

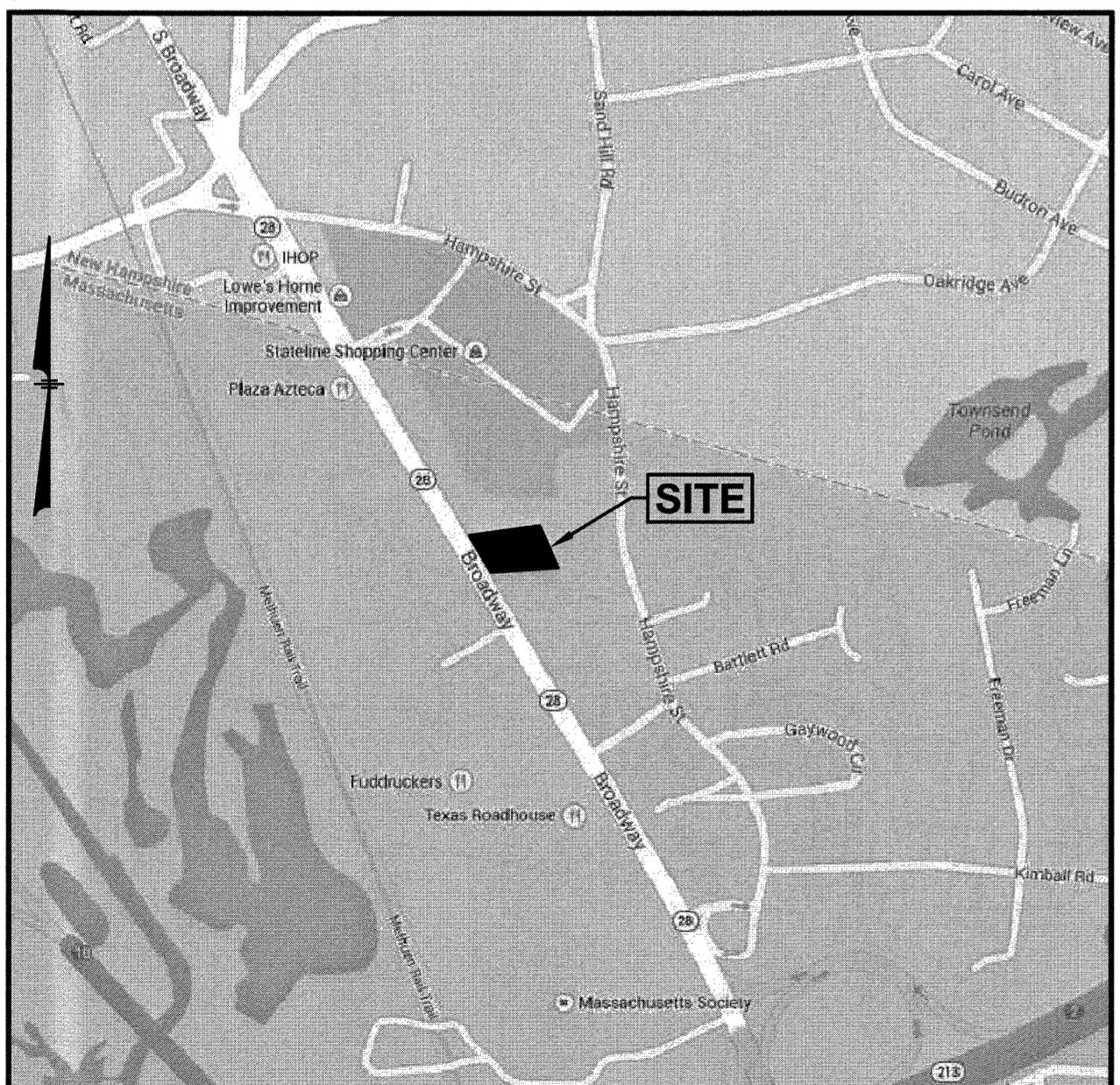
PROPOSED DUNKIN' DONUTS SITE RE-DEVELOPMENT PLANS

for

ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5 477 & 479 BROADWAY METHUEN, MASSACHUSETTS

Prepared for:

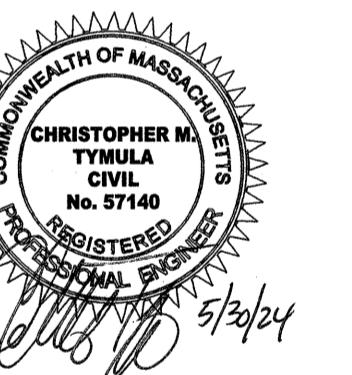
CAFUA MANAGEMENT COMPANY, LLC 280 MERRIMACK STREET METHUEN, MA 01844



LOCATION MAP
(NOT TO SCALE)

INDEX TO DRAWINGS

1. TITLE SHEET
2. GENERAL NOTES
3. EXISTING CONDITIONS PLAN
4. DEMOLITION PLAN
5. SITE PLAN
6. GRADING & DRAINAGE PLAN
7. UTILITY PLAN
8. EROSION & SEDIMENT CONTROL PLAN
9. LANDSCAPE PLAN
10. DETAIL SHEET
11. DETAIL SHEET
12. DETAIL SHEET
13. DETAIL SHEET
14. DETAIL SHEET
- 1 OF 1. TRUCK TURN PLAN (WB-62)
- 1 OF 1. TRUCK TURN PLAN (FIRE)
- 1 OF 1. SITE SIGNAGE (T-1.0)
- 1 OF 1. SIGHT LINE PLAN
- 1 OF 1. LIGHTING PLAN (LO-156127-2)
- 1 OF 1. EXTERIOR ELEVATIONS (A4.0)
- 1 OF 1. PROPOSED EXTERIOR ELEVATIONS (A4.1)



REVISIONS		
1	REV. SHTS 1,2,5-11,13, TT, LO, ADD TT(F), SLP	5/30/24
NO.	REVISION	DATE
	MARCH 6, 2024	
DRAWN/DESIGN BY	CHECKED BY	
SJB/CMT	CMT	

TITLE SHEET	
SCALE:	AS NOTED
PROJECT NO.	NEX-2021347
1 OF 14	

LEGEND

SGC	SLOPED GRANITE CURB
VGC	VERTICAL GRANITE CURB
SCC	SLOPED CONCRETE CURB
VCC	VERTICAL CONCRETE CURB
CCB	CAPE COD BERM
DSDL	DOUBLE SOLID LINE YELLOW
DDLY	DOUBLE DASHED LINE YELLOW
SDLY	SINGLE DASHED LINE YELLOW
SSLY	SINGLE SOLID LINE YELLOW
SSLW	SINGLE SOLID LINE WHITE
SDLW	SINGLE DASHED LINE WHITE
G	GAS LINE
T	UNDERGROUND TELEPHONE
W	WATER LINE
E	UNDERGROUND ELECTRIC
□ □	WOOD GUARDRAIL
○ ○	METAL GUARDRAIL
○ ○ ○	CHAIN LINK FENCE
□ □ □	STOCKADE FENCE
/// / / / /	POST & RAIL FENCE
— x —	WIRE FENCE
— — 90 — —	CONTOUR ELEVATION
⌚ ☀	TREE
⌚	UTILITY POLE
— — — — —	GUY WIRE
— — — — —	OVERHEAD WIRE
~~~~~	TREELINE
☒ PB	PULL BOX
— — — — —	SIGN
× 98.69	SPOT ELEVATION
①	DRAIN MANHOLE
□	CATCH BASIN
®	ROOF DRAIN
◎	CLEANOUT
▽	VENT
⌚	SEWER MANHOLE
①	TELEPHONE MANHOLE
②	ELECTRIC MANHOLE
ⓧ	WATER MANHOLE
Ⓜ	MANHOLE
⌚ GV	GAS VALVE
⌚ S	GAS SHUT OFF
ⓧ WV	WATER VALVE
⌚ S	WATER SHUT OFF
⌚	FIRE HYDRANT
○	BOLLARD
GM	GAS METER
EM	ELECTRIC METER
⊕	MONITORING WELL
⌚	LIGHT POLE
◆	BORING
— — — — —	WETLAND LINE
— — — — —	WATER FEATURE
— — — — —	UNDERGROUND COMM
— — — — —	DITCH LINE
— — — — —	EASEMENT LINE
— — — — —	PROPERTY LINE
— — — — —	ABUTTER PROPERTY LINE
— — — — —	BUILDING SETBACK
• • • • • • •	SOIL TYPE LINE
— — — — —	ZONE LINE
— — — — —	FLOOD ZONE LINE
TBR	TO BE REMOVED
- x x x x x x	TO BE REMOVED
①	NUMBER OF PARKING SPACES
T.D.	TIP DOWN CURB
— — — — —	PROP. BIT. CONCRETE CURB (BCC)
— — — — —	PROP. VERTICAL GRANITE CURB (VGC)
— — — — —	PROP. XXXX CURB (XXX)
— — — — —	PROP. XXXX CURB (XXX)
C.O.	PROP. CLEANOUT
CB-1	PROP. CATCH BASIN
DMH-1	PROP. DRAIN MANHOLE
MEG	MEET EXISTING GRADE
331.25	PROP. SPOT ELEVATION
300	PROP. CONTOUR ELEVATION
TW=	TOP OF WALL ELEV.
BW=	BOTTOM OF WALL ELEV.
G.B.	GRADE BREAK
TP	TEST PIT
⌚	PROP. GATE VALVE
— △ — △ —	PROP. SEDIMENT CONTROL FENCE

## **GENERAL NOTES:**

1) ZONE: HIGHWAY BUSINESS (BH)

2) SETBACKS: FRONT: 25'  
SIDE 30'  
* REAR 30'  
* ADDITIONAL BUFFER ZONE OF 30' IS ADDED TO SETBACK AREA WHEN ADJACENT TO RESIDENTIAL.

3) LOT AREA = 43,119 SF (COMBINED LOTS 4 & 5)

4) EXISTING USE: FORMERLY TWO 2-STORY RESIDENTIAL HOMES WITH DETACHED GARAGES.  
PROPOSED USE: 2,100 SF DONUT SHOP WITH DRIVE THRU.

5) ALL BUILDINGS AND SITE CONSTRUCTION SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA) AS REVISED IN 2010, OR LATEST REVISION.

6) THE LOCATIONS OF EXISTING SUBSURFACE UTILITIES SHOWN ON THIS PLAN WERE COMPILED FROM AVAILABLE RECORD DRAWINGS AND ARE NOT WARRANTED TO BE CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING SUBSURFACE UTILITIES PRIOR TO PERFORMING ANY WORK.

7) WRITTEN DIMENSIONS ON THIS PLAN TAKE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN THE EVENT OF A CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND/OR SPECIFICATIONS, THE ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR.

8) THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 1-888-344-7233 PRIOR TO ANY EXCAVATION.

9) ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE CITY OF METHUEN AND THE COMMONWEALTH OF MASSACHUSETTS.

10) THE SITE IS NOT WITHIN THE 100 YEAR FLOOD BOUNDARY HAZARD ZONE. (SEE SHEET 3 OF 14, NOTE 6)

11) ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND THE STANDARD CONSTRUCTION DRAWINGS AS SUPPLIED BY THE DEVELOPER.

12) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY GREENMAN-PEDERSEN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR AND/OR ENGINEER AS INCLUDED IN THE PLAN SET DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE AND/OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.

13) ALL SNOW SHALL BE STORED IN THE AREA(S) DEPICTED ON THIS PLAN AS SNOW STORAGE AREAS. IN THE EVENT THAT THE AREA(S) APPROVED FOR SNOW STORAGE BECOME FULL, THE OWNER SHALL REASONABLY REMOVE EXCESS SNOW FROM THE SITE, AND SHALL NOT ALLOW SNOW TO BE STORED WITHIN PARKING LOTS OR TRAVEL AISLES.

14) REFER TO DETAIL SHEETS FOR ALL SITE DEVELOPMENT DETAILS AND INFORMATION.

15) A SIGN PERMIT SHALL BE OBTAINED PRIOR TO INSTALLATION.

16) EXISTING IMPERVIOUS COVERAGE = 8,655 SF (20%)  
PROPOSED IMPERVIOUS COVERAGE = 21,447 SF (50%)

17) HOURS OF OPERATION:  
SUNDAY-SATURDAY 5:30AM – 11PM  
PATIO AREA TO BE CLOSED AT 8PM

18) ALL LOADING/DELIVERIES AND TRASH/RECYCLING WILL BE MANAGED DURING OFF-HOURS.

19) ALL SIGNS AND PAVEMENT MARKINGS TO BE INSTALLED WITHIN THE PROJECT SITE SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

20) A SPECIAL PERMIT WAS GRANTED BY THE METHUEN ZONING BOARD OF APPEALS ON APRIL 24, 2024 TO ALLOW A RESTAURANT USE WITHIN THE HIGHWAY BUSINESS ZONE.

**DEMOLITION:**

A DEMOLITION PERMIT MUST BE OBTAINED FROM THE CITY OF METHUEN PRIOR TO COMMENCEMENT OF WORK. ALL EXISTING UTILITY DISCONNECTIONS MUST BE COORDINATED WITH RESPECTIVE UTILITY COMPANIES.

ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN STRICT ADHERENCE TO ALL FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR TO INSTALL EROSION CONTROL DEVICES IN ACCORDANCE WITH EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING DEMOLITION ACTIVITIES.

PROCEED WITH DEMOLITION IN A SYSTEMATIC MANNER, FROM THE TOP OF THE STRUCTURE(S) TO THE GROUND.

DEMOLISH CONCRETE IN ALL SECTIONS.

BREAK UP CONCRETE SLABS-ON-GRADE, UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.

CONDUCT ALL DEMOLITION OPERATIONS IN A MANNER THAT WILL PREVENT INJURY, DAMAGE TO STRUCTURES, ADJACENT BUILDINGS AND ALL PERSONS.

REFRAIN FROM USING EXPLOSIVES WITHOUT PRIOR WRITTEN CONSENT OF THE DEVELOPER AND APPLICABLE GOVERNMENTAL AUTHORITIES.

CONDUCT DEMOLITION SERVICES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED FACILITIES WITHOUT PRIOR WRITTEN PERMISSION OF THE DEVELOPER AND APPLICABLE GOVERNMENTAL AUTHORITIES. PROVIDE ALTERNATIVE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY APPLICABLE GOVERNMENTAL REGULATIONS.

USE WATERING, TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS, AS NECESSARY TO LIMIT THE AMOUNT OF DUST AND DIRT RISING AND SCATTERING IN THE AIR. CLEAN ADJACENT STRUCTURE AND IMPROVEMENTS OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. RETURN ALL ADJACENT AREAS TO THE CONDITIONS EXISTING PRIOR TO THE START OF WORK.

1) ACCOMPLISH AND PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS AT ANY TIME.

2) COMPLETELY FILL BELOW GRADE AREAS AND VOIDS RESULTING FROM THE DEMOLITION OF STRUCTURES AND FOUNDATIONS WITH SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. STONES USED WILL NOT BE LARGER THAN 6 INCHES IN DIMENSION. MATERIAL FROM DEMOLITION MAY NOT BE USED AS FILL. PRIOR TO PLACEMENT OF FILL MATERIALS, UNDERTAKE ALL NECESSARY ACTION IN ORDER TO INSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROZEN MATERIAL, TRASH, DEBRIS. PLACE FILL MATERIALS LAYERS NOT EXCEEDING 6 INCHES IN LOOSE DEPTH AND COMPACT EACH LAYER AT PLACEMENT TO 95% OPTIMUM DENSITY, GRADE SURFACE TO MEET ADJACENT CONTOURS AND TO PROVIDE SURFACE DRAINAGE.

3) REMOVE FROM THE DESIGNATED SITE, AT THE EARLIEST POSSIBLE TIME, ALL DEBRIS RUBBISH, SALVAGEABLE ITEMS, HAZARDOUS AND COMBUSTIBLE SERVICES. REMOVED MATERIALS MAY NOT BE STORED, SOLD OR BURNED ON SITE. REMOVAL OF HAZARDOUS AND COMBUSTIBLE MATERIALS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROCEDURES AS AUTHORIZED BY THE FIRE DEPARTMENT OR OTHER APPROPRIATE REGULATORY AGENCIES AND DEPARTMENTS.

4) DISCONNECT, SHUT OFF AND SEAL ALL UTILITIES SERVING THE STRUCTURE(S) TO BE DEMOLISHED BEFORE THE COMMENCEMENT OF THE DESIGNATED DEMOLITION. MARK FOR POSITION ALL UTILITY DRAINAGE AND SANITARY LINES AND PROTECT ALL ACTIVE LINES. CLEARLY IDENTIFY BEFORE THE COMMENCEMENT OF DEMOLITION SERVICES THE REQUIRED INTERRUPTION OF ACTIVE SYSTEMS THAT MAY AFFECT OTHER PARTIES, AND NOTIFY ALL APPLICABLE UTILITY COMPANIES TO INSURE THE CONTINUATION OF SERVICE.

5) PROTECT EXISTING DRAINAGE SYSTEM(S) AS NECESSARY TO PREVENT SEDIMENT FROM ENTERING DURING CONSTRUCTION. SEE DETAIL SHEETS FOR EROSION CONTROL DEVICES.

6) ALL WORK WITHIN ROADWAY RIGHT-OF-WAYS TO CONFORM TO CITY STANDARDS.

7) THE LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING.

8) IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY DIG-SAFE (DIAL 811) 72 HOURS PRIOR TO ANY EXCAVATION ON THIS SITE. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER DEPARTMENT TO MARK OUT THEIR UTILITIES.

