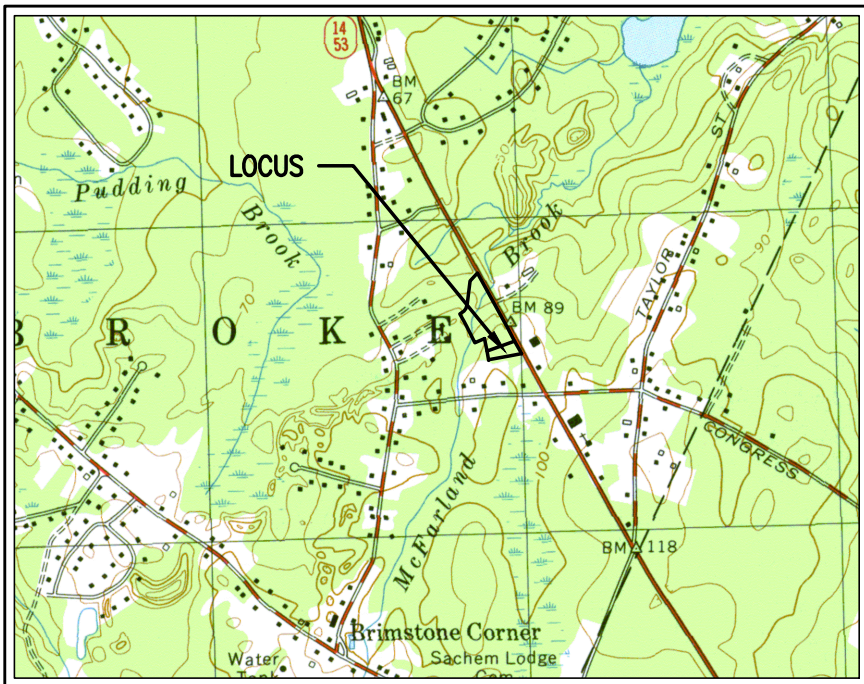




I HEREBY CERTIFY THAT AND INSTRUMENT BOUNDARY SURVEY HAS BEEN CONDUCTED ON THIS PROPERTY AND I CERTIFY THAT THE LOCATIONS OF THE BUILDING, SETBACKS AND ALL OTHER DIMENSIONS, ELEVATIONS AND MEASUREMENTS ARE ACCURATE.

TIMOTHY BENNETT, P.L.S.

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

TIMOTHY BENNETT, P.L.S.



RECORD OWNER:  
ASSESSOR MAP F9 LOT 24  
DANIEL P. & SUSAN M SPURLING, TRUSTEES OF ROSE REALTY TRUST  
DEED BOOK 48500 PAGE 216

PLAN REFERENCES  
1. PLAN No. 282 OF 1956  
2. PLAN No. 561 OF 1973  
3. PLAN No. 663 OF 1973  
4. PLAN No. 226 OF 1994  
5. PLAN No. 308 OF 1995  
6. MASSACHUSETTS STATE HIGHWAY LAYOUT No. 2771

|                                                                                                        |                                                                                                                                                                                               |                     |                       |  |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------|--|
| ZONE:                                                                                                  | RESIDENTIAL-COMMERCIAL                                                                                                                                                                        |                     |                       |  |
| EXISTING USE:                                                                                          | COMMERCIAL BUILDING                                                                                                                                                                           |                     |                       |  |
| PROPOSED USE:                                                                                          | ALLOWED USE PER ZBL SECTION IV 2.A.4 - LIGHT INDUSTRY, INCLUDING FABRICATION, ASSEMBLY, FINISHING, PACKAGING OR RESEARCH, TO INCLUDE THE MANUFACTURE, ASSEMBLY, AND PACKAGING OF MERCHANDISE. |                     |                       |  |
| PARCEL SIZE:                                                                                           | 225,565± SF (133,330 CONTIGUOUS UPLAND)                                                                                                                                                       |                     |                       |  |
| DIMENSIONAL REQUIREMENTS:                                                                              |                                                                                                                                                                                               |                     |                       |  |
| LOT AREA (RECORD 185,565 S.F.)                                                                         | REQUIRED 120,000 S.F.                                                                                                                                                                         | EXISTING 182,484 SF | PROPOSED 182,484 S.F. |  |
| LOT AREA EXCLUSIVE OF WETLANDS                                                                         | 120,000 S.F.                                                                                                                                                                                  | 102,291 S.F.        | 102,291 S.F.          |  |
| LOT PERIMETER RATIO (182484/1,859)                                                                     | 55:1                                                                                                                                                                                          | 98:1                | 98:1                  |  |
| LOT FRONTAGE                                                                                           | 250 FT                                                                                                                                                                                        | 658.04 FT           | 658.04 FT             |  |
| (BUILDING, STRUCTURES, PAVED AREAS)                                                                    |                                                                                                                                                                                               |                     |                       |  |
| FRONT SETBACK                                                                                          | 100 FT                                                                                                                                                                                        | N/A FT              | 50.0 FT*              |  |
| SIDE SETBACK                                                                                           | 40 FT                                                                                                                                                                                         | N/A FT              | 42.6 FT               |  |
| REAR SETBACK                                                                                           | 50 FT                                                                                                                                                                                         | N/A FT              | 60.7 FT               |  |
| MAX HEIGHT                                                                                             | 2.5 STORIES                                                                                                                                                                                   | N/A                 | 1 STORIES             |  |
| MAX BUILDING FLOOR AREA (%)                                                                            | 35%                                                                                                                                                                                           | N/A                 | 2.74%                 |  |
| COVERAGE (%)                                                                                           | 60%                                                                                                                                                                                           | N/A                 | 24.0%                 |  |
| LANDSCAPING                                                                                            | 40%                                                                                                                                                                                           | N/A                 | 76.0%                 |  |
| FRONT 40% OF ANY YARD SHALL BE LANDSCAPED OR LEFT IN A NATURAL STARE (50% ABUTTING RESIDENTIAL USE)    |                                                                                                                                                                                               |                     |                       |  |
| FRONT 100 X.4                                                                                          | 40 FT                                                                                                                                                                                         |                     | 50.3 FT               |  |
| SIDE 40 X.4 (ABUT RESIDENTIAL)                                                                         | 16 FT                                                                                                                                                                                         |                     | 20.8 FT               |  |
| SIDE 40 X.5 (ABUT RESIDENTIAL)                                                                         | 40 FT                                                                                                                                                                                         |                     | 20.8 FT               |  |
| REAR 50 X.4 (ABUT RESIDENTIAL)                                                                         | 20 FT                                                                                                                                                                                         |                     | 38.6 FT               |  |
| PARKING                                                                                                | V.4.A.1.G. FOR WHOLESALE, STORAGE OR INDUSTRIAL ESTABLISHMENTS, ONE PARKING SPACE FOR EVERY THREE PERSONS EMPLOYED AT ANY ONE PEAK PERIOD. 9 EMPLOYEES                                        |                     |                       |  |
| V.4.A.1.E. FOR OFFICE BUILDINGS, ONE PARKING SPACE FOR EVERY SIX HUNDRED SQUARE FEET OF RENTABLE SPACE |                                                                                                                                                                                               |                     |                       |  |
|                                                                                                        | REQUIRED 3 SPACES                                                                                                                                                                             | PROPOSED 7 SPACES   |                       |  |
| (COMMERCIAL) 1SP/3 EMPLOYEES x 9 EMPLOYEES                                                             |                                                                                                                                                                                               |                     |                       |  |
| OFFICE 1SP/600 SF * (5000 SF PROPOSED)                                                                 | 9 SPACES                                                                                                                                                                                      | 10 SPACES           |                       |  |
| TOTAL                                                                                                  | 11 SPACES                                                                                                                                                                                     | 21 SPACES           |                       |  |

FOR REGISTRY USE ONLY



### ZONING VARIANCE REQUEST

- SECTION N.2.D.4 (FRONT YARDS) - BUILDINGS, STRUCTURES AND PAVED AREAS OTHER THAN ACCESS WAYS SHALL BE LOCATED 100 FT FROM THE FRONT LOT LINE. PARKING PROPOSED 50 FT AND BUILDING PROPOSED 50 FT FROM FRONT LOT LINE.
- SECTION N.2.D.5 (SIDE YARDS) - BUILDINGS, STRUCTURES AND PAVED AREAS OTHER THAN ACCESS WAYS SHALL BE LOCATED 40 FT FROM THE FRONT LOT LINE. PARKING AND RETAINING WALL PROPOSED 10 FT FROM SIDE YARD LINE.

### SITE PLAN APPROVAL REQUEST

SECTION V.7.B - NO STRUCTURE SHALL HEREAFTER BE CONSTRUCTED, ERECTED, RELOCATED, OR EXTERNALLY ENLARGED AND NO USE SHALL BE ESTABLISHED, ADDED, CHANGED, OR EXPANDED IN ANY DISTRICT EXCEPT IN CONFORMANCE WITH A SITE PLAN REVIEW, AND CONDITIONS THEREON, APPROVED BY THE PLANNING BOARD.

### WAIVER REQUEST

- SECTION VI 4.15 DEVELOPMENT IMPACT STATEMENT  
SECTION IV 4.22 TRAFFIC IMPACT STUDY  
SECTION V 5.4 PARKING AND LOADING  
SECTION V.5.7.1 ACCESS CONNECTIONS  
SECTION V.5.1.6 50 FT BUFFER TO RESIDENTIAL PROPERTIES
- REQUIRED FOR COMMERCIAL PROJECTS OF 5,000 S.F. OR MORE.
  - PREPARED BY REGISTERED PROFESSIONAL TRAFFIC ENGINEER
  - VERTICAL GRANITE CURBING AT ACCESS DRIVE RADI
  - WAIVER FOR CURBING AT THE EDGE OF ALL PAVED SURFACES
  - ACCESS CONNECTION SPACING TABLE (FROM 350' TO 222').
  - 50 FT LANDSCAPE BUFFER TO BE PROVIDED TO ALL RESIDENTIAL ABUTTING PROPERTIES (ZBL REQUIRES 40 FT)

### PEMBROKE PLANNING BOARD

THIS SITE PLAN DOES NOT NECESSARILY INDICATE COMPLIANCE WITH THE PEMBROKE ZONING BYLAW

DATE APPROVED: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
DATE SIGNED: \_\_\_\_\_

### PEMBROKE TOWN CLERK

I, TOWN CLERK OF THE TOWN OF PEMBROKE, MA HEREBY CERTIFY THAT THE NOTICE OF APPROVAL OF THIS PLAN BY THE PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THIS OFFICE AND NO APPEAL WAS RECEIVED DURING THE NEXT TWENTY DAYS AFTER RECEIPT AND RECORDING OF SAID NOTICE.

DATE: \_\_\_\_\_  
TOWN CLERK, TOWN OF PEMBROKE:

### SHEET INDEX

|          |                                      |
|----------|--------------------------------------|
| SHEET 1  | ZONING                               |
| SHEET 2  | EXISTING CONDITIONS                  |
| SHEET 3  | GRADING                              |
| SHEET 4  | SEPTIC                               |
| SHEET 5  | UTILITIES & DRAINAGE                 |
| SHEET 6  | LANDSCAPE, LIGHTING, & SITE DISTANCE |
| SHEET 7  | DETAILS                              |
| SHEET 8  | DETAILS                              |
| SHEET 9  | DETAILS                              |
| SHEET 10 | EROSION CONTROL PLAN                 |
| SHEET 11 | DETAILS                              |

| REVISIONS  |                                         |
|------------|-----------------------------------------|
| 2021-05-28 | PLANNING BOARD AND PEER REVIEW COMMENTS |
| 2021-06-10 | PEER REVIEW COMMENTS                    |
| 2021-06-10 | DEP REVIEW COMMENTS                     |
| 2021-06-17 | DEP REVIEW COMMENTS                     |

## SITE PLAN WILDLAND TIMBER

#715 WASHINGTON STREET  
(ASSESSORS MAP F9 LOT 24)

PEMBROKE, MASSACHUSETTS

PREPARED FOR:  
GEORGE THIBEAULT  
599 SUMMER STREET  
MARSHFIELD, MA 02050

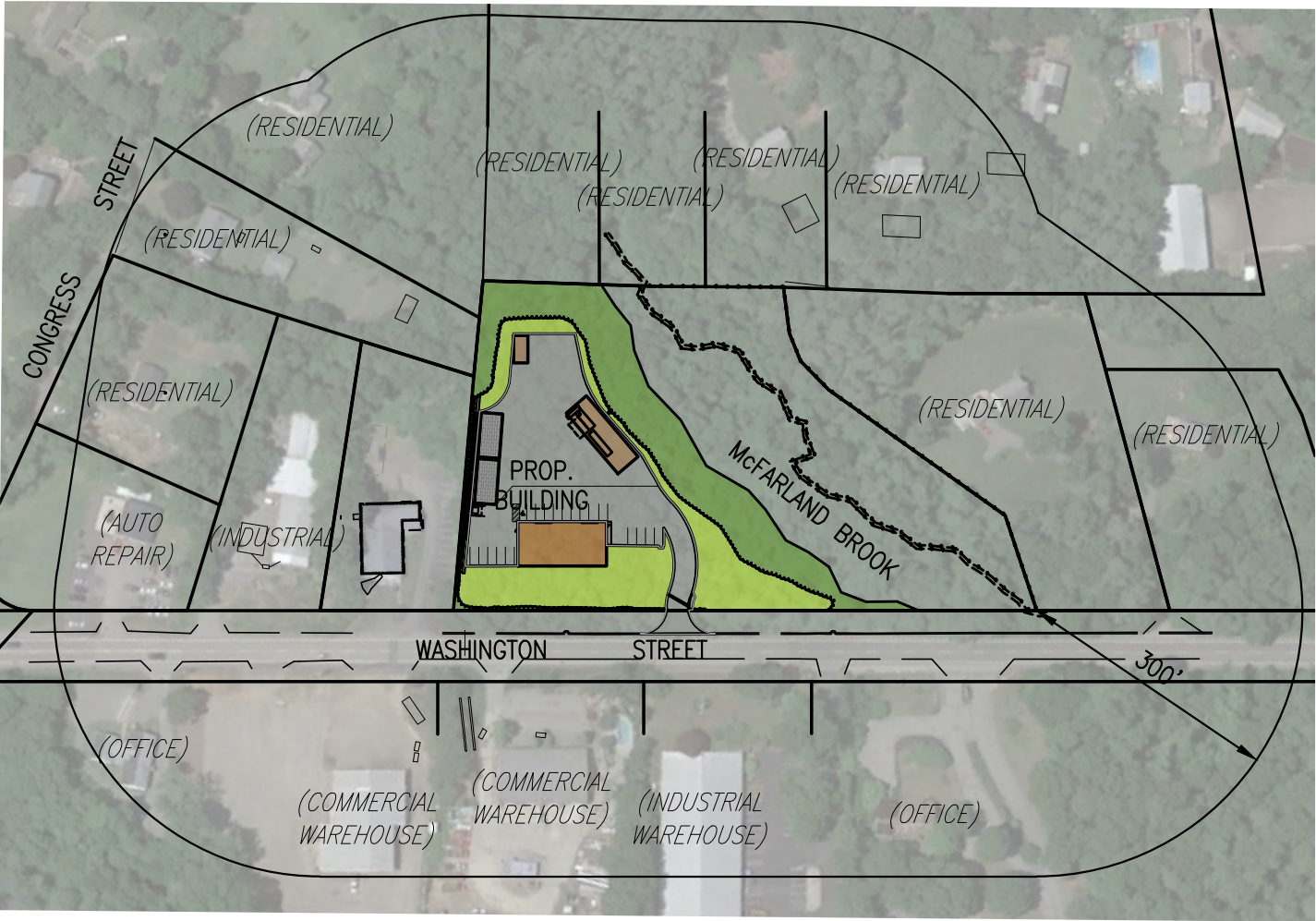
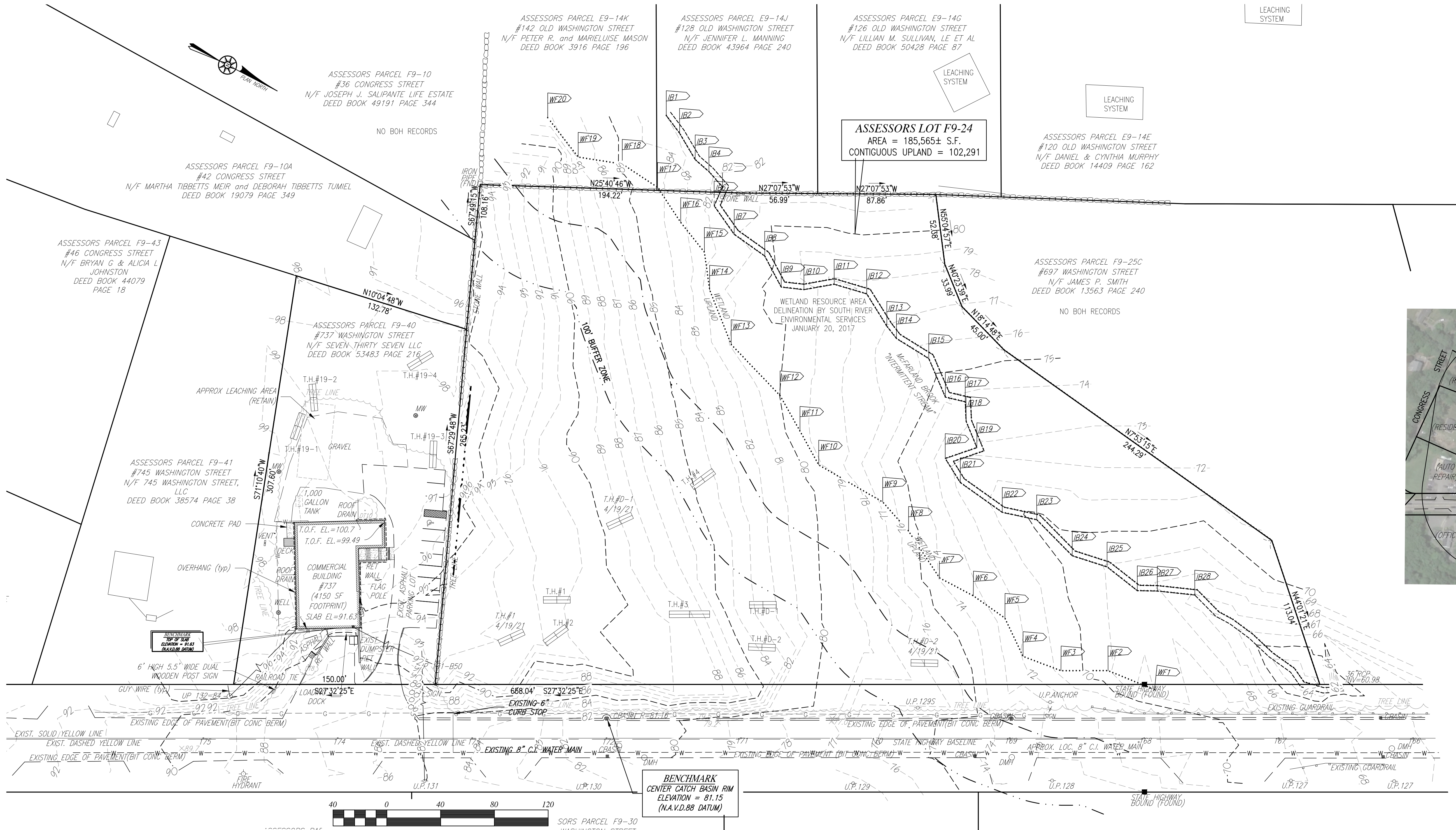
JANUARY 11, 2021  
SCALE: 1"=40'  
JOB No. 20-365

GRADY CONSULTING, L.L.C.

