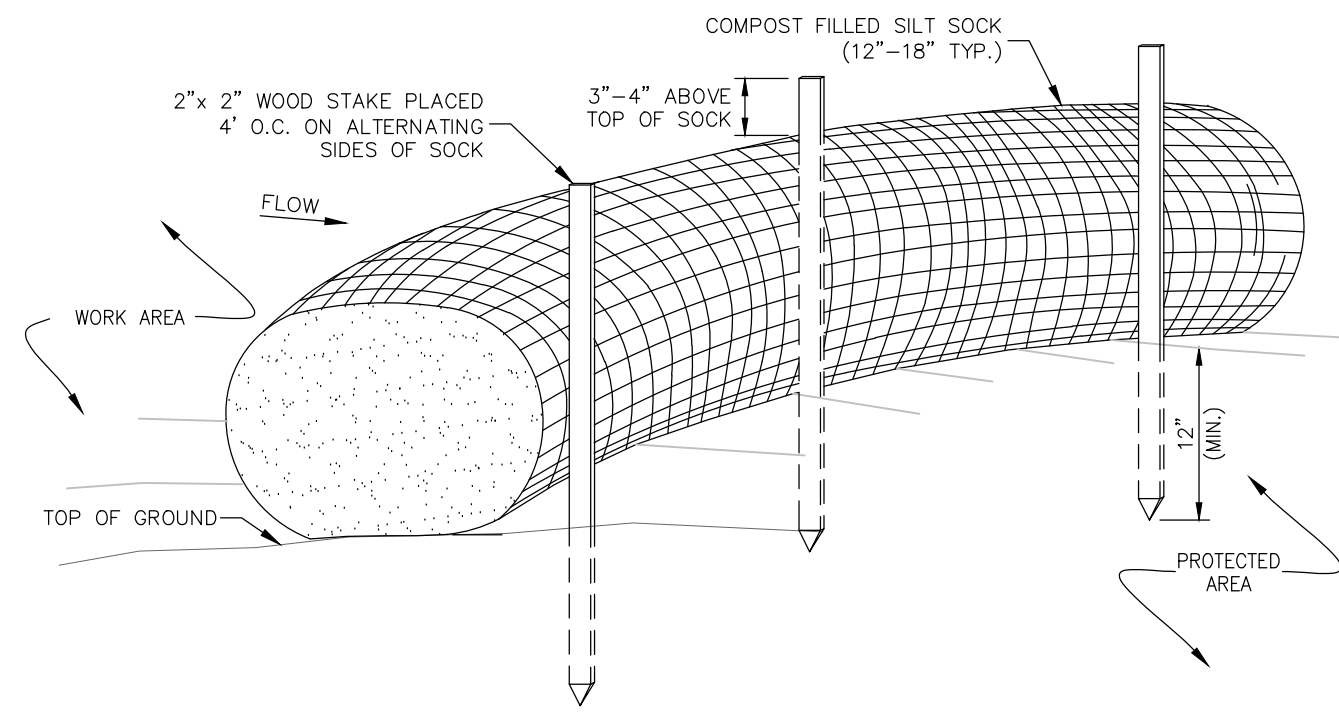
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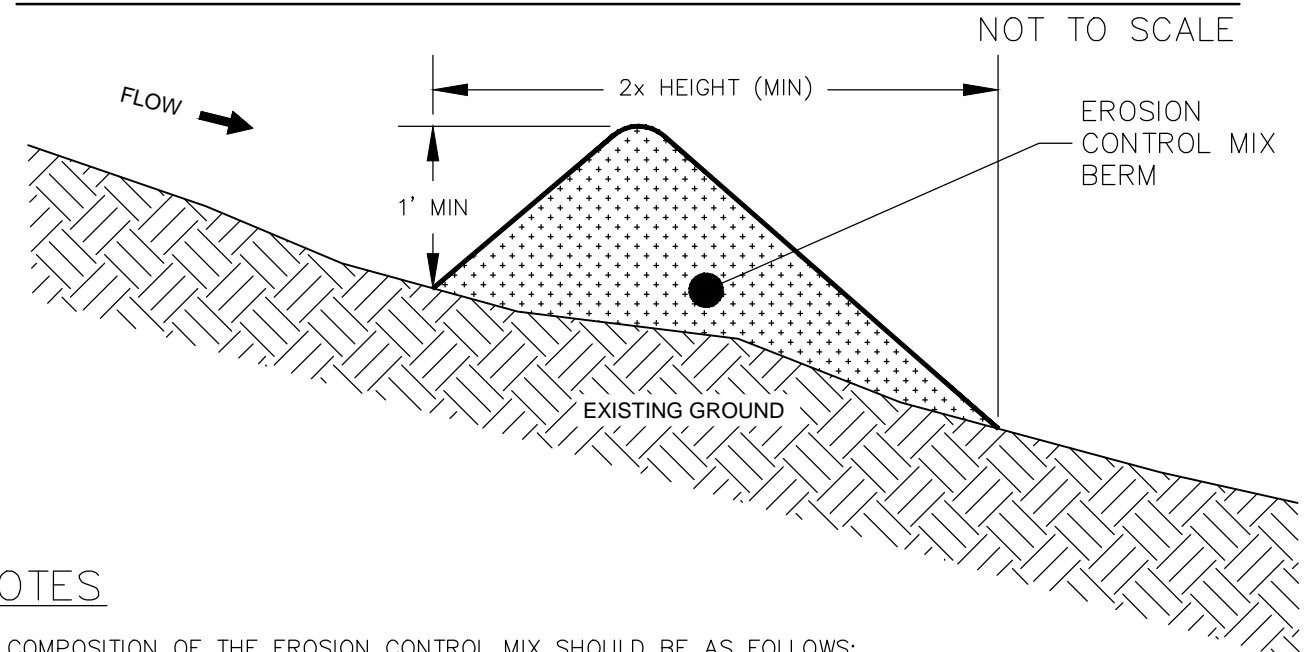
FILE 18149.00 DR JKC FB
 CK CRR CADFILE 18149-00_TRUCK C-17

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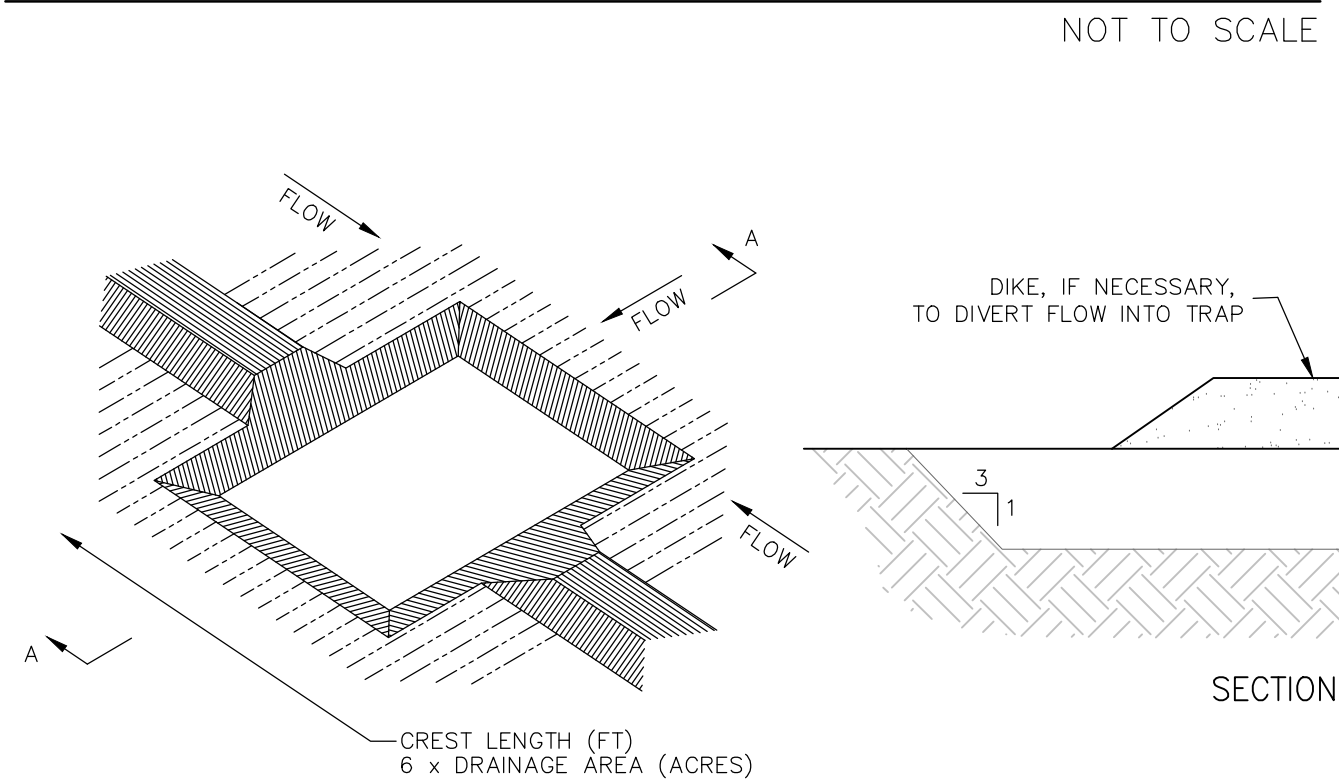
- NOTES**
- SILT SOCK SHALL BE FILTREXXSM SILT SOCKSM OR APPROVED EQUIVALENT.
 - SEE SPECIFICATIONS FOR SOCK SIZE AND COMPOST FILL REQUIREMENTS.
- SILT SOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED AS NEEDED.
- COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

SILT SOCK



- NOTES**
- COMPOSITION OF THE EROSION CONTROL MIX SHOULD BE AS FOLLOWS:
 - EROSION CONTROL MIX SHOULD CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH. THE MIX COMPOSITION SHOULD MEET THE FOLLOWING STANDARDS:
 - THE ORGANIC MATTER CONTENT SHOULD BE BETWEEN 25% AND 65%, DRY WEIGHT BASIS.
 - PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING A 3" SCREEN, 90% TO 100% PASSING A 1" SCREEN, 70% TO 100% PASSING A 3/4" SCREEN, AND A MAXIMUM OF 30% TO 75% PASSING A 1/4" SCREEN.
 - THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
 - THE MIX SHOULD NOT CONTAIN SILTS, CLAYS OR FINE SANDS.
 - SOLUBLE SALTS CONTENT SHOULD BE < 4.0 mmhos/cm.
 - THE pH SHOULD BE BETWEEN 5.0 AND 8.0.
 - THE BARRIER MUST BE PLACED ALONG A RELATIVELY LEVEL CONTOUR. IT MAY BE NECESSARY TO CUT TALL GRASSES OR WOODY VEGETATION TO AVOID CREATING VOIDS AND BRIDGES THAT WOULD ENABLE FINES TO WASH UNDER THE BARRIER THROUGH THE GRASS BLADES OR PLANT STEMS.
 - THE BARRIER MUST BE A MINIMUM OF 12" HIGH, AS MEASURED ON THE UPHILL SIDE OF THE BARRIER, AND A MINIMUM OF TWO FEET WIDE.

EROSION CONTROL MIX BERM



- NOTES**
- SEDIMENT TRAP TO BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL BASINS/PONDS ARE STABILIZED. IF IT IS DETERMINED THAT CONSTRUCTION OF A SEDIMENT TRAP IS WARRANTED, CONSULT WITH ENGINEER TO DETERMINE APPROPRIATE NUMBER AND DIMENSIONS.

SEDIMENT TRAP

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____

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SECRETARY _____ SIGNATURE DATE _____

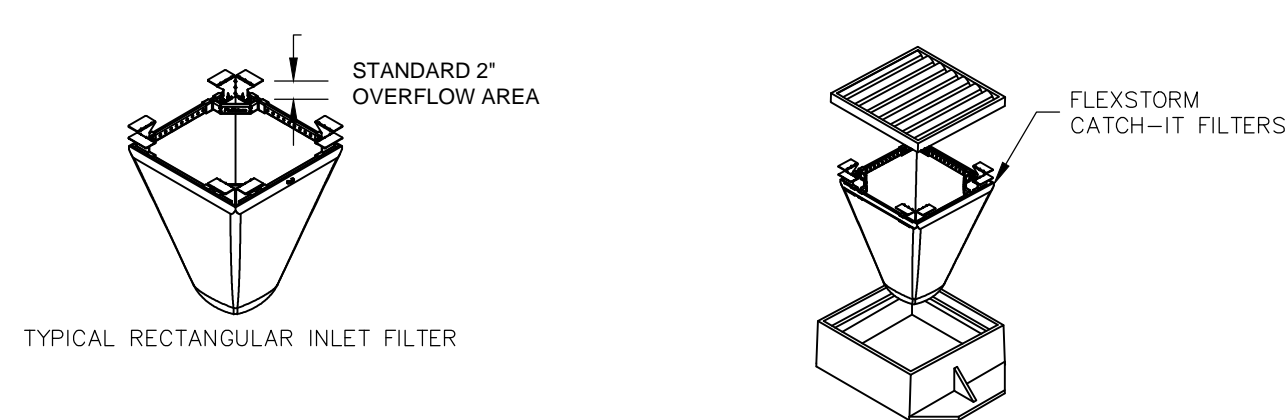
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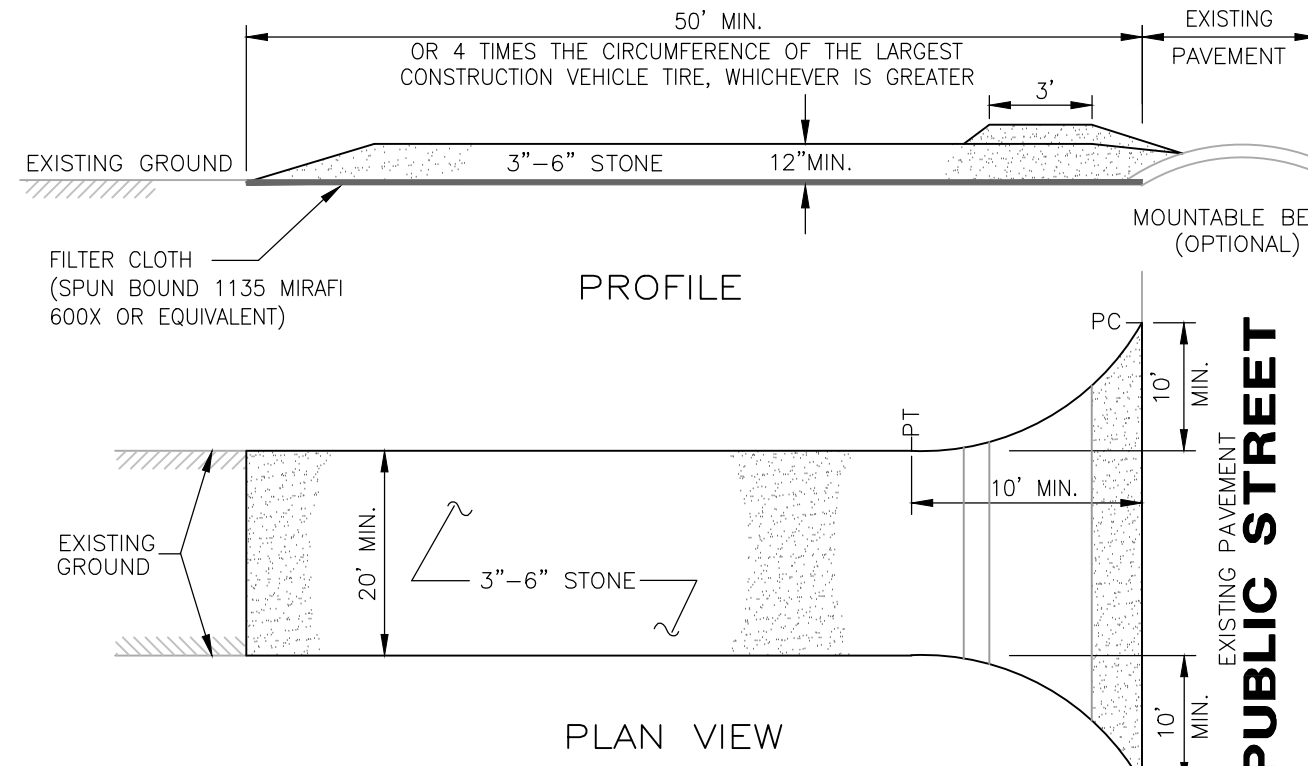
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- NOTES:**
- INSTALL PER MANUFACTURER'S SPECIFICATIONS.
 - INSPECTION SHOULD OCCUR FOLLOWING ANY RAIN EVENT > 1/4".
 - EMPTY THE SEDIMENT BAG PER MANUFACTURER'S SPECIFICATIONS.
 - REMOVED CAKED ON SILT FROM SEDIMENT BAG AND FLUSH WITH MEDIUM SPRAY WITH OPTIMAL FILTRATION.
 - REPLACE BAG IF TORN OR PUNCTURED TO > 1/2" DIAMETER ON LOWER HALF OF BAG.
- ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC.
A DIVISION OF ADS, INC.
WWW.INLETFILTERS.COM
(866) 287-8655 INFO@INLETFILTERS.COM

INLET PROTECTION

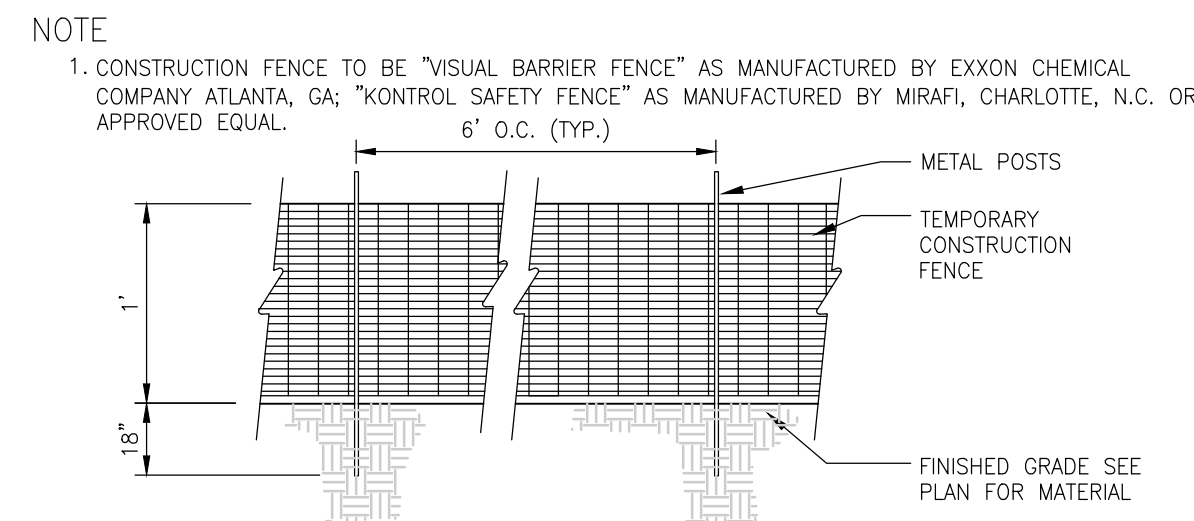
NOT TO SCALE



- NOTES**
- FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE SURFACE.
 - WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
 - MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
 - WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
 - PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN STORM EVENT.

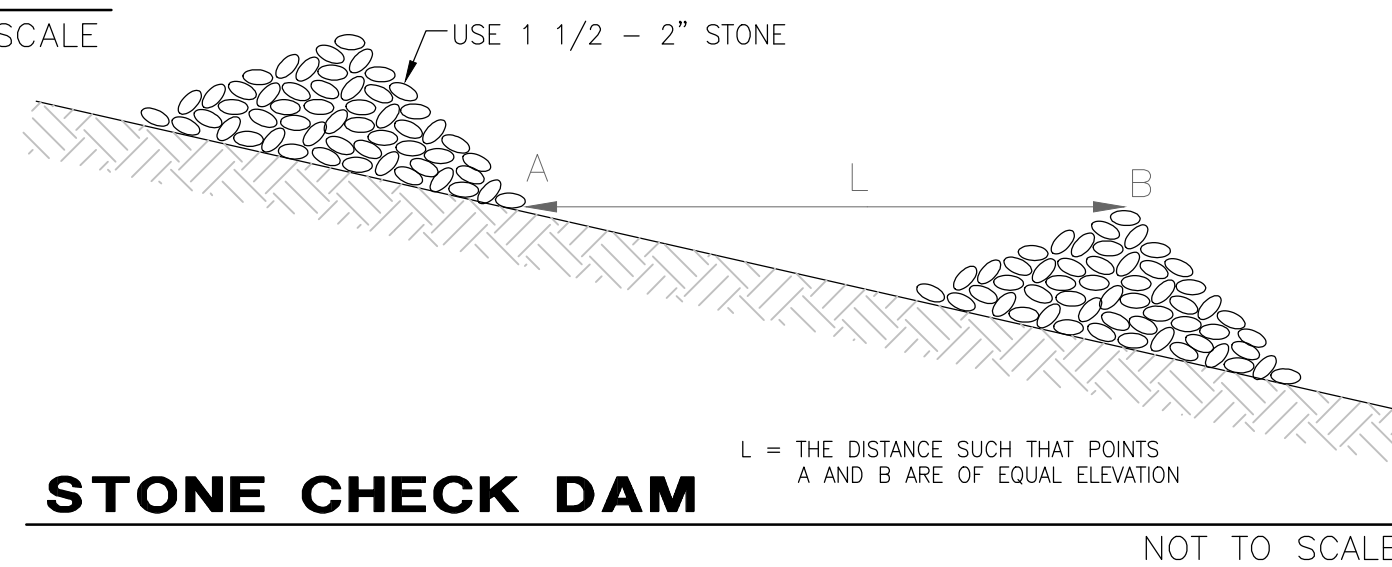
STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



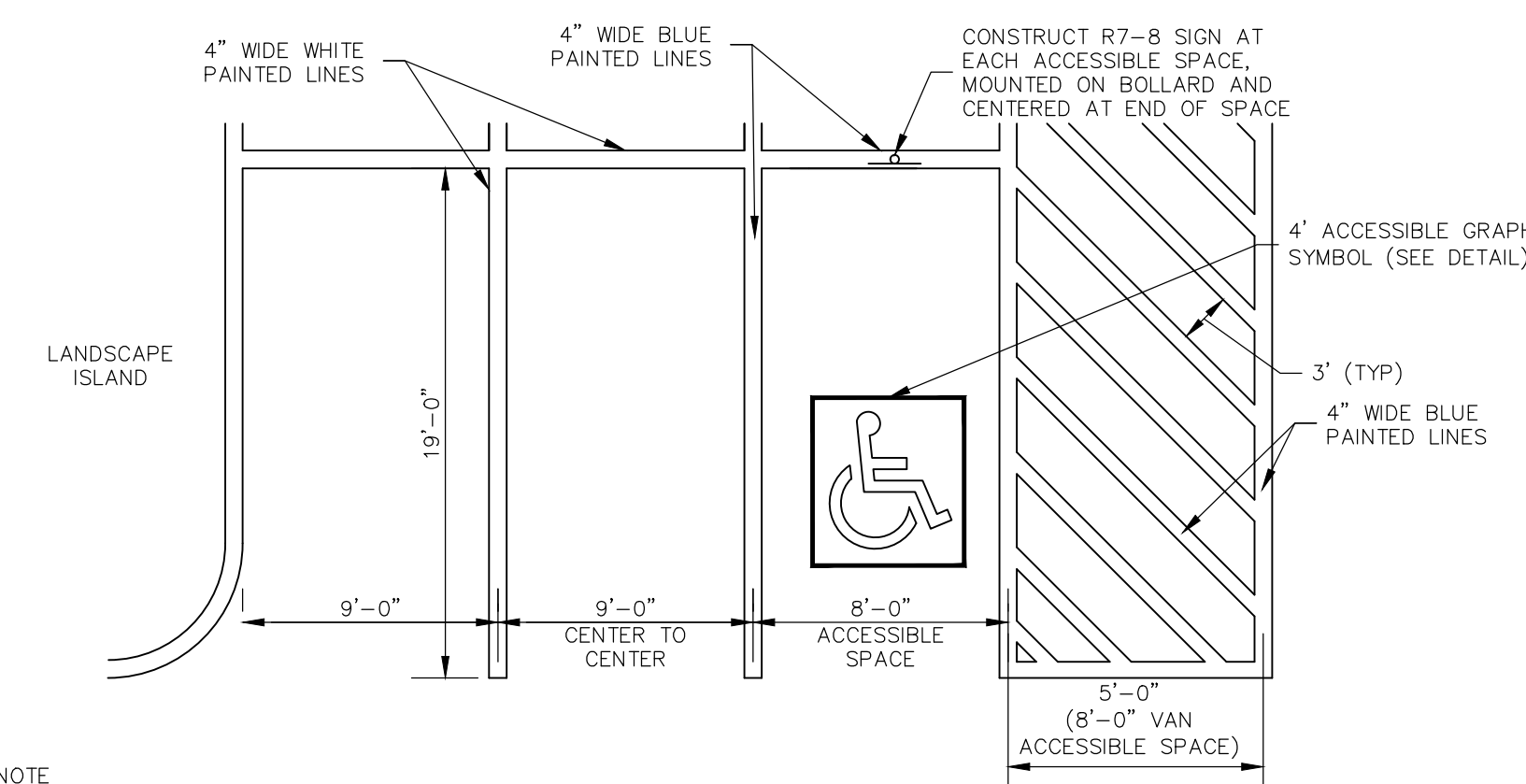
TEMPORARY CONSTRUCTION FENCE

NOT TO SCALE



STONE CHECK DAM

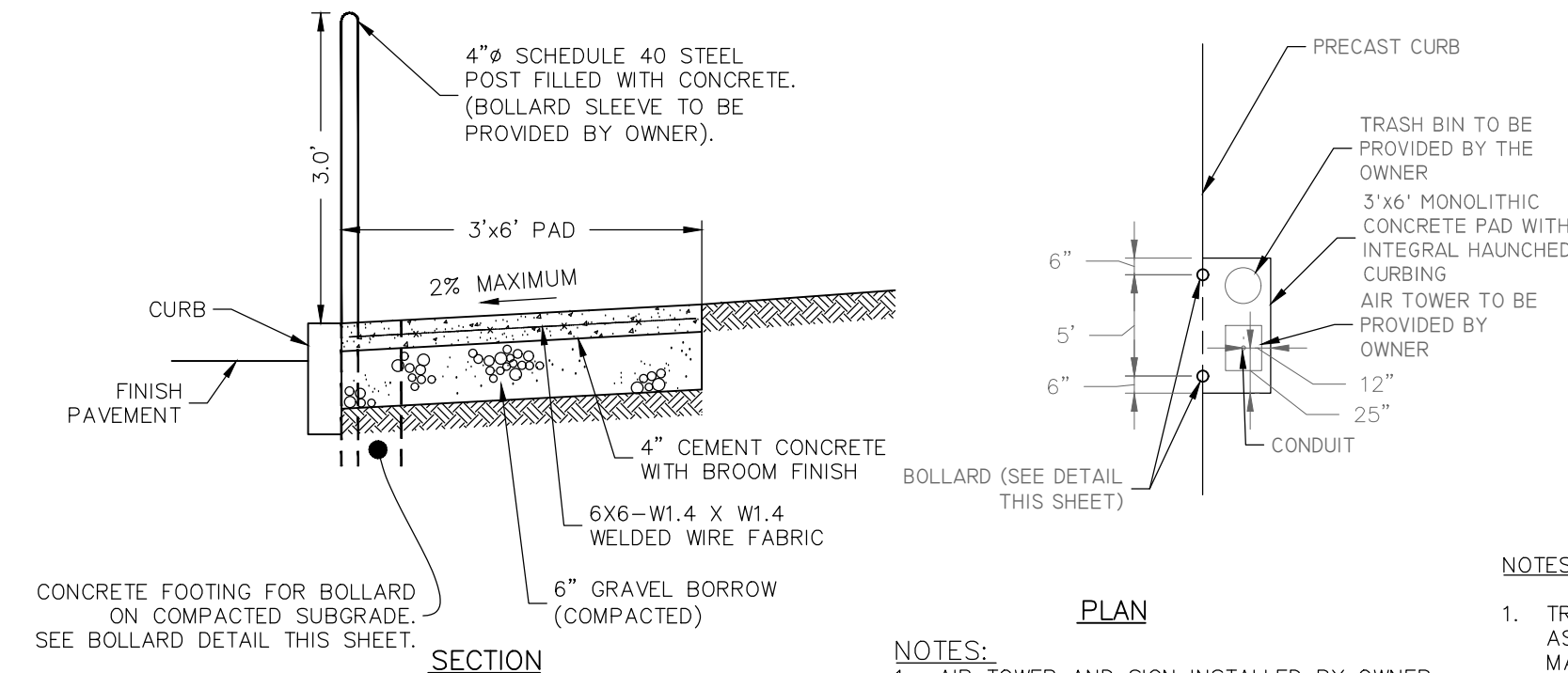
NOT TO SCALE



- NOTE**
- TRAFFIC PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER AND SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F". APPLY TWO COATS.
 - SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT, LATEST EDITION.
 - ALL PAINTED ISLANDS SHALL BE 4" WIDE DIAGONAL LINES AT 3'-0" OC BORDERED BY 4" WIDE LINES.
 - 2% MAXIMUM CROSS SLOPE ALLOWED IN ACCESSIBLE PARKING SPACES AND ACCESS AISLES.

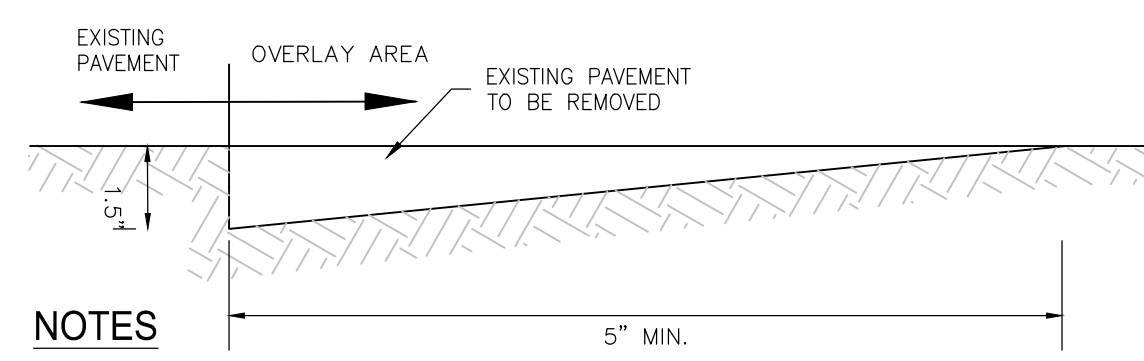
TYPICAL PARKING LAYOUT

NOT TO SCALE



AIR TOWER FOUNDATION DETAIL

NOT TO SCALE



- NOTES**
- USE KEY JOINT AT ALL LOCATIONS WHERE OVERLAY MEETS EXISTING PAVEMENT OR CONCRETE.
 - NEW PAVEMENT SHALL BE FLUSH WITH EXISTING PAVEMENT AND SHALL MEET OVERLAY GRADE WHERE IT ABUTS EXISTING PAVEMENT TO BE OVERLAYED.

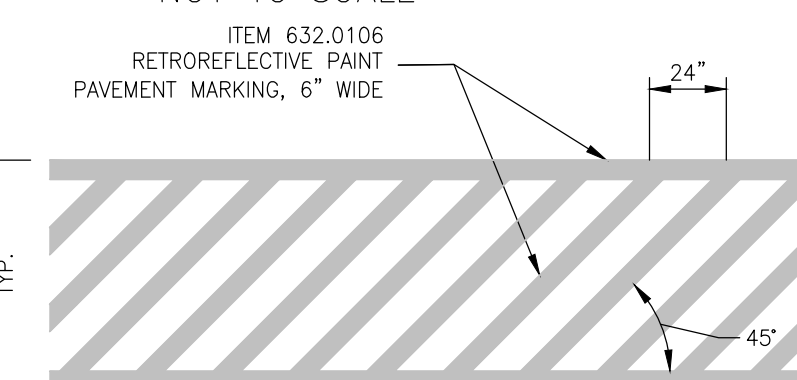
KEY JOINT

NOT TO SCALE

- NOTES**
- TRAFFIC PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER AND SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F". APPLY TWO COATS.
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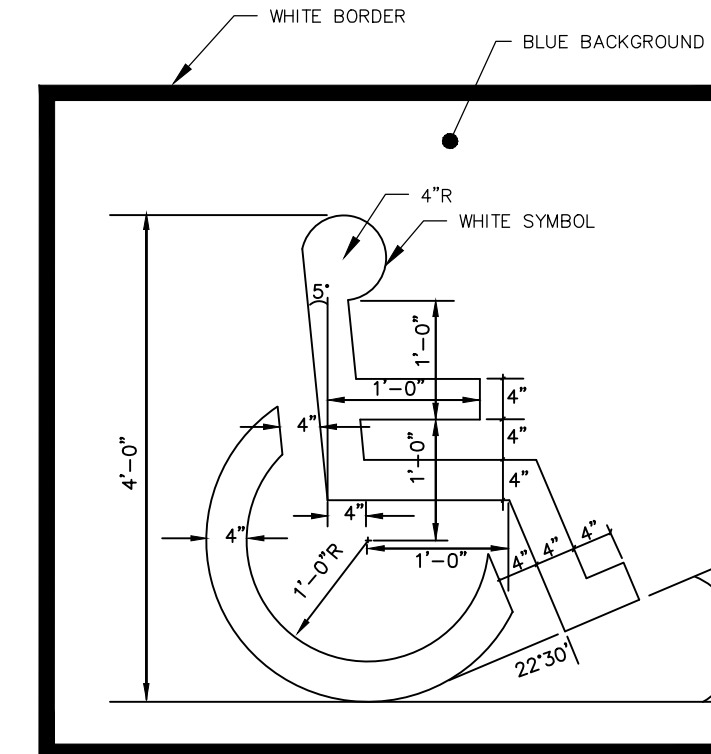
PAINTED ARROW

NOT TO SCALE



CROSSWALK (ON-SITE)

NOT TO SCALE



- NOTES**
- TRAFFIC PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER AND SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F". APPLY TWO COATS.
 - SYMBOLS AND PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT, LATEST EDITION.

ACCESSIBLE GRAPHIC SYMBOL

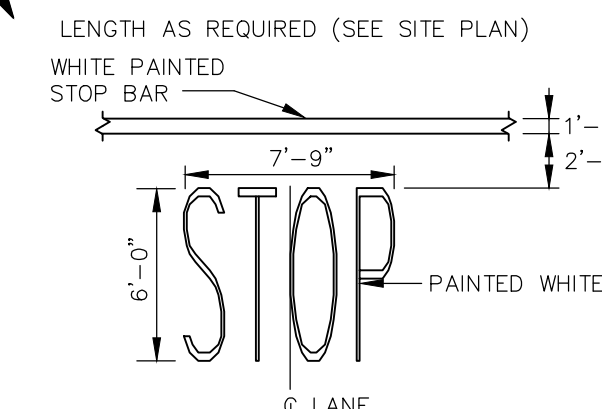
NOT TO SCALE



- NOTES:**
- SIGNS TO BE WALL MOUNTED WITH WEATHER RESISTANT DOUBLE SIDED TAPE. PLACED BEHIND ACCESSIBLE SPACES AS SHOWN ON SITE PLAN.
 - ACCESSIBLE PARKING SPACES AND SIGNAGE SHALL COMPLY WITH LATEST VERSION OF THE ADA STANDARDS FOR ACCESSIBLE DESIGN OR THE APPLICABLE STATE BUILDING CODE, WHICHEVER STANDARD CONTROLS.

ADA SIGN DETAIL

NOT TO SCALE



- NOTES**
- TRAFFIC PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER AND SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F". APPLY TWO COATS.

