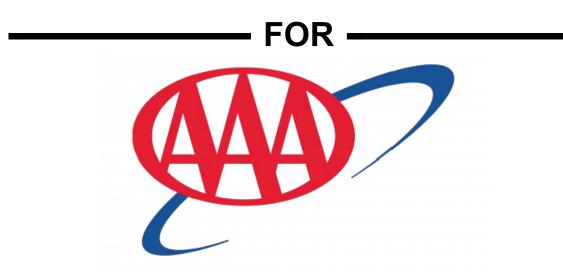
PROPOSED SITE PLAN DOCUMENTS



PROPOSED

SITE IMPROVEMENTS

LOCATION OF SITE

315-317 SOUTHWEST CUTOFF, CITY OF WORCESTER

WORCESTER COUNTY, MASSACHUSETTS

MAP 45, BLOCK 34, LOT 13

REFERENCES AND CONTACTS

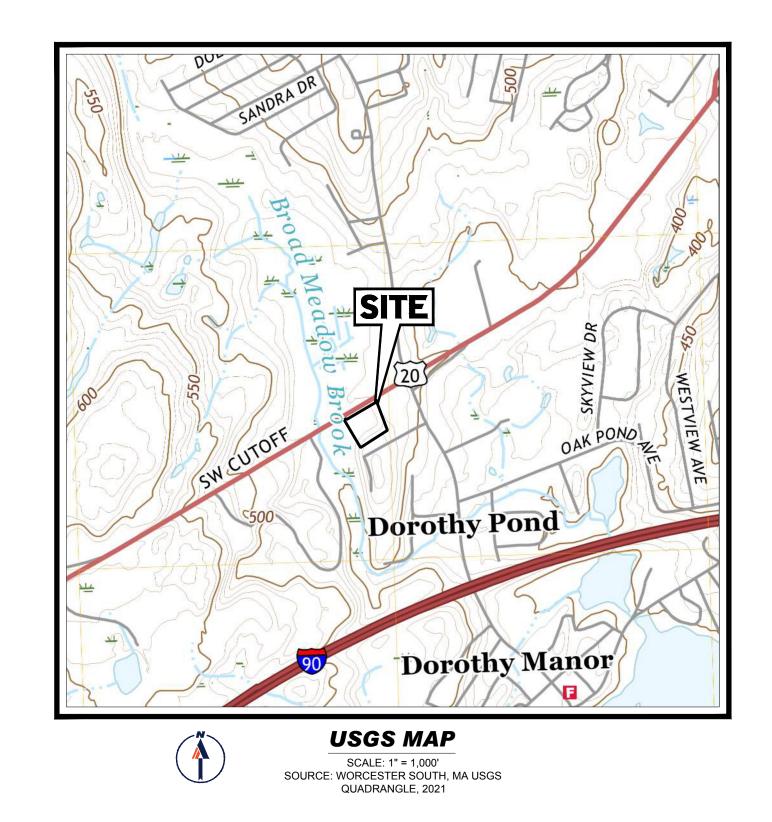
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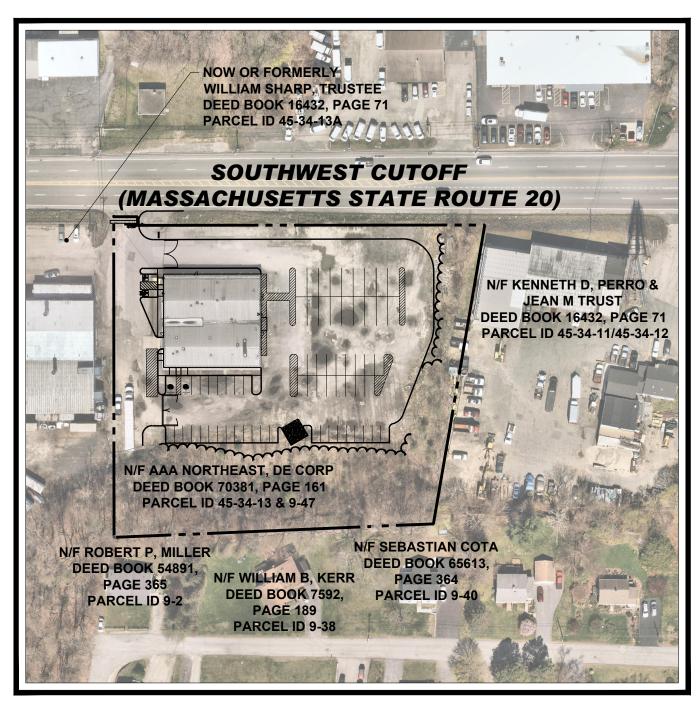
◆ EXISTING CONDITIONS PLAN OF LAND:

FELDMAN GEOSPATIAL
27 MECHANIC STREET
WORCESTER MA, 01608
DATED: 07/01/2024
SURVEY JOB #: 2400627-EX
ELEVATIONS: NAVD 1988

◆ ARCHITECTURAL PLAN:
VISION 3 ARCHITECTS
225 CHAPMAN STREET
PROVIDENCE, RI 02905
DATED: 07/19/2024

THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS, HOWEVER, BOHLER ENGINEERING DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.







AERIAL MAP

SCALE: 1" = 100'
SOURCE: NEARMAP AERIAL IMAGERY

SHEET INDEX	
SHEET TITLE	SHEET NUMBER
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GENERAL NOTES AND LEGEND	C-102
EXISTING CONDITIONS/DEMOLITION PLAN	C-201
SITE PLAN	C-301
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EXISTING CONDITIONS PLAN OF LAND	1 OF 1

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS				
REV	DATE	COMMENT	DRAWN BY	
KEV	DAIL	COMMENT	CHECKED BY	



PERMIT SET

PROJECT No.: MAA230363.00-0B
DRAWN BY: SBB
CHECKED BY: CPB/LMD
DATE: 10/02/2024
CAD I.D.: P-CIVL-CNDS

PROJECT:

SITE DEVELOPMENT PLANS



PROPOSED SITE

MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY WORCESTER, MASSACHUSETTS

BOHLER

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SHEET TITLE:

COVER SHEET

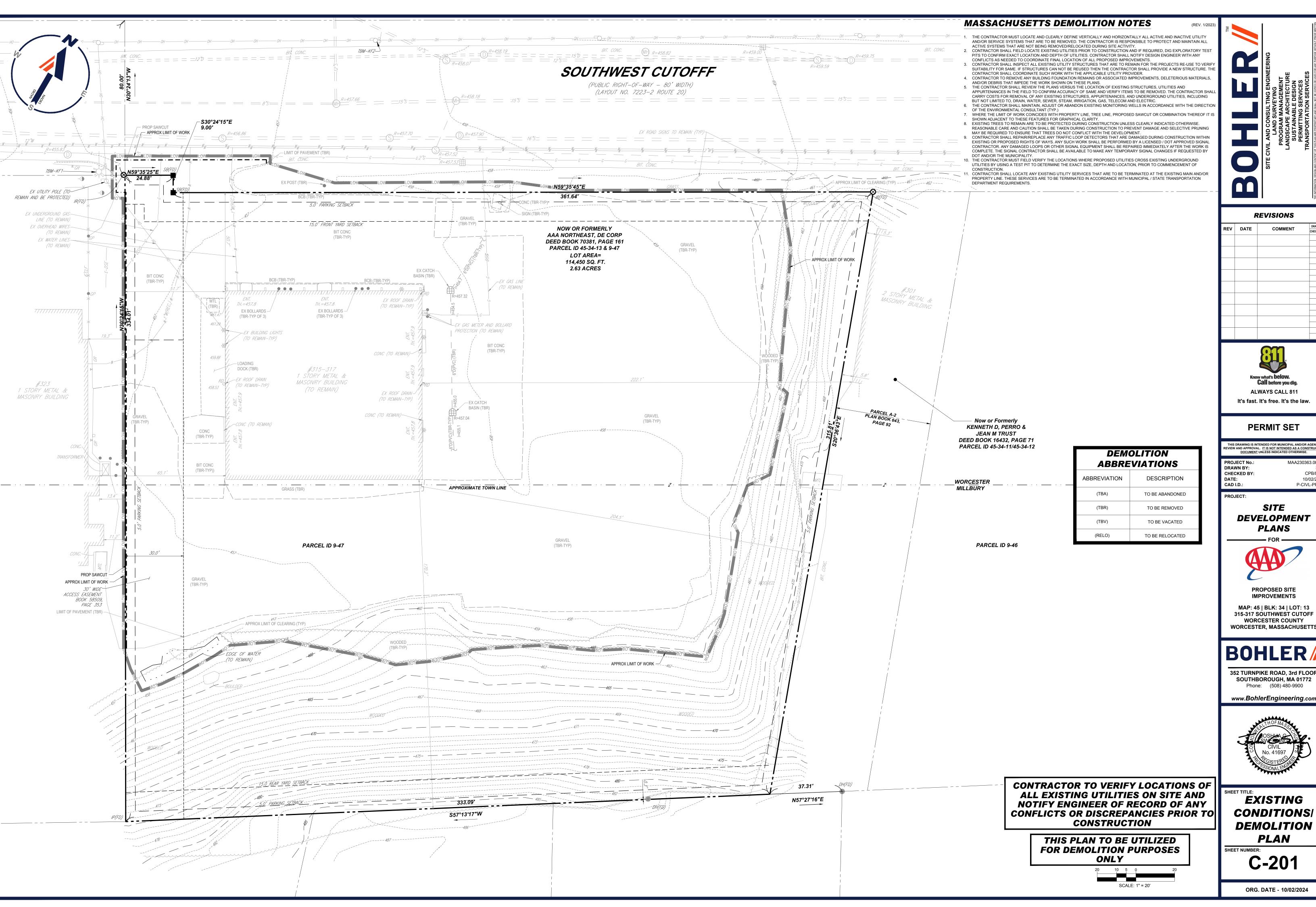
SHEET NUMBER:

C-101

ORG. DATE - 10/02/2024

PREPARED BY





REVISIONS

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			CHECKED



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10/02/2024 P-CIVL-PROP

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SITE DEVELOPMENT

PLANS



IMPROVEMENTS MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY

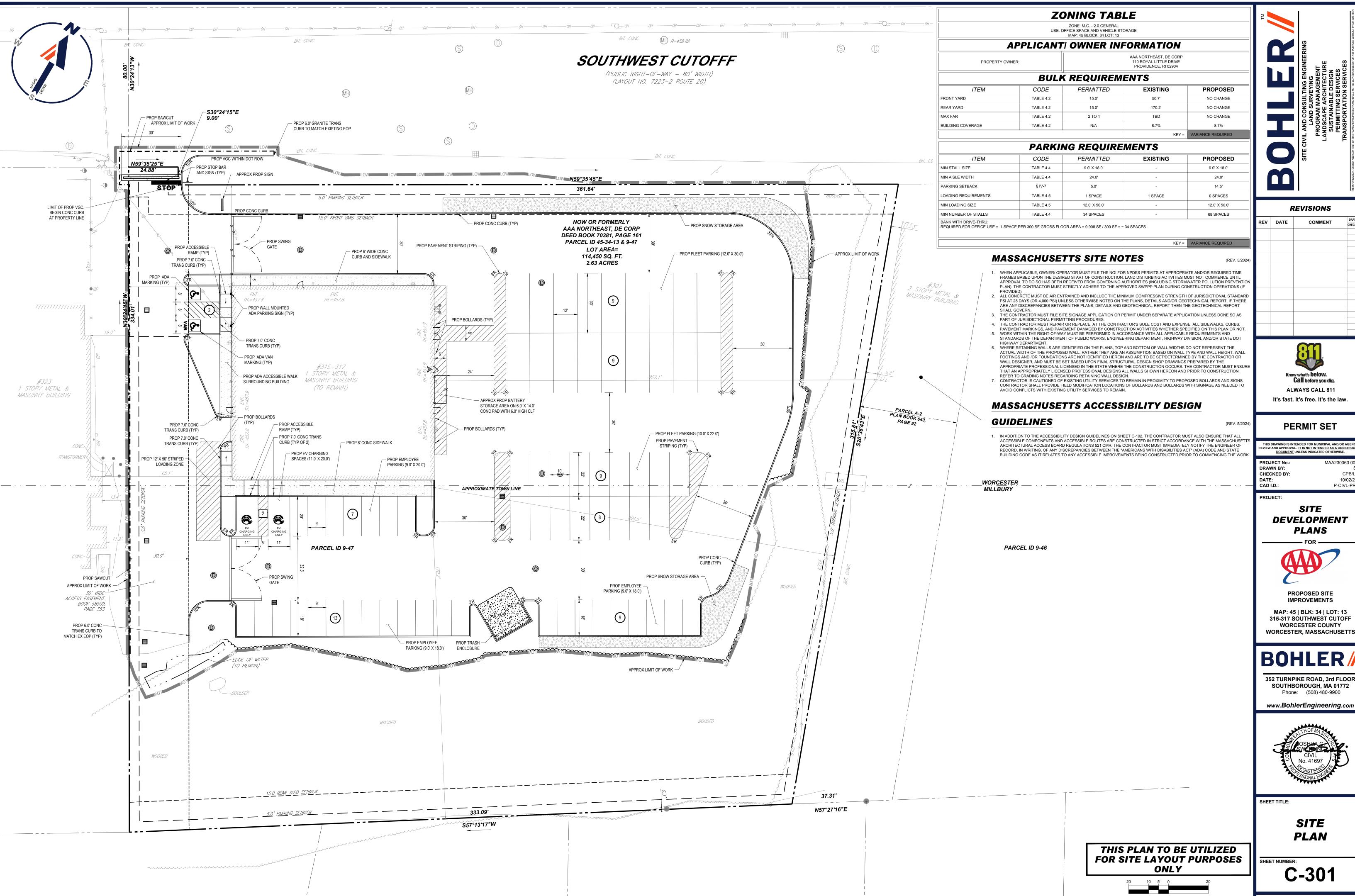
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PLAN

