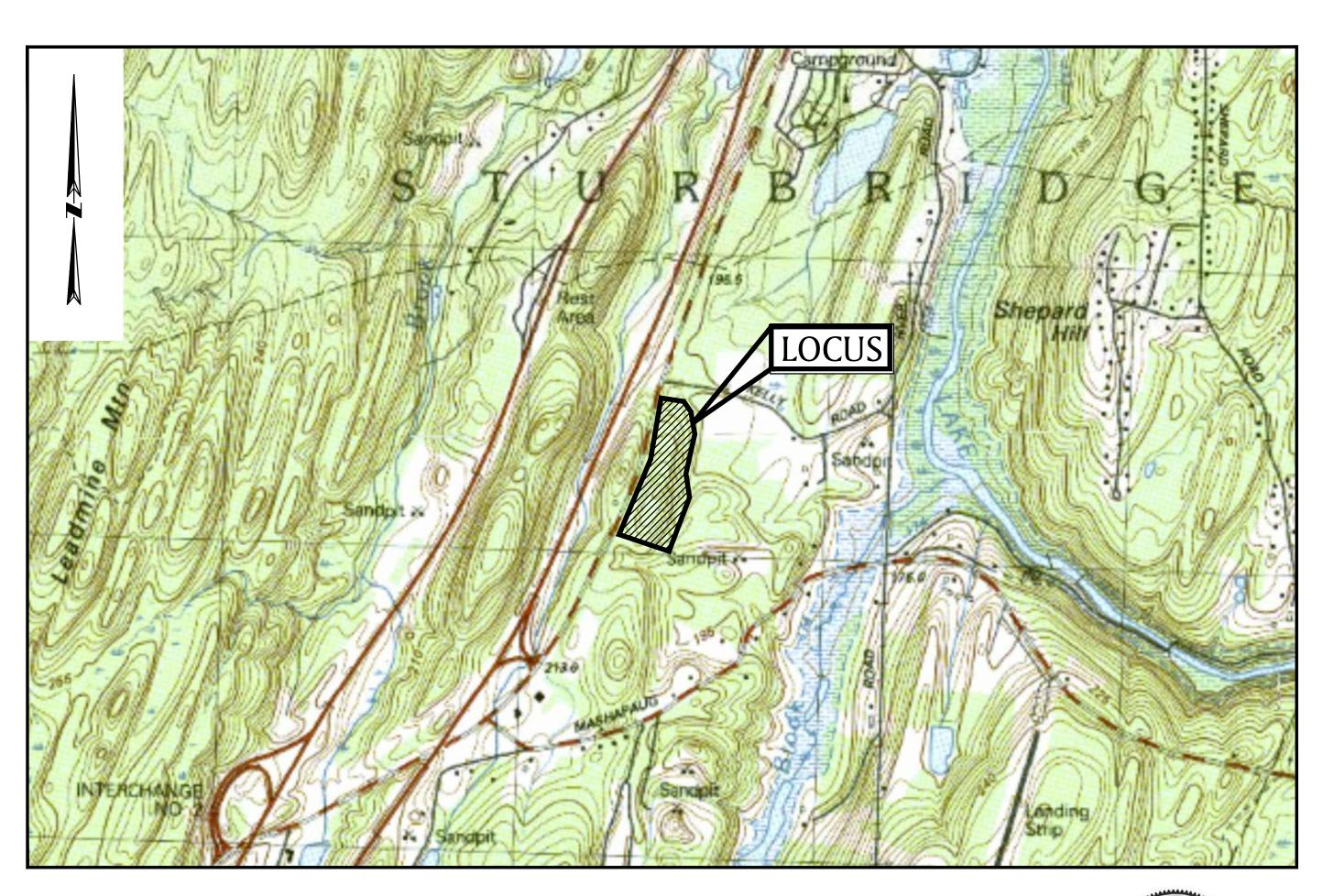
GROUND-MOUNTED PHOTOVOLTAIC SYSTEM

200 HAYNES STREET STURBRIDGE, MASSACHUSETTS

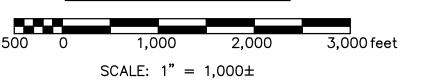
AUGUST 1, 2023

REVISED: MARCH 6, 2024

ZONING COMPLIANCE TABLE	-	
CRITERIA: ARTICLE XIV - INTENSITY REGULA	TIONS (§300—14.2, §	SPECIAL USE)
	REQUIRED	PROPOSED
MINIMUM LOT AREA	1 ACRE	13.92 ACRES
MINIMUM LOT FRONTAGE	200'	1,619.5'±
MINIMUM STREET SETBACK	50'	54.2'
MINIMUM SIDE/REAR YARD SETBACK	30'	192.3'
MAX. LOT COVERAGE (%)	30%	17.0%
MAXIMUM HEIGHT	35'	N/A
CRITERIA: ARTICLE X - SOLAR ENERGY FACI	LITIES (§300-10.1 -	- §300.10.12)
	REQUIRED	PROPOSED
MINIMUM FRONT/SIDE/REAR YARD SETBACK	100'	100.6'
MINIMUM RESIDENTIAL LANDSCAPED BUFFER	200'	200.0'
MAX. PARCEL COVERAGE	20%	16.9%



LOCUS MAP





INDEX OF DRAWINGS

- 1 TITLE SHEET
- 2 EXISTING CONDITIONS PLAN
- 3 EROSION & SEDIMENTATION CONTROL PLAN
- 4 LAYOUT & MATERIALS PLAN
- GRADING PLAN
- 6 DRAINAGE PLAN
- 7 PLANTING PLAN
- 8-9 DETAIL SHEETS

PREPARED BY:



