Site Plans

Issued for	**Local Approvals**
Date Issued	**October 28, 2020**
Latest Issue	**March 2, 2021**

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

Owner

Lakeville Mixed Use Development LLC
44 Clear Pond Road
Lakeville, MA 02347

Applicant

Rhino Capital Advisors LLC
33A Commercial Wharf
Boston, MA 02110

Assessor's Map: 060
Lots: 007-001, 007-001I, 007-001J, 007-001D, 007-001G

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No.	Drawing Title	Latest Issue
C1.01	Legend and General Notes	3/2/2021
C2.00-2.02	Layout and Materials Plan	3/2/2021
C3.00-3.02	Grading & Drainage Plan	3/2/2021
C4.00-4.02	Utilities Plan	3/2/2021
C5.00	Erosion and Sedimentation Control Plan	3/2/2021
C5.01	Wetland Restoration Plan	3/2/2021
C6.01-6.04	Site Details	3/2/2021
C7.01-7.05	Septic Plans, Calculations, and Details	3/2/2021

Reference Drawings

No.	Drawing Title	Latest Issue
Sv-1 - Sv-4	Existing Conditions Plan of Land	January 27, 2021
L1.00	Rendered Landscape Plan	October 28, 2020
L2.00-2.01	Planting Plan	March 2, 2021
L3.00	Site Sections/Precedent Imagery	October 28, 2020
L4.00	Lighting Plan	October 28, 2020
L4.01	Lighting Cut Sheets	October 28, 2020
A2.0-2.3	Floor Plan	December 7, 2020
A2.4	Roof Plan	December 7, 2020
A5.0-5.2	Building Elevations	December 7, 2020

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APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
Civil
No. 52686
REGISTERED PROFESSIONAL ENGINEER

VHB Project : 14849.00
Issued for : Local Approvals 10/28/2020, Rev 01/28/2021

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Legend

Exist.	Prop.	
		PROPERTY LINE
		PROJECT LIMIT LINE
		RIGHT-OF-WAY/PROPERTY LINE
		EASEMENT
		BUILDING SETBACK
		PARKING SETBACK
10+00	10+00	BASELINE
		CONSTRUCTION LAYOUT
		ZONING LINE
		TOWN LINE
		LIMIT OF DISTURBANCE
		WETLAND LINE WITH FLAG
		FLOODPLAIN
BLSF	BLSF	BORDERING LAND SUBJECT TO FLOODING
BZ	BZ	WETLAND BUFFER ZONE
NDZ	NDZ	NO DISTURB ZONE
200'RA	200'RA	200' RIVERFRONT AREA
		GRAVEL ROAD
EOP	EOP	EDGE OF PAVEMENT
BB	BB	BITUMINOUS BERM
BC	BC	BITUMINOUS CURB
CC	CC	CONCRETE CURB
CG	CG	CURB AND GUTTER
CC	ECC	EXTRUDED CONCRETE CURB
CC	MCC	MONOLITHIC CONCRETE CURB
CC	PCC	PRECAST CONC. CURB
SGE	SGE	SLOPED GRAN. EDGING
VGC	VGC	VERT. GRAN. CURB
		LIMIT OF CURB TYPE
		SAWCUT
		BUILDING
EN	EN	BUILDING ENTRANCE
LD	LD	LOADING DOCK
		BOLLARD
D	D	DUMPSTER PAD
		SIGN
		DOUBLE SIGN
		STEEL GUARDRAIL
		WOOD GUARDRAIL
		PATH
		TREE LINE
		WIRE FENCE
		FENCE
		STOCKADE FENCE
		STONE WALL
		RETAINING WALL
		STREAM / POND / WATER COURSE
		DETENTION BASIN
		HAY BALES
		SILT FENCE
		SILT SOCK / STRAW WATTLE
4	4	MINOR CONTOUR
20	20	MAJOR CONTOUR
(10)	(10)	PARKING COUNT
	C10	COMPACT PARKING STALLS
DYL	DYL	DOUBLE YELLOW LINE
SL	SL	STOP LINE
		CROSSWALK
		ACCESSIBLE CURB RAMP
		ACCESSIBLE PARKING
VAN	VAN	VAN-ACCESSIBLE PARKING

Exist.	Prop.	
		CONCRETE
		HEAVY DUTY PAVEMENT
		BUILDINGS
		RIPRAP
		CONSTRUCTION EXIT
27.35 TC×	27.35 TC×	TOP OF CURB ELEVATION
26.85 BC×	26.85 BC×	BOTTOM OF CURB ELEVATION
132.75 ×	132.75 ×	SPOT ELEVATION
45.0 TW× 38.5 BW	45.0 TW× 38.5 BW	TOP & BOTTOM OF WALL ELEVATION
		BORING LOCATION
		TEST PIT LOCATION
MW	MW	MONITORING WELL
UD	UD	UNDERDRAIN
12"D	12"D	DRAIN
6"RD	6"RD	ROOF DRAIN
12"S	12"S	SEWER
FM	FM	FORCE MAIN
OHW	OHW	OVERHEAD WIRE
6"W	6"W	WATER
4"FP	4"FP	FIRE PROTECTION
	2"DW	DOMESTIC WATER
3"G	G	GAS
E	E	ELECTRIC
STM	STM	STEAM
T	T	TELEPHONE
FA	FA	FIRE ALARM
CATV	CATV	CABLE TV
		CATCH BASIN CONCENTRIC
		CATCH BASIN ECCENTRIC
		DOUBLE CATCH BASIN CONCENTRIC
		DOUBLE CATCH BASIN ECCENTRIC
		GUTTER INLET
		DRAIN MANHOLE CONCENTRIC
		DRAIN MANHOLE ECCENTRIC
TD		TRENCH DRAIN
		PLUG OR CAP
CO	CO	CLEANOUT
		FLARED END SECTION
		HEADWALL
S	S	SEWER MANHOLE CONCENTRIC
S	S	SEWER MANHOLE ECCENTRIC
CS	CS	CURB STOP & BOX
WV	WV	WATER VALVE & BOX
TSV	TSV	TAPPING SLEEVE, VALVE & BOX
		SIAMESE CONNECTION
HYD	HYD	FIRE HYDRANT
WM	WM	WATER METER
PIV	PIV	POST INDICATOR VALVE
W	W	WATER WELL
GG	GG	GAS GATE
GM	GM	GAS METER
EM	EMH	ELECTRIC MANHOLE
EM	EM	ELECTRIC METER
		LIGHT POLE
TM	TMH	TELEPHONE MANHOLE
T	T	TRANSFORMER PAD
		UTILITY POLE
		GUY POLE
		GUY WIRE & ANCHOR
HH	HH	HAND HOLE
PB	PB	PULL BOX
		MATCHLINE

Abbreviations

General

ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EX	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TYP	TYPICAL

Utility

CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PIV	POST INDICATOR VALVE
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
RIM=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

Notes

General

1. CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
3. ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
4. AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 6 INCHES LOAM AND SEED.
5. WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
6. WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
7. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
8. TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
9. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
10. IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
11. CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
12. DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
13. CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
14. THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND EPA JURISDICTION. PRIOR TO THE START OF CONSTRUCTION CONTRACTOR IS TO FILE A CGP NOTICE OF INTENT WITH THE EPA AND PREPARE A STORMWATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH THE NPDES REGULATIONS. CONTRACTOR SHALL CONFIRM THE OWNER HAS ALSO FILED A NOTICE OF INTENT WITH THE EPA.

Utilities

1. THE LOCATIONS, SIZES, AND TYPES OF EXISTING UTILITIES ARE SHOWN AS AN APPROXIMATE REPRESENTATION ONLY. THE OWNER OR ITS REPRESENTATIVE(S) HAVE NOT INDEPENDENTLY VERIFIED THIS INFORMATION AS SHOWN ON THE PLANS. THE UTILITY INFORMATION SHOWN DOES NOT GUARANTEE THE ACTUAL EXISTENCE, SERVICEABILITY, OR OTHER DATA CONCERNING THE UTILITIES, NOR DOES IT GUARANTEE AGAINST THE POSSIBILITY THAT ADDITIONAL UTILITIES MAY BE PRESENT THAT ARE NOT SHOWN ON THE PLANS. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTIONS TO EXISTING UTILITIES AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.
2. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, OR EXISTING CONDITIONS DIFFER FROM THOSE SHOWN SUCH THAT THE WORK CANNOT BE COMPLETED AS INTENDED, THE LOCATION, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT AND CONTRACTOR'S FAILURE TO NOTIFY PRIOR TO PERFORMING ADDITIONAL WORK RELEASES OWNER FROM OBLIGATIONS FOR ADDITIONAL PAYMENTS WHICH OTHERWISE MAY BE WARRANTED TO RESOLVE THE CONFLICT.
3. SET CATCH BASIN RIMS, AND INVERTS OF SEWERS, DRAINS, AND DITCHES IN ACCORDANCE WITH ELEVATIONS ON THE GRADING AND UTILITY PLANS.
4. RIM ELEVATIONS FOR DRAIN AND SEWER MANHOLES, WATER VALVE COVERS, GAS GATES, ELECTRIC AND TELEPHONE PULL BOXES, AND MANHOLES, AND OTHER SUCH ITEMS, ARE APPROXIMATE AND SHALL BE SET/RESET AS FOLLOWS:
   A. PAVEMENTS AND CONCRETE SURFACES: FLUSH
   B. ALL SURFACES ALONG ACCESSIBLE ROUTES: FLUSH
   C. LANDSCAPE, LOAM AND SEED, AND OTHER EARTH SURFACE AREAS: ONE INCH ABOVE SURROUNDING AREA AND TAPER EARTH TO THE RIM ELEVATION.
5. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY, THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, FIRE ALARM, ETC.). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH OWNER AND ARCHITECT.
6. CONTRACTOR SHALL MAKE ARRANGEMENTS FOR AND SHALL BE RESPONSIBLE FOR PAYING FEES FOR POLE RELOCATION AND FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, FIRE ALARM, AND ANY OTHER PRIVATE UTILITIES, WHETHER WORK IS PERFORMED BY CONTRACTOR OR BY THE UTILITIES COMPANY.
7. UTILITY PIPE MATERIALS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLAN:
   A. WATER PIPES SHALL BE CEMENT-LINED DUCTILE IRON (CLDI)
   B. SANITARY SEWER PIPES SHALL BE POLYVINYL CHLORIDE (PVC) SEWER PIPE
   C. STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HDPE)
   D. PIPE INSTALLATION AND MATERIALS SHALL COMPLY WITH THE STATE PLUMBING CODE WHERE APPLICABLE. CONTRACTOR SHALL COORDINATE WITH LOCAL PLUMBING INSPECTOR PRIOR TO BEGINNING WORK.
8. CONTRACTOR SHALL COORDINATE WITH ELECTRICAL CONTRACTOR AND SHALL FURNISH EXCAVATION, INSTALLATION, AND BACKFILL OF ELECTRICAL FURNISHED SITEWORK RELATED ITEMS SUCH AS PULL BOXES, CONDUITS, DUCT BANKS, LIGHT POLE BASES, AND CONCRETE PADS. SITE CONTRACTOR SHALL FURNISH CONCRETE ENCASEMENT OF DUCT BANKS IF REQUIRED BY THE UTILITY COMPANY AND AS INDICATED ON THE DRAWINGS.
9. CONTRACTOR SHALL EXCAVATE AND BACKFILL TRENCHES FOR GAS IN ACCORDANCE WITH GAS COMPANY'S REQUIREMENTS.
10. ALL DRAINAGE AND SANITARY STRUCTURE INTERIOR DIAMETERS (4' MIN.) SHALL BE DETERMINED BY THE MANUFACTURER BASED ON THE PIPE CONFIGURATIONS SHOWN ON THESE PLANS AND LOCAL MUNICIPAL STANDARDS. FOR MANHOLES THAT ARE 20 FEET IN DEPTH AND GREATER, THE MINIMUM DIAMETER SHALL BE 5 FEET.

Layout and Materials

1. DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
2. CURB RADII ARE 3 FEET UNLESS OTHERWISE NOTED.
3. CURBING SHALL BE EXTRUDED CONCRETE CURB (ECC) WITHIN THE SITE UNLESS OTHERWISE INDICATED ON THE PLANS.
4. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
5. PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A PROFESSIONAL LAND SURVEYOR.
6. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.

Demolition

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS.
2. EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
3. CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
4. THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
5. UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. MOREOVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.

Erosion Control

1. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
2. CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
4. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
5. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.

Existing Conditions Information

1. BASE PLAN: THE PROPERTY LINES SHOWN WERE DETERMINED BY AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. IN AUGUST, 2020 AND FROM DEEDS AND PLANS OF RECORD. THE TOPOGRAPHY AND PHYSICAL FEATURES ARE DEVELOPED FROM A COMBINED EFFORT OF AERIAL PHOTOGRAMMETRIC MAPPING BY EASTERN TOPOGRAPHICS, INC., BASED ON AERIAL PHOTOGRAPHS TAKEN ON APRIL 17, 2020 AND AUGMENTED BY AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND BY VHB DURING AUGUST, 2020.
   A. DELINEATION OF THE WETLANDS AND PLACEMENT OF THE FLAGS WAS PERFORMED BY: VHB IN APRIL, 2020.
   B. FLAGS MARKING THE WETLANDS WERE LOCATED BY: VHB FIELD SURVEY IN AUGUST 2020
2. TOPOGRAPHY: ELEVATIONS ARE BASED ON NAVD OF 1988.
3. GEOTECHNICAL DATA INCLUDING TEST PIT AND BORING LOCATIONS AND ELEVATIONS WERE OBTAINED FROM VHB AND SANBORN HEAD ASSOCIATES.

Document Use

1. THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.
3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
4. THIS BASE PLAN ILLUSTRATES THE MINIMUM PERIMETER EROSION & SEDIMENTATION CONTROLS. THE SWPPP OPERATOR SHALL UPDATE THIS PLAN THROUGHOUT THE DURATION OF CONSTRUCTION TO SHOW THE LOCATIONS OF PROPOSED/CONSTRUCTED E&S CONTROLS DEEMED NECESSARY TO MEET THE REQUIREMENTS OF THE NPDES CGP.

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APPROVED BY THE LAKEVILLE PLANNING BOARD
SIGNATURES:

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by | Checked by
Issued for | Date
Local Approvals | Oct. 28, 2020

Not Approved for Construction

Drawing Title
Legend and General Notes

Drawing Number
C1.01

Sheet 1 of 21

Project Number
14849.00

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52636
REGISTERED PROFESSIONAL ENGINEER

Saved Wednesday, January 27, 2021 11:53:05 AM AGORMAN Plotted Tuesday, March 2, 2021 4:57:57 PM Gesner, Brittany

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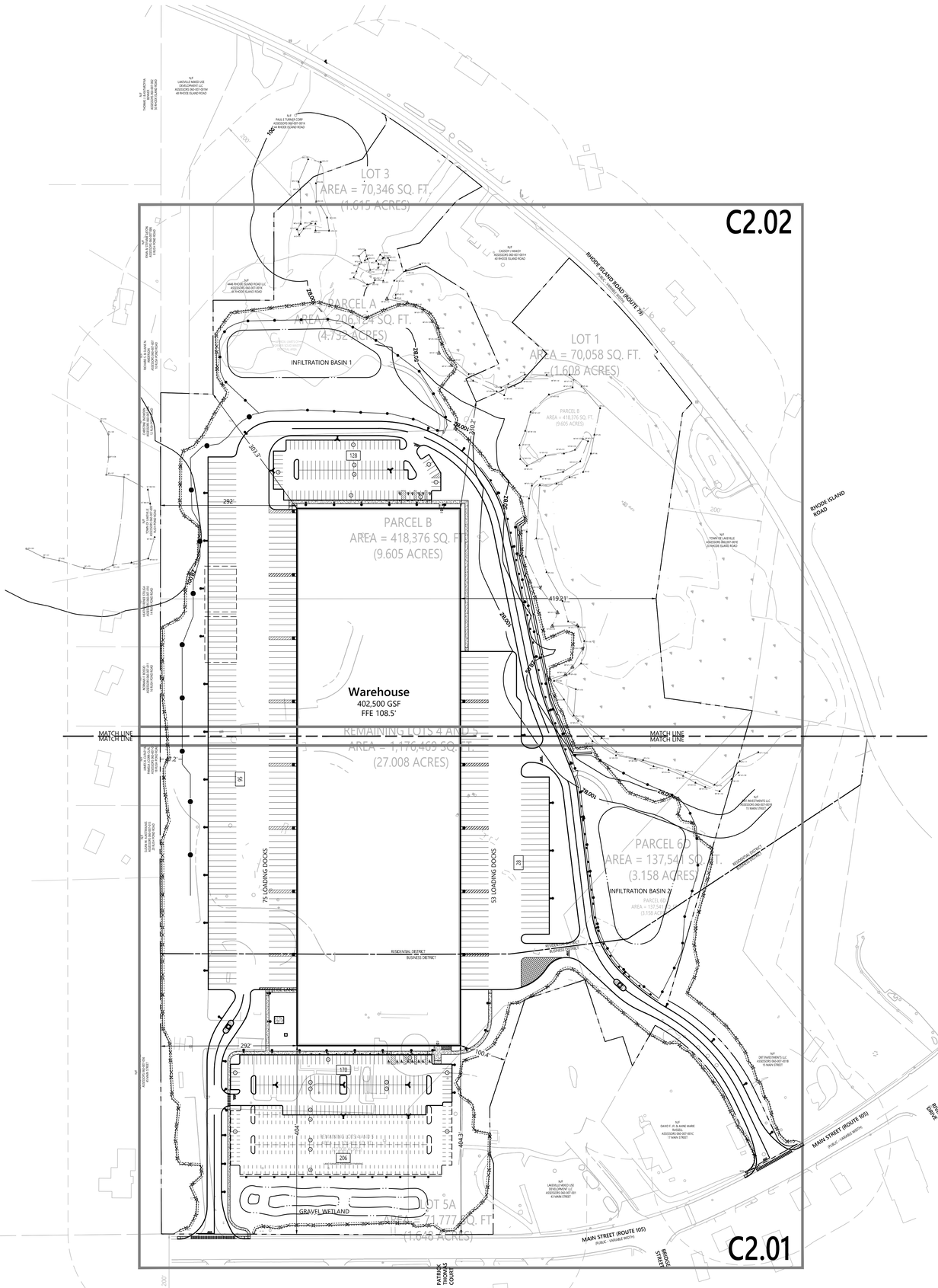

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Zoning Summary Chart[1]

Underlying Zoning Districts:	Residential[2] Business[2]
Overlay Districts:	Mixed Use Development District[2] Development Opportunities District (DO)[3]

Zoning Regulation Requirements	Required[1]	Provided
MINIMUM LOT DIMENSION	25 Acres	49.4 Acres
FRONTAGE IN FEET	200 Feet	835.0 Feet
FRONT YARD IN FEET	60 Feet	404.0 Feet
SIDE YARD IN FEET	40 Feet	100.5 Feet
REAR YARD IN FEET	40 Feet	230.2 Feet
MAXIMUM NUMBER OF STORIES	3 Stories	1 Story
MAXIMUM BUILDING HEIGHT	35 Feet	45 Feet[4]
MAXIMUM PERCENTAGE OF LAND COVERED BY STRUCTURES PARKING AND PAVED AREAS	50.0 %	58.0%[3,4]
BUFFER STRIP ADJACENT TO THE BOUNDARY OF A RESIDENTIAL DISTRICT	100 Feet	101± Feet[4]

1. Zoning regulation requirements used for the purpose of this table are based on the Town of Lakeville Rules & Regulations for the Development Opportunities District, Lakeville Zoning Board of Appeals Section 7.9 (the Zoning Bylaw), Adopted by the Planning Board 1/7/2021.
2. Zoning districts as shown on the Town of Lakeville Zoning Map dated 10/11/18.
3. Per Section 5.2.2.1, any portion of a lot which falls within a wetland or will be used for drainage structures shall not be included in the determination of land covered by structures parking and paved areas. Percentage of land covered by structures parking and paved areas = (All impervious area = 23.23 Acres)/((Total property = 49.37 Acres) - (Total Wetlands & Stormwater Ponds = 9.31± Acres)) x 100%= 58.0%.
4. See waivers section included hereon.

3

Parking Summary Chart

Description	Size		Spaces	
	Required	Provided	Required	Provided
STANDARD SPACES	9 x 20	9 x 20	389	264
STANDARD ACCESSIBLE SPACES *	9 x 20	9 x 20	11	11
VAN ACCESSIBLE SPACES	9 x 20	9x 20	3	3
STANDARD SPACES WITH EV CHARGERS	9 x 20	9 x 20	NA	19
ACCESSIBLE SPACES WITH EV CHARGERS	9 x 20	9 x 20	NA	1
TOTAL SPACES BUILT DAY 1			403	298
LAND BANKED PARKING	9 x 20	9 x 20	NA	206
TOTAL PROPOSED SPACES			403	504
LOADING BAYS	11 x 60	13 x 60	NA	128
TRAILER PARKING SPACES		12 x 60	NA	123

* ADA/AAB REQUIREMENTS

Parking Requirements:

INDUSTRIAL*	402,500 SF	x	1 SPACES	/	1,000	= 403 SPACES
			TOTAL PARKING REQUIRED			= 403 SPACES

* PER SECTION 6.5.3.3 PARKING SPACE SCHEDULE: WHOLESALE, WAREHOUSE OR STORAGE ESTABLISHMENT REQUIRES 1 SPACE PER EACH EMPLOYEE ON LARGEST SHIFT. ASSUMPTION OF 1 EMPLOYEE PER 1,000 SF FOR LARGEST SHIFT

Waivers

IN ACCORDANCE WITH SECTION 7.9.6(G) OF THE ZONING BYLAW AND ITEM #10 OF THE RULES AND REGULATIONS FOR THE DEVELOPMENT OPPORTUNITIES DISTRICT, THE PLANNING BOARD HEREBY WAIVES STRICT COMPLIANCE WITH THE FOLLOWING REGULATIONS:

1. ALLOW A MAXIMUM BUILDING HEIGHT FOR THIS PROJECT OF 45 FEET;
2. ALLOW A MAXIMUM PERCENTAGE OF LAND COVERED BY STRUCTURES, PARKING AND PAVED AREAS TO 58%;
3. ALLOW FOR THE 8' TALL FENCE WITHIN THE 100' BUFFER STRIP; AND,
4. ALLOW FOR PARKING AS OUTLINED WITHIN THE PARKING SUMMARY CHART INCLUDED HEREON.

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

3

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

0 50 100 200 Feet

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by	Checked by
ALG	KSS

Issued for: Local Approvals — Date: Oct. 28, 2020

Not Approved for Construction

Drawing Title: Overall Site Plan

Drawing Number: C2.00

Sheet 2 of 21

Project Number: 14849.00

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52636
REGISTERED PROFESSIONAL ENGINEER

Saved Tuesday, March 2, 2021 4:49:10 PM BGESNER Plotted Tuesday, March 2, 2021 5:28:11 PM Gorman, Annie

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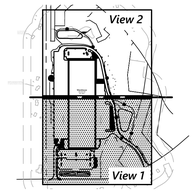

Key

Not To Scale

Sign Summary

M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
R1-1	30"	30"	STOP
R7-8	12"	18"	RESERVED PARKING
R7-8P	12"	6"	VAN ACCESSIBLE
S-1	12"	18"	ELECTRIC VEHICLE PARKING
S-2	12"	18"	NO PASSENGER VEHICLES

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

0 20 40 80 Feet

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

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Designed by	Checked by
ALG	KSS

Issued for: Local Approvals
Date: Oct. 28, 2020

Not Approved for Construction

Drawing Title: **Layout and Materials Plan**

Drawing Number: C2.01

Sheet 3 of 21

Project Number: 14849.00

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52636
REGISTERED PROFESSIONAL ENGINEER

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N/F
RYAN & STEFANIE EATON
ASSESSORS 060-007-006
8 RUSH POND ROAD

N/F
4446 RHODE ISLAND ROAD LLC
ASSESSORS 060-007-001K
44 RHODE ISLAND ROAD

N/F
CASSIDY J MAKSY
ASSESSORS 060-007-001H
40 RHODE ISLAND ROAD

RHODE ISLAND ROAD (ROUTE 79)
(PUBLIC - VARIABLE WIDTH)

N/F
RICHARD S. & ELAINE N.
ASSESSORS 060-007-007
10 RUSH POND ROAD

N/F
CHRISTINE SNOWDEN
ASSESSORS 060-007-008
12 RUSH POND ROAD

N/F
TOWN OF LAKEVILLE
ASSESSORS 060-007-009
RUSH POND ROAD

N/F
HEATHER RENEE STELIGA
ASSESSORS 060-007-010
14 RUSH POND ROAD

N/F
NORMAN F. ROSSIO
ASSESSORS 060-007-011
16 RUSH POND ROAD

N/F
TOWN OF LAKEVILLE
ASSESSORS 060-007-001E
20 RHODE ISLAND ROAD

PARCEL A
AREA = 206,124 SQ. FT.
(4.732 ACRES)

LOT 1
AREA = 70,058 SQ. FT.
(1.608 ACRES)

PARCEL B
AREA = 418,376 SQ. FT.
(9.605 ACRES)

REMAINING LOTS 4 AND 5
AREA = 1,176,469 SQ. FT.
(27.008 ACRES)

INFILTRATION BASIN 1
APPROX. LIMITS OF FORMER SOLID WASTE/ DISPOSAL AREA

4' TALL CHAIN LINK FENCE (TYP.)

GRAVEL ACCESS PATH

CHAIN LINK FENCE GATE

STONE BOUND w/DH (FOUND)

Warehouse
402,500 GSF

STANDARD DUTY BITUMINOUS CONCRETE

CONCRETE SIDEWALK

ARC TYPE A-D

ACR TYPE M-D

PLUSH MCC

BOLLARD MOUNTED R7-8 & R7-8P

BOLLARD MOUNTED R7-8

HEAVY DUTY BITUMINOUS CONCRETE (TYP.)

75 LOADING DOCKS

LOADING DOCK PAD

53 LOADING DOCKS

8' TALL CHAIN LINK FENCE EQUIPPED WITH ACOUSTIFENCE

REFUSE COMPACTER LOCATION (TWO SPACES)

HEAVY DUTY BITUMINOUS CONCRETE

MODULAR BLOCK RETAINING WALL

STEEL GUARD RAIL

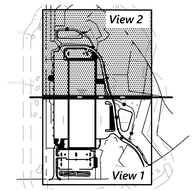
BUILDING

FORMER HUMAN SERVICES BLD.
7 STORY BRICK BUILDING

BITUMINOUS PARKING LOT WITH PAINTED PARKING LINES

CONC WALK

MATCH LINE



Key

Not To Scale

Sign Summary

M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
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R7-8	12"	18"	RESERVED PARKING
R7-8P	12"	6"	VAN ACCESSIBLE
S-1	12"	18"	ELECTRIC VEHICLE PARKING
S-2	12"	18"	NO EXIT

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

0 20 40 80 Feet

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
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Designed by: ALG
Checked by: KSS
Issued for: Local Approvals
Date: Oct. 28, 2020

Not Approved for Construction

Drawing Title
Layout and Materials Plan

Drawing Number
C2.02

Sheet 4 of 21

Project Number
14849.00

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52638
REGISTERED PROFESSIONAL ENGINEER

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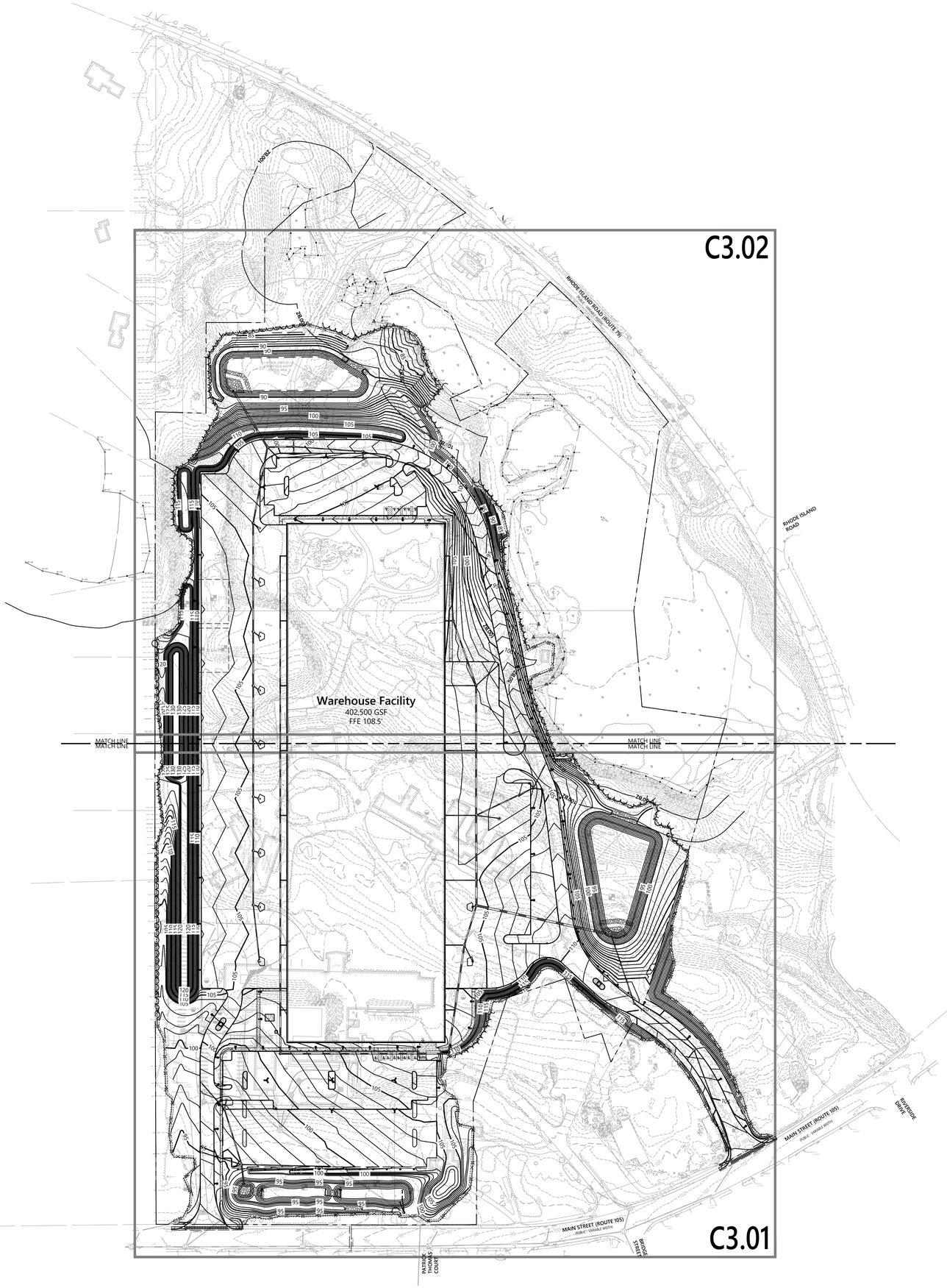

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Notes:

1. TOPOGRAPHIC INFORMATION BEYOND THE PROPERTY LIMITS IS BASED ON PUBLICLY AVAILABLE LIDAR DATA FOUND ON MASSGIS. TOPOGRAPHIC INFORMATION BEYOND THE PROPERTY LIMITS IS NOT BASED ON SURVEY AND IS FOR REFERENCE PURPOSES ONLY.

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

0 50 100 200 Feet

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

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Checked by: KSS

Issued for: Local Approvals
Date: Oct. 28, 2020

Not Approved for Construction

Drawing Title
Overall Grading and Drainage Plan

Drawing Number
C3.00

Sheet 5 of 21

Project Number
14849.00

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52626
REGISTERED PROFESSIONAL ENGINEER

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MATCH LINE

MATCH LINE

Warehouse
402,500 GSF
FFE 108.5'

2 STORY

OVERFLOW STONE SWALE

SURFACE INFILTRATION BASIN
ESHGW= 87.0

SEDIMENT FOREBAY

TEMPORARY GRADING EASEMENT TO BE COORDINATED WITH ABUTTER AND THEIR PROPOSED DEVELOPMENT.

TEMPORARY GRADING EASEMENT TO BE COORDINATED WITH ABUTTER AND THEIR PROPOSED DEVELOPMENT.

TREATMENT CELL 1
PERFORATED RISER (TYP.)

