

# DRACUT SENIOR HOUSING

## 40B - Site Plan of Land at 144 Greenmont Avenue Dracut, Massachusetts Prepared for Common Ground Development Corporation

### Locus Map

Scale: 1" = 2000'



DRACUT ASSESSORS DATA:  
MAP: 47 PARCEL: 249 AND 115

REFERENCES:  
NORTH MIDDLESEX COUNTY  
REGISTRY OF DEEDS  
BOOK: 32840 PAGE: 275

OWNER:  
TOWN OF DRACUT  
62 ARLINGTON STREET  
DRACUT, MA 01826

APPLICANT:  
COMMON GROUND DEVELOPMENT CORP.  
155 MERRIMACK STREET, 2ND FLOOR  
LOWELL, MA 01852

ARCHITECT:  
BWA ARCHITECTURE  
132 LINCOLN STREET  
BOSTON, MA 02111

PLANNERS, LAND SURVEYORS  
& CIVIL ENGINEERS:  
PLACES ASSOCIATES, INC.  
256 GREAT ROAD, SUITE 4  
LITTLETON, MA 01460

### ZONING TABLE

DISTRICT: RESIDENTIAL 1 PROPOSED USE: MULTI-FAMILY*		
	REQUIRED	PROPOSED
MINIMUM LOT AREA	40,000 SQ.FT.	17.3 ACRES + 1 ACRES = 18.3+ ACRES
MINIMUM LOT FRONTAGE	175 FEET	100 FEET (GREENMONT AVE)* 113 FEET (BRIDGE ST.)*
MINIMUM LOT WIDTH	30 FEET	50 FEET (GREENMONT AVE) 113 FEET (BRIDGE ST.)
MINIMUM FRONT YARD	30 FEET	819+ FEET (GREENMONT AVE) 545+ FEET (BRIDGE ST.)
MINIMUM SIDE YARD	15 FEET	N/A
MINIMUM REAR YARD	35 FEET	44+ FEET
MAXIMUM BUILDING HEIGHT	36 FEET	52.5+ FEET (SEE ARCHITECTURAL PLANS)
MAXIMUM NUMBER OF STORIES	2.5 STORIES	3 STORIES (SEE ARCHITECTURAL PLANS)

THE SITE IS LOCATED IN A ZONE X, AREA OF MINIMAL FLOOD HAZARD, FIRM MAP 25017C014E, EFFECTIVE DATE 6/4/2010 AND THEREFORE IS NOT LOCATED WITHIN THE TOWN OF DRACUT FLOODPLAIN AND FLOODWAY DISTRICT.

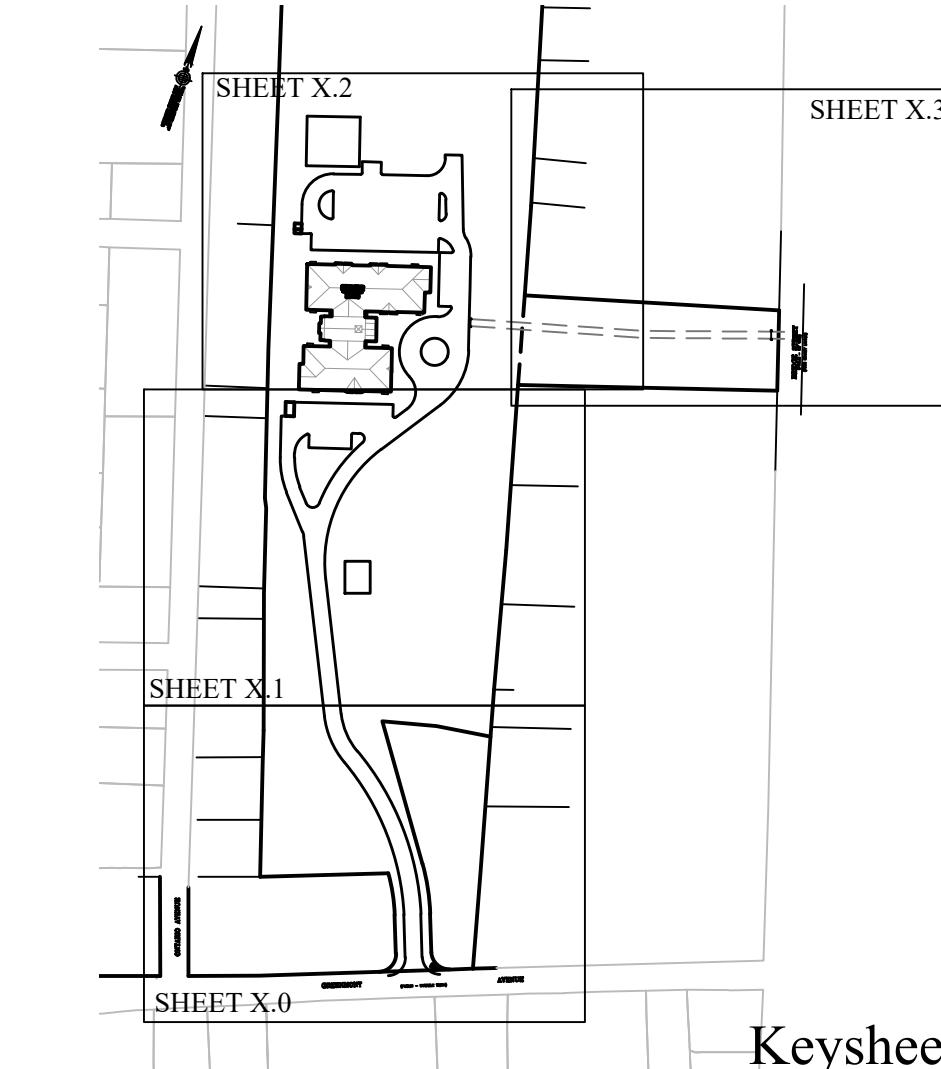
### PARKING

MULTI-FAMILY:  
REQUIRED: TWO (2) SPACES PER DWELLING UNIT  
60 UNITS X 2 = 120 REQUIRED\*

PROVIDED: 77 SPACES, 8 OF WHICH ARE HANDICAP ACCESSIBLE (1.28 PER UNIT)

\* SEE LIST OF 40B WAIVERS SUBMITTED UNDER SEPARATE COVER

PERMIT SET  
NOT FOR CONSTRUCTION  
AUGUST 13, 2020



Keysheet

COVER

COVER

### SHEET INDEX:

- C-0 NOTES AND LEGEND
- C-1.0 - 1.3 EXISTING CONDITIONS & DEMO PLAN
- C-2.0 - 2.2 LAYOUT AND MATERIALS PLAN
- C-3.0 - 3.3 GRADING AND DRAINAGE PLAN
- C-4.0 - 4.3 UTILITY PLAN
- C-5.0 EROSION & SEDIMENTATION CONTROL PLAN
- C-6 to C-8 CONSTRUCTION DETAILS
- L-1 LANDSCAPE PLAN
- T-1 TURNING MOVEMENT PLAN

**GENERAL NOTES:**

- PRIOR TO THE PREPARATION OF BIDS AND/OR THE INITIATION OF CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN AND CAREFULLY EXAMINE THIS PLAN SET, RELATED CONSTRUCTION PLAN SETS FROM OTHER PROFESSIONAL DISCIPLINES, CONSTRUCTION SPECIFICATIONS, MANUFACTURERS INFORMATION AND ANY APPLICABLE PERMIT REQUIREMENTS/CONDITIONS OF APPROVAL FOR THE PROJECT.
- THE EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. DIG SAFE AND THE APPROPRIATE UTILITY COMPANIES SHALL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION.
- NOT ALL UTILITIES WERE ABLE TO BE LOCATED BY RECORD INFORMATION, SITE SURVEYS OR UTILITY LOCATOR SERVICES. THE DESIGN ENGINEER AND BASE PLAN SURVEYOR DO NOT ACCEPT ANY RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OR SUBSURFACE STRUCTURES WHICH ARE OMITTED OR INACCURATELY SHOWN. PRIOR TO THE INITIATION OF WORK, THE CONTRACTOR SHALL VERIFY THE LOCATION/ELEVATION OF EXISTING UTILITIES SHOWN ON THE PLAN.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY DISCREPANCY BETWEEN THE LOCATION/ELEVATION OF ANY EXISTING UTILITIES SHOWN ON THE PLANS AND THAT WHICH IS FOUND IN THE FIELD.
- THE CONTRACTOR SHALL RETAIN THE SERVICES OF A REGISTERED PROFESSIONAL LAND SURVEYOR TO PROVIDE LAYOUT & CONTROL FOR THE DEVELOPMENT OF THE SITE.
- ALL CONSTRUCTION UNDER AREAS SUBJECT TO VEHICULAR TRAFFIC SHALL BE CONSTRUCTED TO WITHSTAND A DIRECT H2O DESIGN LOAD. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT ALL UTILITY/SITE IMPROVEMENT AREAS UNDER LANDSCAPED/NON-TRAFFIC BEARING AREAS FROM TEMPORARY CONSTRUCTION LOADS DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL ADJACENT PROPERTY FROM DAMAGE. ALL DAMAGES BY THE CONTRACTOR OR SUBCONTRACTORS SHALL BE REPAIRED AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING SURVEY MONUMENTS (BOUNDS, PINS, PIPES, DRILL HOLES, ETC.) THROUGHOUT ALL PHASES OF CONSTRUCTION. ANY DISTURBED MONUMENTS SHALL BE REPLACED BY A REGISTERED PROFESSIONAL LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY UPON THE DISCOVERY OF ANY CONTRADICTORY, INCOMPLETE OR MISLABELED INFORMATION SHOWN ON THE PLANS OR PLANS PREPARED BY OTHERS. THE CONTRACTOR SHALL ALLOW FOR ADEQUATE TIME FOR THE ENGINEER TO RESPOND/PROVIDE DIRECTION FOR THE PLAN DISCREPANCY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHOP DRAWINGS OF PRODUCTS/MATERIALS TO THE ENGINEER AND/OR THE LOCAL APPROVING AUTHORITY AS REQUIRED IN THE CONSTRUCTION DOCUMENTS OR IF REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION OVER THE PRODUCT. ADEQUATE TIME SHALL BE ALLOWED FOR THE SHOP DRAWINGS TO BE REVIEWED AND RETURNED TO THE CONTRACTOR PRIOR TO ORDERING THE SPECIFIED PRODUCTS/MATERIALS.
- ALL PERMANENT BOUNDARY AND SURVEY MONUMENTS SHALL BE INSTALLED AFTER THE COMPLETION OF ALL HEAVY SITE WORK.
- NO DEBRIS, JUNK, RUBBISH OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF WITHIN THE LIMITS OF THE PROJECT. ALL WASTE, TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS.

**SITE WORK NOTES:**

- THE LIMITS OF WORK SHALL BE FIELD ESTABLISHED PRIOR TO INITIATION OF ANY CONSTRUCTION, SITE EXPLORATIONS OR EARTHEN DISTURBANCE.
- EROSION CONTROLS SHALL BE IMPLEMENTED PRIOR TO SITE CLEARING OR DISTURBANCE. SEE EROSION AND SEDIMENTATION CONTROL PLAN.
- NO CONSTRUCTION OR CONTRACTOR'S VEHICLES SHALL BE PARKED ON **GREENMONT AVENUE OR BRIDGE STREET**. ALL CONSTRUCTION STAGING, STOCKPILE AND PARKING AREAS SHALL BE ON SITE.
- LOAM SHALL BE STOCKPILED FOR RE-USE ON THE SITE TO THE EXTENT PRACTICAL, SEE EROSION AND SEDIMENTATION CONTROL PLAN.
- NO DEBRIS, JUNK, RUBBISH OR OTHER WASTE MATERIALS SHALL BE BURIED, BURNED OR OTHERWISE DISPOSED OF WITHIN THE LIMITS OF THE PROJECT. ALL WASTE, TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS. THE SITE SHALL BE KEPT IN A NEAT AND ORDERLY FASHION.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A TRENCH OPERATIONS PERMIT PURSUANT TO THE REQUIREMENTS OF THE TOWN OF **DRACUT** AND 520 CMR 14.00 (AKA "JACKIE'S LAW").

**MATERIAL DEFINITIONS:**

**BITUMINOUS CONCRETE PAVEMENT**

A. ASPHALTIC CONCRETE SHALL BE A STANDARD PLANT-MIXED, HOT-LAID PAVING MATERIAL FOR ROAD WORK, CONSISTING OF CLEAN, CRUSHED ROCK AGGREGATE, MINERAL FILLER, AND ASPHALT CONFORMING TO MDPW SPECIFICATIONS, SECTION M3.11.03, TABLE A.

B. BINDER OR BOTTOM COURSE PAVING MEET THE SPECIFICATIONS FOR HMA BASE COURSE, SHALL HAVE MAXIMUM AGGREGATE SIZE PASSING 2" IN. SIEVE, AND BITUMEN CONTENT = 4.4 TO 4.6%± 1/2% BY WEIGHT.

C. TOP OR WEARING COURSE PAVING FOR SHALL BE "HMA SURFACE STANDARD TOP COURSE" HAVING MAXIMUM AGGREGATE SIZE PASSING 5/8 IN. SIEVE, AND BITUMEN CONTENT = 5.9%± 1/2% BY WEIGHT.

D. TOP OR WEARING COURSE FOR CAPE COD BERM PAVING FOR SHALL BE "HMA DENSE MIX" HAVING MAXIMUM AGGREGATE SIZE PASSING 1/2 IN. SIEVE, AND BITUMEN CONTENT = 7.4-7.6%± 1/2% BY WEIGHT.

E. IF RECLAIMED ASPHALT PAVEMENT (RAP) IS USED IN THE MIXTURE, THE PROPORTION OF RAP TO VIRGIN AGGREGATE SHALL BE LIMITED TO A MAXIMUM OF 40% FOR DRUM MIX PLANTS AND 20% FOR MODIFIED BATCH PLANTS.

**CAST IN PLACE CONCRETE**

ALL SITE CAST IN PLACE CONCRETE AND RELATED REINFORCING SHALL MEET THE REQUIREMENTS OF THE MASSACHUSETTS STATE BUILDING CODE, THE AMERICAN CONCRETE INSTITUTE (ACI) AND THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) FOR PRODUCT MATERIALS, FORM WORK, PLACEMENT AND CURING. ALL SITE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI UNLESS OTHERWISE REQUIRED IN THE CONSTRUCTION DOCUMENTS.

**CONTROLLED DENSITY FILL (CDF)**

CONTROL DENSITY FILL SHALL BE A FLOWABLE, SELF-CONSOLIDATING, RIGID SETTING, LOW DENSITY MATERIAL THAT CAN SUBSTITUTE FOR COMPACTED GRAVELS FOR BACKFILLS, FILLS AND STRUCTURAL FILLS. CDF SHALL BE EXCAVATABLE BY HAND TOOLS AND/OR SMALL EQUIPMENT WHEN PLACED AND CURED. CDF SHALL MEET THE REQUIREMENTS OF SSBH M4.0.08, TYPE 2E, AND SHALL MEET THE FOLLOWING REQUIREMENTS:

A. CDF IS TO BE BATCHED AT A READY MIX PLANT AND IS TO BE USED AT A HIGH OF "VERY HIGH SLUMP" FROM 10" TO 12", IT SHALL BE FLOWABLE AND REQUIRE NO VIBRATION AFTER IT HAS BEEN PLACED.

B. CDF SHALL BE A MIXTURE OF PORTLAND CEMENT, FLYASH, SAND AND WATER DESIGNED TO MEET THE CDF REQUIREMENTS. HIGH AIR ENTRAINMENT MAY BE SUBSTITUTED FOR FLYASH WITH AN AMIXTURES (25%) ADJUSTMENT IN SAND CONTENT.

C. CDF MUST MEET THE FOLLOWING STRENGTH REQUIREMENTS:

-20 DAY COMPRESSIVE STRENGTH: 30-80 PSI  
-90 DAY COMPRESSIVE STRENGTH: 100 PSI MAX

**CRUSHED STONE**

CRUSHED STONE SHALL BE THE SIZE AS INDICATED ON THE PLANS. THE STONE SHALL BE FROM A STONE QUARRY THAT PRODUCES HARD, ANGULAR DURABLE WASHED STONE FREE FROM DEBRIS AND ORGANIC MATERIALS. THE STONE SHALL MEET THE REQUIREMENTS OF SSBH M2.01.0

**DENSE GRADED CRUSHED STONE**

DENSE GRADED CRUSHED STONE SHALL CONSIST OF THE COMBINATION OF CRUSHER-RUN COARSE AGGREGATES (MEETING SSBH M2.01.0) AND FINE AGGREGATES OF NATURAL SAND OR STONE SCREENING UNIFORMLY PREMISED WITH A PREDETERMINED QUANTITY OF WATER. COARSE AGGREGATE SHALL CONSIST OF HARD, DURABLE, PARALLEL, FRAGMENTS OF STONE. MATERIALS THAT BREAK UP WHEN ALTERNATELY FROZEN AND THAWED AND DRIED SHALL NOT BE USED. FINE AGGREGATE SHALL CONSIST OF NATURAL OR CRUSHED SAND. THE GRADATION/MATERIAL SHALL COMPLY WITH THE SPECIFICATIONS OF SSBH M2.01.7

**GLACIAL TILL**

A. GLACIAL TILL: NATURAL INORGANIC SOLID APPROVED BY THE ENGINEER AND MEETING THE FOLLOWING REQUIREMENTS:

A. IT SHALL BE FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIALS, FROZEN MATERIALS AND STONES GREATER THAN TWO INCHES IN MAXIMUM DIMENSION.

B. IT SHALL BE A SILT LOAM AS DEFINED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL TEXTURAL CLASSIFICATION.

C. THE SOIL SHALL CONSIST OF GREATER THAN 50% SILT, 12% TO 27% CLAY, OR 50% TO 80% SILT AND LESS THAN 12% CLAY.

**GRAVEL BORROW**

GRAVEL BORROW SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND COARSE SAND, FREE FROM CLAY, SURFACE COATINGS, ORGANIC AND DELETERIOUS MATERIAL. ALL GRAVEL BORROW SHALL MEET THE REQUIREMENTS OF SSBH M1.03.0. MAXIMUM STONE SIZE SHALL BE AS FOLLOWS:

TYPE A: 6" LARGEST DIMENSION  
TYPE B: 3" LARGEST DIMENSION  
TYPE C: 2" LARGEST DIMENSION

**LOAM (BORROW)**

LOAM SHALL CONSIST OF NATURAL TOPSOIL FREE FROM SUB-SOIL OBTAINED FROM AN APPROPRIATE SOURCE. STRIPPED LOAM SHALL BE OF UNIFORM QUALITY, FREE FROM HARD CLODS, STIFF CLAY, MARDAN, SOIL, PARTIALLY DISINTEGRATED STONE, LIME, CEMENT, ASHES, SLAG, CONCRETE, TAR RESIDUE, TARRED PAPER, BOARDS, CHIPS OR ANY OTHER UNDESIRABLE MATERIAL.

LOAM SHALL CONTAIN BETWEEN 5.5 AND 7.5 PERCENT ORGANIC MATTER AS DETERMINED BY LOSS ON IGNITION OF A MOISTURE-FREE SAMPLE DRIED IN ACCORDANCE WITH THE CURRENT METHOD OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS.

THE ACIDITY RANGE OF THE LOAM SHALL BE PH 6.5 TO PH 7.5 INCLUSIVE.

THE MECHANICAL ANALYSIS OF THE SOIL SHALL BE AS FOLLOWS:

U.S. SIEVE SIZE & NUMBER	PERCENT PASSING	MATERIAL
1" INCH	100%	MUD
1/4" INCH	97%	100%
NO. 100 (SAND)	49%	60%
NO. 100 (SILT & CLAY)	40%	60%

**ORDINARY BORROW**

ORDINARY BORROW SHALL CONSIST OF MATERIAL NOT SPECIFIED AS ANY OTHER EARTHEN MATERIAL. ORDINARY BORROW SHALL BE WELL GRADED, NATURAL, INORGANIC MATERIAL ACCEPTABLE TO THE ENGINEER FOR THE GENERAL FILLING TO THE SPECIFIED SUB-GRADE. THE MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS:

A. IT SHALL BE FREE OF ORGANIC OR OTHER WEAK OR COMPRESSIBLE MATERIAL, OF FROZEN MATERIALS AND OF STONES LARGER THAN 6 INCHES IN MAXIMUM DIMENSION.

