

**Applicant: 82 Interlaken, LLC**

**AMENDMENT TO EXISTING SPECIAL PERMIT  
LAKE AND POND OVERLAY DISTRICT**

**CONSTRUCTION OF SINGLE FAMILY HOME AND GUEST HOUSE**

**82 INTERLAKEN ROAD  
STOCKBRIDGE, MA 01262**

**February 2024**



**WHITE ENGINEERING, INC.  
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**WHITE ENGINEERING INC.**  
**CIVIL & ENVIRONMENTAL**  
**A VETERAN-OWNED SMALL BUSINESS**

February 9, 2024

Town of Stockbridge  
Planning Board  
P.O. Box 417  
Stockbridge, MA 01262-0417

RE: 82 Interlaken, LLC- Lake & Pond Overlay District Special Permit Application Amended;  
82 Interlaken Road Stockbridge, MA

Dear Members of the Board:

Please accept this amended application to the Lake and Pond Overlay District (LPOD) Special Permit application for 82 Interlaken, LLC. On March 11, 2021, the Planning Board had approved plans for the proposed project. Since the conclusion of that hearing, the applicant has worked diligently with our office along with Ritch Holben of RhDesign, LLC, and Attorney Lori Robbins from Heller & Robbins, PC, to address outstanding concerns. The result of that effort is reflected in the revised plan sets prepared by our office as well as RhDesign, LLC. These efforts amounted to revised plans dated December 11, 2023.

The applicant has made some changes to the size of patio space and outdoor stairs on the site plan. There have been changes between the approved plans from February 25, 2021, submission versus the new plans dated 20-08-05D dated December 11, 2023, and the Wagner Hodgson plan dated November 15, 2023. First, the increase in permeable patio area increases from 1062 sf to 1153 sf; pea gravel is proposed for walkways totaling 340 sf; there will be stairs added in the patio areas totaling 173 sf; 66 sf for boulder steps; the driveway will be a permeable paver driveway court totaling 2317 sf; 90 sf of retaining wall; and lastly, within the LPOD, 54 sf of spa area.

The previous calculations submitted in 2021 were as follows: *"To summarize our proposed lot coverage is 3.42% (10% maximum allowable); LPOD Coverage of 10.66% (15% maximum allowable) and our Floor Area to Lot ratio is 3.96% (20% maximum allowable)."* The new proposed LPOD coverage would be 7.65% (15% maximum allowable). This is based off the amount of pervious material within the 150' LPOD district. The new proposed LPOD coverage is less than the approved area from 2021.

Town of Stockbridge  
Planning Board  
February 9, 2024  
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I would like to thank the Board for their consideration of these materials. I look forward to explaining the plan changes with the rest of our project team during our next public hearing. Should you have any questions, please feel free to contact our office.

Sincerely,

A handwritten signature in cursive script that reads "Brent M. White/m.c".

Brent M. White, MCE, PE, LEED AP  
Principal

Enclosures

cc: 82 Interlaken, LLC  
Lori Robbins, Esq.

**Town of Stockbridge  
Special Permit Application**

**Application is hereby made to the Planning Board by:**

**Applicant (name):** David A. Brause, Manager, 82 Interlaken LLC

**Applicant Signature:** David A. Brause/mic

**Applicant Mailing Address:** 52 Vanderbilt Avenue, Suite 1507, New York, NY 10017

**On the** 9<sup>th</sup> **day of February, 2024 for property shown on the Stockbridge Assessors**

**Map # 205, Lot #26**

**Owner of property:** 82 Interlaken LLC

**Owner's signature:** David A. Brause/mic

**Address of property:** 82 Interlaken Road, Stockbridge, MA

**Mailing Address:** c/o David Brause

52 Vanderbilt Avenue, Suite 1507, New York, NY 10017

**Description of property:** Lot 3 containing 4.875 acres on which is located a two-story single  
family dwelling

**Present use of property:** Single Family Residence

**Project Description:** Amendment to current special permit to accommodate changes to  
pervious patio and landscape stair configuration as well as modifications to rain garden layout with  
additional replanting proposed.

**Appropriate Section of Zoning Bylaw:** Section 6.5 Lake & Pond Overlay District

**Attach six sets of scale drawings with measurements showing the existing conditions and proposed changes. Also, attach six plot plans showing the locations of all structures and buildings with scaled measurements to all lot lines and between all structures, along with a total of five copies of this application.**

**All applications must be accompanied by six complete sets of documents, all areas of the above form must be completed, and the proper fee paid, or the application will be deemed to be incomplete and returned to the applicant.**

## *Lake and Pond Overlay District Checklist*

Date: 2/9/2024

Name of Applicant: 82 Interlaken, LLC

Address: 52 Vanderbilt Avenue, Suite 1507, New York, NY 10017

Property Affected: 108 Interlaken Road, Stockbridge, MA 01262

(To be filled out by applicant)

1. How far from the mean high water mark is the existing structure? 78'
2. Is the existing structure, lot, etc. nonconforming in any manner other than being within the LPOD? Yes ☐ No ☒ Explain. \_\_\_\_\_  
\_\_\_\_\_
3. Is any construction being done closer to the mean high water mark than the existing structure? Yes ☐ No ☒
4. Is any septic system work being done within 150' of the mean high water mark? Yes ☒ No ☐
5. What is the lot coverage of the existing structure(s)? 0.76% Under the proposed plan? 2.97%
6. Cutting in the LPOD
  - a. Is cutting of live vegetation being done within 35' of the mean high water mark? Yes ☒ No ☐
  - b. Is an alternative cutting plan being proposed? Yes ☒ No ☐  
If so, is a description of natural shrubbery and replacement plantings, if required, included? Yes ☒ No ☐
7. Excavation in the LPOD
  - a. Are any changes being made to roads/driveways? Yes ☒ No ☐
  - b. Any removal of soil? Yes ☐ No ☒
  - c. Any demolition being done? Yes ☒ No ☐

(continued on other side)

(To be filled out by Planning Board.)

8. Does the application/plan include:

1. \_\_\_\_\_ locus map
2. \_\_\_\_\_ scaled drawing of property showing existing watercourses, existing features, parking and loading areas with materials, and erosion control measures.
3. \_\_\_\_\_ grading and drainage plan with 2' contour lines in building area and 5' contour lines elsewhere
4. \_\_\_\_\_ construction time schedule

9. What is the Conservation Commission's opinion? On December 12, 2023, the Conservation Commission issued a unanimous approval of the plan changes.

## 1.0 PROJECT SCOPE

The applicant, 82 Interlaken, LLC, proposes to continue with the reconstruction of an existing single-family home, guest house and other site features originally permitted in 2021. The amendment request is made to memorialize changes to the patios and stairs as well as modifications to the rain garden and landscaping scheme within the 150' Lake and Pond Overlay District.

## 2.0 EXISTING CONDITIONS

The property is currently well underway with construction of the access driveway with the single-family home, guest house, pool and septic system well under construction. The site has been inspected frequently by the Stockbridge Conservation Commission along with their consultant, David Cameron, PWS of Fleetwood Environmental as a compliance check in January of 2023 as well as in December 2023 as part of the request to Amend and Extend the Order of Conditions for the property. The erosion and sedimentation controls have been well maintained and the site has remained stable through the duration of construction. The areas for the proposed rain gardens have not yet been cut as changes were made to the proposed rain garden and replanting scheme. While approval to cut trees exists based upon the current Special Permit the applicant has elected to ensure the Stockbridge Planning Board have approved the changes as the Stockbridge Conservation Commission did on December 12, 2023.

## 3.0 WETLAND RESOURCE AREAS

Wetland resource areas associated with Stockbridge Bowl in the vicinity of property are Land Under Water Body 10.56 (LUWB), Bank 10.54, and Bordering Vegetated Wetland 10.5S(BVW). The BVW is shown further away from the house site between the area of the proposed house and the cul-de-sac. The Mean Annual High Water Mark (Bank) of Stockbridge Bowl is shown as Series C. A Notice of Intent is being submitted to the Stockbridge Conservation Commission for work within areas subject to protection under the Wetlands Protection Act and Town of Stockbridge Wetland Bylaw.

According to the current Natural Heritage & Endangered Species Program (NHESP) mapping, the work area is located within an area of Estimated Habitat of Rare Wildlife and an area of Priority Habitat of Rare Species (PHI 300). There are no Certified or Potential Vernal Pools within the vicinity of the project. A copy of the Notice of Intent is being submitted to NHESP for review under the Massachusetts Endangered Species Act (MESA).

According to FEMA Firm Panel 250042 0005B, the property is not located within the 100-year or 500-year floodplain.

The property is not within an Area of Critical Environmental Concern (ACEC).

Erosion control devices and practices shall be implemented to protect resource areas. This project, as designed, will not affect Stockbridge Bowl or wetland resource areas on the parcel.

## 4.0 ZONING

The parcels front on Interlaken Road and Fox Lane (private cul-de-sac) within the R-4 and R-2 Residence zones. All proposed buildings subject to this application lie within the portions of the parcel mapped within the R-4 district. The only work proposed to occur within sections identified to be in the R-2 District is the leach field for the proposed house with construction access to build the leach field from Fox Lane.

### **Section 6.5: Lake and Pond Overlay District (LPOD)**

*The Lake and Pond Overlay District (LPOD) is intended to protect and enhance the principal lakefronts and shorelines of the Town of Stockbridge; to maintain safe and healthful conditions; to prevent and control water pollution; and to preserve habitat, vegetative cover and natural beauty.*

The existing structure is within the 150-foot LPOD of Stockbridge with the closest point being 78' from Stockbridge Bowl. The project has been designed to ensure the proposed house maintains the same 78' setback to Stockbridge Bowl and through the design process the final house layout has evolved to provide a rotation of the house site which set additional mass of the house further back from Stockbridge Bowl on the North side of the house. The home will have an attached garage on the West (non-lake side) of the house and a detached guest house on the West side of the driveway with no portion of the guest house within the LPOD.

To accommodate the proposed reconstruction of the home and accessory structures the applicant proposes a robust tree re-planting plan and stormwater management. The applicant as well as staff of White Engineering, Inc. consulted with Tom Ingersoll in the evaluation of the existing trees as well as the proposed tree planting plan. Wagner Hodgson Landscape Architects has prepared a landscape plan for the proposed project. The overall concept is consistent with the original approved project with modifications having been made to the pervious patios, conversion of the gravel driveway court to use pervious pavers. Enclosed with the application is a summary of the enhancements to the proposed replanting within the LPOD that provides more mature trees being planted than the Special Permit in force currently requires. With the change to the patio there is a slight increase

Finally, the applicant proposes two docks and a swim float for the two waterfront parcels. The docks as shown are shown on the plans to be formally approved by the Conservation Commission in January 2021. The docks and float have been configured to comply with the Stockbridge Zoning Bylaw requirements of a maximum length of 25' beyond the high-water line and 200 square foot area. Upon receipt of our Order of Conditions a Chapter 91 license will be applied for with the Massachusetts Department of Environmental Protection. Please accept this application as formal notice to the Planning Board of the proposed docks.

### **6.5.1 Purpose**

The proposed project's purpose is to demolish an existing single-family home that is in disrepair and replace it with a new single family home, attached garage, and guest house with landscaping as well as seasonal docks along the waterfront.



### **6.5.2 Description**

*This LPOD shall include:*

- *The lakefront of the Stockbridge Bowl, Lily Pond, Echo Lake, Mohawk Lake and Agawam Lake and one hundred fifty (150) feet back from the high-water mark of these waterbodies;*

The project is within the LPOD as it lies within the 150' setback to Stockbridge Bowl.

### **6.5.3 Relation to Other Districts**

*The LPOD is an overlay district mapped over other districts. Where there is an inconsistency between the requirements of Section 6.5 and the regulations otherwise applicable in such other districts, the more restrictive provision shall be deemed to apply.*

The project is also within the R-4 District fronting on Interlaken Road.

### **6.5.4 Applicability**

a. *Jurisdictional Activities - Except as otherwise provided in Section 6.5, no building, structure or land use activity shall be permitted except pursuant to a special permit issued by the Planning Board pursuant to the requirements of Sections 6.3 and 6.5. For the purposes of Section 6.5, "land use activity" shall mean any significant change in the physical characteristics of land or the physical or chemical characteristics of the wastewater produced from a building or structure, but excluding any exempt uses listed in paragraph b of this subsection. Except as otherwise provided in said paragraph b, "land use activity" shall include, but not be limited to: any extension or alteration of an existing structure; any removal of vegetation; any road or driveway; any excavation for the purpose of removing earth materials off-site; and any facility designed to prevent or mitigate the impacts of stormwater or associated drainage.*

The project is within the LPOD and requires a permit from the Planning Board.

b. *Exempt Activities - The following activities do not require a special permit, but must nevertheless comply with the requirements of subsection 6.5.9:*

- *Any principal or accessory use, otherwise permitted by this Bylaw, to be located within an existing structure, provided that any extension or alteration of such structure does not increase the height of the structure and is no closer to the high water mark than the existing structure; the resulting structure complies with applicable yard, lot coverage and floor area requirements of Section 5.5; and the chemical characteristics of any wastewater produced from such use are not significantly changed;*
- *Ordinary repair or maintenance of, or interior alterations to, existing structures;*
- *Removal of dead, diseased or dying trees and vegetation;*
- *Ordinary pruning or maintenance of shrubs or trees;*
- *Other gardening uses that do not involve the cutting of shrubs or trees;*
- *Structures under one hundred (100) square feet in footprint area; and*
- *Recreational, municipal*

The project does not qualify for exemption of the requirement for a Special Permit.

### **6.5.5 Prohibited Activities**

*The following activities shall be prohibited within the LPOD:*

- *The storage or dumping of any waste material, junk, refuse, or other debris;*

There is no proposed storage or dumping of any waste material, junk, refuse or other debris. Any demolition will be loaded into a container and disposed of off-site in a legal manner.

- *The discharge or application of wastewater or any pollutant except as specifically permitted by the Board of Health; and*

Wastewater discharge is approved by board of health. No other pollutants proposed to be used on site.

- *The relocation of perennial or intermittent watercourses, the filling or reclaiming of wetlands and watercourses, the mining or off-site removal of topsoil, subsoil, clay, peat, gravel, sand, shale or other similar materials.*

There is no proposed alteration of wetlands or water courses. Soils and rock from the foundation excavation will be used for final grading of the property including fill for the raising of the driveway grade and backfilling the house and final grading on the waterfront.

#### **6.5.6 Required Findings**

*The Planning Board shall approve a special permit for any building, structure or land use activity within the LPOD if it finds that the building, structure or land use activity meets all application and site plan requirements set forth in Section 6.3 and subsection 6.5.8 and all applicable land use and development standards set forth in subsection 6.5.9.*

This submittal meets the application and site plan requirements of Section 6.3 and Subsection 6.5.8 (see below). The project will have no adverse impact on the environment utilizing the construction period erosion and sedimentation controls and construction practices identified in the enclosed Stormwater Pollution Prevention Plan (SWPPP). Long term stormwater management requirements are met with details of the stormwater management system identified in the attached Stormwater Report.

#### **6.5.7 Procedure**

*The procedure for review and approval under this section shall be as set forth in Sections 6.3 and 6.5. A Site Plan satisfying the requirements of subsections 6.3.7 and 6.5.8 is required for any proposed building, structure or land use activity within the LPOD for which a special permit is required. Special permit applications and site plans shall be submitted to the Board of Selectmen for its review and comment to the Planning Board.*

A site plan satisfying these requirements has been submitted along with the application of the Special Permit and LPOD criteria and checklist.

#### **6.5.8 Application and Site Plan Requirements**

*In addition to the application and site plan data required by Section 6.3, an Applicant for a special permit pursuant to Section 6.5 shall submit the following information to the Planning Board for its review:*

- *The location and description of existing and proposed features;*

The enclosed site plan set prepared by White Engineering, Inc. prepared for 82 Interlaken, LLC with drawing number 20-08-05C with a revision date of November 21, 2023 and Wagner Hodgson landscape plan dated November 15, 2023.

- *Boundaries of the property plotted to scale;*

Surveyed boundaries of property are shown, to scale, on the site plan based on the survey prepared by BEK Associates for the original subdivision as well as an updated survey provided to White Engineering, Inc. in 2017.

- *Existing watercourses;*

The existing watercourse, Stockbridge Bowl, is shown on the plan.

- *A grading and drainage plan, showing existing and proposed contours at a two (2) foot contour in the area of activities for which a special permit under section 6.5 is being sought, and a five (5) foot contour elsewhere;*

The enclosed plan set shows existing and proposed topography associated with the proposed reconstruction of the single-family home, guest house and expansion of the driveway as well as the proposed paths and proposed stormwater management system.

- *The location, design, and construction materials of all driveway, parking and loading areas;*

A new gravel driveway has been installed as shown on the site plan leading to the proposed garage.

- *The location of all stormwater drainage areas (catchments) for each distinct receiving water/wetland area within and/or downgradient of activities for which a special permit is being sought;*

The work area is a single catchment with Stockbridge Bowl being the receiving water.

*Soils-based stormwater infiltration rates using the following table:*

Texture Class	NRCS Hydrologic Soil Group	Design Infiltration Rate
Sand	A	8.27
Loamy Sand	A	2.41
Sandy Loam	B	1.02
Loam	B	0.52
Silt Loam	C	0.27
Sandy Clay Loam	C	0.17

Clay Loam	D	0.09
Silty Clay Loam	D	0.06
Sandy Clay	D	0.05
Silty Clay	D	0.04
Clay	D	0.02

The stormwater infiltration rates using the LPOD table for Sandy Loam soils group B Design Infiltration Rate of 1.02 Inches/Hour.

- *Plans and specifications for soil erosion and sedimentation control measures*  
Erosion control measures are shown and detailed on the “Proposed Erosion and Sedimentation Control Plan”. Silt fence and straw bales will be used throughout the entire site. Specification for soil stockpiles to be tarped are included in the SWPPP.
- *A timing schedule indicating anticipated starting and completion dates, the sequence of anticipated tasks, and the duration of exposure of each disturbed area prior to the completion of effective erosion and sediment control measures;*
  - 1.) December 12, 2023 potential vote to amend and extend the Order of Conditions and Stormwater Permit
  - 2.) December 2023- install erosion control blanket on soil slope between the house and Stockbridge Bowl that is currently providing construction access to lakeside of the home. Finalize ledge removal for final driveway grading.
  - 3.) Dec 2023-January 2024 file Amendment to LPOD special Permit and Driveway Special Permit to Stockbridge Planning Board
  - 4.) Remainder of Winter 2023-2024- final tree removal and final grading work as weather conditions permit for final grading of rain gardens, etc.
  - 5.) Spring & Summer 2024- finalize septic system installation, installation of arch culvert and re-alignment of driveway in the area of the crossing, final site preparation of sport court areas and fire turn around areas. Finish construction of pool
  - 6.) Fall 2024: Planting areas and rain gardens that are ready to be planted will be planted to establish prior to winter of 2024-2025
- *For any land use activity involving the construction or expansion of a building or structure, the paving of roads, or the creation of driveway, parking and loading area, the results of a pollutant loading model demonstrating that stormwater flow on or from the site will not result in a discharge of any pollutant in violation of subsection 6.5.5. Such model shall evaluate the loadings of nutrients (nitrogen and phosphorus), bacteria, metals and total suspended solids, the expected removal rates associated with any stormwater treatment facility and the resulting loads to the LPOD. The site plan shall be developed subsequent to, and in accordance with an existing natural resources conditions inventory that shows topography including steep slopes (greater than 10%), severe slopes (greater than 20%), soils limitations (constraints related to septic system suitability and erosive characteristics as mapped by the USDA, Natural Resources Conservation Service) and vegetation.*

No increase in the discharge of pollutants is proposed (nutrients, bacteria, metals, or total suspended solids) from the site.

The following represents information from the Mass DEP Stormwater Policy Volume 2, Table 1.2: Stormwater Pollutants, Sources, and Related Items.