TREATMENT CELL 2
UNDERDRAIN

GRAVEL WETLAND, ESHGW = 90.2

OVERFLOW STONE SWALE

MAINTAIN EXISTING DMH & PIPES

INV = 88.1
MAINTAIN EXISTING CATCH BASIN

PLUG EXISTING DRAINAGE PIPE AT PROPERTY LINE

SAWCUT

MAIN STREET (ROUTE 105)
(PUBLIC - VARIABLE WIDTH)

BRIDGE STREET

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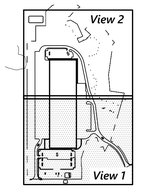

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SIGNATURES:

0 20 40 80 Feet

Lakeville Hospital Redevelopment

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Lakeville, Massachusetts

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Designed by	Checked by
ALG	KSS

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Local Approvals — Oct. 28, 2020

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Drawing Title
Grading and Drainage Plan

Drawing Number
C3.01

Sheet 6 of 21

Project Number
14849.00

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52626
REGISTERED PROFESSIONAL ENGINEER

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SURFACE INFILTRATION BASIN. ESHGW = 83.5.
CONTRACTOR TO REMOVE EXISTING SWDA IN ACCORDANCE WITH MASSDEP REQUIREMENTS AND A LICENSED SITE PROFESSIONAL MUST OBSERVE THIS REMOVAL PROCESS. FURTHERMORE EXISTING SANDY PEATS AND CLAYEY SILTS BELOW THE SWDA (SEE RECORD ENVIRONMENTAL REPORTS PREPARED FOR THE SITE) SHALL BE REMOVED UNTIL NATURAL SANDS ARE REACHED. THE PROJECT CIVIL OR GEOTECHNICAL ENGINEER MUST OBSERVE THE EXCAVATION TO CONFIRM NATURAL SANDS HAVE BEEN ACHIEVED. FOR PRICING PURPOSES ASSUME EXCAVATION OF MATERIALS TO ELEVATION 72.0. REPLACE WITH SAND SUITABLE FOR INFILTRATION IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

3

RHODE ISLAND ROAD (ROUTE 79)
(PUBLIC - VARIABLE WIDTH)

SEDIMENT FOREBAY
100 FES
INV=86.60 105

APPROX. LIMITS OF FORMER SOLID WASTE/ DISPOSAL AREA

Warehouse
402,500 GSF
FFE 108.5'

15" ROOF DRAIN
INV. = 100.50

15" ROOF DRAIN
INV. = 102.50

MATCH LINE

MATCH LINE

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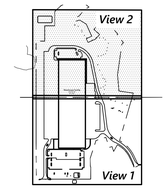

Key
Not To Scale

APPROVED BY THE LAKEVILLE PLANNING BOARD
SIGNATURES:

0 20 40 80 Feet

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
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3	Response to Comments	2021-03-02	

Designed by ALG | Checked by KSS
Issued for: Local Approvals | Date: Oct. 28, 2020

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Drawing Title
Grading and Drainage Plan

Drawing Number
C3.02

Sheet 7 of 21

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52636
REGISTERED PROFESSIONAL ENGINEER

Project Number
14849.00

Saved Tuesday, March 2, 2021 2:40:38 PM AGORMAN Plotted Tuesday, March 2, 2021 5:05:21 PM Gesner, Brittany

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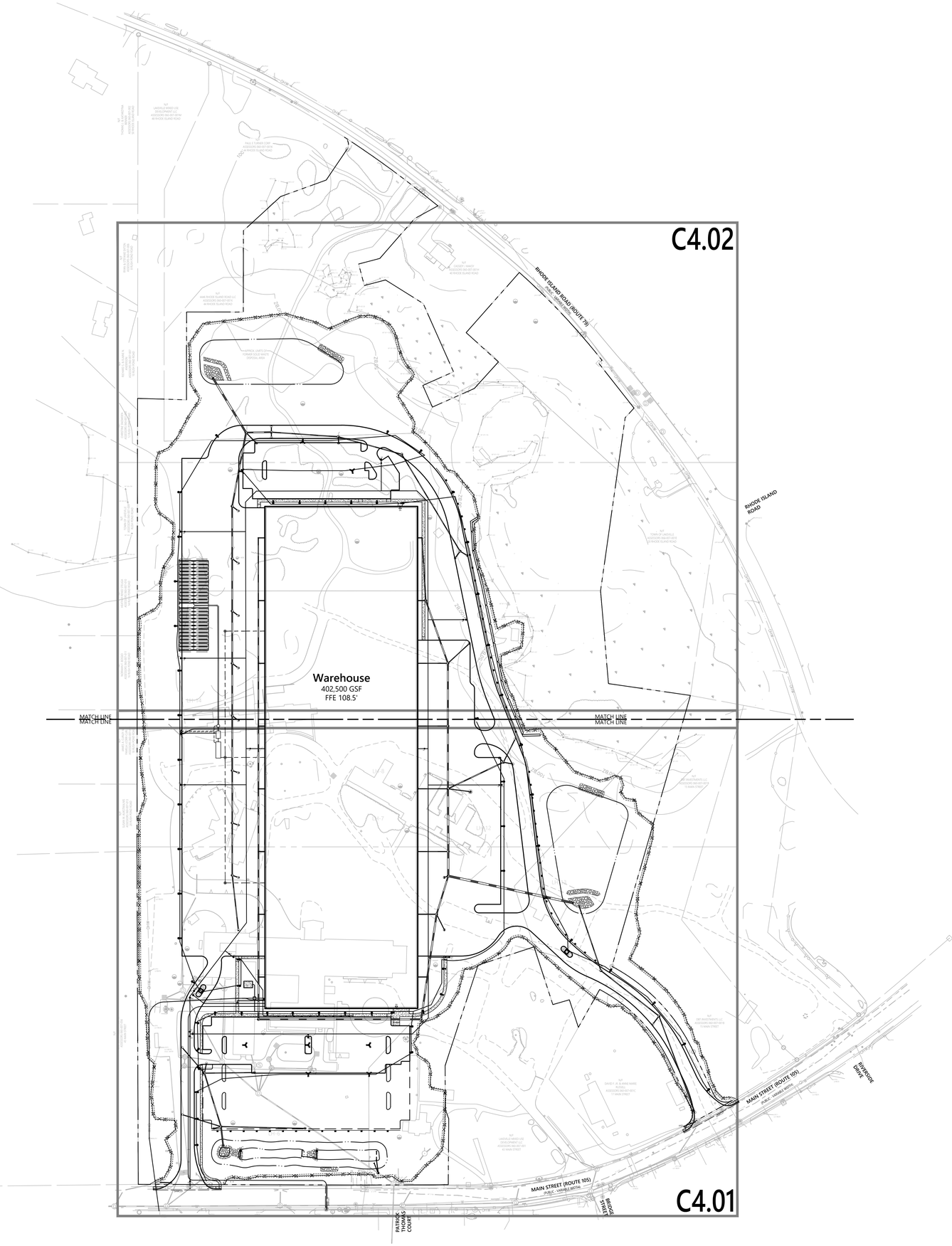

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SIGNATURES:

0 50 100 200 Feet

Lakeville Hospital Redevelopment

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ALG	KSS

Issued for: **Local Approvals** — Date: **Oct. 28, 2020**

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Drawing Title:
Overall Utility Plan

Drawing Number: **C4.00**

Sheet 8 of 21

Project Number: **14849.00**

COMMONWEALTH OF MASSACHUSETTS — BRITTANY GESNER — CIVIL — No. 52836 — REGISTERED PROFESSIONAL ENGINEER

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MATCH LINE

MATCH LINE

N/F
JAMES A. CURLEY &
PAMELA J CORR-CURLEY
ASSESSORS 060-007-012
20 RUSH POND ROAD

N/F
SUSAN M. AUKSTIKALNIS
ASSESSORS 060-007-013
20 RUSH POND ROAD

GEORGE A. MILLETT TRUSTEE
ASSESSORS 060-007-056
45 MAIN STREET

N/F
DBT INVESTMENTS LLC
ASSESSORS 060-007-001B
15 MAIN STREET

N/F
DAVID F. JR. & ANNE MARIE
RUSSELL
ASSESSORS 060-007-001C
17 MAIN STREET

N/F
LAKEVILLE MIXED USE
DEVELOPMENT LLC
ASSESSORS 060-007-001
43 MAIN STREET

INV=98.90
INV=98.80
INV=98.70

SEPTIC SYSTEM COMPONENT. SEE SHEETS C7.01-C7.05 FOR DESIGN AND DETAILS

5,000 GAL. HS-20 DOSING TANK. SEE SHEETS C7.01-C7.05 FOR DESIGN AND DETAILS

19,000 GAL. HS-20 SEPTIC TANK. SEE SHEETS C7.01-C7.05 FOR DESIGN AND DETAILS

102 SMH RIM=104.90 INV=99.40 101 INV=99.40 103 INV=99.40 BS-2 INV=99.30 OUT

226 CO RIM=104.40 INV=99.20 227 INV=99.40 RD 9 INV=99.20 OUT

15" ROOF DRAIN INV. = 100.50

SEPTIC SYSTEM COMPONENT. SEE SHEETS C7.01-C7.05 FOR DESIGN AND DETAILS.

114 DMH RIM=104.30 INV=95.70 116 INV=100.70 115 INV=95.60 OUT

115 CB RIM=103.90 INV=100.90 OUT

CONCRETE SADDLE 1.5'x3.5'
6" SEWER CONNECTION
INV. = 102.0

116 DMH RIM=104.20 INV=96.40 118 INV=100.70 117 INV=96.30 OUT

117 CB RIM=103.90 INV=100.90 OUT

225 CO RIM=104.40 INV=98.80 226 INV=100.40 RD 12 INV=98.80 OUT

15" ROOF DRAIN INV. = 100.50

118 DMH RIM=104.20 INV=97.30 120 INV=100.70 119 INV=97.20 OUT

119 CB RIM=103.90 INV=100.90 OUT

224 CO RIM=104.40 INV=98.40 225 INV=100.40 RD 11 INV=98.40 OUT

15" ROOF DRAIN INV. = 100.50

120 DMH RIM=104.20 INV=98.00 122 INV=100.70 121 INV=97.90 OUT

121 CB RIM=103.90 INV=100.90 OUT

CONCRETE SADDLE 1.5'x3.5'
6" SEWER CONNECTION
INV. = 102.0

101 SMH RIM=104.70 INV=101.00 BS-1 INV=100.90 OUT

15" ROOF DRAIN INV. = 100.50

223 CO RIM=104.40 INV=98.00 224 INV=100.40 RD 10 INV=98.00 OUT

122 CB RIM=103.90 INV=101.40 OUT

FIRE DEPARTMENT CONNECTION

222 CO RIM=103.90 INV=97.60 223 INV=101.90 BD 9 INV=97.60 OUT

15" ROOF DRAIN INV. = 102.00

GENERATOR PAD

ELECTRIC AND TEL/DATA CONNECTIONS
8" FIRE PROTECTION WATER CONNECTION
6" DOMESTIC WATER CONNECTION
GAS SERVICE CONNECTION
UNDERGROUND ELECTRIC FOR EV CHARGING STATIONS

SEE NOTE 1. UTILIZE RISERS TO TRANSITION FROM OVERHEAD TO UNDERGROUND

221 DMH RIM=101.30 INV=97.30 223 INV=97.20 OUT

309 CB RIM=97.40 INV=94.40 OUT

306 CB RIM=96.90 INV=93.50 OUT

307 DCB RIM=99.00 INV=96.00 OUT

SEE NOTE 1

310 DMH RIM=96.80 INV=93.10 306 INV=93.10 309 INV=93.10 307 INV=93.00 OUT

311 SHAL-CB RIM=94.60 INV=92.10 OUT

301 DMH RIM=95.20 INV=91.40 302 INV=92.00 304 INV=91.20 311 INV=91.30 303 INV=91.20 OUT

304 DCB RIM=98.90 INV=95.90 OUT

SEE NOTE 1

302 DCB RIM=95.00 INV=92.00 OUT

300 FES INV=91.00 303

402 CB-WQU RIM=91.40 INV=88.40 OUT

TREATMENT CELL 1
PERFORATED RISER (TYP.)

TREATMENT CELL 2
UNDERDRAIN

FES 3 FES INV=93.00 OUT

GRAVEL WETLAND, ESHGW = 90.2

OVERFLOW STONE SWALE

MAINTAIN EXISTING DMH & PIPES

600 DMH RIM=97.10 INV=88.00 327 INV=92.70 FES 3 INV=90.70 WEIR INV=89.10 OUT

INV = 88.1
MAINTAIN EXISTING CATCH BASIN

SAWCUT

REPLACE EXISTING 6x16 TEE AS DIRECTED BY THE WATER SERVICE PROVIDER.
PLUG EXISTING DRAINAGE PIPE AT PROPERTY LINE

APPROXIMATE LOCATION FOR OVERHEAD ELECTRIC AND TELECOMMUNICATIONS CONNECTION. TO BE CONFIRMED BY MEP ENGINEER AND SERVICE PROVIDER

APPROXIMATE GAS CONNECTION PER UTILITY PROVIDER REQUIREMENTS

SAWCUT

Warehouse
402,500 GSF
FFE 108.5'

15" ROOF DRAIN INV. = 100.50

212 DMH RIM=104.00 INV=96.90 213 INV=97.00 RD 4 INV=96.80 OUT

15" ROOF DRAIN INV. = 100.50

207 DMH RIM=103.40 INV=99.60 RD 5 INV=96.10 212 INV=97.30 208 INV=98.50 230 INV=96.00 OUT

15" ROOF DRAIN INV. = 100.50

206 DMH RIM=104.80 INV=95.20 207 INV=99.30 RD 6 INV=95.10 OUT

201 DMH RIM=104.20 INV=94.80 206 INV=100.60 202 INV=94.60 203 INV=94.30 OUT

202 DCB RIM=103.90 INV=100.90 OUT

203 DMH RIM=104.30 INV=95.20 205 INV=100.00 204 INV=99.60 RD 7 INV=95.10 OUT

15" ROOF DRAIN INV. = 100.50

204 DCB RIM=103.90 INV=100.90 OUT

205 CO RIM=106.10 INV=102.30 RD 8 INV=95.70 220 INV=95.70 OUT

15" ROOF DRAIN INV. = 102.50

220 DMH RIM=111.50 INV=96.10 221 EN INV=96.00 OUT

210 CB RIM=104.30 INV=101.30 OUT

209 DCB RIM=101.70 INV=98.70 OUT

208 DMH RIM=103.10 INV=100.50 210 INV=100.10 211 INV=98.40 209 INV=98.30 OUT

211 CB RIM=104.60 INV=101.60 OUT

230 DCB RIM=102.60 INV=99.60 OUT

OVERFLOW STONE SWALE

SURFACE INFILTRATION BASIN ESHGW= 87.0

SEDIMENT FOREBAY

200 FES INV=93.00 203

500 FES INV=95.00 501

501 DMH RIM=110.50 INV=96.60 502 INV=96.50 OUT

502 DMH RIM=109.20 INV=103.20 504 INV=98.70 503 INV=98.20 OUT

504 CB RIM=106.90 INV=103.90 OUT

503 SHALL CB RIM=103.00 INV=100.90 OUT

REBAR w/CAP (FOUND)

STONE BOUND w/EPLP (FOUND)

STONE BOUND w/DRILL HOLE (FOUND)

MAIN STREET (ROUTE 105)
(PUBLIC - VARIABLE WIDTH)

BRIDGE STREET

SAWCUT

HYD

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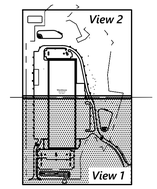

Key

Not To Scale

NOTES:
1. UTILITY PROVIDER TO CONFIRM SUITABILITY OF EXISTING UTILITY POLES FOR REUSE. IF UTILITY PROVIDER APPROVES, EXISTING UTILITY POLES SHALL REMAIN, AND OVERHEAD ELECTRIC, TELECOMM, AND DATA WIRES SHALL BE RESTRUNG IN ACCORDANCE WITH UTILITY PROVIDERS REQUIREMENTS.

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

0 20 40 80 Feet

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by: ALG
Checked by: KSS

Issued for: Local Approvals
Date: Oct. 28, 2020

Not Approved for Construction

Drawing Title: Utility Plan

Drawing Number: C4.01

Sheet 9 of 21

Project Number: 14849.00

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52636
REGISTERED PROFESSIONAL ENGINEER

Saved Tuesday, March 2, 2021 4:55:04 PM BGESNER Plotted Tuesday, March 2, 2021 5:07:55 PM Gesner, Brittany

SURFACE INFILTRATION BASIN, ESHGW = 83.5.
CONTRACTOR TO REMOVE EXISTING SWDA IN ACCORDANCE WITH MASSDEP REQUIREMENTS AND A LICENSED SITE PROFESSIONAL MUST OBSERVE THIS REMOVAL PROCESS. FURTHERMORE EXISTING SANDY PEATS AND CLAYEY SILTS BELOW THE SWDA (SEE RECORD ENVIRONMENTAL REPORTS PREPARED FOR THE SITE) SHALL BE REMOVED UNTIL NATURAL SANDS ARE REACHED. THE PROJECT CIVIL OR GEOTECHNICAL ENGINEER MUST OBSERVE THE EXCAVATION TO CONFIRM NATURAL SANDS HAVE BEEN ACHIEVED. FOR PRICING PURPOSES ASSUME EXCAVATION OF MATERIALS TO ELEVATION 72.0. REPLACE WITH SAND SUITABLE FOR INFILTRATION IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

3

N/F
RYAN & STEFANIE EATON
ASSESSORS 060-007-006
8 RUSH POND ROAD

N/F
RICHARD S. & ELAINE N.
ASSESSORS 060-007-007
10 RUSH POND ROAD

N/F
CHRISTINE SNOWDEN
ASSESSORS 060-007-008
12 RUSH POND ROAD

N/F
NORMAN F. ROSSO
ASSESSORS 060-007-011
16 RUSH POND ROAD

N/F
TOWN OF LAKEVILLE
ASSESSORS 060-007-009
RUSH POND ROAD

N/F
HEATHER RENEE STELIGA
ASSESSORS 060-007-010
14 RUSH POND ROAD

4446 RHODE ISLAND ROAD, LLC
ASSESSORS 060-007-001K
44 RHODE ISLAND ROAD

N/F
CASSIDY J MAKSY
ASSESSORS 060-007-001H
40 RHODE ISLAND ROAD

N/F
TOWN OF LAKEVILLE
ASSESSORS 060-007-001E
20 RHODE ISLAND ROAD

RHODE ISLAND ROAD (ROUTE 79)
(PUBLIC - VARIABLE WIDTH)

APPROX. LIMITS OF FORMER SOLID WASTE DISPOSAL AREA

SEDIMENT FOREBAY
100 FES INV=86.60 105

STONE BOUND w/DH (FOUND)

BENCH MARK UP #14 NAIL SET ELEV.=88.67'

Warehouse

LEACHING FIELD VENT. SEE SHEETS C7.01-C7.05 FOR DESIGN AND DETAILS

PRESSURE LATERAL CLEANOUT. SEE SHEETS C7.01-C7.05 FOR DESIGN AND DETAILS

SOIL ABSORPTION SYSTEM AREA 'A'. SEE SHEETS C7.01-C7.05 FOR DESIGN AND DETAILS

SOIL ABSORPTION SYSTEM AREA 'B'. SEE SHEETS C7.01-C7.05 FOR DESIGN AND DETAILS

(2) 4" DIA. PVC FORCE MAINS TO SAS AREAS. SEE SHEETS C7.01-C7.05 FOR DESIGN AND DETAILS

7' DIA HS-20 VALVE CHAMBER. SEE SHEETS C7.01-C7.05 FOR DESIGN AND DETAILS

SEPTIC SYSTEM

CONCRETE SADDLE 1.5'x3'- 6" SEWER CONNECTION INV. = 102.0

15" ROOF DRAIN INV. = 100.50

15" ROOF DRAIN INV. = 102.50

MATCH LINE

MATCH LINE

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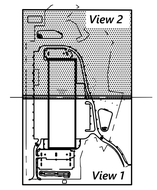

Key
Not To Scale

APPROVED BY THE LAKEVILLE PLANNING BOARD
SIGNATURES:

0 20 40 80 Feet

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Apprvl.
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Designed by ALG | Checked by KSS

Issued for: Local Approvals — Date: Oct. 28, 2020

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Drawing Title: Utility Plan

Drawing Number: C4.02

Sheet 10 of 21

Project Number: 14849.00

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52636
REGISTERED PROFESSIONAL ENGINEER

Saved Tuesday, March 2, 2021 4:55:04 PM BGESNER Plotted Tuesday, March 2, 2021 5:08:09 PM Gesner, Brittany

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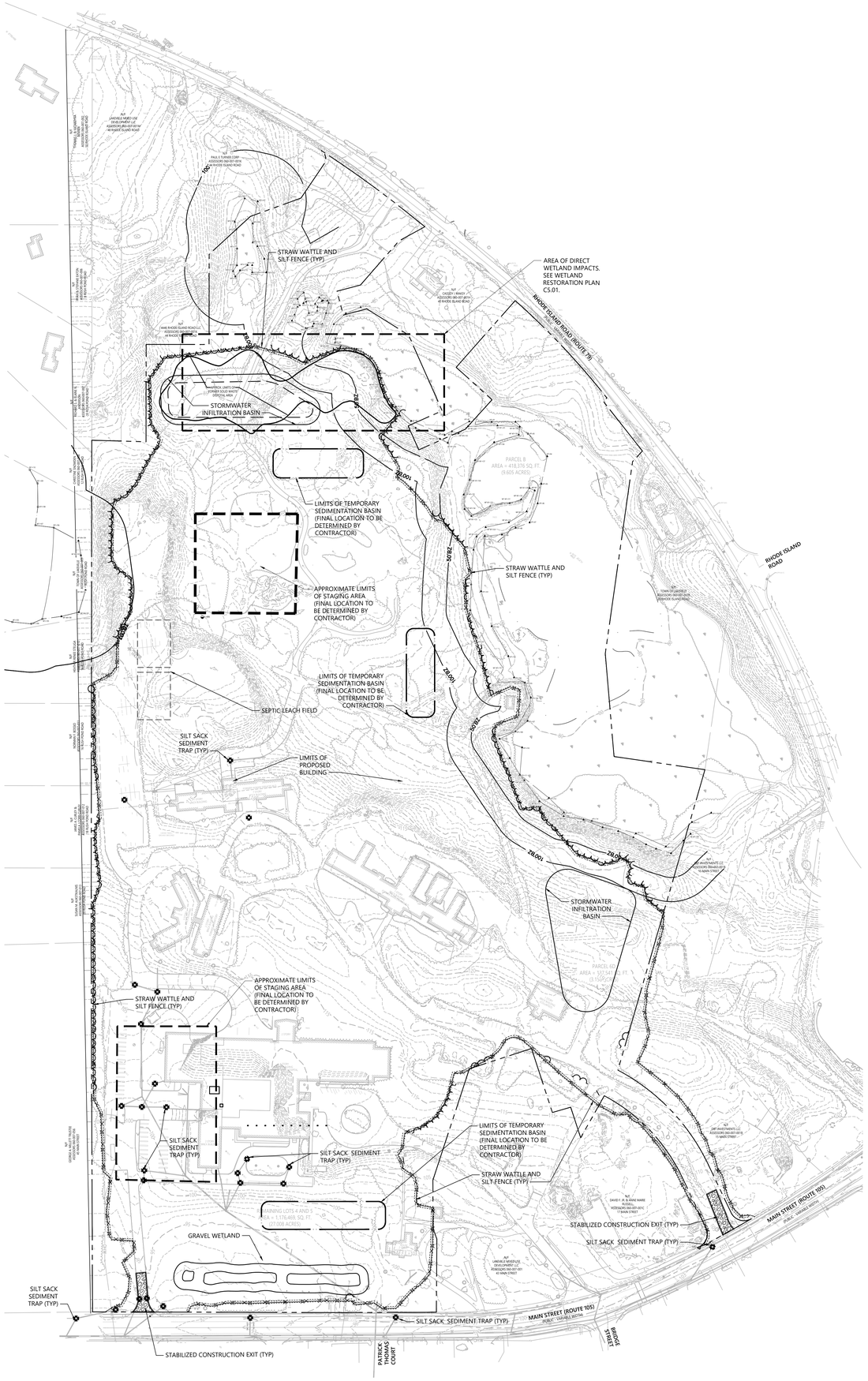

Notes

DOCUMENT USE

THIS BASE PLAN ILLUSTRATES THE MINIMUM PERIMETER EROSION & SEDIMENTATION CONTROLS. THE SWPPP OPERATOR SHALL UPDATE THIS PLAN THROUGHOUT THE DURATION OF CONSTRUCTION TO SHOW THE LOCATIONS OF PROPOSED/CONSTRUCTED E&S CONTROLS DEEMED NECESSARY TO MEET THE REQUIREMENTS OF THE NPDES CGP.

PROJECT E&S NARRATIVE

THE PROPOSED PROJECT INCLUDES THE REDEVELOPMENT OF THE FORMER LAKEVILLE STATE HOSPITAL INTO A 402,500 SF WAREHOUSE FACILITY WITH SITE AND UTILITY IMPROVEMENTS TO SUPPORT THIS USE. THE APPROXIMATELY 49 ACRE SITE WILL BE REDEVELOPED AS A SINGLE-PHASE PROJECT. THE PROJECT DISTURBANCE EXCEEDS 1 ACRE THEREFORE IS SUBJECT TO THE REQUIREMENTS OF THE NPDES CONSTRUCTION GENERAL PERMIT. A SWPPP WILL BE SUBMITTED BEFORE LAND DISTURBANCE BEGINS. REFER TO THE STORMWATER MANAGEMENT REPORT FOR MORE INFORMATION.

Erosion and Sedimentation Control Techniques

THE EROSION AND SEDIMENTATION CONTROLS SHOWN HEREON ARE PERIMETER MEASURES ONLY AND ARE PROVIDED AS A STARTING POINT FOR CONTRACTOR'S STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR IS REQUIRED TO PROVIDE ADDITIONAL INTERIM EROSION AND SEDIMENTATION CONTROLS, INCLUDING BUT NOT LIMITED TO THOSE LISTED BELOW. THE CONTRACTOR SHALL MANAGE EROSION AND SEDIMENTATION DURING CONSTRUCTION TO PREVENT IMPACTS TO RESOURCE AREAS, ROADWAYS, AND ABUTTING PROPERTIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE EROSION AND SEDIMENTATION CONTROLS THROUGHOUT THE DURATION OF CONSTRUCTION.

CATCH BASIN PROTECTION

NEWLY CONSTRUCTED AND EXISTING CATCH BASINS WILL BE PROTECTED WITH SILT SACKS THROUGHOUT CONSTRUCTION.

GRAVEL AND CONSTRUCTION ENTRANCE/EXIT

A TEMPORARY CRUSHED-STONE CONSTRUCTION ENTRANCE/EXIT WILL BE CONSTRUCTED. A CROSS SLOPE WILL BE PLACED IN THE ENTRANCE TO DIRECT RUNOFF TO THE SEDIMENT TRAP.

VEGETATIVE SLOPE STABILIZATION

STABILIZATION OF OPEN SOIL SURFACES WILL BE IMPLEMENTED WITHIN 14 DAYS AFTER GRADING OR CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, UNLESS THERE IS SUFFICIENT SNOW COVER TO PROHIBIT IMPLEMENTATION. VEGETATIVE SLOPE STABILIZATION WILL BE USED TO MINIMIZE EROSION ON SLOPES. ANNUAL GRASSES, SUCH AS ANNUAL RYE, WILL BE USED TO ENSURE RAPID GERMINATION AND PRODUCTION OF ROOTMASS. PERMANENT STABILIZATION WILL BE COMPLETED WITH THE PLANTING OF PERENNIAL GRASSES OR LEGUMES. ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER MAY BE ESTABLISHED BY HYDRO-SEEDING OR SODDING. A SUITABLE TOPSOIL, GOOD SEEDBED PREPARATION, AND ADEQUATE LIME, FERTILIZER AND WATER WILL BE PROVIDED FOR EFFECTIVE ESTABLISHMENT OF THESE VEGETATIVE STABILIZATION METHODS. MULCH WILL ALSO BE USED AFTER PERMANENT SEEDING TO PROTECT SOIL FROM THE IMPACT OF FALLING RAIN AND TO INCREASE THE CAPACITY OF THE SOIL TO ABSORB WATER.

TEMPORARY SEDIMENT BASINS

TEMPORARY SEDIMENT BASINS WILL BE DESIGNED EITHER AS EXCAVATIONS OR BERMED STORMWATER DETENTION STRUCTURES (DEPENDING ON GRADING) THAT WILL RETAIN RUNOFF FOR A SUFFICIENT PERIOD OF TIME TO ALLOW SUSPENDED SOIL PARTICLES TO SETTLE OUT PRIOR TO DISCHARGE. THESE TEMPORARY BASINS WILL BE LOCATED BASED ON CONSTRUCTION NEEDS AS DETERMINED BY THE CONTRACTOR AND OUTLET DEVICES WILL BE DESIGNED TO CONTROL VELOCITY AND SEDIMENT. POINTS OF DISCHARGE FROM SEDIMENT BASINS WILL BE STABILIZED TO MINIMIZE EROSION. AT A MINIMUM, SEDIMENTATION BASINS SHALL BE DESIGNED AND CONSTRUCTED TO PROVIDE STORAGE FOR THE VOLUME OF RUNOFF GENERATED FROM A 2-YR, 24-HR DESIGN STORM, OR AT LEAST 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINING TO THE BASIN.

STOCKPILE MANAGEMENT

SIDE-SLOPES OF STOCKPILED MATERIAL SHALL BE NO STEEPER THAN 2:1. STOCKPILES NOT USED WITHIN 30 DAYS NEED TO BE SEEDED AND MULCHED IMMEDIATELY AFTER FORMATION OF THE STOCKPILE. STRAW BALES AND SILT FENCE ARE TO BE PLACED AROUND THE STOCKPILE AREA APPROXIMATELY 10 FEET FROM THE TOE OF SLOPE.

DUST CONTROL

PERIODICALLY MOISTEN EXPOSED SURFACES ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELWAY DAMP AND REDUCE DUST.

Temporary Erosion and Sedimentation Control Maintenance (Throughout Construction)

1. THE SITE CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). ALL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE INSPECTED WEEKLY AND AFTER RAINFALL OF 0.25 INCHES IN 24 HOURS. THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS. RECORDS OF THE INSPECTIONS WILL BE PREPARED AND MAINTAINED ON-SITE BY THE CONTRACTOR.
2. SILT SHALL BE REMOVED FROM BEHIND BARRIERS IF GREATER THAN 6-INCHES DEEP OR AS NEEDED.
3. DAMAGED OR DETERIORATED ITEMS WILL BE REPAIRED IMMEDIATELY AFTER IDENTIFICATION.
4. SEDIMENT THAT IS COLLECTED IN PROTECTIVE MEASURES SHALL BE DISPOSED OF PROPERLY AND COVERED IF STORED ON-SITE.
5. EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED EARTH HAS BEEN SECURELY STABILIZED. AFTER REMOVAL OF STRUCTURES, DISTURBED AREAS SHALL BE REGRADED AND STABILIZED AS SOON AS POSSIBLE.
6. MAINTAIN THE CONSTRUCTION EXIT IN A CONDITION WHICH WILL PREVENT TRACKING AND WASHING OF SEDIMENTS ONTO PAVED SURFACES. MAINTENANCE MAY INCLUDE TURNING THE MATERIAL IN THE EXIT OR ADDING ADDITIONAL ROCK.

Infiltration Area Protection During Construction

1. FOR THE LONG-TERM FUNCTION OF THE INFILTRATION BASIN(S)/STRUCTURE(S), CARE SHALL BE TAKEN IN THE INFILTRATION AREAS DURING CONSTRUCTION. THE CONTRACTOR SHALL EMPLOY THE FOLLOWING MINIMUM BEST MANAGEMENT PRACTICES (BMPs):
   A. INFILTRATION AREAS SHALL NOT BE USED AS TEMPORARY CONSTRUCTION SEDIMENTATION BASINS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER. IF INFILTRATION AREAS ARE USED AS TEMPORARY SEDIMENTATION BASINS DURING CONSTRUCTION, THEN THE SOILS SHALL BE EXCAVATED A MINIMUM OF 2' FROM THE TEMPORARY BASIN BOTTOM TO REMOVE CLOGGED SOILS.
   B. STORMWATER RUNOFF FROM EXPOSED SURFACES SHALL BE DIRECTED AWAY FROM THE INFILTRATION BASIN(S)/STRUCTURE(S) DURING CONSTRUCTION.
   C. CONSTRUCTION EQUIPMENT, VEHICULAR TRAFFIC, PARKING OF VEHICLES, AND STOCKPILING OF CONSTRUCTION MATERIALS SHALL BE LOCATED OUTSIDE OF THE INFILTRATION AREAS.
   D. EXCAVATION FOR CONSTRUCTION OF THE INFILTRATION BASIN(S)/STRUCTURE(S) SHALL ENSURE THAT THE SOIL AT THE BOTTOM OF THE EXCAVATION IS NOT COMPACTED OR SMEARED.
   E. THE PERIMETER OF THE INFILTRATION AREAS SHALL BE STAKED AND FLAGGED TO PREVENT THE USE OF THE AREA FOR ACTIVITIES THAT MIGHT DAMAGE THE INFILTRATION ABILITY OF THE SYSTEM.

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APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

0 50 100 200 Feet

Lakeville Hospital Redevelopment

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Designed by: ALG
Checked by: KSS
Issued for: Local Approvals
Date: Oct. 28, 2020

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Drawing Title
Erosion and Sedimentation Control Plan

Drawing Number
C5.00

Sheet 11 of 21

Project Number
14849.00

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52636
REGISTERED PROFESSIONAL ENGINEER

Saved Tuesday, March 2, 2021 3:19:20 PM AGORMAN Plotted Tuesday, March 2, 2021 5:11:01 PM Gesner, Brittany

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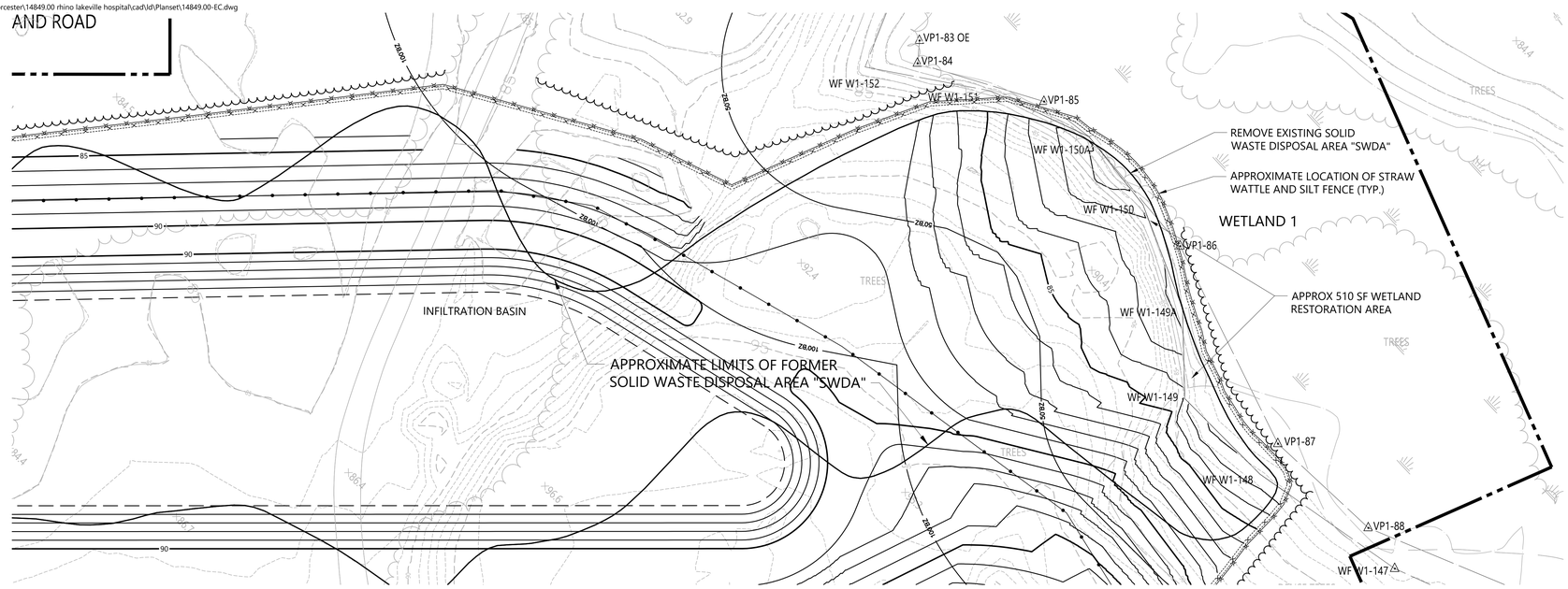
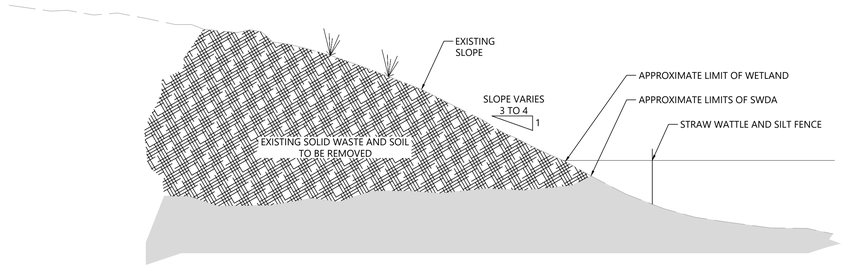


Wetland Restoration Notes:

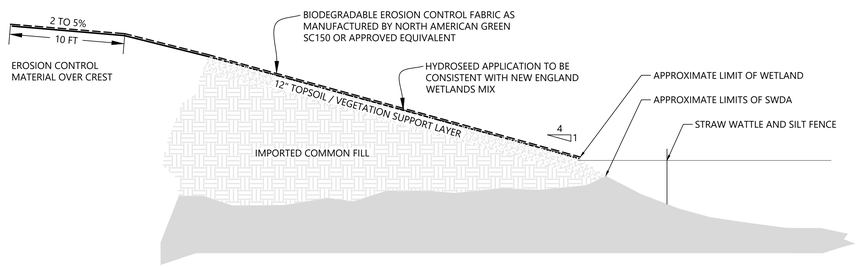
1. THE REMOVAL OF THE SWDA WITHIN THE WETLAND SHALL BE DONE UNDER THE SUPERVISION OF AN EXPERIENCED WETLAND SCIENTIST.
2. CONSTRUCTION OF THE WETLAND RESTORATION AREA SHALL INCLUDE SOIL PLACEMENT, SEEDING, AND SHALL BE PERFORMED UNDER THE SUPERVISION OF AN EXPERIENCED WETLAND SCIENTIST.
3. RESTORATION SHALL INCLUDE REMOVING THE SOLID WASTE AND DEBRIS FROM THE BVW, PLACING AT LEAST 12-INCHES OF WETLAND SOILS WHERE NECESSARY TO MATCH THE SURROUNDING WETLAND TOPOGRAPHY AND SEEDING THE AREA WITH A NEW ENGLAND WETLAND MIX THAT WILL ALLOW FOR REGROWTH OF INDIGENOUS, NON-INVASIVE HERBACEOUS SPECIES TO SUPPLEMENT NATURAL RECRUITMENT.
4. WETLAND SOILS SHALL BE CREATED BY THE CONTRACTOR FOR THIS PROJECT. CREATED SOILS SHALL CONSIST OF A 1:1 MIXTURE (OR EQUAL VOLUMES) OF ORGANIC AND MINERAL MATERIALS (IN THE LOAMY SAND TO SAND RANGE). CLEAN LEAF OR COMMERCIALLY AVAILABLE COMPOST IS THE PREFERRED AMENDMENT TO ACHIEVE THIS STANDARD, THOUGH OTHER MATERIALS MAY BE USED IF APPROVED BY THE WETLAND SCIENTIST.
5. ONCE WETLAND SOILS HAVE BEEN PLACED, EQUIPMENT, VEHICLES, ETC. EXERTING A GROUND PRESSURE OF 3 PSI OR GREATER SHALL NO LONGER BE ALLOWED IN THIS AREA TO AVOID COMPACTION OF WETLAND SOILS.
6. FALLEN LOGS, BRANCHES, AND OTHER NATURAL WOODY DEBRIS SHALL BE COLLECTED AND STOCKPILED FOR RELOCATION TO THE RESTORATION AREA TO PROVIDE BENEFICIAL HABITAT FEATURES FOR WILDLIFE. THIS MATERIAL SHALL BE DISTRIBUTED TO COVER THE RESTORATION AREA. THESE MATERIALS SHALL NOT INCLUDE ANY KNOWN INVASIVE SPECIES.
7. THE EROSION CONTROL BARRIERS SHALL BE DISASSEMBLED AND PROPERLY DISPOSED OF BY CONTRACTOR AS SOON AS ALL AREAS UPGRADIENT OF THESE BARRIERS ARE STABILIZED WITH VEGETATION, UPON APPROVAL BY THE CONSERVATION COMMISSION. ANY SEDIMENT COLLECTED BY ANY BARRIER SHALL BE REMOVED AND DISPOSED OF IN A MANNER THAT PREVENTS EROSION AND TRANSPORT TO A WATERWAY OR WETLAND.
8. SOILS ALONG THE WETLAND EDGE ARE TO BE REVIEWED IN THE FIELD BY A WETLAND SCIENTIST AT THE TIME OF CONSTRUCTION. THE INTENT IS TO MATCH EXISTING GRADES AT THE WETLAND EDGE.
9. THE TOPOGRAPHY OF THE RESTORATION AREA IS INTENDED TO MIMIC THAT OF A NATURAL WETLAND SURFACE AND DOES NOT NEED TO BE GRADED FLAT. SMALL RUTS AND MOUNDS ARE ACCEPTABLE AS THEY PROVIDE A VARIETY OF HABITATS FOR PLANT AND ANIMAL SPECIES, BUT SHALL BE REVIEWED BY THE WETLAND SCIENTIST.
10. UPON COMPLETION, THE RESTORATION AREA SHOULD BE MONITORED BY THE WETLAND SCIENTIST FOR TWO GROWING SEASONS WITH ANNUAL REPORTS SUBMITTED TO THE APPLICABLE PERMITTING AGENCIES.
11. WETLAND HYDROLOGY SHALL BE OBSERVED DURING THE SPRING AND FALL BY THE WETLAND SCIENTIST FOR THE FIRST TWO YEARS AND REPRESENTATIVE PHOTOGRAPHS SHALL BE TAKEN AT THESE TIMES.



