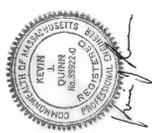


# DEFINITIVE PARKING PLAN IN WORCESTER, MASSACHUSETTS ASSUMPTION UNIVERSITY

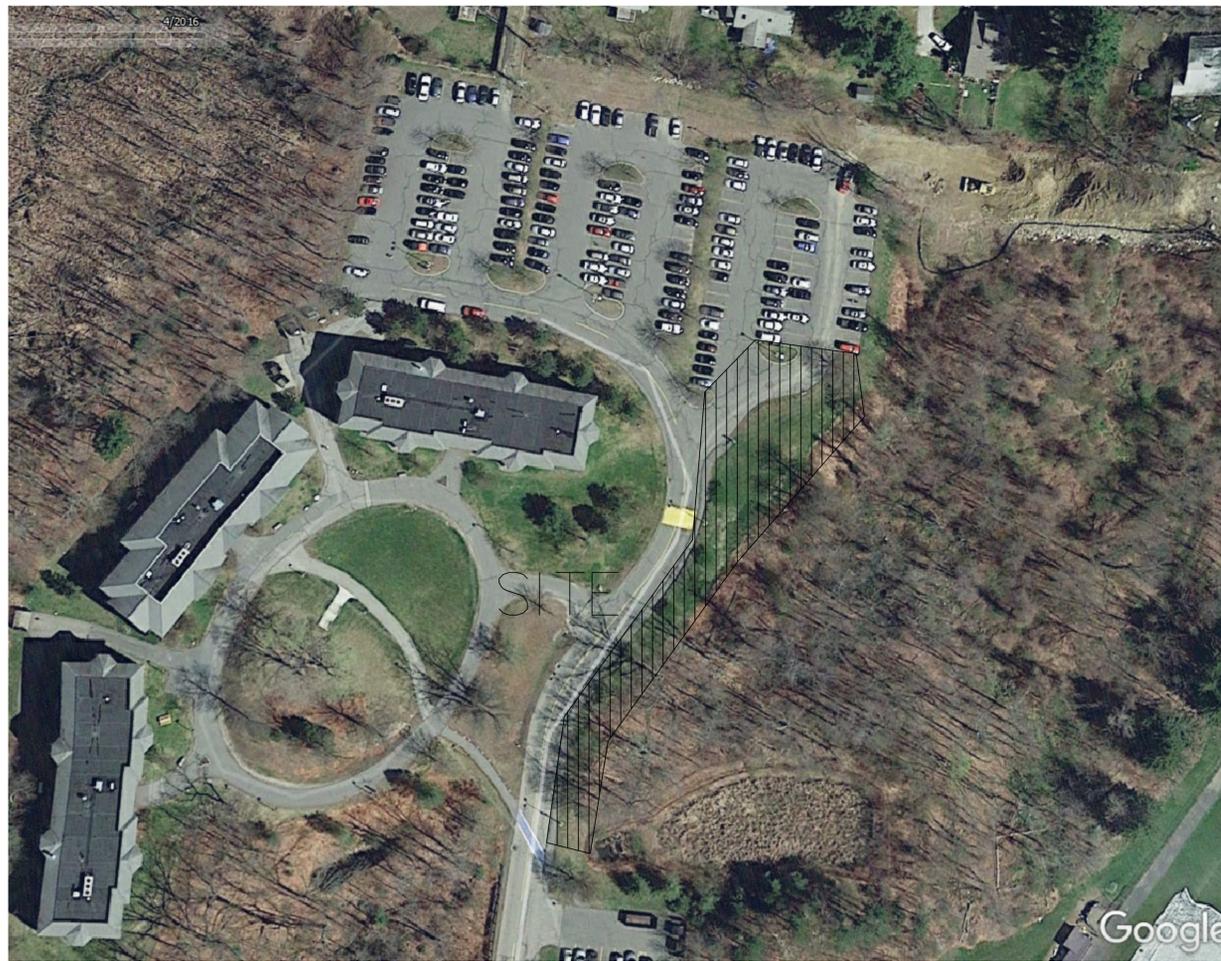
MAY 1, 2020



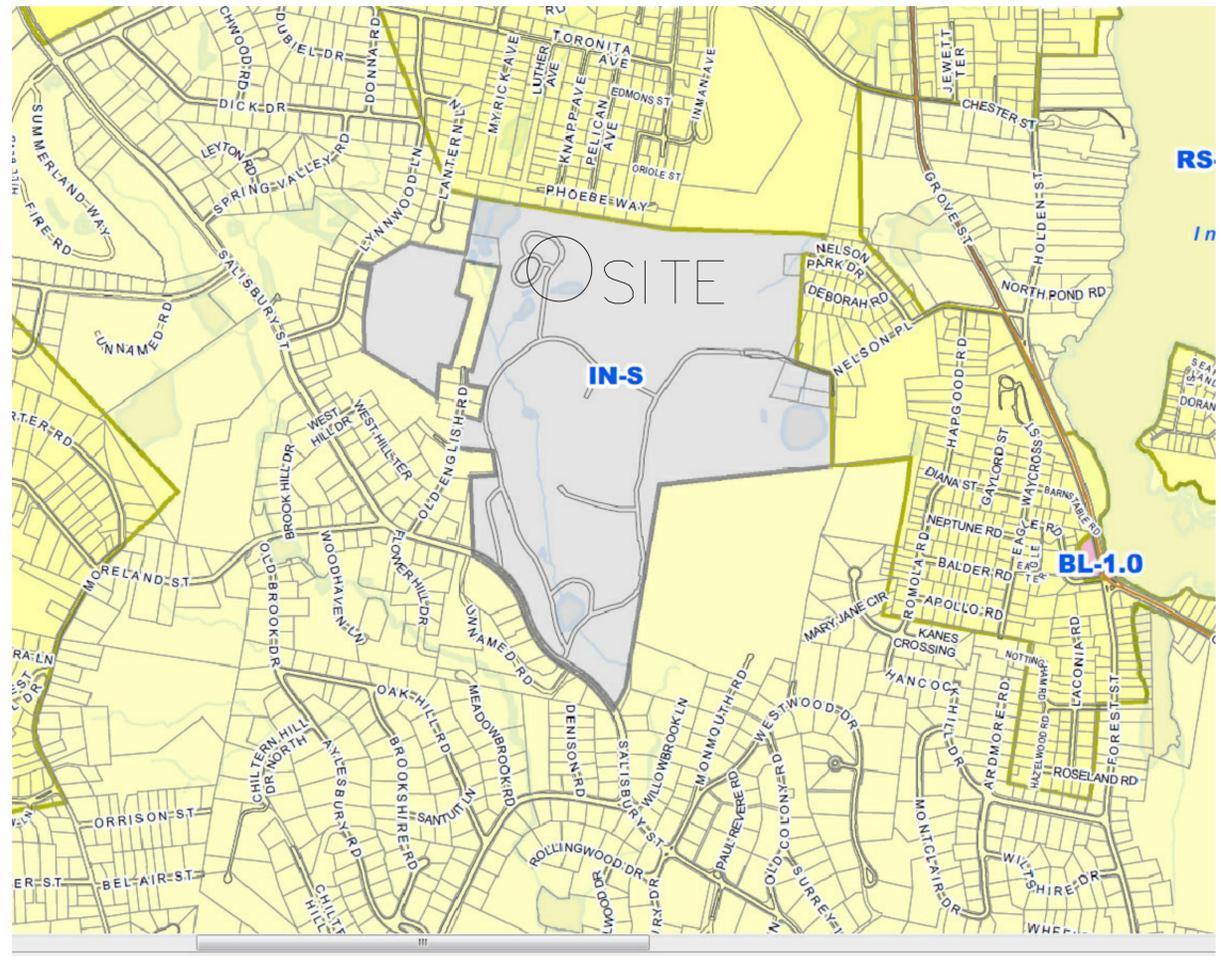
NO.	REVISION	DATE
2	WPB CONDITIONS	8/7/20
1	STAFF COMMENTS	8/3/20



APPLICANT: ASSUMPTION UNIVERSITY  
OWNER: ASSUMPTION UNIVERSITY



LOCUS MAP  
SCALE: 1"= NTS



CITY OF WORCESTER ZONING MAP  
SCALE: 1"= NTS

**EROSION CONTROL NOTES:**

- EXISTING ROADS CONNECTED TO THE PROJECT SITE WILL BE KEPT CLEAN OF SILT AND DEBRIS AT ALL TIMES. CONSTRUCTION ACCESS SHALL BE FROM SALISBURY STREET. MAINTAIN STABILIZED CONSTRUCTION ACCESS THROUGHOUT CONSTRUCTION.
- EROSION CONTROLS INCLUDING HAYBALES AND SILT FENCE WILL BE IMPLEMENTED AND INSPECTED BY A CITY REPRESENTATIVE PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.
- IF LEDGE IS ENCOUNTERED, HAYBALES SHALL BE PLACED ON TOP OF ROCK SURFACE WITH SILT FENCE WRAPPED BENEATH THE HAYBALES. HAYBALES NEED NOT BE STAKED IN THIS CASE.
- ALL EROSION CONTROL DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL ALL DISTURBED SURFACES HAVE BEEN FULLY STABILIZED WITH VEGETATION OR FINISHED SURFACE TREATMENT (PAVEMENT).
- SILT BASKETS SHALL BE INSTALLED IN ALL PROPOSED CATCH BASINS ONCE FULLY INSTALLED PER PLAN.
- DURING CONSTRUCTION, ALL EROSION CONTROL MEASURES SHOWN ON THESE PLANS SHALL BE INSPECTED BY A QUALIFIED ENGINEER ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/4" OF RAINFALL. ANY MAINTENANCE NEEDED SHALL BE PERFORMED IN A TIMELY MANNER.
- AT THE END OF CONSTRUCTION, ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.
- NO MATERIAL SHALL BE STOCKPILED OUTSIDE OF DESIGNATED SOIL STOCKPILE AREAS ON SITE.
- CONSTRUCTION SEQUENCING:
  - EROSION CONTROLS IN PLACE PER PLAN
  - GRADING ASSOCIATED WITH DRAINAGE SYSTEM
  - CONSTRUCT DRAINAGE SYSTEM
  - CONSTRUCT REMAINING PORTION OF PROJECT PER PHASING PLAN
- CONTRACTOR SHALL PLACE 6" OF LOAM AND SEED IN ALL DISTURBED AREAS NOT SUBJECT TO RESTORATION BY ANY OTHER MEANS.

