

TYRELL DEVELOPMENT COMPANY, LLC

GREEN PEAK II, A CONDOMINIUM

WATERVILLE VALLEY, NEW HAMPSHIRE

JULY 2021

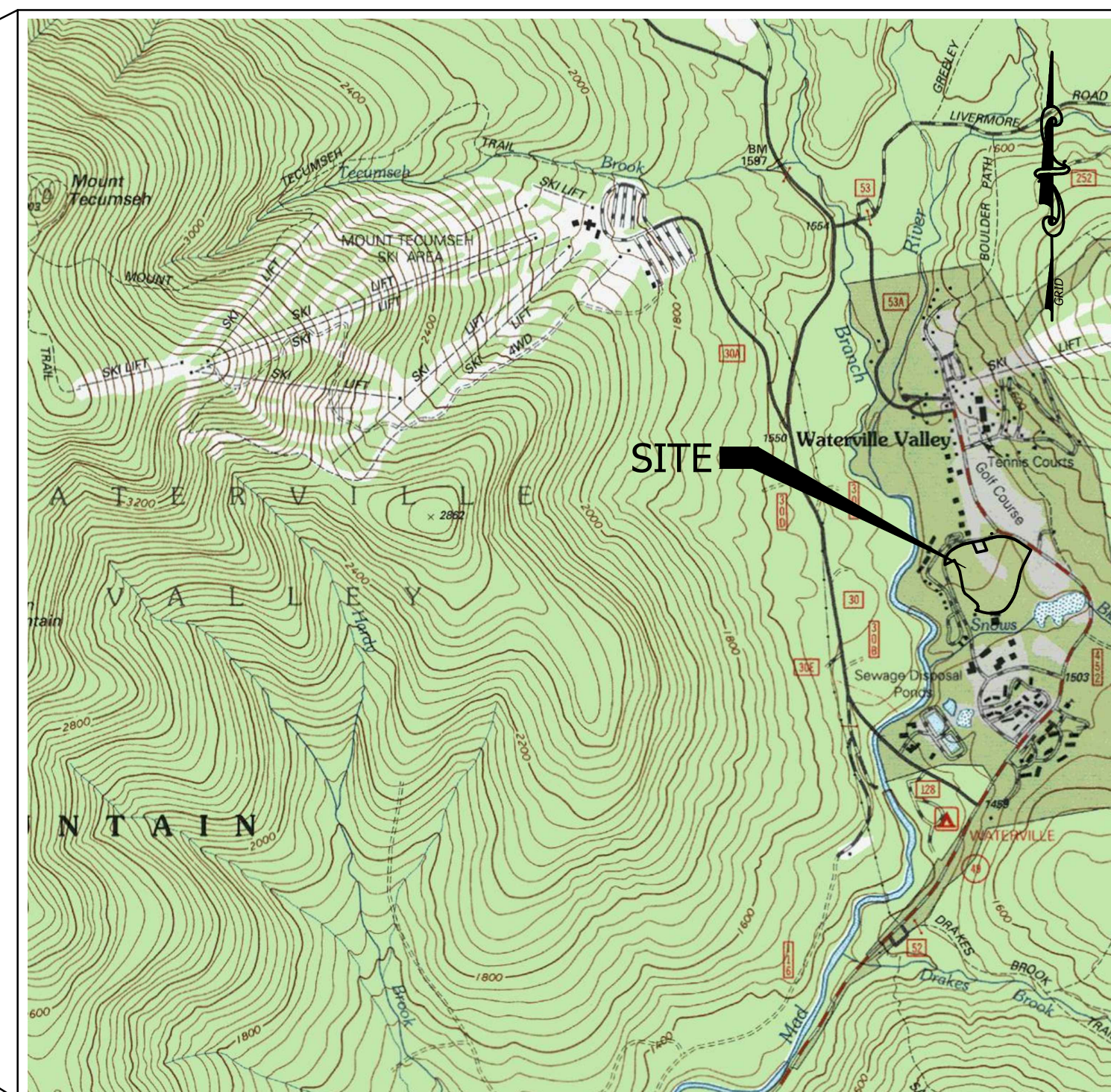
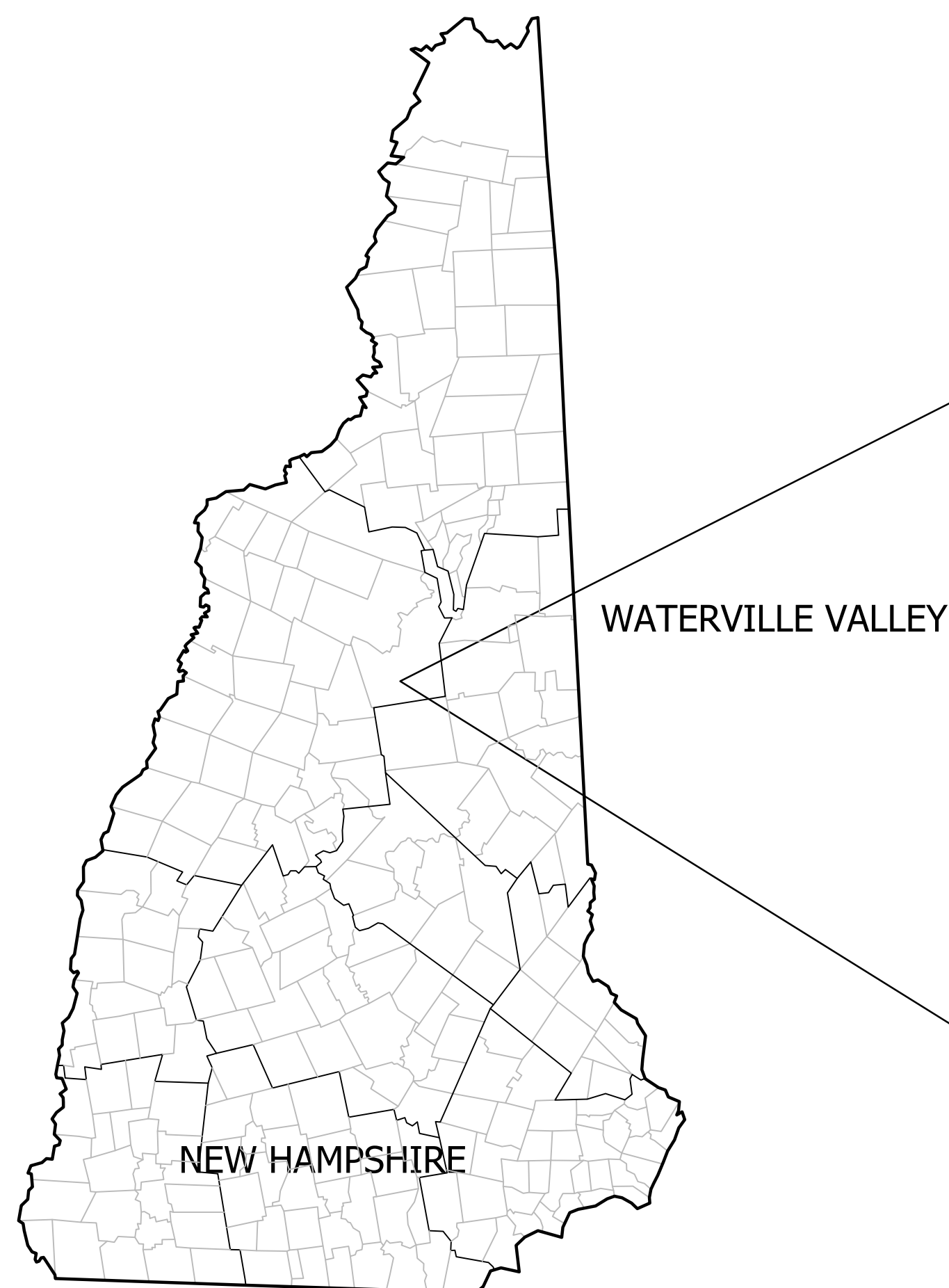
OWNER:

TYRELL DEVELOPMENT COMPANY, LLC
 11 COURT STREET, SUITE 230
 PO BOX 1001, EXETER, NH 03833

ENGINEER:

horizons
Engineering

34 SCHOOL STREET
 LITTLETON, NH 03561
 (603) 444-4111

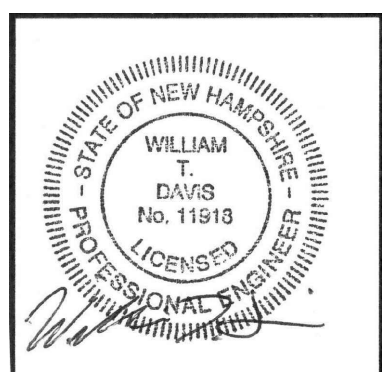


LOCATION PLAN

SCALE: 1" = 2000'

SHEET INDEX:

- C-1 COVER SHEET, LOCATION PLAN & SHEET INDEX
- C-2 EXISTING CONDITIONS
- C-3 GRADING, DRAINAGE, UTILITIES AND EROSION CONTROL PLAN
- C-4 ROADWAY PLAN, TYPICAL SECTIONS, AND PROFILES
- C-5 DRAINAGE DETAILS
- C-6 STANDARD WATER SYSTEM DETAILS AND NOTES
- C-7 STANDARD SANITARY SEWER NOTES AND DETAILS
- C-8 EROSION CONTROL NOTES & DETAILS
- S-1 GREEN PEAK CONDOMINIUM PLAN
- S-2 GREEN PEAK CONDOMINIUM PLAN
- 1 FLOOR PLANS
- 2 ELEVATIONS



FOR REVIEW
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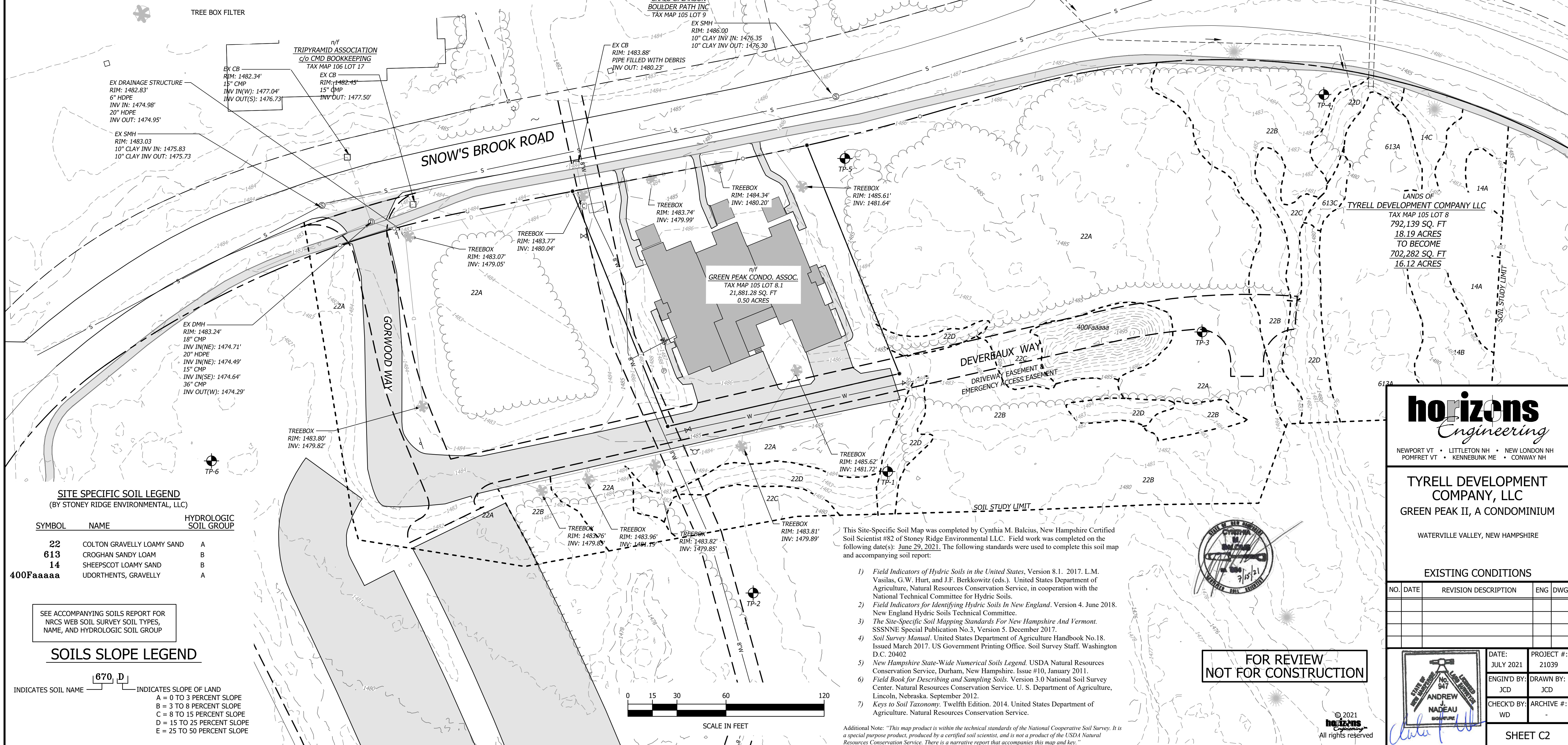
DATE OF PRINT
 AUGUST 02 2021
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LEGEND

- 1 FOOT CONTOURS
- 5 FOOT CONTOURS
- DRAIN LINE
- PAVEMENT
- PROPERTY LINE
- SETBACK LINE
- SOILS BOUNDARY
- TREELINE
- WATER MAIN
- CATCH BASIN
- DRAIN MANHOLE
- SEWER MANHOLE
- SEWER MAIN (GRAVITY)
- SEWER SERVICE (GRAVITY)
- WATER SERVICE
- WATER SHUT OFF
- REDUCER
- GATE VALVE
- HYDRANT
- UTILITY POLE
- TEST PIT LOCATION
- TREE BOX FILTER

GENERAL NOTES

1. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS.
2. NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION.
3. ALL WORK SHALL BE PERFORMED WITHIN THE PROPERTY OF, AND EASEMENTS SECURED BY, THE OWNER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DATA COLLECTION AND PREPARATION OF RECORD DRAWINGS.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTROLLING EROSION IN ALL AREAS DISTURBED BY HIS ACTIONS. COSTS FOR REQUIRED EROSION CONTROL, REGARDLESS OF WHETHER OR NOT SUCH MEASURES ARE SHOWN ON THE ENGINEERING DRAWINGS, SHALL BE BORNE BY HIM.
6. UTILITY LOCATIONS ARE BASED ON THE BEST AVAILABLE INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PROTECTION OF EXISTING UTILITIES AND SHALL REPAIR ANY DAMAGE AS QUICKLY AS POSSIBLE AT HIS OWN EXPENSE. ALL UTILITIES ENCOUNTERED SHALL BE LOCATED BY DEPTH AND TIES AND SHOWN BY THE CONTRACTOR ON HIS "AS BUILT" DRAWINGS. HAND EXCAVATION SHALL BE DONE WHEREVER UNDERGROUND UTILITIES ARE SHOWN OR ANTICIPATED. THE CONTRACTOR SHALL CONTACT DIG SAFE AND THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION IN ORDER TO VERIFY EXISTING CONDITIONS AND UTILITY LOCATIONS.
7. RECORD OWNER:
TYRELL DEVELOPMENT COMPANY, LLC
11 COURT STREET, SUITE 230
EXETER, NH 03833
8. PARCEL IS DEPICTED AS LOT 8 ON WATERVILLE VALLEY PROPERTY MAP 105.
9. THE PREMISES ARE LOCATED WITHIN THE COMMERCIAL 1 DISTRICT PER TOWN OF WATERVILLE VALLEY ZONING.
MINIMUM LOT SIZE: N/A
MAX. BUILDING HEIGHT: 45'
LOT COVERAGE: N/A
OPEN SPACE: 1/5TH
SETBACKS:
10' RIGHT OF WAY OF ANY STREET
10' PAVED EDGE OF INTERNAL ROAD
5' SETBACK OFF STREET PARKING AND RIGHT OF WAY OF STREET
SIDE = 10'
REAR = 10'
10. THE PREMISES ARE NOT WITHIN A DEFINED FLOOD HAZARD ZONE.
11. NO WETLANDS WERE FOUND WITHIN THE SOIL STUDY LIMITS.
12. AERIAL TOPOGRAPHY AND BASEMAP INFORMATION WAS PREPARED BY POTOMAC AERIAL SURVEYS, INC. DATED JULY 1997. ADDITIONAL UTILITY INFORMATION PROVIDED BY R.M PIPER, MARCH 2005, AND FIELD SURVEY PERFORMED BY HORIZONS ENGINEERING, INC. IN MAY, 2011.



SITE SPECIFIC SOIL LEGEND
(BY STONEY RIDGE ENVIRONMENTAL, LLC)

| SYMBOL | NAME | HYDROLOGIC SOIL GROUP |
|-----------|----------------------------|-----------------------|
| 22 | COLTON GRAVELLY LOAMY SAND | A |
| 613 | CROGHAN SANDY LOAM | B |
| 14 | SHEEPSHOT LOAMY SAND | B |
| 400Faaaaa | UDORTHENTS, GRAVELLY | A |

SOILS SLOPE LEGEND

INDICATES SOIL NAME **[670, D]** INDICATES SLOPE OF LAND

- A = 0 TO 3 PERCENT SLOPE
- B = 3 TO 8 PERCENT SLOPE
- C = 8 TO 15 PERCENT SLOPE
- D = 15 TO 25 PERCENT SLOPE
- E = 25 TO 50 PERCENT SLOPE



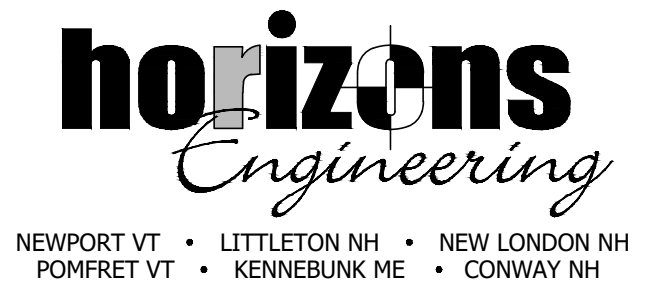
This Site-Specific Soil Map was completed by Cynthia M. Balcius, New Hampshire Certified Soil Scientist #82 of Stoney Ridge Environmental LLC. Field work was completed on the following date(s): June 29, 2021. The following standards were used to complete this soil map and accompanying soil report:

- 1) Field Indicators of Hydric Soils in the United States, Version 8.1. 2017. L.M. Vasilas, G.W. Hurt, and J.F. Berkkowitz (eds.). United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with the National Technical Committee for Hydric Soils.
- 2) Field Indicators for Identifying Hydric Soils in New England, Version 4. June 2018. New England Hydric Soils Technical Committee.
- 3) The Site-Specific Soil Mapping Standards For New Hampshire And Vermont. SSSNNE Special Publication No.3, Version 5. December 2017.
- 4) Soil Survey Manual, United States Department of Agriculture Handbook No.18. Issued March 2017. US Government Printing Office. Soil Survey Staff. Washington D.C. 20402
- 5) New Hampshire State-Wide Numerical Soils Legend. USDA Natural Resources Conservation Service, Durham, New Hampshire. Issue #10, January 2011.
- 6) Field Book for Describing and Sampling Soils. Version 3.0 National Soil Survey Center. Natural Resources Conservation Service. U. S. Department of Agriculture, Lincoln, Nebraska. September 2012.
- 7) Keys to Soil Taxonomy. Twelfth Edition. 2014. United States Department of Agriculture, Natural Resources Conservation Service.

Additional Note: "This map product is within the technical standards of the National Cooperative Soil Survey. It is a special purpose product, produced by a certified soil scientist, and is not a product of the USDA National Resources Conservation Service. There is a narrative report that accompanies this map and key."