Representative Cross Section Existing Conditions

N.T.S.

NOTE:
FOR SLOPES WITH GRADES STEEPER THAN 5:1 AND WITHIN THE 100' BUFFER ZONE, USE EROSION CONTROL MATERIAL NORTH AMERICAN GREEN SC150 OR APPROVED EQUIVALENT (SECURED USING ANCHORS AT PATTERN RECOMMENDED BY MANUFACTURER).
FOR DISTURBED/EXPOSED SOIL AREAS SHALLOWER THAN 5:1, USE EROSION CONTROL MATERIAL NORTH AMERICAN GREEN S75 OR APPROVED EQUIVALENT (SECURED USING ANCHORS AT PATTERN RECOMMENDED BY MANUFACTURER).



Representative Cross Section Proposed Conditions

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APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

0 10 20 40 Feet

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Drawing Title: **Wetland Restoration Plan**

Drawing Number: C5.01

Sheet 12 of 21

Project Number: 14849.00

COMMONWEALTH OF MASSACHUSETTS
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No. 52636
REGISTERED PROFESSIONAL ENGINEER

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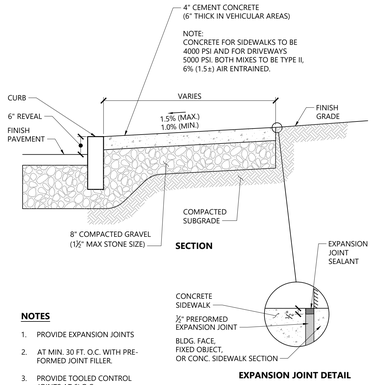


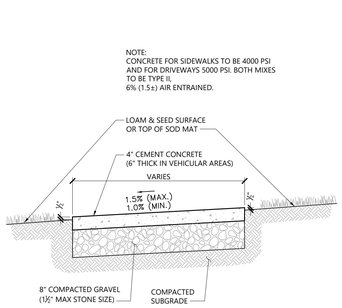
NOTES

1. PROVIDE EXPANSION JOINTS
2. AT MIN. 30 FT. O.C. WITH PRE-FORMED JOINT FILLER.
3. PROVIDE TOOLED CONTROL JOINTS AT 6' O.C.
4. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.

Concrete Sidewalk

1/16

N.T.S. Source: VHB LD_420



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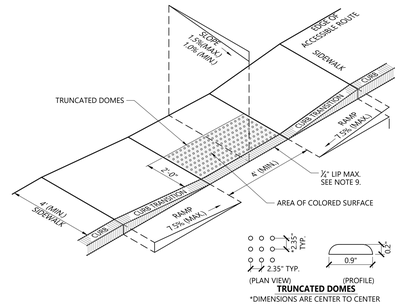
2. PROVIDE TOOLED CONTROL JOINTS AT 6' O.C.
3. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO SIDEWALK DIRECTION.

Concrete Sidewalk in Landscape Area

1/16

N.T.S. Source: VHB LD_426



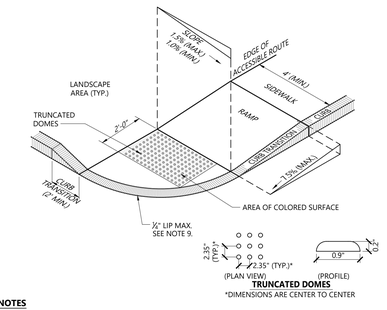
NOTES

1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1.5 (1% MIN.).
2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT CURB RAMPS SHALL BE 7.5%.
4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
6. RAMP, CURB, AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5' x 5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
9. ELIMINATE CURBING AT RAMP (OTHER THAN VERTICAL CURBING, WHICH SHALL BE SET FLUSH) WHERE IT ABUTS ROADWAY.
10. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES.
11. DETECTABLE WARNINGS SHALL BE INSTALLED PERPENDICULAR TO ACCESSIBLE ROUTE.

Accessible Curb Ramp (ACR) Type 'A-D'

1/16

N.T.S. Source: VHB LD_500



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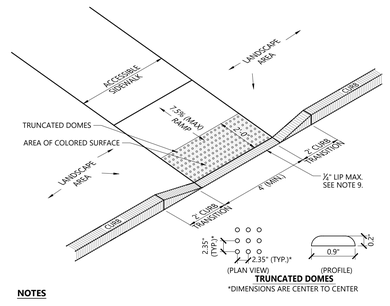
6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5' x 5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
9. ELIMINATE CURBING AT RAMP WHERE IT ABUTS ROADWAY, EXCEPT WHERE VERTICAL CURBING IS INDICATED ON THE DRAWINGS TO BE INSTALLED AND SET FLUSH.
10. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES.
11. DETECTABLE WARNINGS SHALL BE INSTALLED PERPENDICULAR TO THE ACCESSIBLE ROUTE.
12. CONTRACTOR TO SUBMIT R.F.I. FOR THIS TYPE OF ACCESSIBLE CURB RAMP FOR APEX ROADWAY CROSSINGS.

Accessible Curb Ramp (ACR) - Type 'B-D'

1/16

N.T.S. Source: VHB LD_501



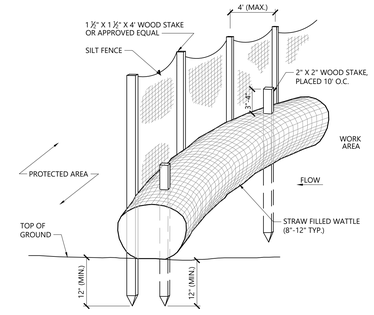
NOTES

1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1.5 (1% MIN.).
2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT CURB RAMPS SHALL BE 7.5%.
4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
5. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5' x 5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
9. ELIMINATE CURBING (OTHER THAN VERTICAL CURBING, WHICH SHALL BE SET FLUSH) WHERE IT ABUTS ROADWAYS.
10. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES.
11. DETECTABLE WARNINGS SHALL BE INSTALLED PERPENDICULAR TO THE ACCESSIBLE ROUTE.

Accessible Curb Ramp (ACR) Type 'M-D'

1/16

N.T.S. Source: VHB LD_512



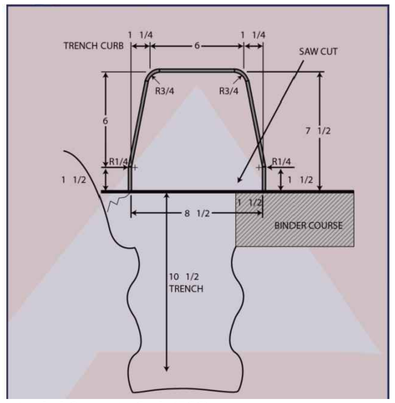
NOTES

1. STRAW WATTLE SHALL BE AS MANUFACTURED BY EARTHSAVER OR APPROVED EQUAL.
2. STRAW WATTLES SHALL OVERLAP A MINIMUM OF 12 INCHES.
3. STRAW WATTLE SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
4. TEMPORARY STRAW WATTLES TO BE REMOVED BY CONTRACTOR, ALL OTHERS TO REMAIN IN PLACE UNLESS DIRECTED OTHERWISE BY ENGINEER.
5. IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

Straw Wattle and Silt Fence

1/16

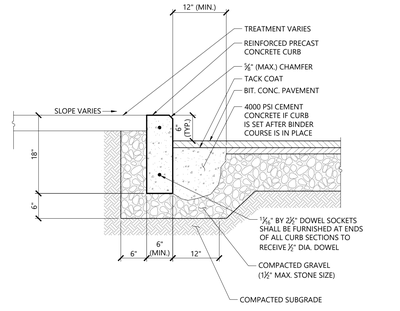
N.T.S. Source: VHB LD_659-A



Extruded Concrete Curb (ECC)

12/20

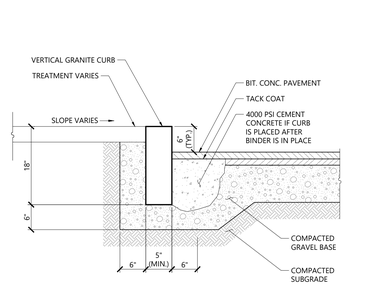
N.T.S. Source:



Precast Concrete Curb (PCC)

1/16

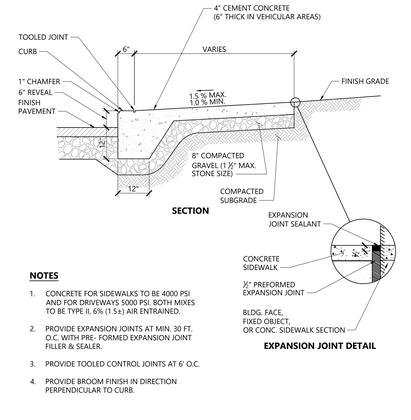
N.T.S. Source: VHB LD_404



Vertical Granite Curb (VGC)

1/16

N.T.S. Source: VHB LD_402



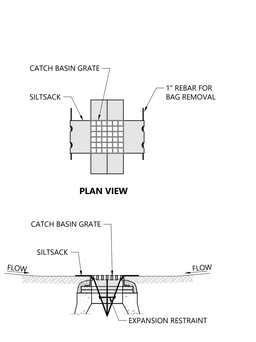
NOTES

1. CONCRETE FOR SIDEWALKS TO BE 4000 PSI AND FOR DRIVEWAYS 5000 PSI. BOTH MIXES TO BE TYPE II, 6% (1.5±) AIR ENTRAINED.
2. PROVIDE EXPANSION JOINTS AT MIN. 30 FT. O.C. WITH PRE- FORMED EXPANSION JOINT FILLER & SEALER.
3. PROVIDE TOOLED CONTROL JOINTS AT 6' O.C.
4. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.

Monolithic Concrete Curb (MCC) & Sidewalk

1/16

N.T.S. Source: VHB LD_421



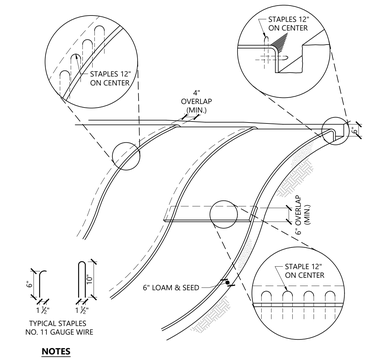
NOTES

1. INSTALL SILTSACK IN ALL CATCH BASINS WHERE INDICATED ON THE PLAN BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER BINDER COURSE IS PLACED AND HAY BALES HAVE BEEN REMOVED.
2. GRATE TO BE PLACED OVER SILTSACK.
3. SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED

Siltsack Sediment Trap

1/16

N.T.S. Source: VHB LD_674



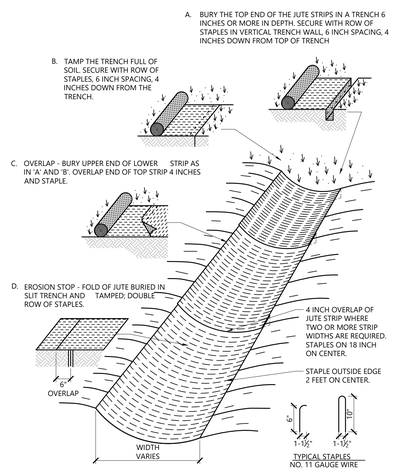
NOTES

1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE UPPER BLANKET END OVER LOWER END WITH 6 INCH (MIN.) OVERLAP AND STAPLE BOTH TOGETHER.
5. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
6. EROSION CONTROL BLANKETS SHALL BE USED IN ALL AREAS WHERE SLOPES EXCEED 3:1.

Erosion Control Blanket Slope Installation

1/16

N.T.S. Source: VHB LD_680

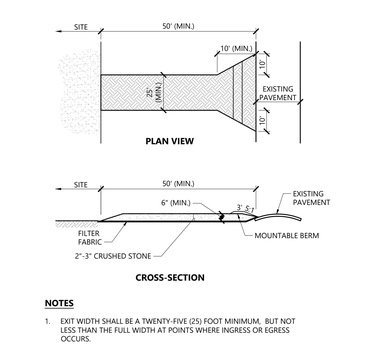


* INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS

Erosion Control Blanket Swale Installation

1/16

N.T.S. Source: VHB LD_681



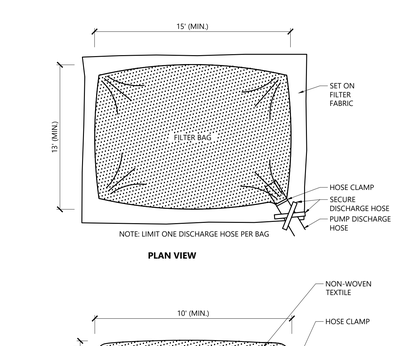
NOTES

1. EXIT WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.

Stabilized Construction Exit

1/16

N.T.S. Source: VHB LD_682



NOTES

1. BAG TO BE USED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

Dewatering Filter Bag

1/16

N.T.S. Source: VHB LD_691

vhb.com
vhb
120 Front Street
Suite 500
Worcester, MA 01608
508.752.1001

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by | Checked by

Issued for | Date

Local Approvals | Oct. 28, 2020

Not Approved for Construction

Drawing Title

Site Details 1

Drawing Number

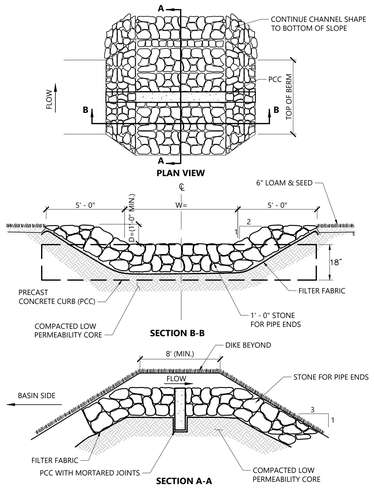
COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52636
REGISTERED PROFESSIONAL ENGINEER

C6.01

Sheet 13 of 21

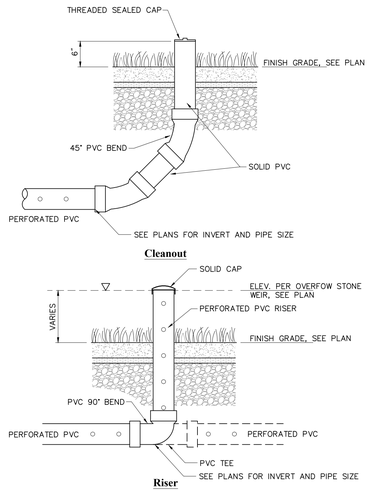
Project Number
14849.00

Saved Tuesday, March 2, 2021 4:49:47 PM BGESNER Plotted Tuesday, March 2, 2021 5:11:53 PM Gesner, Brittany



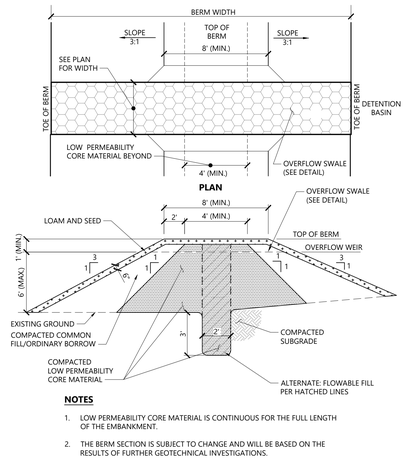
Overflow Stone Swale 1/16

N.T.S. Source: VHB LD_161



Gravel Wetland Subdrain 6/08

N.T.S. Source: VHB LD_302

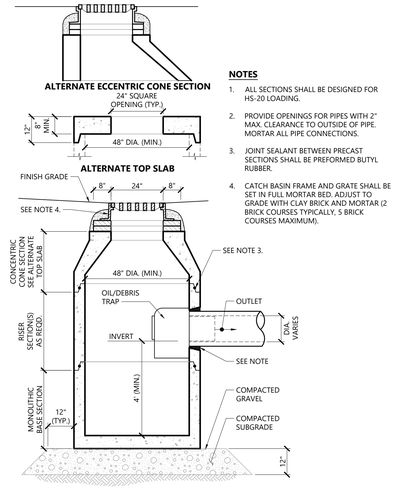


NOTES

1. LOW PERMEABILITY CORE MATERIAL IS CONTINUOUS FOR THE FULL LENGTH OF THE EMBANKMENT.
2. THE BERM SECTION IS SUBJECT TO CHANGE AND WILL BE BASED ON THE RESULTS OF FURTHER GEOTECHNICAL INVESTIGATIONS.

Detention Basin Berm Section 3/19

N.T.S. Source: VHB LD_160

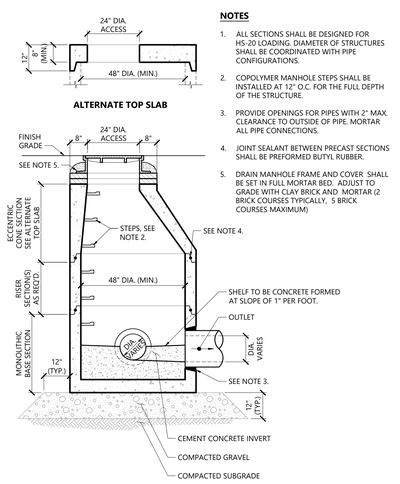


NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

Catch Basin (CB) With Oil/Debris Trap 1/16

N.T.S. Source: VHB LD_101



NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING. DIAMETER OF STRUCTURES SHALL BE COORDINATED WITH PIPE CONFIGURATIONS.
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
3. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
5. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM)

Drain Manhole (DMH) 1/16

N.T.S. Source: VHB LD_115

NOTES

1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.

Utility Trench 1/16

N.T.S. Source: VHB LD_300

NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE DOGHOUSE OPENING FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. TOP SLAB SHALL NOT REST DIRECTLY ON PIPE. GROUT ALL PIPE CONNECTIONS (NON-SHRINK GROUT).
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE (4"DEPTH) SHALL BE SET IN FULL MORTAR BED.
5. ADJUST TO FINISH GRADE WITH CLAY BRICK AND MORTAR AS REQUIRED.

Catch Basin (CB) Shallow Cover with Oil/Debris Trap 1/16

N.T.S. Source: VHB LD_105

NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE DOGHOUSE OPENING FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. TOP SLAB SHALL NOT REST DIRECTLY ON PIPE. GROUT ALL PIPE CONNECTIONS (NON-SHRINK GROUT).
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE (4"DEPTH) SHALL BE SET IN FULL MORTAR BED.
5. ADJUST TO FINISH GRADE WITH CLAY BRICK AND MORTAR AS REQUIRED.

Double Grate Catch Basin (DCB) Shallow Cover with Oil/Debris Trap 1/16

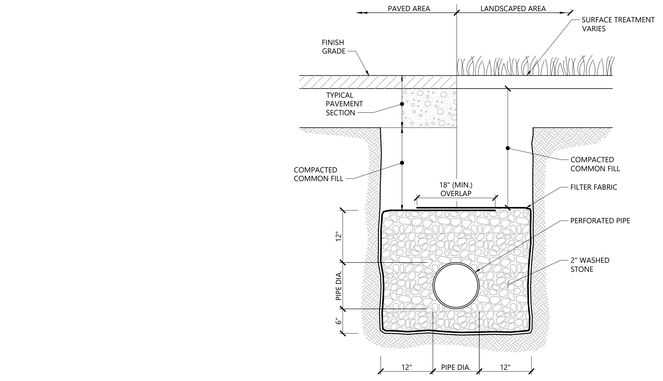
N.T.S. Source: VHB LD_106

NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE BUTYL RUBBER.
4. DOUBLE CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICKS TYPICALLY, 5 BRICK COURSES MAXIMUM)

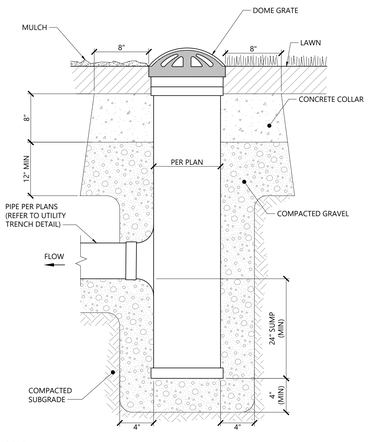
Double Grate Catch Basin (DCB) with Oil/Debris Trap 1/16

N.T.S. Source: VHB LD_103



Underdrain (UD) 1/16

N.T.S. Source: VHB LD_184



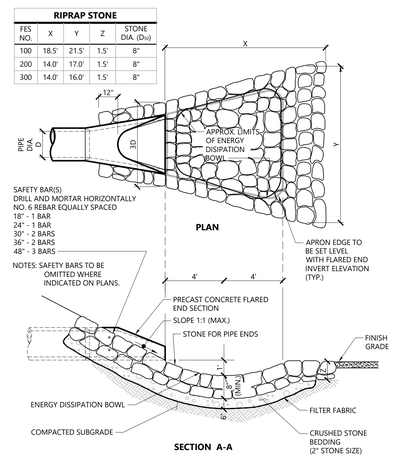
NOTES:

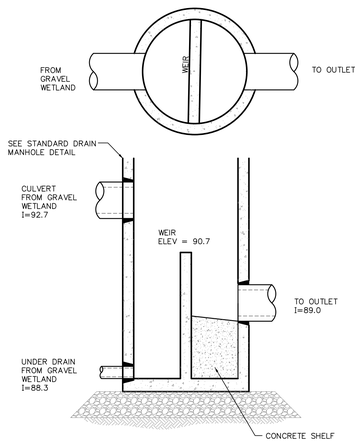
1. LANDSCAPE DRAINS SHALL BE NYLOPLAST 12" DRAIN BASIN, OR APPROVED EQUAL.
2. GRATES SHALL BE NYLOPLAST, 12" DOME GRATE MODEL 1299CGD, OR APPROVED EQUAL AS SHOWN ON PLANS.

Area Drain (AD) 9/17

N.T.S. Source: VHB LD_197

RIPRAP STONE				
FES NO.	X	Y	Z	STONE DIA. (D_{50})
100	18.5'	21.5'	1.5'	8"
200	14.0'	17.0'	1.5'	8"
300	14.0'	16.0'	1.5'	8"

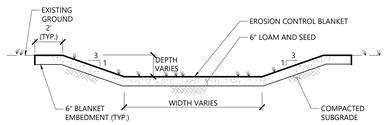

X
12"
PIPE DIA. D
3D
APPROX. LIMITS OF ENERGY DISSIPATION BOWL
Y
SAFETY BAR(S) DRILL AND MORTAR HORIZONTALLY NO. 6 REBAR EQUALLY SPACED
18" - 1 BAR
24" - 1 BAR
30" - 2 BARS
36" - 2 BARS
48" - 3 BARS
PLAN
NOTES: SAFETY BARS TO BE OMITTED WHERE INDICATED ON PLANS.
APRON EDGE TO BE SET LEVEL WITH FLARED END INVERT ELEVATION (TYP.)
4'
4'
PRECAST CONCRETE FLARED END SECTION
SLOPE 1:1 (MAX.)
STONE FOR PIPE ENDS
FINISH GRADE
1'
1'
1'



NOTE: REFER TO PLAN FOR PIPE SIZING AND MATERIAL

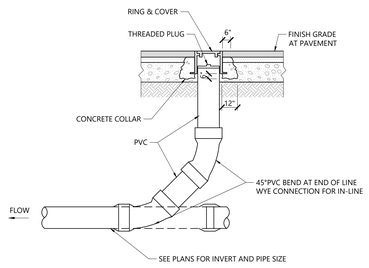
Outlet Control Structure

N.T.S. Source: VHB 6/08 REV



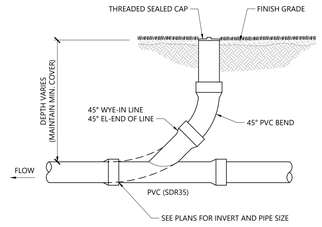
Grassed Swale

N.T.S. Source: VHB 1/16 LD_171



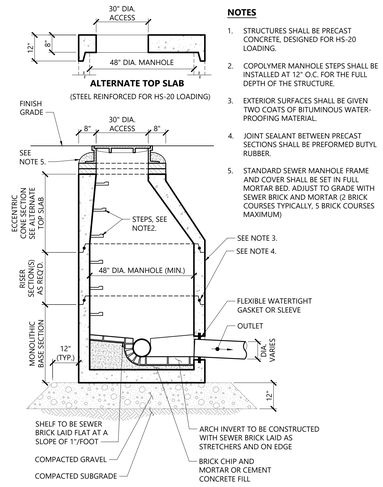
Cleanout - Paved Area

N.T.S. Source: VHB 1/16 LD_303



Cleanout - Landscape Area

N.T.S. Source: VHB 1/16 LD_302

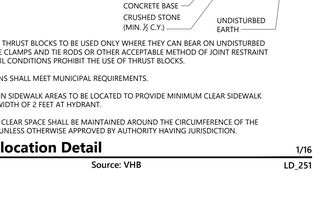


NOTES

1. STRUCTURES SHALL BE PRECAST CONCRETE, DESIGNED FOR HS-20 LOADING.
2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
3. EXTERIOR SURFACES SHALL BE GIVEN TWO COATS OF BITUMINOUS WATER-PROOFING MATERIAL.
4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
5. STANDARD SEWER MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH SEWER BRICK AND MORTAR (2 BRICK COURSES TYPICALLY; 5 BRICK COURSES MAXIMUM)

Sanitary Sewer Manhole (SMH)

N.T.S. Source: VHB 1/16 LD_200



Cleanout

Riser

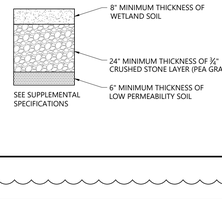
Gravel Wetland Subdrain

N.T.S. Source: VHB 6/08

Notes:

1. SIDE SLOPES SHALL BE 3:1 MAX. 3% MIN.
2. PVC DRAIN PIPES SHALL CONFORM TO ASTM F810. PERFORATIONS, WHEN APPLICABLE, SHALL BE 3/4" HOLES ON 5" CENTERS AND IN THREE ROWS 120° APART.
3. PIPE INVERTS AND STRUCTURE LOCATIONS AS SPECIFIED PER PLAN
4. LOW PERMEABILITY SOIL MATERIAL IS CONTINUOUS FOR THE FULL LENGTH OF THE EMBANKMENT WITH A MINIMUM 6" THICKNESS. PERMEABILITY = 1 x 10-5 cm/s
5. WHERE PIPES PENETRATE THE LOW PERMEABILITY SOIL, PIPE SHALL BE BEDDED IN THE LOW PERMEABILITY MATERIAL.
6. SEE PLANTING PLAN AND DETAILS FOR PLANT TYPES AND SEED MIX.

Section 1:



Gravel Wetland

N.T.S. Source: VHB

NOTES

LIGHT POLE FOUNDATION DESIGN IS SUBJECT TO CHANGE BASED ON FINAL POLE AND FIXTURE SELECTION AND GEOTECHNICAL SITE INVESTIGATION.

Light Pole Foundation Detail (Up to 40' Pole)

N.T.S. Source: VHB 1/16 LD_310

NOTES

1. CONCRETE THRUST BLOCKS TO BE USED ONLY WHERE THEY CAN BEAR ON UNDISTURBED EARTH. USE CLAMPS AND TIE RODS OR OTHER ACCEPTABLE METHOD OF JOINT RESTRAINT WHERE SOIL CONDITIONS PROHIBIT THE USE OF THRUST BLOCKS.
2. DIMENSIONS SHALL MEET MUNICIPAL REQUIREMENTS.
3. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF 2 FEET AT HYDRANT.
4. A 36-INCH CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT UNLESS OTHERWISE APPROVED BY AUTHORITY HAVING JURISDICTION.

Hydrant Relocation Detail

N.T.S. Source: VHB 1/16 LD_251

NOTES

1. CONCRETE THRUST BLOCKS TO BE USED ONLY WHERE THEY CAN BEAR ON UNDISTURBED EARTH AS SHOWN. USE CLAMPS AND TIE RODS OR OTHER ACCEPTABLE METHOD OF JOINT RESTRAINT WHERE SOIL CONDITIONS PROHIBIT THE USE OF THRUST BLOCKS.
2. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF 3 FEET AT HYDRANT.
3. A 36-INCH CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT UNLESS OTHERWISE APPROVED BY AUTHORITY HAVING JURISDICTION.

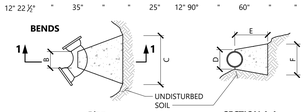
Hydrant Construction

N.T.S. Source: VHB 12/18 LD_250

TABLE OF DIMENSIONS

BENDS	B	C	D	E	F	BENDS	B	C	D	E	F
6° 11 ¼"	8"	15"	12"	24"	12"	6° 45"	8"	30"	12"	24"	14"
6° 22 ½"	"	19"	"	"	13"	6° 90"	"	30"	"	"	27"
8° 11 ¼"	"	20"	"	"	12"	8° 45"	"	30"	"	"	24"
8° 22 ½"	"	22"	"	"	17"	8° 90"	"	38"	"	"	36"
12° 11 ¼"	"	30"	"	"	15"	12° 45"	"	40"	"	"	40"
12° 22 ½"	"	35"	"	"	25"	12° 90"	"	60"	"	"	52"

BENDS

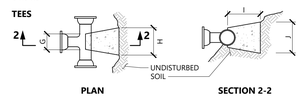


Plan SECTION 1-1

TABLE OF DIMENSIONS

TEES	G	H	I	J	TEES	G	H	I	J
6"X6"X6"	12"	24"	24"	18"	12"X12"X6"	12"	24"	24"	18"
8"X8"X6"	"	"	"	"	12"X12"X8"	"	"	"	24"
8"X8"X8"	"	"	"	24"	12"X12"X12"	"	36"	"	36"

TEES



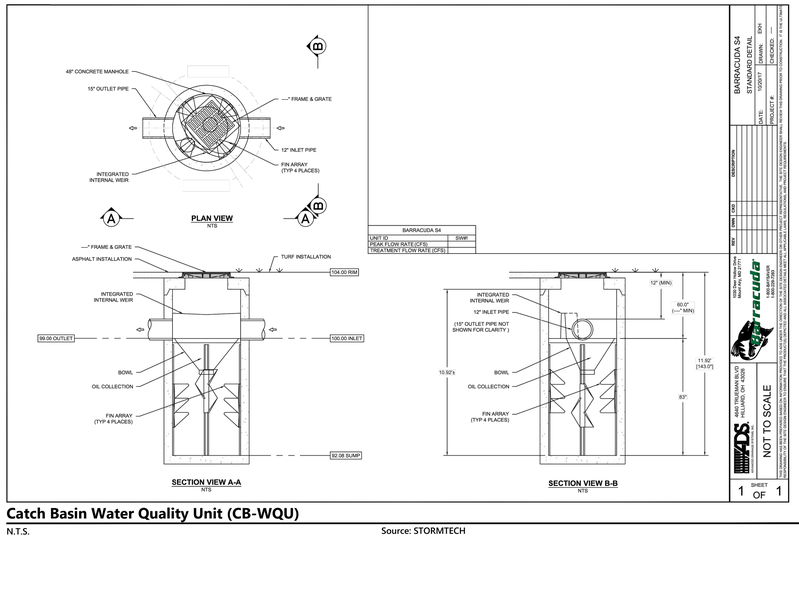
PLAN SECTION 2-2

NOTES

1. PROVIDE BLOCKS FOR TAPPING SLEEVES, DEAD ENDS, GATE VALVES, AND VERTICAL BENDS (SAME SIZE AS REQUIRED FOR TEES). PROVIDE ANCHOR RODS AT VERTICAL BENDS AND GATE VALVES.
2. CONCRETE SHALL NOT BE PLACED AGAINST PIPE BEYOND FITTING.
3. CONCRETE SHALL BE 3,000 PSI-TYPE I.

Concrete Thrust Block

N.T.S. Source: VHB 1/16 LD_260



Catch Basin Water Quality Unit (CB-WQU)

N.T.S. Source: STORMTECH 10/17

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

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Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by — Checked by

Issued for — Date

Local Approvals — Oct. 28, 2020

Not Approved for Construction

Drawing Title

Site Details 3

Drawing Number

C6.03

Sheet 15 of 21

Project Number

14849.00

COMMONWEALTH OF MASSACHUSETTS
BRITTANY GESNER
CIVIL
No. 52656
REGISTERED PROFESSIONAL ENGINEER

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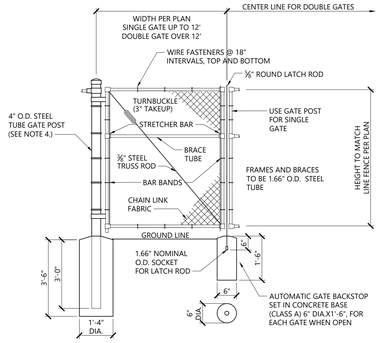
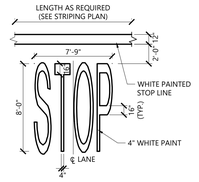


NOTES

1. CHAIN LINK FABRIC FOR GATES TO BE THE SAME AS REQUIRED FOR FENCE.
2. GATE POST BASE-PORTLAND CEMENT CONCRETE (3000 PSI).
3. FENCE FABRIC, POSTS, FRAMEWORKS, AND HARDWARE SHALL BE GALVANIZED STEEL PER SPECIFICATIONS.
4. GATE POSTS TO BE USED ON EACH SIDE OF SINGLE AND DOUBLE GATE OPENINGS.

Chain Link Fence Gate

1/16 | N.T.S. | Source: VHB | LD_482

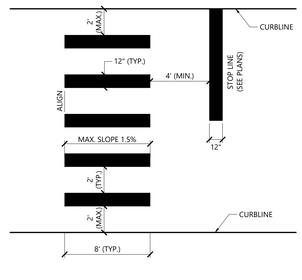


NOTES

1. PAVEMENT MARKINGS TO BE INSTALLED FOR ON SITE WORK IN LOCATIONS SHOWN.

Painted Pavement Markings - On Site

1/16 | N.T.S. | Source: VHB | LD_554

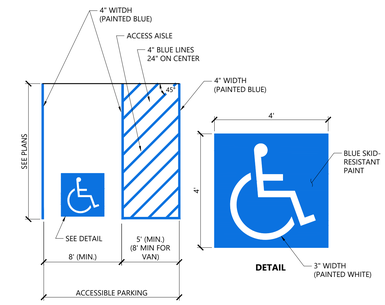


NOTES

1. TWELVE INCH (12") LINES SHALL BE APPLIED IN ONE APPLICATION. NO COMBINATION OF LINES (TWO - 6 INCH LINES) WILL BE ACCEPTED.
2. LONGITUDINAL CROSSWALK LINES TO BE PARALLEL TO CURBLINE.
3. ALL LONGITUDINAL CROSSWALK LINES TO BE THE SAME LENGTH AND PROPERLY ALIGNED.
4. CROSS WALK SIDESLOPE SHALL NOT EXCEED 1.5%.

