

LEGEND

EXISTING FEATURES

CONTOUR	---
EDGE OF PAVEMENT	---
CAPE COD BERM	---
GAS SHUT OFF	---
SEWER MANHOLE	---
CATCH BASIN	---
WATER GATE	---
FIRE HYDRANT	---
UTILITY POLE	---
CABLE TV HANDHOLE	---

PROPOSED FEATURES

CONTOUR	---
VERTICAL GRANITE CURB	---
EDGE OF PAVEMENT	---
FENCE	---
SPOT GRADE	---
SIGN	---
CLEAN OUT	---

UNDERGROUND UTILITIES

GAS	---
WATER	---
ELECTRIC	---

ABBREVIATIONS

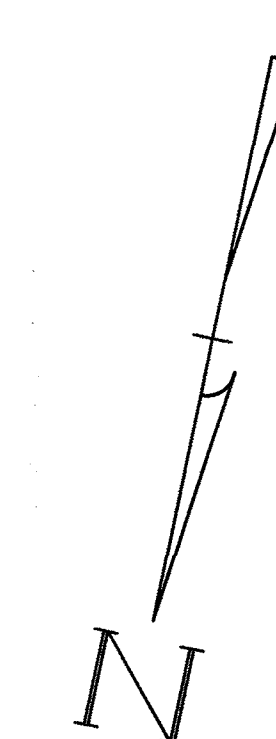
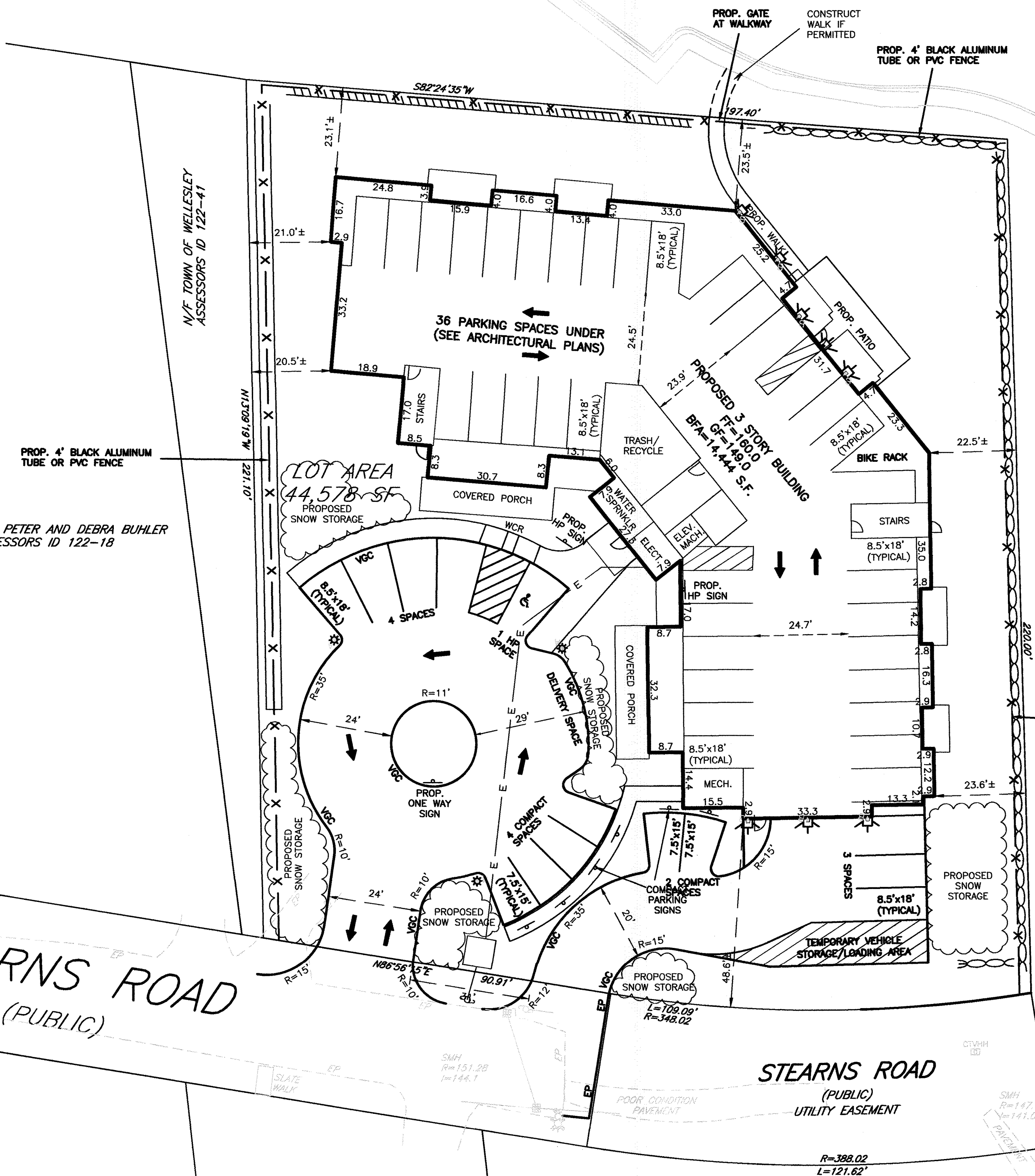
TOP CURB	T.C.
BOTTOM CURB	B.C.
TOP WALL	T.W.
BOTTOM WALL	B.W.
WHEEL CHAIR RAMP	WCR
VERTICAL GRANITE CURB	VGC
EDGE OF PAVEMENT	EP
FIRST FLOOR	F.F.
GARAGE FLOOR	G.F.
BUILDING FOOTPRINT AREA	B.F.A.

NOTES:

- ALL SIGNS AND PAVEMENT MARKINGS TO BE INSTALLED WITHIN THE PROJECT SITE SHALL CONFORM TO THE APPLICABLE STANDARDS OF THE MANUAL OF UNIFORM TRAFFIC CONTROLS (MUTCD).
- SEE DETAIL SHEETS FOR MORE DETAILED INFORMATION.
- ANY ASBESTOS FOUND ON SITE TO BE HANDLED IN ACCORDANCE WITH 310 CMR 7.15.
- AREA TO BE REPAVED IS TO BE DONE IN CONFORMANCE WITH THE TOWN OF WELLESLEY CONSTRUCTION STANDARDS.
- STEARNS ROAD AND FRANCIS ROAD TO BE SWEEP AS NECESSARY.

N/F TOWN OF WELLESLEY
ASSESSORS ID 122-40

N/F PETER AND DEBRA BUHLER
ASSESSORS ID 122-18



ZONING TABLE

ZONE	SINGLE FAMILY DISTRICTS (R10)	
DIMENSIONAL CONTROLS	REQUIRED/ALLOWED	PROPOSED/PROVIDED
FRONT YARD SETBACK	30 ft	48.6± ft
SIDE YARD SETBACK	20 ft	20.5± ft
REAR YARD SETBACK	20 ft	23.1± ft
MIN. FRONTAGE	60 ft	200.00 ft
MIN. LOT AREA	10,000 ft²	44,578 ft²
MAX. BUILDING HEIGHT	45 ft	48.9 ft
MAX. NUMBER OF STORIES	3	3
MAX. BLDG. LOT COVERAGE	6,687 S.F.	14,819 S.F.

SHEET INDEX

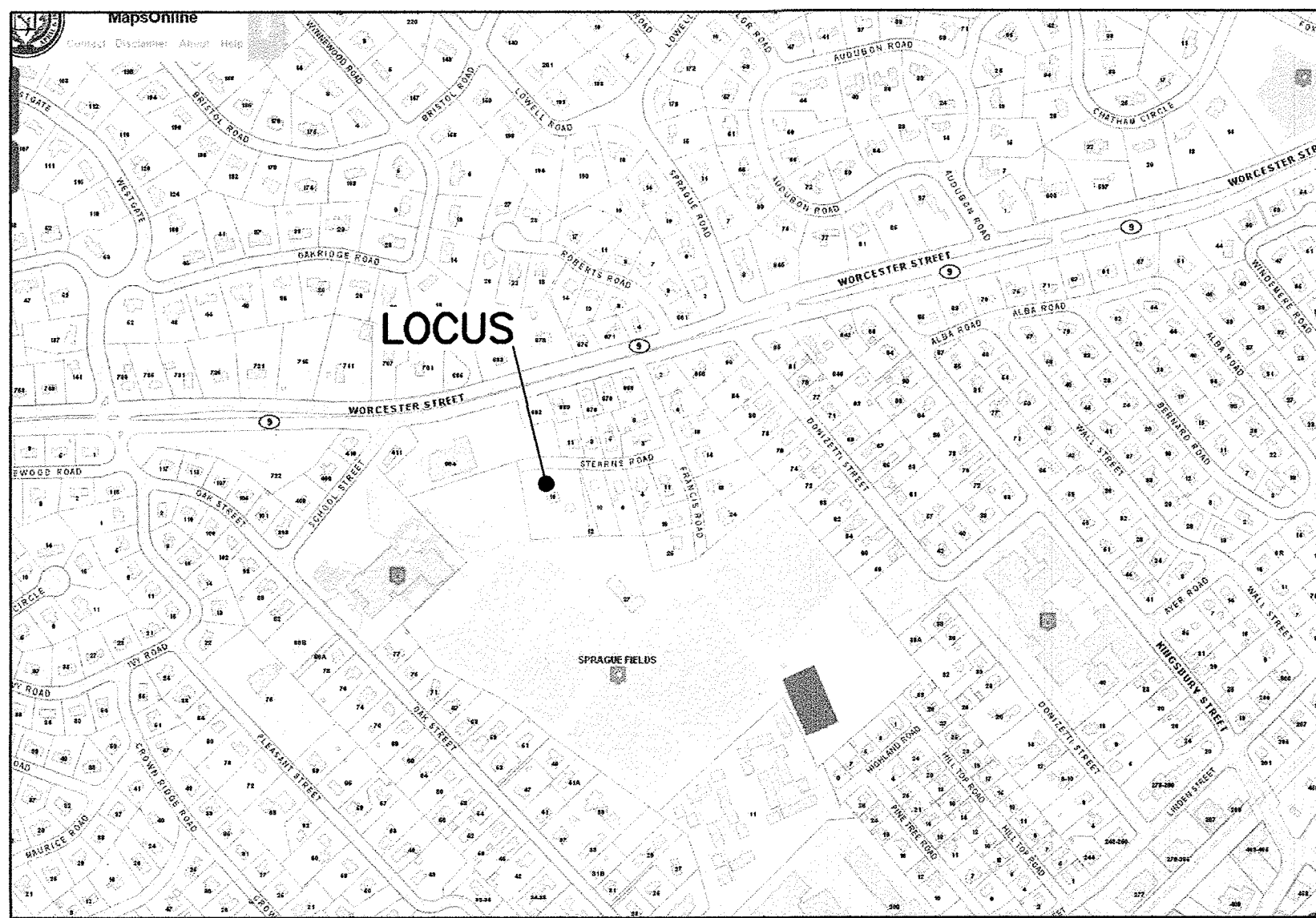
PLAN TITLE	SHEET DESIGNATION
LAYOUT PLAN	C1
GRADING PLAN	C2
SOIL TEST PIT PLAN	C2A
UTILITY PLAN	C3
EROSION PLAN	C4
PHOTOMETRIC PLAN	C5
FIRE ACCESS PLAN	C6A, C6B, & C6C
UTILITY DETAIL SHEET	C7
UTILITY DETAIL SHEET	C8
SITE DETAIL SHEET	C9
EROSION DETAIL SHEET	C10
EXISTING CONDITIONS	
PLAN OF LAND	

EXISTING CONDITIONS AND PLAN OF LAND BY FIELD RESOURCES, INC. BOTH DATED JULY 19, 2017.

PARKING TABLE

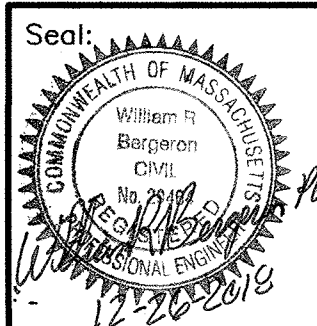
GARAGE UNDER SPACES = 35
GARAGE ACCESSIBLE SPACES = 1
SURFACE SPACES = 13
SURFACE ACCESSIBLE SPACES = 1
TOTAL SPACES PROVIDED = 50

LOCUS:
J. DERENZO & ASSOCIATES, LLC
ASSESSORS ID 122-19



LOCUS MAP

SCALE: 1"=500'±
SOURCE: WELLESLEY GIS



Prepared For:

Applicant:
16 Stearns Road LLC
Joy Derenzo
43 Charles Street
Needham, MA 02494

Prepared By:

Hayes
Hayes Engineering, Inc.
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Design By: WRB
Drawn By: EBL
Checked By: WRB
Project File: WEL-0012
Comp. No: WEL11
☐ Issued For Permit
☒ Issued For Review
☐ Issued For Bid
☐ Issued For Construction
☒ Not For Construction

Rev	Date	Revision
1	2-15-2018	Building footprint
2	4-5-2018	Building height
3	7-8-2018	Submittal
4	10-19-2018	Town Comments
5	12-7-2018	Entrance drive
6	12-11-2018	Drive Locations
7	12-21-2018	Town Comments
8		
9		
10		

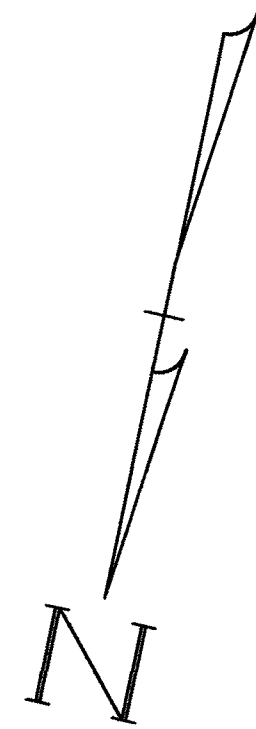
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Date: January 12, 2018

Drawing Title:

LAYOUT PLAN
#16 STEARNS ROAD
WELLESLEY, MASS.

Drawing No.:

C1
SHEET 1 OF 13



LEGEND

EXISTING FEATURES	
CONTOUR	---
EDGE OF PAVEMENT	---
CAPE COD BERM	---
GAS SHUT OFF	---
SEWER MANHOLE	---
CATCH BASIN	---
WATER GATE	---
FIRE HYDRANT	---
UTILITY POLE	---
CABLE TV HANDHOLE	---
PROPOSED FEATURES	
CONTOUR	---
VERTICAL GRANITE CURB	---
EDGE OF PAVEMENT	---
FENCE	---
SPOT GRADE	---
SIGN	---
CLEAN OUT	---
UNDERGROUND UTILITIES	
GAS	---
WATER	---
ELECTRIC	---
ABBREVIATIONS	
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BOTTOM CURB	B.C.
TOP WALL	T.W.
BOTTOM WALL	B.W.
WHEEL CHAIR RAMP	WCR
VERTICAL GRANITE CURB	VGC
EDGE OF PAVEMENT	EP
FIRST FLOOR	F.F.
GARAGE FLOOR	G.F.
BUILDING FOOTPRINT AREA	B.F.A.

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No.	Date	Revision
1	2-15-2018	Building Footprint
2	7-6-2018	Submittal
3	10-19-2018	Town Comments
4	12-21-2018	Dive Locations
5	12-21-2018	Town Comments
6	12-21-2018	Town Comments
7	12-21-2018	Town Comments
8	12-21-2018	Town Comments
9	12-21-2018	Town Comments
10	12-21-2018	Town Comments

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Date: January 12, 2018

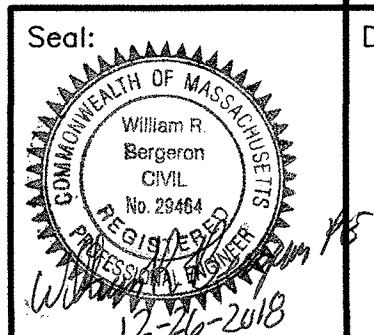
Drawing Title:

GRADING PLAN
#16 STEARNS ROAD
WELLESLEY, MASS.

Drawing No.:

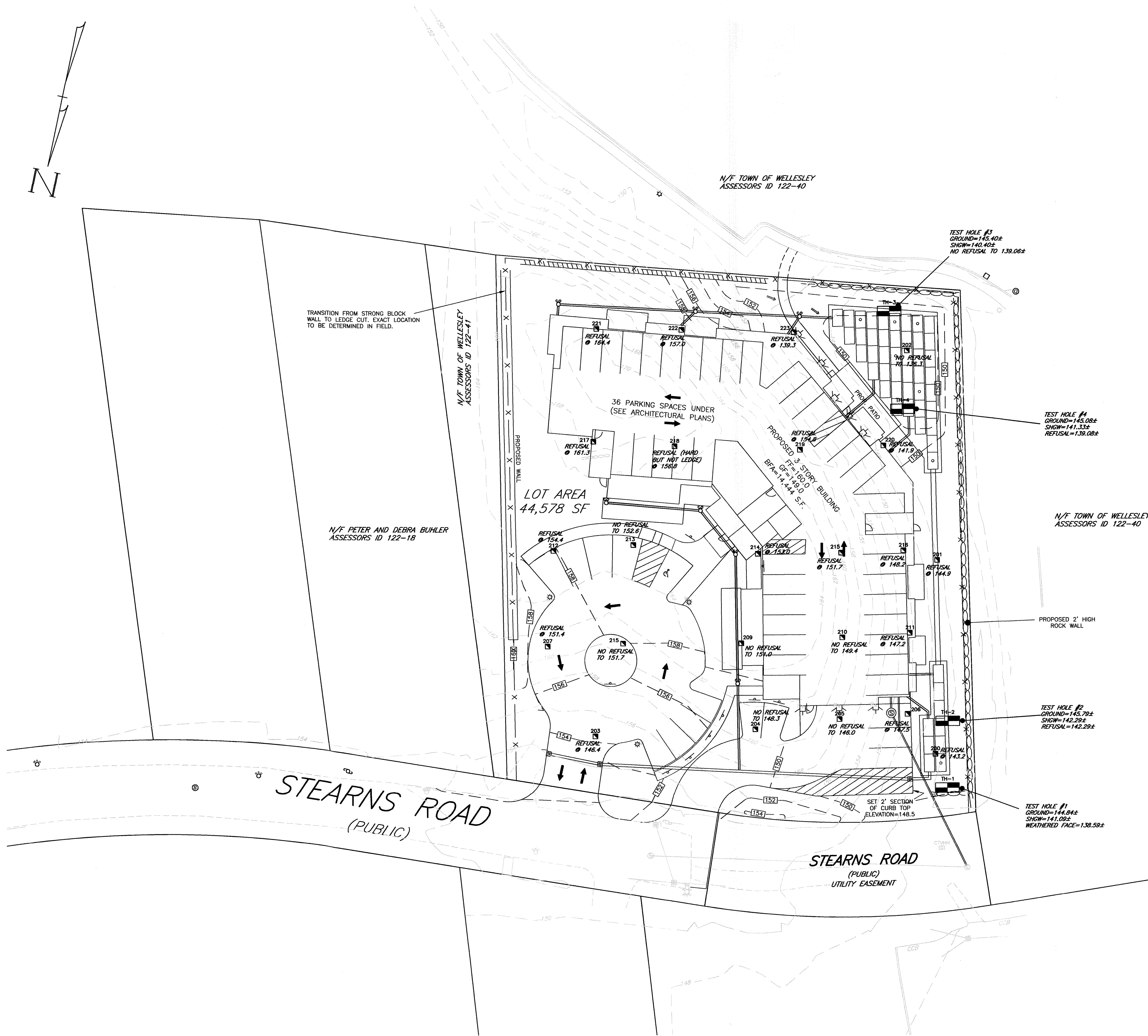
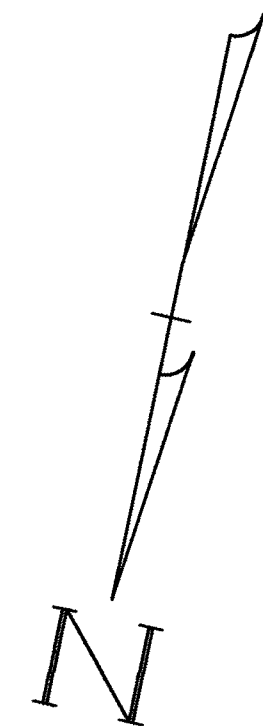
C2

SHEET 2 OF 13



LOCUS:
J. DERENZO & ASSOCIATES, LLC
ASSESSORS ID 122-19

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LEGEND	
EXISTING FEATURES	
CONTOUR	---
EDGE OF PAVEMENT	---
CAPE COD BERM	---
GAS SHUT OFF	---
SEWER MANHOLE	---
CATCH BASIN	---
WATER GATE	---
FIRE HYDRANT	---
UTILITY POLE	---
CABLE TV HANDHOLE	---
PROPOSED FEATURES	
CONTOUR	---
VERTICAL GRANITE CURB	---
EDGE OF PAVEMENT	---
FENCE	---
SPOT GRADE	---
SIGN	---
CLEAN OUT	---
UNDERGROUND UTILITIES	
GAS	---
WATER	---
ELECTRIC	---
ABBREVIATIONS	
TOP CURB	T.C.
BOTTOM CURB	B.C.
TOP WALL	T.W.
BOTTOM WALL	B.W.
WHEEL CHAIR RAMP	WCR
VERTICAL GRANITE CURB	VGC
EDGE OF PAVEMENT	EP
FIRST FLOOR	F.F.
GARAGE FLOOR	G.F.
BUILDING FOOTPRINT AREA	B.F.A.