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TYRELL DEVELOPMENT COMPANY, LLC
GREEN PEAK II, A CONDOMINIUM

WATERVILLE VALLEY, NEW HAMPSHIRE

EXISTING CONDITIONS

| NO. | DATE | REVISION DESCRIPTION | ENG | DWG |
|-----|------|----------------------|-----|-----|
| | | | | |



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| DATE: JULY 2021 | PROJECT #: 21039 |
| ENGINE'D BY: JCD | DRAWN BY: JCD |
| CHECK'D BY: WD | ARCHIVE #: |

SHEET C2

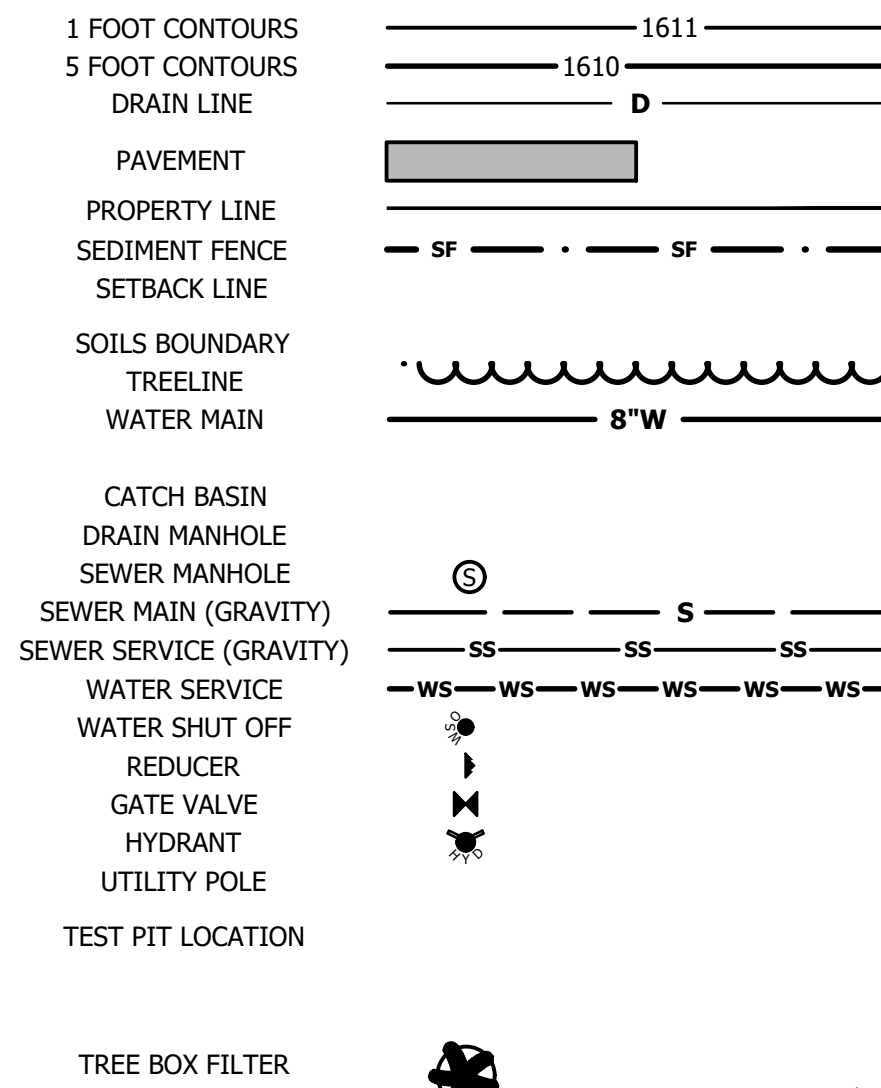
STORMWATER NOTES

- PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
- SWALES SHALL BE INSTALLED BEFORE ROUGH GRADING THE SITE.
- RUNOFF SHALL BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.
- LIMIT THE LENGTH OF EXPOSURE OF UNSTABILIZED SOIL TO 45 DAYS OR LESS.
- EROSION CONTROL PRACTICES ARE TO BE INSPECTED WEEKLY AND AFTER 0.5" OF RAINFALL.
- CUT AND FILL SLOPES SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- STABILIZED MEANS:
IN AREAS TO BE PAVED, BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN INSTALLED. IN VEGETATED AREAS, A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED OR EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- UNDERGROUND ELECTRIC SHALL BE INSTALLED ACCORDING TO PLANS AND SPECIFICATIONS PREPARED BY NEW HAMPSHIRE ELECTRIC COOP. CABLE TV AND PHONE LINES SHALL FOLLOW THE SAME PLAN AND BE INSTALLED ACCORDING TO SPECIFICATIONS PROVIDED BY THE SERVICE PROVIDER.

INVASIVE SPECIES AND FUGITIVE DUST:

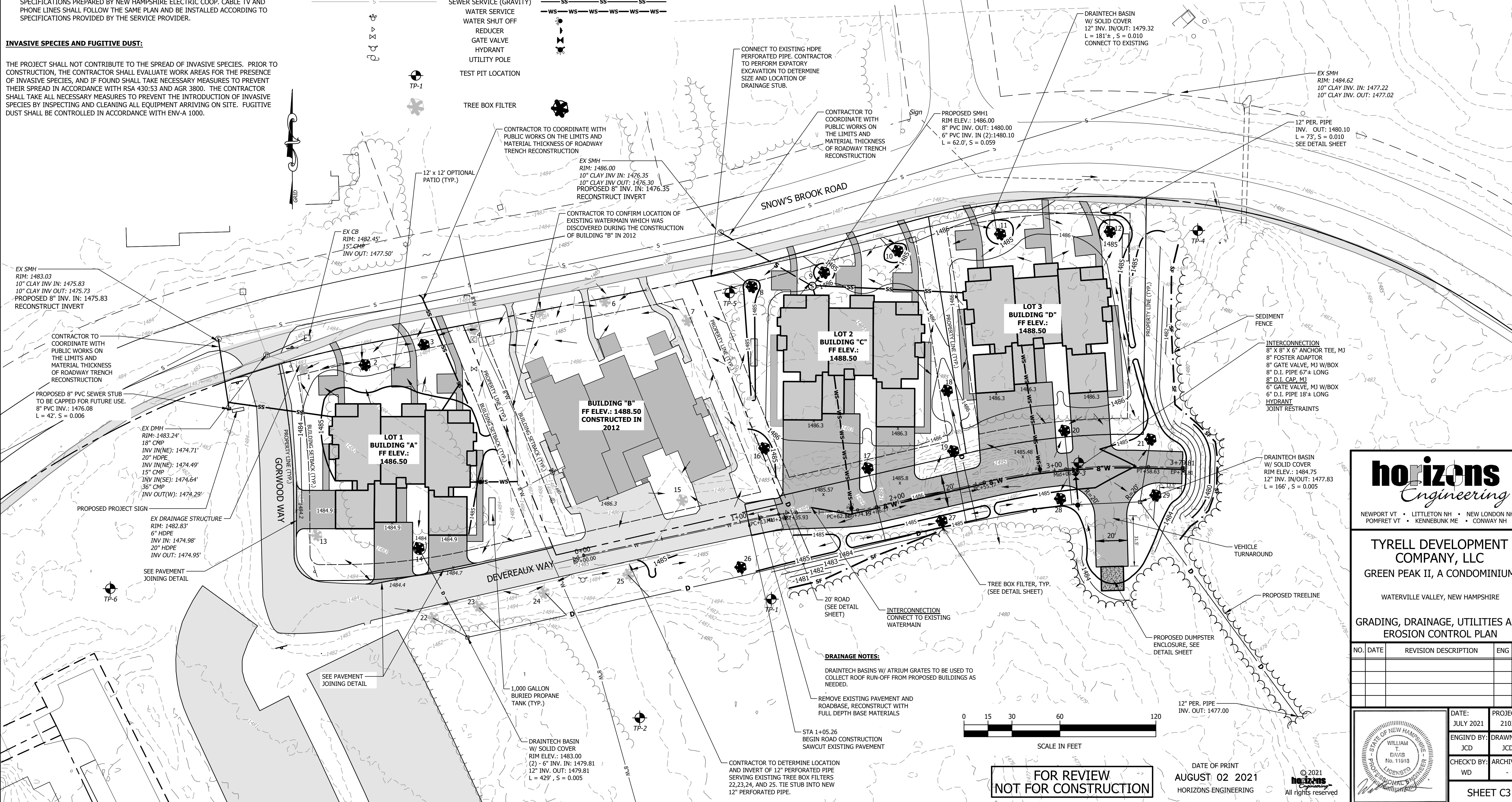
THE PROJECT SHALL NOT CONTRIBUTE TO THE SPREAD OF INVASIVE SPECIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EVALUATE WORK AREAS FOR THE PRESENCE OF INVASIVE SPECIES, AND IF FOUND SHALL TAKE NECESSARY MEASURES TO PREVENT THEIR SPREAD IN ACCORDANCE WITH RSA 430:53 AND AGR 3800. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT THE INTRODUCTION OF INVASIVE SPECIES BY INSPECTING AND CLEANING ALL EQUIPMENT ARRIVING ON SITE. FUGITIVE DUST SHALL BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.

LEGEND

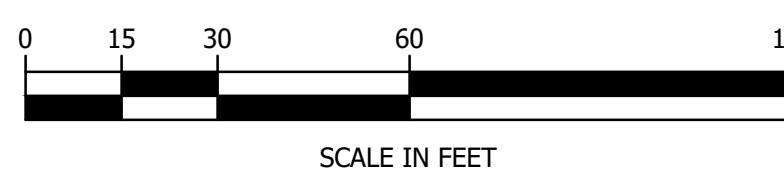


OPEN SPACE CALCULATIONS

- LOT 1 TOTAL AREA: 20,118 SF
BUILDINGS, PARKING, ROADS, DRIVES: 8,171 SF
OPEN SPACE: 11,947 SF
OPEN SPACE %: 59%
- LOT 2 TOTAL AREA: 19,922 SF
BUILDINGS, PARKING, ROADS, DRIVES: 8,587 SF
OPEN SPACE: 11,335 SF
OPEN SPACE %: 57%
- LOT 3 TOTAL AREA: 18,614 SF
BUILDINGS, PARKING, ROADS, DRIVES: 8,175 SF
OPEN SPACE: 10,439 SF
OPEN SPACE %: 56%

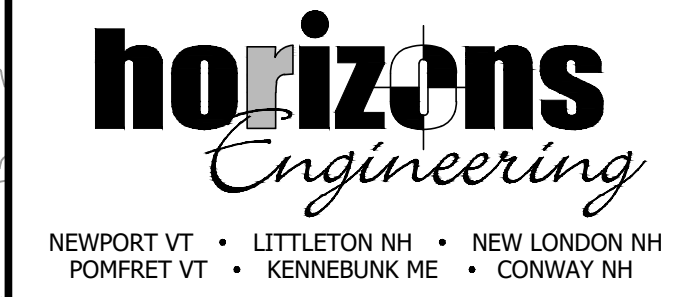


DRAINAGE NOTES:
DRAINTech BASINS W/ ATRIUM GRATES TO BE USED TO COLLECT ROOF RUN-OFF FROM PROPOSED BUILDINGS AS NEEDED.
REMOVE EXISTING PAVEMENT AND ROADBASE, RECONSTRUCT WITH FULL DEPTH BASE MATERIALS



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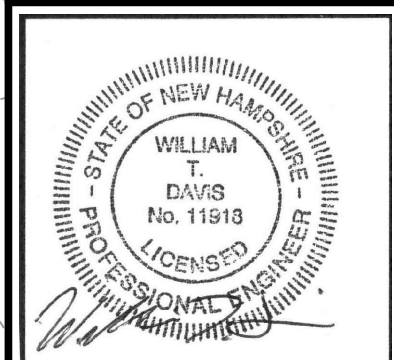


TYRELL DEVELOPMENT COMPANY, LLC
GREEN PEAK II, A CONDOMINIUM
WATERVILLE VALLEY, NEW HAMPSHIRE

GRADING, DRAINAGE, UTILITIES AND EROSION CONTROL PLAN

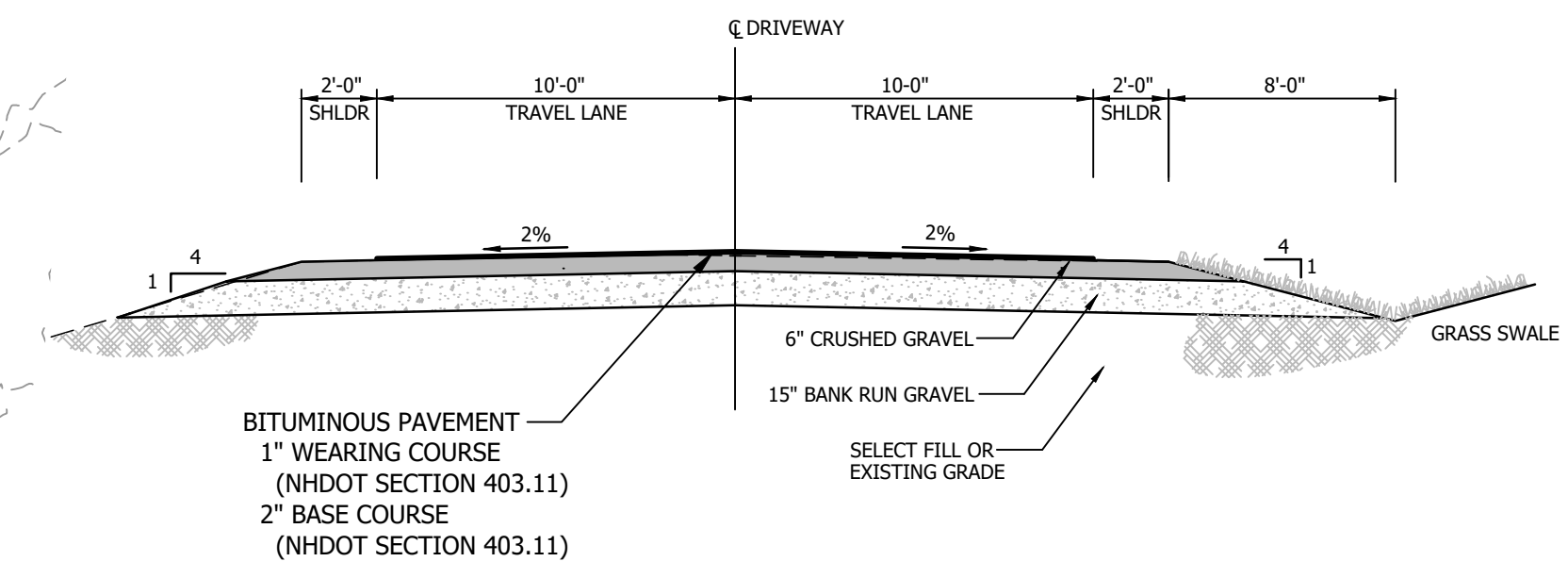
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| DATE: JULY 2021 | PROJECT #: 21039 |
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| CHECK'D BY: WD | ARCHIVE #: |
| SHEET C3 | |

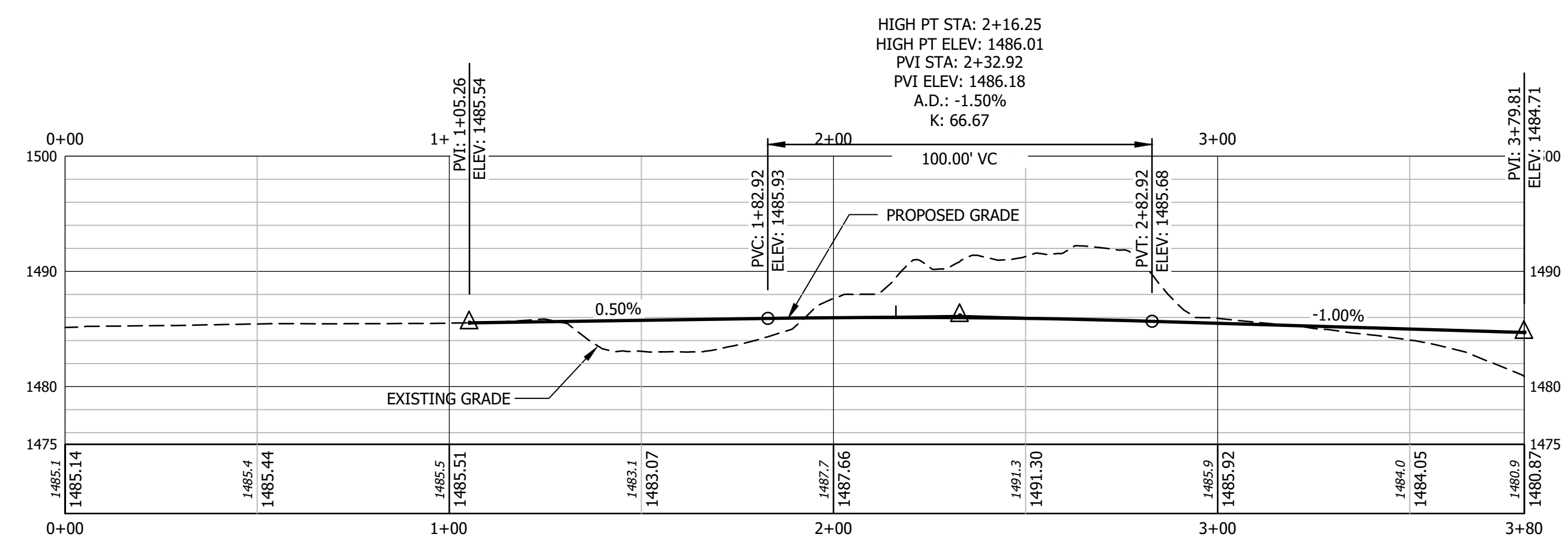
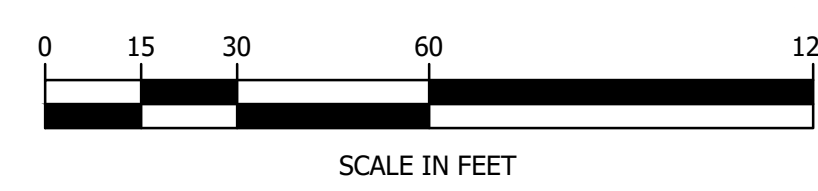


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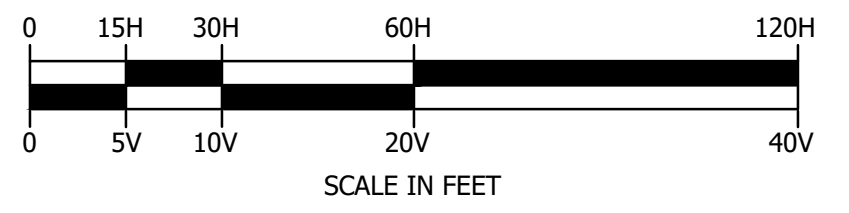
Y:\21039 Summit Green Peak Waterville Valley\DWGS\Final\21039_Site03.dwg, SITE, 8/2/2021 3:09:38 PM, jcd\jcd



DEVEREAUX WAY ROAD SECTION
NOT TO SCALE



DEVEREAUX WAY PH1
STA: 0+00 to STA: 3+80



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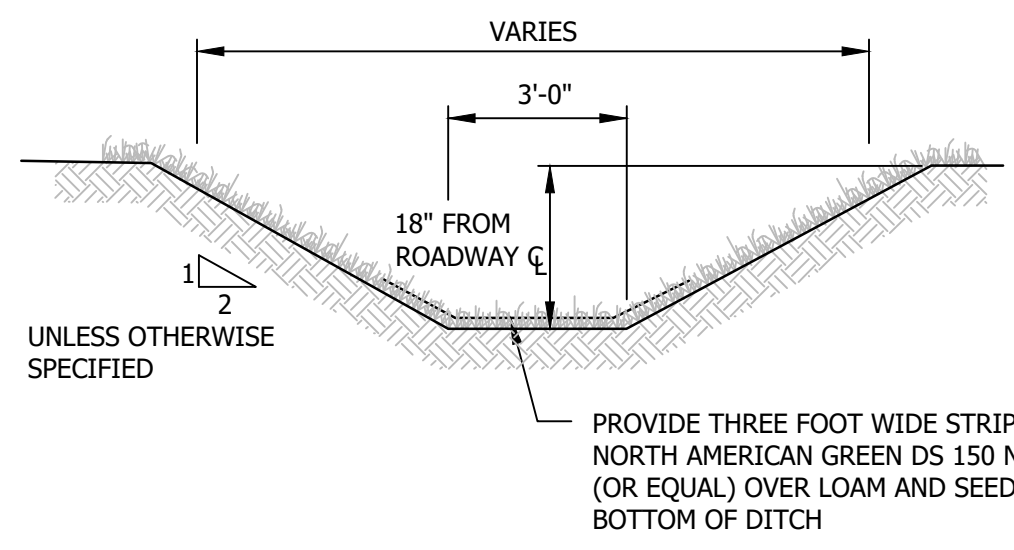
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GREEN PEAK II, A CONDOMINIUM
WATERVILLE VALLEY, NEW HAMPSHIRE
ROADWAY PLAN, TYPICAL SECTIONS, AND PROFILES

