

\_\_\_\_\_ FOR \_\_\_\_\_



**PROPOSED**

## LOCATION OF SITE

**248 BROADWAY (ROUTE 28), CITY OF METHUEN**

**ESSEX COUNTY, MASSACHUSETTS**

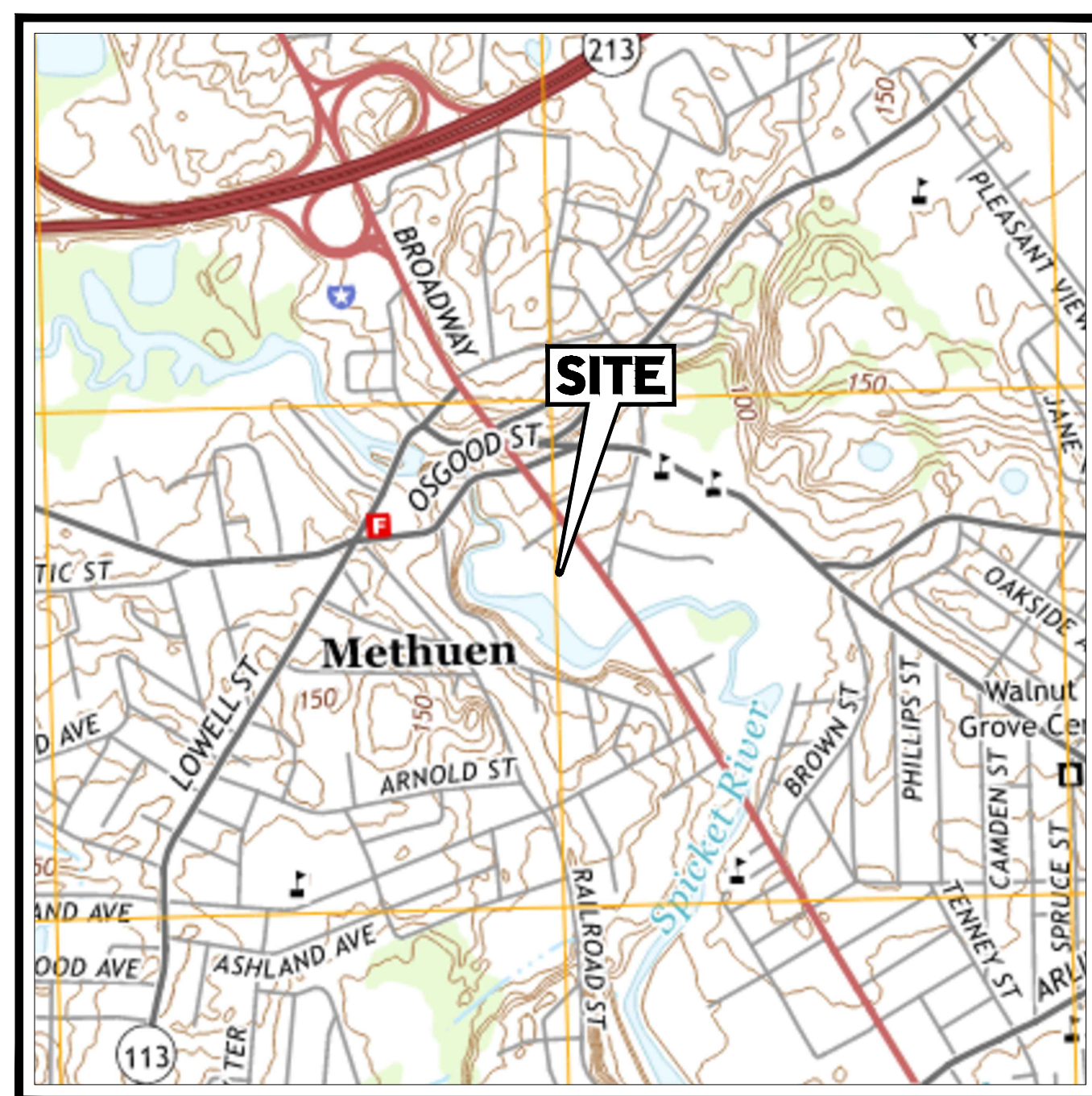
**MAP 612, BLOCK 120, LOT 11**

**REFERENCES**

◆ **BOUNDARY & TOPOGRAPHIC SURVEY:**  
CONTROL POINT ASSOCIATES, INC.  
352 TURNPIKE ROAD  
SOUTHBOROUGH, MA 01772  
DATED: 11/30/2023

◆ **ARCHITECTURAL PLAN:**  
NES GROUP, INC.  
900 S. MAIN STREET, BUILDING B, STE. 201  
MANSFIELD, MA 02048  
DATED: 05/31/2023

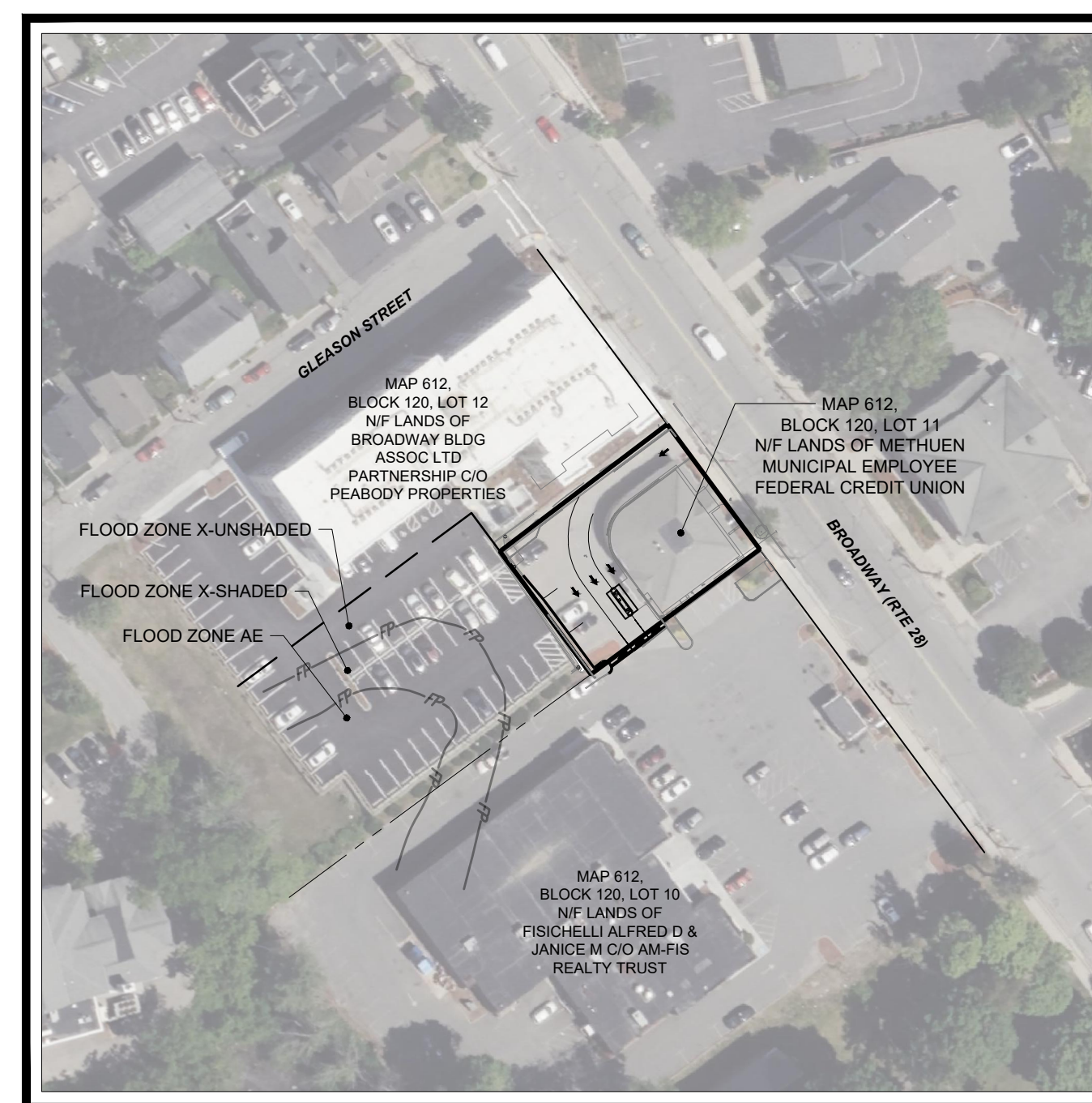
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**USGS MAP**  
SCALE: 1" = 1,000'  
SOURCE: USGS LAWRENCE QUADRANGLE

