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Marborough, MA 01762

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www.tetratech.com

## APPLICANT / OWNER:

DivociWest One Kendell Square, Suite B3201 Cambridge, MA 02139

## **PROJECT ATTORNEY:**

Sullivan & Worossier LLP One Post Office Square Boston, MA 02108

# ARCHITECT:

Bargmenn Hendrie + Archetype, Inc. 300 A Street Boston, MA 02210

# CIVIL & TRAFFIC ENGINEER:

Tetra Tech, Inc. **100 Neckerson Road** Marlborough, MA 01752

## LANDSCAPE ARCHITECT:

Richard Burke Associates, Inc. 7 Davis Square Somerville, MA 02144

DATE: January 15, 2016

# SPECIAL PERMIT SUBMISSION



PROJECT LOCATION: 399 Binney Street Cembridge, MA

Assessors Map/Lot 39-173 and 38-174

Tt PROJECT No .: 143-27561-15001

1007 208 USGS MAP:







UTILITY PLAN REFERENCES:

COMCAST PLAN RECEIVED 07/13/2015

EVERSOURCE ENERGY GAS (NSTAR) 2 MAPS PLOTTED 07/07/2015

EVERSOURCE ENERGY ELECTRIC GIS/RECORDS PLANS RECEIVED 07/03/2015

VERIZON TELEPHONE PLAN, CAM24\_BINNEY ST

CITY OF CAMBRIDGE GIS WATER, SEWER, AND DRAIN

CITY OF CAMBRIDGE DPW -BINNEY STREET TRAFFIC PLAN SHEET 4 OF 5, 2001

MWRA PLANS-METROPOLITAN SEWER -SECTIONS 27 & 28-SOMERVILLE AND CAMBRIDGE

CULLINAN ENGINEERING CO. PLAN 1827-124-87

COPPER BEECH EXCAVATORS, INC. PLAN: AS-BUILT PROGRESS DRAWINGS --PLAN DATED 6/20/1989 CAMBRIDGE REDEVELOPMENT AUTHORITY --WELLINGTON-HARRINGTON URBAN RENEWAL AREA --SEWERAGE AND WATERWORKS --DWG NO. LG-0280-153 MAY 1982

PROFESSIONAL LAND SURVEYOR

6.2015 DATE

PREPARED BY: DGT SURVEY GROUP A DIVISION OF DIGITAL GEOGRAPHIC TECHNOLOGIES, INC.

803 SUMMER STREET 1ST FLOOR BOSTON, MA 02127



TEL: 617-275-0541 info@dgtsurvey.com www.dgtsurvey.com JOB NO, S-1009.07 CRD FILE S-1009-ALL\_CRD SHEET NO, 2 OF 2

DATE: 14-AUG-2015



016 2:16:35 PM - P:275511143-27551-15001/CADISHEETFILES/C-DEMOLITION PLAN.DWG - BARRET



N)



EXISTING TREE TO BE DISPOSED UTILITY TO BE DEMOLISHED REMOVE AND DISPOSE CONSTRUCTION FENCE

0	15'	30'	6
SC/	ALE: 1"	= 30'	



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	ARK DATE DESCRIPTION BY		
PROPERTY LINE	3 전 전 전 2 전 전 전 2 등, 등, Proy. Loc. 399 Binney Street, Cambridge, MA	Stee Development Plans Proposed Building & Parking Garage Updates Proposed Building & Parking Garage	43-27551-15001 R.D.A. J.L.P.