Stormwater Pollutant	Sources	Site Specific Information
nutrients Nitrogen & Phosphorous	Urban Runoff, Animal Waste, Fertilizers, Failing Septic System	No Urban Runoff, No Animal Waste proposed, No Fertilizers proposed within LPOD, Replacing Failed Septic System
Bacteria	Urban Runoff, Animal Waste, Failing Septic System	No Urban Runoff, No Animal Waste proposed, Replacing Failed Septic System
Metals	Industrial Processes, Automobile Pollutants, Metal Roofs	No Industrial processes, Automobile pollutants low for single family house site. Any metal roof to be coated first
Total Suspended Solids	Construction Sites, Other Disturbed and/or Non-Vegetated Lands, Eroding Banks, Road Sanding, Urban Runoff	Erosion and Sedimentation Controls as proposed prior to construction. All land to be stabilized upon completion of work.

The proposed site plan set as well as the SWPPP ensure that there will be no increase in the pollutants identified in the chart referenced in Mass DEP Stormwater Policy Volume 2, Table 1.2: Stormwater Pollutants, Sources, and Related Items.

#### 6.5.9 Land Use and Development Standards All Buildings, Structures and Land Use Activities Shall Comply with the Following Standards:

- a. **Development of Lots**
- *The minimum setback from the high-water mark for buildings and structures shall be 100 feet.*

Existing house is 78 feet from the high-water mark with the proposed house is no closer than 78 feet to Stockbridge Bowl.

- *The maximum lot coverage by buildings, structures and impermeable surfaces within the LPOD shall be fifteen (15) percent of the total lot area within the LPOD.*

Lot coverage is 7.65% of the LPOD area.

- *All driveways, parking and loading areas shall be constructed of permeable materials.*

Existing driveway is gravel. The new proposed driveway will be a permeable paver.

**b. Erosion and Sedimentation Control**

- *Natural vegetation shall be maintained on at least seventy-five percent (75%) of the total lot area within the LPOD.*

Upon completion of the proposed project including the proposed tree replacement and construction of the rain gardens the property will have at least 75% natural vegetation within the LPOD.

- *Grading shall not result in the creation of slopes greater than twenty percent (20%) within the LPOD.*

The project as proposed does not create any new slopes exceeding 20%.

- *Activities that result in slopes exceeding ten percent (10%) shall incorporate the use of staked straw bales, siltation fences, sedimentation basins and silt traps to control sedimentation and erosion during construction. Such practices shall be implemented within twenty-four (24) hours of clearing and excavation and shall be maintained until completion of all such activities.*

A robust erosion and sediment control plan has been proposed on the site plans as well as the enclosed SWPPP.

- *All activities shall be completed within 90 days from original clearing and excavation, except as otherwise authorized by the Building Inspector, in order to minimize exposure to sedimentation and erosion.*

Disturbed areas shall be stabilized with cover within 90 days unless otherwise authorized. Erosion control measures will be maintained until project completion and not removed until authorized by the Stockbridge Conservation Commission.

- *In cleared areas surrounding the creation of new impermeable surfaces, temporary or permanent vegetative landscaping shall be employed within seven (7) days of initial clearing and excavation.*

Once foundation is backfilled temporary vegetation will be planted until the final the final landscaping is completed.

- *Stockpiled soils or other erodible materials shall be securely covered and/or vegetated to avoid erosion and sedimentation during construction.*

Any stockpiling of soils will be temporary and will be covered with a tarp to avoid erosion and sedimentation along with a straw wattle around the perimeter of the pile.

**c. Stormwater Management**

- *Upon completion of activities for which a special permit under Section 6.5 has been granted, stormwater runoff rates shall match pre-development (natural) conditions for the two-, twenty-five- and one-hundred- (2-, 25- and 100-) year events in each catchment area.*

Upon completion of site development stormwater runoff rates will match pre-development rates for 2-, 25- and 100-year storms. The rain gardens as designed will be able to store a static volume of 5.86 inches of rain prior to accounting for any infiltration

- *Upon completion of activities for which a special permit under Section 6.5 has been granted, annual groundwater recharge rates shall match pre-development (natural) conditions to preserve groundwater supplies and to protect baseflow to downgradient streams, lakes and wetlands.*

Annual stormwater recharge rates will match pre-development through infiltration with the rain gardens.

- *Upon completion of activities for which a special permit under Section 6.5 has been granted, additional stormwater recharge shall be provided in an amount equal to the total volume of consumptive uses of groundwater withdrawals, such as drinking water and irrigation, on the site.*

The applicant proposes to capture and infiltrate all proposed runoff generated on site which far exceeds the consumptive use of domestic water and irrigation.

- *Stormwater treatment using bioretention areas, constructed wetlands or organic filters shall be provided for the first flush (1") rainstorm from roads, other paved areas and metallic roofs prior to infiltration/recharge. Stormwater treatment facilities may be designed to include both static storage and dynamic infiltration (infiltration that occurs during the peak 2 hours of the design storm event).*

There is no proposed pavement of the driveway and the deep sump catch basins and forebays provided will provide total suspended solids removal prior to reaching the rain garden.

- *Pollutant loading shall be less than the following receiving water standards:*
  - a. *Phosphorus 0.08 mg/liter*
  - b. *Bacteria 200 colonies/100 milliliters*
  - c. *Metals applicable federal and state drinking water standards*

No pollutant loads containing Phosphorous, bacteria, or metals are proposed (see Table in Section 3.0 Zoning subsection 6.5.8). The final roof materials have not been selected but if a metal roof were to be proposed it would be treated with a silicone membrane which would increase the longevity of the roof and prevent metals from degrading groundwater quality.

**d. Cutting**

- *Except as otherwise permitted by this subsection, no vegetation may be removed within thirty-five (35) feet extending inland from any point along the high-water mark. This area shall be maintained as an undisturbed natural buffer strip.*

The trees proposed to be cut within the 35' setback are largely dead, diseased or dying with a substantial tree replanting plan accounting for all trees removed within the 100' buffer zone to Stockbridge Bowl. The proposed site and landscape plans call for more trees to be planted within the

LPOD that the current special permit requires.

- *For the purpose of water access, a contiguous clear-cut opening in the buffer strip, not to exceed thirty-five (35) feet in width or twenty percent (20%) of the lot's frontage along the water, whichever is less, shall be permitted. Such opening shall not be less than thirty (30) degrees from perpendicular to the water's edge.*

There will be no need for clear cutting to provide waterfront access and the standard is met.

## 5.0 SOILS AND DRAINAGE

The soils on the property are sandy loam and we have utilized the 1.02 in/hr as the design infiltration rate as identified in the Stockbridge Zoning Bylaw. The drainage has been designed to allow all proposed runoff to be captured and collected through a series of deep sump catch basins, sediment forebays and rain gardens to manage the increase in runoff from the proposed improvements. As part of the plans to reuse the construction access as a permanent driveway for which a special permit is being sought the applicant provided additional deep sump catch basins to manage runoff on the driveway behind the pool house with an additional chamber bed proposed to take runoff prior to the rain gardens along the waterfront. The Stockbridge Conservation Commission has approved the amendment to the Stormwater Permit based on these additional improvements.

## 6.0 SEWAGE DISPOSAL

A new septic system is proposed to serve the existing home. While the septic tank and pump chamber are within the LPOD due to the location of the house the proposed leachfield is completely out of the LPOD and greater than 100' from another bordering vegetated wetland on the property. The proposed leachfield will utilize the Eljen Sand system which is a DEP approved Innovation & Alternative (IA) technology that we have used with great success.

## 7.0 WATER SUPPLY

A private well is proposed to serve the new home with the existing well to be decommissioned.

## 8.0 OTHER UTILITIES

The existing overhead electric and cable utilities will be disconnected prior to demolition. The applicant's representatives will work with the utility providers to provide new services to the proposed house and the guest house.

## 9.0 DRIVEWAY AND PARKING

The existing driveway is gravel, and the driveway will be expanded towards the proposed house and attached garage.

## 10.0 SOLID WASTE



Construction waste will be stored in an approved container and removed from the site by a licensed hauler. Debris material will not be stored on-site, outside of the container. Domestic solid waste will be disposed of in a legal manner by an independent hauler arranged by the owner.

#### 11.0 OPEN SPACE, LAND LEFT IN NATURAL STATE

Greater than 75% of the land within the LPOD will remain in its natural state.

#### 12.0 ARCHITECTURAL ELEMENTS AND VISUALIMPACT

The proposed house will use natural colors and materials. Existing mature trees along the shoreline to remain as well as the additional trees to be planted will provide a natural screen of the house from Stockbridge Bowl. The house has been situated in a way where the North side of the house has been rotated counterclockwise to reduce the length of house directly facing Stockbridge Bowl. The proposed pool has been located on the South side of the house which enjoys a greater screen from Stockbridge Bowl with existing deciduous trees. Based upon the placement and elevation of the pool as well as the used of Redi-Rock retaining wall system the blocks will have a natural stone façade to blend with the exposed ledge anticipated on the back side of the home. Additionally, the guest house has been setback behind the garage to further reduce the mass of proposed buildings along the lakefront at the 78' setback.

#### 13.0 L LANDSCAPING AND LIGHTING

Enclosed with this application is a robust planting plan showing the proposed trees, shrubs, and plugs to be planted on the property within he LPOD. The landscaping plan was developed by Wagner Hodgson which incorporates responses to the Stockbridge Conservation Commission review in December 2023. Exterior landscape lighting is not planned for the immediate waterfront and all other lighting will be required to down cast with shielded light fixtures as required by the Town of Stockbridge General Bylaws.



## WHITE ENGINEERING INC.

CIVIL & ENVIRONMENTAL  
A VETERAN-OWNED SMALL BUSINESS

December 12, 2023

**VIA HAND DELIVERY & EMAIL**

Stockbridge Conservation Commission  
P.O. Box 417  
Stockbridge, MA 01262-0417

RE: Supplemental Information for the Request for an Amended Order of Conditions and Stormwater Permit Issued to 82 Interlaken LLC  
82 Interlaken Road  
MADEP File #296-0511

Dear Members of the Commission:

Please accept this correspondence as a response to questions raised during our discussion on November 28, 2023, and the site visit conducted on December 8, 2023, with the Commission and David Cameron, PWS, of Fleetwood Environmental. The first item I wish to affirm for the record is that the applicant does not plan to construct an additional single-family home on the vacant parcels associated with the three (3) lot subdivision that the applicant purchased in 2021. The second item I wish to confirm is that the second proposed dock along the Northern end of the waterfront will be a floating dock and not have motorboats stored there. The applicant communicated closely with the abutters to the North on the dock configuration as well as the proposed planting scheme for the driveway, screening between the home under construction, and their home. The following are items that represent a change from the current approval based on the permit(s) under which those activities are regulated:

**Stormwater Permit**

The first proposed task that is part of changes overseen by the Stormwater Permit alone is the conversion of 2300 square feet (sf) of gravel driveway in the cul-de-sac that will be overlaid with topsoil and revegetated. The second item is a majority of the construction access being sought to remain permanent is indeed outside of the 100' Buffer Zone and 200' setback to Stockbridge Bowl. Sediment forebays and rain gardens have been proposed along either side according to the stormwater handbook to provide additional filtration and infiltration of runoff from the driveway. In response to questions raised at the hearing on November 28, 2023, additional deep sump catch basins were added to the steep portion of the driveway behind the pool to reduce speed and provide greater total suspended solids (TSS) removal. The proposed sport courts will have a stone drip edge around the perimeter to manage runoff from the sport court surfaces. Lastly, Wagner Hodgson, the landscape architecture firm for the project, has provided a planting palette for the area on top of the rock face where the driveway is currently cut to further enhance the revegetation of the property outside of the 200' setback to Stockbridge Bowl and, based on its elevation, provide a taller vegetative screen for the property.

55 SOUTH MERRIAM STREET, PITTSFIELD, MA 01201-6609  
PHONE (413) 443-8011 • WHITEENG.COM • FAX (413) 443-8012

### Stormwater Permit & Order of Conditions

The first item that falls under the purview of both permits is associated with keeping the driveway within the 100' Buffer Zone of the crossing location with the existing temporary culvert. The driveway is being shifted South from the location as seen at the site visit on December 8, 2023. As originally proposed, the southern end of the culvert was to end 1' from the limit of Bordering Vegetated Wetland. After the discussion at the site visit and reviewing the area required for the buffer plantings to thrive, we shifted the culvert North so the setback from the end of the culvert to the Bordering Vegetated Wetland is now 4'. To accommodate the crossing, an arch culvert has been proposed. Sizing information associated with the arch culvert is as follows:

Culvert type - Squash Pipe 64' wide x 43' high x 16' length, 10.75' embedded (25% = 32.25)

Per NE District USACOE Openness Ratio Spreadsheet

OR (Openness Ratio) = 0.25 = x-section area/culvert length

X-Section Area =  $\pi D^2/4 = 3.14 \times 32.25^2/4 = 816.4 \text{ in}^2 = 68 \text{ ft}^2$

**OR = 68/16 = 4.25 ≥ 0.25**

Per Table provided on spreadsheet

L = 16 ft

Required Open Area = 13.12 ft<sup>2</sup>; Provided = 15.27 ft<sup>2</sup>

Required Diameter = 4.56 ft; Provided = 5.3 ft

Enclosed with this cover letter are a series of 8.5" x 11" drawings to help identify the proposed changes with respect to the rain garden areas along the waterfront as requested. The first sheet shows the proposed limit of clearing with the original rain garden configurations as well as the original plant list.

At the site visit, it was requested we provide a summary of the changes associated with the tree removal and replanting. The original approval called for a total of 32 trees to be removed within the 100' Buffer Zone and replaced with a variety of species with a total of 64 trees to be planted at a 5'-6' height. This submittal includes a revised plan set from what was originally submitted with the amendment request in November 2023. These plans show a revised limit of clearing based on the reconfiguration of the Northern rain garden. The final plan calls for 29 trees to be removed and replaced with a total of 64 trees. Eight (8) of the trees now proposed to be planted will be 10'-12' in height compared to 5'-6' as originally proposed for all trees to be planted.

With respect to plantings, it should be noted that there were substitutions made in multiple planting areas to provide species not only native to Massachusetts but a further emphasis on those native to Western Massachusetts. Rob Mooney, RLA from Wagner Hodgson, will be at the hearing this evening and better able to describe those changes.

The last item that relates to both the Stormwater Permit and Order of Conditions is that the soil embankment currently serving as access to the lakeside of the home shall have straw spread or a

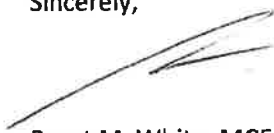
straw erosion control blanket installed to prevent erosion as the embankment will remain in its current configuration for greater than seven (7) days moving forward.

The last item that was requested was an updated timeline for construction based upon the current progress on the site with additional permitting and construction to remain. Moving forward, we believe the following to be the sequence of work:

- 1.) December 12, 2023 - Potential vote to amend and extend the Order of Conditions and Stormwater Permit
- 2.) December 2023 - Install erosion control blanket on soil slope between the house and Stockbridge Bowl that is currently providing construction access to lakeside of the home. Final ledge removal and driveway grading from sport court area to house.
- 3.) December 2023 - January 2024 - File Amendment to LPOD Special Permit and Driveway Special Permit to Stockbridge Planning Board
- 4.) Remainder of Winter 2023-2024 - Tree removal and grading work as weather conditions permit for final grading of rain gardens, installation of arch culvert and realignment of driveway in the area of the crossing, underground utilities from Interlaken Road to house, septic tank installation, retaining wall installation, etc.
- 5.) Spring & Summer 2024 - Final septic system installation and completion of sport court areas and fire turn-around areas. Finish construction of pool and patios and final grading.
- 6.) Fall 2024 - Planting areas and rain gardens that are ready to be planted will be planted to establish prior to winter of 2024-2025

I look forward to presenting the updated information to the Commission this evening. Thank you for your time and attention with this matter.

Sincerely,



Brent M. White, MCE, PE, LEED AP  
Principal

Enclosures

cc: MA DEP  
David and Cheryl Brause, 82 Interlaken LLC  
David Cameron, PWS, Fleetwood Environmental



**WAGNERHODGSON**  
LANDSCAPE ARCHITECTURE  
NY 516 567 1791 VT 802 864 0010

**82 INTERLAKEN ROAD STOCKBRIDGE, MA**

**82 INTERLAKEN,  
LLC**

**PROPOSED WETLAND  
BUFFER PLANTING**

JOB NO 31-154  
SCALE NTS  
DATE 12/22/23  
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## PROPOSED PLANT SCHEDULE

### PLANT SCHEDULE - 100' BUFFER

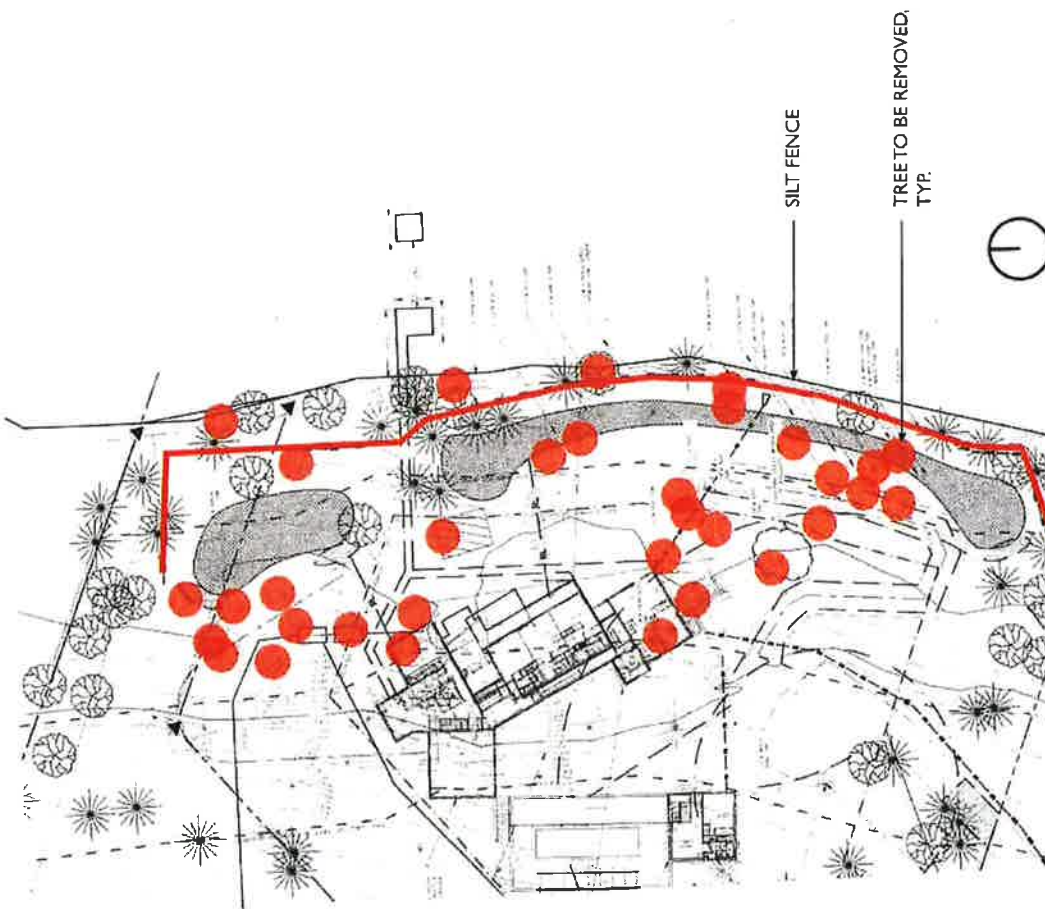
QTY	SCIENTIFIC NAME	COMMON NAME	SIZE
<b>DECIDUOUS TREES</b>			
3	Acer rubrum	SUGAR MAPLE	7" CAL
3	Aquilegia canadensis	SEVENBERRY	5" - 6" HT
1	Corylus americana	AMERICAN HICKORY	7" CAL
1	Fraxinus americana	AMERICAN WHITE OAK	7" CAL
1	Quercus alba	WHITE OAK	7" CAL
1	Quercus prinus	PRINCE OAK	7" CAL

<b>EVERGREEN TREES</b>			
1	Thuja occidentalis	GREEN GLOBE	10" - 12" HT
1	Thuja occidentalis	GREEN GLOBE	10" - 12" HT
1	Thuja occidentalis	GREEN GLOBE	10" - 12" HT