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MAA230363.00-0E DRAWN BY: **CHECKED BY:** CPB/LMD 10/02/2024 P-CIVL-PROP

SITE DEVELOPMENT

PLANS



PROPOSED SITE

IMPROVEMENTS MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF

WORCESTER COUNTY

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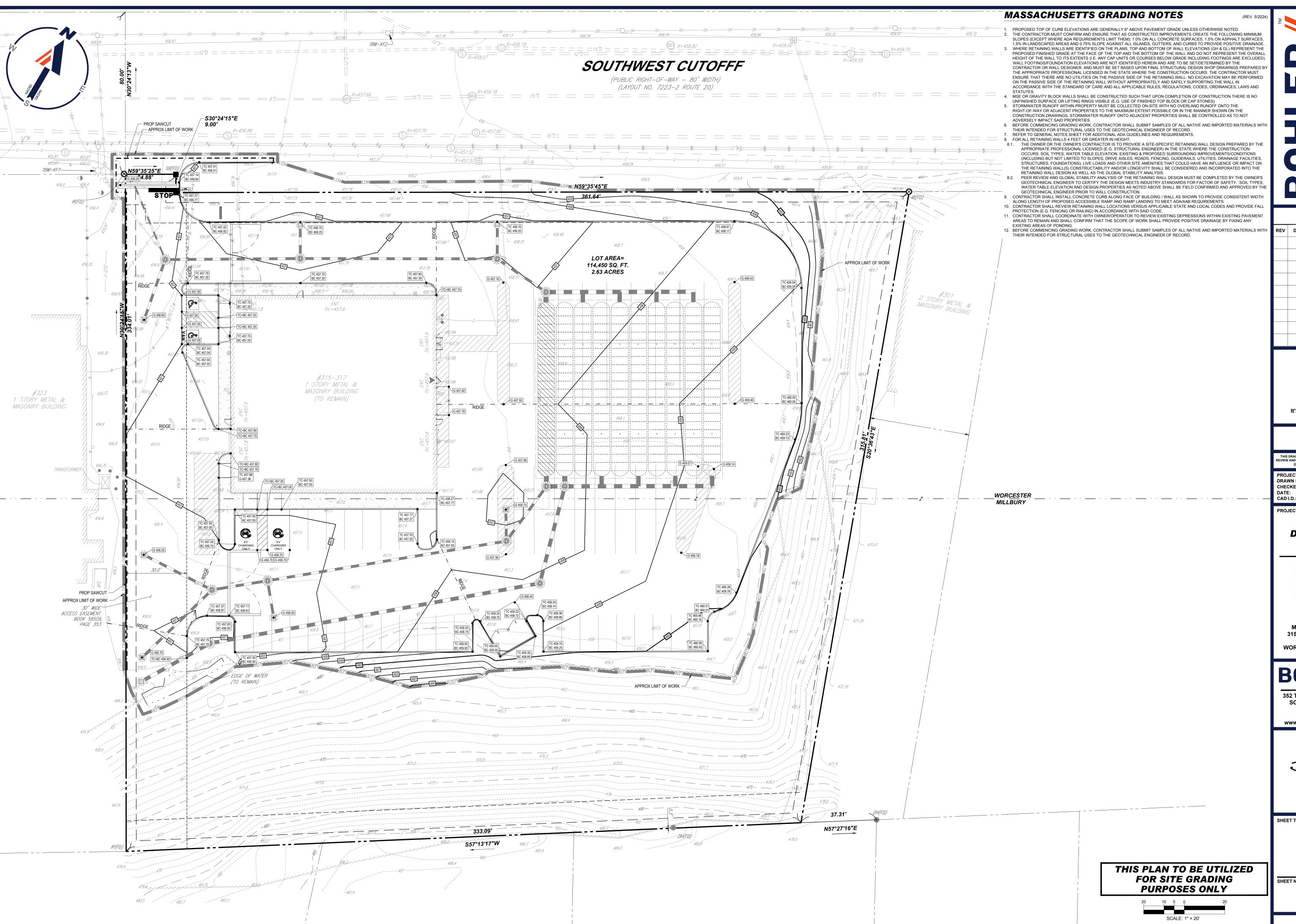
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SHEET TITLE:

SITE PLAN

C-301



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PROJECT No.: DRAWN BY:

10/02/2024 P-CIVL-GRDR

PROJECT:

SITE DEVELOPMENT

PLANS



PROPOSED SITE **IMPROVEMENTS**

MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY WORCESTER, MASSACHUSETTS

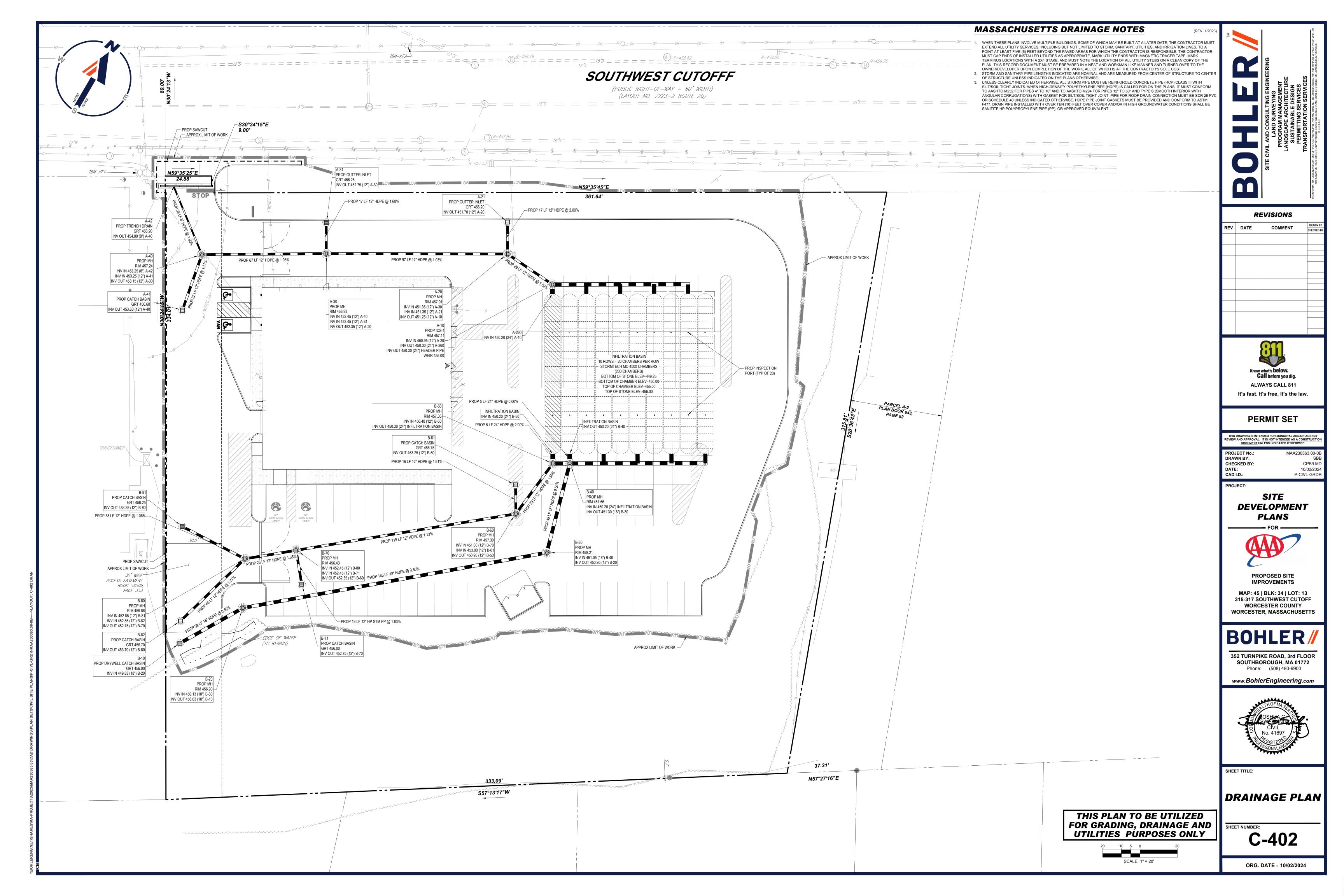
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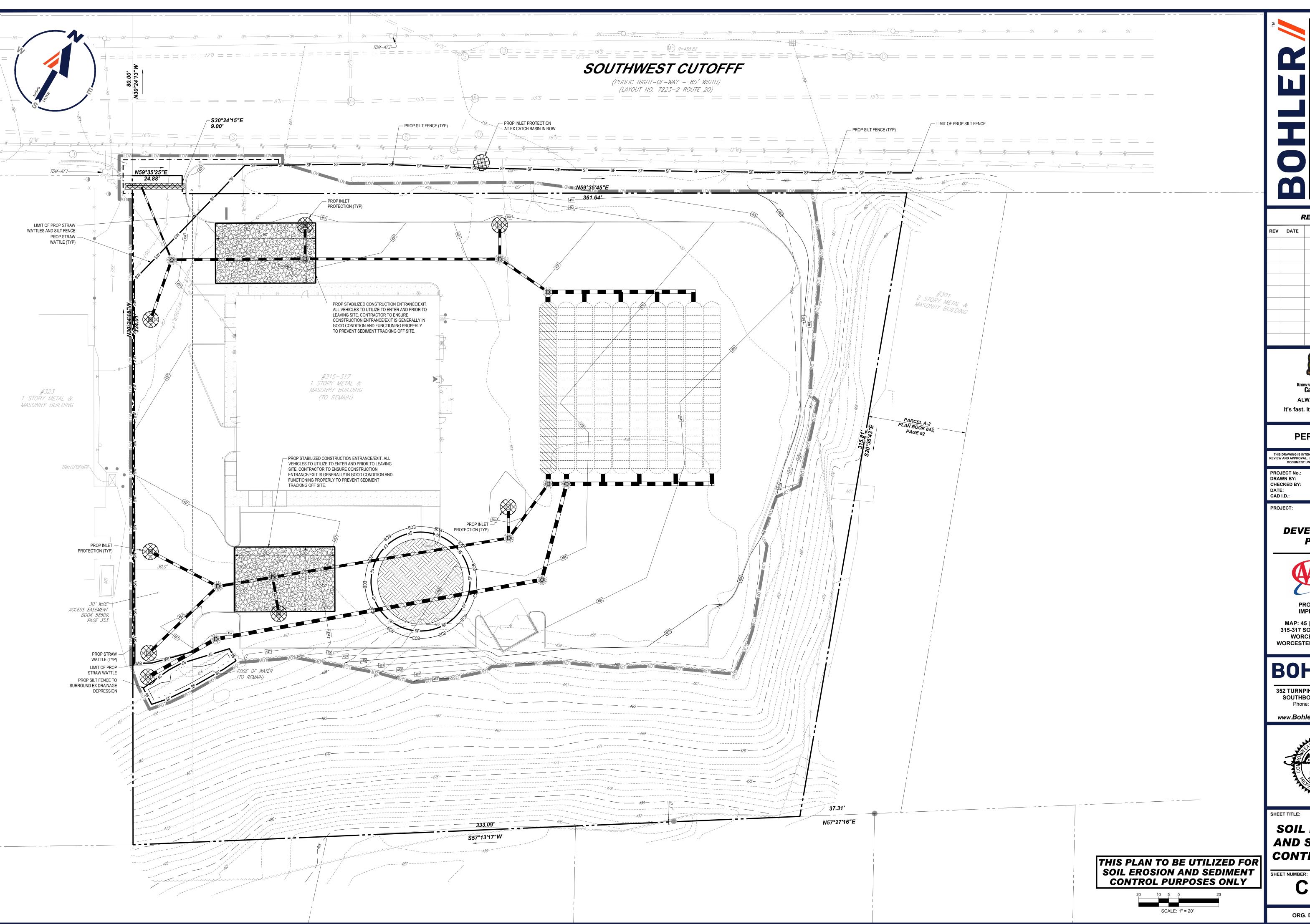
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GRADING PLAN

C-401





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CHECKED BY: 10/02/2024 P-CIVL-PROP

PROJECT:

SITE **DEVELOPMENT PLANS**



IMPROVEMENTS MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY

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SOIL EROSION AND SEDIMENT CONTROL PLAN

C-801

MASSACHUSETTS EROSION AND SEDIMENT CONTROL NOTES

- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND
- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME, AREAS SHALL BE PERMANENTLY STABILIZED IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS, AT A MINIMUM. AREAS SHALL BE PERMANENTLY STABILIZED ACCORDING TO THE CURRENT EDITION OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP), OR IN THE ABSENCE OF A SWPPP, THEY SHALL BE PERMANENTLY STABILIZED WITHIN 14 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD
- SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES
- INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE #5.
- ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE PERMANENTLY STABILIZED. FOR SEDIMENT CONTROL DEVICES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE DEVICES SHALL REMAIN IN PLACE
- NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2:1) UNLESS OTHERWISE INDICATED ON
- THE PLANS. SLOPE PROTECTION FOR SLOPES GREATER THAN 2:1 SHALL BE DESIGNED BY A GEOTECHNICAL ENGINEER. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT

AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.