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Checked By: WRB
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No.	Revision	Date	Town Comments
10			
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Scale: 1"=20'
0' 10' 20' 40'

Date: January 12, 2018

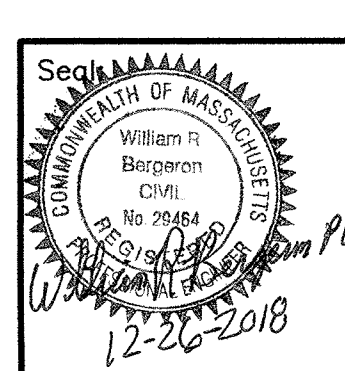
SOIL TEST PIT PLAN

#16 STEARNS ROAD
WELLESLEY, MASS.

Drawing No.: C2A

SHEET 3 OF 13

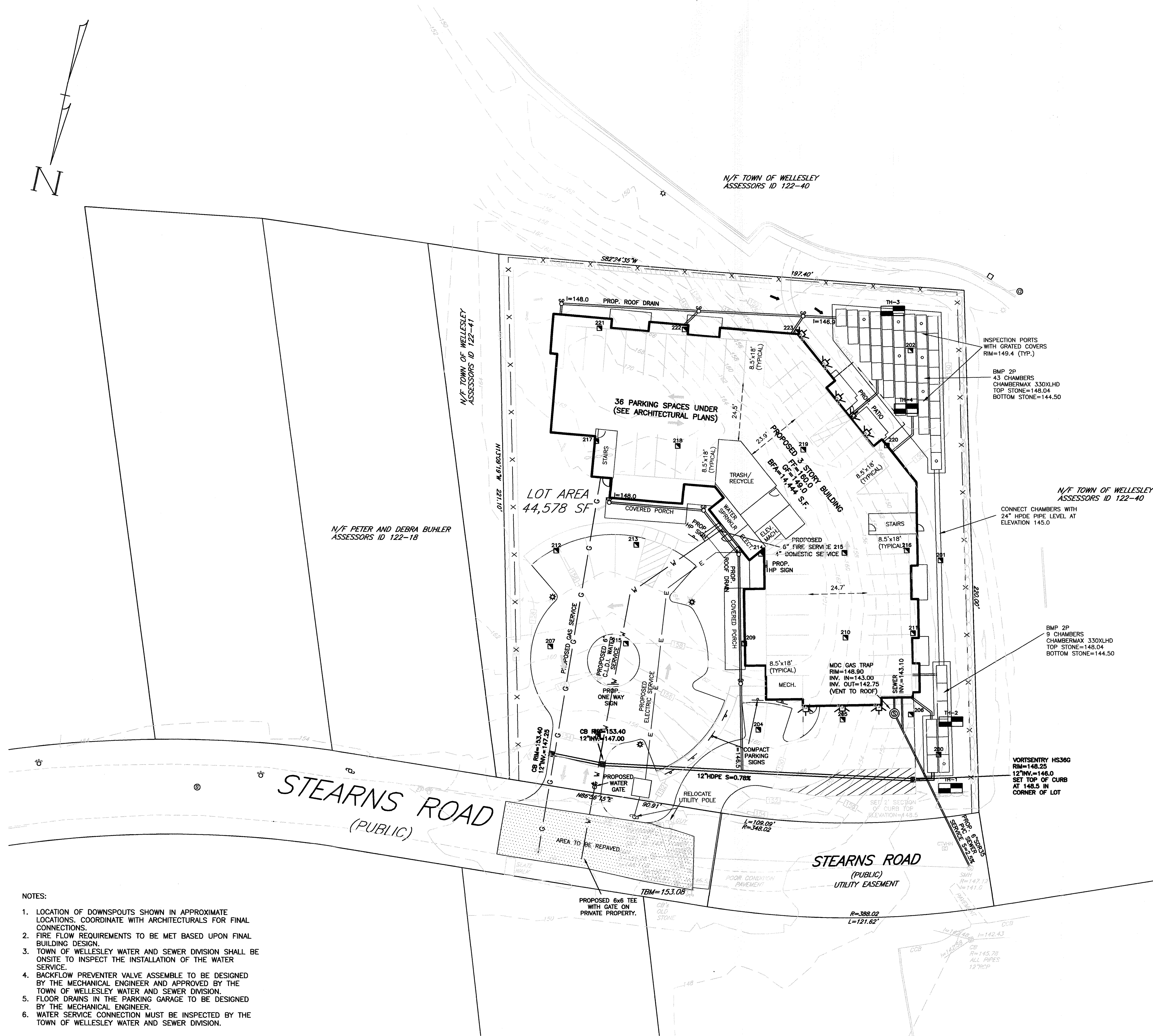
LOCUS:
J DERENZO & ASSOCIATES, LLC
ASSESSORS ID 122-19



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NOTES:

1. LOCATION OF DOWNSPOUTS SHOWN IN APPROXIMATE LOCATIONS. COORDINATE WITH ARCHITECTURALS FOR FINAL CONNECTIONS.
2. FIRE FLOW REQUIREMENTS TO BE MET BASED UPON FINAL BUILDING DESIGN.
3. TOWN OF WELLESLEY WATER AND SEWER DIVISION SHALL BE ONSITE TO INSPECT THE INSTALLATION OF THE WATER SERVICE.
4. BACKFLOW PREVENTER VALVE ASSEMBLY TO BE DESIGNED BY THE MECHANICAL ENGINEER AND APPROVED BY THE TOWN OF WELLESLEY WATER AND SEWER DIVISION.
5. FLOOR DRAINS IN THE PARKING GARAGE TO BE DESIGNED BY THE MECHANICAL ENGINEER.
6. WATER SERVICE CONNECTION MUST BE INSPECTED BY THE TOWN OF WELLESLEY WATER AND SEWER DIVISION.



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No.	Revision	Date
10		
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Scale: 1"=20'
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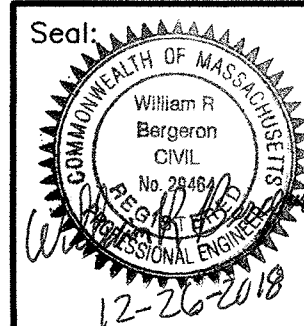
UTILITY PLAN
#16 STEARNS ROAD
WELLESLEY, MASS.

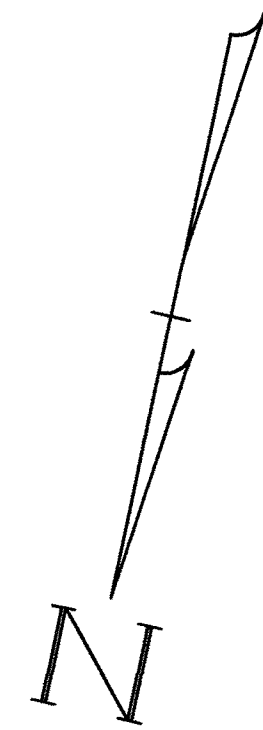
Drawing No.:

C3

SHEET 4 OF 13

LOCUS:
J. DERENZO & ASSOCIATES, LLC
ASSESSORS ID 122-19





LEGEND

EXISTING FEATURES	
CONTOUR	152
EDGE OF PAVEMENT	EP
CAPE COD BERM	CCB
GAS SHUT OFF	GS
SEWER MANHOLE	SMH
CATCH BASIN	CB
WATER GATE	WG
FIRE HYDRANT	FH
UTILITY POLE	UTP
CABLE TV HANDHOLE	CTH
PROPOSED FEATURES	
CONTOUR	156
VERTICAL GRANITE CURB	VGC
EDGE OF PAVEMENT	EP
FENCE	X
SPOT GRADE	49.0
SIGN	S
CLEAN OUT	CO
UNDERGROUND UTILITIES	
GAS	G
WATER	W
ELECTRIC	E
ABBREVIATIONS	
TOP CURB	T.C.
BOTTOM CURB	B.C.
TOP WALL	T.W.
BOTTOM WALL	B.W.
WHEEL CHAIR RAMP	WCR
VERTICAL GRANITE CURB	VGC
EDGE OF PAVEMENT	EP
FIRST FLOOR	F.F.
GARAGE FLOOR	G.F.
BUILDING FOOTPRINT AREA	B.F.A.

- NOTES:
1. STEARNS ROAD AND FRANCIS ROAD TO BE SWEEP AS NECESSARY.
 2. FINAL WATER CONNECTION TO BE DETERMINED BY THE MECHANICAL ENGINEER AND APPROVED BY THE TOWN OF WELLESLEY WATER AND SEWER DIVISION.
 3. ENTIRE SITE TO HAVE A CONSTRUCTION FENCE ALONG THE PERIMETER WITH GATES AT THE TWO TRACKING PADS.

LOCUS:
J. DERENZO & ASSOCIATES, LLC
ASSESSORS ID 122-19

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Checked By: WRB
Project File: WEL-0012
Comp. No: WEL11
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No.	Date	Revision
10	12-21-2018	Town Comments
9	12-11-2018	Drive Locations
8	12-11-2018	Town Comments
7	7-6-2018	Building Footprint
6	2-15-2018	Revision

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Date: January 12, 2018

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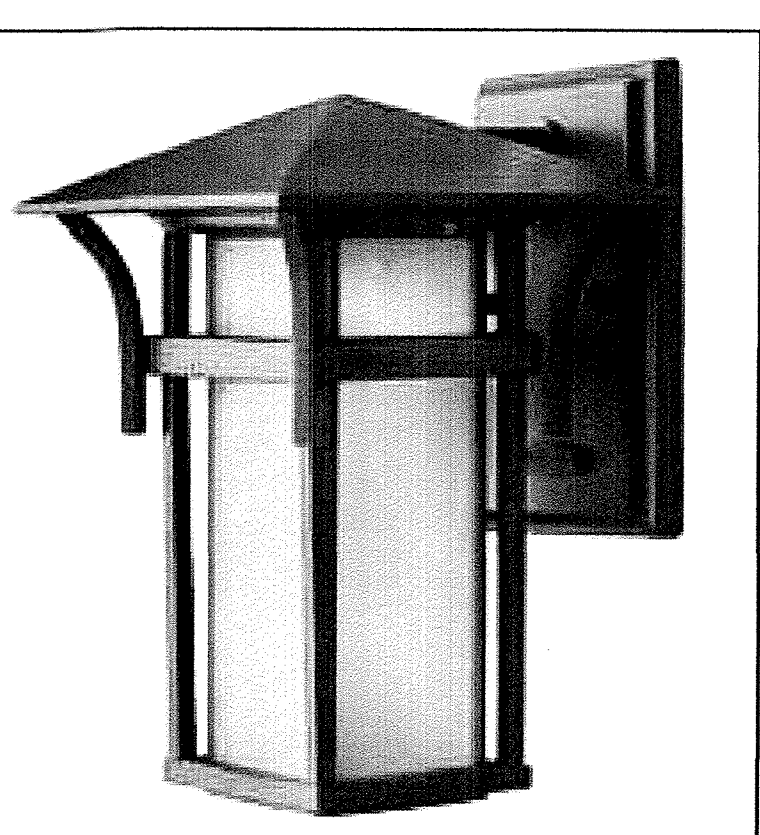
EROSION CONTROL PLAN
#16 STEARNS ROAD
WELLESLEY, MASS.

Drawing No.:

C4
SHEET 5 OF 13



HADCO LIGHTING
BALTIMORE V681 POST TOP



HINKLEY LIGHTING
HARBOR WALL SCONCE

Hadco V681AT3M175HE
Hadco Photometric Lab test report no. TR02-707
lamp(s) MH175/U
candelas (ft. 22.5) 1743LMIES
lamp(s) per luminaire 13500 initial lumens per lamp
Light Loss Factor = 0.800, watts per luminaire = 175
mounting height = 10 ft
number locations = 3, number luminaires = 3
for all locations = 0.5

WAC Lighting DS-W008-F270-WT
WAC Lighting test report no. WAC Lighting
ballast
candelas (ft. 10.5) 1008-F270-WTIES
2 lamp(s) per luminaire 3575 initial lumens per lamp
Light Loss Factor = 0.800, watts per luminaire = 82
Outreach (from mounting data to photometric center) = 8 in
mounting height = 8 ft
number locations = 7, number luminaires = 7
for all locations = 0.5

Target Point Set
368 points at 10.0, up 5 ft by 5 ft
Average
Horizontal Footcandles
Minimum 26.9
Maximum 0.0
Avg 44in N/A
Max 4in N/A
Coeff Var 4.58
Uniformity N/A

N/F TOWN OF WELLESLEY
ASSESSORS ID 122-40

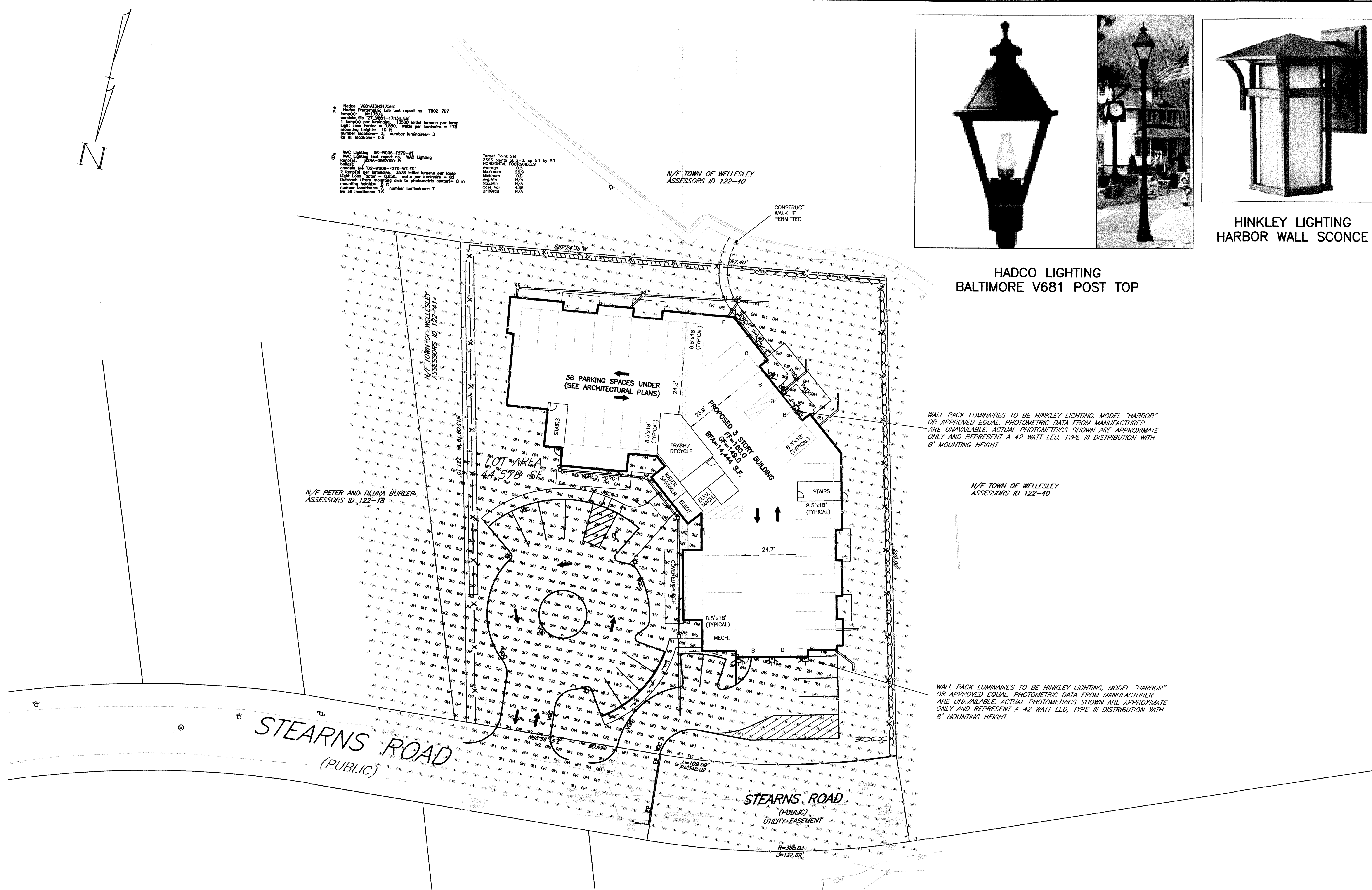
CONSTRUCT
WALK IF
PERMITTED

WALL PACK LUMINAIRES TO BE HINKLEY LIGHTING, MODEL "HARBOR"
OR APPROVED EQUAL. PHOTOMETRIC DATA FROM MANUFACTURER
ARE UNAVAILABLE. ACTUAL PHOTOMETRICS SHOWN ARE APPROXIMATE
ONLY AND REPRESENT A 42 WATT LED, TYPE III DISTRIBUTION WITH
8' MOUNTING HEIGHT.