STOP BAR

NOT TO SCALE

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16

DETAILS

GAS STATION/CONVENIENCE STORE/CAR WASH

91-97 LOWELL ROAD, HUDSON, NH

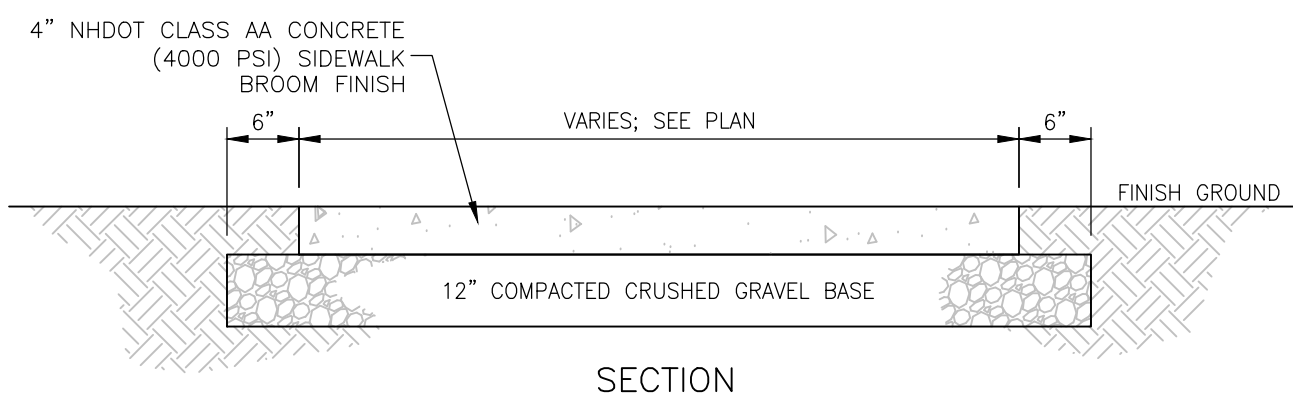
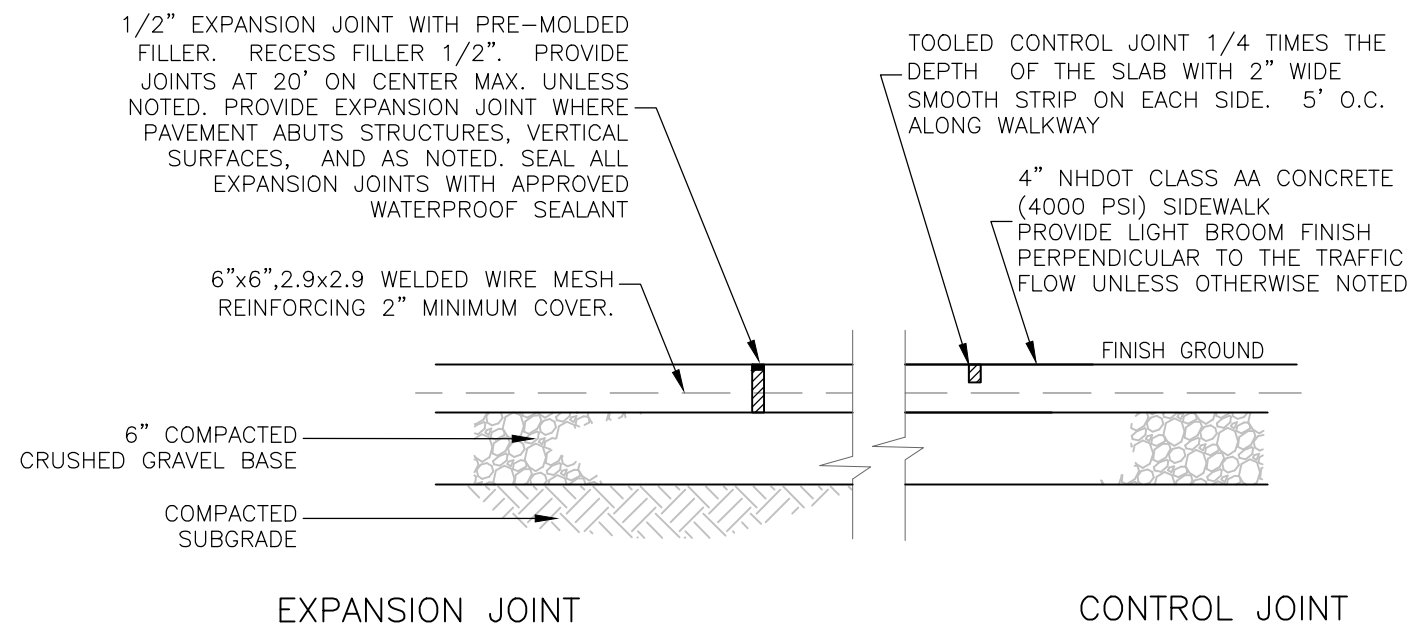
OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

SCALE: NTS

DECEMBER 13, 2023

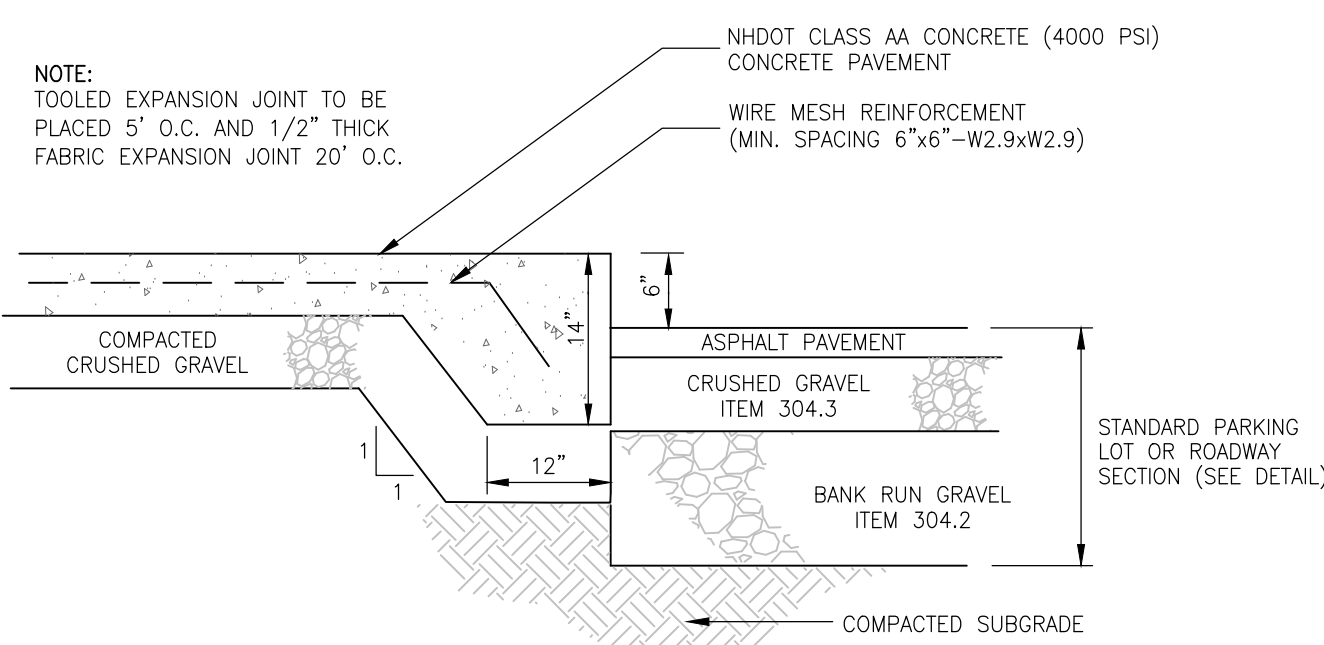
Seacoast Division		Civil Engineers	170 Commerce Way, Suite 102
TFM		Structural Engineers	Portsmouth, NH 03801
		Traffic Engineers	Phone (603) 431-2222
		Land Surveyors	Fax (603) 431-0910
		Landscape Architects	www.tfmoran.com
		Scientists	
FILE	18149.00	DR JKC FB	-
		CK CRR CADFILE	18149-00_DETAILS
			C-18

REV	DATE	DESCRIPTION	DR	CK
5	10/14/2024	REVISED PER PLANNING BOARD COMMENTS	JKC	CRR
4	9/4/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR
3	7/31/2024	REVISED PER AOT REQUIREMENTS	JKC	CRR
2	7/18/2024	REVISED PER TOWN INTERNAL REVIEW COMMENTS	JKC	CRR
1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR



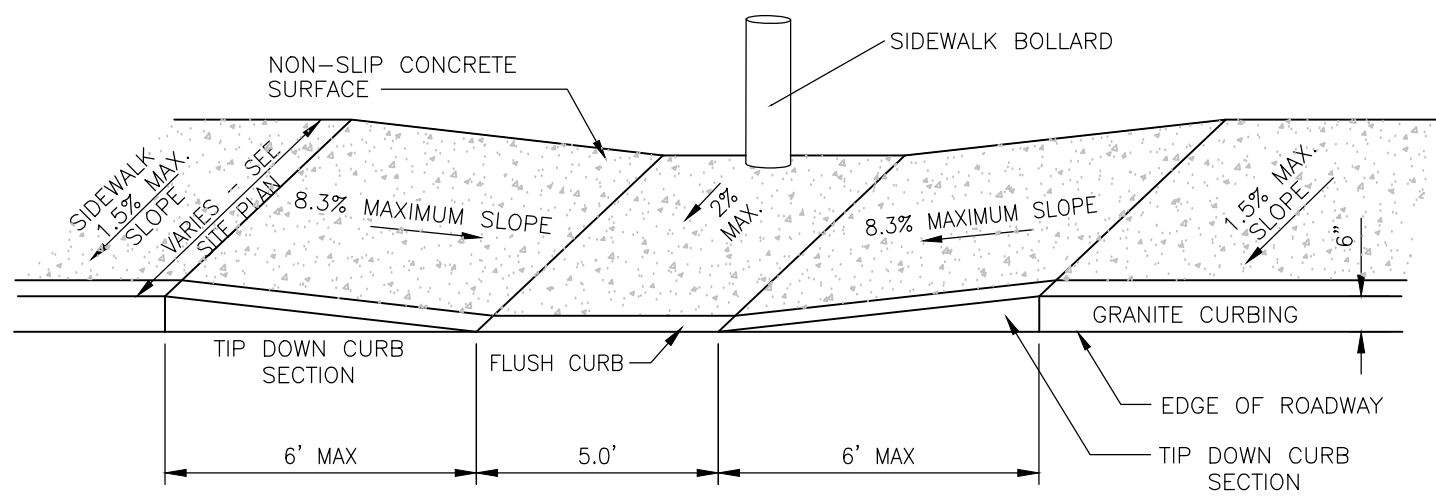
CONCRETE SIDEWALK

NOT TO SCALE



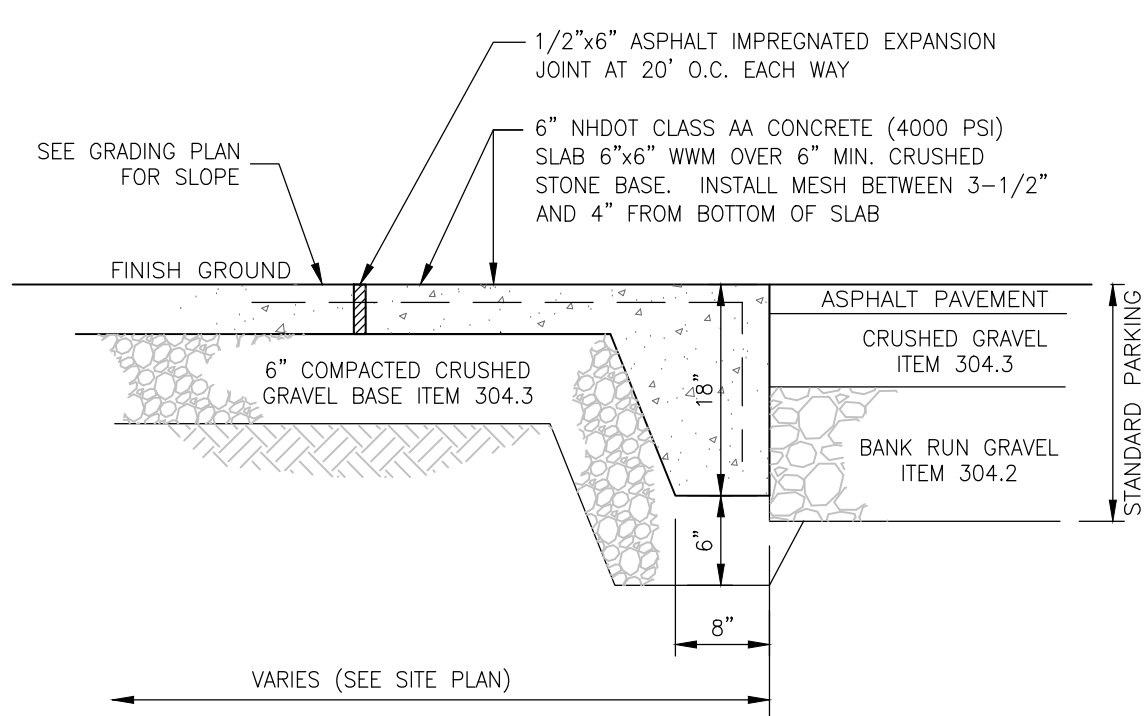
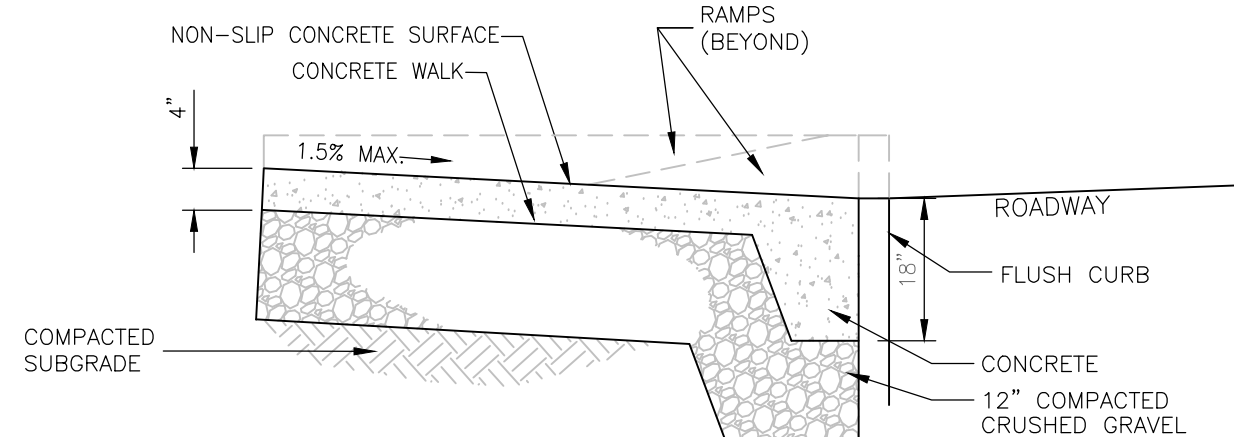
INTEGRATED CONCRETE CURB AT SIDEWALK

NOT TO SCALE



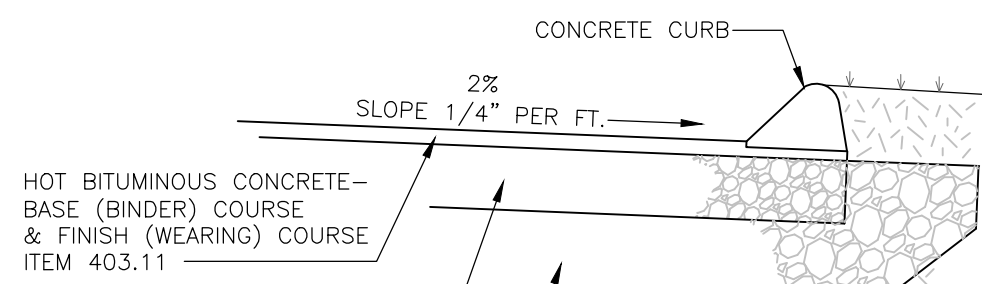
ACCESSIBLE RAMP RECESSED IN WALK

NOT TO SCALE



CONCRETE LOADING APRON

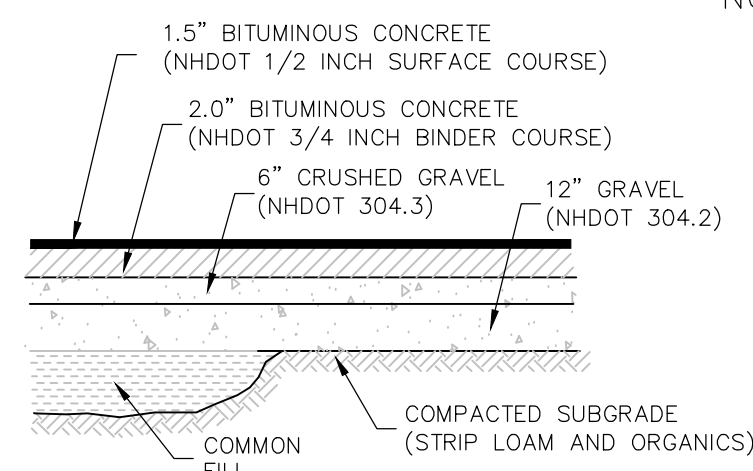
NOT TO SCALE



- NOTES**
- SEE GRADING & DRAINAGE PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
 - PROVIDE CLEAN BUTT TO EXISTING PAVEMENT- USE TACK COAT. SPECIFICALLY, A TACK COAT SHALL BE PLACED ATOP THE BINDER COURSE PAVEMENT PRIOR TO PLACING THE WEARING COURSE.
 - REMOVE ALL LOAM AND/OR YIELDING MATERIAL BELOW PAVEMENT.
 - ALL PAVEMENT, BASE MATERIALS AND WORKMANSHIP TO BE IN COMPLIANCE WITH N.H.D.O.T. "STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION.
 - BITUMINOUS CONCRETE SHALL BE COMPACTED TO AT LEAST 92.5% OF THEORETICAL MAXIMUM DENSITY AS DETERMINED BY ASTM D2041 OR AASHTO T209. PLACEMENT TEMPERATURES OF BITUMINOUS CONCRETE MIXES, IN GENERAL, RANGE BETWEEN 270 AND 310 DEGREES FAHRENHEIT.
 - PAVEMENT BASE COURSE AGGREGATE SHALL CONFORM TO NHDOT SPECIFICATION SECTION 304, ITEM 304.3 AND COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY.
 - PAVEMENT SUBBASE COURSE AGGREGATE AND AGGREGATE FOR SUBGRADE REPAIR AREAS SHALL BE SUITABLE FOR USE AS STRUCTURAL FILL AND BE PROOF ROLLED AND COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY.
 - THE EXPOSED SOIL SUBGRADE SHOULD BE PROOF ROLLED PRIOR TO THE PLACEMENT OF SUBBASE GRAVEL, AND SOFT AREAS SHOULD BE REPAIRED AND REPLACED.
 - IT IS THE RESPONSIBILITY OF THE OWNER TO HIRE A TESTING AGENCY TO INSPECT PAVEMENT SUBGRADE AREAS DURING CONSTRUCTION.
 - ALL PAVEMENT TO MEET AASHTO H-20 LOADING.

PARKING LOT SECTION

NOT TO SCALE



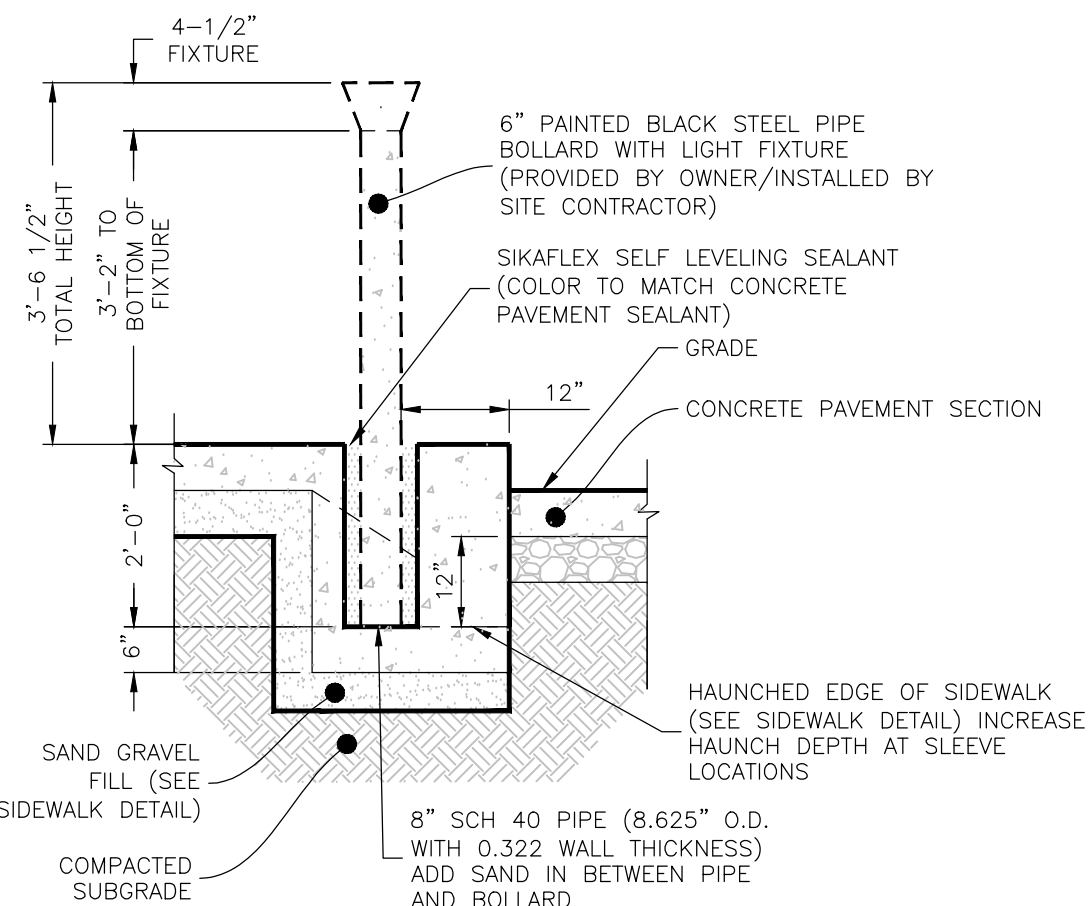
STANDARD DUTY PAVEMENT

- NOTES**
- SEE GRADING & EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
 - PROVIDE CLEAN BUTT TO EXISTING PAVEMENT- USE TACK COAT. A TACK COAT SHALL ALSO BE PLACED BETWEEN GRAVEL COURSE AND SUCCESSIVE LAYERS OF BITUMINOUS CONCRETE. SPECIFICALLY, A TACK COAT SHALL BE PLACED ATOP THE BINDER COURSE PAVEMENT PRIOR TO PLACING THE WEARING COURSE.
 - REMOVE ALL LOAM AND/OR YIELDING MATERIAL BELOW PAVEMENT.
 - BITUMINOUS MATERIALS SHALL CONFORM TO NHDOT SPECIFICATION SECTION 401.
 - BITUMINOUS CONCRETE SHALL BE COMPACTED TO AT LEAST 92.5% OF THEORETICAL MAXIMUM DENSITY AS DETERMINED BY ASTM D2041 OR AASHTO T209. PLACEMENT TEMPERATURES OF BITUMINOUS CONCRETE MIXES, IN GENERAL, RANGE BETWEEN 270 AND 310 DEGREES FAHRENHEIT.
 - PAVEMENT BASE COURSE AGGREGATE SHALL CONFORM TO NHDOT SPECIFICATION SECTION 304, ITEM 304.3 AND COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY.
 - PAVEMENT SUBBASE COURSE AGGREGATE AND AGGREGATE FOR SUBGRADE REPAIR AREAS SHALL BE SUITABLE FOR USE AS STRUCTURAL FILL AND BE PROOF ROLLED AND COMPACTED TO 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY.
 - THE EXPOSED SOIL SUBGRADE SHOULD BE PROOF ROLLED PRIOR TO THE PLACEMENT OF SUBBASE GRAVEL, AND SOFT AREAS SHOULD BE REPAIRED AND REPLACED.
 - ALL PARKING SPACES SHALL BE STANDARD DUTY. ALL OTHER LOCATIONS SHALL BE HEAVY DUTY.

PAVEMENT SECTIONS

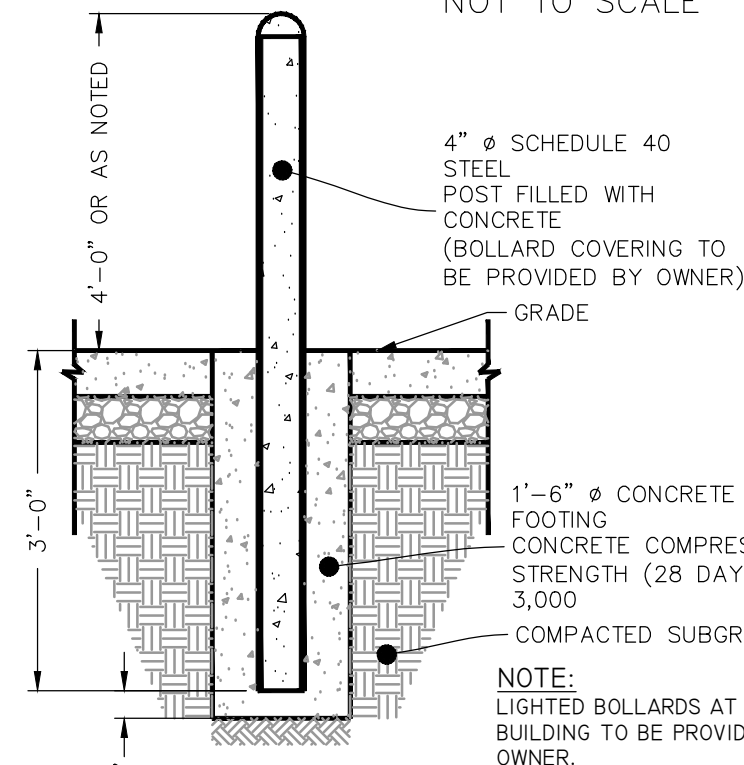
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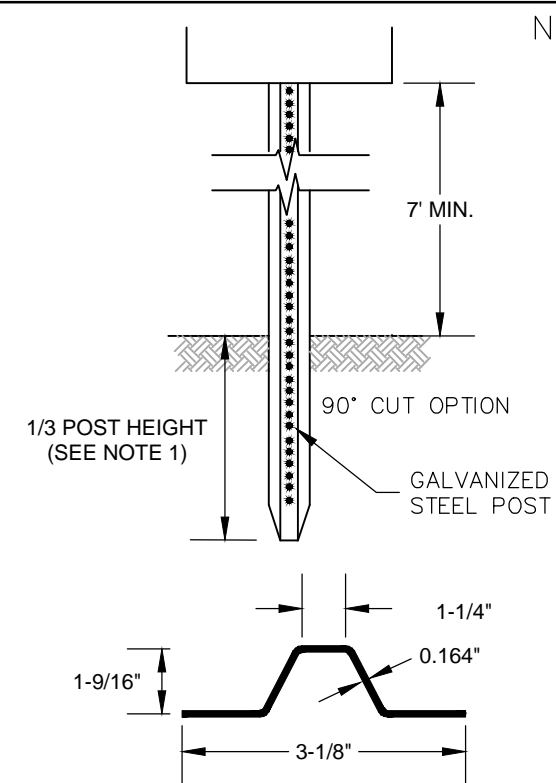
SIDEWALK LIGHTED BOLLARD DETAIL

NOT TO SCALE



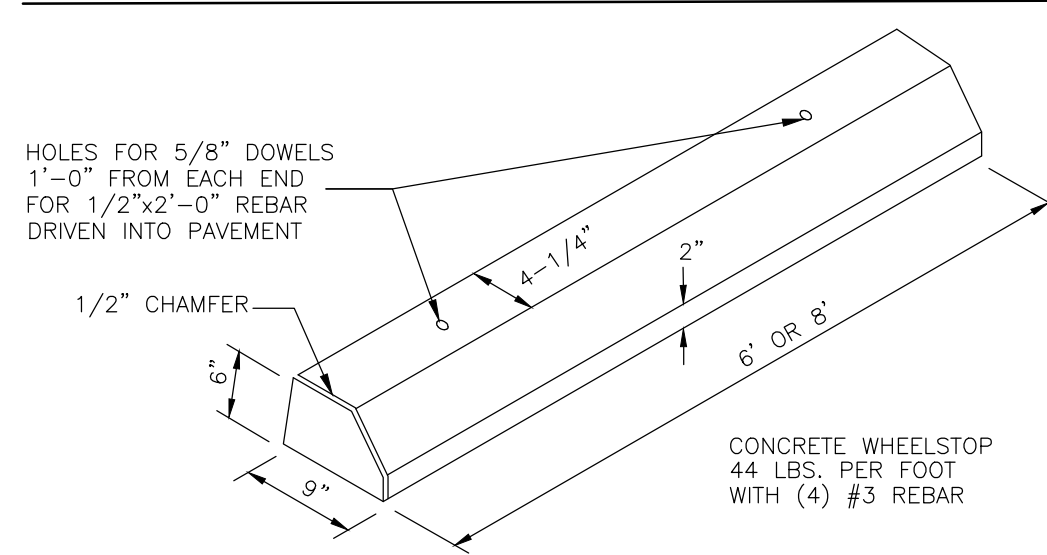
BOLLARD DETAIL

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SIGN POST

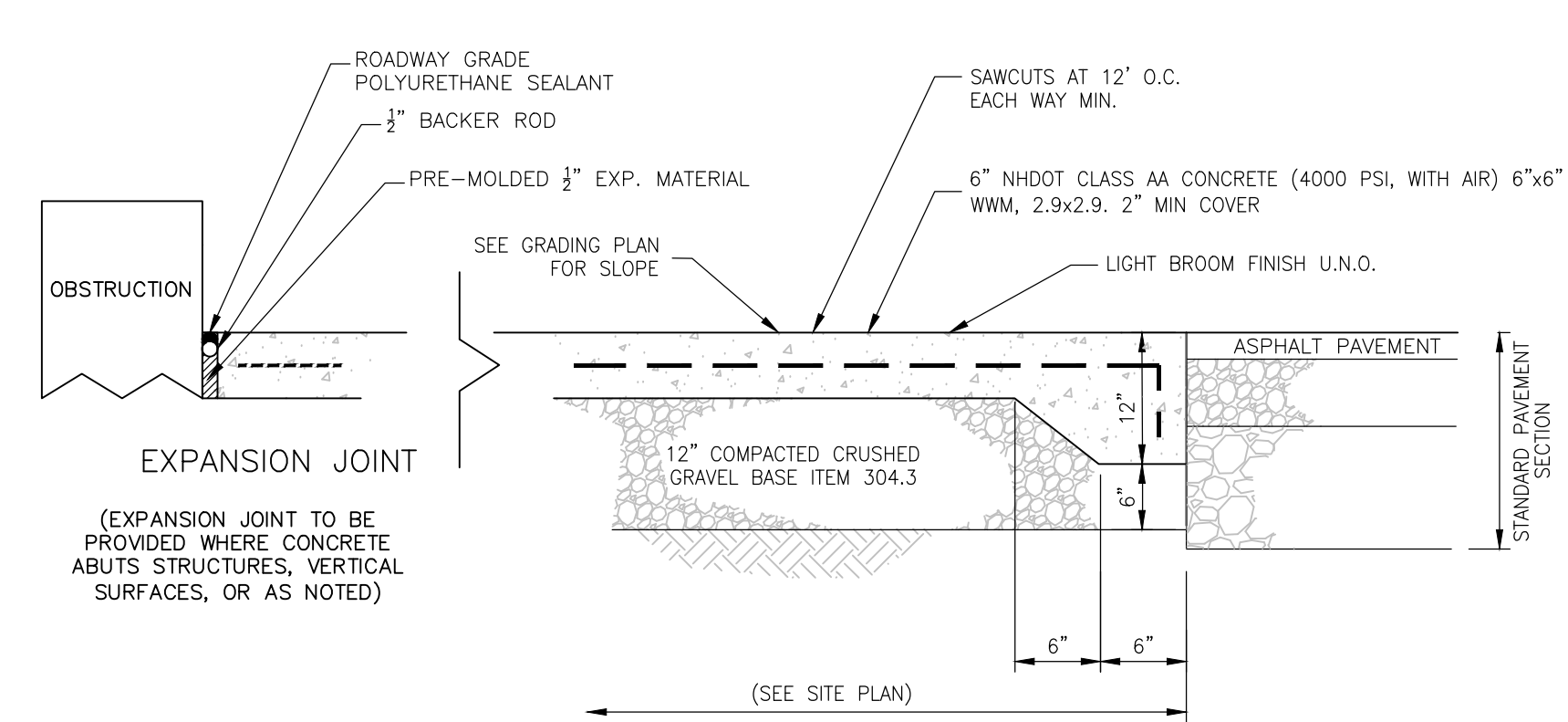
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CONCRETE WHEEL STOP

NOT TO SCALE

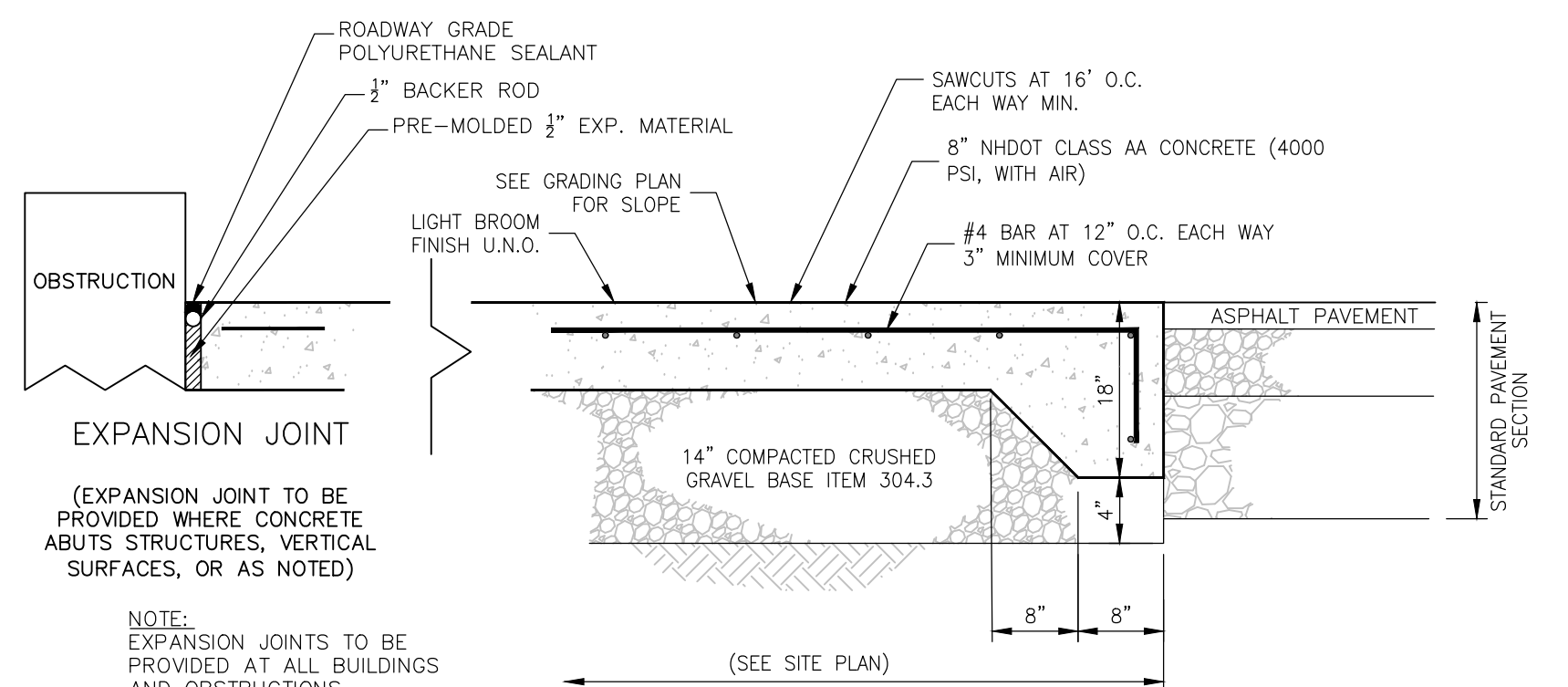
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1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR



LIGHT DUTY CONCRETE PAD

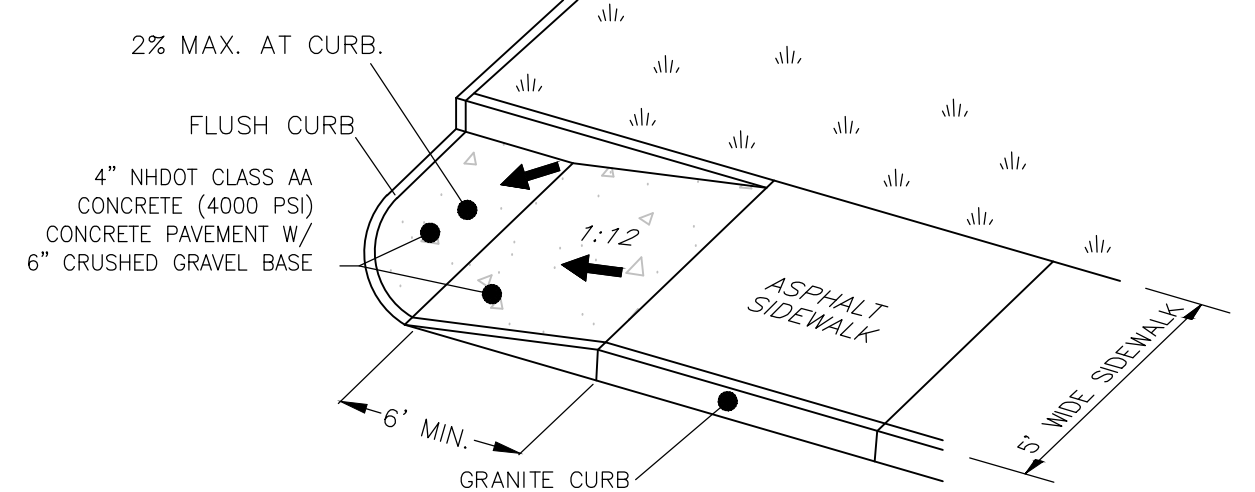
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NOTE: EXPANSION JOINTS TO BE PROVIDED AT ALL BUILDINGS AND OBSTRUCTIONS



HEAVY DUTY CONCRETE PAD

NOT TO SCALE



RAMP AT SIDEWALK INTERSECTION

NOT TO SCALE

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
DETAILS
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

SCALE: NTS

DECEMBER 13, 2023

Seacoast Division



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

170 Commerce Way, Suite 102
Portsmouth, NH 03801
Phone (603) 431-2222
Fax (603) 431-0910
www.tfmoran.com

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	CK	CRR	CADFILE	18149-00_DETAILS	C-19

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APPROVED BY THE HUDSON, NH PLANNING BOARD