TO A UNIFORM SURFACE

THAN 3:1

- TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH LOCAL,
- REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED
- AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:) SIX INCHES. OR DEPTH SPECIFIED ON THE LANDSCAPE PLAN. OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED
- APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF USING 10-20-20 OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER
- FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 47% CREEPING RED FESCUE. 5% REDTOP, AND 48% TALL FESCUE, THE LAWN AREAS WILL BE SEEDED TO A PREMIUM TURE MIXTURE OF 44% KENTLICKY BLUE-GRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS: SEEDING RATE IS 1.03 LBS PER 1,000 SF LAWN.

QUALITY SOD MAY BE SUBSTITUTED FOR SEED WHERE SLOPES DO NOT EXCEED 2:1. SOD ON SLOPES STEEPER THAN 3:1 SHOULD

-) STRAW MULCH AT THE RATE OF 70-90 LBS PER 1.000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER WILL BE USED ON STRAW MULCH FOR WIND CONTROL.
- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS 70% STABILIZED. FOR EROSION CONTROL MEASURES THAT ARE WITHIN AREAS SUBJECT TO CONSERVATION COMMISSION JURISDICTION, THE MEASURES SHALL REMAIN IN PLACE AND BE REMOVED IN ACCORDANCE WITH THE ORDER OF CONDITIONS.
- WETLANDS WILL BE PROTECTED WITH BARRIERS CONSISTING OF STRAW BALES, COMPOST TUBES, SILT FENCE OR A COMBINATION
- 13. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS. 14. ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL FOLLOW APPROPRIATE EROSION CONTROL MEASURES

IOR TO EACH STORM IF NOT BE	ING ACTIVELY WORKED:	
LOCATION PROTECTED AREA	MULCH STRAW	MULCH RATE (1000 SF) 100 POUNDS
WINDY AREA	SHREDDED OR CHOPPED CORNSTALKS STRAW (ANCHORED)*	185-275 POUNDS 100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER	JUTE MESH OR EXCELSIOR MAT	AS REQUIRED

(REFER TO GEOTECHNICAL REPORT FOR FINAL DESIGN REQUIREMENT) GREATER THAN 3:1

 st A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER SHALL BE USED TO ADDITIONAL WIND CONTROL.

* MULCH ANCHORING: ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD

- CELLULOSE FIBER (750 LBS/ACRE): CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS): USE OF A SERRATED STRAIGHT DISK. WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED PROPOSED LOCATIONS OF SURFACE STORMWATER MANAGEMENT BASINS CAN BE UTILIZED AS A TEMPORARY SEDIMENT TRAP
- FEDERAL REQUIREMENTS.
- TEMPORARY SEDIMENT TRAPS SHALL BE SIZED PER THE CURRENT EDITION OF THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" AND PROVIDE A MINIMUM OF 1.800 CF PER ACRE OF TRIBUTARY AREA WITH A MAXIMUM TRIBUTARY AREA OF 5 ACRES, MAINTAIN A 2:1 LENGTH TO WIDTH RATIO, AND NOT EXCEED 5 FT IN HEIGHT, UPON SITE STABILIZATION, ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE TEMPORARY SEDIMENT TRAP EXCAVATED TO 1 FOOT BELOW THE TRAP. THE AREA SHALL THEN BE SCARIFIED TO PREVENT COMPACTION AND PROMOTE INFILTRATION. AND GRADED AND STABILIZED IN ACCORDANCE WITH THE GRADING AND LANDSCAPE PLANS.
- STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC.) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION
- 17. EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.
- THE CONTRACTOR MUST PERFORM DEWATERING (IF REQUIRED), IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND PAY FOR THE COSTS ASSOCIATED WITH ANY AND ALL NECESSARY DISCHARGE
- THE CONTRACTOR MUST LOCATE CONSTRUCTION WASTE MATERIAL STORAGE AREAS TO MINIMIZE EXPOSURE TO STORMWATER. THE CONTRACTOR MUST IMMEDIATELY PLACE CONSTRUCTION WASTE IN ON-SITE STORAGE CONTAINERS UNTIL THAT CONSTRUCTION WASTE IS READY FOR OFF-SITE DISPOSAL. THE CONTRACTOR MUST MAINTAIN SPILL PREVENTION AND RESPONSE EQUIPMENT AND MAKE SAME CONTINUOUSLY AVAILABLE ON-SITE FOR USE BY THE CONTRACTOR'S EMPLOYEES WHO MUST BE PROPERLY TRAINED IN THE APPLICATION OF SPILL PREVENTION AND RESPONSE PROCEDURES.
- 20. EROSION CONTROL NOTES DURING WINTER CONSTRUCTION
- 21. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
- 22. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT THE AMOUNT OF AREA OPEN AT ONE TIME IS MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE AND IN CONFORMANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN SUCH THAT ADEQUATE PROVISIONS ARE EMPLOYED TO CONTROL STORMWATER RUNOF
- 23. CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION
- AN AREA SHALL BE CONSIDERED TO HAVE BEEN TEMPORARILY STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE
- FOR AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR A PERIOD EXCEEDING 14 DAYS BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED. IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 200-300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED AS APPLICABLE SLOPES SHALL NOT BE LEFT UNSTABILIZED OVER THE WINTER OR IN AREAS WHERE WORK HAS CEASED FOR MORE THAN 14 DAYS UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF SEDIMENT BARRIERS OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
- MULCHING REQUIREMENTS: a) BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING
- $_{
 m O}$ MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE
- EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST THE
- SAME APPLIES FOR ALL SLOPES GREATER THAN 8%. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE STORMWATER PREVENTION PLAN.
- 28. DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERA NOTES ARE REFERENCED HEREIN. AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES. IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES FROSION CONTROL MEASURES MUST CONFORM TO THE STATE LOCAL AND FEDERAL GUIDELINES FOR LIRBAN FROSION AND SEDIMENT CONTROL
- LINIESS OTHERWISE NOTED OR LINIESS THE PROFESSIONAL OF RECORD CLEARLY AND SPECIFICALLY IN WRITING DIRECTS OTHERWISE INSTALLATION OF EROSION CONTROL. CLEARING. AND SITE WORK MUST BE PERFORMED EXACTLY AS INDICATED IN THE EROSION CONTROL CONSTRUCTION NOTES
- . THE DISTURBED LAND AREA OF THIS SITE IS APPROXIMATELY 1.873 ACRES.
- 4. THE FOLLOWING EROSION CONTROL MEASURES ARE PROPOSED FOR THIS SITE a) STABILIZED CONSTRUCTION ENTRANCE/EXIT - A TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT IS TO BE INSTALLED AT THE DESIGNATED
- LOCATION SHOWN ON THE PLAN. THIS AREA MUST BE GRADED SO THAT RUNOFF WATER WILL BE RETAINED ON-SITE. b) SEDIMENT FENCE - INSTALL SILT FENCE(S) AND/OR SILT SOCK AROUND ALL OF THE DOWNSLOPE PERIMETERS OF THE SITE, TEMPORARY FILL AND SOIL
- c) INSTALL FILTER FABRIC DROP INLET PROTECTION AROUND EACH DRAINAGE INLET AS DRAINAGE STRUCTURES ARE INSTALLED TO REDUCE THE QUANTITY OF SEDIMENT. INSTALL TEMPORARY INLET PROTECTION ON INLETS DOWNSLOPE FROM DISTURBANCE, WHICH MAY BE BEYOND THE LIMITS
- INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS
- THE CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY. THE CONTRACTOR MUST REMOVE ANY SUT DEPOSITS GREATER THAN 6 INCHES OR HALF THE EROSION CONTROL BARRIER'S HEIGHT COLLECTED ON THE FILTER FABRIC AND/OR SILT SOCK BARRIERS AND EXCAVATE AND
- VFGFTATFD WITHIN 7 DAYS. WHEN AREAS ARE DISTURBED AFTER THE GROWING SEASON, THE CONTRACTOR MUST STABILIZE SAME WITH GEOTEXTILE FABRIC AND MAINTAIN SAME IN STRICT ACCORDANCE WITH BEST MANAGEMENT PRACTICES. 8. THE CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF THE PROFESSIONAL OF RECORD SO REQUIRES, TO PREVENT ANY,

THE CONTRACTOR MUST APPLY TEMPORARY SEED AND MUI CH TO ALL DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINISHED GRADE AND

- INCLUDING THE INCIDENTAL, DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE. 9. THE CONTRACTOR MUST BE RESPONSIBLE FOR INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT PAVING AND TURE/LANDSCAPING IS ESTABLISHED. THE COSTS OF INSTALLING AND MAINTAINING THE FROSION CONTROL MEASURES MUST BE
- INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS. 10. THE CONTRACTOR MUST CONTINUE TO MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE COMPLETION OF CONSTRUCTION AND THE ESTABLISHMENT OF VEGETATION.
- 11. THE CONTRACTOR MUST REMOVE EROSION CONTROL MEASURES, SILT AND DEBRIS AFTER ESTABLISHING PERMANENT VEGETATION COVER OR OTHER
- INSTALLING A DIFFERENT. SPECIFIED METHOD OF STABILIZATION 12. THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL FACILITIES. MEASURES AND STRUCTURES. ADDITIONAL FACILITIES, MEASURES AND STRUCTURES MUST BE INSTALLED WHERE NECESSARY TO COMPLY WITH ALL APPLICABLE
- CODES AND STANDARDS AND/OR TO PREVENT ANY INCLUDING THE INCIDENTAL DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE 13. THE CONTRACTOR MUST PROTECT ALL EXISTING TREES AND SHRUBS. THE CONTRACTOR MUST REFER TO THE LANDSCAPE AND/OR DEMOLITION PLAN(S FOR TREE PROTECTION, FENCE LOCATIONS AND DETAILS.
- 14. THE CONTRACTOR MUST REFER TO GRADING PLANS FOR ADDITIONAL INFORMATION
- 15 THE CONTRACTOR MUIST CLEAN EXISTING AND PROPOSED DRAINAGE STRUCTURES AND INTERCONNECTING PIPES ON OR OFE-SITE AS THE JURISDICTIONAL AGENCY REQUIRES. BOTH AT THE TIME OF SITE STABILIZATION AND AT END OF PROJECT
- 16. SOIL FROSION CONTROL MEASURES MUST BE ADJUSTED OR RELOCATED BY THE CONTRACTOR AS IDENTIFIED DURING SITE OBSERVATION IN ORDER TO MAINTAIN THE COMPLETE FEFECTIVENESS OF ALL CONTROL MEASURES
- 17. THE CONTRACTOR MUST IDENTIFY, ON THE PLAN, THE LOCATION OF WASTE CONTAINERS, FUEL STORAGE TANKS, CONCRETE WASHOUT AREAS AND AN' OTHER LOCATIONS WHERE HAZARDOUS MATERIALS ARE STORED.

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:

- INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT (AS SHOWN)
- INSTALLATION OF EROSION CONTROL BARRIER (STRAW BALES AND SILT FENCE) (AS SHOWN) INSTALLATION OF INLET PROTECTION IN STREET (AS SHOWN)
- DEMOLITION OF EXISTING SITE STRUCTURES (SEE DEMOLITION PLAN)
- DEMOLITION OF EXISTING SITE PAVEMENT AND AMENITIES (SEE DEMOLITION PLAN) CLEARING AND GRUBBING
- INSTALLATION OF TEMPORARY SWALES AND SEDIMENT BASINS
- EARTHWORK AND EXCAVATION/FILLING AS NECESSARY CONSTRUCTION OF UTILITIES
- STABILIZE PERMANENT LAWN AREAS AND SLOPES WITH TEMPORARY SEEDING. INSTALLATION OF INLET PROTECTION OF ON-SITE UTILITIES (AS SHOWN)
- CONSTRUCTION OF ALL CURBING AND LANDSCAPE ISLANDS AS INDICATED ON THE PLANS
- SPREAD TOPSOIL ON SLOPED AREAS AND SEED AND MULCH
- FINAL GRADING OF ALL SLOPED AREAS • PLACE 6" TOPSOIL ON SLOPES AFTER FINAL GRADING COMPLETED. FERTILIZE, SEED, AND MULCH SEED MIXTURE TO BE INSTALLED
- AS REQUIRED. REMOVAL OF THE TEMPORARY SEDIMENT BASINS
- PAVE PARKING LOT LANDSCAPING PER LANDSCAPING PLAN
- REMOVE EROSION CONTROLS AS DISTURBED AREAS BECOME STABILIZED TO 70% STABILIZATION OR GREATER

NE-O030201 - 09/2023)

BLOWN/PLACED

FILTER MEDIA

WORK AREA

(NF-0040201 - 09/2023)

— 2" X 2" X 36" WOODEN STAKES PLACED 10' O.C.

AREA TO BE PROTECTED

SECTION

ALL MATERIAL TO MEET MANUFACTURER SPECIFICATIONS

COMPLETION OF CONSTRUCTION OR AS DIRECTED BY OWNER

COMPOST FILTER SOCK

NOT TO SCALE

COMPOST FILTER SOCK FILL TO MEET APPLICATION

3. COMPOST MATERIAL TO BE DISPERSED ON SITE AT

AFTER STABILIZATION IS ACHIEVED.