**CONSTRUCTION PERIOD POLLUTION PREVENTION PLAN NOTES:**

- CONTROLS TO REDUCE POLLUTANTS:
  - THE FOLLOWING IS A BRIEF DESCRIPTION OF EACH BMP IMPLEMENTED TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES.
    - HAY BALES & SILT FENCE: HAY BALES AND SILT FENCE PROVIDE MEASURES OF CONTROLLING EROSION AND SEDIMENTATION AND SHALL BE IMPLEMENTED BY THE CONTRACTOR WHERE NEEDED TO PREVENT SEDIMENT FROM LEAVING THE WORK SITE.
    - EARTH DIKES, TEMPORARY DRAINAGE SWALES, INTERCEPTOR DIKES AND/OR SWALES SHALL BE EMPLOYED BY THE SITE CONTRACTOR TO DIRECT STORMWATER RUNOFF FROM DISTURBED AREAS TO AREAS WHERE DISCHARGE IS ACCEPTABLE.
    - TEMPORARY CONSTRUCTION ENTRANCES OF CRUSHED STONE SHALL BE IMPLEMENTED BY THE CONTRACTOR WHEN NEEDED TO PREVENT SEDIMENT FROM TRACKING OFF-SITE AND INTO EXISTING ROADWAYS.
  - DISTURBED AREAS NOT SUBJECT TO RESTORATION BY OTHER MEANS SHALL BE STABILIZED UPON FINISH GRADING WITH 4" OF LOAM AND GRASS SEED. AREAS SLOPED AT GREATER THAN 3:1 SHALL BE STABILIZED WITH GEOTEXTILE FABRIC.
  - THE FOLLOWING RECORDS SHOULD BE MAINTAINED BY THE OPERATOR AS PART OF THE POLLUTION PREVENTION PLAN.
    - DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.
    - DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.
    - DATES WHEN STABILIZATION MEASURES ARE INITIATED.
  - HAY BALES, SILT FENCE, STONE CONSTRUCTION ENTRANCES, EARTH DIKES, TEMPORARY DRAINAGE SWALES, INTERCEPTOR DIKES AND SWALES, AND OTHER STRUCTURAL PRACTICES SHALL BE EMPLOYED BY THE SITE CONTRACTOR TO DIRECT STORMWATER RUNOFF FROM DISTURBED AREAS TO AREAS WHERE DISCHARGE IS ACCEPTABLE. THE APPROPRIATE LOCATION AND INSTALLATION TIMING SHALL BE DETERMINED BY THE SITE CONTRACTOR.
  - THE DISCHARGE OF SOLID MATERIALS, INCLUDING BUILDING MATERIALS, TO ANY WETLAND AREAS, CATCH BASIN, STORMWATER BASIN, ETC. ARE PROHIBITED.
  - THE CONTRACTOR SHALL MINIMIZE VEHICLE TRACKED SEDIMENT ONTO THE SURROUNDING ROADWAYS. AIRBORNE DUST SHALL BE CONTROLLED WITH WATER.
  - CONSTRUCTION MATERIALS AND CONSTRUCTION WASTE MATERIALS ASSOCIATED WITH THE PROPOSED DEVELOPMENT SHALL BE STORED IN A MANNER THAT MINIMIZES EXPOSURE TO STORMWATER, IE USE OF TARPULINS, INSIDE STORAGE, ETC. MATERIALS AND WASTE SHALL BE MAINTAINED IN AN ORDERLY MANNER AND SHALL BE COLLECTED IMMEDIATELY UPON SPILLS OR DISPERSION.
  - DURING CONSTRUCTION, POLLUTANTS FROM SOURCES OTHER THAN THE CONSTRUCTION ACTIVITIES ARE NOT EXPECTED.
- ILLICIT AND NON STORMWATER DISCHARGES:
  - IN ACCORDANCE WITH THE DEP MASSACHUSETTS STORMWATER HANDBOOK, AN ILLICIT DISCHARGE DOES NOT INCLUDE DISCHARGES FROM THE FOLLOWING ACTIVITIES OR FACILITIES: FIRE FIGHTING, WATER LINE FLUSHING, LANDSCAPE IRRIGATION, UNCONTAMINATED GROUNDWATER, POTABLE WATER SOURCES, FOUNDATION DRAINS, AIR CONDITIONING CONDENSATION, FOOTING DRAINS, INDIVIDUAL RESIDENT CAR WASHING, FLOWS FROM RIPARIAN HABITATS AND WETLANDS, DECHLORINATED WATER FROM SWIMMING POOLS, WATER USED FOR STREET WASHING AND WATER USED TO CLEAN RESIDENTIAL BUILDINGS WITHOUT DETERGENTS.
  - ILLICIT DISCHARGES TO THE STORMWATER MANAGEMENT SYSTEM SHALL BE PROHIBITED. ILLICIT DISCHARGES INCLUDE WASTEWATER DISCHARGES AND DISCHARGES OF STORMWATER CONTAMINATED BY CONTACT WITH PROCESS WASTES, RAW MATERIALS, TOXIC POLLUTANTS, HAZARDOUS SUBSTANCES, OIL, OR GREASE.
- MAINTENANCE AND CONTROLS:
  - DURING CONSTRUCTION, ALL SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE OPERATING CONDITION. IN THE EVENT THAT THE MEASURES ARE NOT WORKING PROPERLY OR IF ADDITIONAL MEASURES ARE REQUIRED, MAINTENANCE AND ADJUSTMENTS SHALL BE MADE BY THE OPERATOR AS SOON AS POSSIBLE BEFORE THE NEXT RAIN STORM.
  - DURING CONSTRUCTION, IN THE EVENT THAT MAINTENANCE OR IMPLEMENTATION CANNOT BE MADE PRIOR TO THE NEXT RAIN STORM, THE SITUATION SHALL BE DOCUMENTED BY THE OPERATOR AND ALTERNATIVE BMP'S IMPLEMENTED AS SOON AS POSSIBLE.
  - DURING CONSTRUCTION, CATCH BASINS SUMPS AND SEDIMENT TRAPS SHALL BE CLEANED OF SEDIMENT WHEN THE CAPACITY HAS BEEN REDUCED BY 50%.
- MANAGEMENT PRACTICES:
  - ALL CONTROL MEASURES SHALL BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND GOOD PRACTICES. INAPPROPRIATE OR INCORRECT USE OF THE CONTROL SHALL BE MODIFIED AS SOON AS PRACTICABLE.
  - OFF-SITE ACCUMULATION OF SEDIMENT MUST BE REMOVED IMMEDIATELY.
  - LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
  - STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED PRIOR TO AND DURING WINTER CONDITIONS.
  - A VEGETATED BUFFER SHALL BE MAINTAINED WHEREVER POSSIBLE BETWEEN THE WORK AREA AND DOWNSTREAM RESOURCE AREAS AND PROPERTY BOUNDARIES.
  - PROVIDE VELOCITY DISSIPATORS OR RIP RAP AT ALL TEMPORARY AND PERMANENT STORMWATER POINT DISCHARGES.

**SNOW AND ICE MANAGEMENT PLAN:**

- THIS PLAN DEFINES:
  - SITE PROVISIONS FOR STORAGE AND DISPOSAL OF SNOW AND ICE.
  - ANTICIPATED OPERATIONS NECESSARY FOR THE REMOVAL, STORAGE AND DISPOSAL OF SNOW AND ICE.
- ON THIS SITE, PARKING IS PROPOSED IN TWO DISTINCT AREAS. IN ORDER TO REMOVE SNOW FROM PAVED AREAS, AND PLACE IT IN NON-PAVED AREAS, A FRONT-END LOADER MUST BE USED. SNOW PLOWING MAY BE EMPLOYED IN COLLECTING SNOW, HOWEVER, A LOADER MUST BE USED TO MOVE THE SNOW FROM THE PAVED SURFACE.
- DURING SOME WINTERS, IT MAY BE NECESSARY TO TRANSFER SNOW STOCKPILED IN THE SNOW STORAGE AREAS TO A DESIGNATED SNOW DISPOSAL AREA. THIS MAY BE ACCOMPLISHED BY EITHER A FRONT-END LOADER WITH A TRUCK OR BY LOADER OPERATING ALONE.

**QUINN ENGINEERING, INC.**  
P.O. Box 107  
Paxton, Massachusetts 01612  
(508)753-7999 Fax:(508)795-0939

DATE: MAY 1, 2020

PARKING IMPROVEMENTS

COVER SHEET

**PROJECT INFO:**

1. PROPERTY INFORMATION:  
 STREET ADDRESS: 500 SALISBURY STREET  
 ASSESSORS REF.: PARCEL ID: 55-004-00001  
 ZONING DISTRICT: INS  
 DEED REFERENCE: 6889/98

2. ZONING INFORMATION:  
 DISTRICT: INS  
 USE: EDUCATION  
 REQUIRED PROPOSED

MIN. AREA: NA 7,555,351 SF  
 MIN. FRONTAGE: NA >1,600'  
 MIN. FRONT YARD: 15' >100'  
 MIN. SIDE YARD: 10' >100'  
 MIN. REAR YARD: 10' >100'  
 MAX. HEIGHT: NA NA  
 TOTAL FLOOR AREA: NA NA  
 BUILDING FOOTPRINT: NA NA  
 FLOOR TO AREA RATIO: NA NA  
 USABLE OPEN SPACE: >20 ACRES

3. APPLICANT: ASSUMPTION UNIVERSITY  
 500 SALISBURY STREET  
 WORCESTER, MA 01609

4. ARCHITECT: NAULT ARCHITECTS  
 78 HOPE AVENUE  
 WORCESTER, MA 01603

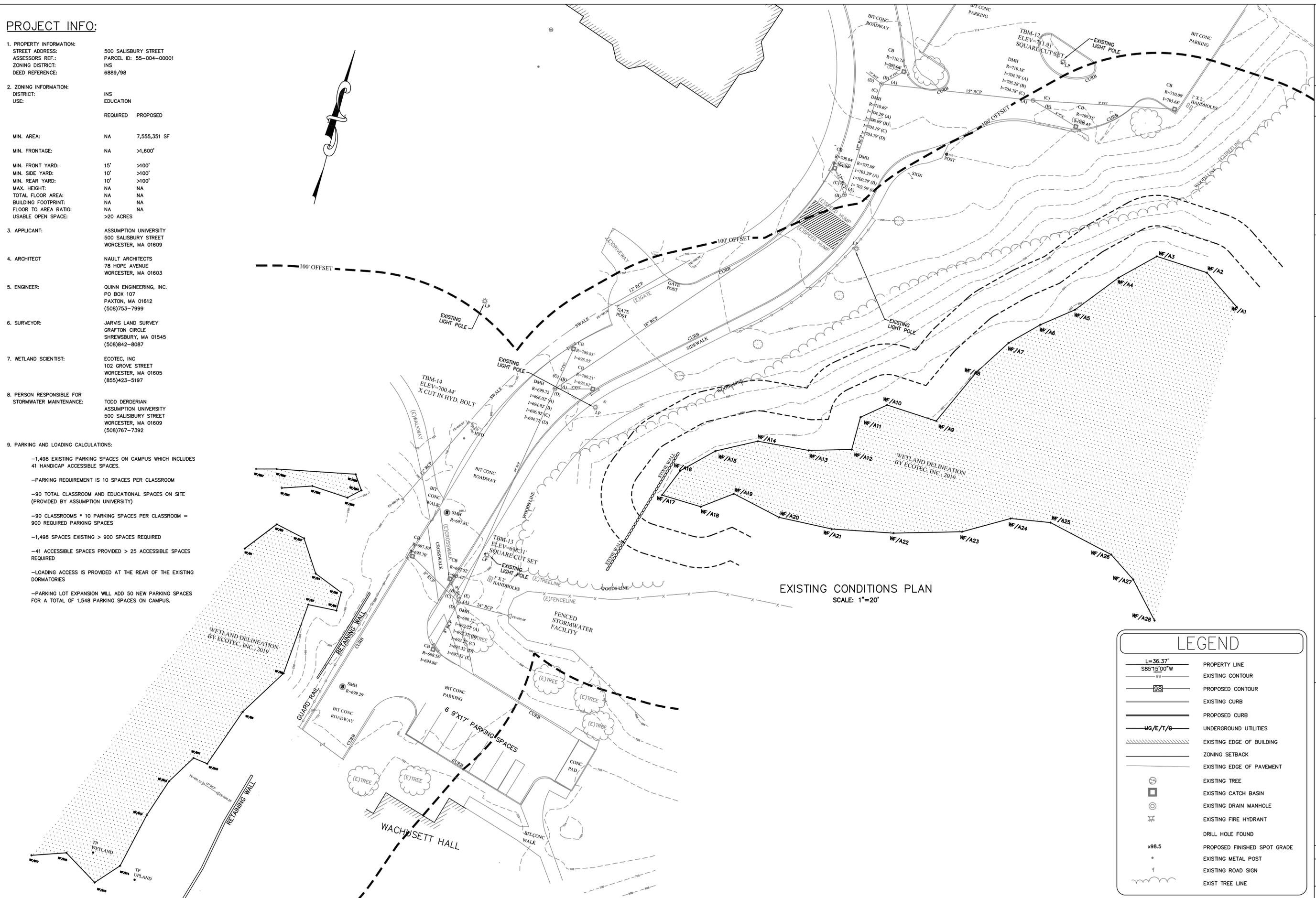
5. ENGINEER: QUINN ENGINEERING, INC.  
 PO BOX 107  
 PAXTON, MA 01612  
 (508)753-7999

6. SURVEYOR: JARVIS LAND SURVEY  
 GRAFTON CIRCLE  
 SHREWSBURY, MA 01545  
 (508)842-8087

7. WETLAND SCIENTIST: ECOTEC, INC.  
 102 GROVE STREET  
 WORCESTER, MA 01605  
 (855)423-5197

8. PERSON RESPONSIBLE FOR STORMWATER MAINTENANCE: TODD DERDERIAN  
 ASSUMPTION UNIVERSITY  
 500 SALISBURY STREET  
 WORCESTER, MA 01609  
 (508)767-7392

9. PARKING AND LOADING CALCULATIONS:  
 -1,498 EXISTING PARKING SPACES ON CAMPUS WHICH INCLUDES 41 HANDICAP ACCESSIBLE SPACES.  
 -PARKING REQUIREMENT IS 10 SPACES PER CLASSROOM  
 -90 TOTAL CLASSROOM AND EDUCATIONAL SPACES ON SITE (PROVIDED BY ASSUMPTION UNIVERSITY)  
 -90 CLASSROOMS \* 10 PARKING SPACES PER CLASSROOM = 900 REQUIRED PARKING SPACES  
 -1,498 SPACES EXISTING > 900 SPACES REQUIRED  
 -41 ACCESSIBLE SPACES PROVIDED > 25 ACCESSIBLE SPACES REQUIRED  
 -LOADING ACCESS IS PROVIDED AT THE REAR OF THE EXISTING DORMATORIES  
 -PARKING LOT EXPANSION WILL ADD 50 NEW PARKING SPACES FOR A TOTAL OF 1,548 PARKING SPACES ON CAMPUS.