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LEGEND			TETRA TE		100 Nicker	Marlborough, h
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(7) PARKING COUNT		-				
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PROPOSED	SCRIF	cial Pe				
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Compost						
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se 1 Garage Reconfiguration, Utility Installation/Connections within Public W	ays		Upda	∞ŏ	an	
nated Start Date: July 2016 to September 2016 Conduct pre-construction kick off meeting/training with			ns rage	Ы	Ē	
tormwater team Equip existing catch basins with geotextile fabric inlet; replace		i	nt Pla g Ga	enti	itro	~
with gravel drop during pavement removal nstall construction fence with windscreen			pme	Гē <	5 O	000
Construct stabilized exit Cut/cap utilities		Je, MA	evelo g & F	٦	Ĕ	Å
nstall utility connections -water/sewer/gas nstall off site drainage infrastructure within Binney Street		ambridg	site D uildin	sio	me	
nstall utility connections in Cardinal Medeiros Avenue Remove existing islands in parking garage access drive		reet, C	ed B	5 C	bed	
Remove pavement in access drive nstall storm drain system in parking garage access drive	fest	iney St	ropos	_	0)	
Equip catch basins with inlet protection -gravel drop until binder course, then geotextile fabric	NooviC	399 Bir	đ			
Prepare binder course access drive	lient: C	Loc.: (				
Perform final paving of access drive	Ľ	Proj.				
	Pr	oject esign	No.: ed By:	143-2	7551-	150 R.D.
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Sheet of 999



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## LEGEND

EVICTING	
17.50	SPOT GRADE
•	TEST PIT
(7)	PARKING COUNT
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	SIGN
VGC	VERTICAL GRANITE CURB
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Ō	TELEPHONE MANHOLE
S	SEWER MANHOLE
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D	DRAIN LINE
FP	FIRE PROTECTION
с	CABLE TV LINE
E	ELECTRIC LINE
W	WATER LINE
G	GAS LINE
115Kv —	115Kv ELECTRIC
т ———	TELEPHONE LINE
ST/L	STREET LIGHTING
→ .	STORMWATER FLOW DURING CONSTRUCTIO
PROPOSEI	<u>D</u>
7507	STABILIZED CONSTRUCTION EXIT
xx	<ul> <li>FENCE WITH WINDSCREEN</li> </ul>
	PROPOSED INLET PROTECTION
	EXISTING CONTOUR
	<ul> <li>LIMIT OF WORK</li> </ul>
CFT -	FILTER TUBE

## Phase 2 Building Demolition

Estimated Start Date: October 2016 to December 2016
Construct stabilized construction exit

- Install compost filter tube (along Binney Stre Avenue sides)
- Construct temporary sidewalk along easterly work limits (access to cine
- Install concrete barrier/fence with wind screen along both street frontage to establish work zone Prepare area along project frontage (Binney and Cardinal Me as work zone for equipment access
  Equip catch basins with geotextile fabric inlet protection
- Demolish buildings
- Begin excavation for new building found







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EXISTI	LEGEND			TRA TECH		www.tetratech.com 100 Nickerson Road	Marlborough, MA 01752 2200 FAX: (508) 786-2201
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	LIMIT OF WORK		MAP 1				
CF	T COMPOST FILTER TUBE						
Phase 3 Net Estimated Sta Excavate for Construct of Place conc	w Building Construction, Site Amenities and Landscaping rt Date: January 2017 to End Date October 2017 or new building concrete washout area* - maintain until placement of all concrete refe for building			ins rage Updates	on &	Plan	
<ul> <li>Construct I</li> <li>Install subs</li> </ul>	building surface stormwater management system			nt Pla g Gai	enti	trol	Э
<ul> <li>Equip catc then geote</li> </ul>	h basins with inlet protection -gravel drop until pavers are installed, wille fabric			pmen arking	eve	Son,	se
Equip trend	ch drain with inlet protection		, MA	s Pa	٦	U t	ha
Construct	plaza/courtyards		nbridge	ildinc	, noi	ner	ш
Construct i	new cross walk in Binney Street		et, Car	ad Bu	So	edii	
<ul> <li>Restore wa</li> <li>Perform fin</li> </ul>	rk zones along street frontage al seeding, and planting and landscaping		st ey Stre	Boose	ш	Ñ	
<ul> <li>Remove co</li> <li>Inspect and</li> </ul>	onstruction fence d clean storm drain system		/cowe 9 Binn	Pre			