**OWNER**

METHUEN MUNICIPAL EMPLOYEE FEDERAL CREDIT UNION  
PO BOX 295  
METHUEN, MA 01844



**AERIAL MAP**  
SCALE: 1" = 80'  
SOURCE: GOOGLE AERIAL

## DEVELOPER

NES GROUP, INC.  
905 S. MAIN STREET, BUILDING B, STE. 201  
MANSFIELD, MA 02048

**PREPARED BY**

The logo for BOHLER, featuring the word "BOHLER" in a bold, dark blue, sans-serif font, followed by two parallel orange diagonal lines.

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SHEET TITLE	SHEET NUMBER
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## REVISIONS

[illegible]

**Know what's below.  
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PROJECT No.:	MAA230263-00-
DRAWN BY:	KM
CHECKED BY:	EM
DATE:	04/30/20
CAD I.D.:	P-CIVL-CNI

**PROJECT:**

## SITE DEVELOPMENT PLANS

— FOR —



### PROPOSED DEVELOPMENT

**MAP:612 | BLK: 120 | LOT: 11**  
**248 BROADWAY**  
**(ROUTE 28)**  
**ESSEX COUNTY**  
**METHUEN, MASSACHUSETTS**

BOHLER//

**352 TURNPIKE ROAD, 3rd FLOOR  
SOUTHBOROUGH, MA 01772**  
Phone: (508) 480-9900

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**SHEET TITLE:**

# COVER SHEET

SHEET NUMBER:

**C-101**

ORG. DATE - 04/30/2024

\\203\MAA\230263.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\IP-CIVL-CNDS-MAA\230263.00-0A----->LAYOUT: C-101 COVER





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**SITE  
DEVELOPMENT  
PLANS**

FOR

---

 **NES**Group

**PROPOSED  
DEVELOPMENT**

**MAP: 612 | BLK: 120 | LOT: 11**  
**248 BROADWAY**  
**(ROUTE 28)**  
**ESSEX COUNTY**  
**METHUEN, MASSACHUSETTS**

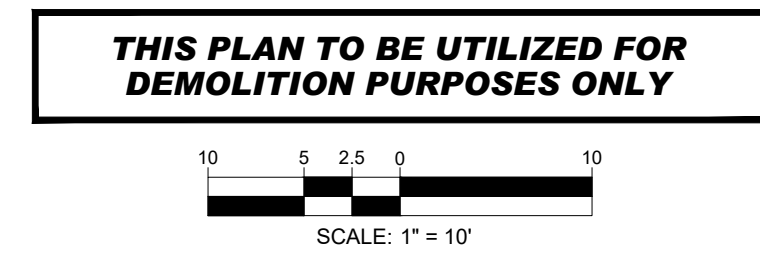
SHEET TITLE: **EXISTING  
CONDITIONS/  
DEMOLITION  
PLAN**

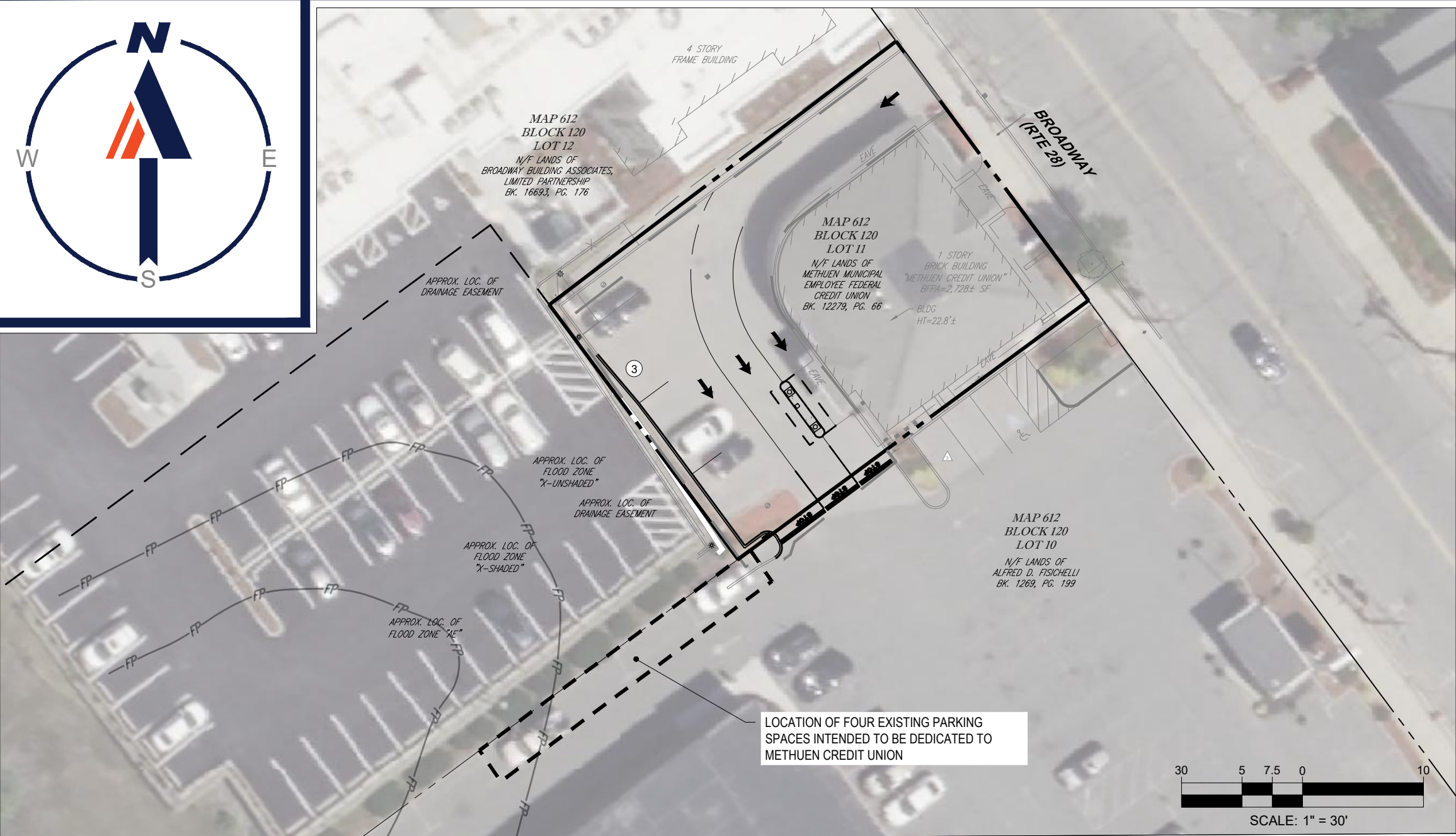
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**C-201**

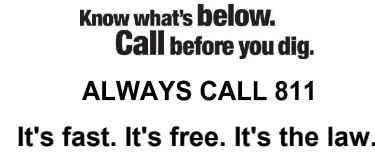
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ORG. DATE - 04/30/2024