B. IT SHALL BE OF SUCH NATURE & CHARACTER THAT IT CAN BE COMPACTED TO THE SPECIFIED DENSITIES IN A REASONABLE AMOUNT OF TIME.

C. IT SHALL BE FREE OF HIGHLY PLASTIC CLAYS, ALL MATERIAL SUBJECT TO DECAY, DECOMPOSITION, AND OF CINDERS OR OTHER MATERIALS WHICH WILL CORRODE PIPING OR OTHER BURIED MATERIALS.

D. IT SHALL HAVE A MAXIMUM DRY DENSITY OF NOT LESS THAN 100 POUNDS PER CUBIC FOOT AND LESS THAN 40 % OF THE MATERIAL SHALL PASS THE NUMBER 200 SIEVE.

E. EXCAVATED ROCK & BOULDERS SMALLER THAN ONE CUBIC YARD IN SIZE MAY BE USED IN FILL AREAS UNDER LAWNS ONLY. PROVIDED THEY ARE A MINIMUM OF 24 INCHES BELOW THE SUBGRADE, PLACED AND COMPACTED IN LAYERS WITH NO Voids AND ALL INTERSTICES FILLED.

**RIP RAP**

RIP-RAP STONE SHALL BE SOUND, DURABLE ROCK, ANGULAR IN SHAPE. RIP RAP SHALL BE FREE FROM DEBRIS, ORGANIC OR DELETERIOUS MATERIAL. ROUNDED STONES, BOULDERS, SANDSTONE OR SIMILAR SOFT STONE OR RELATIVELY THIN SLABS WILL NOT BE PERMITTED UNLESS SPECIFICALLY PERMITTED BY THE DESIGN ENGINEER. ALL RIP RAP MATERIALS SHALL MEET THE REQUIREMENTS OF SSBH M2.02.0.

**SAND BORROW**

SAND BORROW SHALL CONSIST OF CLEAN INERT, HARD, DURABLE GRAINS OF QUARTZ OR OTHER HARD, DURABLE ROCK, FREE FROM LIMESTONE, CLAY, SURFACE COATINGS AND DELETERIOUS MATERIALS. THE ALLOWABLE AMOUNT OF MATERIAL PASSING A #200 SIEVE AS DETERMINED BY ASHTO T-11 SHALL % MASS. ALL SAND BORROW SHALL MEET THE REQUIREMENTS, NOT EXCEED 10 OF SSBH M1.04.0. MAXIMUM STONE SIZE SHALL BE AS DEPICTED IN THE PLANS.

**MATERIAL DEFINITIONS (CONT.):**

**STRUCTURAL FILL**

STRUCTURAL FILL IS FILL OR REPLACEMENT SOIL MATERIALS LOCATED BELOW AND ADJACENT TO ALL STRUCTURAL FOOTINGS, SLABS AND BUILDINGS, (AS DEFINED BY THE MASSACHUSETTS BUILDING CODE) EXTENDING OUT TEN FEET (10'-0") FROM THE EXTERIOR LIMITS OF SUCH STRUCTURES.

**STRUCTURAL FILL** SHALL MEET THE FOLLOWING REQUIREMENTS - IN THE ORDER OF PRIORITY:

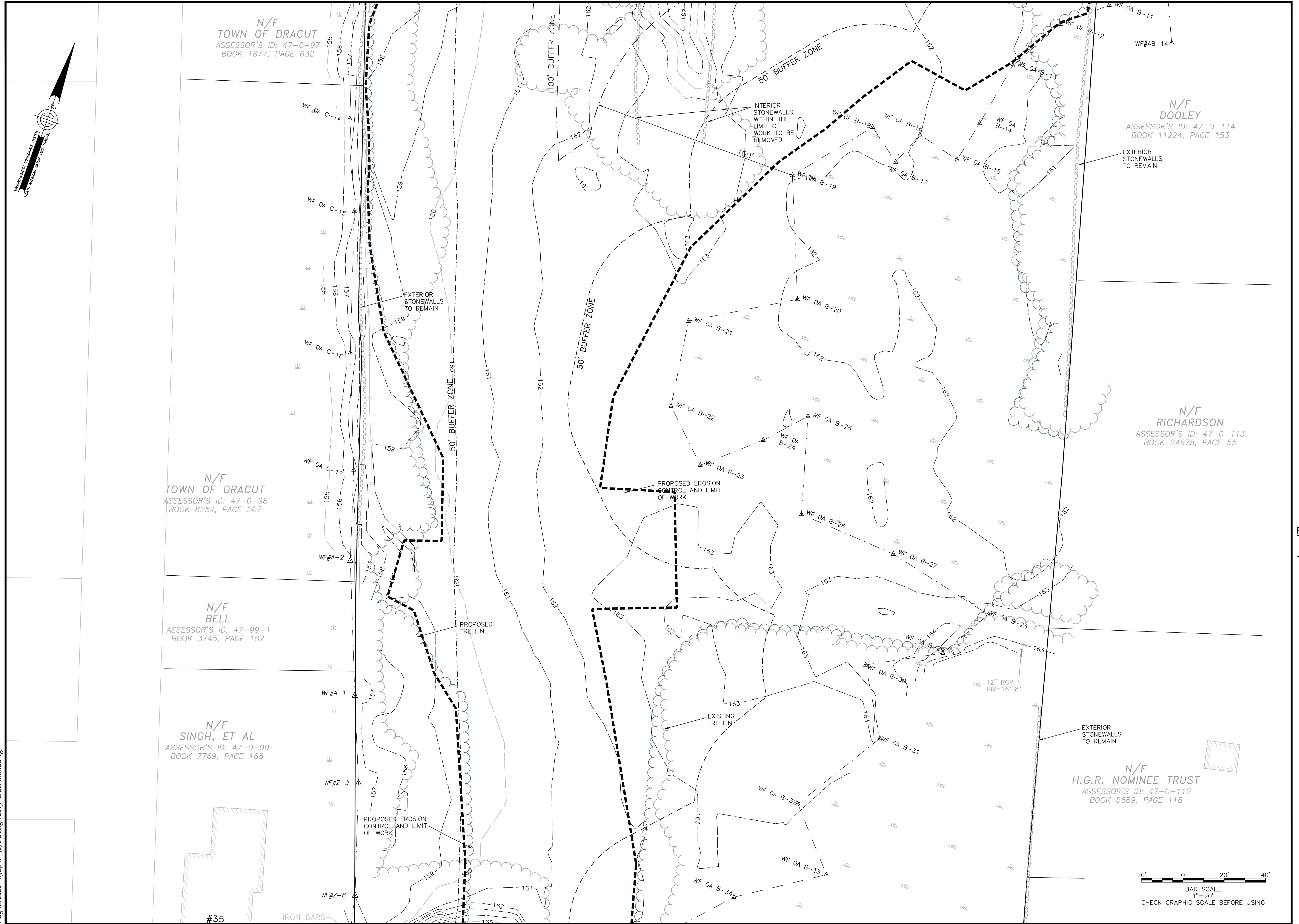
- A SITE SPECIFIC GEOTECHNICAL REPORT, SPECIFICATION OR REQUIREMENT PREPARED BY A MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER.
- A STRUCTURAL ENGINEERS REPORT, SPECIFICATIONS OR REQUIREMENTS.
- AN ARCHITECT'S REPORT, SPECIFICATION OR REQUIREMENTS.
- CRUSHED STONE BEING 3/4" TO 1 1/2" DIAMETER, MEETING SSBH M2.01.0

**ABBREVIATIONS**

**LEGEND**

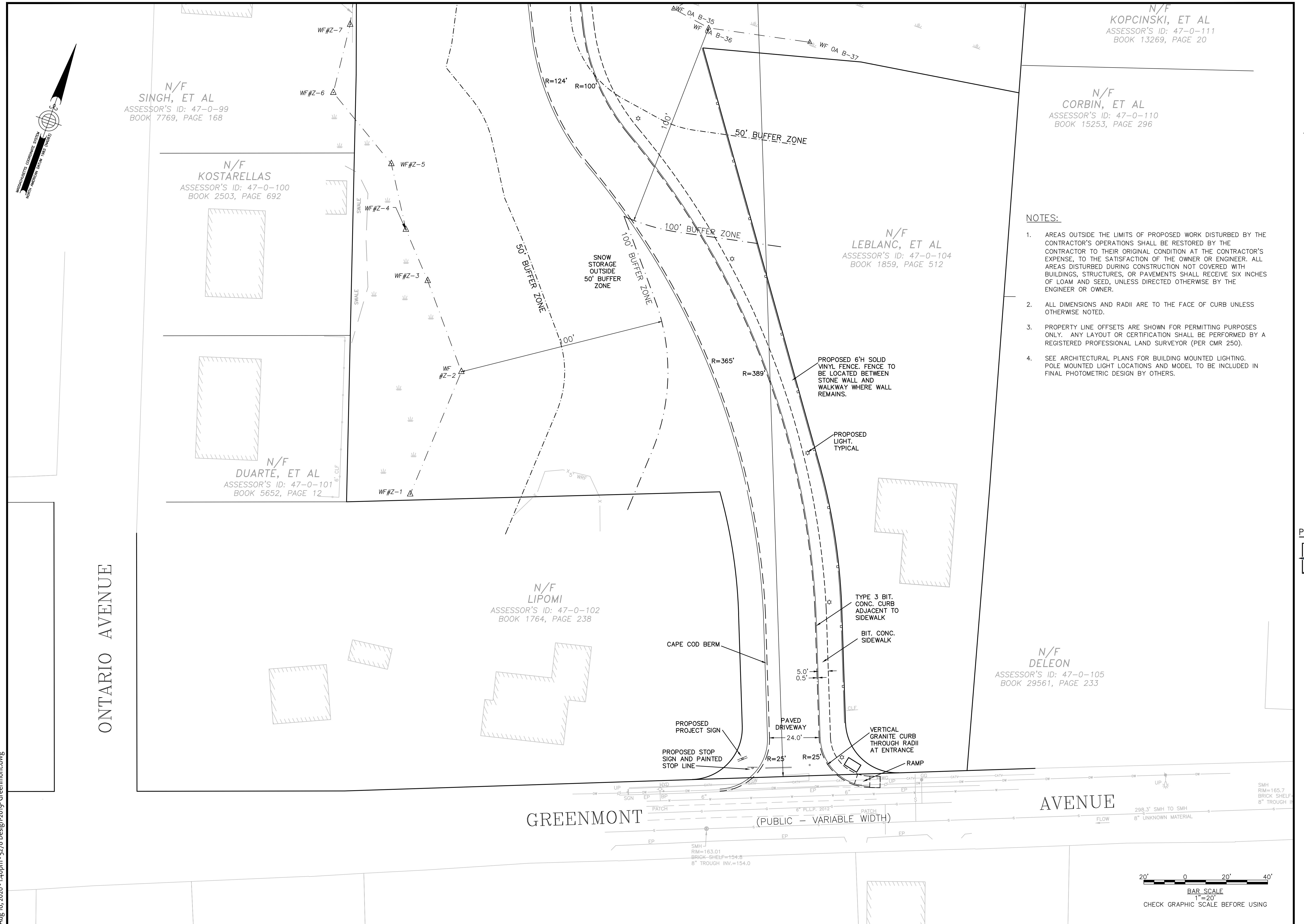
ABBREVIATION	DEFINITION	EXISTING	PROPOSED
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	INDEX CONTOUR	-100
ABR	ABBREVIATION	INTERMEDIATE CONTOUR	100
AR-1	ACCESSIBLE RAMP - TYPE 1	SPOT GRADE	99
AR-2	ACCESSIBLE RAMP - TYPE 2	STONE WALL	100.52
AR-3	ACCESSIBLE RAMP - TYPE 3	EDGE OF WOODS	100.50
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	EDGE OF WATER BODY	100.50
B&B	BALL & BURAP	100 YEAR FLOOD LINE	100.50
BC	BOTTOM CURB ELEVATION	EDGE OF WETLAND	100.50
BLDG	BUILDING	25' BUFFER	100.50
BM	BENCHMARK	50' BUFFER	100.50
BLO	BOTTOM RAMP ELEVATION	75' BUFFER	100.50
CAL	CALIPER	100' BUFFER	100.50
CB	CB CONCRETE BOUND	WETLAND	100.50
CF	CAST IRON PIPE	WETLAND FLAG	100.50
CI	CORRUGATED METAL PIPE	RIVERFRONT	100.50
CMP	CONCRETE	100' RIVER BUFFER	100.50
CONC.	CONCRETE	200' RIVER BUFFER	100.50
COT	COTTON	SILATION BARRIER	100.50
CUB	CUBIC YARD	BUILDING SETBACK LINE	100.50
CT	DRILL HOLE	WELL	100.50
DH	DUCTILE IRON PIPE	TREE	100.50
DICL	DUCTILE IRON CEMENT LINED PIPE	FLAGPOLE	100.50
DIA	DRILL	BOUND	100.50
DMH	DRAIN MANHOLE	DRILL HOLE	100.50
ELEV	ELEVATION	IRON PIN	100.50
EMH	EXISTING	BENCHMARK	100.50
EXT.	EXTERIOR	PERC TEST	100.50
FDN	FOUNDATION	TEST PIT	100.50
FES	FLARED END SECTION	SOIL BORING	100.50
FFE	FINISH FLOOR ELEVATION	EDGE OF GRAVEL	100.50
FG	FINISH GRADE	EDGE OF WALK	100.50
FND	FOUND	CONSTRUCTION JOINT	100.50
FSB	FIELD STONE BOUND	EDGE OF PAVEMENT	100.50
FT	FEET - LINEAR MEASURE	CAPE COD BERM	100.50
GAL	GALLON	BIT CONC. (TYPE 3)	100.50
GPM	GALLONS PER MINUTE	PLUG & PIN	100.50
HP	HIGH DENSITY POLYETHYLENE PIPE	ROUND CONCRETE PIPE	100.50
HT	HIGH POINT	STOCKADE FENCE	100.50
I. FIN.	IRON PIN	CHAIN LINK FENCE	100.50
I. PIPE	PIPE	SEWER - OTHER	100.50
ID	INSIDE DIAMETER	SEWER MANHOLE	100.50
INV.	PIPE INVERT ELEVATION	SPREAD	100.50
LP	LOW POINT	STAKE & STONE	100.50
MAX	MAXIMUM	STANDARD SPECIFICATIONS OF HIGHWAYS & BRIDGES FOR THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS	100.50
MHB	HIGHWAY BOUND	ON CENTER	100.50
MIN	MINIMUM	OUTSIDE DIAMETER	100.50
MUTCD	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES	OC	100.50
OC	ON CENTER	OD	100.50
OD	OUTSIDE DIAMETER	OSHA	100.50
OSHA	OCUPATIONAL SAFETY AND HEALTH ADMINISTRATION	P&P	100.50
P&P	PLUG & PIN	PSD	100.50
PSD	PSD	RECD	100.50
PVC	POLYVINYL CHLORIDE PIPE	REQUIRED	100.50
RCP	ROUND CONCRETE PIPE	SD	100.50
R&S	REMOVE & STOCKPILE ITEM	SMH	100.50
REQ'D	REQUIRED	SPR	100.50
SD	SD	S&S	100.50
SMH	SEWER MANHOLE	SSH	100.50
SPR	SPREAD	STAKE & STONE	100.50
S&S	STAKE & STONE	STANDARD SPECIFICATIONS OF HIGHWAYS & BRIDGES FOR THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS	100.50
SSH	STAKE & STONE	TEMPORARY BENCH MARK	100.50
STV	STOKEADE FENCE	TOP OF CURB ELEVATION	100.50
TBM	TEMPORARY BENCH MARK	TOP OF CONCRETE FOUNDATION ELEVATION	100.50
TC	TOP OF CURB ELEVATION	TOP OF CONCRETE FOUNDATION ELEVATION	100.50
TMH	TOP OF CONCRETE FOUNDATION ELEVATION	TOPICAL FOR ALL ITEMS SHOWN	100.50
TR	TOP OF CONCRETE FOUNDATION ELEVATION	UTILITY POLE	100.50
TYP	TOPICAL FOR ALL ITEMS SHOWN	VERTICAL GRANITE CURB TRANSITION SEGMENT	100.50
UP	UTILITY POLE	VERTICAL GRANITE CURB TRANSITION	100.50
VGCS	VERTICAL GRANITE CURB TRANSITION	FLARED END IN/OUT	100.50
		CLEANOUT	100.50
		IRRIGATION LINE	100.50
		FIRE PROTECTION LINE	100.50
		WATER LINE	100.50
		WATER VALVE	100.50
		FIRE HYDRANT	100.50
		WATER SHUTOFF	100.50
		OVERHEAD WIRES	100.50
		UNDERGROUND WIRES	100.50
		GUY POLE	100.50
		UTILITY POLE	100.50
		GUY ANCHOR	100.50
		UTILITY BOX	100.50
		STREETLIGHT	100.50
		LAMP POST	100.50
		ELECTRIC MANHOLE	100.50
		TELEPHONE MANHOLE	100.50
		SEWER LINE	100.50
		SEWER FORCE MAIN	100.50
		LOW PRESSURE SEWER	100.50
		SEWER MANHOLE	100.50
		GAS LINE	100.50
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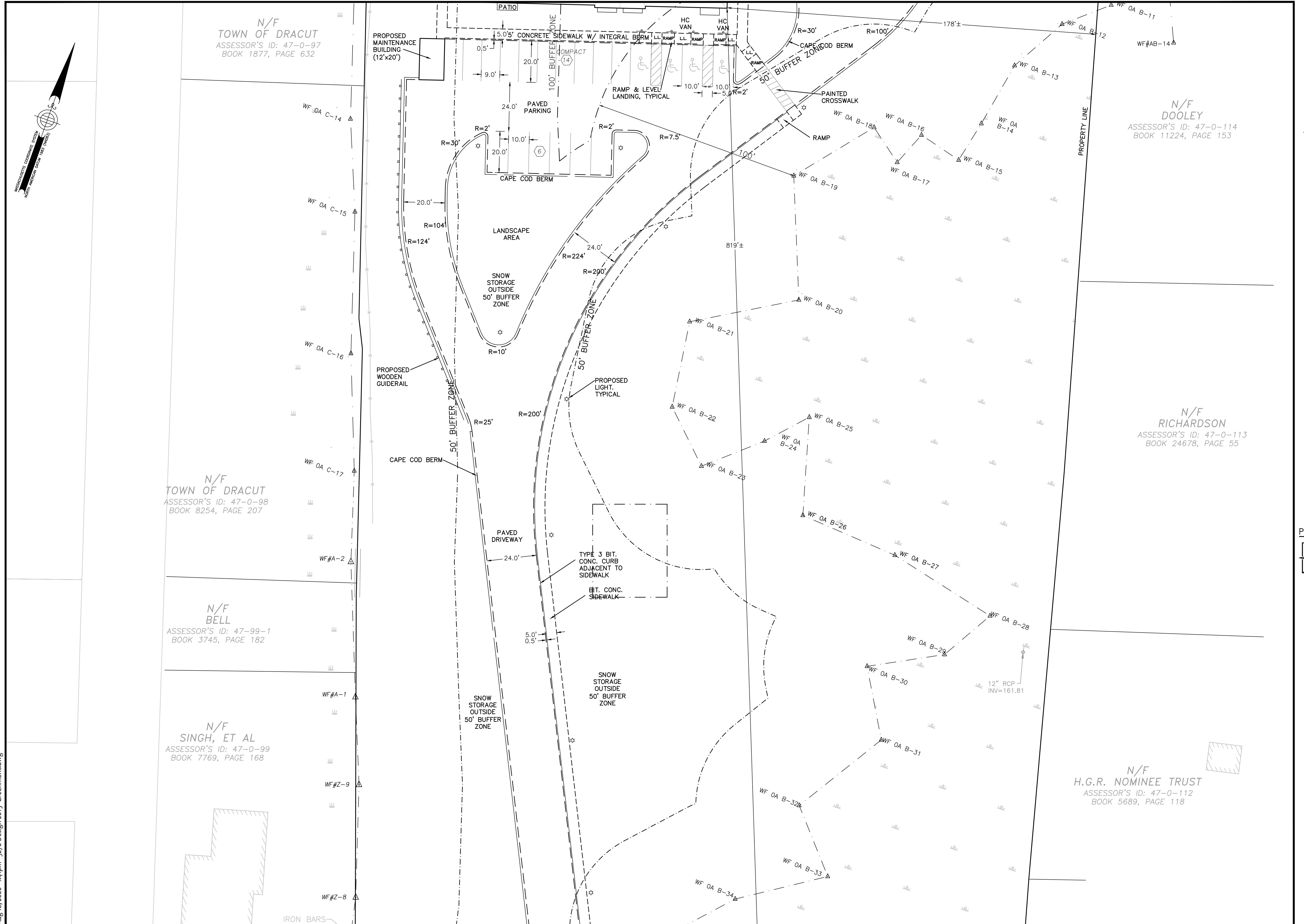
155 Merrimack Street 2nd Floor  
Lowell, MA 01852

## DRACUT CENTER SENIOR HOUSING

DRACUT, MA 01826

155 Merrimack Street 2nd Floor  
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155 Merrimack Street 2nd Floor  
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DRACUT, MA 01826

**PERMIT SET  
NOT FOR CONSTRUCTION  
AUGUST 13, 2020**

PLACES Associates, Inc.