N/F TOWN OF WELLESLEY
ASSESSORS ID 122-40

WALL PACK LUMINAIRES TO BE HINKLEY LIGHTING, MODEL "HARBOR"
OR APPROVED EQUAL. PHOTOMETRIC DATA FROM MANUFACTURER
ARE UNAVAILABLE. ACTUAL PHOTOMETRICS SHOWN ARE APPROXIMATE
ONLY AND REPRESENT A 42 WATT LED, TYPE III DISTRIBUTION WITH
8' MOUNTING HEIGHT.

N/F PETER AND DEBRA BÜHLER
ASSESSORS ID 122-18



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Drawn By: EBL
Checked By: WRB
Project File: WEL-0012
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No.	Revision	Date
10		
9		
8		
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5	Town Comments	12-21-2018
4	Draw Locations	12-11-2018
3	Town Comments	10-19-2018
2	Submit	7-6-2018
1	Building Footprint	2-15-2018

Scale: 1"=20'
0' 10' 20' 40'

Date: January 12, 2018

PHOTOMETRICS PLAN
#16 STEARNS ROAD
WELLESLEY, MASS.

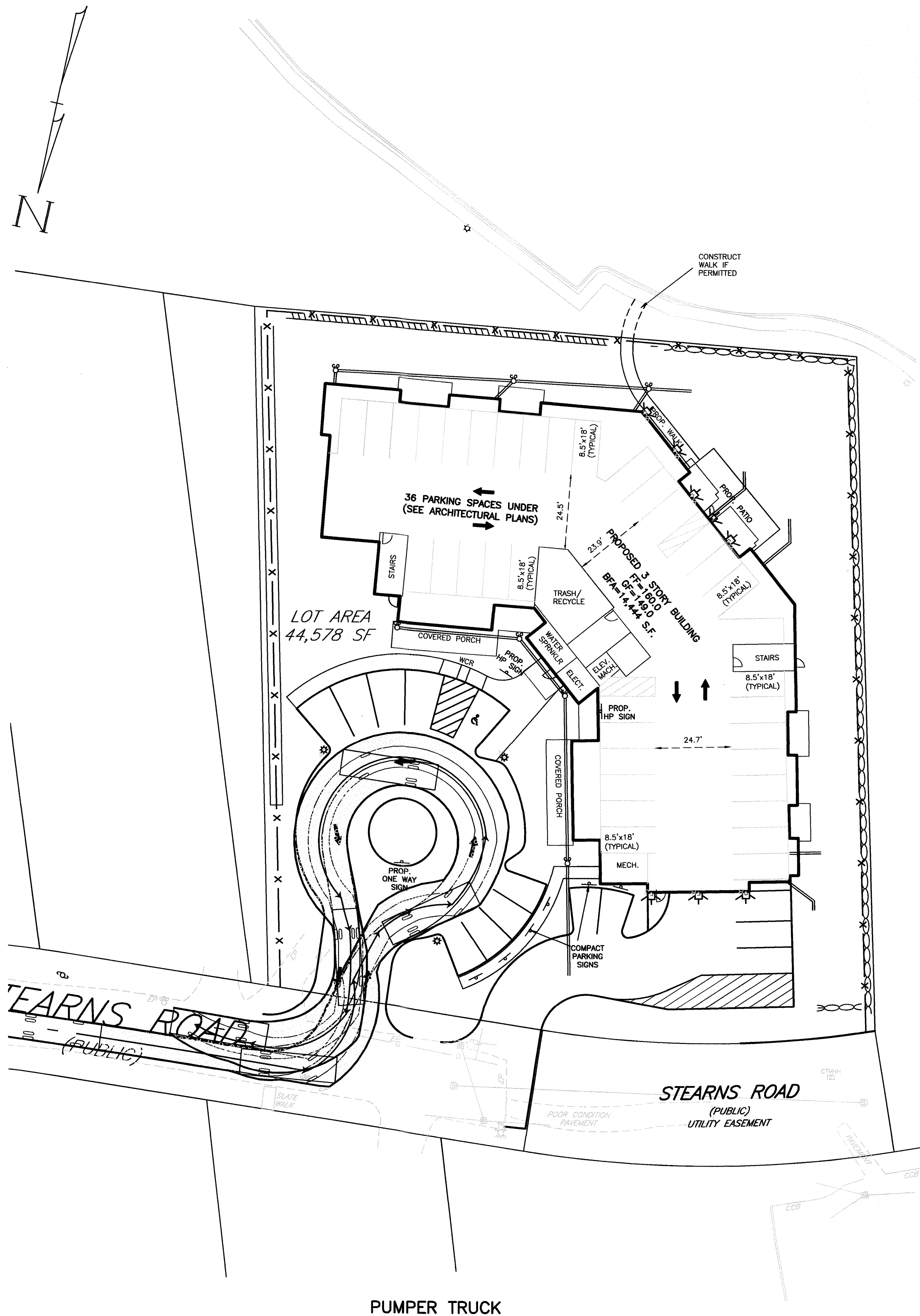
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Seal
COMMONWEALTH OF MASSACHUSETTS
William R. Bergeron
CIVIL
No. 25484
12-26-2018

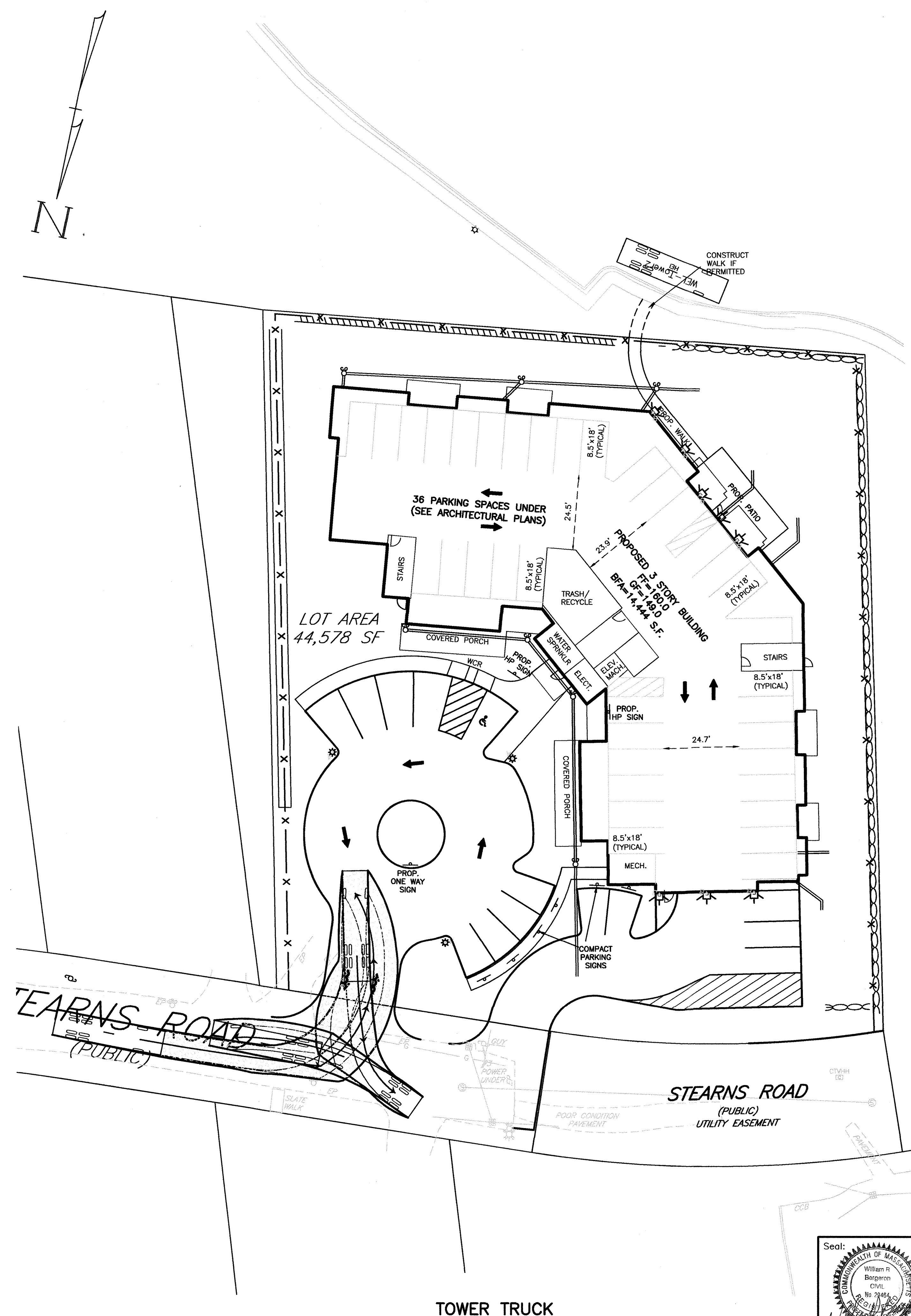
LOCUS:
J DERENZO & ASSOCIATES, LLC
ASSESSORS ID 122-19

Drawing No.:
C5

SHEET 6 OF 13



PUMPER TRUCK



TOWER TRUCK

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Drawn By: EBL

Checked By: WRB

Project File: WEL-0012

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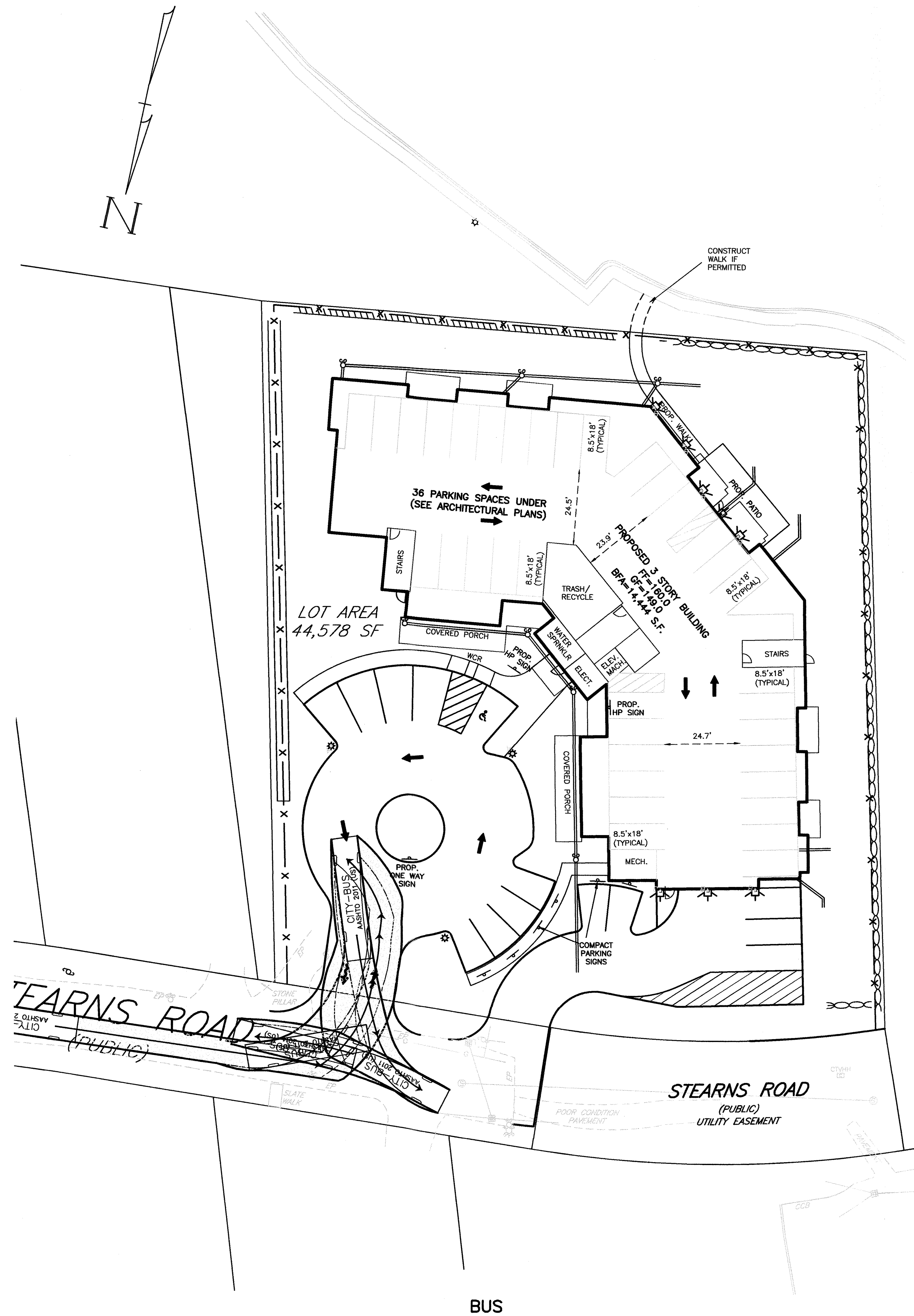
FIRE VEHICLE ACCESS PLAN
#16 STEARNS ROAD
WELLESLEY, MASS.

Drawing No.:

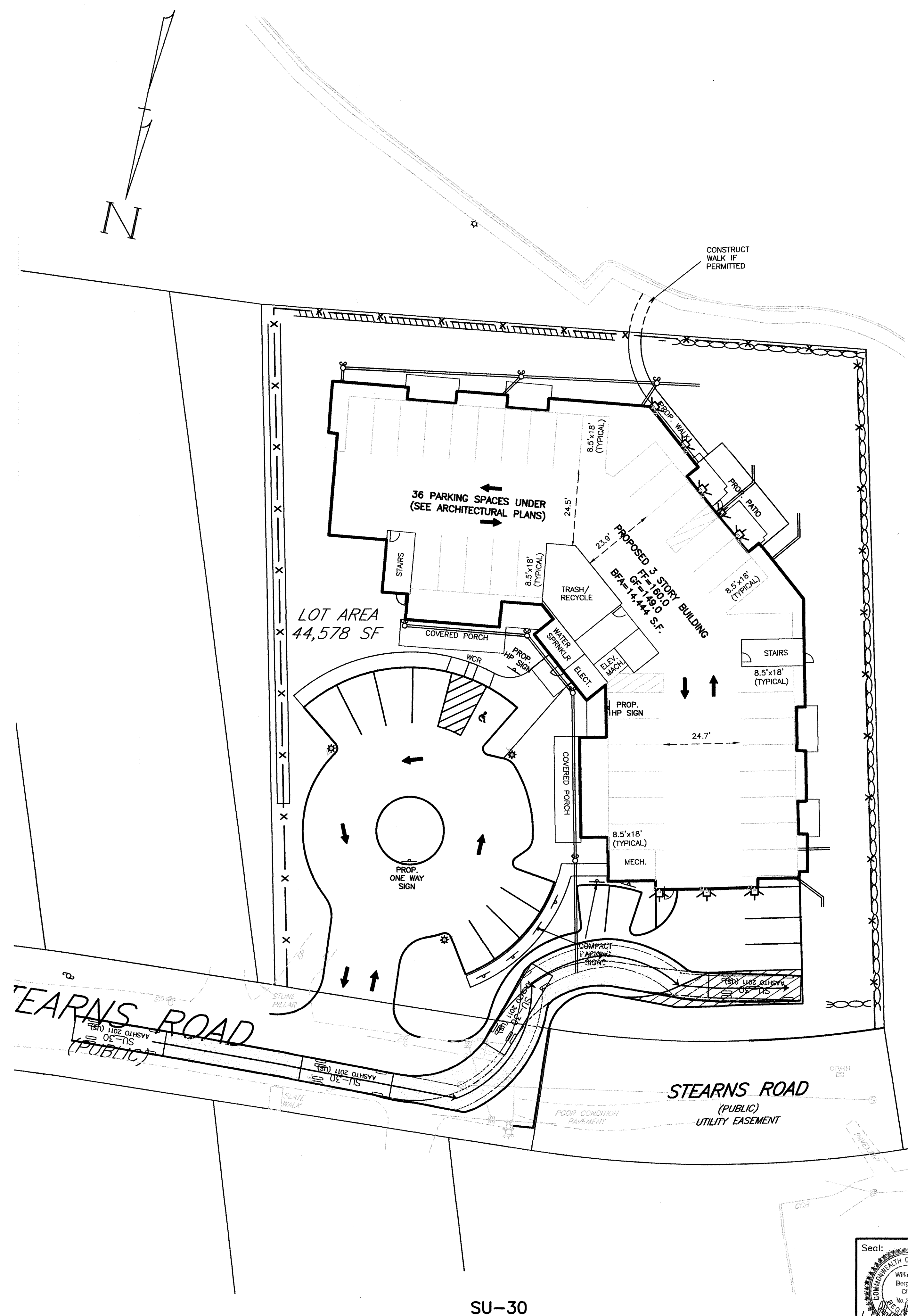
C6A

SHEET 7 OF 13

N:\weld1\SP-16stearns4.dwg, 12/26/2018 7:50:01 AM, EBL



BUS



SU-30

Prepared For:

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Drawn By: EBL
Checked By: WRB
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Scale: 1"=20'
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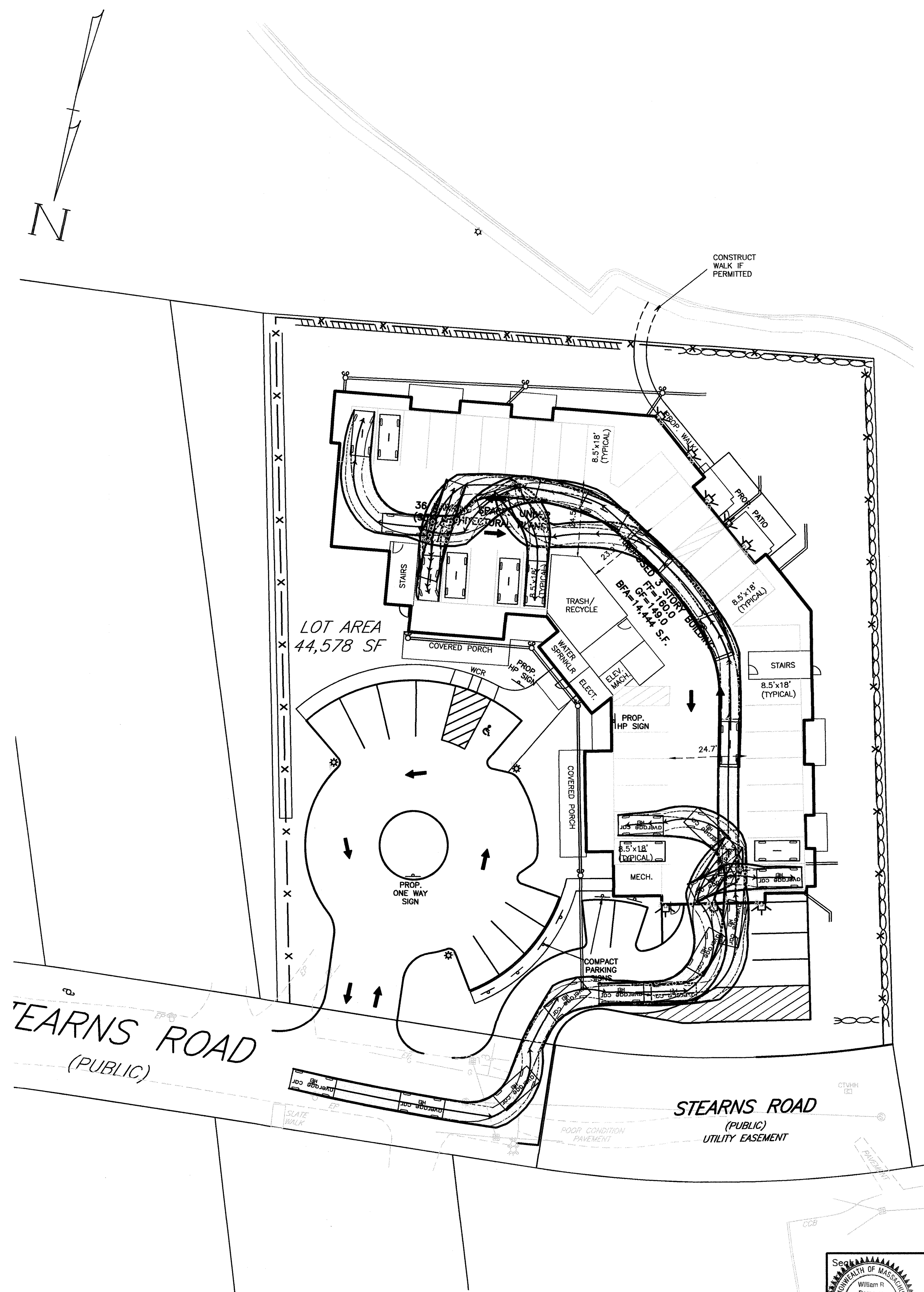
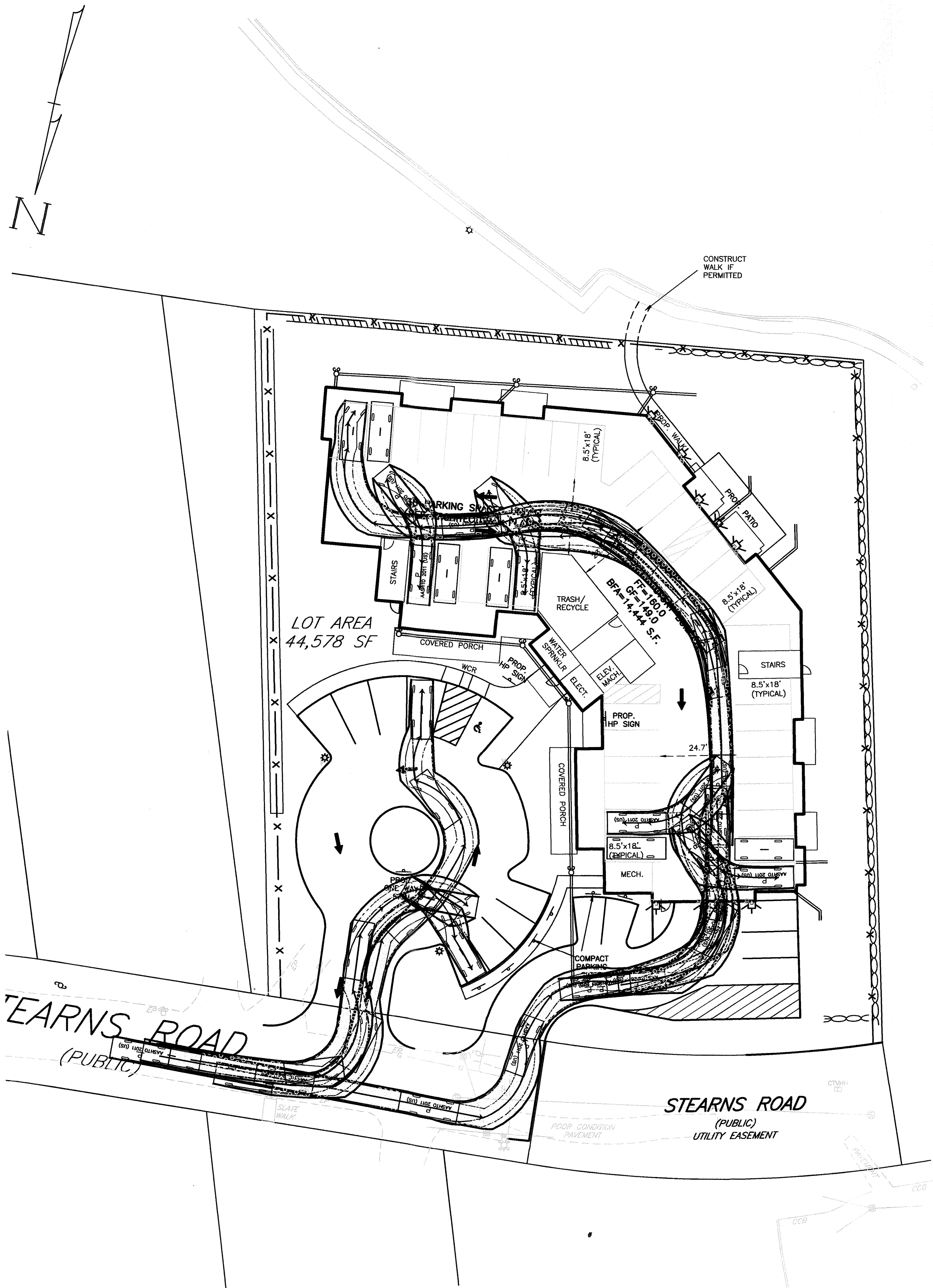
Drawing Title:

BUS VEHICLE ACCESS PLAN
#16 STEARNS ROAD
WELLESLEY, MASS.

Drawing No.:

C6B

SHEET 8 OF 13



Prepared For:

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Town Comments
Dine Locations
Town Submittal
Building Footprint

Scale: 1"=20'
0' 10' 20' 40'

Date: January 12, 2018

Drawing Title:

FIRE VEHICLE ACCESS PLAN
#16 STEARNS ROAD
WELLESLEY, MASS.

Drawing No.:

C6C

ASHTO PASSENGER CAR ACCESS
NOT TO SCALE

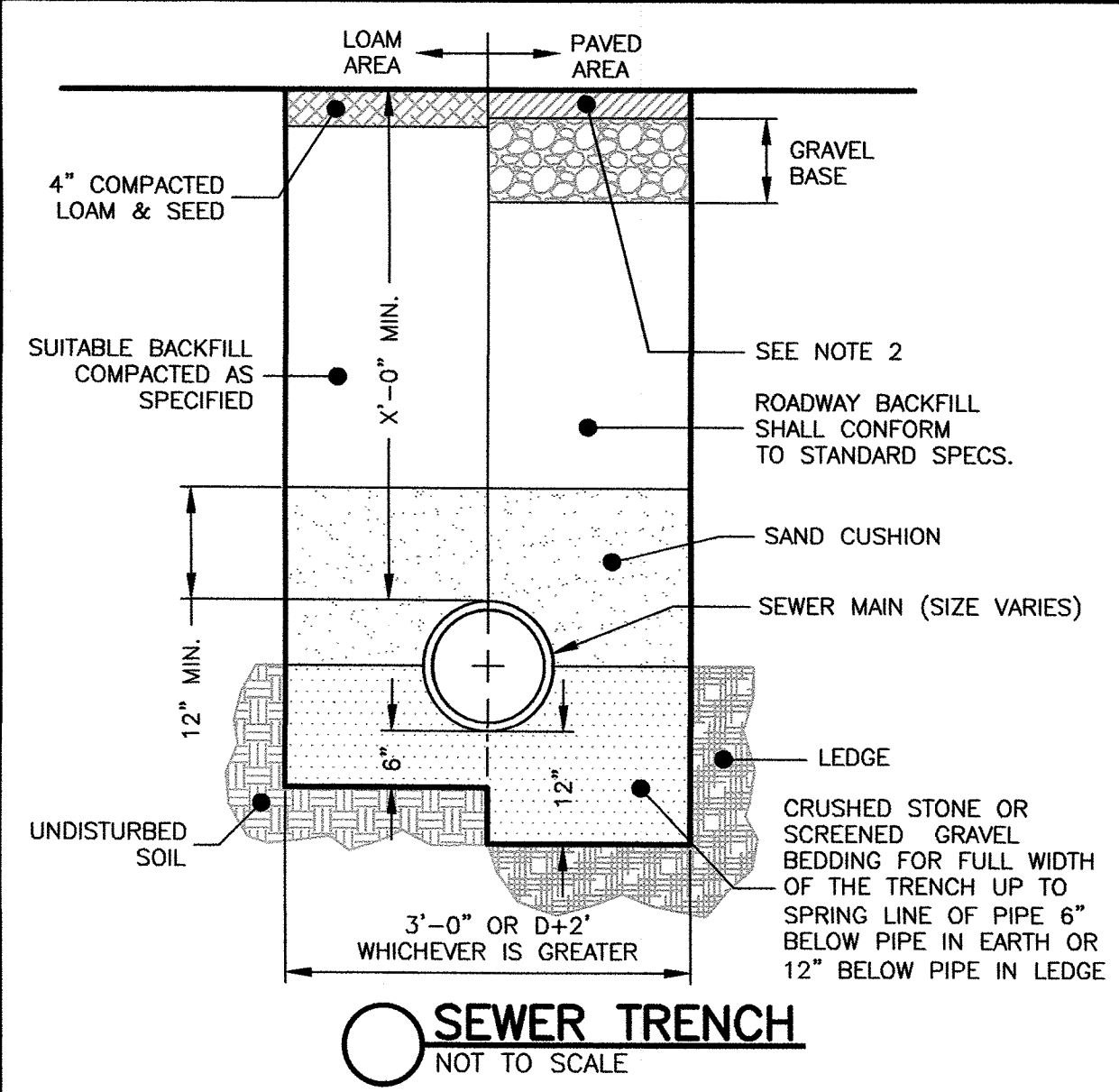
TYPICAL PASSENGER CAR ACCESS
NOT TO SCALE

Seal of William H. Bergeron, Civil Engineer, No. 7997, State of Massachusetts

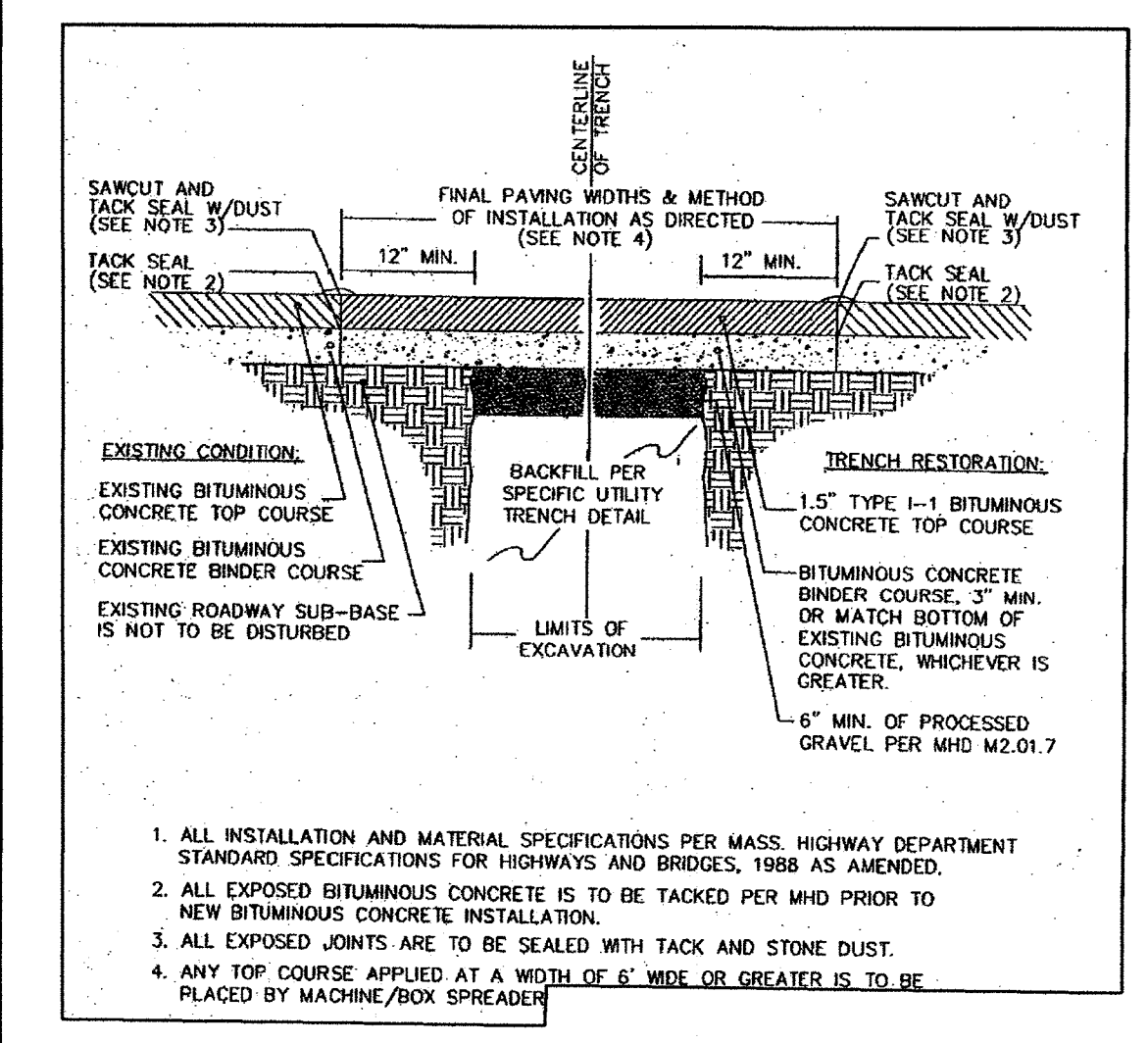
12-20-2018

SHEET 9 OF 13

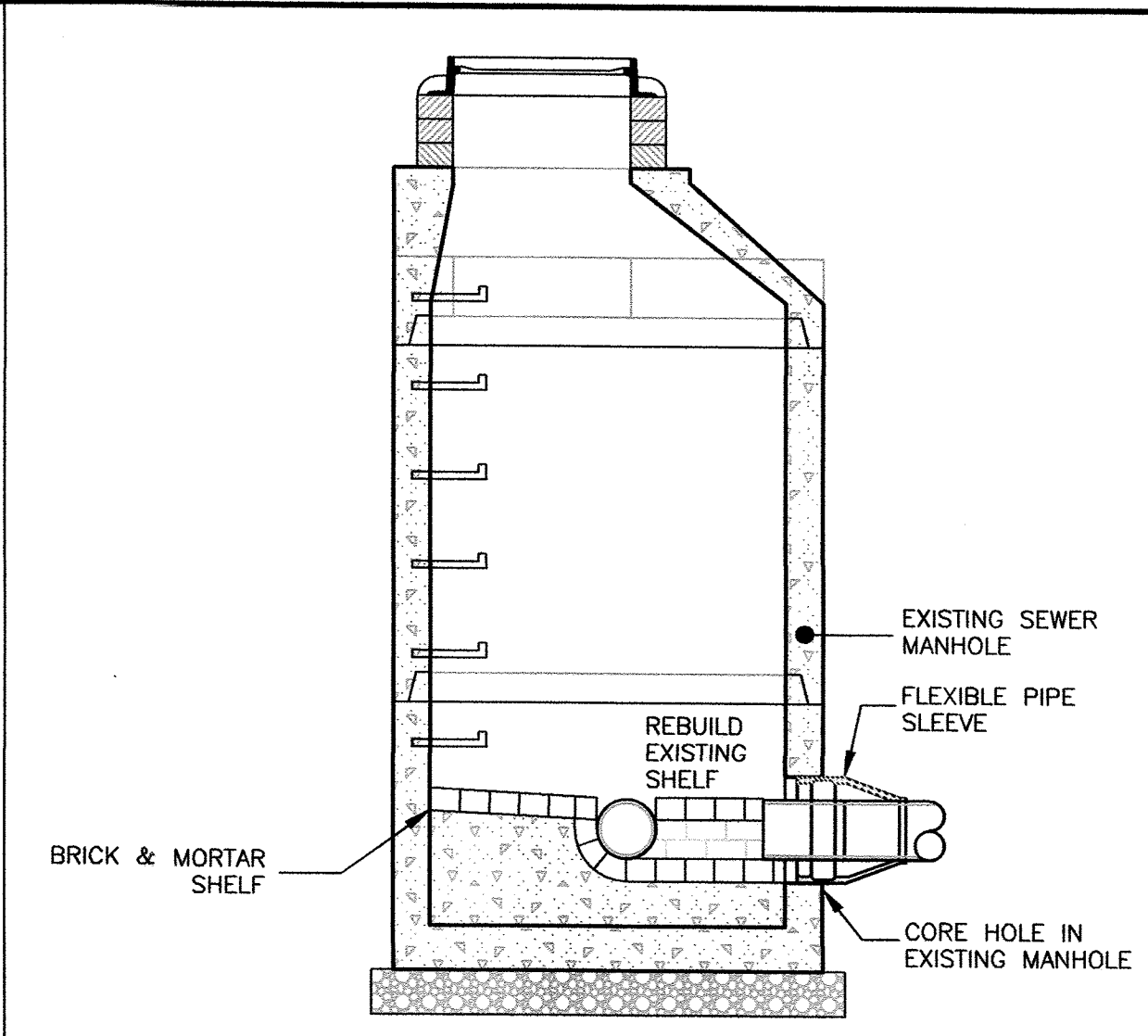
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NOTES:
1. ALL MATERIAL SHALL CONFORM TO CITY/TOWN OF DEPARTMENT OF PUBLIC WORKS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO CITY/TOWN SPECIFICATIONS.
3. IN LIEU OF THE 12" GRAVEL COURSE AND 9" OF CRUSHED GRAVEL, 18" OF CRUSHED GRAVEL OR RECLAIMED STABILIZED BASE MAY BE USED AS A BASE FOR THE PAVEMENT REPAIR.
4. MATERIAL SHALL BE REPLACED IN KIND WHENEVER POSSIBLE.
5. A MINIMUM 2' CUTBACK IS REQUIRED AT THE TOP OF THE TRENCH WALL OVER UNDISTURBED MATERIAL.