<b>PARKING REQUIREMENTS</b>				
<b>ITEM</b>	<b>CODE</b>	<b>PERMITTED</b>	<b>EXISTING</b>	<b>PROPOSED</b>
MIN STALL SIZE	§ VIII-B	9' X 18' PERPENDICULAR 9' X 22' PARALLEL	7.5' X 18'	9' X 22'
MIN AISLE WIDTH	§ VIII-B	20' PERPENDICULAR 12' PARALLEL	12.5'	12'
MIN NUMBER OF STALLS	§ VIII	8	11	10 (1)
DRIVE-INS (EXCLUSIVE OF FOOD) REQUIRED FOR USE = 1 SPACE PER 350 SF				
			KEY =	VARIANCE REQUIRED

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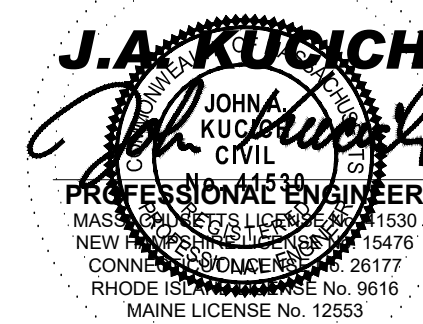
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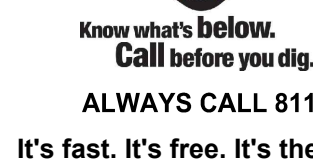
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C-301

ORG. DATE - 04/30/2024

P:\2023\MAA230263.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\IP-CIVL-PROP-MAA230263.00-0A----->LAYOUT: C-301 SITE

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PROJECT No.: MAA230263.00-  
DRAWN BY: KM  
CHECKED BY: EI  
DATE: 04/30/20  
CAD I.D.: P-CIVL-PRG

PROJECT:

## - FOI



MAP:612 | BLK: 120 | LOT: 11  
248 BROADWAY  
(ROUTE 28)  
ESSEX COUNTY  
METHUEN, MASSACHUSETTS

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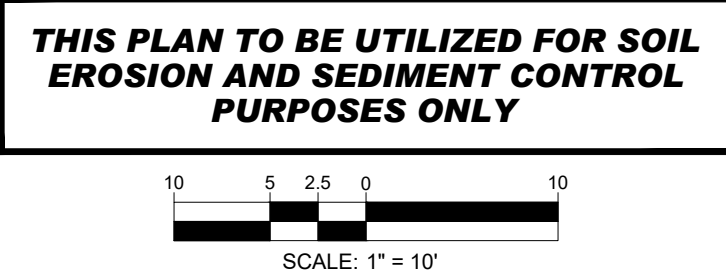


# GRADING, DRAINAGE, & UTILITY PLAN

SHEET NUMBER

C-401

ORG. DATE - 04/30/2024

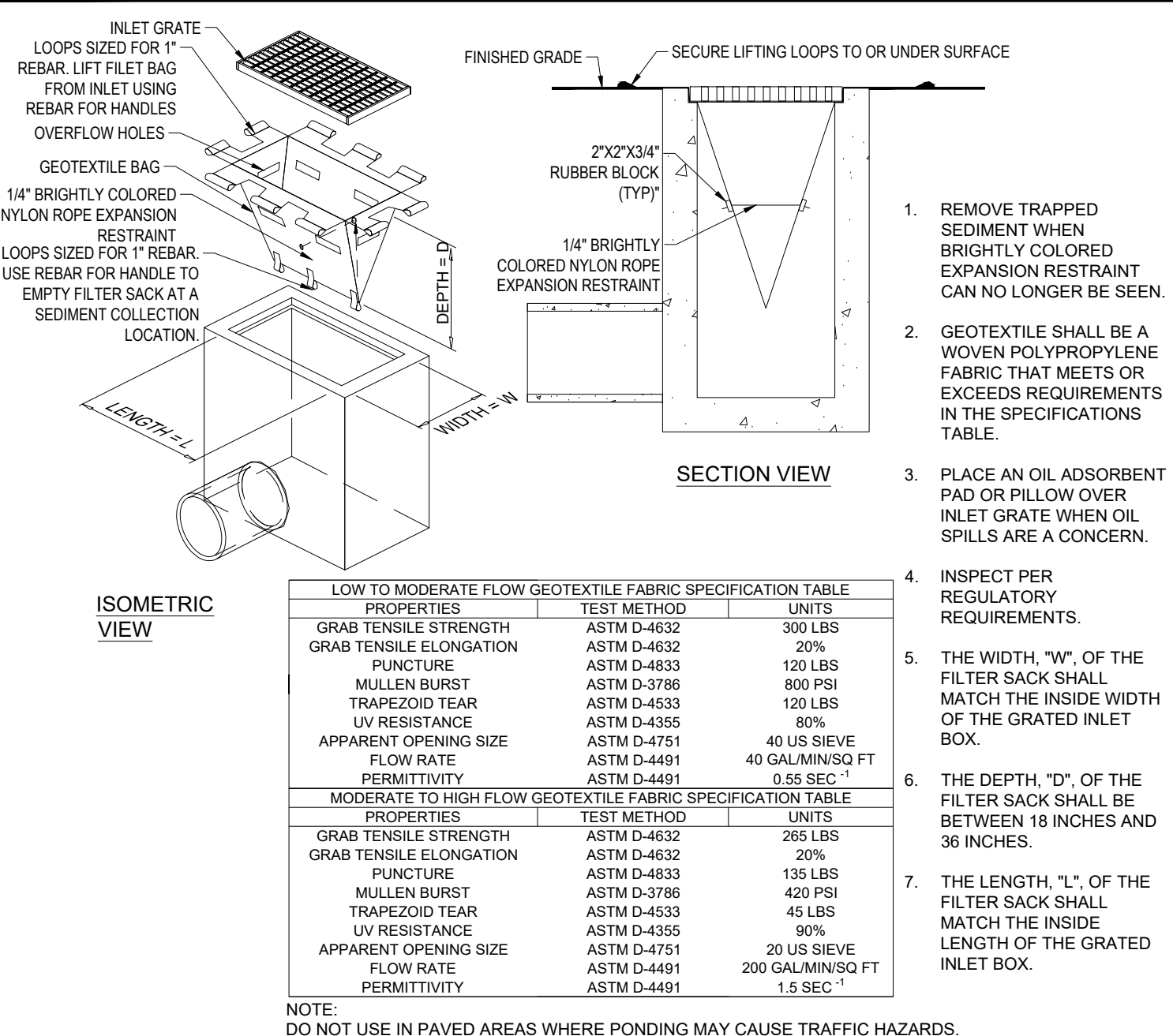


EROSION AND SEDIMENT CONTROL NOTES

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS. AT A MINIMUM, AREAS SHALL BE PERMANENTLY STABILIZED ACCORDING TO THE CURRENT EDITION OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), OR IN THE ABSENCE OF A SWPPP, THEY SHALL BE PERMANENTLY STABILIZED WITHIN 14 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
3. SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 8%.
4. INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #5.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED. FOR SEDIMENT CONTROL DEVICES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE DEVICES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2:1) UNLESS OTHERWISE INDICATED ON THE PLANS. SLOPE PROTECTION FOR SLOPES GREATER THAN 2:1 SHALL BE DESIGNED BY A GEOTECHNICAL ENGINEER.
7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
8. TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL STANDARDS.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:
- 10.1. SIX INCHES, OR DEPTH SPECIFIED ON THE LANDSCAPE PLAN, OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
- 10.2. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF USING 10-20-20 OR EQUIVALENT, APPLY GROUND LIME (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SF).
- 10.3. FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS. SEEDING RATE IS 1.03 LBS PER 1,000 SF LAWN. QUALITY SOO MAY BE SUBSTITUTED FOR SEED WHERE SLOPES DO NOT EXCEED 2:1, SOO ON SLOPES STEEPER THAN 3:1 SHOULD BE PEGGED.
- 10.4. STRAW MULCH AT THE RATE OF 70-90 LBS PER 1,000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER WILL BE USED ON STRAW MULCH FOR WIND CONTROL.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS 70% STABILIZED. FOR EROSION CONTROL MEASURES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE MEASURES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
12. WETLANDS WILL BE PROTECTED WITH BARRIERS CONSISTING OF STRAW BALES, COMPOST TUBES, SILT FENCE OR A COMBINATION THEREOF.
13. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS.
14. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IF NOT BEING ACTIVELY WORKED.