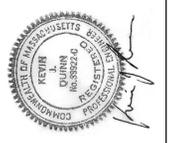
EXISTING CONDITIONS PLAN  
 SCALE: 1"=20'

**LEGEND**

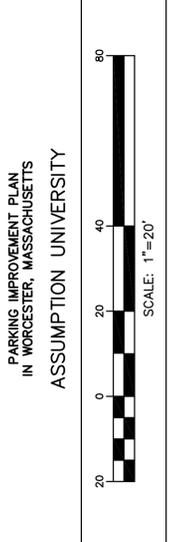
	PROPERTY LINE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING CURB
	PROPOSED CURB
	UNDERGROUND UTILITIES
	EXISTING EDGE OF BUILDING
	ZONING SETBACK
	EXISTING EDGE OF PAVEMENT
	EXISTING TREE
	EXISTING CATCH BASIN
	EXISTING DRAIN MANHOLE
	EXISTING FIRE HYDRANT
	DRILL HOLE FOUND
	PROPOSED FINISHED SPOT GRADE
	EXISTING METAL POST
	EXISTING ROAD SIGN
	EXIST TREE LINE



NO.	REVISION	DATE
2	WPB CONDITIONS	8/7/20
1	STAFF COMMENTS	8/3/20



APPLICANT: ASSUMPTION UNIVERSITY  
 OWNER: ASSUMPTION UNIVERSITY



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 Paxton, Massachusetts 01612  
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STRUCTURE	TO STRUCTURE	CULVERT
CB1 (STORMCEPTOR) RIM EL=707.0* INV OUT=702.12	CHAMBERS 1 (18) CULTEC 330XL	8" C900 L=4' S=0.0300
CB2 (STORMCEPTOR) RIM EL=699.3* INV OUT=696.30	DMH1	8" C900 L=44' S=0.0050
DMH1 RIM EL=700.5* INV IN=696.08 INV OUT=696.05	CHAMBERS 2 (18) CULTEC 330XL	8" C900 L=10' S=0.0050
PARKING LOT CHAMBERS FIN GRADE=705.8+ INV IN=702.00 INV OUT=702.00 B/CHAMBERS=700.50 B/STONE=700.00	OUTLET	4" PVC L=35' S=0.0300
ROAD PARKING CHAMBERS FIN GRADE=701.0+ INV IN=696.06 INV OUT=696.06 B/CHAMBERS=695.50 B/STONE=695.00	OUTLET	4" PVC L=30' S=0.0300

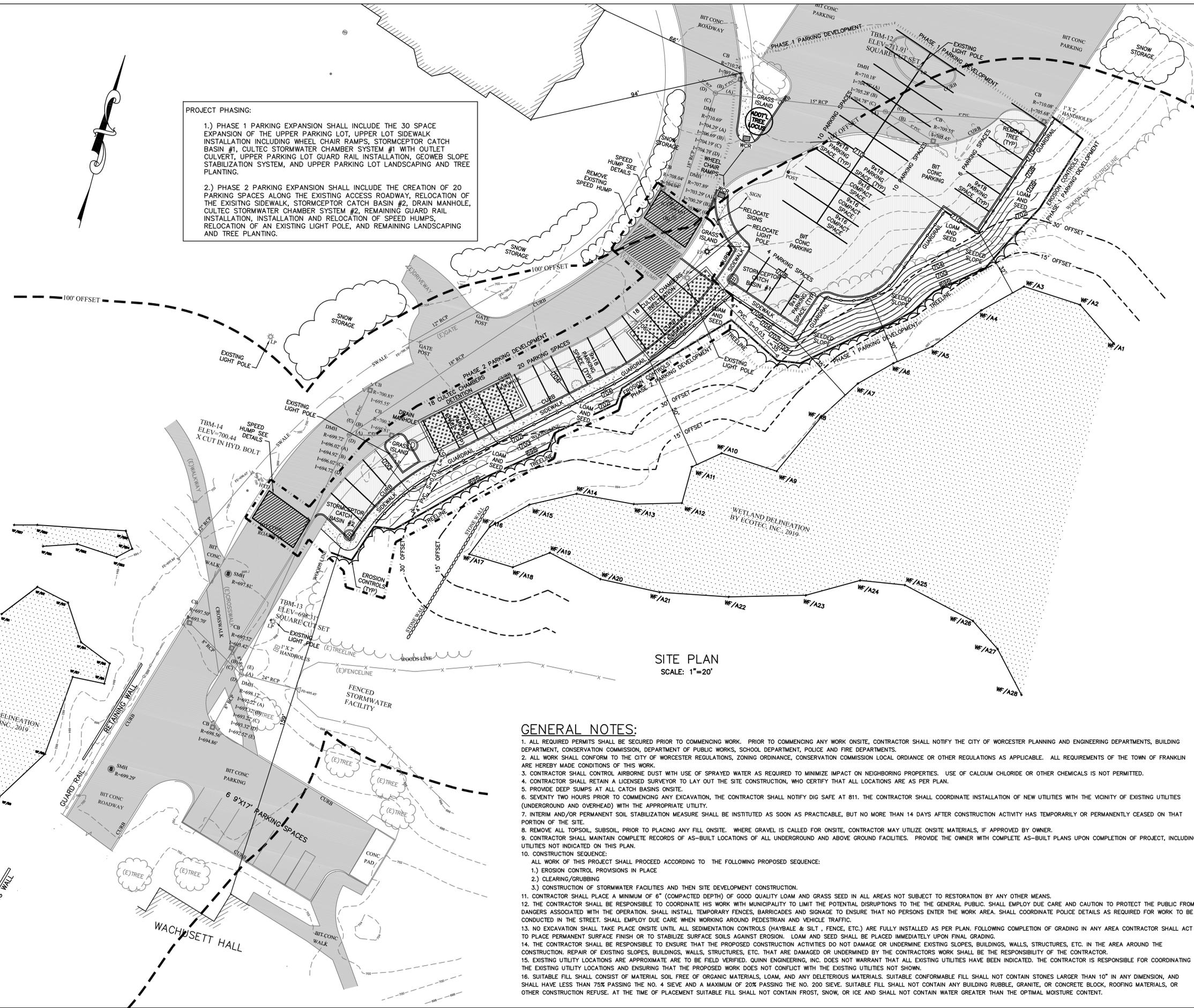
DRAINAGE SCHEDULE

LEGEND	
L=36.37' S85°15'00"W	PROPERTY LINE
---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	EXISTING CURB
---	PROPOSED CURB
---	UNDERGROUND UTILITIES
---	EXISTING EDGE OF BUILDING
---	ZONING SETBACK
---	EXISTING EDGE OF PAVEMENT
(E) TREE	EXISTING TREE
(CB)	EXISTING CATCH BASIN
(DMH)	EXISTING DRAIN MANHOLE
(FH)	EXISTING FIRE HYDRANT
(DH)	DRILL HOLE FOUND
x98.5	PROPOSED FINISHED SPOT GRADE
(M)	EXISTING METAL POST
(S)	EXISTING ROAD SIGN
(TL)	EXIST TREE LINE

**PROJECT PHASING:**

1.) PHASE 1 PARKING EXPANSION SHALL INCLUDE THE 30 SPACE EXPANSION OF THE UPPER PARKING LOT, UPPER LOT SIDEWALK INSTALLATION INCLUDING WHEEL CHAIR RAMP, STORMCEPTOR CATCH BASIN #1, CULTEC STORMWATER CHAMBER SYSTEM #1 WITH OUTLET CULVERT, UPPER PARKING LOT GUARD RAIL INSTALLATION, GEOWEB SLOPE STABILIZATION SYSTEM, AND UPPER PARKING LOT LANDSCAPING AND TREE PLANTING.

2.) PHASE 2 PARKING EXPANSION SHALL INCLUDE THE CREATION OF 20 PARKING SPACES ALONG THE EXISTING ACCESS ROADWAY, RELOCATION OF THE EXISTING SIDEWALK, STORMCEPTOR CATCH BASIN #2, DRAIN MANHOLE, CULTEC STORMWATER CHAMBER SYSTEM #2, REMAINING GUARD RAIL INSTALLATION, INSTALLATION AND RELOCATION OF SPEED HUMPS, RELOCATION OF AN EXISTING LIGHT POLE, AND REMAINING LANDSCAPING AND TREE PLANTING.



SITE PLAN  
SCALE: 1"=20'

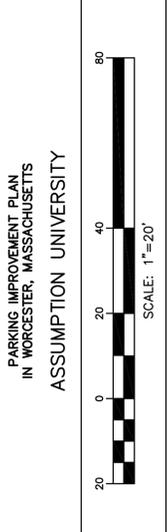
- GENERAL NOTES:**
- ALL REQUIRED PERMITS SHALL BE SECURED PRIOR TO COMMENCING WORK. PRIOR TO COMMENCING ANY WORK ONSITE, CONTRACTOR SHALL NOTIFY THE CITY OF WORCESTER PLANNING AND ENGINEERING DEPARTMENTS, BUILDING DEPARTMENT, CONSERVATION COMMISSION, DEPARTMENT OF PUBLIC WORKS, SCHOOL DEPARTMENT, POLICE AND FIRE DEPARTMENTS.
  - ALL WORK SHALL CONFORM TO THE CITY OF WORCESTER REGULATIONS, ZONING ORDINANCE, CONSERVATION COMMISSION LOCAL ORDINANCE OR OTHER REGULATIONS AS APPLICABLE. ALL REQUIREMENTS OF THE TOWN OF FRANKLIN ARE HEREBY MADE CONDITIONS OF THIS WORK.
  - CONTRACTOR SHALL CONTROL AIRBORNE DUST WITH USE OF SPRAYED WATER AS REQUIRED TO MINIMIZE IMPACT ON NEIGHBORING PROPERTIES. USE OF CALCIUM CHLORIDE OR OTHER CHEMICALS IS NOT PERMITTED.
  - CONTRACTOR SHALL RETAIN A LICENSED SURVEYOR TO LAY OUT THE SITE CONSTRUCTION, WHO CERTIFY THAT ALL LOCATIONS ARE AS PER PLAN.
  - PROVIDE DEEP SUMPS AT ALL CATCH BASINS ONSITE.
  - SEVENTY TWO HOURS PRIOR TO COMMENCING ANY EXCAVATION, THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 811. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF NEW UTILITIES WITH THE VICINITY OF EXISTING UTILITIES (UNDERGROUND AND OVERHEAD) WITH THE APPROPRIATE UTILITY.
  - INTERIM AND/OR PERMANENT SOIL STABILIZATION MEASURE SHALL BE INSTITUTED AS SOON AS PRACTICABLE, BUT NO MORE THAN 14 DAYS AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED ON THAT PORTION OF THE SITE.
  - REMOVE ALL TOPSOIL, SUBSOIL PRIOR TO PLACING ANY FILL ONSITE. WHERE GRAVEL IS CALLED FOR ONSITE, CONTRACTOR MAY UTILIZE ONSITE MATERIALS, IF APPROVED BY OWNER.
  - CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF AS-BUILT LOCATIONS OF ALL UNDERGROUND AND ABOVE GROUND FACILITIES. PROVIDE THE OWNER WITH COMPLETE AS-BUILT PLANS UPON COMPLETION OF PROJECT, INCLUDING UTILITIES NOT INDICATED ON THIS PLAN.
  - CONSTRUCTION SEQUENCE:  
ALL WORK OF THIS PROJECT SHALL PROCEED ACCORDING TO THE FOLLOWING PROPOSED SEQUENCE:  
1.) EROSION CONTROL PROVISIONS IN PLACE  
2.) CLEARING/GRUBBING  
3.) CONSTRUCTION OF STORMWATER FACILITIES AND THEN SITE DEVELOPMENT CONSTRUCTION.
  - CONTRACTOR SHALL PLACE A MINIMUM OF 6" (COMPACTED DEPTH) OF GOOD QUALITY LOAM AND GRASS SEED IN ALL AREAS NOT SUBJECT TO RESTORATION BY ANY OTHER MEANS.
  - THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE HIS WORK WITH MUNICIPALITY TO LIMIT THE POTENTIAL DISRUPTIONS TO THE GENERAL PUBLIC. SHALL EMPLOY DUE CARE AND CAUTION TO PROTECT THE PUBLIC FROM DANGERS ASSOCIATED WITH THE OPERATION. SHALL INSTALL TEMPORARY FENCES, BARRICADES AND SIGNAGE TO ENSURE THAT NO PERSONS ENTER THE WORK AREA. SHALL COORDINATE POLICE DETAILS AS REQUIRED FOR WORK TO BE CONDUCTED IN THE STREET. SHALL EMPLOY DUE CARE WHEN WORKING AROUND PEDESTRIAN AND VEHICLE TRAFFIC.
  - NO EXCAVATION SHALL TAKE PLACE ONSITE UNTIL ALL SEDIMENTATION CONTROLS (HAYBALE & SILT, FENCE, ETC.) ARE FULLY INSTALLED AS PER PLAN. FOLLOWING COMPLETION OF GRADING IN ANY AREA CONTRACTOR SHALL ACT TO PLACE PERMANENT SURFACE FINISH OR TO STABILIZE SURFACE SOILS AGAINST EROSION. LOAM AND SEED SHALL BE PLACED IMMEDIATELY UPON FINAL GRADING.
  - THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT THE PROPOSED CONSTRUCTION ACTIVITIES DO NOT DAMAGE OR UNDERMINE EXISTING SLOPES, BUILDINGS, WALLS, STRUCTURES, ETC. IN THE AREA AROUND THE CONSTRUCTION. REPAIR OF EXISTING SLOPES, BUILDINGS, WALLS, STRUCTURES, ETC. THAT ARE DAMAGED OR UNDERMINED BY THE CONTRACTORS WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
  - EXISTING UTILITY LOCATIONS ARE APPROXIMATE ARE TO BE FIELD VERIFIED. QUINN ENGINEERING, INC. DOES NOT WARRANT THAT ALL EXISTING UTILITIES HAVE BEEN INDICATED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE EXISTING UTILITY LOCATIONS AND ENSURING THAT THE PROPOSED WORK DOES NOT CONFLICT WITH THE EXISTING UTILITIES NOT SHOWN.
  - SUITABLE FILL SHALL CONSIST OF MATERIAL SOIL FREE OF ORGANIC MATERIALS, LOAM, AND ANY DELETERIOUS MATERIALS. SUITABLE CONFORMABLE FILL SHALL NOT CONTAIN STONES LARGER THAN 10" IN ANY DIMENSION, AND SHALL HAVE LESS THAN 75% PASSING THE NO. 4 SIEVE AND A MAXIMUM OF 20% PASSING THE NO. 200 SIEVE. SUITABLE FILL SHALL NOT CONTAIN ANY BUILDING RUBBLE, GRANITE, OR CONCRETE BLOCK, ROOFING MATERIALS, OR OTHER CONSTRUCTION REFUSE. AT THE TIME OF PLACEMENT SUITABLE FILL SHALL NOT CONTAIN FROST, SNOW, OR ICE AND SHALL NOT CONTAIN WATER GREATER THAN THE OPTIMAL MOISTURE CONTENT.