- COMPOSITE FILTER SOCK (SEE PLAN FOR SIZE)

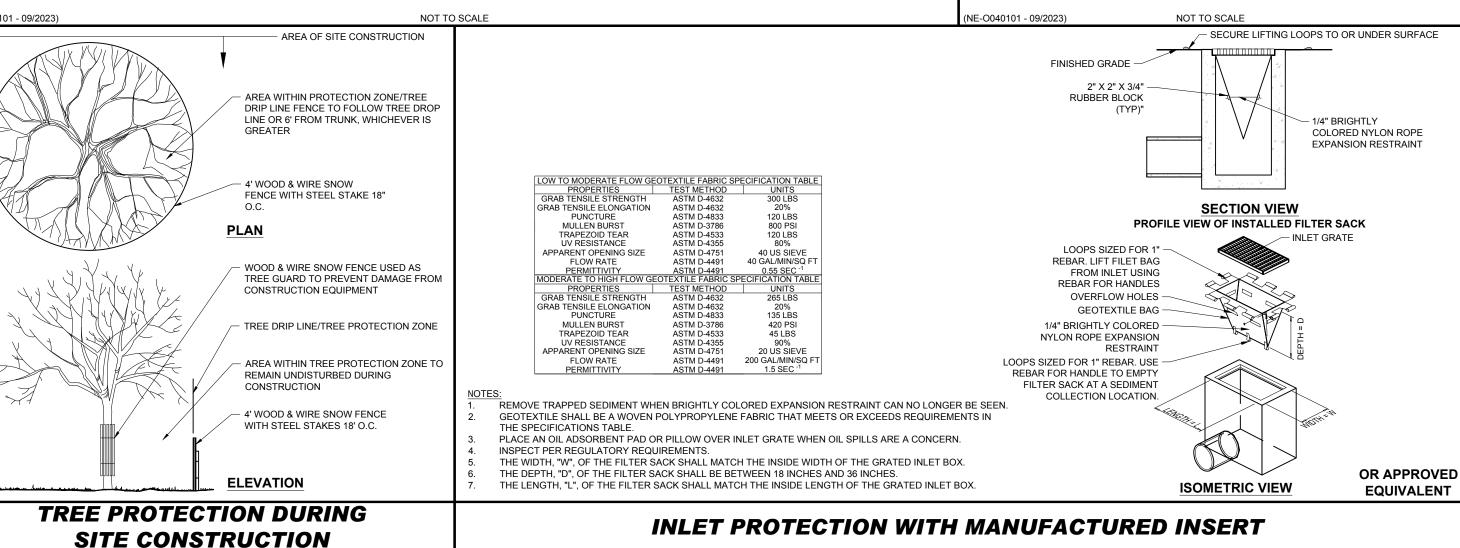
EQUIVALENT

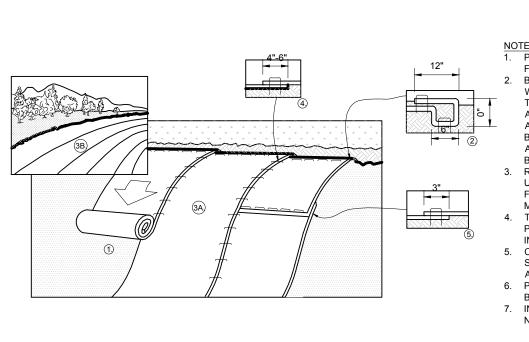
- EXISTING GROUND -1-1/2" x 1-1/2" POST WOOD OR PLASTIC SLAT STAPLED-SEE CHART 1 ROWLENGTH OF STONE REQUIRED THROUGH FABRIC TO POST 0 TO 2% **DETAIL OF POST ATTACHMENT** 2% TO 5% PRE-ASSEMBLED PRIOR TO INSTALLATION ENTIRE ENTRANCE STABILIZED WITH FABC BASE COURSE ((1) AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY FABRIC CHART 1 PROVIDE APPROPRIATE TRANSITION 2-1/2" CLEAN STONE -BETWEEN STABILIZED CONSTRUCTION -FILTER ENTRANCE AND PUBLIC R.O.W. PROFILE ROCKY SOIL.) -NATIVE SOIL - PUBLIC TOE-IN METHODS PERSPECTIVE OF FENCE RIGHT OF GROUND EXCAVATE A 6"x6" TRENCH ALONG THE LINE OF EROSION CONTROL OF THE SITE. UNROLL SILTATION FENCE AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH (NET SIDE AWAY FROM FLOW DIRECTION). DRIVE THE POST INTO THE GROUND UNTIL THE NETTING IS LAYING ACROSS THE TRENCH LAY THE TOE-IN FLAP OF THE FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, PLAN VIEW BACKFILL ALSO BE ACCOMPLISHED BY LAYING FABRIC FLAP ON UNDISTURBED GROUND AND PILING & TAMPING FILL AT THE BASE.

STABILIZED CONSTRUCTION ENTRANCE

IE-O050101 - 09/2023)

NF-0049901 - 09/2023)





NOTES:

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH AS SHOWN IN DETAIL 2. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH

SILT FENCE

AFTER STAPLING APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE 3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER

MANUFACTURES RECOMMENDATION 4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH MINIMUM 6" OVERLAP. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE

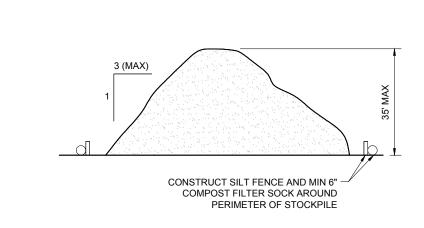
STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. 6. PLACE STAPLES/STAKES PER MANUFACTURER'S RECOMMENDATION FOR THE APPROPRIATE SLOPE

7. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET STEEP SLOPE PROTECTION

(NE-O060102 - 09/2023)

NOT TO SCALE



TEMPORARY STOCK PILE WITH SILT FENCE AND FILTER SOCK

-SILT FENCE (3' WID

—BACKFILL

REV DATE COMMENT

REVISIONS



PERMIT SET

CPB/LMD

P-CIVL-CNDS

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PROJECT:

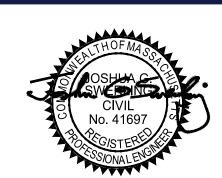
SITE **DEVELOPMENT PLANS**

PROPOSED SITE **IMPROVEMENTS**

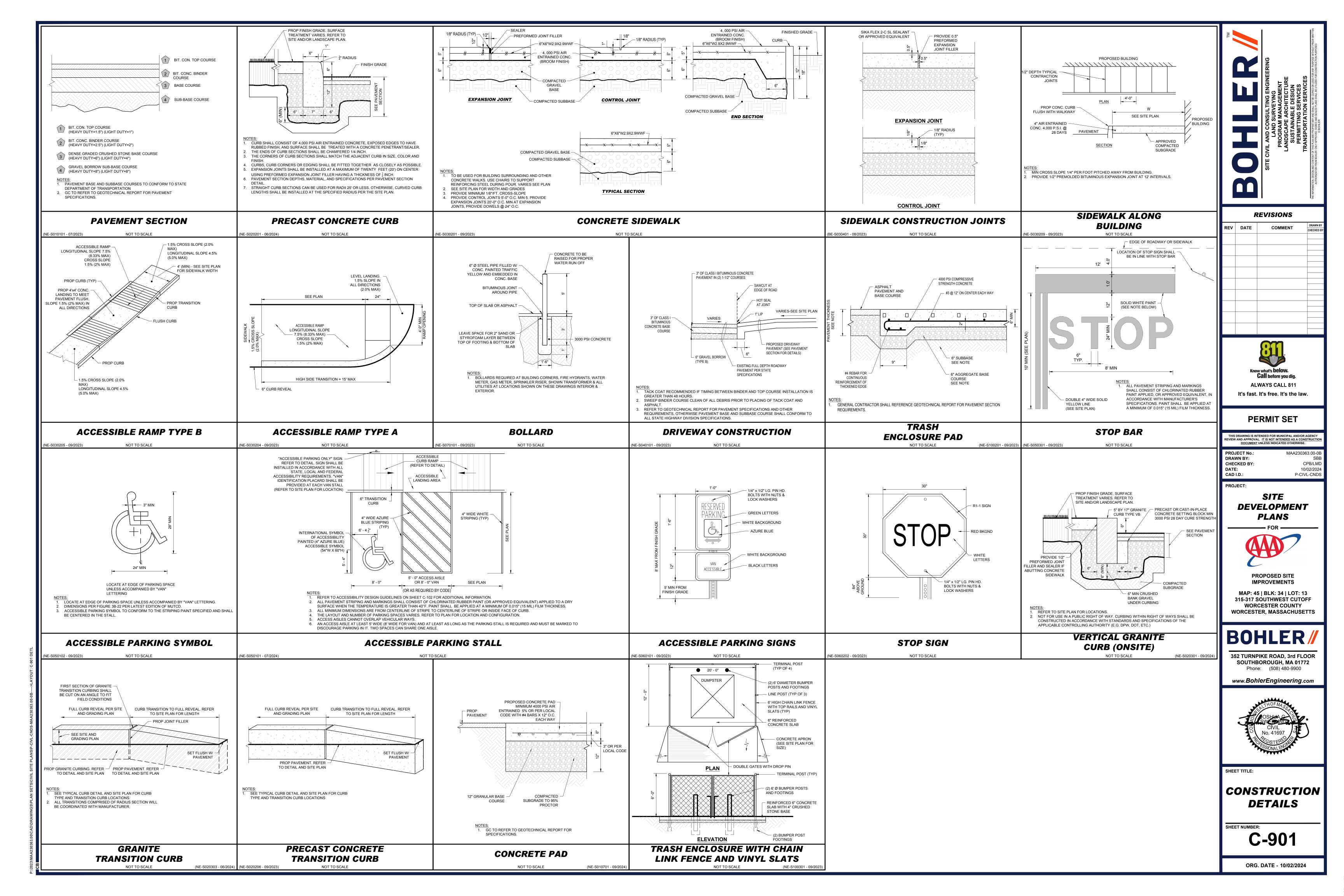
MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY **WORCESTER, MASSACHUSETTS**

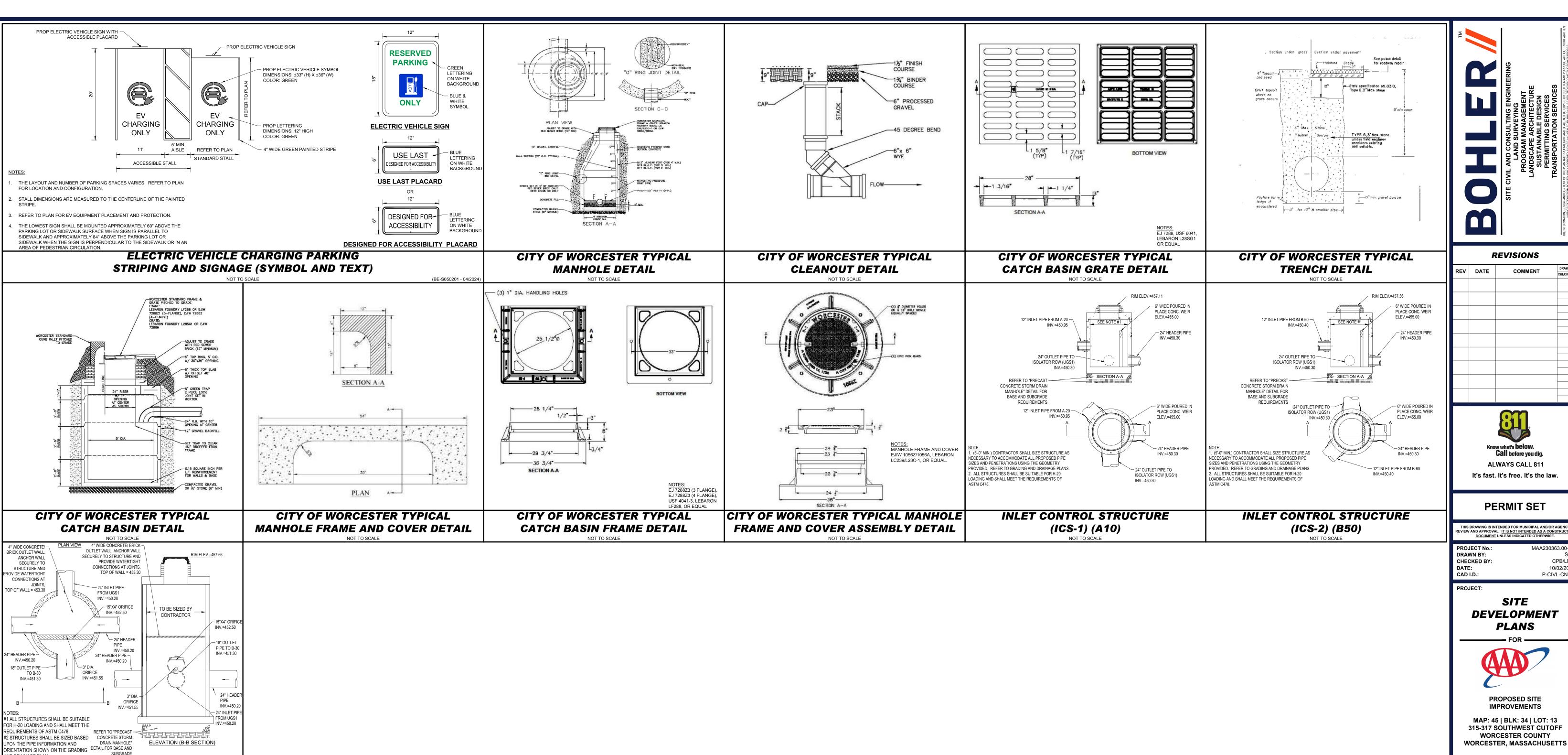
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EROSION AND SEDIMENT CONTROL NOTES AND DETAILS