\* For this project the contractor may supplement the use of on- site concrete washout areas with portable washout containers supplied by a vendor. \* The contractor may use portions of the active work zone for storage and laydown of equipment or materials, however, the location must not be in the vicinity of a catch basin inlet



C-12 Sheet of 999

R.D.A

J.L.

roject No : 143-27551-1500

Bar Measure

esigned By: rawn By:

hecked By:

#### WATER

1) DUCTILE IRON PIPE SHALL BE CEMENT LINED, COAL TAR ENAMEL, DOUBLE COATED, PUSH-ON TYPE JOINT, AND SHALL CONFORM TO A21.51 (AWWA C151) CLASS 52 FOR SIZES 4 INCH THROUGH 12 INCH.

2) DUCTILE IRON FITTINGS SHALL CONFORM TO ANSI/AWWA C153/A21.53-84 (DUCTILE IRON COMPACT FITTINGS) PRESSURE RATING 350 PSI.

3) GATE VALVES AND TAPPING SLEEVE VALVES SHALL BE RESILIENT SEATED VALVES CONFORMING TO THE REQUIREMENTS OF AWWA STANDARD C509. THE VALVE SHALL OPEN RIGHT AND BE PRESSURE RATED FOR 250 PSI WORKING PRESSURE

4) VALVE BOXES SHALL BE THE 2 PIECE SLIP TYPE, 5 1/4 INCH I.D., FLANGE LOCATED AT THE TOP OF THE BOX, COVER MARKED "WATER" EQUAL TO TYPE CURRENTLY BEING USED BY THE TOWN.

5) WATER PRESSURE REQUIREMENTS AND THE ACTUAL WATER PRESSURE TO BE PROVIDED AT THE BUILDING SHALL BE DETERMINED BY OTHERS.

6) THE CONTRACTOR WILL FURNISH AND INSTALL DOMESTIC WATER LINES AND WATER METERS AS SPECIFIED BY THE WATER DISTRICT.

7) WATER LINES MUST BE A MINIMUM OF (18) INCHES ABOVE SEWER LINES. IN ADDITION, ONE FULL LENGTH OF WATER MAIN MUST BE CENTERED ON ONE FULL LENGTH OF SEWER LINE SO THAT ALL JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.

8) WATER SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, PHS (PUBLIC HEALTH SERVICE) MANUAL OF INDIVIDUAL WATER SYSTEMS, PHS PUBLICATION NO. 24, REVISED 1982, IWASHINGTON, GPO (GOVERNMENT PRINTING OFFICE), 1963 AND ANY APPLICABLE CURRENT STATE AND FEDERAL REGULATIONS.

9) CHLORINATION SHALL BE IN ACCORDANCE WITH THE AWWA STANDARD C601 DISINFECTING WATER MAINS

10) ALL PIPELINES SHALL BE GIVEN COMBINED PRESSURE AND LEAKAGE TESTS AT THE DIRECTION OF THE CITY WATER DEPARTMENT. DOMESTIC HYDROSTATIC AND LEAKAGE TEST SHALL BE MADE IN ACCORDANCE WITH A WWA STANDARD COM SECTION 4. HYDROSTATIC TESTS SHALL BE MADE AT 1.5 TIMES THE WORKING PRESSURE; BUT NOT LESS THAN 150 PSI FOR A PERIOD OF NOT LESS THAN 2 HOURS IN ACCORDANCE WITH THE ABOVE AWWA STANDARD FIRE PROTECTION LINES SHALL BE TESTED AT 200 PSI FOR NOT LESS THAN 2 HOURS.

11) INSTALLATION OF WATER UTILITIES TO BE IN CONFORMANCE WITH THE WATER DISTRICT STANDA

12) WHENEVER POSSIBLE WATER MAINS CROSSING SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18" BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER.

13) SHOULD LOCAL CONDITIONS PREVENT AN 18' SEPARATION, BOTH THE WATER MAIN AND THE SEWER SHALL BE ENCASED IN CONCRETE ON EITHER SIDE OF THE CROSSING.