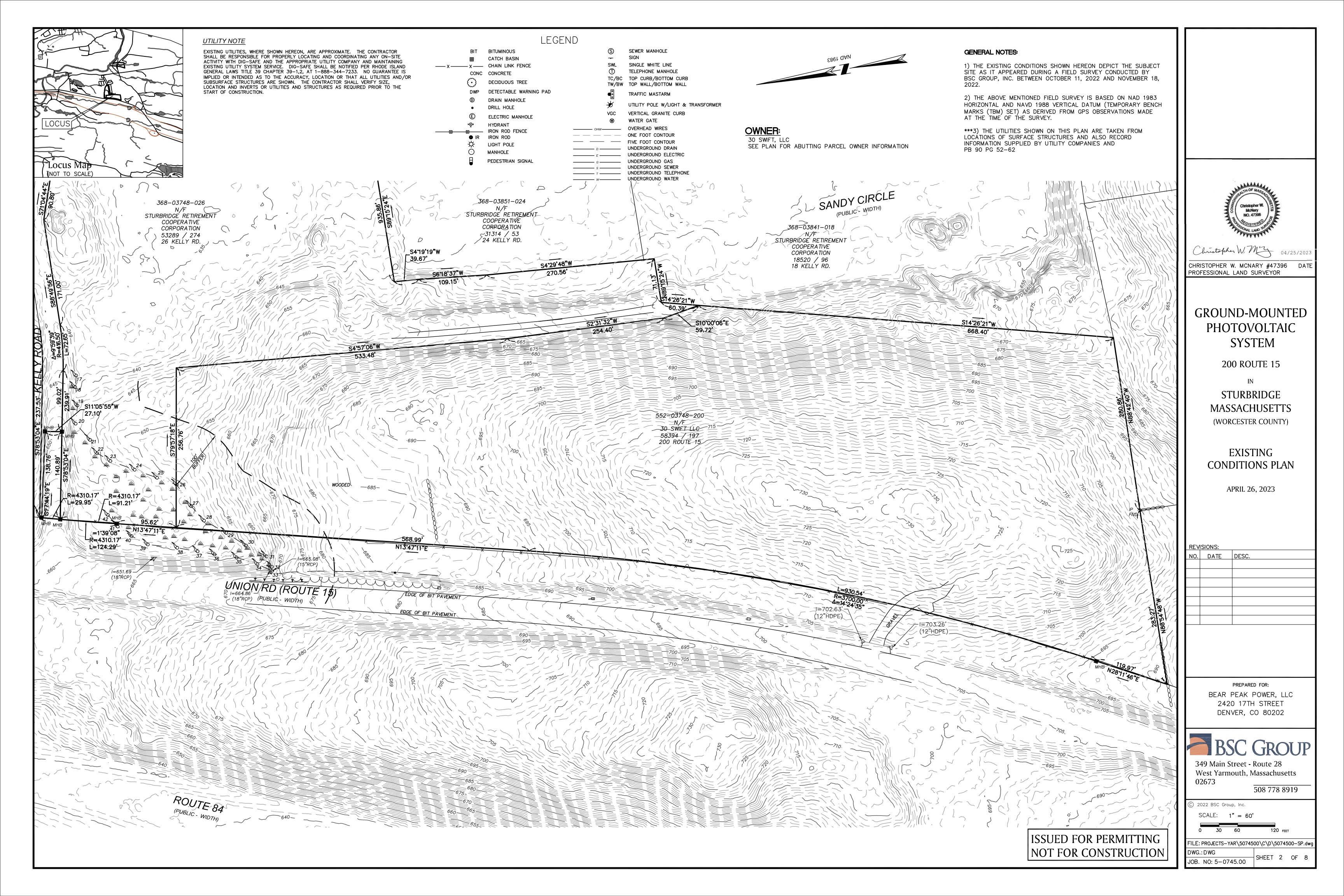
2420 17TH STREET DENVER, CO 80202

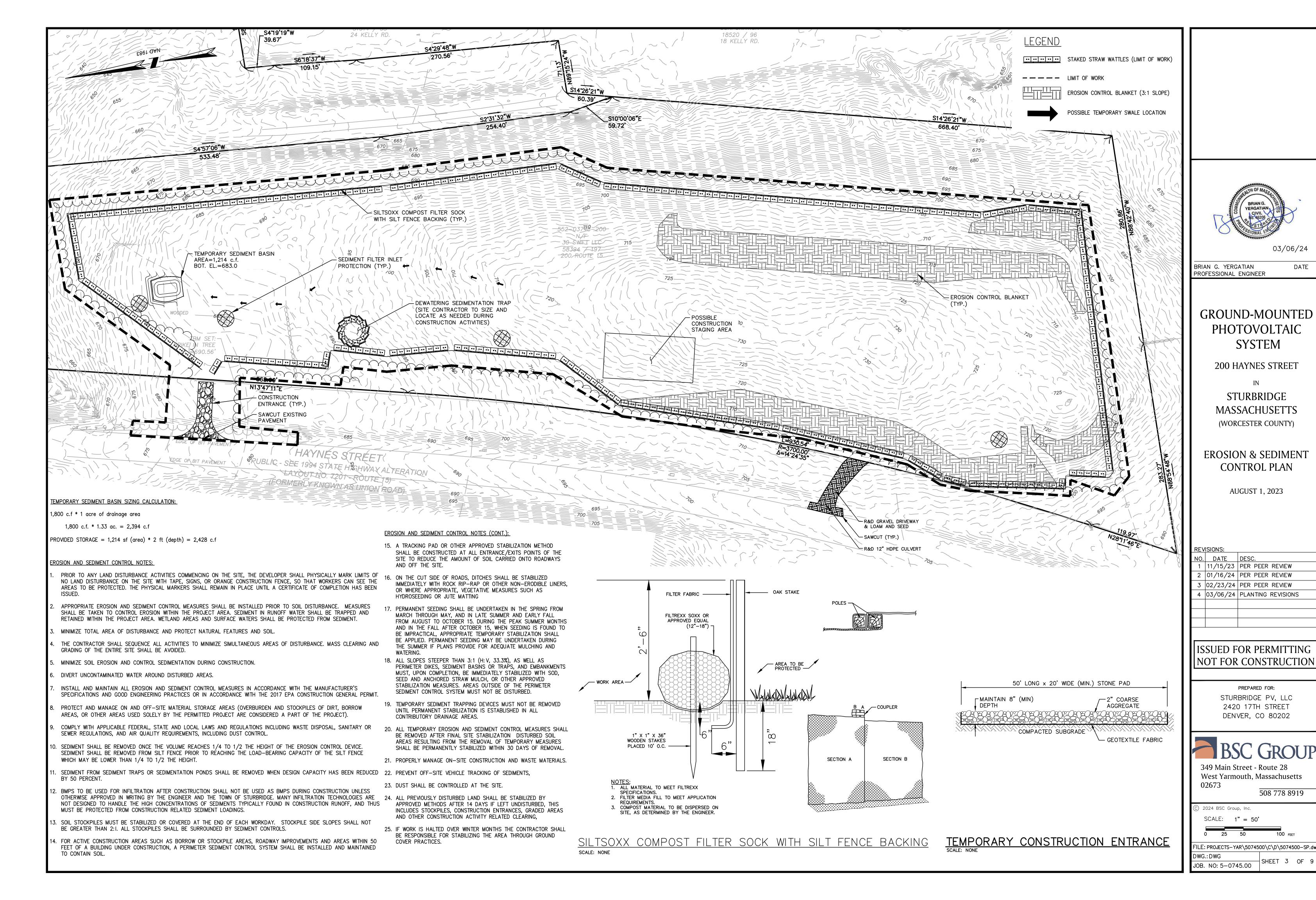
STURBRIDGE PV, LLC

PREPARED FOR:

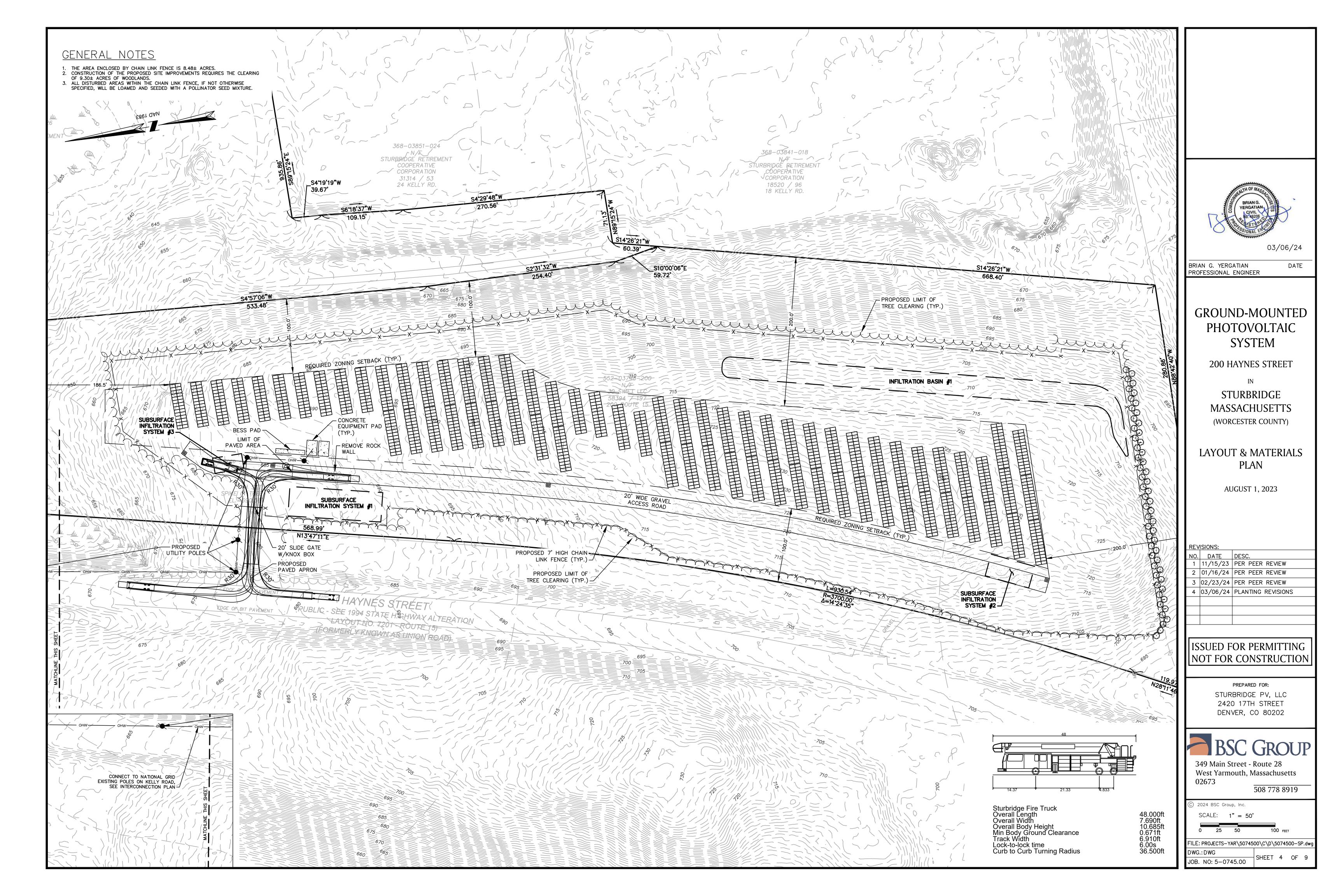
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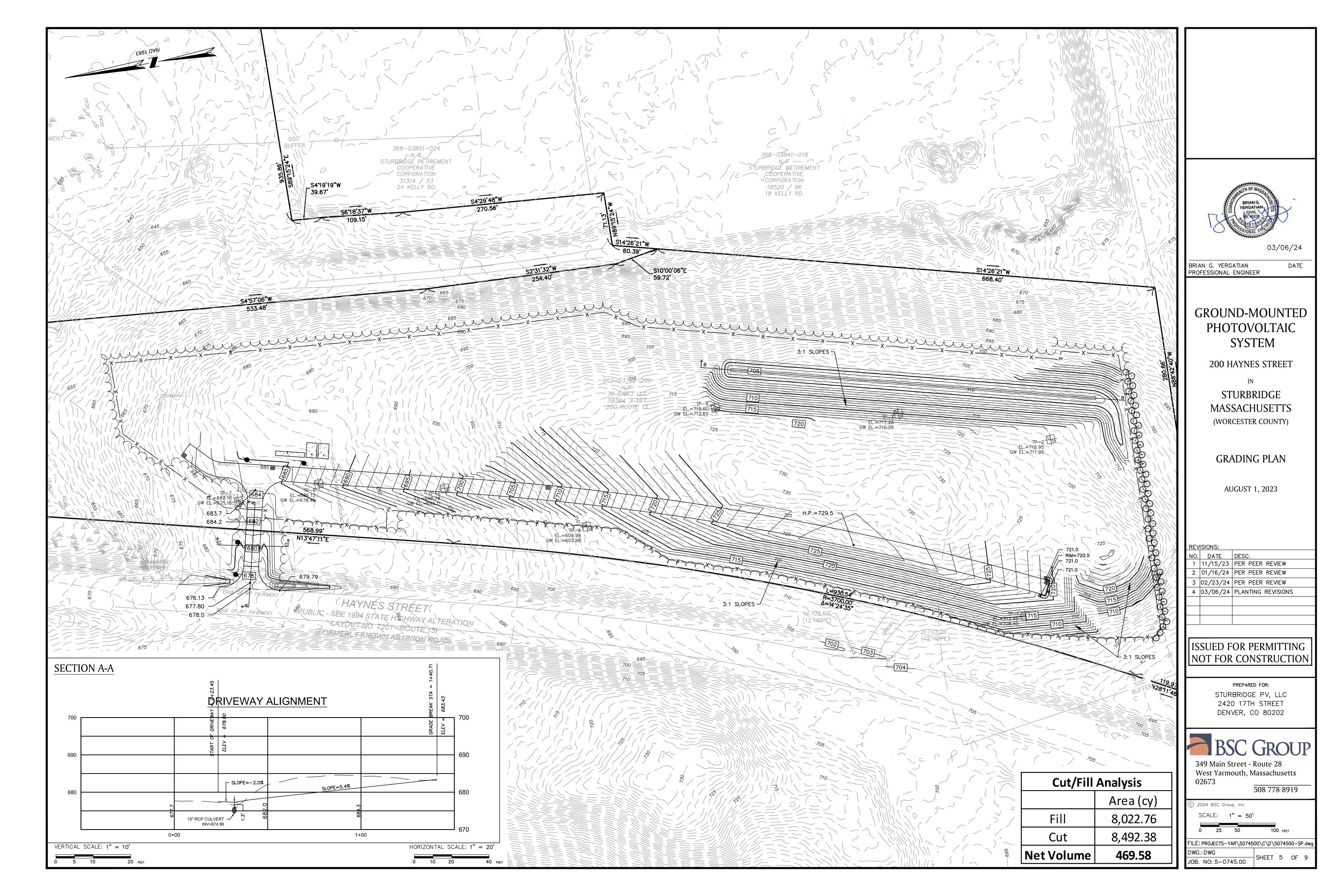
JOB NO: 5-0745.00 SHEET 1 OF 9