9) NOTES ON THIS PLAN THAT READ "TBR" REPRESENT FEATURES TO BE REMOVED. ANY FEATURES NOT LABELED "TBR" OR TO BE REMOVED SHALL BE CONSIDERED EXISTING TO REMAIN.

10) SEE LANDSCAPE PLAN FOR LIMITS OF CLEARING AND GRUBBING. AFTER CLEARING, STRIP AND STOCKPILE TOP SOIL PER LANDSCAPE PLAN, IF APPLICABLE.

## **RADING & DRAINAGE:**

ALL SITE DRAINAGE PIPE SHALL BE CORRUGATED HIGH-DENSITY POLYETHYLENE PIPE WITH STANDARD JOINTS, DUAL-WALL, SMOOTH INTERIOR, AS MANUFACTURED BY ADS, INC., OR APPROVED EQUAL, UNLESS OTHERWISE NOTED ON PLAN. THE UNDERGROUND DETENTION SYSTEM SHALL HAVE SOIL TIGHT (ST) JOINTS MEETING ASTM F477 SPECIFICATIONS.

ALL ROOF AND CANOPY DRAIN PIPE SHALL BE 6" PVC (SDR-35), EXCEPT WITHIN 10' OF A BUILDING FOUNDATION WHERE CAST IRON PIPE SHALL BE USED. MIN. SLOPE=2%.

ELEVATIONS ARE BASED ON NAVD88 DATUM.

ALL PROPOSED ELEVATIONS AS SHOWN ARE BOTTOM OF CURB ELEVATIONS, UNLESS OTHERWISE NOTED.

ALL UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND COORDINATED WITH THE APPROPRIATE LOCAL UTILITY COMPANY.

THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST ELEVATION (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PERTAINING TO COMMENCEMENT OF CONSTRUCTION.

ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL DPW AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.

THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIG-SAFE 811 PRIOR TO COMMENCING ANY EXCAVATION.

THIS SITE WILL NOTE REQUIRE A USEPA NPDES PERMIT FOR STORMWATER DISCHARGE FOR THE SITE CONSTRUCTION SINCE THE DISTURBANCE DOES NOT EXCEED ONE ACRE (ACTUAL DISTURBANCE = 36,500 SF±).

ANY UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE DISCONNECTED AS DIRECTED BY UTILITY COMPANY AND LOCAL DPW.

ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO ASSDOT AND THE CITY DEPARTMENT OF PUBLIC WORKS, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.

ALL ADA ACCESSIBLE WALKWAYS CANNOT EXCEED 5% RUNNING SLOPE AND 2% CROSS SLOPE, STAIRS CANNOT EXCEED 8.33% RUNNING SLOPE AND 2% CROSS SLOPE, AND ACCESSIBLE PARKING STALLS AND ACCESS AISLES CANNOT EXCEED 2% SLOPE IN ANY DIRECTION. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.

SEE UTILITY PLAN FOR DETAILED UTILITY LAYOUT.

ALL PROPOSED CATCH BASINS SHALL HAVE 4' SUMPS AND OUTLETS EQUIPPED WITH "ELIMINATOR" OIL HOODS OR APPROVED EQUAL.

ALL PIPE DATA IS CALCULATED TO CENTER OF STRUCTURE, TYP.

CONTRACTOR TO REFER TO THE OPERATION & MAINTENANCE PLAN FOR STORMWATER MANAGEMENT SYSTEMS (O&M) FOR SITE MAINTENANCE DURING AND AFTER CONSTRUCTION.

CONTRACTOR TO INSTALL RISER STRUCTURES AT EACH CORNER OF UNDERGROUND DETENTION SYSTEMS AND CLEANOUTS AT EACH END OF EACH ROW TO PROVIDE ACCESS POINTS FOR CLEANING AND MAINTENANCE.

- TOTAL RISERS PROPOSED = 4
- TOTAL CLEANOUTS PROPOSED = 5

**UTILITIES:**

ALL SANITARY SEWER PIPE SHALL BE PVC (SDR-35), UNLESS OTHERWISE NOTED.

ALL WATER PIPE SHALL BE COPPER (TYPE K), UNLESS OTHERWISE NOTED.

ALL UTILITY FIELD ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER OF RECORD AND COORDINATED WITH THE APPROPRIATE LOCAL UTILITY COMPANY.

THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO VERIFY EXACT LOCATION PRIOR TO CONSTRUCTION. THE CONTRACTOR IS TO NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES.

ALL CONSTRUCTION SHALL CONFORM TO MUNICIPAL DPW AND ALL APPLICABLE STATE AND FEDERAL STANDARDS.

THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE 811 PRIOR TO ANY EXCAVATION.

ALL WATER AND SEWER CONSTRUCTION SHALL CONFORM TO DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS.

THIS SITE IS SERVED BY MUNICIPAL SEWER AND WATER.

ALL ELECTRIC, TELEPHONE AND CABLE TV LINES ARE TO BE UNDERGROUND AND INSTALLED IN CONFORMANCE WITH APPLICABLE UTILITY CO. SPECIFICATIONS.

ANY UTILITIES TO BE TAKEN OUT OF SERVICE SHALL BE DISCONNECTED AS DIRECTED BY UTILITY COMPANY AND LOCAL DPW.

ALL TRAFFIC CONTROL AND TEMPORARY CONSTRUCTION SIGNAGE ARRANGEMENTS, ACCEPTABLE TO ASSDOT AND CITY DEPARTMENT OF PUBLIC WORKS, SHALL BE EMPLOYED DURING OPERATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.

REFER TO DETAIL SHEETS FOR ALL UTILITY DETAILS AND ADDITIONAL INFORMATION.

## **ORARY EROSION CONTROL MEASURES:**

ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 – NURSERY STOCK, LATEST EDITION (AMERICAN ASSOCIATION OF NURSERYMEN, INC.).

2) A 4' DIA. TREE RING WITH 3" AGED PINE BARK MULCH TO BE INSTALLED AT BASE OF ALL TREES IN LAWN AREAS.

3) 3" AGED PINE BARK MULCH SHALL BE APPLIED TO ALL SHRUB AND GROUNDCOVER BEDS.

4) LANDSCAPE STONE SHALL BE TAN RIVERBED STONE. STONE SHALL BE (1½) INCHES IN DIAMETER AND APPLIED AT A THICKNESS OF (4) INCHES DEEP. ALL FINES SHALL BE SCREENED FROM THE AGGREGATE. THE MATERIAL SHALL BE FREE OF ORGANIC AND INORGANIC DEBRIS AND TRASH. SUBMIT SAMPLE IN A 5-GALLON BUCKET TO THE DEVELOPER FOR APPROVAL.

5) A WEED BARRIER (TY-PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB AND GROUNDCOVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.

6) THE CONTRACTOR SHALL PROVIDE TESTING OF SOILS IN PLANTING LOCATIONS. THE CONTRACTOR SHALL PROVIDE TEST RESULTS AND RECOMMENDATIONS AS NECESSARY FOR SOIL AMENDMENT TO THE ENGINEER FOR THEIR APPROVAL. BACKFILL SHALL BE A BLEND OF ONE-PART LOAM BORROW, ONE PART ORGANIC MATERIAL AND TWO-PARTS EXISTING SUBSOIL.

7) ALL LANDSCAPED AREAS NOT PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE RESTORED WITH SEED AS INDICATED ON PLANS.

8) ALL SOD, SEED, SHRUB AND TREE AREAS SHALL RECEIVE 6" PH CORRECTED TOPSOIL. AFTER TOPSOIL IS SPREAD EVENLY OVER ENTIRE AREA, ALL CLODS, LUMPS, STONES AND OTHER DELETERIOUS MATERIAL SHALL BE RAKED UP AND REMOVED.

9) APPLICATION OF GRASS SEED, FERTILIZERS AND STRAW MULCH SHALL BE ACCOMPLISHED BY BROADCAST SEEDING OR HYDROSEEDING AT THE RATES OUTLINED BELOW:

LIMESTONE: 100 LBS./1,000 SQUARE FEET.  
 FERTILIZER: 500 LBS/ACRE OF 10-20-20 OR 1000 LBS/ACRE OF 5-10-10.  
 STRAW MULCH: APPROXIMATELY 3 TONS/ACRE  
 NEW ENGLAND NATIVE WARM SEASON GRASS MIX: 23 LBS/ACRE

SEED MIX (SLOPES LESS THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	15
PERENNIAL RYEGRASS	5
REDTOP	2
	42

SLOPE MIX (SLOPES GREATER THAN 4:1)	LBS/ACRE
CREEPING RED FESCUE	20
TALL FESCUE	20
BIRDSFOOT TREEFOIL	8
	48

10) SEE ABOVE FOR TEMPORARY EROSION CONTROL NOTES.

11) NEWLY GRADED AREAS REQUIRING SLOPE PROTECTION OUTSIDE OF NORMAL SEEDING SEASON SHALL RECEIVE STRAW MULCH AT THE APPROXIMATE RATE OF NO MORE THAN 3 TONS PER ACRE.

12) ANY CHANGES IN PLANT LOCATIONS OR TYPES SHALL BE APPROVED BY THE DEVELOPER, LANDOWNER AND CITY PRIOR TO INSTALLATION.

13) CLEAR AND GRUB (TO LIMITS REQUIRED ON GRADING PLAN) TO REMOVE VEGETATION, TREES, ROCKS, DEBRIS, ROOTS, ETC. STUMPS SHALL BE REMOVED AND DISPOSED OF OFF SITE IN ACCORDANCE WITH STATE REGULATIONS. AFTER CLEARING, STRIP AND STOCKPILE ALL ON-SITE TOPSOIL FOR REUSE TO THE MAXIMUM EXTENT POSSIBLE.

14) FOR SEED AREAS USE EXISTING TOPSOIL, IF AVAILABLE, FOR A 4" DEPTH AND TOP DRESS WITH 2" OF SCREENED TOPSOIL, UNLESS OTHERWISE NOTED ON PLAN. ALL LOAM OR TOPSOIL IMPORTED OR RE-UTILIZED FROM ON SITE SHALL BE TESTED AND AMENDED AS DIRECTED BY DEVELOPER TO MEET MINIMUM REQUIREMENTS.

## **ATIONS/MAINTENANCE PLAN FOR MWATER SYSTEM:**

JCTION PHASE:  
ASSOCIATED WITH THIS PROJECT WILL BE OWNED BY CAFUA MANAGEMENT COMPANY, LLC  
WILL BE RESPONSIBLE FOR INSPECTION, OPERATION AND MAINTENANCE.

CONTRACTOR IS TO INSTALL AND MAINTAIN DRAINAGE FACILITIES AS SHOWN ON THE SITE  
S BY GREENMAN-PEDERSEN, INC.

TO CONSTRUCTION, ALL EROSION/SEDIMENT CONTROL DEVICES SHOWN ON  
E PLAN ARE TO BE INSTALLED. TO PREVENT SEDIMENT CONTROL INTRUSION INTO  
OUNDING AREAS DURING CONSTRUCTION, THE CONTRACTOR IS TO SET SEDIMENT CONTROL  
NG AT ALL SLOPES WHICH MAY ERODE IN THE DIRECTION OF ANY OPEN DRAINAGE  
TIES OR ABUTTING PROPERTY. SUCH PREVENTIVE MEASURES ARE TO BE MAINTAINED  
UGHOUT THE CONSTRUCTION PROCESS.

CONSTRUCTION OF DRAINAGE FACILITIES IS TO BE INSPECTED BY INSPECTORS FROM THE  
OF METHUEN AND BY AN AUTHORIZED AGENT TO VERIFY CONFORMANCE TO THE DESIGN

SEQUENCE OF DRAINAGE CONSTRUCTION SHALL BE AS FOLLOWS:

CLEAR, GRUB, EXCAVATE AREAS FOR DETENTION SYSTEMS.

INSTALL CATCH BASINS, PIPES AND MANHOLES.

ON CONTROLS ARE TO BE INSPECTED AND MAINTAINED ON A DAILY BASIS. UPON  
VERY OF SEDIMENT CONTROLATION BUILD-UP IN ANY CATCH BASIN SUMP OR ANY OTHER  
TURE, CLEANING SHALL BE PERFORMED WITHIN 24 HOURS.

EXPOSED SOILS SHALL BE IMMEDIATELY STABILIZED WITH A LAYER OF MULCH HAY.

INSTALLATION OF CATCH BASINS, INLET PROTECTION – AS DESCRIBED ON  
EMENTIONED PLAN – SHALL BE INSTALLED AND MAINTAINED UNTIL READY FOR PAVING.

TO CONSTRUCTION OF IMPERVIOUS AREAS, ALL DRAINAGE STRUCTURES AND PIPES SHALL  
STALLED AND INSPECTED FOR PROPER FUNCTION. DURING CONSTRUCTION OF OTHER SITE  
RES, ALL DRAINAGE FACILITIES SHALL BE INSPECTED ON A DAILY BASIS AND  
ED/REPAIRED IMMEDIATELY UPON DISCOVERY OF SEDIMENT BUILD-UP OR DAMAGE.

PAVING IS INSTALLED, IT SHALL BE SWEPT CLEAN ON A MONTHLY BASIS.

CTIONS ARE TO BE PERFORMED AND INSPECTION LOGS FILLED OUT ON A WEEKLY BASIS  
THE START OF CONSTRUCTION THROUGH FINAL STABILIZATION. THE START OF  
TRUCTION MEANS THE INITIAL DISTURBANCE OF SOILS ASSOCIATED WITH CONSTRUCTION.  
STABILIZATION MEANS 70% VEGETATIVE GROWTH FOR UNPAVED AREAS.

**CONSTRUCTION PHASE:** OWNER IS TO BE RESPONSIBLE FOR CONTINUED MAINTENANCE OF ALL ONSITE DRAINAGE

## **LANDSCAPE PLAN:**

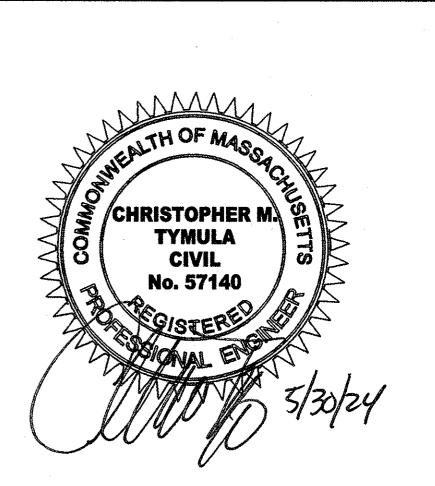
ALL PLANT STOCK SHALL CONFORM TO ANSI Z260.1 - NURSERY STOCK, LATEST EDITION  
AMERICAN ASSOCIATION OF NURSERYMEN, INC.).  
  
A 4' DIA. TREE RING WITH 3" AGED PINE BARK MULCH TO BE INSTALLED AT BASE OF ALL  
TREES IN LAWN AREAS.  
  
1" AGED PINE BARK MULCH SHALL BE APPLIED TO ALL SHRUB AND GROUNDCOVER BEDS.  
  
LANDSCAPE STONE SHALL BE TAN RIVERBED STONE. STONE SHALL BE (1½) INCHES IN  
DIAMETER AND APPLIED AT A THICKNESS OF (4) INCHES DEEP. ALL FINES SHALL BE SCREENED  
FROM THE AGGREGATE. THE MATERIAL SHALL BE FREE OF ORGANIC AND INORGANIC DEBRIS AND  
RASH. SUBMIT SAMPLE IN A 5-GALLON BUCKET TO THE DEVELOPER FOR APPROVAL.  
  
A WEED BARRIER (TY-PAR FABRIC OR APPROVED EQUAL) SHALL BE APPLIED TO ALL SHRUB  
AND GROUNDCOVER BEDS. INSTALL WEED BARRIER AS PER MANUFACTURERS RECOMMENDATIONS.

**GPI** Engineering  
Design  
Planning  
Construction Management  
603.893.0720      **GPINET.COM**  
Hannan-Pedersen, Inc.  