<b>SHORELINE UNDERSTORY</b>			
1	Carex lasiocarpa	SHORE	1" CAL
1	Carex lasiocarpa	SHORE	1" CAL
1	Carex lasiocarpa	SHORE	1" CAL

<b>RAIN GARDEN TREES + SHRUBS</b>			
1	Acer rubrum	RED MAPLE	7" CAL
1	Aquilegia canadensis	SEVENBERRY	5" - 6" HT
1	Corylus americana	AMERICAN HICKORY	7" CAL
1	Fraxinus americana	AMERICAN WHITE OAK	7" CAL
1	Quercus alba	WHITE OAK	7" CAL
1	Quercus prinus	PRINCE OAK	7" CAL

**TREE REMOVAL TOTAL: 29**  
**TOTAL QUANTITY OF PROPOSED TREES: 64**



# PREVIOUS PLANT SCHEDULE

**TREE REMOVAL SCHEDULE**  
22 TREES TO BE REMOVED IN 100-FT BUFFER ZONE  
64 TREES FROM BUFFER ZONE SELECTION TO BE  
PLANTED IN THE BUFFER ZONE 5-6 FT IN HEIGHT

- NORTHERN RED OAK (QUERCUS RUBRA)
- AMERICAN BEECH (FAGUS GRANDIFOLIA)
- HAWTHORN (CRATAEGUS PHAENOPYRUM)
- LILAC (SYRINGA VULGARIS)
- SUGAR MAPLE (ACER SACCHARUM)
- BLACKHAW VIBURNUM (VIBURNUM PRUNIFOLIUM)
- EASTERN RED BUD (CERCIS CANADENSIS)
- WITCH HAZEL (HAMAMELIS VIRGINIANA)
- INVASIVE REPLACEMENT SHRUBS AS UNDERSTORY ALONG SHORELINE:  
GRAY DOGWOOD (CORNUS RACEMOSA)  
COMMON NINEBARK (PHYSOCARPUS OPULIFOLIUS)  
FLOWERING DOGWOOD (CORNUS FLORIDA)  
PASTURE ROSE (ROSA CAROLINA)  
LOWBUSH BLUEBERRY (VACCINIUM ANGUSTIFOLIUM)  
RED MAPLE (ACER RUBRUM)  
SERVICE BERRY (AMELANCHIER ARBOREA)

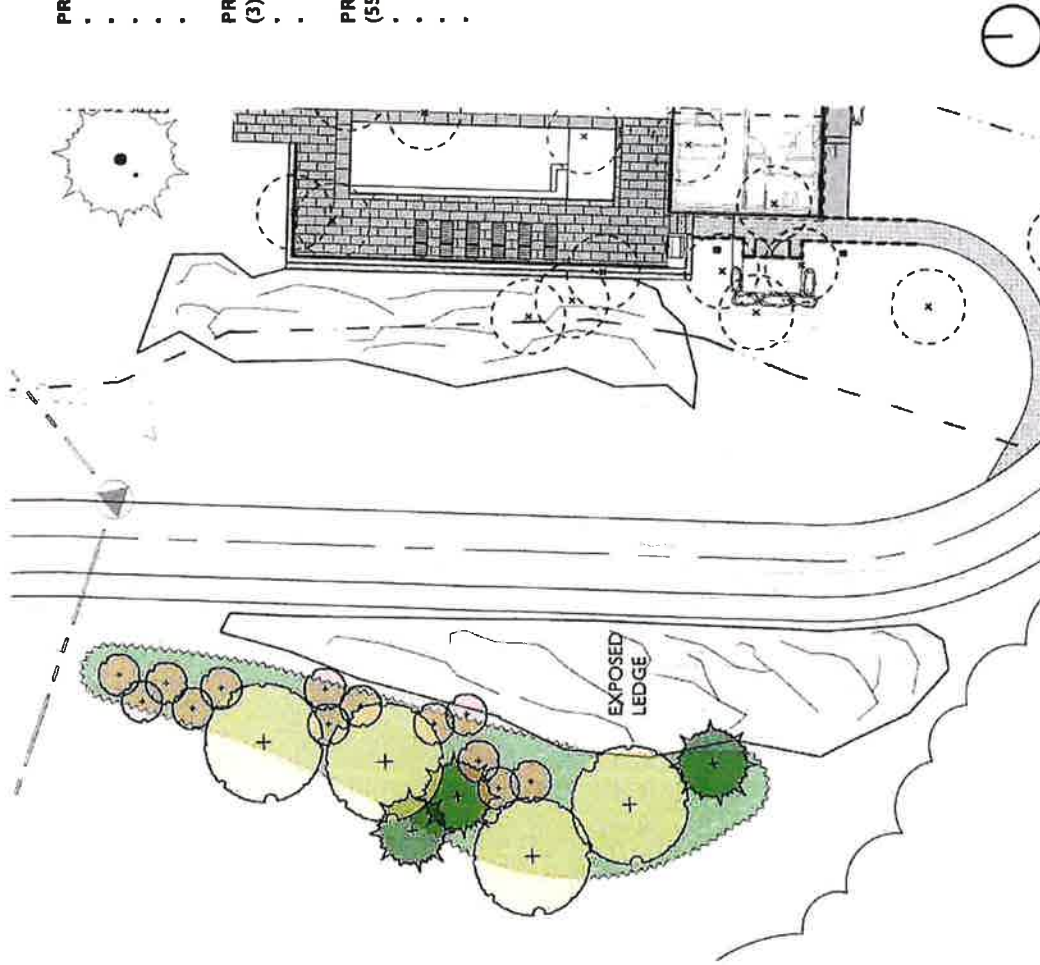
- SMALL GARDEN PLANTINGS**  
RED MAPLE (ACER RUBRUM) 5 PLANTS 5-6 FT IN HEIGHT  
SERVICE BERRY (AMELANCHIER ARBOREA) 5 PLANTS 5-6 FT IN HEIGHT  
HIGHBUSH BLUEBERRY (VACCINIUM CORYMBOSUM) 25 2" PLUGS  
MEADOWSWEEP (SPIRAEA LATIFOLIA) 25 2" PLUGS  
BLUE FLAG IRIS (IRIS VERSICOLOR) 25 2" PLUGS  
VIRGINIA ROSE (ROSA VIRGINIANA) 25 2" PLUGS  
SCARLETT BEE BALM (MENARDA DIDYMA) 25 2" PLUGS  
WINTERBERRY HOLLY (ILEX VERTICILLATA) 6 PLANTS 3-4 FT IN HEIGHT  
BLUE WOOD ASTER (SYMPHYOTRICHUM CANADICUM) 25 2" PLUGS  
CARDINAL FLOWER (LOBELIA CARDINALIS) 25 2" PLUGS  
THREE LOBED CONEFLOWER (RUDECKIA TRILOBA) 25 2" PLUGS  
PINK RUSH (JUNCUS TENUI) 25 2" PLUGS

- INVASIVE REPLACEMENT SHRUBS AS UNDERSTORY ALONG SHORELINE**  
TO SHRUBS 3-4 FT IN HEIGHT FROM THE FOLLOWING  
GRAY DOGWOOD (CORNUS RACEMOSA)  
COMMON NINEBARK (PHYSOCARPUS OPULIFOLIUS)  
FLOWERING DOGWOOD (CORNUS FLORIDA)  
PASTURE ROSE (ROSA CAROLINA)  
LOWBUSH BLUEBERRY (VACCINIUM ANGUSTIFOLIUM)

ALONG 130-FT OF SHORELINE PLANT 13 RED TWIG DOGWOOD STAKES (CORNUS SERICEA)

**TREE REMOVAL TOTAL: 33**  
**TOTAL QUANTITY OF PROPOSED TREES: 64**





**PROPOSED DECIDUOUS TREES AND LARGE SHRUBS 2" CAL OR 5'-6' HT:**

- ACER SACCHARUM - SUGAR MAPLE - 2" CALIPER
- AMELANCHIER CANADENSIS - SERVICEBERRY - 5-6' HT
- HAMAMELIS VIRGINIANA - COMMON WITCH HAZEL - 5-6' HT.
- VIBURNUM TRILOBUM - AMERICAN CRANBERRY- 5-6' HT.
- QUERCUS RUBRA - RED OAK - 2" CAL

**PROPOSED EVERGREEN TREES 5'-6' HT:**

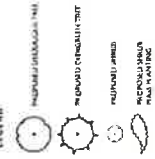
- (3) FROM THE FOLLOWING**
- JUNIPERUS VIRGINIANA - EASTERN RED CEDAR - 10-12' HT.
  - PINUS STROBUS - EASTERN WHITE PINE - 5-6' HT.

**PROPOSED SHRUBS AND GROUNDCOVERS 2-3' HT:**

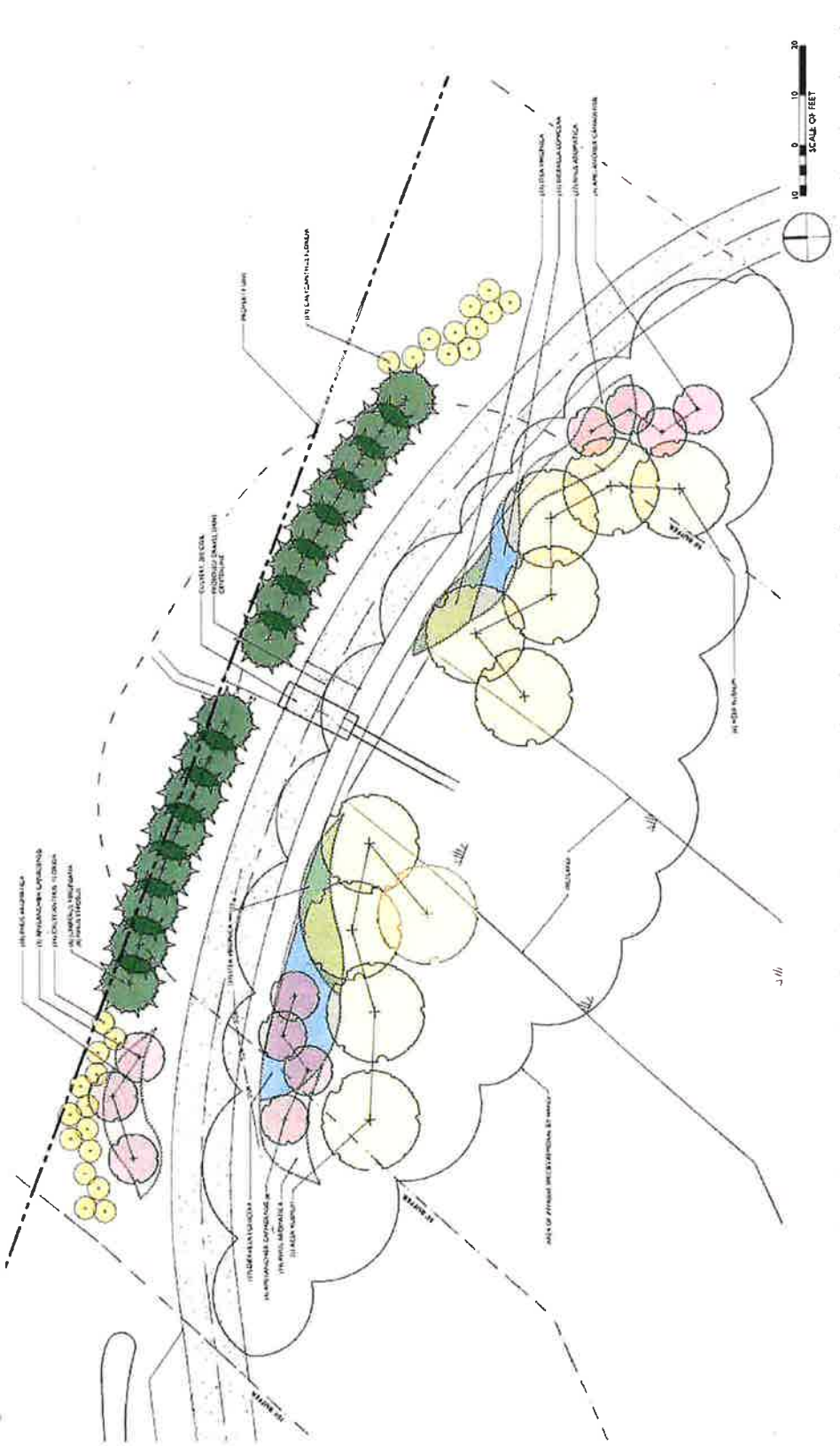
- (55) FROM THE FOLLOWING**
- ILEX VERTICILLATA - WINTERBERRY
  - SPIRAEA LATIFOLIA - MEADOWSWEET
  - VACCINIUM ANGUSTIFOLIUM - LOWBUSH BLUEBERRY
  - VIBURNUM DENTATUM

# PLANT SCHEDULE

QTY	PLANT NAME	SIZE	ZONE
11	DECIDUOUS TREES	8" - 12" DBH	AS SHOWN
11	EVERGREEN TREES	12" - 18" DBH	AS SHOWN
11	SHRUBS	4" - 6" DBH	AS SHOWN



1. The plant schedule is a summary of the plants to be used in the landscape. It is not a contract. The plants shown in the schedule are those that the designer has selected for the project. The client is responsible for obtaining the plants and ensuring that they are of the quality and quantity specified in the schedule.
2. The plants shown in the schedule are those that the designer has selected for the project. The client is responsible for obtaining the plants and ensuring that they are of the quality and quantity specified in the schedule.
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20. The plants shown in the schedule are those that the designer has selected for the project. The client is responsible for obtaining the plants and ensuring that they are of the quality and quantity specified in the schedule.



NOT FOR  
CONSTRUCTION

BRAUSE  
RESIDENCE  
82 NITBLAKEN ROAD  
STOCKBRIDGE MA 01320

SCREENING AND  
CROSSING  
PLANTING PLAN

DATE: 11/11/11  
SCALE: 1" = 10'

L401

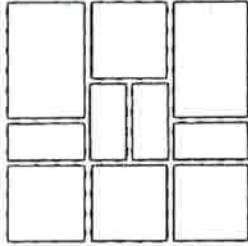




## BLU 80 mm

**DESCRIPTION:** Paver **TEXTURE:** Smooth and HD<sup>2</sup> Smooth

### PALLET OVERVIEW



### NOTES

See page 62 to 64 for more technical information. When used in a permeable pavement application, see page 33 and 101 for more technical information.

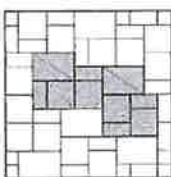
See page 30 for more information about applications.

**JOINT WIDTH:** 9/32" (7 mm)  
**% OF SURFACE OPENING:** 3.0 %  
**INFILTRATION RATE:** 570 in /hr  
 (14 475 mm/hr)

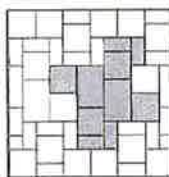
Specifications per pallet	Imperial	Metric
Cubing	<b>84.96 ft²</b>	7.90 m²
Approx. Weight Smooth	3 095 lbs	1 404 kg
Approx. Weight Smooth HD²	3 280 lbs	1 488 kg
Number of rows	8	
Coverage per row	10.62 ft²	0.99 m²
Linear coverage per row	9.75 lin. ft	2.97 lin. m

Unit dimensions	in	mm	Units/pallet
Height	3 1/8	80	32 units
Width	13	330	
Length	6 1/2	165	
Height	3 1/8	80	32 units
Width	13	330	
Length	13	330	
Height	3 1/8	80	16 units
Width	13	330	
Length	19 1/2	495	

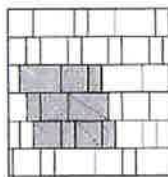
### 01 | Modular pattern



### 02 | Modular pattern



### 03 | Linear pattern



Patterns are for design inspiration only. The installer is responsible to calculate & purchase the correct amount of material

#### Chestnut Brown

HD Smooth  
Smooth



#### Champlain Grey

HD Smooth  
Smooth



#### Beige Cream

Smooth



#### Greyed Nickel

HD Smooth  
Smooth



#### Shale Grey

HD Smooth  
Smooth



#### Onyx Black

HD Smooth  
Smooth

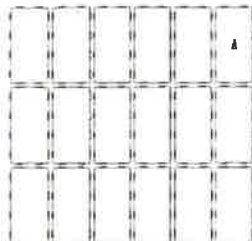




## BLU 80 mm (6"×13")

DESCRIPTION: Paver TEXTURE: Smooth, HD<sup>2</sup> Smooth

### PALLET OVERVIEW



### Specifications per pallet

	Imperial	Metric
Cubing	84.40 ft <sup>2</sup>	7.84 m <sup>2</sup>
Approx. Weight	3 133 lbs	1 421 kg
Number of rows	8	
Coverage per row	10.55 ft <sup>2</sup>	0.98 m <sup>2</sup>
Linear coverage per row	Depth 19.49 lin. ft	5.94 lin. m
	Length 9.74 lin. ft	2.97 lin. m



Unit dimensions	in	mm	Units/pallet
Height	3 1/8	80	144 units
Width	13	330	
Length	6 1/2	165	



### NOTES

See page 62 to 64 for more technical information. When used in a permeable pavement application, see page 33 and 101 for more technical information.

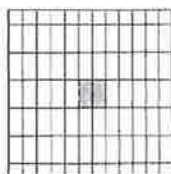
See page 30 for more information about applications.

**JOINT WIDTH:** 9/32" (7 mm)

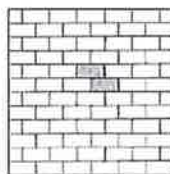
**% OF SURFACE OPENING:** 4.6%

**INFILTRATION RATE:** 570 in./hr  
(14 475 mm/hr)

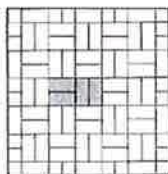
08 | Linear pattern



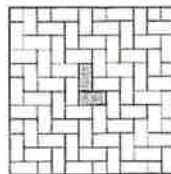
09 | Linear pattern



10 | Parquet pattern



11 | Herringbone pattern



Patterns are for design inspiration only. The installer is responsible to calculate & purchase the correct amount of material.