14) REMOVE VALVE, TEE AND ANCHOR FOR EXITING WATER SERVICES 4" AND LARGER. INSTALL NEW SEGMENT OF DICL WATER MAIN WITH SOLID SLEEVE COUPLINGS PER CITY REQUIREMENTS, FOR DEMOLITION OF SERVICES 2" AN SMALLER, CUT AND CAP AFTER CORPORATION STOP.

#### DRAINAGE

1) DRAINAGE PIPE SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) BY ADS OR APPROVED EQUAL UNLESS INDICATED OTHERWISE.

PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM DESIGNATION C478. CONCRETE REQUIREMENTS SHALL BE 4000 PSI.

3) DRAIN MANHOLE FRAME AND COVER SHALL BE MODEL LC 258-3-000 MARKED WITH THE WORD "DRAIN" AS MANUFACTURED BY E.L. LEBARON COMPANY.

4) AT ALL POINTS OF INTERSECTION BETWEEN STORM DRAIN LINES AND SEVER LINES, ONE FULL LENGTH OF SEWER LINE MUST BE CENTERED OVER THE DRAIN LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE DRAIN AS POSSIBLE.

5) INSTALL STEPS IN ACCORDANCE WITH ASTM C-478, 12" O.C. IN ALL CATCHBASINS AND DRAIN MANHOLES DEEPER THAN 4 EFET

6) MANHOLE AND PIPE JOINT/CONNECTION SHALL BE NEOPRENE KOR-N-SEAL BOOT OR APPROVED EQUAL

7) ANY AND ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF CAMBRIDGE RULES AND REGULATIONS GOVERNING SAME. 8) THE CONTRACTOR MUST CLEAN ALL NEW & EXISTING DRAINAGE STRUCTURES PRIOR TO PROJECT CLOSEOUT.

ELECTRIC 1) SPECIFICATIONS: ALL WORK SHALL BE IN ACCORDANCE WITH THE ELECTRIC COMPANY'S STANDARDS. THE NATIONAL ELECTRICAL SAFETY CODE, AND STATE AND LOCAL CODE REQUIREMENTS.

2) APPROVAL: CONTRACTOR SHALL OBTAIN APPROVAL OF PLAN BY THE WIRE INSPECTOR AND THE ELECTRIC COMPANY. PLANS SHALL SHOW THE LOCATION OF CONDUITS AND THEIR TYPE, SIZE, AND NUMBER. 3) PROVIDE ALL EXCAVATION AND BACK FILLING WORK REQUIRED FOR THE INSTALLATION OF ALL ELECTRIC FAGLINES. THIS SHALL INCLUDE EXCAVATING FOR CONDUITS, MANHOLES, AND/OR JUNCTION ENCLOSURES, AND PADS.

4) INSTALL ALL GROUNDING MATERIALS (IE. WIRE, GROUND, RODS, CONNECTORS, ETC.) AS SPECIFIED BY ELECTRIC COMPANY.

#### GENERAL NOTES:

THIS SET OF PLANS HAS BEEN PREPARED FOR PURPOSES OF MUNICIPAL AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED ON THE DRAWINGS AND EACH DRAWING HAS BEEN REVISED TO INDICATE "ISSUED FOR CONSTRUCTION."

2) THE SEQUENCE OF ALL EXCAVATION OPERATIONS SHALL BE SUCH AS TO INSURE THE MOST EFFICIENT UTILIZATION O EXISTING LEDGE EMBANKMENTS AND THE USE OF A MINIMUM ANOUNT OF BORROW. PRIOR TO ANY LEDGE REMOVANI, THE LEDGE AREA SHALL BE PARTILLY OR COMPLETELY STRIPPEO FO VOERBURDEN AS DIRECTED BY THE RENNEER.

3) ALL SLOPES WHICH ARE 3 FT HORIZONTAL TO 1 FT VERTICAL OR FLATTER MAY BE GRASSED SLOPES. ALL SLOPES STEEPER THAN 3 FT HORIZONTAL TO 1 FT VERTICAL SHALL RECEIVE A SLOPES STABILIZATION GEOTEXTILE FABRIC (2:1) OR A RIPARA SLOPE TREATINEN (1') UNLESS OTHERWISE NOTEO DO THE GRADING FLANS.