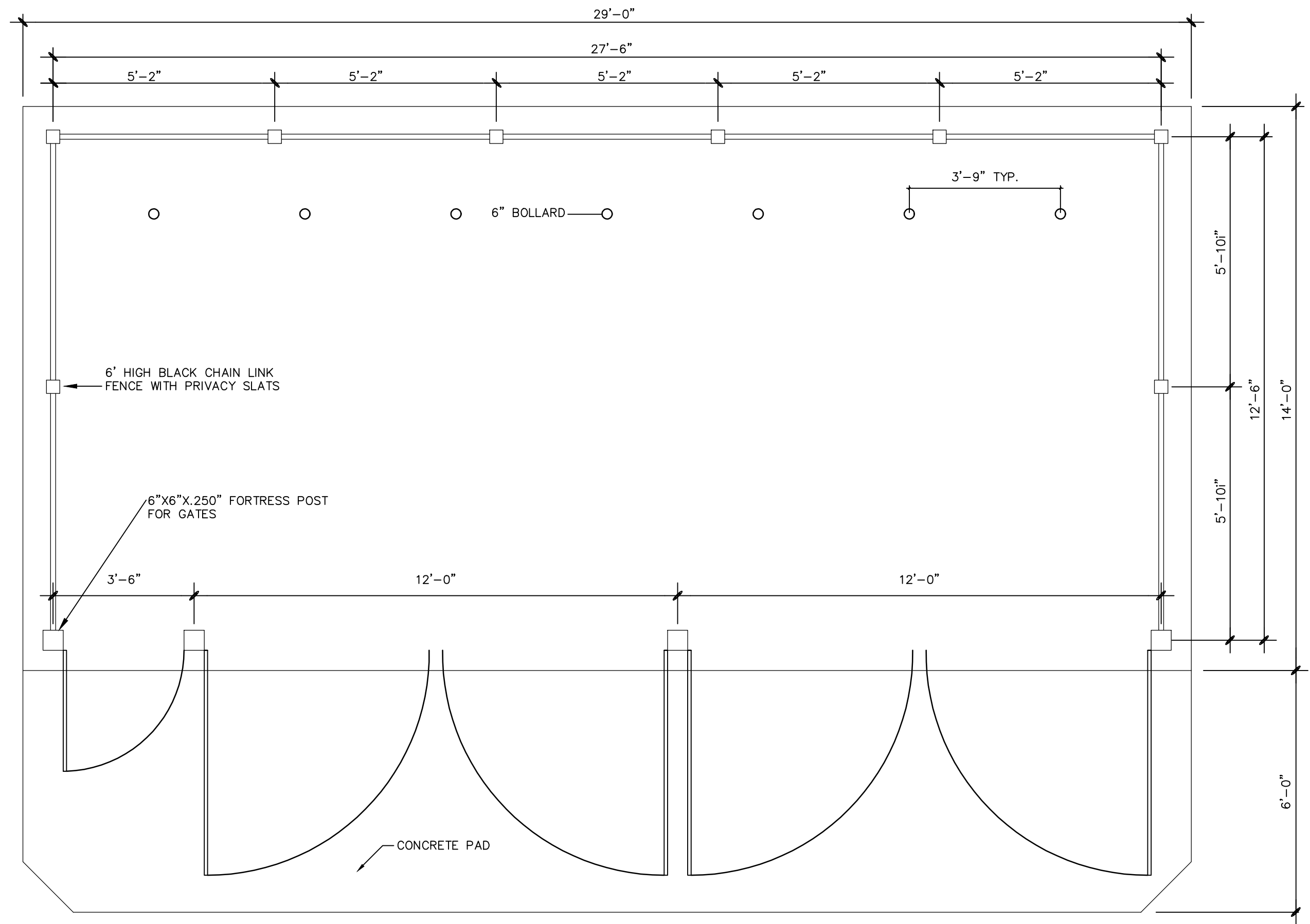
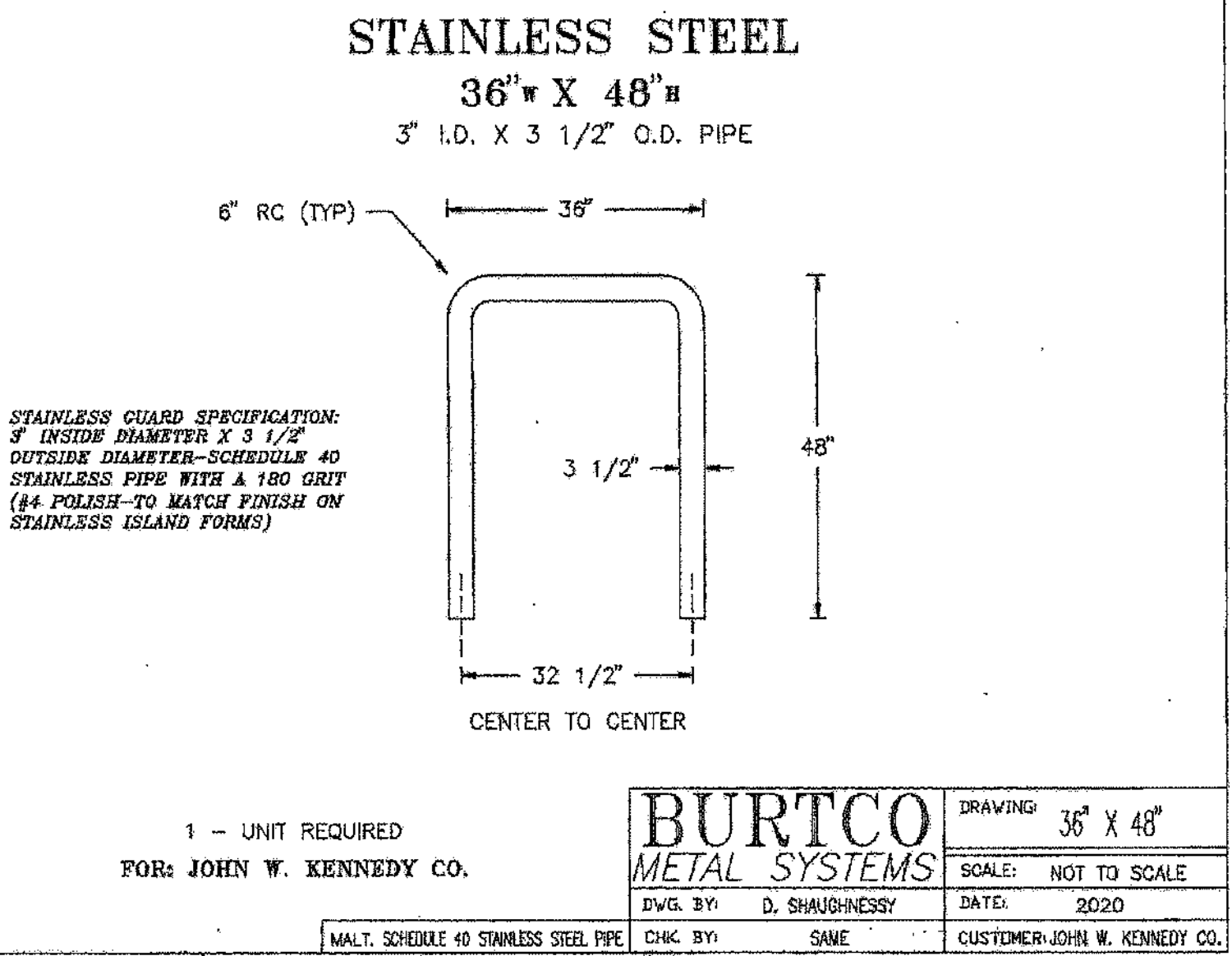
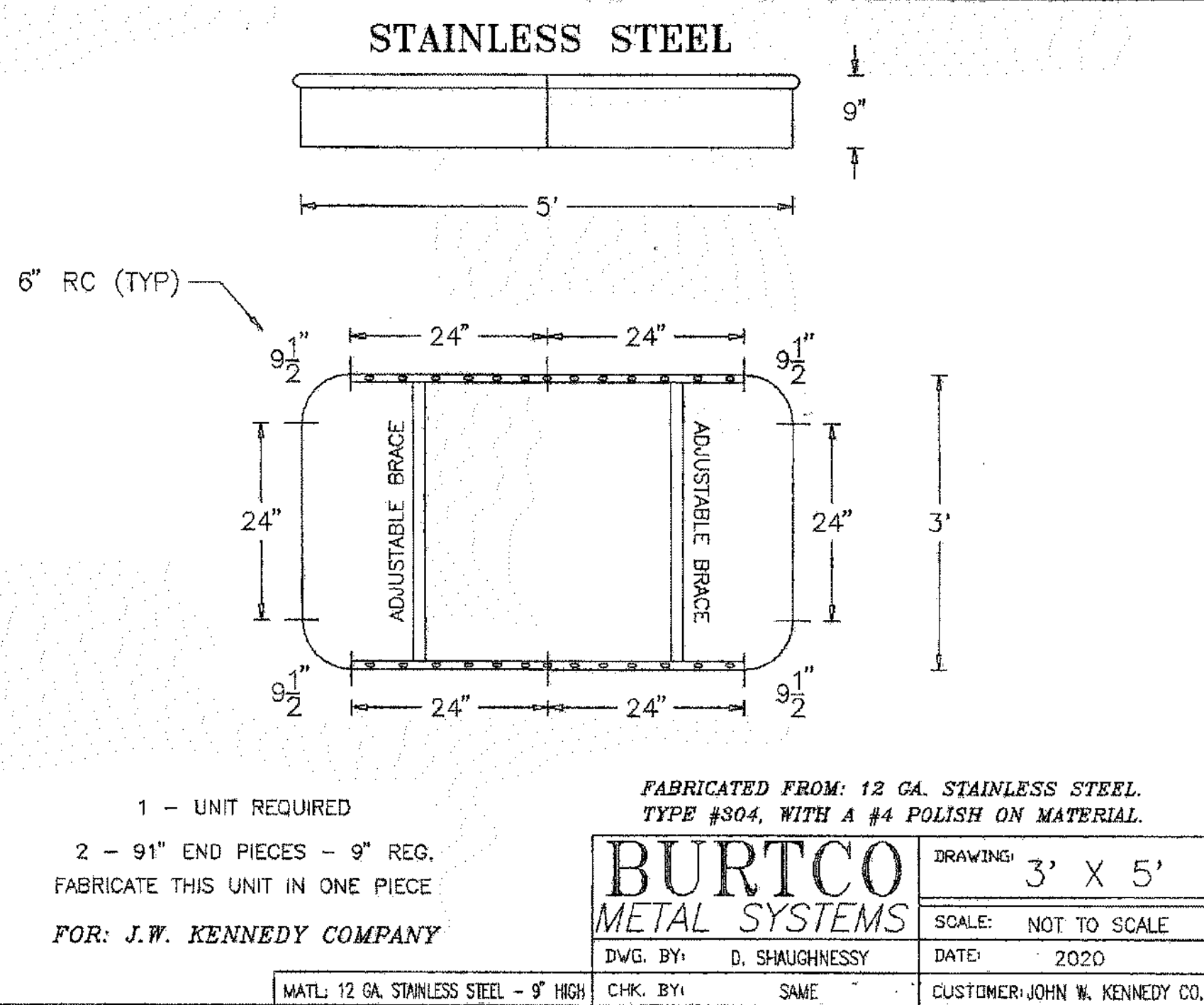
DATE OF MEETING _____

CHAIRMAN _____ SIGNATURE DATE _____ AND _____

SECRETARY _____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL



Crossover LED LIGHTING TECHNOLOGY

U.S. and international patent pending

EXPECTED LIFE - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI website for specific guidance.

LEDS - An array of 24 select high-brightness LEDs (8200K CW), (3000K WW), (4100K NW).

REFLECTOR/DISTRIBUTION - Indirect. Photometric data is tested in accordance to IESNA Procedures.

HOUSING - Crown: Virtually tamper-proof concealed stainless steel fasteners in the cast aluminum crown assembly.

Lower Housing: One-piece, 322 inch seamless, extruded aluminum. Various heights are available in 6" increments starting at a minimum of 30" (maximum height is 60"). Lower housing attaches to cast aluminum base plate with four stainless steel roll pins.

OPTIONAL ROUGHNECK REINFORCEMENT - .375" thick zinc plated, steel base plate with welded U shaped reinforcement. 3/8" diameter 302 stainless steel roll pins with 10,000 lb shear load.

LENS/GASKET - One-piece, clear acrylic lens enclosure fully gasketed at top and bottom edge.

ANCHOR BOLTS - Requires four heavy-duty 3/8" x 10" galvanized steel anchor bolts.

ELECTRICAL - Universal voltage power supply (120-277 VAC, 50/60 Hz). 347-480V also available - 400mA is standard. Surge protector meets IEEE C92.41.2-2002, Scenario 1 Location Category C.

DRIVER - State-of-the-art driver technology designed specifically for LSI LED light sources provides unsurpassed system efficiency. Driver complies with IEC and FCC standards.

OPERATING TEMPERATURE - -40°C to +50°C (-40°F to +122°F).

FINISH - Each fixture is finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard colors include bronze, black, platinum plus, buff, white, graphite, satin verde green and metallic silver.

DECAL STRIPING - Color-coordinated decal is available in 9 standard decal colors or by custom order from a selection of hundreds. Decal is guaranteed for five years against peeling, cracking, or fading.

WARRANTY - LSI LED fixtures carry a limited 5-year warranty.

PHOTOMETRICS - Application layouts are available upon request. Contact LSI Applications Group at lighting.apps@lsindustries.com.

LISTING - Listed to U.S. and Canadian safety standards. Suitable for wet locations. DLC - not all possible distributions are DLC approved. Please refer to LSI or DLC web site for specific listings.

8" CONCRETE BASE

Also available in traditional light sources

SHIPPING WEIGHTS - LED Bollard

Catalog #	Est Weight (lbs)	Length (inches)	Width (inches)	Height (inches)
XBVRD	25.56	1318.51	8.75	31.81
XBVRD	25.56	1318.51	8.75	31.81
XBVRD	25.56	1318.51	8.75	31.81

LIGHT OUTPUT - XBVR

Description	# of LEDs	Output Lumens	Watts
Cool White (XBVR 4)	24	1324	30
Neutral White (XBVR 4)	24	1324	30
Warm White (XBVR 4)	24	850	30

This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.

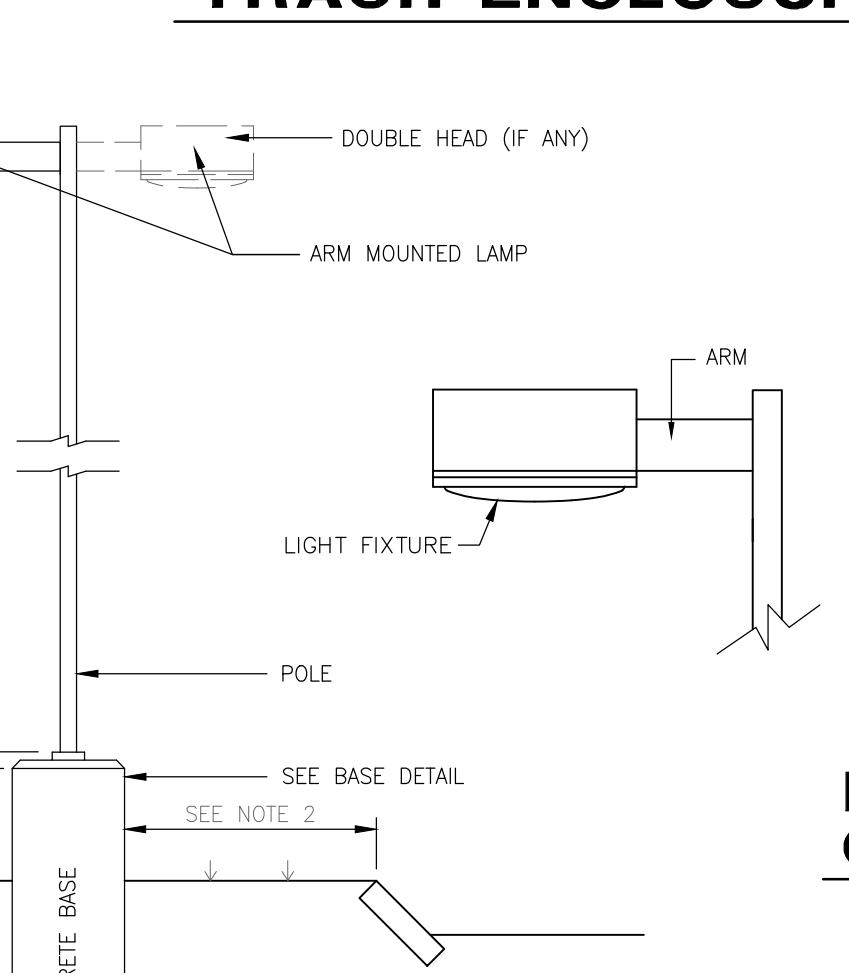
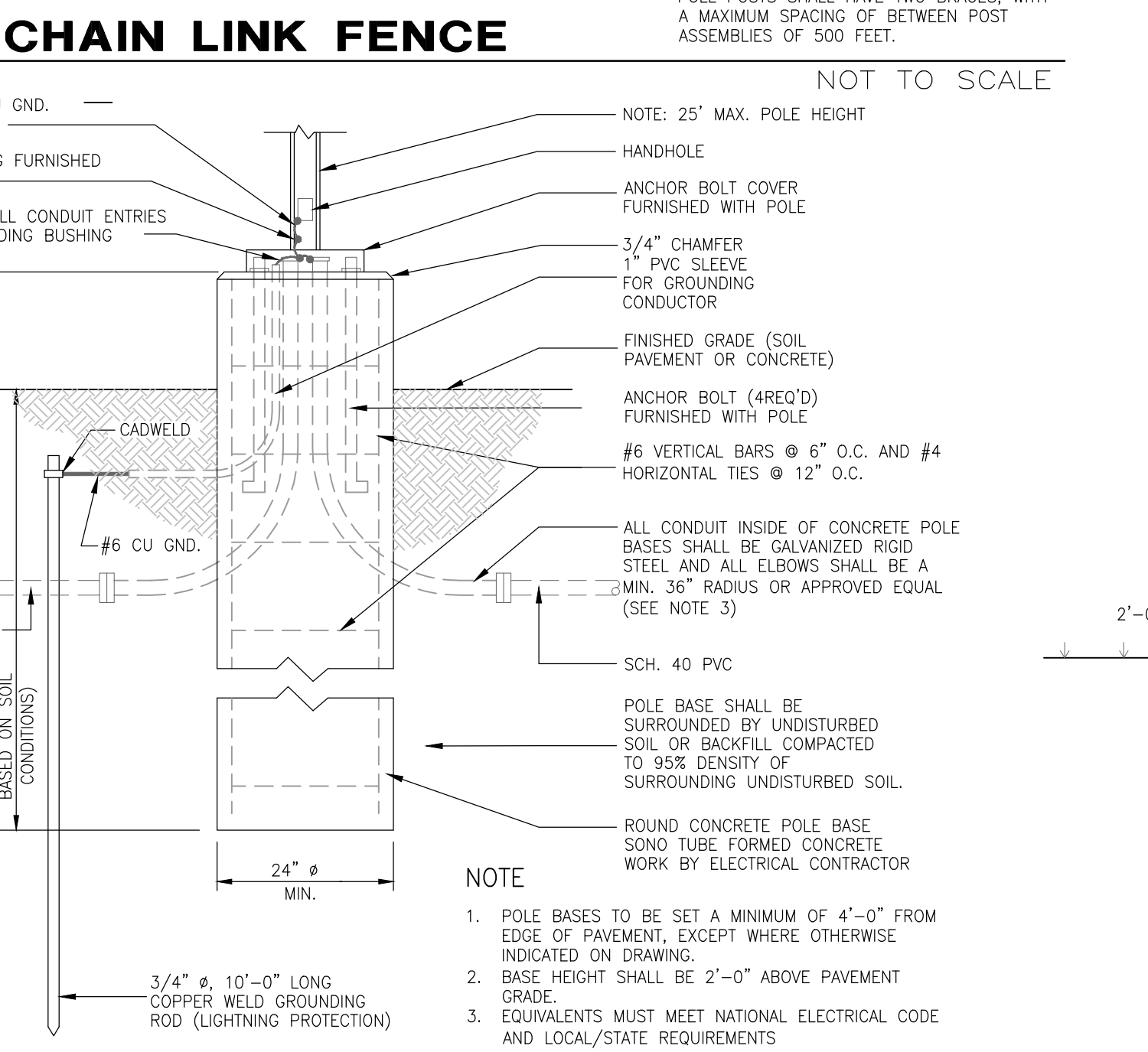
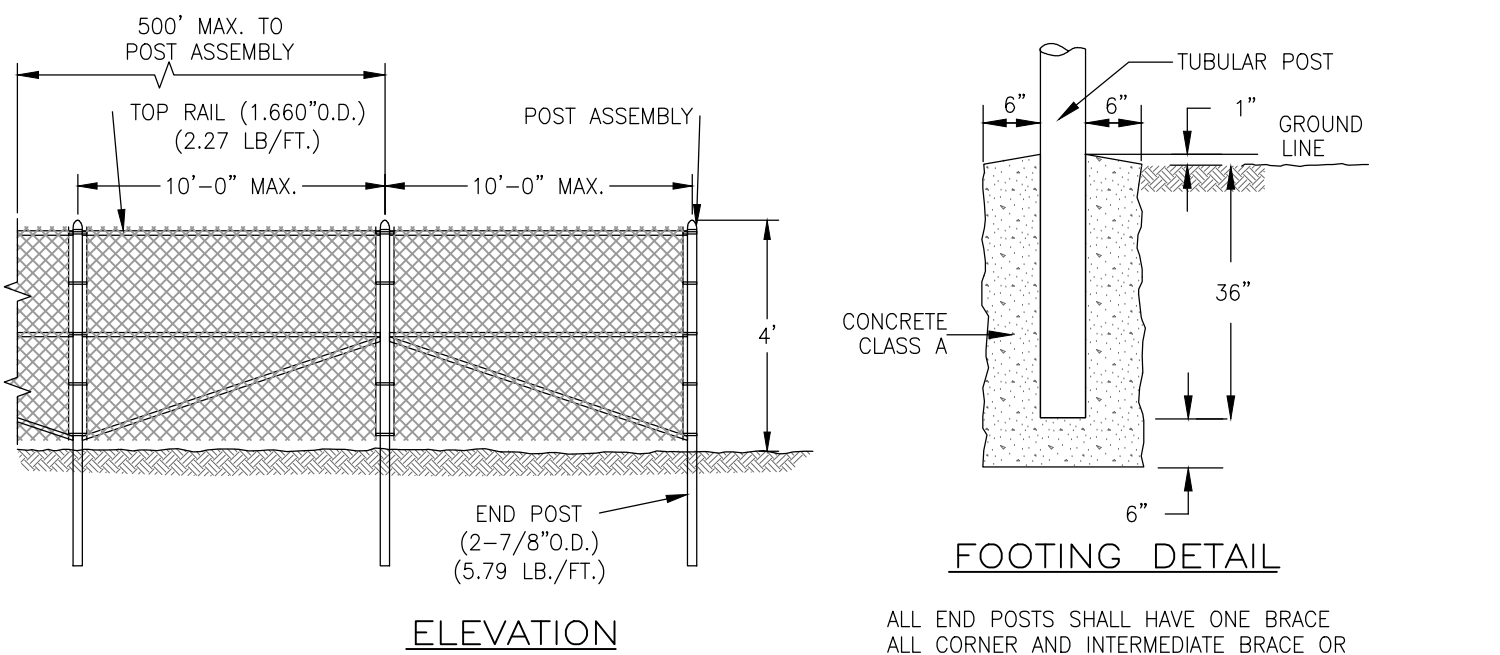
ARRA Funding Compliant

DESIGNLIGHT

Project Name: _____ Fixture Type: _____

DATE: 10/20/22

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BOLLARD LIGHT (DECORATIVE)

NOT TO SCALE

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

CHAIRMAN: _____ SIGNATURE DATE: _____ AND

SECRETARY: _____ SIGNATURE DATE: _____

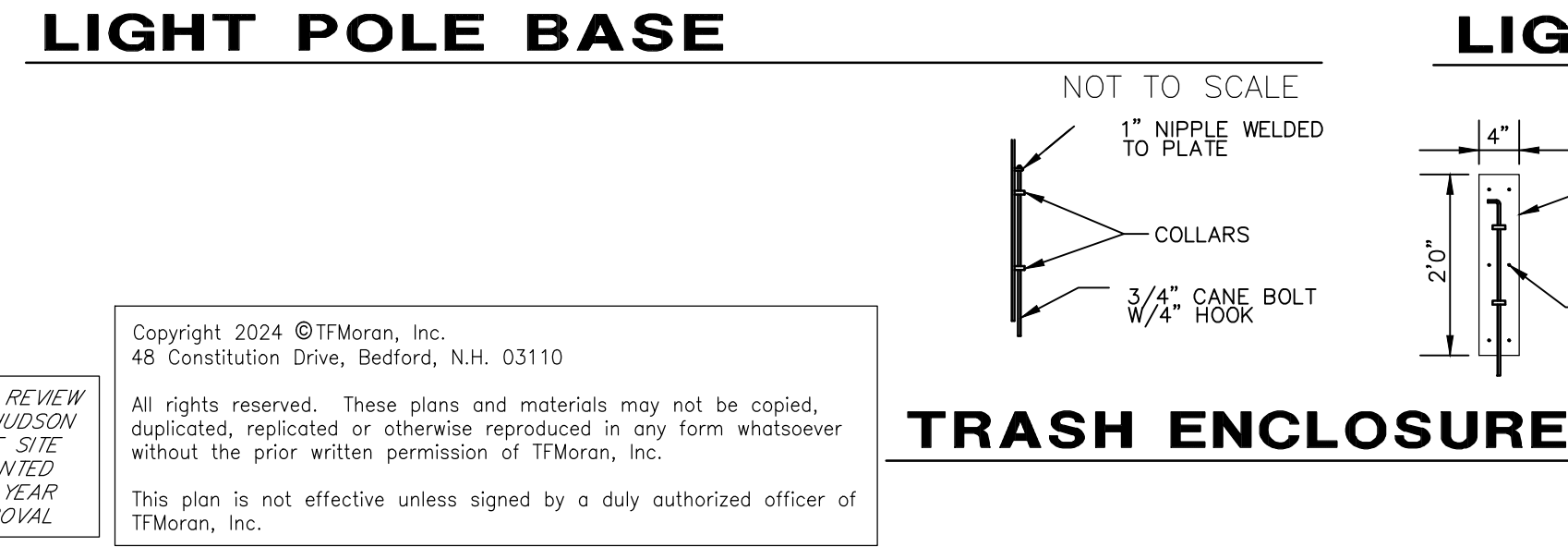
SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

PURSUANT TO THE SITE REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

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SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16

DETAILS

GAS STATION/CONVENIENCE STORE/CAR WASH

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SCALE: NTS

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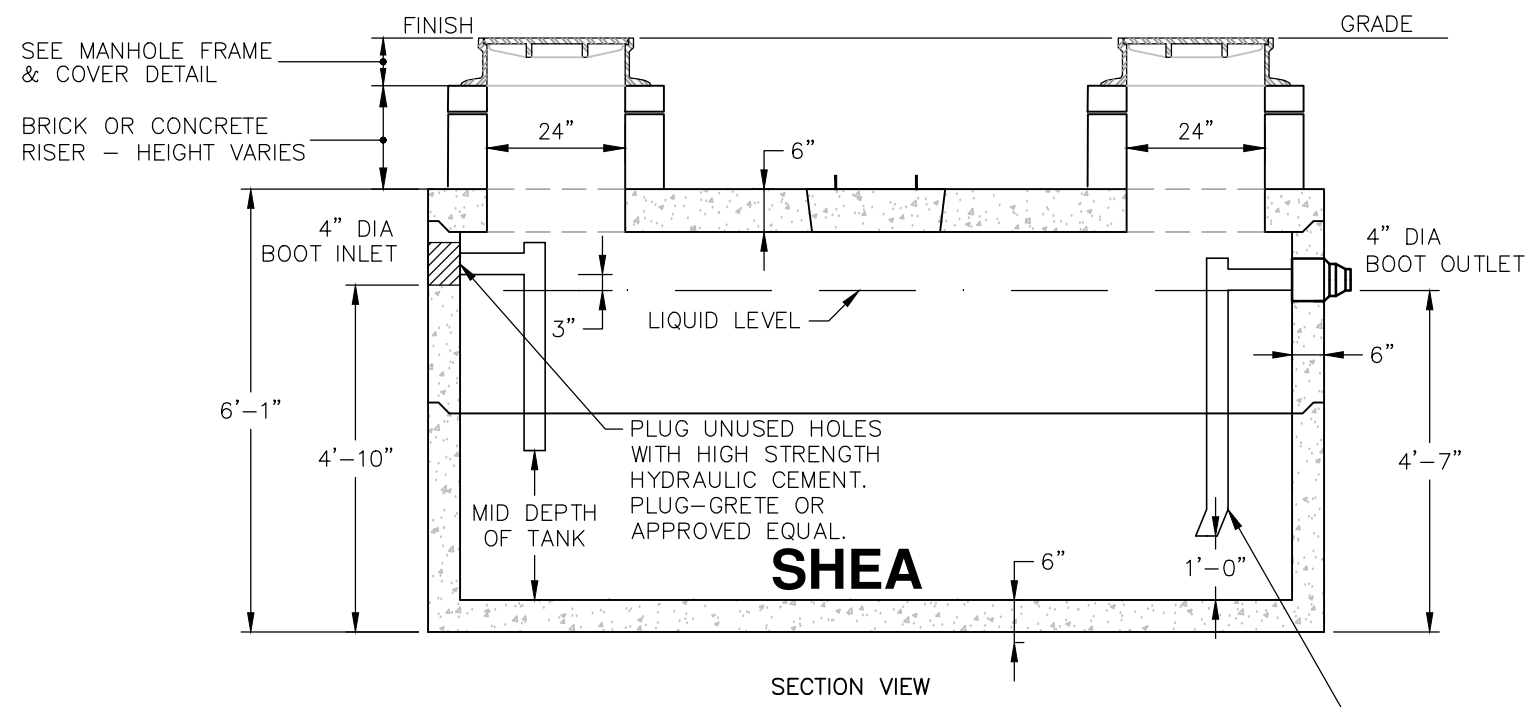
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CK: CRR, CADFILE

18149-00-DETAILS

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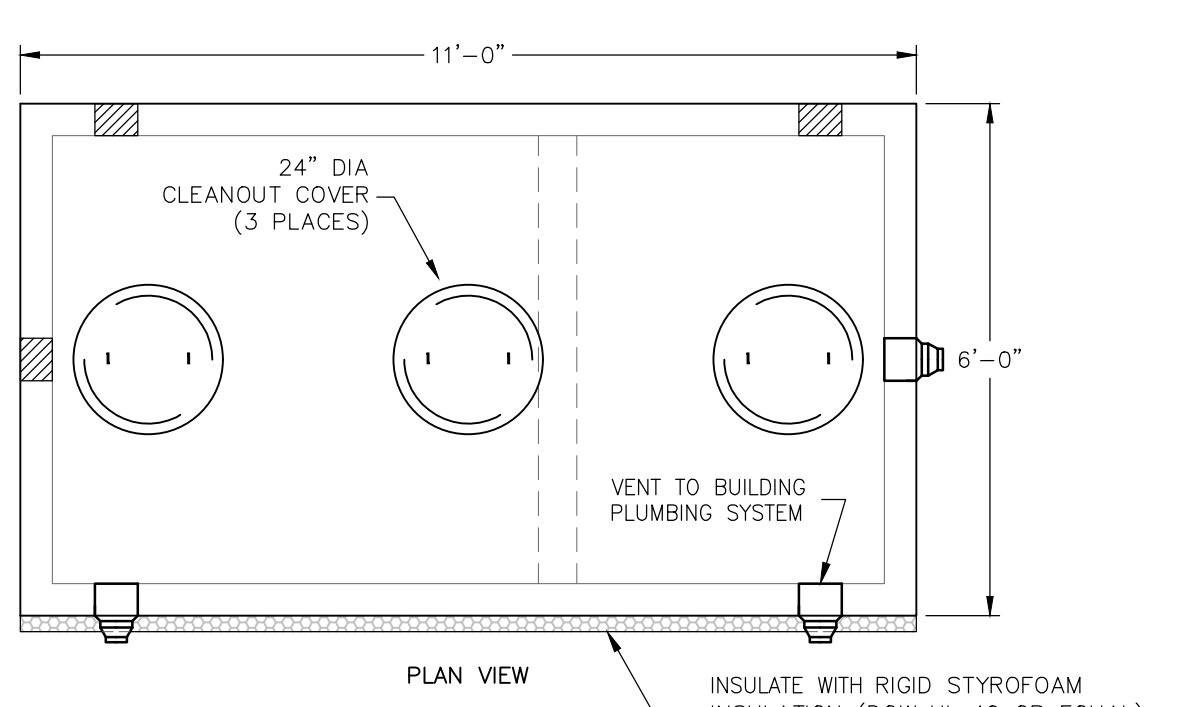
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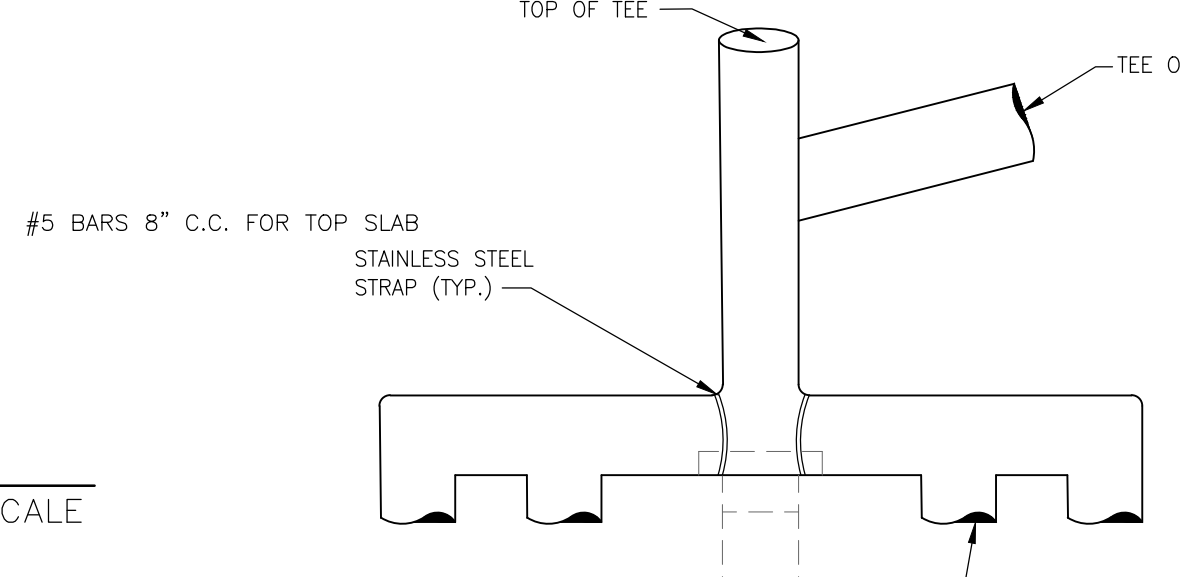
NOTES:

1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
2. ALL REINFORCEMENT PER ASTM C1227.
3. DESIGNED FOR AASHTO HS-20 LOADING, 1 TO 5 FT COVER.
4. TONGUE & GROOVE JOINT SEALED WITH BUTYL RESIN
5. OPTIONAL BATTLE WALL AVAILABLE.
6. GREASE TRAPS SHALL HAVE A MINIMUM DEPTH OF 4 FEET AND MINIMUM CAPACITY OF 1,000 GALLONS, AND SHALL HAVE SUFFICIENT CAPACITY TO PROVIDE AT LEAST A 36 HOUR DETENTION PERIOD FOR THE KITCHEN FLOW. KITCHEN FLOW SHALL BE CALCULATED IN ACCORDANCE WITH 310 CMR 15.203.
7. THE INLET TEE SHALL EXTEND TO THE MID DEPTH OF THE TANK. THE OUTLET TEE SHALL EXTEND TO WITHIN 12 INCHES OF THE BOTTOM OF THE TANK. TEES SHALL BE SCHEDULE 40 PVC AND PROPERLY SUPPORTED BY A HANGER, STRAP, OR OTHER DEVICE.
8. GREASE TRAPS SHALL BE PROVIDED WITH THREE (3) 20 INCH DIAMETER MANHOLE FRAMES AND COVERS TO GRADE.
9. PROVIDE VENT. CONNECT TO VENT IN BUILDING PLUMBING SYSTEM.