Civil Engineers and Land Surveyors  
71 Evergreen Street, Suite 1, Kingston, MA 02364  
Phone (781) 585-2300 Fax (781) 585-2378



Scale 1" = 40'



VICINITY MAP WITHIN 300 FT  
SCALE: 1"=200'

| T.H.#D-1<br>EL. 83.10                                                                                                                         | T.H.#D-2<br>EL. 84.25                                                                                                                        | T.H.#1<br>EL. 91.90                                                                                                                                  | T.H.#2<br>EL. 92.20                                                                                                                                  | T.H.#3<br>EL. 88.50                                                                                                                                   | T.H.#4<br>EL. 85.00                                                                                                                                  | T.H.#19-1<br>EL. 99.10                                                                                      | T.H.#19-2<br>EL. 98.90                                                                            | T.H.#19-3<br>EL. 97.50                                                                            | T.H.#19-4<br>EL. 98.20                                                            | T.H.#D-1<br>4/19/21<br>EL. 89.05                                                                                         | T.H.#D-2<br>4/19/21<br>EL. 77.00                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 0'-8" A LOAM<br>8'-30" B<br>SANDY LOAM<br>30'-84" C1 GRAVELLY SANDY LOAM<br>(REMOVE)<br>84'-120" C2 MEDIUM SAND BOULDERS<br>D=10'-0" NO WATER | 0'-8" A LOAM<br>8'-28" B<br>SANDY LOAM<br>28'-60" C1 GRAVELLY SANDY LOAM<br>(REMOVE)<br>60'-108" C2 MEDIUM SAND BOULDERS<br>D=9'-0" NO WATER | 0'-6" A LOAM<br>6'-22" B<br>SANDY LOAM<br>22'-48" C1 GRAVELLY SAND<br>48'-96" C2 GRAVELLY SANDY LOAM<br>96'-152" C3 MEDIUM SAND<br>D=12'-8" NO WATER | 0'-6" A LOAM<br>6'-22" B<br>SANDY LOAM<br>22'-48" C1 GRAVELLY SAND<br>48'-96" C2 GRAVELLY SANDY LOAM<br>96'-180" C3 MEDIUM SAND<br>D=15'-0" NO WATER | 0'-6" A LOAM<br>6'-18" B<br>SANDY LOAM<br>18'-60" C1 GRAVELLY SAND<br>60'-108" C2 GRAVELLY SANDY LOAM<br>108'-180" C3 MEDIUM SAND<br>D=9'-0" NO WATER | 0'-8" A LOAM<br>8'-24" B<br>SANDY LOAM<br>24'-60" C1 GRAVELLY SAND<br>60'-90" C2 GRAVELLY SANDY LOAM<br>108'-180" C3 MEDIUM SAND<br>D=9'-0" NO WATER | 0'-32" FILL<br>32'-36" A LOAM<br>36'-40" B LOAMY SAND<br>40'-132" C1 LOAMY SAND<br>D=11'-0" WATER @ 10'-10" | 0'-24" FILL<br>24'-30" A LOAM<br>30'-84" C1 MED SAND<br>84'-120" C2 MED SAND<br>D=10'-0" NO WATER | 0'-24" FILL<br>24'-30" A LOAM<br>30'-40" B LOAMY SAND<br>40'-72" C LOAMY SAND<br>D=6'-0" NO WATER | 0'-6" A LOAM<br>6'-30" B LOAMY SAND<br>30'-120" C LOAMY SAND<br>D=10'-0" NO WATER | 0'-4" A LOAM<br>6'-32" B SANDY LOAM<br>32'-88" SANDY LOAM (REMOVE)<br>88'-150" GRAVELLY MEDIUM SAND<br>D=12'-6" NO WATER | 0'-6" A LOAM<br>6'-28" B SANDY LOAM<br>28'-90" SANDY LOAM (REMOVE)<br>90'-108" MEDIUM TO COARSE SAND<br>D=9'-0" MOTTLING @ 3'-6" (EL=73.50) |

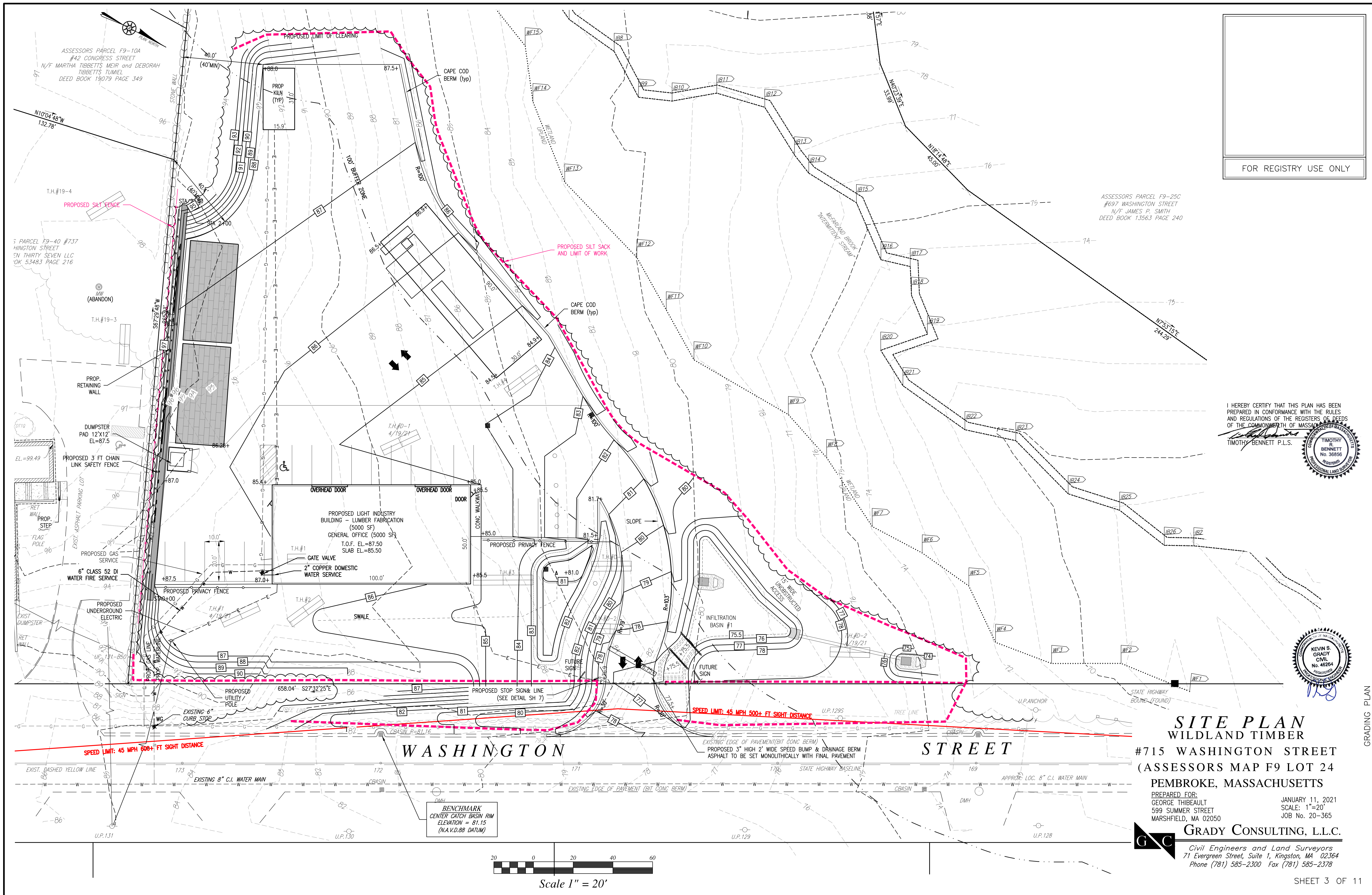
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

**SITE PLAN**  
**WILDLAND TIMBER**  
**#715 WASHINGTON STREET**  
**(ASSESSORS MAP F9 LOT 24)**  
**PEMBROKE, MASSACHUSETTS**

PREPARED FOR:  
GEORGE THIBEAULT  
599 SUMMER STREET  
MARSHFIELD, MA 02050

JANUARY 11, 2021  
SCALE: 1"=40'  
JOB No. 20-365

**GRADY CONSULTING, L.L.C.**  
Civil Engineers and Land Surveyors  
71 Evergreen Street, Suite 1, Kingston, MA 02364  
Phone (781) 585-2300 Fax (781) 585-2378



FOR REGISTRY USE ONLY

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

TIMOTHY BENNETT P.L.S.

KEVIN S. GRADY  
CIVIL  
No. 46264  
REGISTERED PROFESSIONAL ENGINEER

**SITE PLAN**  
**WILDLAND TIMBER**  
**#715 WASHINGTON STREET**  
**(ASSESSORS MAP F9 LOT 24**  
**PEMBROKE, MASSACHUSETTS**  
PREPARED FOR:  
GEORGE THIBEAULT  
599 SUMMER STREET  
MARSHFIELD, MA 02050  
JANUARY 11, 2021  
SCALE: 1"=20'  
JOB No. 20-365  
**GRADY CONSULTING, L.L.C.**  
Civil Engineers and Land Surveyors  
71 Evergreen Street, Suite 1, Kingston, MA 02364  
Phone (781) 585-2300 Fax (781) 585-2378

GRADING PLAN

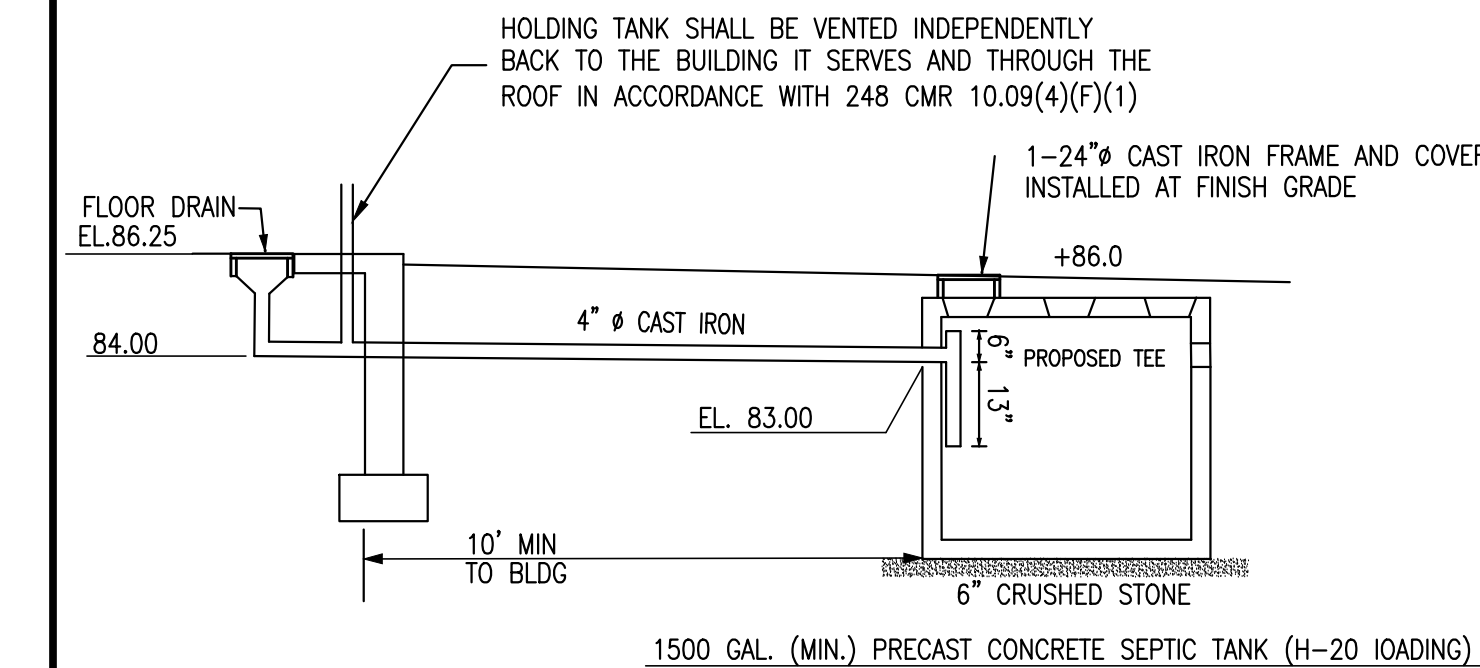
| T.H.#1<br>E.L. 91.90                 |                                       | T.H.#2<br>E.L. 92.20                 |                                       | T.H.#3<br>E.L. 88.50                  |                        | T.H.#4<br>E.L. 85.00                 |                               |
|--------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|------------------------|--------------------------------------|-------------------------------|
| 0"-6"<br>A<br>LOAM                   | 91.40                                 | 0"-6"<br>A<br>LOAM                   | 91.70                                 | 0"-6"<br>A<br>LOAM                    | 88.00                  | 0"-6"<br>A<br>LOAM                   | 84.33                         |
| 6"-22"<br>B<br>SANDY LOAM            | 90.07                                 | 6"-22"<br>B<br>SANDY LOAM            | 90.37                                 | 6"-18"<br>B<br>SANDY LOAM             | 87.00                  | 8"-24"<br>B<br>SANDY LOAM            | 83.00                         |
| 22"-48"<br>C1<br>GRAVELLY SAND       | 87.90                                 | 22"-48"<br>C1<br>GRAVELLY SAND       | 88.20                                 | 18"-60"<br>C1<br>GRAVELLY SAND        | 83.50                  | 24"-60"<br>C1<br>GRAVELLY SAND       | 80.00                         |
| 48"-96"<br>C2<br>GRAVELLY SANDY LOAM | 83.90                                 | 48"-96"<br>C2<br>GRAVELLY SANDY LOAM | 84.20                                 | 60"-108"<br>C2<br>GRAVELLY SANDY LOAM | 79.50                  | 60"-90"<br>C2<br>GRAVELLY SANDY LOAM | 77.50                         |
|                                      | PERC<br>96"-152"<br>C3<br>MEDIUM SAND |                                      | PERC<br>96"-180"<br>C3<br>MEDIUM SAND |                                       | LARGE ROCKS<br>D=9'-0" |                                      | 90"-108"<br>C3<br>MEDIUM SAND |
|                                      | 79.23                                 |                                      | 77.20                                 |                                       | 79.50                  |                                      | 76.00                         |
| D=12'-8"                             |                                       | D=15'-0"                             |                                       |                                       |                        | D=9'-0"                              |                               |
| NO WATER                             |                                       | NO WATER                             |                                       | NO WATER                              |                        | NO WATER                             |                               |



NOTES:  
CONCRETE TANK: T-2000 H-20  
CONCRETE: 5,000 PSI AFTER 28 DAYS  
REINFORCEMENT PER ASTM C1227-93  
DISTRIBUTED THROUGH PEMBROKE CONCRETE PRODUCTS INC.(781-826-6463)

PLASTIC TANK: ROTH MODEL NO. RMT-1060  
DISTRIBUTED THROUGH CAPE COD WINWATER WORKS(508-862-0166)

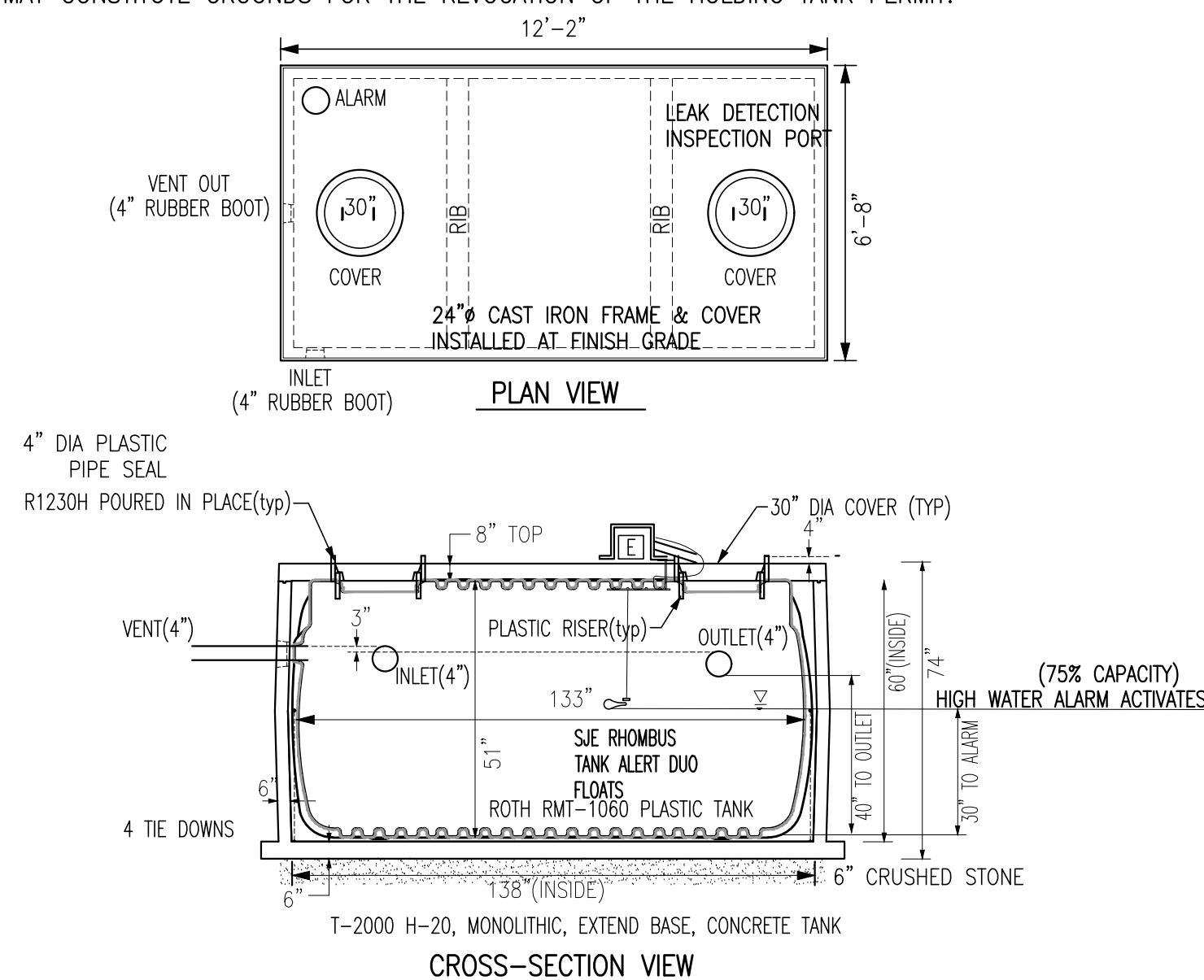
INSTALLER TO COORDINATE WITH PEMBROKE CONCRETE PRODUCTS INC. & CAPE COD WINWATER WORKS  
FOR CONSTRUCTION OF THE HOLDING TANK



SPECIAL INSTRUCTIONS & NOTES FOR HOLDING TANK INSTALLATION:

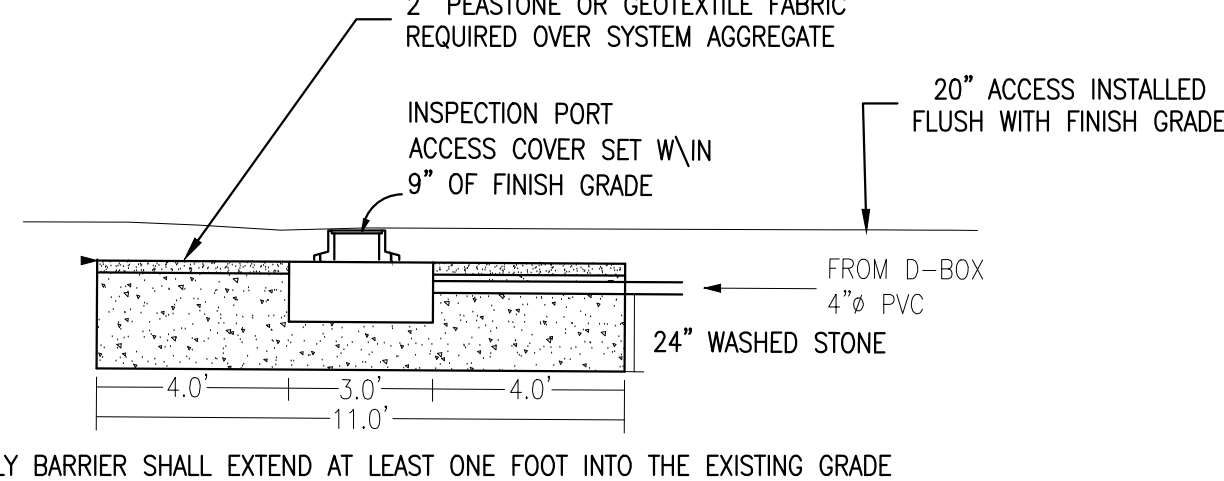
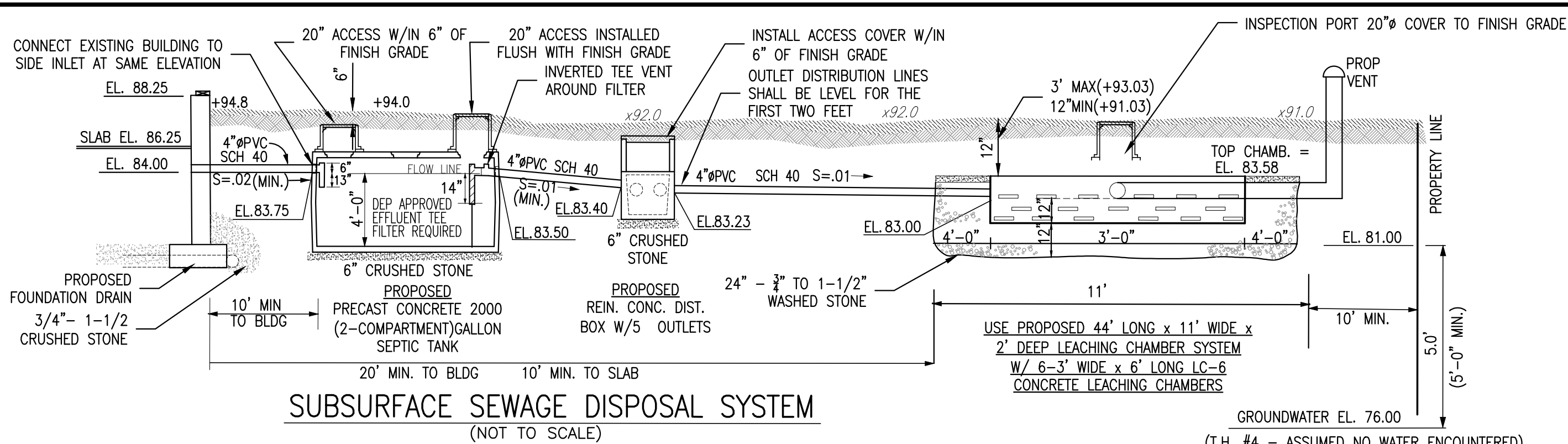
1. THE TANK SHALL BE INSTALLED ONTO A LEVEL (AND COMPACTED) BED OF SAND.
2. HOLDING TANK TO BE INSPECTED EVERY 3 MONTHS TO ENSURE PROPER OPERATION AND MAINTENANCE 310 CMR 15.260 (I).
3. THE HOLDING TANK WILL BE WATERPROOF AND WATERTIGHT 310 CMR 15.260(J).
4. VENTING SHALL BE PROVIDED THROUGH THE ROOF OF THE BUILDING IN ACCORDANCE WITH THE MASSACHUSETTS PLUMBING CODE.
5. INSTALL RHOMBUS TANK ALERT 2 HIGHWATER ALARM WITH SLIDE RAIL FLOAT.
6. A PLAQUE OR SIGN WITH "NON-HAZARDOUS INDUSTRIAL WASTEWATER" SHALL BE INSTALLED NEAR TANK

FAILURE BY THE APPLICANT TO PROPERLY MAINTAIN THE HOLDING TANK  
MAY CONSTITUTE GROUNDS FOR THE REVOCATION OF THE HOLDING TANK PERMIT.



## HOLDING TANK DETAIL

(MONOLITHIC TANK WITH EXTENDED BASE,  
NOT TO SCALE)



**SRP**  
SCOUTLINE PRECAST

**If You Can Draw It - We Can Build It**  
 1-800-888-2000 • 761-891-1171 • Fax 761-891-1172  
 Email: Sales@SRP-Precast.com • Website: SRP.com

**Isolating Channel**  
 Used With King Ducts See C-6.

**Dimensions:**

1. Only with 1002121-0004 duct.
2. Available in 10' (3048mm) lengths.
3. Small end-normant per ASTM A115.1 (4x6x10)

34 1/2" 12" 65"

34 1/2" 12" 65"

34 1/2" 12" 65"

**Approved**  
American  
Concrete  
Institute  
ACI  
Approved  
Product  
Pipes

**The Sclerite Companies**

**NPCA**  
NATIONAL PRECAST  
CONCRETE ASSOCIATION

1. DESIGN DAILY FLOW:

|                     |                                         |                  |
|---------------------|-----------------------------------------|------------------|
| OFFICE:             | 5,000 S.F. x 75 GPD/1000 S.F.           | = 375 GPD        |
| WAREHOUSE:          | 9 PROJECTED EMPLOYEES x 15 GPD/EMPLOYEE | = <u>135 GPD</u> |
| (WITHOUT CAFETERIA) | TOTAL                                   | = 510 GPD        |

2. SEPTIC TANK:  $510 \text{ GPD} \times 2 = 1020 \text{ GAL.}$       USE: 1500 GAL (MIN)  
2 COMPARTMENT TANK (SEE DETAIL)

3. LEACHING CHAMBERS: P.R. <2 MIN/IN CLASS I

TOTAL:1-44' LONG X 11' WIDE X 2' DEEP LEACHING CHAMBER SYSTEM

TITLE 5

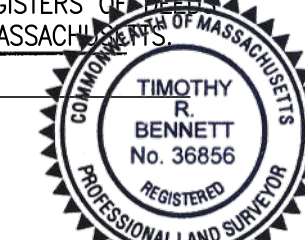
PROPOSED AREA:  $2(2 \times 11) + 2(2 \times 44) + (11 \times 44) = 704$  SF  
CAPACITY:  $704 \text{ S.F.} \times 0.74 \text{ GPD/S.F.} = 520 > 510 \text{ GPD(D.D.F.)}$

1. PROPERTY LINE DATA FROM THE FOLLOWING PLANS RECORDED AT PLYMOUTH COUNTY REGISTRY OF DEEDS: PLAN NO. 282 OF 1956, PLAN NO. 561 OF 1973, PLAN NO. 663 OF 1973, PLAN NO. 226 OF 1994, PLAN NO. 308 OF 1995, AND MASSACHUSETTS STATE HIGHWAY LAYOUT NO. 2771.
2. TOPOGRAPHIC SURVEY BY GRADY CONSULTING JANUARY 2017 & DECEMBER 2020.
3. SOILS TESTING BY KEVIN GRADY, GRADY CONSULTING WITNESSED BY HEALTH AGENT FRED LEARY AUGUST 14, 2007. ADDITIONAL TESTING BY KEVIN GRADY, GRADY CONSULTING WITNESSED BY HEALTH AGENT LISA CULLITY AUGUST 9, 2019.
4. CALL DIG SAFE 1-888-344-7233 AT LEAST 4 DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. NOTIFY TOWN AND GRADY CONSULTING PRIOR TO BACKFILLING OF SYSTEM.
6. NO KNOWN WELLS EXIST WITHIN 200' OF THE PROPOSED SYSTEM
7. THE SITE IS NOT LOCATED IN AN AQUIFER PROTECTION ZONE II.
8. ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED (310 CMR 15.221(12))
9. NO STREAMS, SURFACE & SUBSURFACE DRAINS AND WETLANDS EXIST WITHIN 100 FT OF THE PROPOSED SYSTEM, EXCEPT AS SHOWN.
10. THE SITE IS NOT LOCATED IN A FLOOD PLAIN DISTRICT.
11. NO KNOWN EASEMENTS ARE IN THE AREA OF THE PROPOSED SYSTEM.
12. EXCAVATE ALL MATERIAL (A/B, C1, C2 LAYERS) TO FINE SAND C3 LAYER (96"±), 5' AROUND SYSTEM. REPLACE WITH CLEAN COARSE SAND IN ACCORDANCE WITH 310 CMR 15.255 (3). EXCAVATION TO BE INSPECTED BY GRADY CONSULTING L.L.C. AND TOWN PRIOR TO SOIL REPLACEMENT

APPROXIMATE PERC SAND VOLUME = 484 SF X (84.2 - 83.5) / 27 + 20% = 20± C.Y.

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

*Timothy Bennett*  
TIMOTHY BENNETT P.L.S.



#715 WASHINGTON STREET  
(ASSESSORS MAP F9 LOT 24)

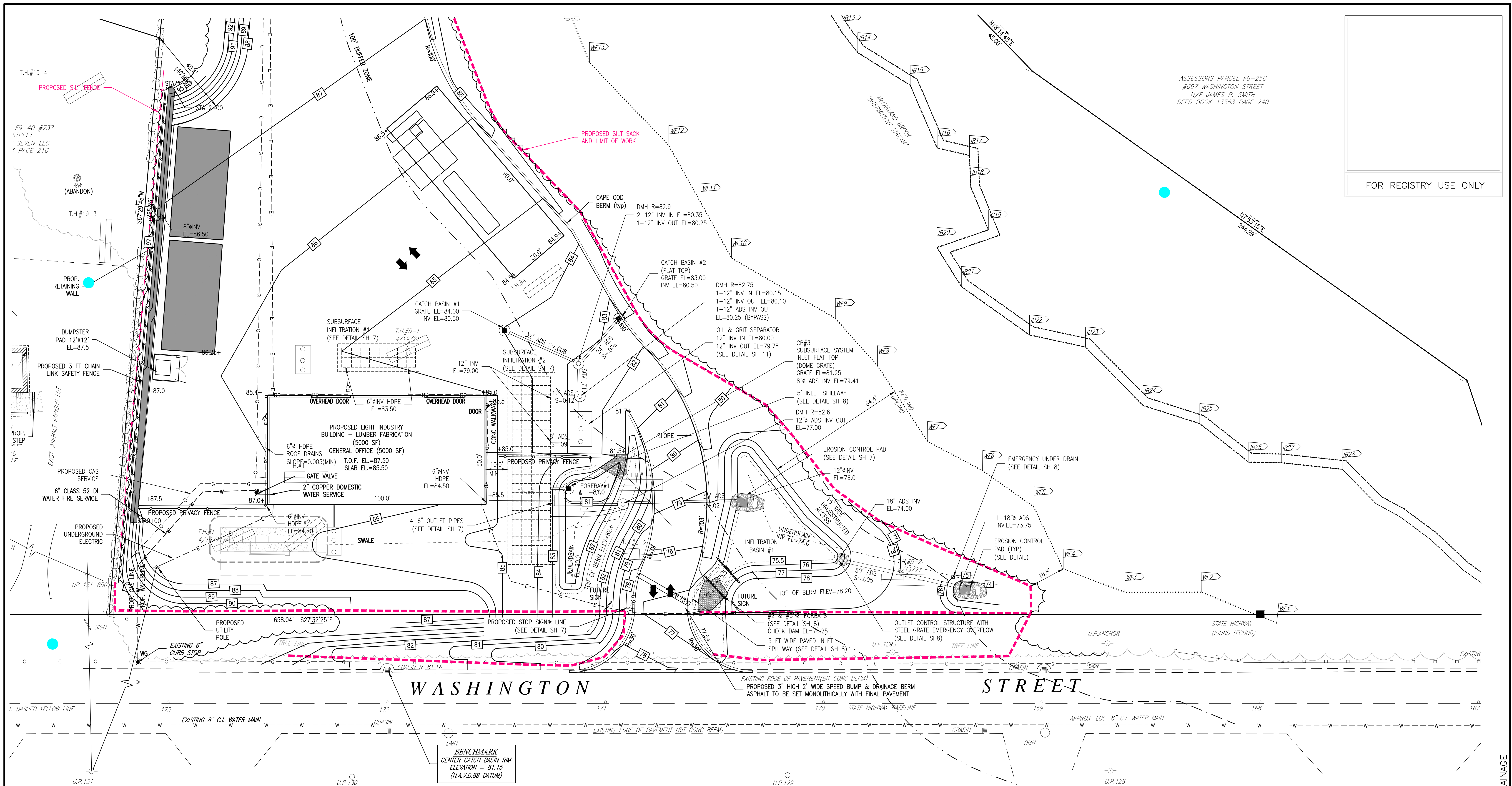
PEMBROKE, MASSACHUSETTS

PREPARED FOR:  
GEORGE THIBEAULT  
599 SUMMER STREET  
MARSHFIELD, MA 02050

JANUARY 11, 202  
SCALE: 1"=20'  
JOB No. 20-365

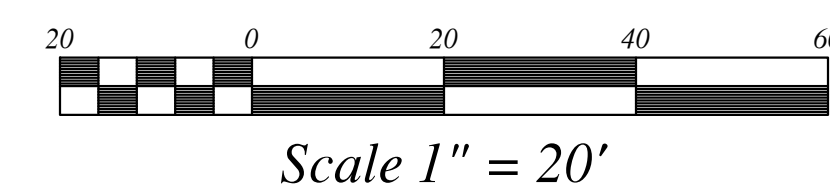
GRADY CONSULTING, L.L.C.

Civil Engineers and Land Surveyors  
71 Evergreen Street, Suite 1, Kingston, MA 02361  
Phone (781) 585-2300 Fax (781) 585-2378



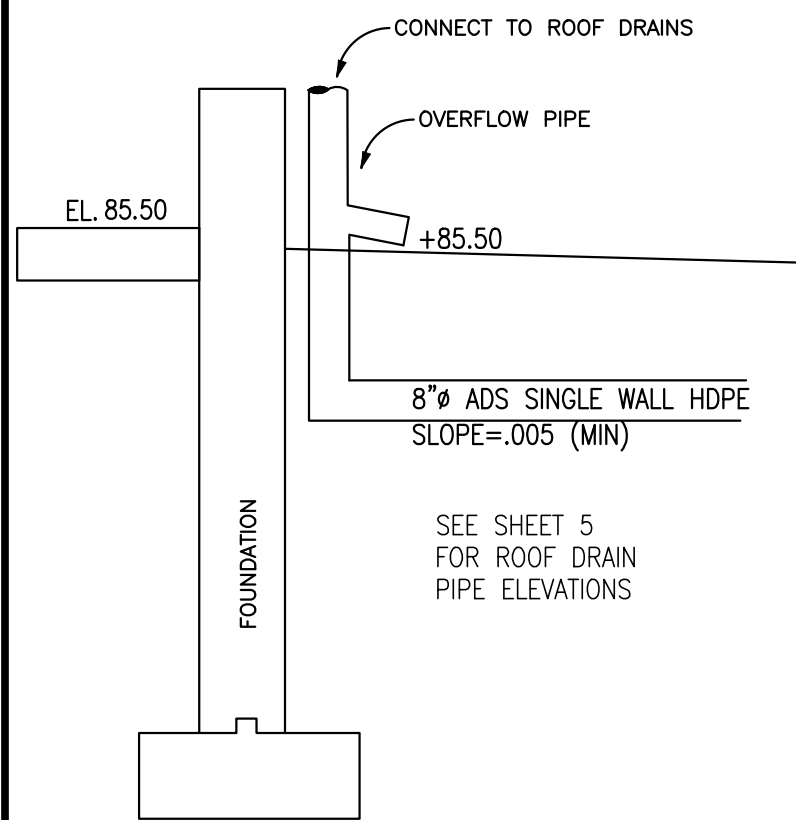
**SITE PLAN**  
**WILDLAND TIMBER**  
**#715 WASHINGTON STREET**  
**(ASSESSORS MAP F9 LOT 24**  
**PEMBROKE, MASSACHUSETTS**  
PREPARED FOR:  
GEORGE THIBEAULT  
599 SUMMER STREET  
MARSHFIELD, MA 02050  
JANUARY 11, 2021  
SCALE: 1"=20'  
JOB No. 20-365  
**GRADY CONSULTING, L.L.C.**  
*Civil Engineers and Land Surveyors*  
71 Evergreen Street, Suite 1, Kingston, MA 02364  
Phone (781) 585-2300 Fax (781) 585-2378

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERED PROFESSIONAL LAND SURVEYORS OF THE COMMONWEALTH OF MASSACHUSETTS.  
TIMOTHY BENNETT P.L.S.

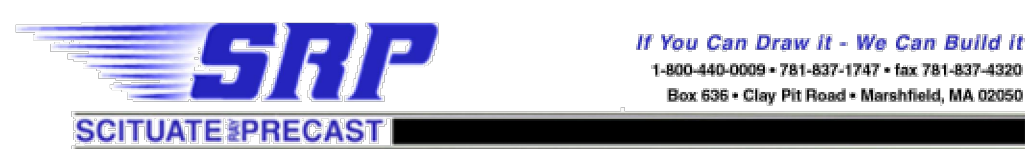


UTILITIES & DRAINAGE



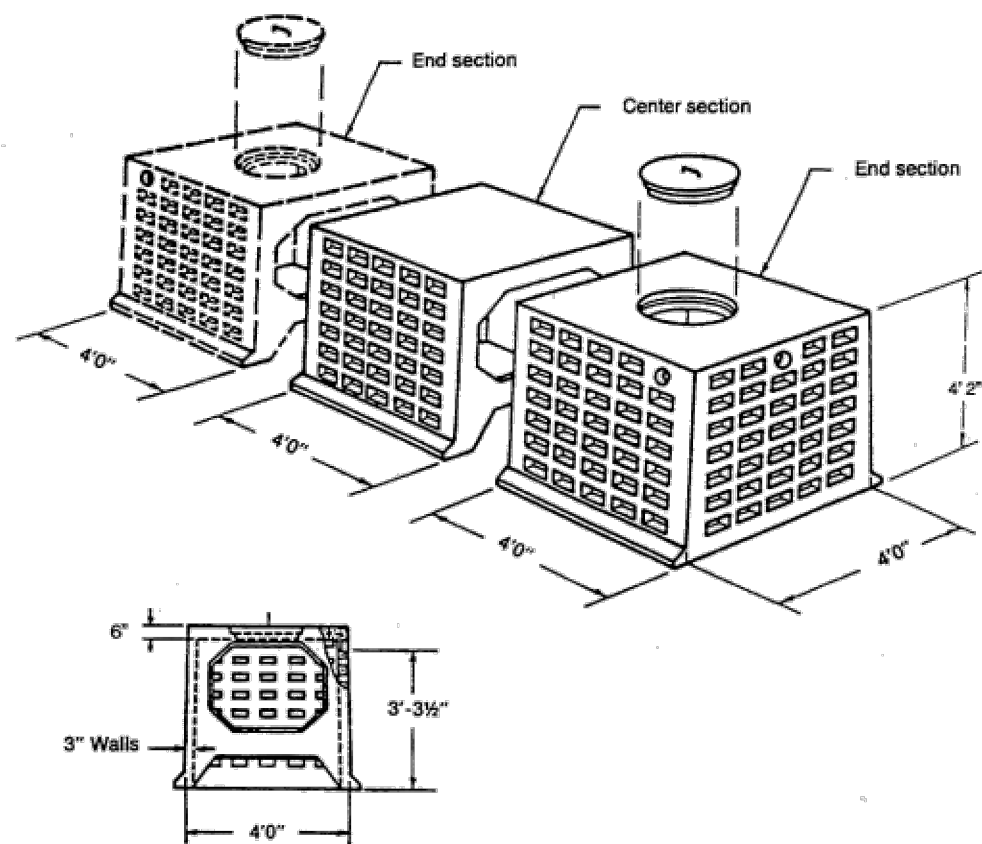


ROOF DRAIN & DOWNSPOUT DETAIL  
(NOT TO SCALE)