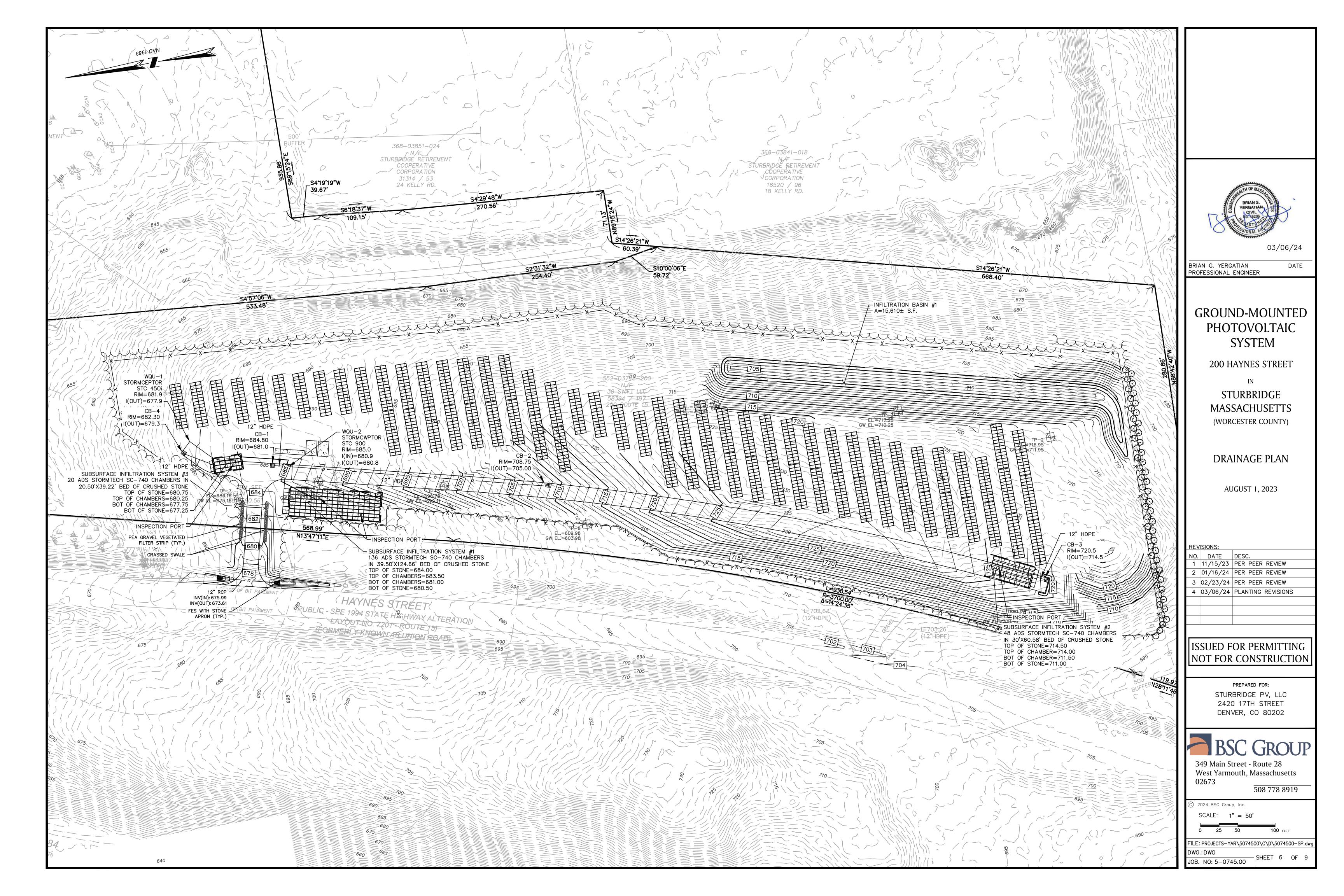


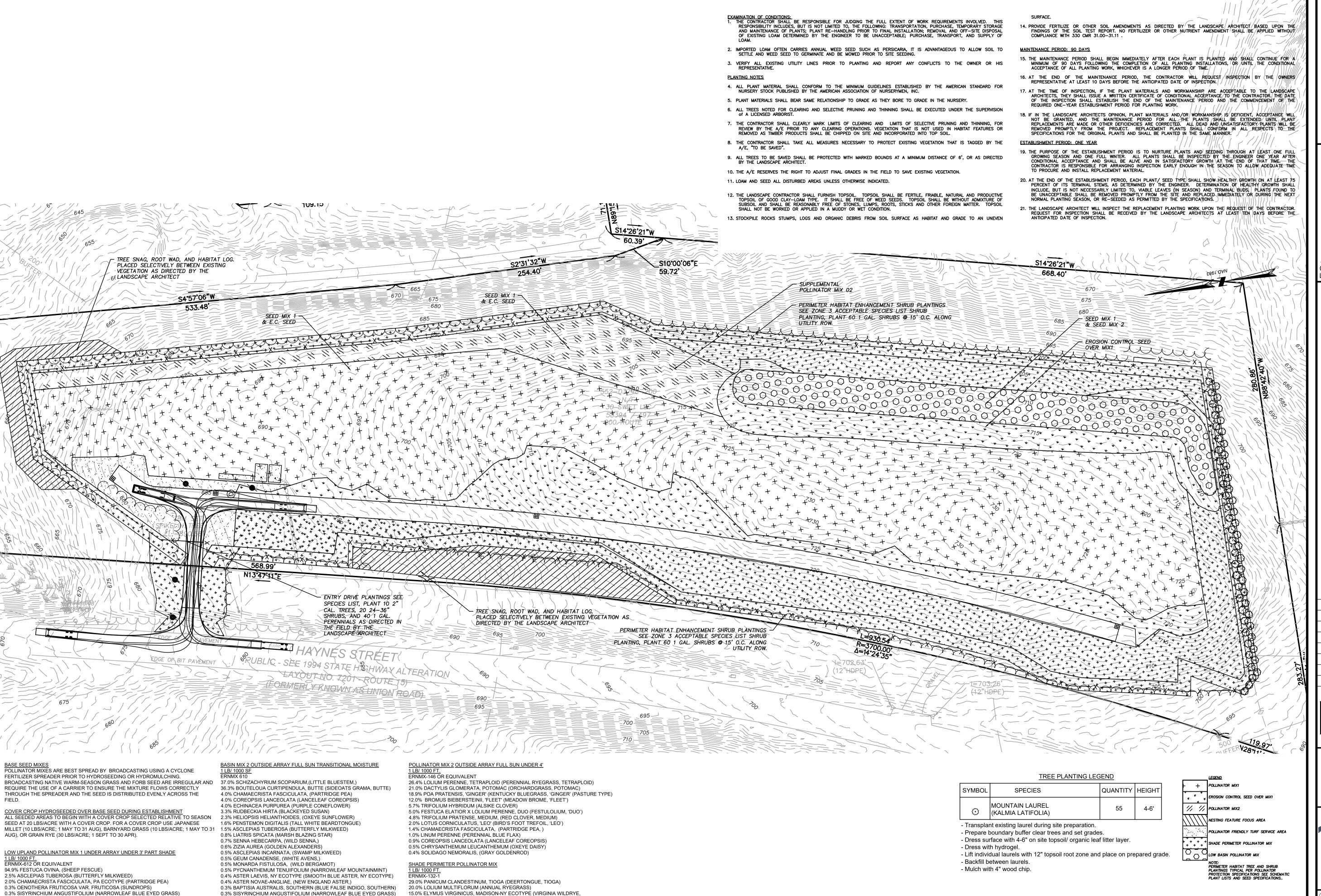


DATE









0.2% OENOTHERA FRUTICOSA VAR. FRUTICOSA(SUNDROPS)

0.2% SOLIDAGO NEMORALIS, (GRAY GOLDENROD)

0.1% ASTER PRENANTHOIDES, (ZIGZAG ASTER)

EROSION CONTROL SEED (OVER MIX 1 FOR STEEP SLOPES) UNDER 3'

30% AVENA SATIVA, (OATS)

LOW GRASS MIX WITH RED AND WHITE CLOVER

70% LOLIUM PERENNE, TETRAPLOID (PERENNIAL RYEGRASS, TETRAPLOID)

15.0% PANICUM VIRGATUM, 'SHELTER' (SWITCHGRASS, 'SHELTER')

5.0% AGROSTIS PERENNANS, ALBANY PINE (AUTUMN BENTGRASS)

10.0% FESTUCA RUBRA (CREEPING RED FESCUE)

3.0% CHAMAECRISTA FASCICULATA, (PARTRIDGE PEA)

3.0% CAREX VULPINOIDEA, (FOX SEDGE)

CASEYLEE BASTIEN RLA 3/5/24 DATE LANDSCAPE ARCHITECT

GROUND-MOUNTED PHOTOVOLTAIC SYSTEM

200 HAYNES STREET

STURBRIDGE **MASSACHUSETTS** (WORCESTER COUNTY)

PLANTING PLAN

AUGUST 1, 2023

NO. DATE DESC. 1 | 11/15/23 | PER PEER REVIEW 2 | 01/16/24 | PER PEER REVIEW 3 02/23/24 PER PEER REVIEW 4 03/06/24 PLANTING REVISIONS

ISSUED FOR PERMITTING NOT FOR CONSTRUCTION

PREPARED FOR:

STURBRIDGE PV, LLC 2420 17TH STREET DENVER, CO 80202



349 Main Street - Route 28 West Yarmouth, Massachusetts 02673

508 778 8919

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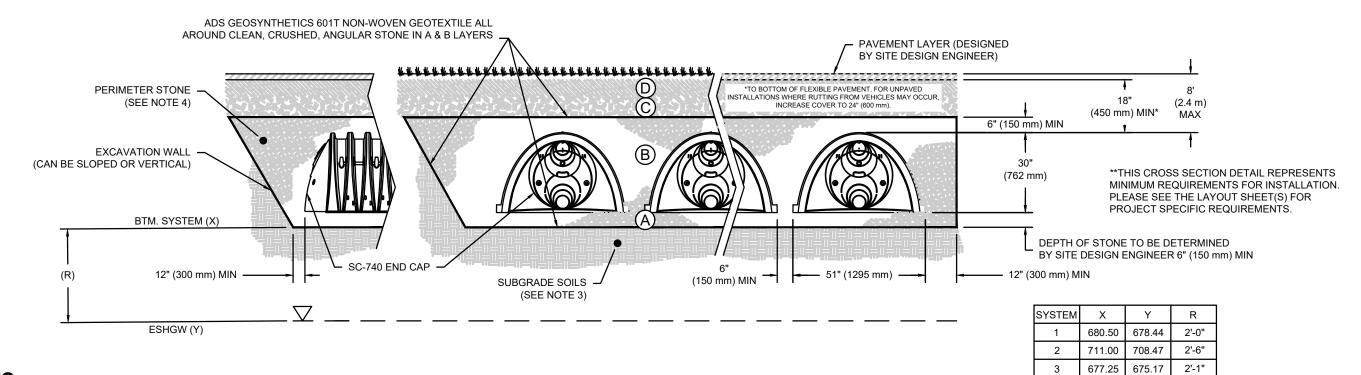
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JOB. NO: 5-0745.00

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS AASHTO MATERIAL COMPACTION / DENSITY REQUIREMENT MATERIAL LOCATION **DESCRIPTION CLASSIFICATIONS** FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THA CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS. PREPARATION