ANGLED TEE (22 1/2°)
MANIFOLD (SEE DETAIL)

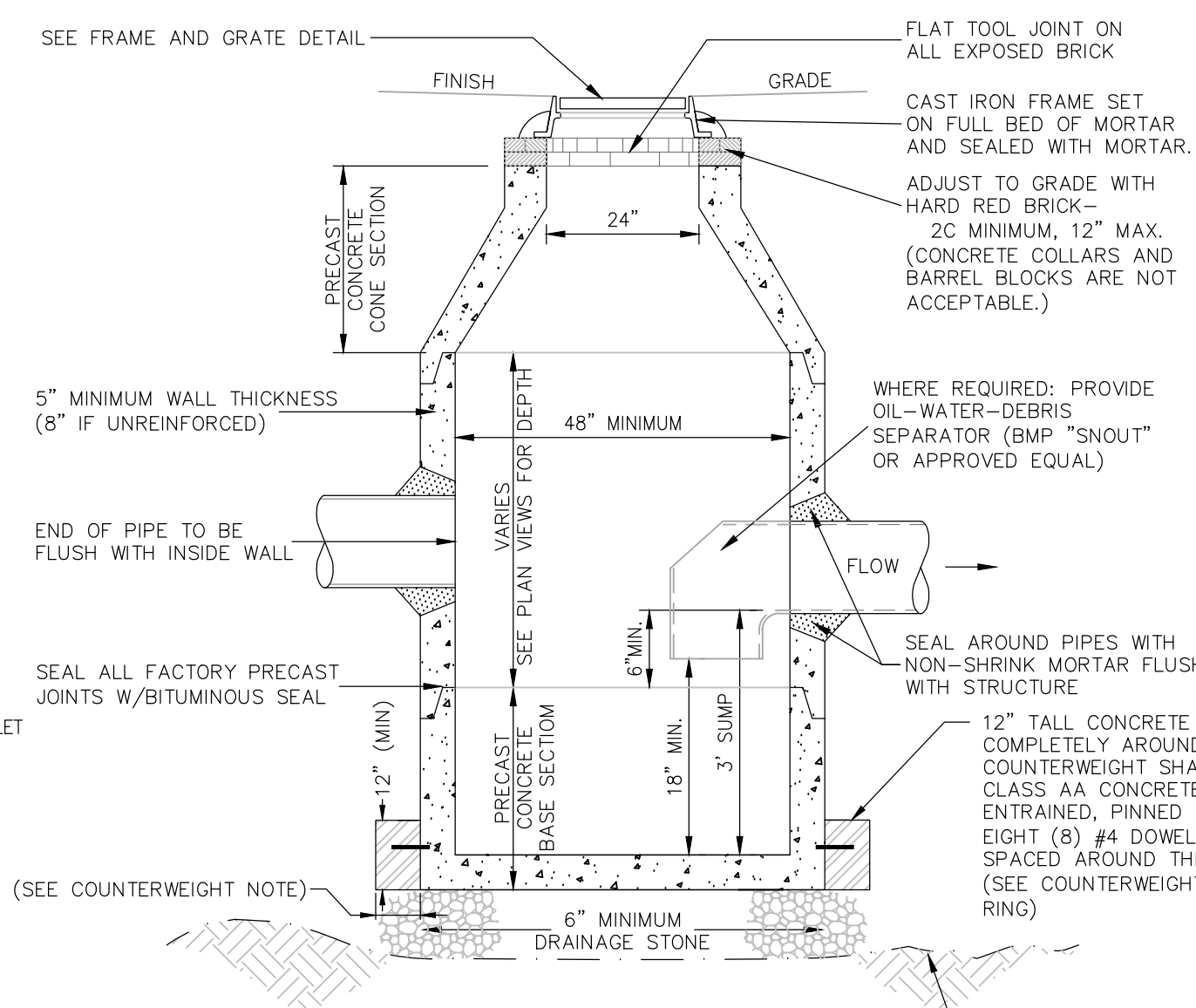


INSULATE WITH RIGID STYROFOAM
INSULATION (DOW HI-40 OR EQUAL)
ON WALL BETWEEN TANK AND BUILDING



TEE MANIFOLD

SCALE AS NOTED

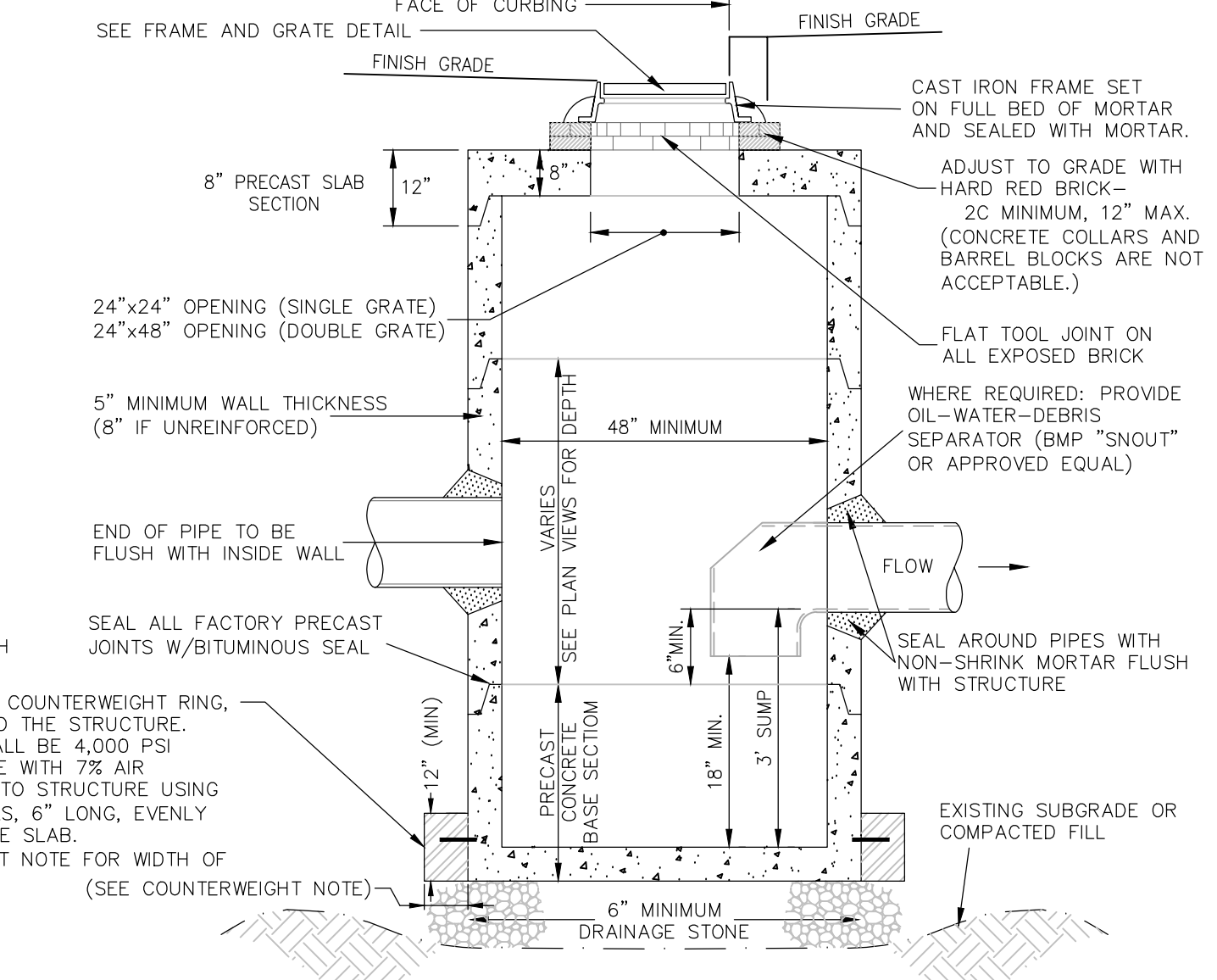


NOTE: ALL PRECAST SECTIONS SHALL CONFORM TO ASTM C-478

CATCH BASIN

CONCENTRIC CONE

NOT TO SCALE



NOTE: ALL PRECAST SECTIONS SHALL CONFORM TO ASTM C-478

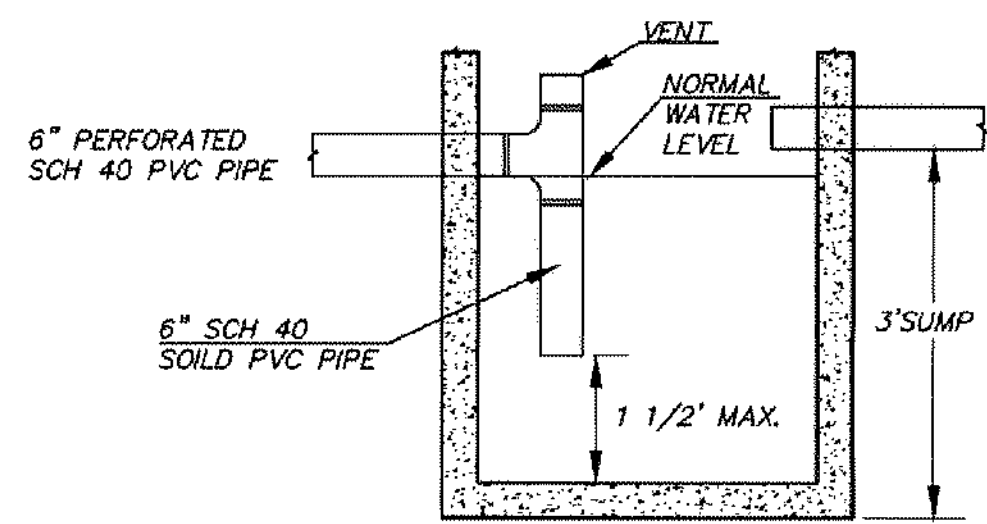
CATCH BASIN

SLAB TOP

NOT TO SCALE

1,500 GALLON GREASE TRAP CHAMBER

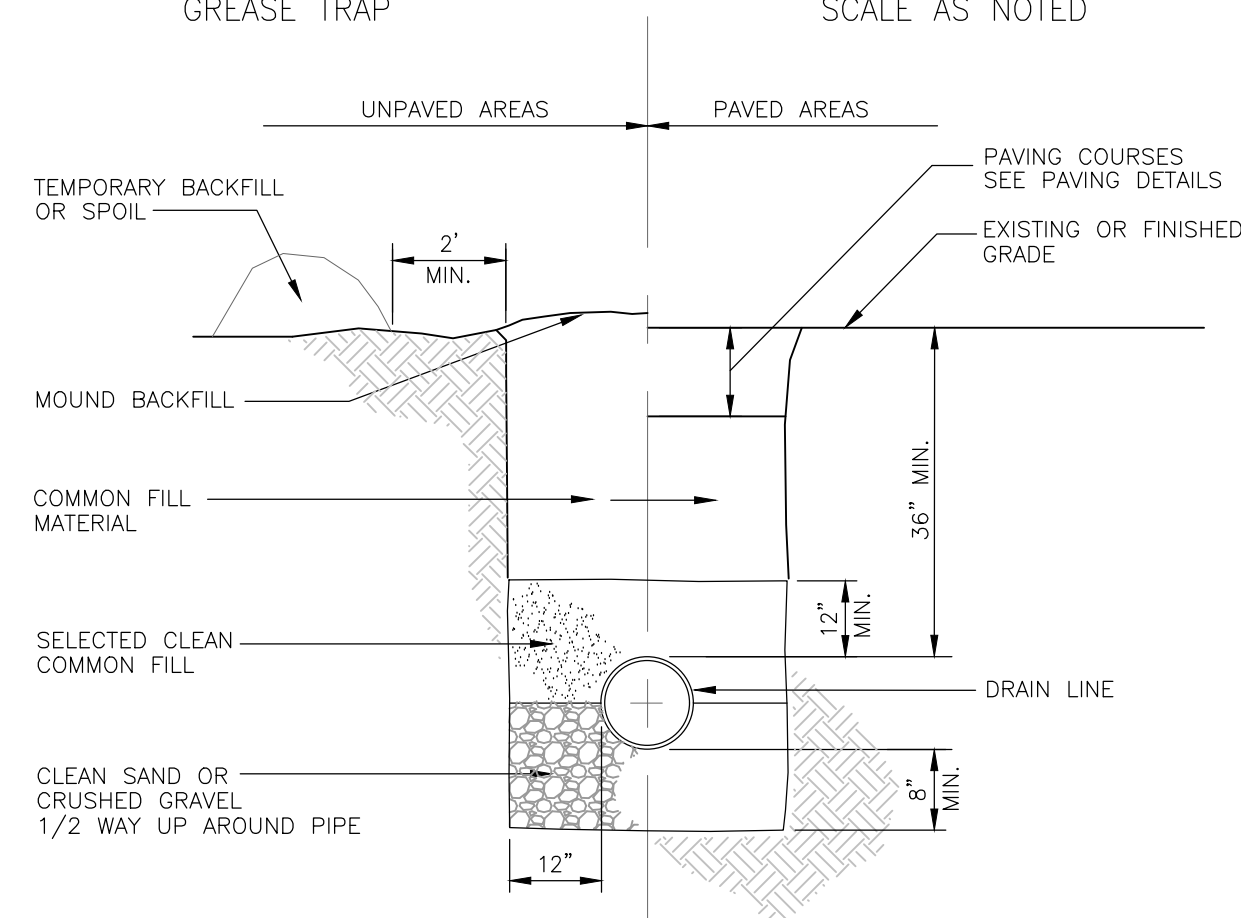
NOT TO SCALE



NOTE: - MAINTAIN A MINIMUM OF 12" FROM THE FLAT COVER TO THE TOP OF PVC VENT
- REQUIRED FOR ALL CATCH BASIN DISCHARGING TO DETENTION BASIN OR INFILTRATION BASIN
- REQUIRED IN PARKING AREAS

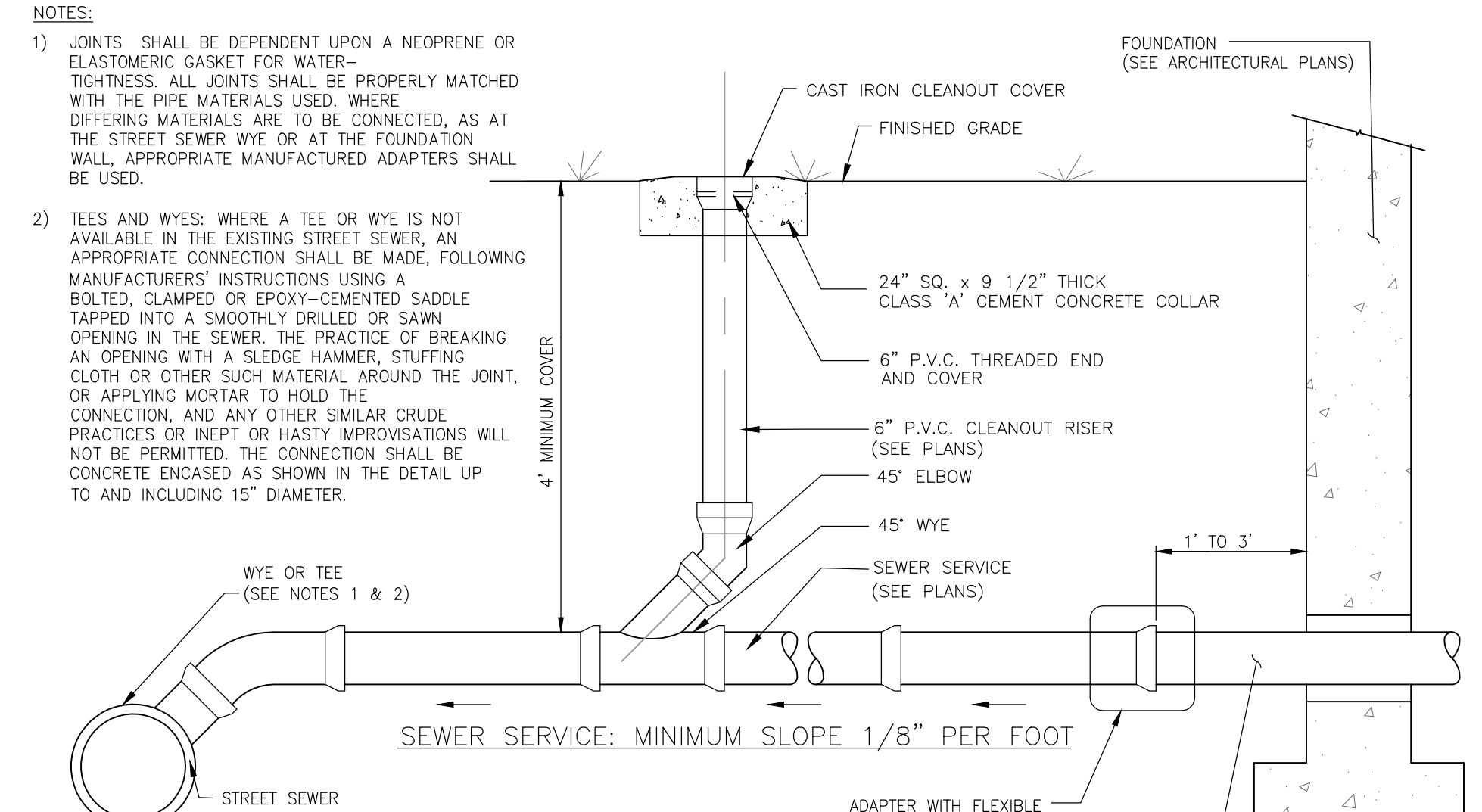
OIL-GREASE SEPARATOR

SCALE AS NOTED



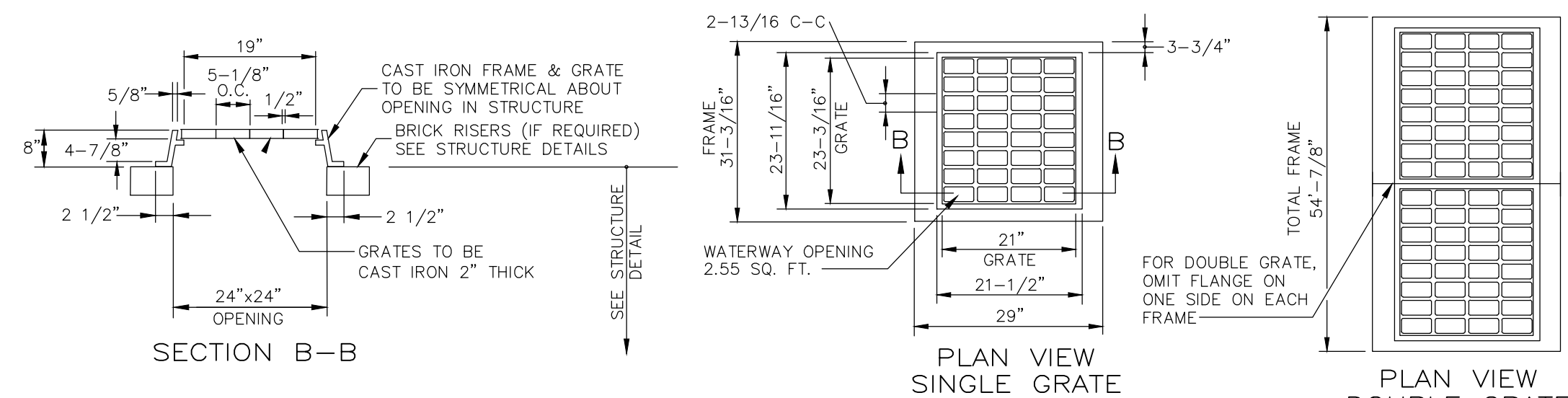
DRAINAGE LINE TRENCH

NOT TO SCALE



SEWER SERVICE & CLEANOUT

NOT TO SCALE



FRAME AND GRATE

NHDOT TYPE B ALT 1

NOT TO SCALE

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16

DETAILS

GAS STATION/CONVENIENCE STORE/CAR WASH

91-97 LOWELL ROAD, HUDSON, NH

OWNED BY & PREPARED FOR

COLBEA ENTERPRISES, LLC

SCALE: NTS

DECEMBER 13, 2023



Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

170 Commerce Way, Suite 102
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REV	DATE	DESCRIPTION	DR	CK
5	10/14/2024	REVISED PER PLANNING BOARD COMMENTS	JKC	CRR
4	9/4/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR
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FILE	18149.00	DR	JKC	FB	-	C-21
CK	CRR	CADFILE	18149-00_DETAILS			

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____
CHAIRMAN _____ SIGNATURE DATE _____ AND
SECRETARY _____ SIGNATURE DATE _____

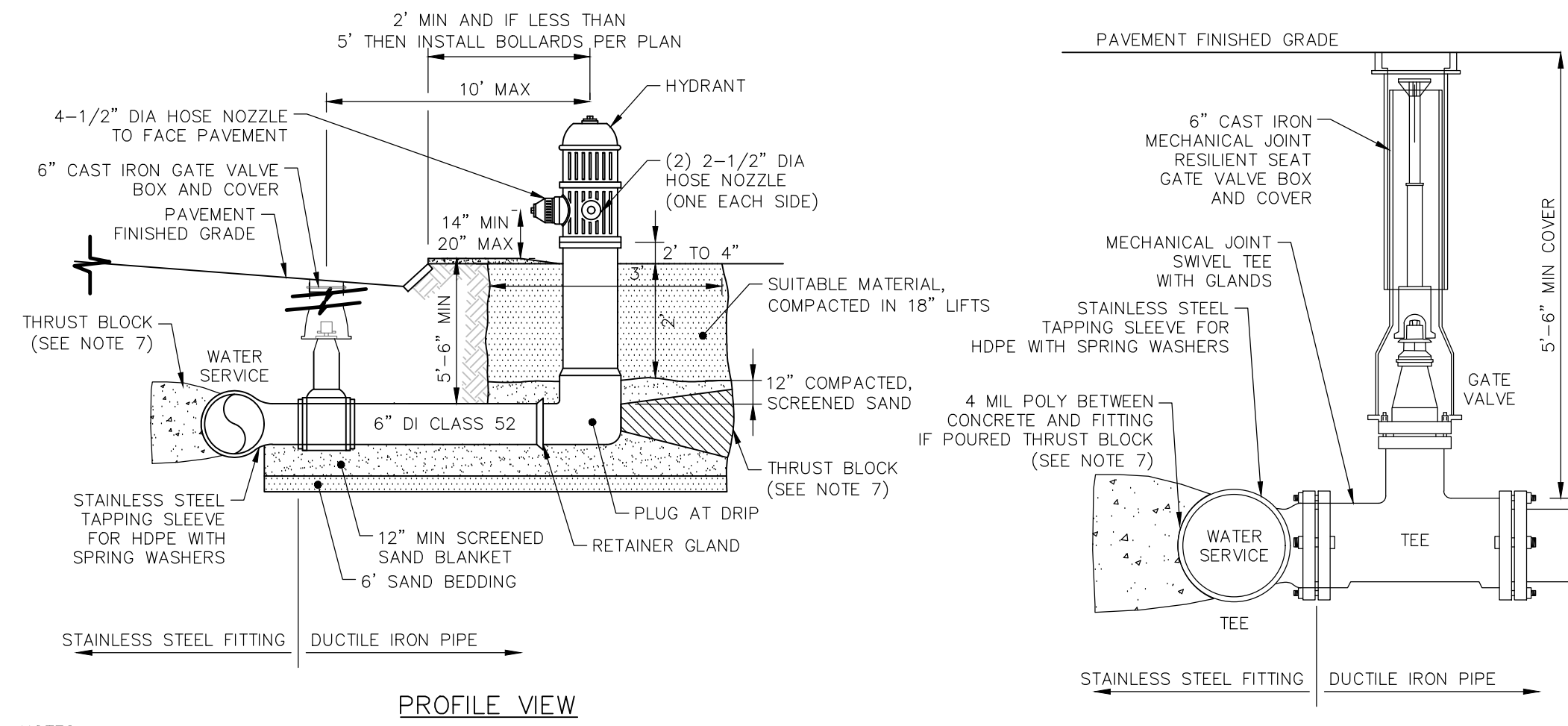
SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

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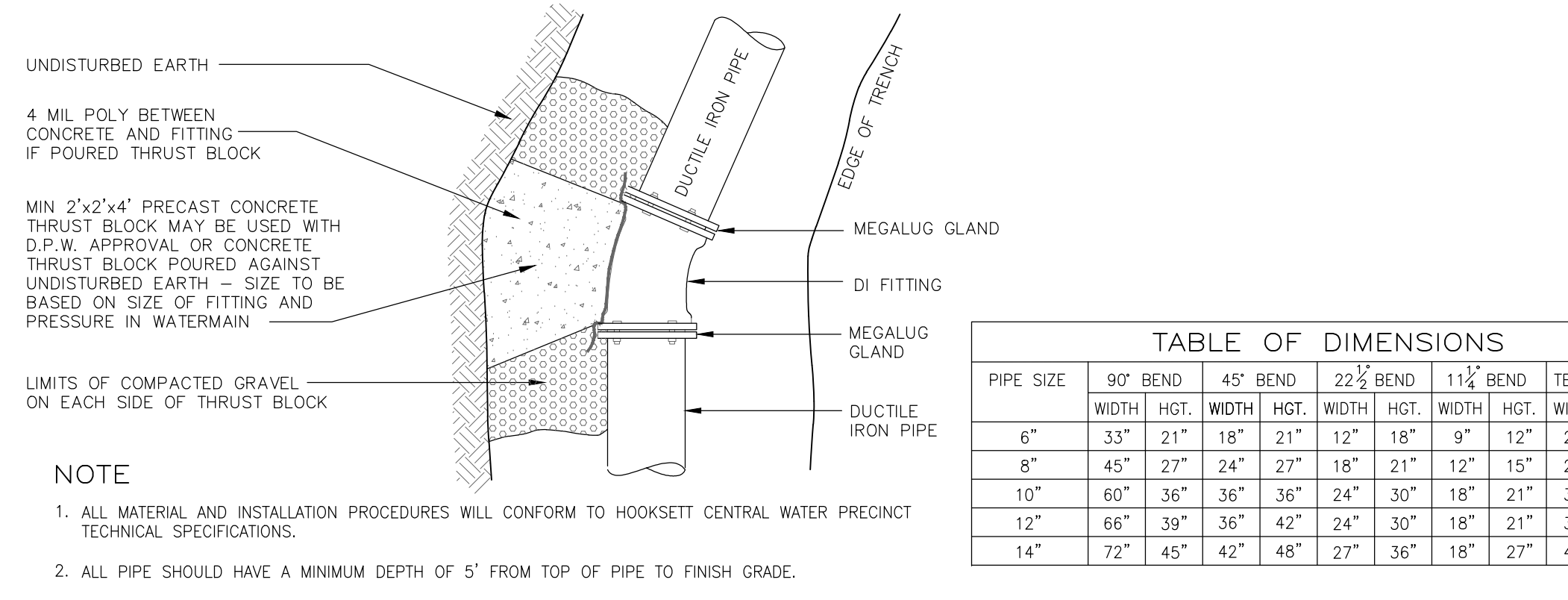
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- NOTES:**
1. ALL MATERIALS, INSTALLATION, OPERATION, MANUFACTURER AND MODEL, AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE CITY/TOWN'S ESTABLISHED RULES AND PROCEDURES.
 2. HYDRANT SHALL BE PAINTED PER CITY/TOWN REQUIREMENTS.
 3. HYDRANT SHALL CONFORM TO AWMA C502 AND CITY/TOWN SPECIFICATIONS AND PROCEDURES.
 4. HYDRANT SHALL BE FURNISHED WITH A TEFLON-COATED 5-1/4 INCH VALVE, ONE 4-INCH STEAMER CONNECTION, TWO 2-1/2 INCH HOSE CONNECTIONS, PLUGGED DRAIN HOLES, AND SHALL OPEN LEFT.
 5. HYDRANT INLET SHALL HAVE MECHANICAL JOINTS CONFORMING TO ANSI A21.11/AWMA C111.
 6. THE STAINLESS STEEL TAPPING SLEEVE SHALL BE BOLTED DIRECTLY TO THE 6" DUCTILE IRON GATE VALVE. ALL MATERIAL FROM THE GATE VALVE TO HYDRANT SHALL BE DUCTILE IRON.
 7. MINIMUM 2'x2'x4' PRECAST CONCRETE THRUST BLOCK MAY BE USED WITH CITY/TOWN APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN (SEE ASSOCIATED DETAIL).

FIRE HYDRANT AND GATE VALVE

NOT TO SCALE

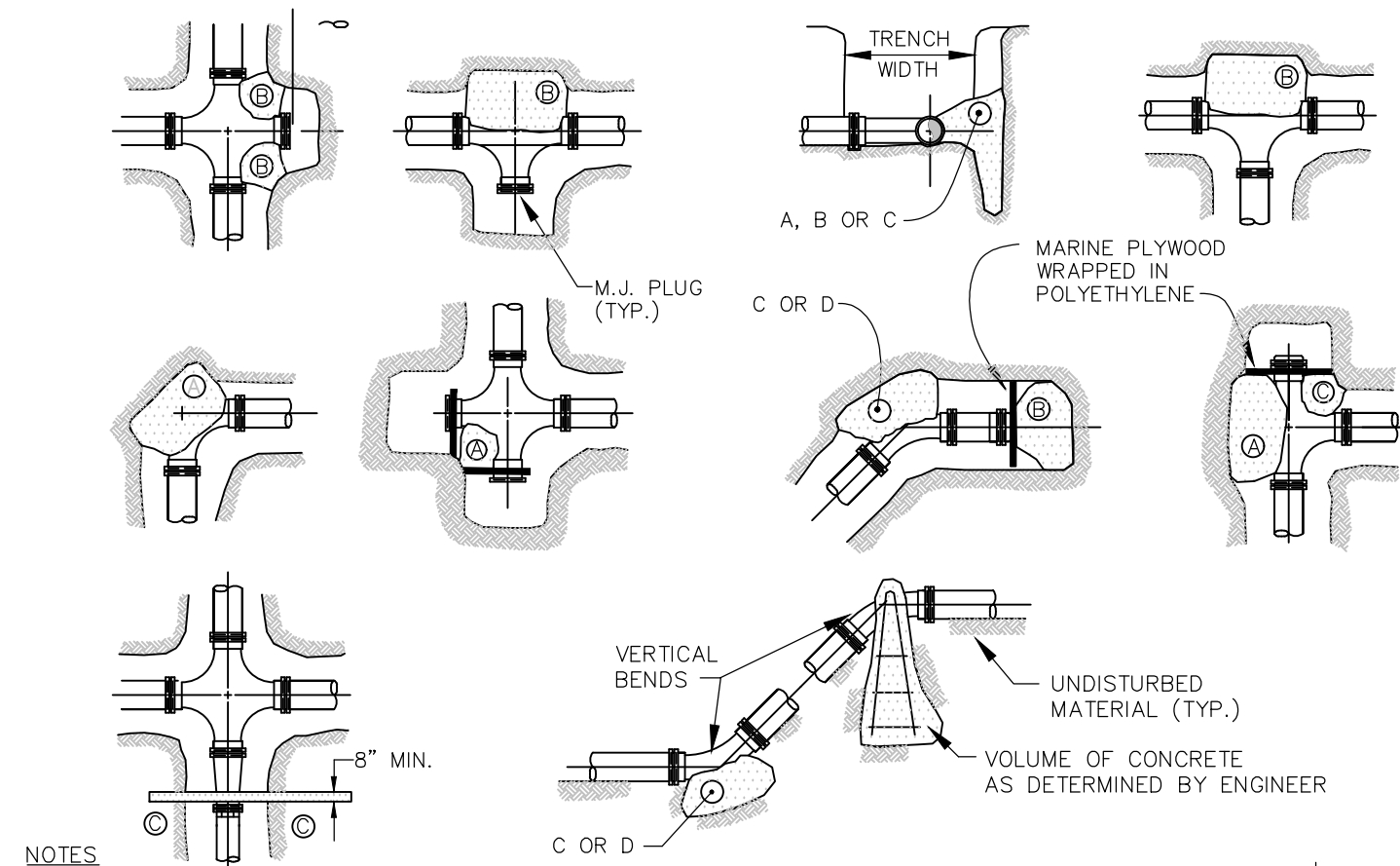


THRUST BLOCKING BEHIND FITTINGS INSTALLATION

NOT TO SCALE

TABLE OF DIMENSIONS

PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/2° BEND		TEE & PLUG	
	WIDTH	HGT.	WIDTH	HGT.	WIDTH	HGT.	WIDTH	HGT.	WIDTH	HGT.
6"	33"	21"	18"	21"	12"	18"	9"	12"	21"	24"
8"	45"	27"	24"	27"	18"	21"	12"	15"	27"	33"
10"	60"	36"	36"	36"	24"	30"	18"	21"	36"	42"
12"	66"	39"	36"	42"	24"	30"	18"	21"	39"	45"
14"	72"	45"	42"	48"	27"	36"	18"	27"	45"	54"



- NOTES:**
1. A MINIMUM 2'x2'x4' PRECAST CONCRETE THRUST BLOCK IS PREFERRED BY TNWD.
 2. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO PIPE JOINTS SHALL BE COVERED WITH CONCRETE.
 3. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
 4. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS. PLACE ROOFING FELT AROUND HYDRANT ELBOW BEFORE POURING THRUST BLOCKS AND ENSURE CONCRETE DOES NOT PLUG HYDRANT DRAIN PORTS.
 5. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE TNWD ESTABLISHED RULES AND PROCEDURES.

SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL

REACTION TYPE	PIPE SIZE				
	4"	6"	8"	10"	12"
A 90°	0.89	2.19	3.82	11.14	17.24
B 180°	0.65	1.55	2.78	8.38	12.00
C 45°	0.48	1.19	2.12	6.02	9.32
D 22-1/2°	0.25	0.60	1.06	3.08	4.74
E 11-1/4°	0.13	0.30	0.54	1.54	2.38

TEST PRESSURE = 200 PSI

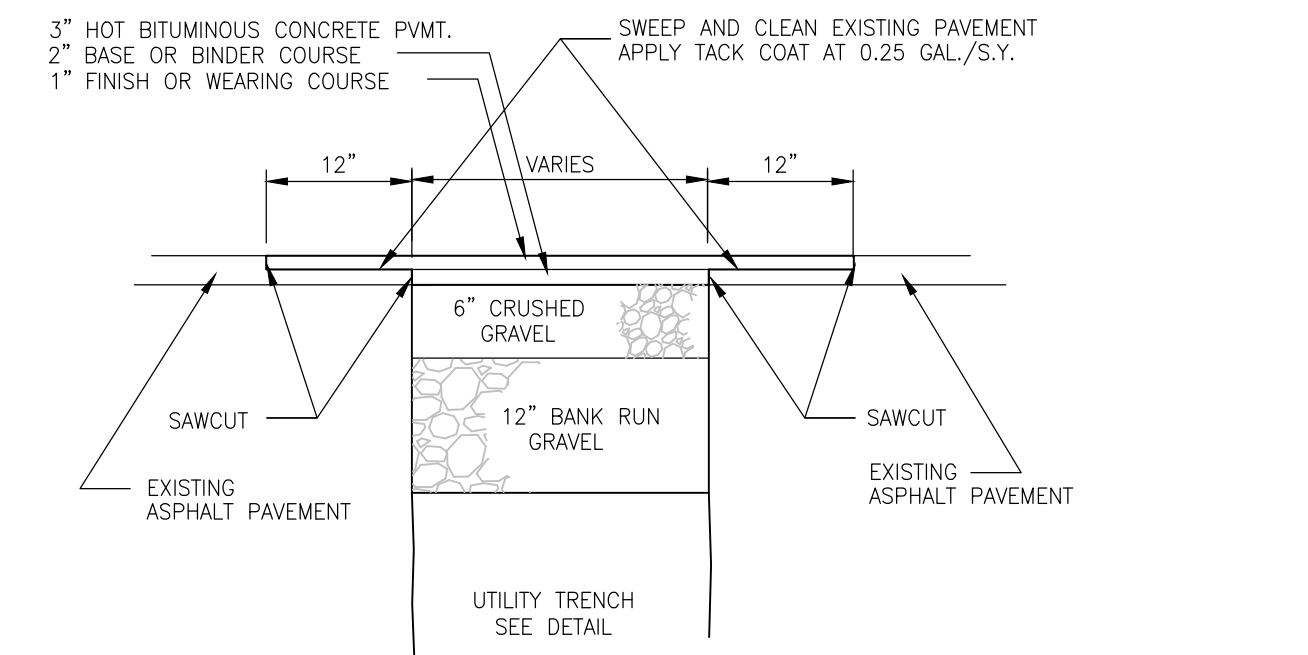
THRUST BLOCKS

NOT TO SCALE

- THE FOLLOWING ARE TNWD ACCEPTABLE MANUFACTURERS FOR WATER MATERIALS:
- DUCTILE IRON PIPE - ATLANTIC STATES, U.S. PIPE AND GRIFFIN
 - DUCTILE IRON FITTINGS - TYLER OR APPROVED EQUAL
 - VALVE BOXES - TYLER OR APPROVED EQUAL
 - JOINT RESTRAINTS - GRIP RINGS BY ROMAC BY EJ PRESCOTT OR MEGALUG BY EBBA
 - HYDRANTS - AMERICAN DARLING B-84-B BY EJ PRESCOTT
 - BLOW-OFF HYDRANT - MAINGUARD BY EJ PRESCOTT
 - 8" GATE VALVES - AMERICAN FLOW CONTROL BY EJ PRESCOTT OR MUELLER
 - 2" GATE VALVES - MUELLER 2" MECHANICAL JOINT RESILIENT WEDGE GATE VALVE
 - BRASS CORPORATIONS, CURB STOPS, UNIONS, AND FITTINGS - FORD AND McDONALD
 - SADDLES - ROMAC 305-H BY EJ PRESCOTT, FORD, OR MUELLER BRIS
- THE FOLLOWING ARE TFM-RECOMMENDED MANUFACTURERS FOR WATER MATERIALS:
- STAINLESS STEEL TAPPING SLEEVE - ROMAC SST BY EJ PRESCOTT
 - MECHANICAL JOINT TAPPING SLEEVE - AMERICAN FLOW CONTROL BY EJ PRESCOTT
 - MECHANICAL JOINT ADAPTER FITTING - INTEGRIFUSE BY EJ PRESCOTT
 - MECHANICAL JOINT RETAINER GLAND - FORD BY EJ PRESCOTT