BWA ARCHITECTURE  
100 Lincoln Street, Boston MA 02111 617.350.7420  
[bwaboston.com](http://bwaboston.com)

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Issue		
No.	Description	Date
01	50% SCHEMATIC	10/23/19
02	PERMIT SET	1/20/2022
03	REVIEW COMMENTS	8/12/2023

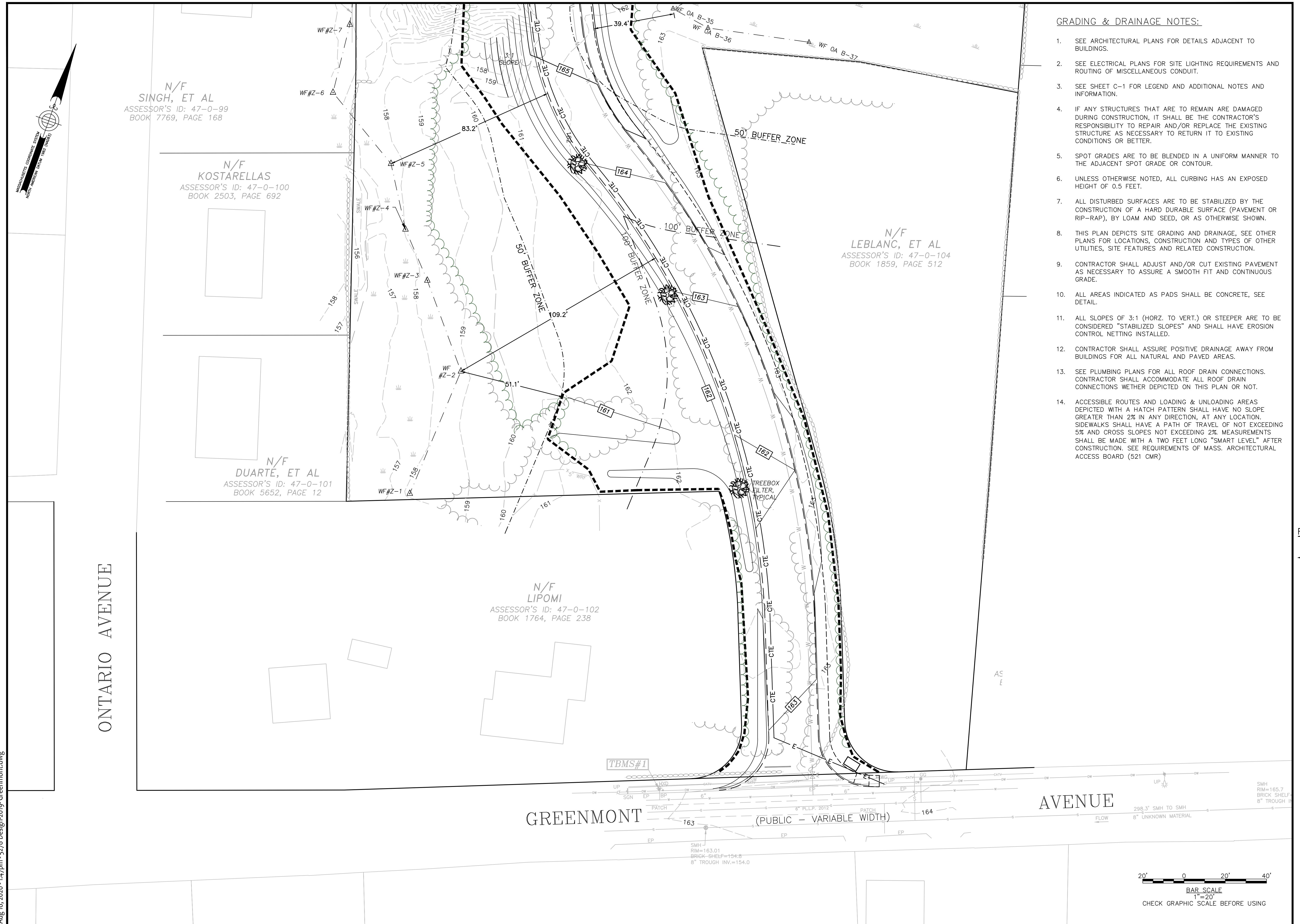
# **DRAWING TITLE**

# **LAYOUT AND MATERIALS PLAN**

**SHEET NO.**

C-2.2

**PROJECT NO.** 5278  
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155 Merrimack Street 2nd Floor  
Lowell, MA 01852

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DRACUT, MA 01826

PERMIT SET  
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AUGUST 13, 2020



Planning  
Landscape  
Architecture  
Civil  
Engineering  
Surveying

256 Great Road, Suite 4  
Littleton, MA 01460  
(978) 484-0334  
www.placesassociates.com



132 Lincoln Street, Boston MA 02111 617.350.7420  
www.bwaboston.com

Issue No. Description Date

01 50% SCHEMATIC 10/23/19

02 PERMIT SET 1/20/2020

03 REVIEW COMMENTS 8/13/2020

DRAWING TITLE

GRADING AND  
DRAINAGE PLAN

SHEET NO.

C-3.0

PROJECT NO. 5278

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Aug 16, 2020 - 1:49pm - 5278 Design-2019-Greenmont.dwg

# DRACUT CENTER SENIOR HOUSING

**PERMIT SET  
NOT FOR CONSTRUCTION  
AUGUST 13, 2020**

ACES Associates, Inc.



The logo for BWA Architecture consists of a series of black, three-dimensional rectangular blocks arranged in a zigzag pattern, creating a sense of depth and movement. Below this graphic, the company name "BWA ARCHITECTURE" is written in a bold, sans-serif font. The "BWA" is in a smaller, bold font, and "ARCHITECTURE" is in a larger, bold font. The entire logo is set against a white background.

Issue Log			
No.	Description	Date	Comments
01	50% SCHEMATIC	10/23/19	
02	PERMIT SET	1/20/2022	
03	REVIEW COMMENTS	8/13/2022	

# DRAWING TITLE

# GRADING AND DRAINAGE PLAN

**SHEET NO.**

# C-3.1

PROJECT NO. 5278



5 Merrimack Street 2nd Floor  
Lowell, MA 01852

# DRACUT CENTER SENIOR HOUSING

**PERMIT SET  
NOT FOR CONSTRUCTION  
AUGUST 13, 2020**

ACES Associates, Inc.



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# GRADING AND DRAINAGE PLAN

**SHEET NO.**

# C-3.1

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## DRAZUT CENTER SENIOR HOUSING

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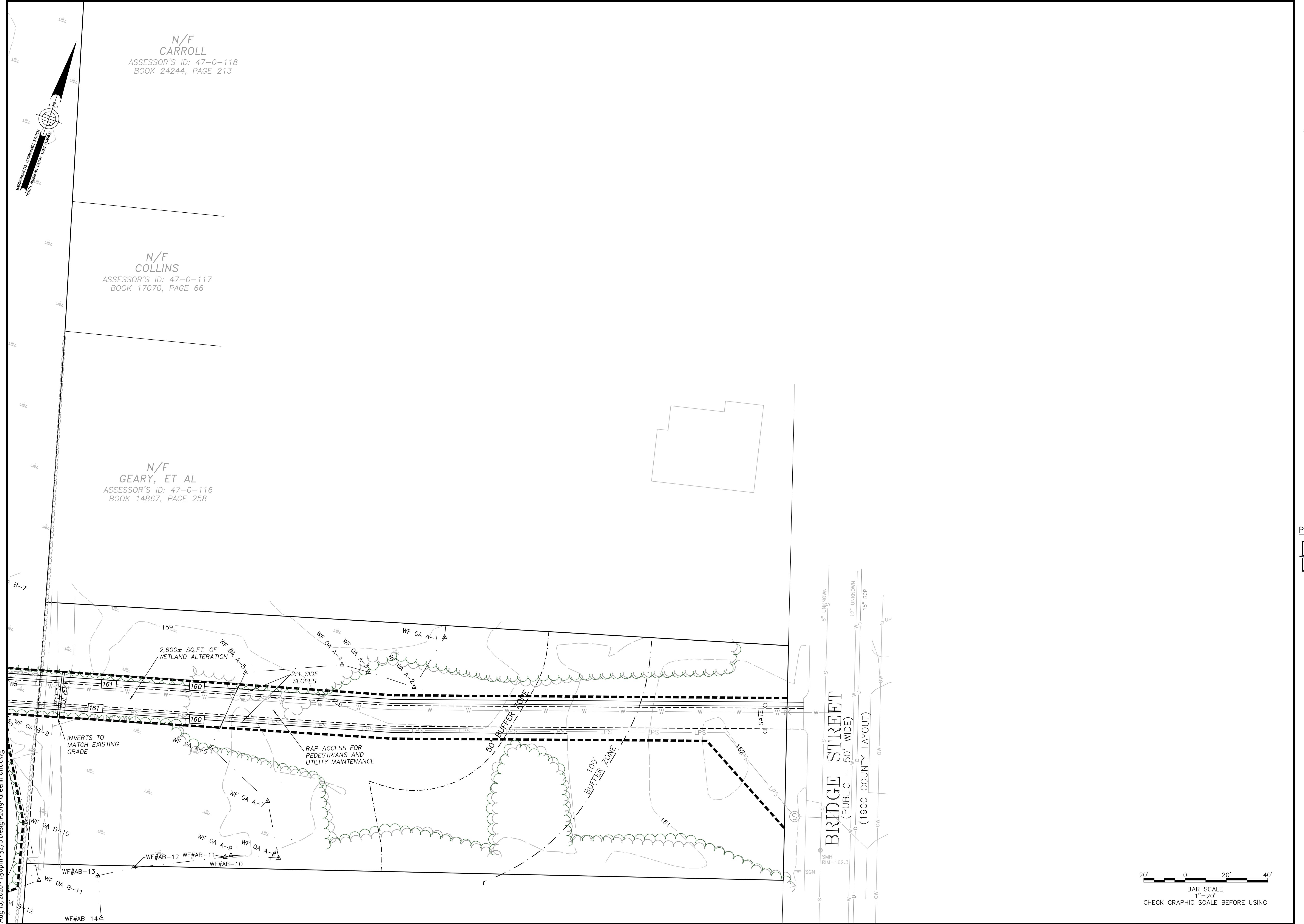
01 50% SCHEMATIC 10/23/19  
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03 REVIEW COMMENTS 8/13/2020

DRAWING TITLE  
GRADING AND  
DRAINAGE PLAN

SHEET NO. C-3.2

PROJECT NO. 5278

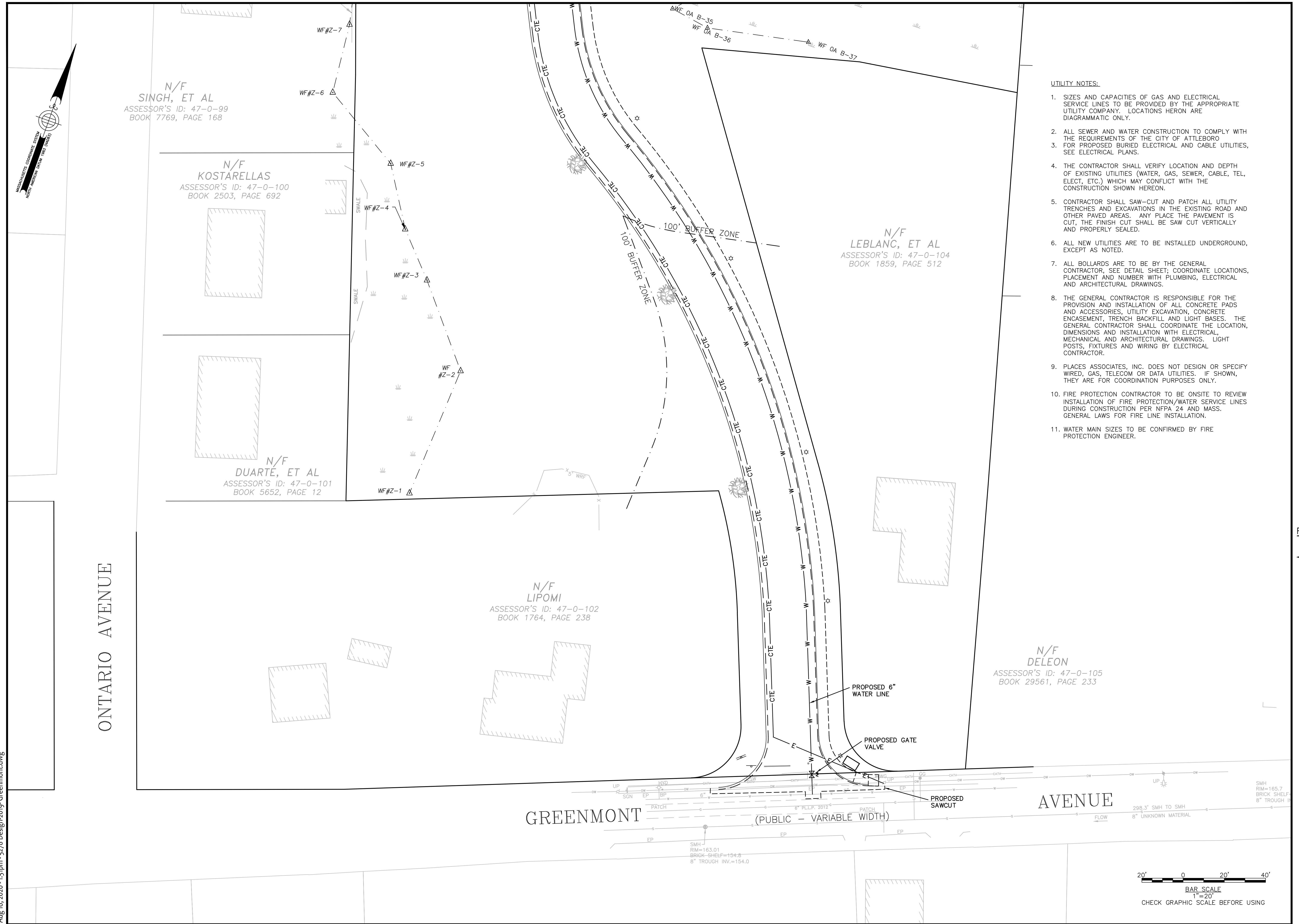
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## DRACUT CENTER SENIOR HOUSING

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**DRAWING TITLE**  
**UTILITY PLAN**

**SHEET NO.**

**C-4.0**

**PROJECT NO.** 5278

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Aug 16, 2020 - 1:52pm - 5278 Design-2019- Greenmont.dwg

N/F  
TOWN OF DRA  
ASSESSOR'S ID: 47-  
BOOK 1877, PAGE

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**MASSACHUSETTS COORDINATE SYSTEM  
NORTH AMERICAN DATUM 1983 (NAD83)**

**N/F TOWN OF DRACUT**  
ASSESSOR'S ID: 47-0-97  
BOOK 1877, PAGE 632

**N/F DOOLEY**  
ASSESSOR'S ID: 47-0-114  
BOOK 11224, PAGE 153

**N/F RICHARDSON**  
ASSESSOR'S ID: 47-0-113  
BOOK 24678, PAGE 55

**N/F BELL**  
ASSESSOR'S ID: 47-99-1  
BOOK 3745, PAGE 182

**N/F SINGH, ET AL**  
ASSESSOR'S ID: 47-0-99  
BOOK 7769, PAGE 168

**N/F H.G.R. NOMINEE TRUST**  
ASSESSOR'S ID: 47-0-112  
BOOK 5689, PAGE 118

MASSACHUSETTS COORDINATE SYSTEM  
NORTH AMERICAN DATUM 1983 (NAD83)

100' BUFFER ZONE

PROPOSED 8" WATER LINE

PROPOSED HYDRANT

PROPOSED 6" WATER LINE

WF OA C-14

WF OA C-15

WF OA C-16

WF OA C-17

WF#A-2

WF#A-1

WF#Z-9

WF#Z-8

IRON BARS

WF OA B-12

WF OA B-13

WF OA B-14

WF OA B-15

WF OA B-16

WF OA B-17

WF OA B-18

WF OA B-19

WF OA B-20

WF OA B-21

WF OA B-22

WF OA B-23

WF OA B-24

WF OA B-25

WF OA B-26

WF OA B-27

WF OA B-28

WF OA B-29

WF OA B-30

WF OA B-31

WF OA B-32

WF OA B-33

WF OA B-34

12" RCP INV=161.81

100' RCP

20' 0 20' 40'

BAR SCALE  
1'=20'

CHECK GRAPHIC SCALE BEFORE USING

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The logo for LACES Associates, Inc. is located in the top right corner. It features a stylized graphic of a green landscape with a blue mountain peak and a winding path. To the right of the graphic, the company name 'LACES Associates, Inc.' is written in a large, serif font. Below the name, the address '256 Great Road, Suite 100' and phone number '(978) 486-0334' are listed, along with the website 'www.placesassociates.com'.