11 Miles Road, Suite One  
Nashua, NH 03079

PARDED FOR  
CAFUA MANAGEMENT  
COMPANY, LLC  
80 MERRIMACK STREET  
METHUEN, MA 01844

२४

477 & 479 BROADWAY  
METHUEN, MASSACHUSETTS



---

## REVISIONS

MISC. REVISIONS	5/30/24
REVISION	DATE
MARCH 6, 2024	
WN/DESIGN BY	CHECKED BY
SJB/CMT	CMT

## GENERAL NOTES

NOTES

---

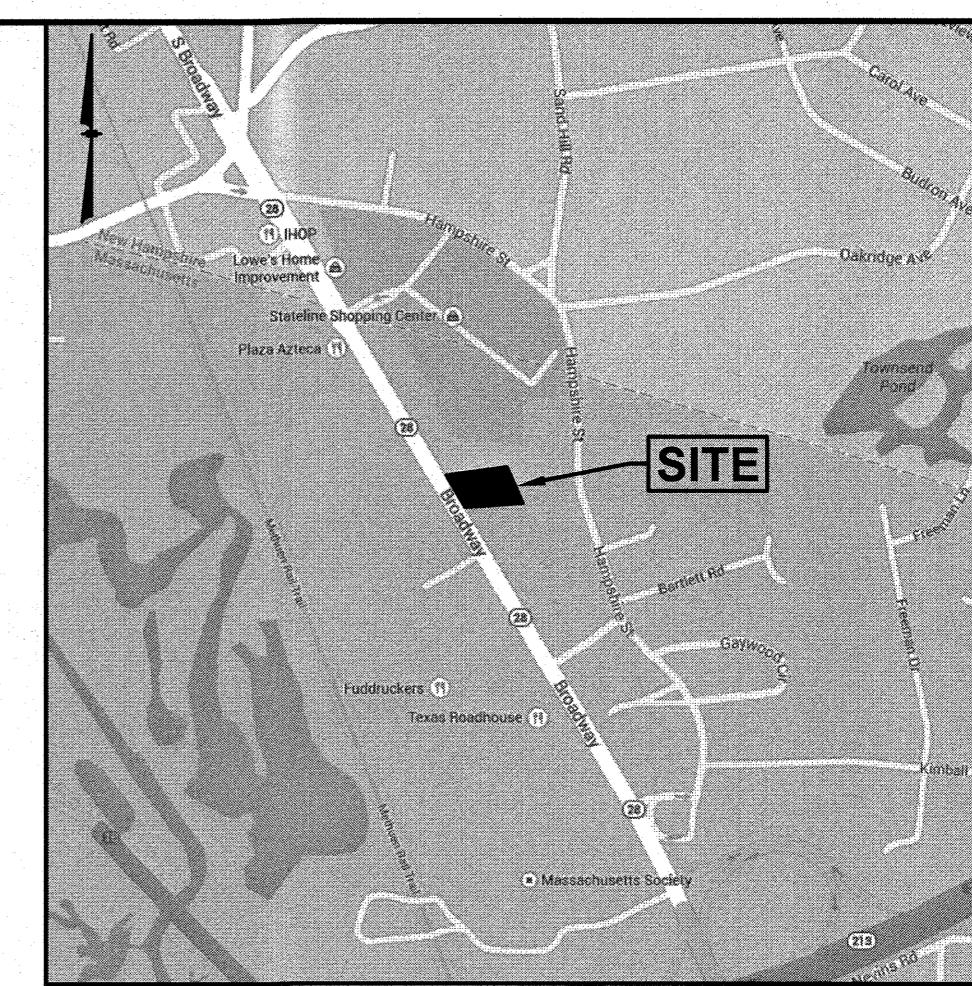
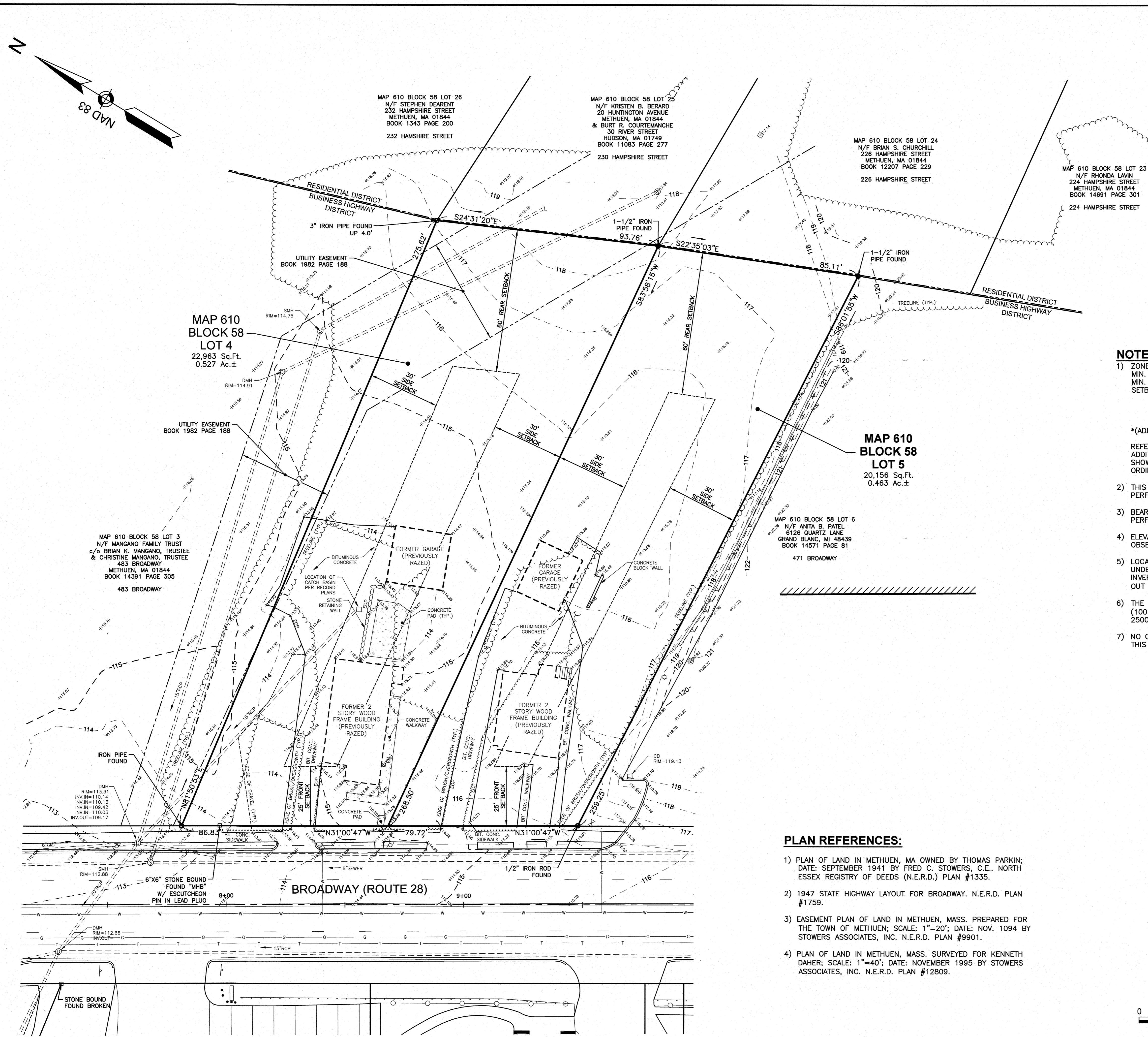
LE: AS NOTED

---

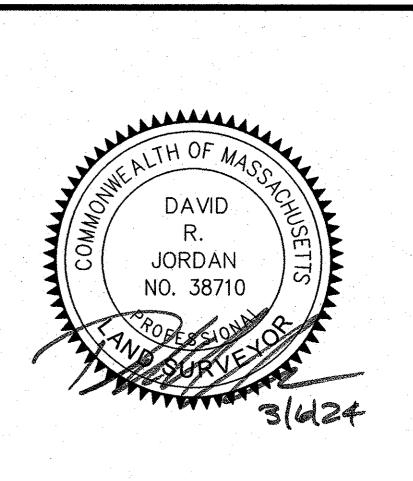
JECT NO. NEX-2021347

---

2 OF 14



**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5  
477 & 479 BROADWAY  
METHUEN, MASSACHUSETTS**



REVISIONS		
NO.	REVISION	DATE
		MARCH 6, 2024

DRAWN/DESIGN BY **SJB/CMT** CHECKED BY **DRJ**

**OWNER OF RECORD:**

MAP 610 BLOCK 58 LOT 4  
CAFUA REALTY TRUST XXV LLC  
280 MERRIMACK STREET  
METHUEN, MA 01844  
BOOK 13846 PAGE 311

MAP 610 BLOCK 58 LOT 5  
CAFUA REALTY TRUST XXV LLC  
280 MERRIMACK STREET  
METHUEN, MA 01844  
BOOK 13846 PAGE 296

0 20 50 100  
SCALE: 1" = 20'

**EXISTING  
CONDITIONS  
PLAN**

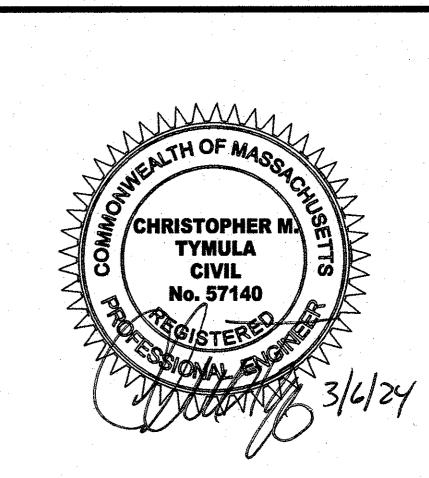
SCALE:  
1" = 20'  
PROJECT NO.  
NEX-2021347

## **NOTES:**

1) SEE SHEET 2 FOR NOTES AND LEGEND INFORMATION.

PREPARED FOR  
CAFUA MANAGEMENT  
COMPANY, LLC  
280 MERRIMACK STREET  
METHUEN, MA 01844

**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5  
477 & 479 BROADWAY  
METHUEN, MASSACHUSETTS**



# DEMOLITION PLAN

SCALE: 1"=20'

PROJECT NO.  
**NEX-2021347**

4 OF 14



0 20 50 100  
SCALE: 1" = 20'

A scale bar and text block. The scale bar is a horizontal line with tick marks. The first 20 units are marked with small white squares. The next 30 units are marked with larger black squares. The total length is 100 units. Below the scale bar, the text "SCALE: 1" = 20'" is centered.

F:\Projects\NEX-2021347 - Methuen, MA - Crafua Management (Old 351314)\CAD Files\21347_SP.dwg DEMO 3/05/24 4:46pm cmason

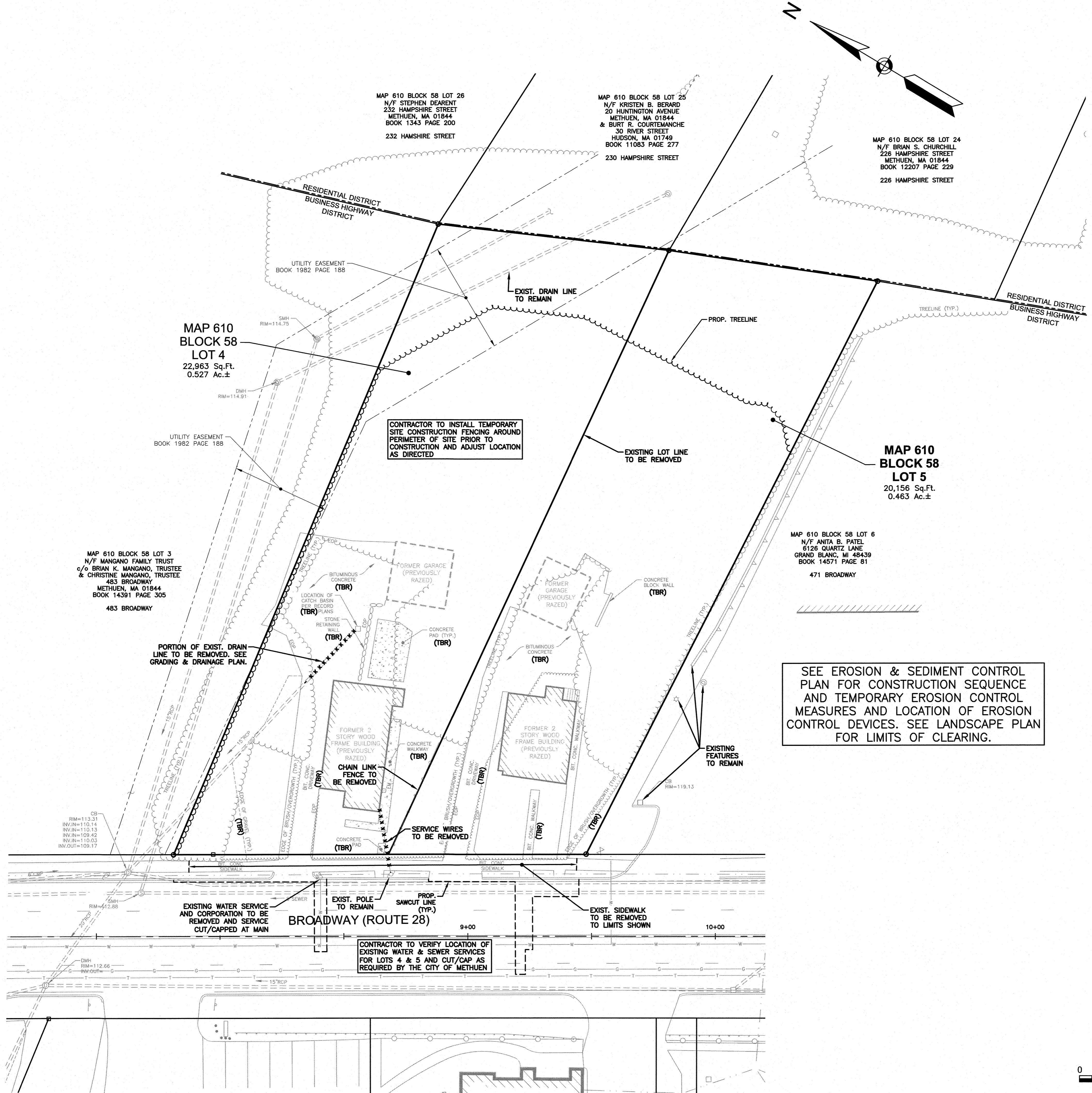


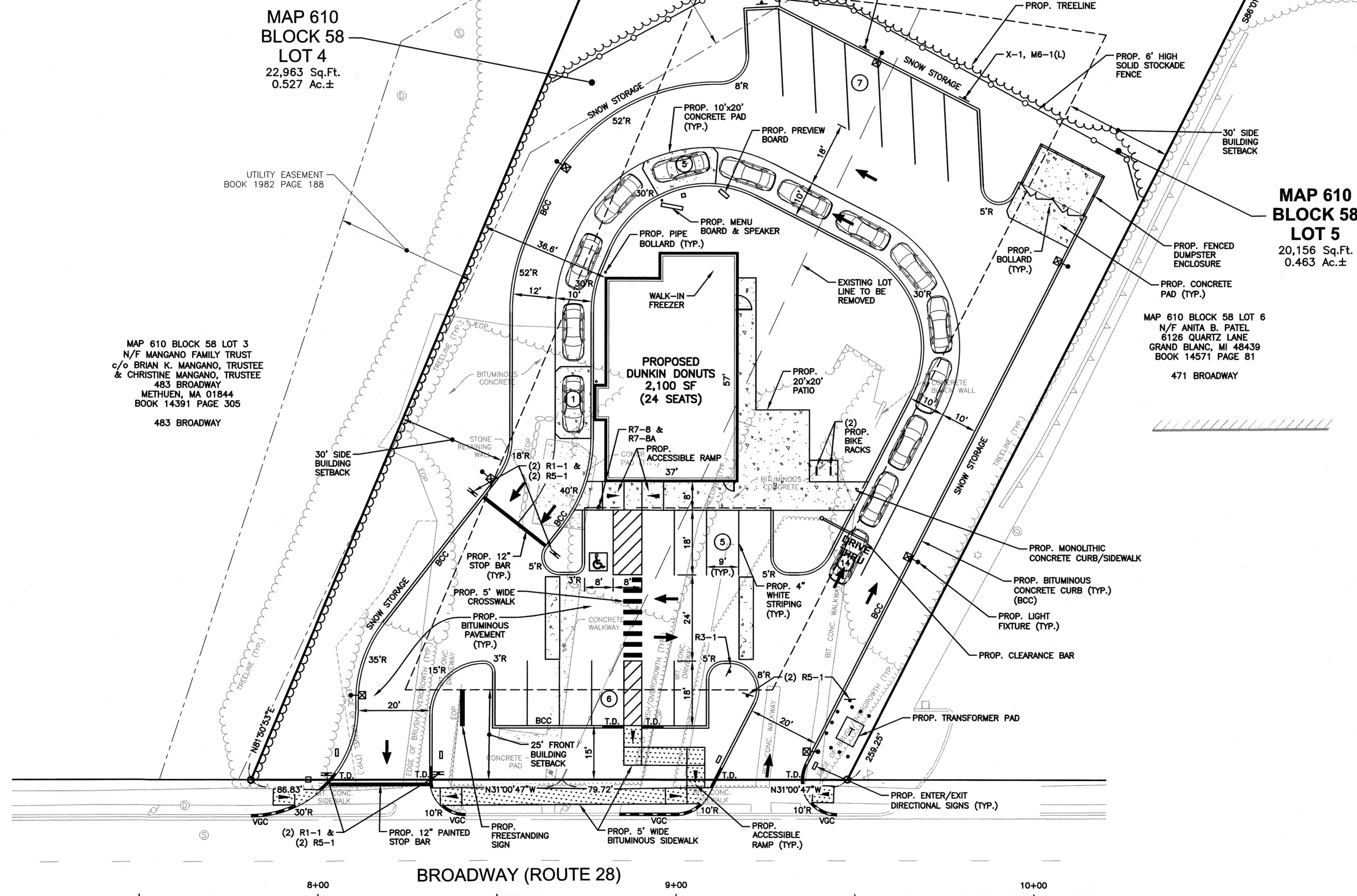
TABLE OF ZONING REGULATIONS		
ZONE: HIGHWAY BUSINESS (BH)		
DESCRIPTION	REQUIRED	PROVIDED
MINIMUM LOT AREA, Sq. Ft.	10,000 SF	43,119 SF
MINIMUM LOT FRONTAGE	100'	165'
MINIMUM FRONT BUILDING SETBACK	25'	83'
MINIMUM SIDE BUILDING SETBACK	60' (ABUTTING RESIDENTIAL ZONE)*	103.3'
MINIMUM REAR BUILDING SETBACK	30'	32.8'
MINIMUM FRONT YARD PARKING SETBACK	15'	15'
MINIMUM REAR YARD PARKING SETBACK	7.5'	N/A
MINIMUM SIDE YARD PARKING SETBACK	7.5' (ALSO 7.5' FROM BUILDINGS)	38.9'
MINIMUM BUFFER FROM RESIDENTIAL AREA, HEIGHT AND SETBACK	30'	33.9*
PARKING SPACE DIMENSIONS	9' X 18'	9' X 18'
MINIMUM NUMBER PARKING SPACES	DONUT SHOP (2,100 SF, 24 SEATS) 1 SP/4 SEATS x 24 SEATS = 6 SPACES 1 SP/2 EMP. x 6 EMP. = 3 SPACES	18 SPACES
TOTAL REQUIRED	= 9 SPACES	
MAXIMUM BUILDING HEIGHT	40' (3 STORIES)	< 40'
MAXIMUM BUILDING COVERAGE	35%	2,100 SF/43,119 SF = 4.9%
MAXIMUM FREESTANDING SIGN AREA, HEIGHT AND SETBACK	60 SF, 20' HEIGHT (ONE SIGN PER BUILDING)	REFER TO PROPOSED PYLON SIGN
MAXIMUM WALL SIGN AREA	33% OF WALL	REFER TO EXTERIOR ELEVATIONS

* WAIVER REQUIRED FROM SECTION VI-B(12) TO ALLOW A REDUCTION IN THE BUFFER ZONE BETWEEN RESIDENTIAL AND BUSINESS ZONING DISTRICTS.