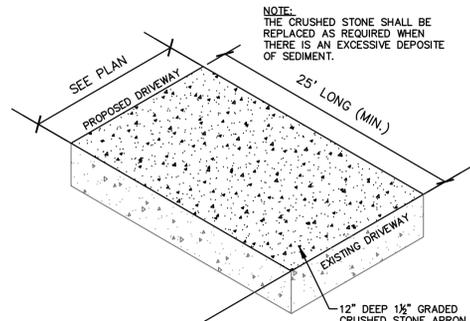
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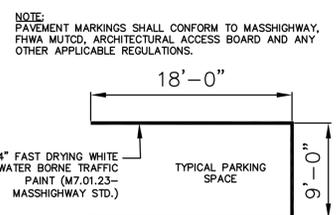
APPLICANT: ASSUMPTION UNIVERSITY  
OWNER: ASSUMPTION UNIVERSITY



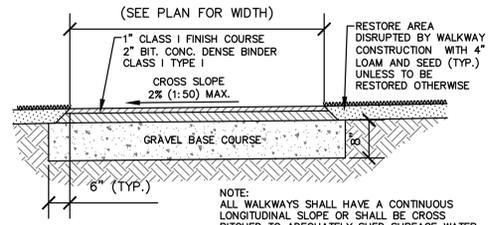
**QUINN ENGINEERING, INC.**  
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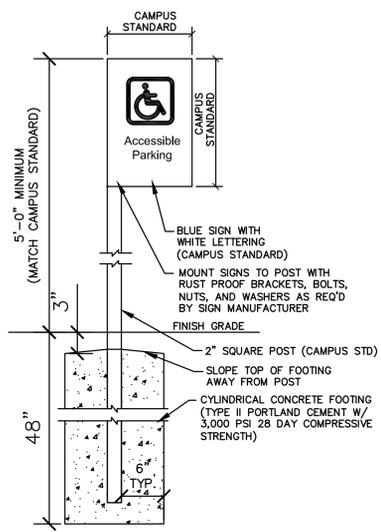
**CRUSHED STONE APRON DETAIL**  
SCALE: NOT TO SCALE



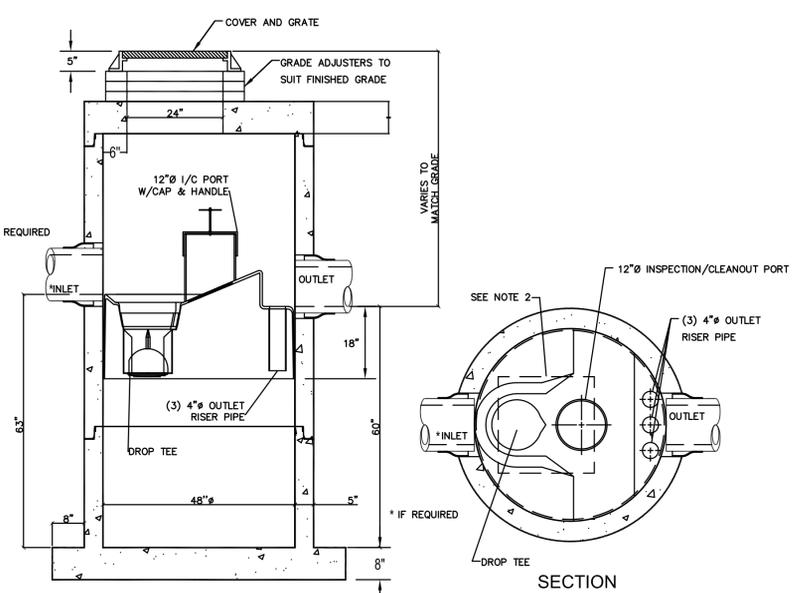
**PARKING SPACE DETAIL**  
SCALE: 1/8"=1'-0"



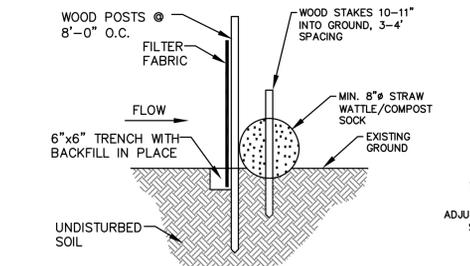
**BIT. CONC. WALKWAY DETAIL**  
SCALE: AS NOTED



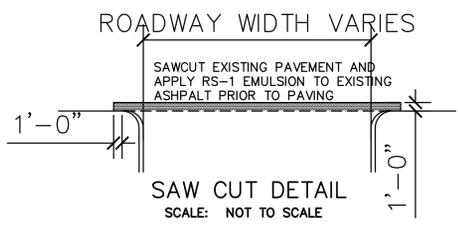
**CAMPUS STANDARD ACCESSIBLE SIGN DETAIL**  
SCALE: 1"=1'-0"



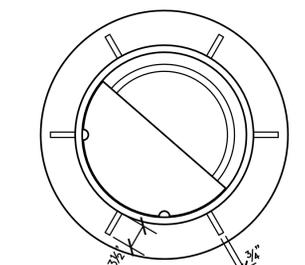
**STORMCEPTOR 450i DETAILS**  
SCALE: NOT TO SCALE



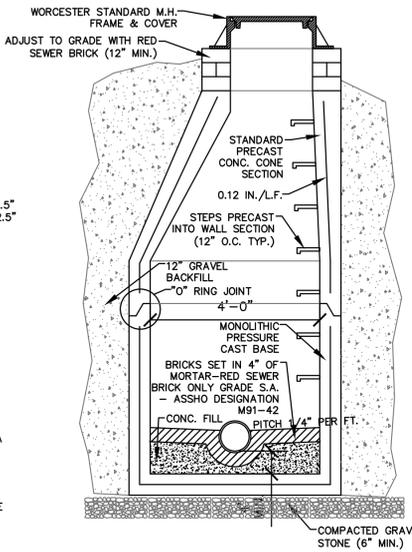
**EROSION CONTROL DETAIL**  
SCALE: NOT TO SCALE



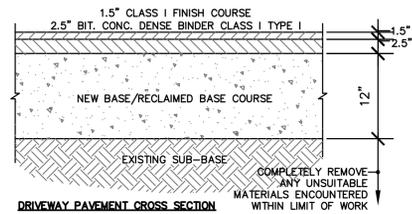
**SAW CUT DETAIL**  
SCALE: NOT TO SCALE



**23" MANHOLE RING & COVER**  
SCALE: 1"=1'-0"



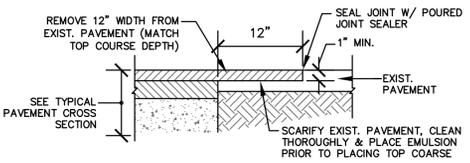
**TYPICAL MANHOLE DETAIL**  
SCALE: 1/2"=1'-0"



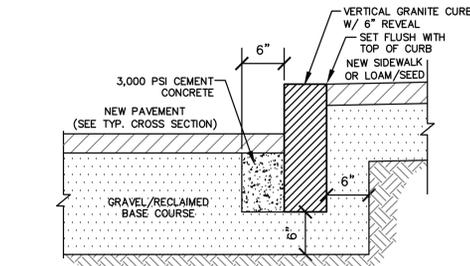
**DRIVEWAY PAVEMENT CROSS SECTION**  
SCALE: NOT TO SCALE

- NOTES:
- IMPORTED GRAVEL USED AS BASE MATERIAL SHALL CONFORM TO MA DOT STANDARD SPECIFICATION M1.03.0 TYPE B.
  - GRAVEL BASE SHALL CONSIST OF INERT MATERIAL THAT IS HARD, DURABLE STONE AND COARSE SAND, FREE FROM LOAM AND CLAY, SURFACE COATINGS, AND DELETERIOUS MATERIALS.
  - GRADATION REQUIREMENTS FOR IMPORTED GRAVEL SHALL BE DETERMINED BY AASHTO-T11 AND T27 AND SHALL CONFORM TO THE FOLLOWING:
- | SIEVE DESIGNATION: | % PASSING: |
|--------------------|------------|
| 1/2 IN.            | 50-85      |
| NO. 4              | 40-75      |
| NO. 50             | 8-28       |
| NO. 200            | 0-10       |
- THE MAXIMUM SIZE OF STONE IN GRAVEL SHALL BE 3" LARGEST DIMENSION FOR M1.03.0 TYPE B.
  - ALL PAVEMENT SHALL HAVE A CONTINUOUS LONGITUDINAL SLOPE OR SHALL BE CROSS PITCHED TO ADEQUATELY SHED SURFACE WATER.

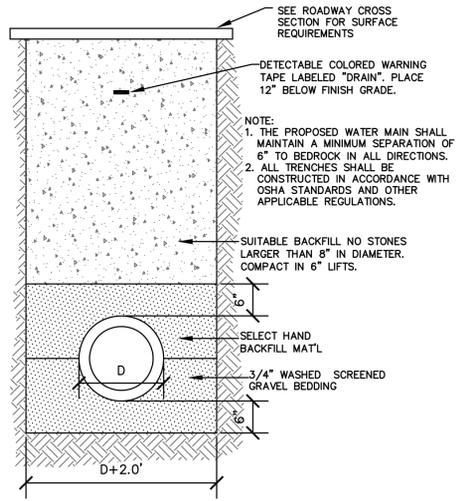
**TYPICAL NEW BITUMINOUS PAVEMENT CROSS SECTION**  
SCALE: 1"=1'-0"



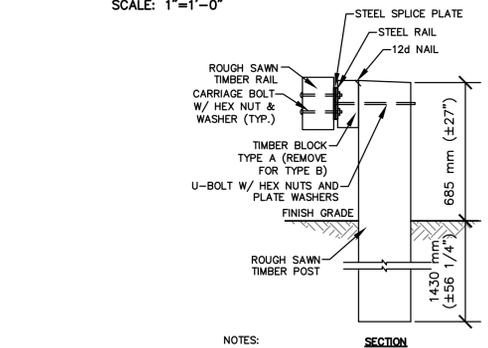
**PAVEMENT JOINT DETAIL**  
SCALE: 1"=1'-0"



**VERTICAL GRANITE CURB (VGC) DETAILS**  
SCALE: 1"=1'-0"

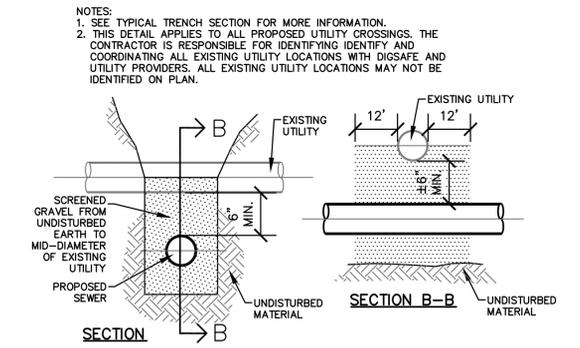


**DRAIN TRENCH DETAIL**  
SCALE: 3/4"=1'-0"

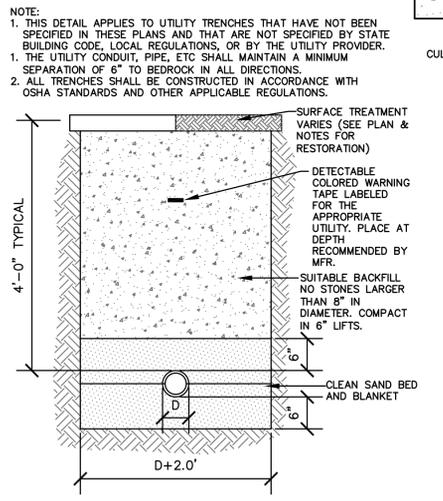


**TIMBER GUARDRAIL DETAILS**  
SCALE: NOT TO SCALE

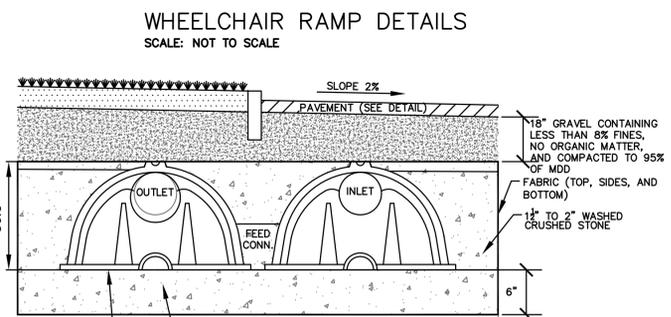
- NOTES:
- TIMBER GUARDRAIL SHALL CONFORM TO FHWA STANDARD SPECIFICATION FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS SECTION 617 AND DETAIL M617-60.
  - GUARDRAIL USED IN PARKING AREAS SHALL BE TYPE B (NON-BLOCKED OUT).