LOCATION	MULCH	MULCH RATE (1000 SF)
PROTECTED AREA	STRAW	100 POUNDS
WINDY AREA	SHREDDED OR CHOPPED CORNSTALKS STRAW (ANCHORED)*	185-275 POUNDS 100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED
GREATER THAN 3:1	(REFER TO GEOTECHNICAL REPORT FOR FINAL DESIGN REQUIREMENT)	

- \* A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER SHALL BE USED TO ADDITIONAL WIND CONTROL.
- \* MULCH ANCHORING: ANCHOR MULCH WITH PEG AND TWINE (1 SO, YD/BLOCK), MULCH NETTING (AS PER MANUFACTURER), WOOD CELLULOSE FIBER (750 LBS/ACRE), CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS), USE OF A SERRATED STRAIGHT DISK. WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.
15. PROPOSED LOCATIONS OF SURFACE STORMWATER MANAGEMENT BASINS CAN BE UTILIZED AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION. SEDIMENT TRAPS SHALL BE SIZED AND CONSTRUCTED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- 15.1. TEMPORARY SEDIMENT TRAPS SHALL BE SIZED PER THE CURRENT EDITION OF THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" AND PROVIDE A MINIMUM OF 1,800 CF PER ACRE OF TRIBUTARY AREA WITH A MAXIMUM TRIBUTARY AREA OF 5 ACRES, MAINTAIN A 2:1 LENGTH TO WIDTH RATIO, AND NOT EXCEED 5 FT IN HEIGHT. UPON SITE STABILIZATION, ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE TEMPORARY SEDIMENT TRAP EXCAVATED TO 1 FOOT BELOW THE TRAP. THE AREA SHALL THEN BE SCARIFIED TO PREVENT COMPACTION AND PROMOTE INFILTRATION, AND GRADED AND STABILIZED IN ACCORDANCE WITH THE GRADING AND LANDSCAPE PLANS.
16. STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC.) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION RUNOFF.
17. EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.
18. THE CONTRACTOR MUST PERFORM DEWATERING (IF REQUIRED), IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR THE COSTS ASSOCIATED WITH ANY AND ALL NECESSARY DISCHARGE PERMITS ASSOCIATED WITH SAME.
19. THE CONTRACTOR MUST LOCATE CONSTRUCTION WASTE MATERIAL STORAGE AREAS TO MINIMIZE EXPOSURE TO STORMWATER. THE CONTRACTOR MUST IMMEDIATELY PLACE CONSTRUCTION WASTE IN ON-SITE STORAGE CONTAINERS UNTIL THAT CONSTRUCTION WASTE IS READY FOR OFF-SITE DISPOSAL. THE CONTRACTOR MUST MAINTAIN SPILL PREVENTION AND RESPONSE EQUIPMENT AND MAKE SAME CONTINUOUSLY AVAILABLE ON-SITE FOR USE BY THE CONTRACTOR'S EMPLOYEES WHO MUST BE PROPERLY TRAINED IN THE APPLICATION OF SPILL PREVENTION AND RESPONSE PROCEDURES.
20. EROSION CONTROL NOTES DURING WINTER CONSTRUCTION
21. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
22. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT THE AMOUNT OF AREA OPEN AT ONE TIME IS MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE AND IN CONFORMANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN SUCH THAT ADEQUATE PROVISIONS ARE EMPLOYED TO CONTROL STORMWATER RUNOFF.
23. CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
24. AN AREA SHALL BE CONSIDERED TO HAVE BEEN TEMPORARILY STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
25. FOR AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR A PERIOD EXCEEDING 14 DAYS BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED. IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 200-300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED AS APPLICABLE. SLOPES SHALL NOT BE LEFT UNSTABILIZED OVER THE WINTER OR IN AREAS WHERE WORK HAS CEASED FOR MORE THAN 14 DAYS UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF SEDIMENT BARRIERS OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
26. MULCHING REQUIREMENTS:
- 26.1. BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
- 26.2. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
- 26.3. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
27. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE STORMWATER PREVENTION PLAN.
28. DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.



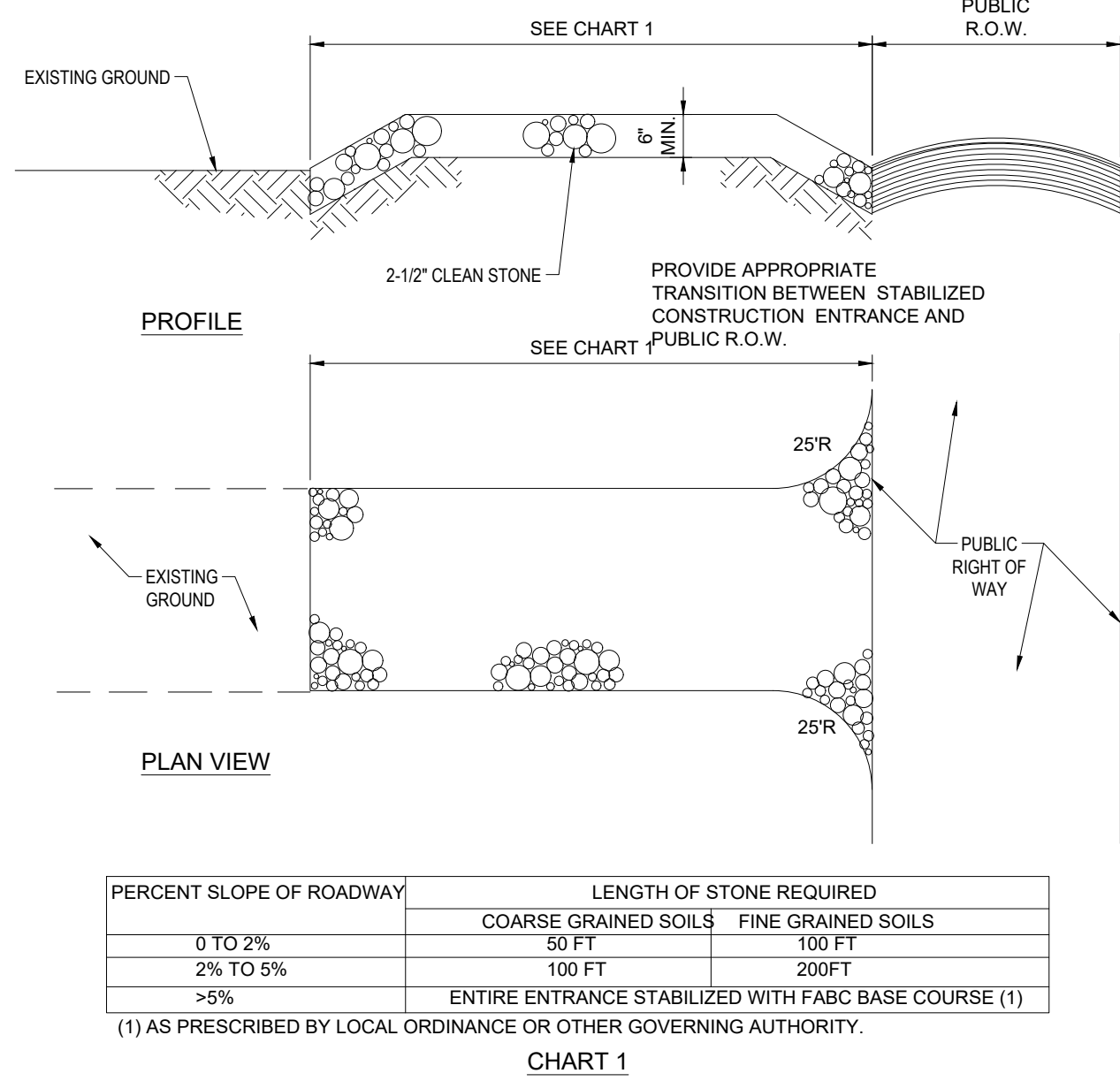
FILTER SACKS (GRADED INLETS)

N.T.S.