Chocolate Brown

Smooth



Chestnut Brown

HD Smooth  
Smooth



Champlain Grey

HD Smooth  
Smooth



Beige Cream

Smooth



Greyed Nickel

HD Smooth  
Smooth



Shale Grey

HD Smooth  
Smooth



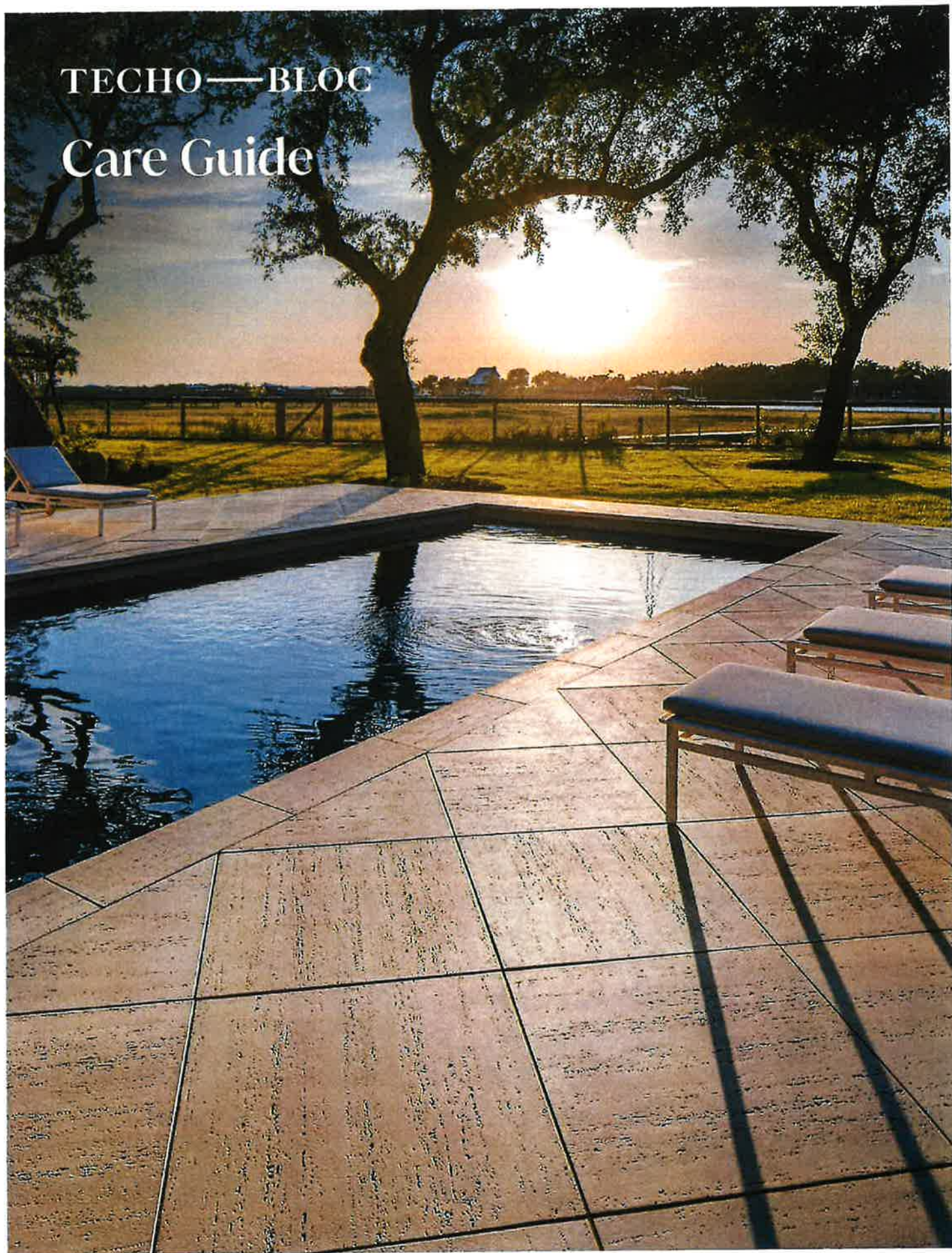
Onyx Black

HD Smooth  
Smooth





# TECHO—BLOC Care Guide







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## Need more assistance? Have more questions?

We have a team dedicated to ensuring your satisfaction.

To submit an after-sales support form, please visit: [www.techo-bloc.com/client-support](http://www.techo-bloc.com/client-support)

For all other warranty related questions please email [clientsupport@techo-bloc.com](mailto:clientsupport@techo-bloc.com)





# A message from our President

Thank you for choosing Techo-Bloc!

Now that your products have been installed, we want to ensure that you are setup and well educated on how to care for your investment so that you can fully enjoy their benefits. Although concrete stones are built to resist outdoor elements and require minimal upkeep, they still need some tender loving care from their owner. To ensure that the beauty of the product lasts, and to avoid any unexpected issues, the secret is simple: take care of them. Prepare them in the fall for winter and get them ready for summer in spring.

I personally have seasonal routines to keep them maintained all year long so that I can benefit from the longevity of my products for decades to come. To avoid organic staining, I sweep away the leaves from my pavement regularly. In areas that are prone to leaves falling, sweep more frequently and perhaps consider using a protectant on your pavers: this will help them be more stain resistant. In the winter,

I make it a point not to over salt them as this can burn the product and isn't great for our environment. In the spring, I lightly wash my pavement to remove all the debris and dirt that built-up under the snow over the winter. In the summer, I keep my paving stones neat by simply brooming and rinsing off built-up dirt or

food with a garden hose. A little effort goes a long way and will keep your products looking how they were destined to be.

We take pride in manufacturing the best products on the market, and want you to enjoy your investment to the very fullest. Take a few minutes to read through this guide. It will help you understand what to expect of concrete stones, how to care for them, and what goes into maintaining their beauty and integrity.

We hope you love your products as much as we love creating them.

Sincerely,

**Charles Ciccarello**  
PRESIDENT





# A standard of care



The care of high-quality concrete products is similar to that of any product exposed to the elements 365 days and nights per year. Just the way you get your home and yards ready for different seasons, the same applies to paving stones. They too require care. To get the most from your investments, take care of them and they'll take care of you.

It is contrary to Techo-Bloc's SOP (Standard Operating Procedures) to be involved in the care of a mature pavement or retaining structure. Care, as mentioned above, is the responsibility of the owner.

## GENERAL CARE

The general care of your hardscape products is minimal, but important. Certain environmental circumstances may involve some additional care, but being consistent with the upkeep avoids more work in the future. Note that concrete is porous. When leaves fall onto your pavers, sweep them off to avoid organic stains. When you see dirt/clay on your pavement, take a minute to hose it off and keep it clean.

Mild cleaning using various household products such as detergents, water and product-specific chemicals is sometimes necessary (like cleaning patio furniture, a vehicle's chrome, plastic, or paint, etc.) to enhance their presence and charm. Protectants of all types are available for additional resistance against acid rain, stains and nature's worst. For questions on industry-specific cleaners and protectants, you may visit <https://www.alliancegator.com/> or reach out to your local distributor or contractor.

Not a DIYer? Contact a local professional. There are companies that specialize in the care of segmental concrete pavements and retaining walls that can be referred by your local distributor.



## CLEANING BASICS

### → HOW OFTEN

Clean your paved area when you see that it is necessary. Again, sweep off leaves regularly to avoid staining. Hose down your pavers to remove any dirt, clay, or debris that have stuck on. When the snow melts, a thorough, overall spring cleaning with a light product shampoo or dishwashing soap works best to get your pavers ready to enjoy.

### → WHAT TO USE

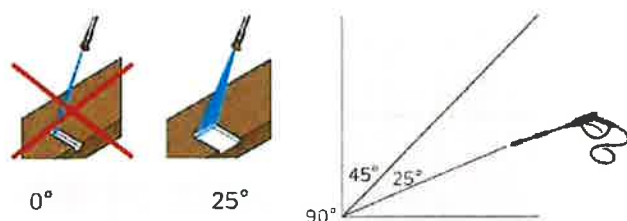
Cleaners are sold for different purposes. For maximum results, be sure to use professional or properly diluted household products. We recommend that you start with the mildest or least invasive cleaner and work your way toward a stronger one. Sometimes two or three applications of a mild cleaner is all you need. If you choose to use an industry cleaner, be sure to read and follow the labels carefully. We recommend Alliance Gator or Flexlock hardscape cleaning products.

### → WHAT TO AVOID

Avoid wire brushes and strong acids like sulfuric and muriatic as this can do serious damage to a concrete paver. Acids should be limited to professional use only.

### → ABOUT PRESSURE WASHERS

The improper use of a pressure washer may permanently etch the surface of your paving stones, steps or retaining walls. Pressure washers should be used by professionals only for the cleaning of your paved surface. The use of a syphon tip is highly recommended. Narrow tips may cause irreversible damage. Consider the use of cleaners and detergents in conjunction with a pressure washer to obtain the best results. Often, cleaning solutions are effective for stain removal and general care with very little water pressure required. Do note that a pressure washer should never be used on Wet Cast products.



Damage caused by the improper use of a pressure washer is not covered by Techo-Bloc's warranty.

## DON'T FORGET ABOUT THE JOINTS

The joint or space between paving stones are the most vulnerable area, especially after a new installation. The two most common issues in jointing material are organics and erosion. We recommend that paving stone joints be filled with polymeric sand, joining compounds, or a joint stabilizing protectant on traditional sand joint.

Damp, shaded areas between stones are prone to moss and weed growth. Moss in your joints? Try using 3 parts water to 1 part chlorine bleach to remove it. Apply the mixture with a watering can or siphon sprayer, scrub with a nylon brush and rinse. To minimize the problem, consider professional advice to correct the moisture that encourages the growth of moss. Commercial products do exist that can help remove moss, mold and mildew such as Alliance Gator M3 Cleaner. This product also inhibits new growth.

When using a garden hose to clean the joints of a paved area, direct the hose diagonally at the surface on a 30-degree angle. Never direct the hose parallel to the joints as the strength of the water stream may be too harsh and may dislocate the joining material.

## FIREPIT BURNER CARE

The purpose of the fire pit burner sleeve is to provide protection to your concrete product against direct flames within your fire feature.

Although this product is engineered to withstand a certain level of heat, it is possible that the painted surface may experience chipping and rust development over time. This occurrence is not indicative of a defect, but rather a natural effect of exposure to fire.

As a solution, we suggest utilizing a high-quality, high heat enamel spray paint to touch up your fire pit sleeve as needed. This will help to maintain its aesthetic appeal and protect against further deterioration.

# Managing stains

How to avoid them, how to remove them.

## FOLIAGE AND ORGANIC DEBRIS

Concrete is a porous material that can absorb pigments from leaves, petals and buds from trees/shrubs. Organic stains can be tough to remove if they stay on the pavers beneath the snow or when left on damp surfaces for a period of time. We recommend that you sweep away dead leaves regularly. If you live in an area that is prone to more foliage, consider protecting your paved area.

Using a protectant can make your pavement more stain resistant and easier to keep clean. (See page 10 for more information regarding protectants.) Note that there is no need to use a protectant with Klean-Bloc products as they are already sealed.

Organic Stain Remover also removes mildew, algae, kills moss and tough stains from tannins.

Depending on the product collection, remedies vary. See below our recommended solutions and directions on how to remove organic stains.

→ **WET-CAST/NON KLEAN-BLOC PRODUCTS:** Mix  $\frac{1}{3}$  liquid chlorine (pool shock) with  $\frac{2}{3}$  water and a small amount of ammonia free dish soap. Add together and mix in a plastic sprayer or bucket.

→ **DRY-CAST PRODUCTS:** Mix  $\frac{1}{2}$  household bleach with  $\frac{1}{2}$  water and a small amount of ammonia free dish soap. Add together and mix in a plastic sprayer or bucket.

Not sure if your product is  
Wet-Cast (Stonedge collection) or  
Dry-Cast (Techo-Bloc collection)?  
Look out for the following symbols in our  
Landscape Catalog and TechoSpec Book.

Ⓛ Dry Cast Collection   Ⓜ Wet Cast Collection

## DIRECTIONS:

- Pre-soak area to be treated and let water absorb into pavers.
- Apply cleaning solution in manageable areas at a time.
- Scrub area with nylon brush or broom. For Wet-Cast, Klean-Bloc or natural stone products, use a microfibre cloth.
- Rinse area and repeat as needed.

## NOTES:

- Clean in cool temperatures and out of direct sunlight.
- Always test in a small inconspicuous area.
- Don't allow soap to dry.
- The goal is to remove the stain without harming the surface of the pavers. Therefore, patience and multiple applications may be required.
- **Do not attempt these solutions on Klean-Bloc or natural stone products.** Simply use a mild, diluted dish-washing soap in warm water and a microfibre cloth.

## RUST

Some fertilizers contain iron that can leave stains on the surface of your patio. After spreading lawn or plant fertilizer, be sure to sweep the surface of your pavement to prevent rust spots.

Rust stains from steel or iron, such as patio furniture, fertilizer or high iron content water (irrigation) can be removed using professional products such as Gator Rust Remover or household iron removers.

## FOOD AND BEVERAGE

Food or beverages (like wine) spilled on the pavement should be removed quickly and the area should be rinsed with hot water immediately. Liquid dish soap or laundry detergent will remove most food and beverage stains on pavers. Mix a solution of the soap or detergent with hot water and gently brush the stain away with a cloth or a soft-bristled brush that you have dipped into the mixture.

## OIL AND GREASE

Light oil and grease stains can generally be removed with an application of liquid dish soap. Directly apply the soap to the affected area and let sit for 20-30 minutes, scrub with a nylon brush and rinse with hot water. Re-apply and repeat until the stain is removed. If it is a fresh stain, lightly rub the area with a clean rag or paper towel.

If an area is heavily soiled, a professional product such as Gator Oil and Grease Removal® may be used. Please refer to product instructions.

# What you need to know

## EFFLORESCENCE AND WHITE MINERAL DEPOSIT

Efflorescence is a whitish residue that sometimes appears on the surface of concrete products.

### EFFLORESCENCE CAN OCCUR A FEW DIFFERENT TIMES:

- Present on the pallet upon delivery,
- Immediately following installation,
- A few weeks after installation,
- A few months after installation.

It may appear randomly or in certain areas and will be more pronounced on dark colored pavers and walls. The white haze may give the impression that the color is fading. When wet, the white disappears, and the color of the pavers and walls is enhanced. When dry, the white haze reappears.

Occasionally, the salts from : cement, water, aggregate, and sand (concrete) , bedding, base, and soil that are embedded are dislodged by water and transported (via vapor pressure or capillary action) to the surface where water evaporates, and salts are deposited. The deposited salt will dissipate naturally and weather and traffic off.

It is common in concrete and other masonry products that contain cement. Typically, efflorescence will stop developing in approximately 90 days but could take 18 to 24 months after the manufacturing process. The concrete is experiencing a natural process which is not harmful to Techo-Bloc products nor is it a defect.

There is no reason to be concerned that pavers and walls are damaged or defective. The concrete products are experiencing a natural process. Some projects experience this more, some experience it less. It is a condition in all cement-based and many other paving products.

Here are some examples of:



Mineral deposits on a wall installation



Mineral deposits on a paver



Efflorescence on a paver

### → TESTING FOR EFFLORESCENCE

A way to test for efflorescence is to wet the surface. If the white residue disappears but reappears when dry, it is water soluble efflorescence. If the deposit is still visible when wet, it may be a different type of mineral deposit like lime or calcium. Those types of mineral deposits (although not detrimental to the product) should be cleaned by or professional grade product.

### → RECOMMENDATIONS

Although Techo-Bloc does not recommend cleaning efflorescence, there are mild removers commercially available through local distributors.

**Please note that improper use of efflorescence cleaners can risk damaging the product. This is not a prescribed method advised by Techo-Bloc and it may void your product warranty.**

Most cleaners contain acid and detergents, be sure to follow all directions and environmental regulations. Careless or improper cleaning can result in injury, damage and discoloration of the concrete. Always conduct a test in an inconspicuous area or a leftover piece before applying any cleaner to the site. If uncomfortable cleaning this yourself, hire a professional contractor. Refer to your hardscape installer or dealer for referrals.

Recommended efflorescence cleaners: Gator Efflorescence Cleaner® or FlexLock Efflorescence Cleaner®. Concrete product manufacturers are unable to warrant against the presence of efflorescence.

Polymeric sand haze commonly called "poly haze" is often confused for efflorescence. Poly haze is the residue of polymer based jointing sand left on the surface of the pavement typically due to moisture on installation, improper application, or inadequate removal. To determine if it's poly haze use boiling hot water from stove or coffee maker on an inconspicuous unit. The stain will largely dissipate.

## WHAT YOU NEED TO KNOW

### COLORS

#### → WHAT'S THE DIFFERENCE BETWEEN TONES & COLORS?

Products in the Wet-Cast Collection are created using a wet cast manufacturing process to closely resemble the sculpted attributes of natural stone. Natural ingredients are present within the recipe to allow for a range in tones, veining and textures from one stone to another. For an authentic look, each color option is composed of a variety of darker and lighter tones.

### PROTECTANTS

Applying a protectant to pavers, slabs and walls can help enhance the beauty of your products much like waxing a car.

Doing so can also help make the product be more stain-resistant. However, the quality of Techo-Bloc products are not compromised if a protectant is not applied.

Depending on your environment, it may be a good idea to protect your paved area. While this will not prevent stains, it will make it easier to clean. Think of it as a protective barrier. The stain sits on top of the protectant instead of penetrating into the concrete. Note that you must completely clean off debris and efflorescence off your paved surface before adding a protectant.

Although there are many different types of protectants on the market, there are two categories to remember.



#### HERE'S A BREAKDOWN:

##### Penetrating Protectants

- Should be used in areas that are prone to stains, such as a grilling area or pavement surround by trees
- Generally last 5-7 or 7-10 years
- Penetrates deeper into the product if clean and dry
- Better long term choice

##### Film Forming Protectants

- For aesthetic appearance
- May enhance product color
- Gives a wet look
- Deepens or darkens color
- Generally lasts 1-3 or 3-5 years
- Does not penetrate deep into the product

#### WE STRONGLY RECOMMEND THAT YOU HIRE A PROFESSIONAL FOR THE APPLICATION OF A PROTECTANT.

Please consult your protectant manufacturer to find out how soon a protectant can be applied after your pavers have been installed. We recommend looking into Alliance and Flexlock protectants.

Please note that using the wrong protectant stripper can prematurely age the product.



## TECHNOLOGIES

We believe that no one should have to compromise between style and durability when choosing landscaping products. This is why we work tirelessly to develop the best pavers, slabs and walls to revive your outdoor spaces. Ensuring they stand up through the test of time through the harshest of climates.

### → KLEAN-BLOC

Products featuring our Klean-Bloc technology are factory sealed to provide consistent and vibrant color, while offering a complete protection against stains and efflorescence. To clean, simply use water with a broom to scrub away stains and debris.

Applying a protectant to this product collection is not necessary nor is it recommended.

### → INTRODUCING: THE KLEAN-BLOC REPAIR KIT!

The Klean-Bloc Topcoat Repair Kit is a two-part aerosol spray that is specially formulated to provide a durable, color matching repair that is easy to apply. Made specifically to touch up chipped or scratched surfaces of Techo-Bloc products made with Klean-Bloc technology.

This spray topcoat serves to mask the exposed concrete substrate and provide the same stain resistance properties as the factory seal.

Available to order on our website as of summer 2023.

**Visit this link to learn how to use the repair kit:**

[www.vimeo.com/techobloc/kleanbloc](http://www.vimeo.com/techobloc/kleanbloc)

## WINTER CARE

Just like ready-mix concrete and asphalt pavements, Techo-Bloc pavers can be plowed and shoveled. Using de-icing salts or other agents (sodium chloride, calcium chloride or magnesium chloride) to melt snow and ice will not harm Techo-Bloc paving stones. De-icing salts should be applied sparingly on areas that have snow or ice only (never directly on the product as this can damage the stones over time). Do not use products that contain a blend of chemicals.

When using a contractor for snow removal, it is recommended to verify that their equipment uses Teflon blades or rubber blades to avoid scratching the pavers. For permeable pavements, it is not recommended to use traction aid grit (for slip/skid resistance) as they can scratch the surface of the stones, clog the system and reduce permeability. Wet cast collection pavers can also be plowed and de-icing salted, wet-cast collection slabs cannot.

When preparing your outdoor paved area for the winter season (including the closing of your pool), keeping your products equally exposed to the elements is important. For example, a pool cover installed over a portion of the pool deck (i.e. pool coping and first few feet of paved surface) for months at a time will affect the product's exposure to light, the elements, dirt and debris. This may result in a difference in appearance over time. Uniform exposure to the elements will keep your project looking great for years to come.



# TECHO—BLOC

INSPIRING ARTSCAPES



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North Brookfield,  
MA 01535

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Douglassville, PA 19518

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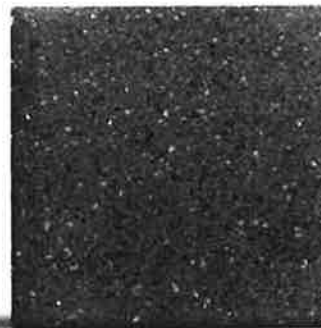
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PROUD MEMBER OF



# PAVERS

DRIVEWAYS, PERMEABLE DRIVEWAYS & PATIOS



## PHYSICAL AND GEOMETRICAL CHARACTERISTICS

CHARACTERISTICS	ASTM C936	CSA A231.2:19
Compressive strength	8000 psi [55 MPa] min.	50 MPa min.
Absorption	5 % max.	-
Freeze-thaw durability	Mass loss (max.): 225 g/m <sup>2</sup> at 28 cycles, or Mass loss (max.): 500 g/m <sup>2</sup> at 49 cycles	Mass loss (max.): 225 g/m <sup>2</sup> after 28 cycles, or Mass loss (max.): 500 g/m <sup>2</sup> after 49 cycles
Dimensional tolerances (see Notes below):	Length and Width: ± 0.063 in. [1.6 mm] Thickness: ± 0.125 in. [3.2 mm]	Length and Width: -1.0 mm to +2.0 mm Thickness: ± 3.0 mm

Notes: The dimensional tolerances shown above are prior to the application of architectural finishes

# INSTALLATION GUIDE

## INTERLOCKING CONCRETE PAVEMENT

### INSTALLATION OUTLINE

#### 01 EXCAVATION

- A. Before excavating, call all the local utility companies (e.g., phone, gas, electrical) to ensure that the area in which you plan to dig is clear of underground cables or wires. If any are found, please notify the appropriate companies before you begin.
- B. When excavating, it is important to achieve a slope in increments of 1.5% ( $\frac{3}{16}$ " per ft/5 mm per 300 mm), which will allow for proper drainage. The excavation should mirror the final grade of pavement.
- C. The width of the base behind the edge should be equivalent to the thickness of the base.
- D. Using a rake, grade the bottom of the excavated area. If the natural soil is granular or sandy, we recommend that you compact the soil with a vibrating plate. If the soil is clay-like, change the soil with a blend of lime and crushed stone prior to compaction. Next, cover it with a layer of geotextile fabric to prevent the contamination of the base (clay and 0- $\frac{3}{4}$ " [0-20 mm] crushed stone). Refer to the table "Thickness of the Granular Foundation" (on next page) to find the minimum thickness of foundation required.