THE CONTRACTOR SHALL GIVE FORTY-EIGHT (48) HOURS NOTICE TO PERTINENT TOWN DEPARTMENTS BEFORE

5) THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION. LOCATIONS OF EXISTING UTILITIES ARE APPROXIMATE ONLY AND ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR A THE TIME OF CONSTRUCTION. ALL UNDERGROUND UTILITIES SHOWN WERE COMPLED ACCORDING TO AVAILABLE RECORD PLANS FROM THE VARIOUS UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY. SEE CHAPTER 370. ACTS OF 1686, MASSACHUBETT GENERAL LAVE. THE COMPARE THAT TECH ASSIME NO RESPONSIBILITY FOR DAMAGES ACTS OF 1686, MASSACHUBETT GENERAL LAVE. THE COMPARE THAT TECH ASSIME NO RESPONSIBILITY FOR DAMAGES MASSACHUBETT FOR DEMENTION OF A CONTROL BEFORE PLANTING FUTURE CONTROL MAPPROPRIATE PUBLIC ENGINEERING DEPARTMENT SHALL BE CONTROLTED AND THE PROPOSED UTILITY WORK SHALL BE CONTROLTED AND THE PUBLIC ENGINEERING DEPARTMENT SHALL BE CONTROLTED AND THE PROPOSED UTILITY WORK SHALL BE CONTROLTED AND THE PUBLIC ENGINEERING DEPARTMENT SHALL BE CONTROLTED AND THE PROPOSED UTILITY WORK SHALL BE CONTROLTED AND THE PUBLIC ENGINEERING DEPARTMENT SHALL BE CONTROLTED AND THE PROPOSED UTILITY WORK SHALL BE CONTROL DEPARTMENT. APPROPRIATE COORDINATED

6) PROTECT ALL NEW AND EXISTING UTILITIES TO REMAIN DURING CONSTRUCTION

7) CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH UTILITY COMPANIES

8) THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AND 'DIGSAFE' (1-888-DIG-SAFE) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES. NOTIFY THE ENGINEER OF ANY UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION.

9) THE CONTRACTOR MUST VERIFY EXISTING UTILITY LOCATIONS AS SHOWN ON THE DRAWINGS. REPORT DISCREPANCIES TO TETRA TECH AT (508) 786-2200.

10) ALL AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO EQUAL OR BETTER CONDITION. (SEE PLANTING AND EROSION CONTROL PLANS). ALL FINISHED SURFACES SHALL BE GRADED SMOOTHLY AND EVENLY.

11) AT THE COMPLETION OF THE CONTRACTOR'S OPERATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ALL DRAINAGE FACILITIES (NEW ANDIOR EXISTING) OF DEBRIS. DRAINAGE SWALES AND STORMWATER BASINS SHALL BE CLEARED FOLLOWING CONSTRUCTION.

12) LIMITS OF WORK SHALL BE MARKED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING

13) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ADEQUATE RECORDS OF LOCATION AND ELEVATION OF ALL WORK INSTALLED.

14) IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN THE ELECTRONIC FILE FROM TETRA TECH FOR PROPER COORDINATION OF SURVEY LAYOUT.

15) THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCHMARKS NECESSARY FOR THE CONSTRUCTION OF THE PROJECT.

16) CONTRACTOR MUST PAY ALL FEES AND PERMITS, INCLUDING BUT NOT LIMITED TO ANY BUILDING PERMIT FEES ASSOCIATED WITH RETAINING WALLS AND SITE FENCING.

17) DO NOT SCALE PLANS. DUE TO REPROGRAPHIC STRETCH, PRINTS MAY NOT SCALE ACCURATELY



1'-0" MIN

\_\_\_\_\_TO \_\_\_\_\_3'-0" MAX

FLOAT SMOOTH

S = 1.6% MAX

11

VARIES

SECTION A-A

┶

<u>PLAN</u>

CEMENT CONCRETE DRIVEWAY APRON

NOT TO SCALE

VERTICAL GRANITE CURB -

ARIES "MIN"

6"

6" (TYP.)