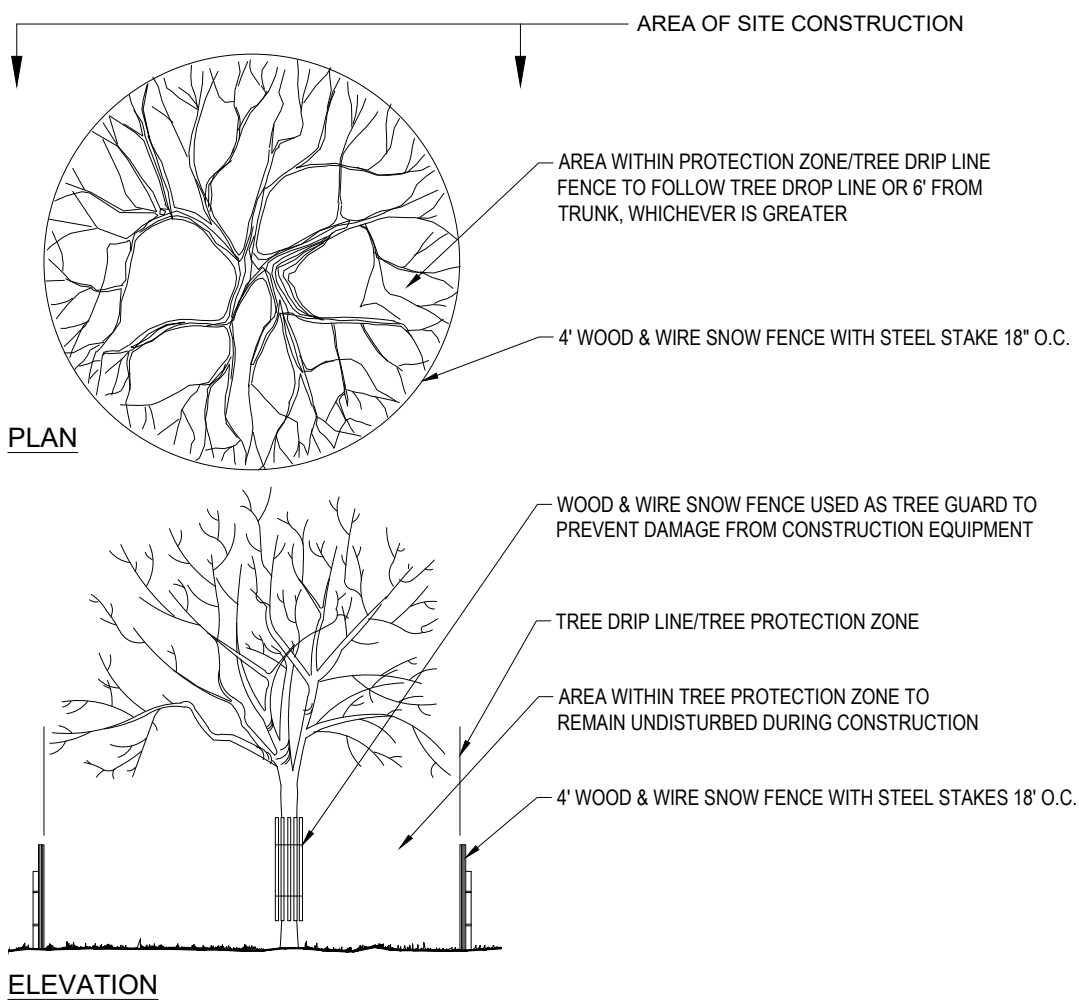
- THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:
- INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT (AS SHOWN)
  - INSTALLATION OF EROSION CONTROL BARRIER (STRAW BALES AND SILT FENCE) (AS SHOWN)
  - INSTALLATION OF INLET PROTECTION IN STREET (AS SHOWN)
  - DEMOLITION OF EXISTING SITE PAVEMENT AND AMENITIES (SEE DEMOLITION PLAN)
  - CLEARING AND GRUBBING
  - INSTALLATION OF TEMPORARY SWALES AND SEDIMENT BASINS
  - EARTHWORK AND EXCAVATION/FILLING AS NECESSARY
  - CONSTRUCTION OF UTILITIES
  - STABILIZE PERMANENT LAWN AREAS AND SLOPES WITH TEMPORARY SEEDING
  - INSTALLATION OF INLET PROTECTION OF ON-SITE UTILITIES (AS SHOWN)
  - CONSTRUCTION OF BUILDINGS
  - CONSTRUCTION OF ALL CURBING AND LANDSCAPE ISLANDS AS INDICATED ON THE PLANS
  - SPREAD TOPSOIL ON SLOPED AREAS AND SEED AND MULCH
  - FINAL GRADING OF ALL SLOPED AREAS
  - PLACE 6" TOPSOIL ON SLOPES AFTER FINAL GRADING COMPLETED. FERTILIZE, SEED, AND MULCH SEED MIXTURE TO BE INSTALLED AS REQUIRED.
  - REMOVAL OF THE TEMPORARY SEDIMENT BASINS
  - PAVE PARKING LOT
  - LANDSCAPING PER LANDSCAPING PLAN
  - REMOVE EROSION CONTROLS AS DISTURBED AREAS BECOME STABILIZED TO 70% STABILIZATION OR GREATER

RECOMMENDED CONSTRUCTION SEQUENCE

N.T.S.