#### 02 FOUNDATION

- A. Install a 0- $\frac{3}{4}$ " (0-20 mm) crushed stone base, in 4" (100 mm) lifts with a minimum 5,000 lbf (22 kN) vibrating plate compactor.
- B. To facilitate compacting, wet the base material thoroughly and compact with a vibrating plate proceeding in all directions. Continue this process until you have achieved the desired height. At this stage, you can verify the final height with the help of a paver.
- C. Base tolerance  $\pm\frac{3}{16}$ " (10 mm) for every 10' (3-m) increment.

#### 03 THE SETTING BED

- A. On the compacted crushed base, install two pipes with an outside diameter of 1" (25 mm). Grade the concrete sand with the help of a straight edge (or Quick-E leveler). If the base is not properly graded and smooth, imperfections will be evident in the finishing grade of the pavement.
- B. Bedding sand should not be compacted until all paving stones have been laid down. Passing the vibrating plate over the paving stones causes them to settle approximately  $\frac{3}{16}$ " (10 mm) into the bedding sand.

#### 04 INSTALLATION OF PAVING STONES

- A. Once the choice of paving stones and the design have been finalized, we recommended that you start installing the pavers at a 90-degree angle. To do so, proceed as follows: measure a first horizontal line of 3' (1-m) and a second line of 4' (1.2 m) perpendicular to the first. Connect a third straight line of 5' (1.5 m) which will form a triangle. The result will be a perfect 90-degree angle. While installing the paving stones, walk on the installed pavers, and fill in gaps caused by the pipes with concrete sand.
- B. It is always recommended that you use more than two cubes at a time in order to maximize the color blend. Furthermore, you should proceed with the cubes from top to bottom.
- C. You may use a chalk line to mark the stones to be cut along the borders, using a guillotine or a concrete saw. When cutting paving stones, we recommend that you wear protective ear and eyewear.
- D. Once you finish installing the paving stones, you can then install Avignon, Belgik or Pietra curbstone on the granular base. To keep curbs in place, add mortar along the back to form a 45-degree angle between the ground and the curbstone or, when available, using the plastic retention system. In a vehicular traffic application, the mortar must be reinforced using steel rods.

#### 05 FILLING IN JOINTS

- A. Spread out the polymer stabilizer sand on the paving stones and sweep in between joints in all directions.
- B. Pass a vibrating plate in all directions to allow sand to penetrate between the joints.
- C. Sweep once more and remove excess sand. Follow the instructions exactly as indicated on the polymer stabilizer sand packaging.



# INSTALLATION GUIDE

## INTERLOCKING CONCRETE PAVEMENT



### VIBRATING PLATE ALERT!

Avoid scuffs on paver surfaces. Pavers with embossed surfaces (high and low points) are more susceptible to scuff marks from plate compactors. Techo-Bloc recommends the use of urethane mats between the plate and the paver surface when compacting. Techo-Bloc will not be held responsible for compaction scuffs or burns on pavers.

### THICKNESS OF THE GRANULAR FOUNDATION<sup>1</sup>

RESIDENTIAL PROJECTS	TYPE OF EXISTING SOIL	
	Clayey or Silty <sup>2</sup>	Sandy or Gravelly
Driveways <sup>3</sup>	8" to 14" (200 to 350 mm) Minimum	6" to 10" (150 to 250 mm) Minimum
Patios and Walkways <sup>4</sup>	6" to 8" (150 to 200 mm) Minimum	4" to 6" (100 to 150 mm) Minimum

1. Data shown in this chart are provided as guidelines only. The range of values suggested depends particularly on existing soil conditions. The thicker the granular foundation, the greater the increase in stability of the whole structure.
2. In the case of unstable soils or ones particularly affected by the freeze-thaw cycles, a thicker foundation may be necessary. For soils with these conditions or for commercial, industrial, or institutional works, a geotechnical professional should be consulted.
3. For the province of Quebec, the typical range is:
  - For clayey or silty soils: 12" to 20"
  - For sandy or gravelly soils: 8" to 14"
4. For the province of Quebec, the typical range is:
  - For clayey or silty soils: 10" to 14"
  - For sandy or gravelly soils: 6" to 8"

### QUANTITY CHART FOR JOINTS FILLING - FLEXLOCK POLYMERIC SAND Approximate surface coverage per bag of 50 lbs (22.7 kg)

PRODUCTS	sq. ft	sq. m			
Antika	21	2	Mika	16.41	1.53
Blu 80 mm	76.5	7.11	Mista random	50.4	4.69
Blu 80 mm (6" x 13")	31.97	2.97	Sleek	97.12	9.03
Diamond	28.4	2.64	Squadra	14.50	1.35
Eva	143.56	13.34	Travertina Raw	16.41	1.53
Hexa 100 mm	61.1	5.7	Valet	24.1	2.2
Industria 150 series - 150x150	31.6	2.94	Victorien 60 mm	97.06	9.02
Industria 200 series - 200x200	41.03	3.81	Villagio	18.50	1.72
Industria 200 series - 200x400	54.57	5.07	Westmount	25.3	2.4
Industria 300 series - 300x100	30.77	2.86			
Industria 300 series - 300x200	41	3.81			
Industria 300 series - 300x300	61.39	5.70			
Industria 450 series - 450 x 100	33.5	3.11			
Industria 450 series - 450 x 150	46.4	4.31			
Industria 450 series - 450 x 300	73.5	6.83			
Industria 600 series - 600x100	35.06	3.26			
Industria 600 series - 600x200	61.32	5.70			
Industria 600 series - 600x300	81.72	7.59			
Industria 600 series - 600x600	122.48	11.38			
Industria 900 series - 900 x 300	103.5	9.6			
Industria 900 series - 900 x 600	166.5	15.5			
Industria 900 series - 900 x 900	208.4	19.4			
Industria Triangle	36.0	3.3			
Linea small rectangles	31.47	2.92			
Linea large rectangles	42.33	3.93			

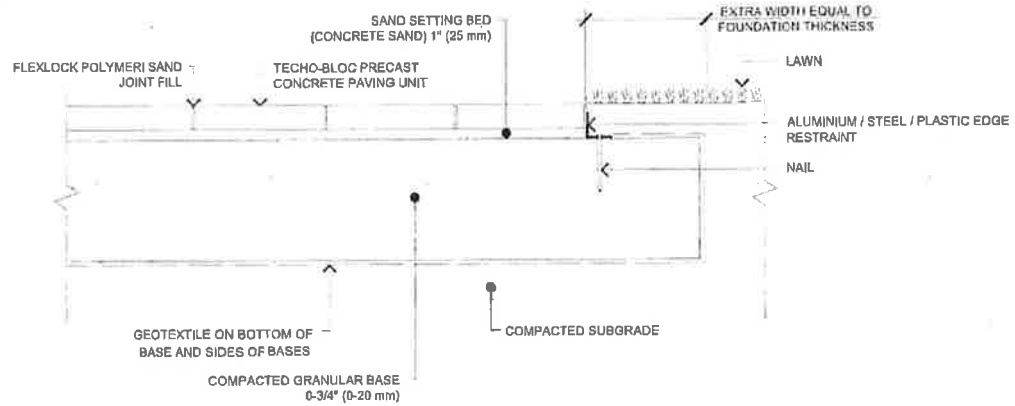
Topsoil quantity in lb (kg) to cover an area of 1 sq.ft (1 sq.m) to fill in between joints and the paver cavity.

PRODUCTS	lbs/sq. ft	kg/sq. m
Aquastorm (see Permeable Pavers section)	12.60	61.40

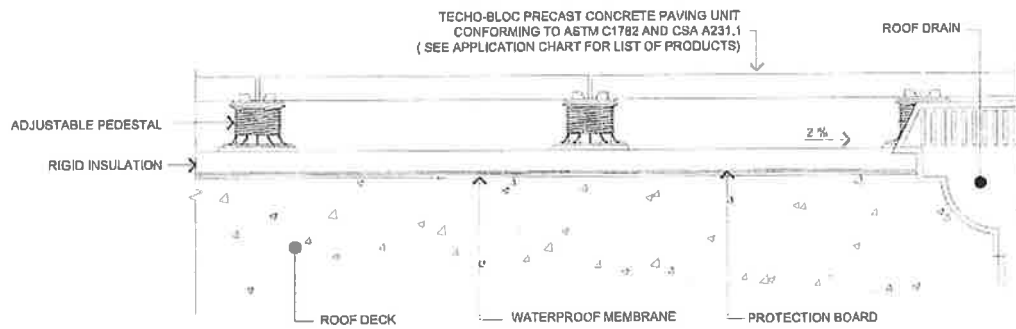
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# INSTALLATION GUIDE

## PAVING UNIT ON COMPACTED GRANULAR BASE



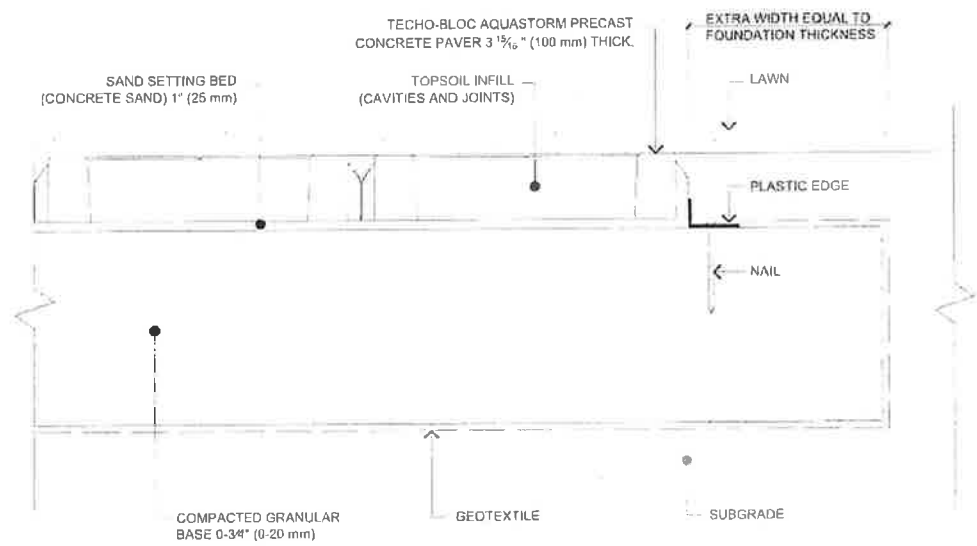
## PAVING UNIT ON PEDESTAL SET



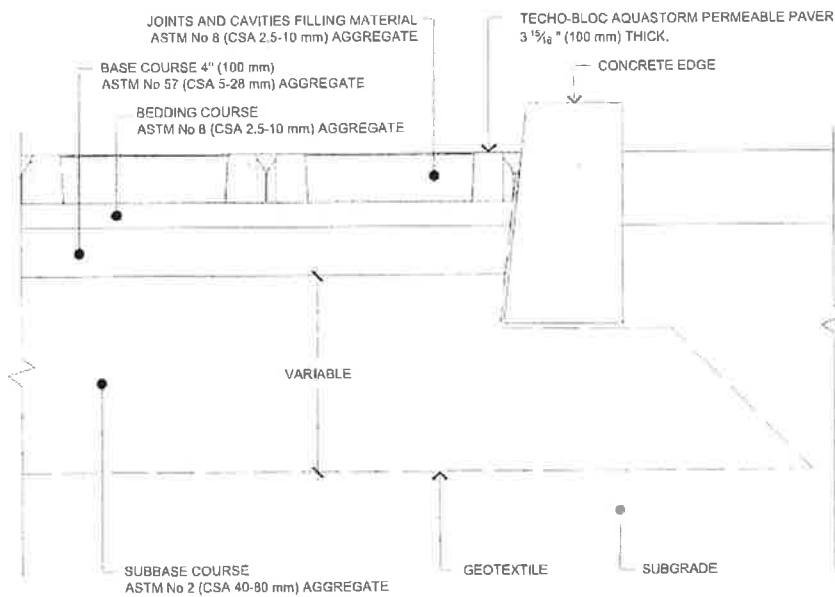
PLEASE REFER TO P.4 FOR THE CORRECT USE AND LIMITATIONS OF PROVIDED TECHNICAL INFORMATION.

# INSTALLATION GUIDE

## CONCRETE GRID PAVER - AQUASTORM (GRASS INFILL)



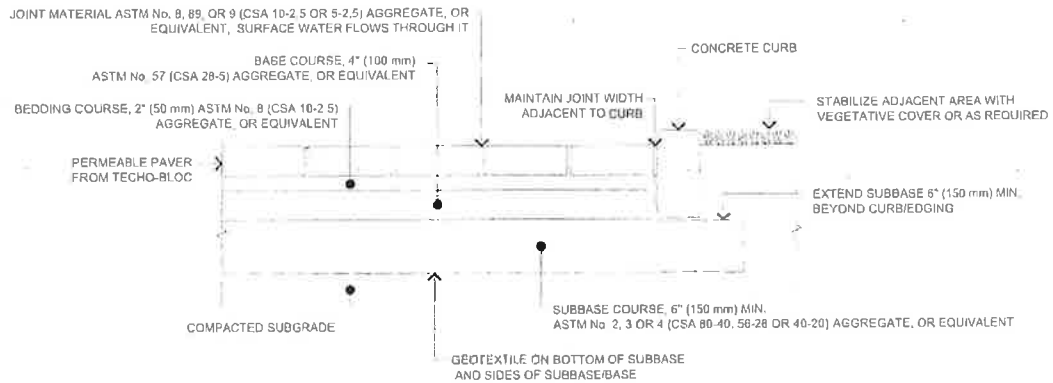
## CONCRETE GRID PAVER - AQUASTORM (AGGREGATE INFILL)



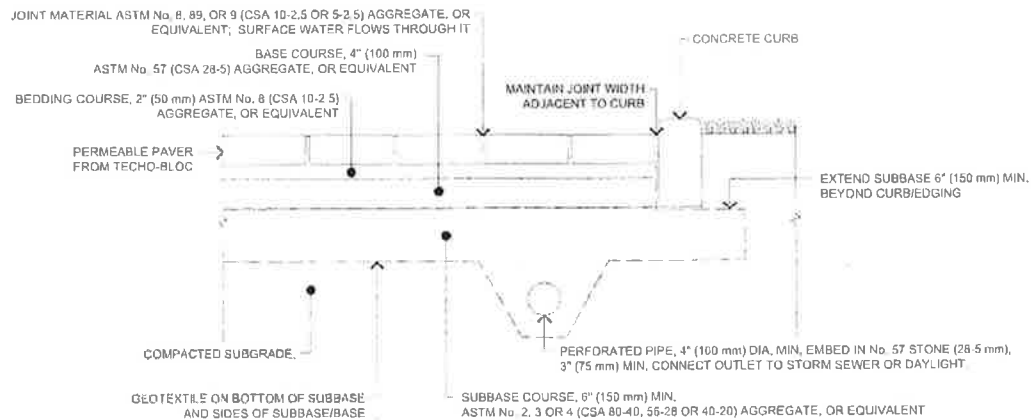
PLEASE REFER TO P.4 FOR THE CORRECT USE AND LIMITATIONS OF PROVIDED TECHNICAL INFORMATION.

# INSTALLATION GUIDE

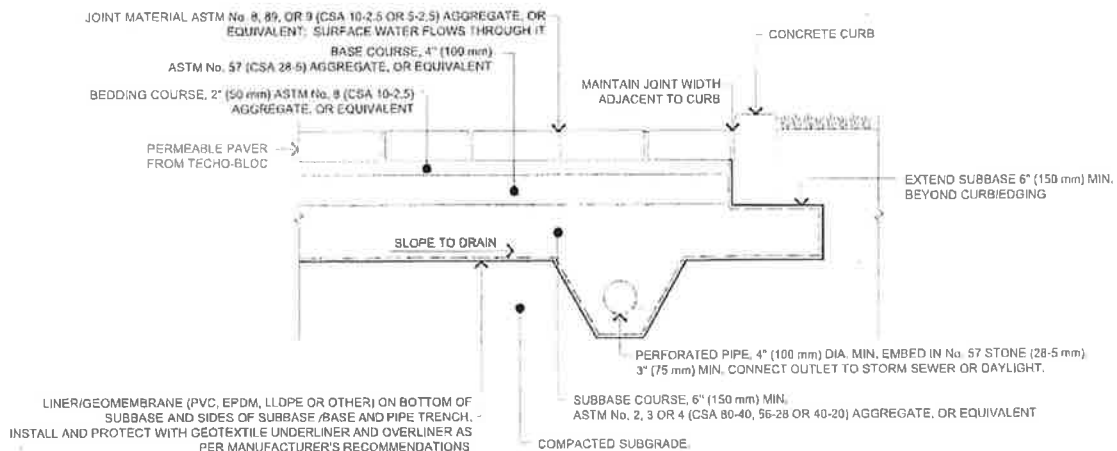
## PERMEABLE PAVER - FULL INFILTRATION TO SOIL SUBGRADE



## PERMEABLE PAVER - PARTIAL INFILTRATION TO SOIL SUBGRADE



## PERMEABLE PAVER - NO INFILTRATION TO SOIL SUBGRADE

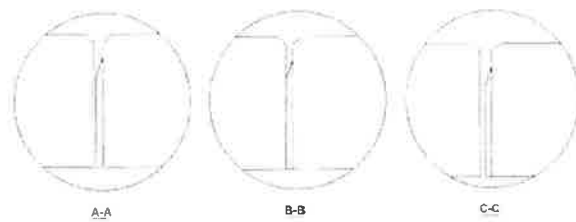
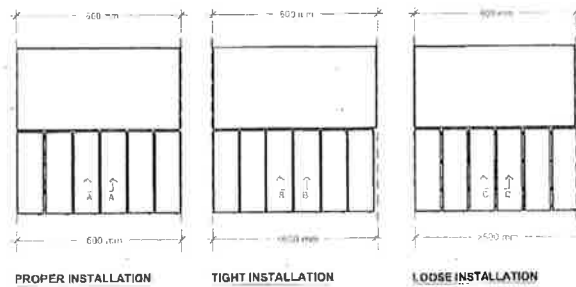


PLEASE REFER TO P.4 FOR THE CORRECT USE AND LIMITATIONS OF PROVIDED TECHNICAL INFORMATION.

# INSTALLATION ACCORDING TO NOMINAL DIMENSIONS

The nominal dimension of a paving unit (width or length) represents the absolute distance between the half-joint on one side of the paving unit and the half-joint on the opposite side. The paving units must be laid while respecting their nominal dimensions. Installed pavers must be neither too tight nor too loose to ensure the performance and integrity of the pavement in service.

Here is an example where pavers of nominal dimension 600x100 mm are laid next to 600x300 mm pavers. If the installation is done according to the nominal dimensions (mid-joint to mid-joint), then at each 600 mm the ends of the pavers will coincide. Otherwise, the installation will be considered tight or loose.