Crosswalk

1/16 | N.T.S. | Source: VHB | LD_553

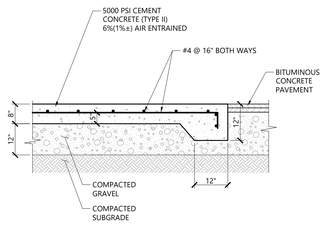


NOTES

1. ALL DIMENSIONS TO EDGES OF 4" PAVEMENT STRIPING.
2. 8' STALL WIDTH REFERS TO 8' CLEAR BETWEEN INSIDE EDGES OF PAVEMENT MARKINGS.
3. ALL SLOPES THROUGHOUT THE ACCESSIBLE PARKING AND AISLE AREAS SHALL NOT EXCEED 1.5%.
4. ACCESS AISLE MEASURED BETWEEN OUTSIDE EDGES OF PAVEMENT MARKINGS.

Accessible Parking Space

1/16 | N.T.S. | Source: VHB | LD_552B

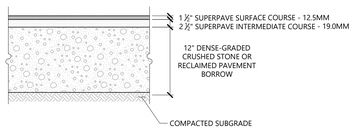


NOTES

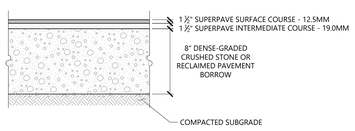
1. SIZE OF PAD TO BE AS INDICATED ON PLANS.
2. CONSTRUCTION JOINTS SHALL BE SPACED NO MORE THAN 30 FEET ON CENTER AND SHALL BE EQUALLY SPACED OVER THE LENGTH AND WIDTH OF THE PAD.

Loading Dock Pad

1/16 | N.T.S. | Source: VHB | LD_711



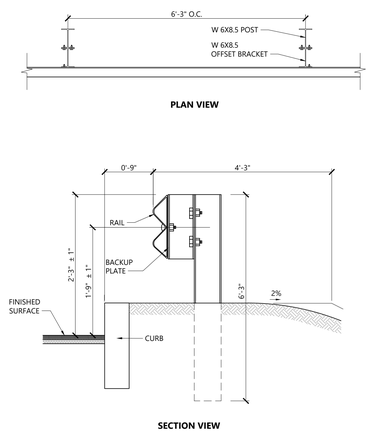
HEAVY DUTY FLEXIBLE PAVEMENT - 15-YEAR DESIGN LIFE



STANDARD DUTY FLEXIBLE PAVEMENT - 15-YEAR DESIGN LIFE

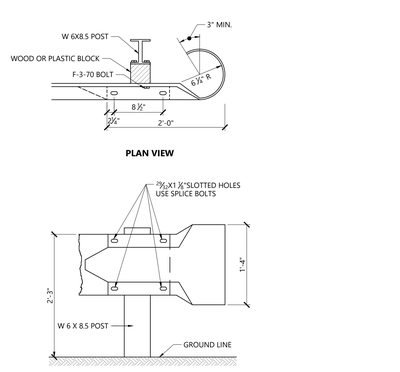
Bituminous Concrete Pavement Sections

11/19 | N.T.S. | Source: VHB | REV | LD_430



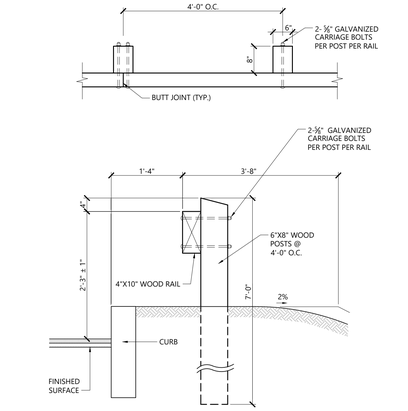
Steel Beam Guardrail with Steel Post

1/16 | N.T.S. | Source: VHB | LD_456



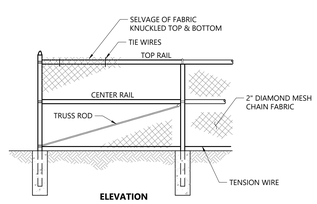
Bollard Mounted Sign

1/16 | N.T.S. | Source: VHB | LD_703



Wood Guardrail

1/16 | N.T.S. | Source: VHB | LD_450

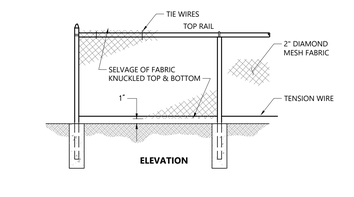


NOTES

1. MATERIALS TO BE SUPPLIED AND INSTALLED IN CONFORMANCE WITH "CHAIN LINK MANUFACTURER'S INSTITUTE" PRODUCT MANUAL.

8' Chain Link Fence

1/16 | N.T.S. | Source: VHB | LD_480

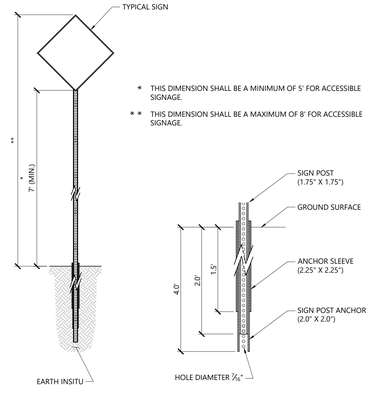


NOTE

1. MATERIALS TO BE SUPPLIED AND INSTALLED IN CONFORMANCE WITH "CHAIN LINK MANUFACTURER'S INSTITUTE" PRODUCT MANUAL.
2. PROVIDE 6" OF CLEARANCE BETWEEN THE BOTTOM OF FABRIC AND FINISH GRADE AROUND BMP IF AN ORDER OF CONDITIONS WAS ISSUED FOR THE PROJECT.

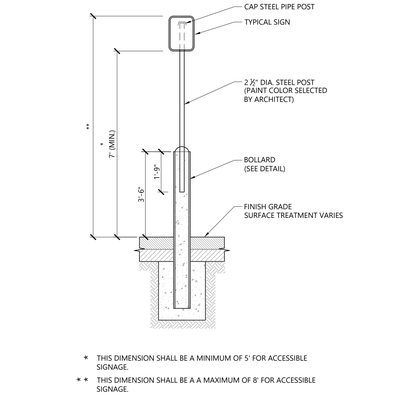
Chain Link Fence up to 6'

1/16 | N.T.S. | Source: VHB | LD_481



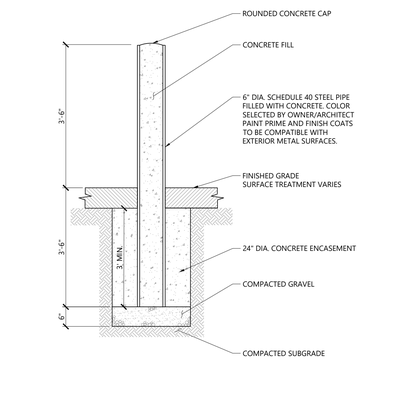
Sign Post - Type 'B'

1/16 | N.T.S. | Source: VHB | LD_702



Bollard Mounted Sign

1/16 | N.T.S. | Source: VHB | LD_703



Bollard

9/17 | N.T.S. | Source: VHB | LD_700

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

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Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Apprvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by | Checked by

Issued for | Date

Local Approvals — Oct. 28, 2020

Not Approved for Construction

Drawing Title: Site Details 4

Drawing Number: C6.04

Sheet 16 of 21

Project Number: 14849.00

COMMONWEALTH OF MASSACHUSETTS — BRITTANY GESNER — CIVIL — No. 52636 — REGISTERED PROFESSIONAL ENGINEER

Saved Tuesday, March 2, 2021 4:49:47 PM BGESNER Plotted Tuesday, March 2, 2021 5:12:08 PM Gesner, Brittany

\\vhb\gbl\proj\Worcester\14849.00 Rhino Lakeville Hospital\cad\ld\Planset\14849.00-ST.dwg

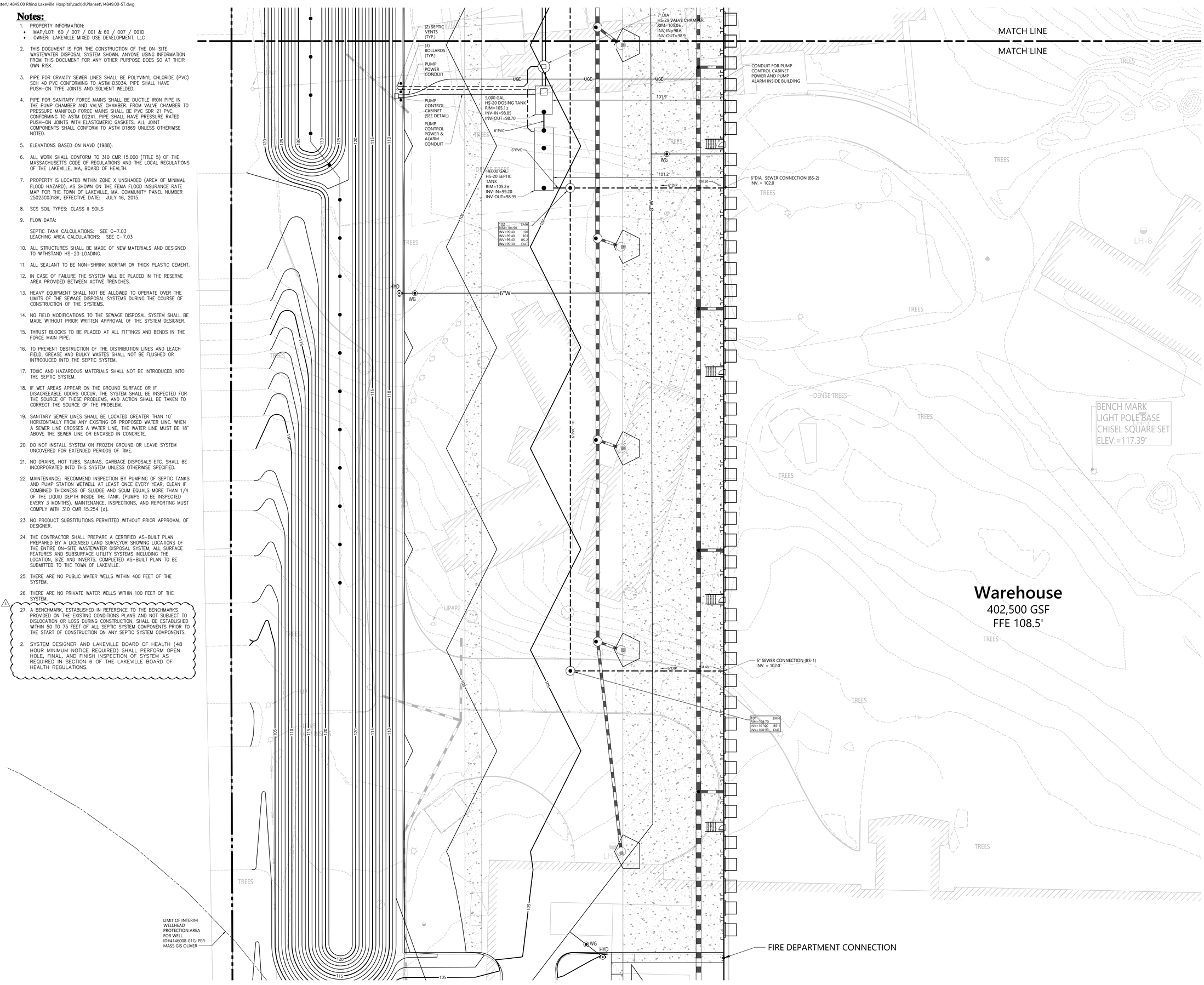
Notes:

1. PROPERTY INFORMATION:
   - MAP/LOT: 60 / 007 / 001 & 60 / 007 / 001D
   - OWNER: LAKEVILLE MIXED USE DEVELOPMENT, LLC
2. THIS DOCUMENT IS FOR THE CONSTRUCTION OF THE ON-SITE WASTEWATER DISPOSAL SYSTEM SHOWN. ANYONE USING INFORMATION FROM THIS DOCUMENT FOR ANY OTHER PURPOSE DOES SO AT THEIR OWN RISK.
3. PIPE FOR GRAVITY SEWER LINES SHALL BE POLYVINYL CHLORIDE (PVC) SCH 40 PVC CONFORMING TO ASTM D3034. PIPE SHALL HAVE PUSH-ON TYPE JOINTS AND SOLVENT WELDED.
4. PIPE FOR SANITARY FORCE MAINS SHALL BE DUCTILE IRON PIPE IN THE PUMP CHAMBER AND VALVE CHAMBER. FROM VALVE CHAMBER TO PRESSURE MANIFOLD FORCE MAINS SHALL BE PVC SDR 21 PVC, CONFORMING TO ASTM D2241. PIPE SHALL HAVE PRESSURE RATED PUSH-ON JOINTS WITH ELASTOMERIC GASKETS. ALL JOINT COMPONENTS SHALL CONFORM TO ASTM D1869 UNLESS OTHERWISE NOTED.
5. ELEVATIONS BASED ON NAVD (1988).
6. ALL WORK SHALL CONFORM TO 310 CMR 15.000 (TITLE 5) OF THE MASSACHUSETTS CODE OF REGULATIONS AND THE LOCAL REGULATIONS OF THE LAKEVILLE, MA, BOARD OF HEALTH.
7. PROPERTY IS LOCATED WITHIN ZONE X UNSHADED (AREA OF MINIMAL FLOOD HAZARD), AS SHOWN ON THE FEMA FLOOD INSURANCE RATE MAP FOR THE TOWN OF LAKEVILLE, MA. COMMUNITY PANEL NUMBER 25023C0318K, EFFECTIVE DATE: JULY 16, 2015.
8. SCS SOIL TYPES: CLASS II SOILS
9. FLOW DATA:

   SEPTIC TANK CALCULATIONS: SEE C-7.03
   LEACHING AREA CALCULATIONS: SEE C-7.03
10. ALL STRUCTURES SHALL BE MADE OF NEW MATERIALS AND DESIGNED TO WITHSTAND HS-20 LOADING.
11. ALL SEALANT TO BE NON-SHRINK MORTAR OR THICK PLASTIC CEMENT.
12. IN CASE OF FAILURE THE SYSTEM WILL BE PLACED IN THE RESERVE AREA PROVIDED BETWEEN ACTIVE TRENCHES.
13. HEAVY EQUIPMENT SHALL NOT BE ALLOWED TO OPERATE OVER THE LIMITS OF THE SEWAGE DISPOSAL SYSTEMS DURING THE COURSE OF CONSTRUCTION OF THE SYSTEMS.
14. NO FIELD MODIFICATIONS TO THE SEWAGE DISPOSAL SYSTEM SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL OF THE SYSTEM DESIGNER.
15. THRUST BLOCKS TO BE PLACED AT ALL FITTINGS AND BENDS IN THE FORCE MAIN PIPE.
16. TO PREVENT OBSTRUCTION OF THE DISTRIBUTION LINES AND LEACH FIELD, GREASE AND BULKY WASTES SHALL NOT BE FLUSHED OR INTRODUCED INTO THE SEPTIC SYSTEM.
17. TOXIC AND HAZARDOUS MATERIALS SHALL NOT BE INTRODUCED INTO THE SEPTIC SYSTEM.
18. IF WET AREAS APPEAR ON THE GROUND SURFACE OR IF DISAGREEABLE ODORS OCCUR, THE SYSTEM SHALL BE INSPECTED FOR THE SOURCE OF THESE PROBLEMS, AND ACTION SHALL BE TAKEN TO CORRECT THE SOURCE OF THE PROBLEM.
19. SANITARY SEWER LINES SHALL BE LOCATED GREATER THAN 10' HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER LINE. WHEN A SEWER LINE CROSSES A WATER LINE, THE WATER LINE MUST BE 18" ABOVE THE SEWER LINE OR ENCASED IN CONCRETE.
20. DO NOT INSTALL SYSTEM ON FROZEN GROUND OR LEAVE SYSTEM UNCOVERED FOR EXTENDED PERIODS OF TIME.
21. NO DRAINS, HOT TUBS, SAUNAS, GARBAGE DISPOSALS ETC. SHALL BE INCORPORATED INTO THIS SYSTEM UNLESS OTHERWISE SPECIFIED.
22. MAINTENANCE: RECOMMEND INSPECTION BY PUMPING OF SEPTIC TANKS AND PUMP STATION WETWELL AT LEAST ONCE EVERY YEAR, CLEAN IF COMBINED THICKNESS OF SLUDGE AND SCUM EQUALS MORE THAN 1/4 OF THE LIQUID DEPTH INSIDE THE TANK. (PUMPS TO BE INSPECTED EVERY 3 MONTHS). MAINTENANCE, INSPECTIONS, AND REPORTING MUST COMPLY WITH 310 CMR 15.254 (d).
23. NO PRODUCT SUBSTITUTIONS PERMITTED WITHOUT PRIOR APPROVAL OF DESIGNER.
24. THE CONTRACTOR SHALL PREPARE A CERTIFIED AS-BUILT PLAN PREPARED BY A LICENSED LAND SURVEYOR SHOWING LOCATIONS OF THE ENTIRE ON-SITE WASTEWATER DISPOSAL SYSTEM, ALL SURFACE FEATURES AND SUBSURFACE UTILITY SYSTEMS INCLUDING THE LOCATION, SIZE AND INVERTS. COMPLETED AS-BUILT PLAN TO BE SUBMITTED TO THE TOWN OF LAKEVILLE.
25. THERE ARE NO PUBLIC WATER WELLS WITHIN 400 FEET OF THE SYSTEM.
26. THERE ARE NO PRIVATE WATER WELLS WITHIN 100 FEET OF THE SYSTEM.

1

27. A BENCHMARK, ESTABLISHED IN REFERENCE TO THE BENCHMARKS PROVIDED ON THE EXISTING CONDITIONS PLANS AND NOT SUBJECT TO DISLOCATION OR LOSS DURING CONSTRUCTION, SHALL BE ESTABLISHED WITHIN 50 TO 75 FEET OF ALL SEPTIC SYSTEM COMPONENTS PRIOR TO THE START OF CONSTRUCTION ON ANY SEPTIC SYSTEM COMPONENTS.
2. SYSTEM DESIGNER AND LAKEVILLE BOARD OF HEALTH (48 HOUR MINIMUM NOTICE REQUIRED) SHALL PERFORM OPEN HOLE, FINAL, AND FINISH INSPECTION OF SYSTEM AS REQUIRED IN SECTION 6 OF THE LAKEVILLE BOARD OF HEALTH REGULATIONS.



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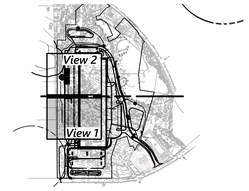

Sheet Key
1" = 800'

0 10 20 40 Feet

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by DJM | Checked by RPM

Issued for: Local Approvals — Date: Oct. 28, 2020

Not Approved for Construction

Drawing Title: **Septic System Plan**

Drawing Number: **C7.01**

Sheet 17 of 21

Project Number: 14849.00

COMMONWEALTH OF MASSACHUSETTS DANIEL J. MEEGAN CIVIL No. 54001 REGISTERED PROFESSIONAL ENGINEER 3/04/2021

Saved Friday, February 26, 2021 2:33:05 PM DMEEGAN Plotted Friday, February 26, 2021 2:45:04 PM Meegan, Daniel

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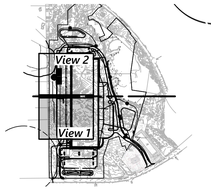

Sheet Key
1" = 800'

LEACHING FIELD VENT (TYP.) (SEE DETAILS)
94.8' TO EXIST. PROP LINE
SP-TP-2 ELEV.=114.3±
SOIL ABSORPTION SYSTEM AREA 'B' (13) 2'W X 62'L X 2'D LEACHING TRENCHES W/ RESERVE BETWEEN TRENCHES (SEE DETAILS)
95.0' TO EXIST. PROP LINE
SP-TP-4 ELEV.=114.9±
252'± TO EXIST PRIVATE WELL (14 RUSH POND RD.)
249'± TO EXIST PRIVATE WELL (16 RUSH POND RD.)
68'
OBSERVATION PORT (TYP.) (SEE DETAILS)
SP-TP-3 ELEV.=112.9±
3" DIA PERFORATED VENT LATERAL (TYP.)
5" DIA PRESSURE MANIFOLD (TYP.)
SOIL ABSORPTION SYSTEM AREA 'A' (13) 2'W X 62'L X 2'D LEACHING TRENCHES W/ RESERVE BETWEEN TRENCHES (SEE DETAILS)
SP-TP-5 ELEV.=112.5±
1-1/2" DIA. PERF. PRESSURE LATERAL (TYP.)
PRESSURE LATERAL CLEANOUT (TYP.)
SP-TP-7 ELEV.=113.0±
4" DIA. VENT MANIFOLD (TYP.)
PRESSURE LATERAL CLEANOUT (TYP.)
SP-TP-6 ELEV.=113.0±
SP-TP-1 ELEV.=110.6±
OBSERVATION PORT (TYP.) (SEE DETAILS)
SEPTIC VENT (TYP.) (SEE DETAILS)
(2) 4" DIA. FORCE MAINS TO SAS AREAS
(2) SEPTIC VENTS (TYP.)
(3) BOLLARDS (TYP.)
PUMP POWER CONDUIT
7' DIA HS-28 VALVE CHAMBER RIM=105.0± INV-IN=98.8 INV-OUT=98.9
CONDUIT FOR PUMP CONTROL CABINET
103 SMH RIM=105.10 INV=101.00 BS-3 INV=100.90 OUT
6" SEWER CONNECTION (BS-3) INV. = 102.0
129.3'
MATCH LINE
MATCH LINE
DENSE TREES
TREES
BF1-104
BF1-105
LH-14
6"W
8"W
6"DIP
6"PVC

Warehouse
402,500 GSF
FFE 108.5'

0 10 20 40 Feet

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by DJM | Checked by RPM

Issued for: **Local Approvals** | Date: **Oct. 28, 2020**

Not Approved for Construction

Drawing Title
Septic System Plan

Drawing Number
C7.02

Sheet 18 of 21

Project Number
14849.00

COMMONWEALTH OF MASSACHUSETTS
DANIEL J. MEEGAN
CIVIL
No. 54061
REGISTERED PROFESSIONAL ENGINEER

Saved Friday, February 26, 2021 2:33:05 PM DMEEGAN Plotted Friday, February 26, 2021 2:45:22 PM Meegan, Daniel

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Septic System Calculations

FLOW

warehouse w/out cafeteria = 402,500 s.f. x (1 person per 1,000 s.f.) = 403 people

15 gpd per person = 15 gpd x 403 = 6,045 gpd

USE A TOTAL DESIGN FLOW = 6,045 gpd

SOIL CLASS

Loamy Sand (SP–TP–3) – Class II Soil (perc rate just under 10 min/in)

Long Term Acceptance Rate (LTAR) = 0.63 gpd/s.f. (Pressure Dosing)

6,045 gallons / 0.63 gpd/s.f. = 9,595 s.f. of leaching surface required

9,595 s.f. / 2 beds = 4,797 sf per bed

LF of Trench per field = 4,797 sf leaching/6 sf/lf = 800 LF Trench per field

Leaching Fields A&B:

Use 13 trenches of 62 ft in length at 8' spacing (center to center).
Total length of trench = 806 ft

LATERALS (Pressure distibution lines in the trenches)

From DEP's "TITLE 5 PRESSURE DISTRIBUTION DESIGN GUIDANCE", Appendix B

Leaching Fields A&B:

62' trench / 2 = 31' laterals (center manifold)

31' / 5 foot perforation spacing = 6 + 1 end perforation per lateral line = 7 = N

Perforation Discharge Rate
q = 11.79 d^2 hd^1/2
d = 1/4" diameter perforations
hd = 2.5' = distal pressure head in feet
q = 1.17 gallons per minute

Lateral Discharge Rate
Q = qN
N = No. of perforations per lateral =7
Q = 8.19 gpm per lateral

MANIFOLD DIAMETER

For a manifold with 13 trenches with 2 laterals per trench spaced at 8 foot spacing at a discharge of 8.19gpm per lateral, diameter = 5" referenced from Appendix C Table 2 of the DEP Guidelines.

Network Pipe volume (1.5" laterals)
= 26 laterals x 31 lf per lateral x [3.14 x(0.75/12)^2] sf x 7.48 gal/cf = 74 gallons

DOSING VOLUME

Dose = 5 time per day per leaching area

Use 2 Leaching Fields for a Total Flow of 6,045 gallons per day

Flow per leaching Field= 6,045 gpd/ 2 = 3,023 gpd

3,023 gpd per Leaching Area / 5 doses per day = 605 gallons per dose per area

Lateral Pipe Volume per leaching field = 74 gallons

Five times network distribution system volume per area = 5 x 74 gallons = 370 gallons

Ten times network distribution system volume per area = 10 x 74 gallons = 740 gallons

Dose volume = 605 gallons This falls between 370 gals. (min.) and 740 gals. (max.) OK

The network pipe manifold is below the invert of the trench lateral pipes.

MINIMUM PUMP DISCHARGE RATE IN GALLONS PER MINUTE

8.19 gpm per lateral x 26 laterals per area = 212.9 gpm

FORCE MAIN Velocity Check
Min. 2 Feet per Sec.
Q=212.9 gpm
Q= (212.2 gpm/7.48 gpm/cf)/60 s/min
Q= 0.474 c.f.s.
A (4" pipe) = PI x (2/12)^2
A= 0.087 sq ft
V = Q/A = 0.474 c.f.s. / 0.087 sq ft
V = 5.45 fps greater than 2 fps OK

SYSTEM FRICTION LOSSES

FITTINGS FOR PUMP STATION, equivalent length of pipe

4" Diameter Pipe & Fittings

Station piping	1 @ 350.0 ft of pipe	= 350.0 ft
90° Elbows	3 @ 10.1 ft of pipe	= 30.3 ft
Through Flow T	1 @ 6.71 ft of pipe	= 6.71 ft
Check Valve	1 @ 33.6 ft of pipe	= 33.6 ft
Gate Valve	1 @ 2.7 ft of pipe	= 2.7 ft
45° Elbows	4 @ 5.4 ft of pipe	= 21.6 ft
	TOTAL	= 444.9 ft

Pump Station Headloss
= pipe length x friction head loss per equivalent length in feet
= Ld [(3.55 x Qm) / (Ch x Dd^2.63)]^1.85
where Ld = pipe length
Qm = flow in gpm = 212.9 gpm
Ch = Hazen Williams friction value = 140
Dd = pipe diameter in inches = 4
= 444.9 x [(3.55 x 212.9) / (140 x 4^2.63)]^1.85
= 444.9 x (0.026)
= 11.56 ft. of head loss in the pipeline in the pump station

NETWORK LOSSES IN LEACH FIELD

N =1.31(hd) hd = distal pressure in ft.
=1.31(2.5)
=3.27 ft

VELOCITY HEAD

(5.45 fps^2) / (2 x 32.2) = 0.08 ft

DYNAMIC HEAD LOSS

	Head Losses (FT)
Pump Station	= 11.56
Leachfield	= 3.27
Velocity	= 0.08
Total	= 14.9

STATIC HEAD LOSS – MINIMUM

	Elevation
Lateral Invert	103.9
Lead Pump "on"	95.7
Elevation head loss	8.2 FT

STATIC HEAD LOSS – MAXIMUM

	Elevation
Lateral Invert	103.9
All Pumps "off" low water	94.8
Elevation head loss	9.1 FT

TOTAL DYNAMIC HEAD (TDH)

Dynamic + Static = Total Head
Min. 14.9 + 8.2 = 23.1 FT TDH
Max 14.9 + 9.1 = 24.0 FT TDH

GROUND WATER MOUND BY HAUTUSH METHOD

K = 60 FT/DAY
Mound over 13,328 SF of S.A.S. area is established to be 0.6 ft above high ground water
See mounding analysis page C9.02.

Tank Sizing Calculations

SEPTIC TANK SIZING

Retention Time Required = 72 hours = 3 days
(48 hours for compartment 1 and 24 hours for compartment 2)
Retention Volume comp 1 = 6,045 gpd x 2 days = 12,090 gallons
Retention Volume comp 2 = 6,045 gpd x 1 days = 6,045 gallons

Minimum Required Tank Size = 18,135 gal

Provided Tank Size = 19,000 gal

DOSING TANK & PUMP CHAMBER SIZING

(pumps will be connected to emergency generator, 1 day storage not required, ~13.3 hour storage provided above working volume)
(no pressure sewer volume: check valve in valve pit)

~13.3 Hour Volume Provided	= 3,358 gal
Dosing Volume	= 605 gal
Total Volume Provided	= 3,963 gal
New dosing pump inside chamber size	= 9' x 16'
Gallons in storage per vertical feet	= 1,077 gal
Provided vertical ft between pumps off and inv in	= 3.68 ft

PIPING SCHEDULE

APPLICATION	PIPE MATERIAL
BUILDING SEWER	DUCTILE IRON PIPE
GRAVITY SEWER	SCH-40 PVC
PUMP STATION PIPING	DUCTILE IRON
VALVE CHAMBER PIPING	DUCTILE IRON
FORCE MAIN & MANIFOLD	SDR-21 PVC
PRESSURE LATERALS	SCH 40 PVC W/ 1/4" DRILLED PERFORATIONS
VENT PIPE	SCH 80 PVC PIPE

PUMP SCHEDULE

PUMPS TO SERVE LEACHING FIELDS "A" & "B"
GOULDS PUMP MODEL: WS3032D3
IMPELLER: 7.00"
2.0 H.P., 3–PHASE, 230 VOLT
1750 RPM WITH A 3" DISCHARGE ON A LIFT OUT RAIL SYSTEM
DESIGN POINT 227 GPM @ 26 FEET OF HEAD

On-site Review

Deep Hole Number: SP–TP–1 Date: 9/15/20 Time: 9:00 A.M. Weather: Partly Cloudy
Location: See Site Plan
Land Use: Vacant / Former Hospital Slope (%): 3–5% Surface Stones: Some Cobbles / Pavement Debris
Vegetation: wooded
Landform: outwash terrace
Existing Ground Elevation: 110.6'(±)

Deep Observation Hole Log - SP-TP-1

Depth from Surface (inches)	Elevation	Soil Horizon/texture	Soil Color (USDA)	Soil Color (Munsell)	Soil Mottling	Other (STRUCTURE, STONES, BOULDERS, CONSISTENCY, % GRAVEL)
0–2	110.6'–110.4'	O, Organics	N/A	N/A		Organics
2–9	110.4'–109.8'	A, Loamy Sand		2.5Y5/3		Granular; Loose; Natural
9–16	109.8'–109.2'	B, Loamy Sand		2.5Y5/4		Granular; Loose; Natural
16–54	109.2'–106.0'	C1, Loamy Sand		2.5Y4/4		Granular; Loose; Natural; sporadic rust coloring not consider indication of seasonal high groundwater
54–138	108.5'–99.0'	C2, Loamy Sand		2.5Y4/4		Massive; V. Friable; Natural;

Parent Material (geologic): Glaciofluvial Deposits Depth to Bedrock: None observed
Depth to Groundwater: None Observed
Estimated Seasonal High Ground Water: el. 88.7'
Soil Evaluator: Daniel Meegan, P.E.(SE13811), Vanasse Hangen Brustlin, Inc. PERC @ 56"
Board of Health Agent: Ed Cullen RATE: = <5.0 Minutes per inch

On-site Review

Deep Hole Number: SP–TP–2 Date: 9/15/20 Time: 10:45 A.M. Weather: Partly Cloudy
Location: See Site Plan
Land Use: Vacant / Former Hospital Slope (%): 0–3% Surface Stones: N/A – Paved
Vegetation: N/A – Paved
Landform: outwash terrace
Existing Ground Elevation: 114.3'(±)

Deep Observation Hole Log - SP-TP-2

Depth from Surface (inches)	Elevation	Soil Horizon/texture	Soil Color (USDA)	Soil Color (Munsell)	Soil Mottling	Other (STRUCTURE, STONES, BOULDERS, CONSISTENCY, % GRAVEL)
0–3	114.3'–114.0'	Pavement	N/A	N/A		Pavement
3–32	110.4'–111.6'	Fill, Med. Sand		10YR5/5		Fill; Granular; Loose; Some Boulders
32–102	111.6'–105.8'	Fill,Loamy Sand		10YR5/3		Fill; Blocky; Friable; Sporadic rust coloring not considered indication of seasonal high groundwater
102–108	105.8'–105.3'	B_s, Sandy Loam		2.5Y6/3		Blocky; Friable; Natural; Some Roots
108–186	105.3'–98.8'	C, Loamy Sand		2.5Y5/4		Granular; Loose; Natural;

Parent Material (geologic): Glaciofluvial Deposits Depth to Bedrock: None observed
Depth to Groundwater: None Observed
Estimated Seasonal High Ground Water: el. 88.7'
Soil Evaluator: Daniel Meegan, P.E.(SE13811), Vanasse Hangen Brustlin, Inc.
Board of Health Agent: Ed Cullen

On-site Review

Deep Hole Number: SP–TP–3 Date: 9/15/20 Time: 12:30 p.M. Weather: Partly Cloudy
Location: See Site Plan
Land Use: Vacant / Former Hospital Slope (%): 0–3% Surface Stones: N/A – Paved
Vegetation: N/A – Paved
Landform: outwash terrace
Existing Ground Elevation: 112.9'(±)

Deep Observation Hole Log - SP-TP-3

Depth from Surface (inches)	Elevation	Soil Horizon/texture	Soil Color (USDA)	Soil Color (Munsell)	Soil Mottling	Other (STRUCTURE, STONES, BOULDERS, CONSISTENCY, % GRAVEL)
0–3	112.9'–112.7'	Pavement	N/A	N/A		Pavement
3–51	112.7'–108.6'	Fill,Loamy Sand		10YR5/4		Fill; Granular; Loose; Some Boulders
51–108	108.6'–103.9'	C1,Loamy Sand		2.5YR5/3		Blocky; Friable; Natural; Dense
108–180	103.9'–97.9'	C2,Loamy Sand		10YR4/6		Blocky; Friable; Natural; Some Roots;

Parent Material (geologic): Glaciofluvial Deposits Depth to Bedrock: None observed
Depth to Groundwater: None Observed
Estimated Seasonal High Ground Water: el. 88.7'
Soil Evaluator: Daniel Meegan, P.E.(SE13811), Vanasse Hangen Brustlin, Inc. PERC @ 58"
Board of Health Agent: Ed Cullen RATE: = 9.7 Minutes per inch

On-site Review

Deep Hole Number: SP–TP–4 Date: 9/15/20 Time: 1:30 P.M. Weather: Partly Cloudy
Location: See Site Plan
Land Use: Vacant / Former Hospital Slope (%): 0–3% Surface Stones: N/A – Paved
Vegetation: N/A – Paved
Landform: outwash terrace
Existing Ground Elevation: 114.9'(±)

Deep Observation Hole Log - SP-TP-4

Depth from Surface (inches)	Elevation	Soil Horizon/texture	Soil Color (USDA)	Soil Color (Munsell)	Soil Mottling	Other (STRUCTURE, STONES, BOULDERS, CONSISTENCY, % GRAVEL)
0–3	114.9'–114.7'	Pavement	N/A	N/A		Pavement
3–66	112.7'–109.4'	Fill,Sandy Loam		10YR4/4		Fill; Granular; Loose
66–72	109.4'–108.9'	A_p,Loamy Sand		10YR3/2		Granular; Loose; Natural; Buried Topsoil Layer
72–84	108.9'–107.9'	B_s,Loamy Sand		10YR4/4		Granular; Loose; Natural; Buried Subsoil Layer
84–90	107.9'–107.4'	C1,Sandy Loam		10YR5/3		Blocky; Friable; Natural; Thin band of dense material
90–180	107.4'–99.9'	C2,Loamy Sand		2.5YR5/3		Granular; Loose; Natural;

Parent Material (geologic): Glaciofluvial Deposits Depth to Bedrock: None observed
Depth to Groundwater: None Observed
Estimated Seasonal High Ground Water: el. 88.7'
Soil Evaluator: Daniel Meegan, P.E.(SE13811), Vanasse Hangen Brustlin, Inc.
Board of Health Agent: Ed Cullen

On-site Review

Deep Hole Number: SP–TP–5 Date: 1/14/21 Time: 9:30 A.M. Weather: Cloudy
Location: See Site Plan
Land Use: Vacant / Former Hospital Slope (%): 0–3% Surface Stones: N/A
Vegetation: Paved/brush (pit on pavement/brush edge)
Landform: outwash terrace
Existing Ground Elevation: 112.5'(±)

Deep Observation Hole Log - SP-TP-5

Depth from Surface (inches)	Elevation	Soil Horizon/texture	Soil Color (USDA)	Soil Color (Munsell)	Soil Mottling	Other (STRUCTURE, STONES, BOULDERS, CONSISTENCY, % GRAVEL)
0–3	112.5'–112.3'	Pave & Organic	N/A	N/A		Pavement
3–84	112.3'–105.5'	Fill,Loamy Sand		10YR5/4		Fill; Granular; Loose; Some Cobbles
84–90	105.5'–105.0'	A_p,Sandy Loam		10YR3/2		Blocky; Friable; Natural; Buried Topsoil Layer
90–102	105.0'–104.0'	B_s,Loamy Sand		10YR4/4		Blocky; Friable; Natural; Buried Subsoil Layer; Isolated pocket of dense Sandy Loam 10YR5/2 one side
102–156	104.0'–99.5'	C1,Loamy Sand		10YR5/3		Blocky; Friable; Natural;
156–216	99.5'–94.5'	C2,Loamy Sand		2.5YR5/4		Granular; Loose; Natural;

Parent Material (geologic): Glaciofluvial Deposits Depth to Bedrock: None observed
Depth to Groundwater: None Observed
Estimated Seasonal High Ground Water: el. 88.7'
Soil Evaluator: Daniel Meegan, P.E.(SE13811), Vanasse Hangen Brustlin, Inc.
Board of Health Agent: Ed Cullen

On-site Review

Deep Hole Number: SP–TP–6 Date: 1/14/21 Time: 10:30 A.M. Weather: Cloudy
Location: See Site Plan
Land Use: Vacant / Former Hospital Slope (%): 10–15% Surface Stones: Some construction Debris and boulders in Area
Vegetation: Brush
Landform: outwash terrace
Existing Ground Elevation: 113.0'(±)

Deep Observation Hole Log - SP-TP-6

Depth from Surface (inches)	Elevation	Soil Horizon/texture	Soil Color (USDA)	Soil Color (Munsell)	Soil Mottling	Other (STRUCTURE, STONES, BOULDERS, CONSISTENCY, % GRAVEL)
0–3	113.0'–112.8'	Organics	N/A	N/A		Organics
3–216	112.8'–95.0'	Fill,Loamy Sand		10YR4/4		Fill; Granular; Loose; Various construction debris including concrete, rock, and wood.