REQUIREMENTS. PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER. BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER AASHTO M1451 GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN A-1, A-2-4, A-3 **INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE** 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR PROCESSED AGGREGATE. TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT PROCESSED AGGREGATE MATERIALS. ROLLER GROSS MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS SUBBASE MAY BE A PART OF THE 'C' LAYER. AASHTO M431 VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIO LAYER. 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 FORCE NOT TO EXCEED 20,000 lbs (89 kN). EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS AASHTO M431 FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER CLEAN, CRUSHED, ANGULAR STONE NO COMPACTION REQUIRED. 3, 357, 4, 467, 5, 56, 57 FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE AASHTO M431 CLEAN, CRUSHED, ANGULAR STONE PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.² SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER. 3, 357, 4, 467, 5, 56, 57

PLEASE NOTE: 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 6" (150 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.



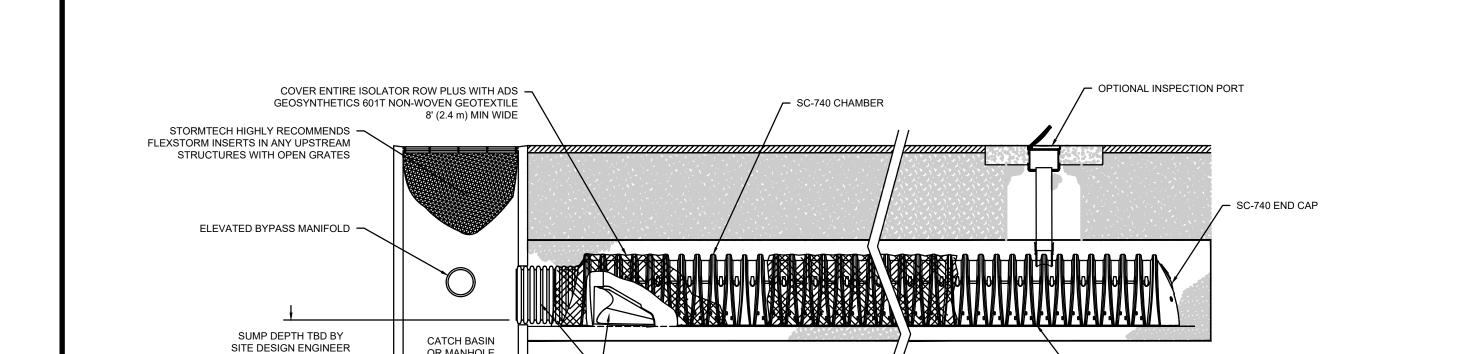
SC-740 CROSS SECTION DETAIL

NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418. "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS
- SC-740 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 FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS
- REQUIREMENTS FOR HANDLING AND INSTALLATION:

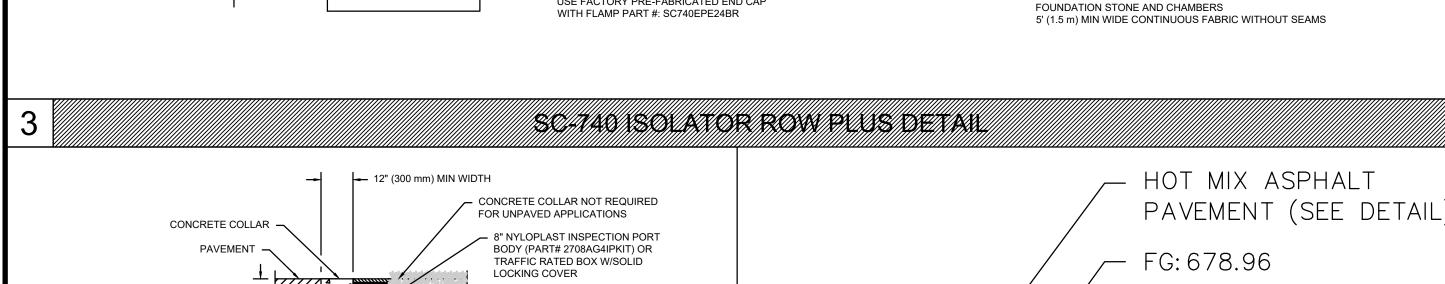
(24" [600 mm] MIN RECOMMENDED

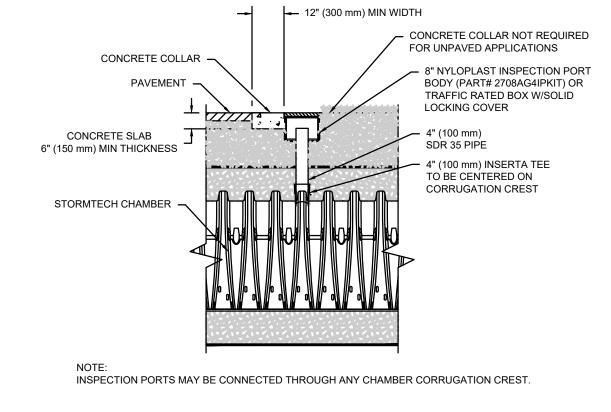
- TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
- TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 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.



24" (600 mm) HDPE ACCESS PIPE REQUIRED

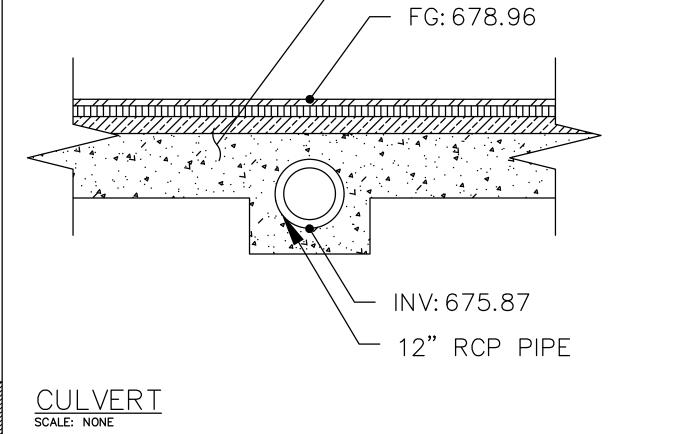
USE FACTORY PRE-FABRICATED END CAP





A"PXXXXXSPECTION PORT/DETAIL

OR MANHOLE



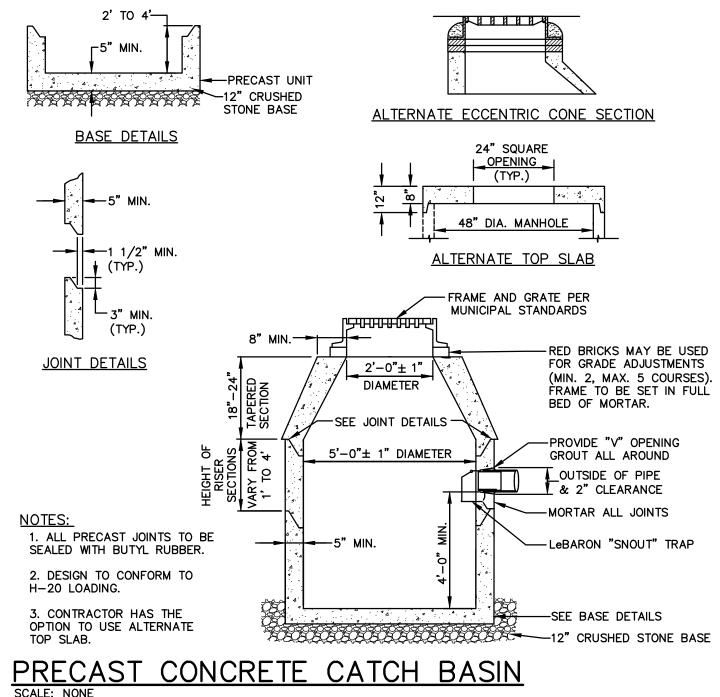
ONE LAYER OF ADSPLUS125 WOVEN GEOTEXTILE BETWEEN

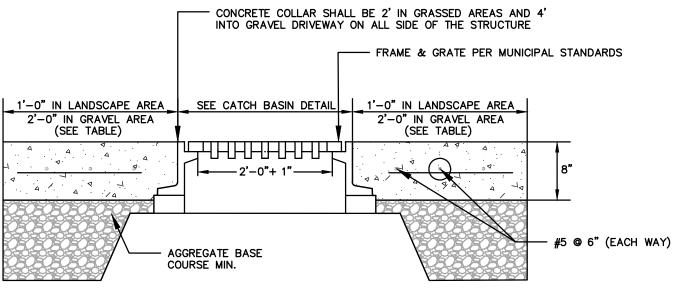
INFILTRATION BASIN #1 TOP EL. 706.00 6" LOAM (50% SAND, 50% LOAM MIXTURE) & SEED--REMOVE UNSUITABLE MATERIAL AN REPLACE WITH CLEAN GRANULAR SOILS

NOTES:

- 1. LIGHT EARTH MOVING EQUIPMENT IS TO BE USED DURING CONSTRUCTION TO REDUCE COMPACTION OF BASIN BOTTOM.
- 2. BASIN FLOOR IS TO BE DEEPLY TILLED AFTER FINAL GRADING.
- 3. PROPER EROSION SEDIMENT CONTROLS SHOULD BE UTILIZED DURING CONSTRUCTION TO PREVENT SEDIMENT AND/OR DEBRIS FROM ENTERING THE BASIN.
- 4. 75% OF RIP-RAP STONE SHALL BE 70 100 lbs.