## PAVING UNITS – JOINT WIDTH

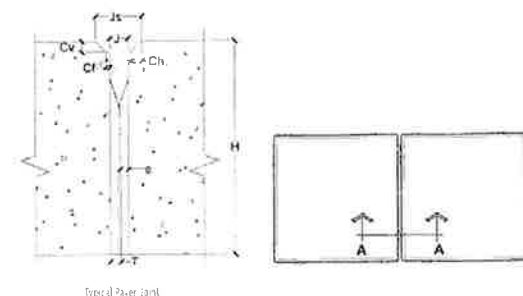
The space between the paving units (excluding the spacer), i.e. the joint width (J), will depend on the thickness of the spacer (T) and the free space (e) between the spacer and the edge side (or spacer) of the adjacent paving unit. To these dimensions are added the dimensions of the chamfer (Ch) and flat shoe (Cf) to determine the joint width on the surface (Js) of the segmental concrete pavement.

Note: The dimensions shown in this table can differ for paving units with slate texture or other type of embossed texture. SLEEK joint width will depend on the spacer position: (i) front to front (largest dimension) or (ii) staggered (smallest dimension).

PAVER	HEIGHT		NOMINAL JOINT WIDTH (J)		JOINT WIDTH ON THE SURFACE (Js)		CHAMFER			SPACER	
	H		J1	J2	Js1	Js2	Flat Shoe Cf	Vertical Cv	Horizontal Ch	Thickness T	Free Space e
Aquasform	100 mm	3 1/8 in.	41.0 mm	-	49.0 mm	-	1.0 mm	3.0 mm	3.0 mm	23.0 mm	1.0 mm
Blo 80 (5x13)	80 mm	3 1/8 in.	7.0 mm	-	15.0 mm	-	1.0 mm	3.0 mm	3.0 mm	3.0 mm	1.0 mm
Hexa 100 mm	100 mm	3 1/8 in.	2.5 mm	-	7.5 mm	-	1.0 mm	1.5 mm	1.5 mm	1.5 mm	1.0 mm
Industria	100 mm	3 1/8 in.	3.0 mm	-	11.0 mm	-	1.0 mm	3.0 mm	3.0 mm	2.0 mm	1.0 mm
Lilica	100 mm	3 1/8 in.	3.0 mm	-	11.0 mm	-	1.0 mm	3.0 mm	3.0 mm	2.0 mm	1.0 mm
Diamond	100 mm	3 1/8 in.	2.5 mm	-	7.5 mm	-	1.0 mm	1.5 mm	1.5 mm	1.5 mm	1.0 mm
Sleek	90 mm	3 1/8 in.	4.0 mm	2.5 mm	12.0 mm	10.5 mm	1.0 mm	3.0 mm	3.0 mm	1.5 mm	1.0 mm
Westmount	80 mm	3 1/8 in.	3.0 mm	-	43.0 mm	-	0.0 mm	1.0 mm	20.0 mm	2.0 mm	1.0 mm
Hydra	100 mm	3 1/8 in.	13.0 mm	-	19.0 mm	-	1.0 mm	3.0 mm	3.0 mm	12.0 mm	1.0 mm
Pure	80 mm	3 1/8 in.	10.0 mm	-	Variable	-	Variable	7.0 mm	Variable	9.0 mm	1.0 mm

### LEGEND

- H HEIGHT
- Js JOINT WIDTH ON THE SURFACE
- J JOINT WIDTH BETWEEN TWO PAVERS (excluding spacers)
- Cf FLAT SHOE CHAMFER
- Cv CHAMFER VERTICAL RISE
- Ch CHAMFER HORIZONTAL DISTANCE
- T THICKNESS OF SPACERS
- e FREE SPACE BETWEEN THE PAVER'S SPACER AND ADJACENT PAVER



**CONSERVATION COMMISSION – TOWN OF STOCKBRIDGE**  
**TUESDAY 12 December 2023**  
**7:00pm, Stockbridge, MA – Town Hall & Remote via Zoom**

Present: Ron Brouker [presiding], Lisa Bozzuto, Jamie Minacci, Karen Levy-Lutner, Joe DeGiorgis, Bill Loutrel, Cathy Plakun

Also present: Jay Dubner, Brent White, Bryan Siter, Stephanie Adler, David Cameron, Carole Owens, Earl Kramer, Marie Raftery, Patti Harper, Cheryl Brause, Tom & Trish Perlmutter, Rob Mooney

Bill Loutrel made a motion to approve minutes from Tuesday, 28 November. Jamie Minacci seconded. Unanimous.

Pursuant to expressed concerns about the scope of the work, David Cameron will conduct a compliance review of the property at 13 Rattlesnake Mountain Road.

Brent White presented a letter describing the plantings and new work covered under the Wetlands Protection Act and the Town Stormwater Bylaw for the Amended Order of Conditions for David Brause, 82 Interlaken Rd. (Map 205, Lots 26 26.5). The new sports courts are only jurisdictional under the Stormwater Bylaw. The new arch culvert is designed to be larger than required under the Stream Crossing standards at 16' in length and 43" high, with a width of 5.3'. The new separation from the driveway to the BVW is now 4'. A new planting plan of species native to Western Massachusetts was submitted. Included are Eastern Red Cedar, white pine, river birch, and red maple. Buckthorn and honeysuckle, among other invasives, will be removed. The exposed ledge will be planted on top with additional trees and shrubs. There are updated plans for the rain gardens, as well. Only 29 trees are now scheduled to be removed, with 64 to be planted. A 75% survival rate is required. DEP # 296-0511. Joe DeGiorgis made a motion to approve the amended order and close the hearing. Lisa Bozzuto seconded. Unanimous. Bill Loutrel made a motion to approve the changes under the Stormwater Bylaw. Ron Brouker seconded. Unanimous.

Ron Brouker made a motion to approve the Certificate of Compliance for David & Anni Mintz, 19 Lakeview Drive (Map 104, Lot 72) and close the hearing. The project included the demolition and replacement of existing house and associated site work. A letter of intent with plans to do additional planting near the lake was included. (Foresight) 296-0512. Jamie Minacci seconded. Lisa Bozzuto recused herself. 6-0-1 motion carried.

A site visit was set to review the plans for the Request for Determination of Applicability for Tom & Trish Perlmutter, 6 Maple Lane at 2:30 on 12/21. (Map 103, Lot 25.) The building is non-conforming, and it is proposed for the demolition and reconstruction of single family home. The proposal is for 2 pine trees to be removed. There will be no cellar in the proposed structure. The garage will be included in the footprint. (Foresight)

The Commission will perform a site visit to review the Request for Certificate of Compliance for Michael & Marilyn Landau, 50 Lake Drive following the Maple Lane site visit on 12/21. (Map 101, Lot 20 DEP # 296-0513) The project included a house and septic replacement and related site work. (Foresight)

Ron Brouker made a motion to approve the Certificate of Compliance for George Rufo at 5A North Church Street as no work has been done. (DEP # 296-0464) Lisa Bozzuto seconded. Unanimous.

David Cameron reported that the required tree planting has been completed at 102 Interlaken Road. There is a stand of dead trees. David theorizes that a change in hydrology likely contributed to the trees dying. He recommended preserving some dead snags for habitat, and the replacement of the lost trees.

Karen Levy-Lutner's request for 3 trees to be removed. Permission was given for the removal of the tree threatening the driveway and the injection of the diseased ash trees. The tree on the bank will require the filing of a Notice of Intent.

Lisa Bozzuto made a motion to cancel the meeting scheduled for 12/26. Jamie Minacci seconded. Unanimous.

Lisa Bozzuto made a motion to adjourn the meeting at 8:45. Bill Loutrel seconded. Unanimous.

Respectfully submitted

Sally Underwood-Miller, Secretary/Member



**GENERAL NOTES:**

1. ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.

2. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT CONSTRUCTION.

3. ALL EROSION CONTROL MEASURES SHALL BE REMOVED UPON COMPLETION OF CONSTRUCTION.

4. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

5. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

6. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

7. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

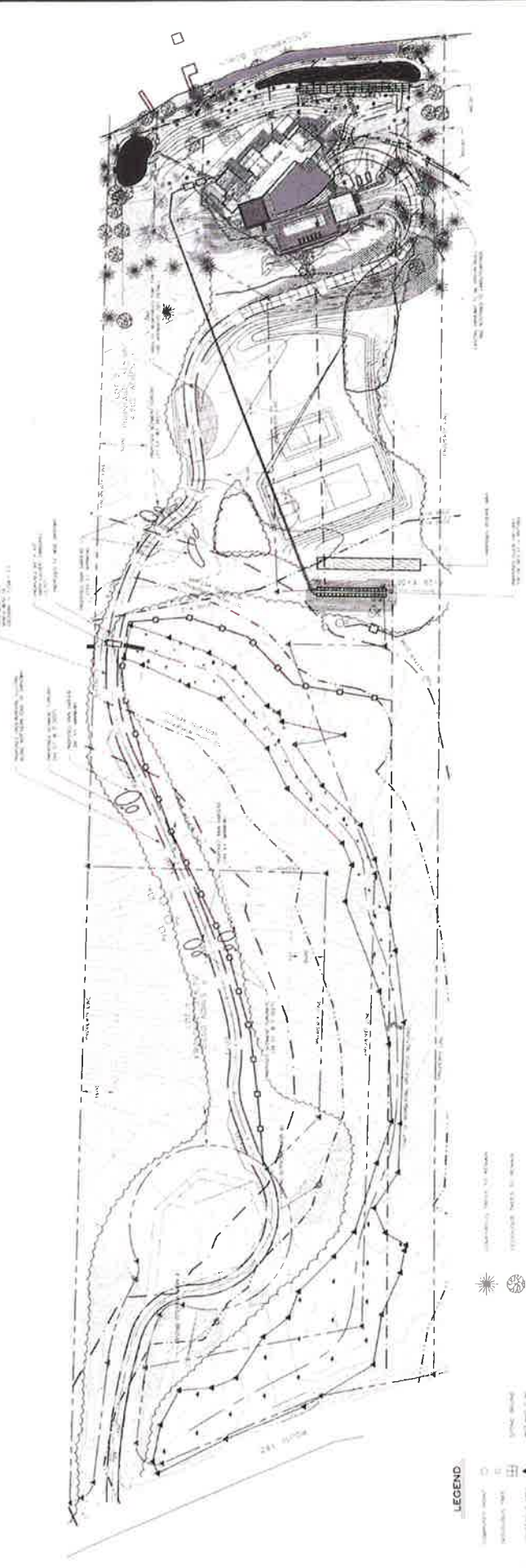
8. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

9. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

10. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

**DISTURBANCE TABULATIONS**

NO.	DESCRIPTION	ACRES
1	Grass	1.50
2	Shrub	0.50
3	Tree	0.50
4	Water	0.50
5	Other	0.50
6	Grass	1.50
7	Shrub	0.50
8	Tree	0.50
9	Water	0.50
10	Other	0.50



**OVERALL PROPOSED SITE IMPROVEMENT PLAN**

**82 INTERLAKEN, LLC**

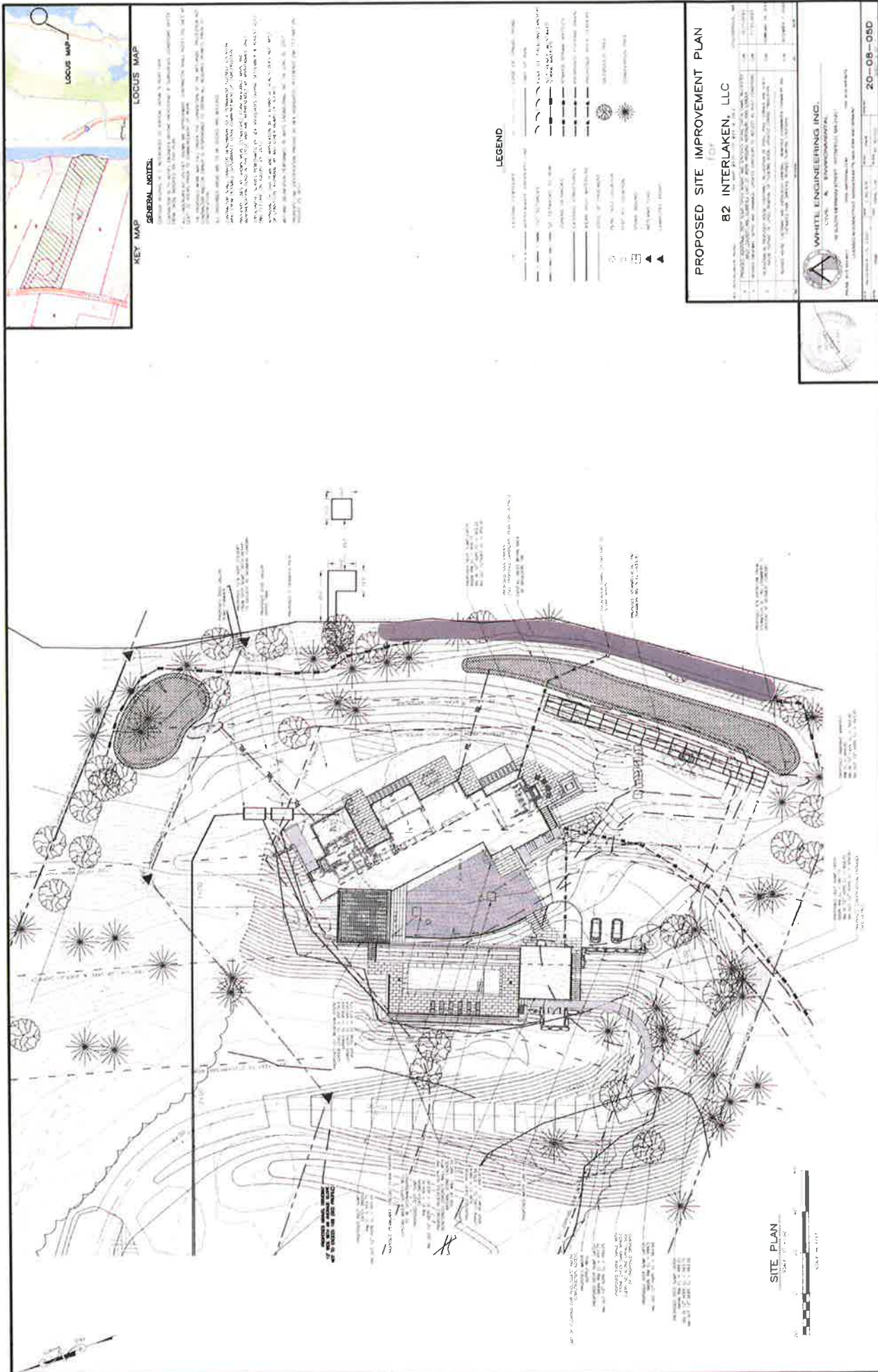
**WHITE ENGINEERING INC.**  
Civil & Environmental  
10000 Highway 100, Suite 100, Houston, TX 77036  
Tel: 281-415-1000  
Fax: 281-415-1001  
www.white-engineering.com

**20-08-050**

**LEGEND**

- Proposed Structure
- Proposed Parking
- Proposed Driveway
- Proposed Easement
- Proposed Fencing
- Proposed Landscaping
- Proposed Grading
- Proposed Retention Wall
- Proposed Stormwater Management
- Proposed Utility
- Proposed Access
- Proposed Boundary
- Proposed Elevation
- Proposed Slope
- Proposed Area
- Proposed Volume
- Proposed Weight
- Proposed Length
- Proposed Width
- Proposed Height
- Proposed Depth
- Proposed Angle
- Proposed Direction
- Proposed Orientation
- Proposed Position
- Proposed Location
- Proposed Site
- Proposed Project
- Proposed Work
- Proposed Task
- Proposed Activity
- Proposed Operation
- Proposed Process
- Proposed Method
- Proposed Technique
- Proposed System
- Proposed Mechanism
- Proposed Device
- Proposed Instrument
- Proposed Equipment
- Proposed Machinery
- Proposed Vehicle
- Proposed Transport
- Proposed Communication
- Proposed Information
- Proposed Knowledge
- Proposed Understanding
- Proposed Awareness
- Proposed Perception
- Proposed Sensation
- Proposed Feeling
- Proposed Emotion
- Proposed Attitude
- Proposed Belief
- Proposed Opinion
- Proposed View
- Proposed Perspective
- Proposed Outlook
- Proposed Expectation
- Proposed Prediction
- Proposed Forecast
- Proposed Projection
- Proposed Estimation
- Proposed Calculation
- Proposed Computation
- Proposed Determination
- Proposed Decision
- Proposed Conclusion
- Proposed Result
- Proposed Outcome
- Proposed Effect
- Proposed Impact
- Proposed Influence
- Proposed Power
- Proposed Force
- Proposed Energy
- Proposed Work
- Proposed Action
- Proposed Behavior
- Proposed Response
- Proposed Reaction
- Proposed Interaction
- Proposed Relationship
- Proposed Connection
- Proposed Link
- Proposed Tie
- Proposed Bond
- Proposed Union
- Proposed Association
- Proposed Affiliation
- Proposed Membership
- Proposed Involvement
- Proposed Participation
- Proposed Engagement
- Proposed Commitment
- Proposed Dedication
- Proposed Devotion
- Proposed Loyalty
- Proposed Fidelity
- Proposed Faithfulness
- Proposed Trustworthiness
- Proposed Reliability
- Proposed Dependability
- Proposed Accountability
- Proposed Responsibility
- Proposed Obligation
- Proposed Duty
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- Proposed Dependability
- Proposed Accountability
- Proposed Responsibility
- Proposed Obligation
- Proposed Duty











**KEY MAP**

## LOCUS MAP

### GENERAL NOTES:

[illegible]

### LEGEND

- [illegible]

## PROPOSED TREE CUTTING PLAN

82 INTERLAKEN, LLC

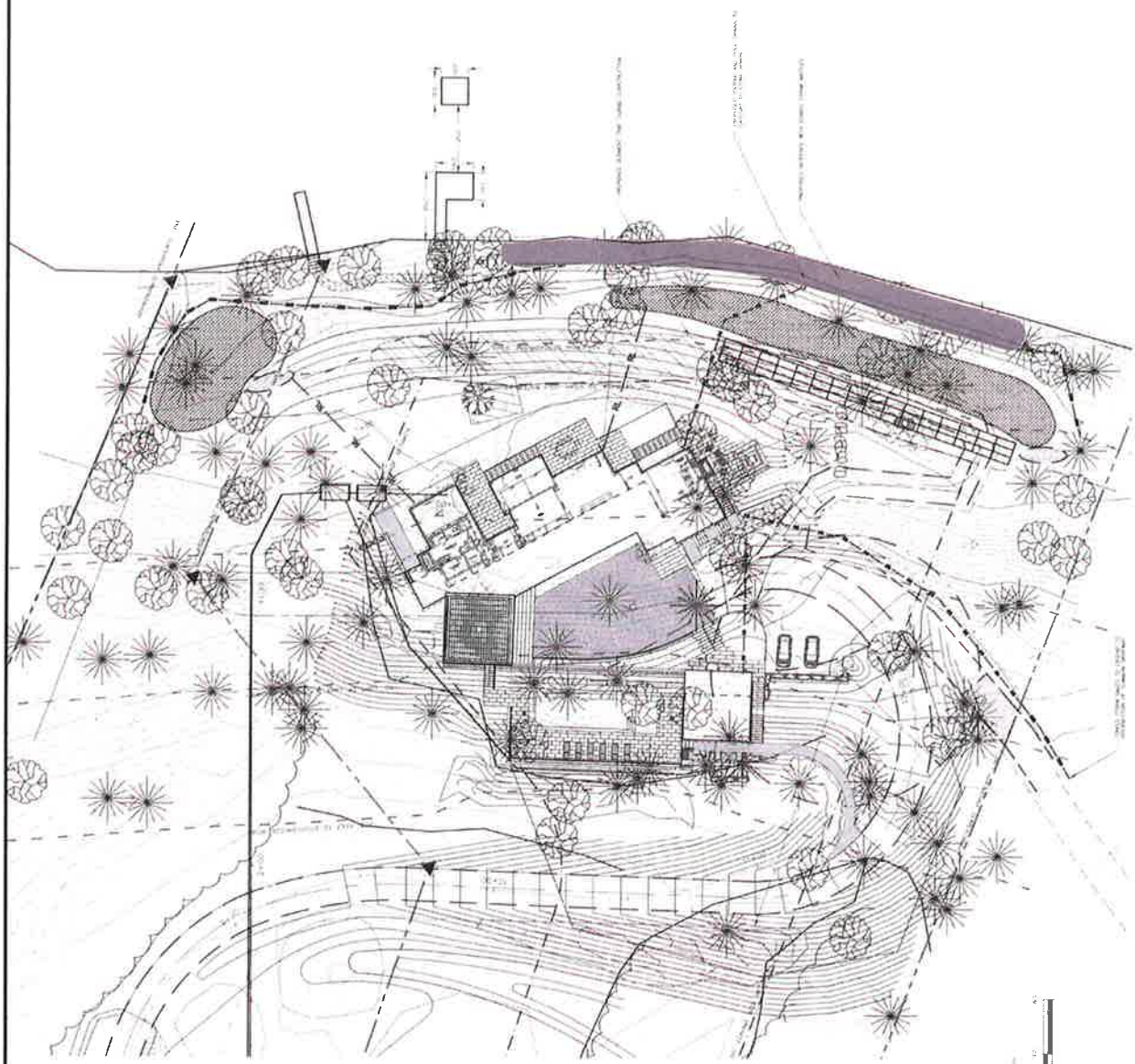
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[illegible]

**WHITE ENGINEERING INC.**  
10000 10th Avenue, Suite 100, Denver, CO 80231  
Tel: 303.751.1000 Fax: 303.751.1001  
www.whiteeng.com

**NO**

20-08-05D



**GENERAL NOTES:**

1. EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT CONSTRUCTION AND POST-CONSTRUCTION PERIOD.
2. SILT FENCES SHALL BE INSTALLED AT ALL EROSION CONTROL MEASURES.
3. SEDIMENT BASINS SHALL BE INSTALLED AT ALL EROSION CONTROL MEASURES.
4. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND POST-CONSTRUCTION PERIOD.
5. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND POST-CONSTRUCTION PERIOD.
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10. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND POST-CONSTRUCTION PERIOD.