SIGN KEY		
SIGN I.D. NUMBER	TEXT/COLOR	SIZE/REMARKS
R1-1	STOP R/W	30" x 30" NEW SIGN WITH POST
R7-8	RESTAURANT G/B/W	12" x 18" NEW SIGN WITH POST
R7-8A	VAN G/B/W	6" x 12"
R5-1	DO NOT ENTER R/W	30" x 30" NEW SIGN WITH POST
R3-1	NO SMOKING B/W/R	24" x 24" NEW SIGN WITH POST
X-1	EMPLOYEE PARKING ONLY B/W	12" x 18" NEW SIGN WITH POST
M6-1	RIGHT TURN B/W	21" x 15" NEW SIGN WITH POST

MAP 610 BLOCK 58 LOT 3  
N/F MANGANO FAMILY TRUST  
c/o BRIAN K. MANGANO, TRUSTEE  
& CHRISTINE MANGANO, TRUSTEE  
483 BROADWAY  
METHUEN, MA 01844  
BOOK 14391 PAGE 305

483 BROADWAY





## NOTES:

)) SEE SHEET 2 FOR NOTES AND LEGEND INFORMATION.

PREPARED FOR  
CAFUA MANAGEMENT  
COMPANY, LLC  
280 MERRIMACK STREET  
METHUEN, MA 01844

**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5**

**477 & 479 BROADWAY  
METHUEN MASSACHUSETTS**

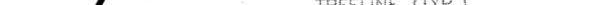
# METHUEN, MASSACHUSETTS

SEWER PIPE SCHEDULE					
FROM: STRUCTURE NUMBER	PIPE SIZE (inches)	TYPE OF PIPE	APPROX. PIPE LENGTH (feet)	SLOPE OF PIPE (ft./ft.)	TO: STRUCTURE NUMBER
BLDG.	4	PVC	10	0.020	GR. TRAP #1
R. TRAP #1	4	PVC	33	0.050	SMH-1
BLDG.	6	PVC	13	0.073	WYE
SMH-1	6	PVC	68	0.063	STUB

## SEWER STRUCTURES

500 GAL. GREASE TRAP #1  
M=116.80  
V.IN=113.80  
V.OUT=113.55  
  
MH-1  
M=116.60  
V.IN=111.90  
V.OUT=111.80

MAP 610 BLOCK 58 LOT 24  
N/F BRIAN S. CHURCHILL  
226 HAMPSHIRE STREET  
METHUEN, MA 01844  
BOOK 12207 PAGE 229  
  
226 HAMPSHIRE STREET

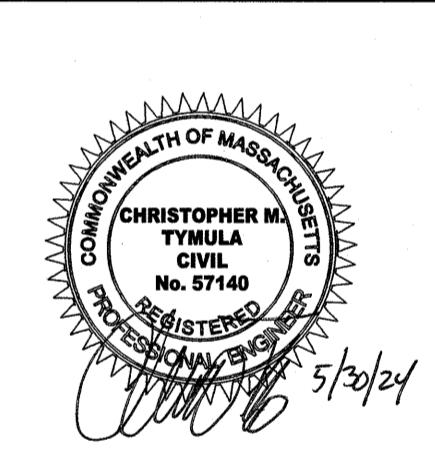
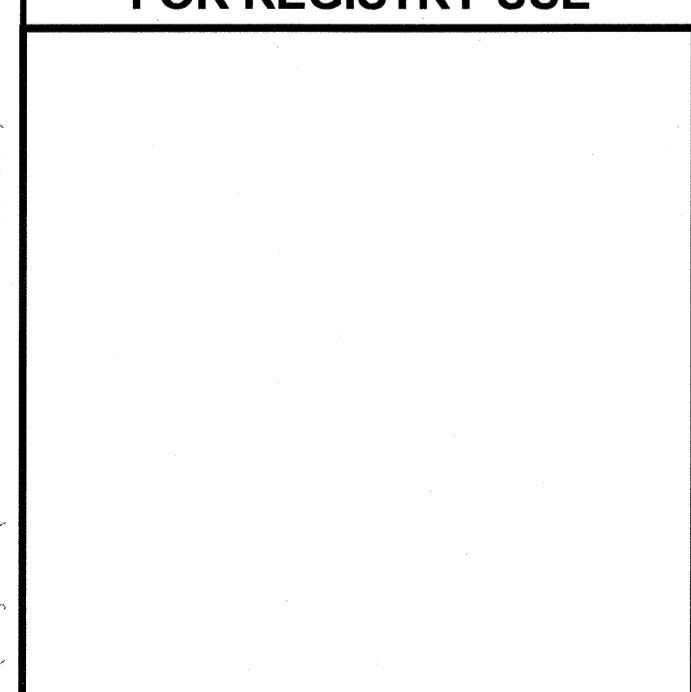
TREELINE (TYP.)  BUSINESS HIGHWAY DISTRICT  
DISTRICT

**MAP 610  
BLOCK 5  
LOT 5  
20.156 Sq.Ft.**

610 BLOCK 58 LOT 6  
F ANITA B. PATEL  
126 QUARTZ LANE  
ND BLANC, MI 48439  
OK 14571 PAGE 81



**FOR REGISTRY USE**



## REVISIONS

MISC. REVISIONS	5/30/24	
REVISION	DATE	
<b>MARCH 6, 2024</b>		
WN/DESIGN BY		CHECKED BY
SJB/CMT		CMT

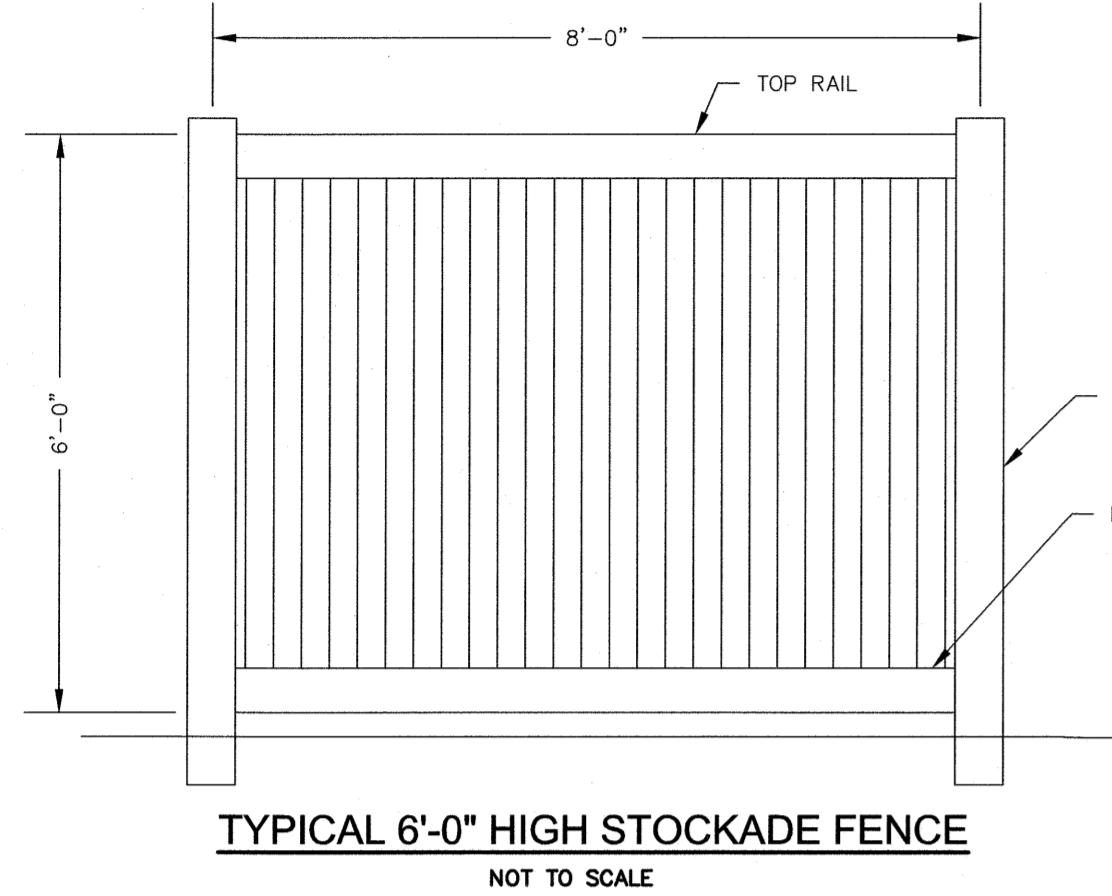
## UTILITY PLAN

LE: 1"=20'  
JECT NO. NEX-2021347  
7 OF 14

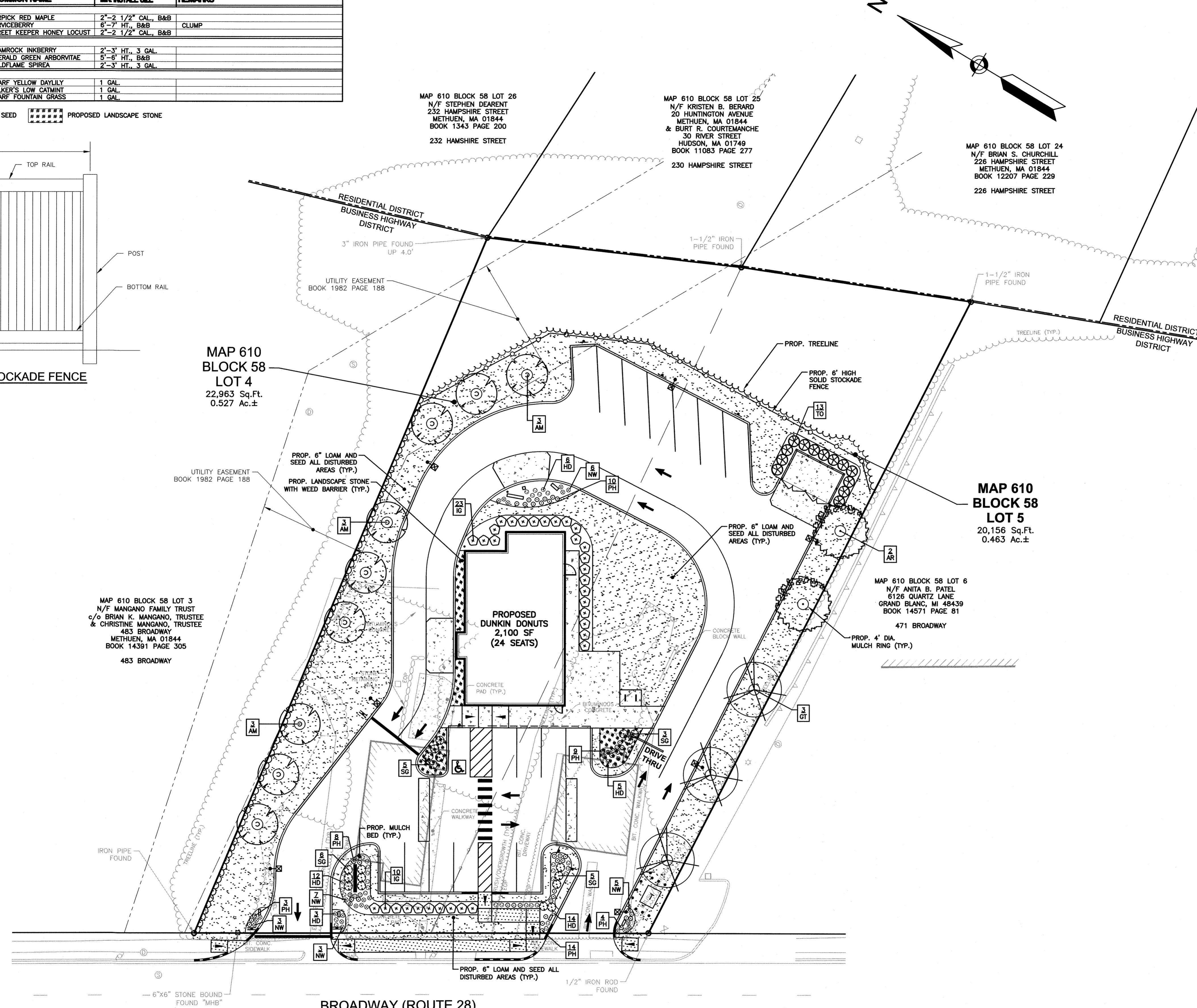


PLANTING SCHEDULE				
PLANT QNTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALL SIZE	REMARKS
1	ACER RUBRUM "KARPICK"	KARPICK RED MAPLE	2'-2 1/2" CAL, B&B	
AM	AMELANCHIER CANADENSIS	SERVICEBERRY	5'-6" HT, B&B	CLUMP
GT	GLIEDTIA TRACANTHOS "STREET KEEPER"	STREET KEEPER HONEY LOCUST	2'-2 1/2" CAL, B&B	
SHRUBS				
IG	ILEX GLabra "SHAMROCK"	SHAMROCK INKBERRY	2'-3" HT, 3 GAL	
TO	THUJA OCCIDENTALIS "SMARAGD"	EMERALD GREEN ARBORVITAE	5'-6" HT, B&B	
SG	SPIREA BUNALDA "GOLDFLAME"	GOLDFLAME SPIREA	2'-3" HT, 3 GAL	
PERENNIALS & GRASSES				
HD	HEMEROCALLIS "STELLA DE ORO"	DWARF YELLOW DAYLILY	1 GAL	
NW	NEPETA CULTIVAR'S LOW CAMPION	WILDE'S LOW CAMPION	1 GAL	
PH	PENNISETUM ALOPECUROIDES "HAMELN"	DWARF FOUNTAIN GRASS	1 GAL	

1 PLANT QUANTITY  
XX PLANT DESIGNATION PROPOSED LOAM AND SEED PROPOSED LANDSCAPE STONE



FOR REGISTRY USE

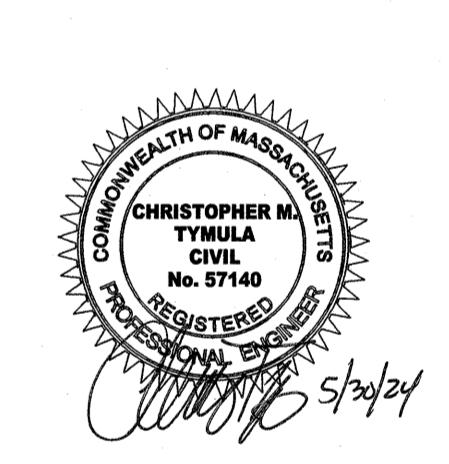


NOTES:  
1) SEE SHEET 2 FOR NOTES AND LEGEND INFORMATION.

**GPI** Engineering  
Design  
Planning  
Construction Management  
603.893.0720  
Gresham-Pedersen, Inc.  
44 Stiles Road, Suite One  
Salem, NH 03079

PREPARED FOR  
CAFUA MANAGEMENT  
COMPANY, LLC  
280 MERRIMACK STREET  
METHUEN, MA 01844

**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5  
477 & 479 BROADWAY  
METHUEN, MASSACHUSETTS**



REVISIONS		
1	MISC. REVISIONS	5/30/24
NO.	REVISION	DATE
		MARCH 6, 2024
DRAWN/DESIGN BY	CHECKED BY	
SJB/CMT	CMT	

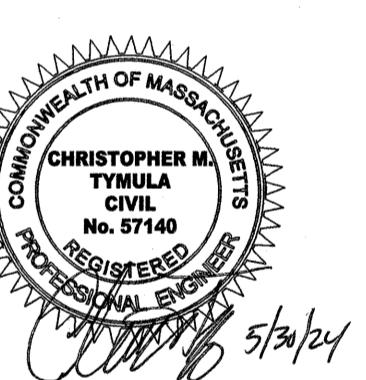
**LANDSCAPE PLAN**

SCALE: 1"=20'  
PROJECT NO.  