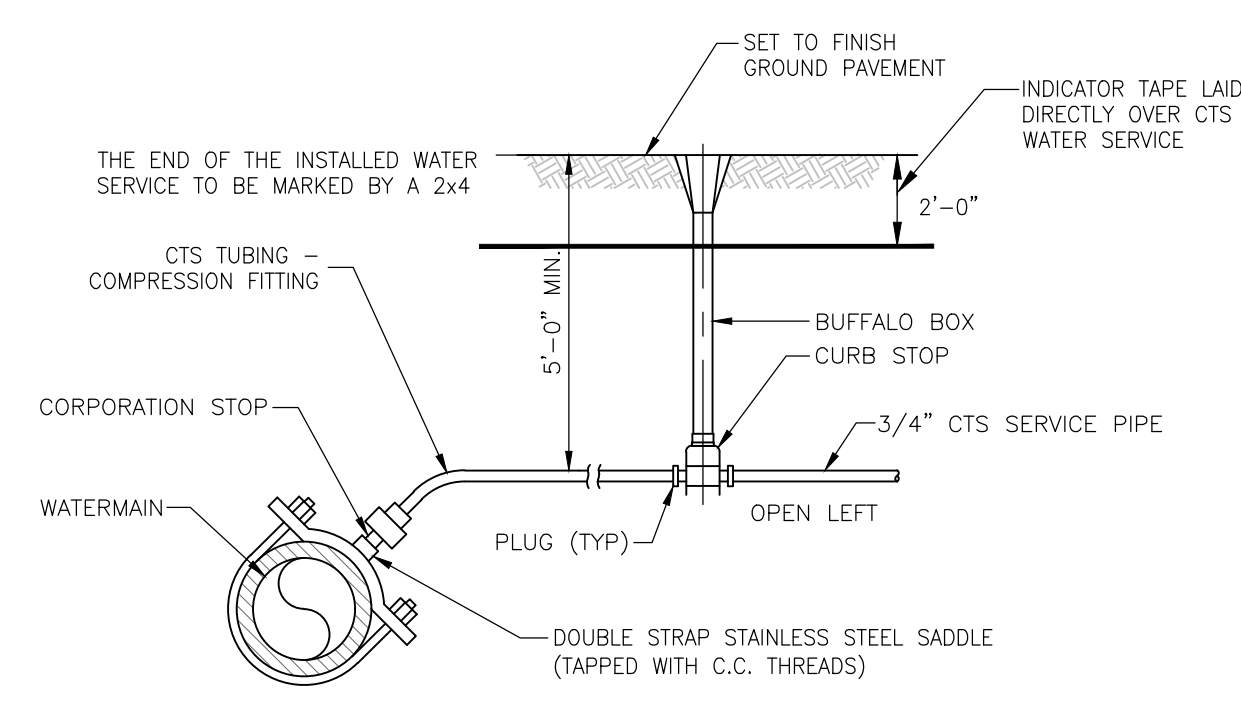
WATER MATERIAL MANUFACTURERS

NOT TO SCALE



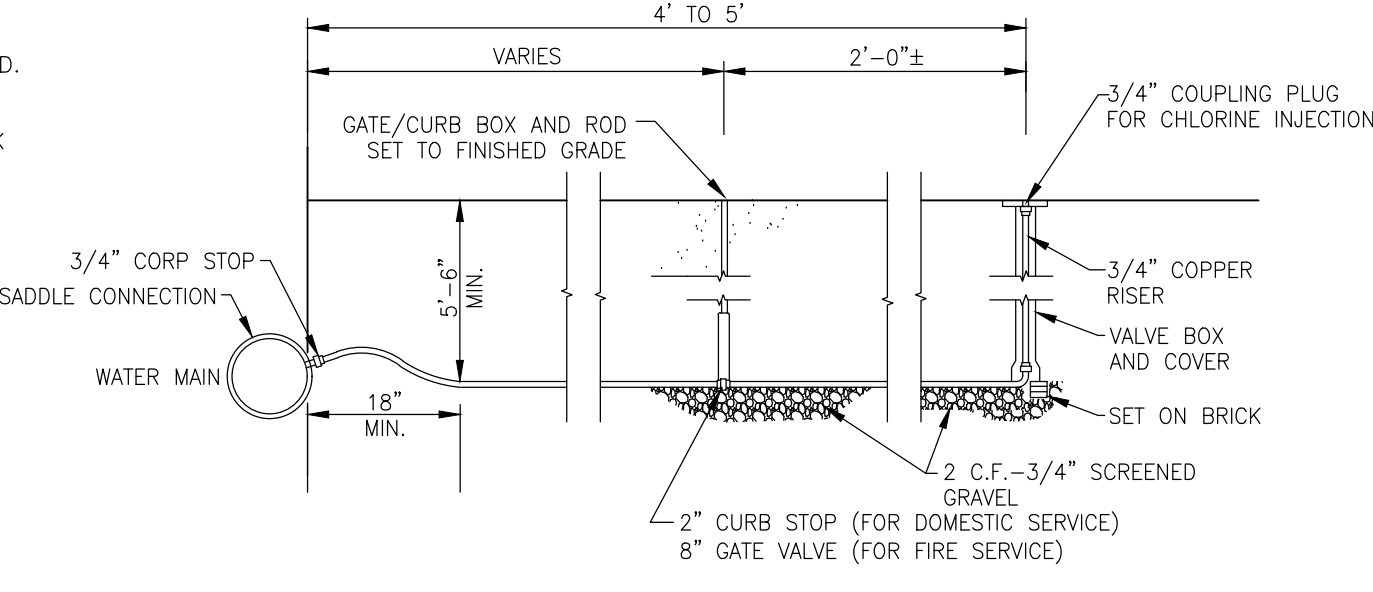
PAVEMENT TRENCH PATCH

NOT TO SCALE



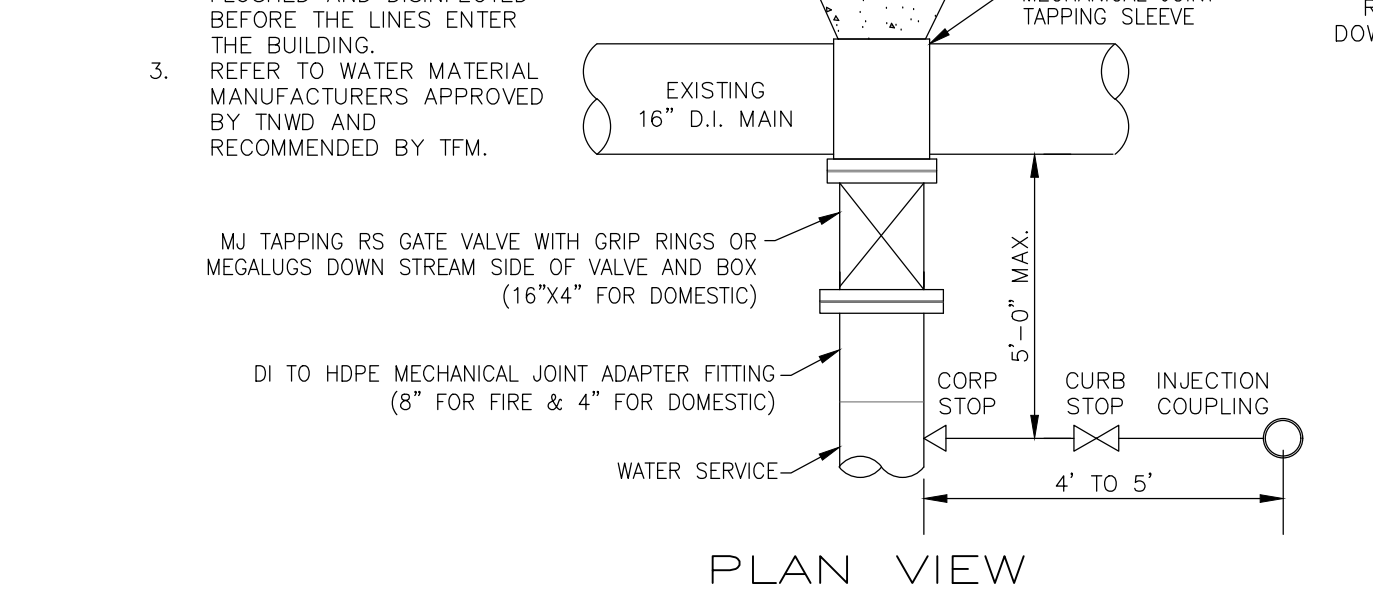
WATER SERVICE CONNECTION

NOT TO SCALE



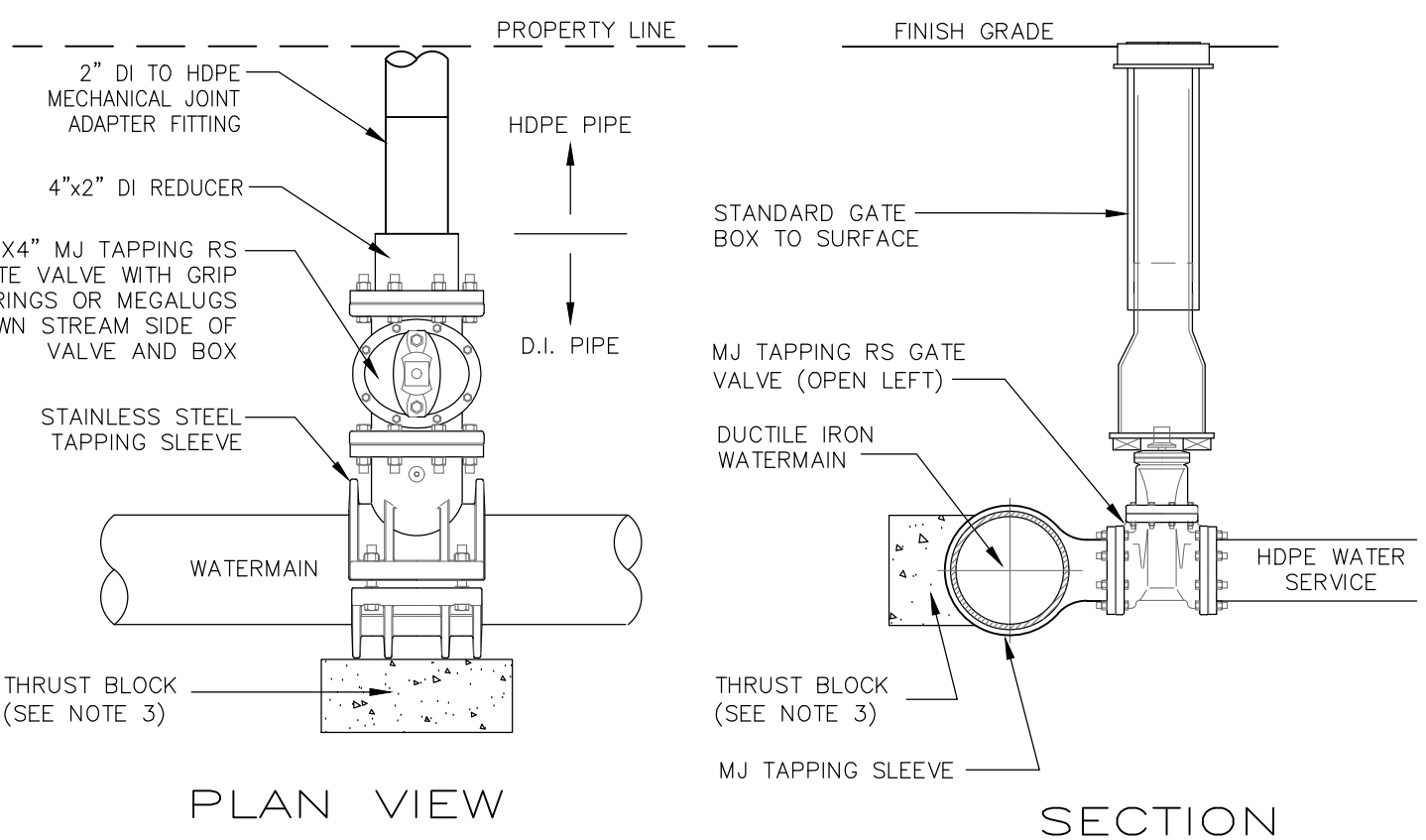
CHLORINE INJECTION CONNECTION

NOT TO SCALE



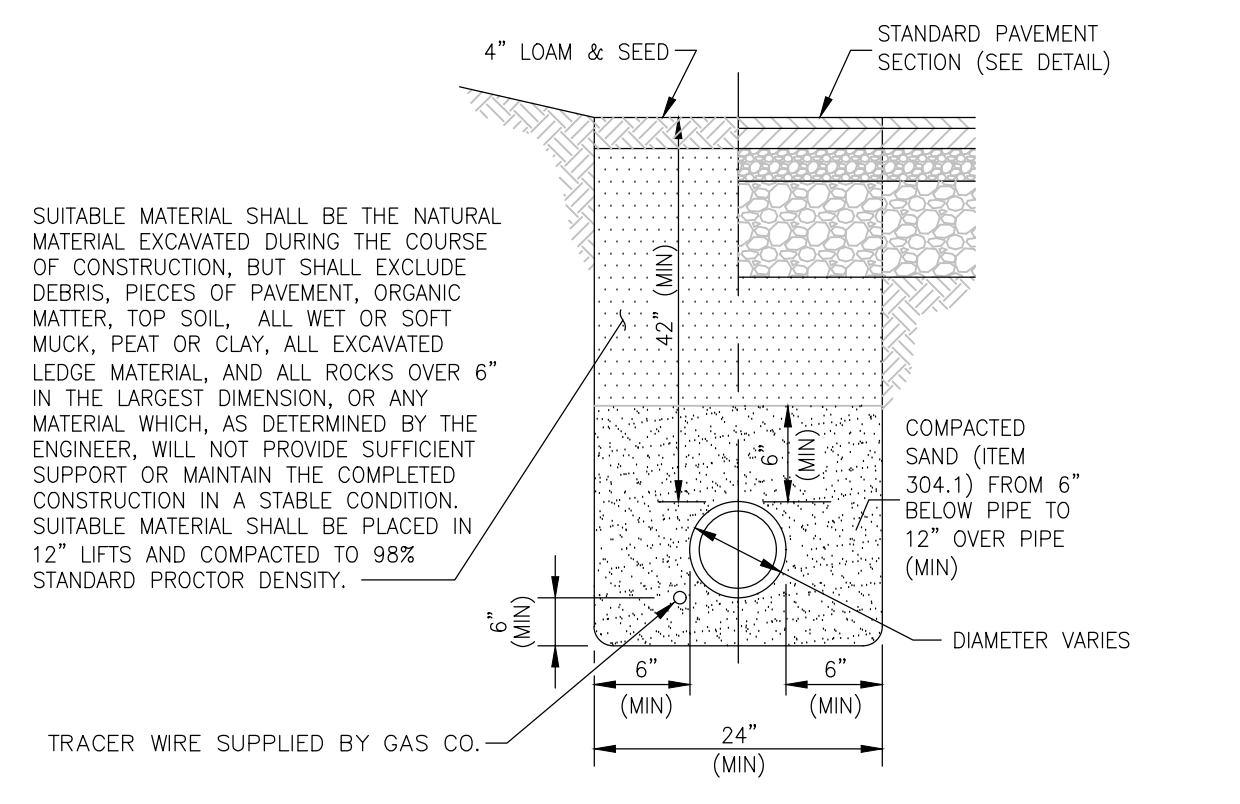
DOMESTIC SERVICE WET TAP INSTALLATION

NOT TO SCALE



WATER TRENCH

NOT TO SCALE



GAS MAIN TRENCH

NOT TO SCALE

ELECTRIC/COMMUNICATIONS TRENCH

NOT TO SCALE

DOMESTIC SERVICE WET TAP INSTALLATION

NOT TO SCALE

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
DETAILS
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

SCALE: NTS DECEMBER 13, 2023

Seacoast Division
TFM
 Civil Engineers
 Structural Engineers
 Traffic Engineers
 Land Surveyors
 Landscape Architects
 Scientists

170 Commerce Way, Suite 102
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18149.00 DR JKC FB
 CK CRR CADFILE 18149-00_DETAILS C-22

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____
 CHAIRMAN _____ SIGNATURE DATE _____ AND
 SECRETARY _____ SIGNATURE DATE _____

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PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

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GENERAL NOTES

- IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAKPROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES SHALL BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H=20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.
- BARRELS, CONE SECTIONS AND CONCRETE GRADE RINGS SHALL BE PRECAST REINFORCED CONCRETE AND SHALL CONFORM ENV-WQ 704.12 & 704.13.
- PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478-06.
- BASE SECTIONS SHALL BE OF MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 6 INCHES ABOVE THE CROWN OF THE INCOMING PIPE.
- MANHOLE CONE SECTIONS SHALL BE ECCENTRIC IN SHAPE.
- ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDELIBLY MARKED ON THE INSIDE WALL.
- ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING.
- SHALL MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H=20 LOADS.
- HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATER-TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT. APPROVED ELASTOMERIC SEALANTS ARE:
 - SIKAFLEX-12-SL
 - SONNEBORN BUILDING PRODUCTS-SONOLASTIC SL-1
- THE MINIMUM INTERNAL DIAMETER OF MANHOLES SHALL BE 48 INCHES. FOR SEWERS LARGER THAN 24-INCH DIAMETER, MANHOLE DIAMETERS SHALL BE INCREASED SO AS TO PROVIDE AT LEAST 12-INCHES OF SHELF ON EACH SIDE OF THE SEWER.
- LEAKAGE TEST SHALL BE PERFORMED IN ACCORDANCE TO ENV-WQ 704.17.
 - (a) ALL MANHOLES SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST IN ACCORDANCE WITH THE ASTM C1244 STANDARD IN EFFECT WHEN THE TESTING IS PERFORMED.
 - (b) THE MANHOLE VACUUM TEST SHALL CONFORM TO THE FOLLOWING:
 - THE INITIAL VACUUM GAUGE TEST PRESSURE SHALL BE 10 INCHES Hg.
 - THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR 1-INCH Hg PRESSURE DROP TO 9 INCHES SHALL BE:
 - A. NOT LESS THAN 2 MINUTES FOR MANHOLES LESS THAN 10 FEET DEEP.
 - B. NOT LESS THAN 2.5 MINUTES FOR MANHOLES 10 TO 15 FEET DEEP.
 - C. NOT LESS THAN 3 MINUTES FOR MANHOLES MORE THAN 15 FEET DEEP.
 - (c) THE MANHOLE SHALL BE REPAIRED OR RETESTED IF THE TEST HOLD TIMES FAIL TO ACHIEVE THE ACCEPTANCE LIMITS SPECIFIED IN (b) ABOVE.
 - (d) INVERTS AND SHELVES SHALL NOT BE INSTALLED UNTIL AFTER SUCCESSFUL TESTING IS COMPLETE.
 - (e) FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT
- ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN OR ANIMALS, UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENT TO GRADE.
- BRICK MASONRY FOR SHELF, INVERT AND GRADE ADJUSTMENT SHALL COMPLY WITH ASTM C32-05, CLAY OR SHALE, FOR GRADE SS HARD BRICK.

MORTAR SHALL BE COMPOSED OF PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION. PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE:

- (a) 4.5 PARTS SAND AND 1.5 PARTS CEMENT; OR
- (b) 4.5 PARTS SAND, 1 PART CEMENT AND 0.5 PART HYDRATED LIME

CEMENT SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C150-05. HYDRATED LIME SHALL BE TYPE S CONFORMING TO ASTM C207-06 "STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES". SAND SHALL CONSIST OF INERT NATURAL SAND CONFORMING TO ASTM C33-03 "STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES".

INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED OR PRECAST CONCRETE SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW AT CHANGES IN DIRECTIONS, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPE TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.

FRAMES AND COVERS: MANHOLES FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN, CLASS 30, CONFORMING TO ASTM A48/48M AND PROVIDE A 30-INCH CLEAR OPENING. 3-INCH WORD (MINIMUM HEIGHT) LETTERS "SEWER" SHALL BE PLAINLY CAST INTO THE TOP SURFACE. THE CASTING SHALL BE OF EVEN GRAINED CAST IRON, SMOOTH AND FREE FROM SCALE, LUMPS, BUSTERS, SAND HOLES AND DEFECTS. CONTACT SURFACES OF COVERS AND FRAMES SHALL BE MACHINED AT THE FOUNDRY TO PREVENT ROCKING OF COVERS IN ANY ORIENTATION.

BEDDING: PRECAST BASES SHALL BE PLACED ON A 6-INCH LAYER OF COMPACTED BEDDING MATERIAL THAT CONFORMS TO ASTM C33-03 NO. 67 STONE AND FREE FROM CLAY, LOAM AND ORGANIC MATTER. THE EXCAVATION SHALL BE PROPERLY DEWATERED WHILE PLACING BEDDING MATERIAL AND SETTING OF THE BASE OR POURING CONCRETE. WATER-STOPS SHALL BE USED AT THE HORIZONTAL JOINT OF THE CAST-IN-PLACE MANHOLES.

100% PASSING	1" SCREEN
90-100% PASSING	3/4" SCREEN
20-55% PASSING	3/8" SCREEN
0-10% PASSING	#4 SIEVE
0-5% PASSING	#8 SIEVE

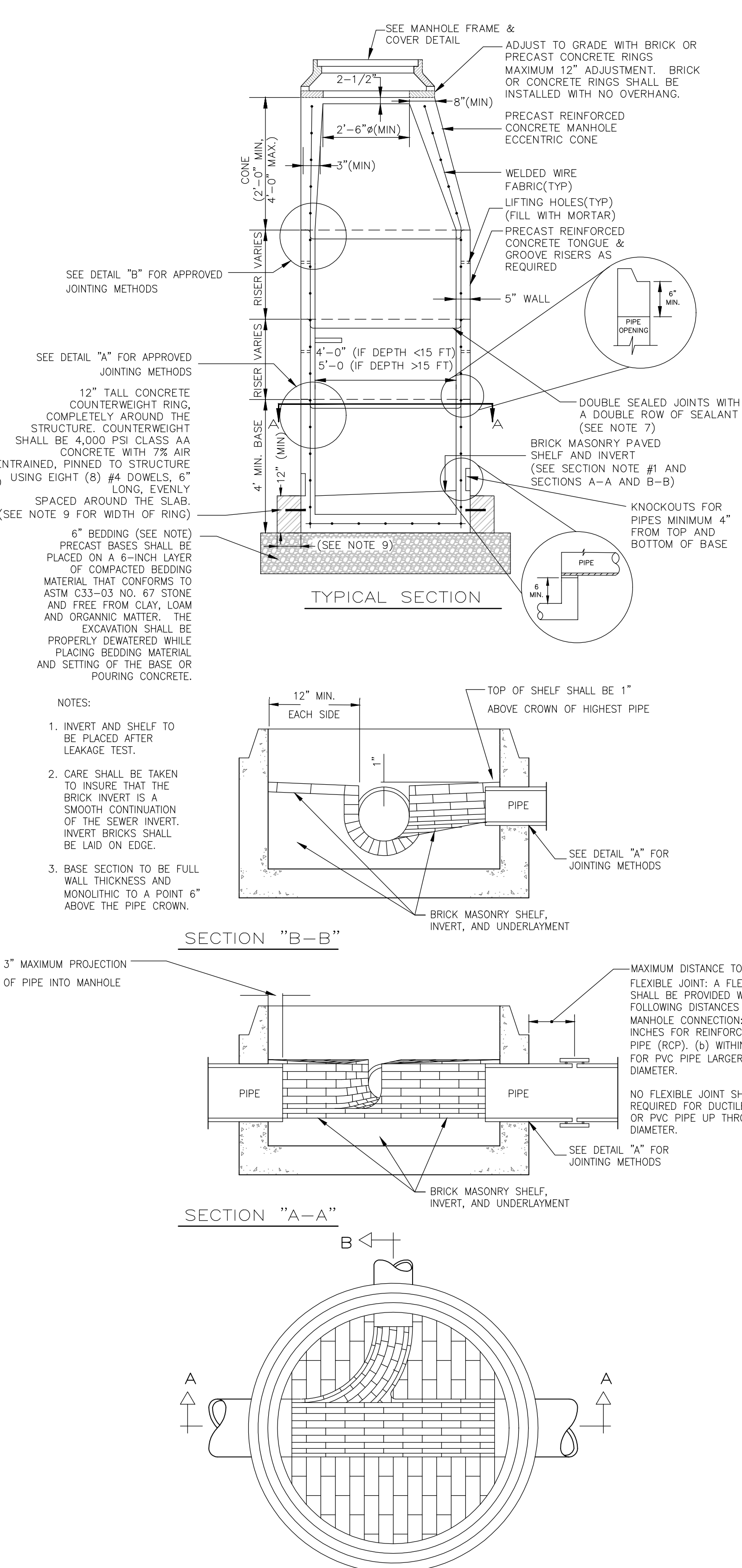
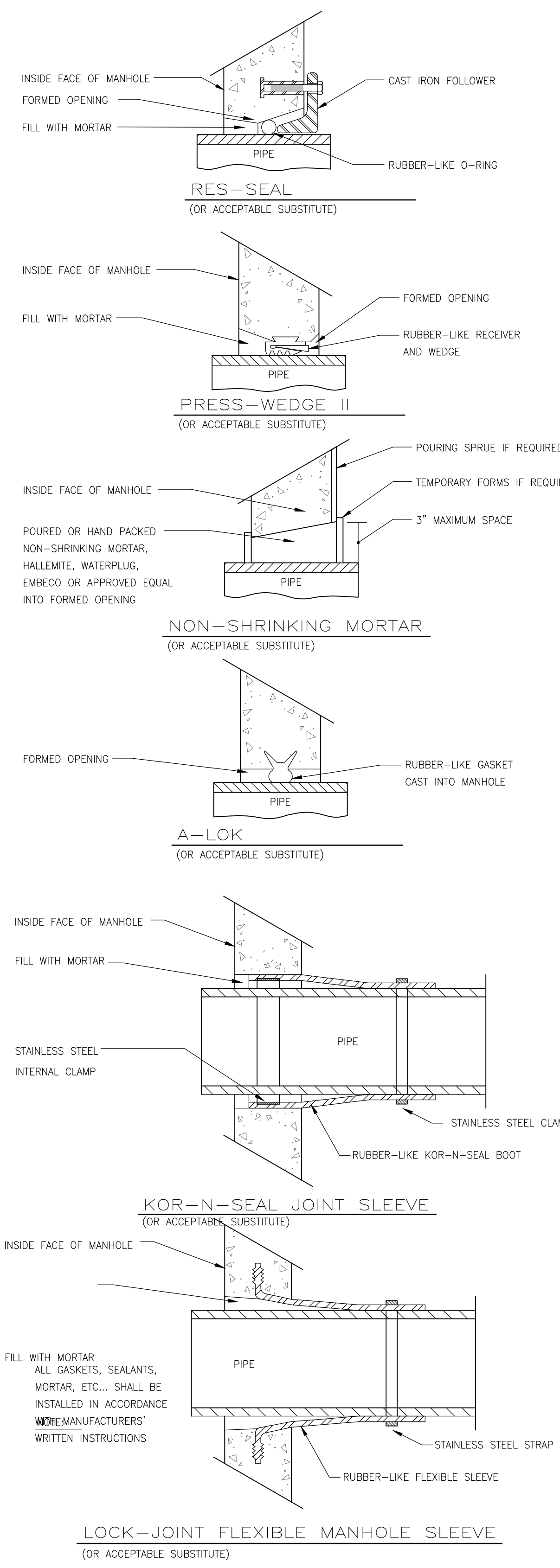
17. FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES FROM ANY MANHOLE CONNECTION: (a) WITHIN 48 INCHES FOR REINFORCED CONCRETE PIPE (RCP). (b) WITHIN 60 INCHES FOR PVC PIPE LARGER THAN 15" DIAMETER.

18. NO FLEXIBLE JOINT SHALL BE REQUIRED FOR DUCTILE IRON PIPE OR PVC PIPE UP THROUGH 15-INCH DIAMETER.

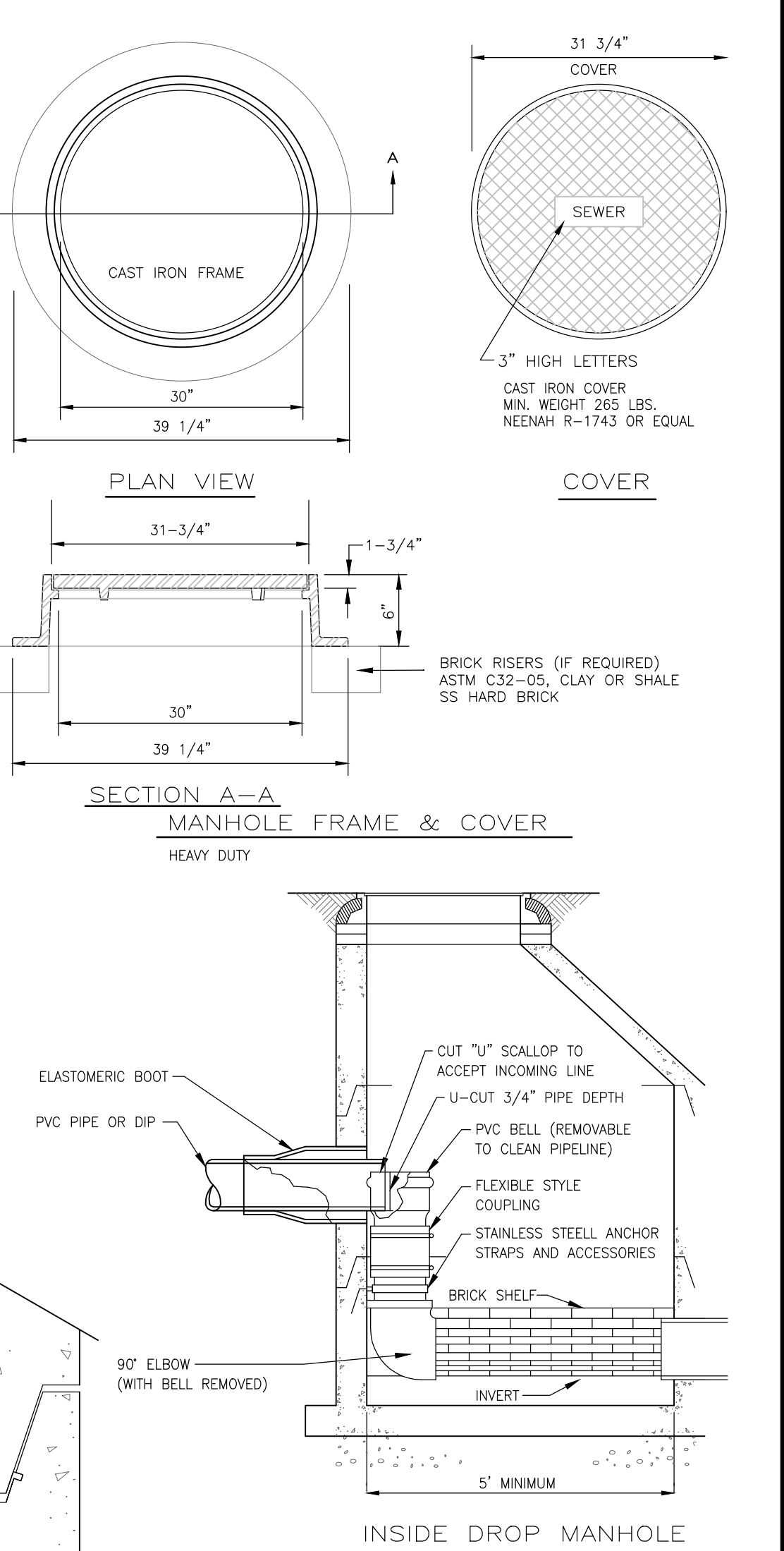
19. PIPE TO MANHOLE JOINTS SHALL BE ONLY AS FOLLOWS:

- A. ELASTOMERIC, RUBBER SLEEVE WITH WATER-TIGHT JOINTS AT THE MANHOLE OPENING AND PIPE SURFACES.
- B. CAST INTO WALL OR SECURED WITH STAINLESS STEEL CLAMPS.
- C. ELASTOMERIC SEALING RING CAST IN THE MANHOLE OPENING WITH THE SEAL FORMED ON THE SURFACE OF THE PIPE BY COMPRESSION OF THE RING.
- D. ON-SHRINK GROUTED JOINTS WHERE WATER-TIGHT BONDING TO THE MANHOLE AND PIPE CAN BE OBTAINED.

20. THE INVERT OF THE INCOMING PIPE SHALL BE NO MORE THAN 6 INCHES ABOVE THE OUTGOING PIPE UNLESS A DROP ENTRY IS USED.



- NOTES
- UNDERLAYMENT OF MANHOLE INVERT AND SHELF SHALL BE BRICK MASONRY PER ENV-WQ 704.12(K).
 - INVERT AND SHELF TO BE PLACED AFTER EACH LEAKAGE TEST.
 - CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT.
 - INVERT BRICKS SHALL BE LAID ON EDGE.
 - PRECAST CONCRETE MANHOLES SHALL MEET AASHTO M199-93/ ASTM C478-90B, RATED FOR HS-20 LOADING WITH CONCRETE STRENGTH OF 4000 PSI OR GREATER.
 - ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING.
 - HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATER-TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT.
- ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.
- STATE OF NEW HAMPSHIRE APPROVED PRODUCTS
- A) SIKAFLEX-12-SL
 - B) SONNEBORN BUILDING PRODUCTS SONOLASTIC SL-1
- MANHOLE STEPS ARE PROHIBITED BY THE TOWN OF TILTON.
- COUNTERWEIGHT NOTE:**
- 4" DIAMETER MANHOLES
 - a. LESS THAN 4" DEEP MUST HAVE 6" WIDE COUNTERBALANCE RINGS.
 - b. EQUAL TO OR GREATER THAN 4" AND LESS THAN 13" DEEP MUST HAVE 8" WIDE COUNTERBALANCE RINGS.
 - c. EQUAL TO OR GREATER THAN 13" DEEP MUST HAVE 10" WIDE COUNTERBALANCE RINGS.
 - 5" DIAMETER MANHOLES
 - a. LESS THAN 9" DEEP MUST HAVE 10" WIDE COUNTERBALANCE RINGS.
 - b. EQUAL TO OR GREATER THAN 9" DEEP AND LESS THAN 18" DEEP MUST HAVE 12" WIDE COUNTERBALANCE RINGS.
 - c. EQUAL TO OR GREATER THAN 18" DEEP MUST HAVE 14" WIDE COUNTERBALANCE RINGS.
 - 6" DIAMETER MANHOLES:
 - a. LESS THAN 7" DEEP MUST HAVE 10" WIDE COUNTERBALANCE RINGS.
 - b. EQUAL TO OR GREATER THAN 7" DEEP AND LESS THAN 10" DEEP MUST HAVE 12" WIDE COUNTERBALANCE RINGS.
 - c. EQUAL TO OR GREATER THAN 10" DEEP AND LESS THAN 17" DEEP MUST HAVE 14" WIDE COUNTERBALANCE RINGS.
 - d. EQUAL TO OR GREATER THAN 17" DEEP MUST HAVE 16" WIDE COUNTERBALANCE RINGS.
- HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATER-TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT.
- ELASTOMERIC SEALANT
- NOTES:
- ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.
- STATE OF NEW HAMPSHIRE APPROVED PRODUCTS
- A) SIKAFLEX-12-SL
 - B) SONNEBORN BUILDING PRODUCTS SONOLASTIC SL-1
- DETAIL "B" - HORIZONTAL JOINTS**



- NOTES:
- MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE TO THE TOWN OF HOOKSETT STANDARDS FOR SANITARY MANHOLE CONSTRUCTION.
 - INSIDE DROP MANHOLES SHALL HAVE A MINIMUM 5' INSIDE DIAMETER.
 - ANCHOR STRAPS (MINIMUM 2) AND BOLTS TO BE 304 OR 316 STAINLESS STEEL AND NOT MORE THAN 3" ON CENTER. SECURE AS DIRECTED: STRAPS - 1" WIDE, BOLTS - 3/8" x 2 1/2" LONG.

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16

DETAILS

GAS STATION/CONVENIENCE STORE/CAR WASH

91-97 LOWELL ROAD, HUDSON, NH

OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

SCALE: NTS **DECEMBER 13, 2023**

Seacoast Division		Civil Engineers	170 Commerce Way, Suite 102
TFM		Structural Engineers	Portsmouth, NH 03801
		Traffic Engineers	Phone (603) 431-2222
		Land Surveyors	Fax (603) 431-0910
		Landscape Architects	www.tfmoran.com
		Scientists	

18149.00	DR	JKC	FB		
	CK	CRR	CADFILE	18149-00-DETAILS	C-23

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APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____

CHAIRMAN _____ SIGNATURE DATE _____ AND

SECRETARY _____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

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STANDARD MANHOLE
NOT TO SCALE

TYPICAL MANHOLE - PLAN VIEW

REV	DATE	DESCRIPTION	DR	CK
5	10/14/2024	REVISED PER PLANNING BOARD COMMENTS	JKC	CRR
4	9/4/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR
3	7/31/2024	REVISED PER AOT REQUIREMENTS	JKC	CRR
2	7/18/2024	REVISED PER TOWN INTERNAL REVIEW COMMENTS	JKC	CRR
1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR

SEWER SERVICE NOTES

- MINIMUM SIZE PIPE FOR SEWER SERVICE SHALL BE FOUR INCHES.
- PIPE AND JOINT MATERIALS:
 - PLASTIC SEWER PIPE
 - PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

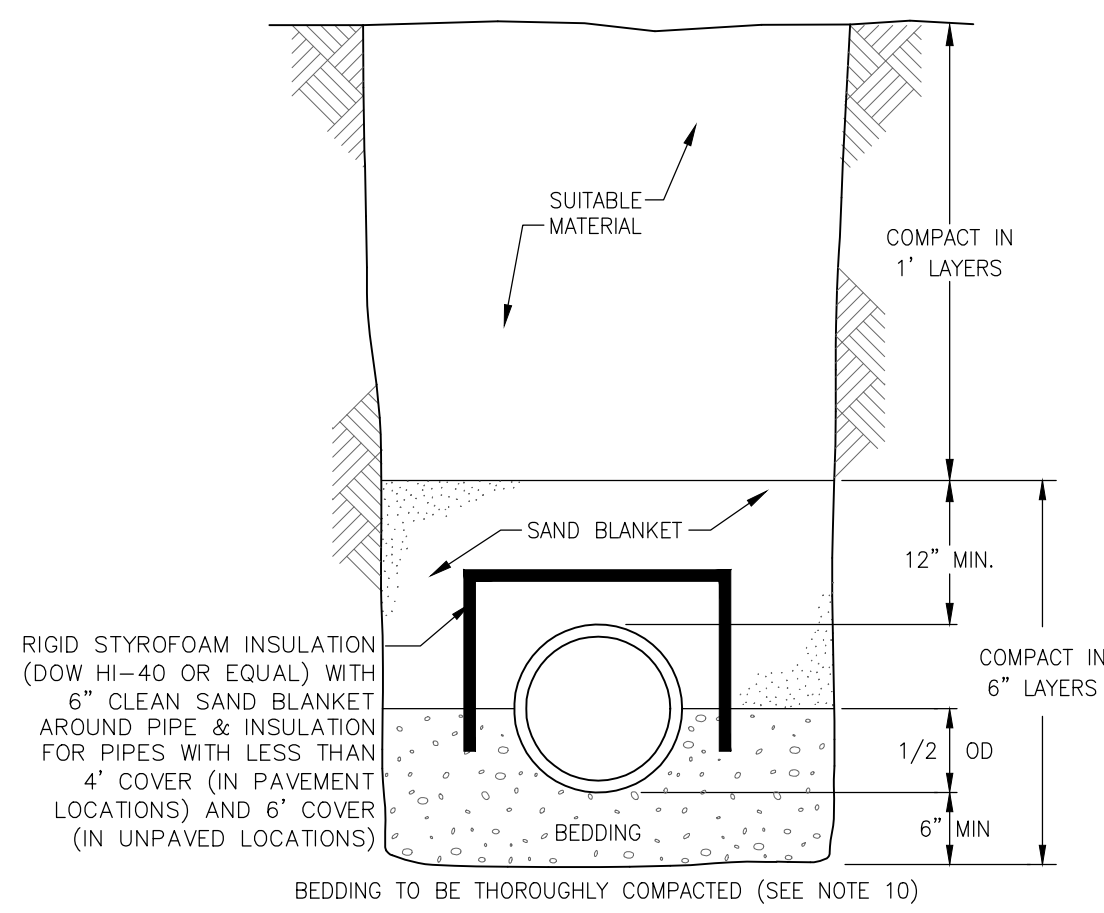
ASTM STANDARDS	GENERIC PIPE MATERIAL	SIZES APPROVED
D3034	*PVC (SOLID WALL)	8" THROUGH 15" (SDR 35)
F789	PVC (SOLID WALL)	18" THROUGH 27" (T-1 & T-2)
F789	PVC (SOLID WALL)	4" THROUGH 18" (T-1 TO T-3)
F794	PVC (RIBBED WALL)	8" THROUGH 36"
D2680	*ABS (COMPOSITES WALL)	8" THROUGH 15"

*PVC: POLY VINYL CHLORIDE
*ABS: ACRYLONITRILE-BUTADIENE-STYRENE
 - JOINTS SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D-3212 AND SHALL BE PUSH-ON, BELL AND SPIGOT TYPE.
ABS TRUSS PIPE AND FITTINGS SHALL CONFORM TO ASTM D-2680, POLYMER COMPOUNDING SHALL BE TO ASTM D-1788 (CLASS 322).
JOINTS FOR ABS TRUSS PIPE SHALL BE CHEMICAL WELDED COUPLINGS TYPE SC IN ACCORDANCE WITH ASTM D-2680, FORMING A CHEMICAL WELDED JOINT.
 - DUCTILE-IRON PIPE, FITTINGS AND JOINTS.
 - DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE UNITED STATES OF AMERICA STANDARDS INSTITUTE:
 - ASTI.50 THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A-536 DUCTILE IRON CASTINGS.
 - ASTI.51 DUCTILE IRON PIPE, CENTRIFUGALLY CAST IN METAL MOLDS OR SAND-LINED MOLDS FOR WATER OR OTHER LIQUIDS.
 - JOINTS SHALL BE OF THE MECHANICAL OR PUSH-ON TYPE. JOINTS AND GASKETS SHALL CONFORM TO:
 - A21.11 RUBBER GASKETS JOINTS FOR CAST IRON PRESSURE PIPE & FITTINGS
- DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.
- JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER-TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED.
- TEES AND WYES: WHERE A TEE OR WYE IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE CONNECTION SHALL BE MADE, FOLLOWING MANUFACTURERS' INSTRUCTIONS USING A BOLTED, CLAMPED OR EPOXY-CEMENTED SADDLE TAPPED INTO A SMOOTHLY DRILLED OR SAWN OPENING IN THE SEWER. THE PRACTICE OF BREAKING AN OPENING WITH A SLEDGE HAMMER, STUFFING CLOTH OR OTHER SUCH MATERIAL AROUND THE JOINT, OR APPLYING MORTAR TO HOLD THE CONNECTION, AND ANY OTHER SIMILAR CRUDE PRACTICES OR INEPT OR HASTY IMPROVISATIONS WILL NOT BE PERMITTED. THE CONNECTION SHALL BE CONCRETE ENCASED AS SHOWN IN THE DETAIL UP TO AND INCLUDING 15" DIAMETER.
- SEWER SERVICE INSTALLATION: THE PIPE SHALL BE HANDLED, PLACED AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 6 INCH LAYER OF CRUSHED STONE AND/OR GRAVEL AS SPECIFIED IN NOTE 10. BEDDING AND RE-FILL FOR DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH APPROPRIATE MECHANICAL DEVICES.
THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE FOUNDATION AT A GRADE OF NOT LESS THAN 1/4" INCH PER FOOT. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DEMATER THE TRENCH.
- TESTING: THE COMPLETED SEWER SERVICE SHALL BE SUBJECTED TO A THIRD PARTY LEAKAGE TEST IN ANY OF THE FOLLOWING MANNERS: (PRIOR TO BACKFILLING)
 - AN OBSERVATION TEE SHALL BE INSTALLED AS SHOWN AND WHEN READY FOR TESTING, AN INFLATABLE BLADDER OR PLUG SHALL BE INSERTED JUST UPSTREAM FROM THE OPENING IN THE TEE. AFTER INFLATION, WATER SHALL BE INTRODUCED INTO THE SYSTEM ABOVE THE PLUG TO A HEIGHT OF 5 FEET ABOVE THE LEVEL OF THE PLUG.
 - THE PIPE SHALL BE LEFT EXPOSED AND LIBERALLY HOSED WITH WATER, TO SIMULATE, AS NEARLY AS POSSIBLE, WET TRENCH CONDITIONS OR, IF TRENCH IS WET, THE GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. INSPECTIONS FOR LEAKS SHALL BE MADE THROUGH THE CLEANOUT WITH A FLASHLIGHT.
 - DRY FLUORESCENCE DYE SHALL BE SPRINKLED INTO THE TRENCH OVER THE PIPE. IF THE TRENCH IS DRY, THE PIPE SHALL BE LIBERALLY HOSED WITH WATER, OR IF THE TRENCH IS WET, GROUND WATER SHALL BE PERMITTED TO RISE IN THE TRENCH OVER THE PIPE. OBSERVATION FOR LEAKS SHALL BE MADE IN THE FIRST DOWN-STREAM MANHOLE.