**LEGEND**

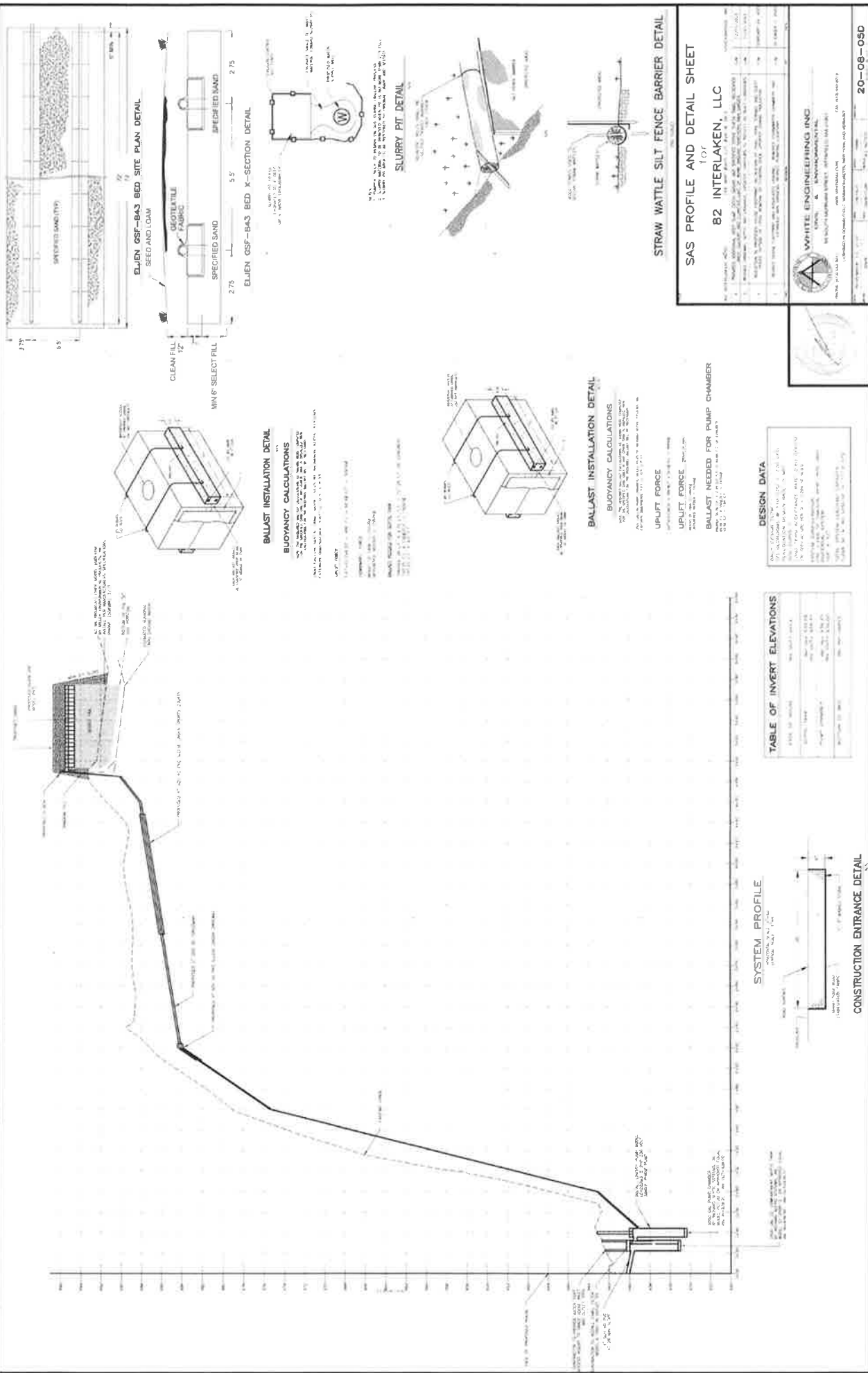


**PROPOSED EROSION AND SEDIMENTATION CONTROL PLAN**

**82 INTERLAKEN, LLC**

**WHITE ENGINEERING INC.**

**20-08-05D**



# STRAW WATTLE SILT FENCE BARRIER DETAIL

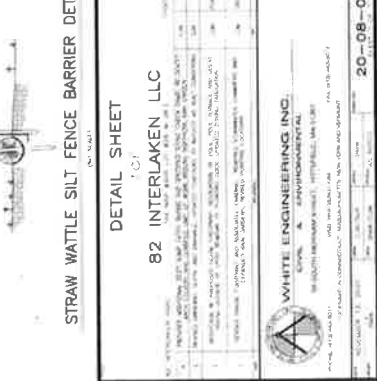
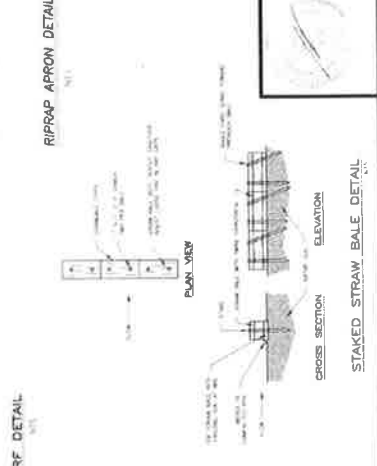
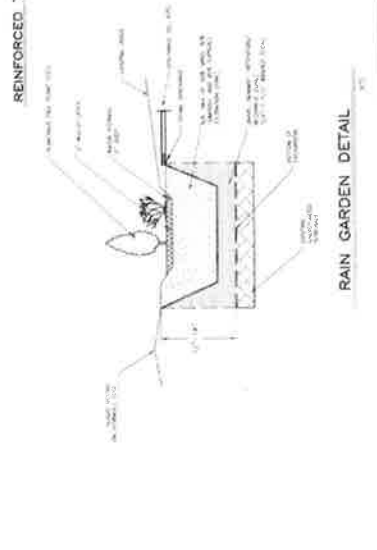
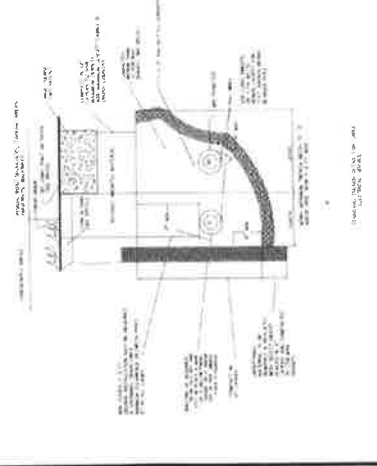
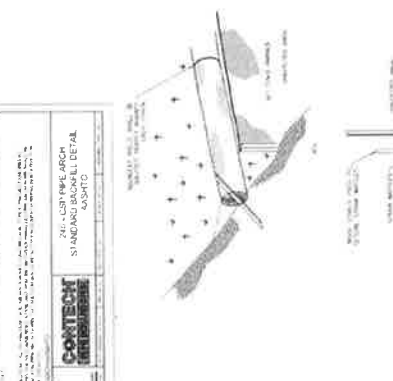
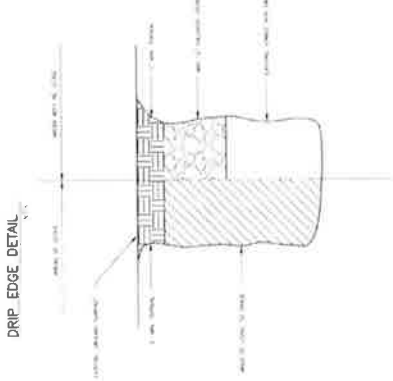
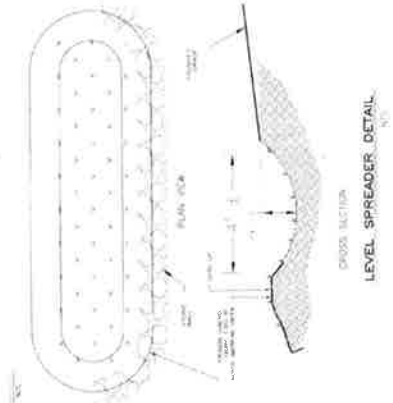
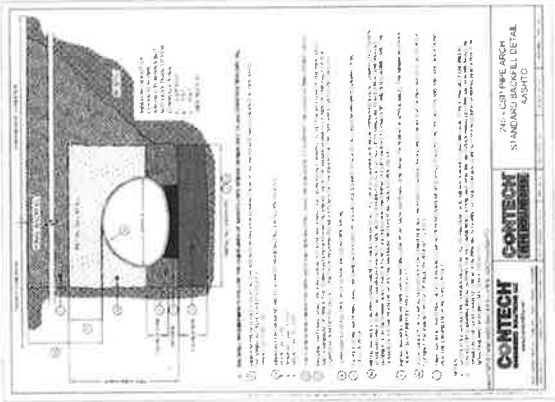
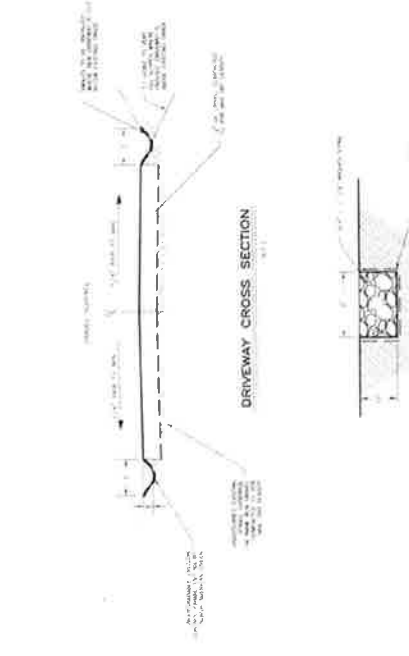
SAS PROFILE AND DETAIL SHEET  
for  
82 INTERLAKEN, LLC

NO.	DESCRIPTION	QUANTITY	UNIT	PRICE	TOTAL
1	STRAW WATTLE SILT FENCE BARRIER	100	LINEAL FEET	10.00	1000.00
2	SLURRY PIT	1	SQ. YD.	100.00	100.00
3	BALLAST	100	CY	1.00	100.00
4	GEOTEXTILE FABRIC	100	SQ. YD.	1.00	100.00
5	SAND	100	CY	1.00	100.00
6	CONCRETE	100	CY	1.00	100.00
7	STEEL	100	LBS.	1.00	100.00
8	WOOD	100	CU. YD.	1.00	100.00
9	PAINT	100	GAL.	1.00	100.00
10	LABOR	100	HOURS	1.00	100.00
11	EQUIPMENT	100	HOURS	1.00	100.00
12	PERMIT	1	DAY	100.00	100.00
13	TRAVEL	100	MILES	1.00	100.00
14	INSURANCE	100	DAYS	1.00	100.00
15	PROFIT	100	PERCENT	1.00	100.00
16	TOTAL				1500.00

**WHITE ENGINEERING INC.**  
10000 W. 100TH AVE. SUITE 100  
DENVER, CO 80231  
303.426.1234  
www.whiteeng.com

**20-08-05D**





**DETAIL SHEET**

**82 INTERLAKEN, LLC**

**WHITE ENGINEERING INC.**

**20-08-050**

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- L100 - MATERIALS PLAN
- L101 - LAYOUT PLAN
- L200 - GRADING PLAN
- L400 - LPOD 100' BUFFER PLANTING PLAN
- L401 - SCREENING AND CROSSING PLANTING PLAN
- L500 - PAVING DETAILS
- L501 - WALL DETAILS
- L502 - LIVE ROOF DETAILS
- L503 - LANDSCAPE DETAILS



**BRAUSE RESIDENCE**  
82 INTERLAKEN DRIVE  
STOCKBRIDGE, MA



**NOT FOR  
CONSTRUCTION**

NO.	DESCRIPTION	DATE
1	REVISION	11/13/2019

**BRAUSE  
RESIDENCE**  
82 INTERLAKEN DRIVE  
STOCKBRIDGE, MA

NO. 100  
SCALE  
GRAPHIC: 1" = 10'  
DATE: 11/13/2019

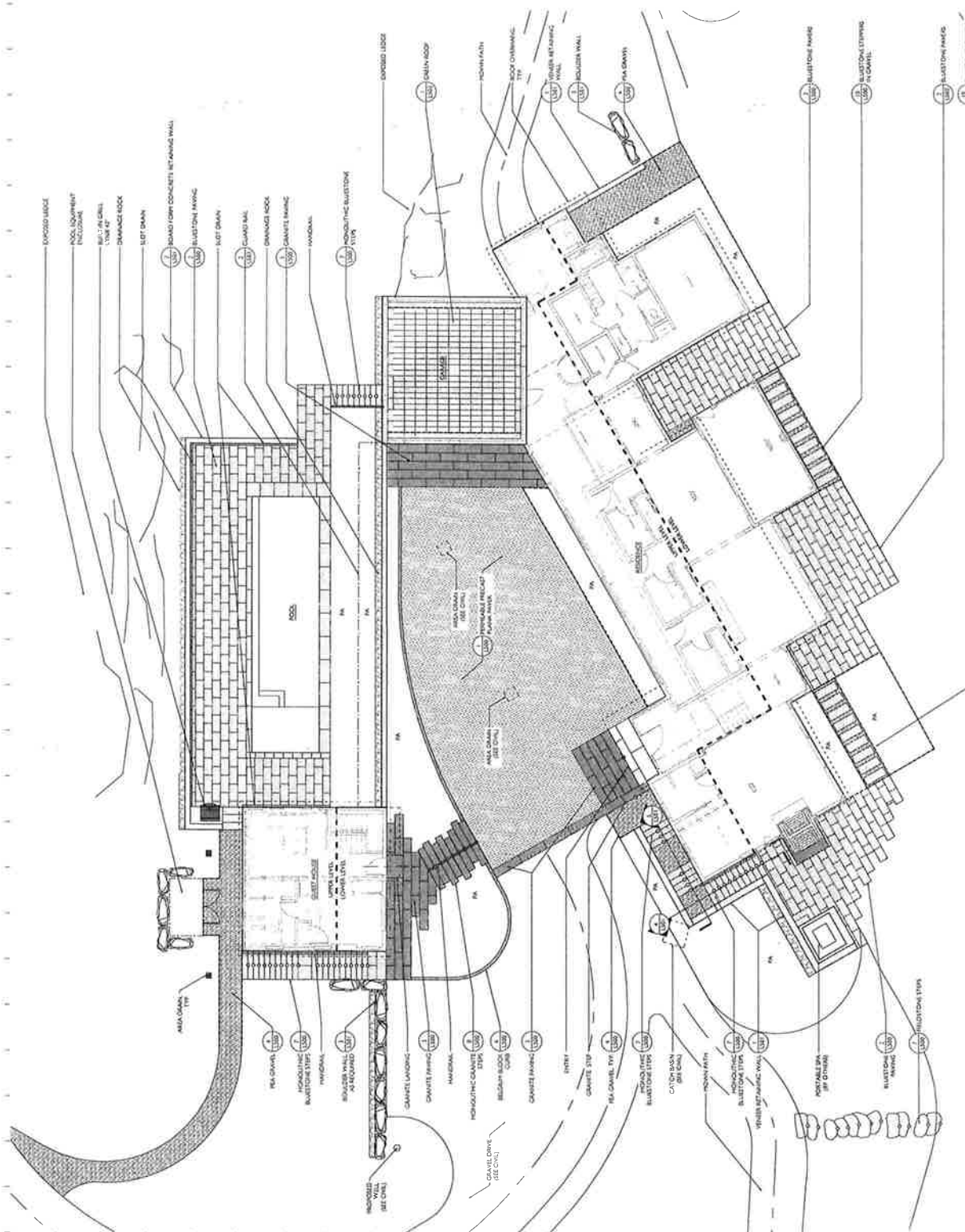
**L000**

[illegible]

DESCRIPTION	DATE
PERMIT SET	11.15.2007

## MATERIALS PLAN

0017



WILEY-BLANKET, 1994



GENERAL NOTES

1. Contractor is responsible for all construction details and materials. All materials shall be approved by the architect prior to construction.
2. Contractor is responsible for obtaining all necessary permits and for providing the required insurance coverage. All permits shall be obtained prior to construction.
3. Contractor shall provide a detailed construction schedule to the architect prior to construction.
4. Contractor shall provide a detailed construction schedule to the architect prior to construction.
5. Contractor shall provide a detailed construction schedule to the architect prior to construction.
6. Contractor shall provide a detailed construction schedule to the architect prior to construction.
7. Contractor shall provide a detailed construction schedule to the architect prior to construction.
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10. Contractor shall provide a detailed construction schedule to the architect prior to construction.
11. Contractor shall provide a detailed construction schedule to the architect prior to construction.
12. Contractor shall provide a detailed construction schedule to the architect prior to construction.