**UTILITY CROSSING DETAILS**  
SCALE: 1/2"=1'-0"

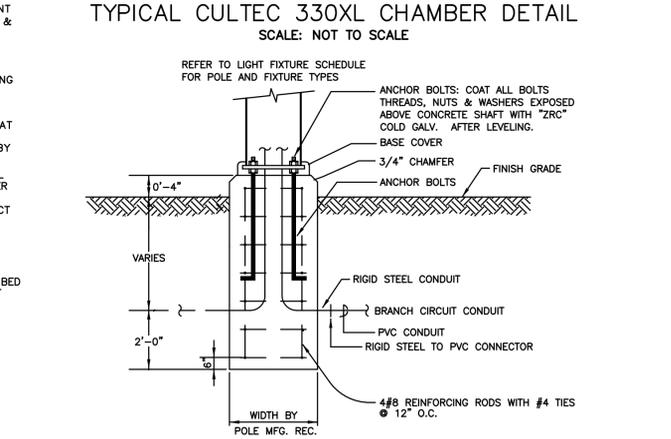


**MISC. UTILITY TRENCH DETAIL**  
SCALE: NOT TO SCALE



**WHEELCHAIR RAMP DETAILS**  
SCALE: NOT TO SCALE

- NOTES:
- CONC. RAMPS ARE TO BE TEXTURED BY BROOMING IN A DIRECTION PARALLEL TO THE LENGTH OF THE RAMP (MINIMUM 6" THICKNESS).
  - CONSTRUCTION MATERIALS FOR WHEEL CHAIR RAMP TO BE SIMILAR TO ADJACENT SIDEWALK.
  - BITUM. CONC. RAMPS SHALL BE 2.5" THICK APPLIED IN TWO COURSES, ONE COURSE OF 1.5" BINDER AND ONE COURSE OF 1" TOP COURSE.



**TYPICAL CULTEC 330XL CHAMBER DETAIL**  
SCALE: NOT TO SCALE

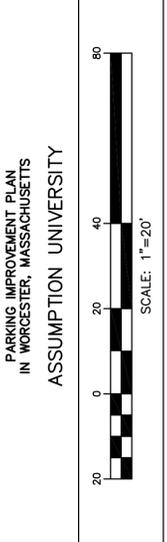
**LIGHT POLE MOUNTING BASE**  
SCALE: NOT TO SCALE



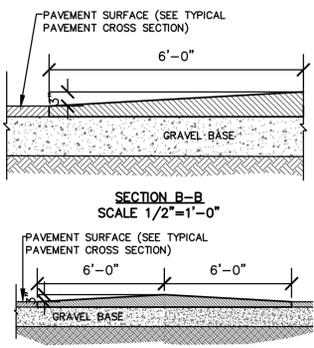
NO.	REVISION	DATE
2	WPB CONDITIONS	8/3/20
1	STAFF COMMENTS	8/7/20



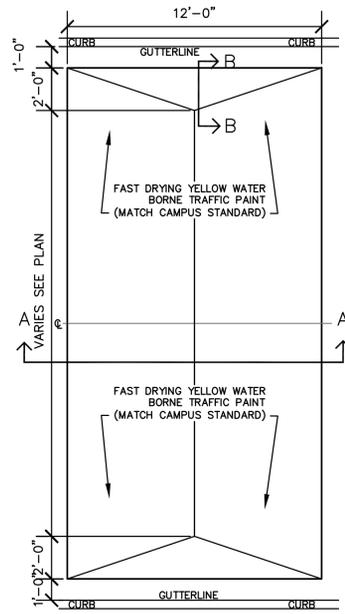
APPLICANT: ASSUMPTION UNIVERSITY  
OWNER: ASSUMPTION UNIVERSITY



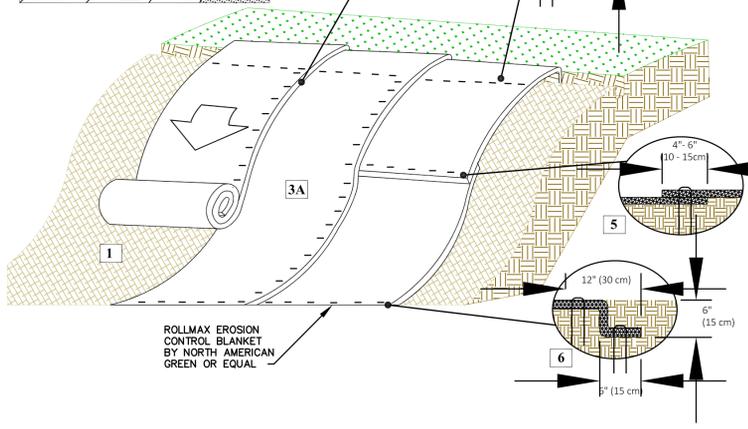
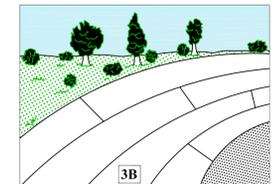
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P.O. Box 107  
Paxton, Massachusetts 01612  
(508)753-7999 Fax: (508)795-0939



SECTION B-B  
SCALE 1/2"=1'-0"  
SECTION A-A  
SCALE 1/4"=1'-0"  
SPEED HUMP SECTIONS  
SCALE: AS NOTED

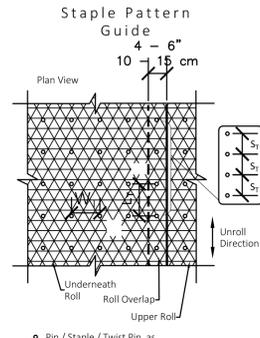


PLAN VIEW  
SCALE 1/4"=1'-0"  
SPEED HUMP DETAIL  
SCALE: AS NOTED



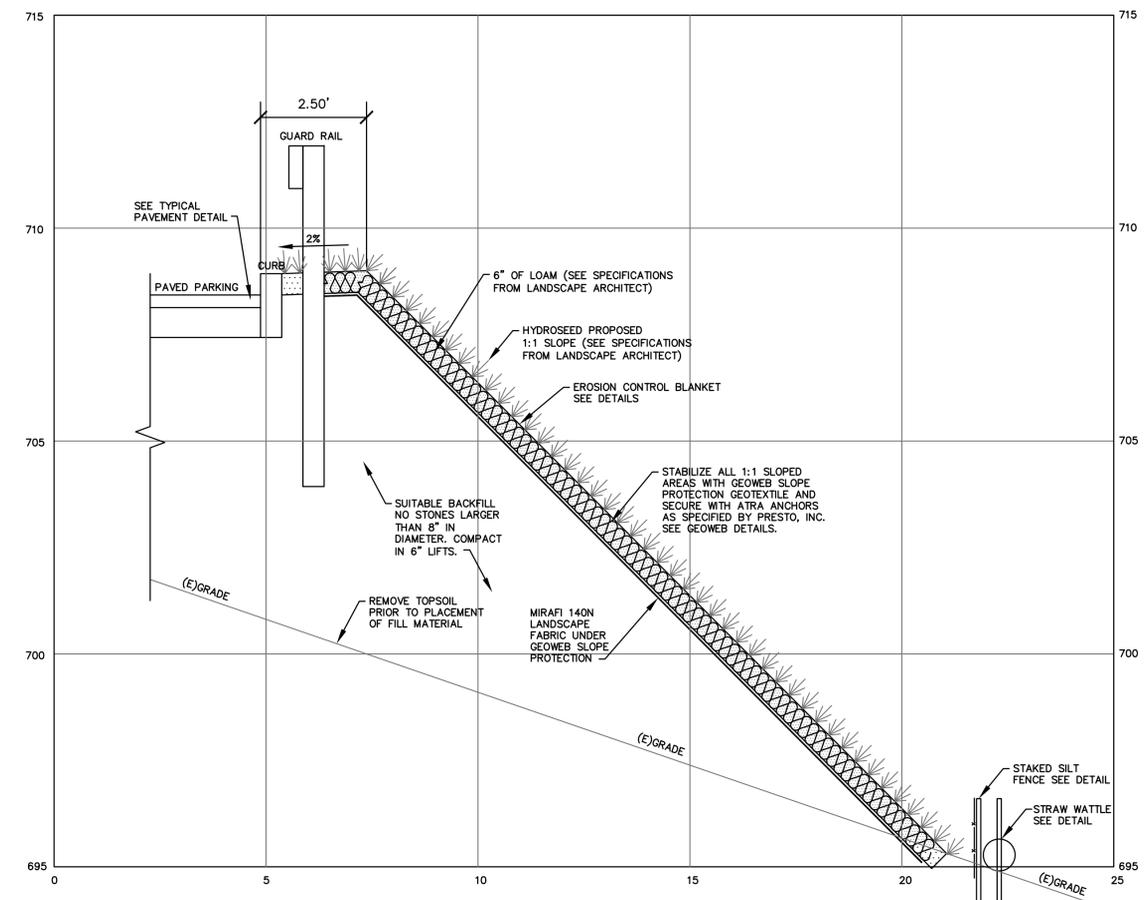
2.5:1 AND STEEPER EROSION CONTROL BLANKET DETAILS  
SCALE: NTS

- Instructions**
- Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed. Ground surface must be free of debris, rocks, clay clods and raked smooth sufficient to allow intimate contact of the RECP with the soil over the entirety of the installation.
  - Begin at the top of the slope by anchoring the RECPs in a 6" (15 cm) deep X 6" (15 cm) wide trench. Anchor the RECPs with a row of staples/stakes/pins spaced at  $S_1$  apart in the bottom of the trench. Backfill and compact the trench after stapling and fold the roll over downslope. Secure RECPs over compacted soil with a row of staples/stakes/pins spaced at  $S_2$  apart across the width of the RECPs.
  - Roll the RECPs (A) down or (B) horizontally across the slope. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes/pins in appropriate locations as shown in the staple pattern guide. RollMax RECPs and ECBs should utilize Staple Pattern C, TRMs and VMax materials should utilize Staple Pattern D.
  - The edges of parallel RECPs must be stapled with approximately 4" - 6" (10 - 15 cm) overlap.
  - Consecutive RECPs spilled down the slope must overlap with the upstream mat stop the downstream mat (shingle style). The overlap should be 4" - 6" (10 - 15 cm).
  - At the terminal end, secure each mat across the width with a row of staples/stakes/pins spaced at  $S_1$  if exposed to flow, foot traffic, wind uplift or other disruption, trench the terminal end in as shown in detail.
  - Fasteners should provide a minimum of twenty pounds of pullout resistance. Six-inch (10 cm) X one-inch (2.5 cm) eleven gauge staples are typically adequate. In loose soils, longer staples may be necessary, twist pins can provide the greatest pullout resistance. In hard or rocky soils, straight pins may be used where staples or twist pins are refused, provided the minimum pullout requirements are met. Bio-degradable fasteners shall not be used with VMax (TRM) or TMax (HPTRM) materials.