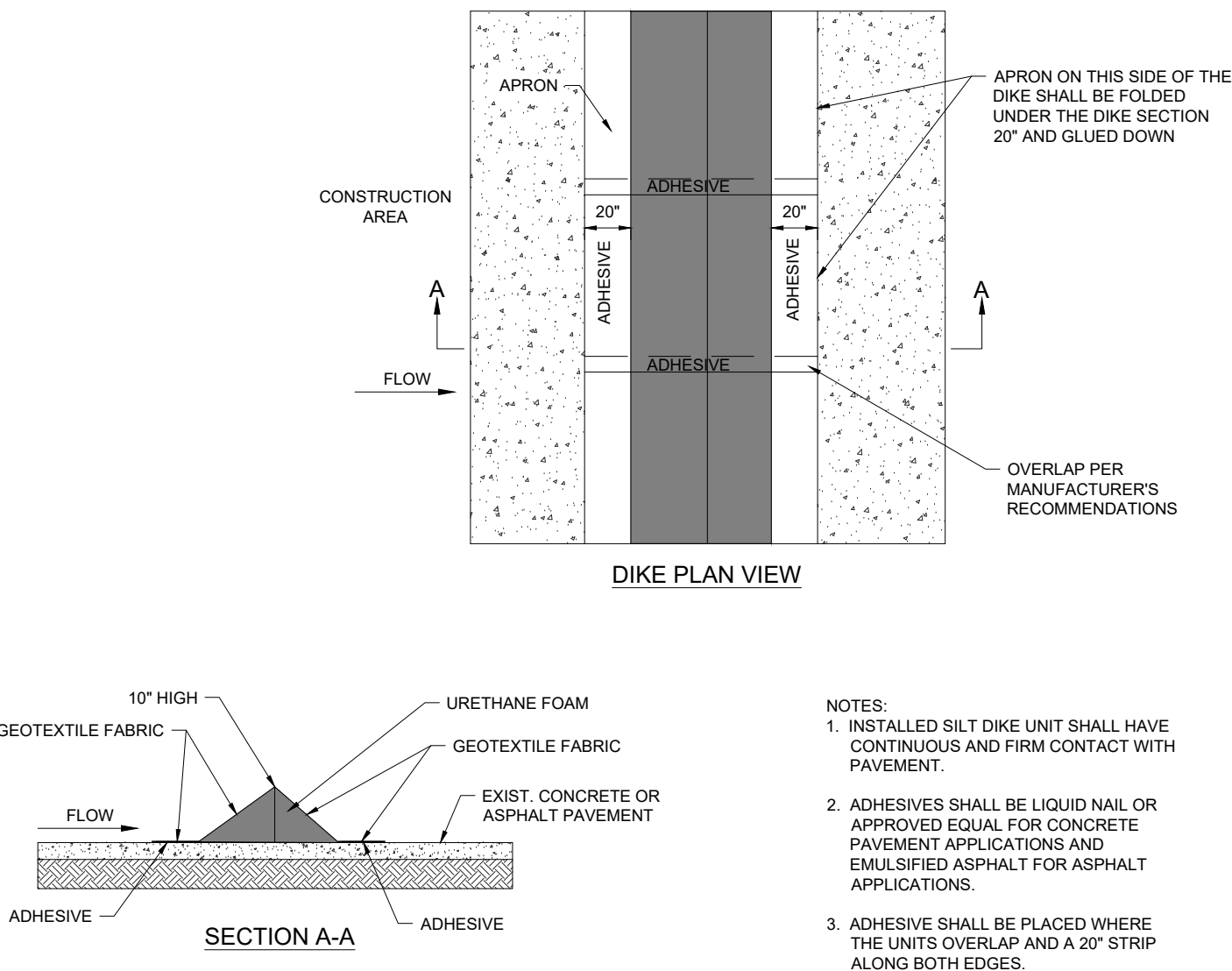


STABILIZED CONSTRUCTION ENTRANCE



TREE PROTECTION DURING SITE CONSTRUCTION

N.T.S.



SILT DIKE (IN EXISTING PAVEMENT)

N.T.S.

**BOHLER**™

SITE CIVIL AND CONSULTING ENGINEERING  
PROGRAM MANAGEMENT  
LANDSCAPE ARCHITECTURE  
SUSTAINABLE DESIGN  
PERMITTING SERVICES  
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	DRAWN BY	CHECKED BY



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PROJECT No.:	MAA230263-00-0A
DRAWN BY:	KME
CHECKED BY:	EKR
DATE:	04/30/2024
CAD ID:	P-CIVL-CNDS

PROJECT:

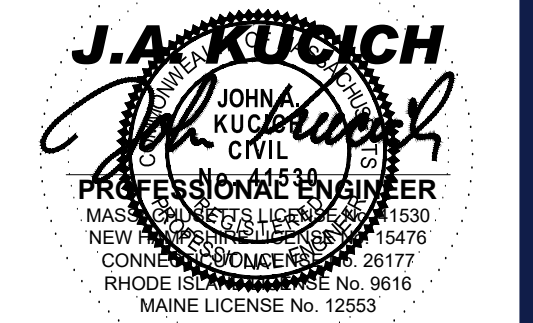
SITE DEVELOPMENT PLANS FOR



PROPOSED DEVELOPMENT  
MAP: 612 | BLK: 120 | LOT: 11  
248 BROADWAY  
(ROUTE 28)  
ESSEX COUNTY  
METHUEN, MASSACHUSETTS

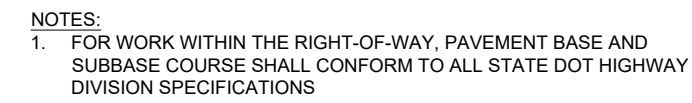
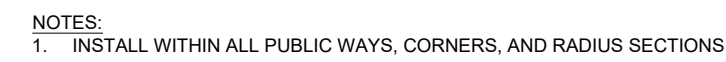
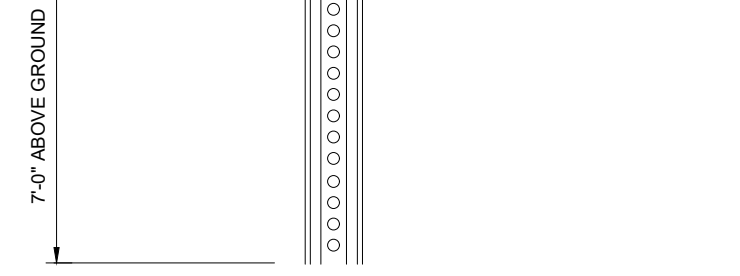
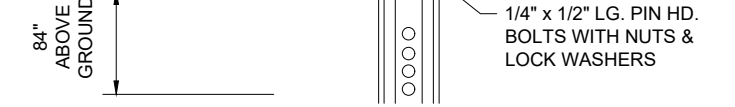
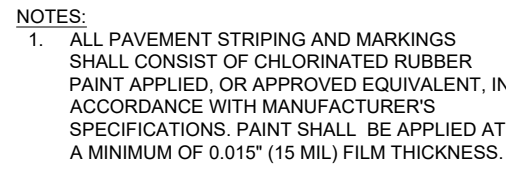
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SOUTHBOROUGH, MA 01772  
Phone: (508) 480-9900  
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SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS  
SHEET NUMBER: C-803

ORG. DATE - 04/30/2024



(NE-S050302 - 09/2023) NOT TO SCALE

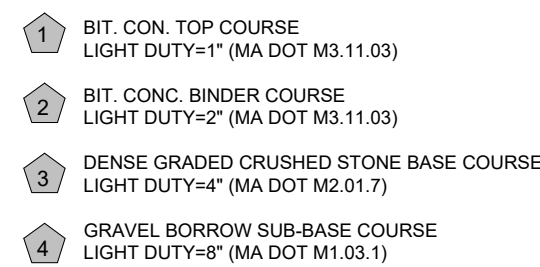
(NE-S050301 - 09/2023) NOT TO SCALE

(NE-S060202 - 09/2023) NOT TO SCALE

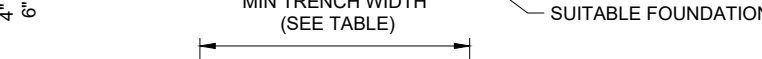
(NE-S060203 - 09/2023) NOT TO SCALE

(NE-S020301 - 09/2023) NOT TO SCALE

(NE-S040104 - 09/2023) NOT TO SCALE



- NOTES:**
1. PAVEMENT BASE AND SUBBASE COURSES TO CONFORM TO STATE DEPARTMENT OF TRANSPORTATION
  2. GC TO REFER TO GEOTECHNICAL REPORT FOR PAVEMENT SPECIFICATIONS.



RECOMMENDED MINIMUM TRENCH WIDTH	
PIPE DIA.	MIN TRENCH WIDTH
6"	23"
8"	26"
10"	28"
12"	30"
15"	34"
18"	39"
24"	48"
30"	56"
36"	64"
48"	80"
60"	96"

- NOTES:**
1. ALL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF DALLAS "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND STORMWATER FLOW" (2009 EDITION).
  2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF FINE PARTICLES INTO BACKFILL MATERIAL, WHEN REQUIRED.
  3. CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE CITY OF DALLAS REPLACEMENT SPECIFICATIONS, OR AS SPECIFIED BY THE ENGINEER AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER. THE TRENCH BOTTOM SHALL BE FIRM, UNDISTURBED, AND FREE OF OBSTACLES (INCLUDING SUTABLE MATERIAL SHALL BE CLASS 1 OR II, OR THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 12" OF COVER ABOVE THE PIPE TO ENGINEER, UNLESS OTHERWISE NOTED BY THE ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 4" (750mm=900mm).
  4. IF THE PIPE IS SUTABLE MATERIAL, SHALL BE CLASS 1 OR II IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE A MINIMUM COVER FOR THE PIPE TO BE SUTABLE MATERIAL. MATERIAL SHALL BE NOT INSTALLED AS REQUIRED IN ASTM D30231.
  5. MINIMUM COVER: MINIMUM COVER IS, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF THE PIPE. MINIMUM COVER SHALL BE 18" IN ALL OTHER AREAS MAY BE REQUIRED BY REQUIRED FOR LANDSCAPE, FOR TRAFFIC APPLICATIONS SHALL BE 24" FROM THE TOP OF THE PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF THE PIPE.