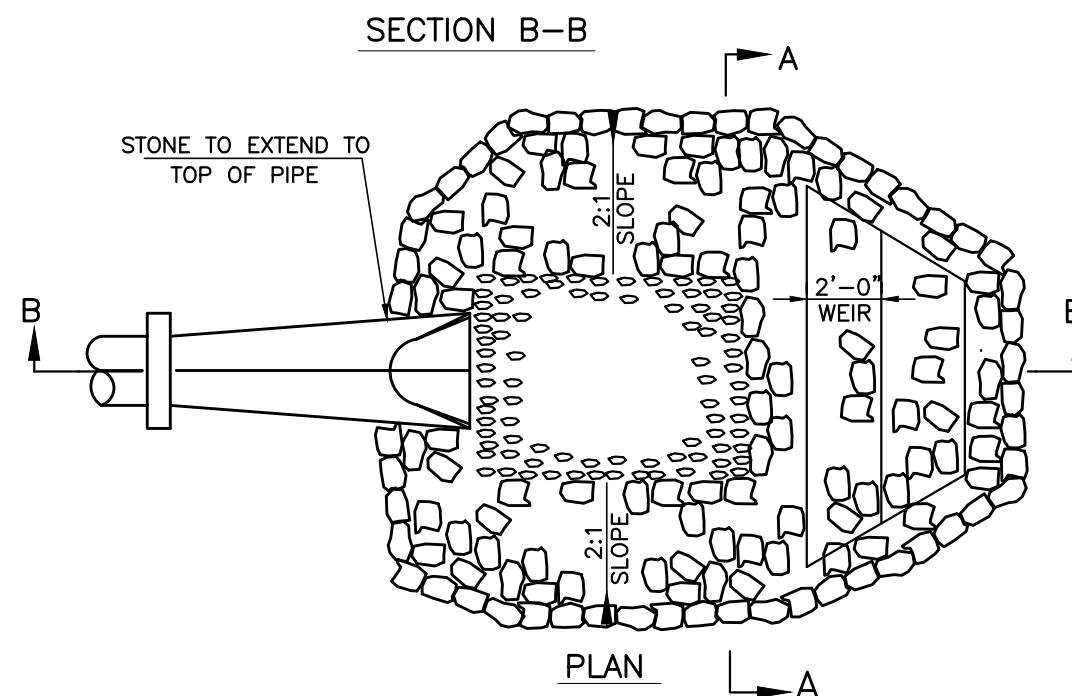
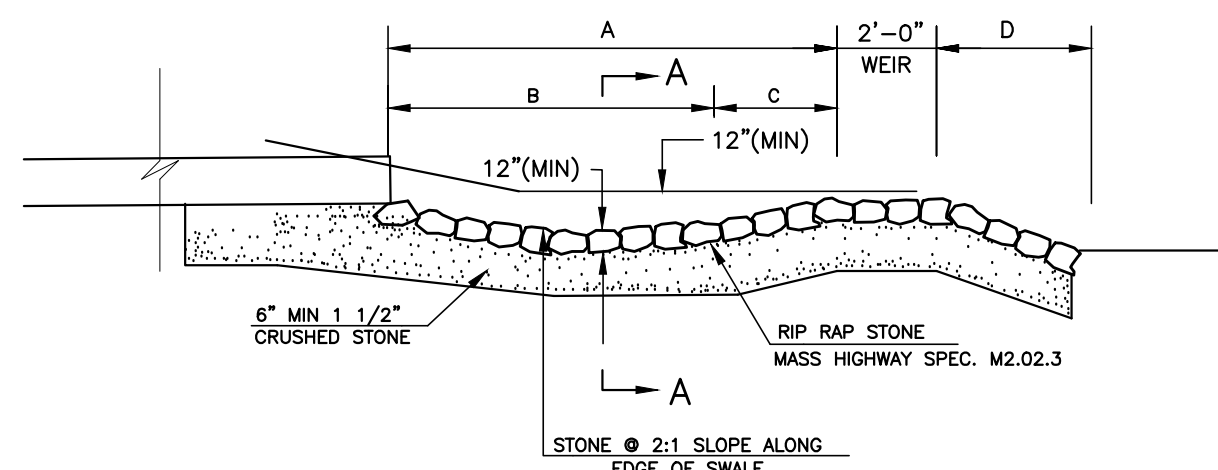
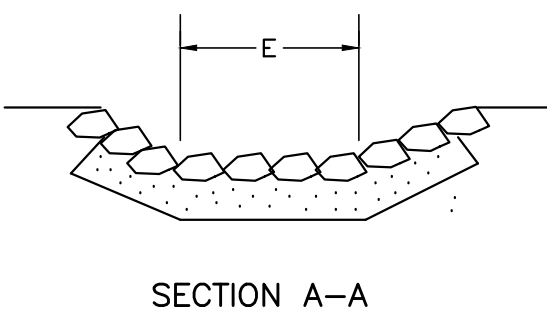
Leaching Chambers  
4FT x 4FT x 4FT Precast Galley

Design notes:  
1. Available in 4' sections. A combination of sections may be used to reach desired length.  
2. Concrete 4000 PSI, 28 days  
3. Available in with 20" or 24" straight opening or concrete cover  
4. Available in H-10 or H-20 covers



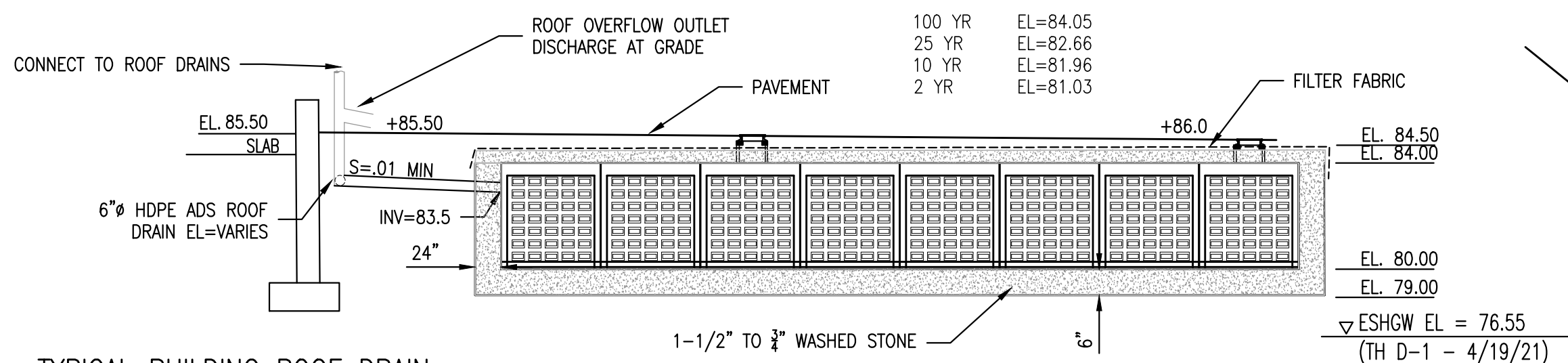
| PIPE DIA. | 10"   | 12"    | 18"    |
|-----------|-------|--------|--------|
| A         | 5'-0" | 10'-0" | 15'-0" |
| B         | 2'-6" | 7'-6"  | 11'-3" |
| C         | 2'-6" | 2'-6"  | 3'-9"  |
| D         | 3'-0" | 3'-0"  | 4'-6"  |
| E         | 3'-0" | 4'-0"  | 6'-0"  |

NOTES:  
1. STONE FOR EROSION CONTROL PADS SHALL COMPLY WITH MDPW MATERIAL SPEC. M. 2.02.3  
2. STONE BERM FOR SILT TRAP SHALL BE CONSTRUCTED AROUND SIDES OF EROSION CONTROL PADS  
NOTE: DIMENSIONS DESIGNATED S.B. REFER TO SEDIMENTATION BASIN  
DIMENSIONS DESIGNATED D.B. REFER TO DETENTION BASIN



DETAIL - SILT TRAP, EROSION CONTROL PAD FROM  
OUTLET CONTROL STRUCTURE BASIN #1  
(NOT TO SCALE)

REMOVE AND REPLACE A, B, C1 TO C2 MEDIUM SAND LAYER (EL=81.7±)  
SUBSURFACE INFILTRATION SYSTEM #1 (TH D-1 4/19/21)  
EXCAVATION TO BE INSPECTED BY GRADY CONSULTING L.L.C. PRIOR TO SOIL REPLACEMENT. SITE BORROW MAY BE ACCEPTABLE WITH SIEVE ANALYSIS MEETING TEXTURAL TRIANGLE PER 310 CMR 15.243 (SAND)



TYPICAL BUILDING ROOF DRAIN CONNECTION

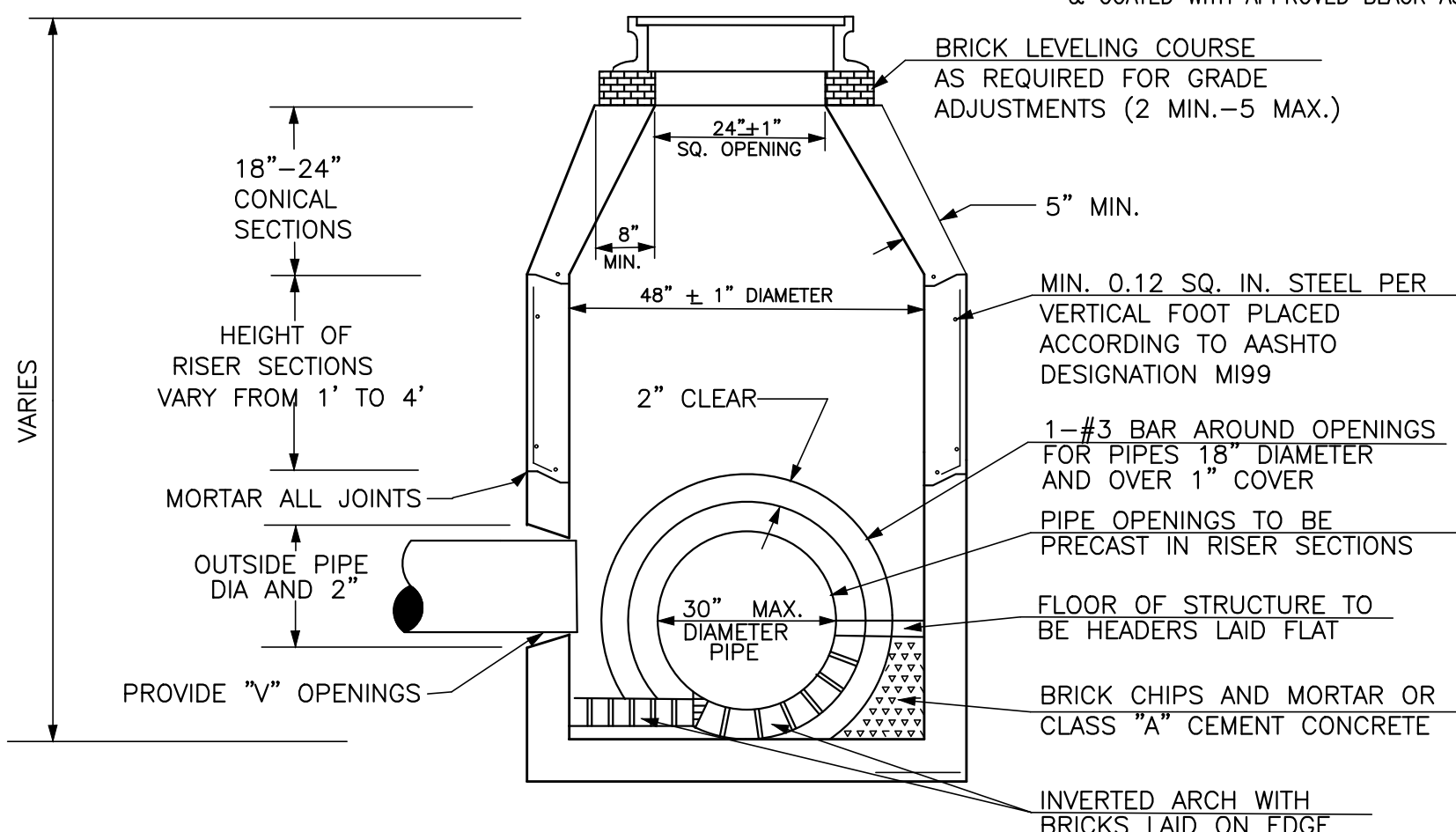
SUBSURFACE SYSTEM #1

CHAMBER MODEL = CONCRETE GALLEY 4X4X4 (CONCRETE GALLEY, UCPI 4X4X4 GALLEY OR EQUIVALENT)  
8 CHAMBERS/ROW X 4.00' LONG = 32.00' ROW LENGTH +24.0" END STONE X 2 = 36.00' BASE LENGTH  
2 ROWS X 52.8" WIDE + 24.0" SIDE STONE X 2 = 12.80' BASE WIDTH  
12.0" BASE + 48.0" CHAMBER HEIGHT + 6.0" COVER = 5.50' FIELD HEIGHT  
16 CHAMBERS X 44.3 CF = 709.5 CF OF CHAMBER STORAGE  
16 CHAMBERS X 58.9 CF = 942.0 CF OF DISPLACEMENT  
2,534.4 CF FIELD - 942.0 CF CHAMBERS = 1,592.4 CF STONE X 40.0% VOIDS = 637.0 CF STONE STORAGE  
CHAMBER STORAGE + STONE STORAGE = 1,346.5 CF = 0.031 AF  
OVERALL STORAGE EFFICIENCY = 53.1%  
OVERALL SYSTEM SIZE = 36.00' X 12.80' X 5.50'

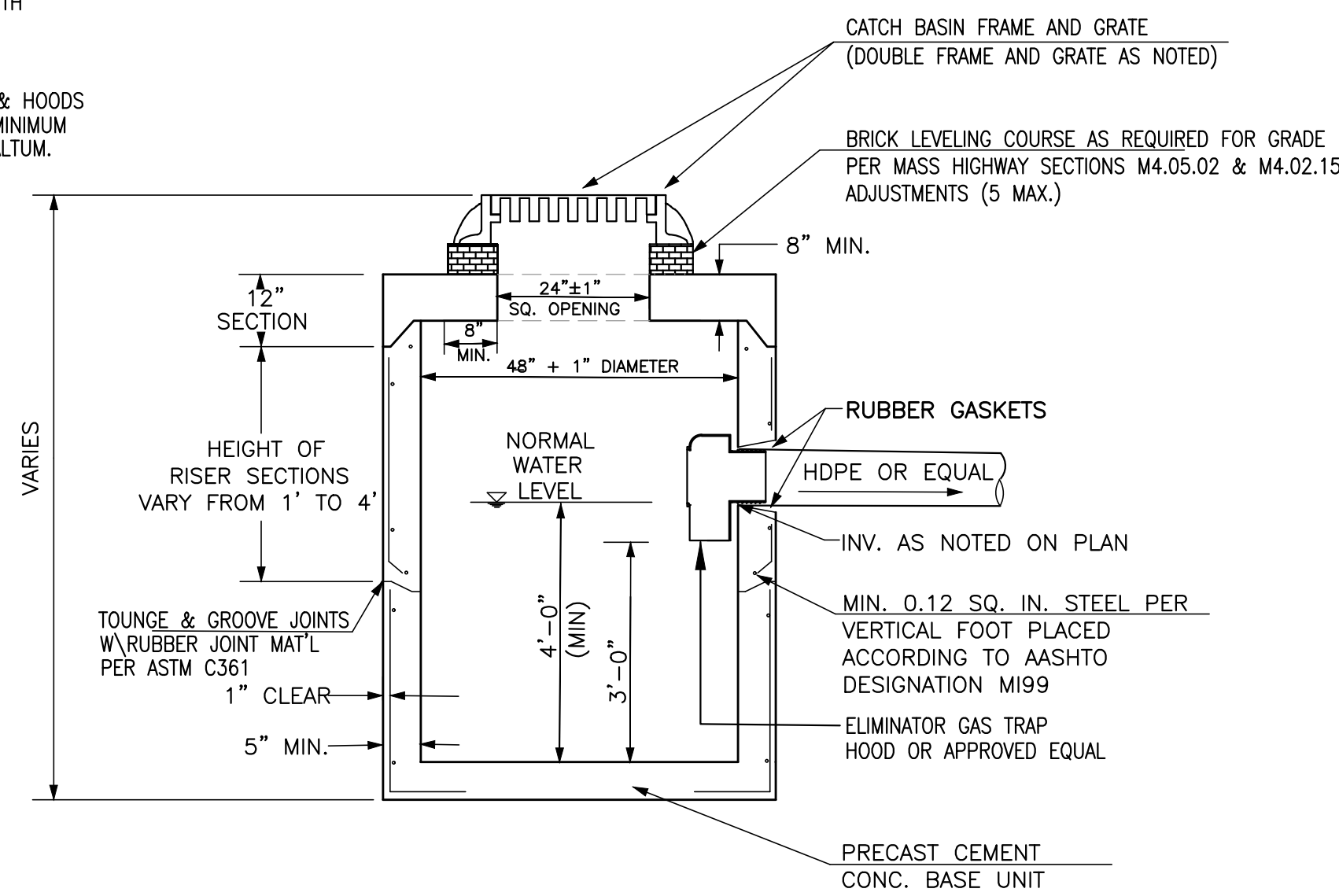
SUBSURFACE INFILTRATION SYSTEM #1  
(NOT TO SCALE)

NOTES:

1. PRECAST CONCRETE UNITS TO CONFORM TO THE MASS HIGHWAY SECTION M4.02.14
2. 4000 PSI MINIMUM COMPRESSIVE STRENGTH
3. PRECAST UNITS TO BE HS-20 LOADING
4. EXTERIOR SURFACES TO BE SEALED W/ COLD APPLIED BITUMINOUS SEALER
5. CASTINGS FOR FRAME, GRATES, COVERS & HOODS TO CONFORM TO ASTM A48, GRADE 30 MINIMUM & COATED WITH APPROVED BLACK ASPHALTUM.



PRECAST CONCRETE MANHOLE  
(NOT TO SCALE)



FLAT-TOP PRECAST GASOLINE TRAP CATCH BASIN  
(NOT TO SCALE)

GENERAL NOTES:

1. PROVIDE 24" x 24" OPENING AND EAST JORDAN FRAME AND GRATE FOR SINGLE GRATE CATCH BASIN (CB) OR APPROVED EQUAL.
2. CATCH BASIN HOOD WILL NOT BE INSTALLED.
3. SET FRAME IN FULL BED OF MORTAR. BRICKS MAY BE USED FOR GRADE ADJUSTMENT.
4. MORTAR ALL JOINTS.
5. PROVIDE "V" KNOCKOUTS FOR PIPES W/ 2" CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
6. REINFORCED STEEL CONFORMS TO LATEST ASTM SPEC. 0.12 SQ. IN./LINEAR FT. AND 0.12 SQ. IN. (BOTH WAYS) BASE BOTTOM.
7. CONCRETE COMPRESSIVE STRENGTH-4000 PSI MIN.
8. MANHOLE DESIGN SPECS CONFORM TO LATEST ASTM C-478 SPEC FOR "PRECAST CONCRETE MANHOLE SECTIONS"

BEEHIVE FRAMES AND GRATES



OMA801300020 22" x 6" frame and beehive grate

EJ BEEHIVE GRATE OR APPROVED EQUAL

BEEHIVE GRATE (CB#3)  
(NOT TO SCALE)

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

TIMOTHY BENNETT P.L.S.



Massachusetts Municipal Drainage Frames and Grates



Square hole grate

| Grate Type            | Product Number |
|-----------------------|----------------|
| Standard grate        | OMA552000074   |
| Square hole grate     | OMA552000075   |
| Cascade grate (left)  | OMA552000076   |
| Cascade grate (right) | OMA552000077   |
| ADA grate             | OMA552000078   |

Note: 2 grates required per frame

New England Municipal and Construction Castings

Massachusetts Municipal Manhole Frames and Covers

V-1600/V-1800 FRAMES AND COVERS



V-1600-4 assembly

Features  
Heavy duty  
Reversible frame (BF = V-1600, TF = V-1800)

Options  
Solid or vented covers  
Special lettered covers  
Custom logo covers  
Bolted assemblies  
Grates (see V-3600/V-3800)  
Hinged unit available in select sizes

V-1600/V-1800 Frame and Cover Options

| Catalog Number | A Cover Diameter | B Cover Thickness | C Clear Opening | D Frame Opening | E Flange Diameter | F Height |
|----------------|------------------|-------------------|-----------------|-----------------|-------------------|----------|
| V-1600-1       | 19 1/4           | 1 1/2             | 18 1/4          | 19 1/2          | 24                | 4        |
| V-1600-2       | 23 1/2           | 1 1/2             | 22              | 23 3/4          | 28 1/2            | 4        |
| V-1600-3       | 25 3/8           | 1 1/2             | 24              | 25 5/8          | 32 1/8            | 4        |
| V-1600-4       | 31 3/4           | 1 3/8             | 30              | 32 1/8          | 38                | 4        |
| V-1600-5       | 38               | 2                 | 36              | 38 1/4          | 46                | 6        |
| V-1600-6       | 50 1/4           | 2                 | 48              | 50 1/2          | 56 1/2            | 6        |
| V-1800-1       | 19 1/4           | 1 1/2             | 18 1/4          | 20 1/2          | 24                | 4        |
| V-1800-2       | 23 1/2           | 1 1/2             | 22              | 24 3/4          | 28 1/2            | 4        |
| V-1800-3       | 25 3/8           | 1 1/2             | 24              | 26 5/8          | 32 1/8            | 4        |
| V-1800-4       | 31 15/16         | 1 3/8             | 30              | 33 1/8          | 38                | 4        |
| V-1800-5       | 38               | 2                 | 36              | 40              | 46                | 6        |
| V-1800-6       | 50 1/4           | 2                 | 48              | 52              | 56 1/2            | 6        |

Note: all dimensions are in inches.