NO.	DESCRIPTION	QUANTITY	UNIT	PRICE
1	CONCRETE	100	YD	100.00
2	GRAVEL	200	YD	200.00
3	BRICK	1000	LS	1000.00
4	STONE	500	LS	500.00
5	PAVING	100	YD	100.00
6	LANDSCAPING	100	YD	100.00
7	PLANTING	100	YD	100.00
8	IRRIGATION	100	YD	100.00
9	LIGHTING	100	YD	100.00
10	DEMOLITION	100	YD	100.00
11	FOUNDATION	100	YD	100.00
12	ROOFING	100	YD	100.00
13	CLADDING	100	YD	100.00
14	INTERIORS	100	YD	100.00
15	MECHANICAL	100	YD	100.00
16	ELECTRICAL	100	YD	100.00
17	PAINTING	100	YD	100.00
18	FINISHES	100	YD	100.00
19	LANDSCAPING	100	YD	100.00
20	PLANTING	100	YD	100.00
21	IRRIGATION	100	YD	100.00
22	LIGHTING	100	YD	100.00
23	DEMOLITION	100	YD	100.00
24	FOUNDATION	100	YD	100.00
25	ROOFING	100	YD	100.00
26	CLADDING	100	YD	100.00
27	INTERIORS	100	YD	100.00
28	MECHANICAL	100	YD	100.00
29	ELECTRICAL	100	YD	100.00
30	PAINTING	100	YD	100.00
31	FINISHES	100	YD	100.00
32	LANDSCAPING	100	YD	100.00
33	PLANTING	100	YD	100.00
34	IRRIGATION	100	YD	100.00
35	LIGHTING	100	YD	100.00
36	DEMOLITION	100	YD	100.00
37	FOUNDATION	100	YD	100.00
38	ROOFING	100	YD	100.00
39	CLADDING	100	YD	100.00
40	INTERIORS	100	YD	100.00
41	MECHANICAL	100	YD	100.00
42	ELECTRICAL	100	YD	100.00
43	PAINTING	100	YD	100.00
44	FINISHES	100	YD	100.00
45	LANDSCAPING	100	YD	100.00
46	PLANTING	100	YD	100.00
47	IRRIGATION	100	YD	100.00
48	LIGHTING	100	YD	100.00
49	DEMOLITION	100	YD	100.00
50	FOUNDATION	100	YD	100.00

NOT FOR  
CONSTRUCTION

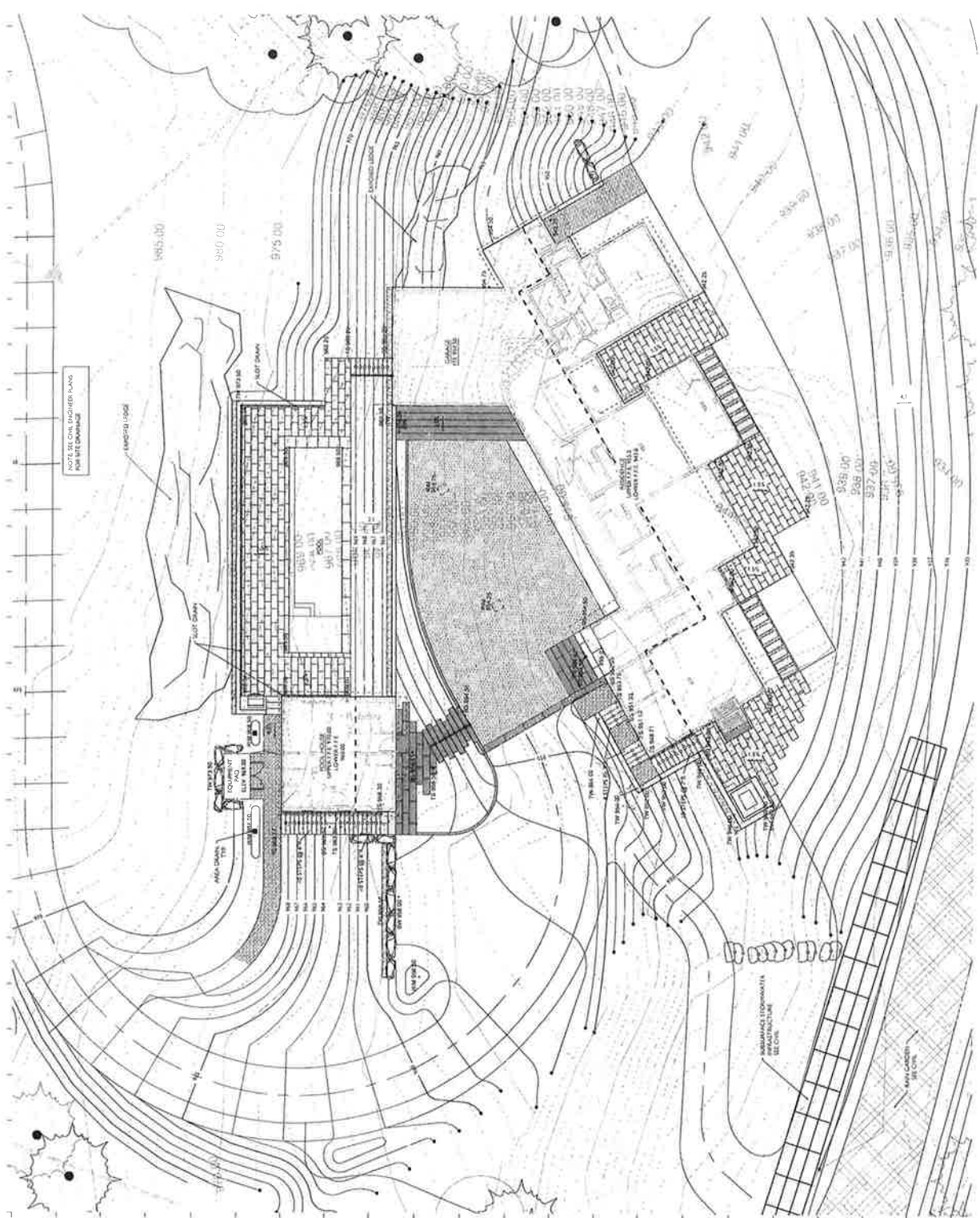
BRAUSE  
RESIDENCE  
88 INTERLAGEN DRIVE  
STOCKBRIDGE, MA

LAYOUT PLAN

2010  
SCALE: 1/8" = 1'-0"  
DRAWN BY: T.M.  
DATE: 11/13/2011

L101





- GENERAL NOTES**
1. Contractor is responsible for all grading as shown on this plan. The Engineer is responsible for the design of the grading and the Contractor is responsible for the construction of the grading.
  2. The grading shall be in accordance with the proposed grading plan and the existing topography. The grading shall be in accordance with the proposed grading plan and the existing topography.
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  13. The grading shall be in accordance with the proposed grading plan and the existing topography. The grading shall be in accordance with the proposed grading plan and the existing topography.

**WAGNER HODGSON**  
 ARCHITECTS  
 1000 N. 10TH ST., SUITE 100  
 DENVER, CO 80202  
 PHONE: (303) 733-1111  
 FAX: (303) 733-1112  
 WWW.WAGNERHODGSON.COM

**NOT FOR CONSTRUCTION**

NO.	DESCRIPTION	DATE
1	PROJECT SET	11.13.2022

**BRAUSE RESIDENCE**  
 82 INTERLAKEN DRIVE  
 STOCKBRIDGE, GA

**GRADING PLAN**

DESIGN: J. WAGNER  
 DRAWN BY: J. WAGNER  
 DATE: 11.13.2022

**L200**



PRINT DATE: 11/13/2022 10:00 AM



## PLANTING NOTES

**IMPROVED ECONOMY**  
It is the value of the material in the form of the finished product that has specifically determined the choice of the material for the cover box.

**IMPROVED FREQUENCY**  
During operation, casting dies that are subjected to high loads are damaged by fatigue. The frequency of their replacement is determined by the length of the casting period, casting dies that are subjected to high loads are damaged by fatigue.

**IMPROVED SHAPE**  
Accuracy is a key factor in the design of the cover box. The accuracy of the casting is determined by the length of the casting period, casting dies that are subjected to high loads are damaged by fatigue.

**IMPROVED FILLING**  
The filling of the cover box is determined by the length of the casting period, casting dies that are subjected to high loads are damaged by fatigue.

[illegible]

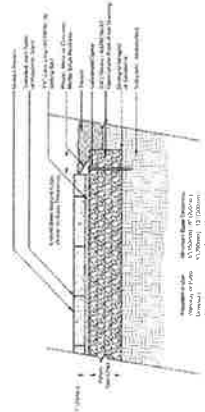
## SCREENING AND CROSSING PLANTING PLAN

L401

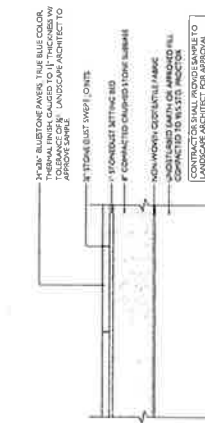


1000

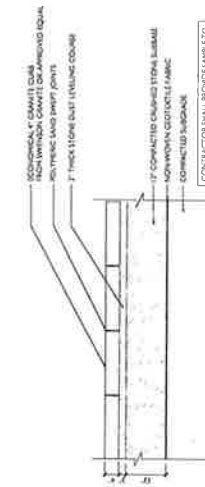




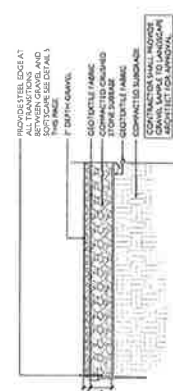
1 PERMEABLE PLANK PAVERS  
3/4" x 1 1/2"



2 BLUESTONE PAVERS  
3/4" x 1 1/2"



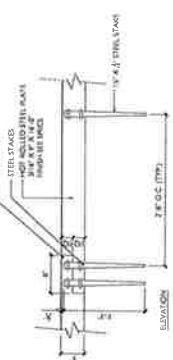
3 GRANITE PAVING  
3/4" x 1 1/2"



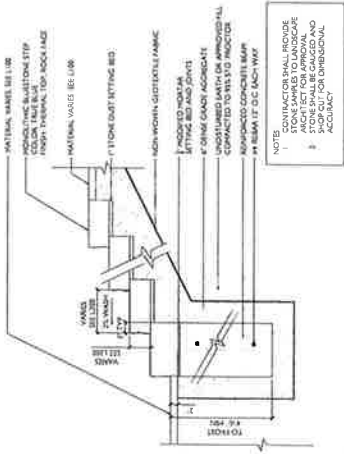
4 GRAVEL PATH  
3/4" x 1 1/2"



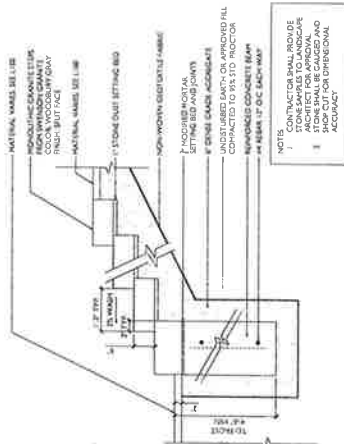
5 STEEL EDGE  
3/4" x 1 1/2"



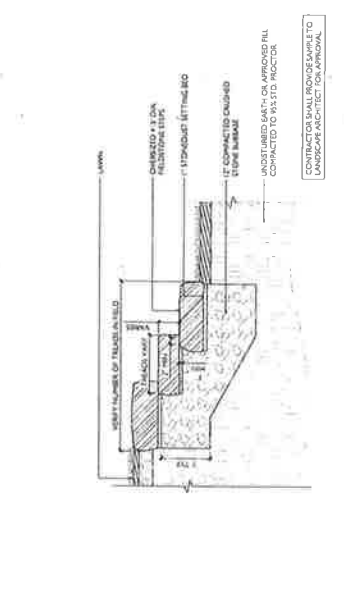
6 BELGUM BLOCK CURB  
3/4" x 1 1/2"



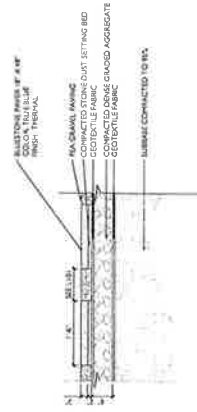
7 MONOLITHIC BLUESTONE STEPS  
3/4" x 1 1/2"



8 MONOLITHIC GRANITE STEPS  
3/4" x 1 1/2"



9 FIELDSTONE STEPS  
3/4" x 1 1/2"



10 BLUESTONE STEPPERS IN GRAVEL  
3/4" x 1 1/2"

NOT FOR  
CONSTRUCTION

NO.	DESCRIPTION	DATE
1	REVISION	11.13.2020

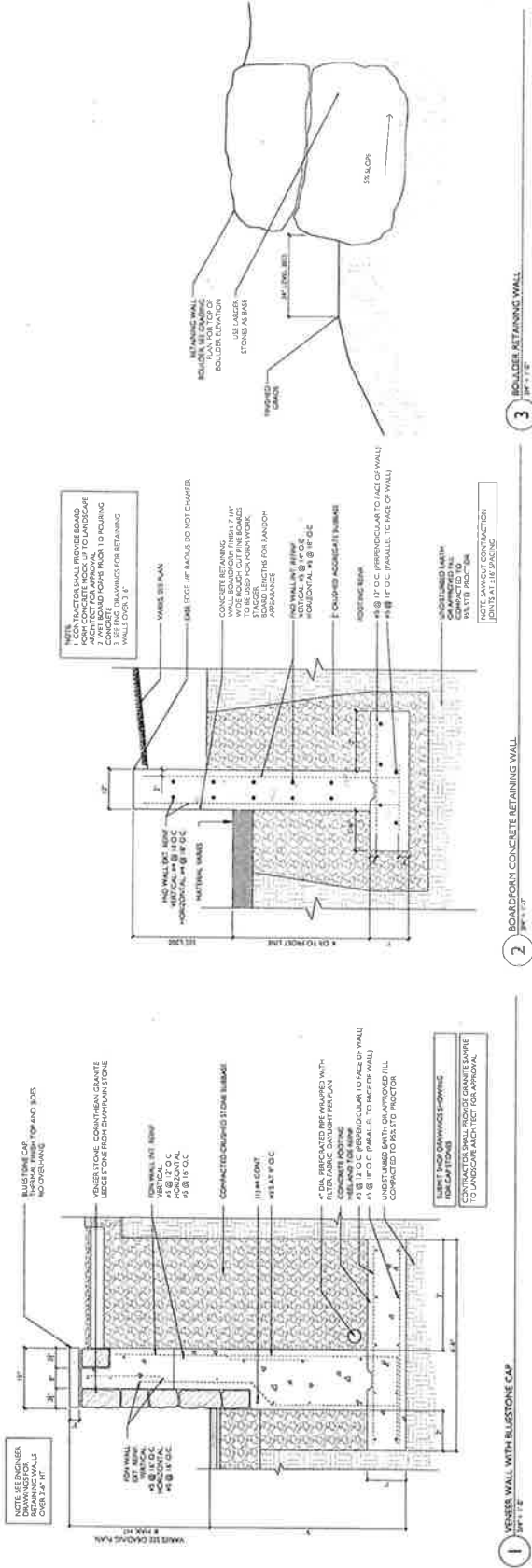
**BRAUSE  
RESIDENCE**  
42 INTERLAKEN DRIVE  
STOCKBRIDGE, MA

PAVING DETAILS

FOR NO. 31154  
SCALE: AS SHOWN  
DRAWN BY: J. WAGNER  
DATE: 11.13.2020

**L500**

NOT TO SCALE



NOT FOR  
CONSTRUCTION

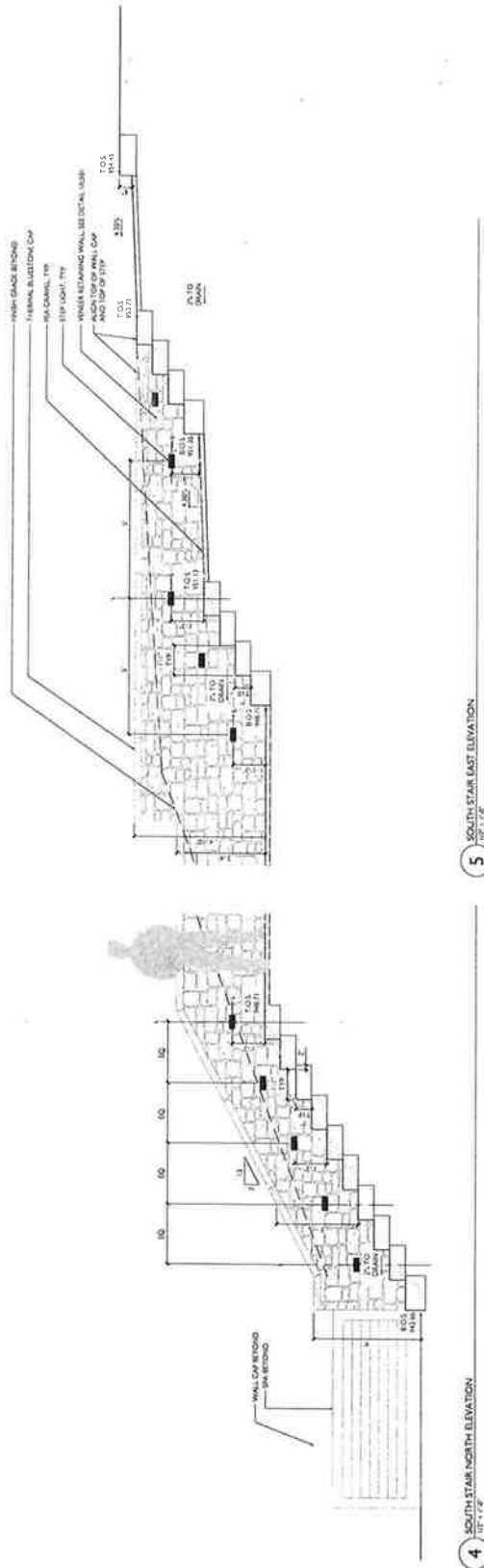
NO	DESCRIPTION	DATE
	PERMIT SET	11-15-2023

**BRAUSE  
RESIDENCE**  
#2 INTERLAKEN DRIVE  
STOCKBRIDGE, MA

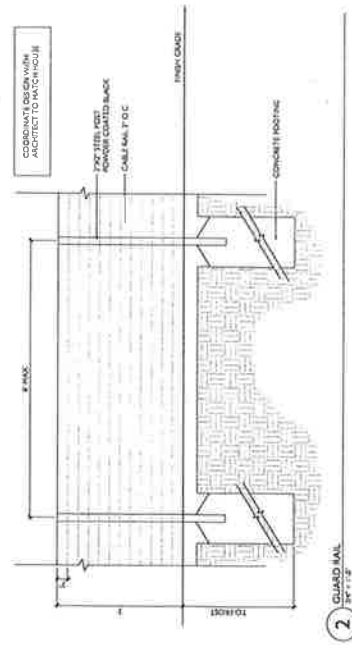
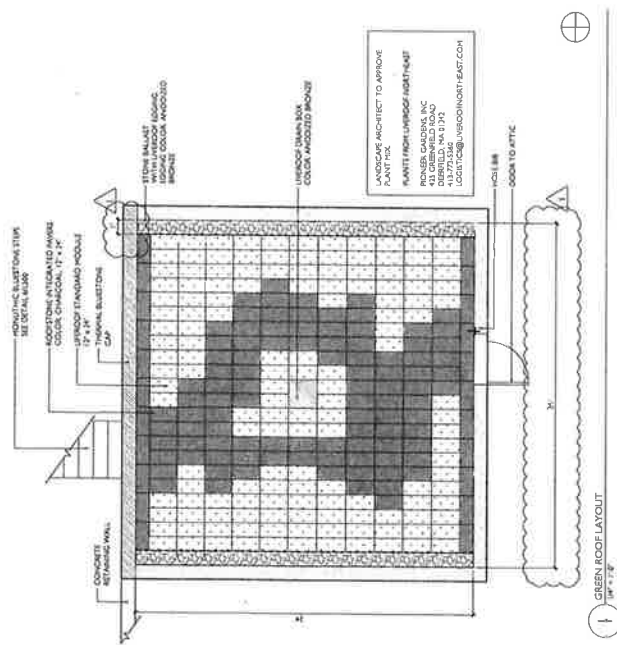
## WALL DETAILS

JOB NO. 21-154  
SCALE 43 S-CROWN  
DRAWN BY TAY  
DATE 11-13-2023

1501



L502









**WHITE ENGINEERING INC.**  
55 S MERRIAM ST  
PITTSFIELD, MA 01201

**BERKSHIRE BANK**  
PITTSFIELD, MA 01201  
53-7169/2118

2984

2/2/2024

PAY TO THE ORDER OF Town of Stockbridge

\$\*\*300.00

Three Hundred and 00/100\*\*\*\*\*

DOLLARS

PROTECTED AGAINST FRAUD

Town of Stockbridge



MEMO



⑈002984⑈

⑆211871691⑆

413596474⑈

WHITE ENGINEERING INC.

Town of Stockbridge

2/2/2024

2984

Brause

300.00

Berkshire Bank Check

300.00

WHITE ENGINEERING INC.

Town of Stockbridge

2/2/2024

2984

Brause

300.00

PAYMENT  
RECORD

Berkshire Bank Check

300.00



105151

Rev 6/21