NEX-2021347  
9 OF 14

APPROVED BY THE CITY OF METHUEN COMMUNITY DEVELOPMENT BOARD	DATE
FILED	
HEARING	

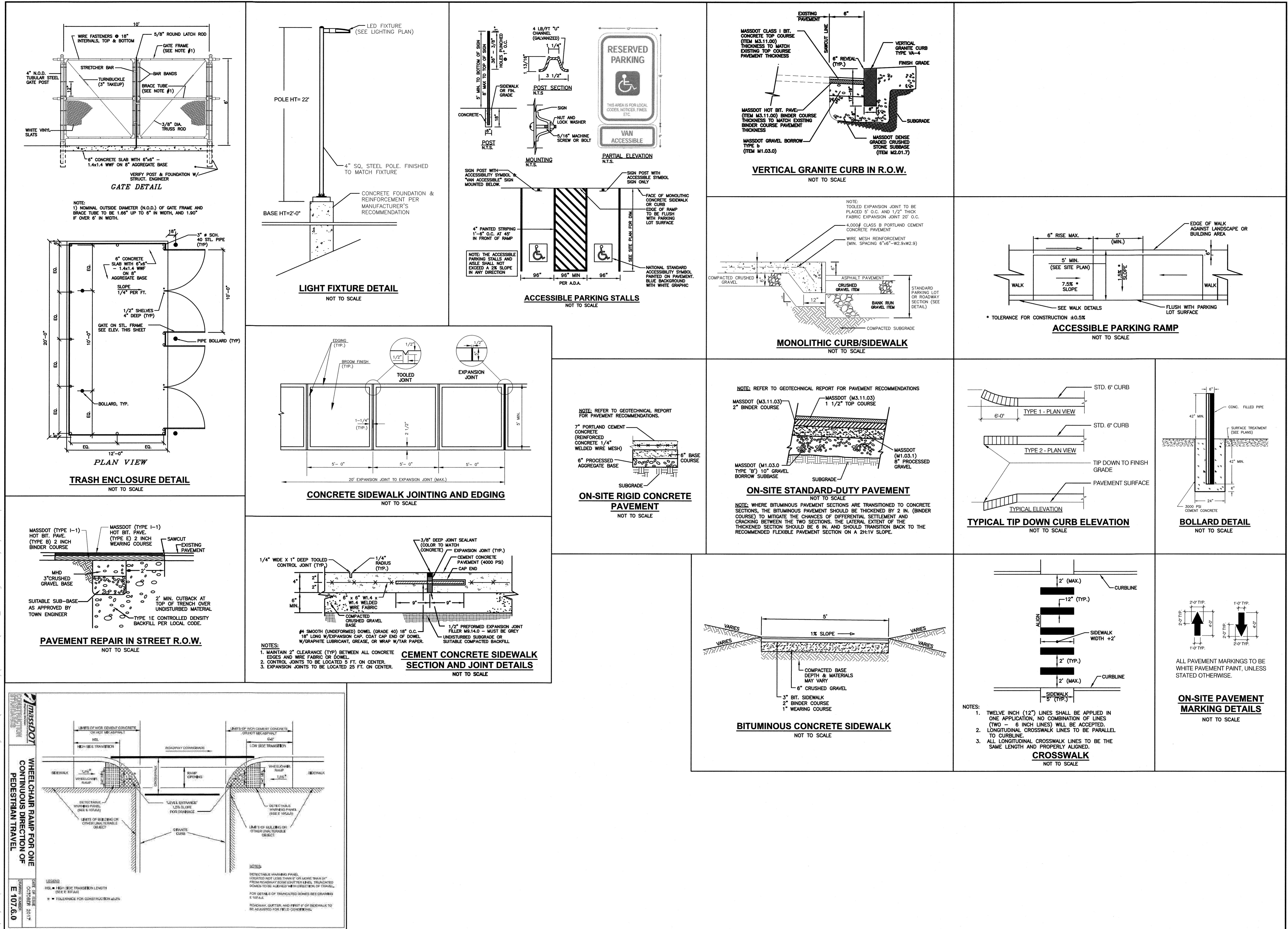
0 20 50 100  
SCALE: 1" = 20'

**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5  
477 & 479 BROADWAY  
METHUEN, MASSACHUSETTS**



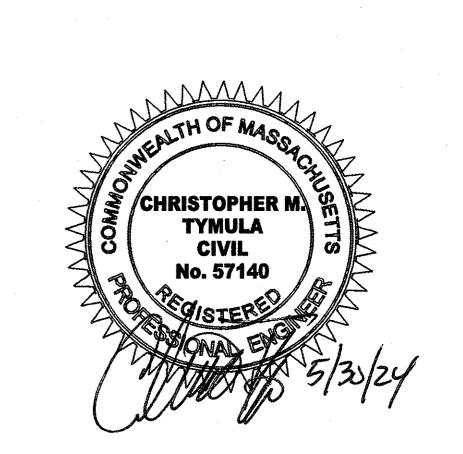
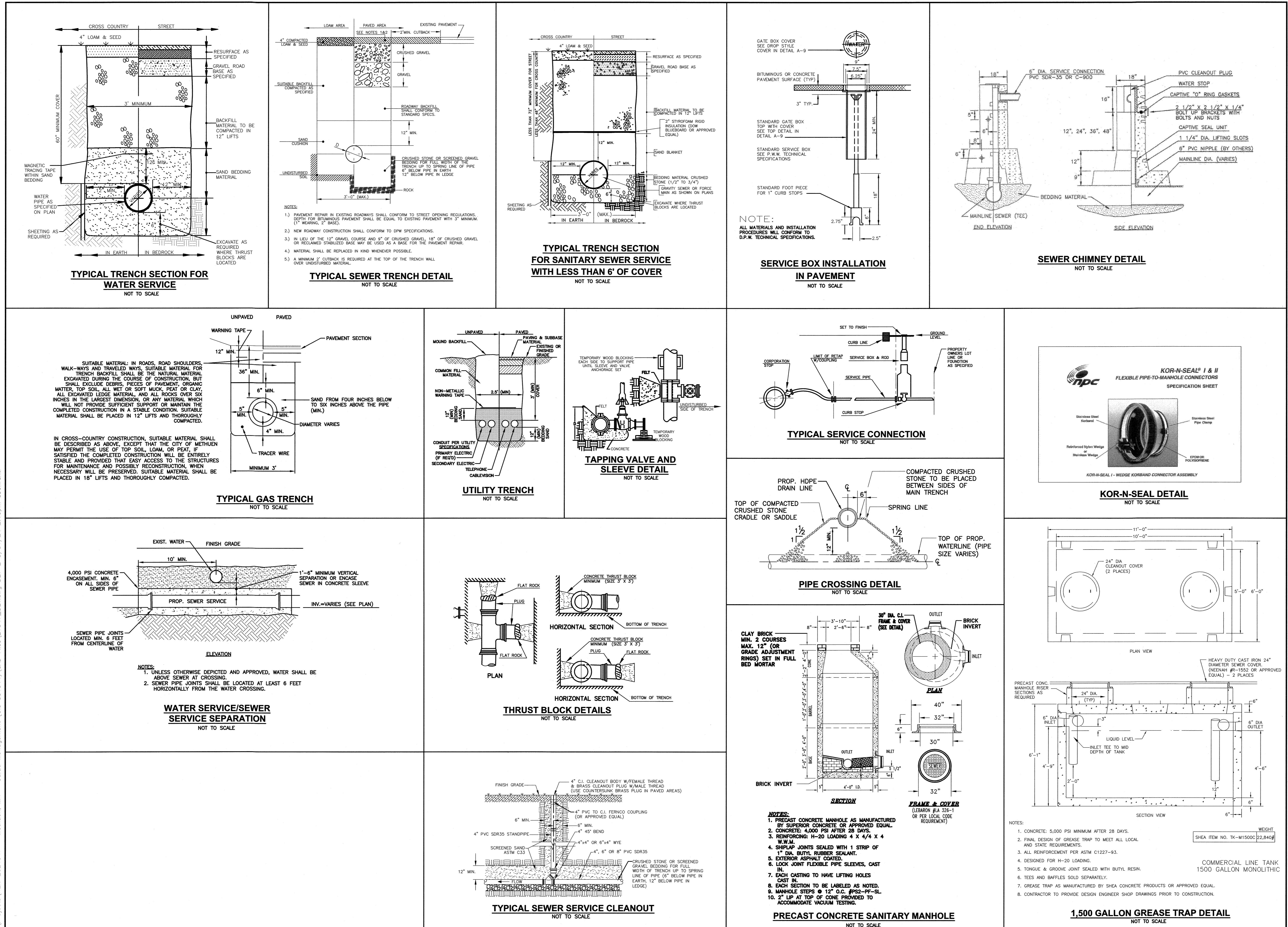
REVISIONS		
1	REVISE CURB RAMP DETAIL	5/30/24
NO.	REVISION	DATE
	MARCH 6, 2024	
DRAWN/DESIGNED BY	CHECKED BY	
SJB/CMT	CMT	

DETAIL SHEET	
SCALE:	NOT TO SCALE
PROJECT NO.	NEX-2021347



5

**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5  
477 & 479 BROADWAY  
METHUEN, MASSACHUSETTS**



REVISIONS		
1	MISC. REVISIONS	5/30/24

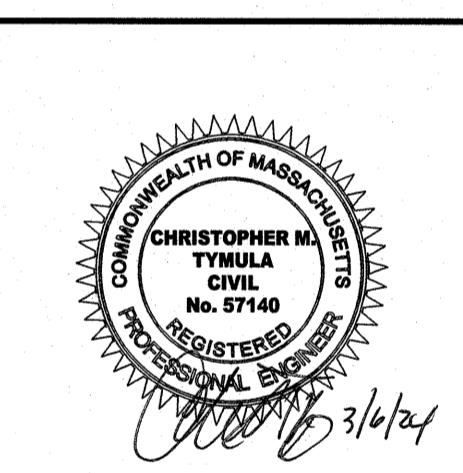
NO. REVISION DATE  
MARCH 6, 2024  
DRAWN/DESIGN BY SJB/CMT CHECKED BY CMT

DETAIL SHEET	
NOT TO SCALE	SCALE:
PROJECT NO. NEX-2021347	COMMERCIAL LINE TANK 1500 GALLON MONOLITHIC
11 OF 14	WEIGHT SHEA ITEM NO. TK-M1500C 2,840#

REARED FOR  
CAFUA MANAGEMENT  
COMPANY, LLC  
280 MERRIMACK STREET  
METHUEN, MA 01844

**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5  
477 & 479 BROADWAY  
METHIEN MASSACHUSETTS**

477 & 479 BROADWAY  
METHIEN MASSACHUSETTS

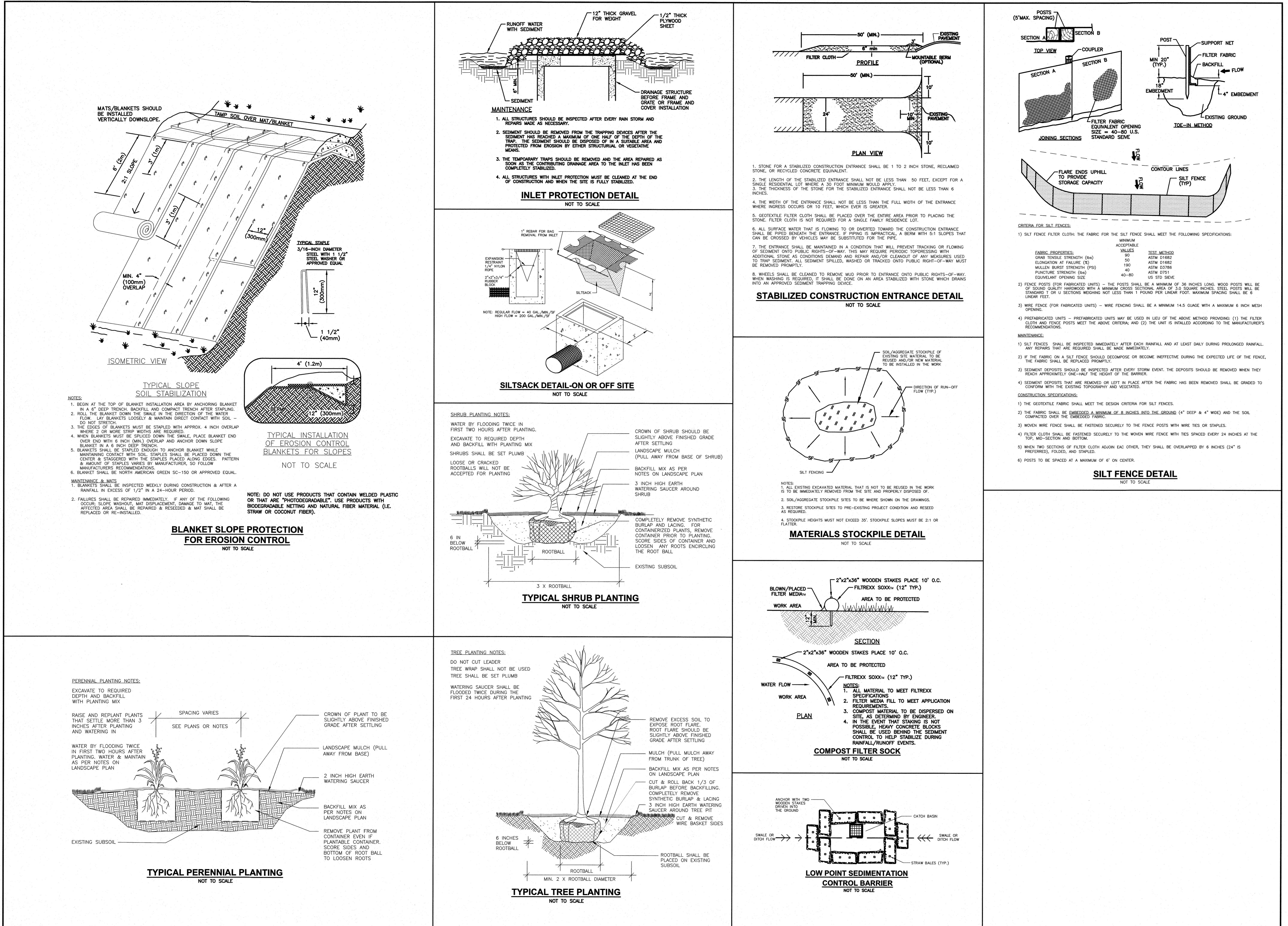


## REVISIONS

## DETAIL SHEET

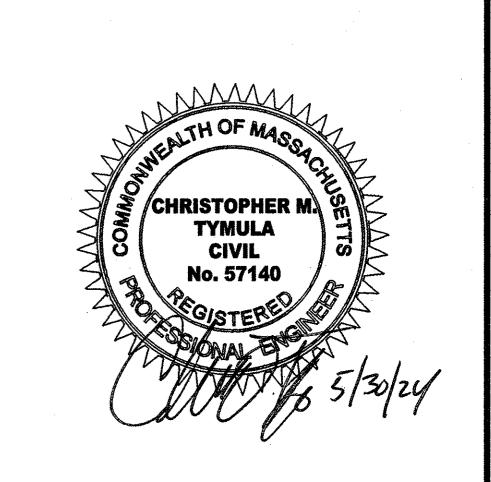
SCALE: **NOT TO SCALE**  
PROJECT NO. **NEX 2021247**

12 OF 14



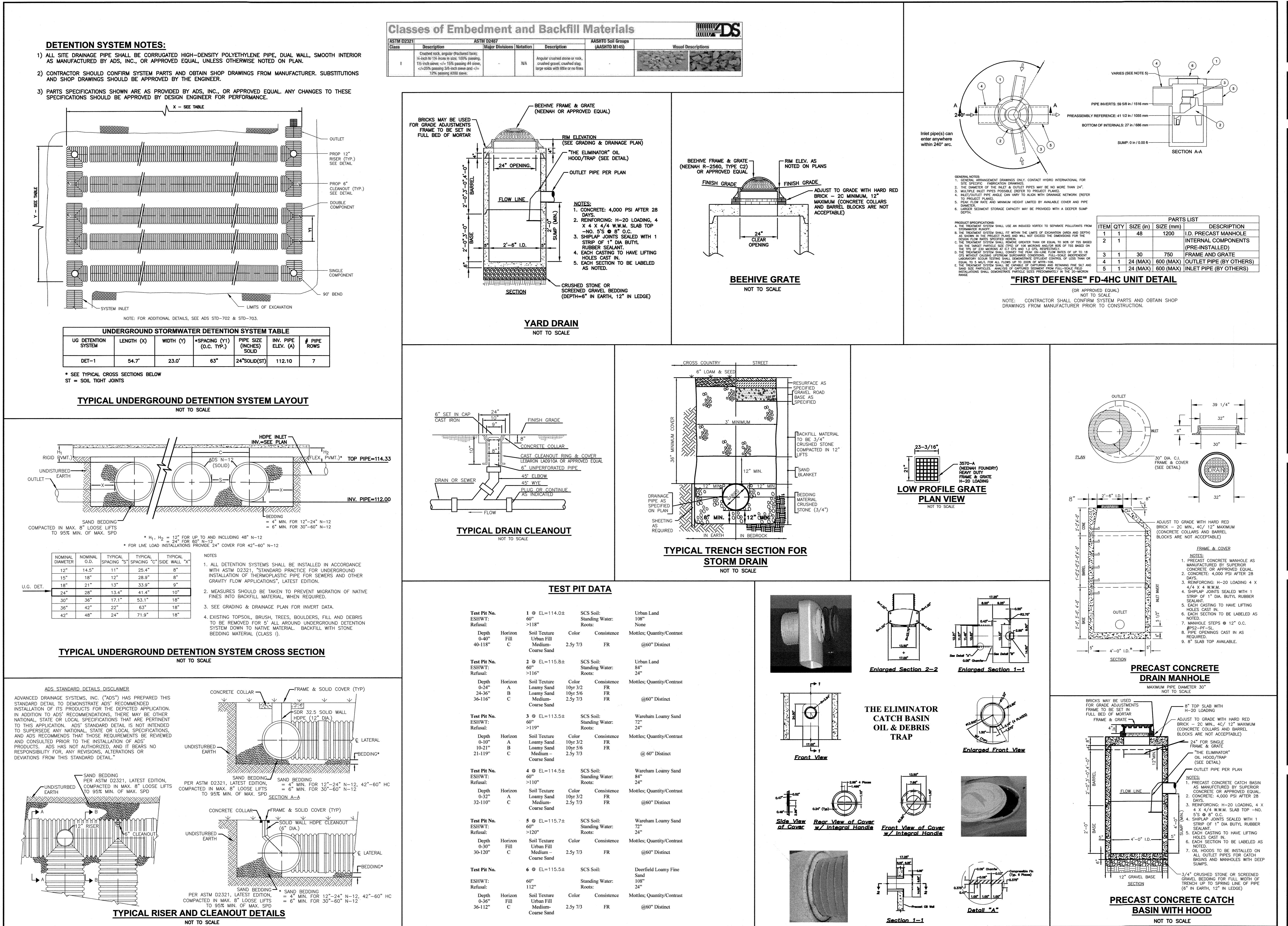
**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5**

**477 & 479 BROADWAY  
METHUEN, MASSACHUSETTS**

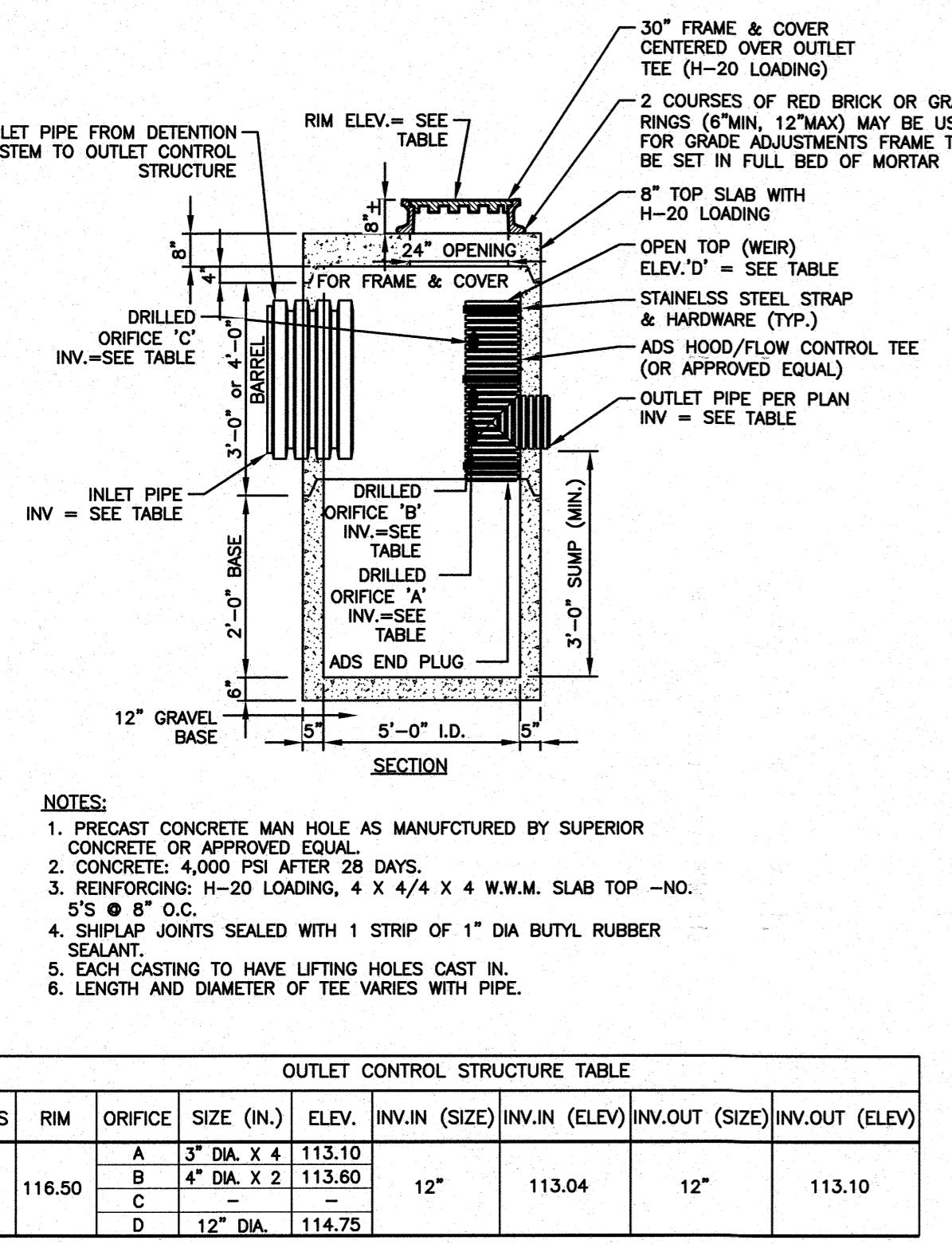


REVISIONS		
1	MISC. REVISIONS	5/30/24
NO.	REVISION	DATE
	MARCH 6, 2024	
	DRAWN/DESIGN BY	CHECKED BY
	SJB/CMT	CMT

SCALE:	NOT TO SCALE
PROJECT NO.	NEX-2021347



**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5  
477 & 479 BROADWAY  
METHUEN, MASSACHUSETTS**



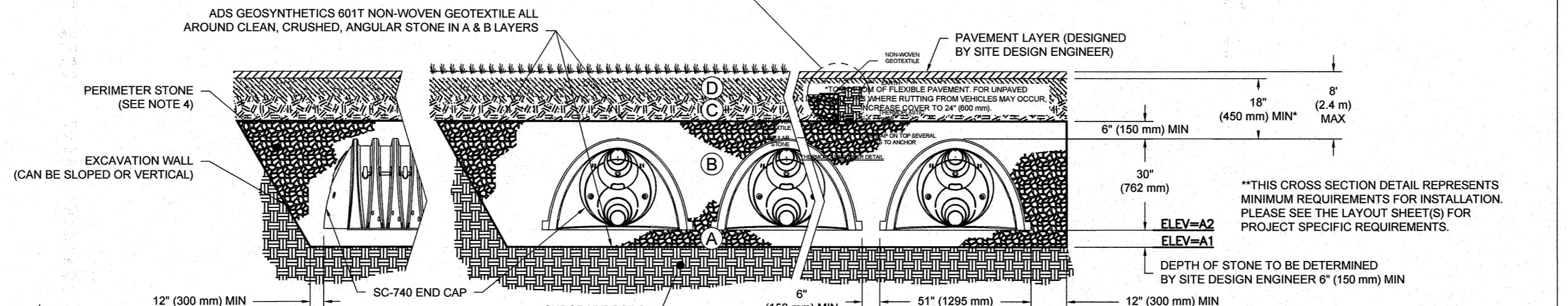
**CONCRETE OUTLET CONTROL STRUCTURE (OCS)**

NOT TO SCALE

**ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT	
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE SPECIAL MATERIAL AND PREPARATION REQUIREMENTS.	
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBODIMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 67, 68, 7, 78, 89, 9, 10 3, 357, 4, 467, 5, 56, 57	BEGIN COMPACTION AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR VEHICLE LOADS. DETERMINE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN), DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBODIMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

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



NOTES:  
1. PRECAST CONCRETE MAN HOLE AS MANUFACTURED BY SUPERIOR CONCRETE OR APPROVED EQUAL.  
2. CONCRETE: 4,000 PSI AFTER 28 DAYS.  
3. REINFORCING: H-20 LOADING, 4 X 4/4 X 4 W.W.M. SLAB TOP - NO.  