Dimension	Staple Pattern	
	C	D
$W_1$	30" (75 cm)	24" (60 cm)
$L_1$	30" (75 cm)	20" (50 cm)
$S_1$	18" (45 cm)	18" (45 cm)
Nominal Frequency	1.7 / SY	3.0 / SY
Application	ECB (Degradable)	TRM (Permanent)

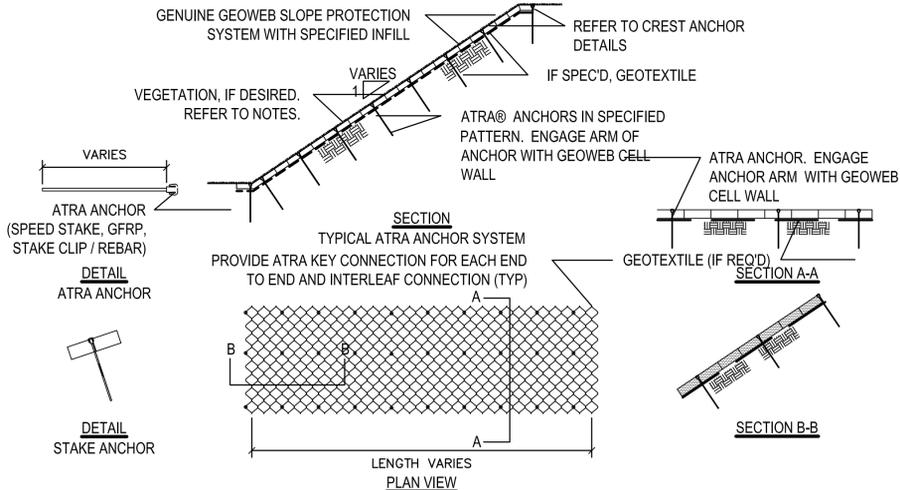
\*Note: Staple Pattern A and B used prior to 8/2019 have been discontinued.



1:1 SLOPE STABILIZATION DETAIL  
SCALE: 1/2"=1'-0"



PRESTO GEOSYSTEMS  
P.O. BOX 2399, 670 NORTH PERKINS ST.  
APPLETON, WI 54912-2399  
TOLL FREE: 1-800-548-3424  
PHONE: (920) 738-1336  
www.prestogeo.com



- STAKE ANCHOR INSTALLATION STEPS:**
- POSITION THE ATRA ANCHOR NEXT TO THE UP-SLOPE CELL WALL.
  - DRIVE ATRA ANCHOR INTO THE GROUND UNTIL ARM OF ANCHOR IS LOCATED ABOVE GEOWEB CELL WALL.
  - ENGAGE ARM OF ANCHOR TO CELL WALL AND DRIVE UNTIL TIGHT.
- MANUFACTURER NOTES:**
- ATRA ANCHORS SHALL CONSIST OF NO. 4 REBAR WITH AN ATRA STAKE CLIP INSERTED INTO THE END OF THE REBAR. LENGTH OF THE ATRA ANCHORS SHALL BE AS SPECIFIED.
  - ONE-PIECE MOLDED POLYMER ATRA SPEED STAKES AND PRE-ASSEMBLED ATRA GFRP (POLYMER) ARE AVAILABLE FROM PRESTO GEOSYSTEMS IN VARIOUS LENGTHS.
  - THE GEOWEB CELLS SHALL BE FILLED WITH THE SPECIFIED MATERIAL (TOPSOIL, STONE, OR CONCRETE) AND SHALL BE SUITABLE TO WITHSTAND THE APPLICABLE HYDRAULIC CONDITIONS.
  - THE GEOWEB SECTIONS SHALL BE ANCHORED TO RESIST SLIDING DUE TO DRIVING AND HYDRAULIC FORCES.
  - IF VEGETATION IS DESIRED, PROVIDE AN EROSION CONTROL BLANKET OR TURF REINFORCEMENT MAT IF THERE IS A POTENTIAL FOR EROSION PRIOR TO ESTABLISHING VEGETATION.
  - THE GEOWEB PANELS SHALL BE CONNECTED WITH ATRA KEYS AT EACH INTERLEAF AND END TO END CONNECTION.
  - REFER TO THE GENERAL DETAIL DRAWINGS FOR ANCHOR DETAILS.
- NOTES:**
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
  - DO NOT SCALE DRAWING.
  - THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
  - ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
  - CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT [www.CADdetails.com/info](http://www.CADdetails.com/info) AND ENTER REFERENCE NUMBER SITE\_3



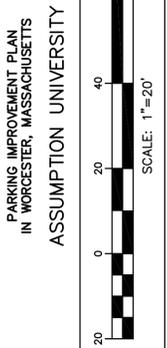
SITE\_3  
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REVISION DATE 07/08/2020  
CADdetails.com

GEOWEB SLOPE STABILIZATION DETAILS  
SCALE: AS NOTED

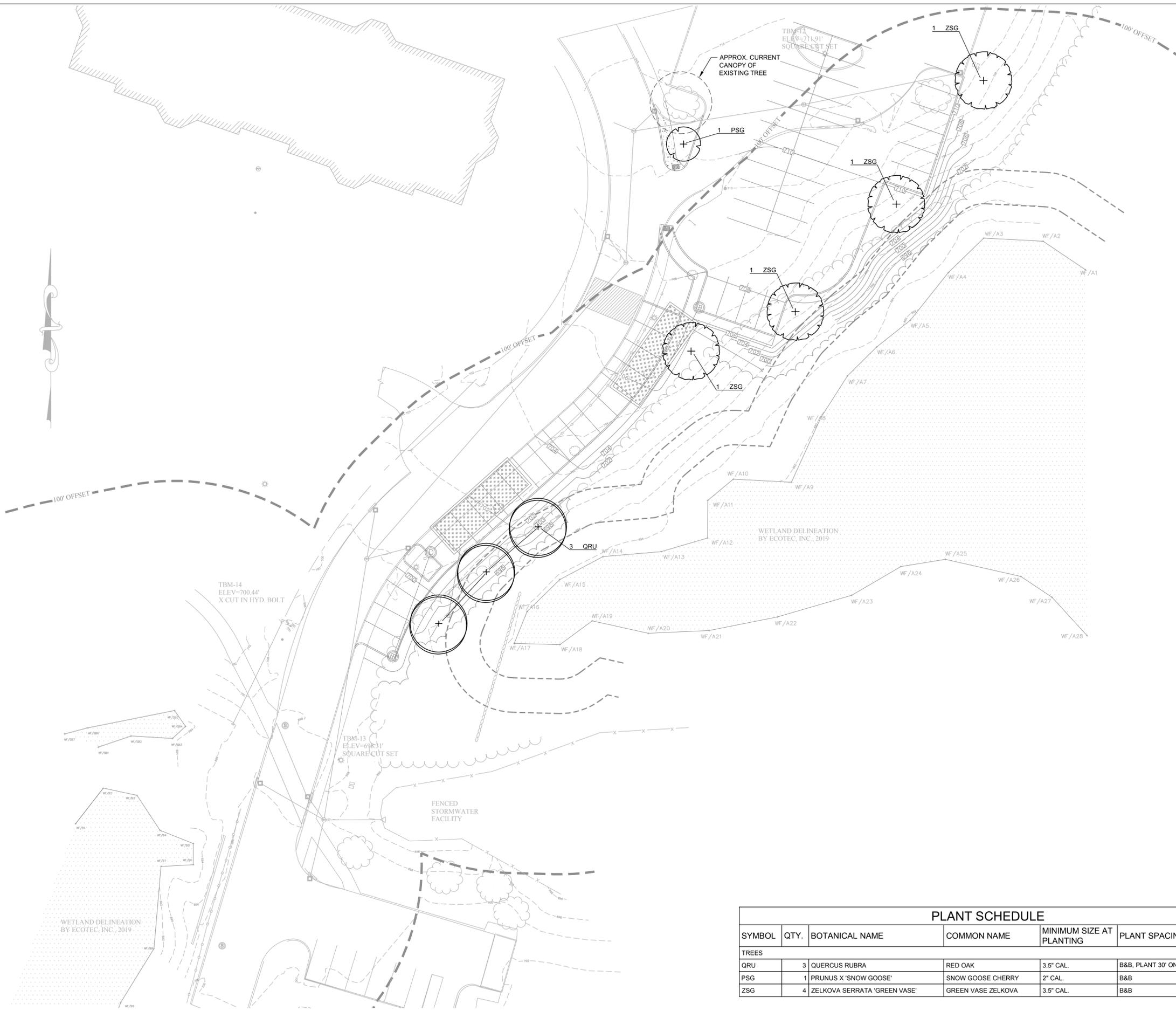


NO.	REVISION	DATE
2	WPB CONDITIONS	8/7/20
1	STAFF COMMENTS	8/3/20

APPLICANT: ASSUMPTION UNIVERSITY  
OWNER: ASSUMPTION UNIVERSITY



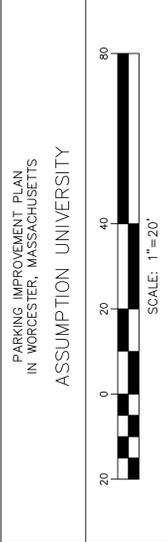
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NO.	REVISION	DATE
1	WPB CONDITIONS	8/7/20



APPLICANT: ASSUMPTION UNIVERSITY  
 OWNER: ASSUMPTION UNIVERSITY



**LEGEND:**

PROPOSED TREES

- NOTES:**
- 1) PLANT SPECIES, CULTIVARS, AND LOCATIONS SHALL NOT BE CHANGED EXCEPT BY PERMISSION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL CHECK PLANT MATERIAL FROM NURSERIES BEFORE ACCEPTING PLANTS. TO MAKE SURE THERE ARE NO UNAUTHORIZED SUBSTITUTIONS. ALTERNATE CULTIVARS OF THE SAME SPECIES SHALL NOT BE SUBSTITUTED WITHOUT LANDSCAPE ARCHITECT'S APPROVAL.
  - 2) SEE SHEET L-2 FOR DETAILS & TECHNICAL NOTES.
  - 3) ALL AREAS TO RECEIVE SEED AND PLANTINGS SHALL FIRST RECEIVE 6" OF LOAM AS SPECIFIED ON SHEET L-2.
  - 4) ALL NON-PAVED AREAS SHALL BE SEEDED AS SPECIFIED ON SHEET L-2. SLOPES OF 2:1 AND STEEPER SHALL BE HYDROSEEDING.

PLANT SCHEDULE					
SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	MINIMUM SIZE AT PLANTING	PLANT SPACING & NOTES
<b>TREES</b>					
QRU	3	QUERCUS RUBRA	RED OAK	3.5" CAL.	B&B, PLANT 30' ON CENTER
PSG	1	PRUNUS X 'SNOW GOOSE'	SNOW GOOSE CHERRY	2" CAL.	B&B
ZSG	4	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	3.5" CAL.	B&B



**QUINN ENGINEERING, INC.**  
 P.O. Box 107  
 Paxton, Massachusetts 01612  
 (508)753-7999 Fax: (508)795-0939

DATE: MAY 1, 2020  
 LANDSCAPE PLAN  
 SHEET L-1

**TECHNICAL NOTES FOR LOAM BORROW:**

- SCOPE OF WORK: FOR THIS PROJECT, THE WORK SHALL INCLUDE PLACING LOAM ALL AREAS TO RECEIVE PLANTS AND TURFGRASS SEEDING.
- THE CONTRACTOR SHALL FURNISH A CERTIFIED LABORATORY REPORT SHOWING THE SOILS CLASSIFICATION AND NUTRIENT ANALYSIS OF REPRESENTATIVE SAMPLES OF THE LOAM THIS IS PROPOSED TO BE USED, INCLUDING THE EXTENT OF LIME AND FERTILIZER REQUIRED. ALL COSTS FOR SUCH WORK SHALL BE BORNE BY THE CONTRACTOR.
- IN ACCORDANCE WITH THE SPECIFIC REQUIREMENTS OF THIS PROJECT, EXISTING ON-SITE SOIL MAY BE RE-USED AS LOAM BORROW ONLY IF IT MEETS THIS SPECIFICATION. EXISTING TOPSOIL THAT DOES NOT MEET THIS SPECIFICATION MAY BE RE-USED ONLY UP TO THE SUBGRADE ELEVATION WITHIN THE LIMITS OF AREAS TO RECEIVE NEW LOAM BORROW. THE CONTRACTOR SHALL FURNISH ALL REQUIRED LOAM BORROW, FROM OFF-SITE SOURCES, AS NECESSARY, TO COMPLETE THE PROJECT.
- SCREENED LOAM SHALL BE "FINE SANDY LOAM" OR "SANDY LOAM" DETERMINED BY MECHANICAL ANALYSIS (ASTM D-422) AND BASED ON THE "USDA CLASSIFICATION SYSTEM". SCREENED LOAM SHALL HAVE THE FOLLOWING MECHANICAL ANALYSIS:

TEXTURAL CLASS PERCENTAGE	PERCENTAGE OF TOTAL WEIGHT	AVERAGE PERCENTAGE
SAND (0.05 - 2.0 MM)	45 - 75	60
SILT (0.002 - 0.05 MM)	5 - 35	25
CLAY (LESS THAN 0.002 MM)	5 - 20	15