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01	50% SCHEMATIC	10/23/2023
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**DRAWING TITLE**

**UTILITY PLAN**

**SHEET NO.**

**C-4.**

**PROJECT NO.** 5278  
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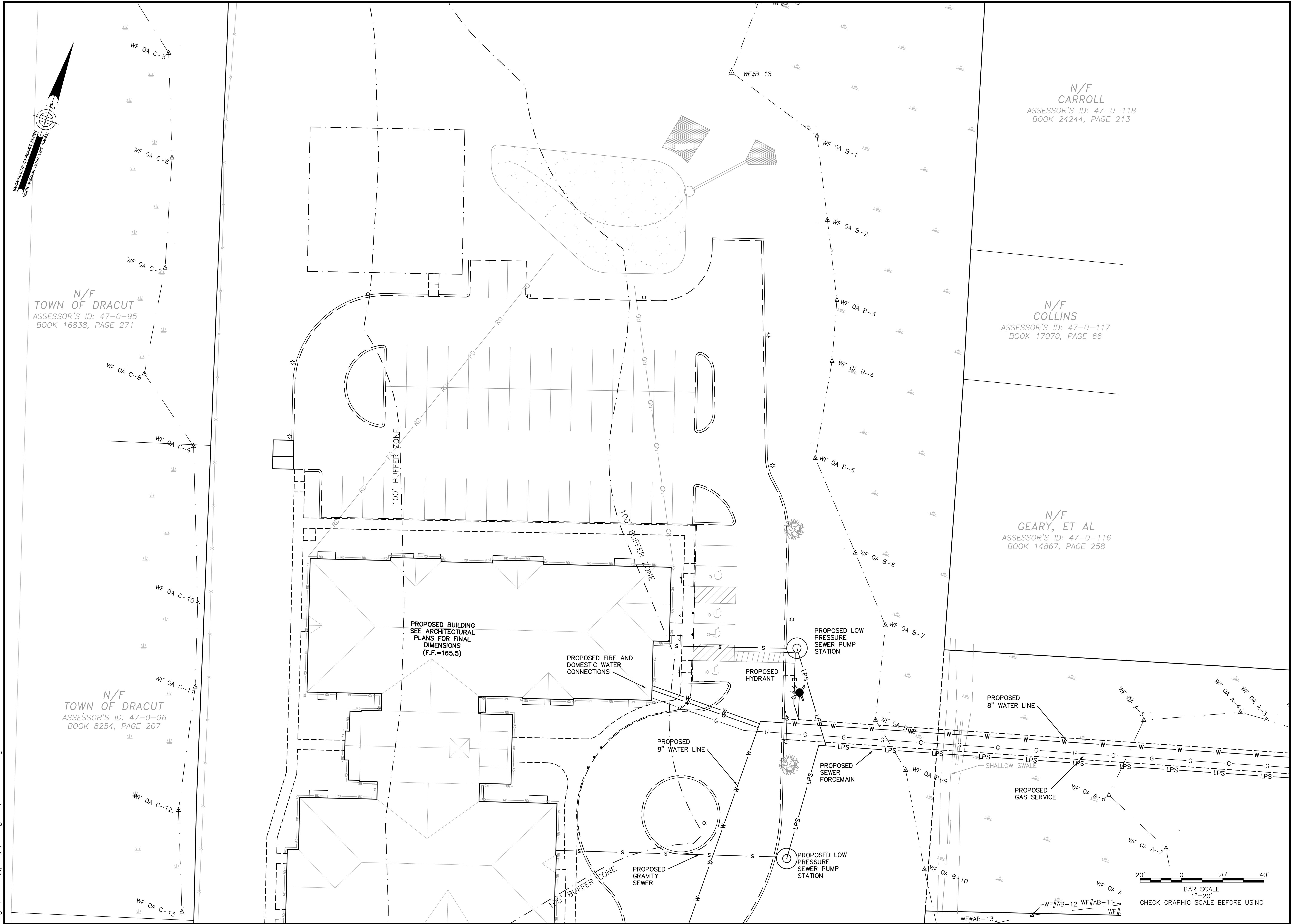
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**DRAWING TITLE**  
**UTILITY PLAN**

**SHEET NO.**

**C-4.2**

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# DRAINAGE SYSTEM OPERATIONS

# & MAINTENANCE PLAN EROSION & SEDIMENTATION CONTROL PLAN

## STORM WATER COLLECTION SYSTEM:

THE STORMWATER COLLECTION SYSTEM SERVING THIS SITE IS INTENDED TO BOTH COLLECT STORM WATER RUNOFF AND TO PROVIDE TREATMENT OF THE STORMWATER PRIOR TO ITS DISCHARGE. THIS SYSTEM COLLECTS RUNOFF GENERATED FROM THE SITE THROUGH THE USE OF STORMWATER BEST MANAGEMENT PRACTICES (BMP'S). WHEN THESE BASIC CONTROL MECHANISMS ARE FUNCTIONING PROPERLY THEY PROVIDE FOR A REDUCTION OF CONTAMINANTS AND DEBRIS ENTERING THE STORMWATER COLLECTION SYSTEMS, AND THEREFORE DOWNSTREAM RECEIVING WATERS/WETLANDS.

STORMWATER SYSTEMS RELY UPON PROPER MONITORING, OPERATIONS AND MAINTENANCE TO FUNCTION AS DESIGNED AND INTENDED. A PROGRAM OF MONITORING, OPERATIONS AND MAINTENANCE MUST BE ONGOING THROUGHOUT THE LIFE AND USE OF THE SITE, AND IS THE OWNER'S RESPONSIBILITY SOLELY. THESE ACTIVITIES, AS DESCRIBED BELOW, ARE TO BE INITIATED AFTER COMPLETION OF THE PROJECT AND ARE NOT RELATED TO THE CONSTRUCTION OF THE SITE, EXCEPT AS SPECIFICALLY PROVIDED. THIS PLAN IS SPECIFICALLY FOR SITE-RELATED ACTIVITIES, NOT ACTIVITIES WHICH ARE INFERIOR TO BUILDINGS, THOUGH THERE ARE NECESSARY IMPLICATIONS AND CORRELATIONS BETWEEN THE TWO.

## MONITORING:

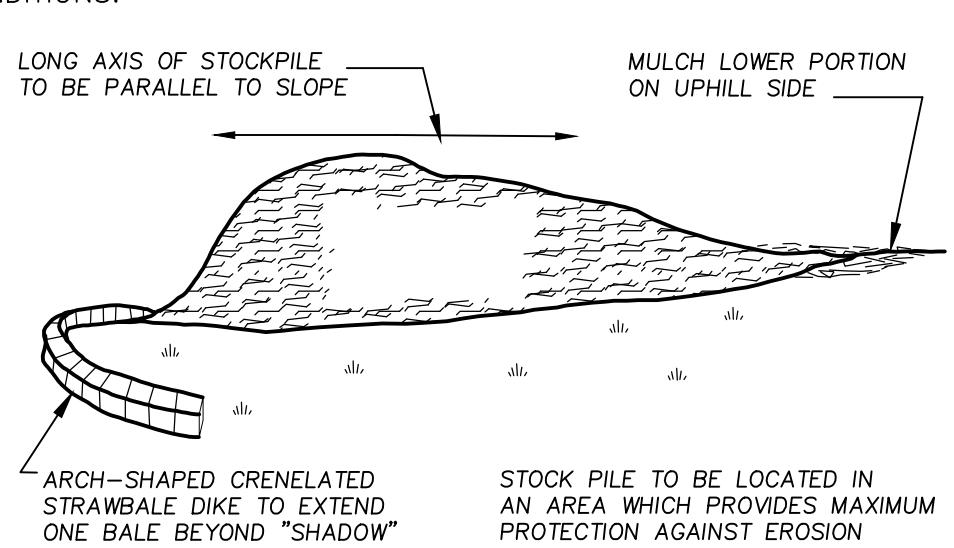
THE DRAINAGE SYSTEMS ARE REQUIRED TO BE MONITORED BY THE DESIGNATED SYSTEM MANAGER. THE NAME, ADDRESS AND DAY AND NIGHT (OR EMERGENCY) TELEPHONE NUMBER OF THIS PERSON OR ENTITY SHALL BE PROVIDED TO THE CITY/TOWN PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE OF CONSTRUCTION. THIS INDIVIDUAL SHALL BE REQUIRED TO KEEP A LOG OF ALL REQUIRED INSPECTIONS, OBSERVATIONS AND MAINTENANCE ACTIVITIES. DRAINAGE SYSTEM COMPONENTS SHALL BE REFERRED TO BY SPECIFIC LOCATION OR THE DESIGN PLAN DESIGNATION, (E.G. CTB # 10.) TO AVOID CONFUSION OR MISIDENTIFICATION THE LOG SHALL BE MADE AVAILABLE TO ANY MUNICIPAL OR STATE AGENCY HAVING JURISDICTION WITHIN TEN (10) DAYS OF A WRITTEN REQUEST BY THAT AGENCY.

## MONITORING FOR THIS SITE SHALL CONSIST OF THE FOLLOWING:

1. ALL CATCHBASINS SHALL BE INSPECTED TO ENSURE THEY ARE WATER-TIGHT (HOLDING WATER), HAVE ADEQUATE SUMP CAPACITY, ALL OIL/GAS TRAPS ARE IN-PLACE, ALL GRATES AND FRAMES ARE FREE FROM STRUCTURAL DAMAGE, AND ARE DRAINING FREELY. THIS MONITORING SHALL OCCUR AT A MINIMUM OF FOUR (4) MONTH INTERVALS (QUARTERLY).
2. ALL DRAINAGE MANHOLES SHALL BE INSPECTED TO ENSURE THAT THEY ARE WATER-TIGHT, ALL LIDS AND FRAMES ARE FREE FROM STRUCTURAL DAMAGE, ARE DRAINING FREELY AND ARE NOT PONDING WATER. THIS MONITORING SHALL OCCUR A MINIMUM OF ONCE PER YEAR.
3. OTHER DRAINAGE SYSTEMS SHALL BE INSPECTED TO ENSURE THAT NO EROSION IS OCCURRING AT OUTLETS, ALL OUTLETS ARE FREE-FLOWING AND NO DAMAGE HAS OCCURRED AS PART OF SITE MAINTENANCE OR ACTIVITIES.
4. PROVIDE MAINTENANCE AND MONITORING OF THESE AND OTHER COMPONENTS AS SPECIFIED IN THE OPERATION AND MAINTENANCE MANUAL (O&M).

## OPERATIONS:

1. GOOD HOUSE KEEPING AND MATERIAL MANAGEMENT REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF. A POLLUTION PREVENTION PLAN SHALL BE DEVELOPED WHICH SHALL INCLUDE THE FOLLOWING AT A MINIMUM:
  - 1.1. ALL MATERIALS STORED ON-SITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
  - 1.2. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
  - 1.3. SUBSTANCES SHOULD NOT BE MIXED WITH ONE ANOTHER, UNLESS RECOMMENDED BY THE MANUFACTURER.
  - 1.4. WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF A CONTAINER.
  - 1.5. THE SYSTEM'S MANAGER SHALL INSPECT THE SITE DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON-SITE, DURING ALL CONSTRUCTION PHASES.
  - 1.6. ORIGINAL MATERIALS LABELS AND MATERIAL SAFETY DATA SHEETS SHALL BE KEPT; THEY RETAIN IMPORTANT INFORMATION.
  - 1.7. ALL ON-SITE VEHICLES AND PARKING AREAS SHALL BE REGULARLY MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO PREVENT LEAKAGE.
  - 1.8. PETROLEUM PRODUCTS SHALL BE STORED UNDER COVER AND SHALL BE IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.
  - 1.9. FERTILIZERS SHALL ONLY BE USED IN THE MINIMUM AMOUNTS AS RECOMMENDED BY THE MANUFACTURER.
  - 1.10. THE CONTENTS OF ANY UNUSED FERTILIZER SHALL BE TRANSFERRED TO A CLEARLY LABELED, SEALABLE PLASTIC BIN, TO AVOID SPILLAGE.
  - 1.11. ALL PAINTS AND SOLVENTS SHALL BE STORED IN ORIGINAL MANUFACTURER'S CONTAINERS IN A COVERED LOCATION.
  - 1.12. THE USE OF PAINTS AND SOLVENTS SHALL, WHENEVER POSSIBLE, BE LIMITED TO SERVICE OR STORAGE BAYS AND NOT IN PARKING OR ACCESS WAYS THAT ARE TRIBUTARY TO THE DRAINAGE SYSTEM.
2. SPILL CONTROL PRACTICES:
  - 2.1. MANUFACTURER'S RECOMMENDED METHODS SHALL BE CLEARLY POSTED FOR SPILL CLEANUP AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF CLEANUP INFORMATION AND SUPPLIES.
  - 2.2. MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT ON-SITE IN A DESIGNATED MATERIAL STORAGE AREA. EQUIPMENT WILL INCLUDE, BUT NOT BE LIMITED TO, BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, ABSORBENT MATERIALS, SAND, SAWDUST AND PLASTIC & METAL TRASH CONTAINERS SPECIFICALLY KEPT AND LABELED FOR THIS PURPOSE.
  - 2.3. ALL SPILLS WILL BE CLEANED-UP IMMEDIATELY AFTER DISCOVERY.
  - 2.4. SPILLS OF TOXIC OR HAZARDOUS MATERIAL OF NATURE WILL BE REPORTED TO THE APPROPRIATE STATE, LOCAL OR FEDERAL AGENCY, AS REQUIRED BY-LAW.
  - 2.5. THE SPILL PREVENTION PLAN WILL INCLUDE PROVISIONS TO ADAPT THE PLAN TO ENSURE THAT SPILLS WILL NOT REOCUR, AND HOW TO CLEANUP THE SPILL IF THERE IS ANOTHER ONE.
3. SITE OPERATIONS AND DAILY USE SHALL CONSIDER THE ULTIMATE DISPOSITION OF STORMWATER AND OTHER SITE-GENERATED FORMS OF RUNOFF. THE WASHING OF VEHICLES SHALL BE LIMITED AREAS WITHIN THE BUILDING, AS THEY ARE SERVED BY THE FLOOR DRAIN SYSTEM. WASH WATER WITH ITS COMBINATION OF SOLVENTS, DETERGENTS AND OIL/GREASES SHOULD NOT BE ALLOWED TO ENTER ANY PART OF THE ON-SITE DRAINAGE SYSTEM.
4. SNOW PLOWING SNOW PLOWING OPERATIONS SHALL STOCKPILE SNOW, ICE AND ACCUMULATED MATERIALS IN AREAS WHERE SNOW MELT WILL FLOW INTO THE ON-SITE DRAINAGE SYSTEMS. NO PLOWING OR STORAGE OF SNOW INTO WETLANDS.
5. SALT USE SITE-WIDE SHALL BE APPLIED TO THE MINIMUM EXTENT POSSIBLE TO MAINTAIN SAFE CONDITIONS, AND ONLY IF NOT SPECIFICALLY EXCLUDED BY ANY SPECIAL CONDITIONS.



TEMPORARY STOCKPILE

## MAINTENANCE:

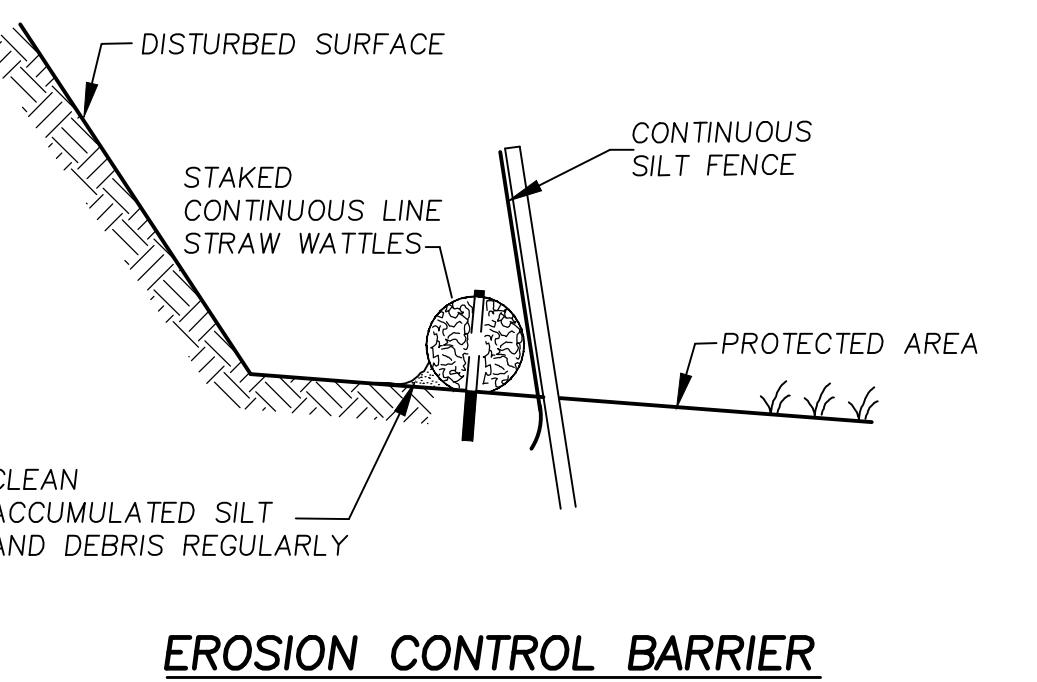
1. PARKING AREAS, ROAD AND ACCESS WAYS AND GUTTERS SHALL BE SWEEP CLEAN OF DEBRIS AND ACCUMULATION ON A REGULAR BASIS. AT A MINIMUM, A SPRING AND FALL CLEANING SCHEDULE IS RECOMMENDED.
2. ALL CATCHBASINS SHALL HAVE THE SUMPS CLEANED AT ANY TIME OF THE YEAR WHEN 2' OR LESS SPACE EXISTS BELOW THE OUTLET INVERT, OR A MINIMUM OF ONCE PER YEAR, REGARDLESS OF SUMP ACCUMULATION. ALL DEBRIS FROM THE CLEANING SHALL BE DISPOSED OF OFF-SITE AND IN A MANNER AS PROSCRIBED BY LAW.
3. ALL HYDROCARBON TRAPS SHALL BE CHECKED FOR PHYSICAL INTEGRITY AND SEALED IMMEDIATELY AFTER EACH CATCHBASIN CLEANING.
4. OIL ABSORBING "PILLOWS" OR OTHER MEANS SHALL BE USED TO REMOVE ACCUMULATIONS OF HYDROCARBONS (OIL/GREASE) IN CATCHBASINS THAT ARE REGULARLY OBSERVED TO CONTAIN HYDROCARBONS, WHICH DO NOT EVAPORATE BETWEEN INSPECTIONS.
5. ALL BROKEN, LEAKING OR OTHERWISE DAMAGED STRUCTURES SHALL BE REPAIRED PROMPTLY UPON DISCOVERY. CATCHBASIN GRATES OR MANHOLE LIDS SHALL BE REPLACED WITH SIMILAR WEIGHT AND LOADING CHARACTERISTIC REPLACEMENT PARTS.
6. ALL EROSION SHALL BE REPAIRED.
7. THE REPLACEMENT OF ANY PIPE OR DRAINAGE STRUCTURE SHALL MATCH THE ORIGINAL DESIGN SPECIFICATIONS.
8. PROVIDE MAINTENANCE AND MONITORING AS SPECIFIED IN THE OPERATION AND MAINTENANCE MANUAL (O&M).