4. SHIPLAP JOINTS SEALED WITH 1 STRIP OF 1" DIA BUTYL RUBBER SEALANT.  
5. EACH CASTING TO HAVE LIFTING HOLES CAST IN.  
6. LENGTH AND DIAMETER OF TEE VARIES WITH PIPE.

OUTLET CONTROL STRUCTURE TABLE								
OCS	RIM	ORIFICE	SIZE (IN.)	ELEV.	INV. (SIZE)	INV. (ELEV.)	INV. OUT (SIZE)	INV. OUT (ELEV.)
#1	116.50	A 3" DIA. X 4"	113.10		12"	113.04	12"	113.10
		B 4" DIA. X 2"	113.60					
		C -	-					
		D 12" DIA.	114.75					

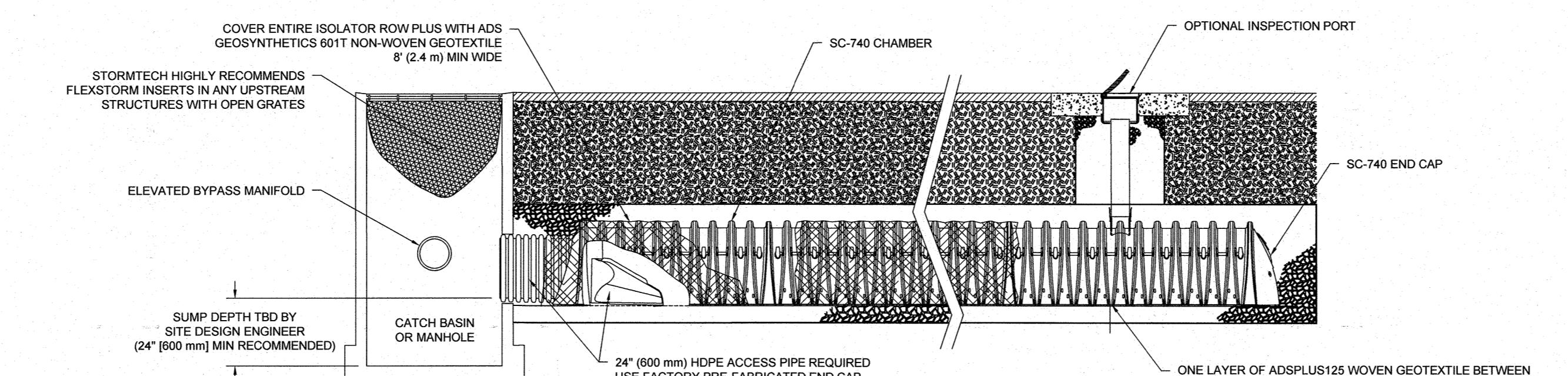
**NOT TO SCALE**

**NOTES:**

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".  
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".  
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.  
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.  
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:  
• TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.  
• TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".  
• TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT², AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT Elevated TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

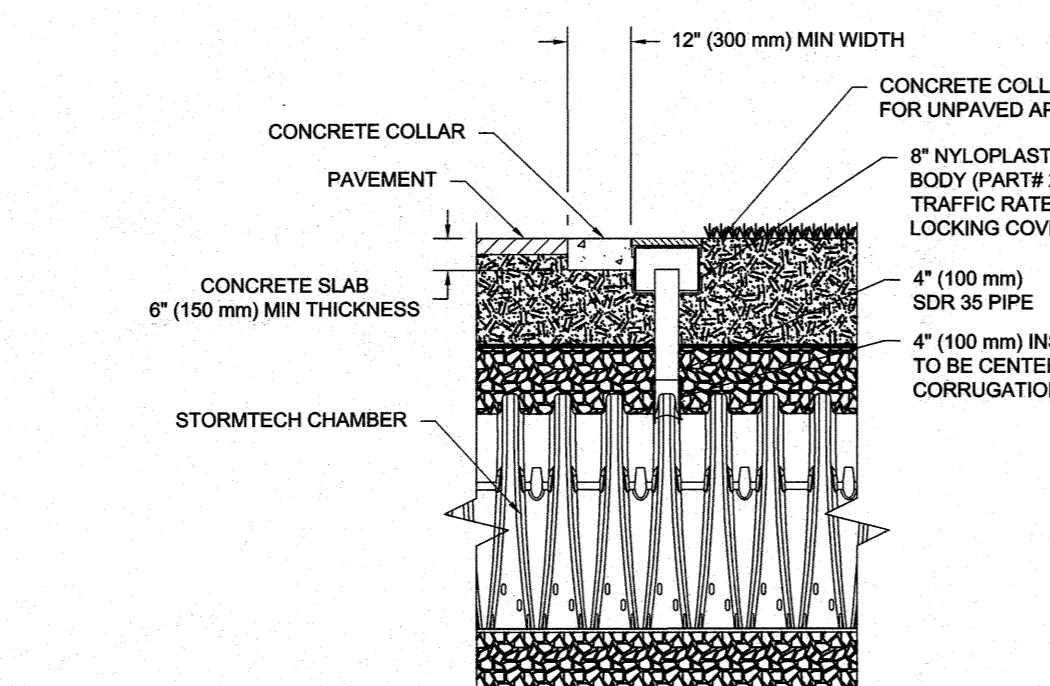
1

**SC-740 CROSS SECTION DETAIL**



3

**SC-740 ISOLATOR ROW PLUS DETAIL**



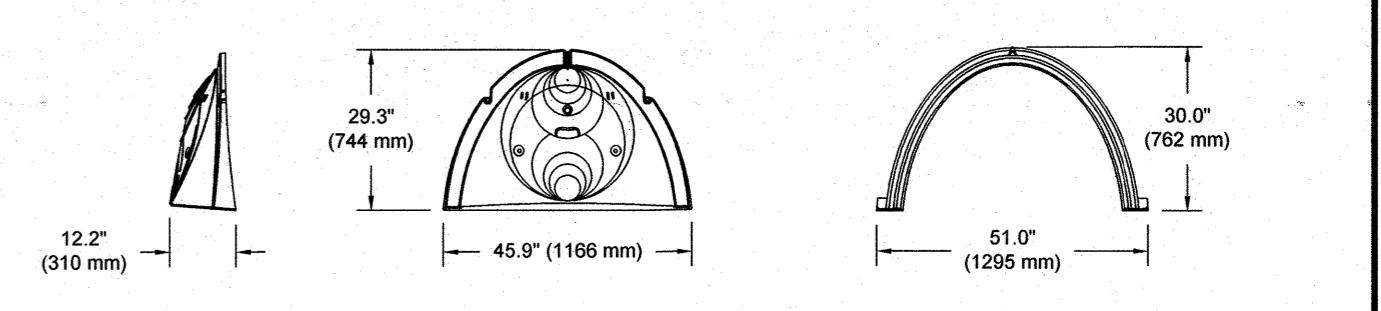
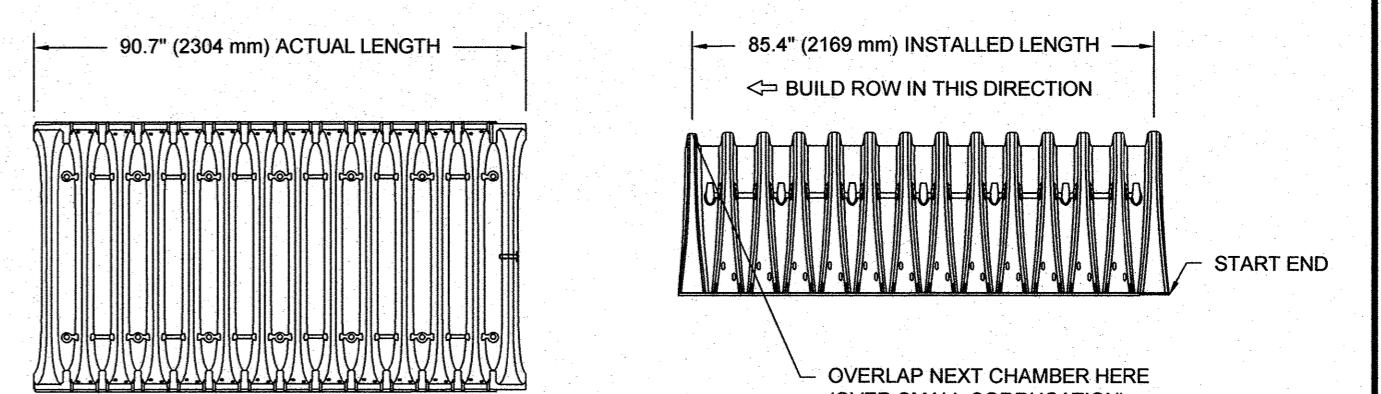
**INSPECTION & MAINTENANCE**

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

**NOTES**

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

4  
**4" PVC INSPECTION PORT DETAIL  
(SC SERIES CHAMBER)**



**NOMINAL CHAMBER SPECIFICATIONS**  
SIZE (W X H X INSTALLED LENGTH)  
51.0" X 30.0" X 85.4" (1295 mm X 762 mm X 2169 mm)  
48.3 CUBIC FEET (1.36 m³)  
MINIMUM INSTALLED STORAGE*  
74.9 CUBIC FEET (2.2 m³)  
WEIGHT  
75.0 lbs. (33.6 kg)

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

PART #	STUB	A	B	C
SC740EPE091 / SC740EPE091PC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)	0.5" (13 mm)
SC740EPE093 / SC740EPE093PC	8" (200 mm)	12.2" (310 mm)	18.5" (419 mm)	0.6" (15 mm)
SC740EPE088 / SC740EPE088PC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)	0.7" (18 mm)
SC740EPE108 / SC740EPE108PC	12" (300 mm)	14.7" (373 mm)	12.5" (318 mm)	1.2" (30 mm)
SC740EPE128 / SC740EPE128PC	9.0" (230 mm)			
SC740EPE168 / SC740EPE168PC	15" (375 mm)	18.4" (467 mm)	1.3" (33 mm)	
SC740EPE181 / SC740EPE181PC	18" (450 mm)	18.7" (500 mm)	5.0" (127 mm)	
SC740EPE188 / SC740EPE188PC	24" (600 mm)	18.5" (470 mm)	1.6" (41 mm)	0.1" (3 mm)
SC740EPE248 ⁴	24" (600 mm)	18.5" (470 mm)	1.6" (41 mm)	0.1" (3 mm)

ALL STUBS, EXCEPT FOR THE SC740EPE248/SC740EPE248R, ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

* FOR THE SC740EPE248/SC740EPE248R THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

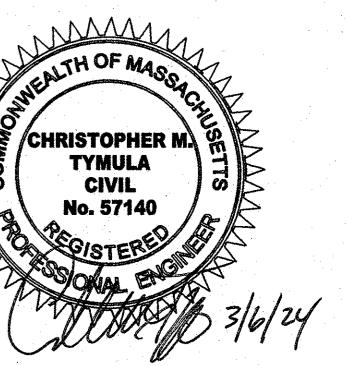
NOTE: ALL DIMENSIONS ARE NOMINAL.