INFILTRATION BASIN CROSS-SECTION

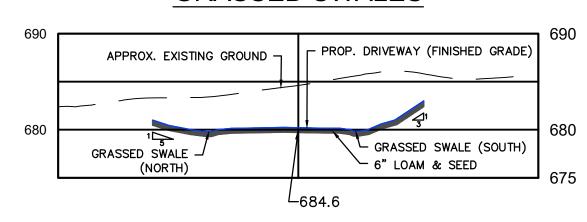




NOTE: CONCRETE COLLARS TO BE PLACED AT ALL PROPOSED CATCH BASIN INLETS AND STRC. | NORTH | SOUTH | EAST | WEST | CB-1 2'-0" 2'-0" 1'-0" 2'-0" CB-2 2'-0" 2'-0" 1'-0" 2'-0" CB-3 2'-0" 1'-0" 1'-0" 2'-0" CB-4 1'-0" 2'-0" 2'-0" 1'-0" ANY OTHER STRUCTURES PLACED IN GRAVEL

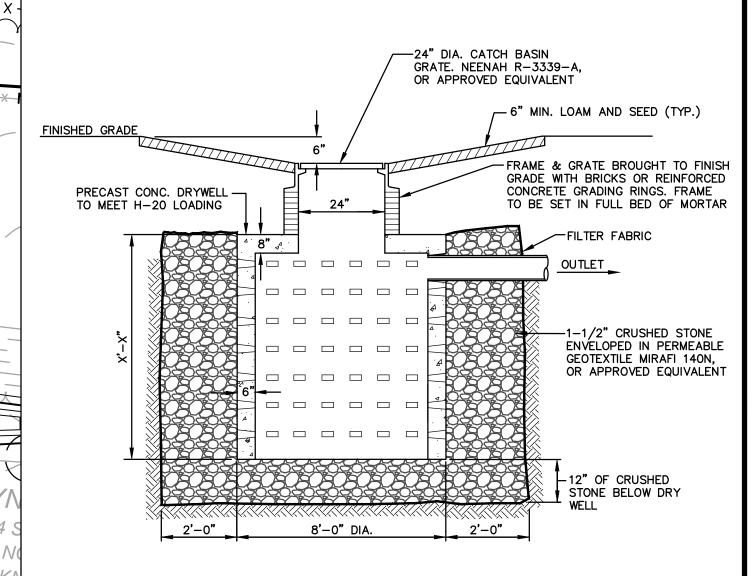
CONCRETE COLLAR SCALE: NONE

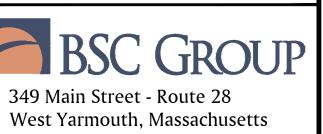
GRASSED SWALES



- 1. UPHILL GRADED SLOPES IN EXCESS OF 3:1 (HOR: VERT.) TO BE STABILIZED WITH JUTE MATTING OR OTHER PROTECTIVE FABRIC IN ADDITION TO LOAM AND SEED TO PREVENT EROSION OF NEWLY
- PLACED OR EXCAVATED MATERIAL. MAX SLOPE OF 2:1 2. SWALE CHANNEL AND SIDE SLOPES TO BE STABLIZED WITH JUTE MATTING IN ADDITION TO LOAM AND SEED TO PREVENT EROSION.
- 3. GRASS MIX SHOULD CONSIST OF SPECIES THAT PRODUCE FINE, UNIFORM AND DENSE COVER THAT CAN WITHSTAND PREVAILING MOISTURE CONDITIONS. (CONSIDER WETLAND ADAPTED SPECIES FOR SWALES IN AREAS OF POORLY DRAINED SOILS) SPECIES TO BE SELECTED BY WETLAND SPECIALIST.

GRASSED SWALE (SECTION C-C)





03/06/24

DATE

BRIAN G. YERGATIAN

PROFESSIONAL ENGINEER

GROUND-MOUNTED

PHOTOVOLTAIC

SYSTEM

200 HAYNES STREET

STURBRIDGE

MASSACHUSETTS

(WORCESTER COUNTY)

DETAIL SHEET

AUGUST 1, 2023

REVISIONS:

NO. DATE DESC.

1 | 11/15/23 | PER PEER REVIEW

2 |01/16/24 | PER PEER REVIEW

3 02/23/24 PER PEER REVIEW

4 03/06/24 PLANTING REVISIONS

ISSUED FOR PERMITTING

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PREPARED FOR:

STURBRIDGE PV, LLC

2420 17TH STREET

DENVER, CO 80202

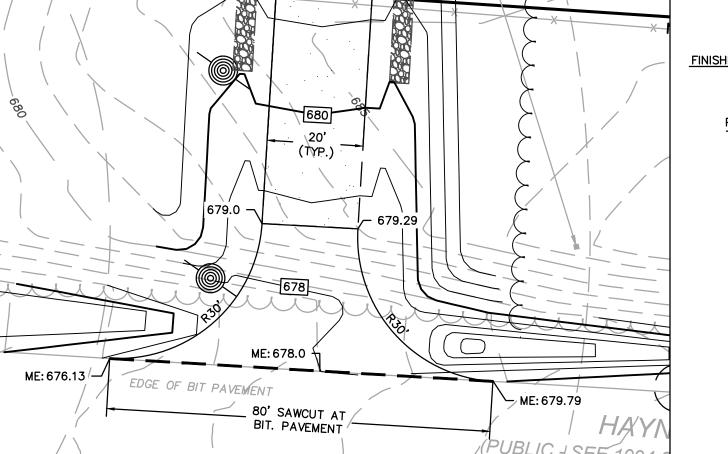
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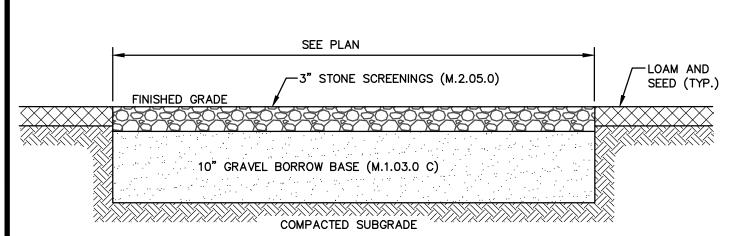
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(FORMERLY K EDGE OF BIT PAVENENT