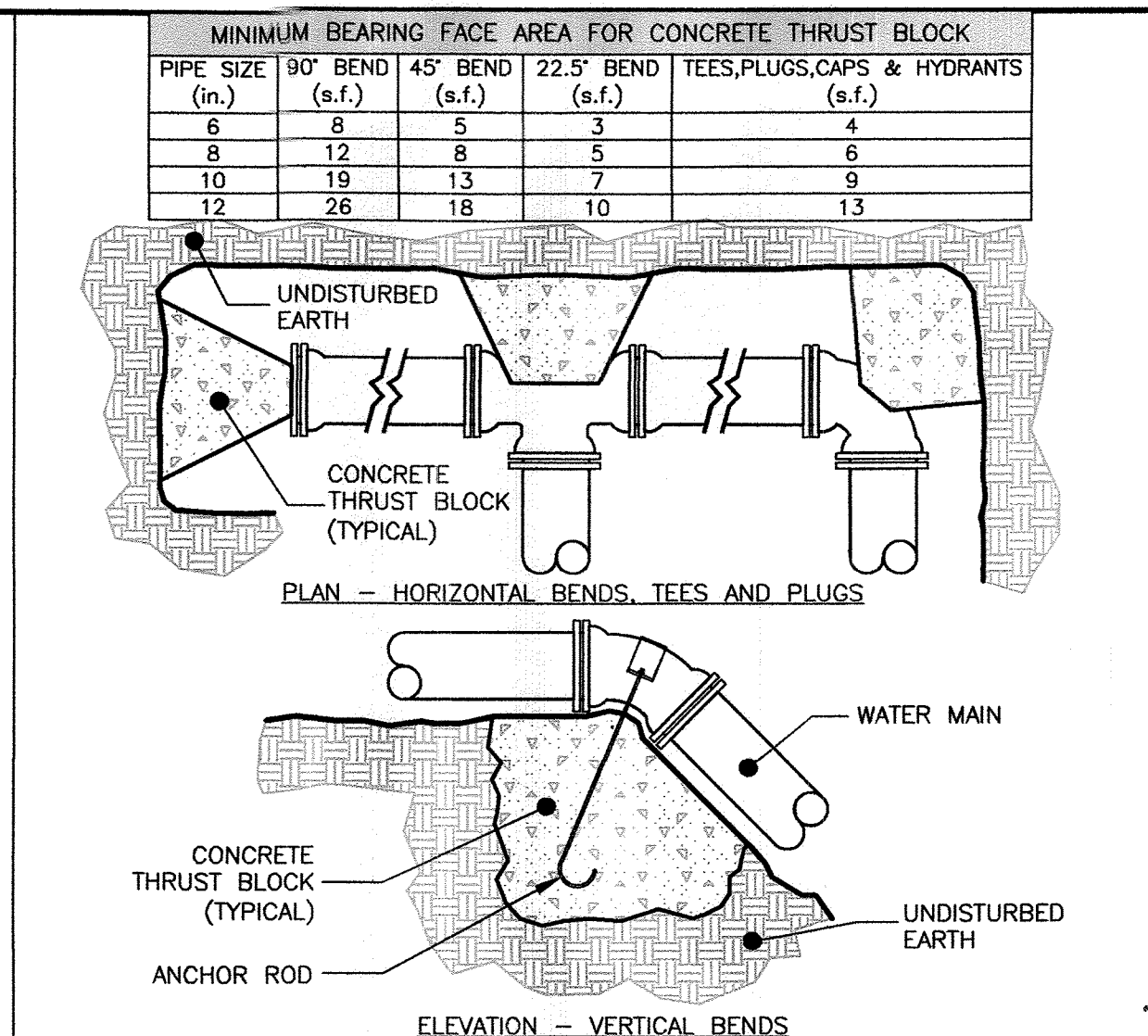


TRENCH REPAIR & PAVEMENT SECTION
NOT TO SCALE



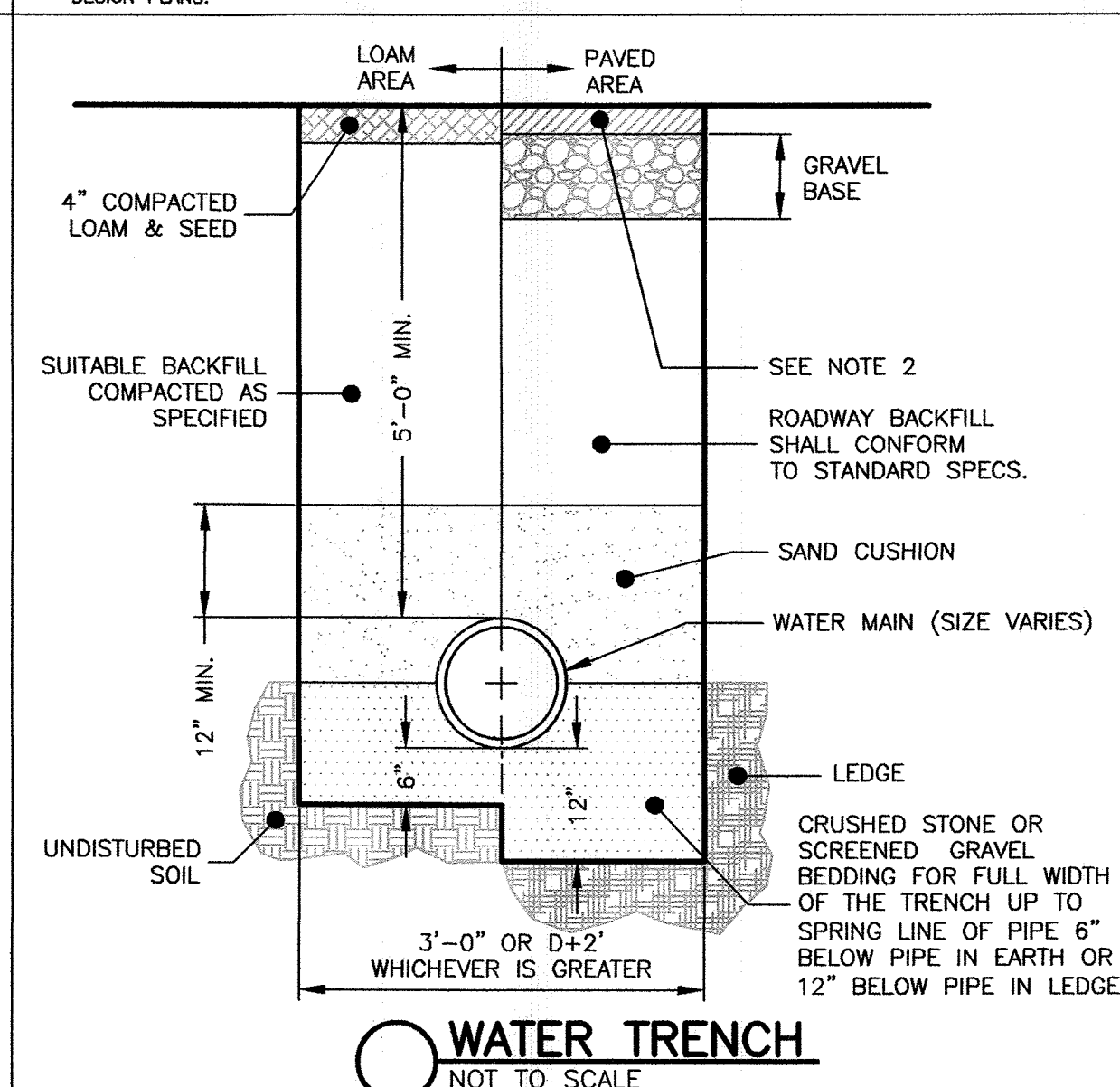
CONNECTION TO EXISTING SEWER MANHOLE
NOT TO SCALE

NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. REINFORCED STEEL CONFORMS TO LATEST ASTM A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
3. H-20 DESIGN LOADING PER AASHTO HS-20-44; ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."



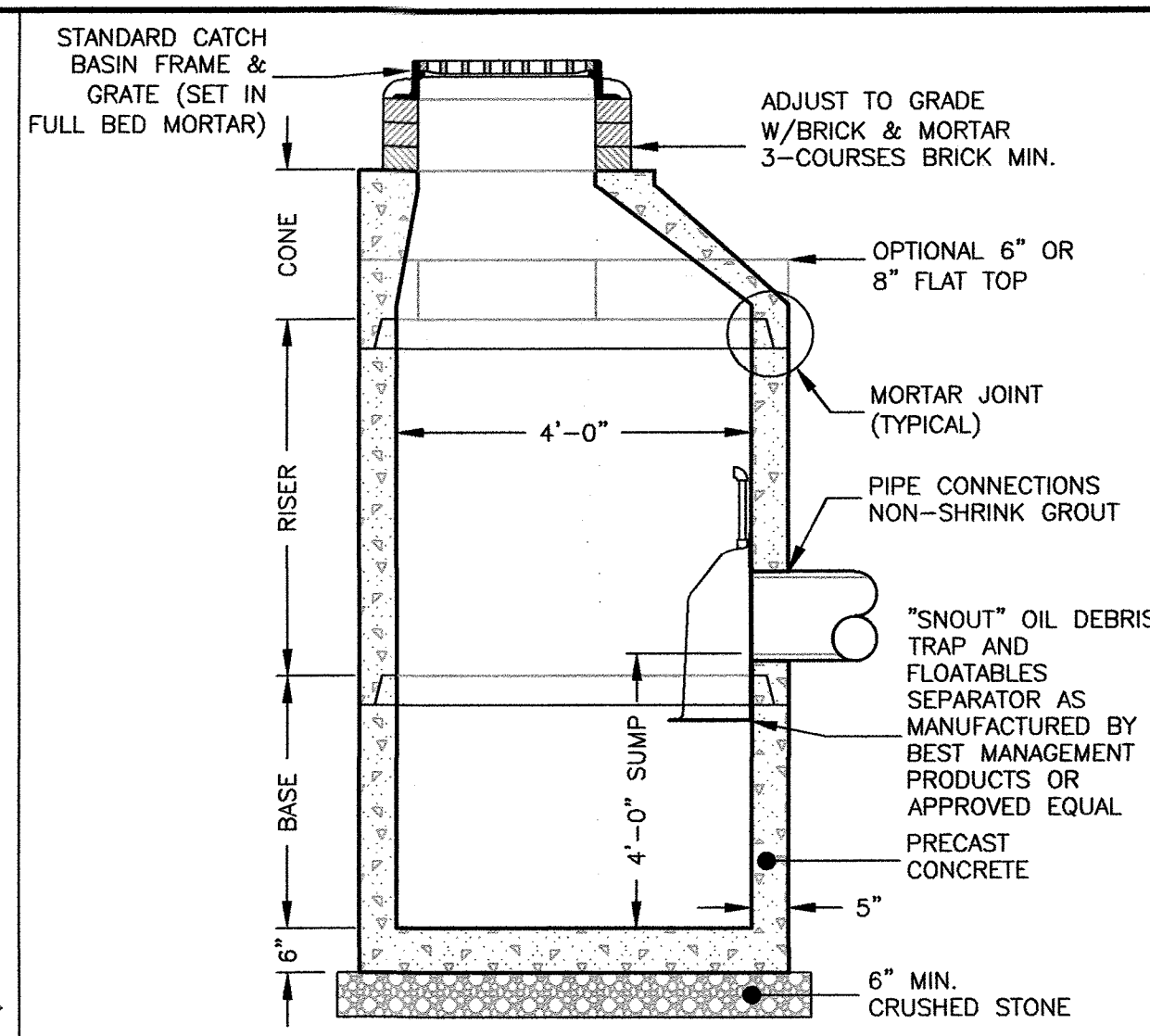
THRUST BLOCK
NOT TO SCALE

NOTES:
1. THRUST BLOCKS TO BE 3000 PSI CONCRETE PLACED AGAINST UNDISTURBED MATERIAL. KEEP CONCRETE CLEAR OF MECHANICAL JOINTS.
2. STONE BACKING MAY BE SUBSTITUTED FOR CONCRETE THRUST BLOCKS PROVIDED THE STONE(S) ARE OF EQUAL SIZE AND BEAR ON UNDISTURBED EARTH.
3. USE OF JOINT RESTRAINT SYSTEMS SHALL NOT ELIMINATE THRUST BLOCK REQUIREMENTS (WHERE POSSIBLE).
4. THE TOWN OF WELLESLEY WATER AND SEWER DIVISION SHALL APPROVE FINAL WATER AND SEWER CONNECTIONS AND SHALL BE ON SITE TO INSPECT THE INSTALLATION OF THE SERVICES.
5. THE FINAL LOCATION OF THE BACKFLOW PREVENTER VALVE WILL BE DETERMINED BY THE FINAL PLUMBING DESIGN PLANS.



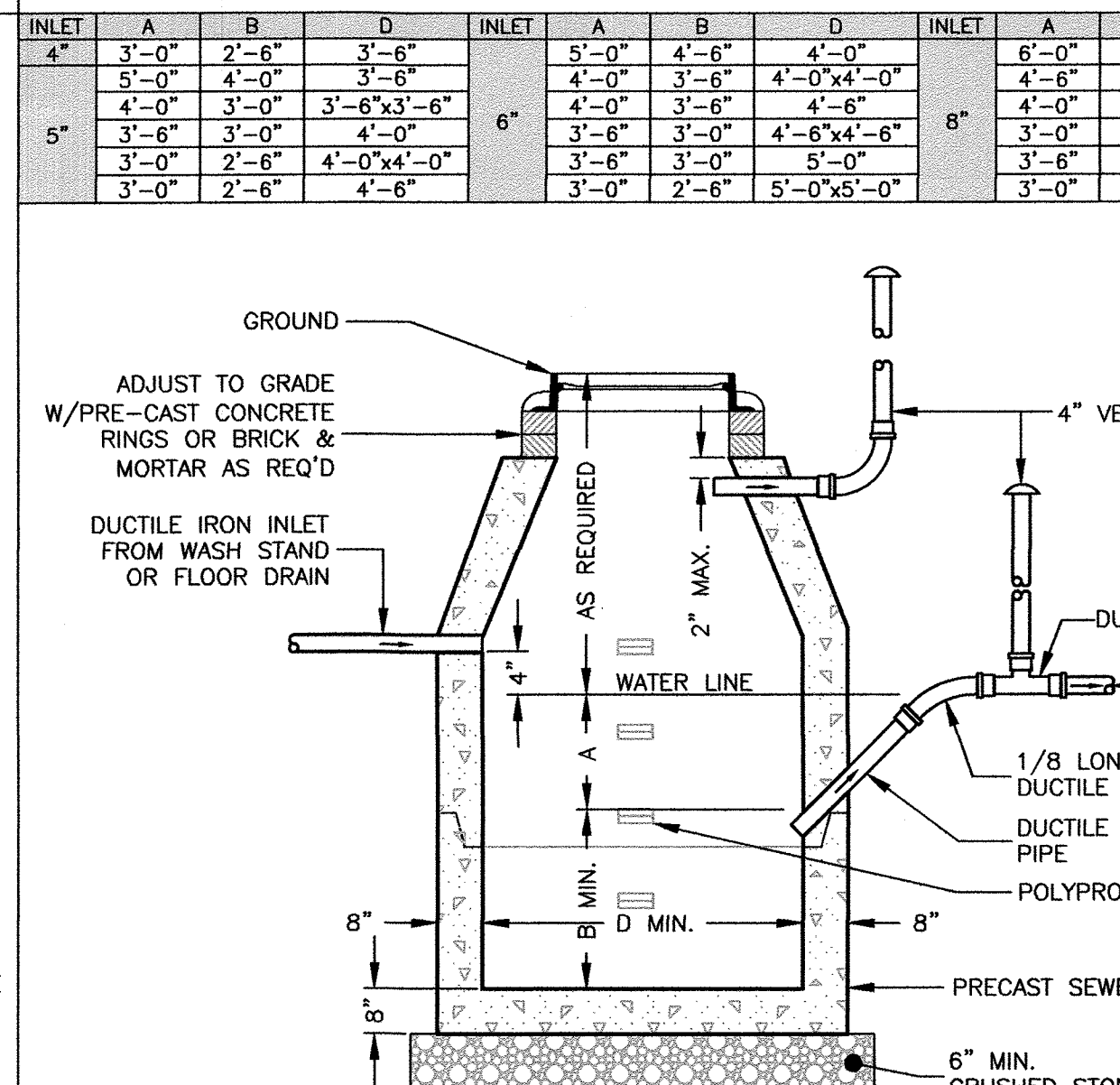
WATER TRENCH
NOT TO SCALE

NOTES:
1. ALL MATERIAL SHALL CONFORM TO CITY/TOWN OF DEPARTMENT OF PUBLIC WORKS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO CITY/TOWN SPECIFICATIONS.
3. IN LIEU OF THE 12" GRAVEL COURSE AND 9" OF CRUSHED GRAVEL, 18" OF CRUSHED GRAVEL OR RECLAIMED STABILIZED BASE MAY BE USED AS A BASE FOR THE PAVEMENT REPAIR.
4. MATERIAL SHALL BE REPLACED IN KIND WHENEVER POSSIBLE.
5. A MINIMUM 2' CUTBACK IS REQUIRED AT THE TOP OF THE TRENCH WALL OVER UNDISTURBED MATERIAL.

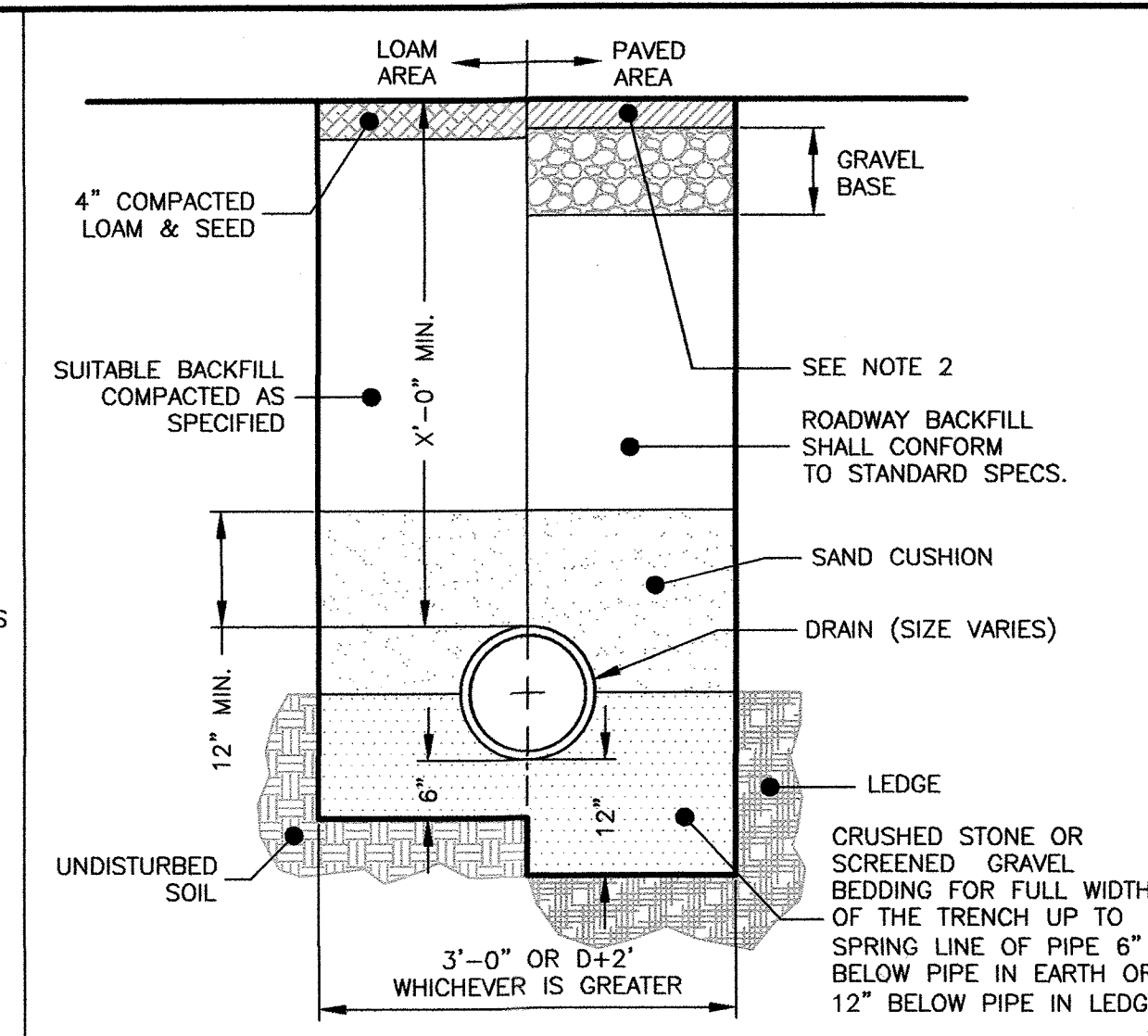


PRE-CAST CATCH BASIN
NOT TO SCALE

NOTES:
1. CONCRETE: 4,000 PSI MINIMUM AFTER 28 DAYS.
2. REINFORCED STEEL CONFORMS TO LATEST ASTM A185 SPEC. 0.12 SQ. IN./LINEAL FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
3. H-20 DESIGN LOADING PER AASHTO HS-20-44; ASTM C478 SPEC FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS."