**UNDERGROUND INFILTRATION SYSTEM NOTES:**

1) EXISTING TOPSOIL, BRUSH, BOULDERS, FILL, DEBRIS AND OTHER UNSUITABLES TO BE REMOVED FOR 5' ALL UNDERGROUND INFILTRATION SYSTEM DOWN TO NATIVE MATERIAL. BACKFILL WITH STONE BEDDING MATERIAL.  
2) DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.  
3) AFTER EXCAVATION TO THE FINAL DESIGN ELEVATION, THE FLOOR SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.  
4) DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.  
5) CONTRACTOR SHOULD CONFIRM SYSTEM PARTS AND OBTAIN SHOP DRAWINGS FROM MANUFACTURER. SUBSTITUTIONS AND SHOP DRAWINGS SHOULD BE APPROVED BY THE ENGINEER.  
6) PARTS SPECIFICATIONS SHOWN ARE AS PROVIDED BY ADS INC., OR APPROVED EQUAL. ANY CHANGES TO THESE SPECIFICATIONS SHOULD BE APPROVED BY DESIGN ENGINEER FOR PERFORMANCE.

**CONSTRUCTION NOTES:**

1. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.  
2. AFTER THE INFILTRATION SYSTEM AREA IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHOULD BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.  
3. DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.  
4. STORMTECH CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH CONSTRUCTION GUIDE".  
5. THE USE OF EQUIPMENT OVER CHAMBERS IS LIMITED.  
NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.  
NO RUBBER TIRES, DUMP TRUCKS, EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH CONSTRUCTION GUIDE".  
6. WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH CONSTRUCTION GUIDE".  
7. FULL 30" (900 mm) STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL.  
8. USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.  
9. CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



**REVISIONS**

MARCH 6, 2024

DRAWN/DESIGN BY **SJB/CMT** CHECKED BY **CMT**

**DETAIL SHEET**

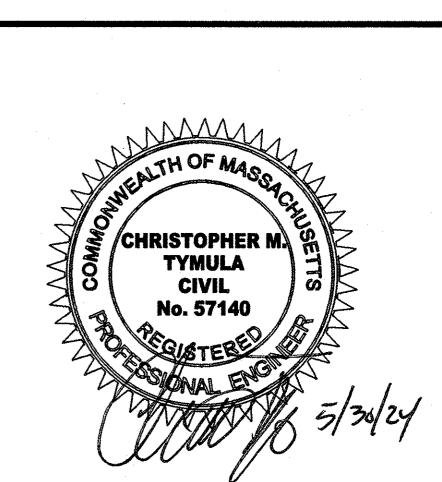
SCALE: NOT TO SCALE

PROJECT NO. NEX-2021347

14 OF 14

PREPARED FOR  
CAFUA MANAGEMENT  
COMPANY, LLC  
280 MERRIMACK STREET  
METHUEN, MA 01844

**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5  
477 & 479 BROADWAY  
METHUEN, MASSACHUSETTS**



---

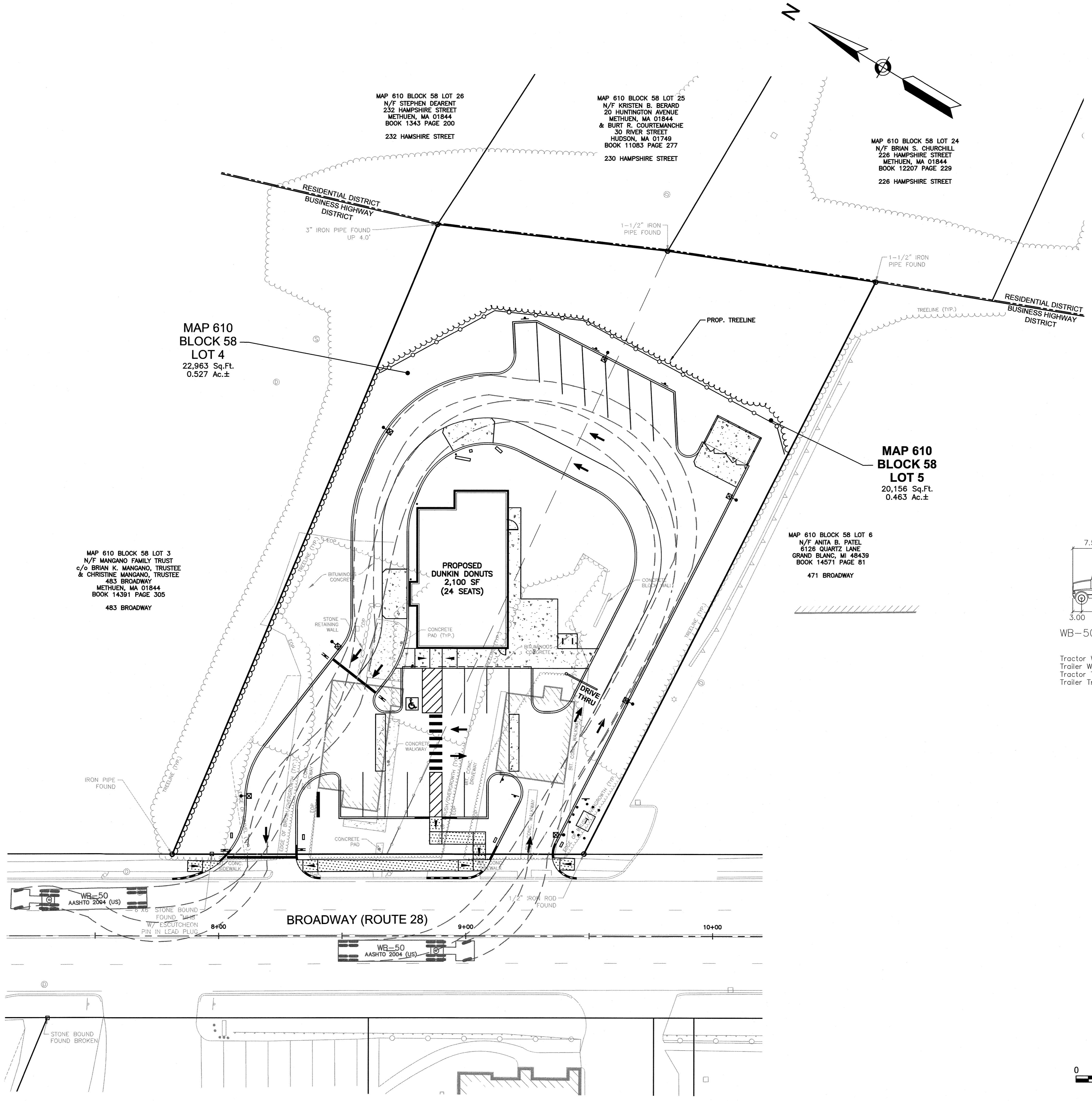
## REVISIONS

REVISIONS		
NO.	REVISION	DATE
1	MISC. REVISIONS	5/30/24
MARCH 6, 2024		
DRAWN/DESIGN BY		CHECKED BY
SJB/CMT		CMT

# TRUCK TURN PLAN (WB-50)

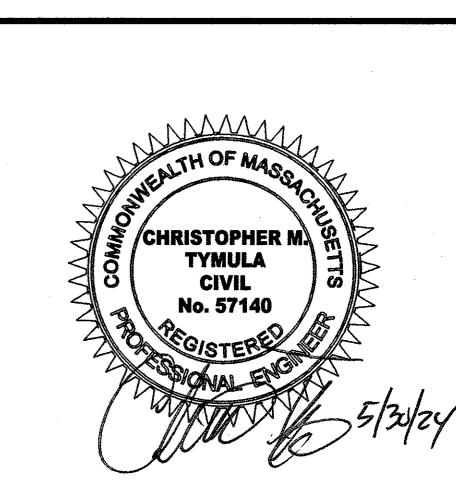
SCALE: 1"=20'  
PROJECT NO. NEX-2021347  
1 OF 1

:\Projects\NEX-2021347 - Methuen, MA - Cafua Management (Old 351314)\CAD Files\21347_SP.dwg TT 5/31/24 2:16pm sbonfanti



REARED FOR  
CAFUA MANAGEMENT  
COMPANY, LLC  
280 MERRIMACK STREET  
METHUEN, MA 01844

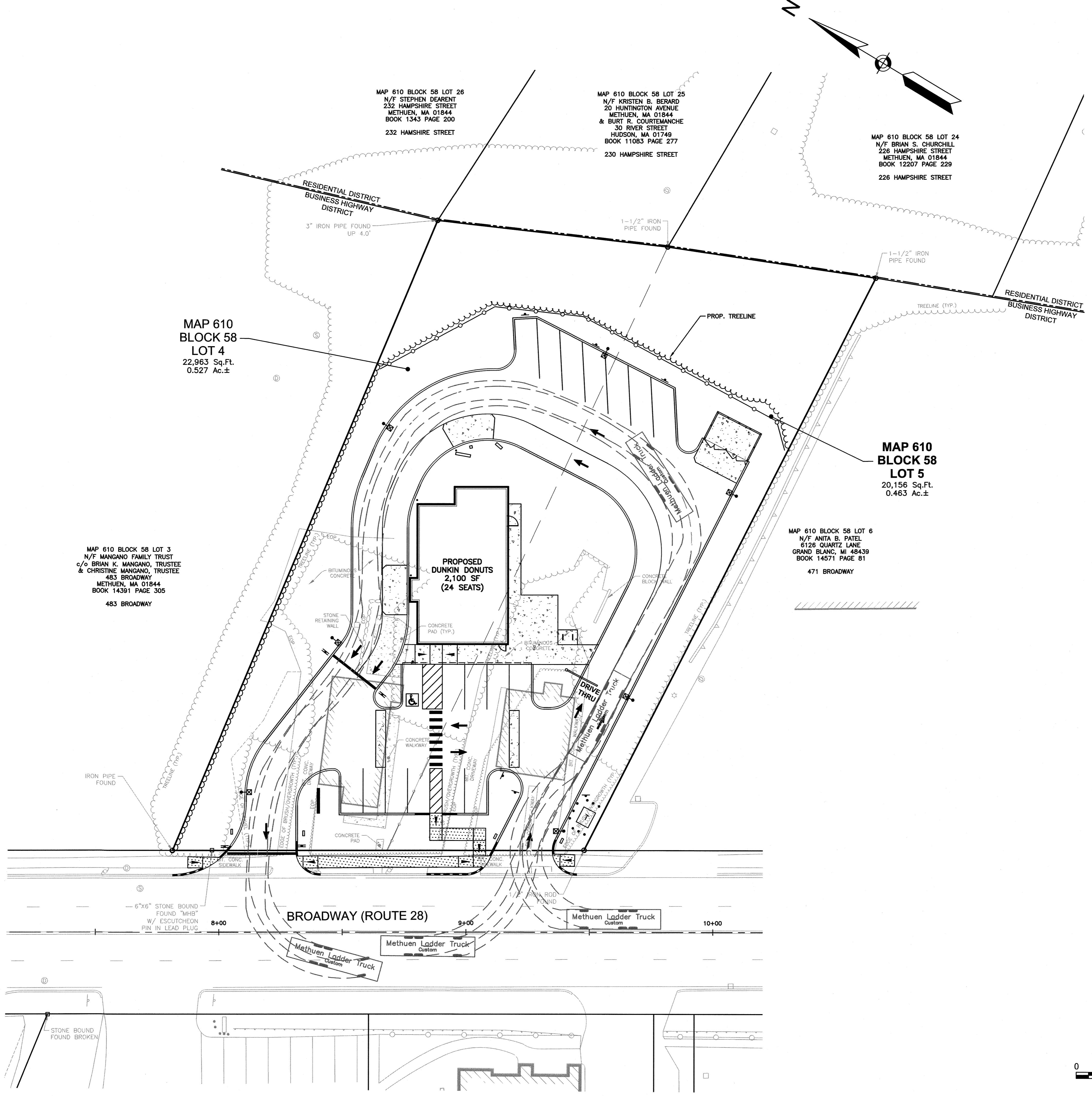
**ASSESSORS MAP 610 BLOCK 58 LOTS 4 & 5  
477 & 479 BROADWAY  
METHUEN, MASSACHUSETTS**

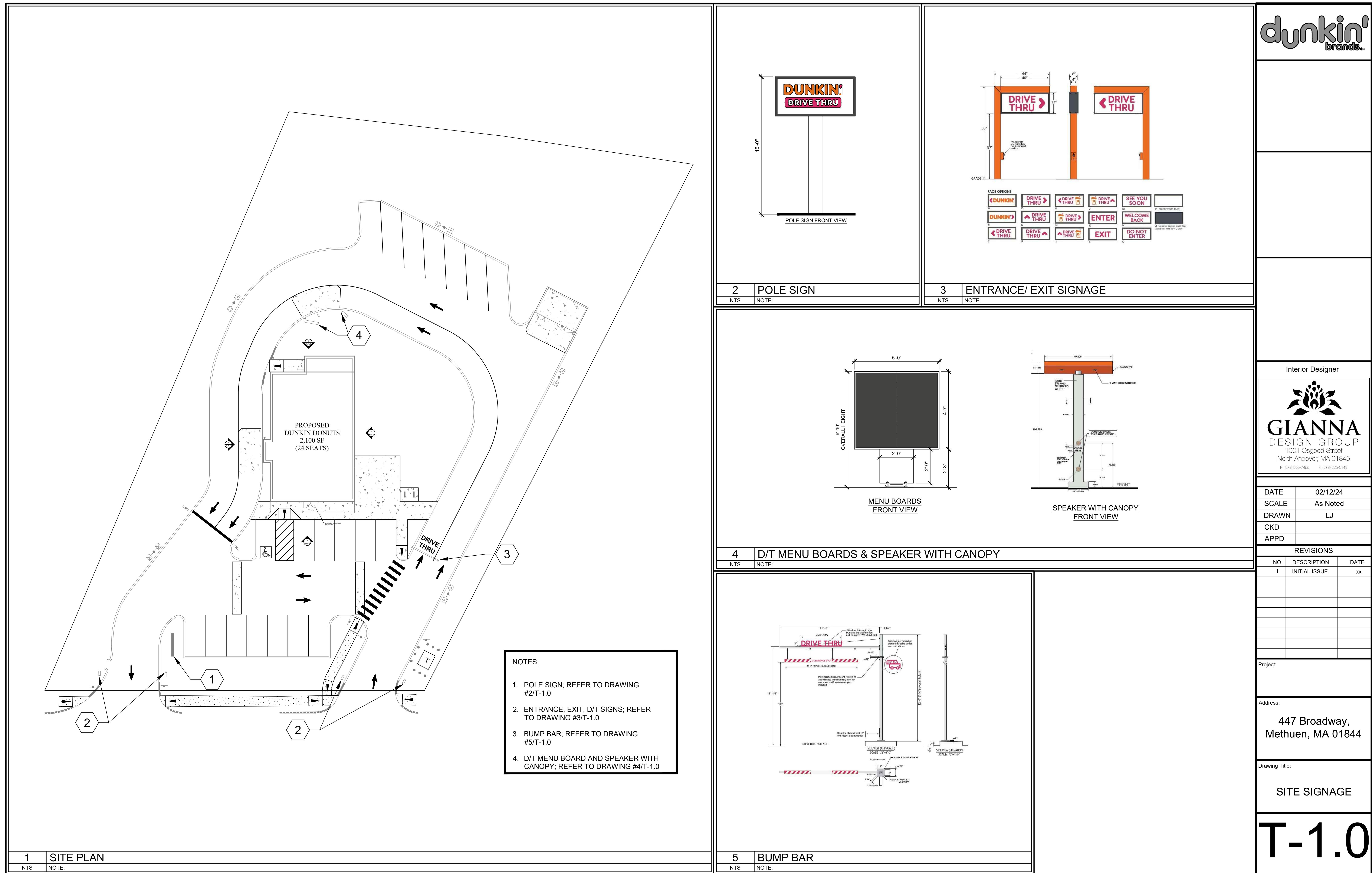


# TRUCK TURN PLAN (FIRE)

SCALE: 1"=20'  
PROJECT NO. NEX-2021347  
1 OF 1

F:\Projects\NEX-2021347 - Methuen, MA - Cafuia Management (Old 351314)\CAD Files\21347_SP.dwg TT (FIRE) 5/31/24 2:17pm sbonfanti





**NOTE: SIGNS, LANDSCAPING AND OTHER FEATURES LOCATED WITHIN THE SIGHT TRIANGLE AREAS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED SO AS NOT TO EXCEED 2.5-FEET IN HEIGHT. SNOW WINDROWS LOCATED WITHIN SIGHT TRIANGLE AREAS THAT EXCEED 3.5-FEET IN HEIGHT OR THAT WOULD OTHERWISE INHIBIT SIGHT LINES SHALL BE PROMPTLY REMOVED.**

PREPARED FOR  
CAFUA MANAGEMENT  
COMPANY, LLC  
280 MERRIMACK STREET  
METHUEN, MA 01844

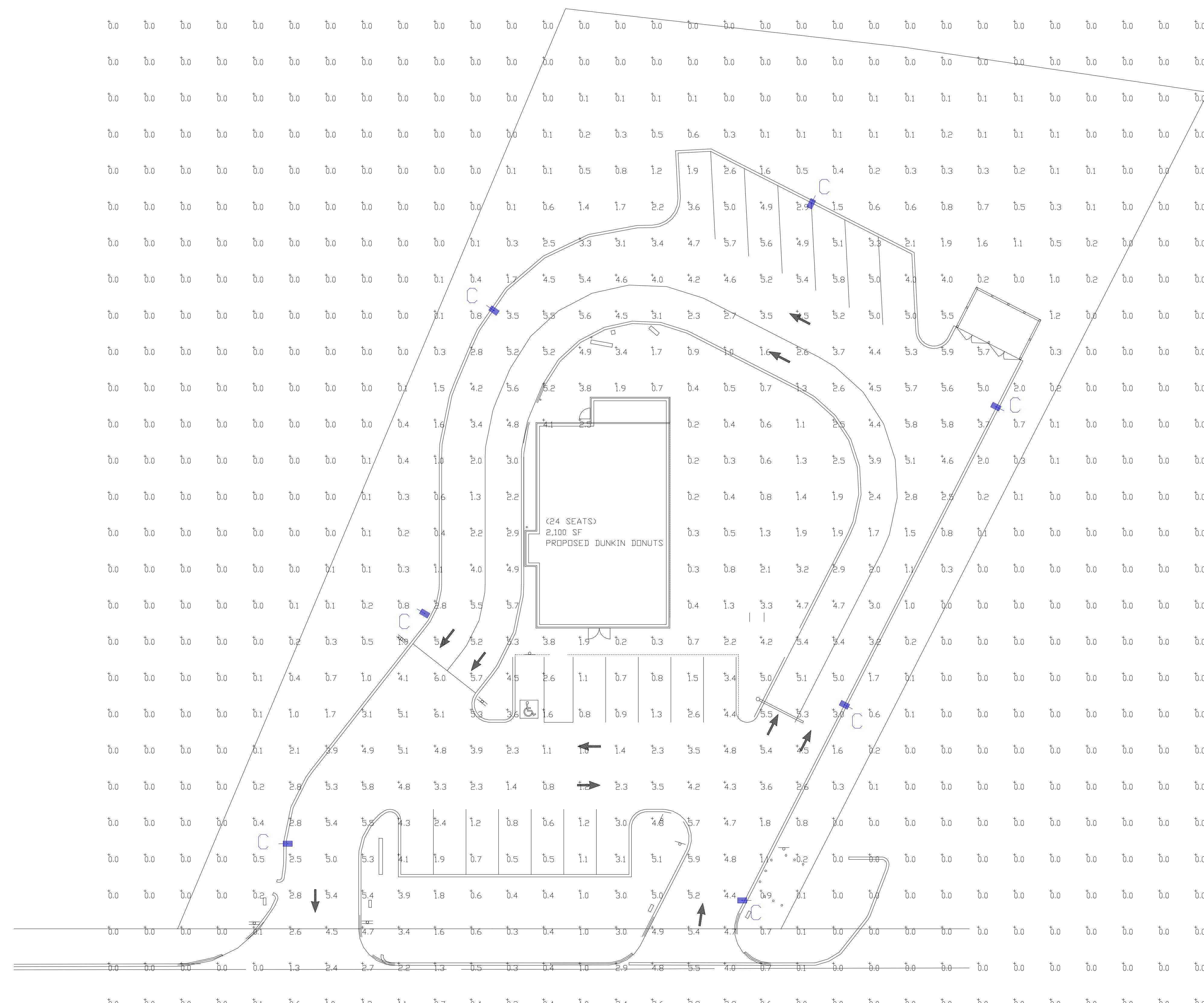
**SIGHT LINE PLAN**  
**477 & 479 BROADWAY**  
**METHUEN, MASSACHUSETTS**

# SIGHT LINE PLAN

SCALE: 1"=40'  
PROJECT NO. NEX-2021347  
1 OF 1

A scale bar and text overlay are positioned at the bottom of the image. The scale bar consists of a horizontal line with tick marks and numerical labels: 0, 40, 100, and 160. Below the scale bar, the text 'SCALE: 1" = 40'' is centered.