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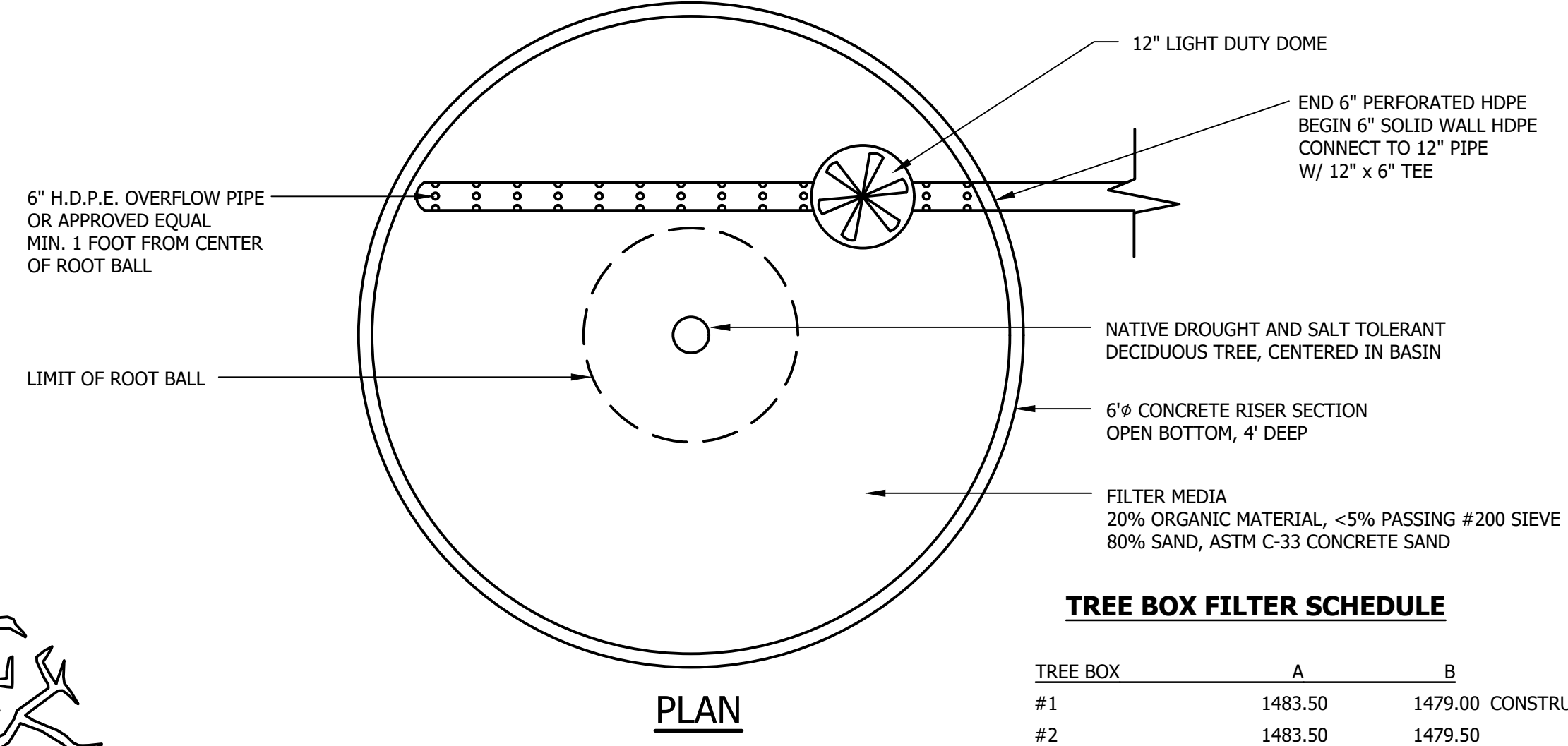
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| | JCD | JCD |
| CHECK'D BY: | ARCHIVE #: | |
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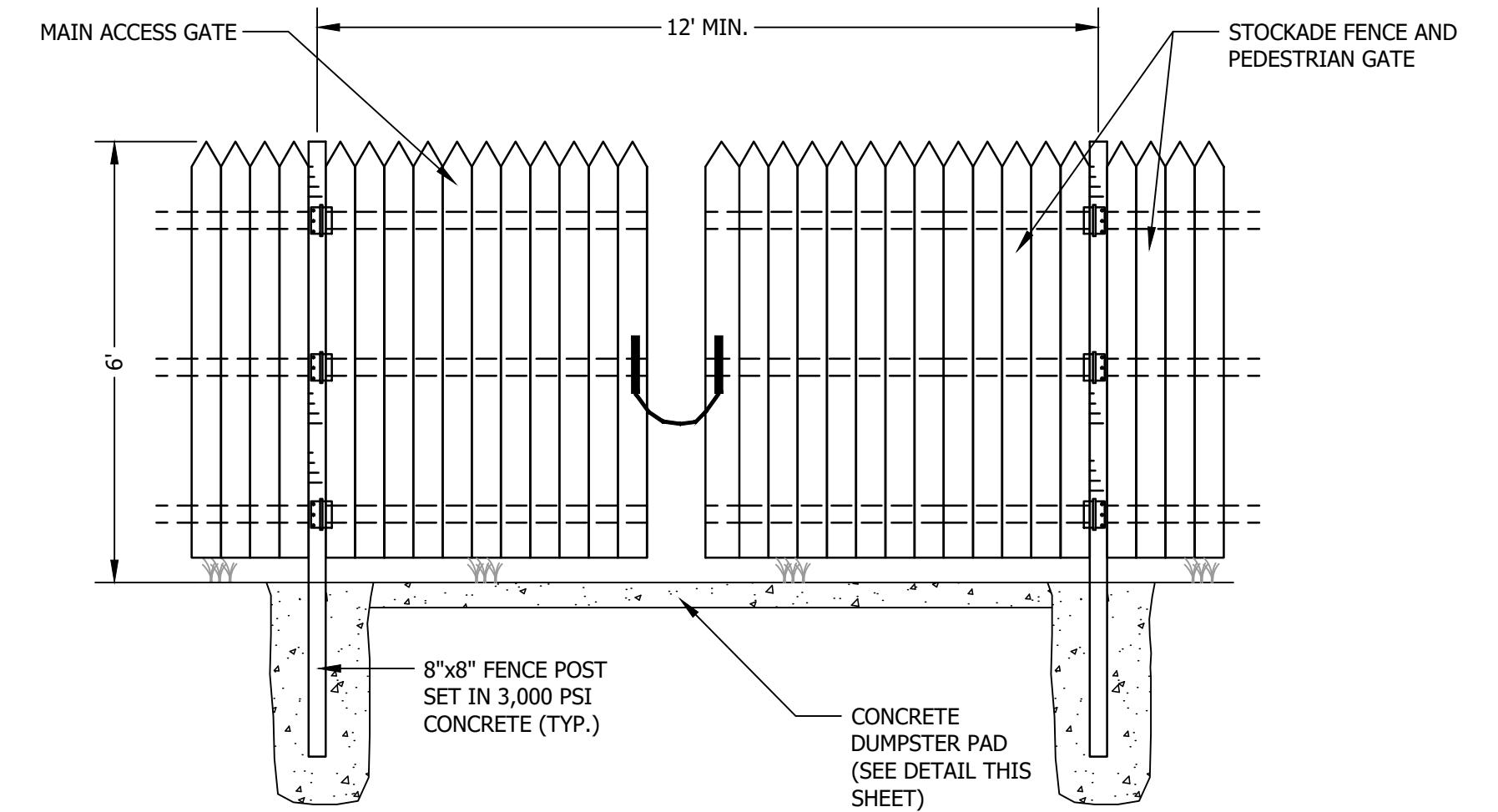
GRASS LINED DITCH DETAIL
NOT TO SCALE



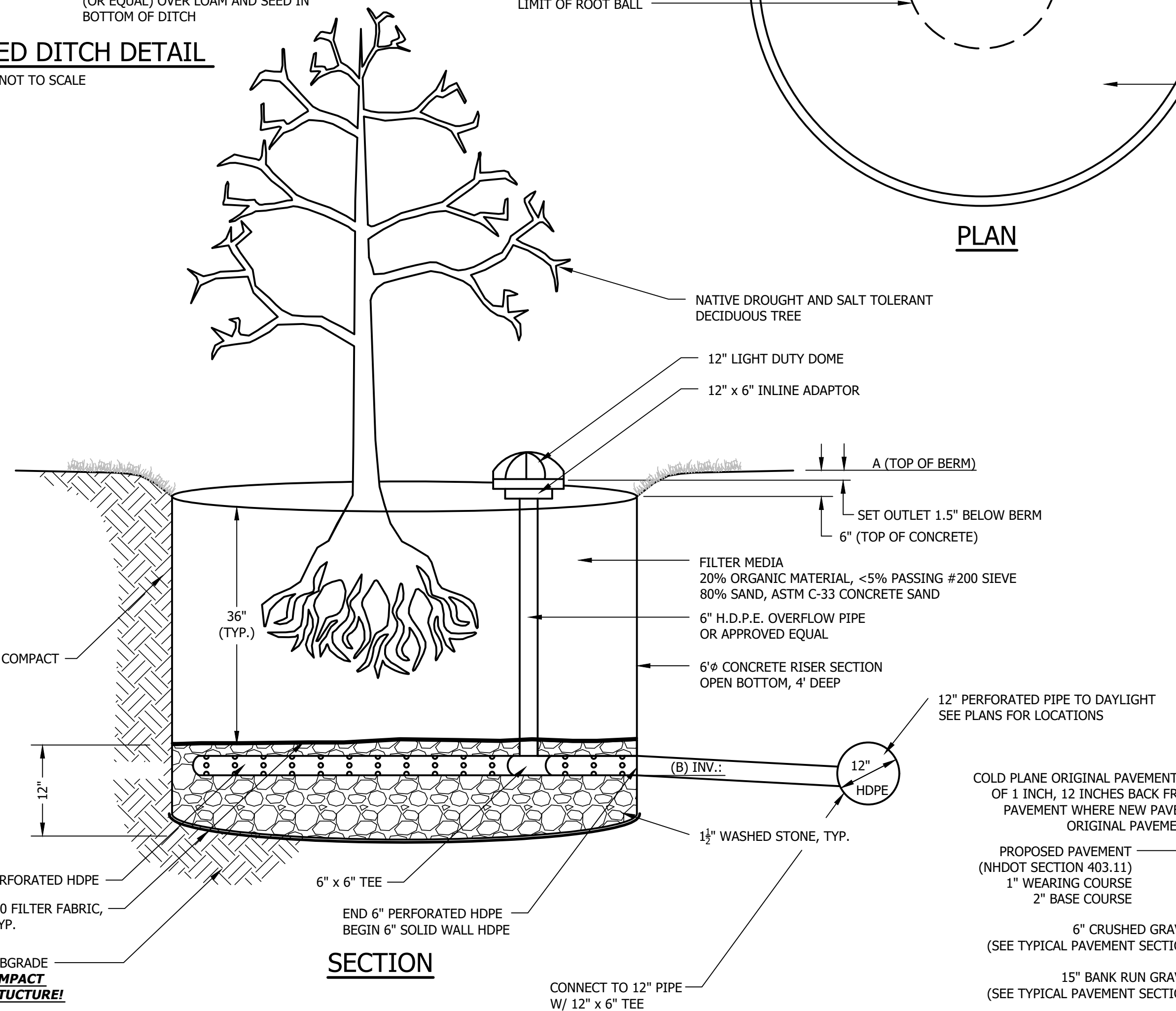
PLAN

TREE BOX FILTER SCHEDULE

| TREE BOX | A | B |
|----------|---------|---------------------|
| #1 | 1483.50 | 1479.00 CONSTRUCTED |
| #2 | 1483.50 | 1479.50 |
| #3 | 1483.50 | 1479.50 |
| #4 | 1484.00 | 1480.04 CONSTRUCTED |
| #5 | 1484.00 | 1480.00 CONSTRUCTED |
| #6 | 1485.00 | 1480.20 CONSTRUCTED |
| #7 | 1485.60 | 1481.64 CONSTRUCTED |
| #8-#12 | 1484.50 | 1480.50 |
| #13 | 1484.00 | 1479.82 CONSTRUCTED |
| #14 | 1484.00 | 1480.00 |
| #15 | 1484.00 | 1481.72 CONSTRUCTED |
| #16 | 1484.00 | 1480.00 |
| #17-#19 | 1485.50 | 1481.50 |
| #20 | 1485.00 | 1481.00 |
| #21 | 1484.50 | 1480.50 |
| #22 | 1484.00 | 1479.85 CONSTRUCTED |
| #23 | 1484.00 | 1481.19 CONSTRUCTED |
| #24 | 1484.00 | 1479.85 CONSTRUCTED |
| #25 | 1484.00 | 1479.90 CONSTRUCTED |
| #26-#29 | 1484.50 | 1480.50 |