## NPDES GENERAL NOTES:

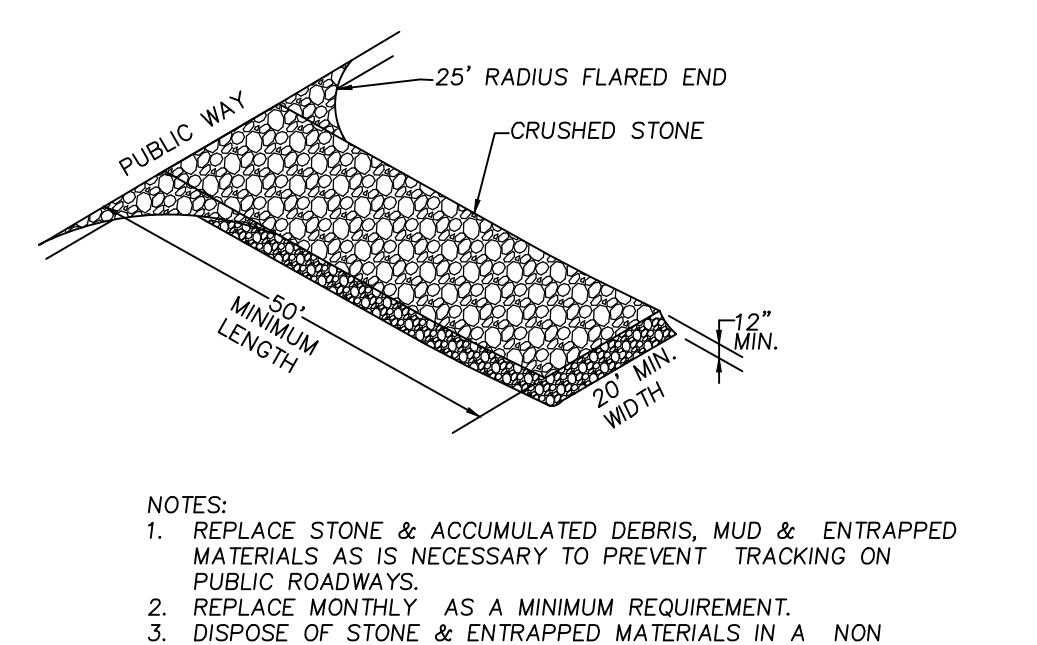
1. THIS PLAN IS INTENDED TO BE UTILIZED AS PART OF THE INFORMATION REQUIRED TOWARD MEETING THE NATIONAL STORM WATER POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) OF SECTION 402 OF THE FEDERAL CLEAN WATER ACT. THE CONSTRUCTION OF DRIVEWAYS, PARKING AREAS, BUILDINGS AND APPURTENANT STRUCTURES WILL RESULT IN MORE THAN 1 ACRE OF TOTAL DISTURBED AREA, REQUIRING THE SUBMITTAL OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THIS SITE.
2. IT IS ANTICIPATED THAT THE SITE AS DESIGNED WILL MEET THE CRITERIA FOR A NPDES GENERAL PERMIT. THE SUBMISSION OF THE NPDES NOTICE OF INTENT (NPDES NOI), THIS PLAN AND SUPPORTING DOCUMENTATION MUST BE POSTMARKED A MINIMUM OF TWO (2) WEEKS PRIOR TO THE INITIATION OF ANY SITE DISTURBANCE OR CONSTRUCTION, WHICH SHALL NOT COMMENCE UNTIL AN ORDER OF CONDITIONS HAS BEEN ISSUED.
3. A COPY OF THE NPDES SUBMITTAL AND THIS PLAN MUST BE KEPT ON-SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE MADE AVAILABLE TO ALL INTERESTED PARTIES.
4. RECORDS MUST BE MAINTAINED BY THE PERMITEE FOR A PERIOD OF THREE (3) YEARS FROM THE DATE OF STABILIZATION OF THE SITE. STABILIZATION OCCURS WHEN THE SITE HAS OVER 70% VEGETATIVE GROWTH AND/OR MECHANICAL STABILIZATION THROUGHOUT FOR ONE COMPLETE GROWING SEASON.
5. ALL INSPECTIONS SHALL BE CONDUCTED BY QUALIFIED PERSONNEL, WHO SHALL PRODUCE WRITTEN QUANTITATIVE AND QUALITATIVE REPORTS ON THE METHODS, SUITABILITY OF STRUCTURES AND THE GENERAL CONSTRUCTION.
6. INSPECTIONS ARE REQUIRED DURING SITE ALTERATIONS A MINIMUM OF ONCE EVERY SEVEN (7) DAYS WHILE SURFACES ARE UNSTABILIZED.
7. INSPECTIONS ARE REQUIRED WITHIN 24 HOURS OF STORMS WHICH PRODUCE 0.25" OF PRECIPITATION OR GREATER.
8. WHEN THE SITE IS FULLY STABILIZED, INSPECTIONS SHALL BE CONDUCTED AT MONTHLY INTERVALS FOR A PERIOD OF 3 YEARS OR AS SPECIFIED IN THE O&M AND OR SWPPP.

## LOCAL PERMITTING:

1. THIS PLAN IS PART OF A SET OF DOCUMENTS WHICH INCLUDE LOCAL PERMITS, LOCAL REVIEW AND MODIFICATIONS TO PROPOSED SWPPP'S CREATED BY THE ABOVE LISTED CRITERIA.
2. CONTRACTORS SHALL ACCOMMODATE LOCAL REVIEW TIMELINES AS PART OF ALL SUBMISSIONS FOR SWPPPS.



EROSION CONTROL BARRIER



TEMPORARY CONSTRUCTION ENTRANCE

## GENERAL:

1. THIS PLAN IS PART OF A SET OF DOCUMENTS THAT ARE TO BE VIEWED AND REVIEWED IN THEIR ENTIRETY, SUCH DOCUMENTS INCLUDE THE CONSTRUCTION SPECIFICATIONS, CONSTRUCTION PLANS AND ANY PERMITS ISSUED BY THE CITY/TOWN OR OTHER REGULATORY AGENCIES.
2. THIS IS A PERFORMANCE SPECIFICATION WHICH THE CONTRACTOR SHALL APPLY APPROPRIATE MEANS AND METHODS TO ACHIEVE.

## EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT EROSION AND SEDIMENTATION ARE CONTROLLED. THIS PLAN SHALL BE ADAPTED TO FIT THE CONTRACTOR'S EQUIPMENT, WEATHER CONDITIONS, AND ANY ORDERS OF CONDITIONS ISSUED BY THE CITY/TOWN OR ANY OTHER REGULATORY AGENCY.
2. THE MOST IMPORTANT ASPECTS OF CONTROLLING EROSION AND SEDIMENTATION ARE LIMITING THE EXTENT OF DISTURBANCE AND STABILIZING SURFACES AS SOON AS POSSIBLE. ONE SECONDARY IMPORTANCE IN EROSION CONTROL IS THE LIMITING THE SIZE AND LENGTH OF THE TRIBUTARY DRAINAGE AREA WITHIN THE WORK SITE AND DRAINAGE STRUCTURES. THESE FUNDAMENTAL PRINCIPLES SHALL BE THE KEY FACTOR IN THE CONTRACTOR'S CONTROL OF EROSION ON THE SITE.
3. THE EXISTING SOIL CONDITIONS PROVIDE THE POTENTIAL OF RUNOFF TO OFF-SITE AREAS WITH EROSION POTENTIAL.
4. THE CONTRACTOR SHALL CONSTRUCT TEMPORARY DIVERSION SWALES AND SETTLING BASINS IN AREAS OF FUTURE CONSTRUCTION. CONSTRUCTION IS PERMITTED BEYOND THE LIMIT OF DISTURBANCE ONLY WHEN ADDITIONAL DRAINAGE MEASURES OR STABILIZATION MEASURES ARE NEEDED, AND SHALL BE SUBJECT TO APPROVAL BY THE CITY/TOWN. PRIOR TO WORK OUTSIDE OF DESIGNATED LIMIT OF DISTURBANCE LINE, THE LIMIT OF DISTURBANCE LINE SHALL BE THE EROSION CONTROL BARRIER.
5. ALL DISTURBED SURFACES SHALL BE STABILIZED A MINIMUM OF 14 DAYS AFTER CONSTRUCTION IN ANY PORTION OF THE SITE HAS CEASED OR IS TEMPORARILY HALTED UNLESS ADDITIONAL CONSTRUCTION IS INTENDED TO BE INITIATED WITHIN 21 DAYS.
6. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ALL EROSION CONTROL DEVICES ON-SITE. ALL EROSION CONTROL DEVICES SHALL BE REGULARLY INSPECTED, ANY SEDIMENTS REMOVED FROM THE CONTROL DEVICES SHALL BE DISPOSED OF OUTSIDE OF THE 100' WETLANDS BUFFER ZONE.
7. AT NO TIME SHALL SILT-LADEN WATER BE ALLOWED TO ENTER SENSITIVE AREAS (WETLANDS, OFF-SITE AREAS AND DRAINAGE SYSTEMS). ANY RUNOFF FROM DISTURBED SURFACES SHALL BE DIRECTED THROUGH SETTLING BASINS AND EROSION CONTROL BARRIERS PRIOR TO ENTERING ANY SENSITIVE AREAS.

## PRE-CONSTRUCTION:

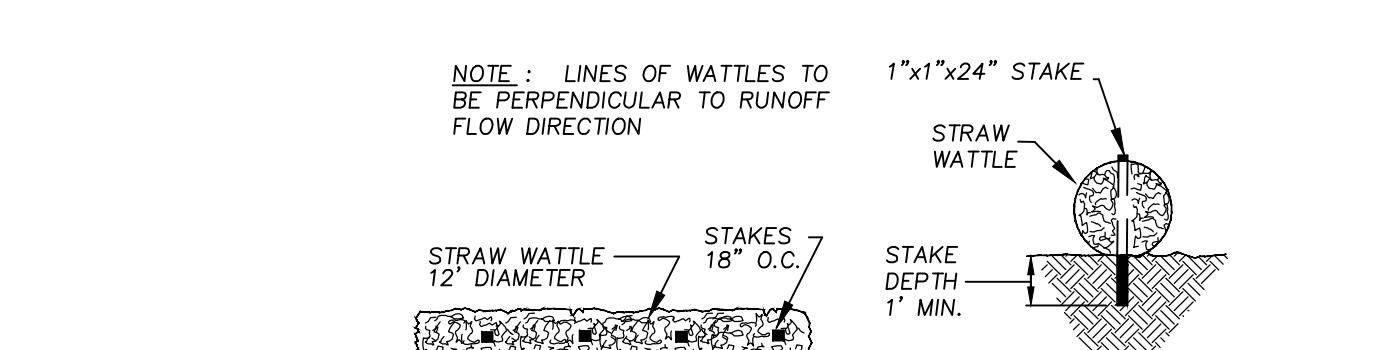
1. AN EROSION CONTROL BARRIER SHALL BE INSTALLED AS DEPICTED ON THE SITE PLAN, BETWEEN THE AREAS TO BE DISTURBED AND WETLAND AREAS. THIS BARRIER SHALL REMAIN IN PLACE UNTIL ALL TRIBUTARY SURFACES HAVE BEEN FULLY STABILIZED. THE EROSION CONTROL BARRIERS AS SHOWN ON THE SITE PLAN ARE THE MINIMUM REQUIRED TO PROTECT THE ON & OFF SITE DRAINAGE SYSTEMS.
2. PHOTOGRAPHS AND/OR VIDEO IMAGES OF THE PRE-CONSTRUCTION CONDITION OF THE SITE AND SURROUNDING AREAS, ESPECIALLY THE ADJACENT STREETS SHALL BE TAKEN, DEVELOPED AND DATED. A COPY OF THESE MATERIALS SHALL BE SUBMITTED TO THE PERMIT GRANTING AUTHORITY AND OWNER FOR THEIR FILES. THESE PICTURES AND IMAGES SHALL REFERENCE EXISTING SITE CONDITIONS AND PERMANENT REFERENCE MARKS TO ENABLE RECOGNITION OF THE AREA BEING PHOTOGRAPHED, AND SHALL REPRESENT A COMPREHENSIVE VIEW OF THE SITE PRIOR TO DEVELOPMENT.
3. THE CONTRACTOR SHALL ESTABLISH A STAGING AREA ON A PORTION OF THE AREA TO BE DISTURBED FOR THE OVERNIGHT STORAGE OF EQUIPMENT AND STOCKPILING OF MATERIALS. THE STAGING AREA SHALL BE OUTSIDE OF THE 100' WETLANDS BUFFER ZONE.
4. IN THE STAGING AREA, THE CONTRACTOR SHALL HAVE A STOCKPILE OF MATERIALS REQUIRED TO CONTROL EROSION ON-SITE TO BE USED TO SUPPLEMENT OR REPAIR EROSION CONTROL DEVICES. THESE MATERIALS SHALL INCLUDE, BUT ARE NOT LIMITED TO: STRAWBALES, SILT FENCE AND CRUSHED STONE.
5. A TEMPORARY STONE CONSTRUCTION ENTRANCE IS REQUIRED TO PREVENT TRACKING OF SILT, MUD, ETC. ONTO EXISTING ROADS. THE STONE SHALL BE REPLACED REGULARLY AS WELL AS WHEN THE STONE IS SILT LADEN OR EQUIPMENT IS OBSERVED TO BE TRACKING SOIL ONTO THE ROADWAYS.
6. THE CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL ON SITE AND SHALL UTILIZE EROSION CONTROL MEASURES WHERE NEEDED, REGARDLESS OF WHETHER THE MEASURES ARE SPECIFIED HEREIN, ON THE PLAN OR IN ANY ORDER OF CONDITIONS.

## PRELIMINARY SITE WORK:

1. MATERIAL REMOVED SHOULD BE STOCKPILED, SEPARATING THE TOPSOIL FOR FUTURE USE ON THE SITE. EROSION CONTROLS SHALL BE UTILIZED ALONG THE DOWNSLOPE SIDE OF THE PILES IF THE PILES ARE TO REMAIN MORE THAN THREE WEEKS OR SUBJECT TO EROSION CONDITIONS SUCH AS INTENSE RAIN, WIND OR OTHER EXPOSURE.
2. STOCKPILES SHALL BE LOCATED AS SPECIFIED HEREIN AND AS REQUIRED, SHOULD ADDITIONAL AREAS BE NEEDED THEY SHALL BE LOCATED WITHIN THE LIMITS OF DISTURBANCE, IN AREAS OF MINIMAL IMPACT. IF A STOCKPILE IS LOCATED ON A SLOPE, THE RUNOFF SHALL BE DIRECTED AWAY FROM THE PILE.
3. IF INTENSE RAINFALL IS ANTICIPATED, THE INSTALLATION OF SUPPLEMENTAL STRAWBALE DIKES, SILT FENCES, OR ARMORED DIKES SHALL BE UTILIZED.
4. IF THE SITE CONSTRUCTION OCCURS AT ANY TIME OTHER THAN THE MAY - NOVEMBER CONSTRUCTION SEASON, THE SITE DRAINAGE SYSTEM SHALL BE INSTALLED, MAINTAINING HYDRAULIC CAPACITY PRIOR TO ANY ROUGH GRADING IN THE BUFFER ZONE.
5. INLET SEDIMENT CONTROL DEVICES SHALL BE INSTALLED ON ALL CATCHBASINS ADJACENT TO THE LIMIT OF WORK, EVEN IF OUTSIDE THE DELINEATED LIMIT OF WORK. THE GENERAL CONTRACTOR SHALL MONITOR AND EMPTY AND/OR REPLACE ON AN AS NEEDED BASIS.

## DRAINAGE SYSTEM:

1. THE DRAINAGE SYSTEM SHALL BE INSTALLED FROM THE DOWNSTREAM END UP.
2. A SILT FENCE SHALL BE INSTALLED AT THE OUTFALL OF ALL TEMPORARY BASINS AND SWALES. IT SHALL REMAIN IN PLACE UNTIL ALL TRIBUTARY AREAS ARE STABILIZED.
3. WATER SHALL NOT BE ALLOWED TO ENTER PIPES FROM UN-STABILIZED SURFACES. SILT FENCE SHALL BE MONITORED, CLEANED & REPLACED AS NEEDED ON A REGULAR BASIS. SEE NPDES SWPPP REQUIREMENTS, IF APPLICABLE.
4. TRENCH EXCAVATIONS SHALL BE LIMITED TO THE MINIMUM LENGTH REQUIRED FOR DAILY PIPE INSTALLATION. ALL TRENCHES SHALL BE BACKFILLED AS SOON AS POSSIBLE. THE ENDS OF PIPES SHALL BE CLOSED NIGHTLY WITH PLYWOOD AND BACKER BOARD.
5. IF UNSTABLE AREAS ARE ENCOUNTERED DUE TO NATURAL SPRINGS OR GROUNDWATER BREAKOUT, INTERCEPTOR DRAINS SHALL BE INSTALLED TO DIRECT THE RUNOFF INTO THE DRAINAGE SYSTEM, SEE DETAILS.
6. IT IS IMPORTANT THAT THE BINDER COURSE, WITH BERMS, BE INSTALLED ON THE LIMITS OF THE PARKING LOT AND ACCESS ROADS AS SOON AS FEASIBLE AS THESE AREAS WILL FUNCTION AS A CONDUIT FOR RUNOFF.



STRAW WATTERS

## INSTALLATION OF UTILITIES:

1. CARE SHALL BE TAKEN TO ASSURE THAT THE UTILITY TRENCHES DO NOT CHANNELIZE RUNOFF TOWARDS EXISTING STREETS OR OTHER OFF-SITE AREAS.
2. THE INSTALLATION OF SUBSURFACE UTILITIES AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS.
3. TRENCH EXCAVATIONS SHALL BE LIMITED TO THE MINIMUM LENGTH REQUIRED FOR DAILY UTILITY INSTALLATION. ALL TRENCHES SHALL BE BACKFILLED AS SOON AS POSSIBLE.

## LANDSCAPING:

4. LANDSCAPING SHALL OCCUR AS SOON AS POSSIBLE TO PROVIDE PERMANENT STABILIZATION OF DISTURBED SURFACES.
5. CONTRACTOR SHALL UTILIZE A VARIETY OF SLOPE STABILIZATION METHODS AND MATERIALS WHICH SHALL BE ADJUSTED TO THE SITE CONDITIONS. EROSION CONTROL BLANKETS OR MIRAFI MIRAMAT (OR SIMILAR PRODUCTS) SHALL BE AVAILABLE ON SITE.
6. IF THE SEASON OR ADVERSE WEATHER CONDITIONS DO NOT ALLOW THE ESTABLISHMENT OF VEGETATION, TEMPORARY MULCHING WITH STRAW, TACKIFIED WOOD CHIPS OR OTHER METHODS SHALL BE PROVIDED.
7. A MINIMUM OF 6" TOPSOIL SHALL BE PLACED AND ITS SURFACE SMOOTHED TO THE SPECIFIED GRADES.
8. SEED APPLICATIONS SHALL BE IN ACCORDANCE WITH THE GRASS AND SLOPE COVER SPECIFICATIONS.