Parent Material (geologic): Glaciofluvial Deposits Depth to Bedrock: None observed
Depth to Groundwater: None Observed
Estimated Seasonal High Ground Water: el. 88.7'
Soil Evaluator: Daniel Meegan, P.E.(SE13811), Vanasse Hangen Brustlin, Inc.
Board of Health Agent: Ed Cullen

On-site Review

Deep Hole Number: SP–TP–7 Date: 1/14/21 Time: 11:30 A.M. Weather: Cloudy
Location: See Site Plan
Land Use: Vacant / Former Hospital Slope (%): 0–3% Surface Stones: N/A
Vegetation: Brush
Landform: outwash terrace
Existing Ground Elevation: 113.0'(±)

Deep Observation Hole Log - SP-TP-7

Depth from Surface (inches)	Elevation	Soil Horizon/texture	Soil Color (USDA)	Soil Color (Munsell)	Soil Mottling	Other (STRUCTURE, STONES, BOULDERS, CONSISTENCY, % GRAVEL)
0–3	113.0'–112.8'	Pavement	N/A	N/A		Pavement
3–156	112.8'–100.0'	Fill,Loamy Sand		10YR4/4		Fill; Granular; Loose; Various construction debris including concrete, rock, and wood.
156–168	100.0'–99.0'	C1,Loamy Sand		10YR5/3		Blocky; Friable; Natural;
168–228	99.0'–94.0'	C2,Loamy Sand		2.5YR5/4		Granular; Loose; Natural;

Parent Material (geologic): Glaciofluvial Deposits Depth to Bedrock: None observed
Depth to Groundwater: None Observed
Estimated Seasonal High Ground Water: el. 88.7'
Soil Evaluator: Daniel Meegan, P.E.(SE13811), Vanasse Hangen Brustlin, Inc.
Board of Health Agent: Ed Cullen

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Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by DJM Checked by RPM

Issued for Local Approvals Date Oct. 28, 2020

Not Approved for Construction

Drawing Title
Septic System Calculations & Soil Logs

Drawing Number
C7.03

Sheet 19 of 21

Project Number
14849.00

COMMONWEALTH OF MASSACHUSETTS DANIEL J. MEEGAN CIVIL No. 54001 REGISTERED PROFESSIONAL ENGINEER

Saved Friday, February 26, 2021 2:37:15 PM DMEEGAN Plotted Friday, February 26, 2021 2:45:43 PM Meegan, Daniel

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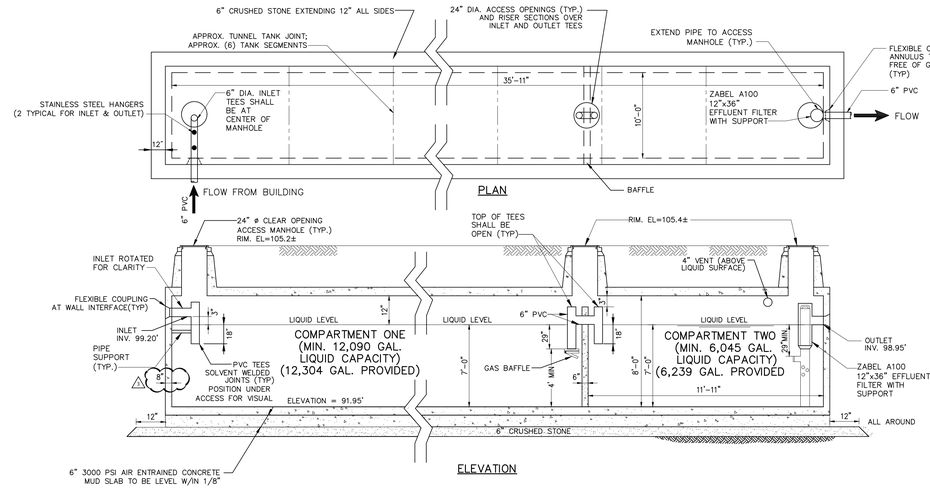
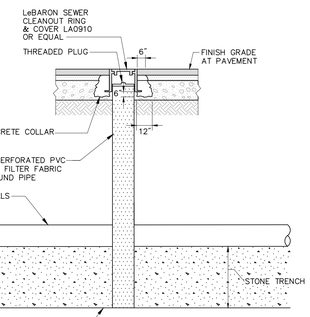


19,000 Gallon Septic Tank

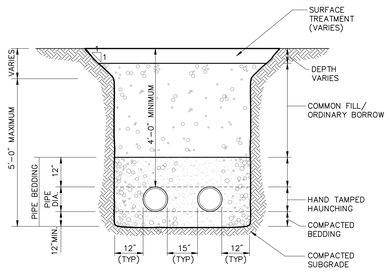
N.T.S.



Inspection Port - Paved Area

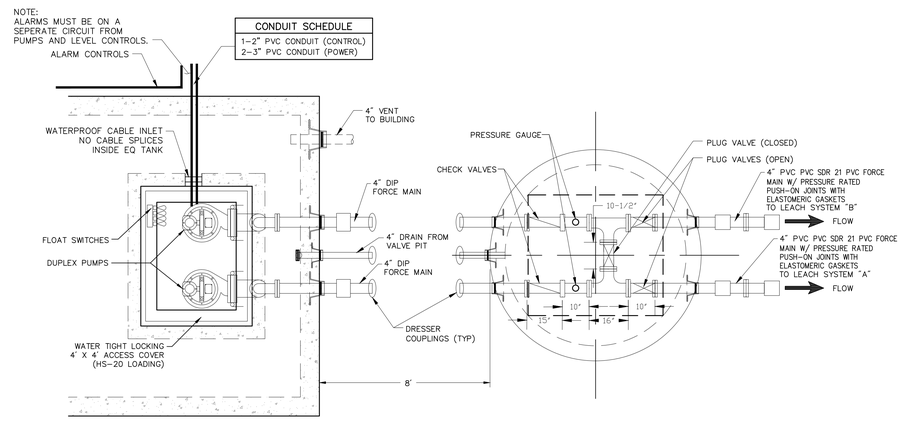
6/03

N.T.S. Source: VHB LD_303



Septic Tank and Dosing Tank Notes:

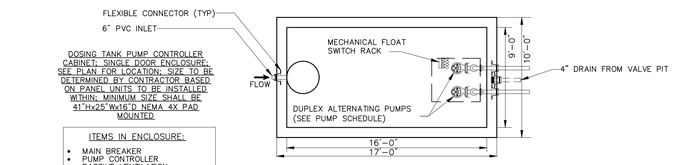
1. ACCESS FOR TANK RISERS SHALL BE EAST JORDAN IRON WORKS FRAMES AND COVERS OR APPROVED EQUAL.
2. CONCRETE MINIMUM STRENGTH – 5,000 P.S.I. @ 28 DAYS
3. STEEL REINFORCEMENT – ASTM A–615, 1" MIN. COVER DESIGN LOADING – AASHTO HS–20
4. STRUCTURE DESIGN SHALL BE SUITABLE TO SUPPORT THE DEPTH OF SOILS INDICATED BY THE DRAWINGS
5. TONGUE AND GROOVE JOINT SEALED WITH BUTYL RESIN AND BOLTED WITH 3/4 " DIA BOLTS
6. AS SUPPLIED BY SHEA CONCRETE OR APPROVED EQUAL
7. CONTRACTOR TO COORDINATE WITH MANUFACTURE TO CONFIRM PRODUCT MATCHES DIMENSIONS AND VOLUMES SHOWN ON THESE PLANS AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PURCHASE OF MATERIALS



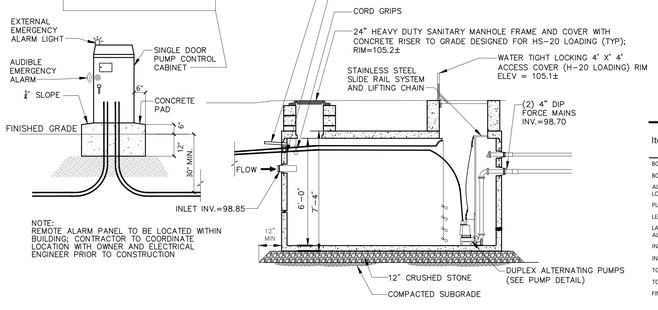
Typical Force Main Trench

3/08

N.T.S. Source: VHB REV



Pump Station Plan



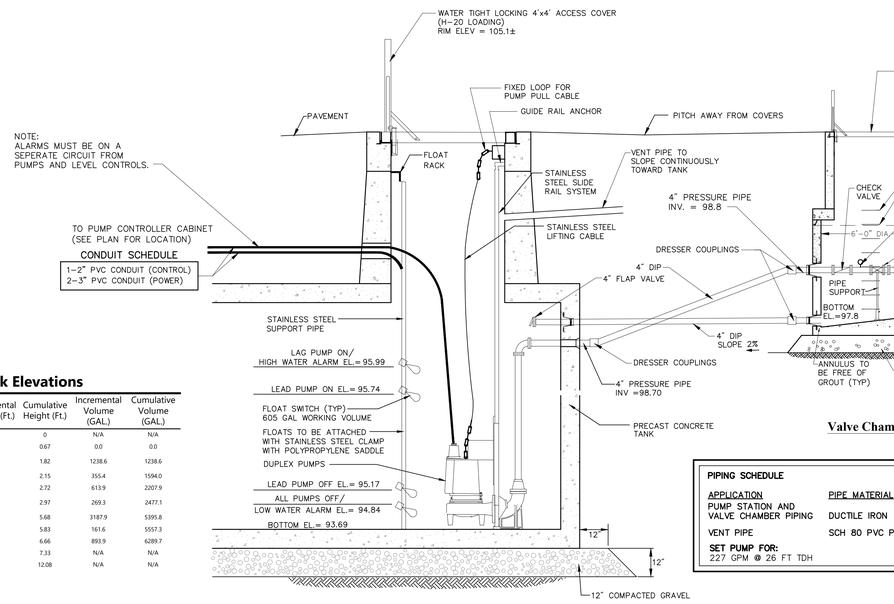
SECTION A-A **SECTION B-B**

5,000 Gallon Dosing Tank

N.T.S. Source: VHB

Dosing Tank Elevations

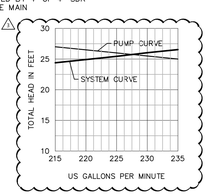
Item	Elevation	Incremental Height (Ft.)	Cumulative Height (Ft.)	Incremental Volume (GAL.)	Cumulative Volume (GAL.)
BOTTOM TANK	93.02	0.00	0	N/A	N/A
BOTTOM INSIDE TANK	93.69	0.67	0.67	0.0	0.0
ALL PUMPS OFF (EMERGENCY) & LOW WATER ALARM	94.84	1.15	1.82	1238.6	1238.6
PUMPS OFF	95.17	0.33	2.15	355.4	1594.0
LEAD PUMP ON	95.74	0.57	2.72	613.9	2207.9
LAG PUMP ON & HIGHWATER ALARM	95.99	0.25	2.97	269.3	2477.1
INVERT OUT	98.70	2.96	5.68	3187.9	5395.8
INVERT IN	98.85	0.15	5.83	161.6	5557.3
TOP INSIDE TANK	99.68	0.83	6.66	893.9	6289.7
TOP TANK	100.35	0.67	7.33	N/A	N/A
FINISHED GRADE (RIM)	105.1±	4.75	12.08	N/A	N/A



Pump Elevation

Valve Chamber

PIPING SCHEDULE	
APPLICATION	PIPE MATERIAL
PUMP STATION AND VALVE CHAMBER PIPING	DUCTILE IRON
VENT PIPE	SCH 80 PVC PIPE
SET PUMP FOR: 227 GPM @ 26 FT TDH	



Pump Notes:

1. LOCATE WIRING AND FLOAT RACK ASSEMBLY TO PROVIDE CLEAR ACCESS TO RAISE AND LOWER PUMPS ON THE RAIL SYSTEM.
2. PUMPS TO ALTERNATE BETWEEN LEACH FIELD "A" AND "B".

Pump Detail (Duplex, Submersible)

6/03

N.T.S. LD_225

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by DJM Checked by RPM

Issued for Date

Local Approvals Oct. 28, 2020

Not Approved for Construction

Drawing Title

Septic Details

Drawing Number

C7.04

Sheet 20 of 21

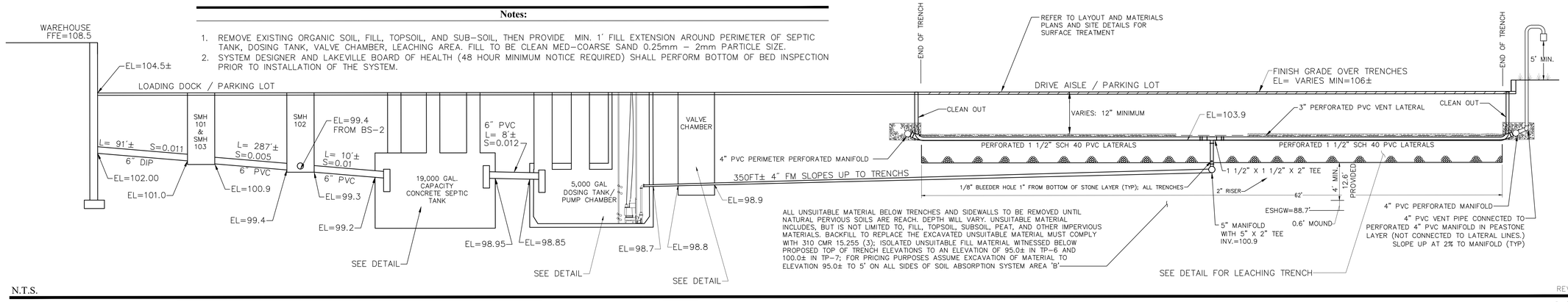
Project Number 14849.00

COMMONWEALTH OF MASSACHUSETTS DANIEL J. MEEGAN CIVIL No. 54001 REGISTERED PROFESSIONAL ENGINEER

Saved Friday, February 26, 2021 2:30:24 PM DMEEGAN Plotted Friday, February 26, 2021 2:46:48 PM Meegan, Daniel

Notes:

1. REMOVE EXISTING ORGANIC SOIL, FILL, TOPSOIL, AND SUB-SOIL, THEN PROVIDE MIN. 1' FILL EXTENSION AROUND PERIMETER OF SEPTIC TANK, DOSING TANK, VALVE CHAMBER, LEACHING AREA. FILL TO BE CLEAN MED-COARSE SAND 0.25mm – 2mm PARTICLE SIZE.
2. SYSTEM DESIGNER AND LAKEVILLE BOARD OF HEALTH (48 HOUR MINIMUM NOTICE REQUIRED) SHALL PERFORM BOTTOM OF BED INSPECTION PRIOR TO INSTALLATION OF THE SYSTEM.

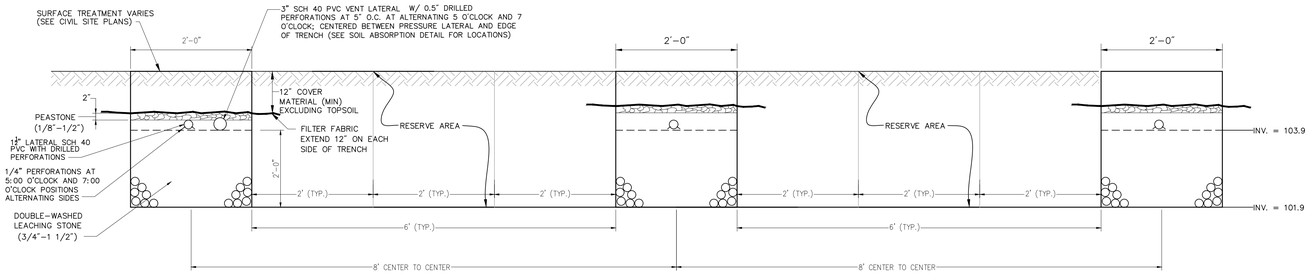


N.T.S. REV 02/07

LD_850_MOD

Disposal System Cross Section (Leaching Trench)

Source: VHB

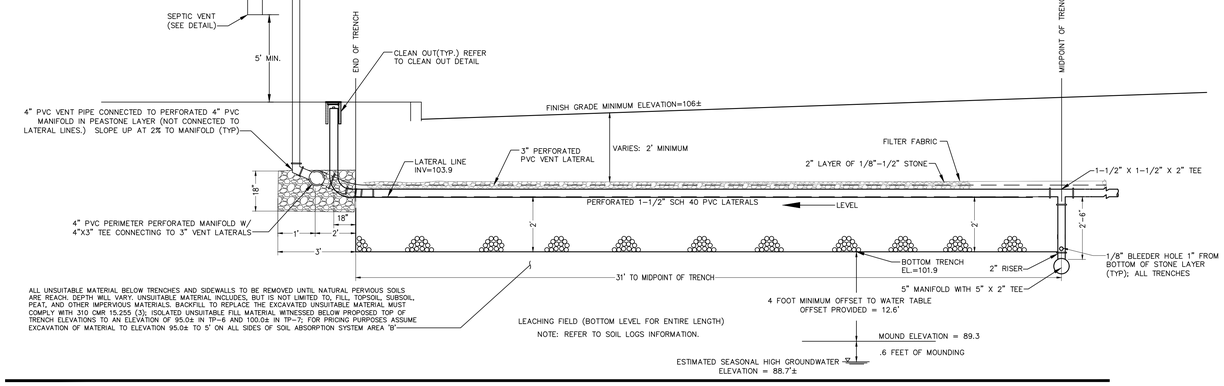


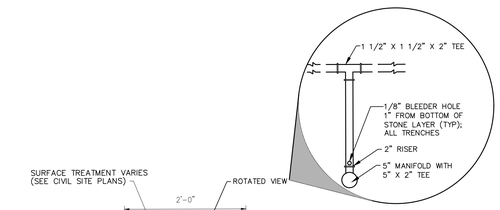
Leaching Trench Typical Cross Section

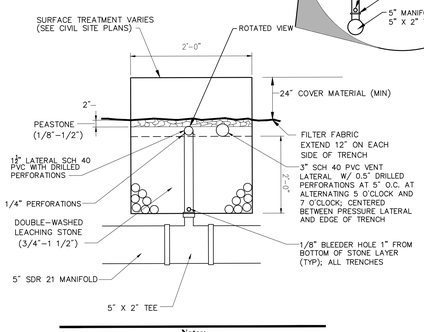
02/07

N.T.S.

Source: VHB

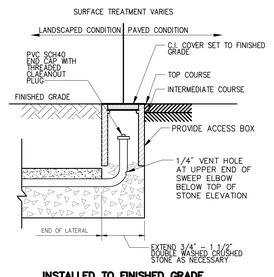






Notes:

1. THE 1/4" PRESSURE LATERAL PERFORATIONS SHALL BE 5'-0" ON CENTER FOR THE LENGTH OF THE LATERAL LINE. SHALL ALTERNATE SIDES WITH EACH FIVE FOOT LOCATION AT THE 5 O'CLOCK AND 7 O'CLOCK POSITIONS.



INSTALLED TO FINISHED GRADE (SEE SOIL ABSORPTION SYSTEM DETAILS FOR LOCATIONS)

Leaching Trench Section

08/06

N.T.S. Source: VHB REV LD_844

Cleanout

6/03

N.T.S. Source: VHB REV LD_303

MOUNDING ANALYSIS CALCULATIONS:

METHOD: HANTUSH'S METHOD PER MA GROUNDWATER DISCHARGE GUIDANCE

PARAMETERS:
1. FLOW RATE FOR ANALYSIS = 80% DESIGN FLOW = 0.8 * 6,045 GPD = 4,836 GPD
2. OVERALL LENGTH OF APPLICATION AREA = 211 FT
3. OVERALL WIDTH OF APPLICATION AREA = 62 FT
4. TOTAL AREA OF APPLICATION AREA = (62 FT * 211 FT) = 13,082 SF
5. APPLICATION RATE = 4,836 GAL * (1 CF / 7.48 GAL) / 13,082 SF = 0.049 FT/DAY
6. DURATION INFILTRATION PERIOD = 90 DAYS
7. SPECIFIC YIELD OF SOIL = 0.16 (TILL, PREDOMINANTLY SAND)
8. HORIZONTAL HYDRAULIC CONDUCTIVITY = 60 FT/DAY
9. INITIAL THICKNESS OF SATURATED ZONE = 7.8 FT

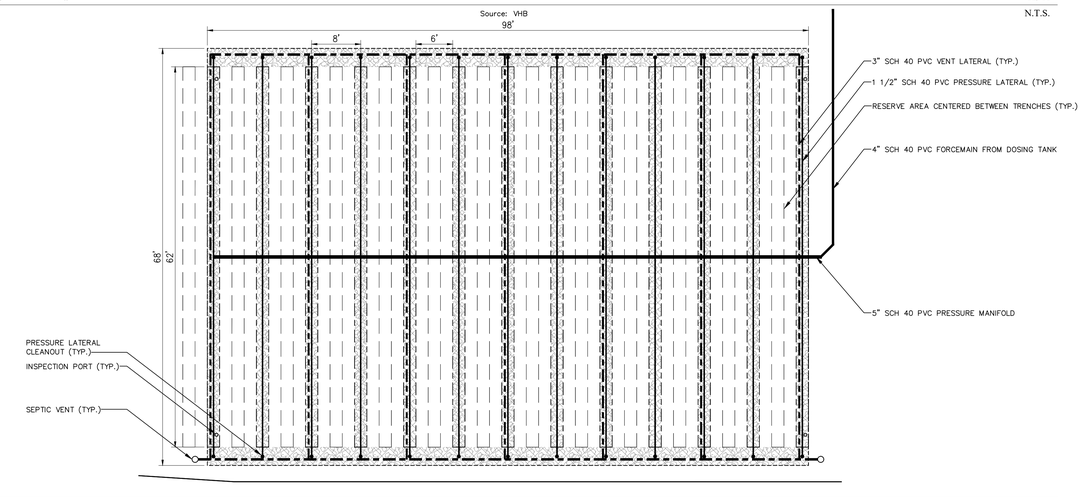
RESULTS:
- MAXIMUM GROUNDWATER MOUNDING BENEATH BED = 0.6 FT

Leaching Trench Typical Section

08/06

N.T.S.

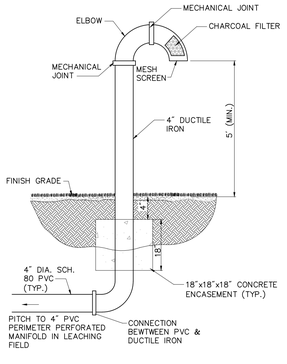
Source: VHB



Leaching Field/ Sewer Vent

11/02

N.T.S. Source: VHB LD_872



Soil Absorption System Plan Detail

09/20

Source: VHB N.T.S.

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120 Front Street
Suite 500
Worcester, MA 01608
508.752.1001

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	Response to Comments Letter #1	2020-12-10	
2	Local Review Coordination	2021-01-28	
3	Response to Comments	2021-03-02	

Designed by: DJM | Checked by: RJM

Issued for: Local Approvals | Date: Oct. 28, 2020

Not Approved for Construction

Drawing Title: Septic Details

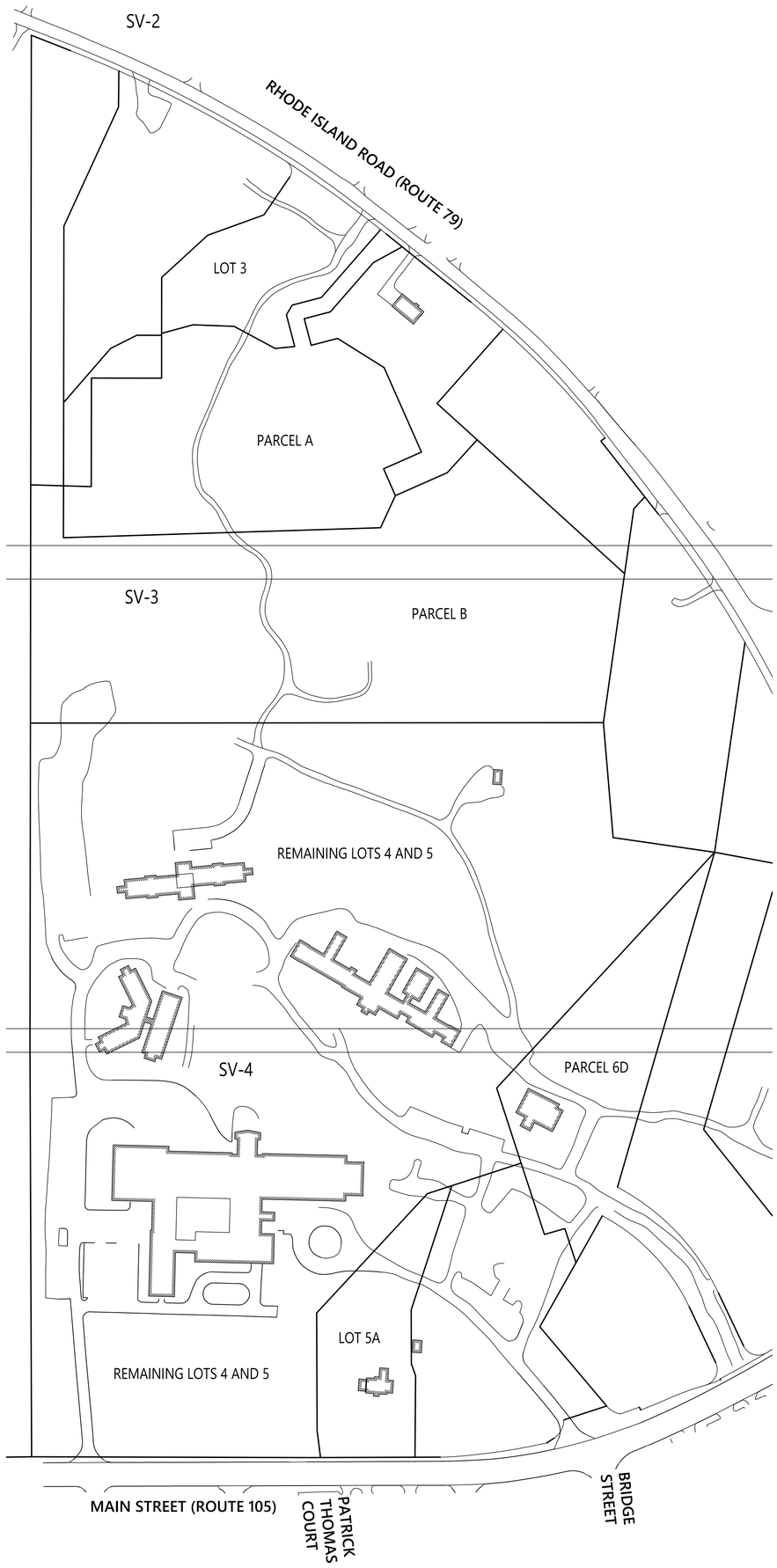
Drawing Number: C7.05

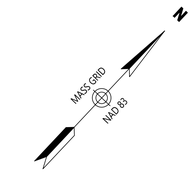
Sheet 21 of 21

Project Number: 14849.00

Saved Friday, February 26, 2021 2:30:24 PM DMEEGAN Plotted Friday, February 26, 2021 2:45:59 PM Meegan, Daniel

\\vhb\gbl\proj\Worcester\14849.00 Rhino Lakeville Hospital\cad\sr\planset\14849.00-EXIST-signed-DO NOT USE.dwg





100 0 100 200
SCALE IN FEET

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Watertown, MA 02471
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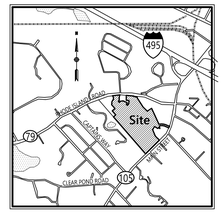

Locus
(NOT TO SCALE)

Record Owners

LOT 1
LAKEVILLE MIXED USE
DEVELOPMENT LLC
38 RHODE ISLAND ROAD
LAKEVILLE, MASS.
ASSESSORS PARCEL 060-007-001G
BK. 49008, PAGE 84

LOT 3
LAKEVILLE MIXED USE
DEVELOPMENT LLC
42 RHODE ISLAND ROAD
LAKEVILLE, MASS.
ASSESSORS PARCEL 060-007-001I
BK. 49008, PAGE 84

PARCEL A
LAKEVILLE MIXED USE
DEVELOPMENT LLC
REAR RHODE ISLAND ROAD
LAKEVILLE, MASS.
ASSESSORS PARCEL 060-007-001J
BK. 49008, PAGE 84

PARCEL B
LAKEVILLE MIXED USE
DEVELOPMENT LLC
REAR RHODE ISLAND ROAD
LAKEVILLE, MASS.
ASSESSORS PARCEL 060-007-001D
BK. 49008, PAGE 84

REMAINING LOTS 4 & 5, LOT 5A & PARCEL 6D
LAKEVILLE MIXED USE
DEVELOPMENT LLC
REAR RHODE ISLAND ROAD
LAKEVILLE, MASS.
ASSESSORS PARCEL 060-007-001J
BK. 49008, PAGE 84

Plan References

REGISTRY OF DEEDS
PLAN BOOK 4 PLAN 106
PLAN BOOK 17 PLAN 675
PLAN BOOK 47 PLAN 48
PLAN BOOK 53 PLAN 729
PLAN BOOK 55 PLAN 135
PLAN BOOK 60 PLAN 739
PLAN BOOK 61 PLAN 918
PLAN BOOK 61 PLAN 970
PLAN BOOK 62 PLAN 232
PLAN BOOK 63 PLAN 1016
PLAN BOOK 64 PLAN 52
PLAN BOOK 64 PLAN 550

STATE HIGHWAY LAYOUT
PLAN BOOK 11D PLANS 247-249
PLAN BOOK 15 PLAN 45
PLAN BOOK 15 PLANS 63-65

COUNTY LAYOUT
PLAN BOOK K PAGES 8-10

General Notes

1) THE PROPERTY LINES SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. IN AUGUST, 2020 AND FROM DEEDS AND PLANS OF RECORD.
2) THE EXISTING CONDITIONS SHOWN ON THIS PLAN WERE DEVELOPED FROM A COMBINED EFFORT OF AERIAL PHOTOGRAMMETRIC MAPPING BY EASTERN TOPOGRAPHICS, INC., BASED ON AERIAL PHOTOGRAPHS TAKEN ON APRIL 17, 2020, AND AUGMENTED BY AN ON-THE-GROUND SURVEY PERFORMED BY VHB DURING AUGUST, 2020.
3) THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD OBSERVATIONS AND INFORMATION OF RECORD. THEY ARE NOT WARRANTED TO BE EXACTLY LOCATED NOR IS IT WARRANTED THAT ALL UNDERGROUND UTILITIES OR OTHER STRUCTURES ARE SHOWN ON THIS PLAN.
4) HORIZONTAL DATUM IS BASED ON MASS. GRID SYSTEM, NAD 1983. ELEVATIONS SHOWN ON THIS PLAN REFER TO NAVD OF 1988.
5) THE LOT LIES ENTIRELY WITHIN ZONE X (UNSHADED) (AREAS TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR PLYMOUTH COUNTY, MASSACHUSETTS, MAP NUMBERS 25023C0431K & 25023C0318K, EFFECTIVE DATE JULY 16, 2015.
6) THE LOT LIES WITHIN THE RESIDENTIAL DISTRICT AND BUSINESS DISTRICT WITH A MIXED USE DEVELOPMENT DISTRICT AS SHOWN ON THE ONLINE "TOWN OF LAKEVILLE, ZONING MAP", DATED 2018. DIMENSIONAL REQUIREMENTS FOR A RESIDENTIAL AND BUSINESS DISTRICT AT THE TIME OF THIS SURVEY ARE:

	RESIDENTIAL	BUSINESS
MINIMUM LOT AREA	77,000 S.F.	77,000 S.F.
MINIMUM FRONTAGE	175 FEET	175 FEET
MINIMUM FRONT YARD SETBACK	40 FEET	40 FEET
MINIMUM SIDE YARD SETBACK	20 FEET	40 FEET
MINIMUM REAR YARD SETBACK	20 FEET	40 FEET
MAXIMUM BUILDING HEIGHT	35 FEET	35 FEET
MAXIMUM BUILDING STORIES	2.5 STORIES	3 STORIES
MAXIMUM % OF LAND COVERED	25%	50%
MAXIMUM HEIGHT OF TOWERS	35 FEET	35 FEET

SEE SECTION 7.5 OF ZONING CODE FOR MIXED USE DEVELOPMENT DISTRICT REGULATIONS.

7) THE WETLANDS SHOWN ON THIS PLAN WERE FLAGGED BY VHB ENVIRONMENTAL DEPARTMENT AND FIELD SURVEYED BY VHB BETWEEN APRIL & DECEMBER, 2020.
8) THE TREE SYMBOL OUTLINE SHOWN ON THIS PLAN DOES NOT REPRESENT THE ACTUAL TREE CANOPY.