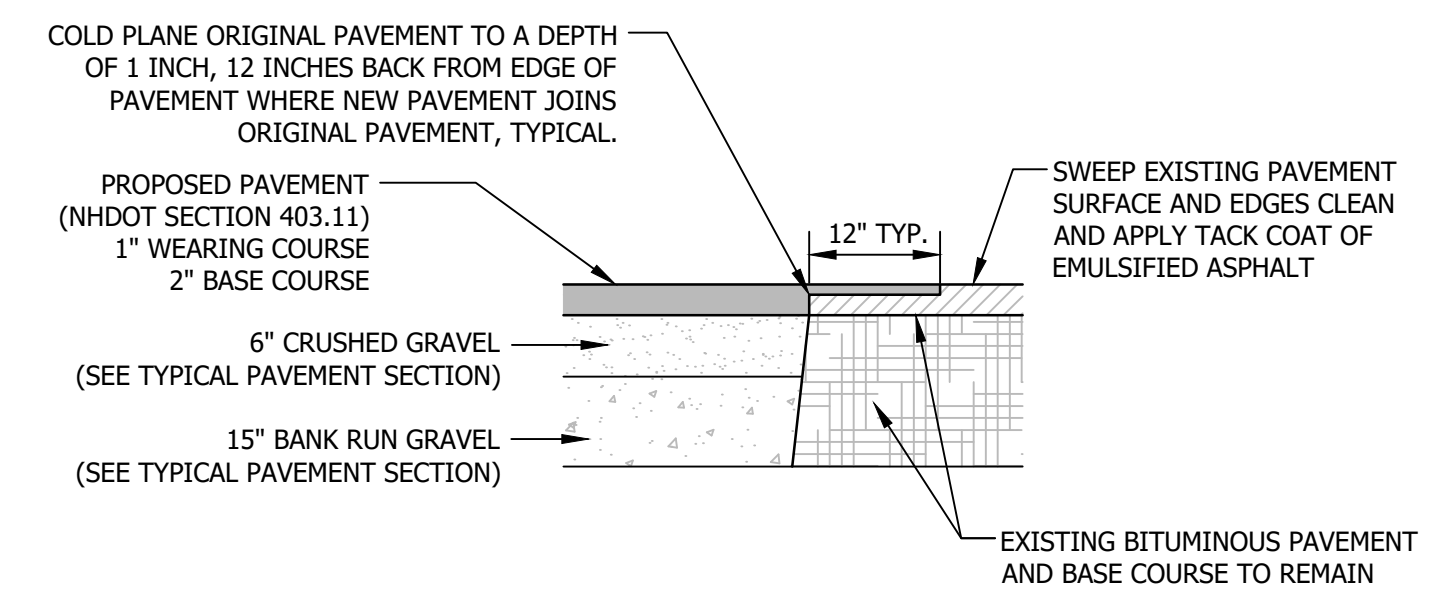


SCREEN FENCE AND GATE FOR DUMPSTER PAD
NOT TO SCALE

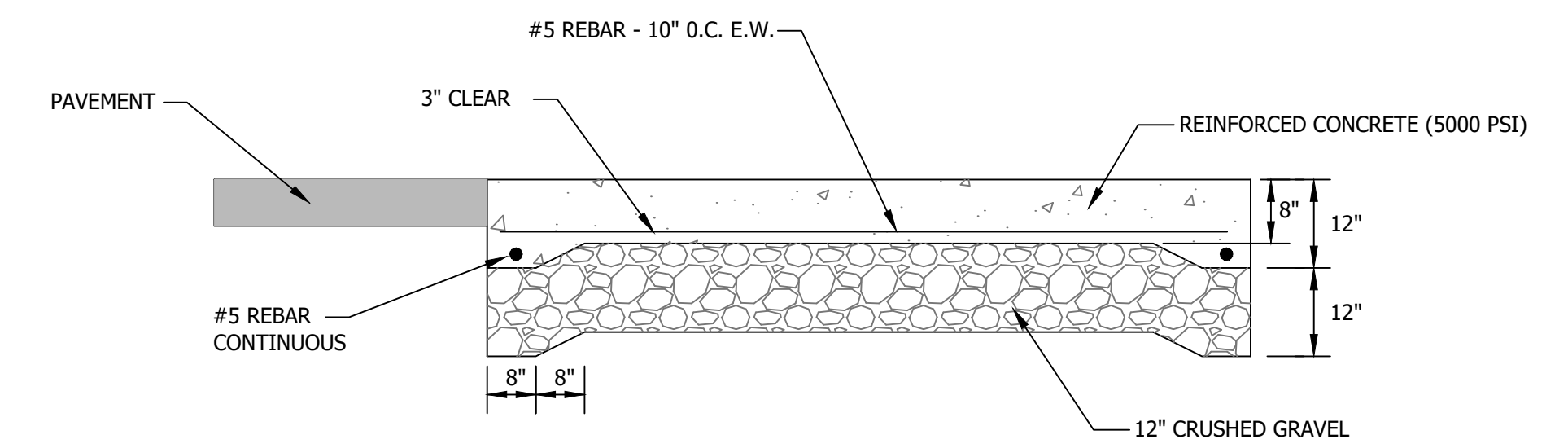


SECTION

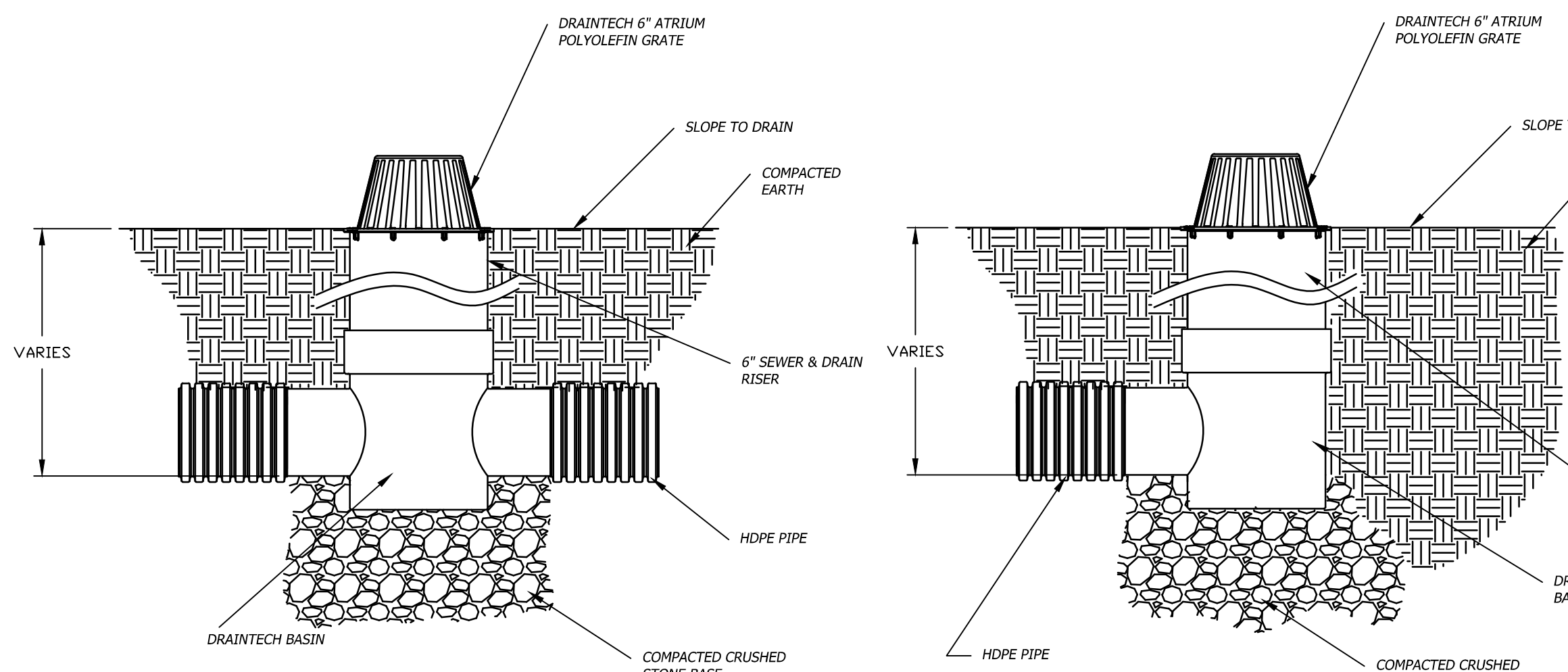
TREE BOX FILTER DETAIL
NOT TO SCALE



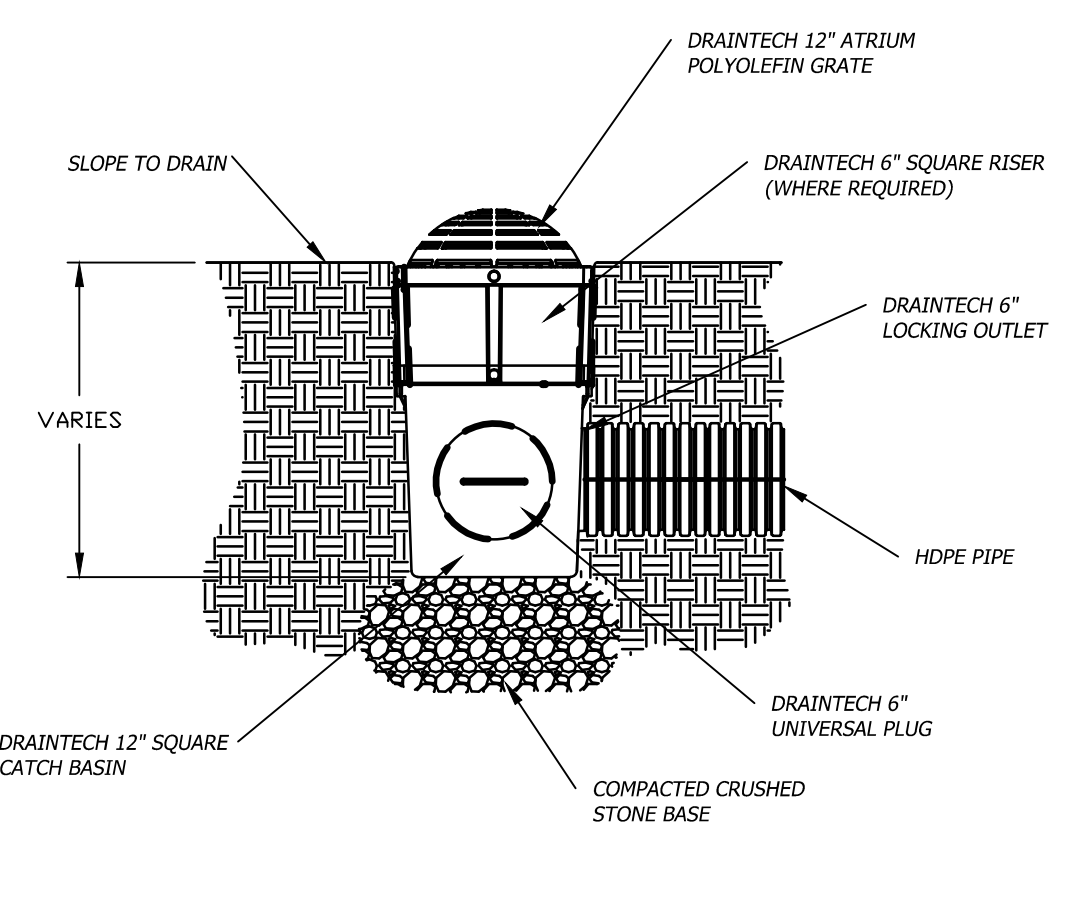
PAVEMENT JOINING DETAIL
NOT TO SCALE



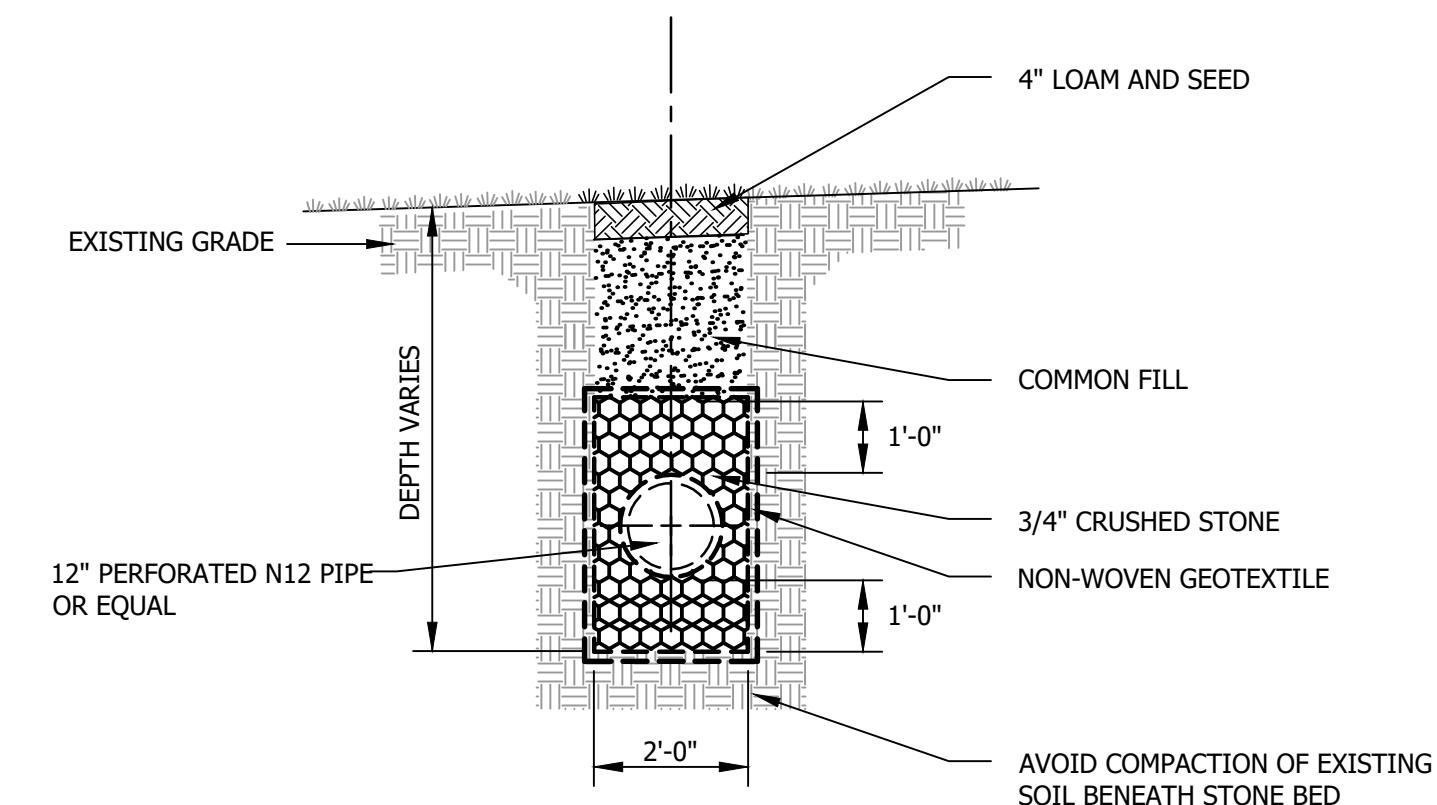
14' WIDE x 15' DEEP DUMPSTER PAD DETAIL
NOT TO SCALE



DRAINTECH BASIN W/CORRUGATED PIPE AND ATRIUM GRATE
NOT TO SCALE



DRAINTECH 12" SQ. CB W/CORR. PIPE & ATRIUM GR. (LANDSCAPE APP.)
NOT TO SCALE



12" PERFORATED DRAIN DETAIL
NOT TO SCALE

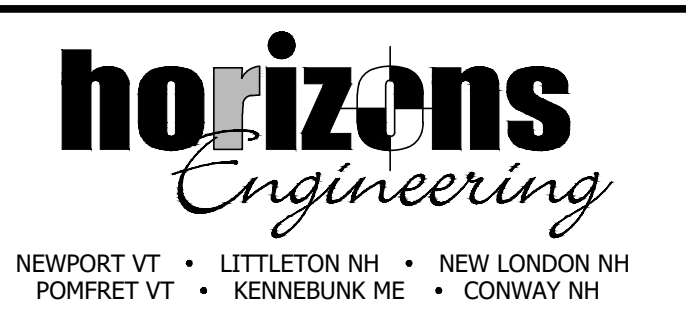
- NOTES:**
1. MAX COVER OVER TOP OF PIPE IS 4 FT. CONTACT ADS IF OTHERWISE GREATER.
 2. GRATE OR LID MUST BE INSTALLED PRIOR TO BACKFILLING
 3. PRODUCT SPECIFIED BY ADS. CONTRACTOR MAY SUBSTITUTE TO ENGINEER FOR APPROVED EQUAL



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GREEN PEAK II, A CONDOMINIUM
WATERVILLE VALLEY, NEW HAMPSHIRE

DRAINAGE DETAILS

| NO. | DATE | REVISION DESCRIPTION | ENG | DWG |
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| DATE: JULY 2021 | PROJECT #: 21039 |
| ENGINE'D BY: JCD | DRAWN BY: JCD |
| CHECK'D BY: WD | ARCHIVE #: - |
| SHEET C5 | |

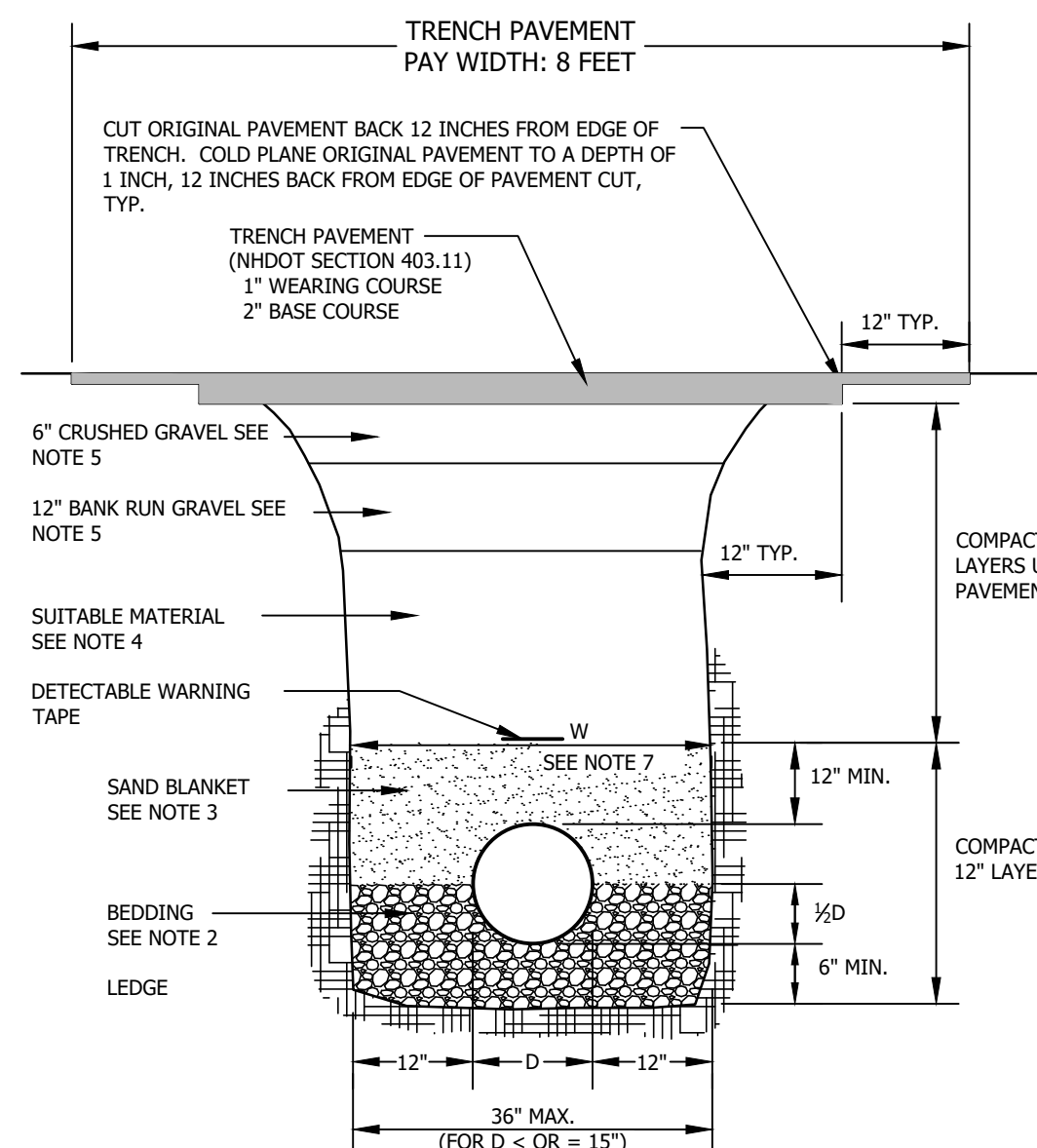
Y:\21039-Sumnuu Green Peak Waterville Valley\DWGS\Final\21039_Sched03.dwg, DETAILS, 8/2/2021 3:10:02 PM, jcdigneault

STANDARD TRENCH NOTES - WATER

- ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE SHALL BE REPLACED WITH BEDDING MATERIAL.** SEE ALSO NOTE 4.
- BEDDING:** SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM ORGANIC MATTER, CLAY, AND/OR LOAM MEETING ASTM C33 STONE SIZE NO. 67.

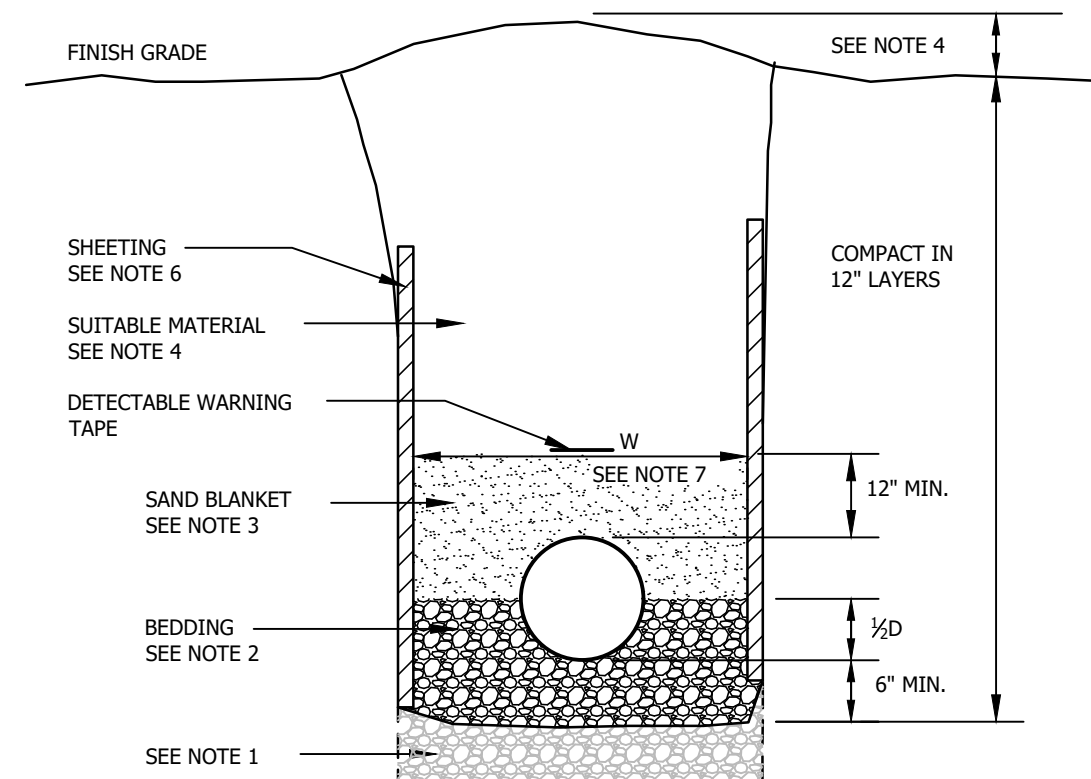
| | |
|-----------------|---------------|
| 100% PASSING | 1 INCH SCREEN |
| 90-100% PASSING | ¾ INCH SCREEN |
| 20-55% PASSING | ½ INCH SCREEN |
| 0-10% PASSING | #4 SIEVE |
| 0-5% PASSING | #8 SIEVE |
- SAND BLANKET:** CLEAN SAND FREE FROM ORGANIC MATTER, SO GRADED THAT 100% PASSES A ½ INCH SIEVE AND NOT MORE THAN 15% PASSES A #200 SIEVE.
- SUITABLE MATERIAL:** IN ROADS, ROAD SHOULDERS, WALKWAYS, AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED FROM THE TRENCH DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT OR CLAY, EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIAL NOT APPROVED BY THE ENGINEER.

TRENCH BACKFILL IN CROSS-COUNTRY LOCATIONS SHALL BE SUITABLE MATERIAL AS DESCRIBED ABOVE, EXCEPT THAT TOP SOIL, LOAM, MUCK, OR PEAT MAY BE USED PROVIDED THAT THE COMPLETED CONSTRUCTION WILL BE STABLE AND ACCESS TO THE PIPE FOR MAINTENANCE AND RECONSTRUCTION IS PRESERVED. BACKFILL SHALL BE MOUND TO A HEIGHT OF SIX INCHES ABOVE THE ORIGINAL GROUND SURFACE
- BASE COURSE FOR TRENCH REPAIR** SHALL MEET THE REQUIREMENTS OF SECTION 300 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
- SHEETING:** WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE. WHERE SHEETING IS TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE.
- TRENCH DIMENSIONS:** W = MAXIMUM ALLOWABLE TRENCH WIDTH MEASURED 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER (D) OR LESS, W SHALL BE NO MORE THAN 36 INCHES; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS THE PIPE OUTSIDE DIAMETER. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE. THE MAXIMUM ALLOWABLE TRENCH PAVEMENT PAYMENT WIDTH SHALL BE 8 FEET CENTERED OVER PIPE.
- WATER/SEWER SEPARATION:** WATER MAINS SHALL BE SEPARATED FROM SANITARY SEWER BY A MINIMUM OF 10 FEET HORIZONTALLY AND A MINIMUM OF 18 INCHES VERTICALLY, WITH THE WATER MAIN ABOVE THE SEWER.
- PIPE COVER:** COVER OVER WATER SHALL BE 6 FEET MINIMUM IN ALL LOCATIONS.



NOTE:
MINIMUM BEDDING DEPTH AND MAXIMUM PAYMENT LIMIT FOR LEDGE EXCAVATION = ¼D (6" MINIMUM)

LEDGE/SUB PAVEMENT CONSTRUCTION



EARTH CONSTRUCTION WITH OR WITHOUT SHEETING

STANDARD TRENCH SECTIONS

NOT TO SCALE

- BLOCKS MUST BE POURED AGAINST UNDISTURBED SOIL
- THE PIPE JOINT AND BOLTS MUST BE ACCESSIBLE.
- CONCRETE SHOULD BE CURED FOR AT LEAST 5 DAYS AND SHOULD HAVE A COMPRESSION STRENGTH OF 3,000 LBS. AT 28 DAYS.
- BLOCKS MUST BE POSITIONED TO COUNTERACT THE DIRECTION OF THE RESULTANT THRUST FORCE.

RESTRAINED JOINTS MAY BE USED FOR RESISTING THRUST FORCES WHERE THERE IS A SHORTAGE OF SPACE OR WHERE THE SOIL BEHIND A FITTING WILL NOT PROVIDE ADEQUATE SUPPORT. THIS RESTRAINING METHOD INVOLVES PLACEMENT OF THESE SPECIAL JOINTS AT APPROPRIATE FITTINGS AND FOR A PREDETERMINED NUMBER OF PIPE LENGTHS ON EACH SIDE, (MINIMUM 15 FEET).