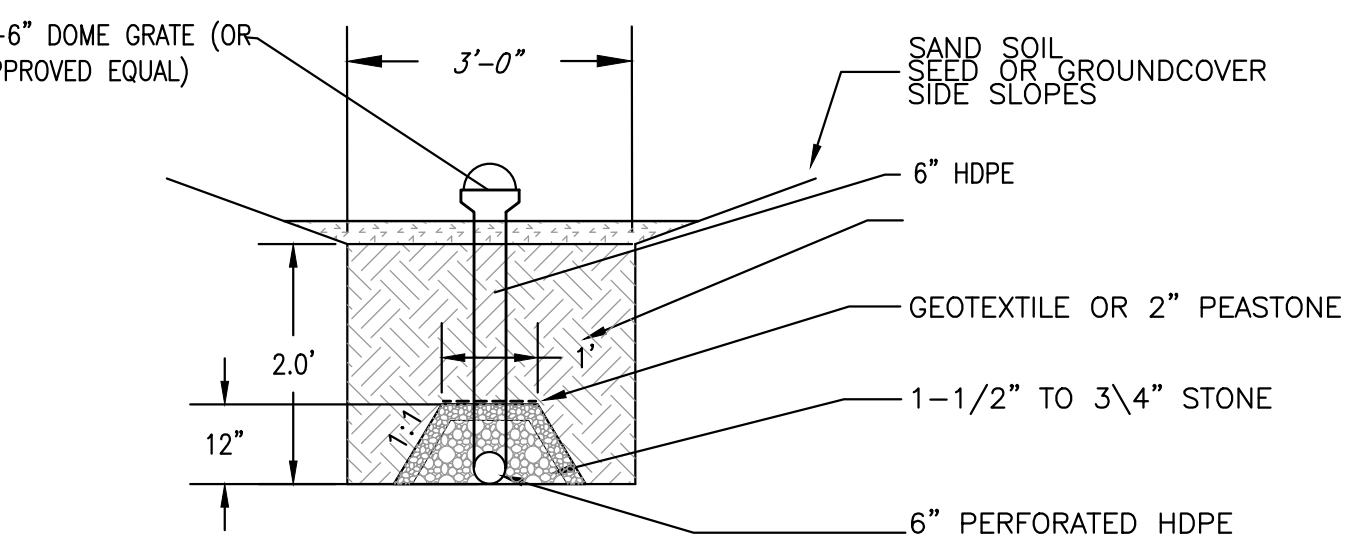
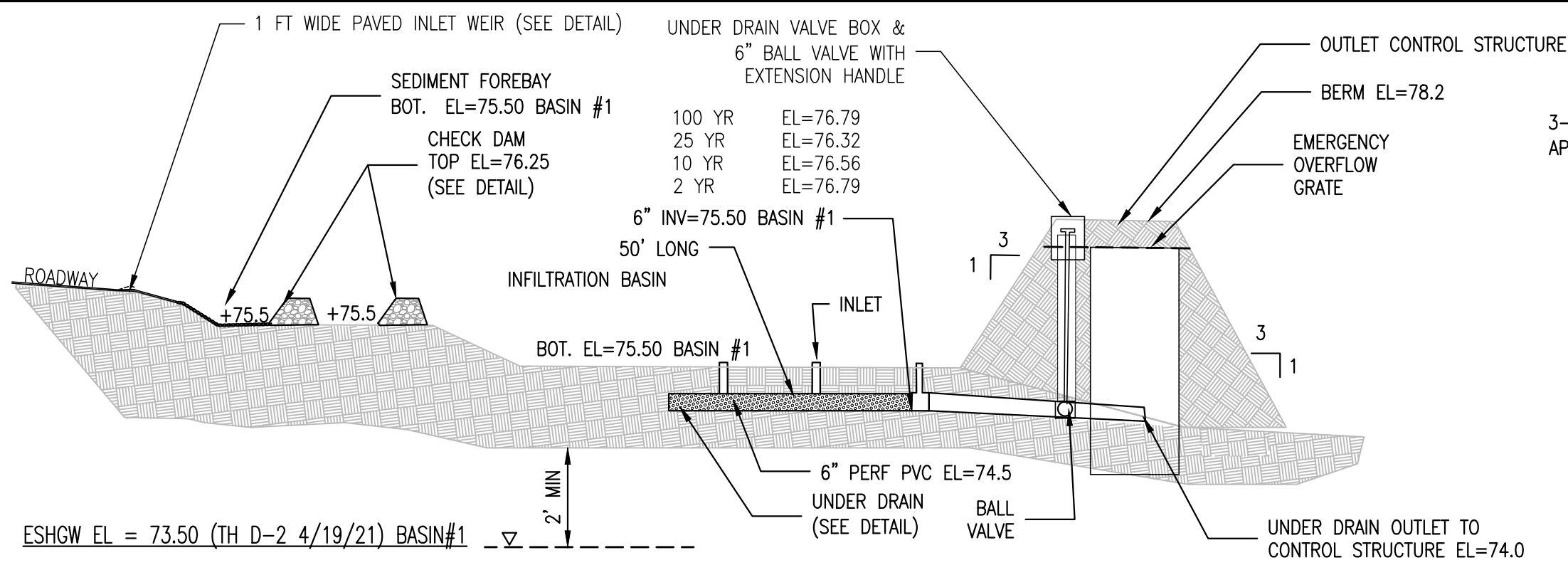


**SITE PLAN**  
**WILDLAND TIMBER**  
**#715 WASHINGTON STREET**  
**(ASSESSORS MAP F9 LOT 24**  
**PEMBROKE, MASSACHUSETTS**

PREPARED FOR:  
GEORGE THIBEAULT  
599 SUMMER STREET  
MARSHFIELD, MA 02050

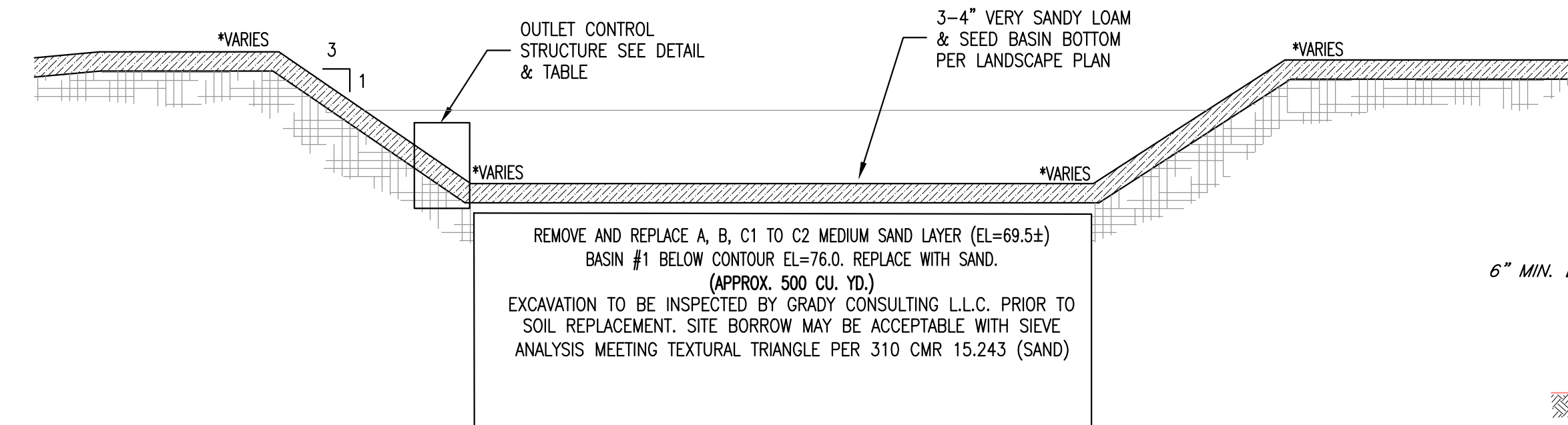
JANUARY 11, 2021  
SCALE: AS NOTED  
JOB No. 20-365

**GRADY CONSULTING, L.L.C.**  
*Civil Engineers and Land Surveyors*  
71 Evergreen Street, Suite 1, Kingston, MA 02364  
Phone (781) 585-2300 Fax (781) 585-2378



UNDER DRAIN CROSS SECTION DETAIL

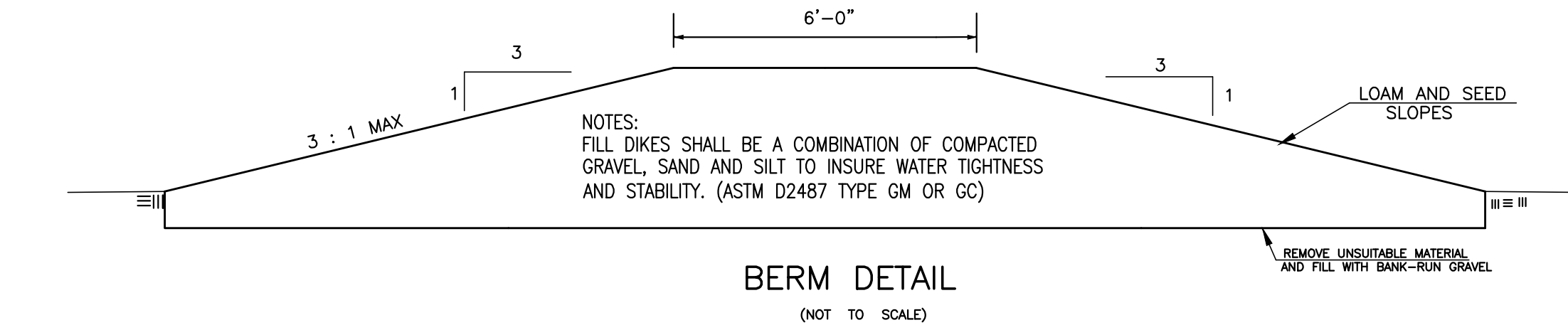
(NOT TO SCALE)



| ELEVATION TABLE |              |                |                          |
|-----------------|--------------|----------------|--------------------------|
| BASIN           | BOTTOM BASIN | BASIN TOP BERM | GROUNDWATER              |
| 1               | 75.50        | 78.20          | 73.50(TH D-1) 2021-04-19 |

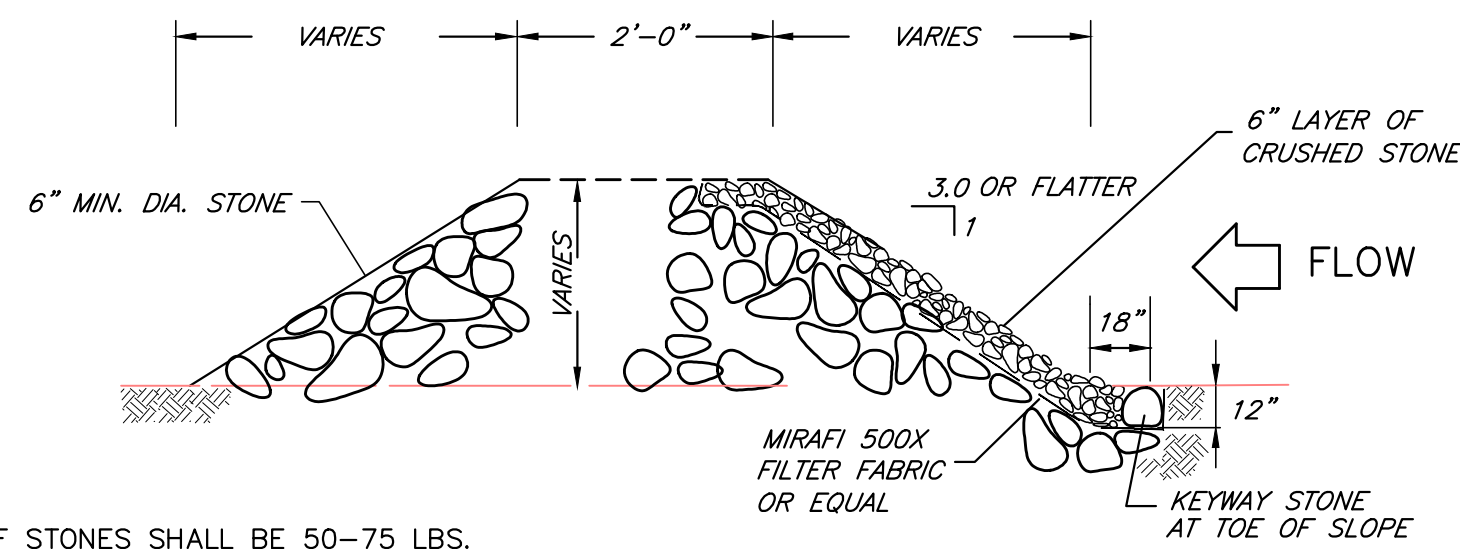
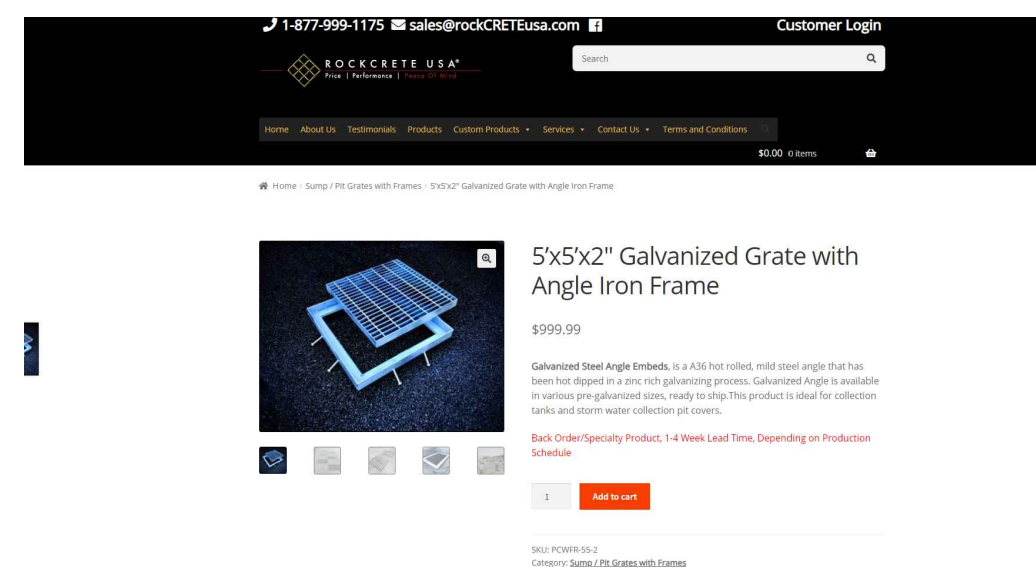
BASIN DETAIL

(NOT TO SCALE)



BERM DETAIL

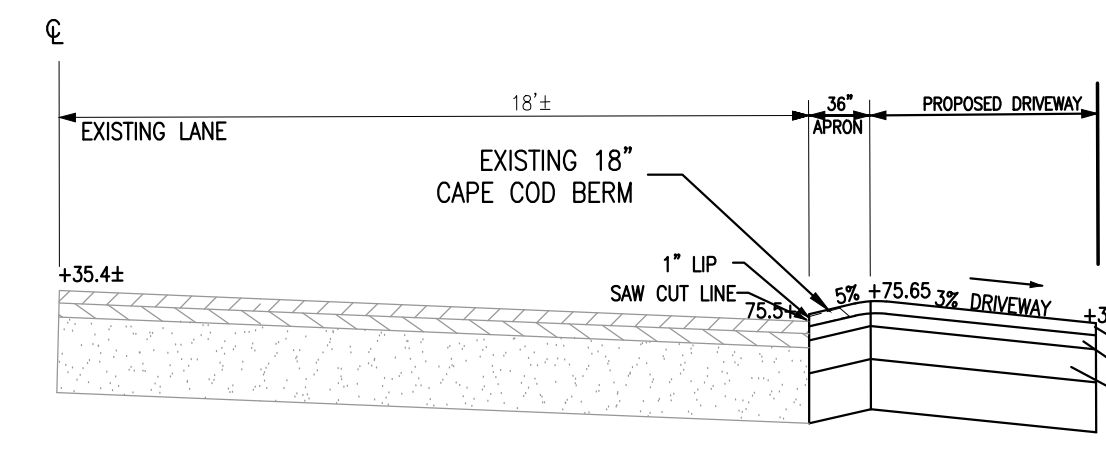
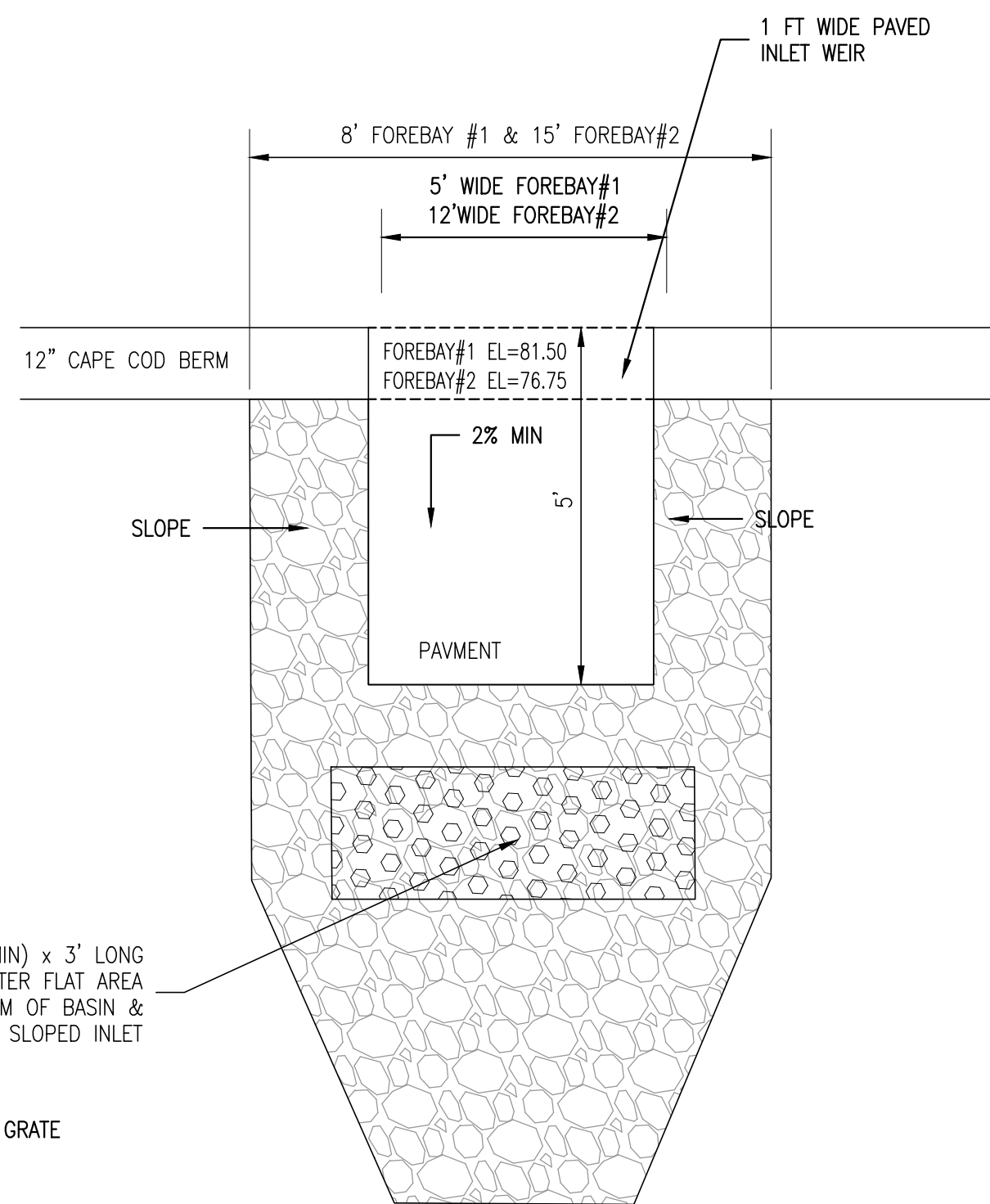
(NOT TO SCALE)



75% OF STONES SHALL BE 50-75 LBS. AND AS NEARLY RECTANGULAR AS POSSIBLE.