AND DRAINAGE PLAN

UNDERGROUND INFILTRATION BASIN **OUTLET CONTROL STRUCTURE (B-40)**



REVISIONS

COMMENT



PERMIT SET

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> SITE DEVELOPMENT

PLANS

PROPOSED SITE

IMPROVEMENTS MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY

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CONSTRUCTION **DETAILS**

C-902





CHAMBERS -

MIN SEPARATION

END CAP

MC-4500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-4500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION: TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL,
- TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE
- DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS: THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95
- FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE. THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

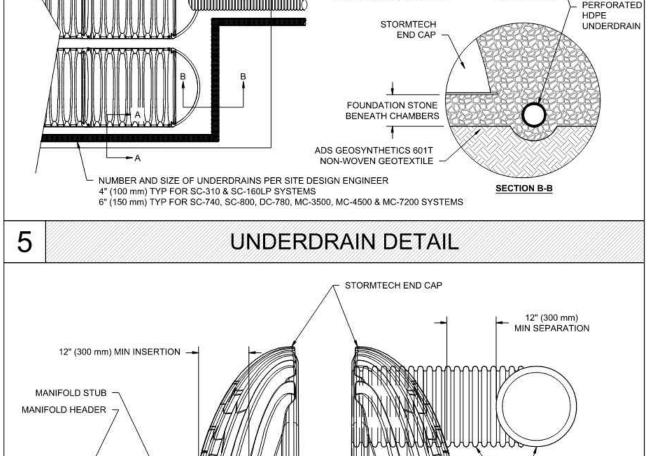
- STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS. 2. STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500
- 3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:

 STONESHOOTER LOCATED OFF THE CHAMBER BED
- BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43
- 9. STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.
- 10. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW
- 11. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE
- 12. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- 2. THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
- NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION
- 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING. USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR



MIN INSERTION

MATERIAL LOCATION

FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE

PAVEMENT OR UNPAVED FINISHED GRADE ABOVE, NOTE THAT

INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE

TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm)

EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER

FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE

SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.

TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE

PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER

SUBBASE MAY BE A PART OF THE 'C' LAYER.

PERIMETER STONE

EXCAVATION WALL

(CAN BE SLOPED OR VERTICAL)

(SEE NOTE 4)

NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL

MC-SERIES END CAP INSERTION DETAIL

OUTLET MANIFOLD

FOUNDATION STONE BENEATH CHAMBERS

ADS GEOSYNTHETICS 601T

SECTION A-A

MANIFOLD HEADER

MANIFOLD STUB

DESCRIPTION

ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS

CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.

GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR

PROCESSED AGGREGATE.

MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS

CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE⁵

CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE⁵

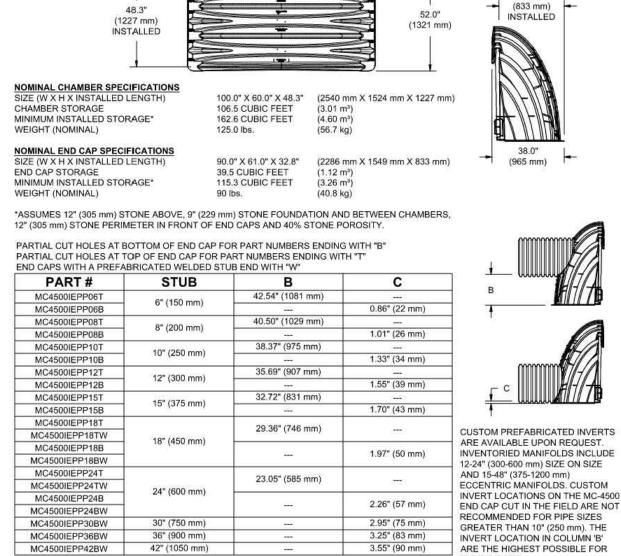
WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL"

THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".

STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGNS, CONTACT STORMTECH FOR

ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS



MC-4500 TECHNICAL SPECIFICATIONS

COMPACTION / DENSITY REQUIREMENT

PREPARE PER SITE DESIGN ENGINEER'S PLANS, PAVED

INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND

PREPARATION REQUIREMENTS.

BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER

THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN

12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR

WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR

PROCESSED AGGREGATE MATERIALS.

NO COMPACTION REQUIRED.

PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. 2.3

**THIS CROSS SECTION DETAIL REPRESENTS

MINIMUM REQUIREMENTS FOR INSTALLATION.

PLEASE SEE THE LAYOUT SHEET(S) FOR

PROJECT SPECIFIC REQUIREMENTS.

DEPTH OF STONE TO BE DETERMINED

BY SITE DESIGN ENGINEER 9" (230 mm) MIN

(600 mm) MIN*

2" (300 mm) MIN

STIFFENING RIB /

BUILD ROW IN THIS DIRECTION

NOTE: ALL DIMENSIONS ARE NOMINAL

AASHTO MATERIAL

CLASSIFICATIONS

A-1, A-2-4, A-3

AASHTO M431

3, 357, 4, 467, 5, 56, 57

AASHTO M431

3, 357, 4, 467, 5, 56, 57

'TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 30" (750 mm).

BY SITE DESIGN ENGINEER)

3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10

- UPPER JOINT CORRUGATION - CREST

LOWER JOINT CORRUGATION

> O D 4 D

> > SHEET

- 90.0" (2286 mm) ----

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> CAD I.D.: P-CIVL-CNDS PROJECT: SITE

DEVELOPMENT PLANS

CPB/LMD

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ALWAYS CALL 811

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REVISIONS

COMMENT

REV DATE

PROPOSED SITE

WORCESTER, MASSACHUSETTS

IMPROVEMENTS MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY

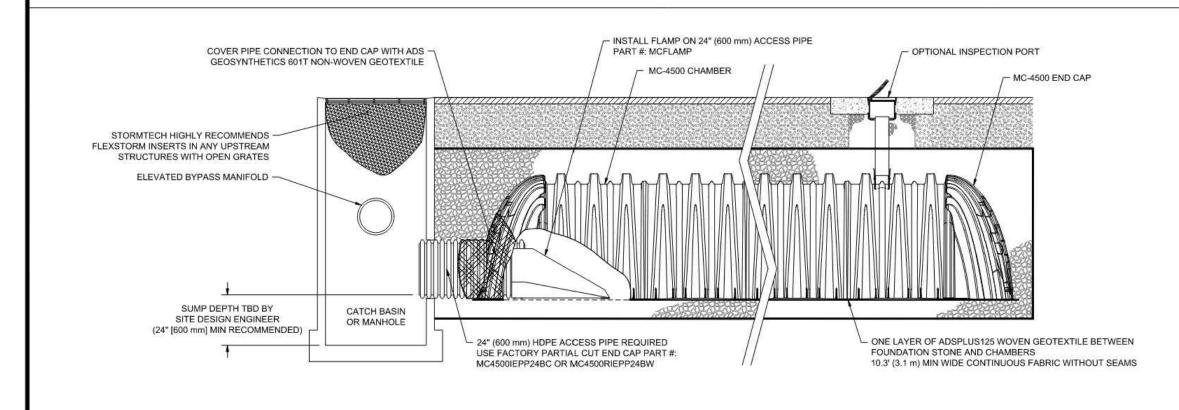
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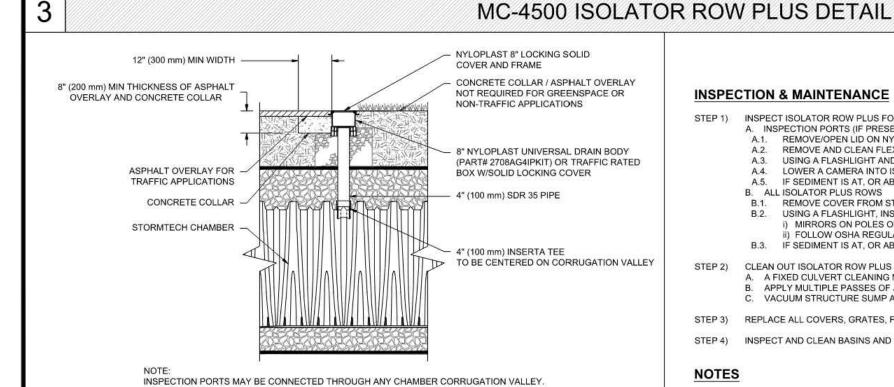
Phone: (508) 480-9900



SHEET TITLE:

CONSTRUCTION **DETAILS**





INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT A. INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
- USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL) A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
- MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLI
- IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3. CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

- 1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION, ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS
- 2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY

PLEASE NOTE:

CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101 2. MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION

PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.

5. REQUIREMENTS FOR HANDLING AND INSTALLATION:

 TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS. . TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".

TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/%.

AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

MC-4500 CROSS SECTION DETAIL

ADS GEOSYNTHETICS 601T NON-WOVEN GEOTEXTILE ALL AROUND

END CAR

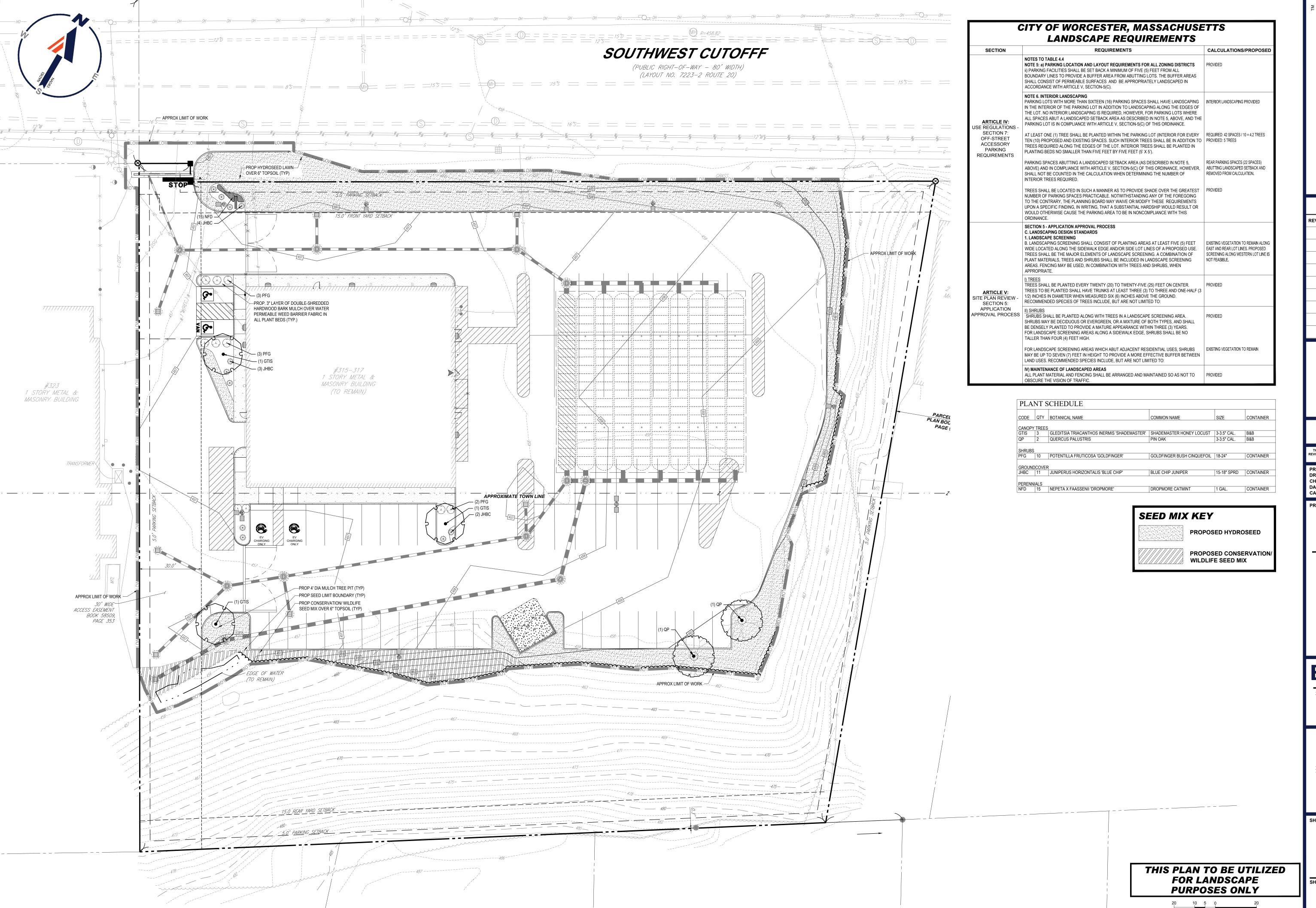
CLEAN, CRUSHED, ANGULAR STONE IN A & B LAYERS

FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.