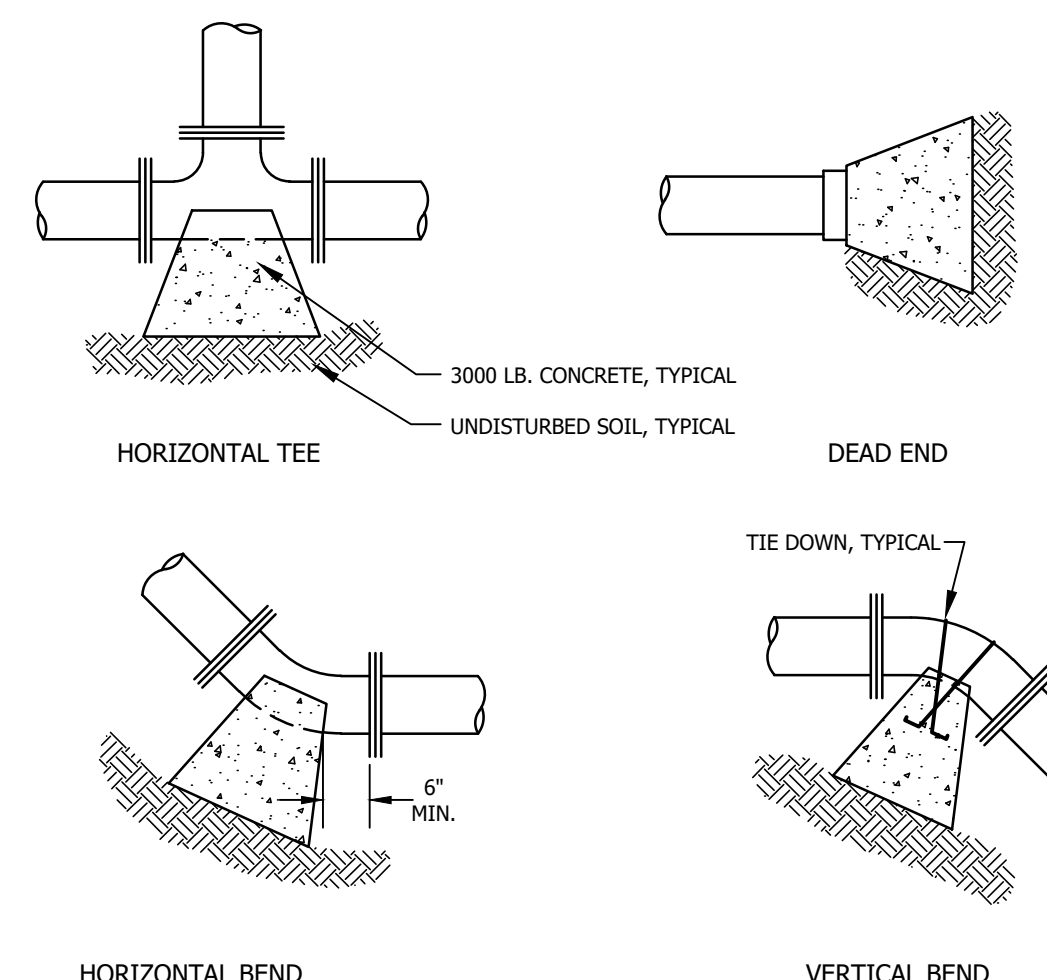
| NOMINAL PIPE DIA. (INCHES) | TOTAL THRUST (POUNDS) | | | | |
|----------------------------|-----------------------|----------|----------|-----------|-----------|
| | DEAD END | 90° BEND | 45° BEND | 22½° BEND | 11¼° BEND |
| 4 | 1,810 | 2,559 | 1,385 | 706 | 355 |
| 6 | 3,739 | 5,288 | 2,862 | 1,459 | 733 |
| 8 | 6,433 | 9,097 | 4,923 | 2,510 | 1,261 |
| 10 | 9,677 | 13,685 | 7,406 | 3,776 | 1,897 |
| 12 | 13,685 | 19,353 | 10,474 | 5,340 | 2,683 |
| 14 | 18,385 | 26,001 | 14,072 | 7,174 | 3,604 |
| 16 | 23,779 | 33,638 | 18,199 | 9,278 | 4,661 |
| 18 | 29,865 | 42,235 | 22,858 | 11,653 | 5,855 |
| 20 | 36,644 | 51,822 | 28,046 | 14,298 | 7,183 |
| 24 | 52,279 | 73,934 | 40,013 | 20,398 | 10,249 |

NOTE:
TO DETERMINE THRUST AT PRESSURES OTHER THAN 100 PSI, MULTIPLY THE THRUST OBTAINED IN THE TABLE BY THE RATIO OF THE PRESSURE TO 100. FOR EXAMPLE, THE THRUST ON A 12 INCH, 90° BEND AT 125 PSI IS:

$$\frac{19,353 \times 125}{100} = 24,191 \text{ POUNDS}$$

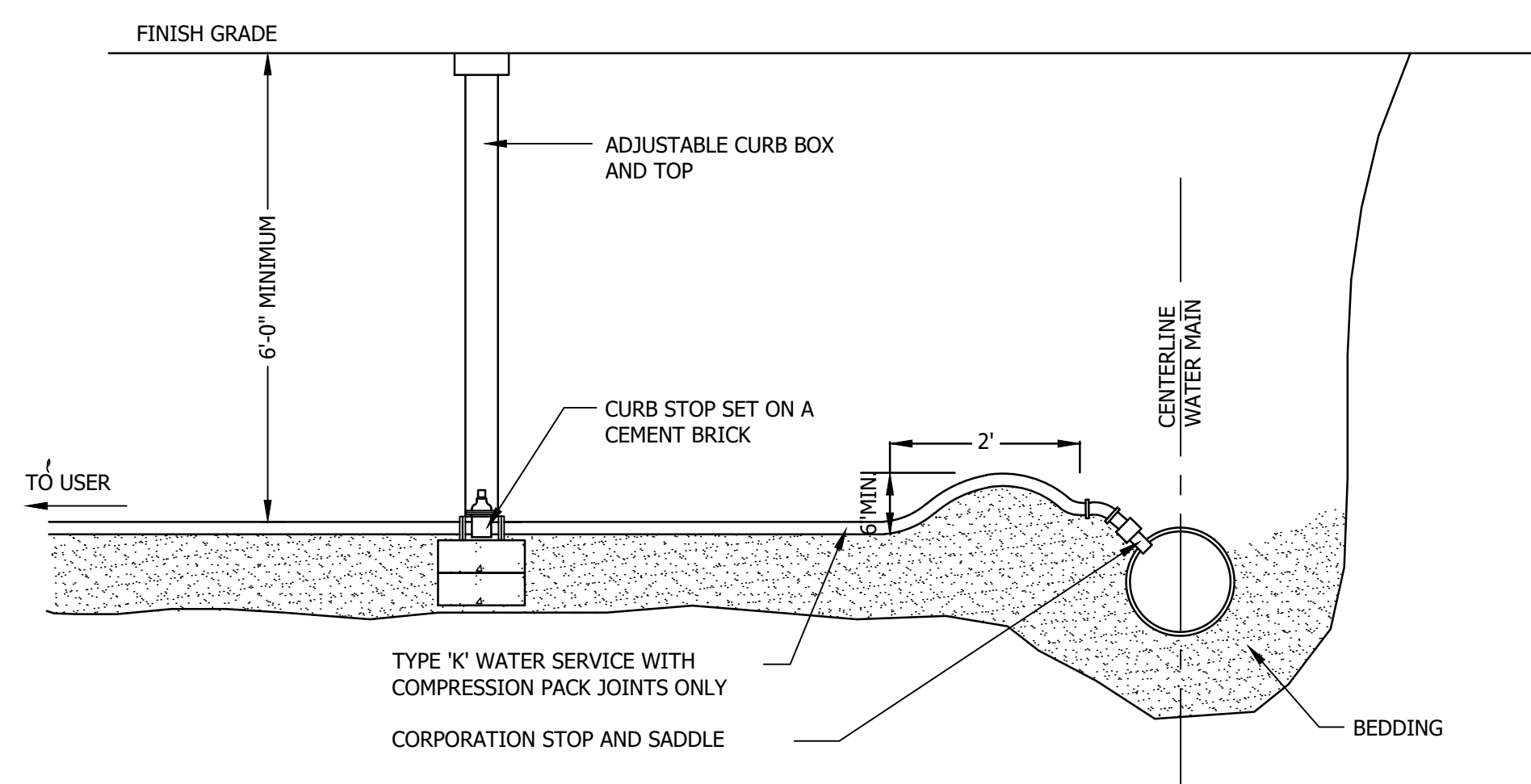
TO DETERMINE THE SIZE OF A CONCRETE THRUST BLOCK, DIVIDE THE TOTAL FORCE BY THE BEARING VALUE OF THE SOIL. THE QUOTIENT WILL BE THE SIZE OF THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET. APPROXIMATE VALUES FOR VARIOUS TYPES OF SOIL ARE LISTED BELOW.

| SOIL | BEARING LOAD (LBS./SQ. FT.) |
|------------|-----------------------------|
| MUCK | 0 |
| SOFT CLAY | 1,000 |
| SILT | 1,500 |
| SANDY SILT | 3,000 |
| SAND | 4,000 |
| SANDY CLAY | 6,000 |



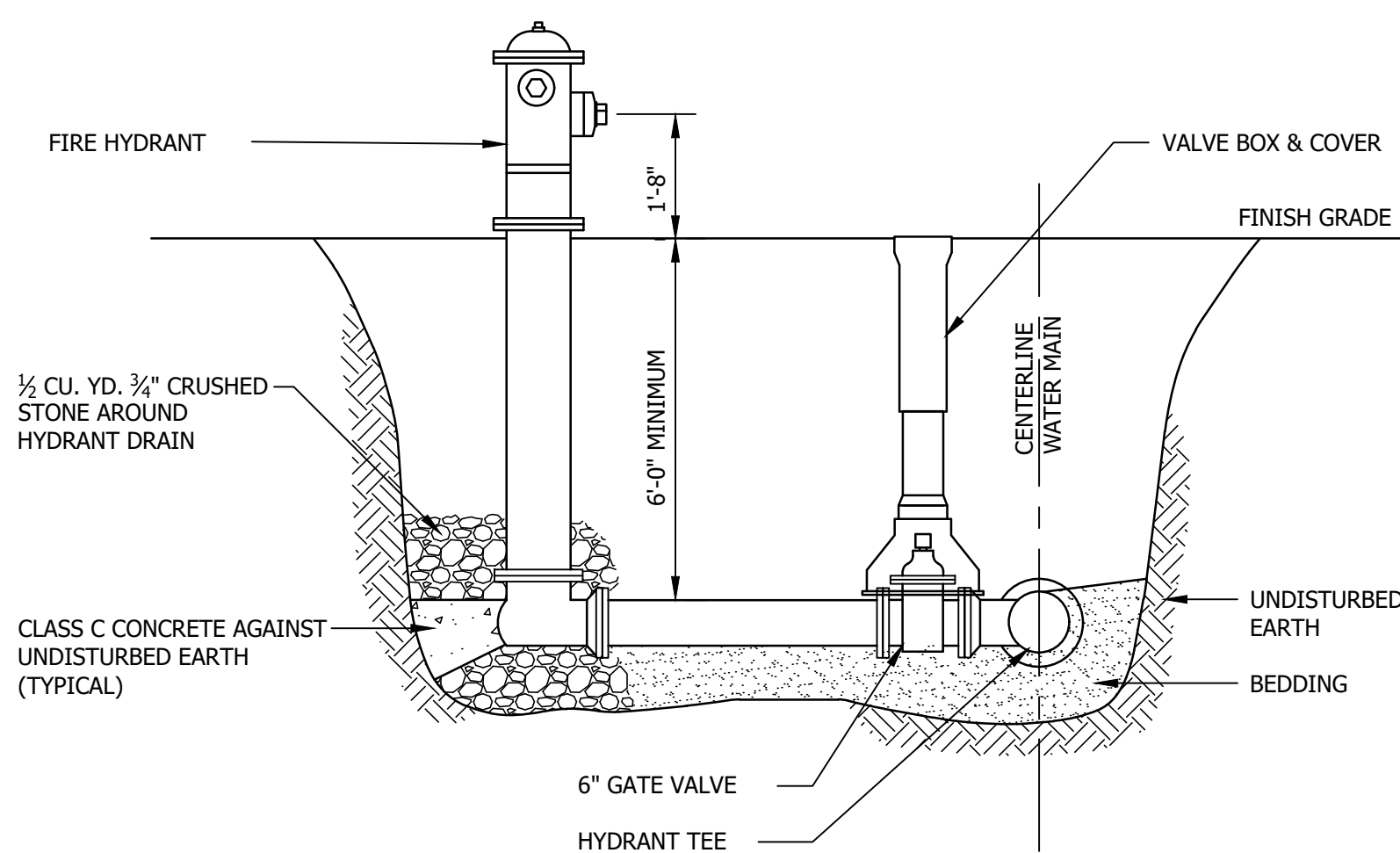
THRUST BLOCK NOTES & DETAILS

NOT TO SCALE



WATER SERVICE CONNECTION

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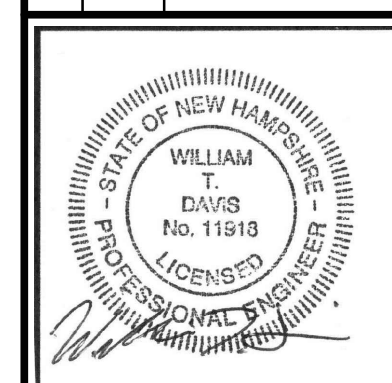
FIRE HYDRANT DETAIL

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SEWER NOTES

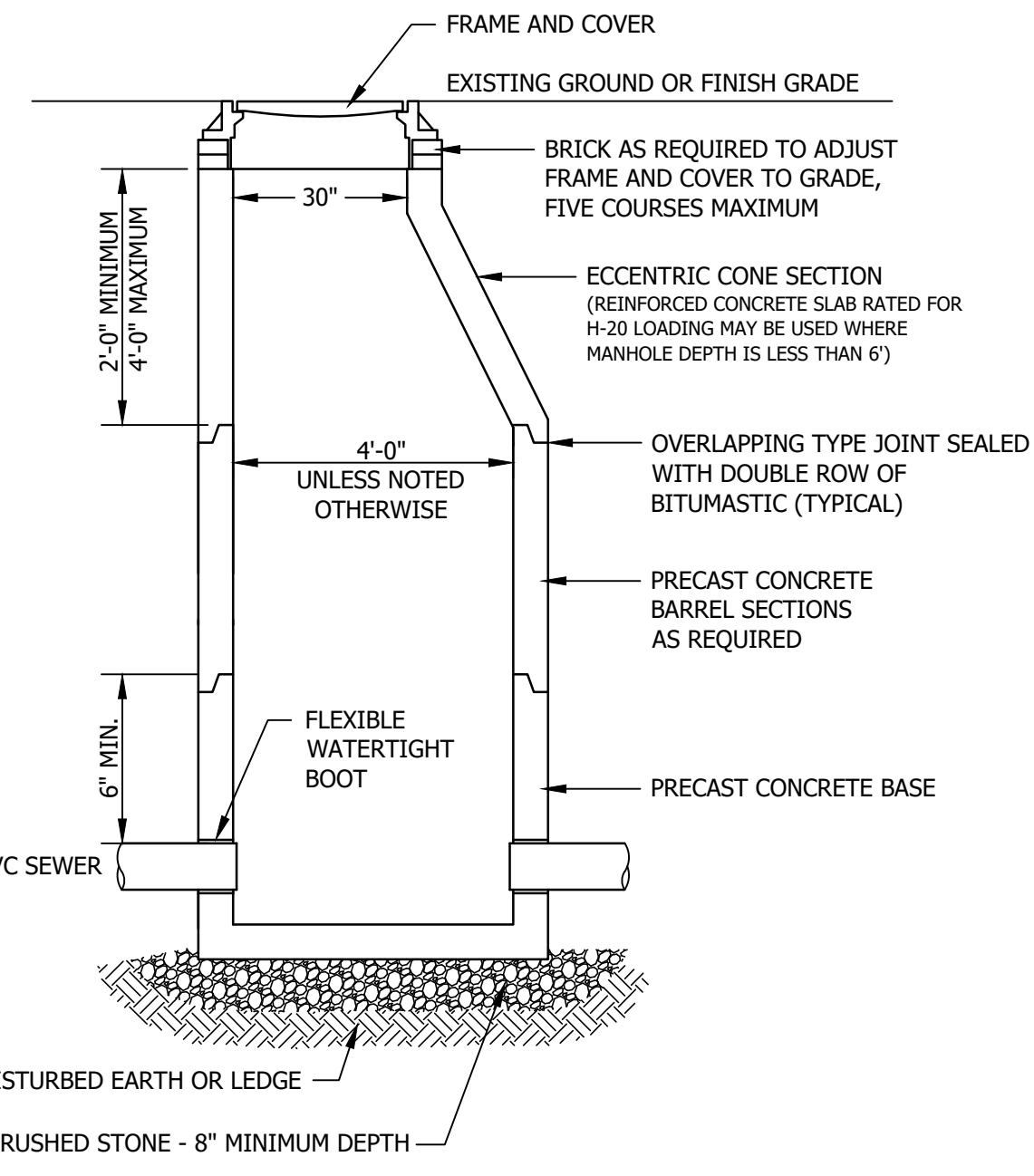
- GENERAL**
CONSTRUCTION OF ALL COMPONENTS OF THE SANITARY SEWER SYSTEM SHALL CONFORM TO THE MOST CURRENT VERSION OF THE NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES ENV-WQ 700 AND TECHNICAL SPECIFICATIONS.
- TYPES OF SEWERS**
A. THERE SHALL BE NO CONNECTION BETWEEN SANITARY SEWERS AND STORM SEWERS.
B. RUNOFF FROM ROOFS, STREETS, AND OTHER AREAS AND GROUNDWATER FROM FOUNDATION DRAINS, SUMP PUMPS, OR OTHER SUBSURFACE DRAINS SHALL BE EXCLUDED FROM SANITARY SEWERS.
- SEWER SIZE AND COVER**
A. MINIMUM PIPE SIZE FOR GRAVITY SEWER MAINS SHALL BE 8 INCHES.
B. MINIMUM PIPE SIZE FOR GRAVITY SEWER SERVICES SHALL BE 4 INCHES.
C. MINIMUM PIPE SIZE FOR FORCE MAIN SEWER SERVICES SHALL BE 2 INCHES.
D. SANITARY SEWERS SHALL HAVE 6 FEET MINIMUM COVER IN ALL ROADWAY LOCATIONS AND 4 FEET MINIMUM COVER IN ALL CROSS-COUNTRY LOCATIONS.
- PIPE AND FITTING MATERIALS:**
A. **DUCTILE IRON PIPE**
DUCTILE IRON PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE AMERICAN WATER WORKS ASSOCIATION:
(1) AWWA C151 FOR DUCTILE IRON PIPE, CENTRIFUGALLY CAST IN METAL OR SAND LINED MOLDS, FOR WATER OR OTHER LIQUIDS;
(2) AWWA C150 FOR THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A 536 IRON CASTINGS; AND
(3) JOINTS SHALL BE MECHANICAL TYPE, PUSH-ON TYPE, OR BALL-AND-SOCKET TYPE;
B. **PVC (POLY VINYL CHLORIDE) PIPE**
PVC PIPE AND FITTINGS SHALL BE APPROVED FOR SEWAGE SERVICE AND CONFORM TO THE FOLLOWING:
(1) PVC PIPE USED FOR GRAVITY SEWERS SHALL BE TYPE SDR 35 CONFORMING TO ASTM D3034;
(2) PVC PIPE USED FOR FORCE MAINS SHALL BE TYPE SDR 26 CONFORMING TO ASTM D2241 OR ASTM D1785;
(3) JOINTS SHALL BE PUSH-ON, BELL-AND-SPIGOT TYPE HAVING OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D3212.
- BEDDING**
PIPE BEDDING SHALL BE SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM ORGANIC MATTER, CLAY, AND/OR LOAM MEETING ASTM C33 STONE SIZE NO. 67. BEDDING SHALL EXTEND FROM THE SPRING LINE OF THE PIPE TO A MINIMUM DEPTH OF 6" BELOW THE BOTTOM OF THE PIPE OUTSIDE SURFACE.

| | |
|-----------------|-----------------|
| 100% PASSING | 1/2 INCH SCREEN |
| 90-100% PASSING | 3/4 INCH SCREEN |
| 20-55% PASSING | 1/2 INCH SCREEN |
| 0-10% PASSING | #4 SIEVE |
| 0-5% PASSING | #8 SIEVE |
- MANHOLES**
A. PRECAST CONCRETE BARREL SECTIONS, CONES, AND BASES SHALL CONFORM TO ASTM C478.
B. MANHOLES SHALL BE DESIGNED FOR H-20 LOADING.
C. HORIZONTAL JOINTS BETWEEN BARREL SECTIONS SHALL BE OF AN OVERLAPPING TYPE WHICH SHALL DEPEND UPON A DOUBLE ROW OF ELASTOMERIC OR MASTIC-LIKE SEALANT FOR WATER TIGHTNESS.
D. PIPE TO MANHOLE JOINTS SHALL BE AS FOLLOWS:
(1) ELASTOMERIC, RUBBER SLEEVE WITH WATERTIGHT JOINTS AT THE MANHOLE OPENING AND PIPE SURFACES;
(2) CAST INTO THE WALL OR SECURED WITH STAINLESS STEEL CLAMPS;
(3) ELASTOMERIC SEALING RING CAST IN THE MANHOLE OPENING WITH SEAL FORMED ON THE SURFACE OF THE PIPE BY COMPRESSION OF THE RING; AND
(4) NON-SHRINK GROUTED JOINTS WHERE WATERTIGHT BONDING TO THE MANHOLE AND PIPE CAN BE OBTAINED.
E. MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. INVERTS AND SHELVES SHALL BE PLACED AFTER TESTING.
- PROTECTION OF WATER SUPPLIES**
A. THERE SHALL BE NO PHYSICAL CONNECTION BETWEEN A PUBLIC OR PRIVATE WATER SUPPLY SYSTEM AND A SEWER OR SEWER APPURTENANCE WHICH WOULD PERMIT THE PASSAGE OF SEWAGE OR POLLUTED WATER INTO THE POTABLE SUPPLY. NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SEWER OR SEWER MANHOLE.
B. NO SEWER SHALL BE LOCATED WITHIN THE WELL PROTECTIVE RADIUS ESTABLISHED IN ENV-WS 300 FOR ANY PUBLIC WATER SUPPLY WELLS OR WITHIN 100 FEET OF ANY PRIVATE WATER SUPPLY WELL.
C. SEWERS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN.
D. A DEVIATION FROM THE SEPARATION REQUIREMENTS OF (B) OR (C) ABOVE SHALL BE ALLOWED WHERE NECESSARY TO AVOID CONFLICT WITH SUBSURFACE STRUCTURES, UTILITY CHAMBERS, AND BUILDING FOUNDATIONS, PROVIDED THAT THE SEWER IS CONSTRUCTED IN ACCORDANCE WITH THE FORCE MAIN CONSTRUCTION REQUIREMENTS SPECIFIED IN ENV-WQ 704.06.
E. WHENEVER SEWERS MUST CROSS WATER MAINS, THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS:
(1) VERTICAL SEPARATION OF THE SEWER AND WATER MAIN SHALL BE NOT LESS THAN 18 INCHES, WITH WATER ABOVE SEWER; AND
(2) SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.