SEWER GAS TRAP
NOT TO SCALE



DRAIN TRENCH
NOT TO SCALE

NOTES:
1. ALL MATERIAL SHALL CONFORM TO CITY/TOWN OF DEPARTMENT OF PUBLIC WORKS.
2. NEW ROADWAY CONSTRUCTION SHALL CONFORM TO CITY/TOWN SPECIFICATIONS.
3. IN LIEU OF THE 12" GRAVEL COURSE AND 9" OF CRUSHED GRAVEL, 18" OF CRUSHED GRAVEL OR RECLAIMED STABILIZED BASE MAY BE USED AS A BASE FOR THE PAVEMENT REPAIR.
4. MATERIAL SHALL BE REPLACED IN KIND WHENEVER POSSIBLE.
5. A MINIMUM 2' CUTBACK IS REQUIRED AT THE TOP OF THE TRENCH WALL OVER UNDISTURBED MATERIAL.

GENERAL CONSTRUCTION NOTES

- MANHOLE TO BE LOCATED OUTSIDE OF BUILDING WHERE POSSIBLE, COVER TO HAVE A CENTER HOLE.
- A TIGHT COVER MUST BE USED IF MANHOLE IS LOCATED INSIDE OF BUILDING.
- OPENING SHALL BE NOT LESS THAN 24" DIA.
- THE MANHOLE SHALL BE SO LOCATED AND CONSTRUCTED THAT SURFACE WATER SHALL BE EXCLUDED.
- INLET PIPE SHALL BE AT LEAST FOUR INCHES ABOVE NORMAL WATER LINE.
- WHERE SUBJECT TO FROST OR CRUSHING CONDITIONS, OUTLET SHALL BE AT LEAST THREE FEET BELOW THE SURFACE.
- THE NEW MANHOLE MUST BE FILLED WITH CLEAN WATER BEFORE USING, AND AFTER BEING EMPTIED FOR PERIODIC CLEANING.
- ALL OIL AND GASOLINE MUST BE REMOVED BEFORE CLEANING OUT THE MANHOLE, AND MUST NOT BE DISCHARGED INTO THE SEWER THROUGH OTHER FIXTURES.
- SPECIFICATIONS FOR COVERING SPECIAL CASES OR CONDITIONS, SHALL BE APPROVED BY THE LOCAL AUTHORITIES, AND THE AUTHORITIES OF THE COMMONWEALTH OF MASSACHUSETTS.
- POLYPROPYLENE STEPS SHALL BE SPACED ABOUT 18" APART.
- BOTH VENTS SHALL BE EXTENDED INDEPENDENTLY 18" ABOVE THE ROOF, OR AS APPROVED BY THE LOCAL AUTHORITIES, AND THE AUTHORITIES OF THE COMMONWEALTH OF MASSACHUSETTS.

Scale: 1"=20'

Date: January 12, 2018

Prepared For:

Applicant: 16 Stearns Road LLC
Joy Derenzo
43 Charles Street
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Prepared By: Hayes Engineering, Inc.
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Design By: WRB
Drawn By: EBL
Checked By: WRB
Project File: WEL-0012
Comp. No: WEL11

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☒ Issued For Review
☐ Issued For Bid
☐ Issued For Construction
☒ Not For Construction

No.	Revision	Date
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Town Comments
Drawn Locations
Town Comments
Town Comments
No Change This Sheet

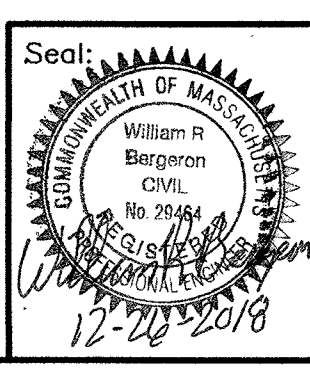
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UTILITY DETAIL SHEET

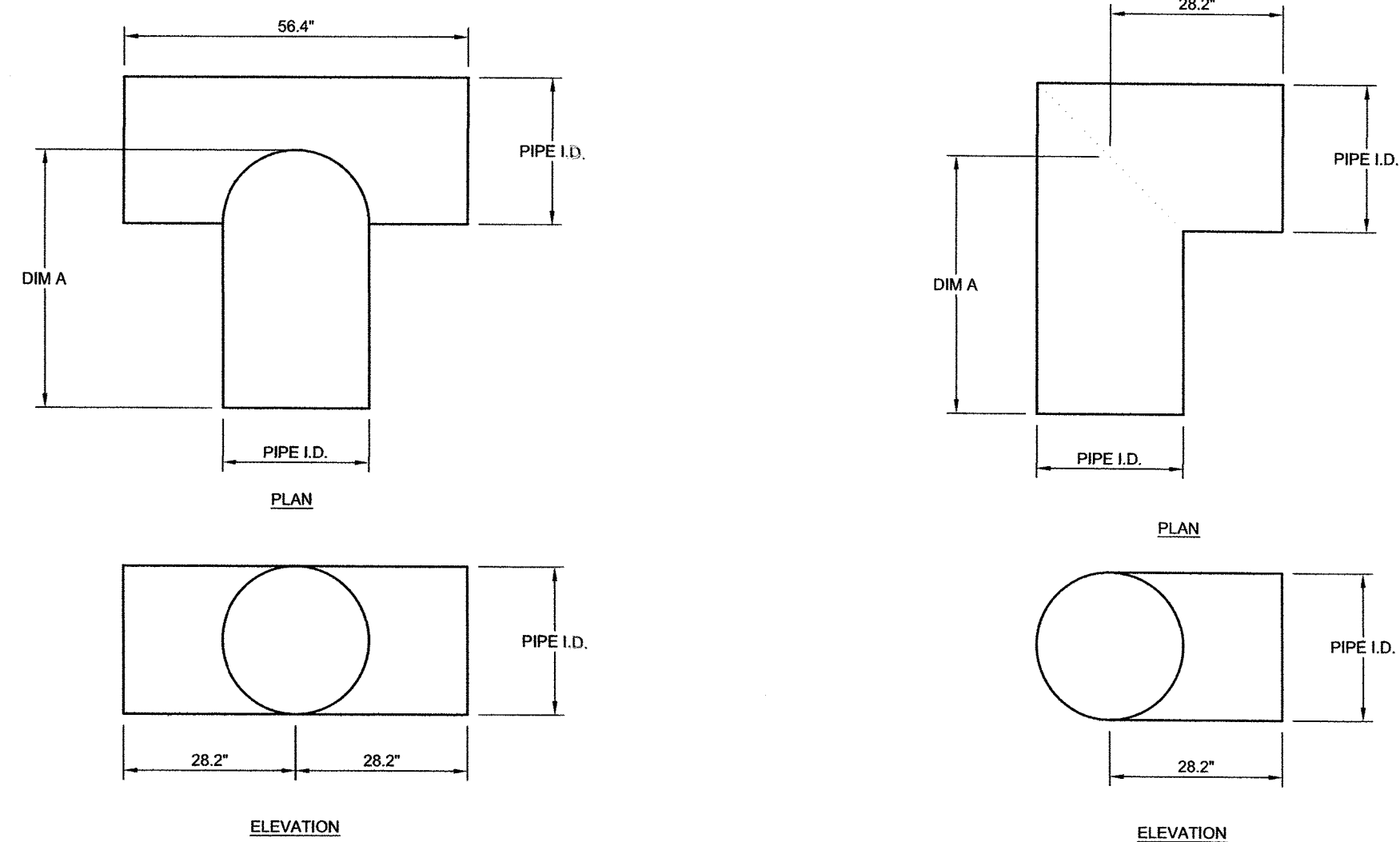
#16 STEARNS ROAD
WELLESLEY, MASS.

Drawing No.: C7

SHEET 10 OF 13



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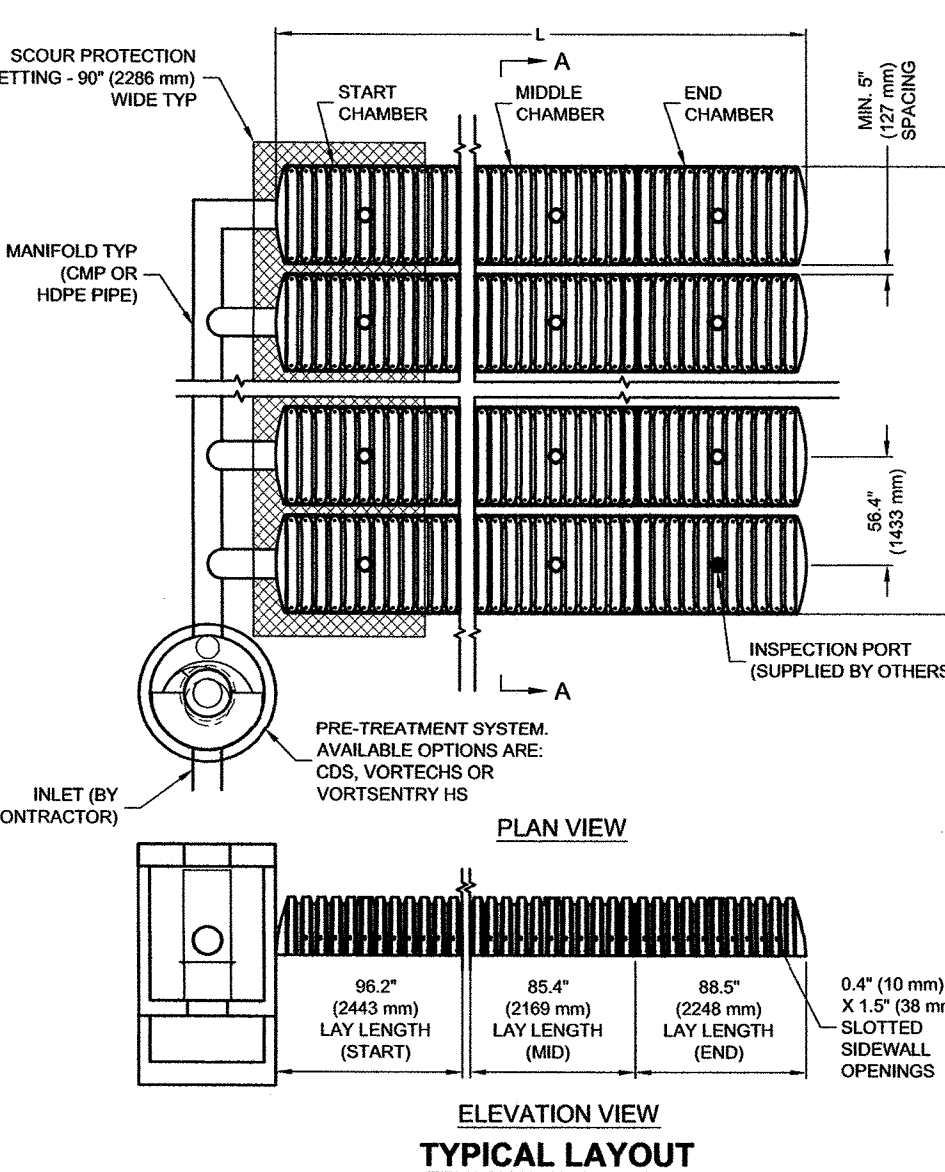
STANDARD MANIFOLD COMPONENTS				
AVAILABLE DIAMETERS (IN)				
TEE	12	15	18	24
ELBOW	12	15	18	24
DIM A	42	42	48	48

- GENERAL NOTES:
- FITTING MATERIAL TO BE MANUFACTURED FROM CORRUGATED HIGH DENSITY POLYETHYLENE, AASHTO M294 PIPE.
 - FITTINGS TO BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF AASHTO M294.
 - FITTINGS DESIGNED TO PROTRUDE 6" INTO END OF THE INLET CHAMBERS.
 - MANIFOLD TEE AND ELBOW JOINTS TO BE CONNECTED UTILIZING MAR MAC POLYSEAL COUPLERS. REFERENCE WWW.MARMAC.COM

CHAMBERMaxx[®]
PATENT PENDING



CHAMBERMAXX STORMWATER RETENTION SYSTEM
STANDARD MANIFOLD DETAILS



CHAMBERMAXX DESIGN DETAILS			
FEATURE	START CHAMBER	MIDDLE CHAMBER	END CHAMBER
OVERALL CHAMBER HEIGHT - IN (mm)	30.3 (770)	30.3 (770)	30.3 (770)
OVERALL CHAMBER WIDTH - IN (mm)	51.4 (1306)	51.4 (1306)	51.4 (1306)
ACTUAL LENGTH - IN (mm)	96.4 (2500)	91.0 (2311)	92.0 (2337)
INSTALLED LAY LENGTHS - IN (mm)	96.2 (2443)	85.4 (2169)	86.5 (2248)
CHAMBER STORAGE VOLUME - CF (m³)	52.5 (1.49)	49.3 (1.39)	48.2 (1.36)
CHAMBER STORAGE PER LINEAR FOOT - CF/LF (m³/m)	6.5 (0.804)	6.9 (0.641)	6.5 (0.604)
*MIN. INSTALLED CHAMBER VOLUME - CF (m³)	78.7 (2.23)	76.7 (2.17)	76.1 (2.15)
*MIN. INSTALLED CHAMBER VOLUME PER LINEAR FOOT - CF/LF (m³/m)	9.8 (0.910)	10.8 (1.003)	10.3 (0.957)
CHAMBER WEIGHT - LB (kg)	85 (38.55)	77 (34.92)	76 (34.47)

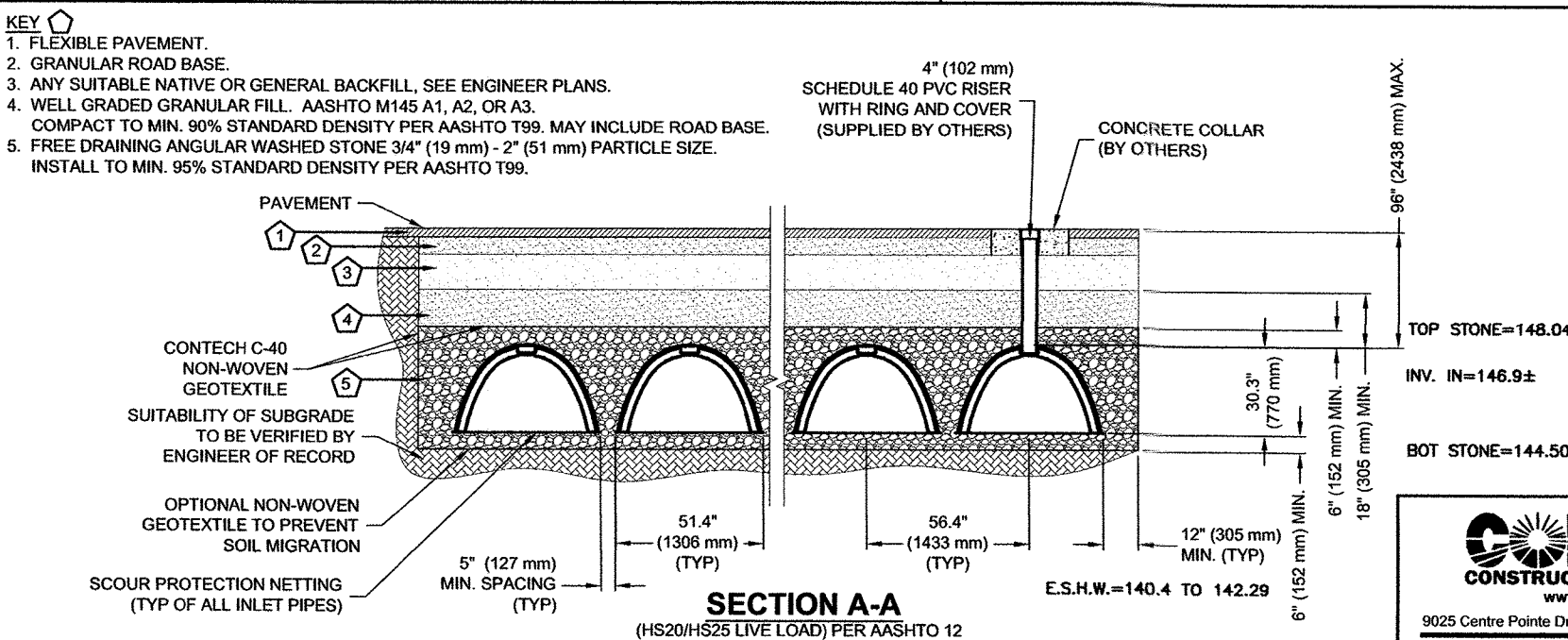
*16" (152 mm) OF STONE ABOVE AND BELOW CHAMBER, 5" (127 mm) CHAMBER SPACING AND 40% POROSITY

GENERAL NOTES

- ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF RISERS AND INLETS SHALL BE VERIFIED BY THE ENGINEER OF RECORD.
- PRIOR TO INSTALLATION OF THE CHAMBERMAXX SYSTEM A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED. THOSE REQUIRED TO ATTEND ARE THE SUPPLIER OF THE SYSTEM, THE GENERAL CONTRACTOR, SUB-CONTRACTORS AND THE ENGINEER.
- CHAMBERMAXX CHAMBERS ARE MANUFACTURED FROM POLYPROPYLENE PLASTIC.
- CHAMBERMAXX SYSTEM TO MEET AASHTO HS20/HS25 LIVE LOADING, PER AASHTO LRFD SECTION 12.
- ACCESS COVERS TO MEET AASHTO HS20/HS25 LIVE LOADING.
- MINIMUM COVER IS 18-INCHES (457 mm) AND MAXIMUM COVER IS 96-INCHES (2438 mm) TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR COVER HEIGHTS GREATER THAN 96-INCHES (2438 mm) CONTACT YOUR LOCAL REPRESENTATIVE.
- ALL PARTS PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.
- FOR INFORMATION ON PRE-TREATMENT SYSTEMS, REFERENCE CONTECH PRE-TREATMENT SYSTEM STANDARD DETAILS OR CONTACT YOUR LOCAL REPRESENTATIVE.
- CHAMBERMAXX BY CONTECH CONSTRUCTION PRODUCTS (800) 925-5240