1 OF 1



Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CALCS @ GRADE	Illuminance	Fc	1.12	6.1	0.0	N.A.	N.A.
INSIDE CURB	Illuminance	Fc	3.69	6.1	0.5	7.38	12.20

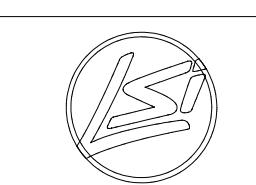
## PHOTOMETRIC EVALUATION NOT FOR CONSTRUCTION

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

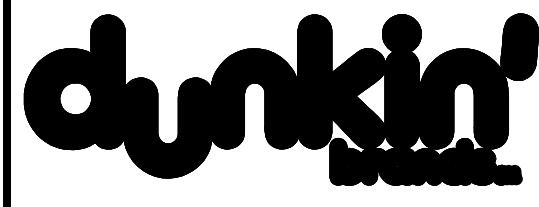
This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with The Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted. Fixture nomenclature noted does not include mounting hardware or poles. This drawing is for photometric evaluation purposes only and should not be used as a construction document or as a final document for ordering product.

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Description	Mounting Height	LLD	LLF
	7	C	Single	MRS-LED-24L-SIL-FT-50-70CRI-SINGLE	22' POLE+2' BASE	1.000	1.000

Total Project Watts  
Total Watts = 1372



LIGHTING PROPOSAL LD-156127-2  
DUNKIN' DONUTS  
477 & 479 BRADAWAY  
METHUEN, MA  
BYMVE DATE 6/21/22 REV 05-17-24 SHEET 1 OF 1  
SCALE: 1"=16' 0 16



Stamp:

Consulting Architect

## Interior Designer



**GIANNA**  
DESIGN GROUP

1001 Osgood Street  
North Andover, MA 01845

DATE 02/12/24

DATE	02/12/24
SCALE	As Noted
DRAWN	LJ
CKD	

## REVISIONS

Project:

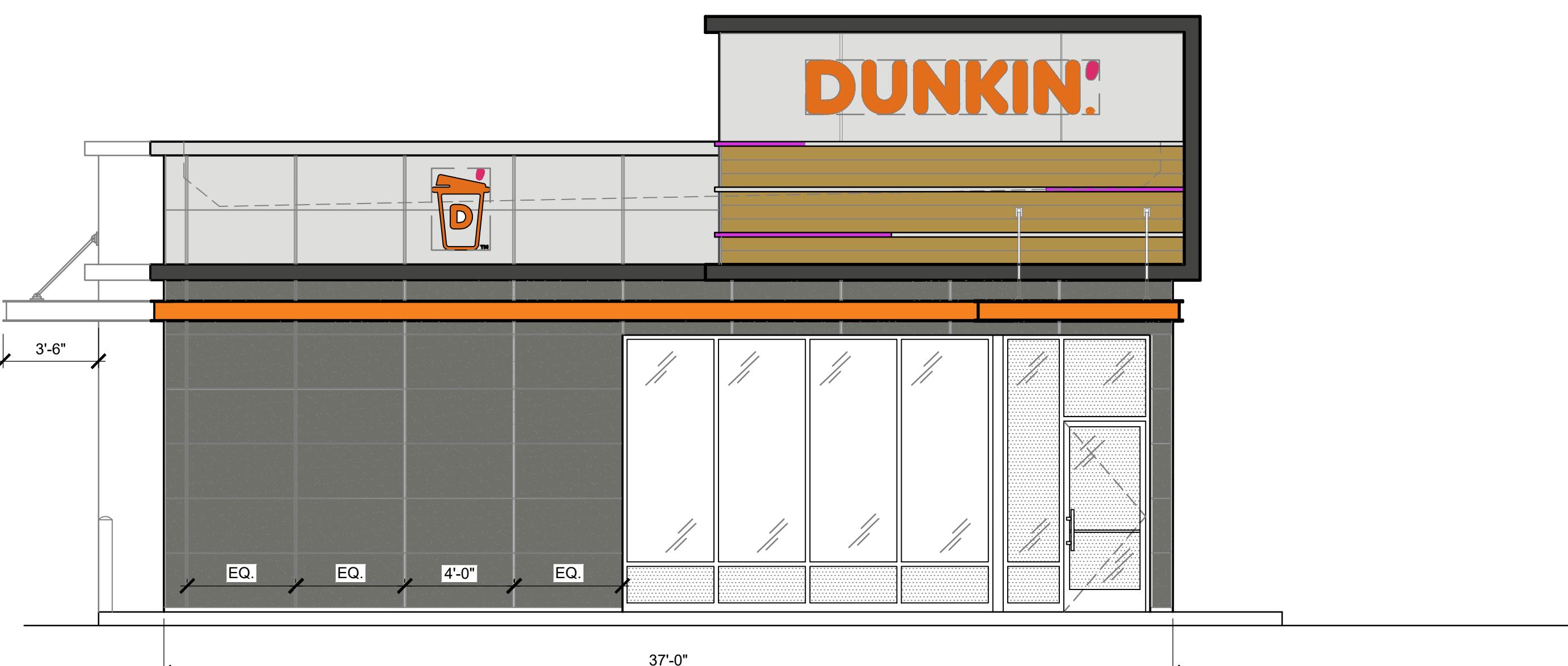
Address:

## REFERENCES, 1941-1942

Drawing Title:

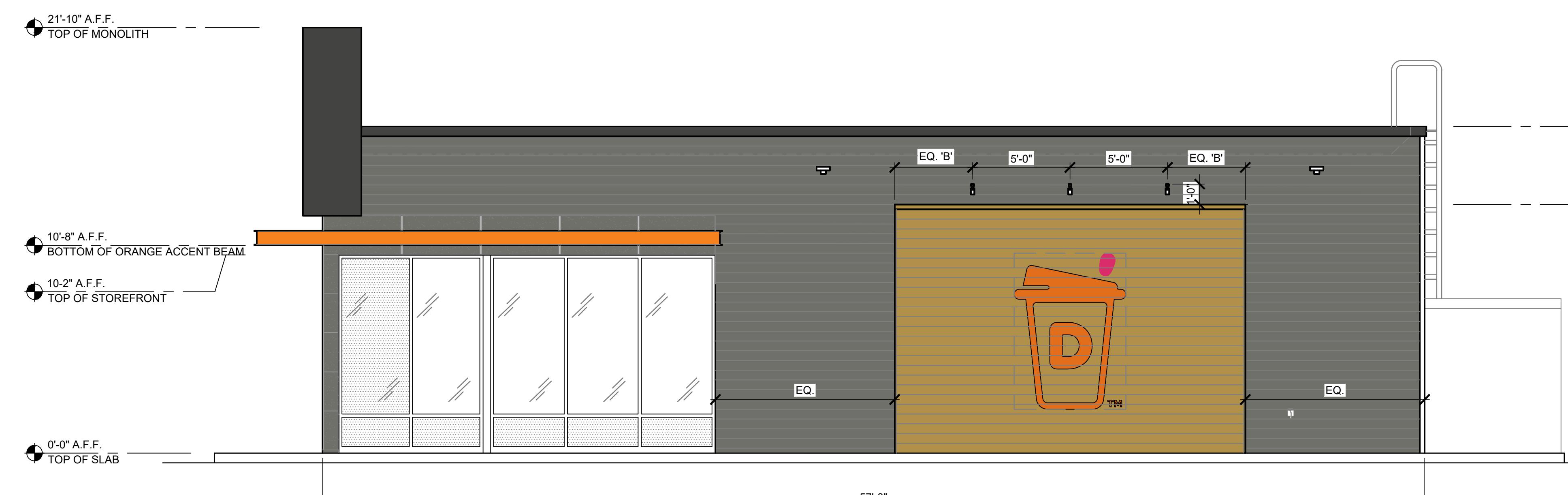
# A-4.0

THESE DOCUMENTS ARE CONFIDENTIAL PROPERTY OF DUNKIN' BRANDS INC. AND ARE RESTRICTED ACCESS



## 1 FRONT ELEVATION

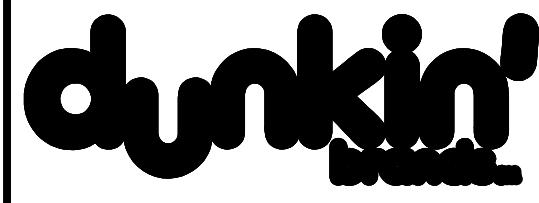
1/4" = 1'-0" NOTE:



## 2 | RIGHT ELEVATION

1/4" = 1'-0" NOTE:

NOTE: DRAWINGS ARE NOT TO SCALE IF SHEET IS PLOTTED ON 11" x 17"



Stamp:

## Consulting Architect

## Interior Designer



# GIANNA DESIGN GROUP

1001 Osgood Street  
North Andover, MA 01845

DATE | 02/12/24

## Project

## Address

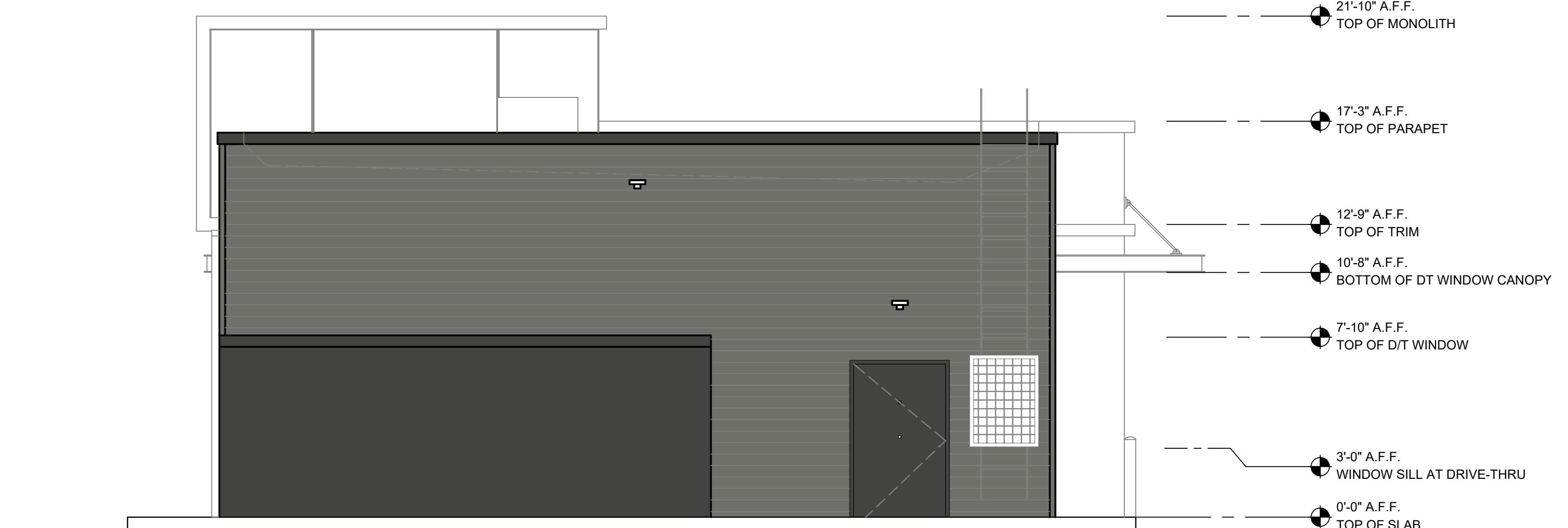
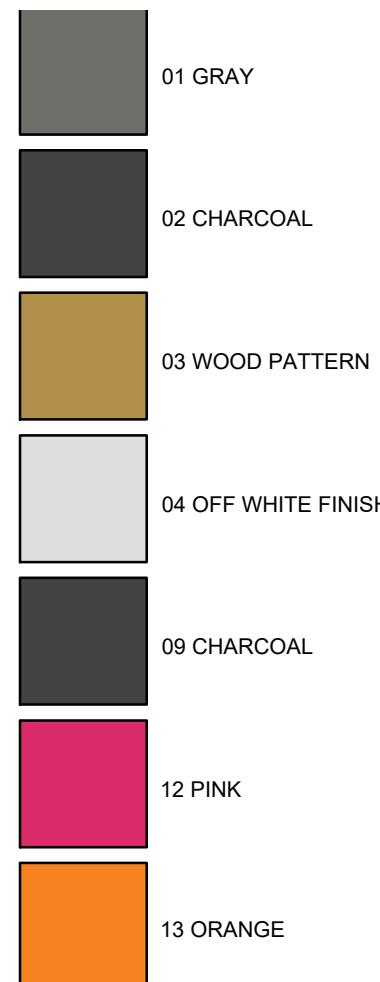
447 Broadway,  
Methuen, MA 01844

1

# PROPOSED EXTERIOR ELEVATIONS

# A-4.1

A vertical strip consisting of 12 empty rectangular boxes, arranged one above the other. The boxes are defined by a thick black border. The strip is oriented vertically on the page.



## 1 REAR ELEVATION

/4" = 1'-0" NOTE:



## 2 LEFT ELEVATION

/4" = 1'-0" NOTE:

NOTE: DRAWINGS ARE NOT TO SCALE IF SHEET IS PLOTTED ON 11" x 17"