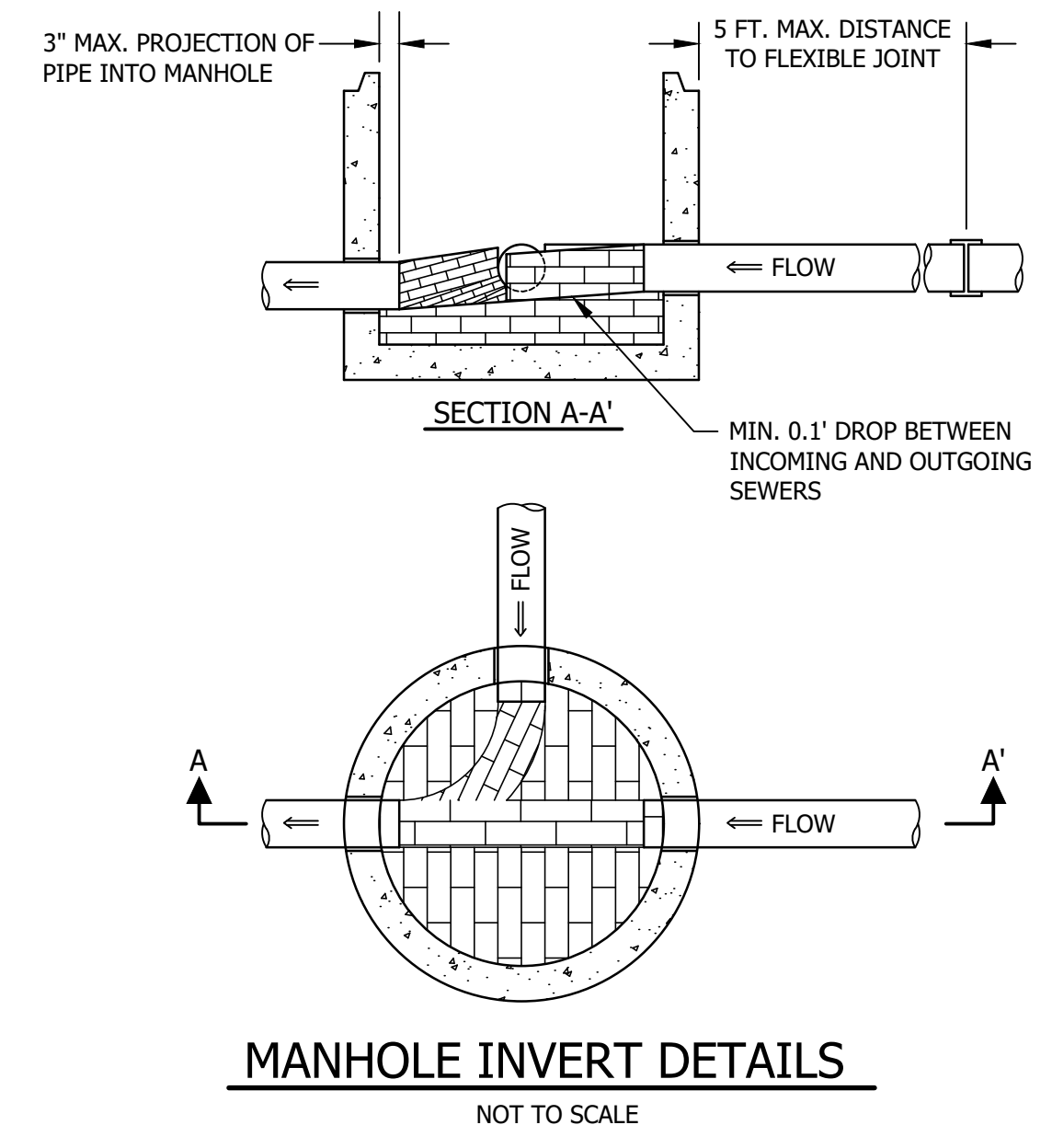
STANDARD TRENCH NOTES - SEWER

- ORDERED EXCAVATION OF UNSUITABLE MATERIAL** BELOW GRADE SHALL BE REPLACED WITH BEDDING MATERIAL. SEE ALSO NOTE 4.
- BEDDING:** SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM ORGANIC MATTER, CLAY, AND/OR LOAM MEETING ASTM C33 STONE SIZE NO. 67.

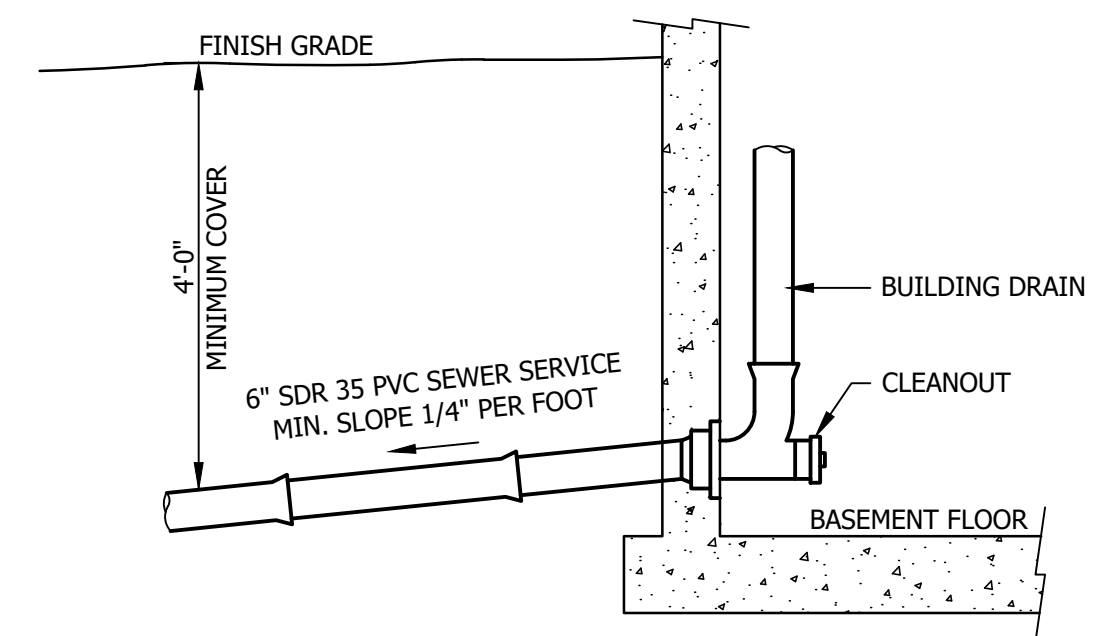
| | |
|-----------------|-----------------|
| 100% PASSING | 1/2 INCH SCREEN |
| 90-100% PASSING | 3/4 INCH SCREEN |
| 20-55% PASSING | 1/2 INCH SCREEN |
| 0-10% PASSING | #4 SIEVE |
| 0-5% PASSING | #8 SIEVE |
- SAND BLANKET:** CLEAN SAND FREE FROM ORGANIC MATTER, SO GRADED THAT 100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% PASSES A #200 SIEVE.
- SUITABLE MATERIAL:** IN ROADS, ROAD SHOULDERS, WALKWAYS, AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED FROM THE TRENCH DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, WET OR SOFT MUCK, PEAT OR CLAY, EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIAL NOT APPROVED BY THE ENGINEER.
TRENCH BACKFILL IN CROSS-COUNTRY LOCATIONS SHALL BE SUITABLE MATERIAL AS DESCRIBED ABOVE, EXCEPT THAT TOP SOIL, LOAM, MUCK, OR PEAT MAY BE USED PROVIDED THAT THE COMPLETED CONSTRUCTION WILL BE STABLE AND ACCESS TO THE PIPE FOR MAINTENANCE AND RECONSTRUCTION IS PRESERVED. BACKFILL SHALL BE MOUND TO A HEIGHT OF SIX INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- BASE COURSE FOR TRENCH REPAIR** SHALL MEET THE REQUIREMENTS OF SECTION 300 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
- SHEETING:** WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW MID-DIAMETER, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE. WHERE SHEETING IS TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN ONE FOOT ABOVE THE TOP OF THE PIPE.
- TRENCH DIMENSIONS:** W = MAXIMUM ALLOWABLE TRENCH WIDTH MEASURED 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER (D) OR LESS, W SHALL BE NO MORE THAN 36 INCHES; FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS THE PIPE OUTSIDE DIAMETER. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE. THE MAXIMUM ALLOWABLE TRENCH PAVEMENT PAYMENT WIDTH SHALL BE 8 FEET CENTERED OVER PIPE.
- PIPE INSULATION AT STORM DRAIN CROSSING:** INSTALL 2" THICK RIGID FOAM INSULATION OVER SEWER AT STORM DRAIN CROSSINGS, EXTEND INSULATION 4 FEET EITHER SIDE OF STORM DRAIN ALONG SEWER.



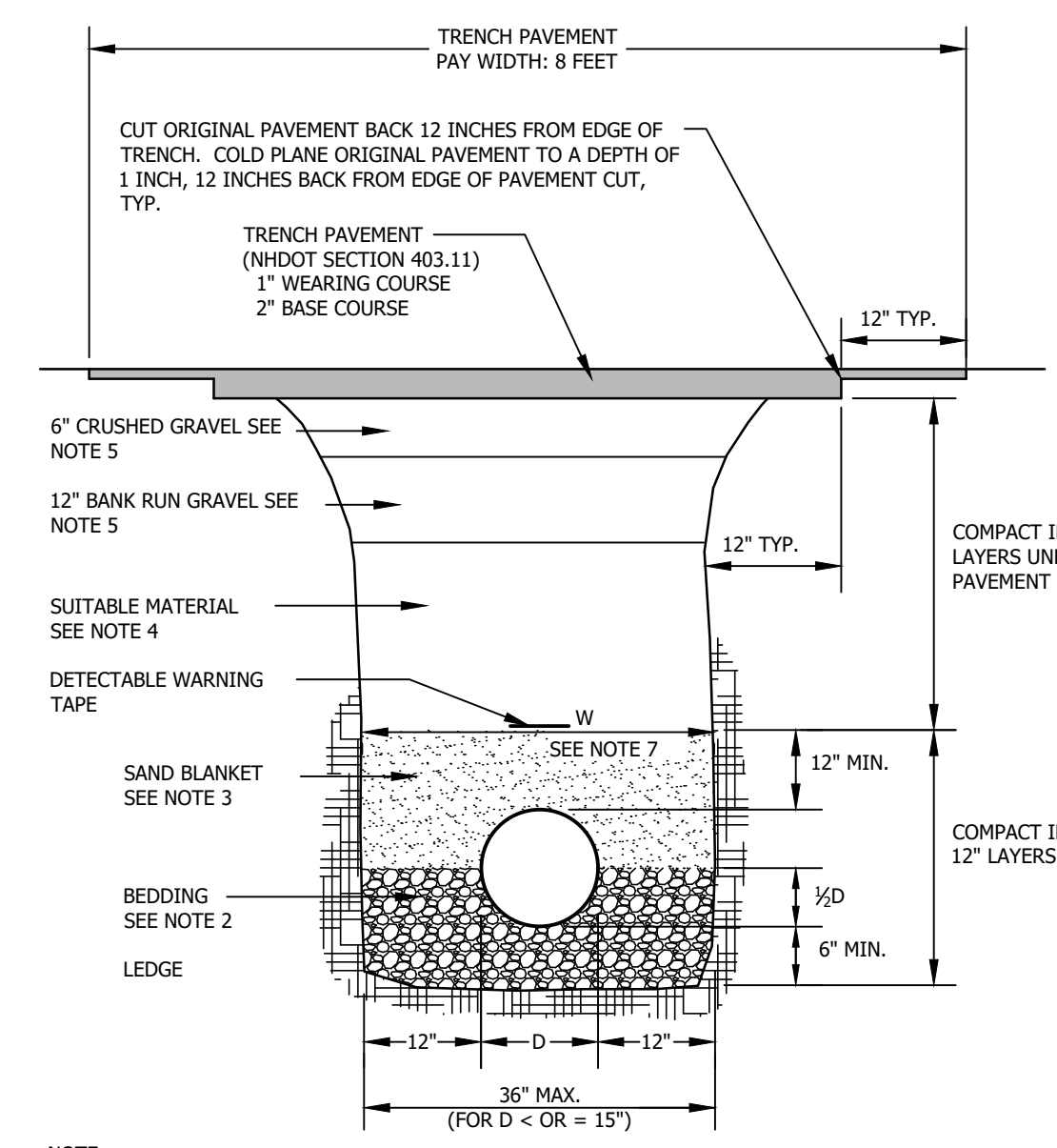
SANITARY SEWER MANHOLE DETAIL
NOT TO SCALE



MANHOLE INVERT DETAILS
NOT TO SCALE

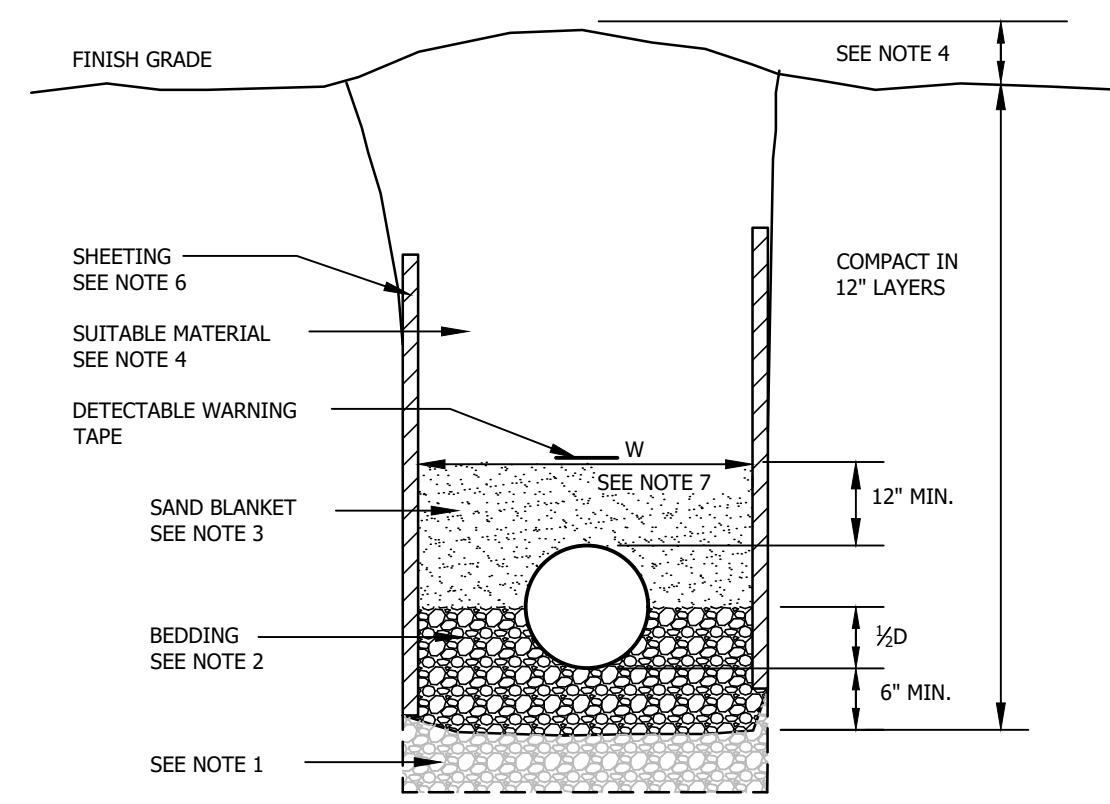


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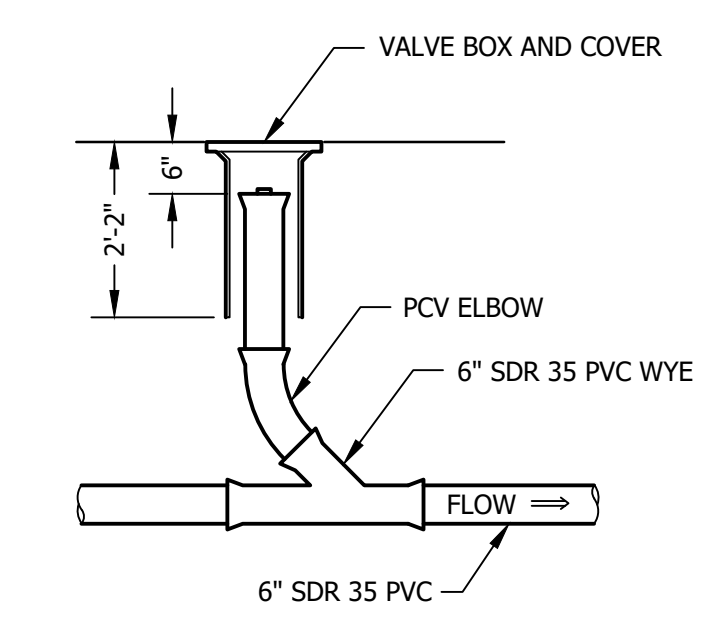


NOTE:
MINIMUM BEDDING DEPTH AND MAXIMUM PAYMENT LIMIT FOR LEDGE EXCAVATION = 1/2 D (6\"/>

LEDGE/SUB PAVEMENT CONSTRUCTION



EARTH CONSTRUCTION WITH OR WITHOUT SHEETING



SEWER CLEANOUT DETAIL
NOT TO SCALE

STANDARD TRENCH SECTIONS

NOT TO SCALE

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TYRELL DEVELOPMENT COMPANY, LLC
GREEN PEAK II, A CONDOMINIUM

WATERVILLE VALLEY, NEW HAMPSHIRE

STANDARD SANITARY SEWER NOTES AND DETAILS

| NO. | DATE | REVISION DESCRIPTION | ENG | DWG |
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| ENGINE'D BY: JCD | DRAWN BY: JCD |
| CHECK'D BY: WD | ARCHIVE #: - |

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SEEDING RECOMMENDATIONS

1. GRADING AND SHAPING
A. SLOPES SHALL NOT BE STEEPER THAN 2:1; 3:1 SLOPES OR FLATTER ARE PREFERRED. WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.

2. SEEDBED PREPARATION
A. SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
B. STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE AMENDED WITH ORGANIC MATTER AND TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND MIX FERTILIZER AND LIME THOROUGHLY INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.