VERTICAL GRANITE CURB

CEMENT CONCRETE

1/4" EXPA



COMPACTED

SIDEWALK (SEE SIDEWALK DETAILS)

SIDEWALK SUBBASE (SEE SIDEWALK DETAILS)

MPACTED SUB-GRADE

SIDEWALK (SEE SIDEWALK DETAIL)





RED PRECAST CONCRETE "OPTILOCK" PAVER 6" HMA BASE COURS 6" GRAVEL BORROW

NOT TO SCALE



999999999 PROP. FULL DEP CONSTRUCTION

















8' LIMIT OF

NOTES: 1. CLEAN ALL COLD PLANED SURFACES BEFORE APPLYING JOINT ADHESIVE AND FINAL PAVEMENT

FULL DEPTH PAVEMENT JOINT DETAIL

NOT TO SCALE

COLD PLANE JOINT

6"

CURB SECTION - VERTICAL GRANITE





	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAVER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS
с	NITAL FILL: FILL MATERIAL FOR LAYER C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B) LAYER) TO 18: (460 mm) ABOVE THE TOME (B) LAYER) TO 19: (460 mm) ABOVE THE SUBBASE MAY BE A PART OF THE C LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2-4, A-3 OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12 (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED COMPACT ADDITIONAL LAVERS IN 6' (150 mm) M LIFTS TO A MUN 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 22,000 bis (53 kN). DYNAMIC FORCE NOT TO EXCEED 2000 bis (59 kN).
в	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. 23

PLEASE NOTE: 1. 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'. ANOLLAR NO. 4 (AASH10 M43) SLORE: 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6' (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD COMDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTOR. FOLLIPMENT TO, SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.





TRENCH DRAIN (K100 - KLASSIKDRAIN - LOAD CLASS: E) NOT TO SCALE

MATERIALS

#### NOTES:

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 'STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CO OR ASTM F2922 'STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS'.

2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".

3. "ACCEPTABLE FILL MATERIALS' TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.

4. 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 FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.

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

6. ONCE LAYER C' IS PLACED, ANY SOILMATERIAL 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.



## SC-740 TECHNICAL SPECIFICATION



\* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL. NOTE: ALL DIMENSIONS ARE NOMINAL





#### SEEDING

SEEDING RATES							
PECIES	LBS/1000 S.F.	LBS/ACRE	RECOMMENDED SEEDING DATES				
NNUAL RYEGRASS	1	40	APRIL 1 TO JUNE 1 AUG 1 TO SEPT 15				
OXTAIL MILLET	0.7	30	MAY 1 TO JUNE 30				
ATS	2	80	APRIL 1 TO JULY 1 AUG 15 TO SEPT 15				
VINTER RYE	3	120	AUG 15 TO OCT 15				

### MULCHING

NOTES

MULCH APPLICATION RATES:

NULCH APPLICATION RATES: HAY OR STRAW MULCH SHALL BE AIR-DRIED, FREE OF UNDESIRABLE SEEDS AND COARSE MATERIALS. APPLICATION RATE MUST BE 2 BALES (70-90 LBS) FRF. 1.000 SQUARE FEET OR 1.5 TO 2 TONS FRE AGRE. NO BARE SPOTS SHOWING NO SHALL ONLY DE APPLIED TO 2005 SAT OR FLATTER. ANCHORING METHODS INCLUDING NETTING WITH JUTE. WOOD FIBER OR PLASTIC: OR PAPLE VILLOCH AND TRACK SURFACE UP AND DOWN THE SLOPE SOL CLET MARKS ARE PARALLEL TO THE CONTOURS. FOR OVERWINTER APPLICATION, THE RATE SHALL BE 150 ISS PRI 1.000 SQUARE FEET OR STONSACRE. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW, SNOW MUST BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION. APPLICATION