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## ISSUE

No. Description Date

01 50% SCHEMATIC 10/23/19

02 PERMIT SET 1/20/2020

03 REVIEW COMMENTS 8/13/2020

## DRAWING TITLE</h

## DRACUT CENTER SENIOR HOUSING

DRACUT, MA 01826

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AUGUST 13, 2020

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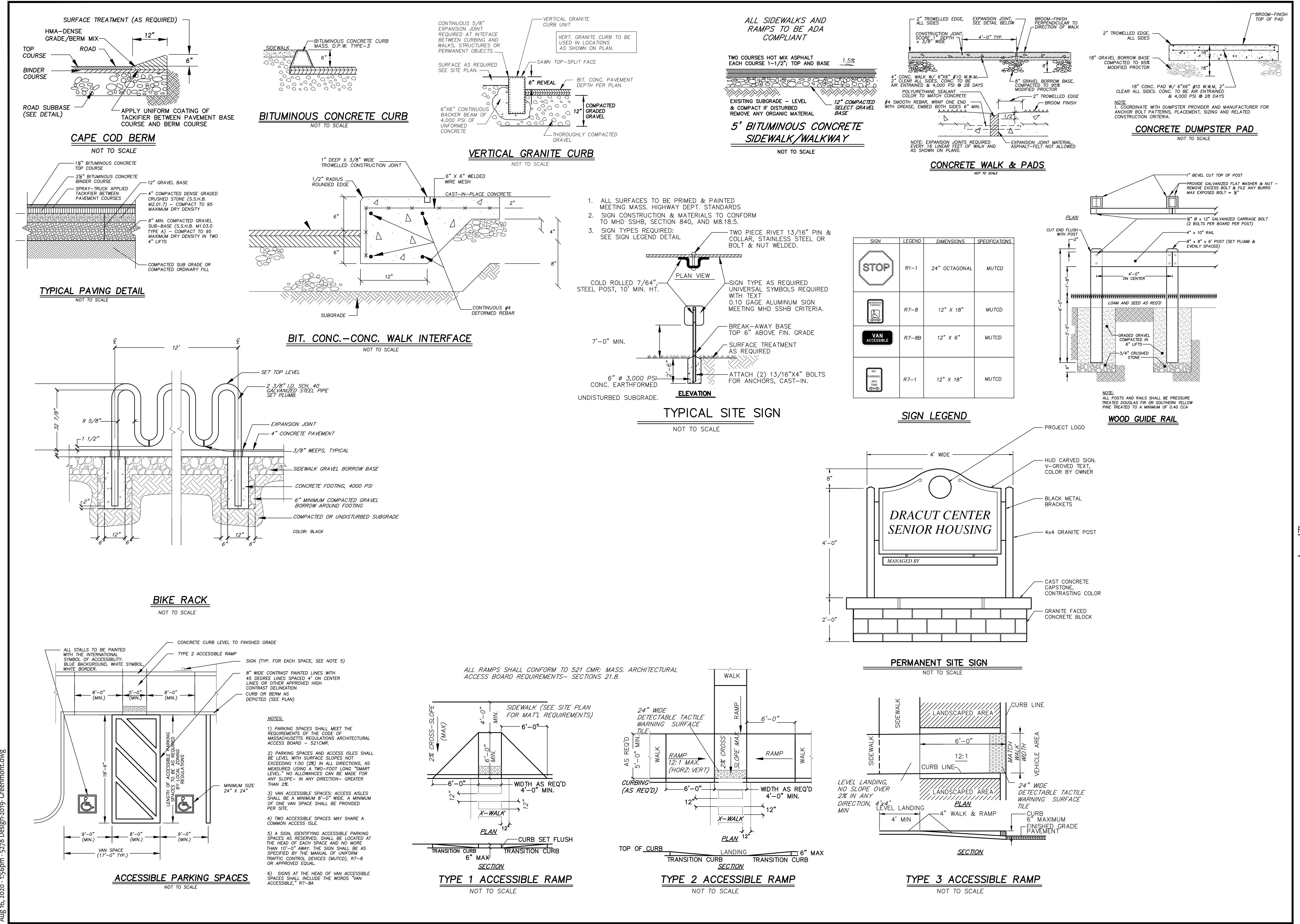
No.	Description	Date
01	50% SCHEMATIC	10/23/19
02	PERMIT SET	1/20/2020
03	REVIEW COMMENTS	8/13/2020

## CONSTRUCTION DETAILS

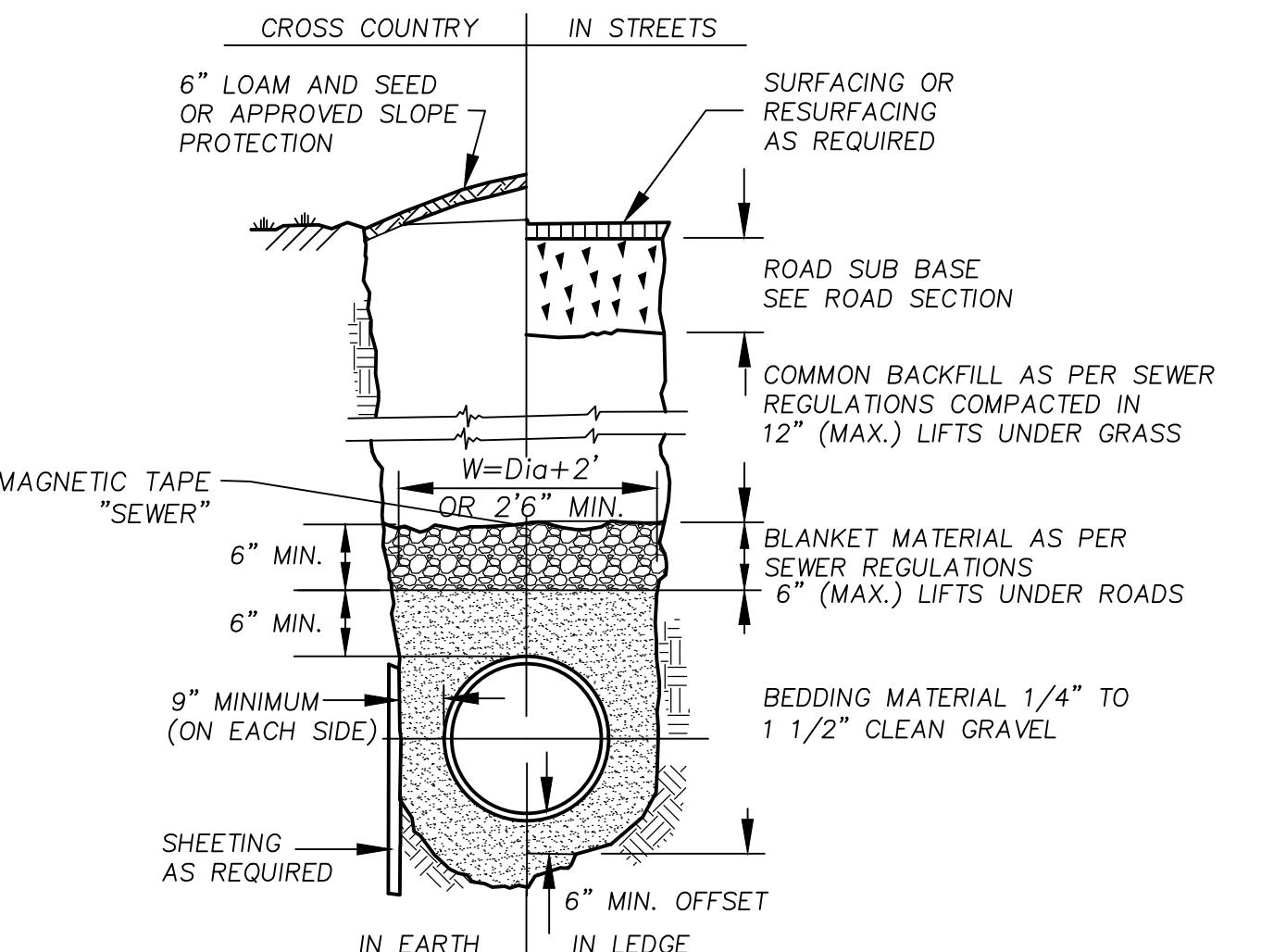
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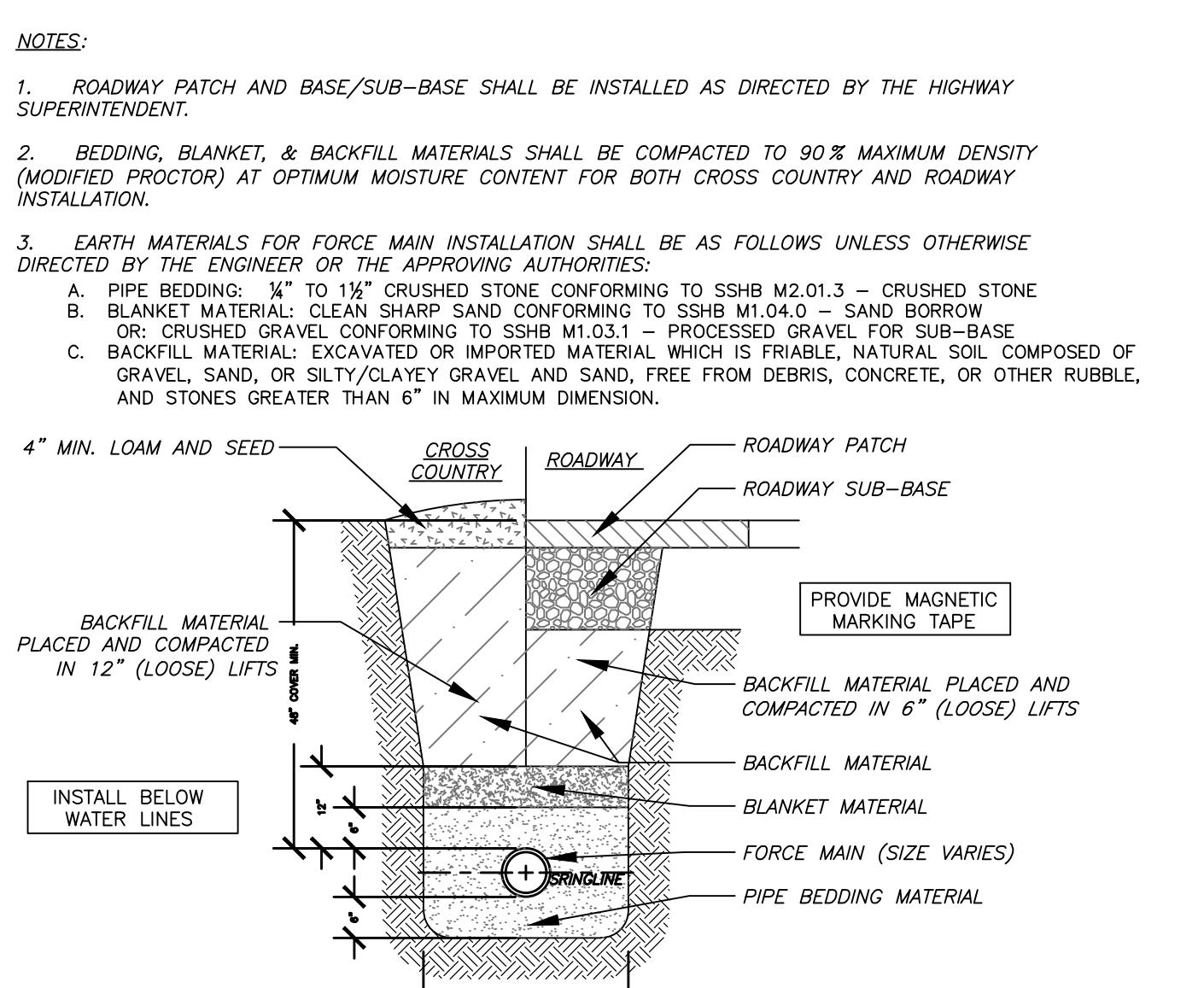






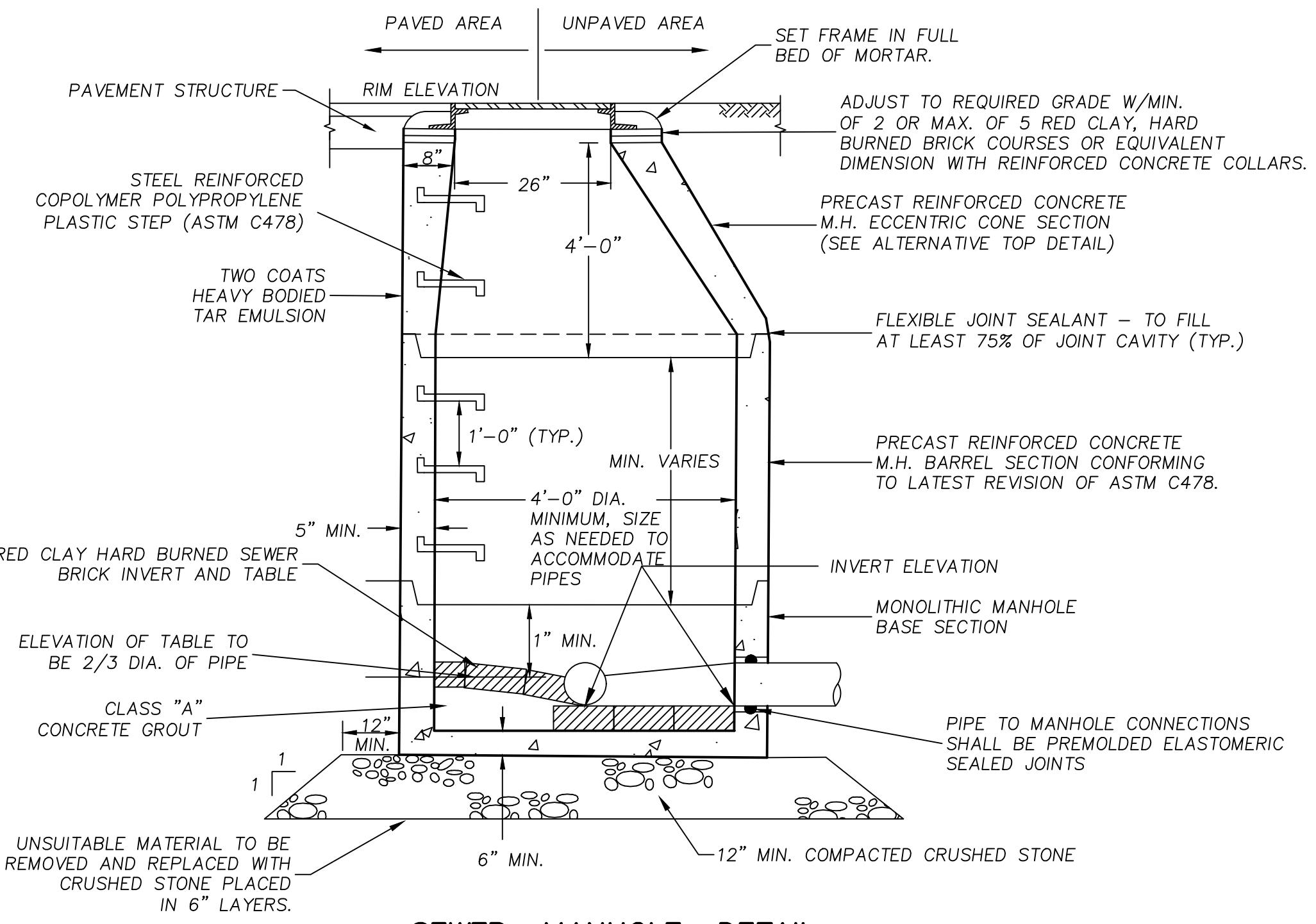
**TYPICAL SEWER TRENCH**

NOT TO SCALE



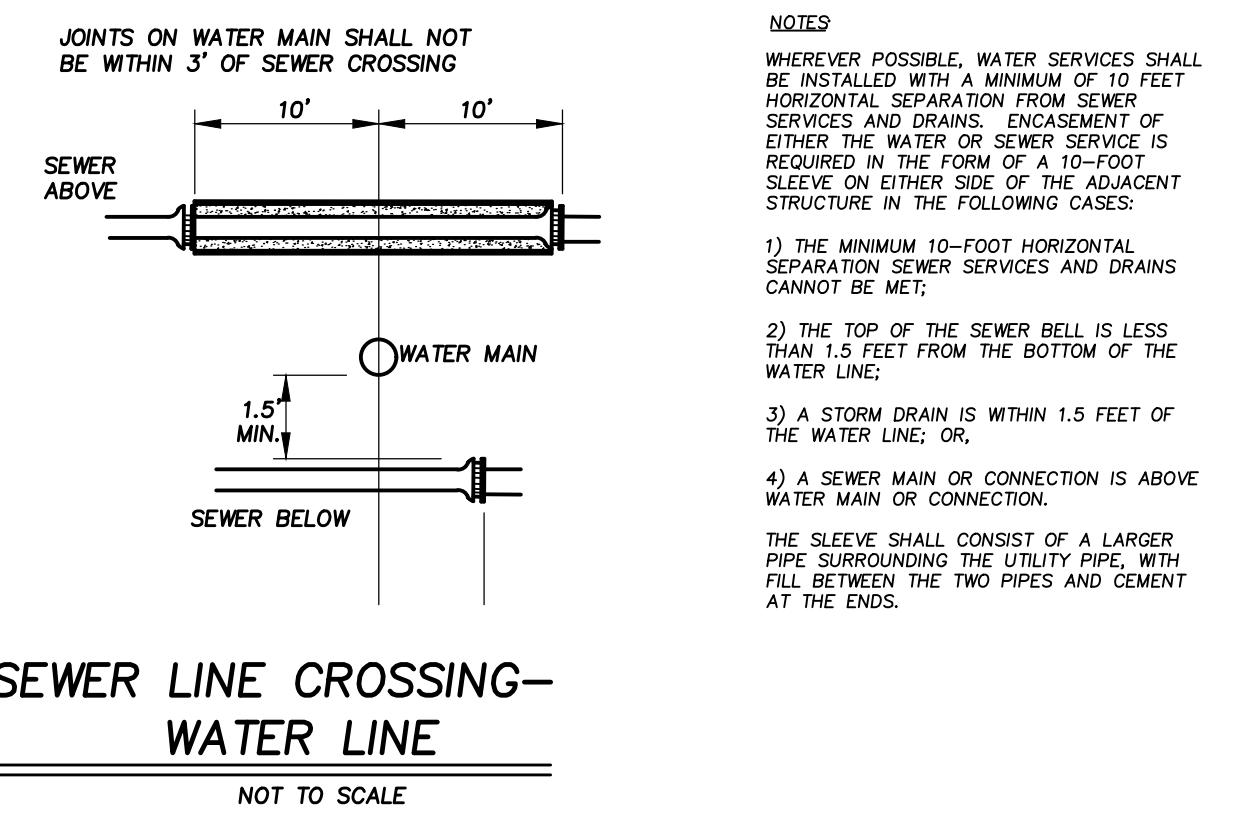
**LOW PRESSURE SEWER (LPS) LINE TRENCH**