3. ESTABLISHING VEGETATION
A. LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. KINDS AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
-AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ. FT.
-NITROGEN (N), 50 LBS. PER ACRE OR 1.1 LBS. PER 1,000 SQ. FT.
-PHOSPHATE (P₂O₅), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ. FT.
-POTASH (K₂O), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ. FT.
(NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10).

B. SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING, AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.

C. SEEDING GUIDE:

| USE | SEEDING MIXTURE (SEE 3D) | SOIL TYPE | | | |
|--|--------------------------|-----------|--------------|-------------------|----------------|
| | | DROUGHTY | WELL DRAINED | MOD. WELL DRAINED | POORLY DRAINED |
| STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS | A | FAIR | GOOD | GOOD | FAIR |
| | B | POOR | GOOD | FAIR | FAIR |
| | C | FAIR | EXCELLENT | EXCELLENT | POOR |
| WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER | A | GOOD | GOOD | GOOD | FAIR |
| LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES | A | GOOD | GOOD | GOOD | FAIR |
| | B | GOOD | GOOD | FAIR | POOR |

D. SEEDING RATES:

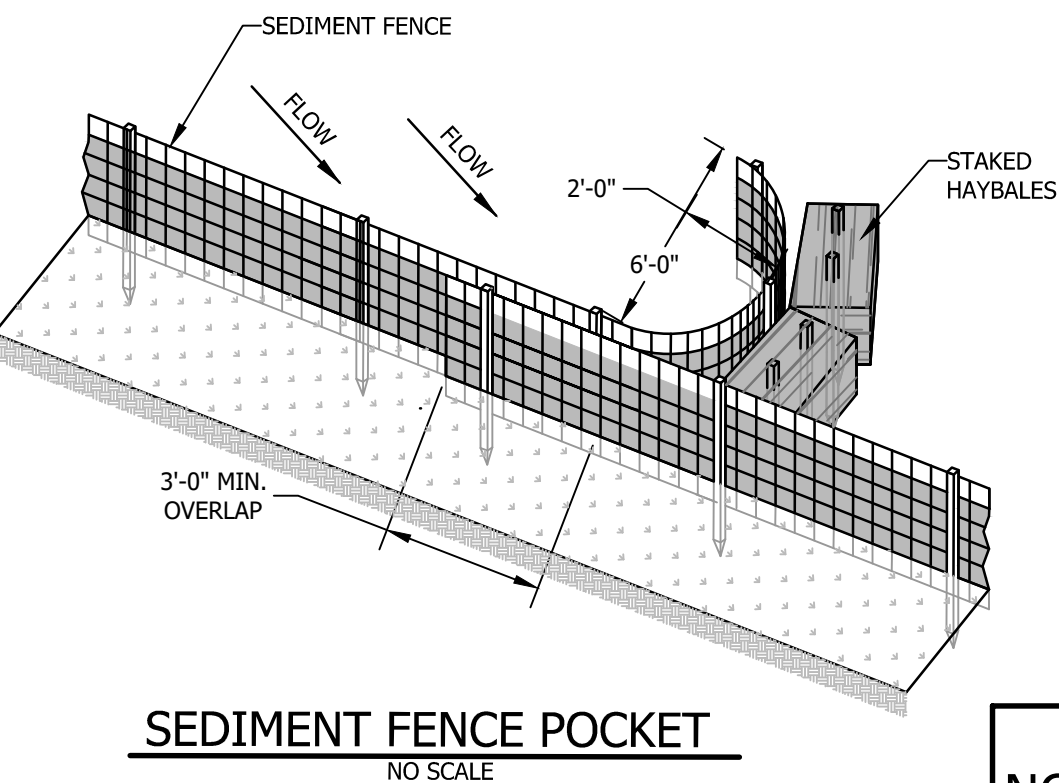
| MIXTURE | POUNDS PER ACRE | POUNDS PER 1,000 SQ. FT. |
|------------------------|-----------------|--------------------------|
| A TALL FESCUE | 20 | 0.45 |
| CREEPING RED FESCUE | 20 | 0.45 |
| REDTOP | 2 | 0.05 |
| TOTAL: | 42 | 0.95 |
| B TALL FESCUE | 15 | 0.35 |
| CREEPING RED FESCUE | 10 | 0.25 |
| CROWN VETCH OR FLATPEA | 15 OR 30 | 0.35 OR 0.75 |
| TOTAL: | 40 OR 55 | 0.95 OR 1.35 |
| C TALL FESCUE | 20 | 0.45 |
| FLATPEA | 30 | 0.75 |
| TOTAL: | 50 | 1.20 |

E. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO SEPTEMBER 15. WHEN SEEDING AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SEPTEMBER TO MAY 20 OR FROM AUGUST 10 TO SEPTEMBER 1.

F. TEMPORARY SEEDING RATES:

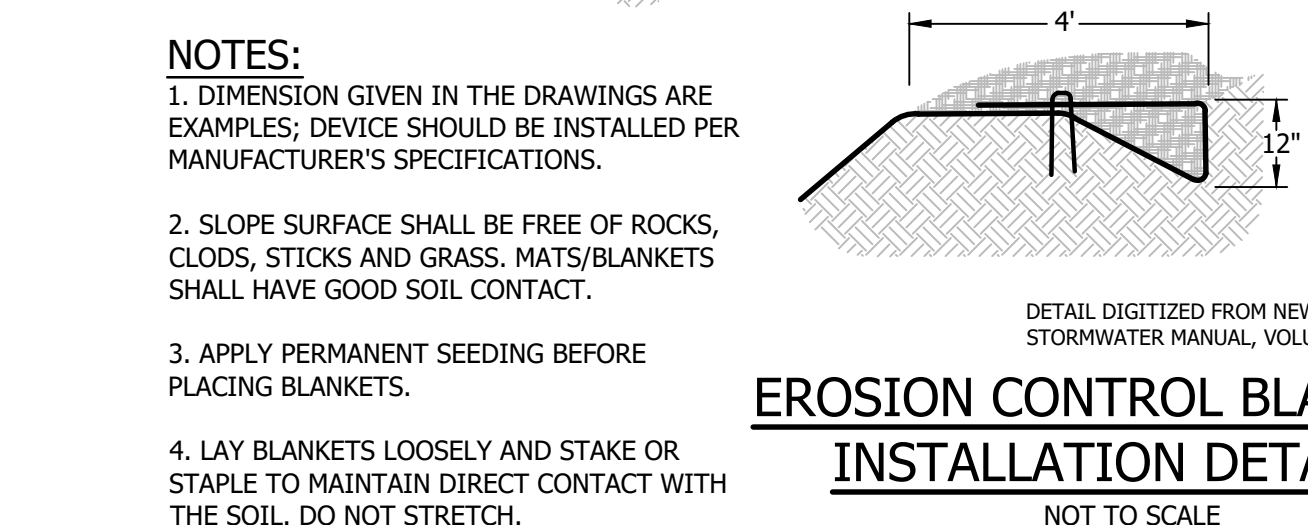
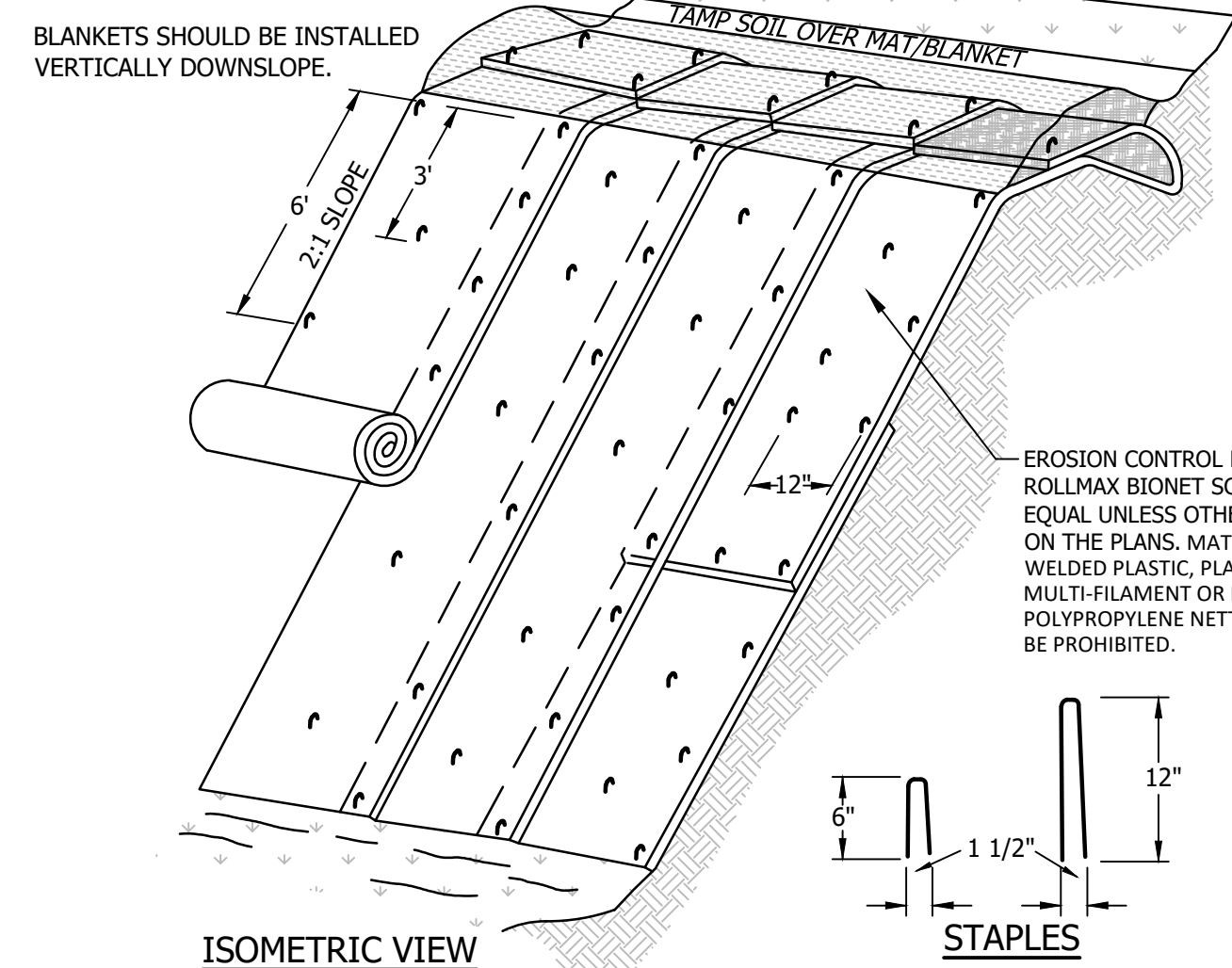
| SPECIES | POUNDS PER ACRE | POUNDS PER 1,000 SQ. FT. | REMARKS |
|--------------------|-----------------|--------------------------|---|
| WINTER RYE | 112 | 2.5 | BEST FOR FALL SEEDING. SEED FROM AUGUST TO SEPTEMBER 15 FOR BEST COVER. SEED TO A DEPTH OF 1 INCH. |
| OATS | 80 | 2.0 | BEST FOR SPRING SEEDING. SEED NO LATER THAN MAY 15TH FOR SUMMER PROTECTION. SEED TO A DEPTH OF 1 INCH. |
| ANNUAL RYEGRASS | 40 | 1.0 | GROWS QUICKLY, BUT IS OF SHORT DURATION. USE WHERE APPEARANCES ARE NOT IMPORTANT. SEED EARLY SPRING AND/OR BETWEEN AUGUST 15TH AND SEPTEMBER 15TH. COVER SEED WITH NO MORE THAN 0.25 INCH OF SOIL. |
| PERENNIAL RYEGRASS | 30 | 0.7 | GOOD COVER WHICH IS LONGER LASTING THAN ANNUAL RYEGRASS. SEED BETWEEN APRIL 1ST AND JUNE 1ST AND/OR BETWEEN AUGUST 15TH AND SEPTEMBER 15TH. MULCHING WILL ALLOW SEEDING THROUGHOUT THE GROWING SEASON. SEED TO A DEPTH OF APPROXIMATELY 0.5 INCH. |

4. MULCH
A. HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
B. MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING.
5. MAINTENANCE TO ESTABLISH A STAND
A. PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
B. FERTILIZATION NEEDS SHOULD BE DETERMINED BY ON SITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME ESTABLISHED.
C. IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, OCCASIONAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

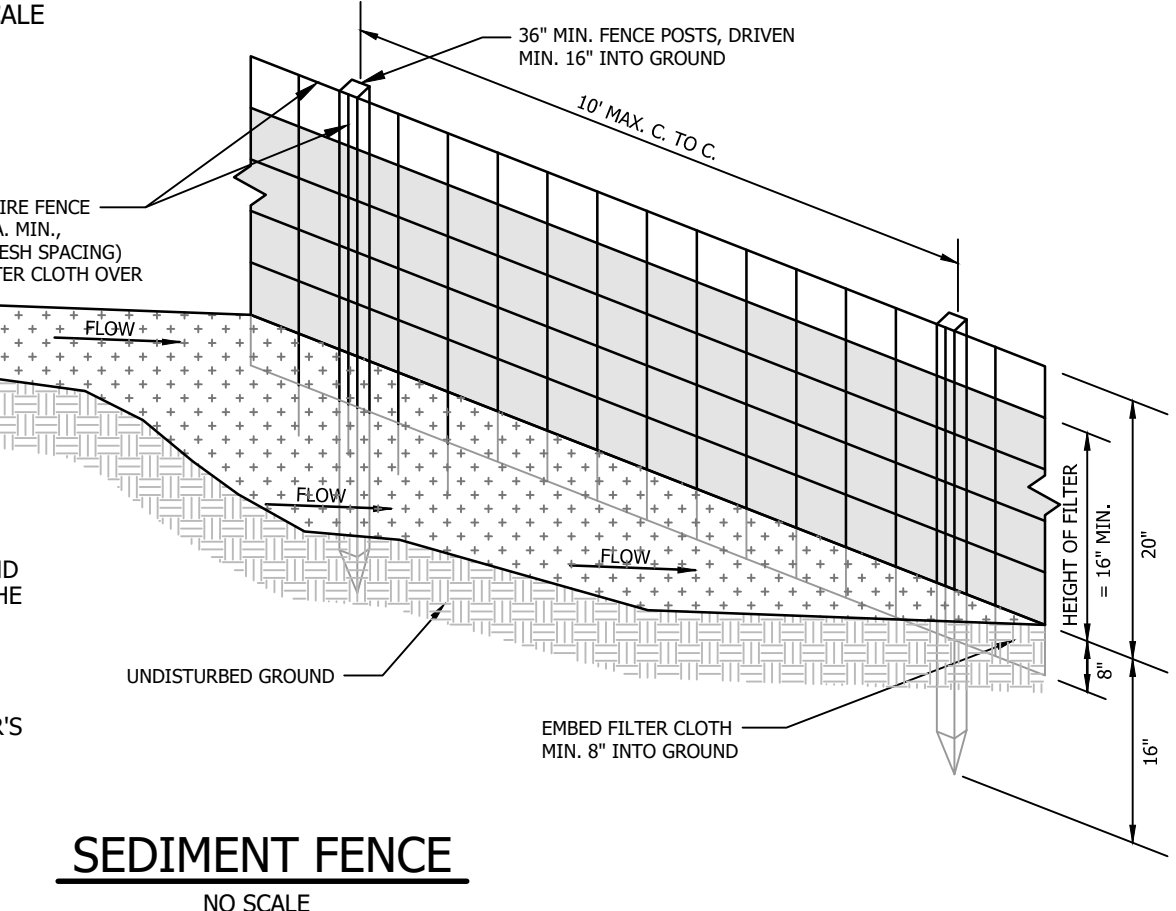


EROSION CONTROL GENERAL NOTES

- A. KEEP SITE MODIFICATION TO A MINIMUM**
1. CONSIDER FITTING THE BUILDINGS AND STREETS TO THE NATURAL TOPOGRAPHY. THIS REDUCES THE NEED FOR CUTS AND FILLS. AVOID EXTENSIVE GRADING THAT WOULD ALTER DRAINAGE PATTERNS OR CREATE VERY STEEP SLOPES.
2. EXPOSE AREAS OF BARE SOIL TO EROSION ELEMENTS FOR THE SHORTEST TIME POSSIBLE.
3. SAVE AND PROTECT DESIRABLE EXISTING VEGETATION WHERE POSSIBLE. ERECT BARRIERS TO PREVENT DAMAGE FROM CONSTRUCTION EQUIPMENT.
4. LIMIT THE GRADES OF SLOPES SO VEGETATION CAN BE EASILY ESTABLISHED AND MAINTAINED.
5. AVOID SUBSTANTIAL INCREASE IN RUNOFF LEAVING THE SITE.
- B. MINIMIZE POLLUTION OF WATER DURING CONSTRUCTION ACTIVITIES**
1. STOCKPILE TOPSOIL REMOVED FROM CONSTRUCTION AREA AND SPREAD OVER ANY DISTURBED AREAS PRIOR TO REVEGETATION. TOPSOIL STOCKPILES MUST BE PROTECTED FROM EROSION.
2. PROTECT BARE SOIL AREAS EXPOSED BY GRADING ACTIVITIES WITH TEMPORARY VEGETATION OR MULCHES.
3. USE SEDIMENT BASINS TO TRAP DEBRIS AND SEDIMENT WHICH WILL PREVENT THESE MATERIALS FROM MOVING OFF SITE.
4. USE DIVERSIONS TO DIRECT WATER AROUND THE CONSTRUCTION AREA AND AWAY FROM EROSION PRONE AREAS TO POINTS OF SAFE DISPOSAL.
5. USE TEMPORARY CULVERTS OR BRIDGES WHEN CROSSING STREAMS WITH EQUIPMENT.
6. PLACE CONSTRUCTION FACILITIES, MATERIALS, AND EQUIPMENT STORAGE AND MAINTENANCE AREAS AWAY FROM DRAINAGE WAYS.
- C. PROTECT AREA AFTER CONSTRUCTION**
1. ESTABLISH GRASS OR OTHER SUITABLE VEGETATION ON ALL DISTURBED AREAS. SELECT SPECIES ADAPTED TO THE SITE CONDITIONS AND THE FUTURE USE OF THE AREA. FINAL GRADES SHALL BE SEED WITHIN 72 HOURS. STABILIZATION SHALL BE DEFINED AS 85% VEGETATIVE COVER.
2. MAINTAIN VEGETATED AREAS USING PROPER VEGETATIVE 'BEST MANAGEMENT PRACTICES' DURING THE CONSTRUCTION PERIOD.
3. MAINTAIN NEEDED STRUCTURAL 'BEST MANAGEMENT PRACTICES' AND REMOVE SEDIMENT FROM DETENTION PONDS AND SEDIMENT BASINS AS NEEDED.
4. DETERMINE RESPONSIBILITY FOR LONG TERM MAINTENANCE OF PERMANENT 'BEST MANAGEMENT PRACTICES'.
5. IF CONSTRUCTION IS ANTICIPATED DURING WINTER MONTHS, REFER TO 'COLD WEATHER SITE STABILIZATION REQUIREMENTS'.
- D. INVASIVE SPECIES AND FUGITIVE DUST**
1. THE PROJECT SHALL NOT CONTRIBUTE TO THE SPREAD OF INVASIVE SPECIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EVALUATE WORK AREAS FOR THE PRESENCE OF INVASIVE SPECIES, AND IF FOUND SHALL TAKE NECESSARY MEASURES TO PREVENT THEIR SPREAD IN ACCORDANCE WITH RSA 430:51-57 AND AGR 3800. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT THE INTRODUCTION OF INVASIVE SPECIES BY INSPECTING AND CLEANING ALL EQUIPMENT ARRIVING ON SITE.
2. FUGITIVE DUST SHALL BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.



- CONSTRUCTION NOTES FOR SEDIMENT FENCE**
- WOVEN WIRE FENCE, IF REQUIRED, TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP, MID SECTION, AND BOTTOM.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN 'BULGES' DEVELOP IN THE SEDIMENT FENCE, OR 50% OF CAPACITY IS USED.
 - 12" DIAMETER FILTREX SILT-SOXX SHALL BE CONSIDERED AN ACCEPTABLE EQUAL TO SEDIMENT FENCE IF INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.