- SCREENED LOAM SHALL BE A NATURAL PRODUCT CONSISTING PRIMARILY OF NATURAL TOPSOIL, FREE FROM SUBSOIL, AND OBTAINED FROM AN AREA THAT HAS NEVER BEEN STRIPPED BEFORE. SCREENED LOAM SHALL NOT CONTAIN LESS THAN FIVE PERCENT (5%) NOR MORE THAN TEN PERCENT (10%) ORGANIC MATTER. TO ADJUST ORGANIC MATTER CONTENT, THE SOIL MAY BE AMENDED, PRIOR TO SITE DELIVERY, BY THE ADDITION OF COMPOSTED LEAF MOLD OR PEAT MOSS. NO MIXING OR AMENDING OF LOAM IS PERMITTED ON SITE.
- THE LOAM SHALL NOT BE DELIVERED IN A WET OR FROZEN CONDITION.
- SCREENED LOAM SHALL CONSIST OF FERTILE, FRIABLE, LOAM CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. LOAM SHALL BE WITHOUT ADMIXTURE OF SUBSOIL, AND REFUSE. IT SHALL BE A HOMOGENEOUS MATERIAL FREE OF STONES GREATER THAN ONE-HALF (1/2) INCH IN THE LONGEST DIMENSION; FREE OF LUMPS, PLANTS, GRASS, ROOTS, STICKS, EXCESSIVE STONE CONTENT, DEBRIS, AND EXTRANEOUS MATTER AS DETERMINED BY THE OWNER.
- SCREENED LOAM SHALL BE WITHIN THE PH RANGE OF 6.0 TO 6.5. IT SHALL BE UNCONTAMINATED BY SALT WATER, FOREIGN MATTER, AND SUBSTANCES HARMFUL TO PLANT GROWTH. THE MAXIMUM SOLUBLE SALT INDEX SHALL BE 100. SCREENED LOAM SHALL NOT HAVE LEVELS OF ALUMINUM GREATER THAN 200 PARTS PER MILLION.
- SEE GRASS SEEDING NOTES FOR LIME AND FERTILIZER REQUIREMENTS FOR LAWN AREAS.
- TOPSOIL STRUCTURE SHALL NOT BE DESTROYED THROUGH EXCESSIVE AND UNNECESSARY HANDLING OR COMPACTION. INAPPROPRIATE HANDLING LEADING TO THE COMPACTION OF DETERIORATION OF SOIL STRUCTURE WILL RESULT IN REJECTION OF TOPSOIL FOR USE.
- AT NO TIME SHALL EQUIPMENT OR MATERIAL REST ON THE SOIL.
- THE CONTRACTOR SHALL FURNISH AND SPREAD LOAM TO A MINIMUM 6 INCH DEPTH (AFTER SOIL SETTLEMENT) IN ALL LAWN AND PLANT BED AREAS. SUBSOIL SHALL BE SCARIFIED PRIOR TO PLACEMENT OF LOAM. THE TOP OF THE SETTLED LOAM BORROW LAYER SHALL BE TO GRADES SPECIFIED ON THE DRAWINGS. NO COMPACTION SHALL BE REQUIRED BEYOND THAT EXTENT NECESSARY TO PLACE SOO OR OR TO PLANT TREES AND SHRUBS TO ENSURE AGAINST UNEVENNESS OR SETTLING BELOW ACCEPTED GROWTH LINES.
- PREPARED LOAM SHALL BE FILLED IN THE GEOWEB CELLS ON THE 1:1 SLOPE (SEE CIVIL SHEETS). THE SLOPE SHALL THEN BE SEED AS SPECIFIED.

**TECHNICAL NOTES FOR GRASS SEEDING:**

- SCOPE OF WORK: FOR THIS PROJECT, THE WORK SHALL INCLUDE SEEDING AREAS DENUDED BY CONSTRUCTION.
- ALL AREAS SHALL BE SEEDDED WITHIN 30 DAYS AFTER FINISHED GRADES ARE ESTABLISHED AND OTHER ELEMENTS INCLUDED IN THIS CONTRACT ARE CONSTRUCTED.
- TURFGRASS SEED SPECIFICATIONS:
  - AREAS RECEIVING FULL SUN OR PART SHADE
 

FESCUE/BLUEGRASS/PERENNIAL RYEGRASS MIXTURE:  
MIXTURE REQUIREMENTS ARE AS FOLLOWS (WITH APPROXIMATE PERCENTAGES):

35% FINE FESCUE (ENDOPHYTIC)  
35% KENTUCKY BLUEGRASS  
30% PERENNIAL RYEGRASS (ENDOPHYTIC)
  - AREAS RECEIVING MOSTLY SHADE:
 

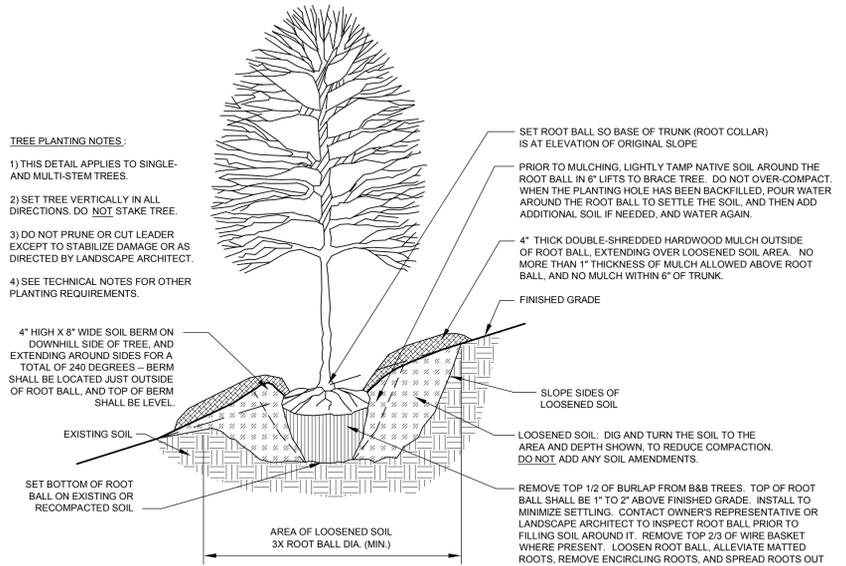
FESCUE/PERENNIAL RYEGRASS MIXTURE:  
MIXTURE REQUIREMENTS ARE AS FOLLOWS (WITH APPROXIMATE PERCENTAGES):

90% FINE FESCUE (ENDOPHYTIC)  
10% PERENNIAL RYEGRASS (ENDOPHYTIC)
- ALL TURFGRASS SEED SHALL HAVE A MINIMUM PURITY OF 98 PERCENT AND A GERMINATION RATE OF 85 PERCENT.
- ALL TURFGRASS SEED SHALL BE LABELED TO SHOW THAT IT IS WITHIN THE REQUIREMENTS OF THE USDA AS TO PURITY, GERMINATION, AND PRESENCE OF RESTRICTED OR PROHIBITED WEEDS.
- NO-MOW GRASS SEED SPECIFICATIONS:
  - AREA WITH 1:1 SLOPE (GEOWEB WITH LOAM IN CELLS):
 

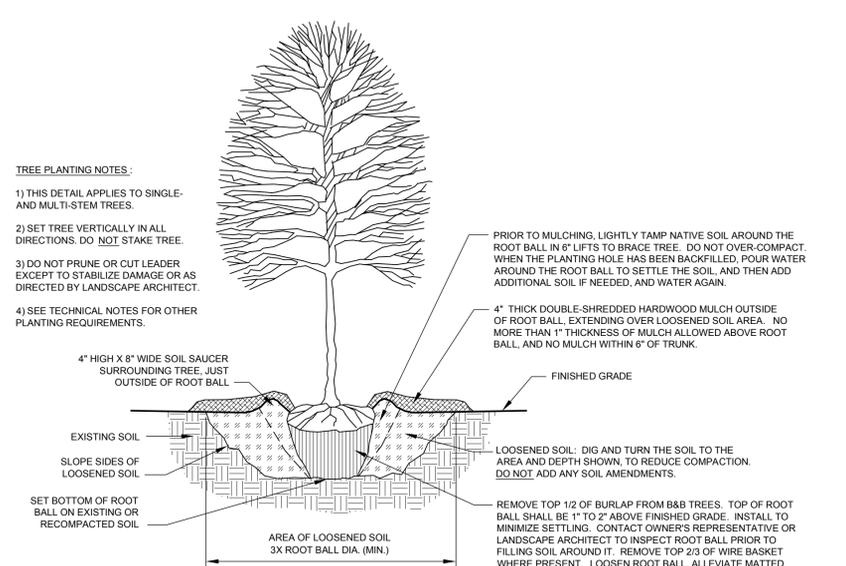
NO-MOW LAWN SEED MIX WITH RYE  
MIXTURE SHALL BE OBTAINED FROM PRAIRIE NURSERY, 1-800-476-9453, PRAIRIENURSERY.COM
- ANY PROPOSED SUBSTITUTIONS SHALL BE PRESENTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO SEEDING.
- BED PREPARATION FOR AREAS TO BE SEEDDED WITH TURFGRASS: A ROTOVATOR, CHISEL PLOW, OR CULTIVATOR SHALL BE USED TO WORK THE SOIL TO A DEPTH OF SIX INCHES. AFTER THIS OPERATION, REMOVE AND DISPOSE OF STICKS, STONES OVER 1 INCH DIAMETER, AND RUBBISH TO A MINIMUM DEPTH OF TWO INCHES.
- LIME AND NUTRIENTS: LIME SHALL BE GROUND DOLOMITIC LIMESTONE, APPLIED AT THE RATE OF 50 POUNDS PER 1000 SQUARE FEET. LIME SHALL BE WELL-MIXED INTO THE TOP THREE INCHES OF LOAM.
- FERTILIZER: FERTILIZER SHALL BE A COMMERCIAL GRADE WITH A MINIMUM OF 50 PERCENT OF THE NITROGEN COMPONENT IN A CONTROLLED RELEASE FORM LABELED TO RELEASE NITROGEN FOR A MINIMUM OF SIX WEEKS. FERTILIZER SHALL HAVE AN N/P/K RATIO IN THE RANGE OF 1:1:1 TO 1:2:2. IT SHALL BE APPLIED AT A RATE WHICH ACHIEVES ONE POUND OF NITROGEN PER 1000 SQUARE FEET.
- SEEDING PROCEDURE: SOWING OF SEED SHALL BE DONE ONLY AFTER THE PREPARED SOIL, TO WHICH LIME AND FERTILIZER HAVE BEEN ADDED AS SPECIFIED, HAS BEEN THOROUGHLY SETTLED BY RAINFALL OR ARTIFICIAL WATERING. IMMEDIATELY BEFORE ANY SEED IS SOWN, THE GROUND IN AREAS TO RECEIVE TURFGRASS SEED SHALL BE SCARIFIED AS SPECIFIED. TURFGRASS AREAS SHALL BE SEEDDED EVENLY WITH A MECHANICAL SPREADER, AND ALL SLOPES OF 2:1 AND STEEPER SHALL BE HYDROSEEDDED. ALL GRASS SEED MIXTURES SHALL BE SOWN AT A RATE OF 5 POUNDS PER 1000 SQUARE FEET. AFTER SEEDING, THE TURFGRASS AREAS SHALL BE LIGHTLY RAKED, ROLLED WITH A 200-POUND ROLLER. ALL GRASS AREAS SHALL THEN BE WATERED WITH A FINE SPRAY. THIS METHOD OF SEEDING MAY BE VARIED AT THE DISCRETION OF THE CONTRACTOR ON HIS OWN RESPONSIBILITY TO ESTABLISH A SMOOTH, UNIFORMLY GRASSED LAWN.
- SEED FOR PERMANENT GRASS AREAS SHALL ONLY BE SOWN FROM THE THIRD WEEK IN APRIL THROUGH JUNE AND DURING THE MONTH OF SEPTEMBER.
- TEMPORARY SEEDING FOR EROSION CONTROL: IN THE EVENT THAT THE CONTRACT IS SUSPENDED, TEMPORARY SEEDING SHALL BE USED ON ANY BARE AREAS THAT MAY BE SUBJECT TO EROSION AND WHERE TEMPORARY VEGETATION CAN BE USED TO RETARD EROSION FROM 2 TO 12 MONTHS. THE SEED TYPE USED FOR TEMPORARY COVER SHALL BE 100 PERCENT TALL FESCUE APPLIED AT A RATE OF 300 POUNDS PER ACRE.
- MAINTENANCE: MAINTAIN THE TURFGRASS FROM TIME OF INSTALLATION UNTIL THE FINAL INSPECTION IMMEDIATELY PRIOR TO THE BEGINNING OF THE GUARANTEE PERIOD. MAINTENANCE SHALL INCLUDE WATERING OF TURF AREAS, REPAIRS TO TURF AREAS, AND OTHER NECESSARY OPERATIONS. THE MAINTAINED TURFGRASS AREAS SHALL BE MOWED TO A UNIFORM HEIGHT OF APPROXIMATELY TWO AND ONE-HALF INCHES. MOWING SHALL BE PROVIDED AS REQUIRED SO THAT THE TURF NEVER EXCEEDS FOUR INCHES IN HEIGHT. ALL GRASS SHALL BE PROTECTED AND REPLANTED AS NECESSARY TO ESTABLISH A UNIFORM STAND OF THE SPECIFIED TURF AND UNTIL ACCEPTANCE. SCATTERED BARE SPOTS, NONE OF WHICH IS LARGER THAN ONE SQUARE FOOT, WILL BE ALLOWED UP TO A MAXIMUM OF THREE PERCENT OF ANY TURF AREA WHEN GRASS AREAS ARE READY FOR FINAL INSPECTION. THE MAINTAINED TURFGRASS AREAS SHALL BE NEATLY MOWED TO THE UNIFORM HEIGHTS AS NOTED ABOVE. THE LAWNS SHALL BE CONSIDERED ESTABLISHED ONLY WHEN THE SPECIFIED GRASS IS VIGOROUS AND GROWING WELL IN ADDITION TO MEETING THE OTHER REQUIREMENTS SPECIFIED. AT THE TIME OF ACCEPTANCE FOLLOWING FINAL INSPECTION, THE CONTRACTOR IS RELIEVED OF ROUTINE MAINTENANCE RESPONSIBILITIES FOR THE TURF UNDER THIS CONTRACT.
- FINAL INSPECTION, CLEANUP AND COMPLETION: FINAL INSPECTION SHALL BE FOR THE COMPLETED LANDSCAPE AND SHALL BE MADE AT THE CONCLUSION OF THE LANDSCAPE WORK. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL EQUIPMENT AND OTHER ARTICLES USED. ALL EXCESS SOIL, STONES, AND DEBRIS SHALL BE REMOVED FROM THE SITE. ALL WORK AREAS SHALL BE LEFT IN A CLEAN AND NEAT CONDITION. ALL DAMAGE TO EXISTING CONSTRUCTION CAUSED BY THE LANDSCAPING OPERATIONS SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
- GUARANTY AND REPLACEMENT: IF A SATISFACTORY STAND OF MAINTAINED TURF HAS BEEN PRODUCED AT THE TIME OF FINAL INSPECTION, IT SHALL BE GUARANTEED THROUGH ONE COMPLETE GROWING SEASON. IF RENOVATION AND/OR RESEEDING ARE REQUIRED AT THE END OF THE GUARANTEE PERIOD, THIS WORK SHALL BE DONE IN CONFORMANCE WITH THE REQUIREMENTS NOTED ABOVE. IF A SATISFACTORY STAND OF MAINTAINED TURF HAS NOT BEEN PRODUCED AT THE TIME OF FINAL INSPECTION, NECESSARY REPAIRS SHALL BE PERFORMED IN CONFORMANCE WITH THE REQUIREMENTS NOTED ABOVE. UPON COMPLETION OF THESE REPAIRS, THE TURF GRASS SHALL BE GUARANTEED AS NOTED ABOVE.