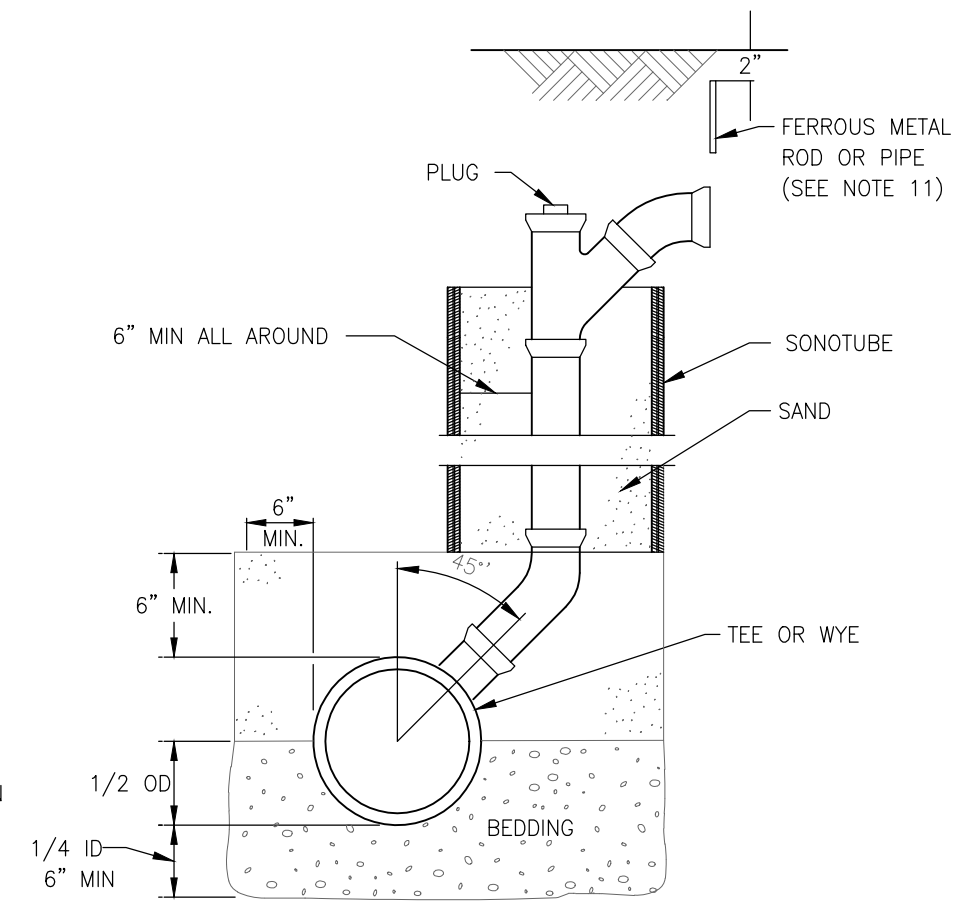
LEAKAGE OBSERVED IN ANY ONE OF THE ABOVE ALTERNATE TESTS SHALL BE CAUSE FOR NON-ACCEPTANCE AND THE PIPE SHALL BE DUG-UP IF NECESSARY AND RE-LAID SO AS TO ASSURE WATER TIGHTNESS.
- ILLEGAL CONNECTIONS: NOTHING BUT SANITARY WASTE FLOW FROM TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS, SUMP PUMPS OR OTHER SIMILAR CONNECTIONS CARRYING RAIN WATER, DRAINAGE OR GROUND WATER SHALL NOT BE PERMITTED.
- WATER SERVICE SHALL NOT BE LAID IN SAME TRENCH AS SEWER SERVICE.
- BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATERIAL AND MEETING ASTM C33-87.

100% PASSING	1 INCH SCREEN
90%-100% PASSING	3/4 INCH SCREEN
20%-55% PASSING	3/8 INCH SCREEN
0%-10% PASSING	#4 SIEVE
0%-5% PASSING	#8 SIEVE

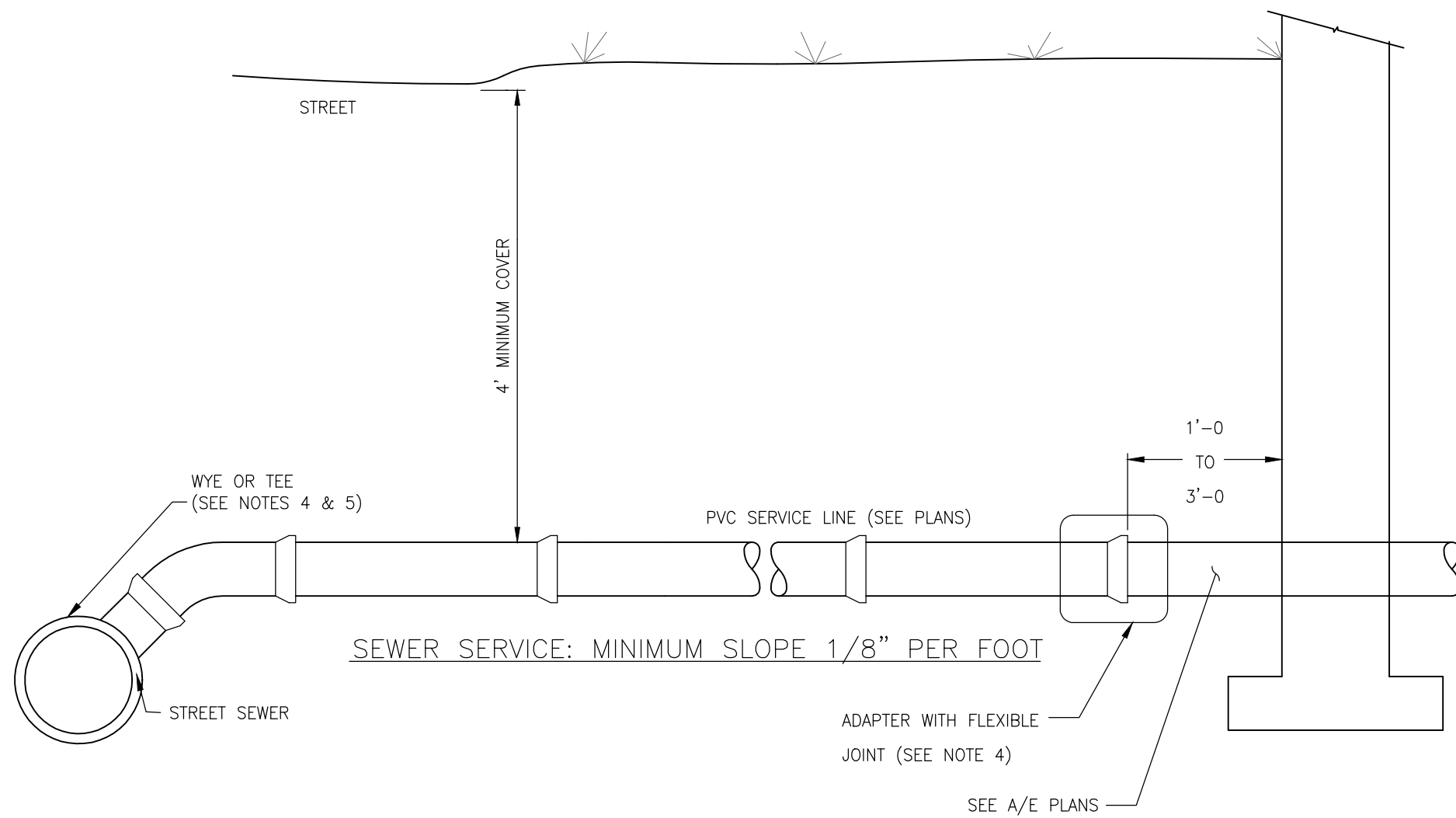
WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, SCREENED GRAVEL OR CRUSHED STONE 1/2 INCH TO 1 1/2 INCH SHALL BE USED.
- LOCATION: THE LOCATION OF THE TEE OR WYE SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS METAL ROD OR PIPE SHALL BE PLACED OVER THE TEE OR WYE AS DESCRIBED IN THE TYPICAL "CHIMNEY" DETAIL, TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPEFINDER.
- CHIMNEYS: IF VERTICAL DROP INTO SEWER IS GREATER THAN 4 FEET, A CHIMNEY SHALL BE CONSTRUCTED FOR THE SEWER CONNECTION. CHIMNEY INSTALLATION AS RECOMMENDED BY THE PIPE MANUFACTURER MAY BE USED IF APPROVED BY THE ENGINEER.



TRENCH CROSS-SECTION
NOT TO SCALE



CHIMNEY
NOT TO SCALE



SEWER SERVICE
NOT TO SCALE

GRAVITY SEWER NOTES

- MINIMUM SIZE PIPE FOR GRAVITY SEWER SHALL BE 8-INCHES.
- PIPE AND JOINT MATERIALS FOR PLASTIC SEWER PIPE SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

ASTM STANDARDS	GENERIC PIPE MATERIAL	SIZES APPROVED
D3034-04a	*PVC (SOLID WALL)	8" THROUGH 15" (SDR 35)
F679-03	PVC (SOLID WALL)	18" THROUGH 27" (T-1 & T-2)
F784-03	PVC (RIBBED WALL)	8" THROUGH 36"
F1760-01(2005)e1	PVC, RECYCLED	ALL DIAMETERS

*PVC: POLY VINYL CHLORIDE
- PLASTIC SEWER PIPE SHALL HAVE A PIPE STIFFNESS RATING OF AT LEAST 46 POUNDS PER SQUARE INCH AT 5 PERCENT PIPE DIAMETER DEFLECTION, AS MEASURED IN ACCORDANCE WITH ASTM D2412-02 DURING MANUFACTURE.
- JOINTS SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D-3212-96(a)(2003)e1 AND SHALL BE PUSH-ON, BELL AND SPIGOT TYPE.
- DUCTILE-IRON PIPE, FITTINGS AND JOINTS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA).
 - AWWA C151/A21.51-02 THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A-536-84 (2004) DUCTILE IRON CASTINGS.
 - AWWA C151/A21.51-02 DUCTILE IRON PIPE, CENTRIFUGALLY CAST IN METAL MOLDS OR SAND-LINED MOLDS FOR WATER OR OTHER LIQUIDS.

JOINTS SHALL BE OF THE MECHANICAL OR PUSH-ON TYPE. JOINTS AND GASKETS SHALL CONFORM TO AWWA C151/A21.11 RUBBER GASKETS JOINTS FOR CAST IRON PRESSURE PIPE & FITTINGS.
- CONCRETE PIPE SHALL CONFORM TO AWWA C302-04.
- PRESTRESSED CONCRETE CYLINDER PIPE AND FITTINGS SHALL CONFORM TO AWWA C301-99.
- JOINTS SEALS FOR CONCRETE CYLINDER PIPE SHALL BE OIL RESISTANT ELASTOMERIC MATERIAL CONFORMING TO ASWWA C301-99 SPECIFICATIONS.
- DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.
- GRAVITY SEWER PIPE TESTING SHALL BE AS FOLLOWS:
 - ALL NEW GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF LOW-PRESSURE AIR TESTS. LOW PRESSURE AIR TESTING SHALL BE IN CONFORMANCE WITH:
 - ASTM F1417-92(2005) "STANDARD TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW PRESSURE AIR".
 - UNI-BELL PVC PIPE ASSOCIATION UNI-B-6, "LOW PRESSURE AIR TESTING OF INSTALLED SEWER PIPE".
- ALL NEW GRAVITY SEWERS SHALL BE CLEANED AND VISUALLY INSPECTED AND SHALL BE TRUE TO LINE AND GRADE FOLLOWING INSTALLATION AND PRIOR TO USE.
- ALL PLASTIC SEWER PIPE SHALL BE DEFLECTION TESTED NOT LESS THAN 30 DAYS FOLLOWING INSTALLATION.
- THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5.0 PERCENT OF THE AVERAGE INSIDE DIAMETER.
- TRENCH CONSTRUCTION SHALL CONFORM TO THE FOLLOWING:
 - SEWERS SHALL BE BURIED TO A MINIMUM DEPTH OF 6' BELOW GRADE IN ALL ROADWAY LOCATIONS AND TO A MINIMUM DEPTH OF 4 FEET BELOW GRADE IN ALL CROSS COUNTRY LOCATIONS.

WHERE SEWER LINES CROSS WATER PIPES, A MINIMUM OF 18" VERTICAL SEPARATION BETWEEN THE TWO OUTSIDE PIPE WALLS SHALL BE OBSERVED. AT SEWER/WATER INTERSECTIONS, A MINIMUM OF 6 FEET SHALL BE PROVIDED FROM THE WATER LINE TO THE SEWER PIPE JOINT. 12" SEPARATION BETWEEN THE TWO OUTSIDE PIPE WALLS SHALL BE REQUIRED BETWEEN SEWER LINES AND ALL OTHER PIPES.

TRENCH DIMENSIONS FOR SEWER PIPE LESS THAN 15 INCHES IN DIAMETER, THE ALLOWABLE TRENCH WIDTH AT A PLANE 12 INCHES ABOVE THE PIPE SHALL BE NO MORE THAN 36 INCHES AND FOR PIPE 15 INCHES AND LARGER, THE ALLOWABLE WIDTH SHALL BE EQUAL TO THE PIPES OUTSIDE DIAMETER PLUS 24 INCHES.

PIPE TRENCH BEDDING MATERIAL AND FILL MATERIAL FOR EXCAVATION BELOW GRADE SHALL BE SCREENED GRAVEL OR CRUSHED STONE TO ASTM C33-03 STONE SIZE NO. 67. THE PIPE SAND BLANKET MATERIAL SHALL BE GRADED SAND FREE FROM ANY ORGANIC MATERIALS, GRADED SUCH THAT 100 PERCENT PASSED THE 1/2-INCH SIEVE AND A MAXIMUM OF 15 PERCENT PASSES A #200 SIEVE. IN LIEU OF A SAND BLANKET, A STONE ENVELOPE 6 INCHES THICK COMPLETELY AROUND THE PIPE USING 3/4-INCH STONE MAY BE USED.

PIPE BEDDING MATERIAL SHALL EXTEND FROM A HORIZONTAL PLANE THROUGH THE PIPE AXIS TO 6-INCHES BELOW THE BOTTOM OF THE OUTSIDE SURFACE OF THE PIPE.
PIPE SAND BLANKET MATERIAL SHALL COVER THE PIPE A MINIMUM OF 12 INCHES ABOVE THE CROWN OF THE OUTSIDE SURFACE.

COMPACTION SHALL BE IN 12-INCH LAYERS FOR BEDDING AND BLANKET MATERIALS.

BACKFILL MATERIAL SHALL BE IN 3-FOOT LAYERS TO THE GROUND SURFACE EXCEPT FOR ROAD CONSTRUCTION WHERE THE FINAL 3-FOOT SHALL BE COMPACTED IN 12-INCH LAYERS TO THE ROAD BASE SURFACE.

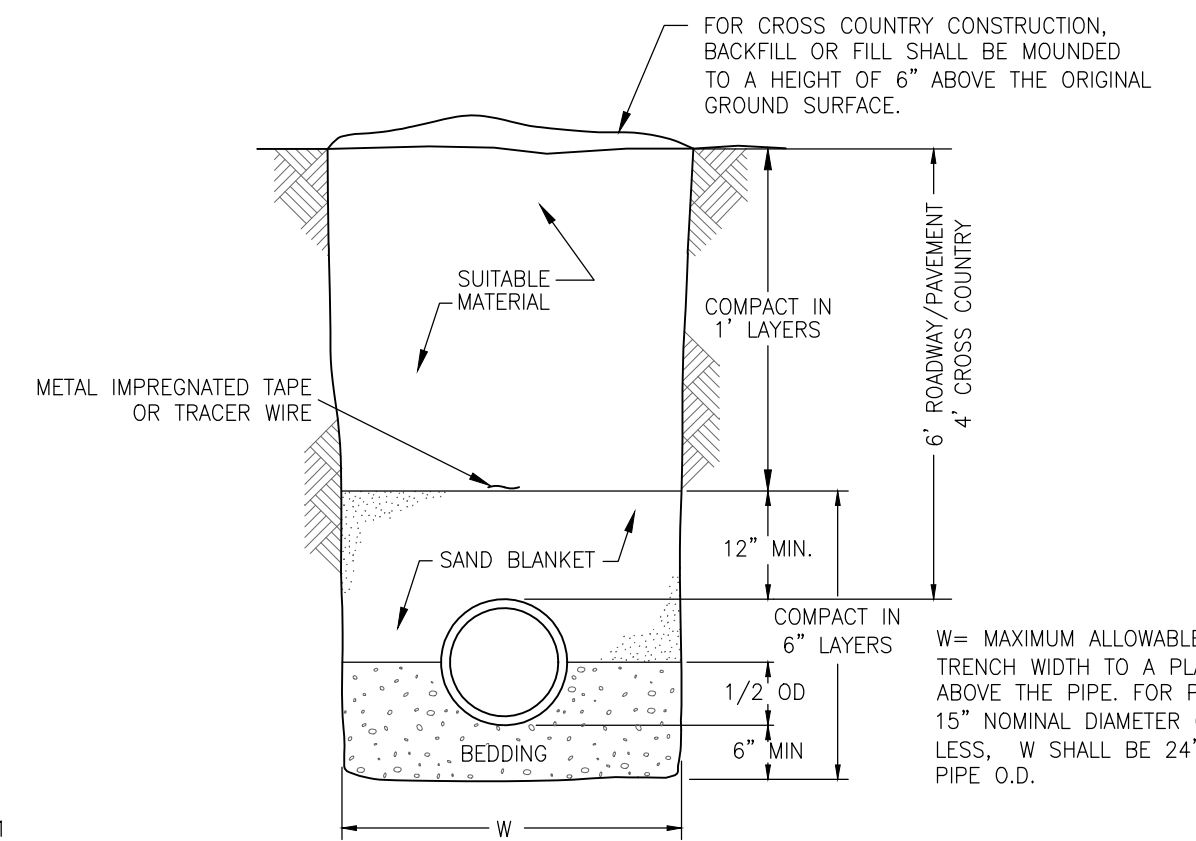
TRENCH BACKFILL MATERIAL IN ROADWAY LOCATIONS SHALL BE NATURAL MATERIALS EXCAVATED FROM THE TRENCH DURING CONSTRUCTION, EXCLUDING DEBRIS, PAVEMENT PIECES, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT, CLAY, EXCAVATED LEDGE, ROCKS OVER 6 INCHES IN THE LARGEST DIMENSION, OR ANY OTHER UNSUITABLE MATERIAL NOT APPROVED BY THE ENGINEER.

TRENCH BACKFILL AT CROSS-COUNTRY LOCATIONS SHALL BE AS DESCRIBED ABOVE EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK OR PEAT, IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER FOR MAINTENANCE AND POSSIBLE RECONSTRUCTION, WHEN NECESSARY WILL BE PRESERVED. BACKFILL SHALL BE MOUND 6-INCHES ABOVE ORIGINAL GROUND.

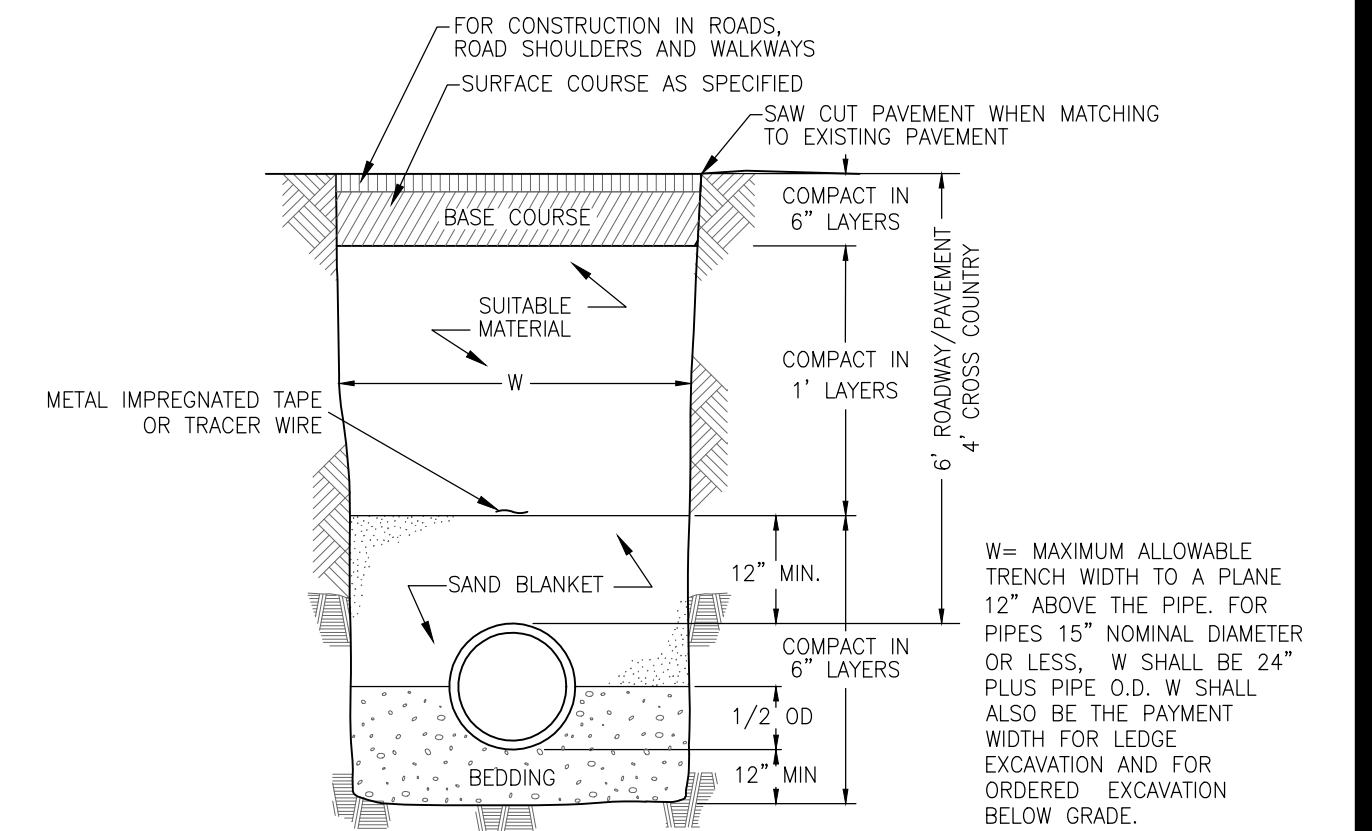
BASE COURSE MATERIALS FOR TRENCH REPAIRS SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.

WHERE SHEETING IS PLACED ALONG SIDE OF THE PIPE AND EXTENDS BELOW MID-DIAMETER, THE SHEETING SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE AND AT LEAST 3 FEET BELOW FINISH GRADE.

TRENCHES FOR SEWER PIPES WITH SLOPES OVER 0.08 FEET PER FOOT AND TRENCHES FOR SEWER PIPE BELOW THE SEASONAL HIGH GROUND WATER LEVEL SHALL HAVE IMPERVIOUS TRENCH DAMS CONSTRUCTED EVERY 300 FEET TO PREVENT POTENTIAL DISTURBANCE TO PIPE BEDDING AND BLANKET MATERIALS.



EARTH CONSTRUCTION
NOT TO SCALE



LEDGE CONSTRUCTION
NOT TO SCALE

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
DETAILS
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

SCALE: NTS

DECEMBER 13, 2023

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C-24

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APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____

CHAIRMAN _____ SIGNATURE DATE _____ AND

SECRETARY _____ SIGNATURE DATE _____

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PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

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SC-740 STORMTECH CHAMBER SPECIFICATIONS

- 1. CHAMBERS SHALL BE STORMTECH SC-740.
- 2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- 3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- 5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- 6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- 7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN², AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- 8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.56 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- 9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 SYSTEM

- 1. STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- 2. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- 3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.
 - STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- 4. THE FOUNDATION STONE SHALL BE LEVELLED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- 6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- 7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- 8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- 9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- 1. STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- 2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIERED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

INSPECTION & MAINTENANCE

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

NOTES

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

JELLYFISH DESIGN NOTES

MAINTENANCE:
THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

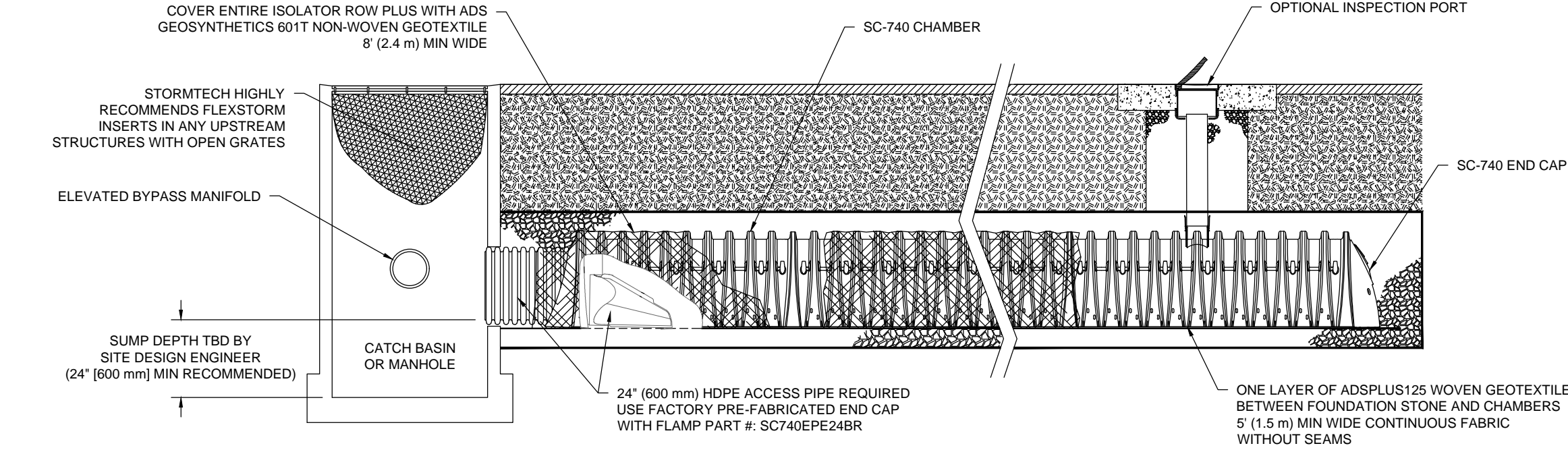
CONSTRUCTION SPECIFICATIONS:

- 1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
- 2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
- 3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12".
- 4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
- 5. ADD ANIMAL SCREEN TO FLARED END SECTION OUTLET.

RIP RAP AND FLARED END SECTION WITH OUTLET PROTECTION

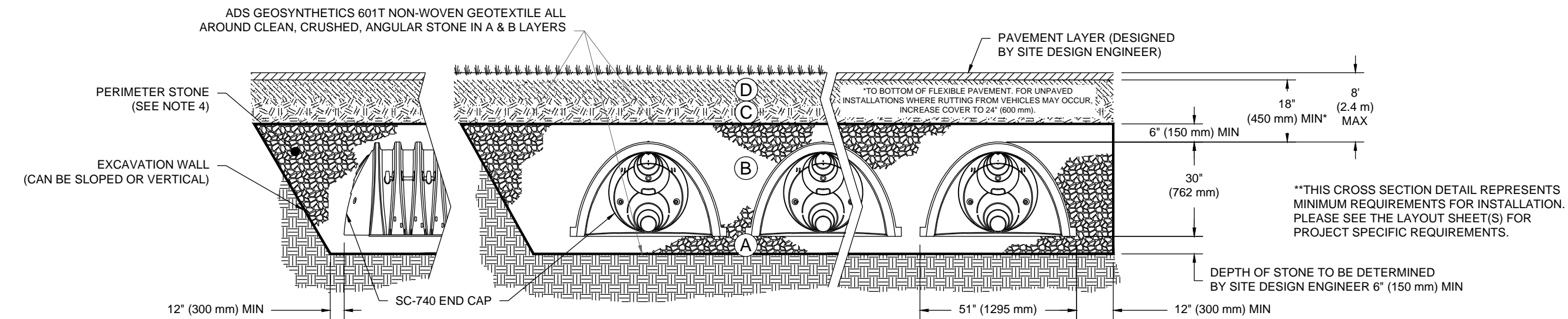
RIP RAP DIMENSIONS

LOCATION	FES-01
#50 STONE SIZE:	6"
LENGTH OF APRON (L):	8.5'
WIDTH OF APRON (W):	6.5'
DEPTH OF RIP RAP (T):	9"
% OF WEIGHT SMALLER THAN THE GIVEN SIZE OF STONE (INCHES)	
100	9.00 TO 12.00
85	7.80 TO 10.50
50	6.00 TO 9.00
15	1.80 TO 3.00



SC-740 ISOLATOR ROW PLUS DETAIL

NOT TO SCALE



ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS (53 KN), DYNAMIC FORCE NOT TO EXCEED 20,000 LBS (89 KN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

REV	DATE	DESCRIPTION	DR	CK
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3	7/31/2024	REVISED PER AOT REQUIREMENTS	JKC	CRR
2	7/18/2024	REVISED PER TOWN INTERNAL REVIEW COMMENTS	JKC	CRR
1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR

SC-740 TYPICAL CROSS SECTION DETAIL

NOT TO SCALE

- NOTES:
1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/IN², AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____

CHAIRMAN _____ SIGNATURE DATE _____ AND

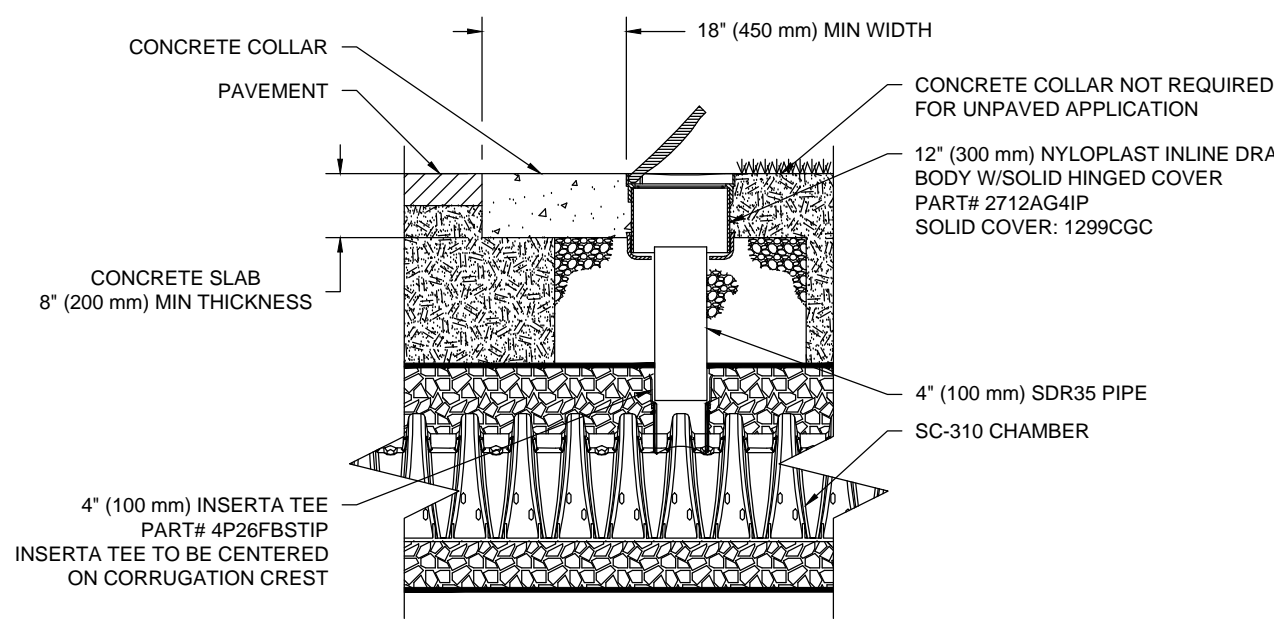
SECRETARY _____ SIGNATURE DATE _____

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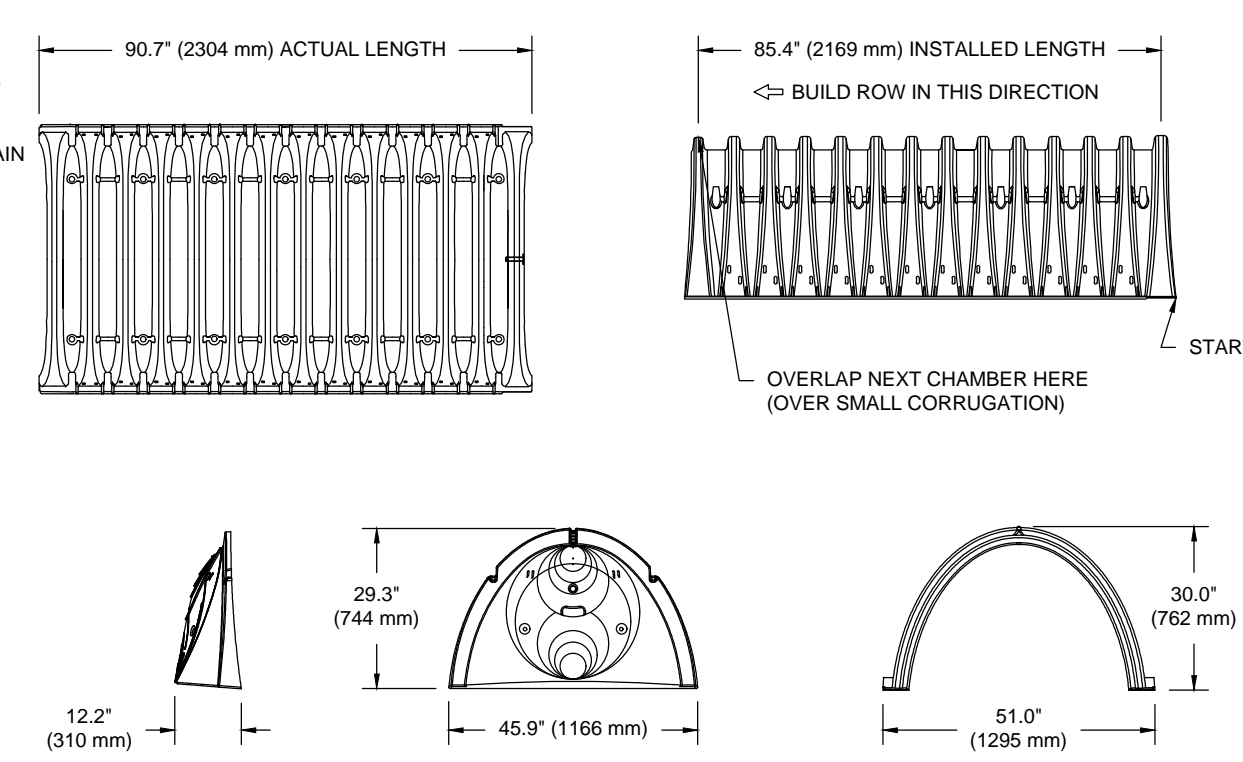
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4" INSPECTION PORT DETAIL