INSTALLATION NOTES

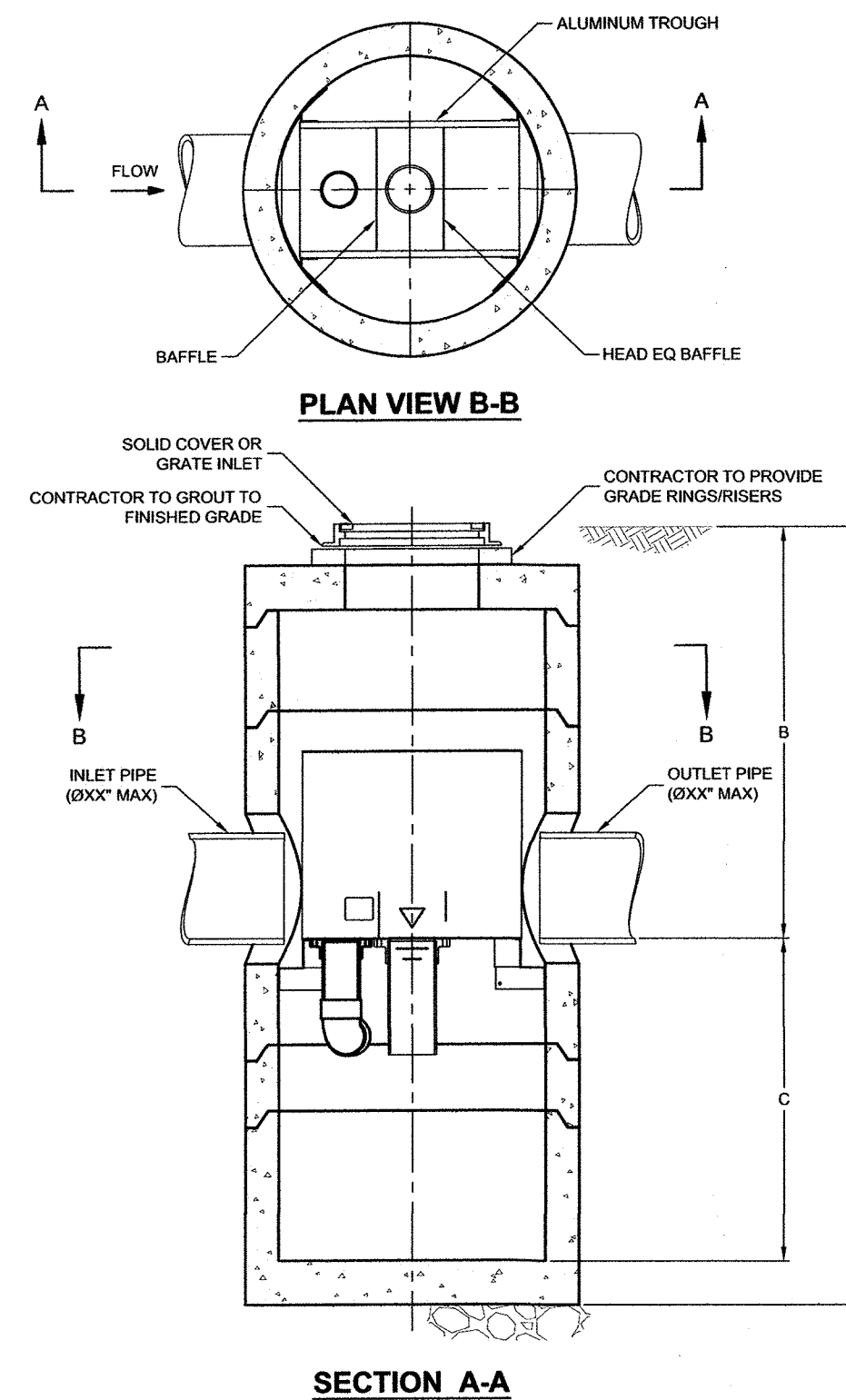
- CHAMBERMAXX INSTALLATION GUIDE TO BE REVIEWED BY CONTRACTOR PRIOR TO INSTALLATION.
- PRIOR TO PLACING BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, A TENSAR GEOTEXTILE SHALL BE UTILIZED OR UNSUITABLE MATERIAL SHALL BE REMOVED AND BROUGHT BACK TO GRADE WITH FILL MATERIAL AS APPROVED BY THE ENGINEER OF RECORD. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE BEDDING MATERIAL CAN BE PLACED.
- THE SCOUR PROTECTION NETTING TO EXTEND 1'-0" (305 mm) BEYOND OUTSIDE EDGE OF INLET CHAMBERS.
- COVER ANY OPEN VOID SPACES GREATER THAN 3" (76 mm) ON CHAMBERS WITH A NON-WOVEN GEOTEXTILE TO PREVENT INFILTRATION OF BACKFILL MATERIAL.
- STONE EMBEDMENT MATERIAL SHALL BE INSTALLED TO 96% STANDARD PROCTOR DENSITY AND PLACED IN 6-INCH (152 mm) TO 8-INCH (203 mm) LIFTS SUCH THAT THERE IS NO MORE THAN A TWO LIFT DIFFERENTIAL BETWEEN ANY OF THE CHAMBERS AT ANY TIME. GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 90% STD. BACKFILLING SHALL BE ADVANCED ALONG THE LENGTH OF THE CHAMBER ROWS AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING AND DISPLACEMENT OF THE CHAMBERS. THE MINIMUM CHAMBER SPACING MUST BE MAINTAINED.
- REFER TO CHAMBERMAXX INSTALLATION GUIDE FOR TEMPORARY CONSTRUCTION LOADING GUIDELINES.
- IT IS ALWAYS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.
- GENERAL INSTALLATION METHODS AND MATERIALS TO BE IN ACCORDANCE WITH ASTM D2321.



CHAMBERMAXX STORMWATER RETENTION SYSTEM
STANDARD DETAIL
PRE-TREATMENT STRUCTURE OPTION

CHAMBERMaxx[®]
PATENT PENDING

CONTECH[®] CHAMBERMAXX 330XLHD
NOT TO SCALE



SECTION A-A

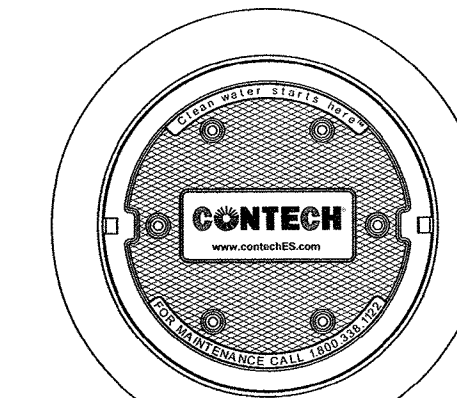
VortSentry[®]
THIS PRODUCT IS PROTECTED BY ONE OR MORE PATENTS. THE PATENT RIGHTS ARE RESERVED BY CONTECH ENGINEERED SOLUTIONS LLC.

VORTSENTRY HS DESIGN NOTES

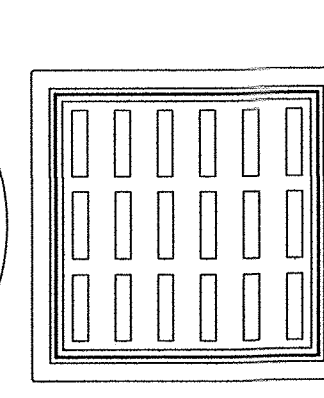
VSHS RATED TREATMENT CAPACITY IS SHOWN IN THE TABLE BELOW. OR PER LOCAL REGULATIONS. MAXIMUM HYDRAULIC INTERNAL BYPASS CAPACITY VARIES. CONTACT YOUR CONTECH REPRESENTATIVE FOR ADDITIONAL INFORMATION.

THE STANDARD SOLID COVER CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW.

CONFIGURATION OPTION DESCRIPTION											
GRATE INLET (NO INLET PIPE)											
GRATE INLET WITH INLET PIPE											
VortSentry Model	Manhole Diameter (ID)	Total Treatment Flow Rate		Typical Total Distance Rim to Outside Bottom		Typical Distance Rim to Invert		Typical Depth Below Invert (inside)		Approximate Minimum Distance Rim to Invert	
		ft	m	ft	m	ft	m	ft	m	ft	m
HS36	3	900	0.55	15.6	10.18	3.10	4.08	1.24	5.58	3.00	0.91
HS48	4	1200	1.20	34.0	13.25	4.04	6.00	1.83	6.75	2.057	0.63
HS60	5	1600	2.20	62.3	15.13	4.61	6.50	1.98	7.96	2.426	0.74
HS72	6	1800	3.70	104.8	16.56	5.05	6.75	2.06	9.15	2.788	0.85
HS84	7	2100	5.60	158.6	18.85	5.75	7.75	2.36	10.35	3.156	0.96
HS96	8	2400	8.10	229.4	20.87	6.36	8.50	2.59	11.54	3.518	1.07



FRAME AND COVER
(DIAMETER VARIES)
N.T.S.



FRAME AND GRATE
(24" SQUARE)
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS			
STRUCTURE ID			
WATER QUALITY FLOW RATE (CFS)			
PEAK FLOW RATE (CFS)			
RETURN PERIOD OF PEAK FLOW (YRS)			
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1			
OUTLET PIPE			
RIM ELEVATION			
ANTI-FLOTATION BALLAST		WIDTH	HEIGHT
NOTES/SPECIAL REQUIREMENTS:			
* PER ENGINEER OF RECORD			

GENERAL NOTES

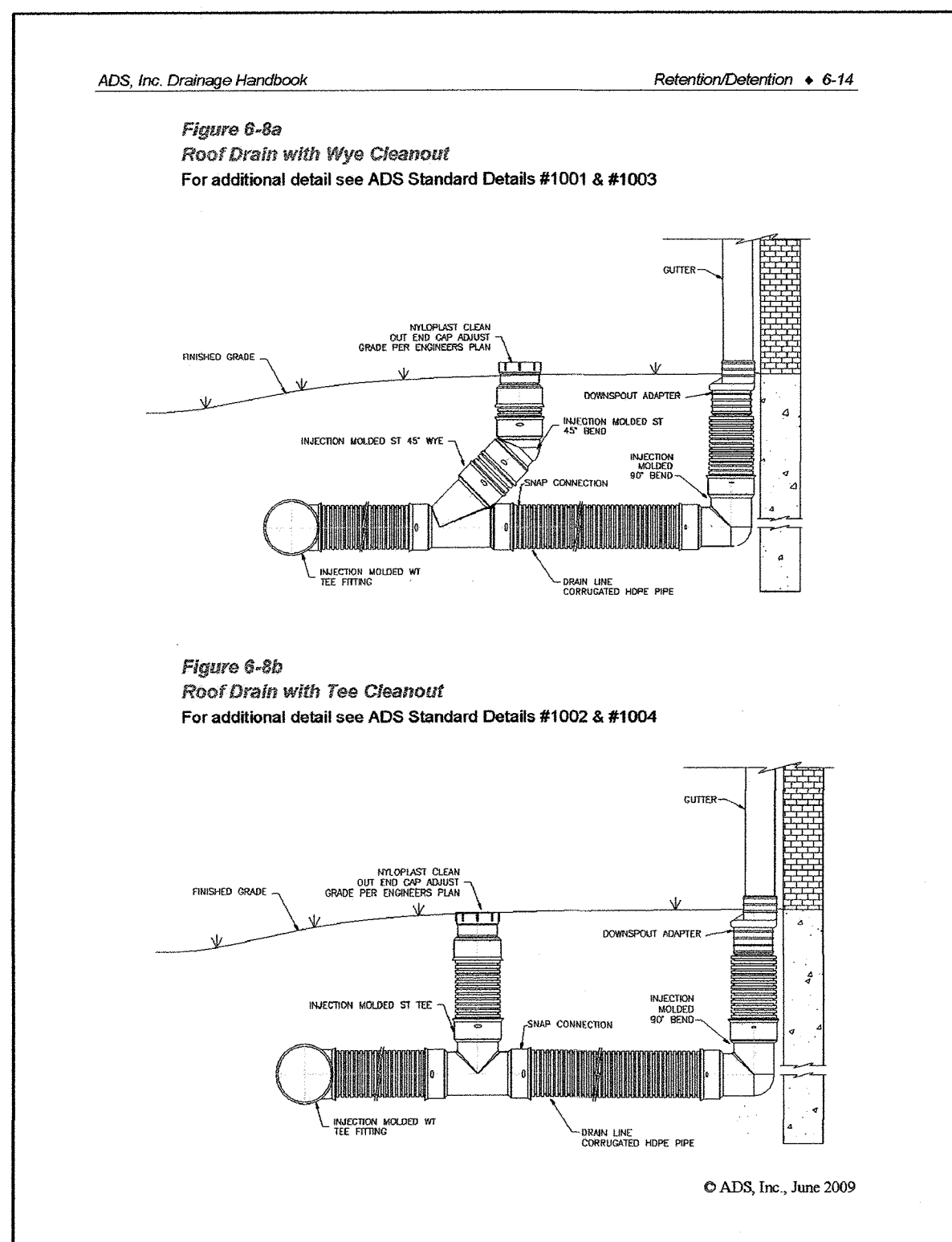
- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH (U) ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. WWW.CONTECHES.COM
- VORTSENTRY HS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE SHALL MEET AASHTO HS20 AND CASTINGS SHALL MEET AASHTO M306 LOAD RATINGS, ASSUMING GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION.

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE VORTSENTRY HS MANHOLE STRUCTURE (LIFTING CLUTCHES PROVIDED).
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL AND GROUT PIPES. MATCH PIPE INVERTS WITH ELEVATIONS SHOWN.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

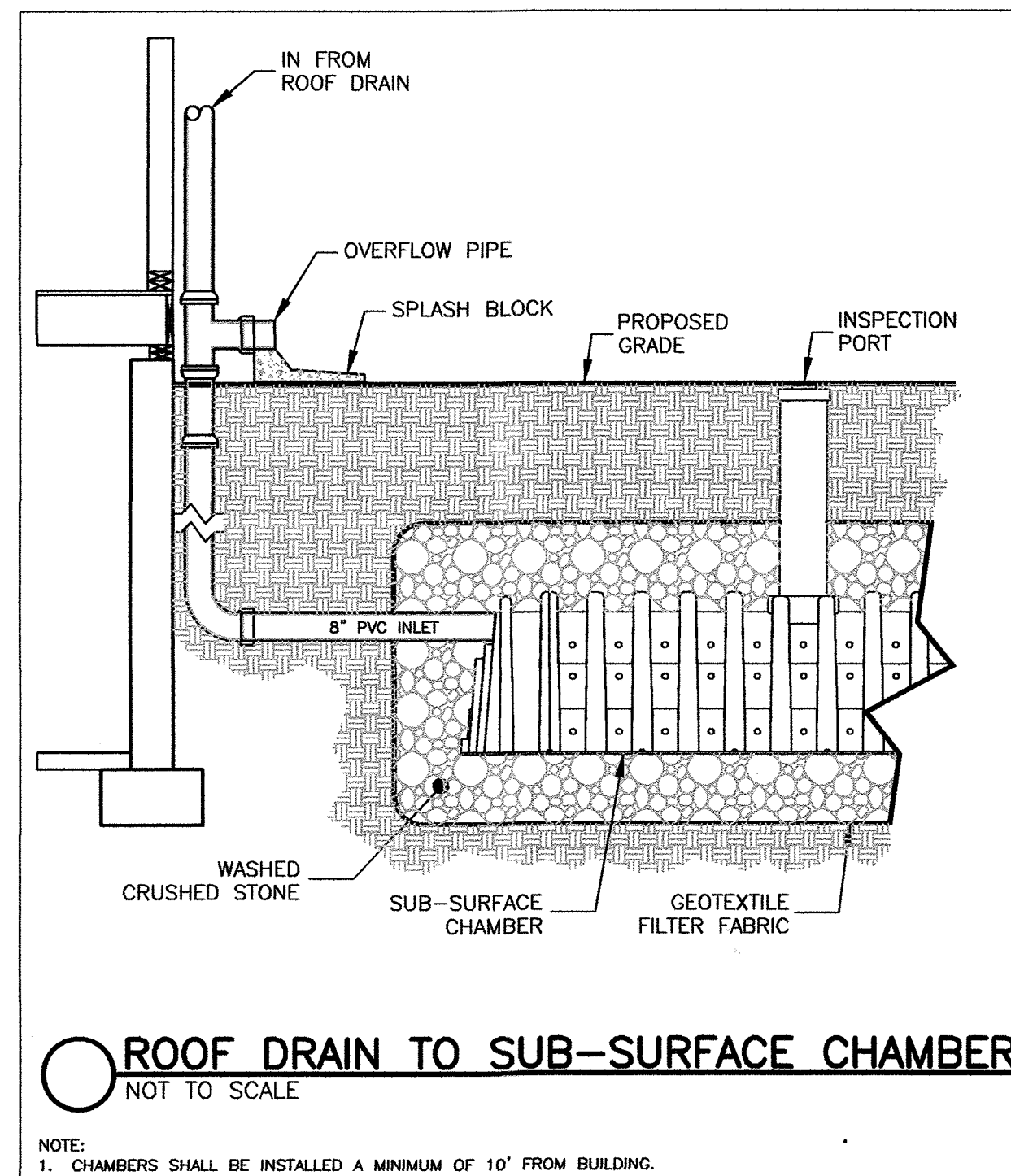


VORTSENTRY HS
STANDARD DETAIL



ADS ROOF DRAIN AND CLEAN OUT
NOT TO SCALE

CONTECH[®] VORTSENTRY HS
NOT TO SCALE



NOTE:
1. CHAMBERS SHALL BE INSTALLED A MINIMUM OF 10' FROM BUILDING.

Prepared For:

Applicant
16 Stearns Road LLC
Joy Derenzo
43 Charles Street
Needham, MA 02494

Prepared By:

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Wellesley, MA 01980
Tel: 781.246.7968
Fax: 781.246.7968
www.hayeseng.com

Design By: WRB

Drawn By: EBL

Checked By: WRB

Project File: WEL-0012

Comp. No: WEL11

☐ Issued For Permit

☒ Issued For Review

☐ Issued For Bid

☐ Issued For Construction

☒ Not For Construction

12-21-2018

12-11-2018

10-19-2018

7-27-2018

2-15-2018

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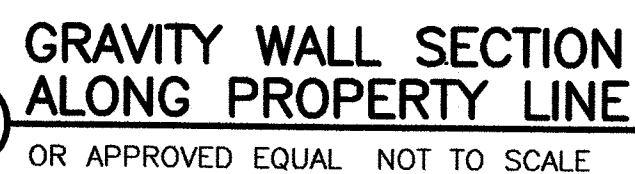
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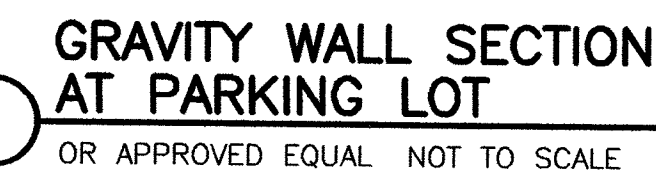
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DISCLAIMER: These typical details are preliminary and conceptual in nature. They are provided for general information purposes only. Anyone making use of these details and related information does so at their own risk and without warranty. The final design should be performed by a licensed Professional Engineer based on actual site conditions, material availability, and other project specific information.