12" (300 mm) MIN -

SUBGRADE SOILS -

4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)







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PROJECT No.:

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 MAA230363.00-0B

 DRAWN BY:
 SBB

 CHECKED BY:
 CPB/LMD

 DATE:
 10/02/2024

 CAD I.D.:
 P-CIVL-LSCP

PROJECT:

SITE DEVELOPMENT PLANS

— FOR ——



PROPOSED SITE IMPROVEMENTS

MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY WORCESTER, MASSACHUSETTS

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SHEET TITL

LANDSCAPE PLAN

SHEET NUMBER:

L-101

MASSACHUSETTS LANDSCAPE SPECIFICATION

c) LAWN:

- a) THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.
- MATERIALS) GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.
- TOPSOIL NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY
- c)a) ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM 6" THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT. AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED ON THE LANDSCAPE PLAN.
- c)b) LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
- SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE. c)d) MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK
- MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN AND/OR LANDSCAPE PLAN NOTES / DETAILS. FERTILIZE d)a) FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS
- SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.
- d)b) FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED
- PLANT MATERIAL e)a) ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION
- (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN). e)b) IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT
- e)c) PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT
- OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION. TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 11/4", WHICH HAVE

NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY

- TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. e)e) ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS,
- CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER, THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE
- e)g) SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST
- e)h) TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.
- GENERAL WORK PROCEDURES
- CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED. STOCKPILED OR DISPOSED OF
- WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED. INCLUDING ORGANIC MATERIALS. BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.
-) BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN. SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL
- (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK

ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE

- TREE PROTECTION
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.
- A FORTY-FIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY 'VISI-FENCE' OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED. IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR
- TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED
- AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.
- SOIL MODIFICATIONS
- a) CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY
- LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS. AS SPECIFIED HEREIN. MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS
- THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED
- BY A CERTIFIED SOIL LABORATORY TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO
- A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH d)a) TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE
- BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE
- d)b) MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
- FINISHED GRADING
-) UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE
- LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1"±).
- ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT
- ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS. TOPSOILING
- CONTRACTOR SHALL PROVIDE A 6" THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS
- ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL
- MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE ALL LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY [SEE SPECIFICATION 6.A.]):
- d)a) 20 POUNDS 'GRO-POWER' OR APPROVED SOIL CONDITIONER/FERTILIZER d)b) 20 POUNDS NITRO-FORM (COURSE) 38-0-0 BLUE CHIP OR APPROVED NITROGEN FERTILIZER
- e) THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.
- PI ANTING) INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.

PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL

- CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.
- ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED. ALL PLANTING CONTAINERS, BASKETS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS
- DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE
- LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY. THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN. MUST BE INSTALLED. INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING

- f)a) PLANTS: MARCH 15 TO DECEMBER 15 f)b) LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1
- f)c) PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS
- g) FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:
 - ACER RUBRUM PLATANUS X ACERIFOLIA BETULA VARIETIES POPULUS VARIETIES CARPINUS VARIETIES PRUNUS VARIETIES CRATAEGUS VARIETIES PYRUS VARIETIES KOELREUTERIA **QUERCUS VARIETIES** LIQUIDAMBAR STYRACIFLUA TILIA TOMENTOSA
- h) PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS. WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:

ZELKOVA VARIETIES

h)a) 1 PART PEAT MOSS h)b) 1 PART COMPOSTED COW MANURE BY VOLUME

LIRIODENDRON TULIPIFERA

- h)c) 3 PARTS TOPSOIL BY VOLUME h)d) 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
- h)d)a) 2 TABLETS PER 1 GALLON PLANT

SPECIFICATIONS AS LISTED HEREIN.

- h)d)b) 3 TABLETS PER 5 GALLON PLANT
- h)d)c) 4 TABLETS PER 15 GALLON PLANT
- h)d)d) LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK i) FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER
- THOROUGHLY
- j) ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS. IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.
- k) ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE. I) GROUND COVER AREAS SHALL RECEIVE A 1/4" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO
- PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION
- m) NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.
- n) ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB. o) ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING
- 10. TRANSPLANTING (WHEN REQUIRED) a) ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT.
- b) IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY
- WATERED AND PROTECTED FROM EXTREME HEAT SUN AND WIND
- c) PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30. d) UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE
- e) TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN. f) F TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.
- 11. WATERING
- a) NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL
- b) SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY
- c) IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS. HEALTHY GROWTH.
- 12. GUARANTEE a) THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF 1 YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR
- AUTHORIZED REPRESENTATIVE b) ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE
- DISPOSED OF OFF-SITE. WITHOUT EXCEPTION. TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE d) LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS

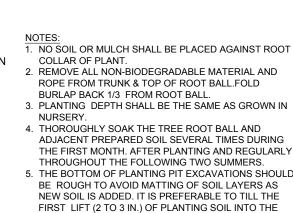
SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF

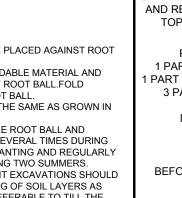
- 13. CLEANUP a) UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL
- REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED. b) THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR
- AUTHORIZED REPRESENTATIVE 14. MAINTENANCE (ALTERNATIVE BID):

ERODED OR BARE AREAS.

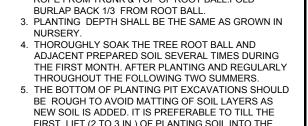
a) A 90 DAY MAINTENANCE PERIOD SHALL COMMENCE AT THE END OF ALL LANDSCAPE INSTALLATION OPERATIONS. THE 90 DAY MAINTENANCE PERIOD ENSURES TO THE OWNER/OPERATOR THAT THE NEWLY INSTALLED LANDSCAPING HAS BEEN MAINTAINED AS SPECIFIED ON THE APPROVED LANDSCAPE PLAN. ONCE THE INITIAL 90 DAY MAINTENANCE PERIOD HAS EXPIRED, THE OWNER/OPERATOR MAY REQUEST THAT BIDDERS SUBMIT AN ALTERNATE MAINTENANCE BID FOR A MONTHLY MAINTENANCE CONTRACT. THE ALTERNATE MAINTENANCE CONTRACT WILL ENCOMPASS ANY WORK THAT IS CONSIDERED APPROPRIATE TO ENSURE THAT PLANT AND LAWN AREAS ARE HEALTHY AND MANICURED TO THE APPROVAL OF THE OWNFR/OPERATOR.

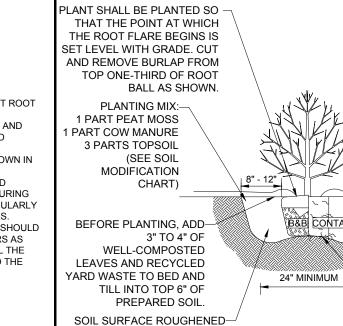
AVOID PURCHASING TREES WITH TWO LEADERS OR REMOVE ONE AT PLANTING: OTHERWISE, DO NOT PRUNE TREE AT PLANTING EXCEPT FOR REINFORCED RUBBER HOSE (1/2" DIA. SPECIFIC STRUCTURAL CORRECTIONS. BLACK) - SET ROOT BALL FLUSH TO GRADE OR FOLD BURLAP AWAY FROM TOP OF SEVERAL INCHES HIGHER IN POORLY ROOT BALL DRAINING SOILS. 12 GAUGE GALVANIZED WIRE GUYS -TWISTED - 4" BUILT-UP EARTH SAUCER 2" DIA. HARDWOOD STAKES 2/3 -3" DOUBLE SHREDDED HARDWOOD TREE HT. 3 PER TREE BARK MULCH (UNLESS OTHERWISE SPECIFIED) (DO NOT PLACE MULCH IN TWICE THE WIDTH OF ROOTBALI CONTACT WITH TREE TRUNK) FOR PREPARED SOIL FOR TREES LANDSCAPE FABRIC AS SPECIFIED. PREPARED SOIL FOR TREES 1 PART PEAT MOSS 1 PART COW MANURE 3 PARTS TOPSOIL (RECOMMENDATION ONLY & SEE SOIL MOD. CHART) UNDISTURBED -ALL PLANTING CONTAINERS, SUBGRADE BASKETS AND NON-BIODEGRADABLE MATERIALS DIG WIDE, SHALLOW HOLE SHALL BE REMOVED FROM ROOT WITH TAMPED SIDES BALLS. - SET ROOT BALL ON TAMP SOIL SOLIDLY AROUND -UNDISTURBED SOIL IN BOTTOM BASE OF ROOT BALL TREE PLANTING





5 THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD





TO BIND WITH NEW SOIL.

THAN 2" DIAMETER

PERENNIAL RYEGRASS

SPREADING FESCUE

TANK TACKIFIER

FERTILIZER (16.32.16)

KENTUCKY BLUEGRASS

SEEDING RATES:

RED FESCUE

LIQUID LIME

FOR CONTAINER-GROWN SHRUBS. PLANT SHALL BE

TRANSPLANTED AT THE SAME GRADE AS IN THE

FINGER OR SMALL HAND TOOLS TO PULL THE

CIRCLE THE PERIMETER OF THE CONTAINER.

ROOTS OUT OF THE OUTER LAYER OF POTTING

SOIL; THEN CUT OR PULL APART ANY ROOTS THAT

CONTAINER. REMOVE THE CONTAINER, USE

—3" DOUBLE-SHREDDE HARDWOOD BARK MULCH (DO NOT PU MUI CH AGAINST TH BASE OF THE PLANT -LANDSCAPE FABRIC AS SPECIFIED -FINISHED GRADE

-UNDISTURBED SUBGRADE -WHEN APPROPRIATE PLANT MULTIPLE SHRU IN CONTINUOUS PLANTING HOLE -PLACE SHRUB ON FIRM SOIL IN

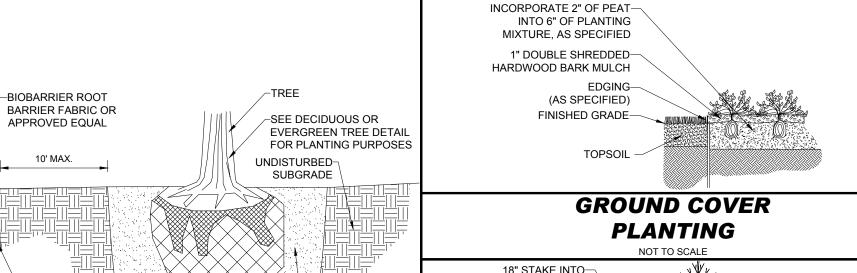
BOTTOM OF HOLE



COMMENT

REV DATE

SHRUB PLANTING INCORPORATE 2" OF PEAT-



FOR TREES

- BIOBARRIER ROOT BARRIER FABRIC TO BE INSTALLED

INSTALLED WITH BIOBARRIER ROOT BARRIER FABRIC AS SHOWN

SIDEWALK

TO THE DEPTH OF THE (SEE PLANTING **BOTTOM OF STONE BASE** COURSE OR 10", WHICHEVER IS GREATER 1. ANY TREE INSTALLED WITHIN 10 FT. OF NEW CONCRETE SIDEWALKS SHOULD BE

TREES SHALL BE INSTALLED ACCORDING TO THE APPROPRIATE PLANTING DETAIL.

BIOBARRIER

ROOT BARRIER

LAWN OR GRAVEL AREA--MULCH PREPARED SOIL AS SPECIFIED 3/16" x 4" BLACK **ALUMINUM EDGING** PREPARED TOPSOIL UNDISTURBED SUBGRADE

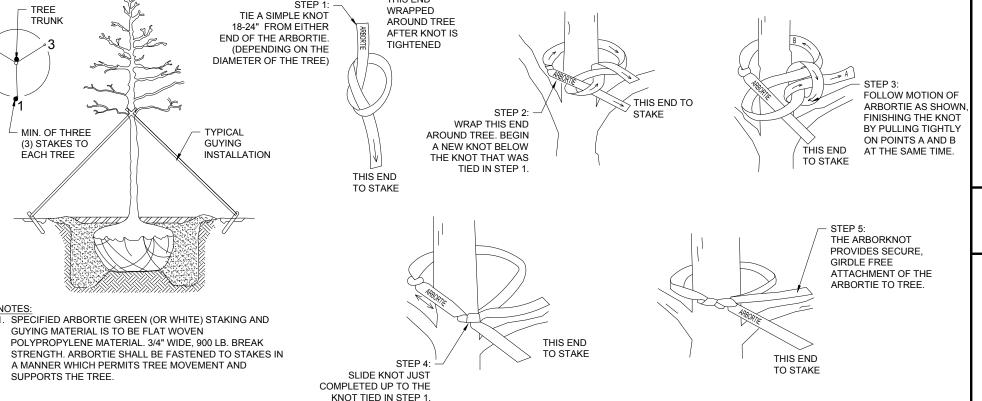
BLACK ALUMINUM EDGING

UNDISTURBED GROUND

RECOMMENDATION

EVERY 30" O.C. LAP JOINTS

AS PER MANUFACTURERS



ARBORTIE **STAKING**

FASTEN FREE END TO

STAKE OR ANCHOR.