**TECHNICAL NOTES FOR TREE, SHRUB, GROUND COVER, AND PERENNIAL PLANTINGS:**

- NOMENCLATURE: THE NAMES OF PLANTS REQUIRED UNDER THIS CONTRACT SHALL CONFORM TO THOSE GIVEN IN STANDARDIZED PLANT NAMES, LATEST EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF VARIETIES NOT INCLUDED THEREIN SHALL CONFORM GENERALLY WITH NAMES ACCEPTED IN THE NURSERY TRADE.
- QUALITY AND SIZE: PLANTS SHALL HAVE A HABIT OF GROWTH THAT IS NORMAL FOR THE SPECIES AND SHALL BE SOUND, HEALTHY, VIGOROUS, AND FREE FROM INSECT PESTS, PLANT DISEASES, AND INJURIES. ALL PLANTS SHALL BE EQUAL OR EXCEED THE MEASUREMENTS SPECIFIED IN THE PLANT LIST, WHICH ARE MINIMUM ACCEPTABLE SIZES. THEY SHALL BE MEASURED BEFORE PRUNING IS DONE AT TIME OF PLANTING. REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING, AND BURLAPPING OF PLANTS IN THE PLANT LIST SHALL FOLLOW THE CODE OF STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN ASSOCIATIONS OF NURSERYMEN, INC., IN THE AMERICAN STANDARD FOR NURSERY STOCK.
- SUBSTITUTIONS: SUBSTITUTIONS WILL BE PERMITTED ONLY UPON SUBMISSION OF PROOF THAT ANY PLANT AS SPECIFIED IS NOT OBTAINABLE DURING THE SCHEDULED PLANTING SEASON. WRITTEN AUTHORIZATION BY THE LANDSCAPE ARCHITECT SHALL BE REQUIRED FOR ANY SUBSTITUTION. THE NEAREST EQUIVALENT SIZE OR VARIETY OF PLANT HAVING THE SAME ESSENTIAL CHARACTERISTICS SHALL BE PROPOSED FOR SUBSTITUTION.
- BALLED AND BURLAPPED MATERIALS: PLANTS DESIGNATED "B&B" IN THE PLANT LIST SHALL BE BALLED AND BURLAPPED. THEY SHALL BE DUG WITH FIRM, NATURAL BALLS OF EARTH OF SUFFICIENT DIAMETER AND DEPTH TO ENCOMPASS THE FIBROUS AND FEEDING ROOT SYSTEM NECESSARY FOR FULL RECOVERY OF THE PLANT. MATERIAL SHALL BE IN A CONDITION WHERE THE NATURAL ROOT COLLAR OF THE PLANT IS WITHIN APPROXIMATELY TWO (2) INCHES OF THE SOIL LEVEL OF THE BALL. BALLS SHALL BE FIRMLY WRAPPED WITH BURLAP OR SIMILAR MATERIAL AND BOUND WITH TWINE, CORD, OR WIRE MESH. NO SYNTHETIC FABRIC IS ALLOWED. WHERE NECESSARY TO PREVENT BREAKING OR CRACKING OF THE BALL DURING THE PROCESS OF PLANTING, THE BALL MAY BE SECURED TO A PLATFORM. BALLS SHALL BE KEPT MOIST AND SHADED UNTIL THEY ARE PLANTED. REMOVE ALL BALL TIES OR STRAPPING FROM ROOT BALL PRIOR TO PLANTING. PLANT IN ACCORDANCE WITH TREE AND SHRUB PLANTING DETAILS.
- CONTAINER-GROWN MATERIALS: PLANTS NOT DESIGNATED OTHERWISE IN THE PLANT LIST MAY BE PURCHASED AS CONTAINER-GROWN OR BALLED/BURLAPPED. CONTAINER-GROWN PLANTS, IF STORED ON THE SITE, SHALL BE WATERED THOROUGHLY AT LEAST ONCE EVERY 48 HOURS. ROOT SYSTEMS OF CONTAINER-GROWN PLANTS SHALL BE WELL-DEVELOPED BUT NOT IN "POT-BOUND" CONDITION OF DENSE, ENCIRCLING ROOTS. THE ROOT BALL OF THE PLANT SHALL BE LOOSENED TO ALLEVIATE ENCIRCLING ROOTS AND TO PROVIDE AN INCREASED ROOT INTERFACE WITH THE FILL SOIL. PLANT IN ACCORDANCE WITH TREE, SHRUB, AND GROUND COVER PLANTING DETAILS.
- PROTECTION OF PLANTS PRIOR TO INSTALLATION: THE ROOT ZONE OF ALL PLANTS NOT YET INSTALLED SHALL BE PROTECTED FROM FREEZING, DRYING, AND DIRECT SUNLIGHT.
- MULCHING: DOUBLE-SHREDDED HARDWOOD MULCH SHALL BE USED AS THE MULCH FOR ALL PLANT BEDS INDICATED ON THE LANDSCAPE PLAN, INCLUDING AREAS SURROUNDING THE PLANTS AS SHOWN ON THE TREE, SHRUB, AND GROUND COVER PLANTING DETAILS.
- PLANTING SEASON: THE NORMAL PLANTING SEASON IS APRIL THROUGH NOVEMBER. SOME PLANTS SPECIFIED AS BALLED AND BURLAPPED CANNOT BE DUG DURING PORTIONS OF THIS PLANTING SEASON -- CHECK WITH NURSERIES FOR SPECIFICS. PLANTING OPERATIONS SHALL BE CONDUCTED UNDER FAVORABLE WEATHER CONDITIONS DURING THE NORMAL PLANTING SEASON.
- WEATHER CONDITIONS: PLANTING SHALL NOT TAKE PLACE WHEN SOILS ON SITE ARE FROZEN OR WET AND IN POOR TILT.
- LAYOUT: NEW PLANTINGS SHALL BE LOCATED ACCORDING TO THE LANDSCAPE PLAN. THE CONTRACTOR SHALL STAKE THE PLANT LOCATIONS, AND SHALL THEN CONTACT THE LANDSCAPE ARCHITECT FOR APPROVAL.
- SETTING PLANTS: ALL PLANTS SHALL BE PLANTED IN PREPARED SOILS BEDS, AND SET ON FIRM SOIL TO SUCH DEPTH AS INDICATED IN THE PLANTING DETAILS. TREES, SHRUBS, GROUNDCOVERS, AND PERENNIALS SHALL BE SET SO THAT THE PLANT'S NATURAL ROOT COLLAR OR CROWN IS ABOVE FINISHED GRADE AT THE HEIGHTS INDICATED IN THE PLANTING DETAILS. NO BURLAP SHALL BE PULLED FROM UNDER THE BALLS. ROOTS ON BARE-ROOT PLANTS SHALL BE SPREAD IN THEIR NORMAL POSITION. ALL BROKEN OR FRAYED ROOTS SHALL BE CUT OFF CLEANLY. PREPARED SOIL SHALL BE PLACED AND COMPACTED CAREFULLY TO AVOID INJURY TO ROOTS, TO FILL ALL VOIDS, AND TO MINIMIZE ROCKING OF ROOT BALL. ADD WATER AND TAMP THE BACKFILL UNTIL THE BACKFILL IS COMPLETELY SATURATED, THEN ALLOW IT TO SOAK AWAY. FILL THE HOLE TO FINISHED GRADE, AND FORM A SAUCER AROUND EACH TREE AND SHRUB BY PLACING A RIDGE OF TOPSOIL AROUND THE EDGE OF EACH ROOT BALL, IN ACCORDANCE WITH THE PLANTING DETAILS. AFTER THE GROUND SETTLES, ADDITIONAL SOIL SHALL BE FILLED IN TO THE LEVEL OF THE FINISHED GRADE, AND WATERED.
- STAKING TREES: DO NOT STAKE TREES, UNLESS TREES ARE PLANTED ON STEEP SLOPES, IN WHICH CASE THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT FOR PERMISSION TO STAKE THOSE TREES.
- MAINTENANCE: MAINTAIN PLANTS AND PLANT BEDS FROM THE TIME OF INSTALLATION UNTIL THE FINAL INSPECTION IMMEDIATELY PRIOR TO COMMENCEMENT OF THE GUARANTEE PERIOD. MAINTENANCE SHALL INCLUDE WATERING AND PROTECTION OF PLANTINGS AND OTHER NECESSARY OPERATIONS.
- FINAL INSPECTION: WHEN THE TREE AND SHRUB PLANTINGS ARE READY FOR FINAL INSPECTION, ALL MULCHED AREAS SHALL BE FREE FROM WEEDS AND MULCHED TO THE EXTENT INDICATED ON THESE DRAWINGS. PLANT TAGS SHALL BE REMOVED BY THE CONTRACTOR PRIOR TO THE INSPECTION FOR ACCEPTANCE.
- GUARANTEE: AFTER ACCEPTANCE AT TIME OF FINAL INSPECTION, ALL PLANTS SHALL BE GUARANTEED FOR ONE (1) YEAR. PLANTINGS SHALL BE ALIVE AND IN SATISFACTORY VIGOR AT THE END OF THE GUARANTEE PERIOD.
- REPLACEMENT: AT THE END OF THE GUARANTEE PERIOD, ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR IN POOR VIGOR SHALL BE REMOVED FROM THE SITE. THESE AND ANY MISSING PLANTS SHALL BE REPLACED AS SOON AS CONDITIONS PERMIT, BUT DURING THE NORMAL PLANTING SEASON. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AS ORIGINALLY PLANTED AND SHALL BE OF SIZE EQUAL TO THAT ATTAINED BY ADJACENT PLANTS OF THE SAME KIND AT THE TIME REPLACEMENT IS MADE. ONLY ONE REPLACEMENT WILL BE REQUIRED FOR EACH PLANT DECLARED DEAD, IN AN UNHEALTHY OR BADLY IMPAIRED CONDITION, OR MISSING AT THE TIME OF FINAL INSPECTION.



**TREE PLANTING ON SLOPE** NOT TO SCALE



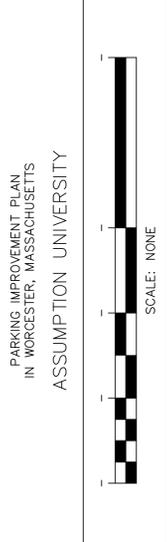
**TREE PLANTING** NOT TO SCALE



NO.	REVISION	DATE
1	WPB CONDITIONS	8/7/20



APPLICANT: ASSUMPTION UNIVERSITY  
OWNER: ASSUMPTION UNIVERSITY



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DATE: MAY 1, 2020  
LANDSCAPE DETAILS AND NOTES  
SHEET L-2