NOT TO SCALE



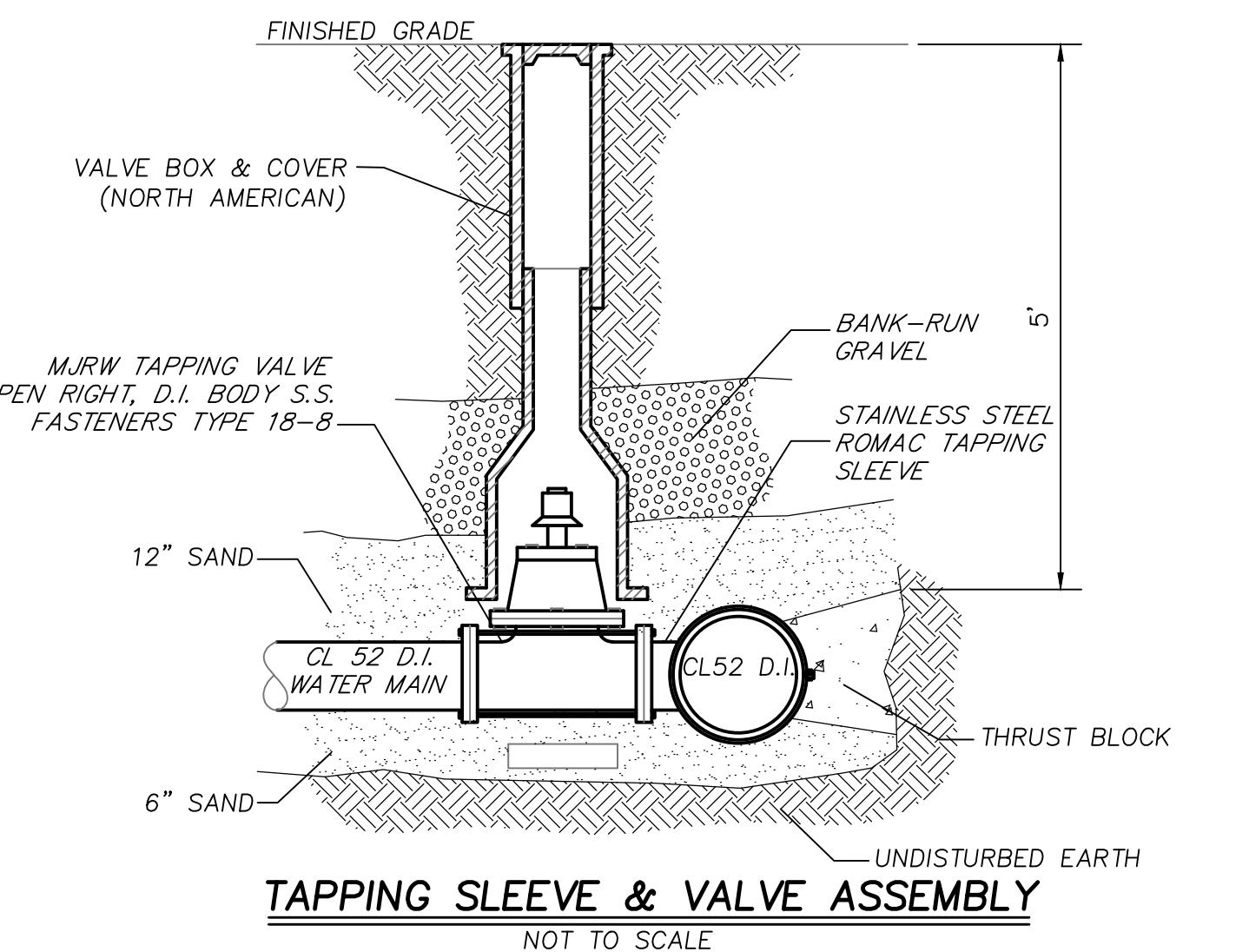
**SEWER MANHOLE DETAIL**

NOT TO SCALE



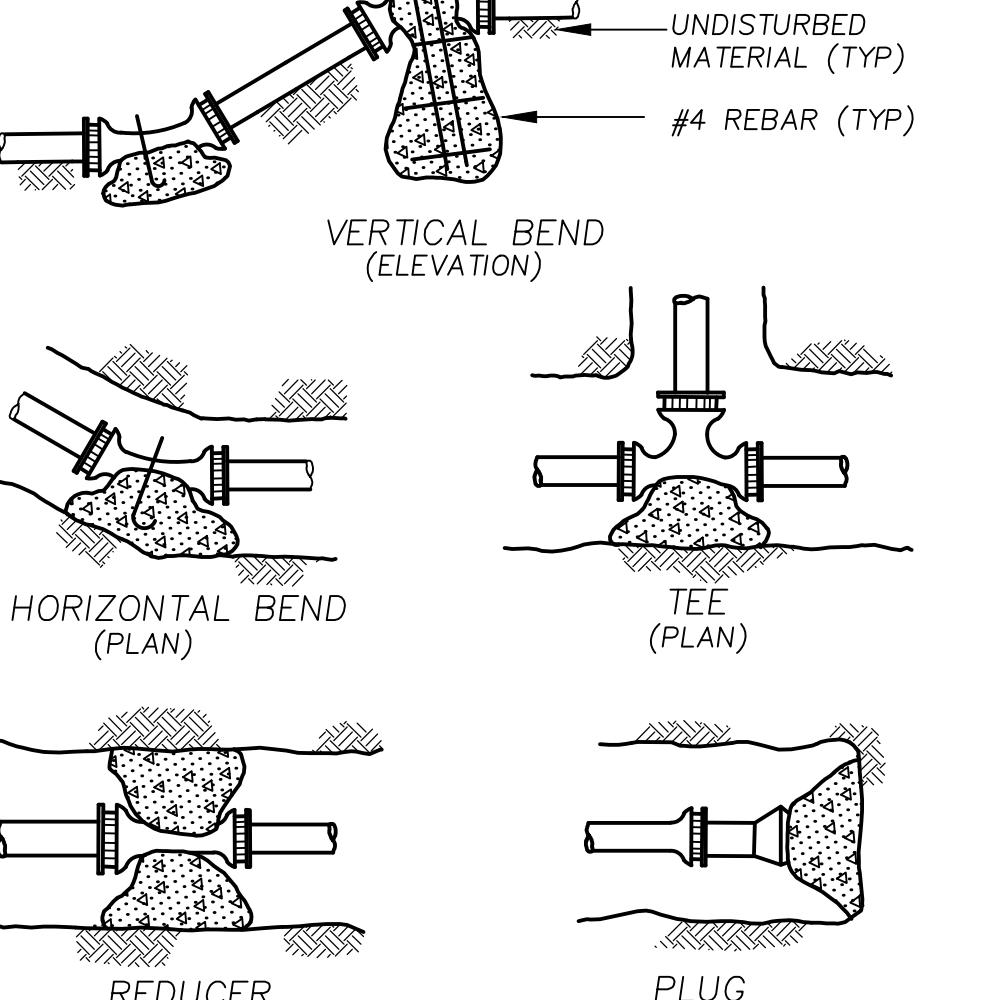
**SEWER LINE CROSSING-WATER LINE**

NOT TO SCALE



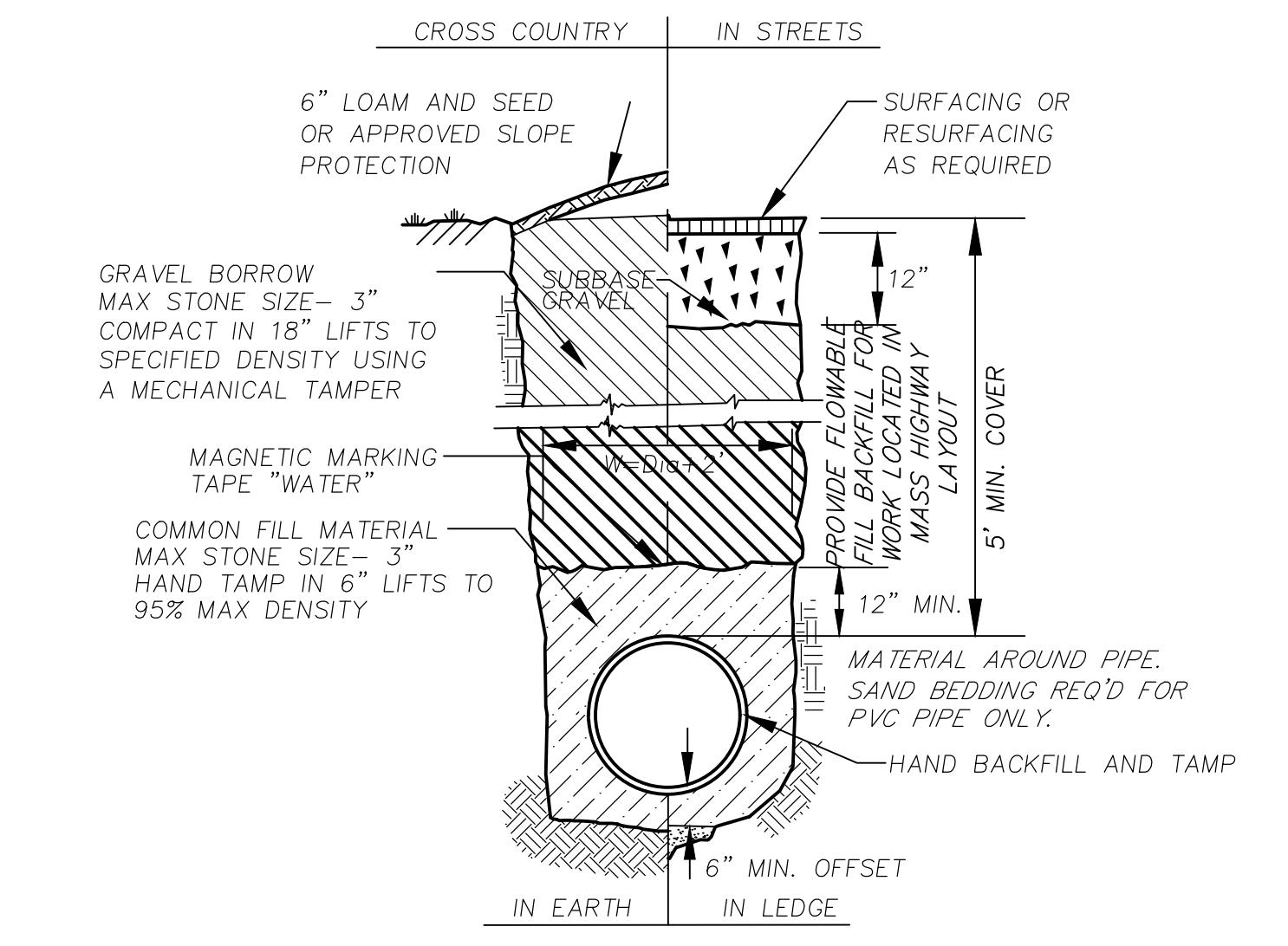
**TAPPING SLEEVE & VALVE ASSEMBLY**

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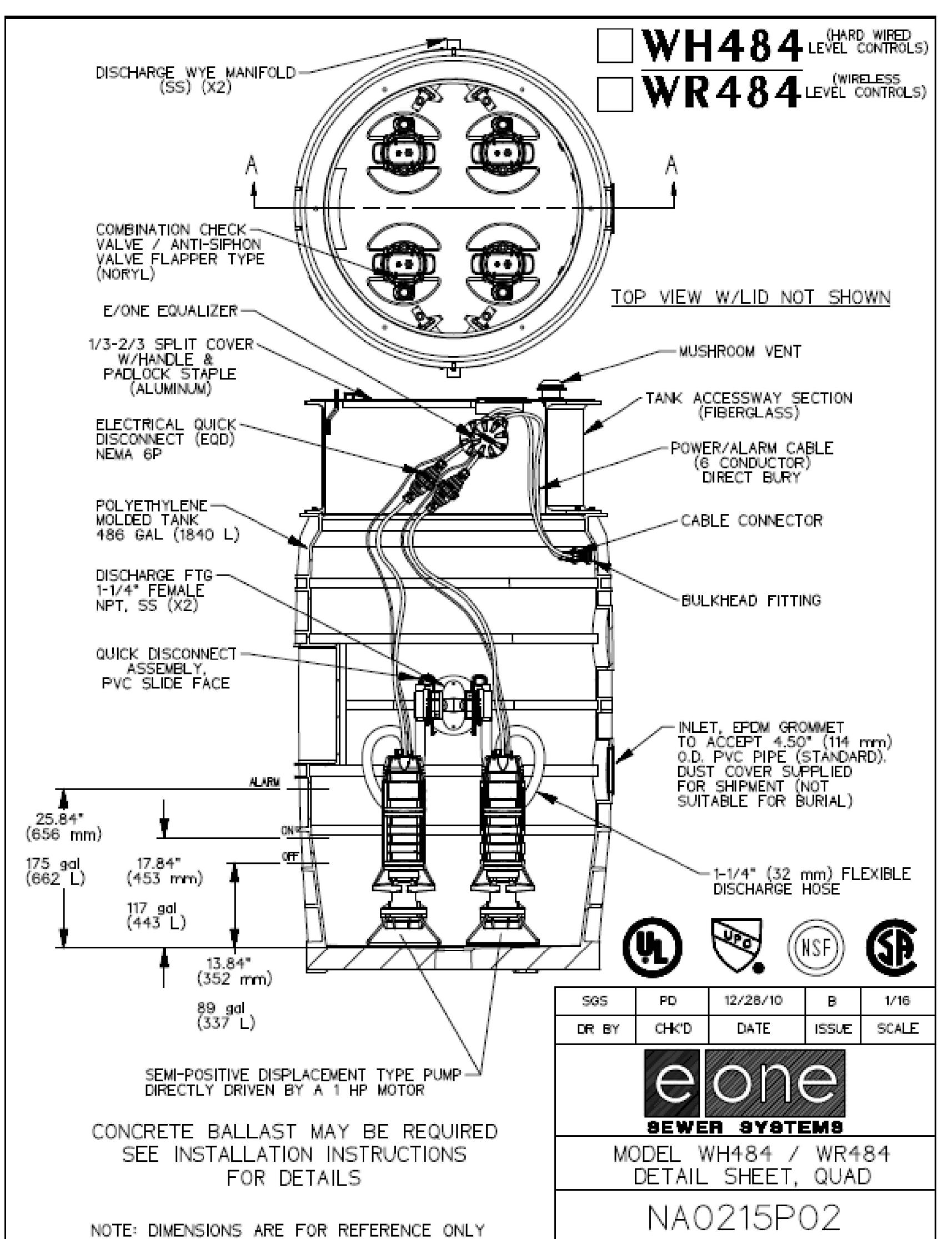
**THRUST BLOCK DETAILS**

NOT TO SCALE



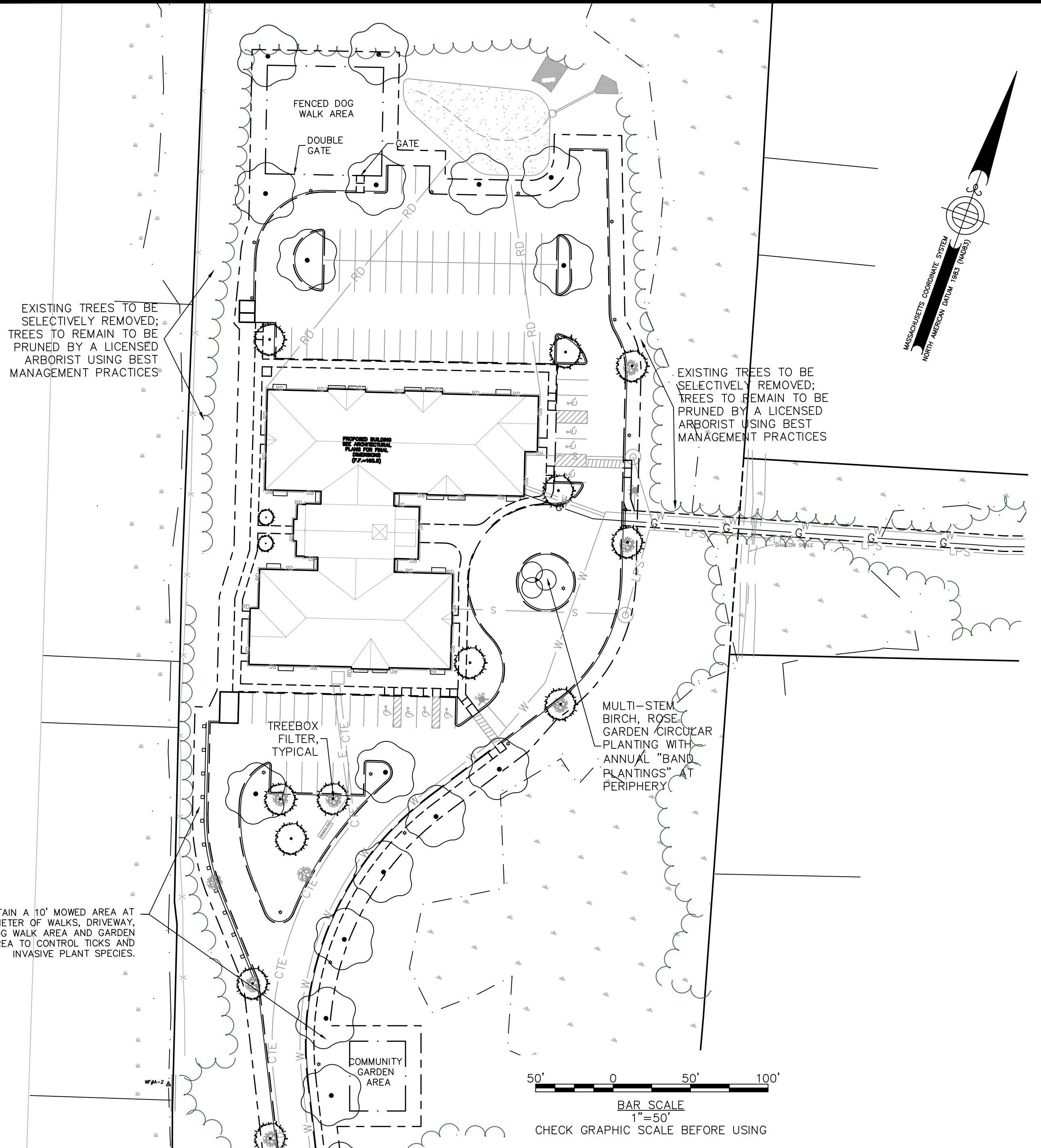
**TYPICAL WATER MAIN TRENCH**

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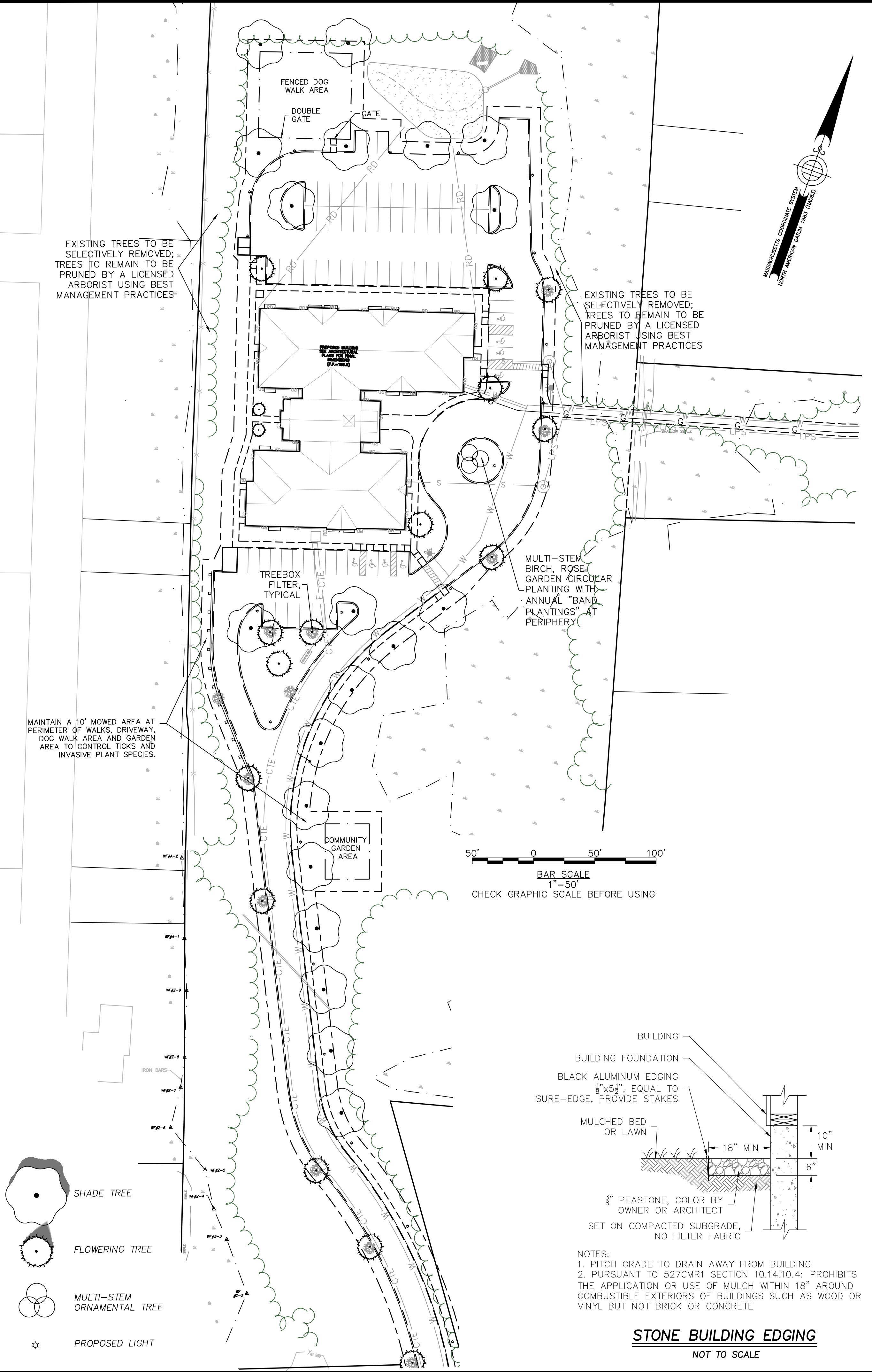