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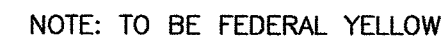


CHECK ON AVAILABILITY OF ALL UNITS w/ LOCAL PRODUCER/
DEALER. SOME UNITS MAY HAVE LIMITED AVAILABILITY.

www.stonestrong.com

PROJECT	CROSS SECTIONS STONE STRONG SYSTEMS
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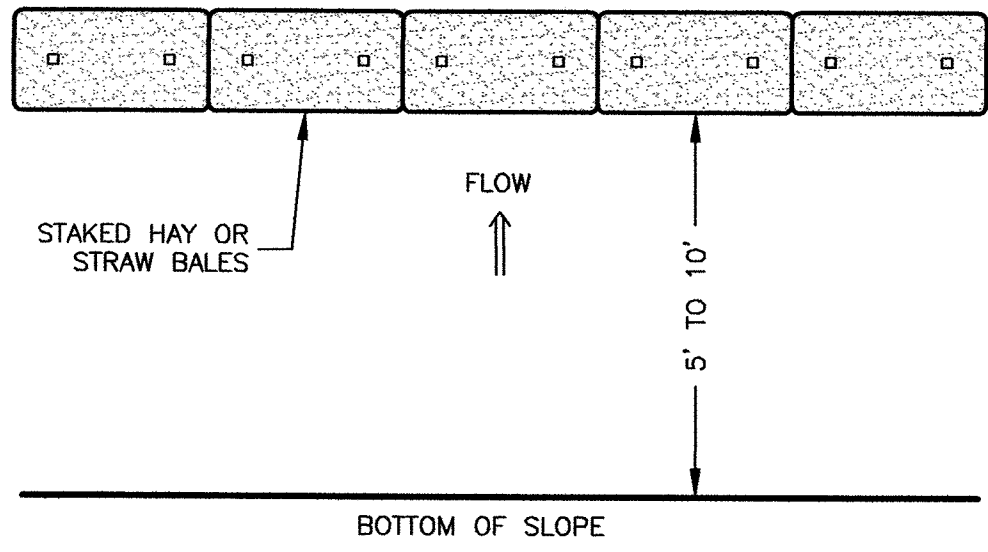
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NOTE:
WHEELCHAIR RAMP SHALL COMPLY WITH ALL STATE AND FEDERAL RULES AND
REGULATIONS.

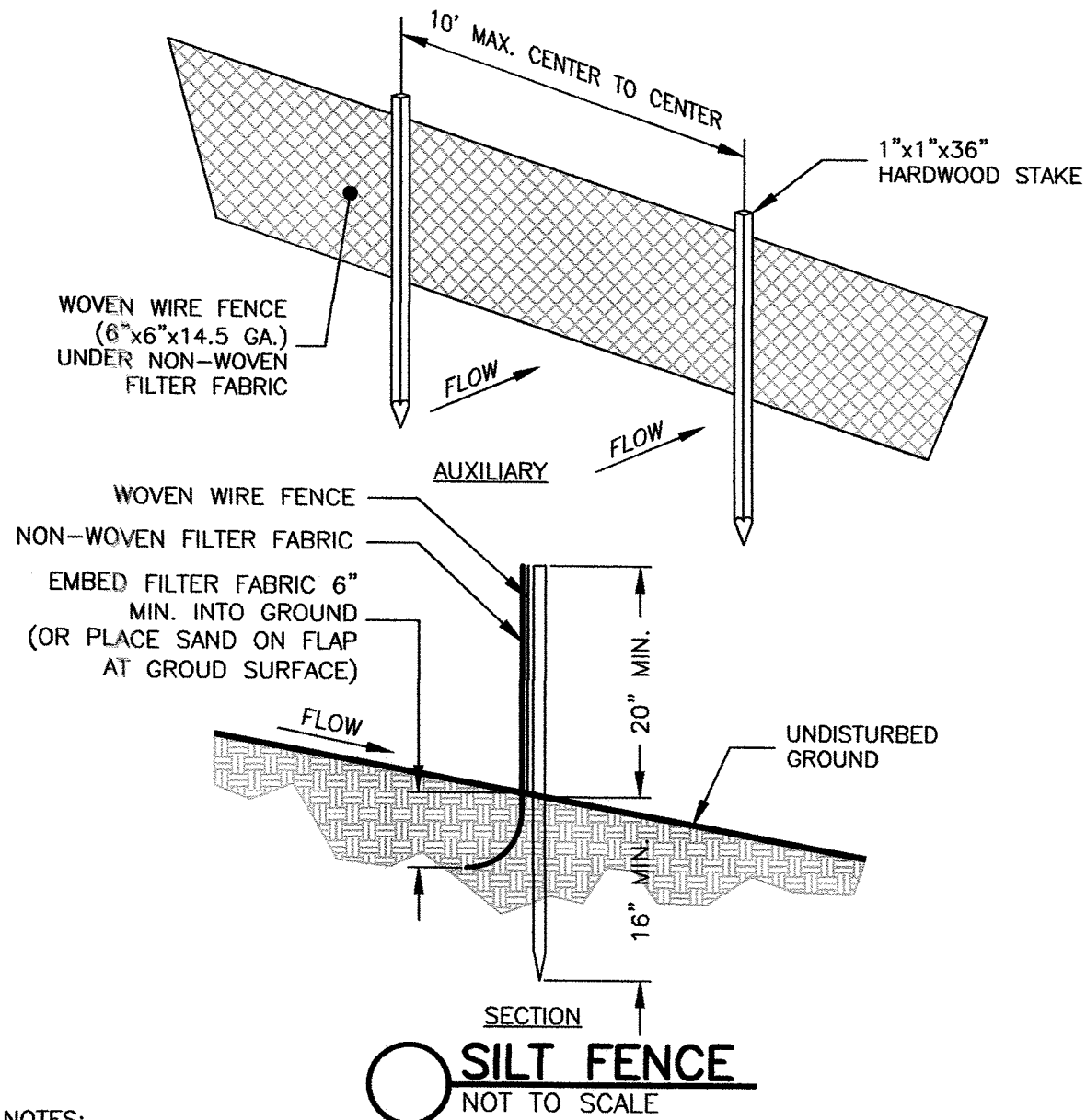


SHEET 12 OF 13

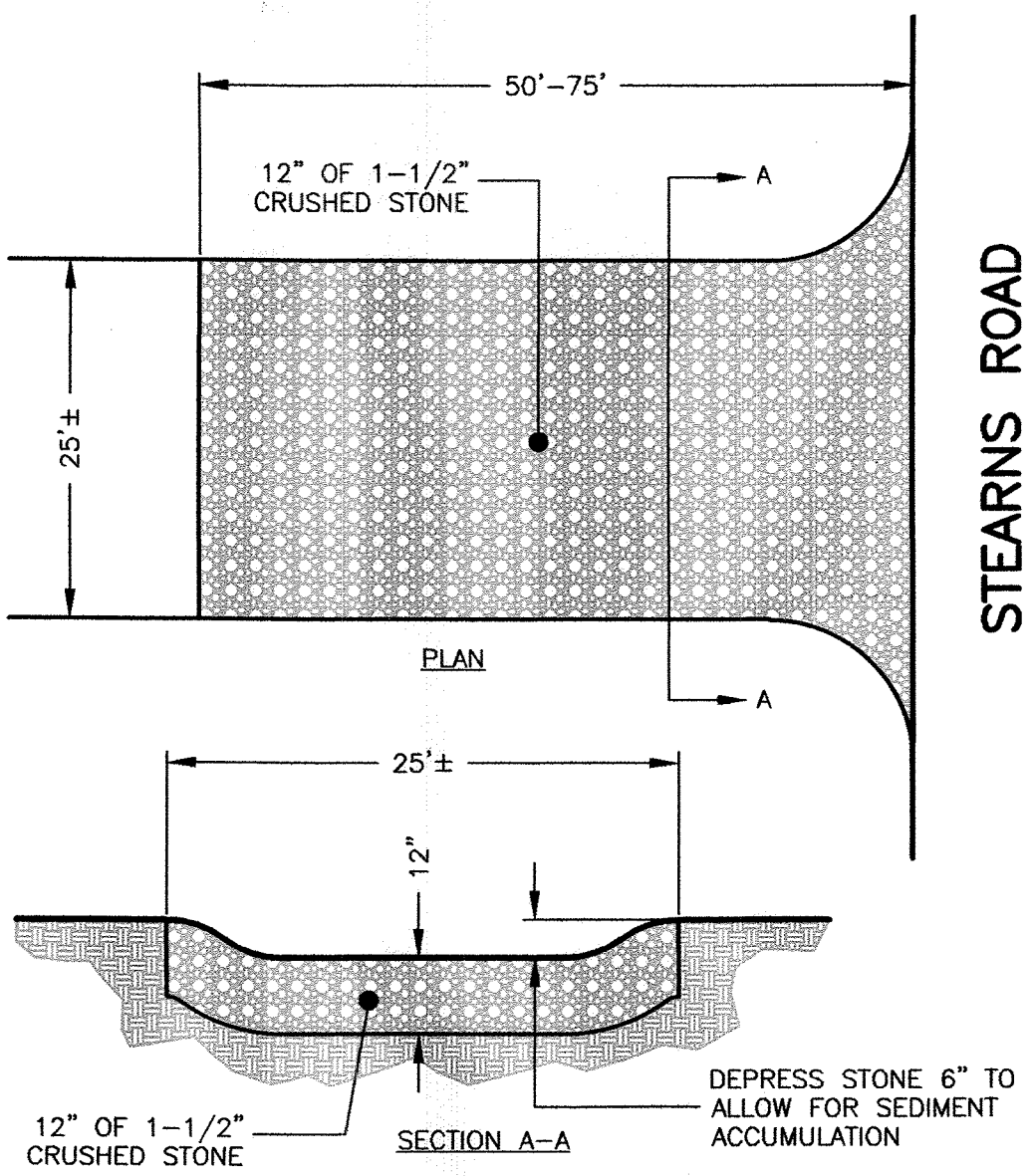


EROSION PROTECTION @ BOT. SLOPE
NOT TO SCALE

NOTE:
NORMAL USE AT BOTTOM OF FILL SLOPE

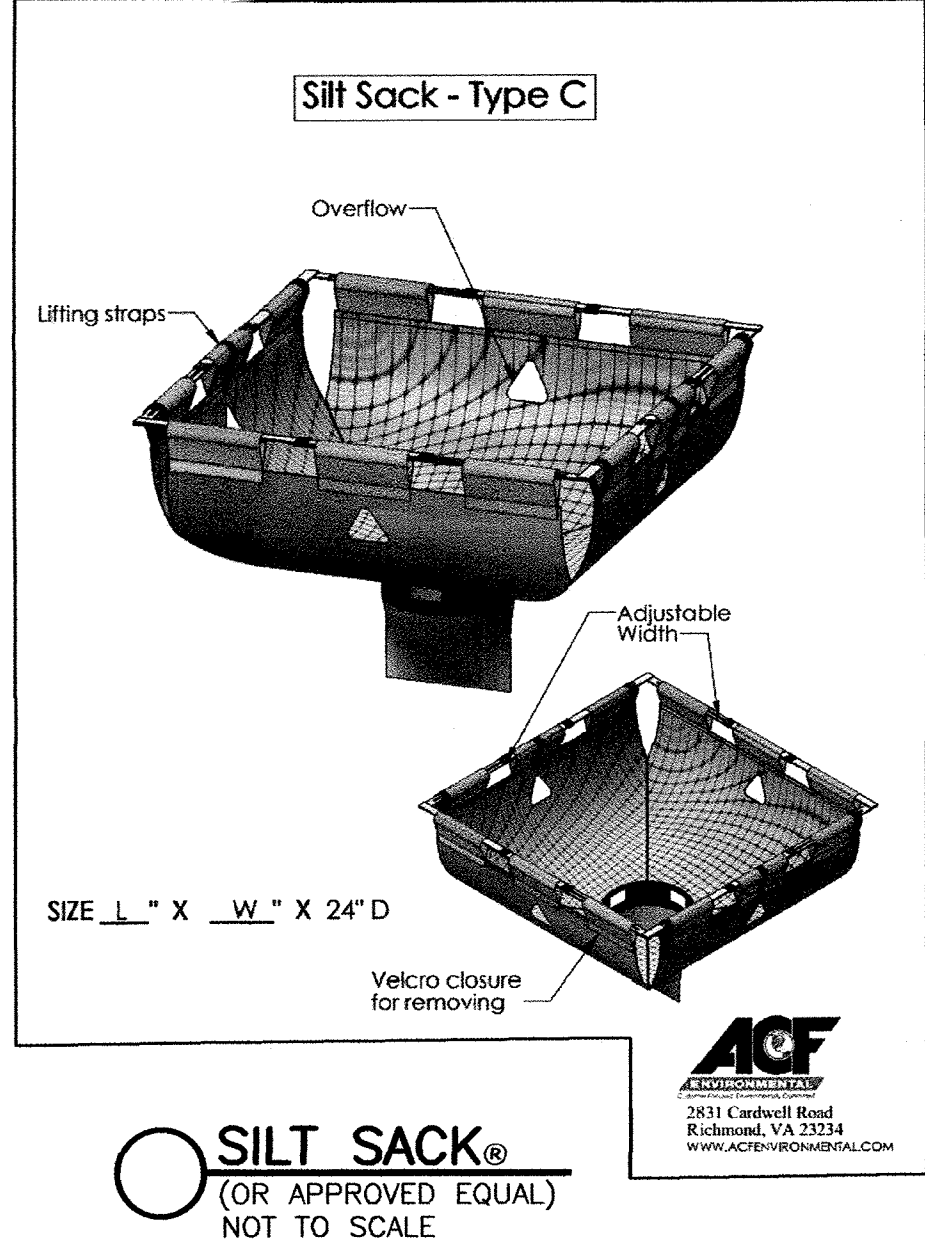


- NOTES:
1. WOVEN WIRE FENCE (6"x6"x14.5 GA.) UNDER NON-WOVEN FILTER FABRIC TO BE USED AT ALL WETLAND CROSSINGS AND ALL AREAS WITHIN 25' OF THE WETLAND LINE. ALL OTHER LOCATIONS THE FILTER FABRIC TO BE UV RESISTANT POLYPROPYLENE WITH A MINIMUM WEIGHT OF 2.5 OZ./SY.
 2. USE MULTIPLE ROWS OF SILT FENCE FOR LONG STEEP SLOPES IF NECESSARY.
 3. TO BE USED WHERE CLEARANCE IS LIMITED.



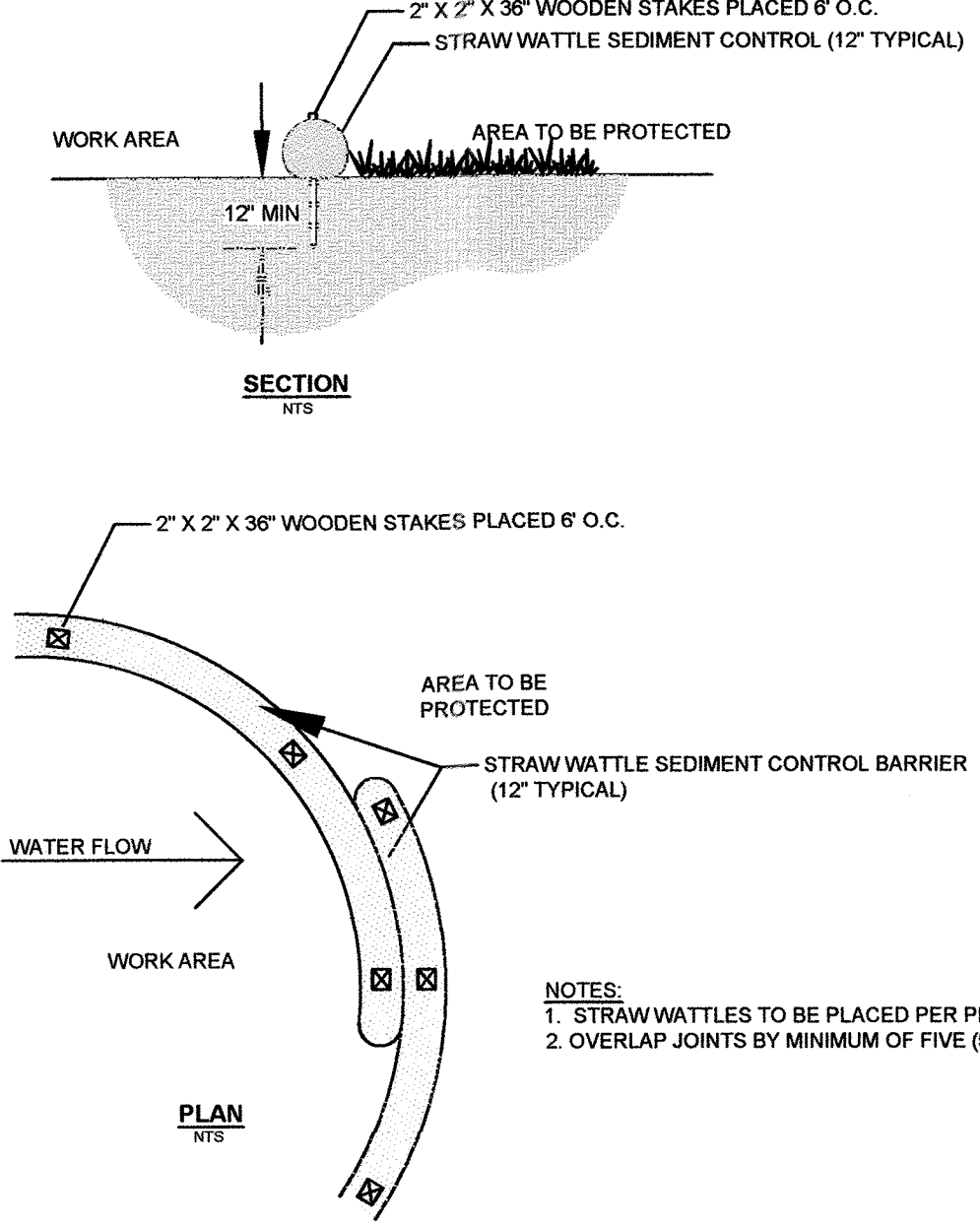
TIRE TRACKING PAD
NOT TO SCALE

NOTE:
PROVIDE TRANSITION BETWEEN CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OF SEDIMENT INTO PUBLIC RIGHT-OF-WAY



SILT SACK®
(OR APPROVED EQUAL)
NOT TO SCALE

- NOTES:
1. ANY AREA IMPACTED BY CONSTRUCTION TRACKING WILL HAVE SILTSACKS INSTALLED AS NEEDED.
 2. EXTRA SILTATION CONTROL MATERIALS WILL BE STOCKPILED ON SITE FOR USE AS NEEDED.



STRAW WATTLE SEDIMENT CONTROL
NOT TO SCALE

- NOTES:
1. STRAW WATTLES TO BE PLACED PER PLAN LOCATIONS.
 2. OVERLAP JOINTS BY MINIMUM OF FIVE (5) FEET

Prepared For:

Applicant
16 Stearns Road LLC
Joy Derenzo
43 Charles Street
Needham, MA 02494

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603 Salem Street
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No.	Revision	Date
10		
9		
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Scale: 1"=20'
0' 10' 20' 40'

Date: January 12, 2018

Drawing Title:

EROSION DETAIL SHEET
#16 STEARNS ROAD
WELLESLEY, MASS.

Drawing No.:

C10

SHEET 13 OF 13