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

_____

_____

_____

_____

_____

_____

Lakeville Hospital

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	WETLANDS UPDATE	12/7/20	CDKR

Designed by | Checked by

Issued for | Date

August 25, 2020

Drawing Title
Existing Conditions Plan of Land (KEY SHEET)

Drawing Number
Sv-1

Sheet 1 of 4

Project Number
14849.00

COMMONWEALTH OF MASSACHUSETTS
RUSSELL J. BOUSQUET
NO. 35389
REGISTERED PROFESSIONAL LAND SURVEYOR

1/27/2021

Saved Wednesday, January 27, 2021 11:01:02 AM RBOUSQUET Plotted Wednesday, January 27, 2021 11:03:13 AM Bousquet, Russell

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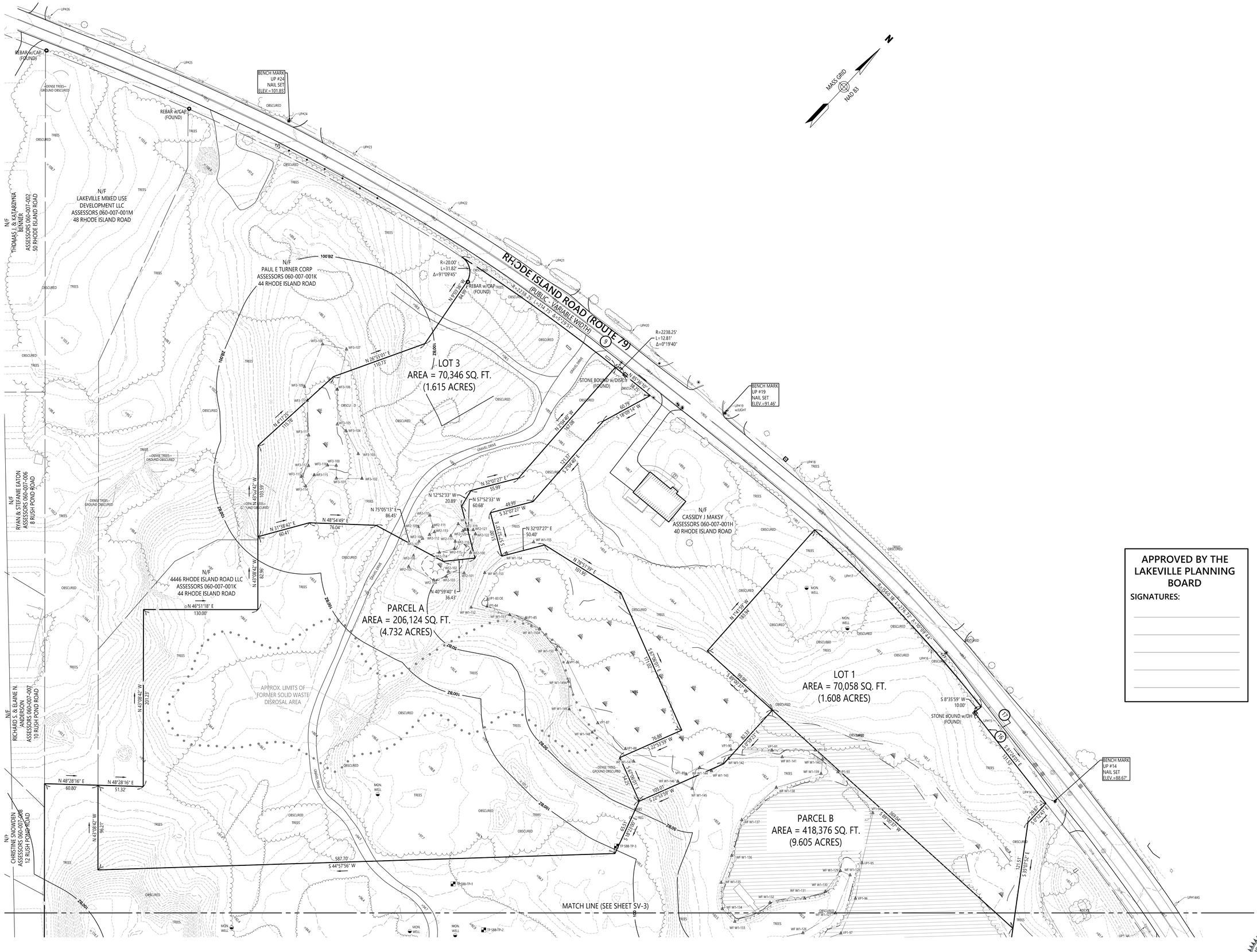

Legend

- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- MANHOLE
- HH HAND HOLE
- WATER GATE
- FIRE HYDRANT
- GAS GATE
- BOLLARD w/LIGHT
- STREET SIGN
- LIGHT POLE
- UTILITY POLE
- GUY POLE
- GUY WIRE
- MONITORING WELL
- FLOOD LIGHT
- W WELL
- MARSH
- F.F.E.=45.27' FINISHED FLOOR ELEVATION
- CNO COULD NOT OPEN
- NPV NO PIPES VISIBLE
- DYL DOUBLE YELLOW LINE
- DWL DASHED WHITE LINE
- SYL SINGLE YELLOW LINE
- LSA LANDSCAPED AREA
- EOP EDGE OF PAVEMENT
- CC CONCRETE CURB
- VGC VERTICAL GRANITE CURB
- SGE SLOPED GRANITE EDGE
- BB BITUMINOUS BERM
- BC BITUMINOUS CURB
- GUARD RAIL
- CHAIN LINK FENCE
- DRAINAGE LINE
- SEWER LINE
- OHW OVERHEAD WIRE
- E UNDERGROUND ELECTRIC
- T TELEPHONE LINE
- G GAS LINE
- W WATER LINE
- STONE WALL
- TREE LINE
- 100'BZ 100-FT BUFFER ZONE
- 100'RA 100-FT RIVER FRONT AREA
- 200'RA 200-FT RIVER FRONT AREA
- ALT-100 LIMIT MEAN ANNUAL HIGH WATER
- BF-100 LIMIT OF BANK
- WF1-100 VEGETATED WETLAND BOUNDARY

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

_____

_____

_____

_____

_____

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Watertown, MA 02471
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Lakeville Hospital

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	WETLANDS UPDATE	12/7/20	CDKR

Designed by | Checked by

Issued for

Date: August 25, 2020

Drawing Title
Existing Conditions Plan of Land

Drawing Number
Sv-2

Sheet 2 of 4

Project Number
14849.00

COMMONWEALTH OF MASSACHUSETTS
RUSSELL J. BOUSQUET
NO. 35389
REGISTERED PROFESSIONAL LAND SURVEYOR
1/27/2021

Saved Wednesday, January 27, 2021 11:01:02 AM RBOUSQUET Plotted Wednesday, January 27, 2021 11:04:04 AM Bousquet, Russell

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MASS GRID
NAD 83

MATCH LINE (SEE SHEET SV-2)

MATCH LINE (SEE SHEET SV-4)

PARCEL B
AREA = 418,376 SQ. FT.
(9.605 ACRES)

REMAINING LOTS 4 AND 5
AREA = 1,176,469 SQ. FT.
(27.008 ACRES)

PARCEL 6D
AREA = 137,541 SQ. FT.
(3.158 ACRES)

N/F
TOWN OF LAKEVILLE
ASSESSORS 060-007-009
RUSH POND ROAD

N/F
HEATHER RENEE STELIGA
ASSESSORS 060-007-010
14 RUSH POND ROAD

N/F
NORMAN F. ROSSIO
ASSESSORS 060-007-011
16 RUSH POND ROAD

N/F
JAMES A. CORLEY &
PAMELA A. CORLEY
ASSESSORS 060-007-012
18 RUSH POND ROAD

N/F
SUSAN M. AUKSTIKALNIS
ASSESSORS 060-007-013
20 RUSH POND ROAD

N/F
TOWN OF LAKEVILLE
ASSESSORS 060-007-001E
20 RHODE ISLAND ROAD

N/F
DBT INVESTMENTS LLC
ASSESSORS 060-007-001B
15 MAIN STREET

RESIDENTIAL DISTRICT
BUSINESS DISTRICT

FORMER HUMAN SERVICES BLD.
7 STORY
BRICK BUILDING

8 STORY

7 STORY
BRICK BUILDING

1 STORY
BRICK BUILDING
FORMER MAINTENANCE BLD.

1 STORY
BUILDING

3 STORY
BRICK BUILDING

2 STORY
BRICK BUILDING
FORMER DORMITORY

BENCH MARK
LIGHT POLE BASE
CHISEL SQUARE SET
ELEV.=117.39'

N 46°44'10" E
1,061.51'

N 48°09'42" W
441.43'

N 49°09'42" W
595.58'

S 48°09'42" E
213.68'

S 55°07'52" E
278.88'

N 55°01'33" E
189.82'

S 55°07'52" E
154.84'

S 27°05'30" E
646.02'

SCALE IN FEET
40 0 40 80

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

Legend

- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- MANHOLE
- HH HAND HOLE
- WATER GATE
- FIRE HYDRANT
- GAS GATE
- BOLLARD w/LIGHT
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- WF1-100 VEGETATED WETLAND BOUNDARY

Lakeville Hospital

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	WETLANDS UPDATE	12/7/20	CDKR

Designed by | Checked by

Issued for | Date

August 25, 2020

Drawing Title
Existing Conditions Plan of Land

Drawing Number
Sv-3

Sheet 3 of 4

Project Number
14849.00

COMMONWEALTH OF MASSACHUSETTS
RUSSELL J. BOUSQUET
NO. 35389
REGISTERED PROFESSIONAL ENGINEER
1/27/2021

Saved Wednesday, January 27, 2021 11:01:02 AM RBOUSQUET Plotted Wednesday, January 27, 2021 11:04:44 AM Bousquet, Russell

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MASS GRID
NAD 83

MATCH LINE (SEE SHEET SV-3)

RESIDENTIAL DISTRICT
BUSINESS DISTRICT

PARCEL 6D
AREA = 137,541 SQ. FT.
(3.158 ACRES)

REMAINING LOTS 4 AND 5
AREA = 1,176,469, SQ. FT.
(27.008 ACRES)

LOT 5A
AREA = 71,777 SQ. FT.
(1.648 ACRES)

MAIN STREET (ROUTE 105)
(PUBLIC - VARIABLE WIDTH)

PATRICK THOMAS COURT

BRIDGE STREET

1 STORY BRICK BUILDING (COLLAPSED)

1 STORY BRICK BUILDING

2 STORY BRICK BUILDING

3 STORY

2 STORY

4 STORY BRICK BUILDING
FORMER MAIN HOSPITAL

1 STORY WOOD BUILDING

2 STORY WOOD BUILDING

SHED
-WOOD BUILDING

N/F
DBT INVESTMENTS LLC
ASSESSORS 060-007-001B
15 MAIN STREET

N/F
LAKEVILLE MIXED USE
DEVELOPMENT LLC
ASSESSORS 060-007-001
43 MAIN STREET

N/F
DAVID F. JR. & ANNE MARIE
RUSSELL
ASSESSORS 060-007-001C
17 MAIN STREET

N/F
ASSESSORS 060-007-056
45 MAIN STREET

BENCH MARK
FIRE HYDRANT
CUT B.O.M.O
ELEV = 101.87'

BENCH MARK
UP #23
NAIL SET
ELEV = 92.08'

BENCH MARK
FIRE HYDRANT
X-CUT SET
B.O.M.O.
ELEV = 97.84'

BENCH MARK
FIRE HYDRANT
X-CUT FOUND B.O.M.O.
ELEV = 106.08'

BENCH MARK
UP #15
NAIL SET
ELEV = 102.43

REBAR
w/CAP
(FOUND)

STONE BOUND
w/EPLP
(FOUND)

STONE BOUND
w/DRILL HOLE
(FOUND)

N 43°25'52" W
434.70'

N 43°25'19" W
328.79'

N 43°25'17" W
218.00'

S 43°25'08" E
100.00'

S 62°48'25" E
23.47'

S 46°06'42" W
2.09'

S 46°57'13" W
512.93'

S 46°34'43" W
175.10'

N 50°27'25" W
50.00'

S 46°34'43" W
20.25'

N 28°44'39" E
47.61'

S 28°44'59" W
134.95'

N 61°15'19" W
39.49'

S 30°46'06" W
99.99'

N 61°15'19" W
242.09'

S 25°10'44" E
301.67'

N 07°20'39" W
301.67'

S 12°10'22" E
89.86'

N 68°34'08" W
114.61'

S 68°34'08" E
114.61'

S 42°48'25" E
15.03'

S 69°41'02" E
1.88'

R=30.00'
L=49.73'
Δ=94°58'08"

R=30.00'
L=51.05'
Δ=97°29'52"

R=394.00'
L=28.63'
Δ=4°09'47"

R=430.00' L=275.25' Δ=36°40'35"

R=330.00' L=238.84' Δ=41°28'47"

R=2
L=98.
Δ=2°(

SCALE IN FEET
40 0 40 80

Legend

- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- MANHOLE
- HH HAND HOLE
- WATER GATE
- FIRE HYDRANT
- GAS GATE
- BOLLARD w/LIGHT
- STREET SIGN
- LIGHT POLE
- UTILITY POLE
- GUY POLE
- GUY WIRE
- MONITORING WELL
- FLOOD LIGHT
- W WELL
- MARSH
- F.F.E.=45.27' FINISHED FLOOR ELEVATION
- CNO COULD NOT OPEN
- NPV NO PIPES VISIBLE
- DYL DOUBLE YELLOW LINE
- DWL DASHED WHITE LINE
- SYL SINGLE YELLOW LINE
- LSA LANDSCAPED AREA
- EOP EDGE OF PAVEMENT
- CC CONCRETE CURB
- VGC VERTICAL GRANITE CURB
- SGE SLOPED GRANITE EDGE
- BB BITUMINOUS BERM
- BC BITUMINOUS CURB
- GUARD RAIL
- CHAIN LINK FENCE
- DRAINAGE LINE
- SEWER LINE
- OHW OVERHEAD WIRE
- E UNDERGROUND ELECTRIC
- T TELEPHONE LINE
- G GAS LINE
- W WATER LINE
- STONE WALL
- TREE LINE
- 100'BZ 100-FT BUFFER ZONE
- 100'RA 100-FT RIVER FRONT AREA
- 200'RA 200-FT RIVER FRONT AREA
- ATT=100 LIMIT MEAN ANNUAL HIGH WATER
- BF=100 LIMIT OF BANK
- WF=100 VEGETATED WETLAND BOUNDARY

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

_____

_____

_____

_____

_____

Lakeville Hospital

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.
1	WETLANDS UPDATE	12/1/20	CDNR

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Date

August 25, 2020

Drawing Title

Existing Conditions Plan of Land

Drawing Number

Sv-4

Sheet 4 of 4

Project Number

14849.00

COMMONWEALTH OF MASSACHUSETTS
RUSSELL J. BOUSQUET
NO. 35389
REGISTERED PROFESSIONAL ENGINEER

1/27/2021

Saved Wednesday, January 27, 2021 11:01:02 AM RBOUSQUET Plotted Wednesday, January 27, 2021 11:05:20 AM Bousquet, Russell

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43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Apprvd.

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Drawing Title
Rendered Landscape Plan

Drawing Number
L1.00

Sheet 1 of 6

Project Number
14849.00

Saved Wednesday, October 28, 2020 11:33:41 PM MGILLEN Plotted Wednesday, October 28, 2020 11:58:48 PM Haotian Deng

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Warehouse Facility
402,500 GSF
FFE 110.0'

4' TALL CHAIN LINK FENCE (TYP.)

SILT FENCE
STRAW WATTLE

SNOW STORAGE AREA

PROTECT (9) NINE EXISTING TREES

SIGN

LEGEND

- Property Line
- Proposed Deciduous Tree
- Proposed Evergreen Tree
- Proposed Shrub
- Proposed Live Stake
- TREE TAG (quantity / PJ / species symbol)
- SHRUB TAG (quantity / PJ / species symbol)
- PERENNIAL TAG (quantity / PJ / species symbol)
- TREE LOGS AT 2:1 SLOPES
- Fescue Hydroseed
- Meadow Hydroseed
- Perennials
- Plug
- Wetland Meadow Mix
- PL1 Pole Light SL4b, See Lighting Plan
- PL2 Pole Light DL1, See Lighting Plan
- PL3 Pole Light SL4, See Lighting Plan
- PL4 Pole Light SL2, See Lighting Plan
- PL5 Pole Light SL4-HS, See Lighting Plan
- WL Wall Light, See Lighting Plan
- SL Sign Light, See Lighting Plan

NOTE: SEE L2.01 FOR PLANT SCHEDULE

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KEY
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Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Apprvd.
1	REVISION 1	2021-01-28	
2	REVISION 2	2021-03-02	

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Not Approved for Construction

Drawing Title: Planting Plan

Drawing Number: L2.00

Sheet 2 of 6

Project Number: 14849.00

Saved Wednesday, February 10, 2021 11:33:41 PM HDENG Plotted Tuesday, March 2, 2021 3:51:30 PM Haotian Deng

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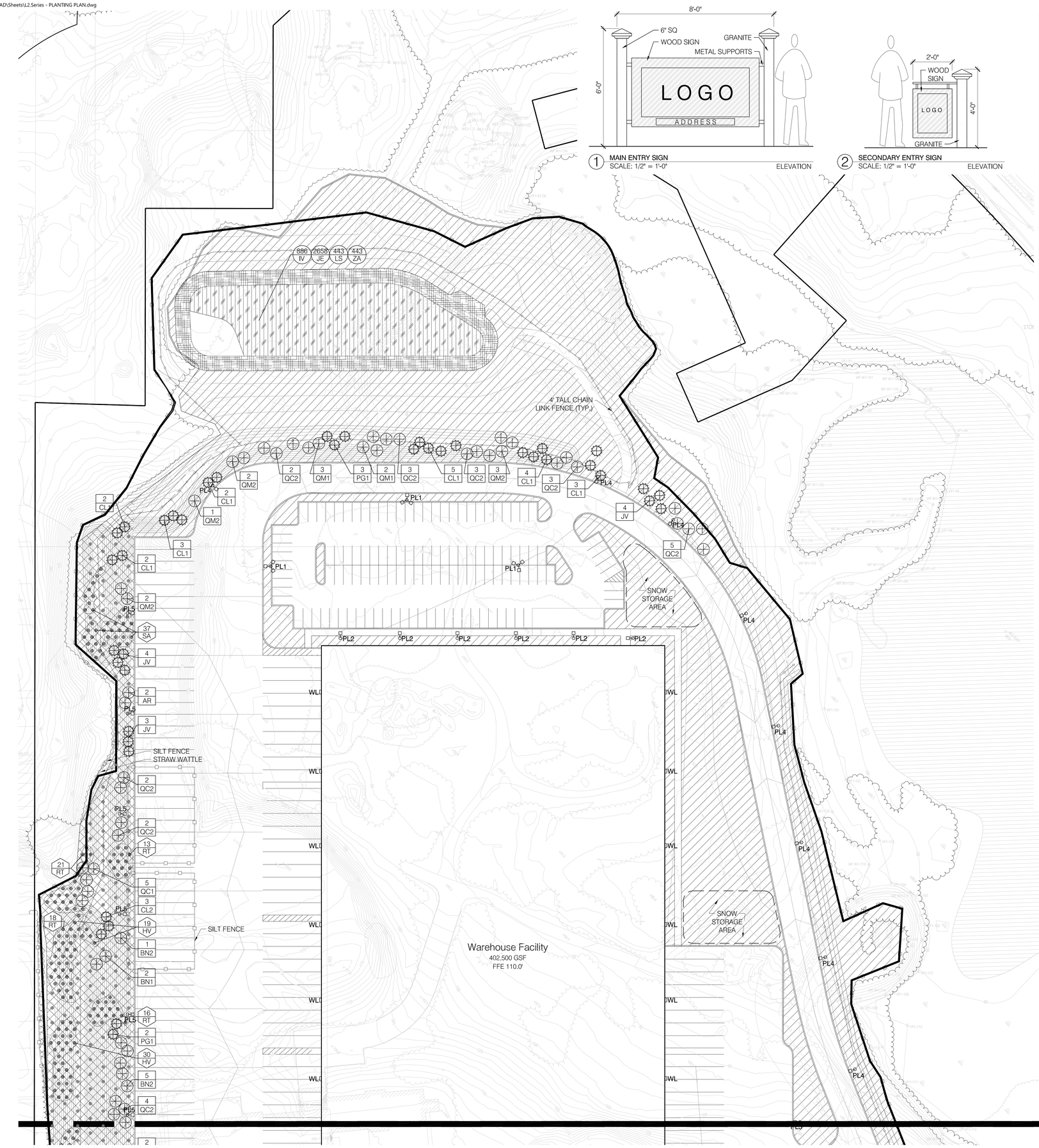

DECIDUOUS TREES:						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING
45	AR	*Acer rubrum*	Red Maple	2" CAL.	B+B	PER PLAN
2	BN1	*Betula nigra*	River Birch	10' HT	Multi-stem B+B	PER PLAN
22	BN2	*Betula nigra*	River Birch	2" CAL.	B+B	PER PLAN
16	QA	*Quercus alba*	White Oak	2" CAL.	B+B	PER PLAN
5	QC1	*Quercus acuminata*	Yellow Oak	10' HT	B+B	PER PLAN
48	QC2	*Quercus acuminata*	Yellow Oak	2" CAL.	B+B	PER PLAN
5	QM1	*Quercus macrocarpa*	Bur Oak	10' HT	B+B	PER PLAN
8	QM2	*Quercus macrocarpa*	Bur Oak	2" CAL.	B+B	PER PLAN

EVERGREEN TREES:						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING
34	CL1	*Cupressocyparis leylandii*	Leyland Cypress	8' HT	B+B	PER PLAN
24	CL2	*Cupressocyparis leylandii*	Leyland Cypress	14' HT	B+B	PER PLAN
7	PN1	*Pinus nigra*	Austrian Pine	8' HT	B+B	PER PLAN
5	PN2	*Pinus nigra*	Austrian Pine	14' HT	B+B	PER PLAN
8	PG1	*Pinus glauca*	White Spruce	10' HT	B+B	PER PLAN
38	JV	*Juniperus virginiana*	Eastern Red Cedar	5' HT	B+B	PER PLAN

UNDERSTORY TREES:						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING
13	AC1	*Amelanchier canadensis*	Shadblow Serviceberry	6' HT	Multi-stem	8' O.C.
13	AC2	*Amelanchier canadensis*	Shadblow Serviceberry	8' HT	Multi-stem	8' O.C.
13	AC3	*Amelanchier canadensis*	Shadblow Serviceberry	12' HT	Multi-stem	8' O.C.
76	HV	*Hamamelis virginiana*	Witch Hazel	4-5' HT	B+B	8' O.C.
37	SA	*Sassafras albidum*	Sassafras	#5	CONT.	8' O.C.
153	RT	*Rhus typhina*	Staghorn Sumac	#5	CONT.	8' O.C.

SHRUBS:						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING
96	CA	*Clethra alnifolia*	Sweet Pepperbush	24"	B+B	6' O.C.
37	CS	*Cornus sericea*	Red Twig Dogwood	24"	B+B	6' O.C.
14	FM	*Fothergilla major*	Mountain Witch Alder	24"	B+B	6' O.C.
97	LB	*Lindera benzoin*	Northern Spicebush	36"	B+B	6' O.C.
146	MG	*Myrica gale*	Sweet Gale	24"	B+B	6' O.C.
216	MP	*Myrica pensylvanica*	Bayberry	36"	B+B	6' O.C.
57	VC	*Vaccinium corymbosum*	Highbush Blueberry	18"	POT	6' O.C.
49	VT	*Viburnum trilobum*	American Cranberrybush	24"	B+B	6' O.C.
105	CO*	*Cephalanthus occidentalis*	Buttonbush	24"	LIVE STAKE	15' O.C.
105	CS*	*Cornus sericea*	Red Twig Dogwood	24"	LIVE STAKE	15' O.C.

PERENNIALS:						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING
202	EP	*Eupatorium perfoliatum*	Common boneset	#1	CONT.	2' O.C.
2272	IV	Iris versicolor	Blueflag	-	PLUG	12" O.C.
6814	JE	*Juncus effusus*	Soft Rush	-	PLUG	2' O.C.
1135	LS	*Lobelia siphilitica*	Great Blue Lobelia	-	PLUG	12" O.C.
200	SE	*Symphyotrichum ericoides*	White Heath Aster	#1	CONT.	2' O.C.
1135	ZA	*Zizia aurear*	Golden Alexander	-	PLUG	2' O.C.

HYDROSEED:						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	NOTE
259,000 SF	FESRUB01 ERNST SEEDS	*Festuca rubra*	Creeping Red Fescue	SEED	CONTACT	NO MOW MIX
86,000 SF	FESRUB01 ERNST SEEDS	*Festuca brevipila 'Beacon'*	Hard Fescue Beacon	SEED	CONTACT	WARM NO MOW MIX
216,000 SF	ERNMX-153 ERNST SEEDS	*Various spp.*	Showy Northeast Native Wildflower & Grass Mix	SEED	20 LB/ACRE	-
50,406 SF	ERNMX-122 ERNST SEEDS	*Various spp.*	Wetland Meadow Mix	SEED	20 LB/ACRE	-

NOTES:
1. ALL NEW PLANTING MATERIAL SHALL CONFORM TO MINIMUM GUIDELINES ESTABLISHED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN NURSERYMEN AND LANDSCAPE ASSOCIATION (ANLA). ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY AND PLANT HEIGHT MEASURED FROM ROOT FLARE NOT BOTTOM OF POT OR BURLAP BALL.
2. CONTRACTOR SHALL CONFIRM SIZE (HEIGHT AND SPREAD) OF ALL EVERGREEN MATERIAL PRIOR TO PURCHASING. LANDSCAPE ARCHITECT MAY ADJUST QUANTITIES BASED ON SIZE OF AVAILABLE MATERIAL.
3. CONTRACTOR TO DIG TEST PITS PRIOR TO ORDERING PLANT MATERIAL TO CONFIRM DEPTH OF PLANTING BEDS.
4. LA TO CUSTOMIZE ERNST NATIVE WILDFLOWER MIX TO INCLUDE NATIVE, ENDANGERED SPECIES BASED ON AVAILABILITY. LANDSCAPE ARCHITECT SHALL NOTIFY THE COMMISION OF THE ADDED SPECIES, SUCH AS SUNDIAL LUPINE.

LEGEND

- Property Line
- Proposed Deciduous Tree
- Proposed Evergreen Tree
- Proposed Shrub
- Proposed Live Stake
- quantity / key / species symbol — TREE TAG
- quantity / key / species symbol — SHRUB TAG
- quantity / key / species symbol — PERENNIAL TAG
- TREE LOGS AT 2:1 SLOPES
- Fescue Hydroseed
- Meadow Hydroseed
- Perennials
- Plug
- Wetland Meadow Mix
- PL1 Pole Light SL4b, See Lighting Plan
- PL2 Pole Light DL1, See Lighting Plan
- PL3 Pole Light SL4, See Lighting Plan
- PL4 Pole Light SL2, See Lighting Plan
- PL5 Pole Light SL4-HS, See Lighting Plan
- WL Wall Light, See Lighting Plan
- SL Sign Light, See Lighting Plan

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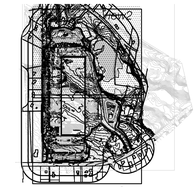

KEY
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SIGNATURES:

0 20 40 80

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Apprvd.
1	REVISION 1	2021-01-28	
2	REVISION 2	2021-03-02	

Designed by | Checked by
Issued for: Local Approvals
Date: Dec. 21, 2020

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Drawing Title: Planting Plan

Drawing Number: L2.01

Sheet 3 of 6

Project Number: 14849.00

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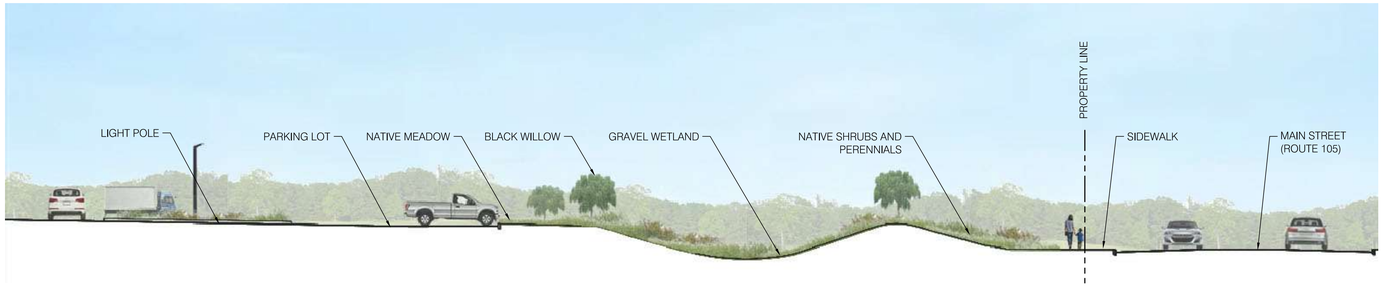
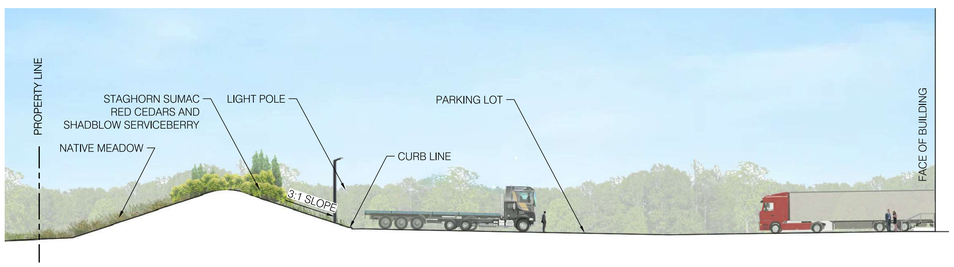
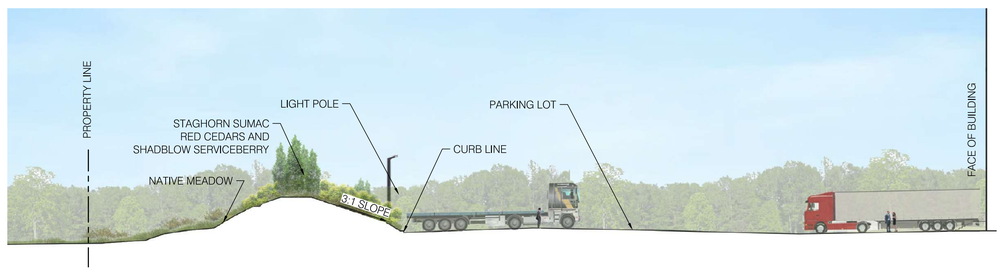


1 SECTION LOOKING EAST THROUGH PARKING LOT AND GRAVEL WETLAND
SCALE: 1" = 20'-0"
SECTION



2 SECTION LOOKING NORTH THROUGH VEGETATED BERM
SCALE: 1" = 20'-0"
SECTION



3 SECTION LOOKING NORTH THROUGH VEGETATED BERM
SCALE: 1" = 20'-0"
SECTION

4 HYDROSEED - FESCUE AND MEADOW MIX
N.T.S.
IMAGE

5 TREES - EASTERN RED CEDAR AND BLACK WILLOW
N.T.S.
IMAGE

6 UNDERSTORY TREES - SHADBLOW SERVICEBERRY, STAGHORN SUMAC
N.T.S.
IMAGE

7 SHRUBS - RED TWIG DOGWOOD, MOUNTAIN WITCH ALDER, OAKLEAF HYDRANGEA
N.T.S.
IMAGE

8 PERENNIALS - GIANT GOLDENROD, WHITE HEATH ASTER, GIANT IRONWEED
N.T.S.
IMAGE

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Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Apprvd.
1	REVISION 1	2021-01-28	
2	REVISION 2	2021-03-02	

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Not Approved for Construction

Drawing Title: Site Sections and Precedent Imagery

Drawing Number: L3.00

Sheet 4 of 6

Project Number: 14849.00

Saved Wednesday, October 28, 2020 11:38:17 PM HDENG Plotted Wednesday, October 28, 2020 11:39:14 PM Haolian Deng

NOTES:

-REFLECTANCES ASSUMED:
SURFACE: 50

- MOUNTING HEIGHTS:
TYPE SL4, SL4-HS, SL4b @ 25'-0" AFG
TYPE DL1 @ 12'-0" AFG
TYPE WL-1 @ 18'-0" AFG
TYPE BL-1 @ 39" AFG

- TASK HEIGHT: AT SURFACE

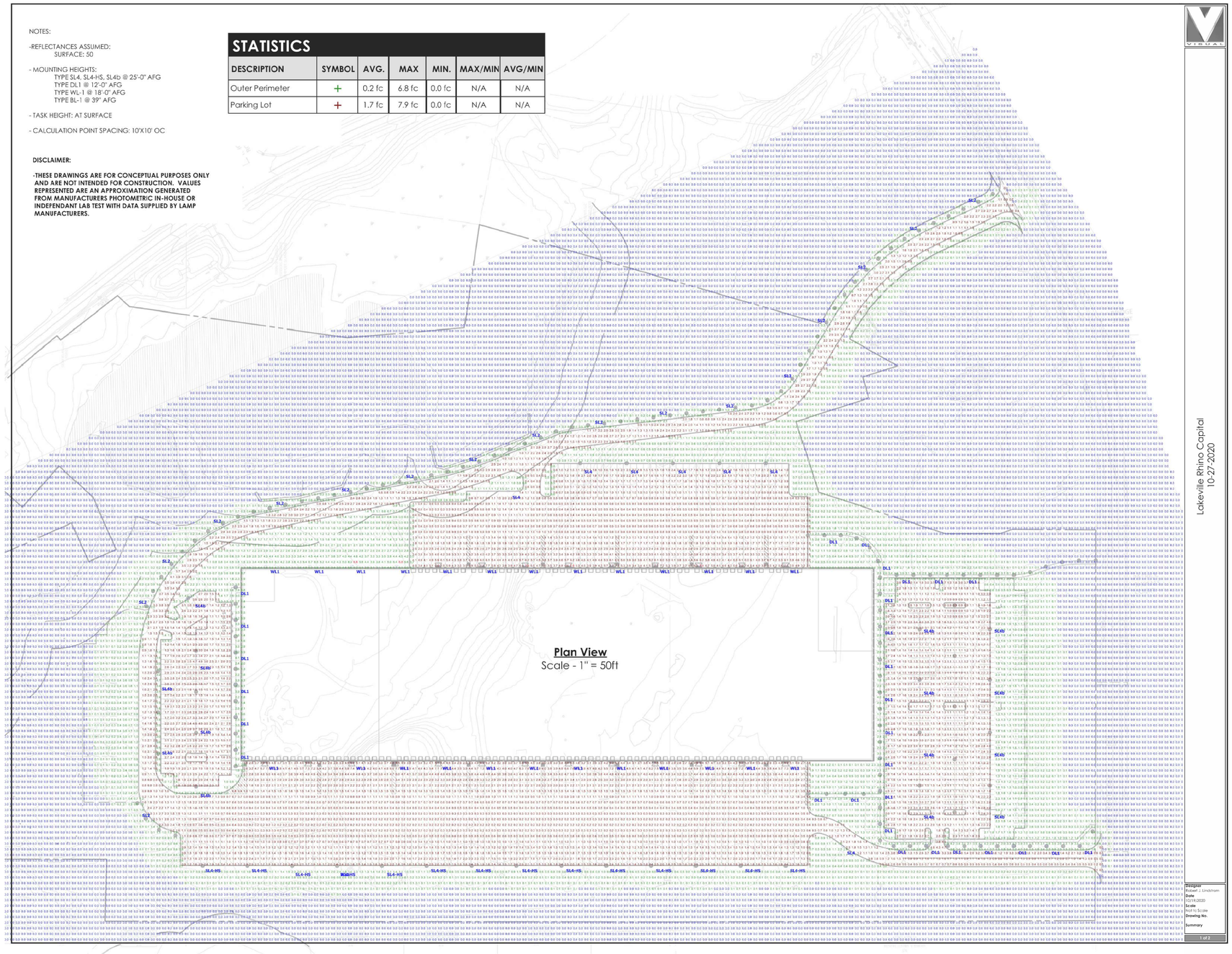
- CALCULATION POINT SPACING: 10'X10' OC

DISCLAIMER:

-THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES ONLY AND ARE NOT INTENDED FOR CONSTRUCTION. VALUES REPRESENTED ARE AN APPROXIMATION GENERATED FROM MANUFACTURERS PHOTOMETRIC IN-HOUSE OR INDEFENDANT LAB TEST WITH DATA SUPPLIED BY LAMP MANUFACTURERS.