TANK FIBER MULCH 30 LB/1000 SQ F1 GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS APPROVED BY OWNER

"NEW ENGLAND CONSERVATION/ WILDLIFE SEED MIX" AS PREPARED BY NEW ENGLAND WETLAND PLANTS, INC

HYDROSEED SPECIFICATIONS

PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGEF

PRIOR TO SEEDING, CONSULT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS

1 LB/1000 SQ F

1/2 LB/1000 SQ FT

1/2 LB/1000 SQ F

2 LB/1000 SQ F

1 GAL/800 GAL.

35 LB/800 GAL

WEBSITE: WWW.NEWP.COM APPLICATION RATE: 1750 SQ FT/LB OR 25LBS/ACRE

820 WEST STREET, AMHERST, MA 01002

PHONE: 413-548-8000

EMAIL: INFO@NEWP.COM

- MINIMUM ORDER: 2 LBS . SPECIES:
- a) VIRGINIA WILD RYE (ELYMUS VIRGINICUS) b) LITTLE BLUESTEM (SCHIZACHYRIUM SCOPARIUM)
- BIG BLUESTEM (ANDROPOGON GERARDII) RED FESCUE (FESTUCA RUBRA)
- SWITCH GRASS (PANICUM VIRGATUM) PARTRIDGE PEA (CHAMAECRISTA FASCICULATA) PANICI EDI FAF TICK TREFOIL (DESMODIUM PANICUI ATUM)
- INDIAN GRASS (SORGHASTRUM NUTANS
- BLUE VERVAIN (VERBENA HASTATA) BUTTERFLY MILKWEED (ASCLEPIAS TUBEROSA)
- BLACK EYED SUSAN (RUDBECKIA HIRTA) COMMON SNEEZEWEED (HELENIUM AUTUNALE)
- m) HEATH ASTER (ASTERPILOSUS/SYMPHYOTRICHUM PILOSUM)
- n) EARLY GOLDENROD (SOLIDAGO JUNCEA)

NEW ENGLAND CONSERVATION |

WILDLIFE SEED MIX SPECIFICATION



PERMIT SET

CPB/LMD

P-CIVL-LSCP

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENC VIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUC DOCUMENT UNLESS INDICATED OTHERWISE PROJECT No. MAA230363.00-0

CAD I.D.: PROJECT:

DRAWN BY:

CHECKED BY

SITE **DEVELOPMENT**

PLANS



PROPOSED SITE **IMPROVEMENTS**

MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY **WORCESTER, MASSACHUSETTS**

352 TURNPIKE ROAD, 3rd FLOOR SOUTHBOROUGH, MA 01772 Phone: (508) 480-9900

www.BohlerEngineering.com



SHEET TITLE:

LANDSCAPE NOTES AND DETAILS

HO—	OH O
	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$
	$= \begin{array}{cccccccccccccccccccccccccccccccccccc$
12"W †0.1	0.6 APPROX LIMIT OF WORK
†0.1 ± †0.5	**************************************

1 STORY METALL &

MASONRY BUILDING

TH.=457.8

#315-317

1 STORY METAL &

MASONRY BUILDING

(TO REMAIN)

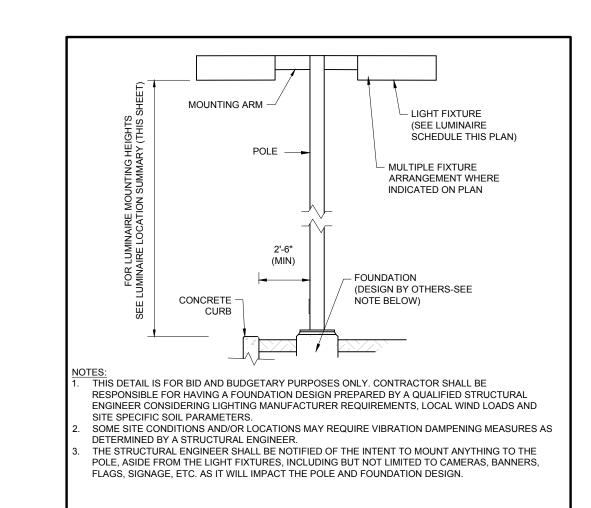
LUMINAIRE SCHEDULE						
LABEL	QTY	MOUNTING HEIGHT	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION
P2-S	2	25'-0" AFG	SINGLE	11804	0.900	LITHONIA LIGHTING, D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 2 MEDIUM, WITH HOUSE-SIDE SHIELD, ZERO UP-LIGHT (DSX1LED-P3-40K-70CRI-T2M-HS)
P3-D	1	25'-0" AFG	2 @ 90 DEGREES	13762	0.900	LITHONIA LIGHTING, D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 3 MEDIUM, ZERO UP-LIGHT (DSX1LED-P3-40K-70CRI-T3M)
P3-S	2	25'-0" AFG	SINGLE	11929	0.900	LITHONIA LIGHTING, D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 3 MEDIUM, WITH HOUSE-SIDE SHIELD, ZERO UP-LIGHT (DSX1LED-P3-40K-70CRI-T3M-HS)
P5-D	1	25'-0" AFG	BACK-BACK	14602	0.900	LITHONIA LIGHTING, D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 5 WIDE, ZERO UP-LIGHT (DSX1LED-P3-40K-70CRI-T5W)
PF-S	1	25'-0" AFG	SINGLE	11794	0.900	LITHONIA LIGHTING, D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE FORWARD THROW MEDIUM, WITH HOUSE-SIDE SHIELD, ZERO UP-LIGHT (DSX1LED-P3-40K-70CRI-TFTM-HS)
W1	7	10'-0" AFF*	SINGLE	1568	0.900	LITHONIA LIGHTING, WPX LED WALL PACK, ZERO UP-LIGHT (WPX1 LED P1-40K-x)

*REFER TO ARCHITECTURAL PLANS FOR FINAL MOUNTING HEIGHT AND LOCATIONS

— APPROX[†]bliMIT OF WORK

CALCULATI	ON SUMMARY	7					
LABEL	CALCTYPE	UNITS	Avg	MAX	MIN	AVG/MIN	MAX/MIN
ALL POINTS	ILLUMINANCE	FC	0.25	5.7	0.0	N.A.	N.A.
DRIVE AISLE	ILLUMINANCE	FC	1.53	4.0	0.6	2.55	6.67
PARKING COURT	ILLUMINANCE	FC	1.29	2.7	0.6	2.15	4.50





AREA LIGHT

PERMIT SET

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Call before you dig.

ALWAYS CALL 811

It's fast. It's free. It's the law.

REVISIONS

REV DATE COMMENT

PROJECT No.: MAA230363.00-0B
DRAWN BY: SBB
CHECKED BY: CPB/LMD
DATE: 10/02/2024
CAD I.D.: P-CIVL-LGHT

AD 1.D..

(NE-I000001 - 09/2023)

SITE
DEVELOPMENT

PLANS
— FOR —



PROPOSED SITE IMPROVEMENTS

MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY WORCESTER, MASSACHUSETTS

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352 TURNPIKE ROAD, 3rd FLOOR SOUTHBOROUGH, MA 01772 Phone: (508) 480-9900

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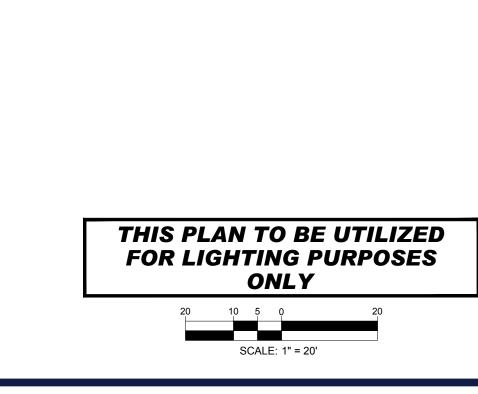


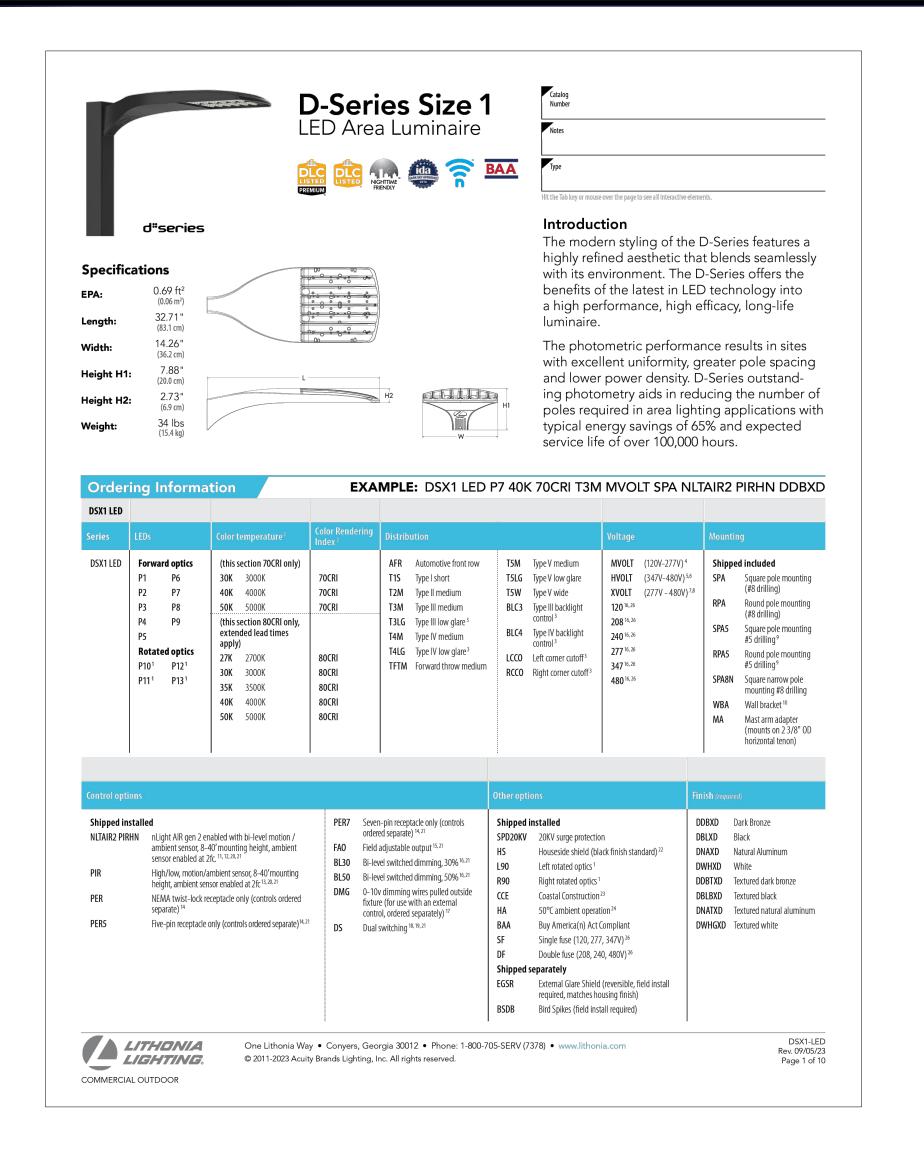
SHEET TITLE:

LIGHTING PLAN

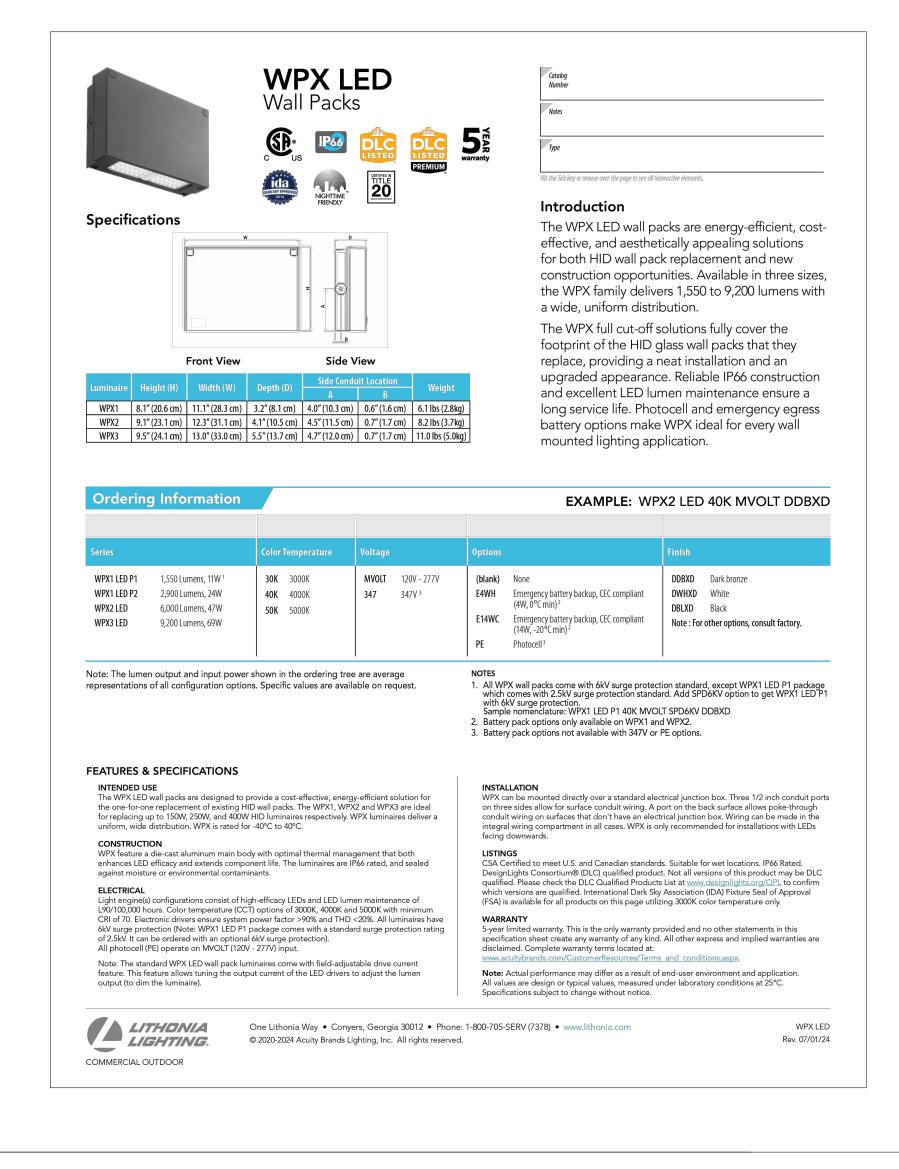
SHEET NUMBER:

L-201





LITHONIA D-SERIES SIZE 1 LED AREA LUMINAIRE



LITHONIA WPX LED WALL PACKS



REV	DATE	COMMENT	DRAWN B
			CHECKED



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PROJECT No.: DRAWN BY: CPB/LMD

CHECKED BY: DATE: CAD I.D.:

PROJECT:

SITE DEVELOPMENT **PLANS**



PROPOSED SITE **IMPROVEMENTS**

MAP: 45 | BLK: 34 | LOT: 13 315-317 SOUTHWEST CUTOFF WORCESTER COUNTY **WORCESTER, MASSACHUSETTS**

BOHLER

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LIGHTING NOTES AND DETAILS

L-202

1. BENCH MARK INFORMATION:

BENCH MARK USED:

ELEVATIONS WERE OBTAINED BY GPS OBSERVATIONS ON 6/19/2024.

TEMPORARY BENCH MARKS SET:

TEMPORARY BENCH MARKS SET:

TBM-KF1: X-CUT IN FRONT OF LEFT BOLT OVER MAIN OPENING ON HYDRANT

AT 315-317 SOUTHWEST CUTOFF, AS SHOWN HEREON.

ELEVATION = 458.03

TBM-KF2: RAILROAD SPIKE SET IN UTILITY POLE #73 ALONG NORTHERLY SIDELINE OF SOUTH WEST CUTOFF, AS SHOWN HEREON.

2. ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

ELEVATION = 459.04

3. CONTOUR INTERVAL EQUALS ONE (1) FOOT.

4. BY GRAPHIC PLOTTING ONLY, THE PARCEL SHOWN HEREON LIES WITHIN A ZONE "X" (UNSHADED), AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AS SHOWN ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY (F.E.M.A). FLOOD INSURANCE RATE MAP (F.I.R.M.) FOR WORCESTER COUNTY, MASSACHUSETTS, MAP NUMBER 25027C0807E, TOWN OF WORCESTER, HAVING AN EFFECTIVE DATE OF JULY 4, 2011.

UTILITY INFORMATION SHOWN IS BASED ON BOTH A FIELD SURVEY AND PLANS OF RECORD. THE LOCATIONS OF UNDERGROUND PIPES AND CONDUITS HAVE BEEN DETERMINED FROM THE AFOREMENTIONED RECORD PLANS AND ARE APPROXIMATE ONLY. WE CANNOT ASSUME RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES THAT ARE OMITTED OR INACCURATELY SHOWN ON SAID RECORD PLANS, SINCE SUBSURFACE UTILITIES CANNOT BE VISIBLY VERIFIED. BEFORE PLANNING FUTURE CONNECTIONS, THE PROPER UTILITY ENGINEERING DEPARTMENT SHOULD BE CONSULTED AND THE ACTUAL LOCATION OF SUBSURFACE STRUCTURES SHOULD BE DETERMINED IN THE FIELD. CALL, TOLL FREE, THE DIG SAFE CALL CENTER AT 1-888-344-7233 SEVENTY-TWO HOURS PRIOR TO EXCAVATION.

THIS DOCUMENT IS AN INSTRUMENT OF SERVICE OF FELDMAN GEOSPATIAL ISSUED TO OUR CLIENT FOR PURPOSES RELATED DIRECTLY AND SOLELY TO FELDMAN GEOSPATIAL'S SCOPE OF SERVICES UNDER CONTRACT TO OUR CLIENT FOR THIS PROJECT. ANY USE OR REUSE OF THIS DOCUMENT FOR ANY REASON BY ANY PARTY FOR PURPOSES UNRELATED DIRECTLY AND SOLELY TO SAID CONTRACT SHALL BE AT THE USER'S SOLE AND EXCLUSIVE RISK AND LIABILITY, INCLUDING LIABILITY FOR VIOLATION OF COPYRIGHT LAWS, UNLESS WRITTEN CONSENT IS PROVIDED BY FELDMAN GEOSPATIAL.



©···········SEWER MANHOLE

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CATCUL BASIN

· BOLLARD

ORILL HOLE

 ORILL HOLE

 ORICL HOLE

 ORICL HOLE

 ORICL HOLE

 ORICL HOLE

 ORICL HOLE

 ORICL HOLE

©········IRON PIPE ⊗·······IRON ROD ⊠·······TRANSFORMER

BCB·······BIT. CONC. BERM

BFA·······BUILDING FOOTPRINT AREA

BIT.·······BITUMINOUS

CONC.·······CONCRETE

DH·······DRILL HOLE

ENT·······ENTRANCE

FD········FOUND

GR · · · · · · · · · · · GUARD RAIL

I= · · · · · · · · · · · INVERT ELEVATION

IP · · · · · · · · · · · · · · · · IRON PIPE

IR·············IRON ROD

LD···········LOADING DOCK

MTL········METAL

R=·······RIM ELEVATION

SB·········STONE BOUND
SQ. FT.·····SQUARE FEET
SRW······STONE RETAINING WALL

TBM········TEMPORARY BENCH MARK

TH ······THRESHOLD

→ ·······UTILITY CONTINUES TO UNKNOWN DESTINATION

· GATE POST

GUARD RAIL
STONE WALL
DIGSAFE ELECTRIC

<u>REFERENCES PLANS</u>

WORCESTER COUNTY REGISTRY OF DEEDS

 PLAN OF LAND OF POINTED ROK CONDOMINIUM. DATED JULY 10, 1986, BY BOULEY BROTHERS INC. PLAN BOOK 561, PLAN 17.
 EASEMENT PLAN OF LAND OF UPPER BLACKSTONE WATER POLLUTION ABATEMENT DISTRICT. DATED APRIL 23, 2021, BY DAVID E. ROSS

ABATEMENT DISTRICT. DATED APRIL 23, 2021, BY DAVID E. ROSS
ASSOCIATES, INC. PLAN BOOK 956, PLAN 88.

3. PLAN OF LAND OF WORCESTER ACRES. DATED SEPTEMBER 30, 1946, BY

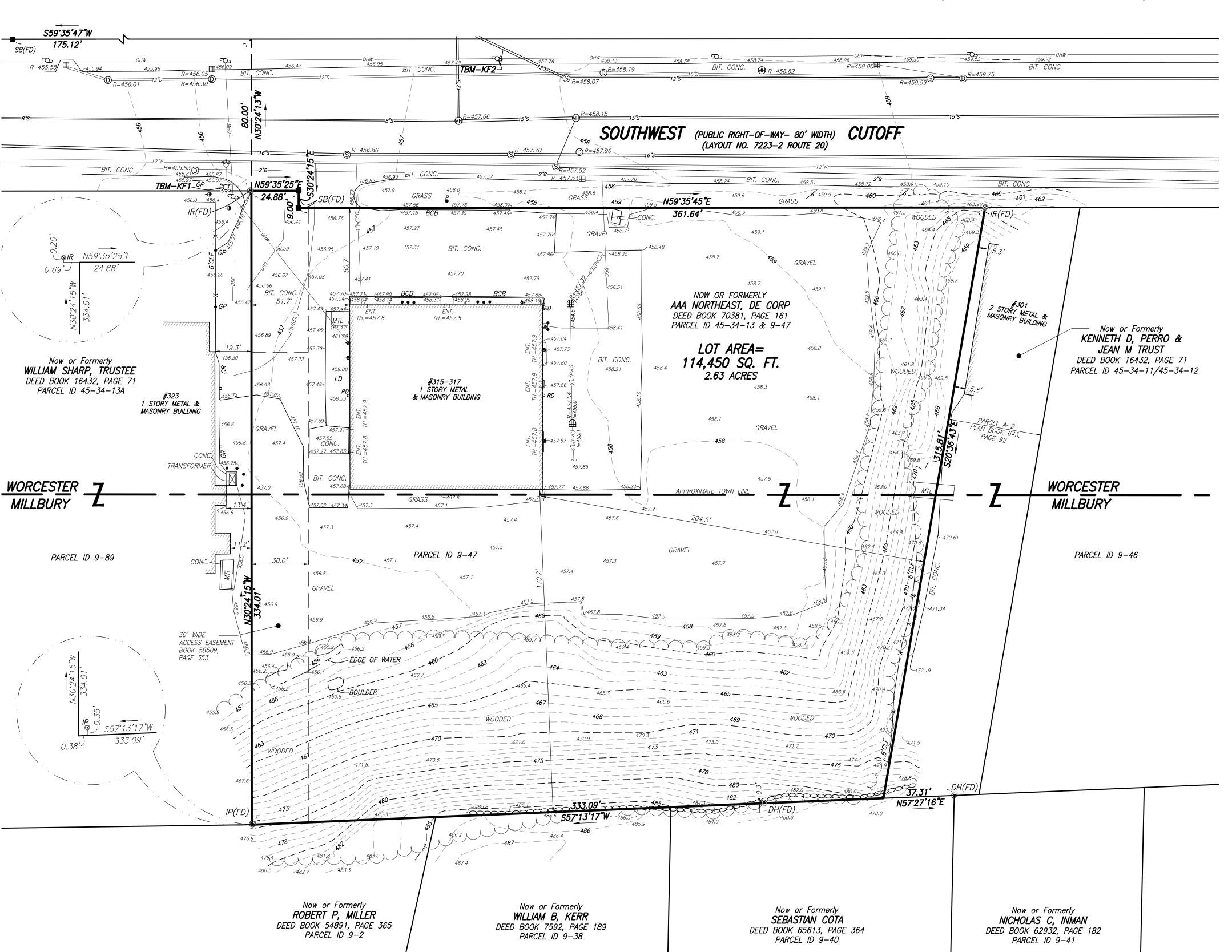
W.T. MOORE ENGR. BOOK 141, PLAN 122.
4. SUBDIVISION PLAN OF LAND OF MILLBURY TERRACE. DATED OCTOBER 13, 1948, BY KENNETH SHAW. PLAN BOOK 156, PLAN 40.
5. PLAN OF LAND OF GARRY N. BEAN. DATED SEPTEMBER 1, 1977, BY CULLINAN ENGINEERING CO. PLAN BOOK 455, PLAN 19.

6. PLAN OF LAND OF KENNETH D. PERRO. DATED APRIL 19, 1990, BY BOULEY BROTHERS INC. PLAN BOOK 643, PLAN 92.

C.M. BROUGH. PLAN BOOK 149, PLAN 87.

7. SUBDIVISION PLAN OF LAND OF BOB MILLER'S WAY. DATED MARCH 18, 2013, BY ALPHA OMEGA ENGINEERING INC. PLAN BOOK 899, PLAN 91. 8. PLAN OF LAND OF MILLBURY TERRACE. DATED SEPTEMBER 22, 1947, BY

9. EXHIBIT PLAN OF 315-317 SOUTHWEST CUTOFF. DATED FEBRUARY 26, 2018, BY J.M. GRENIER ASSOCIATES INC. PLAN BOOK 58509, PLAN 355.

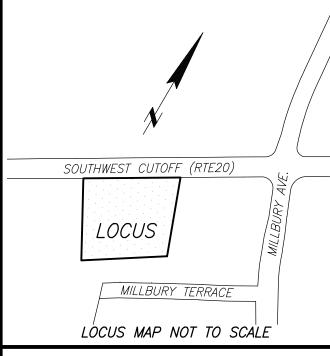




BOSTON HEADQUARTERS 152 HAMPDEN STREET BOSTON, MA 02119

WORCESTER OFFICE 27 MECHANIC STREET WORCESTER, MA 01608





I CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY AND THE LATEST PLANS AND DEEDS OF RECORD.

DRAFT 6/28/2024

TIMOTHY R. AGURKIS, PLS (MA# 52782) TAGURKIS@FELDMANGEO.COM

DRAWING NAME:

EXISTING CONDITIONS
PLAN OF LAND

317 SOUTHWEST CUTOFF WORCESTER, MASS.

DATE:	JU	NE 19, 2024
REVISIONS:		
FILENAME:	2400627-EX.	lwg
RESEARCH:	JG	FIELD CHIEF: KF
PROJ MGR:	JG	APPROVED:
CALC:	JG	CADD: HF
FIELD CHK:	JG	CRD FILE: 2400627-EX

SCALE: 1"=30'

SHEET NO. 1 OF 1