PRACTICE MULCHING: MULCHING IS AN EROSION CONTROL PRACTICE THAT INVOLVES USING MATERIALS SUCH AS STRAW MULCH DERIVED FROM WHEAT, RICE OR BARLEY OR WOOD MULCH CONSISTING OF SHREDDED OR CHIPPED WOOD BARK OR COMPOST. MULCHING IS HIGHLY EFFECTIVE, AND WHEN APPLED CORRECTLY PROVIDES A LEVEL OF AREAS HOLMING SEEDS FERTURES, SAND TOPSOIL IN PLACE, RETAINING MOISTURE, AND INSULATING PLANT ROOTS AGAINST EXTREME TEMPERATURES.

INSTALLATION: MULCH MUST BE APPLIED UNIFORMLY TO THE SOIL AND PROPERLY ANCHORED (USING STUDDED ROLLERS, TACKIFIERS OR AN ANCHORING TOOL), MULCH SHOULD NOT BE APPLIED ON SLOPES STEEPER THAN 31. AND SHOULD NOT BE USED IN AREAS OF CONCENTRATED FLOWS. AREA SHOULD BE ROUDHEND OR TRACKED PRIOR TO APPLICATION. AVIDI APPLYING MULCH DURING OR IMMEDIATELY BEFORE RAINFALL. THERE SHOULD BE NO BARE SONTS SHUMMINE FLYPOSET SOLT

\*\* HYDRAULICALLY APPLIED MULCHES SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

MANTENANCE, MULCH SHALL BE REAPPLIED TO ANY BARE SPOTS, MAINTAIN AN UNBROKEN GROUND COVER AND REPAIR ANY DAMAGED GROUND COVER AND RE-MULCH EXPOSED AREAS. INSPECT AFTER EACH RAINFALL EVENT TO MARE SURE THE MULCH IS NOT DISLODGED OR CAUSING EROSION.

TEMPORARY STABILIZATION MULCHING & SEEDING



TREE PROTECTION BARRIERS MUST BE PLACED AROUND TREES TO BE RETAINED WITHIN AN AREA WHERE LAND ALTERATION AND CONSTRUCTION ACTIVITIES WILL OCCUR. TREES TO REMAIN SHALL BE INDICATED ON THE PLANS.

2. TREE PROTECTION BARRIER MUST REMAIN IN PLACE UNTIL GRADING AND CONSTRUCTION ACTIVITY IS COMPLETE OR UNTIL COMMENCEMENT OF FINISH GRADING AND SODDING. BARRIERS SHALL BE PLACED AROUND TREES AT THE DRIPLINE EXCEPT WHERE LAND ALTERATION OR CONSTRUCTION ACTIVITIES ARE APPROVED WITHIN THE DRIPLINE.

4. THE DRIPLINE OF A TREE IS THE IMAGINARY VERTICAL LINE THAT EXTENDS DOWN FROM THE OUTERMOST TIPS OF THE TREE'S BRANCHES TO THE GROUND.

AREAS SURROUNDED BY THE TREE PROTECTION BARRIERS SHALL BE PROTECTED VEGETATION REMOVAL, PLACEMENT OF SOIL, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND.

6. ALL TREE ROOTS WITHIN AREA TO BE GRADED AND ORIGINATING FROM A PROTECTED TREE SHALL BE SEVERED CLEANLY AT THE LIMITS OF THE PROTECTED AREA.

7. ALL TREE PRUNING AND TRIMMING ON ANY TREE TO BE RETAINED SHALL BE PERFORMED BY AN ARBORIST CERTIFIED BY THE AMERICAN SOCIETY OF ARBORICULTURE (ASA). 2'x2' TREE PROTECTION SIGNS SPACED A MINIMUM OF ONE SIGN EVERY 300' SHALL CONTAIN THE WORDING "TREE PROTECTION ZONE - KEEP OUT".

> TREE PROTECTION BARRIER NOT TO SCALE





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