DETAIL DIGITIZED FROM NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, NHDES 2008

FOR REVIEW NOT FOR CONSTRUCTION

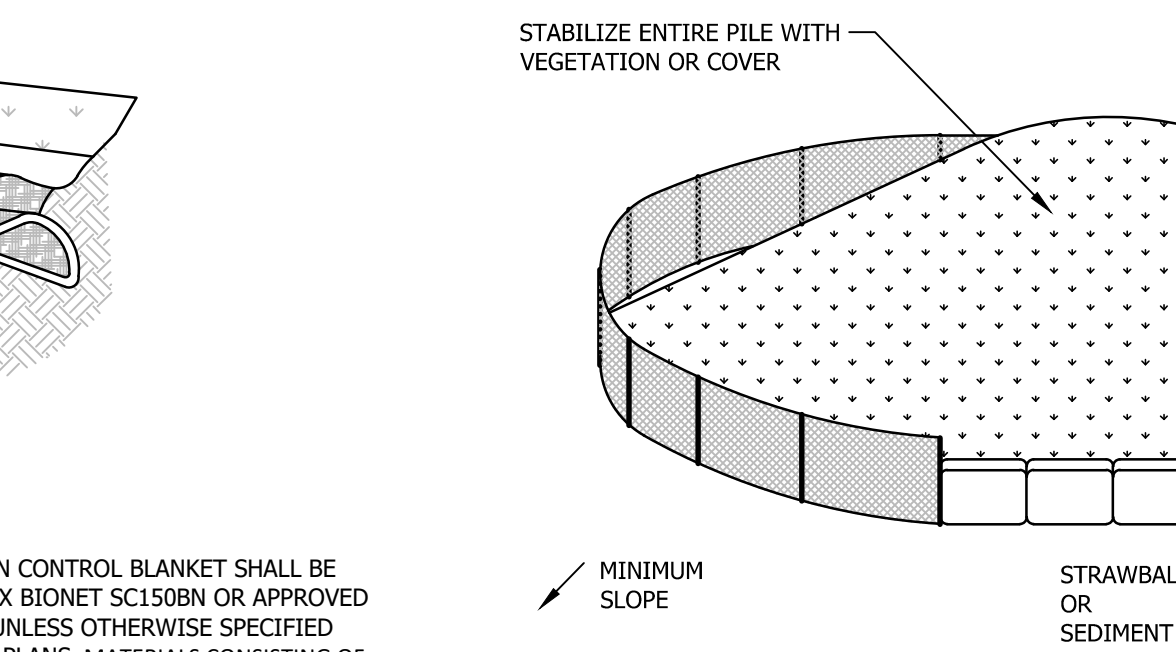
SOIL STOCKPILING DETAIL
NOT TO SCALE

INSTALLATION NOTES:

- AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
- MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
- UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES AND THEN STABILIZED WITH VEGETATION OR COVERED.

SOIL STOCKPILING IS TO BE USED WHERE TOPSOIL IS NECESSARY FOR REGRADING AND VEGETATING DISTURBED AREAS.
TEMPORARY STOCKPILE STABILIZATION MEASURES INCLUDE VEGETATIVE COVERS, MULCH, NON-VEGETATIVE COVERS, AND PERIPHERAL SEDIMENT TRAPPING BARRIERS. THE STABILIZATION MEASURE(S) SELECTED SHOULD BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, AND REQUIRED PERIOD OF USE.

EROSION CONTROL BLANKET SHALL BE ROLLMAX BIONET SC1508N OR APPROVED EQUAL UNLESS OTHERWISE SPECIFIED ON THE PLANS. MATERIALS CONSISTING OF WELDED PLASTIC, PLASTIC, OR MULTI-FILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH SHALL BE PROHIBITED.



COLD WEATHER SITE STABILIZATION REQUIREMENTS

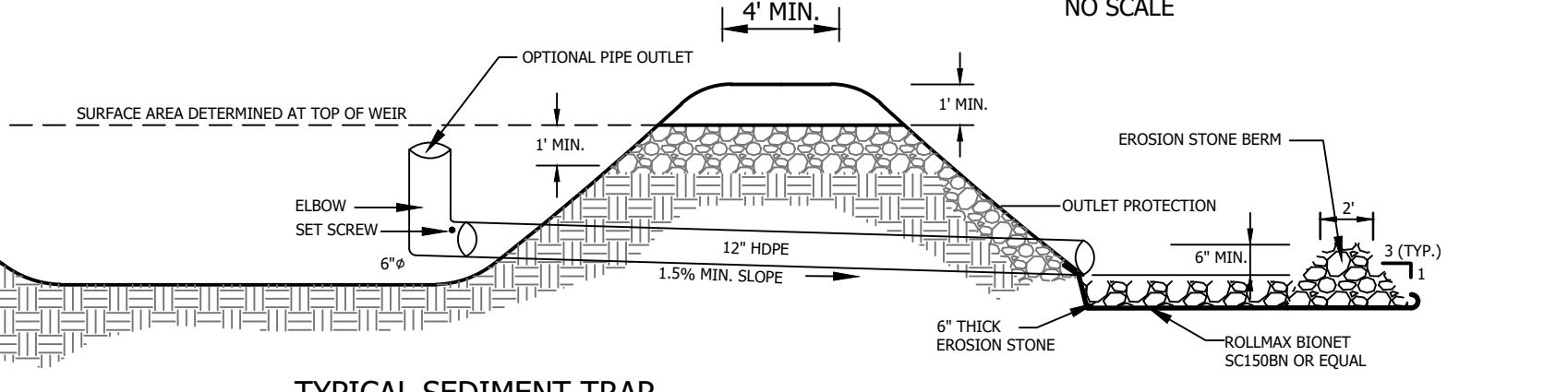
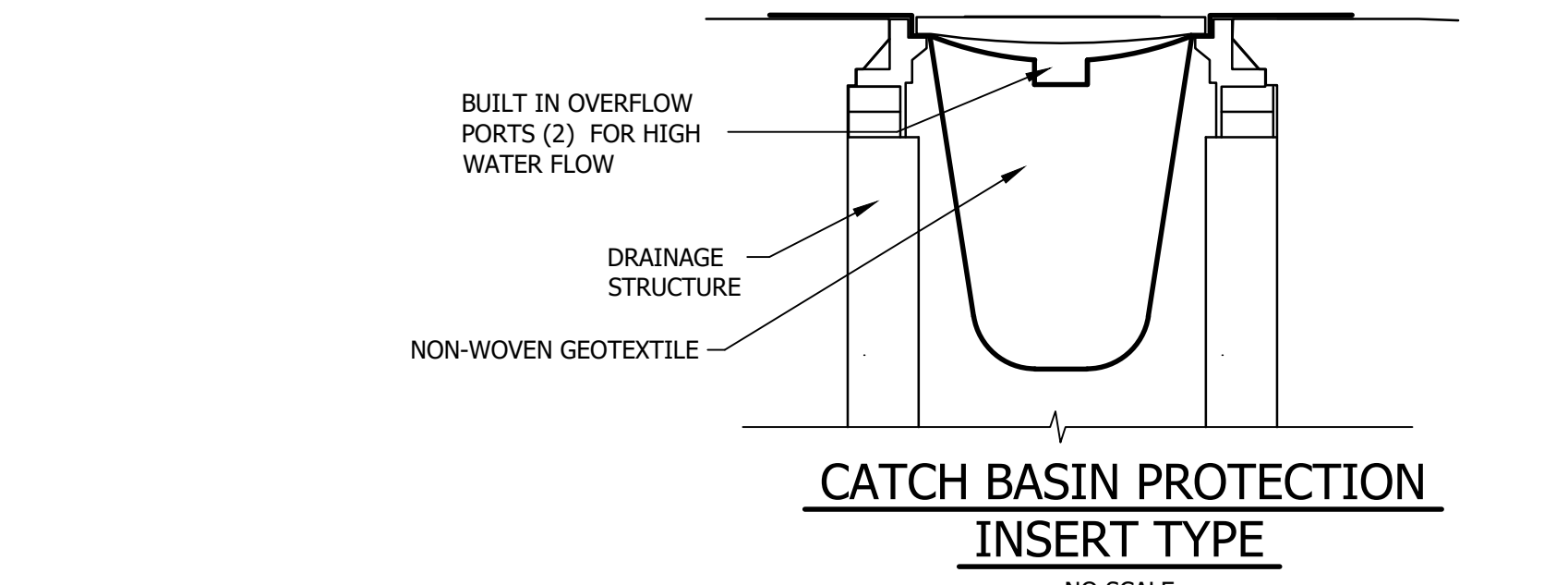
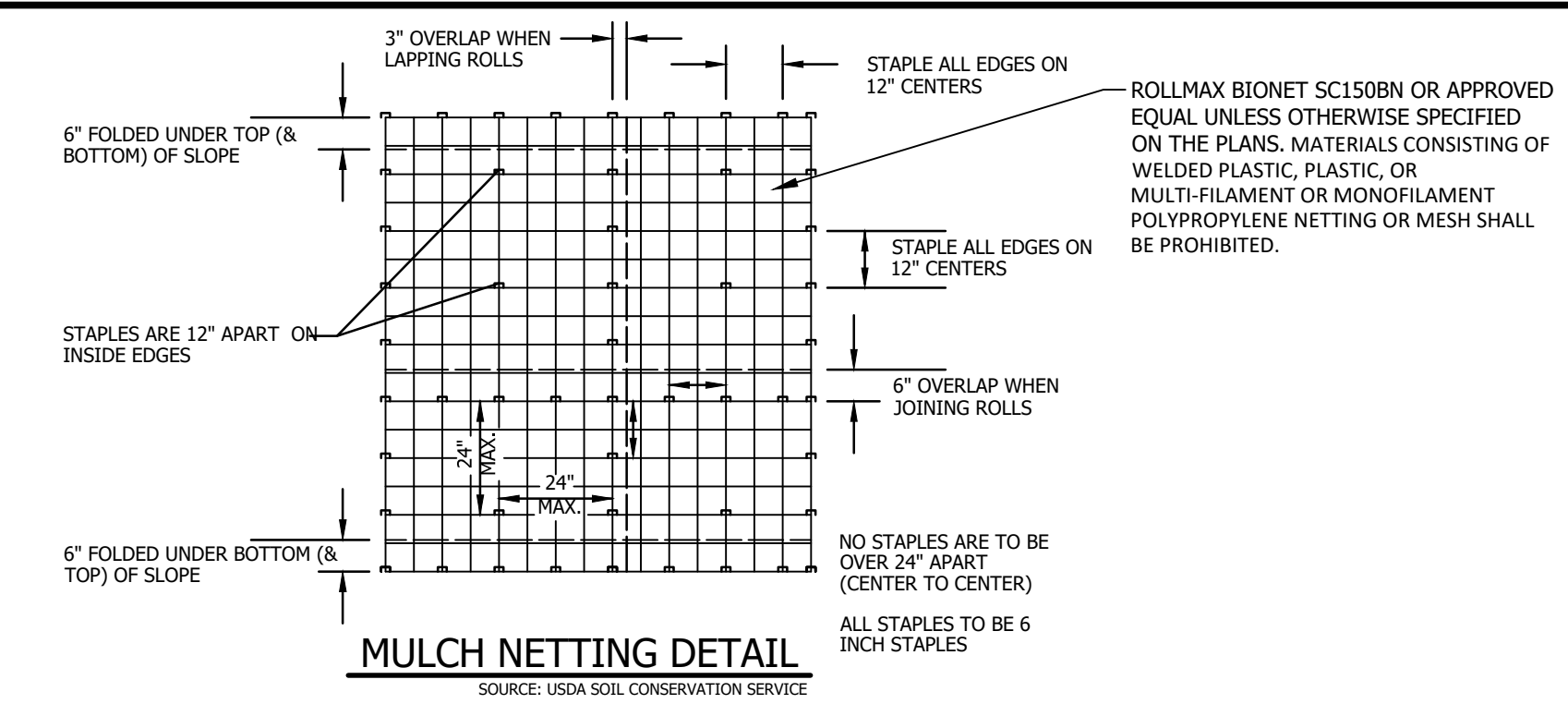
- TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE FOLLOWING ADDITIONAL STABILIZATION TECHNIQUES SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1:
- THE AREA OF EXPOSED, UNSTABILIZED SOIL SHALL BE LIMITED TO 1 ACRE AND SHALL BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT. THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN, DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, IS REVIEWED AND APPROVED BY NHDES.
 - ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDING AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE, SECURED WITH ANCHORED NETTING OR TACKIFIER, OR 2 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H).
 - ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDING AND COVERED WITH PROPERLY INSTALLED AND ANCHORED EROSION CONTROL MATTING OR WITH A MINIMUM 4 INCH THICKNESS OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H).
 - INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX, MEETING THE CRITERIA OF ENV-WQ 1506.05(D) THROUGH (H), SHALL NOT OCCUR OVER SNOW OF GREATER THAN 1 INCH IN DEPTH OR ON FROZEN GROUND.
 - INSTALLATION OF EROSION CONTROL MATTING SHALL NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
 - ALL PROPOSED STABILIZATION IN ACCORDANCE WITH NOTES 2 OR 3 ABOVE, SHALL BE COMPLETED WITHIN 1 DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
 - ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.
 - AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM NO. 304.1 OR 304.2.

CONSTRUCTION SEQUENCE

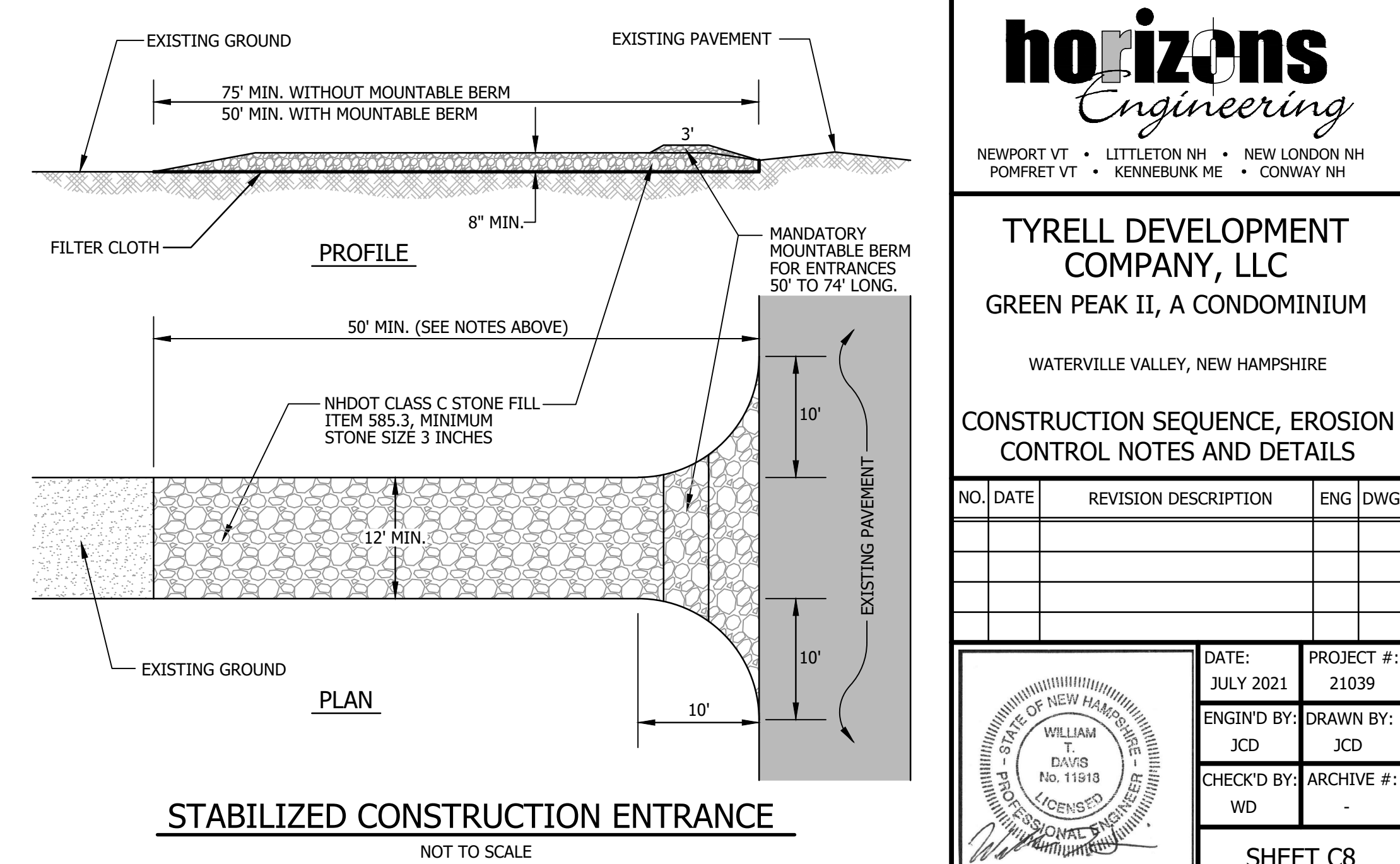
- PREPARE AN EROSION CONTROL PLAN OR A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- INSTALL CONSTRUCTION ENTRANCE, SEE DETAIL.
- CUT AND CLEAR TREES WITHIN THE CLEARING LIMITS.
- INSTALL SEDIMENT FENCES, ROCK CHECK DAMS, AND OTHER APPROPRIATE EROSION CONTROL MEASURES AT LOCATIONS SHOWN ON THE PLANS AND AS NEEDED.
- GRUB SITE WITHIN GRADING LIMITS.
- STRIP AND STOCKPILE TOPSOIL AND INSTALL EROSION CONTROL MEASURES.
- INSTALL/ADJUST SEDIMENT FENCE, CHECK DAMS, AND HAYBALES, AS REQUIRED.
- RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMP'S AREA STABILIZED.
- CONSTRUCT PERMANENT STORMWATER CONTROLS AS SOON AS PRACTICAL. DO NOT DIRECT STORMWATER TOWARD TREATMENT BASINS, PONDS, SWALES, DITCHES AND LEVEL SPREADERS UNTIL THEY HAVE BEEN STABILIZED.
- PROCEED WITH WORK, LIMITING THE DURATION OF DISTURBANCE. THE MAXIMUM OF DISTURBED EARTH AT ANY ONE TIME IS FIVE ACRES. THE MAXIMUM LENGTH OF TIME THAT DISTURBED EARTH MAY BE LEFT UNSTABILIZED IS 45 DAYS.
- BEGIN SEEDING AND MULCHING IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED WITH APPROVED METHODS WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
B) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
D) EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

- INSPECT ALL EROSION CONTROL MEASURES ON A DAILY BASIS AND AFTER EVERY 0.5 INCHES OF PRECIPITATION. MAINTAIN SEDIMENT FENCE, SEDIMENT TRAPS, HAY BALES, ETC., AS NECESSARY.
- PAVE ROADWAYS AND/OR PARKING AREAS.
- PLACE TOPSOIL, SEED AND MULCH.
- COMPLETE ALL REMAINING PERMANENT EROSION CONTROL STRUCTURES.
- MONITOR THE SITE AND MAINTAIN STRUCTURES AS NEEDED UNTIL FULL VEGETATION IS ESTABLISHED.



- GENERAL NOTES:**
- THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE.
 - THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE TRAP SHALL BE LESS THAN 5 ACRES.
 - THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,000 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
 - THE SIDESLOPES SHALL ALL BE 3:1 OR FLATTER, AND SHALL BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION.
 - THE OUTLET OF THE TRAP SHALL BE A MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO A STABILIZED AREA.
 - THE TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
 - THE MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED AND STABILIZED.
- SEDIMENT TRAP DRAIN NOTES:**
- LOOSEN SET SCREW AND SLOWLY ROTATE ELBOW DOWNWARD TO LOWER STORED VOLUME BETWEEN STORMS.
 - DO NOT LOWER WATER LEVEL ALL AT ONCE (SUGGEST NOT MORE THAN 1 FOOT DROP IN 24 HOURS).
 - RETURN ELBOW TO VERTICAL POSITION IN ADVANCE OF STORMS.
 - SEDIMENTS TRAPS SHALL BE CONSTRUCTED AS NECESSARY TO CAPTURE RUNOFF DURING CONSTRUCTION. BASINS SHALL BE ELIMINATED BACKFILLED ONCE CONTRIBUTING DRAINAGE AREAS ARE STABLE. THE INFILTRATION BASIN IS CONSTRUCTED, AND PROPOSED GRADES AREA ACHIEVED.



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TYRELL DEVELOPMENT COMPANY, LLC
GREEN PEAK II, A CONDOMINIUM
WATERVILLE VALLEY, NEW HAMPSHIRE

CONSTRUCTION SEQUENCE, EROSION CONTROL NOTES AND DETAILS

| NO. | DATE | REVISION DESCRIPTION | ENG | DWG |
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| DATE: JULY 2021 | PROJECT #: 21039 |
| ENGIN'D BY: JCD | DRAWN BY: JCD |
| CHECK'D BY: WD | ARCHIVE #: - |

SHEET C8

STATE OF NEW HAMPSHIRE
WILLIAM T. DAVIS
No. 11819
LICENSED PROFESSIONAL ENGINEER

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