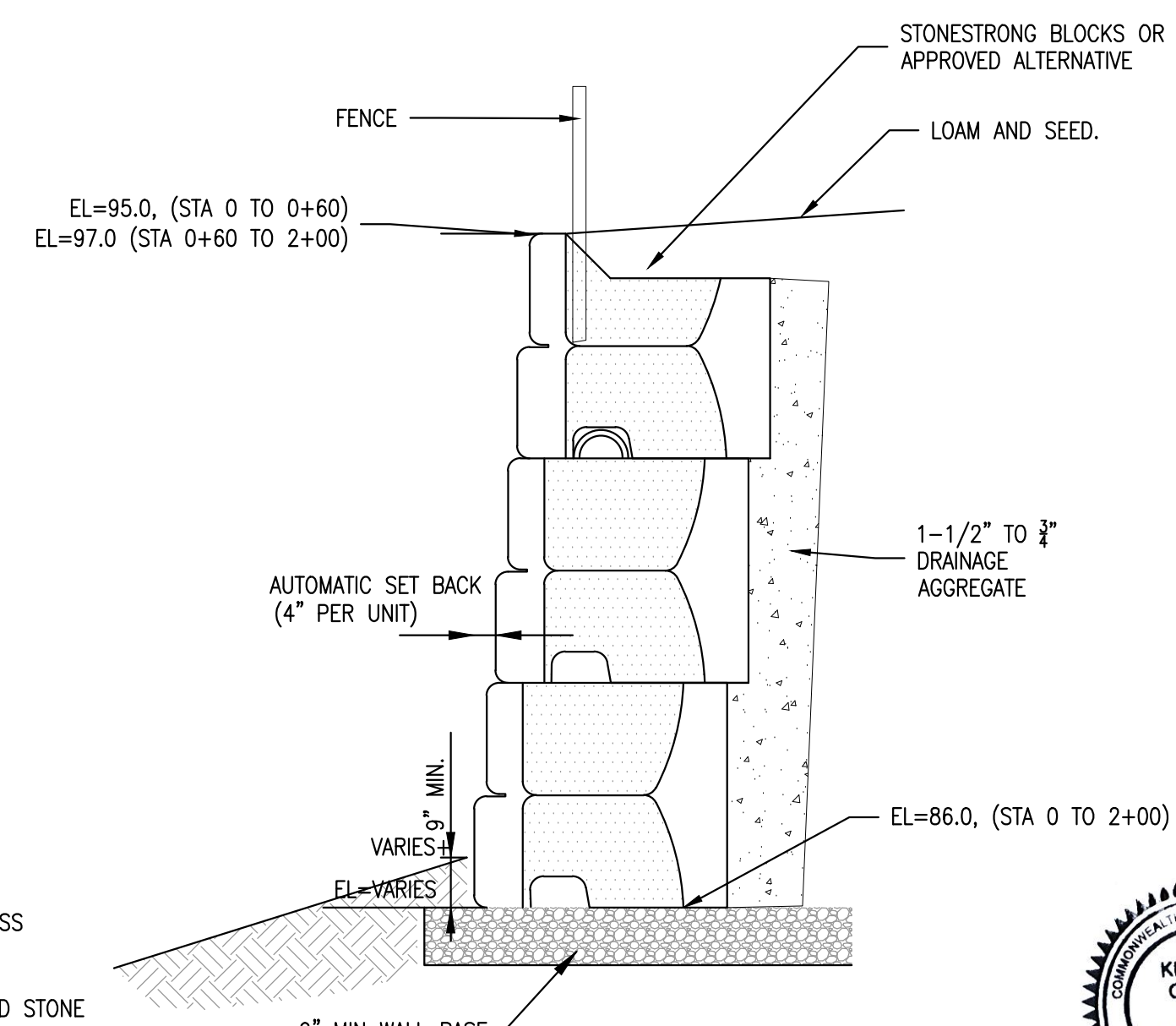
DETAIL - CHECK DAM

(NOT TO SCALE)



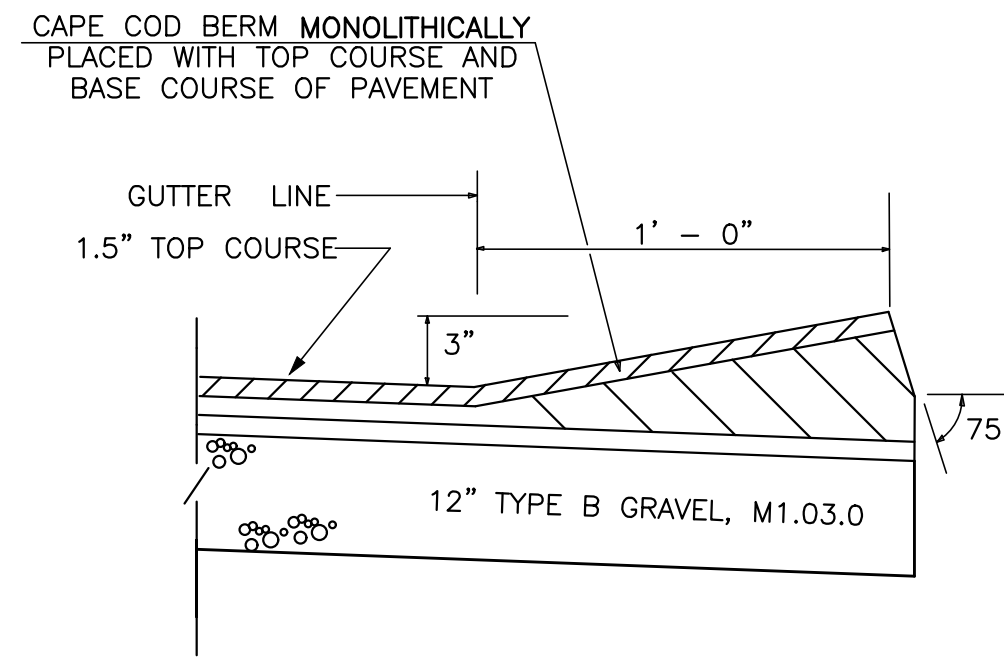
SECTION A-A X-SECTION

(NOT TO SCALE)



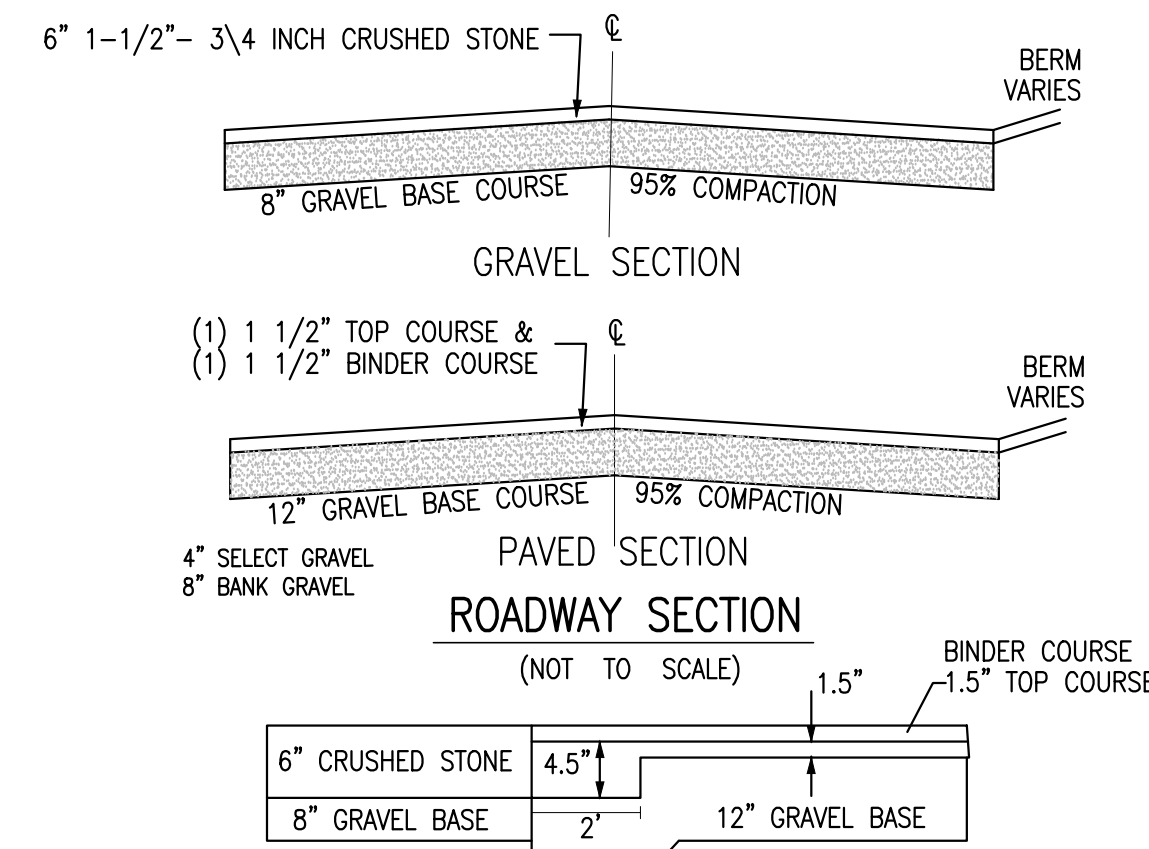
RETAINING WALL DETAIL

(NOT TO SCALE)



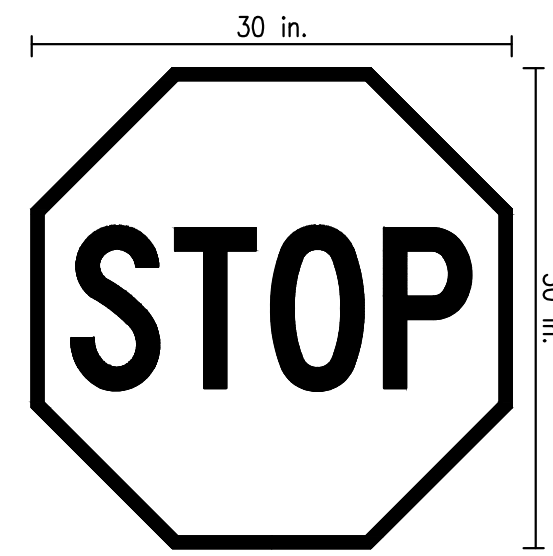
CAPE COD BERM DETAIL

(NOT TO SCALE)



PAVEMENT TO GRAVEL TRANSITION

(NOT TO SCALE)

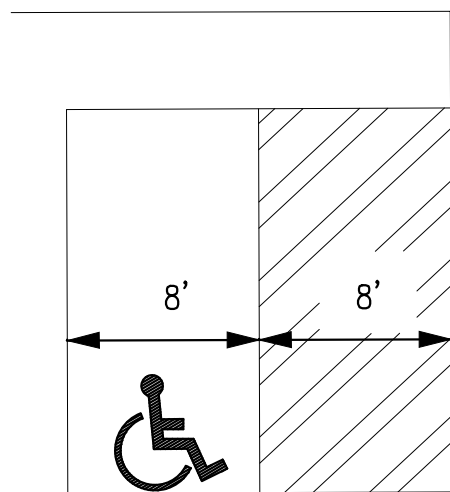


STOP SIGN SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES WITH THE EXCEPTION OF BEING DIAMOND GRADE. (R1-1)

12" WIDE x 12 FT LONG STOP LINE TO BE PLACED 5 FT IN ADVANCE OF NEAREST CROSSWALK OR WAY.

STOP SIGN DETAIL

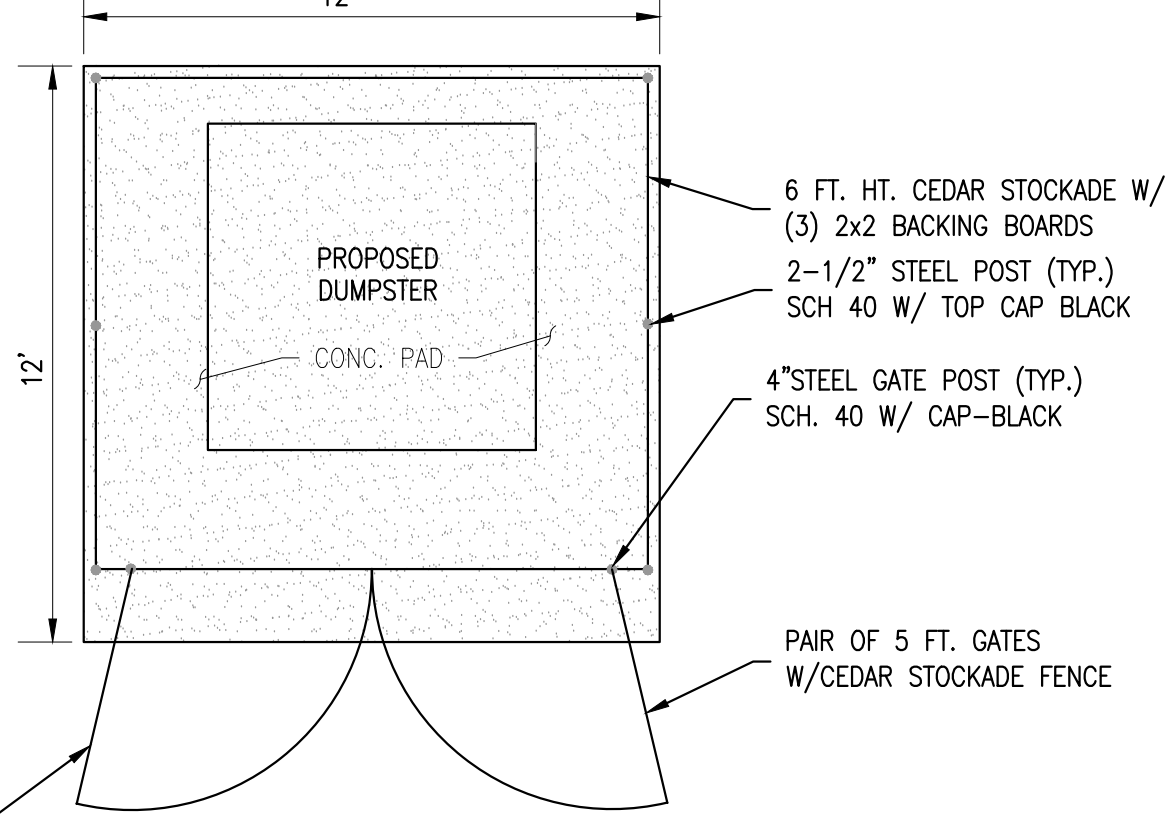
(NOT TO SCALE)



STANDARD HANDICAPP VAN ACCESSIBLE SPACES

WHEELCHAIR RAMP & HANDICAP SPACE STRIPING DETAIL

(NOT TO SCALE)



DUMPSTER DETAIL

(NOT TO SCALE)

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

TIMOTHY R. BENNETT  
No. 38856  
REGISTERED PROFESSIONAL LAND SURVEYOR

## SITE PLAN WILDLAND TIMBER

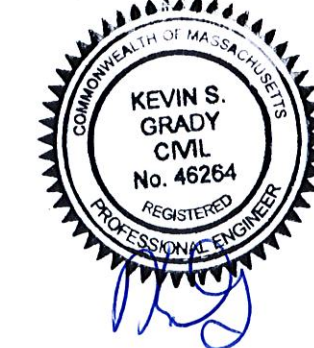
#715 WASHINGTON STREET  
(ASSESSORS MAP F9 LOT 24)

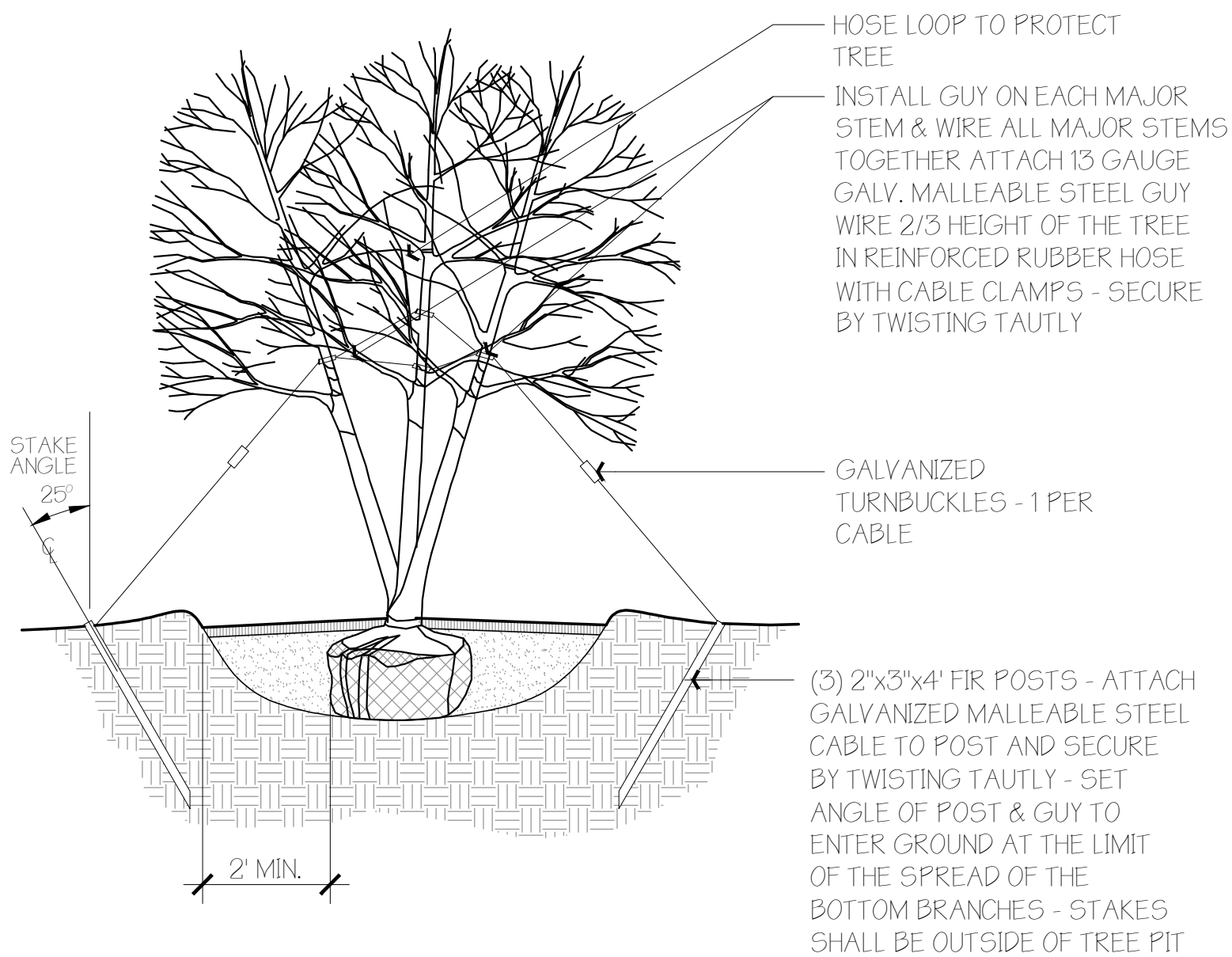
PEMBROKE, MASSACHUSETTS

PREPARED FOR:  
GEORGE THIBEAULT  
599 SUMMER STREET  
MARSHFIELD, MA 02050

JANUARY 11, 2021  
SCALE: AS NOTED  
JOB No. 20-365

**GRADY CONSULTING, L.L.C.**  
Civil Engineers and Land Surveyors  
71 Evergreen Street, Suite 1, Kingston, MA 02364  
Phone (781) 585-2300 Fax (781) 585-2378





**TREE GUYING DETAIL - MULTISTEM**

1/2" = 1'-0"