STATISTICS

DESCRIPTION	SYMBOL	AVG.	MAX	MIN.	MAX/MIN	AVG/MIN
Outer Perimeter	+	0.2 fc	6.8 fc	0.0 fc	N/A	N/A
Parking Lot	+	1.7 fc	7.9 fc	0.0 fc	N/A	N/A



Plan View
Scale - 1" = 50ft

VIRTUAL

Lakeville Rhino Capital
10-27-2020

Designed by Robert J. Lindhorn
Date 10/19/2020
Scale Not to Scale
Drawing No.
Summary

1 of 2

SCHEDULE

SYMBOL	LABEL	QUANTITY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP	# OF LAMPS	LUMENS PER LAMP	LLF	WATTAGE
	SL4	7	Lithonia Lighting	DSX1 LED P3 40K T4M MVOLT SPA DDBXD NLTAIR2 PIRHN	DSX1 Area Light - Single head Pole @ 90° - Fixture Mounted at 25'-0" AFG	LED	1	12308	0.9	102
	SL4-HS	14	Lithonia Lighting	DSX1 LED P3 40K T4M MVOLT HS SPA DDBXD NLTAIR2 PIRHN	DSX1 Area Light w/ House side sheild - Single head Pole @ 90° - Fixture Mounted at 25'-0" AFG	LED	1	9552	0.9	102
	SL4b	14	Lithonia Lighting	DSX1 LED P3 40K T4M MVOLT SPA DDBXD NLTAIR2 PIRHN	DSX1 Area Light - Double head Pole @ 180° - Fixture Mounted at 25'-0" AFG	LED	1	12308	0.9	204
	SL2	17	Lithonia Lighting	DSX1 LED P3 40K BLC MVOLT SPA DDBXD NLTAIR2 PIRHN	DSX1 Area Light w/ Back Light control - Single head Pole @ 90° - Fixture Mounted at 25'-0" AFG	LED	1	10309	0.9	102
	DL1	29	Lithonia Lighting	RADPT P3 40K SYM MVOLT MOUNTING NLTAIR2 XX DDBXD	Radean Post Top - Decorative Area Light - Fixture mounted @ 12'-0" AFG	LED	1	7303	0.9	53.6184
	WL1	26	Lithonia Lighting	WDGE4 LED P5 70CRI RFT 40K NLTAIR2 PIRH DDBXD	Wedge 4 Wall Pack - Fixture mounted @ 24'-0" AFG		1	22560	0.9	159.51

NOTES:

-REFLECTANCES ASSUMED:
SURFACE: 50

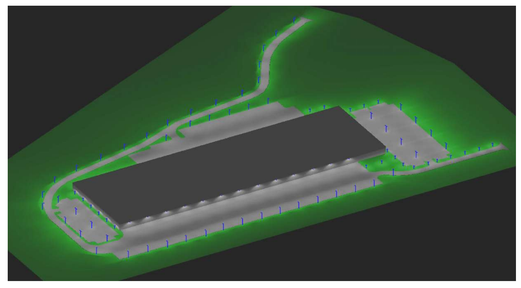
- MOUNTING HEIGHTS:
TYPE SL4, SL4-HS, SL4b, SL2 @ 25'-0" AFG
TYPE DL1 @ 12'-0" AFG
TYPE WL-1 @ 18'-0" AFG

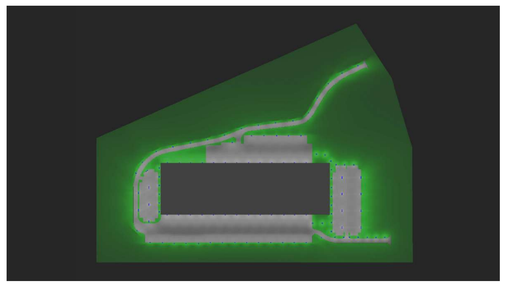
- TASK HEIGHT: AT SURFACE

- CALCULATION POINT SPACING: 10'X10' OC

STATISTICS

DESCRIPTION	SYMBOL	AVG.	MAX	MIN.	MAX/MIN	AVG/MIN
Outer Perimeter	+	0.2 fc	6.8 fc	0.0 fc	N/A	N/A
Parking Lot	+	1.7 fc	7.9 fc	0.0 fc	N/A	N/A





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SIGNATURES:

Lakeville Hospital Redevelopment

43 Main Street
Lakeville, Massachusetts

No.	Revision	Date	Appvd.

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Lighting Plan

Drawing Number

L4.00

Sheet 5 of 6

Project Number
14849.00

Saved Wednesday, October 28, 2020 8:39:00 PM HDENG Plotted Wednesday, October 28, 2020 11:42:07 PM Haotian Deng

P:\Lakeville Hospital Redevelopment\CAD Sheets\L4.01.dwg Saved Wednesday, October 28, 2020 11:41:20 PM HDENG Plotted Wednesday, October 28, 2020 11:41:20 PM Haotian Deng

D-Series Size 1

LED Area Luminaire

dsx1 series

Specifications

EPA: 1.01 ft²
Length: 39" (99.1 cm)
Width: 19" (48.3 cm)
Height H1: 7-1/2" (19.1 cm)
Height H2: 3-1/2" (8.9 cm)
Weight (max): 27 lbs (12.2 kg)

Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 60% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED								
Series	**Lens**	**Color temperature**	**Distribution**		**Voltage**	**Mounting**		
DSX1 LED	**Forward optics** P1 P4 P7 P2 P5 P8 P3 P6 P9 **Rotated optics** P10 P12 P11 P13	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium BLC Backlight control* LCCO Left corner cutoff* RCCO Right corner cutoff*		T5VS Type V very short* T5S Type V short* T5M Type V medium* T5W Type V wide* T5VW Type V very wide* MOD Mod bat wing* SQ Square	MVOLT 10V-277V 120 120V 208 208V 240 240V 277 277V 347 347V* 480 480V*	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adapter* RPUMBA Round pole universal mounting adapter* **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adapter (specify finish)*

Control options		Other options		Finish (required)
Shipped installed NLTAIR2 nLight AIR generation 2 enabled * PIRHN Network, high/low motion/ambient sensor * PER Network, high/low motion/ambient sensor, number of sensors specified * PER5 Five pin receptacle only (no sensor) ordered separately * PER7 Seven pin receptacle only (no sensor) ordered separately * DMG 0-10V dimming wires pulled outside back of housing for use with an external control (not functional) DS Dual switching *	PIR Intuitive, motion-activated sensor, 8-15' mounting height, ambient sensor enabled at 5 fc * PIRH Intuitive, motion-activated sensor, 15-30' mounting height, ambient sensor enabled at 5 fc * PIRHTCR Intuitive, motion-activated sensor, 15-30' mounting height, ambient sensor enabled at 5 fc, tri-color reporting * PIRTCR 3-fixture motion-activated sensor for 8-15' mounting height, ambient sensor enabled at 5 fc * ISO Field adjustable output **	**Shipped separately** BS Bird spikes EGS External glare shield	**Shipped installed** HS House-side shield* SF Single fuse (120, 277, 347V)* DF Double fuse (208, 240, 480V)* DBL Diffused lens* BAA Buy America(n) compliant* WG "WG" wire leads* **Shipped separately** BSW Bird spike kit DSHADE External shade

Notes	
DSX1 LED	

*Not available with SPUMBA or RPUMBA.
**Only DF, DS, or PER5 will include the matte "SQP" in parts.

Ordering Information

Accessories
Ordered and shipped separately.

DLL127F1.5 CID Photocell - ClickSpec Button Photocell
DLL347F1.5 CID Photocell - ClickSpec 347V
DSHM-DDBXD U Mast arm mounting bracket adapter (specify finish)
DSHM-DDBXD U Square pole universal mounting adapter
DSHM-RPUMBA Round pole universal mounting adapter
DSHM-WBA Wall bracket
DSHM-SPUMBA Square pole universal mounting adapter
DSHM-SPA Square pole mounting bracket
DSHM-RPA Round pole mounting bracket
DSHM-WBA Wall bracket
SPUMBA-DDBXD Square pole universal mounting adapter
RPUMBA-DDBXD Round pole universal mounting adapter
KMA8 DDBXD U Mast arm mounting bracket adapter (specify finish)
DSHM-DS Dual switching
DSHM-PER5 Five pin receptacle
DSHM-PER7 Seven pin receptacle
DSHM-DMG External 0-10V dimming extension
DSHM-PIRHN Network, high/low motion/ambient sensor
DSHM-PIR Intuitive, motion-activated sensor
DSHM-PIRH Intuitive, motion-activated sensor, 15-30' mounting height
DSHM-PIRTCR Intuitive, motion-activated sensor, tri-color reporting
DSHM-PIR1FC3V Intuitive, motion-activated sensor, 8-15' mounting height, 1 fixture controlled
DSHM-PIRH1FC3V Intuitive, motion-activated sensor, 15-30' mounting height, 1 fixture controlled
DSHM-ISO Field adjustable output

NOTES
1. Any DSHM ordered for shipping with the luminaire will be packaged separately.
2. Any DSHM ordered for shipping separately will be packaged individually.
3. For more information on the NLTAIR2 nLight AIR wireless control system, see pages 5 and 6.
4. For more information on the SiteWorx platform, see page 6.
5. For more information on the SPUMBA and RPUMBA, see page 3.
6. For more information on the WBA, see page 3.
7. For more information on the SPA and RPA, see page 3.
8. For more information on the DSHM-PIRHN, see page 5.
9. For more information on the DSHM-PIR, DSHM-PIRH, DSHM-PIRTCR, DSHM-PIR1FC3V, and DSHM-PIRH1FC3V, see page 6.
10. For more information on the DSHM-ISO, see page 7.

Options

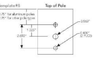
EGS - External Glare Shield

Drilling

HANDHOLE ORIENTATION

Handhole

Template #10
1.75" (4.4 cm) above the pole
2.00" (5.1 cm) along the spine



Top of Pole

Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180°	2 @ 90°	3 @ 120°	4 @ 90°
2-3/8"	RPA	AST20-190	AST20-280	AST20-290	AST20-320	AST20-390
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390

Mounting Option	Drilling Template	Single	2 @ 180°	2 @ 90°	3 @ 120°	4 @ 90°
Square Pole	#10	DM19AS	DM28AS	DM29AS	DM32AS	DM39AS
Round Pole	#10	DM19AR	DM28AR	DM29AR	DM32AR	DM39AR

DSX1 Area Luminaire - EPA

Pole Top Tenon O.D.	Mounting Configuration	Single (MAST)	2 @ 180° (MA2)	2 @ 90° (MA3)	3 @ 120° (MA4)	4 @ 90° (MA5)
Any	Square or Round	1.0	1.5	1.5	2.0	2.0
AS20-190		0.7	1.2	1.2	1.7	1.7

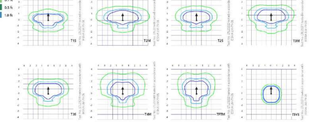
Drilling Template	Maximum Luminaire Orientation Plus Increments					
#10	0°	120°	120°	90°	120°	90°
#15	0°	120°	120°	90°	120°	90°
#20	0°	120°	120°	90°	120°	90°

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting® DSX1 LED homepage.

Isofootcandle plots are created to the tip of the mounting height.

LEGEND
- 1.0 fc
- 0.5 fc
- 0.2 fc



Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for ambient temperatures between 0°C and 50°C (32°F and 122°F).

Ambient	25°C	30°C
0°C	1.04	1.04
10°C	1.02	1.02
20°C	1.01	1.01
25°C	1.00	1.00
30°C	0.99	0.98
40°C	0.98	0.97
50°C	0.96	0.95

Electrical Load

Performance Package	Drive Current (mA)	System Watts	120 (208, 240, 277, 347, 480)				208				240				277				347				480			
			Min Current	Max Current	Min Watts	Max Watts	Min Current	Max Current	Min Watts	Max Watts	Min Current	Max Current	Min Watts	Max Watts	Min Current	Max Current	Min Watts	Max Watts	Min Current	Max Current	Min Watts	Max Watts	Min Current	Max Current	Min Watts	Max Watts
P1	350	28	0.23	0.25	27.6	30.0	0.13	0.14	27.0	29.0	0.12	0.13	27.0	29.0	0.10	0.11	27.0	29.0	0.08	0.09	27.0	29.0	0.06	0.06	27.0	29.0
	525	41	0.34	0.37	40.5	44.0	0.19	0.21	39.5	42.5	0.17	0.19	39.5	42.5	0.15	0.16	39.5	42.5	0.12	0.13	39.5	42.5	0.08	0.09	39.5	42.5
	700	54	0.45	0.49	53.5	58.0	0.25	0.27	52.5	56.5	0.22	0.24	52.5	56.5	0.19	0.21	52.5	56.5	0.15	0.17	52.5	56.5	0.11	0.12	52.5	56.5
P2	350	42	0.34	0.37	40.5	44.0	0.19	0.21	39.5	42.5	0.17	0.19	39.5	42.5	0.15	0.16	39.5	42.5	0.12	0.13	39.5	42.5	0.08	0.09	39.5	42.5
	525	62	0.51	0.55	60.5	66.0	0.29	0.31	59.5	64.0	0.25	0.28	59.5	64.0	0.22	0.24	59.5	64.0	0.17	0.19	59.5	64.0	0.12	0.13	59.5	64.0
	700	82	0.68	0.74	81.0	88.0	0.38	0.41	79.0	85.0	0.33	0.36	79.0	85.0	0.29	0.31	79.0	85.0	0.22	0.24	79.0	85.0	0.16	0.17	79.0	85.0
P3	350	54	0.45	0.49	53.5	58.0	0.25	0.27	52.5	56.5	0.22	0.24	52.5	56.5	0.19	0.21	52.5	56.5	0.15	0.17	52.5	56.5	0.11	0.12	52.5	56.5
	525	82	0.68	0.74	81.0	88.0	0.38	0.41	79.0	85.0	0.33	0.36	79.0	85.0	0.29	0.31	79.0	85.0	0.22	0.24	79.0	85.0	0.16	0.17	79.0	85.0
	700	107	0.89	0.96	105.5	114.0	0.49	0.53	103.0	111.0	0.43	0.47	103.0	111.0	0.38	0.41	103.0	111.0	0.29	0.31	103.0	111.0	0.21	0.23	103.0	111.0
P4	350	70	0.58	0.63	69.0	75.0	0.32	0.35	68.0	73.0	0.28	0.30	68.0	73.0	0.24	0.27	68.0	73.0	0.19	0.21	68.0	73.0	0.14	0.15	68.0	73.0
	525	107	0.89	0.96	105.5	114.0	0.49	0.53	103.0	111.0	0.43	0.47	103.0	111.0	0.38	0.41	103.0	111.0	0.29	0.31	103.0	111.0	0.21	0.23	103.0	111.0
	700	142	1.18	1.28	140.0	151.0	0.65	0.70	137.0	148.0	0.57	0.62	137.0	148.0	0.50	0.54	137.0	148.0	0.38	0.41	137.0	148.0	0.28	0.30	137.0	148.0
P5	350	84	0.70	0.76	82.5	89.0	0.38	0.41	81.5	87.5	0.33	0.36	81.5	87.5	0.29	0.31	81.5	87.5	0.22	0.24	81.5	87.5	0.16	0.17	81.5	87.5
	525	129	1.08	1.16	127.0	137.0	0.59	0.64	125.0	134.0	0.52	0.56	125.0	134.0	0.45	0.49	125.0	134.0	0.34	0.37	125.0	134.0	0.25	0.27	125.0	134.0
	700	170	1.42	1.53	168.0	181.0	0.78	0.84	165.0	178.0	0.68	0.74	165.0	178.0	0.59	0.64	165.0	178.0	0.45	0.49	165.0	178.0	0.33	0.36	165.0	178.0
P6	350	112	0.93	1.01	110.0	119.0	0.51	0.55	108.0	117.0	0.45	0.49	108.0	117.0	0.39	0.42	108.0	117.0	0.30	0.32	108.0	117.0	0.22	0.24	108.0	117.0
	525	170	1.42	1.53	168.0	181.0	0.78	0.84	165.0	178.0	0.68	0.74	165.0	178.0	0.59	0.64	165.0	178.0	0.45	0.49	165.0	178.0	0.33	0.36	165.0	178.0
	700	224	1.87	2.02	221.0	238.0	1.03	1.11	217.0	234.0	0.90	0.97	217.0	234.0	0.78	0.84	217.0	234.0	0.59	0.64	217.0	234.0	0.44	0.47	217.0	234.0
P7	350	140	1.17	1.26	138.0	149.0	0.64	0.69	136.0	146.0	0.56	0.61	136.0	146.0	0.49	0.53	136.0	146.0	0.37	0.40	136.0	146.0	0.28	0.30	136.0	146.0
	525	213	1.78	1.92	210.0	226.0	0.98	1.05	207.0	223.0	0.85	0.92	207.0	223.0	0.74	0.80	207.0	223.0	0.56	0.61	207.0	223.0	0.42	0.45	207.0	223.0
	700	280	2.33	2.52	276.0	297.0	1.29	1.39	271.0	292.0	1.12	1.21	271.0	292.0	0.98	1.05	271.0	292.0	0.74	0.80	271.0	292.0	0.55	0.59	271.0	292.0
P8	350	168	1.40	1.51	165.0	178.0	0.77	0.83	163.0	175.0	0.67	0.73	163.0	175.0	0.59	0.64	163.0	175.0	0.45	0.49	163.0	175.0	0.33	0.36	163.0	175.0
	525	255	2.13	2.30	252.0	271.0	1.18	1.27	248.0	267.0	1.02	1.10	248.0	267.0	0.89	0.96	248.0	267.0	0.67	0.73	248.0	267.0	0.50	0.54	248.0	267.0
	700	336	2.80	3.02	331.0	357.0	1.55	1.67	326.0	351.0	1.34	1.45	326.0	351.0	1.17	1.26	326.0	351.0	0.89	0.96	326.0	351.0	0.66	0.71	326.0	351.0
P9	350	196	1.63	1.76	193.0	208.0	0.90	0.97	190.0	205.0	0.78	0.85	190.0	205.0	0.69	0.75	190.0	205.0	0.53	0.57	190.0	205.0	0.39	0.42	190.0	205.0
	525	298	2.48	2.68	294.0	317.0	1.37	1.48	289.0	312.0	1.19	1.28	289.0	312.0	1.04	1.12	289.0	312.0	0.78	0.84	289.0	312.0	0.58	0.62	289.0	312.0
	700	392	3.27	3.53	386.0	417.0	1.80	1.95	380.0	410.0	1.57	1.69	380.0	410.0	1.37	1.48	380.0	410.0	1.04	1.12	380.0	410.0	0.77	0.83	380.0	410.0

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platform tested in accordance to IESNA TM-21-11 and are valid when operated per the DSX1 LED operating instructions. Actual performance may differ.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.95	>0.90	>0.82

Electrical Load

Performance Package	Drive Current (mA)	System Watts	120 (208, 240, 277, 347, 480)				208				240				277				347				480			
			Min Current	Max Current	Min Watts	Max Watts	Min Current	Max Current	Min Watts	Max Watts	Min Current	Max Current	Min Watts	Max Watts	Min Current	Max Current	Min Watts	Max Watts	Min Current	Max Current	Min Watts	Max Watts	Min Current	Max Current	Min Watts	Max Watts
P1	350	28	0.23	0.25	27.6	30.0	0.13	0.14	27.0	29.0	0.12	0.13	27.0	29.0	0.10	0.11	27.0	29.0	0.08	0.09	27.0	29.0	0.06	0.06	27.0	29.0
	525	41	0.34	0.37	40.5	44.0	0.19	0.21	39.5	42.5	0.17	0.19	39.5	42.5	0.15	0.16	39.5	42.5	0.12	0.13	39.5	42.5	0.08	0.09	39.5	42.5
	700	54	0.45	0.49	53.5	58.0	0.25	0.27	52.5	56.5	0.22	0.24	52.5	56.5	0.19	0.21	52.5	56.5	0.15	0.17	52.5	56.5	0.11	0.12	52.5	56.5
P2	350	42	0.34	0.37	40.5	44.0	0.19	0.21	39.5	42.5	0.17	0.19	39.5	42.5	0.15	0.16	39.5	42.5	0.12	0.13	39.5	42.5	0.08	0.09	39.5	42.5
	525	62	0.51	0.55	60.5	66.0	0.29	0.31	59.5	64.0	0.25	0.28	59.5	64.0	0.22	0.24	59.5	64.0	0.17	0.19	59.5	64.0	0.12	0.13	59.5	64.0
	700	82	0.68	0.74	81.0	88.0	0.38	0.41	79.0	85.0	0.33	0.36	79.0	85.0	0.29	0.31	79.0	85.0	0.22	0.24	79.0	85.0	0.16	0.17	79.0	85.0
P3	350	54	0.45	0.49	53.5	58.0	0.25	0.27	52.5	56.5	0.22	0.24	52.5	56.5	0.19	0.21	52.5	56.5	0.15	0.17	52.5	56.5	0.11	0.12	52.5	56.5
	525	82	0.68	0.74	81.0	88.0	0.38	0.41	79.0	85.0	0.33	0.36	79.0	85.0	0.29	0.31	79.0	85.0	0.22	0.24	79.0	85.0	0.16	0.17	79.0	85.0
	700	107	0.89	0.96	105.5	114.0	0.49	0.53	103.0	111.0	0.43	0.47	103.0	111.0	0.38	0.41	103.0	111.0	0.29	0.31	103.0	111.0	0.21	0.23	103.0	111.0
P4	350	70	0.58	0.63	69.0	75.0	0.32	0.35	68.0	73.0	0.28	0.30	68.0	73.0	0.24	0.27	68.0	73.0	0.19	0.21	68.0	73.0	0.14	0.15	68.0	73.0
	525	107	0.89	0.96	105.5	114.0	0.49	0.53	103.0	111.0	0.43	0.47	103.0	111.0	0.38	0.41	103.0	111.0	0.29	0.31	103.0	111.0	0.21	0.23	103.0	111.0
	700	142	1.18	1.28	140.0	151.0	0.65	0.70	137.0	148.0	0.57	0.62	137.0	148.0	0.50	0.54	137.0	148.0	0.38	0.41	137.0	148.0	0.28	0.30	137.0	148.0
P5	350	84	0.70	0.76	82.5	89.0	0.38	0.41	81.5	87.5	0.33	0.36	81.5	87.5	0.29	0.31	81.5	87.5	0.22	0.24	81.5	87.5	0.16	0.17	81.5	87.5
	525	129	1.08	1.16	127.0	137.0	0.59	0.64	125.0	134.0	0.52	0.56	125.0	134.0	0.45	0.49	125.0	134.0	0.34	0.37	125.0	134.0	0.25	0.27	125.0	134.0
	700	170	1.42	1.53	168.0	181.0	0.78	0.84	165.0	178.0	0.68	0.74	165.0	178.0	0.59	0.64	165.0	178.0	0.45	0.49	165.0	178.0	0.33	0.36	165.0	178.0
P6	350	112	0.93	1.01	110.0	119.0	0.51	0.55	108.0	117.0	0.45	0.49	108.0	117.0	0.39	0.42	108.0	117.0	0.30	0.32	108.0	117.0	0.22	0.24	108.0	117.0
	525	170	1.42	1.53	168.0	181.0	0.78	0.84	165.0	178.0	0.68	0.74	165.0	178.0	0.59	0.64	165.0	178.0	0.45	0.49	165.0	178.0	0.33	0.36	165.0	178.0
	700	224	1.87	2.02	221.0	238.0	1.03	1.11	217.0	234.0	0.90	0.97	217.0	234.0	0.78	0.84	217.0	234.0	0.59	0.64	217.0	234.0	0.44	0.47	217.0	234.0
P7	350	140	1.17	1.26	138.0	149.0	0.64	0.69	136.0	146.0	0.56	0.61	136.0	146.0	0.49	0.53	136.0	146.0	0.37	0.40	136.0	146.0	0.28	0.30	136.0	146.0
	525	213	1.78	1.92	210.0	226.0	0.98	1.05	207.0	223.0	0.85	0.92	207.0	223.0	0.74	0.80	207.0	223.0	0.56	0.61	207.0	223.0	0.42	0.45	207.0	223.0
	700	280	2.33	2.52	276.0	297.0	1.29	1.39	271.0	292.0	1.12	1.21	271.0	292.0	0.98	1.05	271.0	292.0	0.74	0.80	271.0	292.0	0.55	0.59	271.0	292.0
P8	350	168	1.40	1.51	165.0	178.0	0.77	0.83	163.0	175.0	0.67	0.73	163.0	175.0	0.59	0.64	163.0	175.0	0.45	0.49	163.0	175.0	0.33	0.36	163.0	175.0
	525	255	2.13	2.30	252.0	271.0	1.18	1.27	248.0	267.0	1.02	1.10	248.0	267.0	0.89	0.96	248.0	267.0	0.67	0.73	248.0	267.0	0.50	0.54	248.0	267.0
	700	336	2.80	3.02	331.0	357.0	1.55	1.67	326.0	351.0	1.34	1.45	326.0	351.0	1.17	1.26	326.0	351.0	0.89	0.96	326.0	351.0	0.66	0.71	326.0	351.0
P9	350	196	1.63	1.76	193.0	208.0	0.90	0.97	190.0	205.0	0.78	0.85	190.0	205.0	0.69	0.75	190.0	205.0	0.53	0.57	190.0	205.0	0.39	0.42	190.0	205.0
	525	298	2.48	2.68	294.0	317.0	1.37	1.48	289.0	312.0	1.19	1.28	289.0	312.0	1.04	1.12	289.0	312.0	0.78	0.84	289.0	312.0	0.58	0.62	289.0	312.0
	700	392	3.27	3.53	386.0	417.0	1.80	1.95	380.0	410.0	1.57	1.69	380.0	410.0	1.37	1.48	380.0	410.0	1.04	1.12	380.0	410.0	0.77	0.83	380.0	410.0

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platform tested in accordance to IESNA TM-21-11 and are valid when operated per the DSX1 LED operating instructions. Actual performance may differ.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.95	>0.90	>0.82

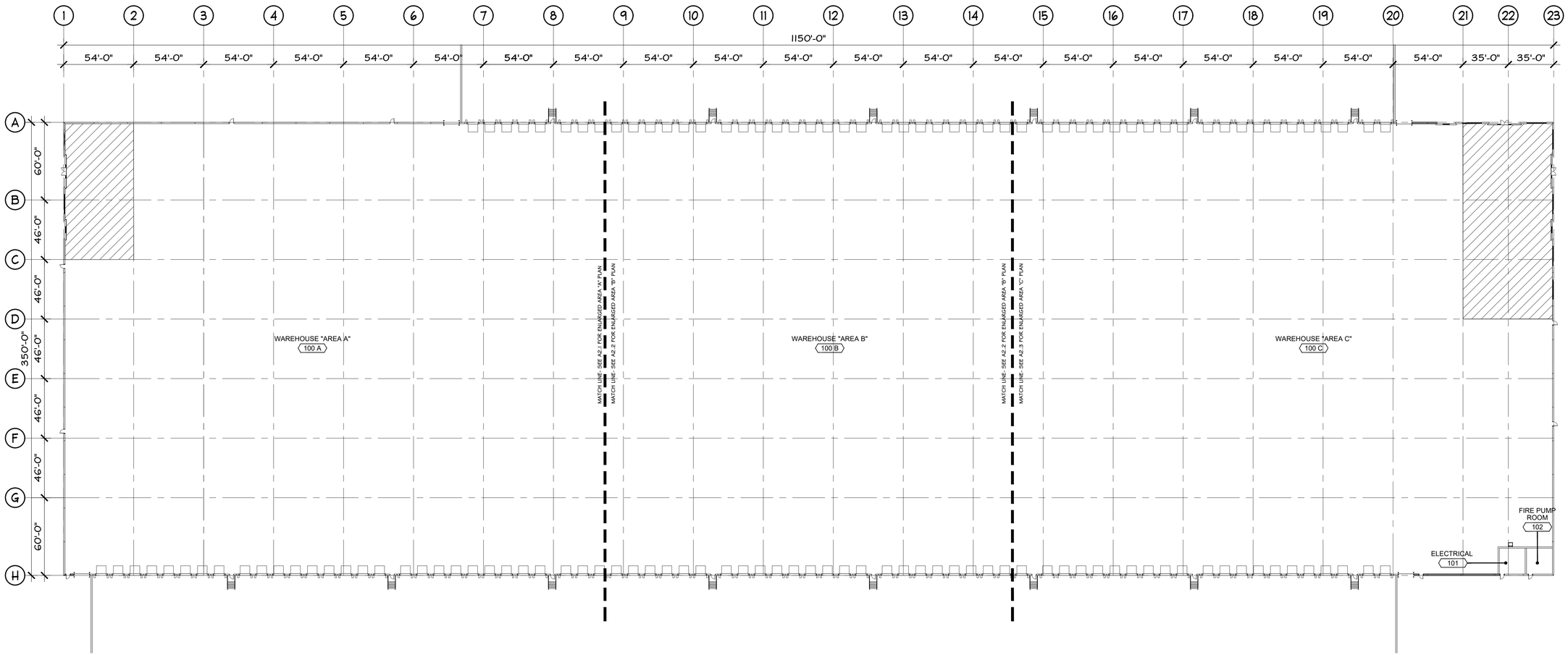
Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

Performance Package	Drive Current (mA)	System Watts	30K (3000K, 70CRI)						40K (4000K, 70CRI)						50K (5000K, 70CRI)					
			Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW			
P1	350	28	3,477	1	0	1	124	3,615	1	0	1	129	3,615	1	0	1	129			
	525	41	4,977	1	0	1	121	5,174	1	0	1	126	5,174	1	0	1	126			
	700	54	6,477	2	0	1	120	6,733	2	0	1	125	6,733	2	0	1	125			
P2	350	42	5,192	1	0	2	124	5,397	1	0	2	129	5,397	1	0	2	129			
	525	62	7,427	2	0	2	120	7,721	2	0	2	125	7,721	2	0	2	125			
	700	82	9,662	2	0	2	118	10,045	2	0	2	123	10,045	2	0	2	123			
P3	350	54	6,477	2	0	2	120	6,733	2	0	2	125	6,733	2	0	2	125			
	525	82	9,662	2	0	2	118	10,045	2	0	2	123	10,045	2	0	2	123			
	700	107	12,847	2	0	2	120	13,356	2	0	2	125	13,356	2	0	2	125			
P4	350	70	8,319	2	0	2	119	8,648	2	0	2	124	8,648	2	0	2	124			
	525	107	12,847	2	0	2	120	13,356	2	0	2	125	13,356	2	0	2	125			
	700	142	16,977	2	0	2	120	17,648	2	0	2	124	17,648	2	0	2	124			
P5	350	84	9,977	2	0	2	119	10,373	2	0	2	124	10,373	2	0	2	124			
	525	129	15,277	2	0	2	118	15,882	2	0	2	123	15,882	2	0	2	123			
	700	170	20,277	2	0	2	119	21,082	2	0	2	124	21,082	2	0	2	124			
P6	350	112	13,277	2	0	2	119	13,802	2	0	2	123	13,802	2	0	2	123			
	525	170	20,277	2	0	2	119	21,082	2	0	2	124	21,082	2	0	2	124			
	700	224	26,677	2	0	2	119	27,737	2	0	2	124	27,737	2	0	2	124			
P7	350	140	16,677	2	0	2	119	17,341	2	0	2	124	17,341	2	0	2	124			
	525	213	25,377	2	0	2	119	26,386	2	0	2	124	26,386	2	0	2	124			
	700	280	33,377	2	0	2	119	34,693	2	0	2	124



1 A2.0 OVERALL FLOOR PLAN

SCALE: 1" = 40'-0"

APPROVED BY THE LAKEVILLE PLANNING BOARD

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PROJECT
RHINO CAPITAL
43 MAIN STREET
LAKEVILLE, MA 02347

REGISTERED ARCHITECT — JOHN VANDERSTAR — MISSOURI — COMMONWEALTH OF MASSACHUSETTS

JOB NO : SP8049
PA : BJC
DATE : 12.07.2020

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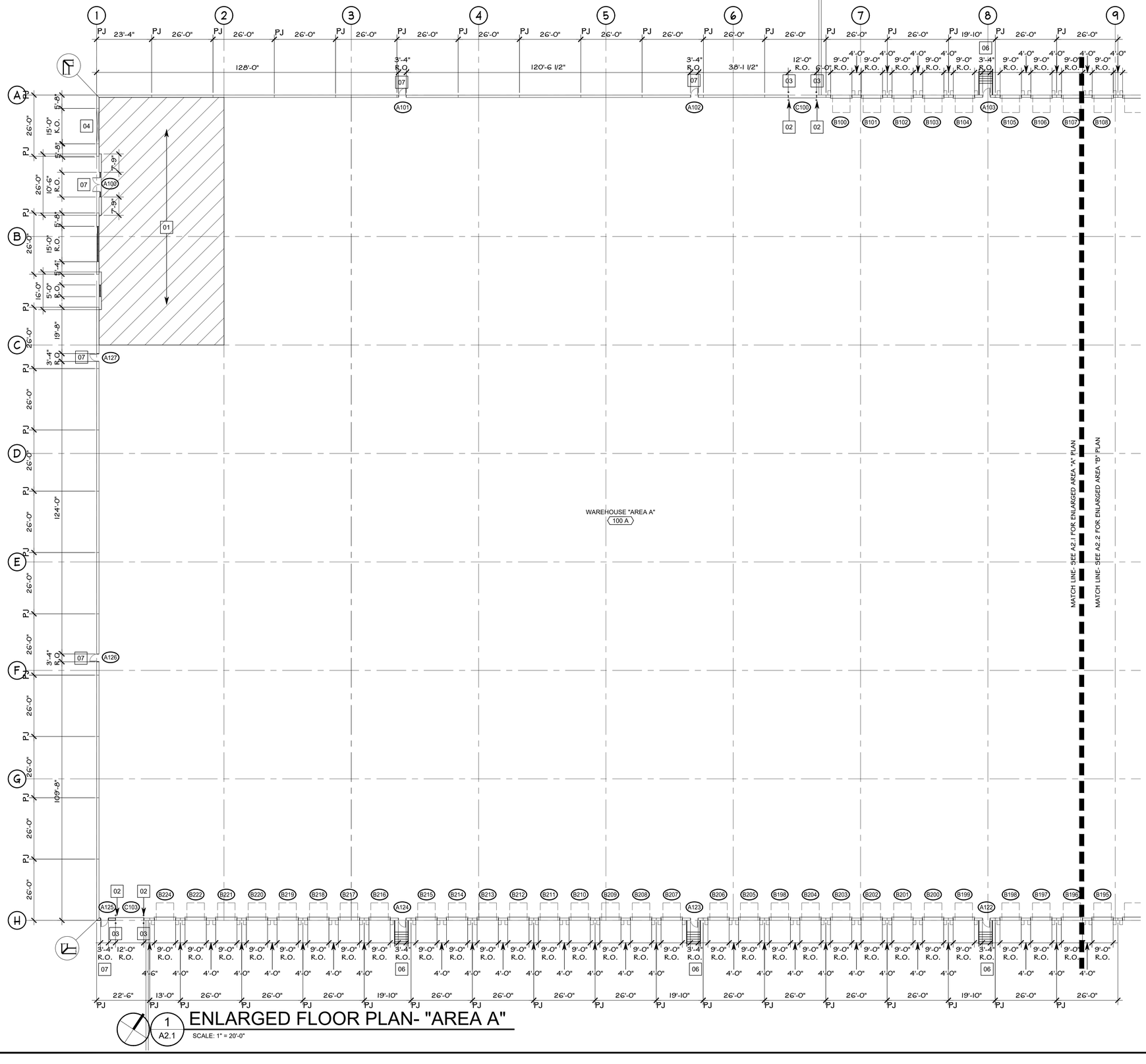
SHEET NUMBER
A2.0
OVERALL FLOOR PLAN



1 A2.1 ENLARGED FLOOR PLAN- "AREA A"

SCALE: 1" = 20'-0"

GENERAL FLOOR PLAN NOTES

1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS AT THE JOB SITE AND NOTIFY ARCHITECT OF ANY OMISSIONS, DISCREPANCIES, AND/OR CONFLICTS BEFORE PROCEEDING WITH THE WORK.
2. GLAZING AND EQUIPMENT SUPPLIERS SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION.
3. DOORS SHOWN ADJACENT TO WALLS ARE TYPICALLY 4" FROM ADJACENT UNLESS NOTED OTHERWISE.
4. ALL DIMENSIONS ARE TO FACE OF PARTITIONS.
5. ALL EXTERIOR AND EXPOSED INTERIOR TILT CONCRETE JOINTS SHALL BE CAULKED USING A TWO (2) PART TREMCO DYMERIC POLYURETHANE OR EQUAL. THE JOINTS SHALL ALSO HAVE A BACKER ROD BEHIND THE CAULK.
6. EXTERIOR PAINT SYSTEM FOR THE CONCRETE TILT-UP PANELS SHALL CONSIST OF (1) COAT OF A RESISTANT PRIMER AND (1) COAT OF A MEDIUM TEXTURE PAINT. SYSTEM TO CARRY A 10 YEAR WARRANTY.
7. COORDINATE FIRE EXTINGUISHERS LOCATIONS WITH ARCHITECT AND LOCAL FIRE MARSHALL. LOCATIONS SHALL FOLLOW NFPA 472 AND ADA GUIDELINES. SEE SHEET LS1.1