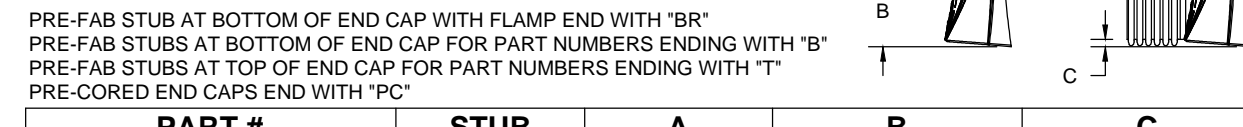
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NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE*	WEIGHT
51.0" X 30.0" X 85.4"	45.9 CUBIC FEET (1.30 m ³)	74.9 CUBIC FEET (2.12 m ³)	75.0 lbs. (33.6 kg)

*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS



PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"

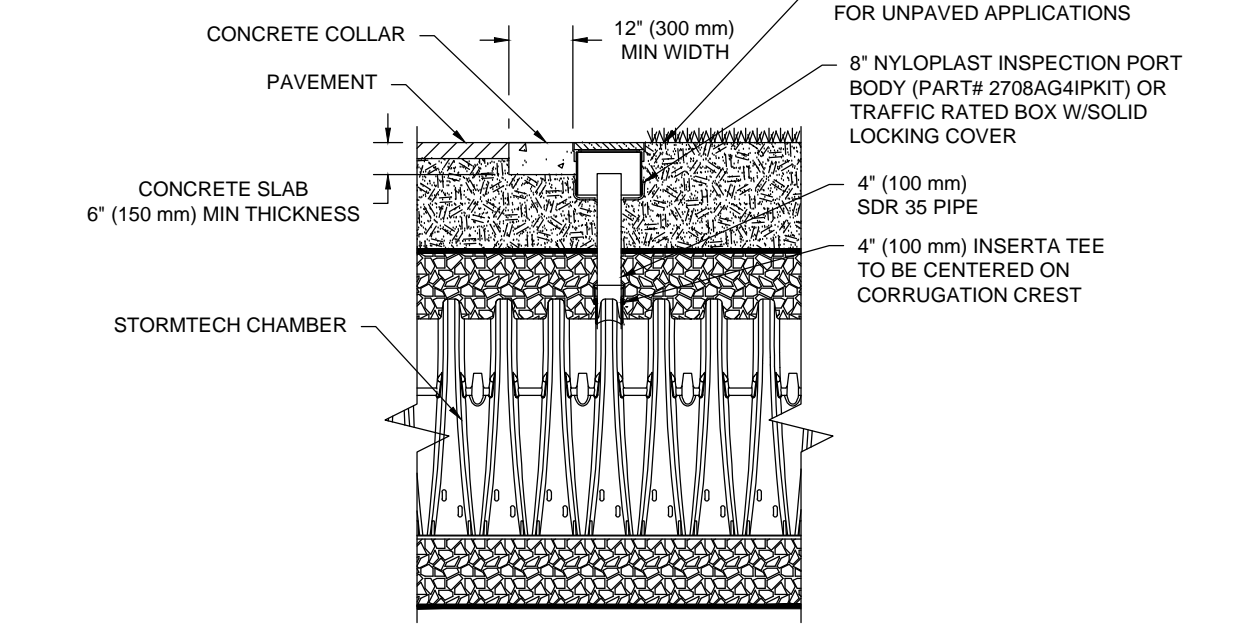
PART #	STUB	A	B	C
SC740EP06T / SC740EP06TPC	6" (150 mm)	10.9' (277 mm)	18.5' (470 mm)	---
SC740EP06B / SC740EP06BPC	---	---	---	0.5' (13 mm)
SC740EP08T / SC740EP08TPC	8" (200 mm)	12.2' (310 mm)	16.5' (419 mm)	---
SC740EP08B / SC740EP08BPC	---	---	---	0.6' (15 mm)
SC740EP10T / SC740EP10TPC	10" (250 mm)	13.4' (340 mm)	14.5' (368 mm)	---
SC740EP10B / SC740EP10BPC	---	---	---	0.7' (18 mm)
SC740EP12T / SC740EP12TPC	12" (300 mm)	14.7' (373 mm)	12.5' (318 mm)	---
SC740EP12B / SC740EP12BPC	---	---	---	1.2' (30 mm)
SC740EP15T / SC740EP15TPC	15' (375 mm)	18.4' (467 mm)	9.0' (229 mm)	---
SC740EP15B / SC740EP15BPC	---	---	---	1.3' (33 mm)
SC740EP18T / SC740EP18TPC	18" (450 mm)	19.7' (500 mm)	5.0' (127 mm)	---
SC740EP18B / SC740EP18BPC	---	---	---	1.6' (41 mm)
SC740EP24B*	24" (600 mm)	18.5' (470 mm)	---	0.1' (3 mm)
SC740EP24BR*	---	---	---	0.1' (3 mm)

PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
PRE-CORED END CAPS END WITH "PC"

ALL STUBS, EXCEPT FOR THE SC740EP24B/SC740EP24BR ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EP24B/SC740EP24BR THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL



NOTE: INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

4" INSPECTION PORT DETAIL

SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16

DETAILS
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

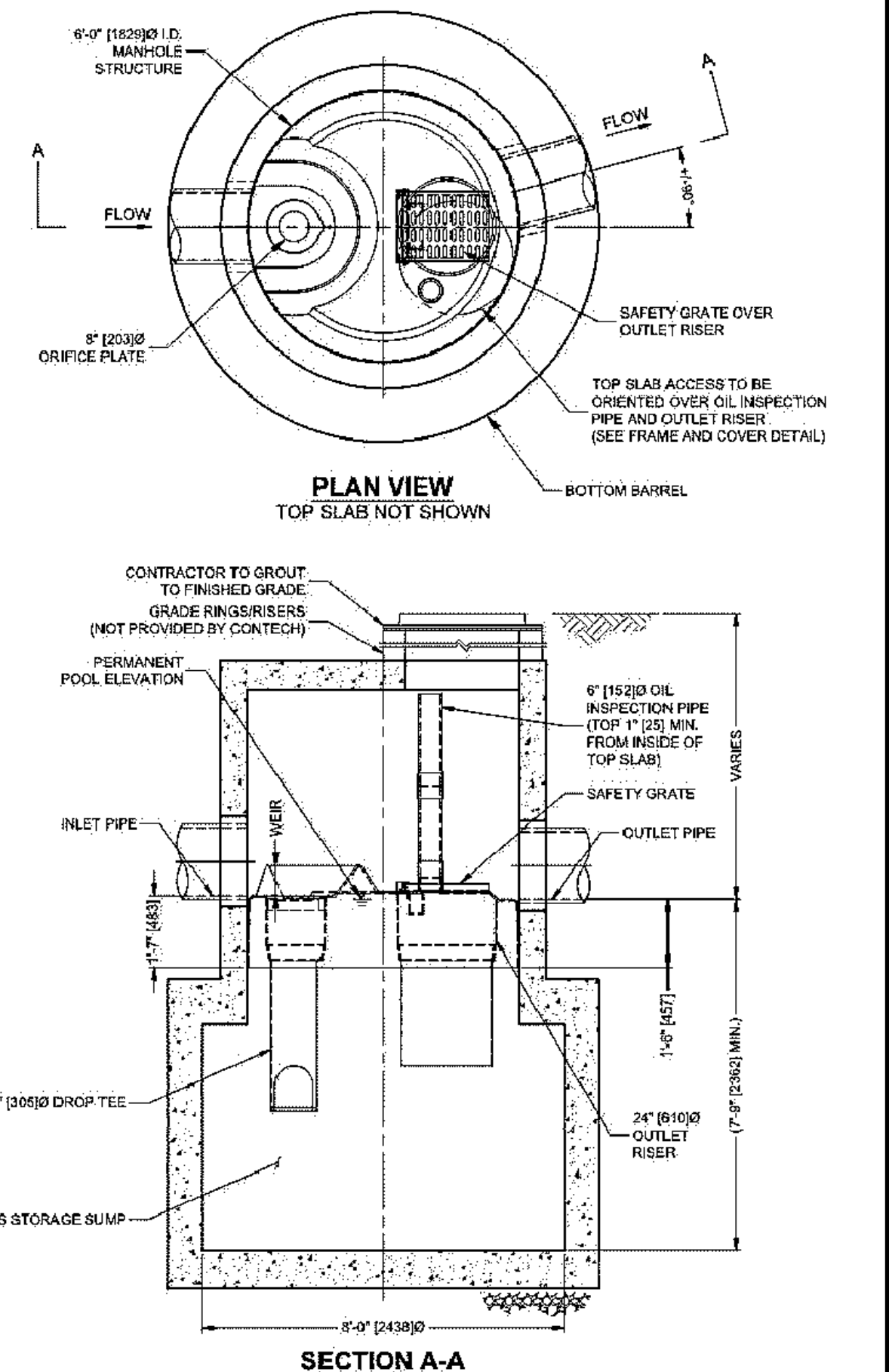
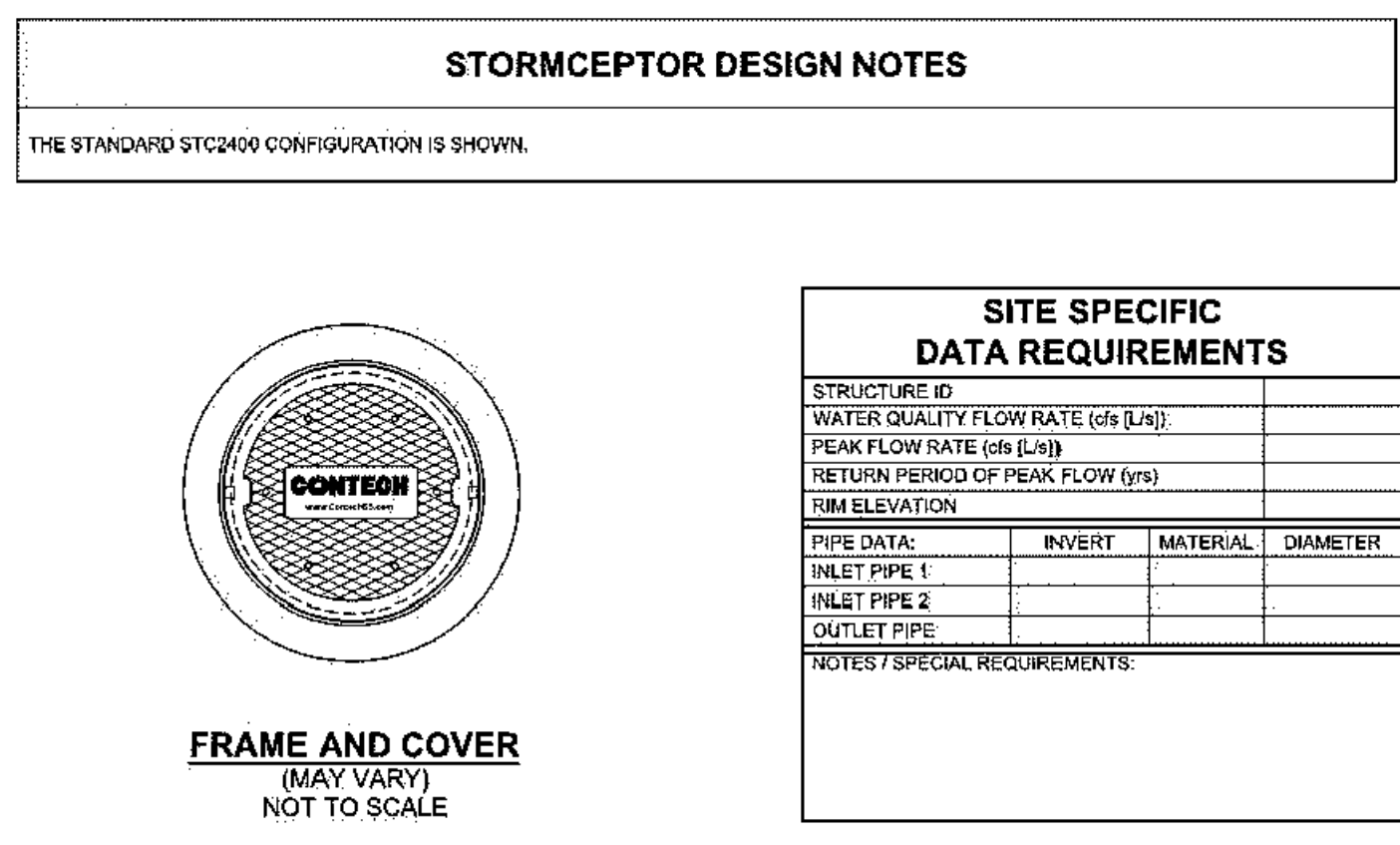
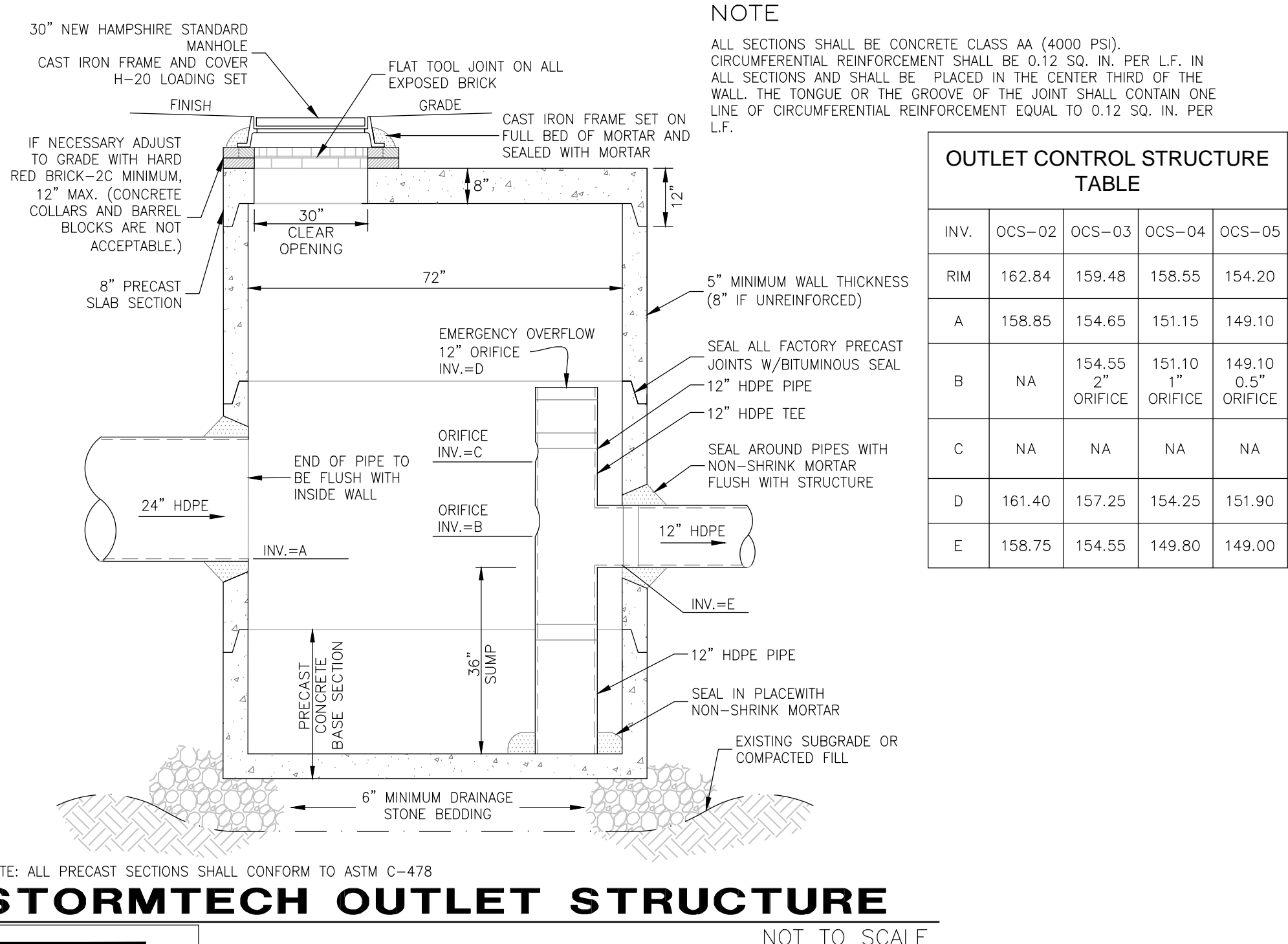
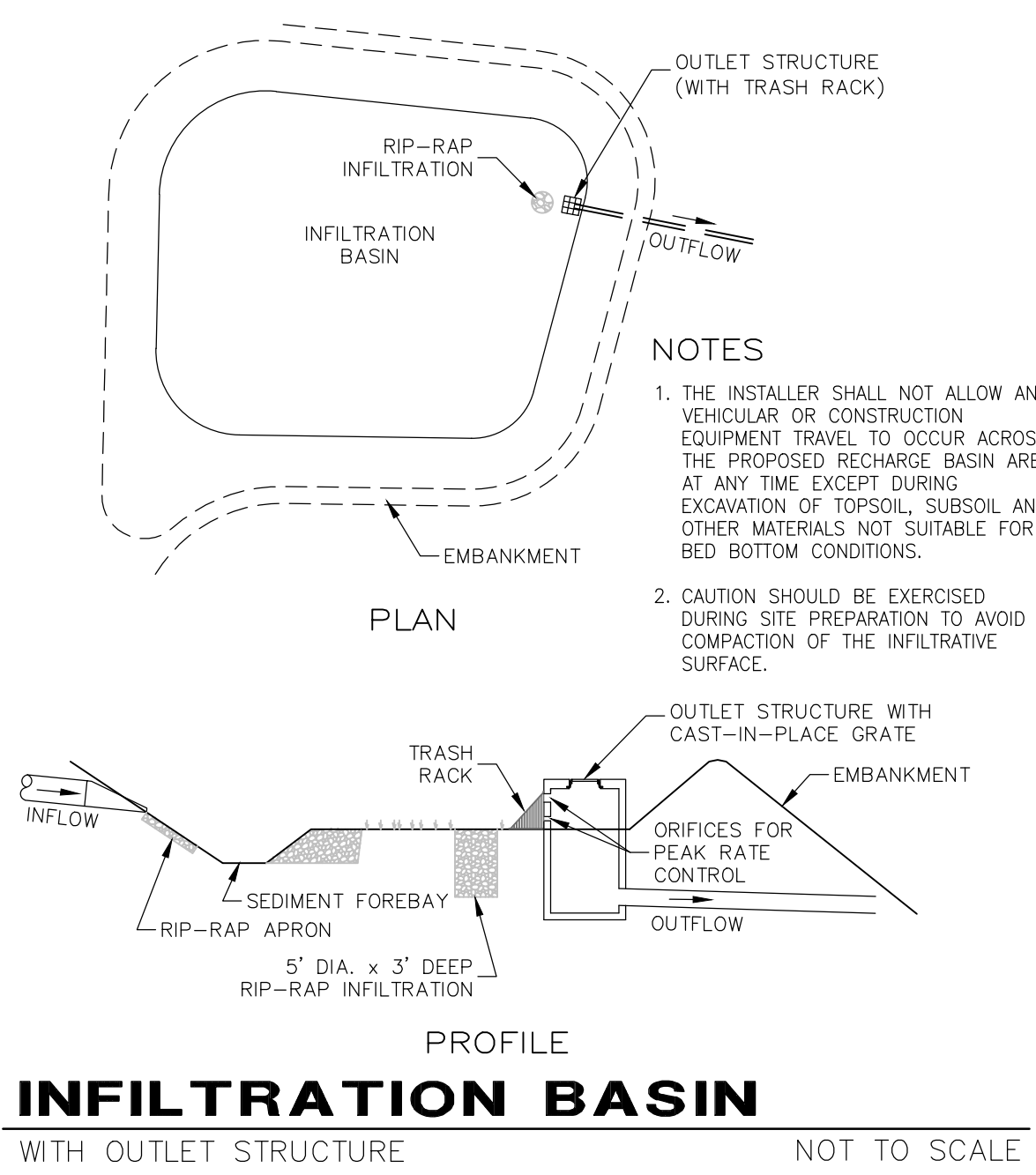
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DECEMBER 13, 2023

Seacoast Division
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Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
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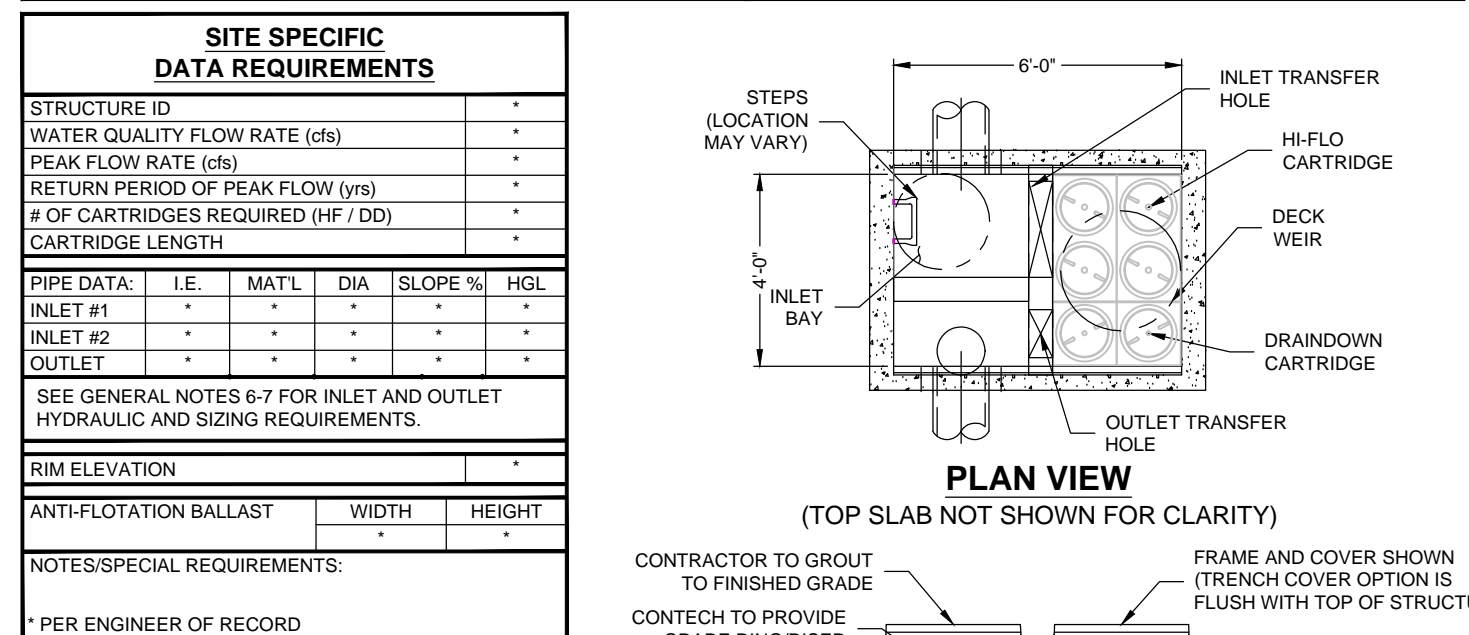
C-25



JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD SURFACE INLET STYLE WITH TRENCH GRATE AND COVER IS SHOWN. ALTERNATE CURB INLET OR PIPE INLET OPTIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.

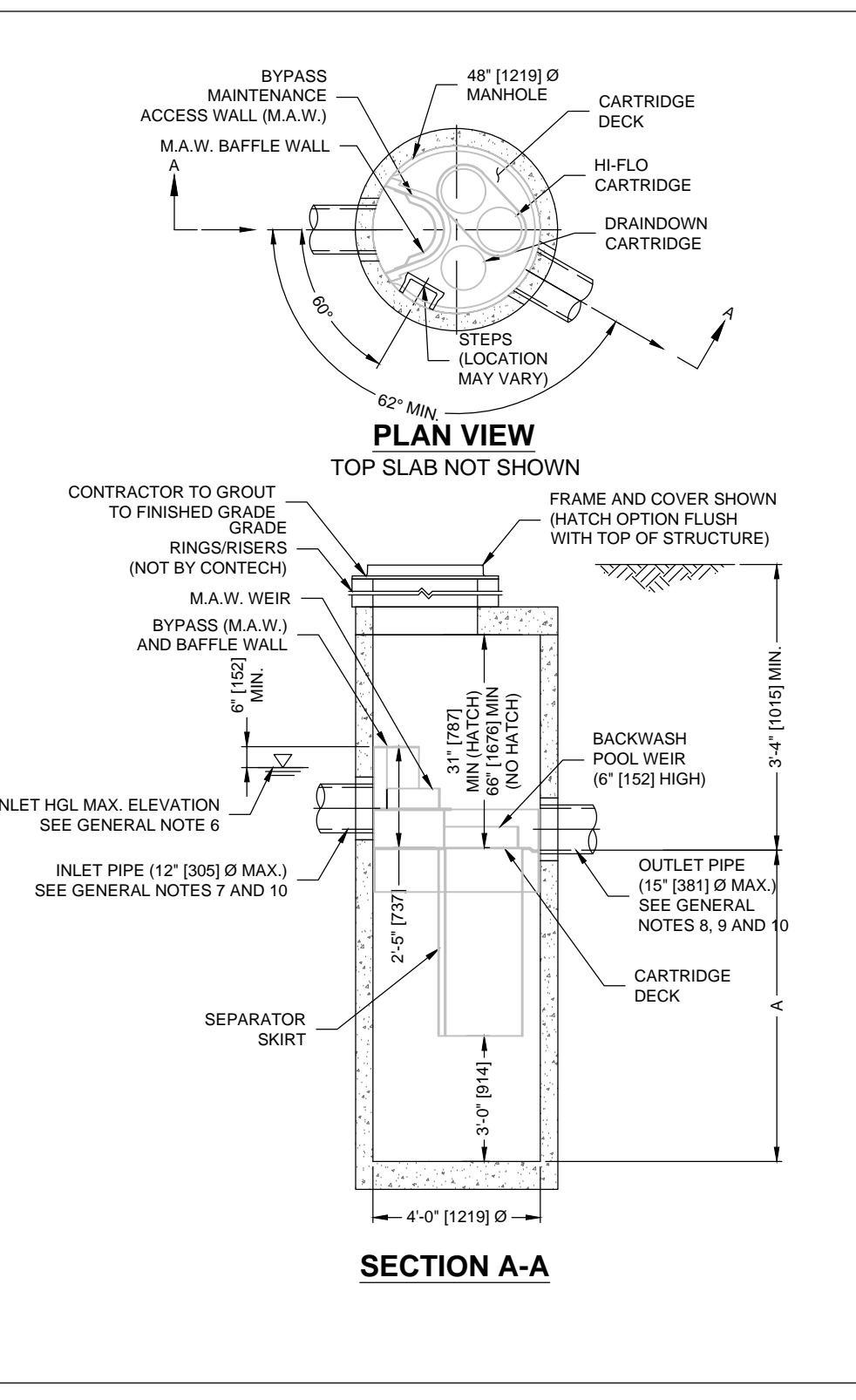
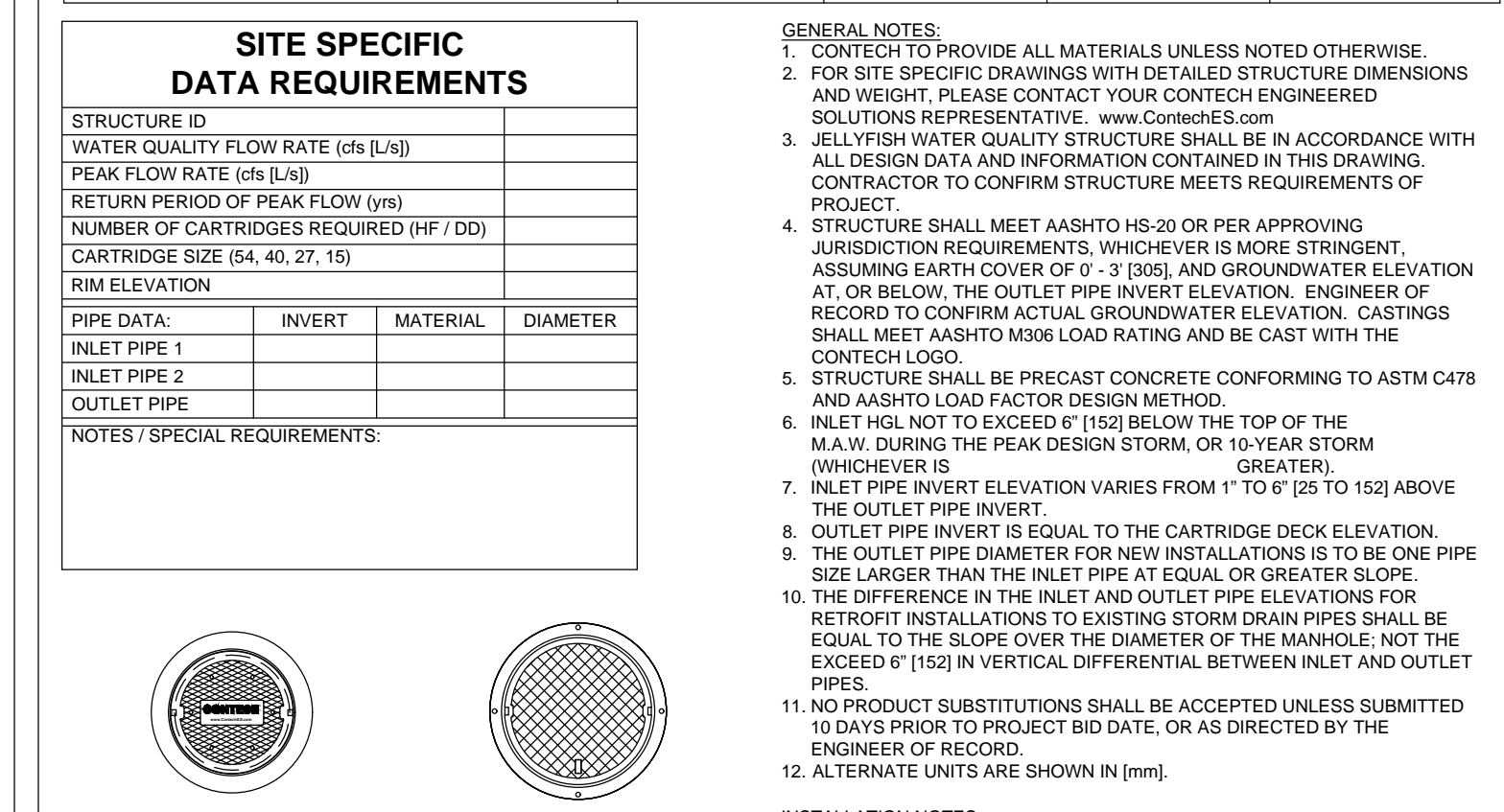
CARTRIDGE SELECTION	54"	40"	27"	15"
CARTRIDGE LENGTH	54"	40"	27"	15"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-5"	5'-4"	4'-3"	3'-2"
FLOW RATE HIGH-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089	0.133 / 0.067	0.089 / 0.045	0.049 / 0.025
MAX. TREATMENT (CFS)	0.89	0.67	0.45	0.25
OUTLET INVERT TO RIM (MIN) (B)	5'-0"	4'-0"	4'-0"	4'-0"



JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SIZE, TYPE AND QUANTITY. THE STANDARD MANHOLE STYLE IS SHOWN. THE 48" (1219 mm) Ø MANHOLE JELLYFISH PEAK TREATMENT CAPACITY IS 0.45 cfs (12.74 L/s) AND MAXIMUM BYPASS CAPACITY IS 2.50 cfs (70.79 L/s). IF THE SITE CONDITIONS EXCEED THE BYPASS CAPACITY OF THE SYSTEM, AN UPSTREAM DIVERSION STRUCTURE IS REQUIRED. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.