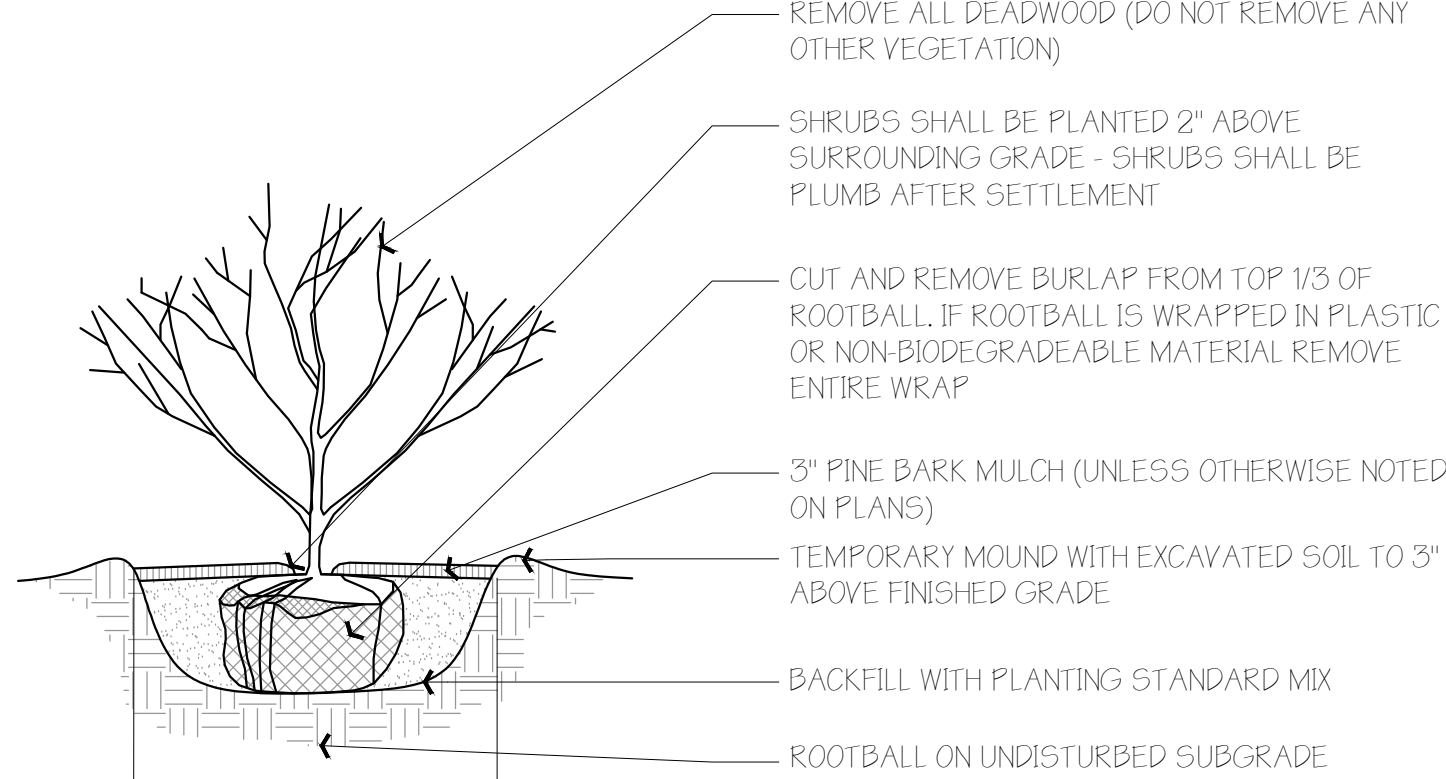
329343.02.01



**EVERGREEN TREE DETAIL**

1/2" = 1'-0"

329343.04.01

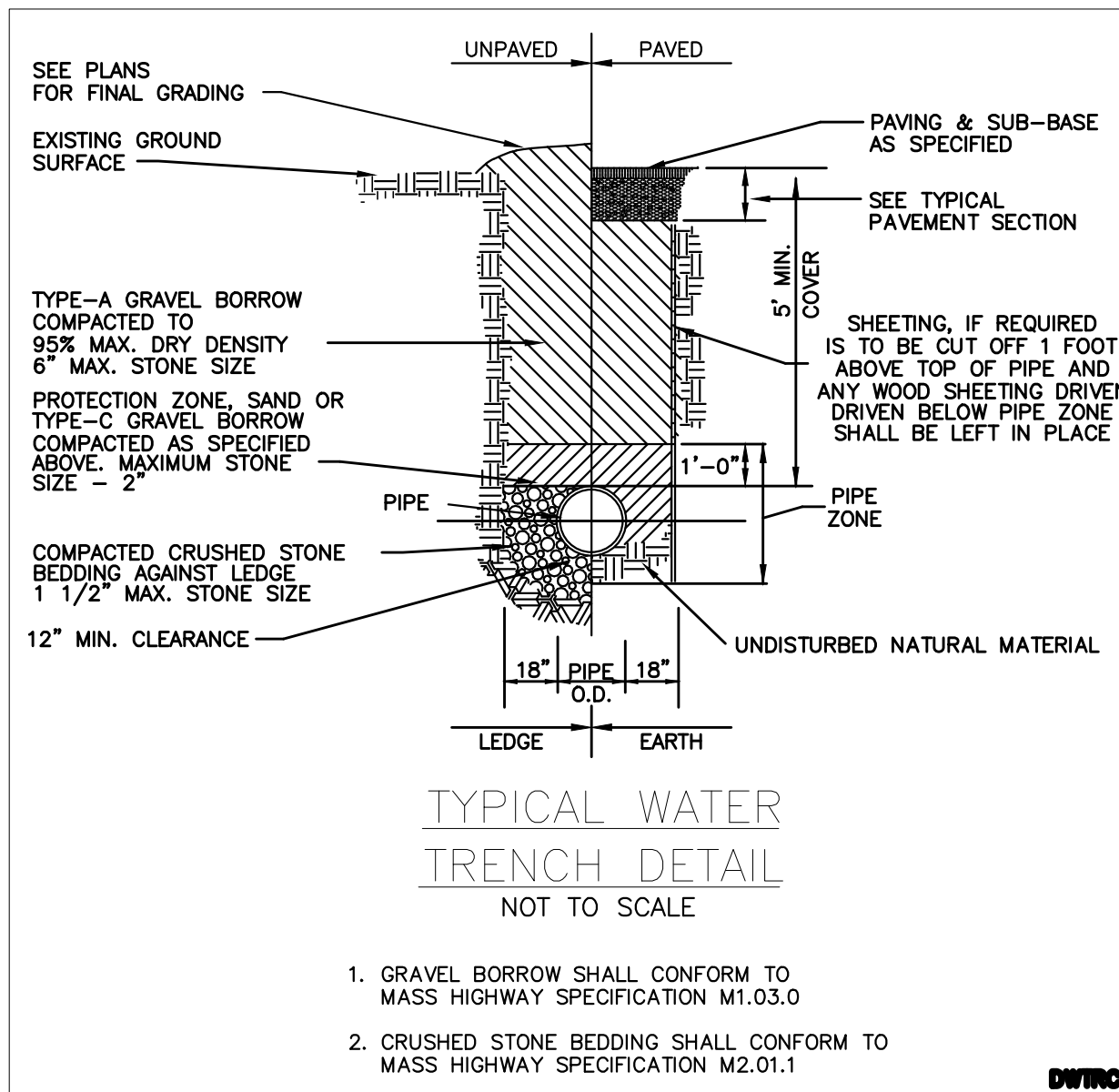


**SHRUB DETAIL**

1" = 1'-0"

329333.00-02

**PLANTING STANDARD SOIL MIX:**  
1/3 PEAT - MANURE BLEND  
1/3 HIGH ORGANIC LOAM  
1/3 EXISTING SOIL

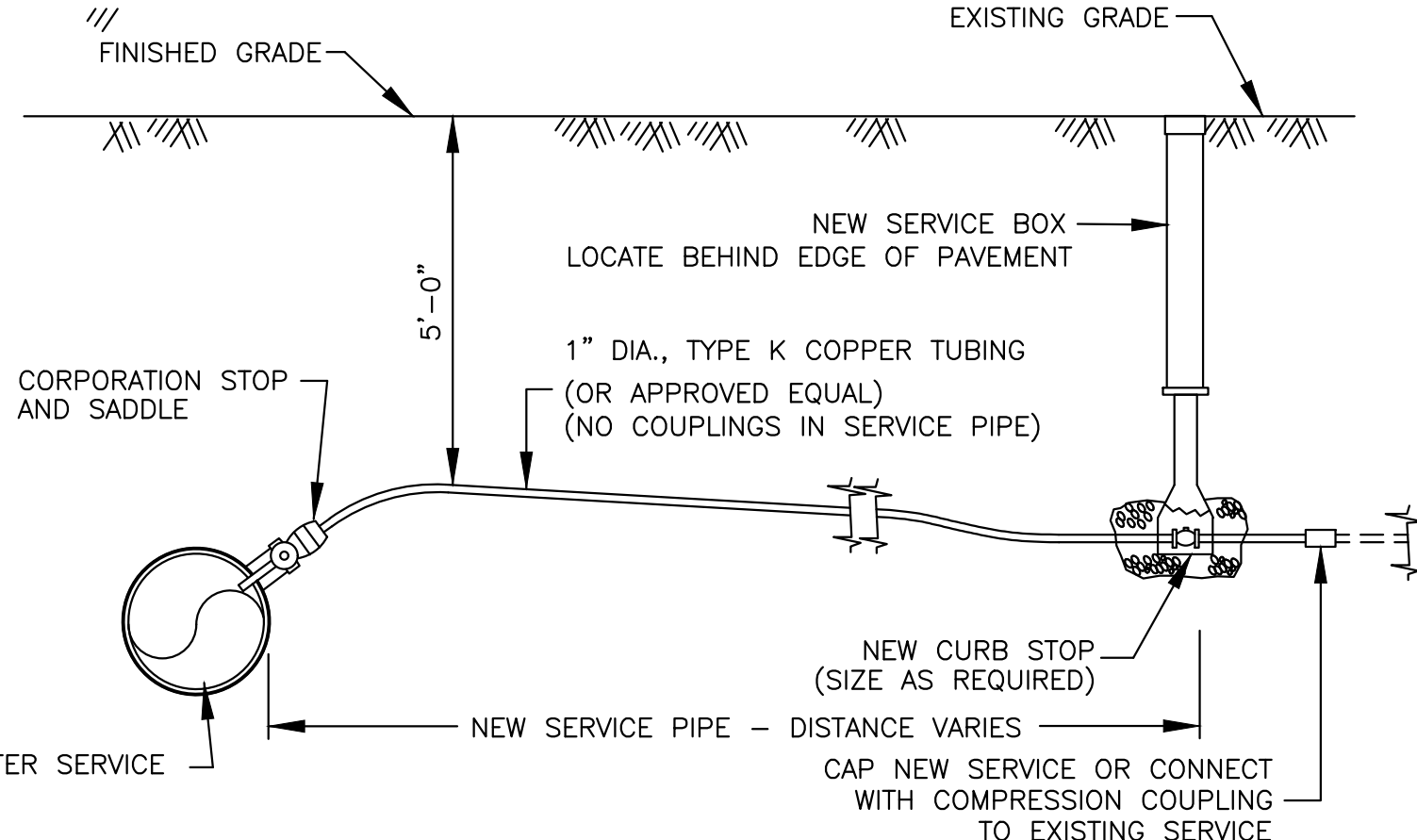


**TYPICAL WATER TRENCH DETAIL**  
NOT TO SCALE

- GRAVEL BORROW SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M1.03.0
- CRUSHED STONE BEDDING SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M2.01.1

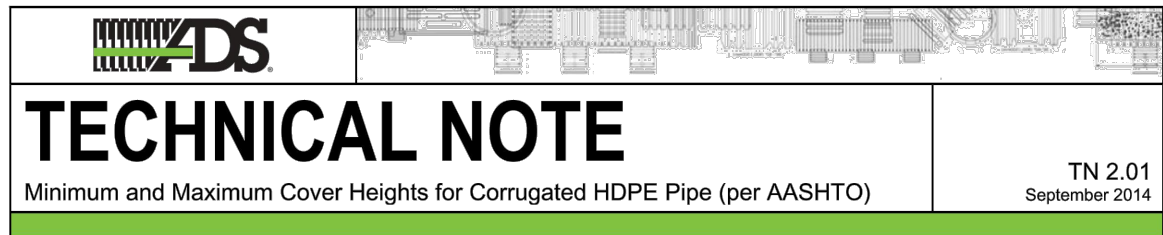
## PLANTING NOTES

- NOTIFY DIG-SAFE AND LOCAL AUTHORITIES PRIOR TO ANY TYPE OF SITE PREPARATION OR CONSTRUCTION.
- ALL PLANTS TO HAVE THE SAME RELATIONSHIP TO FINISH GRADE AFTER SETTLEMENT AS TO THEIR ORIGINAL GRADE BEFORE DIGGING. LOCATE PLANT COLLAR TWO OR THREE INCHES HIGHER THAN PLANTING SOIL MIX TO INSURE CORRECT FINAL RELATIONSHIP.
- APPLY AN APPROVED ANTI-DESSICANT TO ALL PLANTS IN LEAF AT PLANTING TIME, AND TO ALL EVERGREENS BEFORE THEIR FIRST WINTER.
- FLOOD ALL PLANTS WITH CLEAN WATER TWICE IN THE FIRST 24 HOUR AFTER PLANTING. CONTRACTOR TO ARRANGE FOR ALL PLANTS TO BE PLANTED WITHIN THREE DAYS AFTER DELIVERY TO THE SITE UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
- NEVER CUT A LEADER.
- TRIM ONLY BROKEN OR DEAD BRANCHES FROM EVERGREEN PLANTS.
- THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIAL AND MULCH IN SUFFICIENT QUANTITIES TO COMPLETE PLANTING AS SHOWN ON THE DRAWINGS. DRAWING QUANTITIES TAKE PRECEDENCE OVER PLANT LIST QUANTITIES.
- ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES BY "THE AMERICAN STANDARD FOR NURSERY STOCK," PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL TREES SHALL HAVE "BEST FACE" SIDE TAGGED AT NURSERY PRIOR TO DIGGING.
- ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN, UNLESS OTHERWISE APPROVED BY THE LANDSCAPE ARCHITECT.
- CONTRACTOR TO STAKE TREE LOCATIONS FOR APPROVAL BY LANDSCAPE ARCHITECT.
- LANDSCAPE ARCHITECT TO APPROVE IN PLACE ALL SHRUBS, PERENNIALS AND VINES PRIOR TO PLANTING.
- ALL TREES TO RECEIVE A MINIMUM OF THREE INCHES OF MULCH. ALL SHRUBS, VINES AND GROUND COVERS TO RECEIVE A MINIMUM OF TWO INCHES OF MULCH.
- WHERE SPECIFIED, CALIPER SIZE TO BE OVERKING FACTOR IN TREE SELECTION.
- STAKE OR GUY ALL TREES AND LARGE EVERGREEN MATERIAL.
- CONTRACTOR TO PROVIDE TWO YEAR GUARANTEE ON ALL MATERIAL. CONTRACTOR TO MAINTAIN ALL PLANTING AND LAWNS UNTIL FINAL PROJECT ACCEPTANCE. GUARANTEE PERIOD TO BEGIN AT FINAL ACCEPTANCE.
- ALL PLANT MATERIAL SHALL BE INSTALLED PRIOR TO FINAL TOP-DRESSING AND SODDING/SEEDING.
- COORDINATE LANDSCAPE INSTALLATION WITH INSTALLATION OF UNDERGROUND SPRINKLER SYSTEM & LANDSCAPE LIGHTING (IF APPLICABLE).
- NO PLANTING BEFORE THE ACCEPTANCE OF ROUGH GRADING.
- CONTRACTOR TO PROVIDE SOIL TESTS IN AREAS DESIGNATED BY LANDSCAPE ARCHITECT IN FIELD FOR EXISTING SOILS TO DETERMINE APPROPRIATE SOIL AMENDMENTS PRIOR TO THE DISTURBANCE OF SITE.
- ALL PLANTING BEDS TO BE TREATED WITH PREEN AND GREEN OR APPROVED EQUAL TO PROHIBIT WEED GERMINATION AND GROWTH PRIOR TO THE SPREADING OF MULCH.
- ALL PERENNIALS ARE TO BE PLANTED INTO DAMP SOIL.
- PLANT LIST: A COMPLETE LIST OF PLANTS INCLUDING A SCHEDULE OF QUANTITIES, SIZES, TYPES AND NAMES IS INCLUDED IN THIS SET OF DRAWINGS. IN THE EVENT OF DISCREPANCIES BETWEEN QUANTITIES OF PLANTS IN THE PLANT LIST AND THE QUANTITIES SHOWN ON THE DRAWINGS, THE PLAN SHALL GOVERN. WHEN MULTIPLE PLANT SPECIES ARE LISTED IN ONE PLANT CATEGORY, THE GOAL IS TO PROVIDE THE BEST PLANTS AVAILABLE AT THE TIME OF INSTALLATION. GRADY CONSULTING SHALL SELECT OR COORDINATE THE SELECTION OF THE APPROPRIATE PLANTS AT LOCAL NURSERIES. GRADY CONSULTING HAS THE RIGHT TO REJECT ANY PLANT THAT DOES NOT MEET THE SPECIFICATIONS LISTED IN THE PLANT TABLE.
- PLANT SUBSTITUTION ARE NOT ALLOWED UNLESS APPROVED BY GRADY CONSULTING.
- ALL DISTURBED AREAS TO BE LOAMED AND SEEDED AND BLENDED INTO EXISTING GRADE AND CONDITIONS (REFER TO ENGINEER'S SOIL STABILIZATION AND EROSION CONTROL PLAN FOR FURTHER INFORMATION).



- SERVICES SHALL CONSIST OF COPPER TUBING, A CORPORATION COCK AT THE MAIN, A CURB STOP AND CURB BOX AT THE PROPERTY LINE AND AN INSIDE VALVE AND METER ON THE OWNERS PREMISES.
- ALL SERVICE PIPE SHALL BE OF TYPE "K" COPPER TUBING, THE SIZE TO BE DETERMINED BY THE DEPARTMENT.
- SERVICE PIPE SHALL BE PLACED FIVE FEET BELOW FINAL GRADE.
- SERVICE BOXES SHALL BE CENTERED OVER THE CURB STOP AND SET FLUSH WITH THE GROUND SURFACE.
- CONNECTIONS TO WATER MAINS SHALL BE DONE BY THE DEPARTMENT. A SERVICE CHARGE WILL BE LEVED FOR THIS SERVICE.
- NO PIPE OR FITTING SHALL BE BACKFILLED BEFORE INSPECTION BY A PERSON DESIGNATED BY THE DEPARTMENT.
- ALL DAMAGE OF WHATEVER NATURE RESULTING FROM THE WORK, OR RESULTING TO THE WORK FROM WHATEVER CAUSE SHALL BE BORNE AND SUSTAINED BY THE CONTRACTOR.
- DAMAGES TO ANY EXISTING UNDERGROUND STRUCTURE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- NO WATER SERVICE SHALL BE INSTALLED NEARER THAN 10 FEET TO ANY SEPTIC TANK, CESSPOOL, LEACHING FIELD DRAINAGE PIT, SEWER LINE OR DRAIN LINE AS PER DEP 310 CMR, SECTION 15.211.
- THE CONTRACTOR WILL HAVE AN APPROVED STREET OPENING PERMIT FROM THE PEMBROKE DEPARTMENT OF PUBLIC WORKS (THE DEPARTMENT) PRIOR TO THE START OF ANY WORK PERFORMED IN A PUBLIC WAY. A SERVICE LINE INSTALLED BY A PRIVATE CONTRACTOR IN A PUBLIC WAY MUST BE GUARANTEED FOR ONE YEAR FROM THE DATE OF COMPLETION. THE CONTRACTOR SHALL REPAIR ANY SETTLEMENT OF THE TRENCH PAVEMENT BY A METHOD APPROVED BY THE DEPARTMENT AND AT HIS OWN EXPENSE FOR THE SAME ONE-YEAR PERIOD STARTING FROM THE DATE OF COMPLETION.

## 1"Ø DOMESTIC WATER SERVICE DETAIL



### Introduction

The information in this document is designed to provide answers to general cover height questions; the data provided is not intended to be used for project design. The design procedure described in the Structures section (Section 2) of the Drainage Handbook provides detailed information for analyzing most common installation conditions. This procedure should be utilized for project specific designs.

The two common cover height concerns are minimum cover in areas exposed to vehicular traffic and maximum cover heights. Either may be considered "worst case" scenario from a loading perspective, depending on the project conditions.