(NE-S010103 - 01/2024) NOT TO SCALE

(NE-U019812 - 09/2023)

[illegible]

<b>PERMIT SET</b>	
THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.	
<b>PROJECT No.:</b>	MAA230263.00-0A
<b>DRAWN BY:</b>	KME
<b>CHECKED BY:</b>	EKR
<b>DATE:</b>	04/30/2024
<b>CAD I.D.:</b>	P-CIVL-CNDS

**BOHLER //**

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352 TURNPIKE ROAD, 3rd FLOOR  
SOUTHBOROUGH, MA 01772

Phone: (508) 480-9900

*[www.BohlerEngineering.com](http://www.BohlerEngineering.com)*

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**ORG. DATE - 04/30/2024**

LEGEND	
	EXISTING CONTOUR
	EXISTING SPOT ELEVATION
	EXIST. TOP OF CURB ELEVATION
	EXIST. BOTTOM OF CURB ELEVATION
	EXIST. TOP OF WALL ELEVATION
	EXIST. BOTTOM OF WALL ELEVATION
	OVERHEAD WIRES
	APPROX. LOC. UNDERGROUND NATURAL GAS LINE
	SUBSURFACE UTILITY QUALITY LEVEL C
	WATER VALVE
	WATER METER
	ELECTRIC METER
	UNKNOWN MANHOLE
	DRAINAGE/STORM MANHOLE
	CLEAN OUT
	UTILITY POLE
	LAMP
	PAINTED HANDICAPPED
	PAINTED ARROWS
	SIGN
	BOLLARD
	METAL GUIDE RAIL
	AIR CONDITIONING UNIT
	DECIDUOUS TREE & TRUNK SIZE
	PARKING SPACE COUNT
	EDGE OF CONC.
	EDGE OF PAVEMENT
	LANDSCAPED AREA
	TYPICAL
	SOLID WHITE LINE
	HEIGHT
	WOOD GUIDE RAIL
	EVIDENCE FOUND
	UNKNOWN TERMINUS

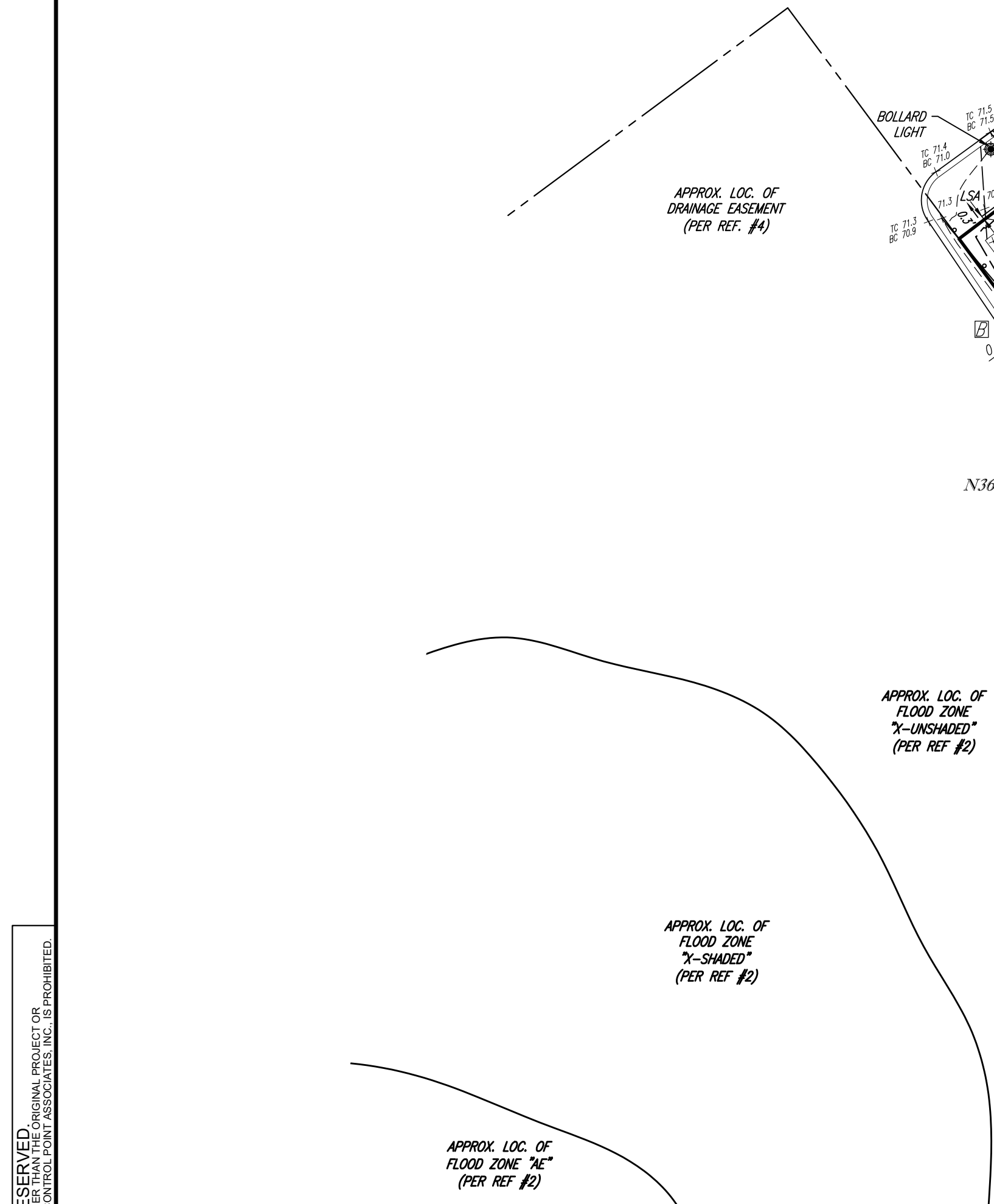
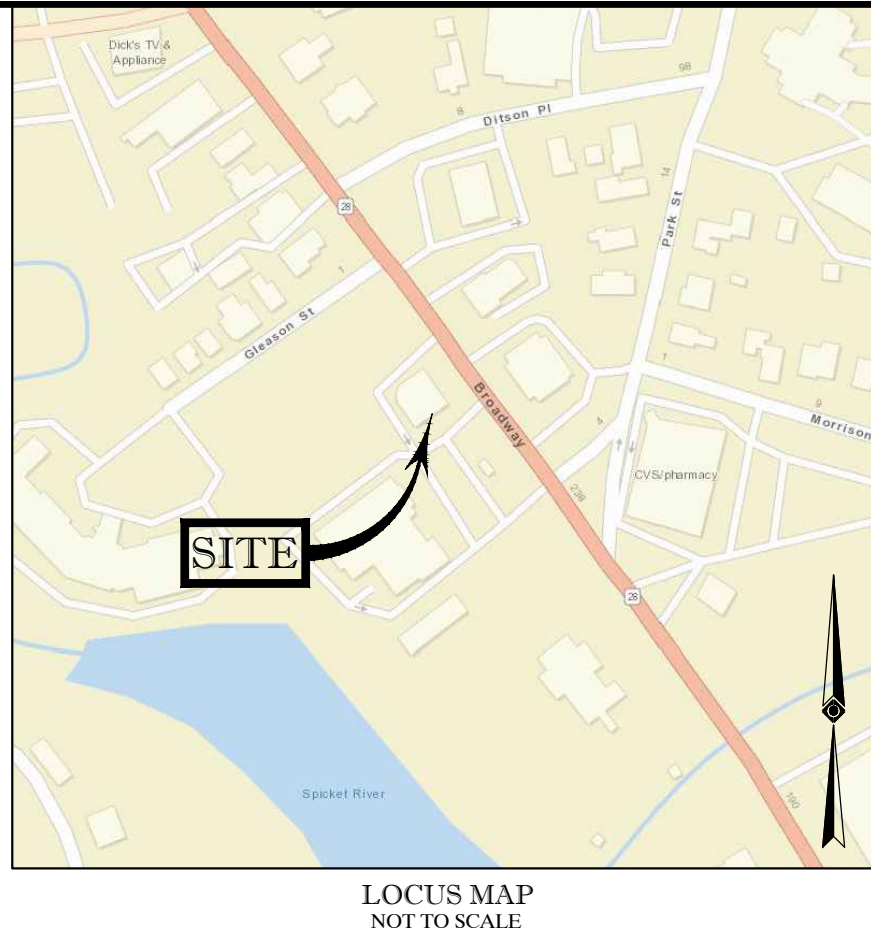
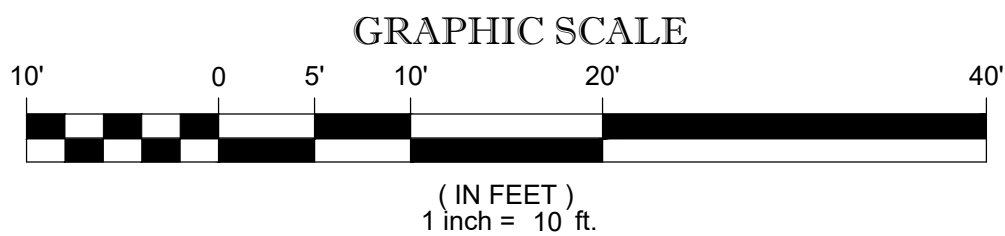