CARTRIDGE SIZE	54"	40"	27"	15"
FLOW RATE, HIGH-FLO / DRAINDOWN (cfs [L/s])	0.18 / 0.09 [5.10 / 2.55]	0.13 / 0.065 [3.68 / 1.84]	0.09 / 0.045 [2.55 / 1.28]	0.05 / 0.025 [1.42 / 0.71]
MAXIMUM CARTRIDGE QUANTITY HIGH-FLO / DRAINDOWN	211	211	211	211
PEAK TREATMENT CAPACITY (cfs [L/s])	0.45 [12.74]	0.33 [9.34]	0.22 [6.23]	0.12 [3.40]
OUTLET INVERT TO STRUCTURE INVERT (A) (ft. [mm])	7.42 [188]	6.25 [159]	5.17 [131]	4.17 [106]



SITE DEVELOPMENT PLANS
TAX MAP 198 LOTS 11, 12, 14, 15, & 16
DETAILS
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

SCALE: NTS **DECEMBER 13, 2023**

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____
CHAIRMAN _____ SIGNATURE DATE _____ AND
SECRETARY _____ SIGNATURE DATE _____

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PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL

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REV	DATE	DESCRIPTION	DR	CK
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2	7/18/2024	REVISED PER TOWN INTERNAL REVIEW COMMENTS	JKC	CRR
1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR

Seacoast Division

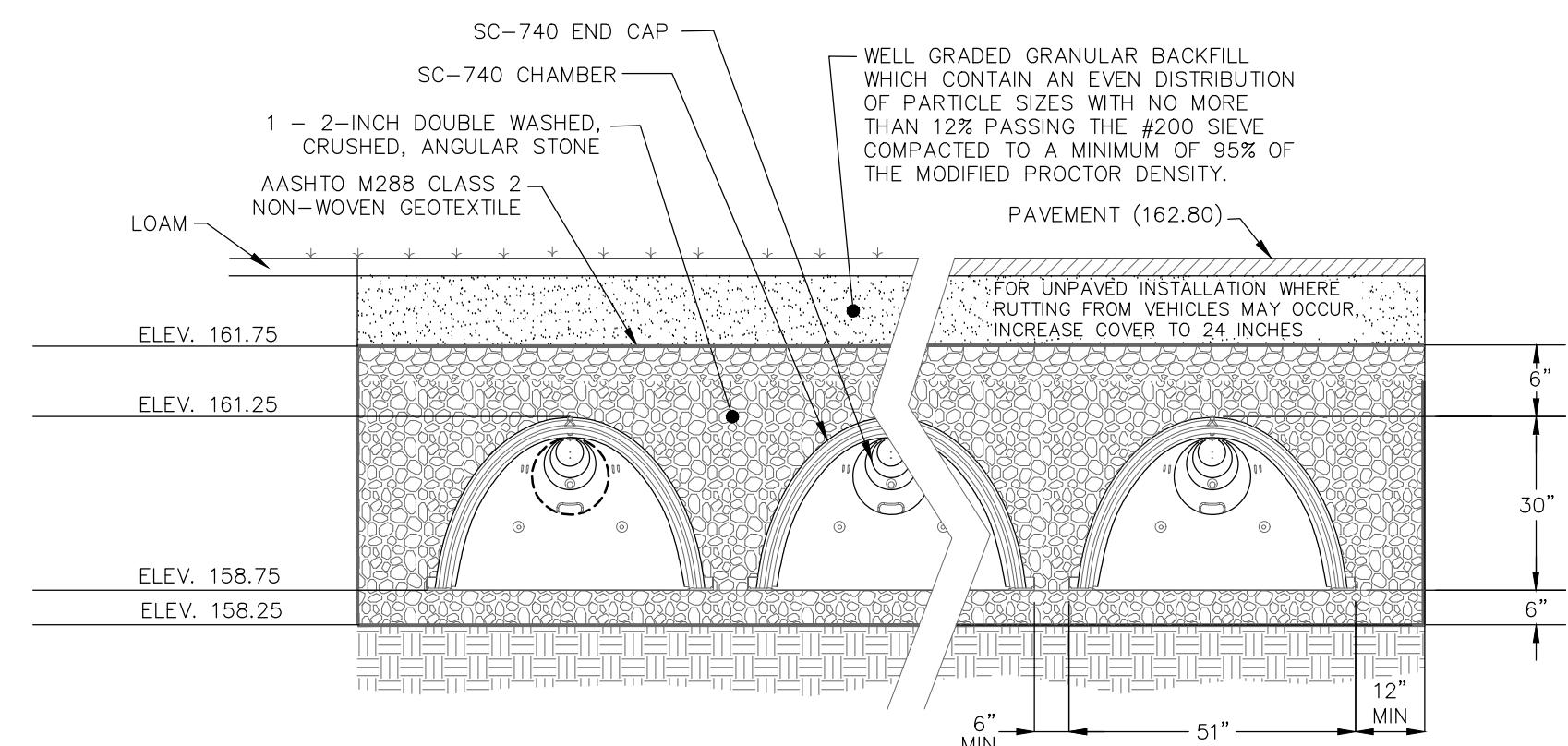
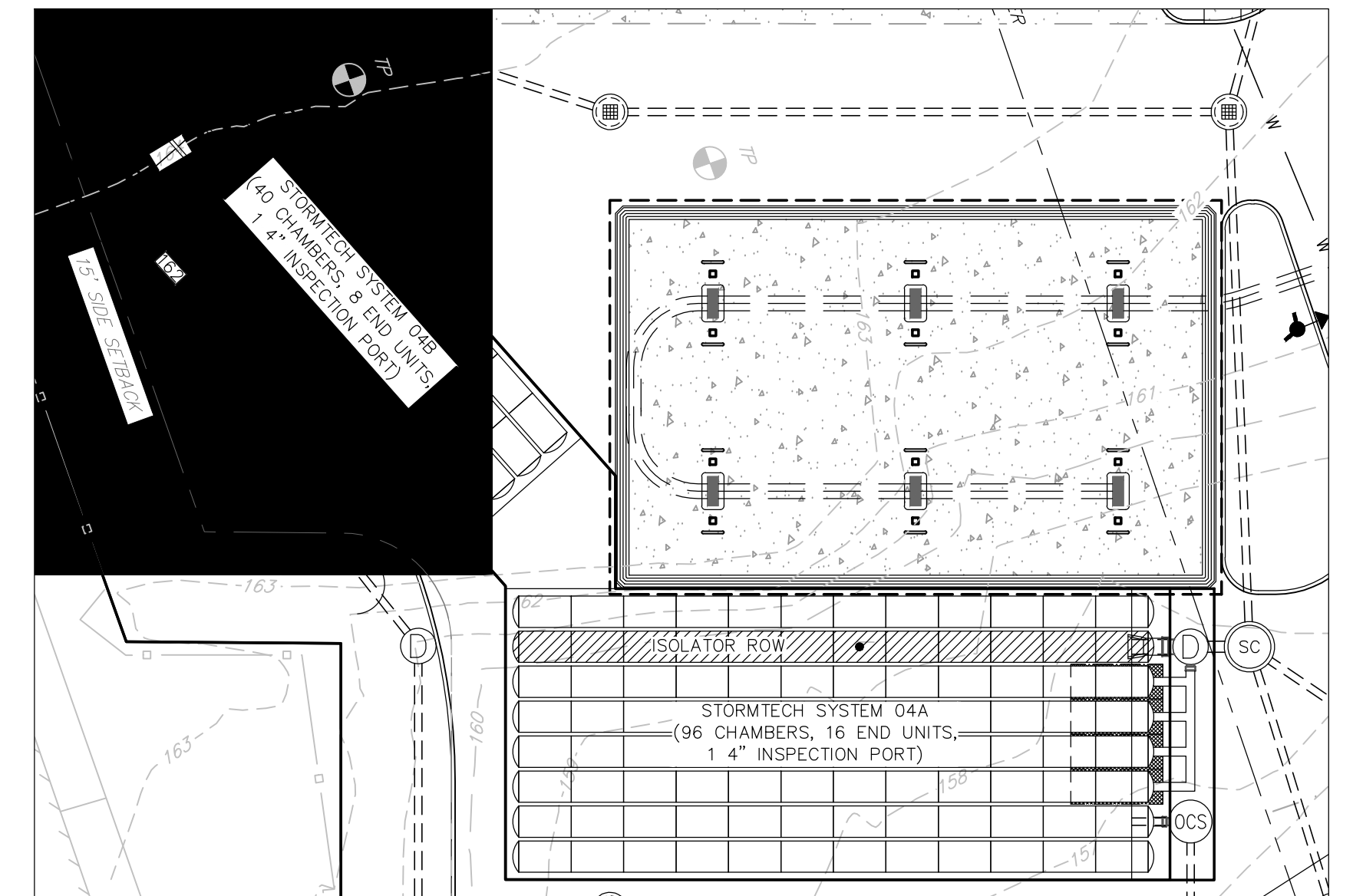
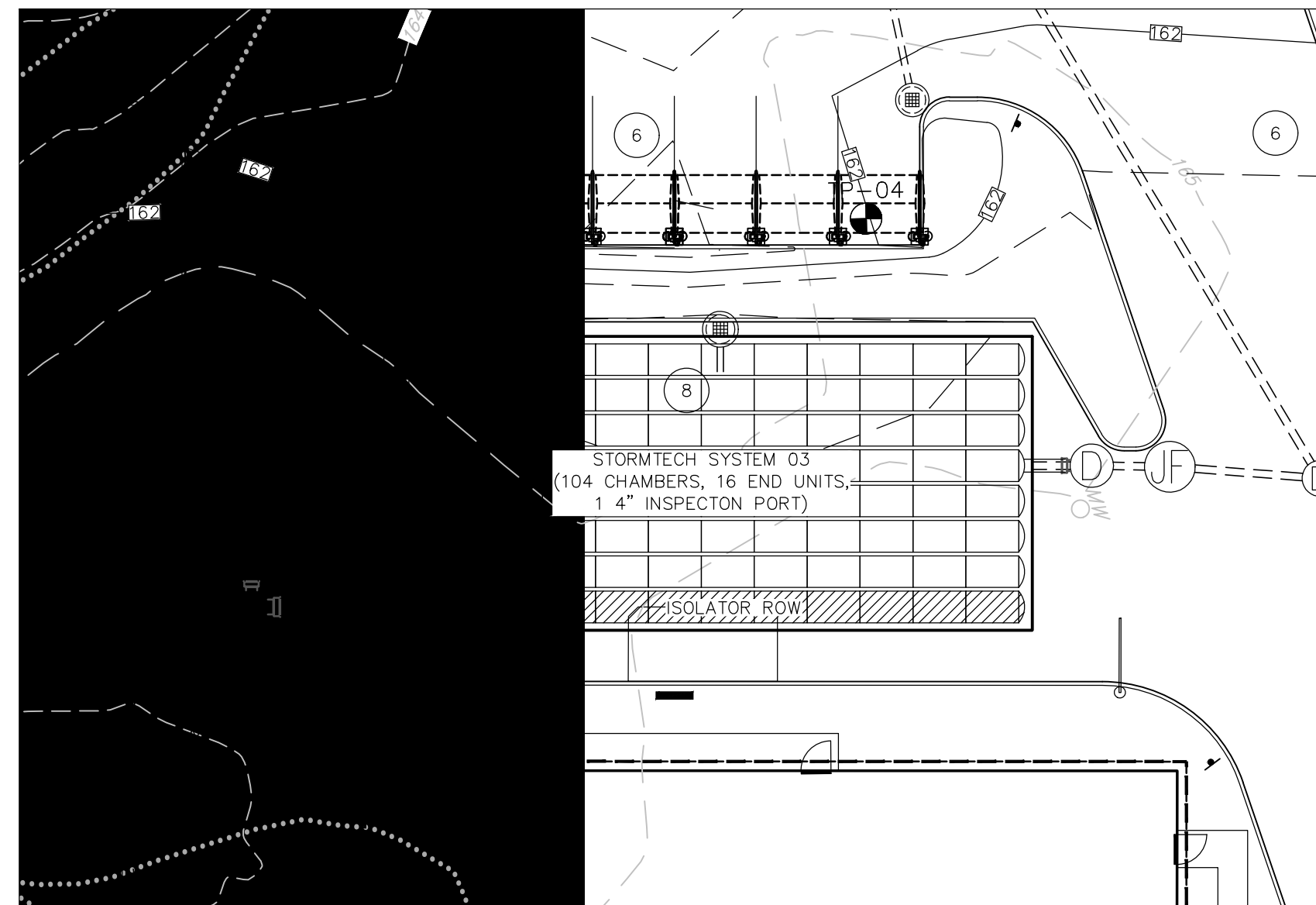
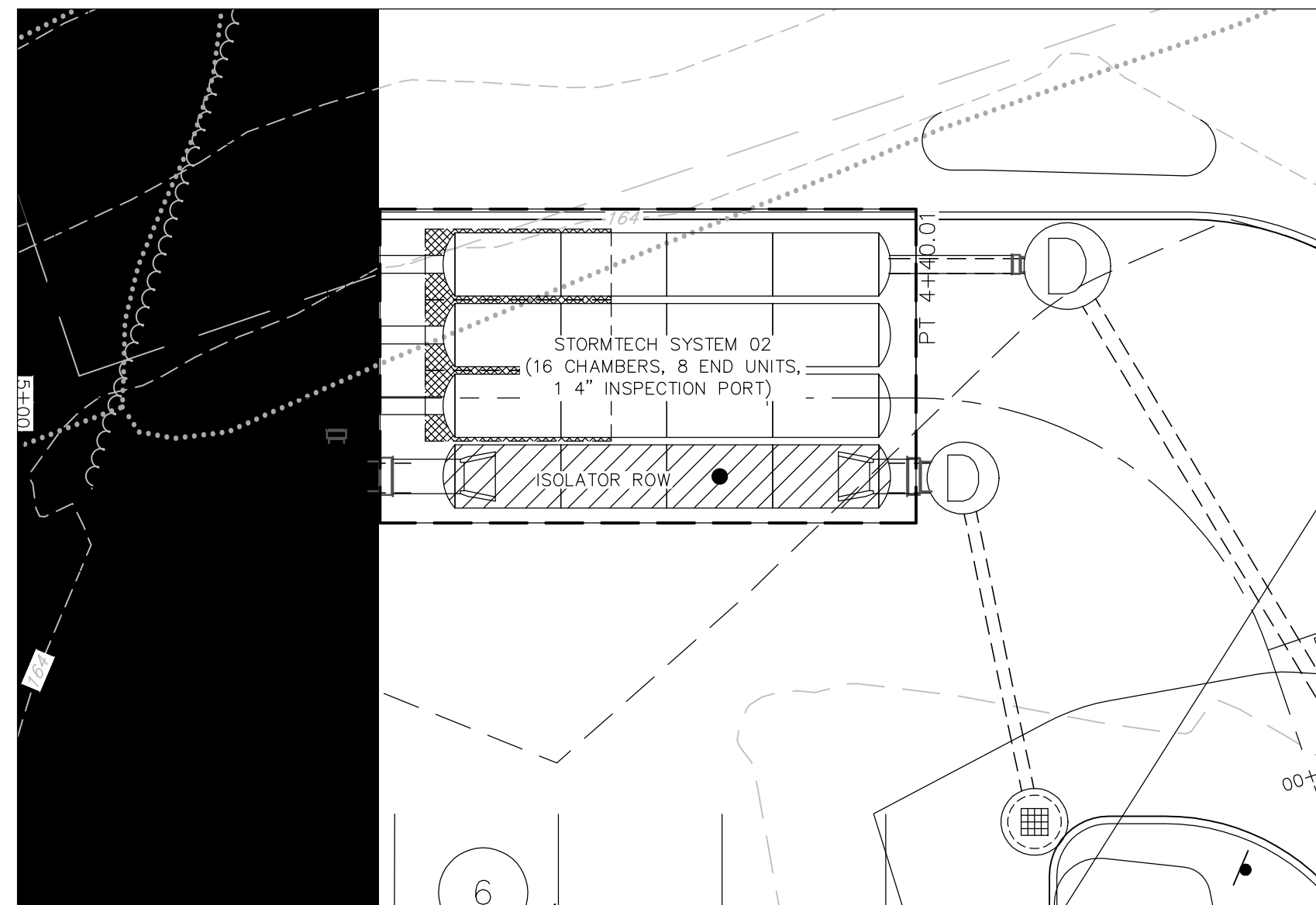
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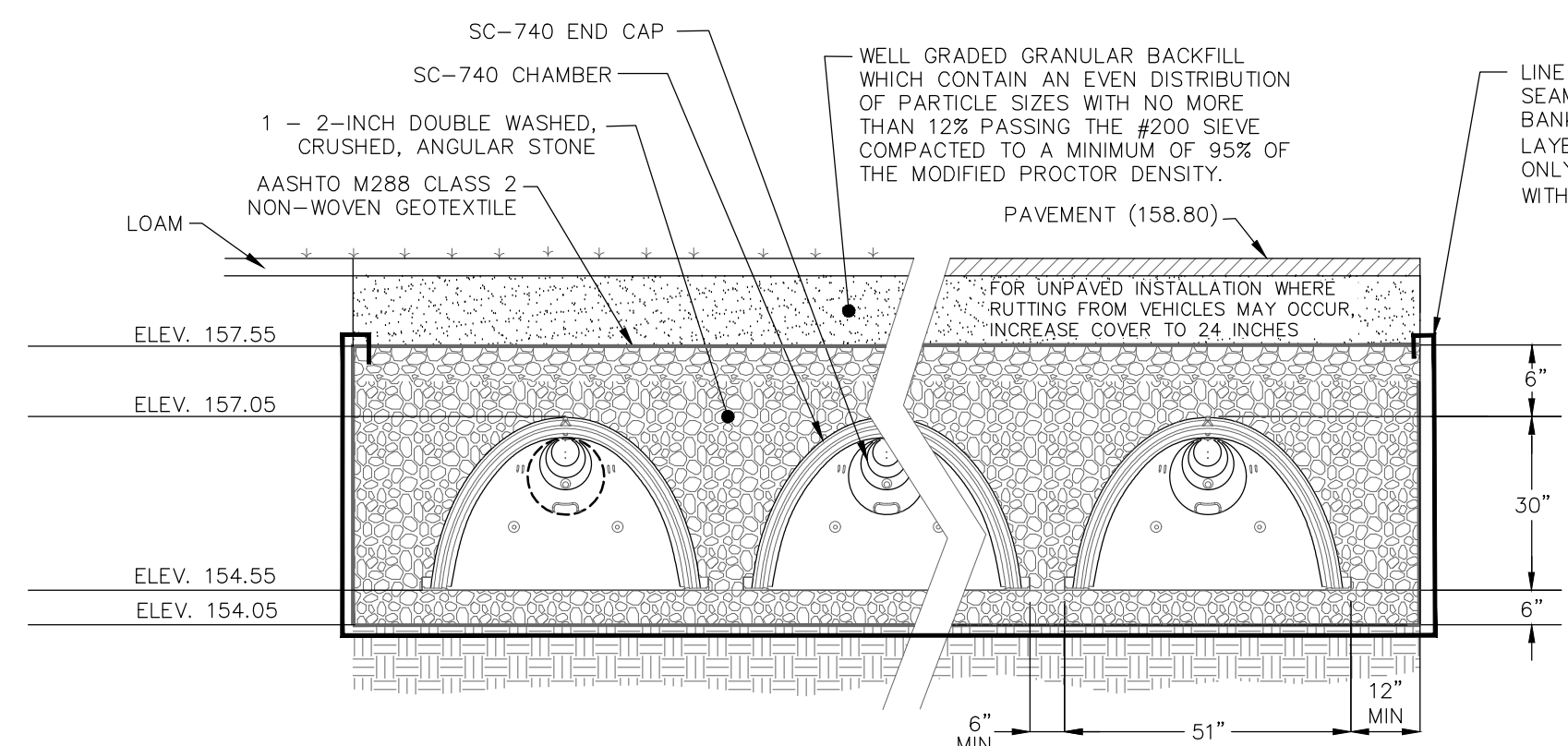
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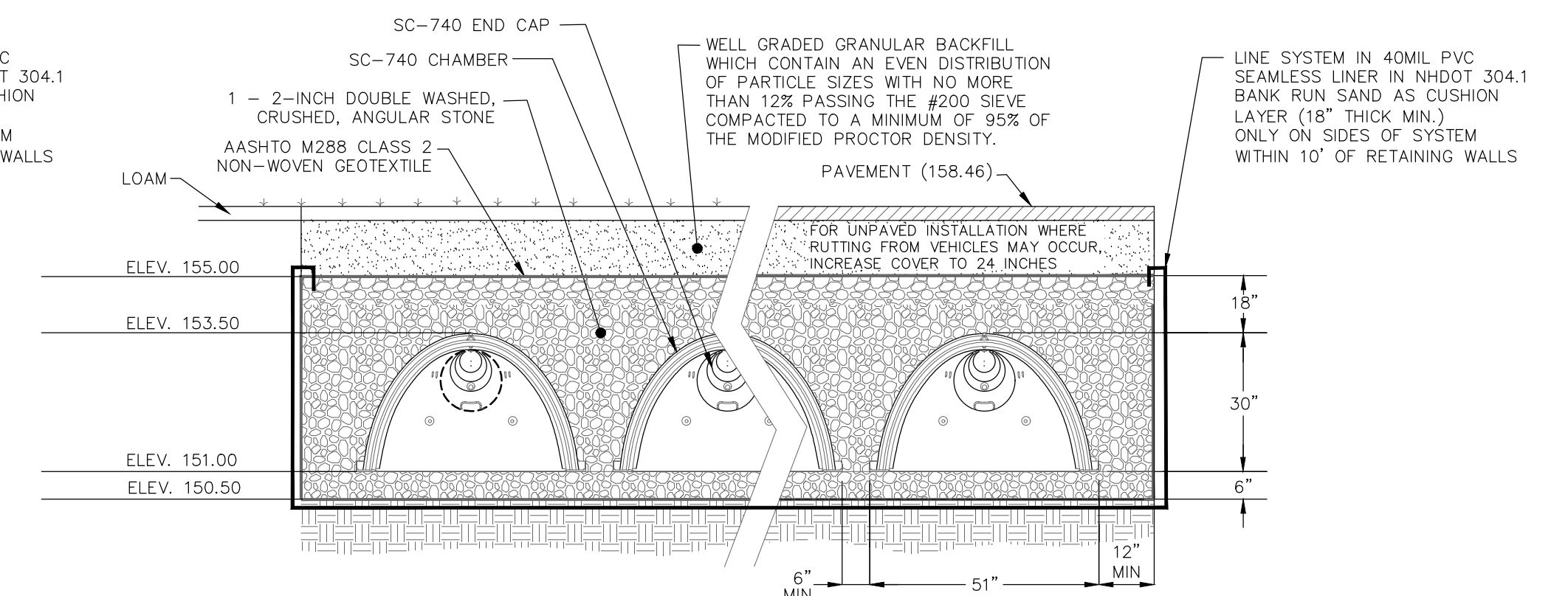
STORMTECH SC-740 CHAMBER SYSTEM CROSS SECTION DETAIL STORMTECH SYSTEM #2

NOT TO SCALE



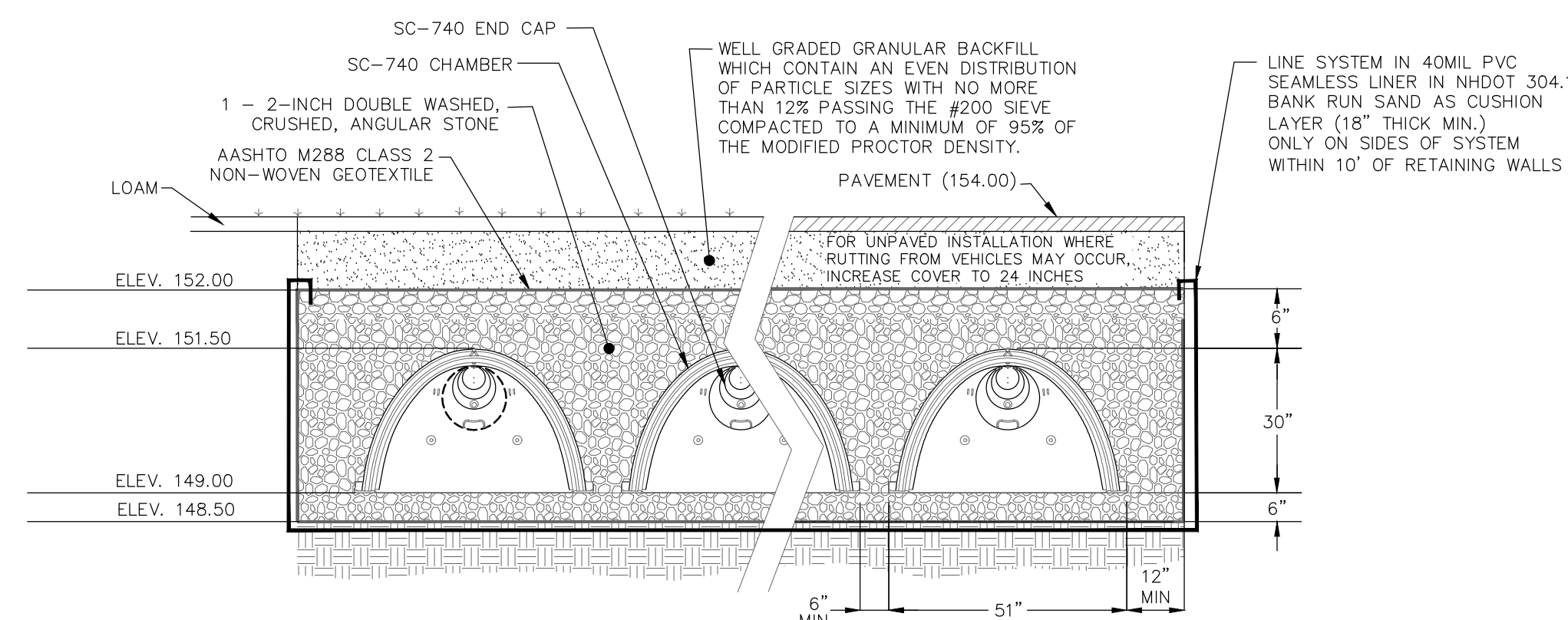
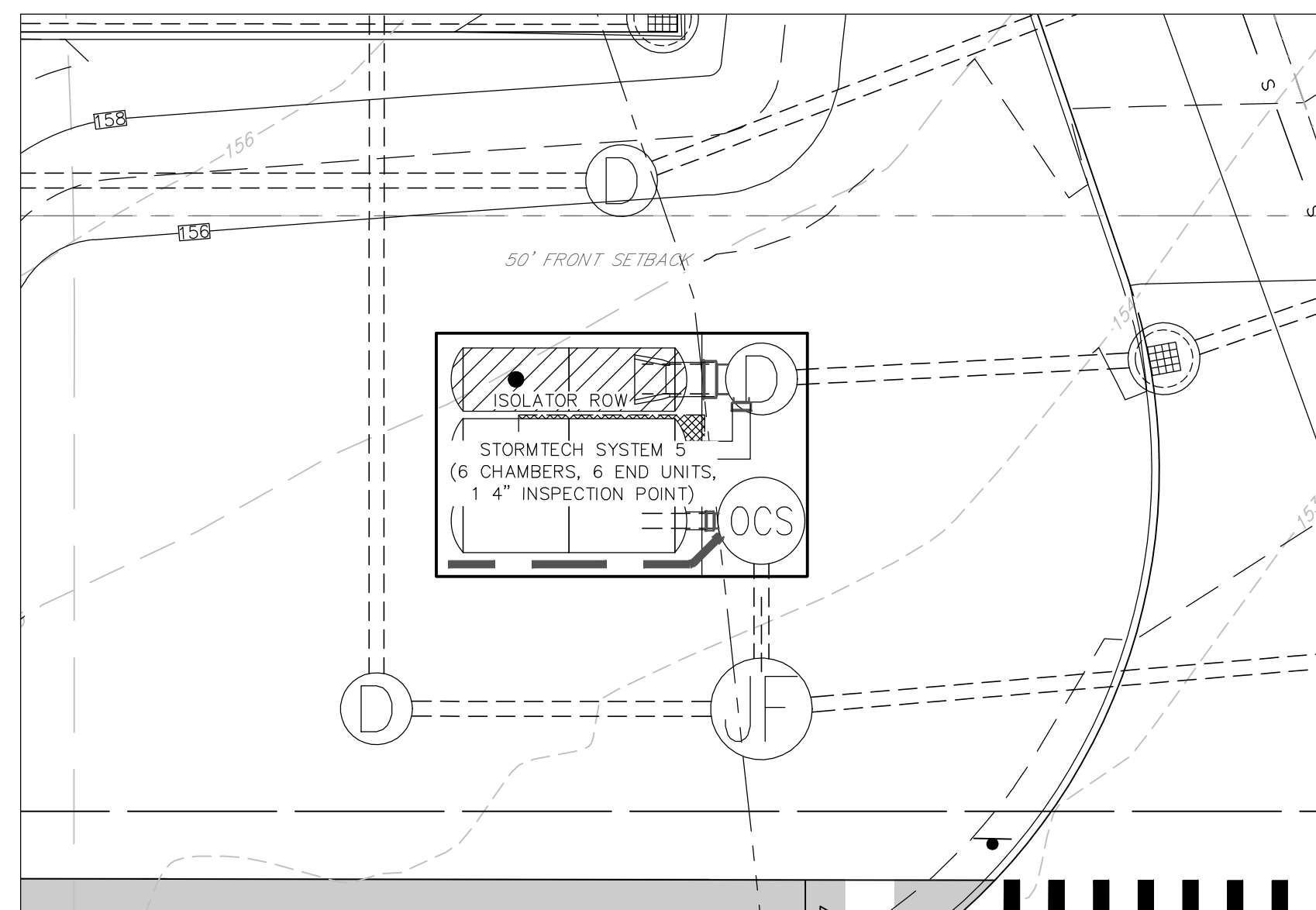
STORMTECH SC-740 CHAMBER SYSTEM CROSS SECTION DETAIL STORMTECH SYSTEM #3 (LINED)

NOT TO SCALE



STORMTECH SC-740 CHAMBER SYSTEM CROSS SECTION DETAIL STORMTECH SYSTEM #4 (LINED)

NOT TO SCALE



STORMTECH SC-740 CHAMBER SYSTEM CROSS SECTION DETAIL STORMTECH SYSTEM #5 (LINED)

NOT TO SCALE

SITE DEVELOPMENT PLANS

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 CHAIRMAN _____ SIGNATURE DATE _____ AND
 SECRETARY _____ SIGNATURE DATE _____

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

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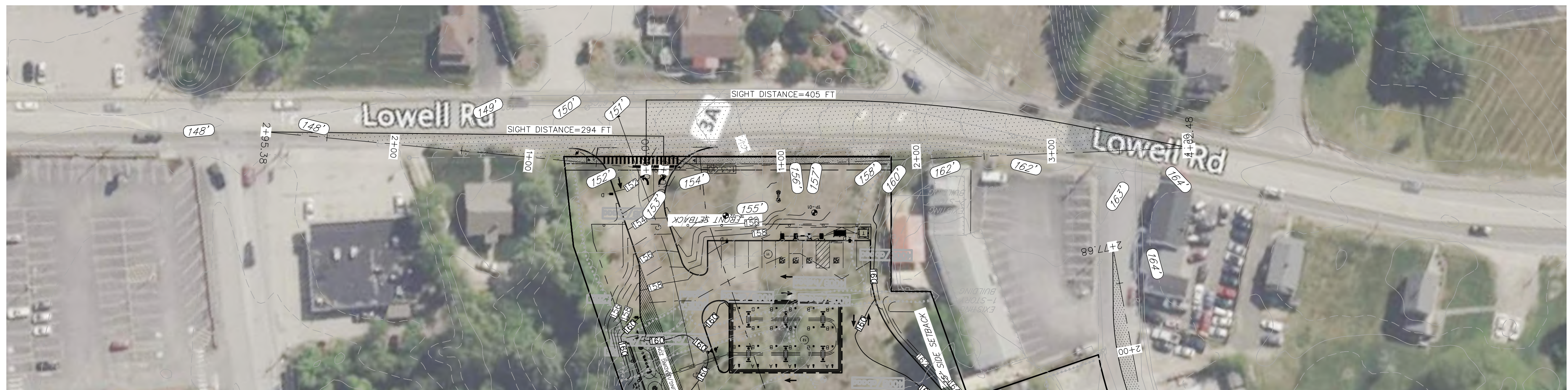
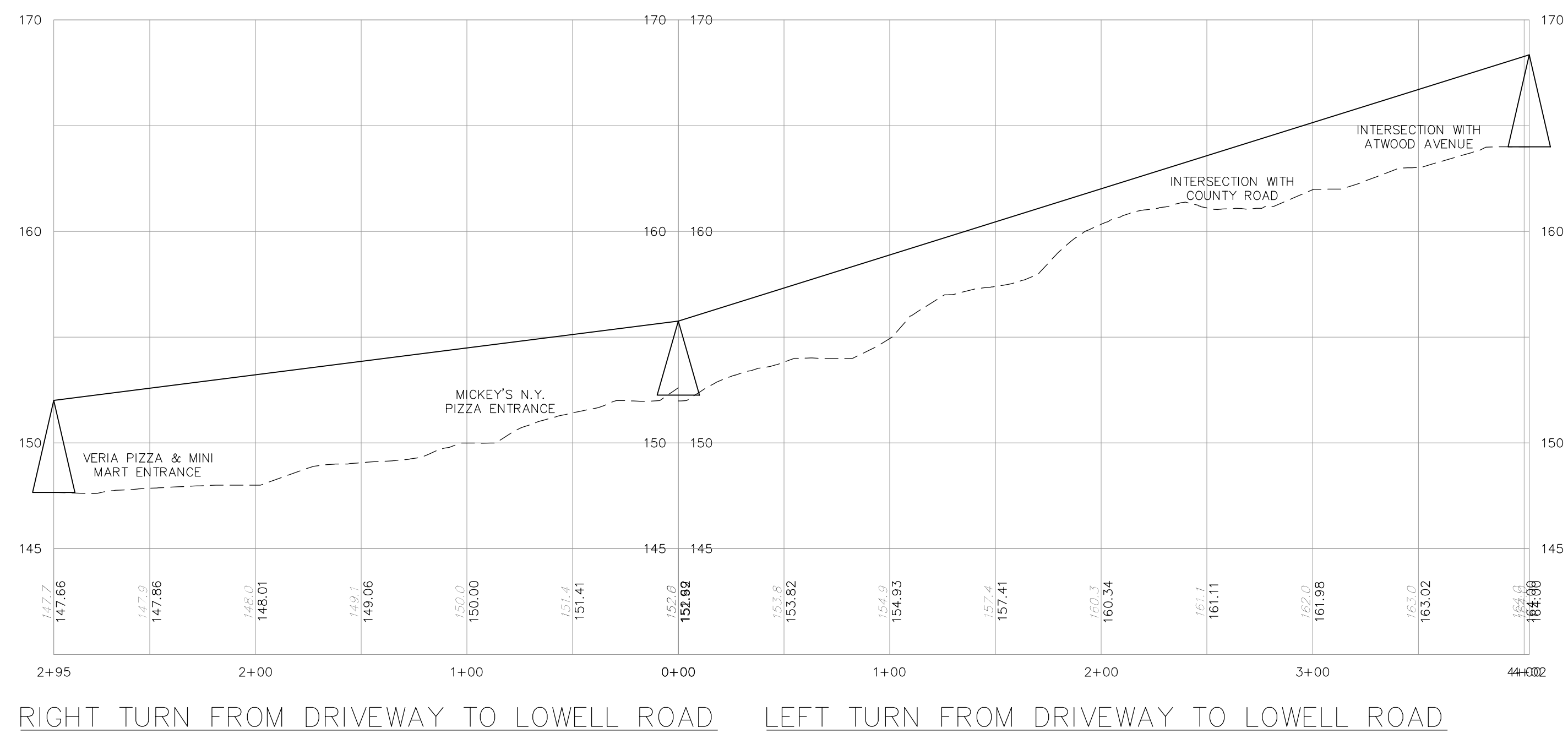
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4	9/4/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR
3	7/31/2024	REVISED PER AOT REQUIREMENTS	JKC	CRR
2	7/18/2024	REVISED PER TOWN INTERNAL REVIEW COMMENTS	JKC	CRR
1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR

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18149.00 DR JKC FB
 CK CRR CADFILE 18149-00_DETAILS C-27

Oct 08, 2024 - 4:17pm
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SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
LOWELL ROAD SIGHT DISTANCE PLAN
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=100' (11"x17")
SCALE: 1"=50' (22"x34") **DECEMBER 13, 2023**

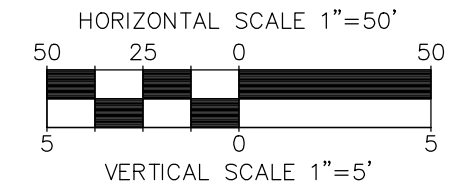
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DATE OF MEETING _____
 CHAIRMAN _____ SIGNATURE DATE _____ AND
 SECRETARY _____ SIGNATURE DATE _____

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1	5/24/2024	REVISED PER ENGINEERING REVIEW COMMENTS	JKC	CRR

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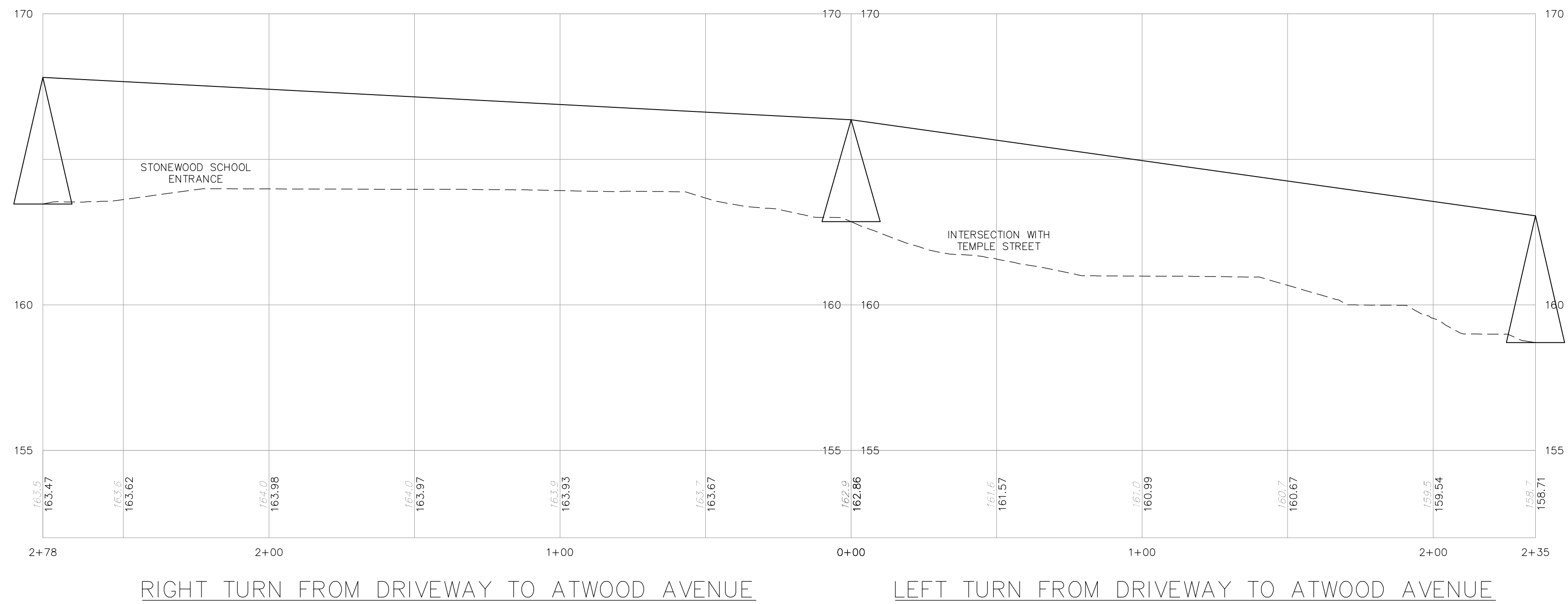
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FILE	18149.00	DR	JKC	FB	-	C-28
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SITE DEVELOPMENT PLANS

TAX MAP 198 LOTS 11, 12, 14, 15, & 16
ATWOOD AVENUE SIGHT DISTANCE PLAN
 GAS STATION/CONVENIENCE STORE/CAR WASH
 91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=60' (11"x17')
SCALE: 1"=30' (22"x34') **DECEMBER 13, 2023**

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DATE OF MEETING _____ AND
 CHAIRMAN _____ SIGNATURE DATE _____
 SECRETARY _____ SIGNATURE DATE _____

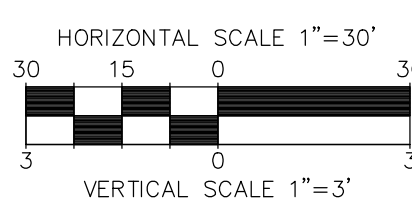
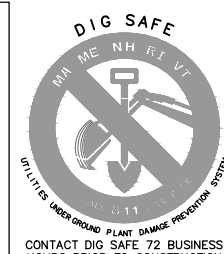
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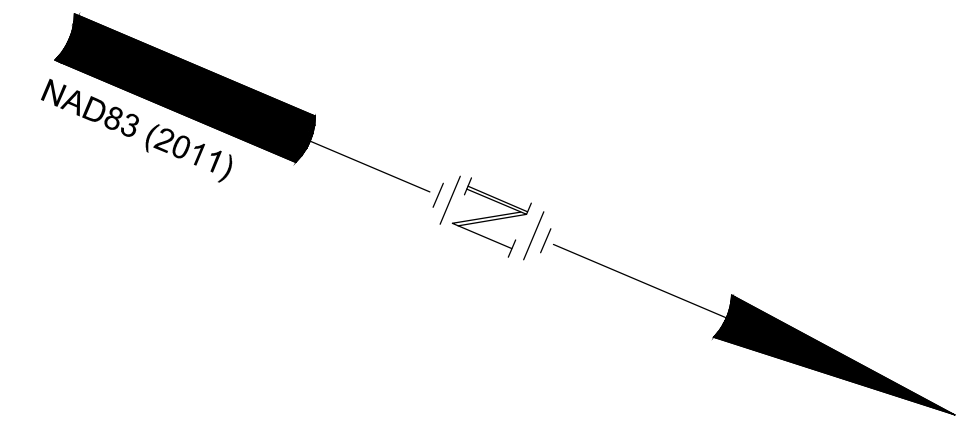
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FILE	18149.00	DR	JKC	FB	-	C-29
CK	CRR	CADFILE	18149-00_SIGHT DISTANCE			



NOTES

1. PROPOSED PROJECT TO INCLUDE IMPROVEMENTS TO OFF-SITE DRAINAGE. ALL OFF-SITE WORK TO BE COORDINATED WITH THE TOWN OF HUDSON INCLUDING INSTALLATION AND SUPPLY OF CATCH BASINS.
2. ALL WORK TO BE LOCATED WITHIN THE RIGHT-OF-WAY. AREAS OF DISTURBANCE ARE TO BE RESTORED AFTER INSTALLATION.



SITE DEVELOPMENT PLANS
 TAX MAP 198 LOTS 11, 12, 14, 15, & 16
OFF-SITE DRAINAGE
GAS STATION/CONVENIENCE STORE/CAR WASH
91-97 LOWELL ROAD, HUDSON, NH
 OWNED BY & PREPARED FOR
COLBEA ENTERPRISES, LLC

1"=100 (11"x17")
SCALE: 1"=50' (22"x34') **DECEMBER 13, 2023**

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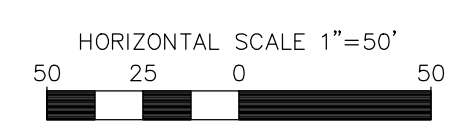
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CK	CRR	CADFILE	18149-00 OFF-SITE DRAINAGE			