FLOOR PLAN KEY NOTES

NOT ALL NOTES APPLY TO ALL SHEETS

1. SOLID HATCH REPRESENTS APPROXIMATELY 16,000 SQUARE FEET OF VAPOR BARRIER TO BE INSTALLED UNDER FLOOR SLAB FOR PROSPECTIVE FUTURE OFFICE
2. INTERIOR PIPE BOLLARD.
3. EXTERIOR PIPE BOLLARD.
4. KNOCK OUT (K.O.) FOR FUTURE STOREFRONT SYSTEM.
5. ROOF LADDER.
6. TYP. DOCK STAIR AND MAN DOOR.
7. PROVIDE 5'-0"x5'-0" CONCRETE STOOP @ ALL EXTERIOR DOORS & @ BASE OF ALL EXTERIOR STAIRS.PROVIDE CONCRETE HAUNCH BELOW SIDEWALK ABUTTING MAN DOORS

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FIRE PROTECTION:
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PROJECT
RHINO CAPITAL
43 MAIN STREET
LAKEVILLE, MA 02347

REGISTERED ARCHITECT JOSEPH MAINE VANDERWERKEN NO. 31,777 STATE OF MISSOURI

JOB NO : SP8049
PA : BJC
DATE : 12.07.2020

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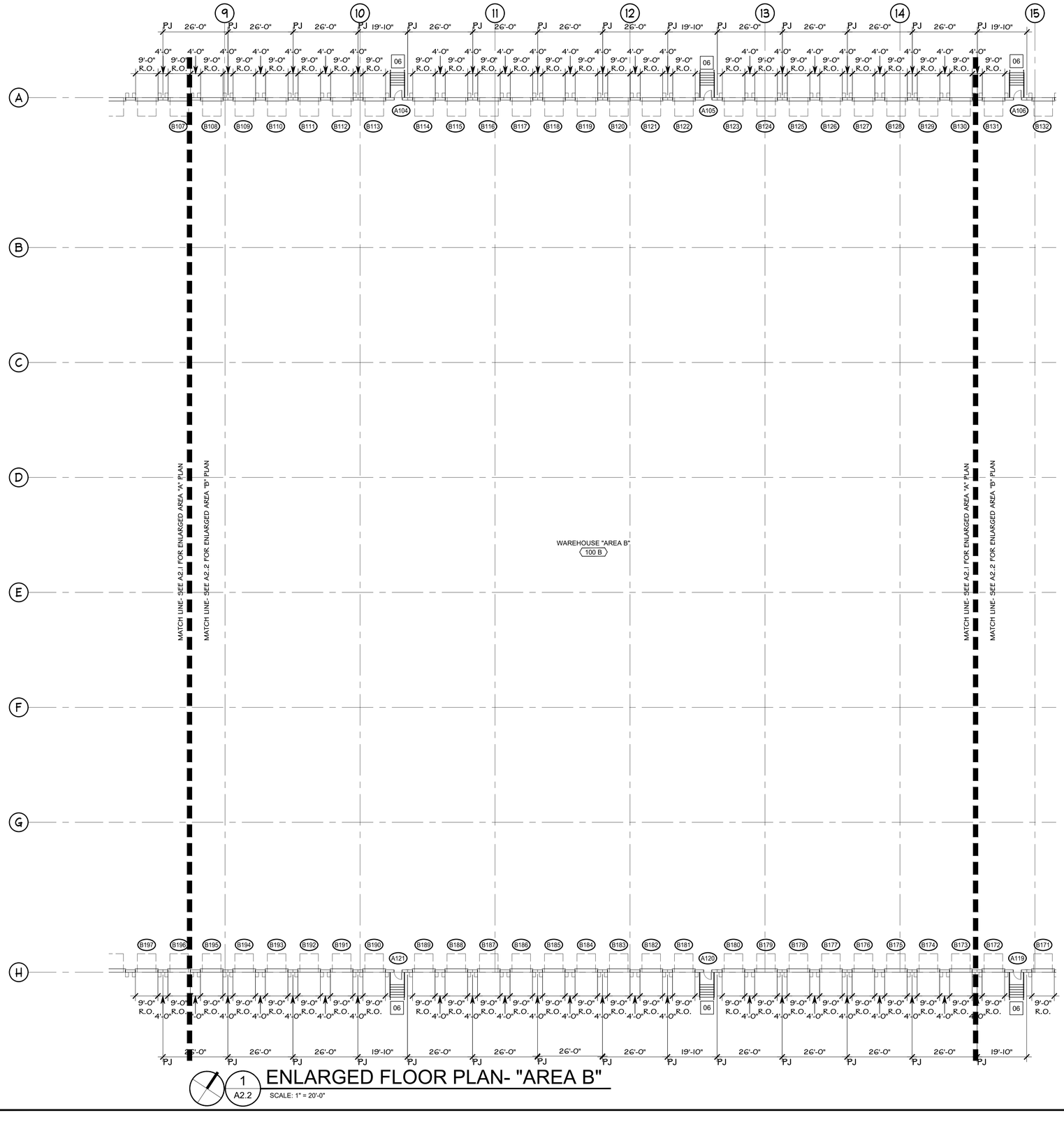
SHEET NUMBER
A2.1
ENLARGED FLOOR PLAN AREA "A"



ENLARGED FLOOR PLAN- "AREA B"

1 / A2.2 SCALE: 1" = 20'-0"

GENERAL FLOOR PLAN NOTES

1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS AT THE JOB SITE AND NOTIFY ARCHITECT OF ANY OMISSIONS, DISCREPANCIES, AND/OR CONFLICTS BEFORE PROCEEDING WITH THE WORK.
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7. COORDINATE FIRE EXTINGUISHERS LOCATIONS WITH ARCHITECT AND LOCAL FIRE MARSHALL. LOCATIONS SHALL FOLLOW NFPA 472 AND ADA GUIDELINES. SEE SHEET LS1.1

FLOOR PLAN KEY NOTES

NOT ALL NOTES APPLY TO ALL SHEETS

1. SOLID HATCH REPRESENTS APPROXIMATELY 16,000 SQUARE FEET OF VAPOR BARRIER TO BE INSTALLED UNDER FLOOR SLAB FOR PROSPECTIVE FUTURE OFFICE
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5. ROOF LADDER.
6. TYP. DOCK STAIR AND MAN DOOR.
7. PROVIDE 5'-0"x5'-0" CONCRETE STOOP @ ALL EXTERIOR DOORS & @ BASE OF ALL EXTERIOR STAIRS.PROVIDE CONCRETE HAUNCH BELOW SIDEWALK ABUTTING MAN DOORS

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PROJECT

RHINO CAPITAL
43 MAIN STREET
LAKEVILLE, MA 02347

REGISTERED ARCHITECT — WAYNE VANDERLAAN — COMMONWEALTH OF MASSACHUSETTS

JOB NO : SP8049
PA : BJC
DATE : 12.07.2020

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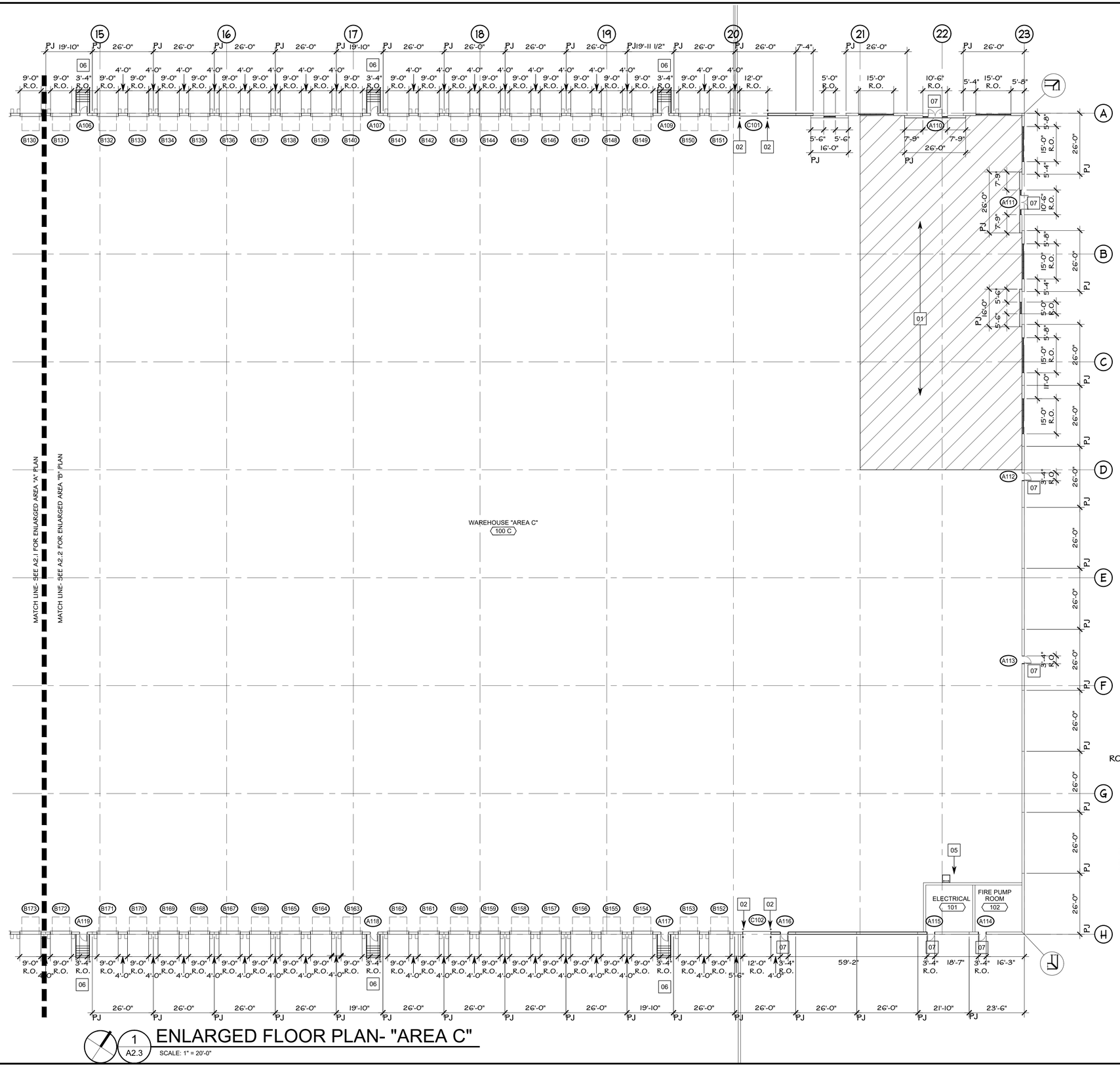
SHEET NUMBER

A2.2

ENLARGED FLOOR PLAN AREA "B"



1 A2.3 ENLARGED FLOOR PLAN- "AREA C"
SCALE: 1" = 20'-0"

GENERAL FLOOR PLAN NOTES

1. CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWINGS AT THE JOB SITE AND NOTIFY ARCHITECT OF ANY OMISSIONS, DISCREPANCIES, AND/OR CONFLICTS BEFORE PROCEEDING WITH THE WORK.
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FLOOR PLAN KEY NOTES

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5. ROOF LADDER.
6. TYP. DOCK STAIR AND MAN DOOR.
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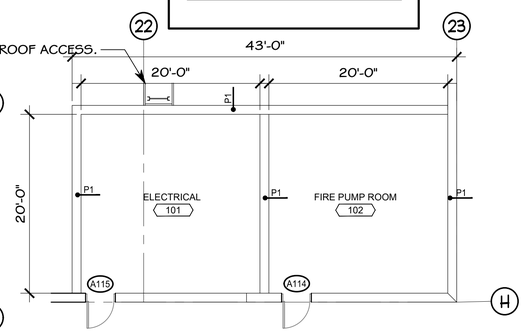

2 A2.3 ELEC / FIRE ROOM PLAN
SCALE: 1/8" = 1'-0"

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PROJECT
RHINO CAPITAL
43 MAIN STREET
LAKEVILLE, MA 02347

JOB NO : SP8049
PA : BJC
DATE : 12.07.2020

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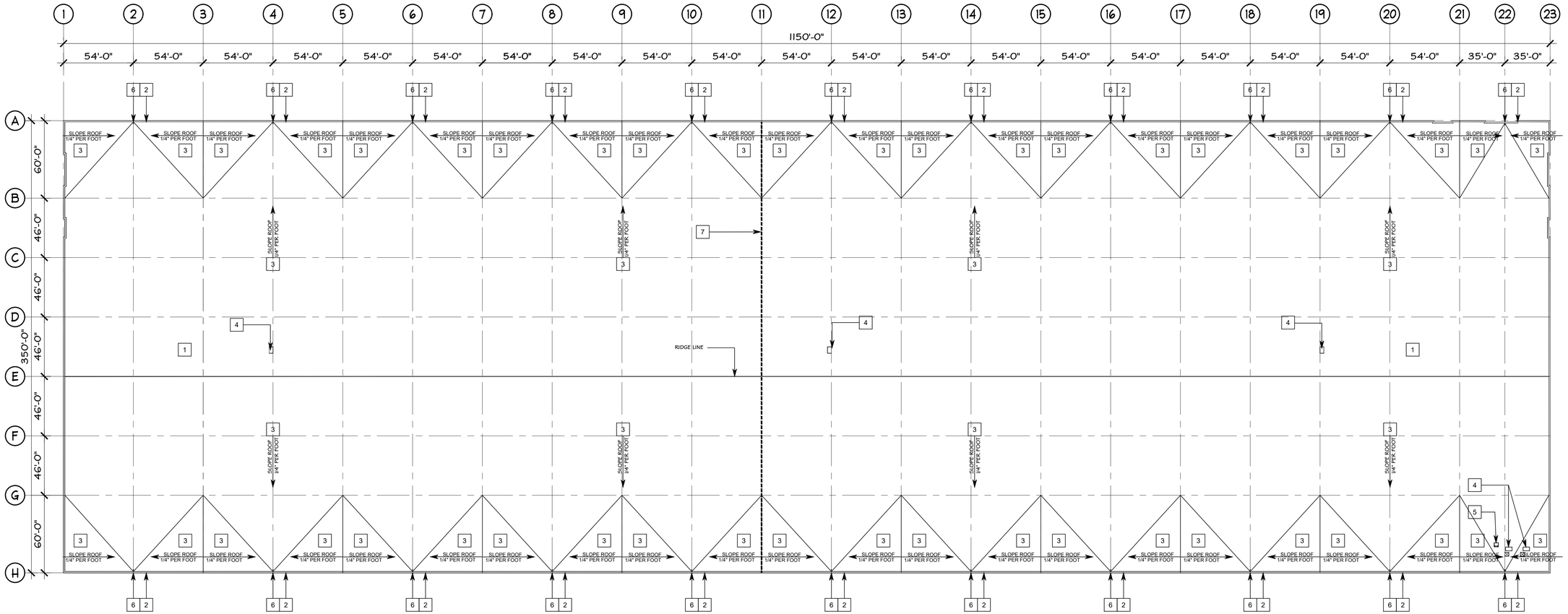
SHEET NUMBER
A2.3
ENLARGED FLOOR PLAN AREA "C"



1 A2.4 OVERALL ROOF PLAN

SCALE: 1" = 40'-0"

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GENERAL ROOF PLAN NOTES

1. GALVANIZED METAL ROOF DECK SHALL BE FACTORY PRIMED. BAR JOISTS SHALL BE PAINTED WITH GRAY FACTORY PRIMER
2. FLASH MECHANICAL EQUIPMENT AND PENETRATIONS ON THE ROOF ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
3. FLASHING AND COUNTER FLASHING FOR ROOF TOP UNITS SHALL BE COMPLETED IN ACCORDANCE WITH SMACNA
4. 10'-0" MINIMUM DISTANCE ANY VENT TO AIR INTAKE.
5. SEE DETAILS 1/A2.5 & 2/A2.5 FOR TYPICAL MECHANICAL CURBS AND PIPE PENETRATIONS
6. ALL ROOF AREAS TO BE SLOPED 1/4" PER FOOT MIN. UNLESS NOTED OTHERWISE. SEE THE PLANS FOR AREAS OF STRUCTURE SLOPE.
7. ALL PLBG., MECH., ELECT., ETC. ITEMS MOUNTED ON OR PENETRATING ROOF MAY NOT BE SHOWN, SEE RESPECTIVE PLANS FOR LOCATIONS. PENETRATIONS, ETC. THROUGH ROOF SYSTEM SHALL COMPLY W/ROOF MANUFACTURER'S PRINTED INSTRUCTIONS & STANDARDS.
8. ALL WORK & MATERIALS BELONGING TO & ADJACENT TO ROOF SHALL BE IN FULL COMPLIANCE WITH ROOF MANUFACTURER'S STANDARD INSTALLATION DETAILS & WARRANTY.
9. PROVIDE CRICKETS ADJACENT TO ALL ROOF-TOP EQUIPMENT, ETC. (TYPICAL). MINIMUM 1/4" PER FOOT SLOPE ON ALL CRICKETS.

ROOF PLAN KEY NOTES

1. MECHANICALLY FASTENED OVER 60 MIL WHITE TPO ROOFING MEMBRANE AND POLYISO RIGID INSULATION (R-30) - TWO LAYERS OF APPROXIMATELY 2.6", APPROXIMATELY 5.2" TOTAL THICKNESS, STAGGER LAYERS OF INSULATION OVER SLOPED STRUCTURAL STEEL OPEN WEB JOISTS AND METAL DECK (TYP). LAP INSULATION JOINTS. LOCATED OVER AMBIENT WAREHOUSE
2. OVERFLOW SCUPPER (24" WIDE X 8" HIGH) .
3. SLOPED STRUCTURE AT 1/4" PER FOOT MINIMUM.
4. ROOF TOP EQUIPMENT. PROVIDE ROOF CRICKETS ON HIGH-SIDE OF EQUIPMENT. RE: MECHANICAL DRAWINGS.
5. ROOF LADDER. REFER TO SHEET A2.3 FOR PLAN AND
6. ROOF DRAIN. SEE PLUMBING DRAWINGS.
7. EXPANSION JOINT

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PROJECT
RHINO CAPITAL
43 MAIN STREET
LAKEVILLE, MA 02347

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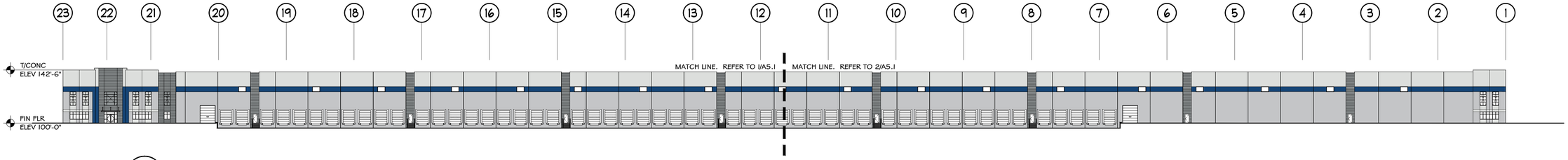
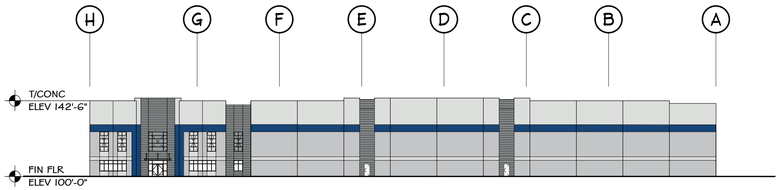
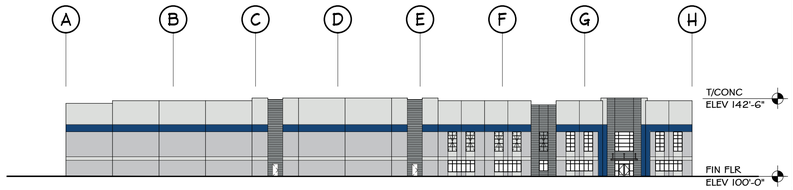
SHEET NUMBER
A2.4
OVERALL ROOF PLAN



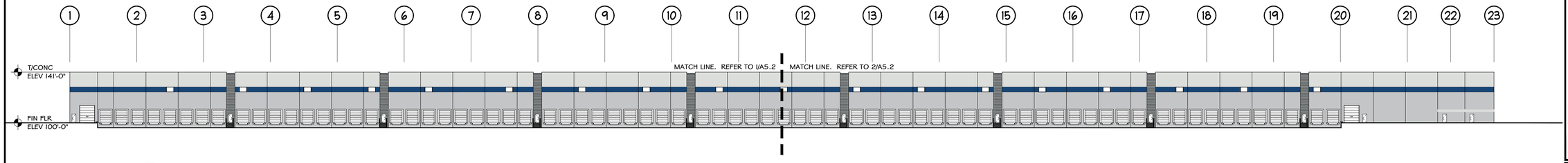
1 A5.0 OVERALL EAST ELEVATION
SCALE: 1" = 40'-0"



2 A5.0 OVERALL NORTH ELEVATION
SCALE: 1" = 40'-0"



3 A5.0 OVERALL SOUTH ELEVATION
SCALE: 1" = 40'-0"



4 A5.0 OVERALL WEST ELEVATION
SCALE: 1" = 40'-0"

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RHINO CAPITAL
43 MAIN STREET
LAKEVILLE, MA 02347

REGISTERED ARCHITECT
MAINE VANDERHOOF
STATE OF MISSOURI
KANSAS CITY, MO
COMMONWEALTH OF MASSACHUSETTS

JOB NO : SP8049

PA : BJC

DATE : 12.07.2020

REVISIONS △

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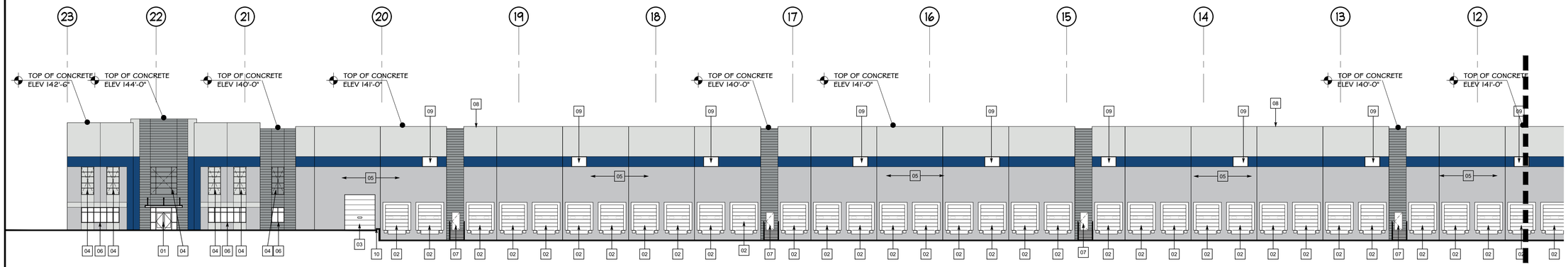
SHEET NUMBER

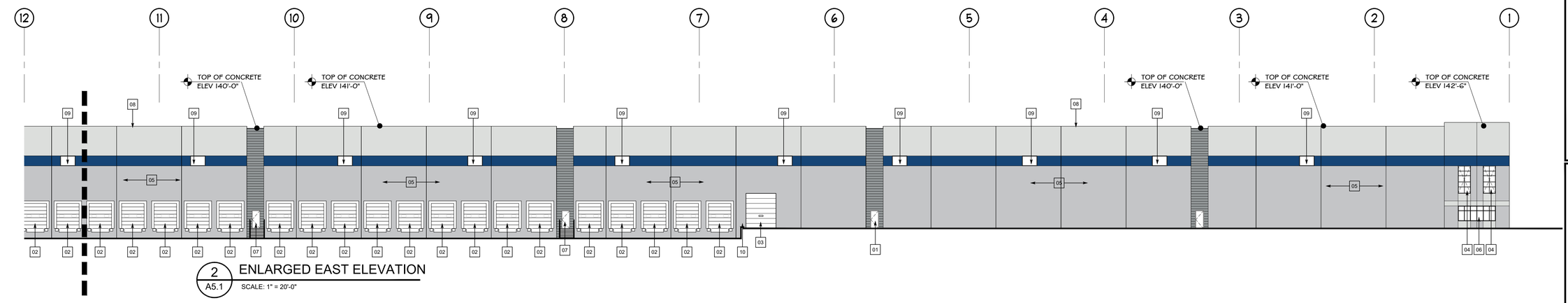
A5.0

OVERALL ELEVATIONS



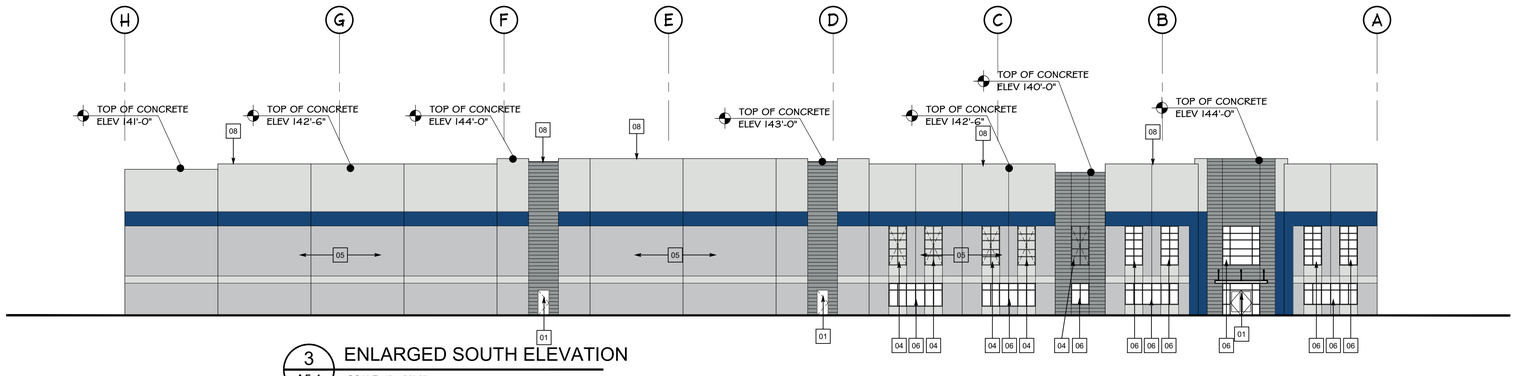
1 A5.1 ENLARGED EAST ELEVATION

SCALE: 1" = 20'-0"



2 A5.1 ENLARGED EAST ELEVATION

SCALE: 1" = 20'-0"



3 A5.1 ENLARGED SOUTH ELEVATION

SCALE: 1" = 20'-0"

ELEVATION KEY NOTES

1. SCHEDULED DOOR AND FRAME. RE: FLOOR PLANS AND DOOR SCHEDULE.
2. SCHEDULED OVERHEAD DOOR WITH MECHANICAL DOCK LEVELERS. RE: FLOOR PLANS AND DOOR SCHEDULE.
3. SCHEDULED DRIVE-IN DOOR. RE: FLOOR PLAN AND DOOR SCHEDULE.
4. KNOCK-OUT PANEL FOR FUTURE STOREFRONT SYSTEM.
5. PAINTED CONCRETE TILT-UP PANEL, RE: STRUCTURAL FOR ADDITIONAL INFORMATION.
6. INSULATED GLAZING IN ALUMINUM WINDOW SYSTEM.
7. DOCK STAIR WITH HANDRAILS AND GUARDRAILS.
8. PREFIN. MTL. COPING CAP w/ CONT CLEAT.
9. 6'-0" X 4'-0" CLEARSTORY WINDOWS.
10. RETAINING WALL WITH GUARDRAIL.

APPROVED BY THE LAKEVILLE PLANNING BOARD

SIGNATURES:

FINISH SCHEDULE

P-1	SHERWIN WILLIAMS:	TBD
P-2	SHERWIN WILLIAMS:	TBD
P-3	SHERWIN WILLIAMS:	TBD
P-4	SHERWIN WILLIAMS:	TBD
P-5	SHERWIN WILLIAMS:	TBD

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CONSULTING ENGINEERS

CIVIL:
NAME
ADDRESS
CITY / STATE / ZIP
CONTACT INFO

STRUCTURAL:
NAME
ADDRESS
CITY / STATE / ZIP
CONTACT INFO

MECHANICAL:
NAME
ADDRESS
CITY / STATE / ZIP
CONTACT INFO

ELECTRICAL:
NAME
ADDRESS
CITY / STATE / ZIP
CONTACT INFO

PLUMBING:
NAME
ADDRESS
CITY / STATE / ZIP
CONTACT INFO

FIRE PROTECTION:
NAME
ADDRESS
CITY / STATE / ZIP
CONTACT INFO

PROJECT
RHINO CAPITAL
43 MAIN STREET
LAKEVILLE, MA 02347

REGISTERED ARCHITECT JOSEPH C. GMA COMMONWEALTH OF MASSACHUSETTS

JOB NO : SP8049
PA : BJC
DATE : 12.07.2020

REVISIONS

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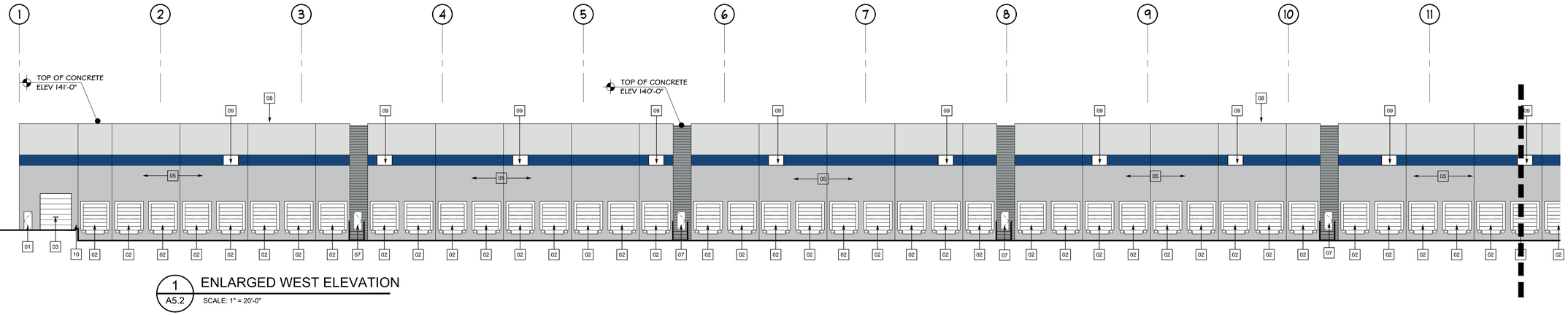
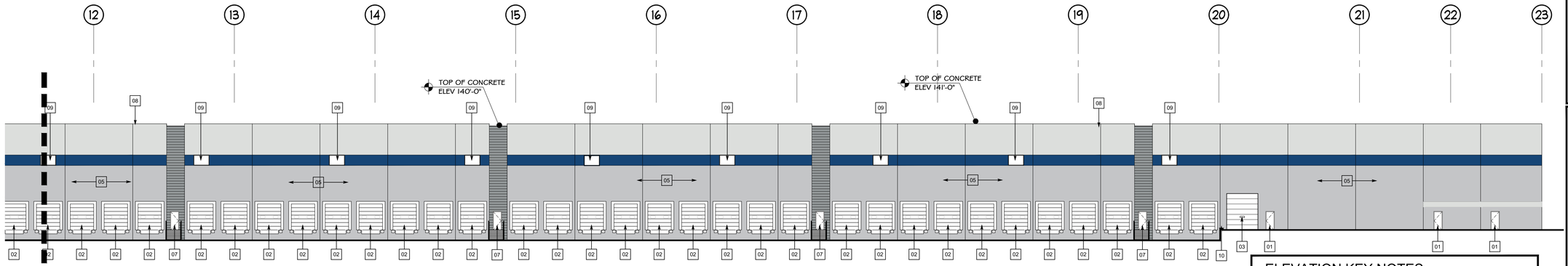
SHEET NUMBER
A5.1
ENLARGED ELEVATIONS



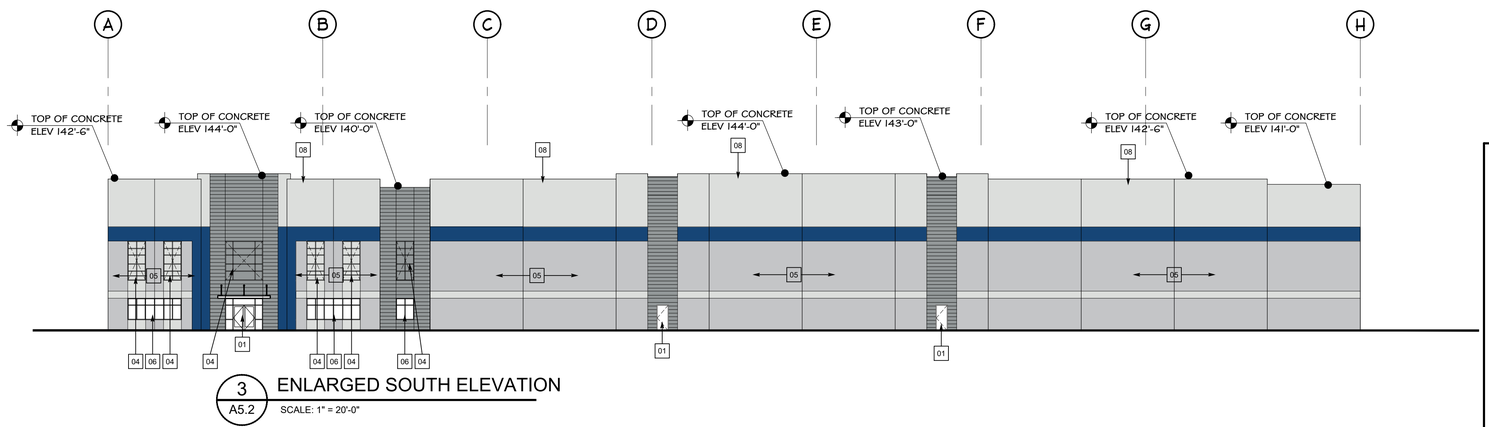
1 A5.2 ENLARGED WEST ELEVATION

SCALE: 1" = 20'-0"



2 A5.2 ENLARGED WEST ELEVATION

SCALE: 1" = 20'-0"



3 A5.2 ENLARGED SOUTH ELEVATION

SCALE: 1" = 20'-0"

ELEVATION KEY NOTES

1	SCHEDULED DOOR AND FRAME. RE: FLOOR PLANS AND DOOR SCHEDULE.
2	SCHEDULED OVERHEAD DOOR WITH MECHANICAL DOCK LEVELERS. RE: FLOOR PLANS AND DOOR SCHEDULE.
3	SCHEDULED DRIVE-IN DOOR. RE: FLOOR PLAN AND DOOR SCHEDULE.
4	KNOCK-OUT PANEL FOR FUTURE STOREFRONT SYSTEM.
5	PAINTED CONCRETE TILT-UP PANEL, RE: STRUCTURAL FOR ADDITIONAL INFORMATION.
6	INSULATED GLAZING IN ALUMINUM WINDOW SYSTEM.
7	DOCK STAIR WITH HANDRAILS AND GUARDRAILS.
8	PREFIN. MTL. COPING CAP w/ CONT CLEAT.
9	6'-0" X 4'-0" CLEARSTORY WINDOWS.
10	RETAINING WALL WITH GUARDRAIL.

FINISH SCHEDULE

P-1	SHERWIN WILLIAMS: TBD
P-2	SHERWIN WILLIAMS: TBD
P-3	SHERWIN WILLIAMS: TBD
P-4	SHERWIN WILLIAMS: TBD
P-5	SHERWIN WILLIAMS: TBD

APPROVED BY THE LAKEVILLE PLANNING BOARD

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PLUMBING:
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ADDRESS
CITY / STATE / ZIP
CONTACT INFO

FIRE PROTECTION:
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REGISTERED ARCHITECT
MAINE VANOSDOL
COMMONWEALTH OF MASSACHUSETTS
ST. LOUIS, MO

JOB NO : SP8049
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SHEET NUMBER
A5.2
ENLARGED ELEVATIONS