TABLE OF APPARENT ENCROACHMENTS	
	WOODEN GUIDE RAIL OVER PROP LINE ONTO LOT 12 BY 0.3'
	WOODEN GUIDE RAIL FROM LOT 12 OVER PROP LINE BY 0.6'
	STONE WALL FROM LOT 12 OVER PROP LINE BY 0.9'

NOTE: THESE ARE THE POSSIBLE ENCROACHMENTS OBSERVED DURING THE FIELD SURVEY. THERE MAY BE OTHERS NOT RECOGNIZED BY THE SURVEYOR.



- NOTES:
- PROPERTY KNOWN AS LOT 11, BLOCK 120 AS SHOWN ON THE CITY OF METHUEN, ESSEX COUNTY, COMMONWEALTH OF MASSACHUSETTS, MAP NO. 612.
  - AREA = 8,563 SQUARE FEET OR 0.197 ACRES.
  - LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. LOCATIONS AND SIZES ARE BASED ON UTILITY MARK-OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE ASBUILT PLANS AND UTILITY MARKOUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES. CONTROL POINT ASSOCIATES, INC. DOES NOT GUARANTEE THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED.
- THE SOURCE OF UNDERGROUND UTILITIES ARE SHOWN UTILIZING A QUALITY LEVEL SYSTEM:
- QUALITY LEVEL D - UTILITIES SHOWN BASED UPON REFERENCE MAPPING OR ORAL HISTORY. NOT FIELD VERIFIED.
- QUALITY LEVEL C - LOCATION OF UTILITY SURFACE FEATURES SUPPLEMENTS REFERENCE MAPPING. INCLUDES MARKOUT BY OTHERS.
- QUALITY LEVEL B - UTILITY LOCATION DATA IS COLLECTED THROUGH GEOPHYSICAL SENSING TECHNOLOGY TO SUPPLEMENT SURFACE FEATURES AND OR REFERENCE MAPPING. INCLUDES MARKOUT BY CONTROL POINT ASSOCIATES, INC.
- QUALITY LEVEL A - HORIZONTAL AND VERTICAL LOCATION OF UTILITIES ARE OBTAINED USING VACUUM EQUIPMENT EXCAVATION OR OTHER METHODS TO EXPOSE THE UTILITY. LOCATION SHOWN AT SINGLE POINT WHERE EXCAVATION OCCURRED UNLESS UTILITY WAS LOCATED PRIOR TO FILLING.
- ALL FOUR TYPES MAY NOT APPEAR ON THE SURVEY.
- THIS PLAN IS BASED ON INFORMATION PROVIDED BY CLIENT. A SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC., AND OTHER REFERENCE MATERIAL AS LISTED HEREON.
  - THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN. IT IS STRONGLY RECOMMENDED THAT A COMPLETE TITLE SEARCH BE PROVIDED TO THE SURVEYOR FOR REVIEW PRIOR TO THE PLACEMENT OF OR ALTERATION TO IMPROVEMENTS ON THE PROPERTY.
  - EXISTING FIRM BY GRAPHIC PLOTTING ONLY PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X-UNSHADED (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), PER REF. #2.
  - THE EXISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THE FIELD SURVEY.
  - ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88), BASED ON GPS OBSERVATIONS UTILIZING THE KEYSTONE VRS NETWORK (KEYNETGPS). TEMPORARY BENCH MARKS SET:
- TBM-A: MAG NAIL SET IN PAVEMENT, ELEVATION= 69.10'
- TBM-B: MAG NAIL SET IN PAVEMENT, ELEVATION= 68.32'
- PRIOR TO CONSTRUCTION IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE BENCHMARKS ILLUSTRATED ON THIS SKETCH HAVE NOT BEEN DISTURBED AND THEIR ELEVATIONS HAVE BEEN CONFIRMED. ANY CONFLICTS MUST BE REPORTED PRIOR TO CONSTRUCTION.
- THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADDITION, ETC.

- REFERENCES:
- THE TAX ASSESSOR'S MAP OF METHUEN, ESSEX COUNTY, MAP 612.
  - MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, ESSEX COUNTY, MASSACHUSETTS (ALL JURISDICTIONS), PANEL 206 OF 600," MAP NUMBER 2509020206F, MAP EFFECTIVE DATE: JULY 3, 2012.
  - MAP ENTITLED "PLAN OF LAND IN METHUEN, MASS. DRAWN FOR APPLICANT 254 BROADWAY, LLC, 9 VERNON STREET, SUITE 3, BROOKLINE, MASSACHUSETTS 02146," PREPARED BY MERRIMACK ENGINEERING SERVICES, DATED JUNE 21, 2004, RECORDED WITH THE ESSEX COUNTY REGISTRY OF DEEDS, NORTHERN DISTRICT, AS PLAN NO. 14827.
  - MAP ENTITLED "PLAN OF LAND IN METHUEN, MASSACHUSETTS, PROPOSED DRAINAGE EASEMENTS, PREPARED FOR METHUEN ASSISTING LIVING, LP, 9 VERNON ST. SUITE 3, BROOKLINE, MA 02146," PREPARED BY MERRIMACK ENGINEERING SERVICES, RECORDED WITH THE ESSEX COUNTY REGISTRY OF DEEDS, NORTHERN DISTRICT, AS PLAN NO. 15852.

THIS SURVEY HAS BEEN PERFORMED IN THE FIELD UNDER MY SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE, BELIEF, AND INFORMATION, THIS SURVEY HAS BEEN PERFORMED IN ACCORDANCE WITH CURRENTLY ACCEPTED ACCURACY STANDARDS.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL



GERRY L. HOLDRIGHT, PLS  
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

FIELD DATE	11-2-2023
FIELD BOOK NO.	-
FIELD BOOK PG.	-
FIELD CREW	C.W.
DRAWN:	E.G.F.
REVIEWED:	R.J.K.
APPROVED:	G.L.H.
DATE	11-30-2023
SCALE	1"=10'
FILE NO.	03-230406-00
DWG. NO.	1 OF 1

BOUNDARY, TOPOGRAPHIC & UTILITY SURVEY  
**METHUEN CREDIT UNION**  
248 BROADWAY  
MAP 612, BLOCK 120, LOT 11  
CITY OF METHUEN, ESSEX COUNTY  
COMMONWEALTH OF MASSACHUSETTS

**CONTROL POINT ASSOCIATES, INC.**  
352 TURNPIKE ROAD  
SOUTH BOKROUGH, MA 01772  
508.948.3000 - 508.948.3003 FAX  
ALBANY, NY 518-217-5010  
CHALFONT, PA 215-712-9800  
HAUPPAUGE, NY 631-880-2645  
MANHATTAN, NY 646-780-0411  
MT LAUREL, NJ 908-857-2999  
WARREN, NJ 908-668-0999