# DRACUT CENTER SENIOR HOUSING

DRACUT, MA 01826



Aug 16, 2020 - 158pm - 5278 Design-2019-Greenmont.dwg



## LANDSCAPE NOTES:

1. THE SPECIES AND VARIETIES LISTED SHALL BE ADHERED TO IN ALL CASES. WHERE A SUBSTITUTION IS PROPOSED, THE CONTRACTOR SHALL PROVIDE THE OWNER A LISTING OF COST DIFFERENTIALS AND ALL SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
2. SEE SITE PLANS AND PLANS WHICH DEPICT WORK OF OTHER TRADES FOR THE LOCATIONS OF BURIED UTILITIES, UNDERGROUND STRUCTURES AND OTHER OBSTACLES THAT MAY IMPACT THE PLANTING SHOWN HEREON.
3. PLANTING PLAN IS DIAGRAMMATIC IN NATURE. FINAL PLACEMENT OF PLANTS TO BE APPROVED BY THE LANDSCAPE ARCHITECT IN THE FIELD. CONTRACTOR SHALL ACCOMMODATE THIS IN BASE BID.
4. IN CASE OF CONFLICT BETWEEN LANDSCAPE PLAN AND PLANTING SCHEDULE, THE GREATER NUMBER OR LARGER QUANTITY SHALL BE PROVIDED.
5. NO PLANT MATERIAL SHALL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA, ANY TREES NOTED AS "SEAL OR SELECTED SPECIMEN" SHALL BE TAGGED AND SEALED BY THE LANDSCAPE ARCHITECT.
6. ALL TREES SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER'S REPRESENTATIVE AND LANDSCAPE ARCHITECT.
7. ALL PLANTS AND PLANTING METHODS SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF "RECOMMENDED STANDARD SPECIFICATION FOR PLANTINGS" AS COMPILED AND ISSUED BY THE ASSOCIATED LANDSCAPE CONTRACTORS OF MASSACHUSETTS. ALL PLANT BEDS AND TREE SAUCERS TO RECEIVE 4" OF PINE BARK MULCH. GROUND COVER AREAS SHALL RECEIVE 1" OF PINE BARK MULCH.
8. ANY FALL TRANSPLANTING HAZARD PLANTS SHALL BE DUG IN THE SPRING AND STORED FOR FALL PLANTING, UNLESS OTHERWISE APPROVED BY LANDSCAPE ARCHITECT.
9. TREES SHALL HAVE A MINIMUM CALIPER AS INDICATED ON THE PLANTING SCHEDULE TAKEN ONE FOOT ABOVE THE ROOT CROWN.
10. ALL PLANTS SHALL BE WARRANTED FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE BY THE LANDSCAPE ARCHITECT. SHOULD ANY PLANTS DIE, EXHIBIT UNDESIRABLE DIE-BACK OR DISEASE DAMAGE, THEY SHALL BE REPLACED, AT NO ADDITIONAL COST TO THE OWNER WITH PLANTS MEETING THE ORIGINAL SPECIFICATIONS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION OF ADEQUATE WATER SUPPLIES TO THE PLANT MATERIALS UNTIL ACCEPTANCE OF THE LANDSCAPE BY THE LANDSCAPE ARCHITECT HAS OCCURRED.
12. THE CALIPER OF ALL TREES SHALL BE MEASURED FOUR (4') FEET ABOVE THE ROOT BALL OR GROUND LINE, WHICHEVER IS HIGHER.
13. ALL DECIDUOUS TREES ADJACENT TO WALKWAYS AND ROADWAYS SHALL HAVE A BRANCHING PATTERN TO ALLOW FOR A MINIMUM OF 7' OF CLEARANCE BETWEEN THE GROUND AND THE LOWEST BRANCH.
14. ALL PARKING ISLANDS PLANTED WITH SHRUBS SHALL HAVE 18" OF TOP SOIL. FINISH GRADE SHALL BE EQUAL TO THE TOP OF CURB.
15. PLANTING SEASONS:  
SPRING SEASON:  
FOR ALL PLANTING IS FROM APRIL 1ST TO JULY 15TH  
FALL SEASON:  
FOR ALL EVERGREEN MATERIALS IS FROM AUGUST 15TH TO NOVEMBER 15TH  
FOR ALL DECIDUOUS TREES, SHRUBS AND GROUND COVERS IS FROM AUGUST 15TH TO NOVEMBER 1ST.
16. FERTILIZER USE & APPLICATION SHALL CONFORM TO 330 CMR 31.00 FOR NON-AGRICULTURAL APPLICATION OF NITROGEN FERTILIZERS. SOIL SAMPLES, TESTS, AND SHOP DRAWINGS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT OR THE OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
17. CONTRACTOR RESPONSIBLE FOR ALL LAWN AND PLANTED GROUND COVER AREAS AND WATERING, AND RESEEDING OF BARE SPOTS UNTIL A UNIFORM STAND OF VEGETATION IS ESTABLISHED AND ACCEPTED.
18. ALL SLOPES IN EXCESS OF 3:1 (HORIZONTAL TO VERTICAL) SHALL BE STABILIZED SLOPES, SEE THE PROVISIONS OF SPECIFICATION SECTION-EROSION AND SEDIMENTATION CONTROL AND RELATED SECTIONS.
19. A MINIMUM 18" WIDE BARRIER OF 1" GRAY OR TAN PEASTONE SHALL BE INSTALLED IN ALL PLANT BED WHICH ABUT THE BUILDINGS. NO MULCH IS ALLOWED WITHIN 18" OF ALL BUILDINGS PER THE LATEST EXECUTIVE OFFICE OF PUBLIC SAFETY AND SECURITY DEPARTMENT OF FIRE SERVICES REGULATION (527 CMR 17.00). INSTALL 6" DEEP OF PEASTONE WITH MIRAFI WEED FABRIC BEHIND AND STEEL EDGING BETWEEN THE PEASTONE AND ADJACENT MULCH BED.  
EXCEPTION: ANY BUILDING, REGARDLESS OF THE EXISTENCE OF FIRE SEPARATIONS, CONTAINING SIX DWELLING UNITS OR LESS.

## SEEDING NOTES:

1. ALL DISTURBED AREAS, INCLUDING SLOPES AND THE DETENTION BASIN, SHALL BE GRADED AND STABILIZED BY PLANTING OR OTHER METHOD AS SHOWN OR SPECIFIED ON THE PLANS.
2. A MINIMUM OF 6" OF LOAM SHALL BE APPLIED TO ALL SURFACES TO BE SEDED. LOAM SHALL BE UNIFORMLY APPLIED, SHAPED AND SMOOTHED.
3. LOAM ACIDITY SHALL BE CHECKED AND ADJUSTED TO A PH OF 6.5, APPLY LIME AT A MINIMUM RATE OF 50 LBS PER 1,000 SQUARE FEET, IF NECESSARY. (IF PERMITTED BY THE ORDERS OF CONDITIONS ONLY).
4. ORGANIC-SLOW RELEASE FERTILIZER OF A TYPE 5-2-2 APPLIED AT A RATE OF 50 LBS PER 500 SQUARE FEET. (IF PERMITTED BY THE ORDERS OF CONDITIONS ONLY).
5. RAKE A SEED BED USING A YORK RAKE OR HAND RAKING TO A MINIMUM DEPTH OF 3"
6. SEEDING MAY BE PERFORMED BY HAND, MECHANICAL OR TRACTOR MOUNTED SPREADER. HYDROSEEDING IS RECOMMENDED.
7. SEEDING BEFORE APRIL 15 OR AFTER OCTOBER 15, SHALL BE REAPPLIED BETWEEN THESE DATES IF A MINIMUM GERMINATION OF 90% DETERMINED BY SURFACE AREA COVERAGE, HAS NOT OCCURRED OR IF THE SURFACE AREA HAS ERODED OR BECOME UN-STABILIZED.
8. SEEDING:  
8.1. HAND SEEDING:  
8.1.1. SEED SHALL BE APPLIED BY HAND OR BROADCAST SPREADER TO PROVIDE A UNIFORM DISTRIBUTION OF SEED.  
8.1.2. SEED SHALL BE LIGHTLY RAKED INTO A DEPTH OF 1/2"-1", WITH ALL RAKING TO BE PERPENDICULAR TO THE SLOPE.  
8.1.3. SEED IS TO BE ROLLED WITH A WATER BALLAST ROLLER TO INSURE CONTACT OF SEED WITH SOIL, DO NOT COMPACT SOIL.  
8.1.4. AREA SHALL BE MULCHED USING SEED-FREE STRAW TO ADEQUATELY COVER THE AREA TO A DEPTH OF 1/2"-1", INSURING A UNIFORM COVER OF 75% OF THE SURFACE AREA.  
8.1.5. MULCH SHALL BE SECURED BY MEANS OF SECURED LANDSCAPE FABRIC, EROSION CONTROL NETTING (3/4" - 1" MESH), OR OTHER BIODEGRADABLE MATERIAL WHICH WILL INSURE ADEQUATE COVER UNTIL THE SURFACE HAS GROWN TO 90% GERMINATION, OR ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
- 8.2. HYDROSEEDING:  
8.2.1. HYDROSEEDING IS ENCOURAGED FOR ALL AREAS, ESPECIALLY FOR LARGE AREAS AND STEEP SLOPES.  
8.2.2. HYDROSEEDING SHALL BE PERFORMED IN A SINGLE UNIFORM LAYER.  
8.2.3. A TRACK EQUIPPED MACHINE SHALL TRAVEL PERPENDICULAR TO ANY SLOPE TO PROVIDE SHALLOW COMPACTED SURFACE DEPRESSIONS FOR HYDROSEEDING TO CATCH. SUCH TRACKS SHALL BE A MINIMUM OF THREE (3') FEET ON CENTER FOR THE TOTAL LENGTH OF THE SLOPE.  
8.2.4. APPLICATION RATES ON SLOPES GREATER THAN 3:1 (HORIZONTAL TO VERTICAL) OR GREATER SHALL HAVE A MINIMUM SEEDING RATE OF 4LBS/1000SF.  
8.2.5. A LATEX OR FIBER TACKIFIER SHALL BE USED ON ALL AREAS AT THE RATE RECOMMENDED BY THE MANUFACTURER AND ON ALL SLOPES IDENTIFIED ABOVE (NO. 4), A MINIMUM RATE OF 50LBS OF TACKIFIER PER 500GALS OF WATER SHALL BE USED.  
8.2.6. FERTILIZER AND LIME MAY BE INCORPORATED INTO THE HYDROSEED MIXTURE IN THE QUANTITIES AND TYPE IDENTIFIED PREVIOUSLY. (IF PERMITTED BY THE ORDERS OF CONDITIONS ONLY).
9. SEED MIXTURE:  
9.1. ALL SEED SHALL BE OF THE PREVIOUS YEAR'S CROP AND SHALL HAVE A QUANTIFIED MIXTURE ANALYSIS ATTACHED. NO MORE THAN 10% OF TOTAL MIXTURE SHALL CONSIST OF WEED SPECIES.  
9.2. SEED MIXTURE TYPE "A": SEED MIXTURES FOR LAWN AREAS SHALL CONSIST OF A STANDARD LAWN MIX CONTAINING A MINIMUM OF 30% PERENNIAL SPECIES, AND SHALL CONFORM TO THE FOLLOWING STANDARDS:  
MINIMUMS (BY TOTAL WEIGHT OF MIX):  
40% KENTUCKY BLUEGRASS  
20% CHEWING FESCUE  
20% PERENNIAL RYEGRASS  
20% ANNUAL RYE OR OTHER ANNUAL SPECIES\*

\* NO MORE THAN 20% OF THE TOTAL MIX, BY WEIGHT, SHALL CONSIST OF ANNUAL RYE OR OTHER ANNUAL SPECIES. APPLY AT A RATE OF 4 LBS PER 1,000 SQUARE FEET, OR 170 LBS. PER ACRE.

- 9.3. SOD: SEE SPECIFICATIONS
- 9.4. SEED MIXTURE TYPE "C": SEED MIXTURES FOR SLOPED AREAS SHALL CONSIST OF A STANDARD CONSERVATION MIX CONFORMING TO THE RECOMMENDATIONS OF THE U.S. NATURAL RESOURCES SERVICES GUIDELINES (FORMERLY THE SOIL CONSERVATION SERVICE, SCS) AND SHALL CONFORM TO THE FOLLOWING STANDARDS:  
MINIMUMS (BY TOTAL WEIGHT OF MIX):  
20% ANNUAL RYE\*  
15% RED TOP FESCUE  
10% WHITE CLOVER  
5% LADINO CLOVER  
\*NO MORE THAN 40% OF THE TOTAL MIX, BY WEIGHT, SHALL CONSIST OF ANNUAL RYE OR OTHER ANNUAL SPECIES. APPLY AT A RATE OF 4 LBS PER 1,000 SQUARE FEET.
- 9.5. SEED MIXTURE TYPE "D": BASIN MIX SHALL BE AS MANUFACTURED BY NEW ENGLAND WETLANDS PLANTS, INC., AMHERST, MA, "WET MIX".
- 9.6. WILDFLOWER MEADOW MIX SHALL BE "NEW ENGLAND WILDFLOWER MIX" BY NEW ENGLAND WETLANDS PLANTS, INC, AMHERST, MA, OR "NATIVE NORTHEAST WILDFLOWER SEED MIX" BY AMERICAN MEADOWS, WILLISTON, VT

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No.	Description	Date
01	50% SCHEMATIC	10/23/19
02	PERMIT SET	1/20/2020
03	REVIEW COMMENTS	8/13/2020

DRAWING TITLE  
LANDSCAPE  
PLAN

SHEET NO.

L-1

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## DRACUT CENTER SENIOR HOUSING

DRACUT, MA 01826

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AUGUST 13, 2020



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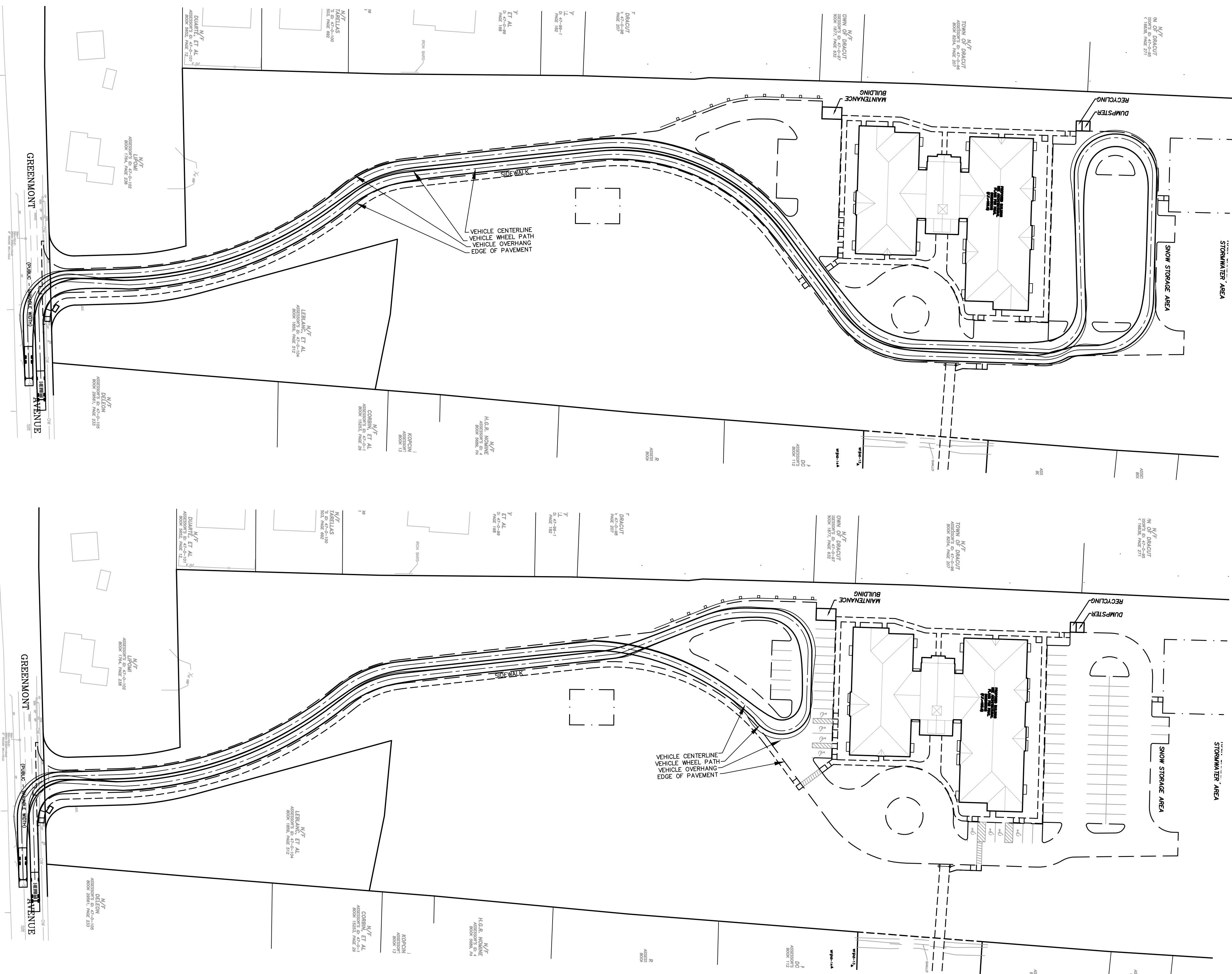
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01	50% SCHEMATIC		10/23/19
02	PERMIT SET		1/20/2020
03	REVIEW COMMENTS		8/13/2020

DRAWING TITLE  
TURNING  
MOVEMENTS  
PLAN

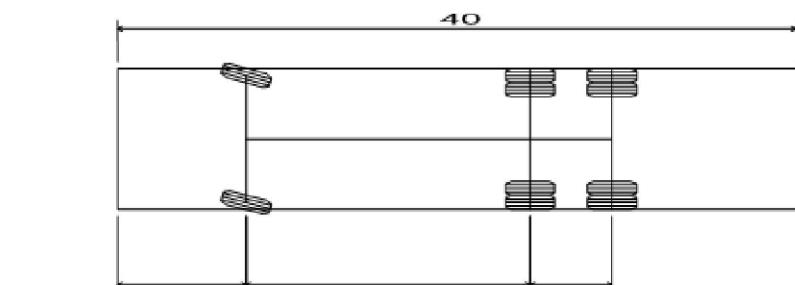
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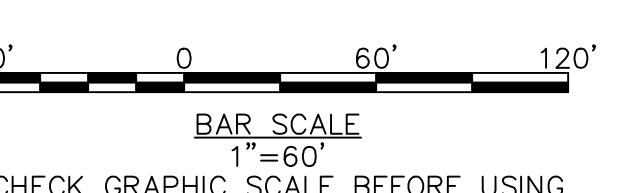


E-ONE HP 100 AERIAL LADDER TRUCK  
TURNING MOVEMENTS PLAN

Vehicle Tracking Vehicle Details		Ref:
Unit Name:	E-ONE HP100 Aerial Tractor	
Type:	Tractor (with driver controlled steering)	
Body style:	Fire Tender	
Classification:	(Unspecified)	
Source:	No data	
Description:	No data	
Notes:	No data	
Datum:	Front Primary Axle	
Front Axle(s):	1 Ackerman (axles fixed, wheels turn) 0.000ft 0.000ft (Auto Calculated) 45.000deg (Any Front Wheel) Active Non Self-Steered 8.333ft 2 (positioned at the ends of the axle) 0.833ft (Auto Calculated - proportion of Track Width) 2.917ft (Auto Calculated - proportion of Track Width)	
Rear Axle(s):	2 Fixed (All axles identical) 16.750ft (Innermost Axle behind Front Primary Axle) 19.167ft (Auto Calculated) Unlimited 4.833ft Active Non Self-Steered 8.333ft 4 (positioned at the ends of the axle) 0.833ft (Auto Calculated - proportion of Track Width) 2.917ft (Auto Calculated - proportion of Track Width)	
Steering:	Front Axle(s): Maximum Wheel Angle: See Front Axles: Maximum Wheel Angle 45.000deg 6.0sec / 6.0sec	
	Lock-to-Lock Time (Fwd/Rev): Driver / Pilot Driver Offset Longitudinally: Driver / Pilot Offset Laterally: Driver Height: Front Coupling: Rear Coupling: Body outline (plan): Outline Type: Offset (X,Y): Length / Width:	
	-2.662ft (in front of Front Primary Axle) -1.969ft (Right of Centerline) -8.202ft (Above ground level) None	
	None	
	Rectangle -7.583ft, 0.000ft 40.000ft / 8.333ft	



E-ONE HP100 Aerial  
Overall Length 40.000ft  
Overall Width 8.333ft  
Overall Body Height 11.000ft  
Min Body Ground Clearance 1.393ft  
Track Width 8.333ft  
Lock-to-lock time 6.00s  
Max Wheel Angle 45.00°



CHECK GRAPHIC SCALE BEFORE USING