### Minimum Cover in Traffic Applications

Pipe diameters from 4- through 48-inch (100-1200 mm) installed in traffic areas (AASHTO H-25 or HS-25 loads) must have at least one foot (0.3m) of cover over the pipe crown, while 54- and 60-inch (1350 and 1500 mm) pipes must have at least 24 inches (0.6m) of cover. The backfill envelope must be constructed in accordance with the Installation section (Section 5) of the Drainage Handbook and the requirements of ASTM D2321. The backfill envelope must be of the type and compaction listed in Appendix A-5, Table A-5-2 of the Drainage Handbook. In Table 1 below, this condition is represented by a Class III material compacted to 90% standard Proctor density, although other material can provide similar strength at slightly lower levels of compaction. Structural backfill material should extend six inches (0.15m) over the crown of the pipe; the remaining cover should be appropriate for the installation and as specified by the design engineer. If settlement or rutting is a concern, it may be appropriate to extend the structural backfill to grade. Where pavement is involved, sub-base material can be considered in the minimum burial depth. While rigid pavements can be included in the minimum cover, the thickness of flexible pavements should not be included in the minimum cover.

Additional information that may affect the cover requirements is included in the Installation section (Section 5) of the Drainage Handbook. Some examples of what may need to be considered are temporary heavy equipment, construction loading, paving equipment and similar loads that are less than the design load, the potential of pipe flotation, and the type of surface treatment which will be installed over the pipe zone.

**Table 1**  
**Minimum Cover Requirements for ADS N-12®, N-12 ST, and N-12 WT (per AASHTO) with AASHTO H-25 or HS-25 Load**

| Inside Diameter, ID, in.(mm) | Minimum Cover, ft. (m) | Inside Diameter, ID, in.(mm) | Minimum Cover, ft. (m) |
|------------------------------|------------------------|------------------------------|------------------------|
| 4 (100)                      | 1 (0.3)                | 24 (600)                     | 1 (0.3)                |
| 6 (150)                      | 1 (0.3)                | 30 (750)                     | 1 (0.3)                |
| 8 (200)                      | 1 (0.3)                | 36 (900)                     | 1 (0.3)                |
| 10 (250)                     | 1 (0.3)                | 42 (1050)                    | 1 (0.3)                |
| 12 (300)                     | 1 (0.3)                | 48 (1200)                    | 1 (0.3)                |
| 16 (400)                     | 1 (0.3)                | 54 (1350)                    | 2 (0.6)                |
| 18 (450)                     | 1 (0.3)                | 60 (1500)                    | 2 (0.6)                |

*Note: Minimum covers presented here were calculated assuming Class III backfill material compacted to 90% standard Proctor density around the pipe and a minimum of 6-inches (0.15m) structural backfill over the pipe crown, as recommended in Section 5 of the Drainage Handbook, with an additional layer of compacted traffic lane sub-base for a total cover as required. In shallow traffic installations, especially where pavement is involved, a good quality compacted material to grade is required to prevent surface settlement and rutting.*

4640 TRUEMAN BLVD. HILLIARD, OH 43026 (603) 821-6710 www.ads-gps.com

ATN2.01

© ADS 2014

ALL DRAIN PIPE TO BE ADS N-12  
EQUIVALENT OR APPROVED EQUAL

## DRAIN PIPE DETAIL

(NOT TO SCALE)

## WATER SUPPLY NOTES

- THERE SHALL BE NO PHYSICAL CONNECTION BETWEEN A PUBLIC OR PRIVATE POTABLE WATER SUPPLY SYSTEM AND A SEWER, OR APPURTENANCE THERETO WHICH WOULD PERMIT THE PASSAGE OF ANY WASTEWATER OR POLLUTED WATER INTO THE POTABLE SUPPLY.
- THE SEWER MAY BE LAID CLOSER THAN 10 FEET TO A WATER MAIN PROVIDED THAT IT IS
  - LAID IN A SEPARATE TRENCH, AND
  - THE ELEVATION OF THE TOP(CROWN) OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM(INVERT) OF THE WATER MAIN.
- WHENEVER SEWERS MUST CROSS UNDER WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR RECONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
- WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS STIPULATED ABOVE, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF MECHANICAL JOINT CAST IRON PIPE AND SHALL BE PRESSURE TESTED TO ASSURE WATERTIGHTNESS.

## SPECIFICATIONS

- ALL WATER MAIN PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH A WW A C 151. PIPE SHALL BE DUCTILE IRON, THICKNESS CLASS 52. THE INSIDE OF THE PIPE SHALL BE GIVEN A CEMENT LINING AND ASPHALTIC SEAL COAT IN ACCORDANCE WITH A WW A C 104.
- ALL INSTALLED WATER PIPE SHALL HAVE FIVE FEET OF COVER MEASURED AT FINAL GRADE.
- GENERALLY, NO PIPE SMALLER THAN EIGHT INCHES IN INTERNAL DIAMETER SHALL BE UTILIZED FOR WATER MAINS CONNECTED TO A HYDRANT.
- ALL FITTINGS SHALL BE MECHANICAL JOINT, CONFORM TO THE REQUIREMENTS OF A WW A CL 10 OR C153, AND BE CAPABLE OF WITHSTANDING 250 PSI.
- TAPPING SLEEVES SHALL HAVE STAINLESS STEEL WRAP TEES.
- ALL VALVES AND FITTINGS SHALL BE BRACED AGAINST MOVEMENT UTILIZING APPROVED JOINT RESTRAINT SYSTEMS (I.E. MEGALUG® FITTINGS SERIES 1100 OR APPROVED EQUAL).
- WATER VALVES SHALL BE RESILIENT WEDGE TYPE GATE VALVES MANUFACTURED TO AWWA C509 STANDARDS. VALVES SHALL OPEN RIGHT (CLOCKWISE). ALL VALVES THAT ARE 16 INCHES IN SIZE OR GREATER, SHALL BE BUTTERFLY VALVES. BUTTERFLY VALVES SHALL BE IN ACCORDANCE WITH "RUBBER SEATED BUTTERFLY VALVES", AWWA DESIGNATION C504. ALL GATE VALVES AND BUTTERFLY VALVES SHALL BE MANUFACTURED BY MUELLER CO.
- GATE BOXES SHALL BE SET PLUMB AND FLUSH WITH THE GROUND SURFACE AND CONFORM TO A WWA C500. GATE VALVE BOXES SHALL BE EQUIPPED WITH PAVEMENT FLANGE.
- NO PIPE OR FITTING SHALL BE BACKFILLED BEFORE INSPECTION BY A PERSON DESIGNATED BY THE WATER DEPARTMENT.
- HYDRANTS SHALL CONFORM TO THE REQUIREMENTS OF AWWA C502. HYDRANTS SHALL BE SET PLUMB, WITH THE STEAMER NOZZLE FACING THE ROAD. THE AREA AROUND THE DRIPS SHALL BE FILLED WITH CLEAN STONE. APPROVED JOINT RESTRAINT FITTINGS SHALL BE UTILIZED FOR HYDRANT INSTALLATION. HYDRANTS SHALL BE PLACED SO THAT THEY ARE WITHIN ONE FOOT OF THE PROPERTY LINE AND SHALL BE THE 5 1/4 CENTURION MODEL AS MANUFACTURED BY MUELLER COMPANY.
- THE COMPLETED WATER MAIN SHALL BE CHLORINATED BY USING ONE PART SOLUTION OF AVAILABLE CHLORINE IN SUCH VOLUME THAT THE RATE OF DOSAGE OF THE WATER CONTENT OF THE MAIN SHALL BE AT LEAST FIFTY PARTS PER MILLION AVAILABLE CHLORINE. THE CONTACT PERIOD SHALL BE AT LEAST TWENTY-FOUR HOURS, LONGER IF THE TEST FOR RESIDUAL CHLORINE INDICATES THAT IT IS NECESSARY FOR PROPER DISINFECTION. WATER MAIN DISINFECTION SHALL BE IN ACCORDANCE WITH AN APPROVED A WW A METHOD FOR DISINFECTING WATER MAINS. THE DEPARTMENT WILL TAKE BACTERIA SAMPLES AND PERFORM ANALYSIS. THE CUSTOMER SHALL BE RESPONSIBLE FOR FLUSHING AND PRESSURE TESTING NEW WATER MAIN. NO WATER MAIN SHALL BE PLACED INTO SERVICE UNTIL THE DEPARTMENT HAS GIVEN APPROVAL.
- ALL DAMAGES OF WHATEVER NATURE RESULTING FROM THE WORK OR RESULTING TO THE WORK, FROM WHATEVER CAUSE SHALL BE BORNE AND SUSTAINED BY THE CONTRACTOR.
- DAMAGE TO ANY EXISTING UNDERGROUND STRUCTURE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- PRESSURE TESTS OF THE NEW WATER MAIN SHALL BE CARRIED OUT AT 150 POUNDS GAUGE FOR ONE HOUR. LEAKAGE TESTS SHALL BE PERFORMED IF THE PRESSURE DROPS AFTER THE ONE HOUR TIME PERIOD. THE RATE OF LEAKAGE SHALL NOT EXCEED ONE GALLON PER DAY PER LINEAR FOOT OF JOINT.
- THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER THE COMPLETION OF STRENGTH AND LEAKAGE TESTS.
- IN THE CASE WHERE THE TOWN OF PEMBROKE SUPPLIES WATER TO INDIVIDUAL HOUSES IN A DEVELOPMENT AND AFTER ALL THE FOREGOING CONDITIONS HAVE BEEN MET, AND BEFORE THE TOWN ACCEPTS THE ROAD OR ROADS AND/OR UTILITIES, THE OWNER OF THE DEVELOPMENT SHALL PAY, AT COST, FOR- ANY REPAIRS TO THE MAINS AND APPURTENANCES WHICH MAY BECOME NECESSARY.
- THE WATER MAIN SHOULD HAVE A MINIMUM OF 18" OF CLEARANCE BETWEEN ANY UTILITIES WHETHER RUNNING PARALLEL OR CROSSING A UTILITY.
- THE WATER MAIN, FITTINGS AND HYDRANTS LATERALS SHALL BE POLYETHYLENE ENCASED WITH V-BIO IN ANY INSTANCE THE WATER SYSTEM APPURTENANCES MAY BE INSTALLED WITHIN THE SEASONAL HIGH GROUND WATER.

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMANCE WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

TIMOTHY BENNETT P.L.S.

TIMOTHY BENNETT  
REGISTERED  
PROFESSIONAL LAND SURVEYOR

MASSACHUSETTS  
NO. 100  
LANDSCAPE

KEVIN S. GRADY  
CIVIL  
No. 45564  
REGISTERED  
PROFESSIONAL ENGINEER

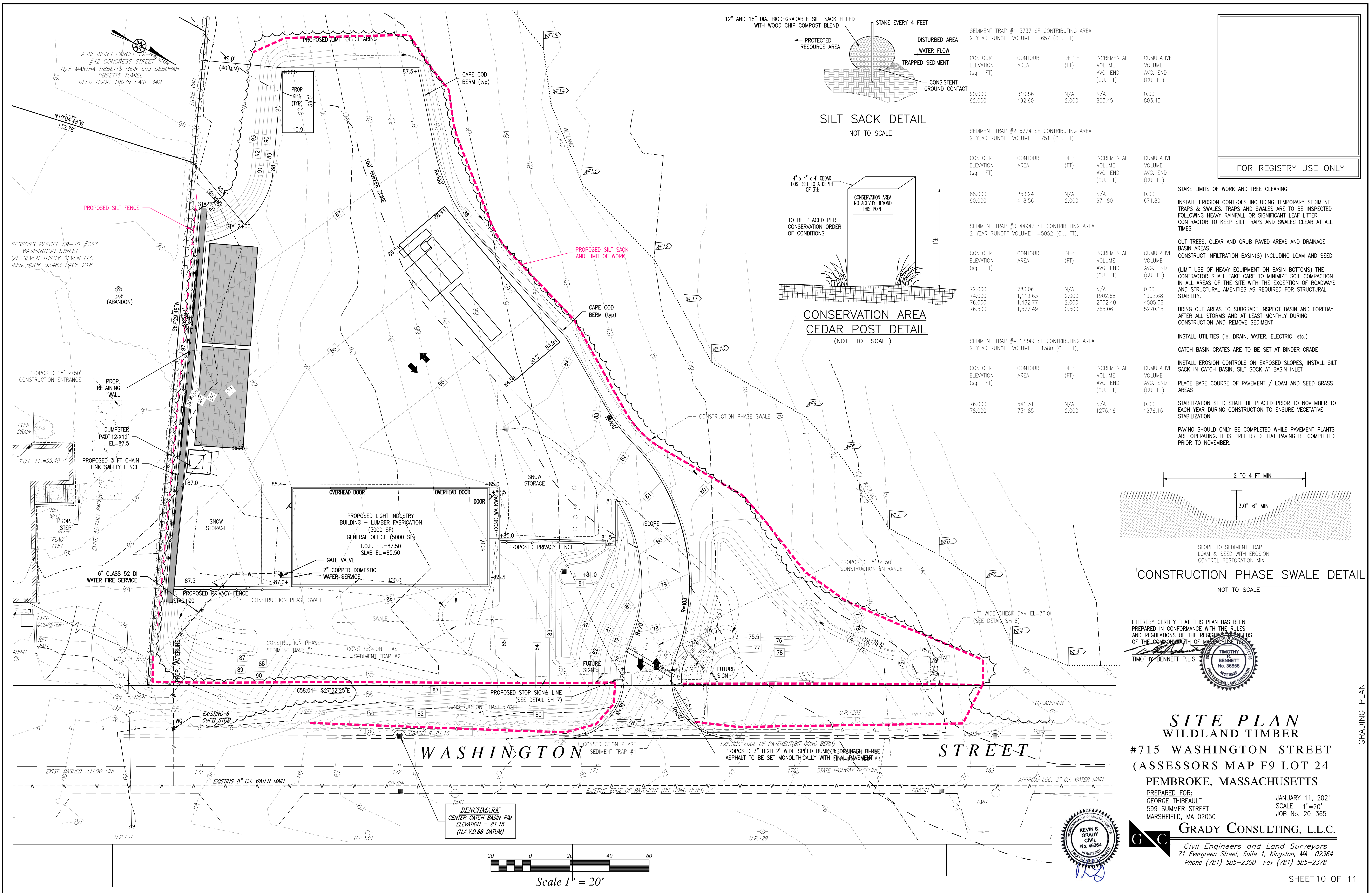
**SITE PLAN**  
**WILDLAND TIMBER**  
**#715 WASHINGTON STREET**  
**(ASSESSORS MAP F9 LOT 24**

**PEMBROKE, MASSACHUSETTS**

PREPARED FOR:  
GEORGE THIBEAULT  
599 SUMMER STREET  
MARSHFIELD, MA 02050

JANUARY 11, 2021  
SCALE: AS NOTED  
JOB No. 20-365

**Grady Consulting, L.L.C.**  
*Civil Engineers and Land Surveyors*  
71 Evergreen Street, Suite 1, Kingston, MA 02364  
Phone (781) 585-2300 Fax (781) 585-2378



INTERIOR SPECIALTY LUMBER KILN  
(NOT TO SCALE)

MINIQUICK 12 CHORD KILN  
CHORD WOOD KILN  
(NOT TO SCALE)

MINIQUICK 12 WOOD-MIZER LT50-HYDRAULIC PORTABLE SAWMILL  
SAWMILL  
(NOT TO SCALE)

OIL & GRIT SEPARATOR  
(NOT TO SCALE)

A blue mobile unit, likely a mobile office or control room, is parked on a gravel lot. It features a large white vented box in the center and a satellite dish on the right side. The unit is labeled "Precision 1000". It has a blue frame with vertical poles and horizontal bars. The unit is parked on a gravel surface with trees and a clear sky in the background.

# FIREWOOD PROCESSOR

# FIREWOOD HOLDING BAG

[illegible]

ENCLOSURE DETAILS  
(NOT TO SCALE)

## CONSTRUCTION NOTES

GENERAL:

1. THE ACCURACY OF EXISTING UTILITY LOCATIONS, DIMENSIONS AND LINES IS FROM EXISTING INFORMATION OF RECORD AND IS NOT WARRANTED. CONTRACTOR TO VERIFY PRIOR TO INITIATING CONSTRUCTION.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SECURE ALL NECESSARY STATE, MUNICIPAL, AND OTHER UTILITY PERMITS AND VERIFY THE PROPOSED LOCATIONS OF UTILITIES WITH UTILITY COMPANIES.
3. CONTRACTOR SHALL NOTIFY "DIG SAFE" (1-888-344-7233) AT LEAST 4 DAYS PRIOR TO CONSTRUCTION.
4. UNDERGROUND UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE APPROPRIATE DEPARTMENT OR COMPANY. THE CONTRACTOR SHALL NOTIFY THE PEMBORO D.P.W. (293-5620) AT LEAST 4 DAYS PRIOR TO CONSTRUCTION OF DRAINAGE & WATER SYSTEMS.
5. ALL CONSTRUCTION SHALL CONFORM TO TOWN OF PEMBORO PLANNING BOARD RULES AND REGULATIONS, DPW SPECIFICATIONS, CONSERVATION COMMISSION REGULATIONS AND ALL OTHER APPLICABLE CODES.
6. ALL STUMPS SHALL BE DISPOSED OFF SITE AND SATISFY THE REQUIREMENTS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

WATER SYSTEM NOTES:

1. ALL WATER SERVICES SHALL BE 1" TYPE "L" COPPER TUBING OR APPROVED EQUAL.
2. ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO TOWN OF PEMBROKE WATER DEPARTMENT REQUIREMENTS.
3. ALL WATER GATES SHALL BE MUELLER, OPEN LEFT.

EROSION CONTROL:

1. ALL CUT AND FILL AREAS, AND DISTURBED DRAINAGE AREAS ARE TO BE BROUGHT TO FINISHED GRADE WITH A MIN. OF 4" OF LOAM, SEEDED WITH A MIXTURE OF ANNUAL RYEGRASS AND PERENNIAL GRASSES, AND MAINTAINED UNTIL VEGETATION STABILIZES THESE AREAS.
2. HAY MULCH, OR OTHER SUITABLE EROSION PROTECTION, SHALL BE UTILIZED ON ALL EXPOSED SLOPES.

CONSTRUCTION SEQUENCE:

### INSTALL SILT SOCK

## GRADE SEDIMENT FOREBAY AND INFILTRATION BASIN

GRADE FOREBAY AND BASIN AS TEMPORARY SEDIMENT BARRIER DURING CONSTRUCTION

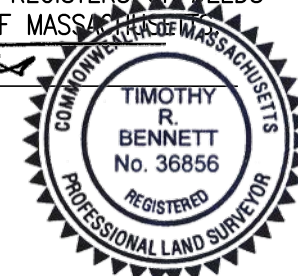
CONSTRUCT REMAINDER OF SITE

CLEAR AND GRUB SITE AREAS  
BRING CUT AREAS TO SUBGRADE  
INSPECT BASIN AFTER ALL STORMS AND AT LEAST MONTHLY DURING CONSTRUCTION AND  
REMOVE SEDIMENT  
EXCAVATE FOUNDATION, POUR, STRIP AND BACKFILL  
INSTALL UTILITIES (ie, DRAIN, WATER, ELECTRIC, etc.)  
CATCH BASIN GRATES ARE TO BE SET AT BINDER GRADE  
INSTALL EROSION CONTROLS ON EXPOSED SLOPES  
PLACE BASE COURSE OF PAVEMENT / LOAM AND SEED GRASS AREAS INSTALL LANDSCAPING  
INCLUDING  
FINISH PAVING ON ROADWAY

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN  
PREPARED IN CONFORMANCE WITH THE RULES  
AND REGULATIONS OF THE REGISTERS OF DEEDS  
OF THE COMMONWEALTH OF MASSACHUSETTS.

  
TIMOTHY BENNETT P.L.S.

 TIMOTHY  
R.



# SITE PLAN

## WILDLAND TIMBER

#715 WASHINGTON STREET  
(ASSESSORS MAP F9 LOT 24

PEMBROKE, MASSACHUSETTS

PREPARED FOR:  
GEORGE THIBEAULT  
599 SUMMER STREET  
MARSHFIELD, MA 02050

JANUARY 11, 2021  
SCALE: AS NOTED  
JOB No. 20-365

 GRADY CONSULTING, L.L.C.

Civil Engineers and Land Surveyors  
71 Evergreen Street, Suite 1, Kingston, MA 02364  
Phone (781) 585-2300 Fax (781) 585-2378