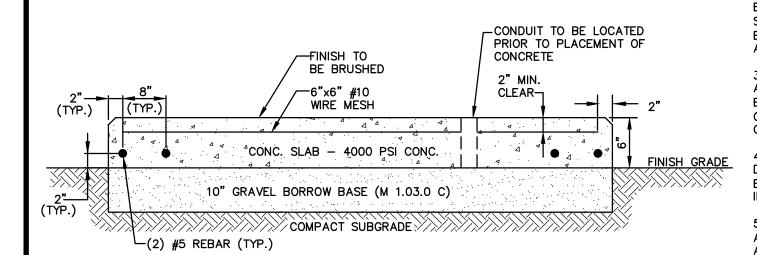
DRY WELL WITH GRATE

DRIVEWAY APRON (SC SERIES CHAMBER)



GRAVEL DRIVEWAY SCALE: NONE

TRANSFORMER PAD



STANDARD DUTY FLEXIBLE PAVEMENT

HOT MIX ASPHALT PAVEMENT SECTIONS

PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND MAY BE

BASED ON THE RESULTS OF GEOTECHNICAL INVESTIGATIONS

VERTICAL SCALE: 1" = 15'

15" COMPACTED GRAVEL

BORROW BASE

(M 1.03.0 C)

USA 1-800-772-2040 CANADA 1-800-448-2040 **CONSTRUCTION NOTES:**

14649 HIGHWAY 41 NORTH, EVANSVILLE, INDIANA 47725

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. HYDROSEED SIDE SLOPES BEFORE INSTALLATION OF BLANKETS.

2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.

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 SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.

5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART

14'-7"

STAPLE PATTERN GUIDE ---|---*3" (7.5cm) (0.6m)◆ | ∕ Seam Stitch (1.0m)1.7 STAPLES PER SQ. YD. (2.0 STAPLES PER SQ. M)

BLANKETS WITH THE OPTIONAL NORTH AMERICAN GREEN™DOT SYSTEM PLACE STAPLES/STAKES THROUGH EACH OF THE GREEN COLORED DOTS.

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15CM) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

A. OVERLAPS AND SEAMS

14'-4"

NON-REFLECTIVE

re-spread existing topsoil under 🖚

AND AROUND AND BIETWEEN PANELS

(IMPORT TOPSOIL AS NEEDED).

SECTION VIEW - TYPICAL PANEL/RACK ASSEMBLY

SOLAR PANELS

- B. PROJECTED WATER LINE C. CHANNEL BOTTOM/SIDE SLOPE VERTICES
- * HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

TILT BRACKET

C-CHANNEL

(TYP)

FINISH GRADE

FOUNDATION SYSTEM-

TO BE DETERMINED

LOWER SUPPORT

- ** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENTHS IN EXCESS OF 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.
- *LOCATION OF SEAM STITCH WILL VARY DEPENDING ON NORTH AMERICAN GREEN PRODUCT TYPE: -APPROX. 5" SEAM OVERLAP FOR BIONET EROSION CONTROL BLANKETS

SLOPE STABILIZATION INSTALLATION \DETAILS\LD\EROSION CONTROL\SLOPE STABILIZATION INSTALLATION.DWG

14'-7"

GRADE -

HORIZONTAL SCALE: 1" = 30'

-LOWER SUPPORT ANGLE MOUNT

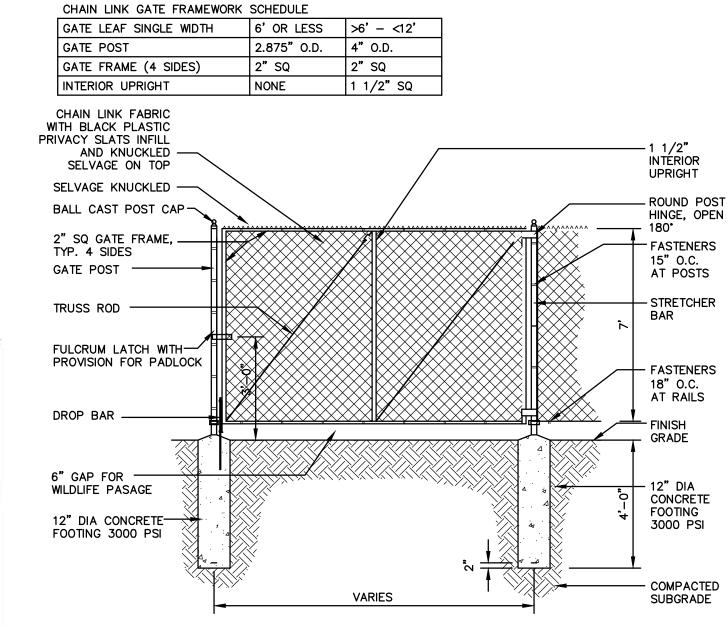
HORIZONTAL

(TYP)

STEEL Z-RAIL



ÀS SPEC.



CHAIN LINK FENCE GATE

CHAIN LINK FENCE FRAMEWORK SCHEDULE

END, CORNER & PULL POST | 2.375" O.D.

1.900" O.D.

1.660" O.D.

MALLEABLE IRON

TENSION BAR

TYPICAL FENCE POST

CONCRETE FOOTING

TYP. TO FROST LINE

— POST TOP TYP.

—END AND CORNER POST.

NONE

LINE POST

MIDDLE RAIL

AND HARDWARE

AS SPEC.

4' MIN.

BLACK VINYL COATED.

TOP AND BOTTOM RAIL

SEE SPECIFICATION FOR FRAME MEMBER

SIZING, MESH GAUGE & OPENING, FINISH,

FINISH GRADE

FENCE MESH AND FRAME SHALL BE

4"MIN.

CONCRETE

PSI.-TYP

FOOTING 4000

FOOTING SECTION FENCE ELEVATION

TOP RAIL -FENCE MESH

CHAIN LINK FABRIC

-BAND AND BUCKLE

ON TOP

- LINE POST

TOP RAIL

-BOTTOM RAIL

-BOTTOM SELVAGE

-FINISHED GRADE

WITH BLACK PLASTIC

PRIVACY SLATS INFILL

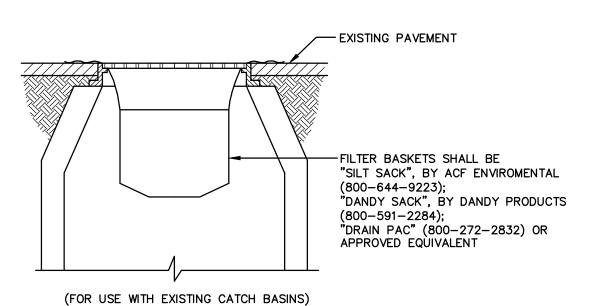
-AND KNUCKLED SELVAGE

FASTENERS AT 12" O.C

AT RAILS AND POSTS

INFILTRATION BASIN 01 APPROXIMATE EXISTING GROUND - INFILTRATION BASIN - FINISHED GROUND TOP ELEV.=706 INFILTRATION BASIN APPROXIMATE ESTIMATED SEASONAL HIGH GROUNDWATER ELEVATION 690 2+00 4+00 5+00

INFILTRATION BASIN (SECTION B-B)
SCALE: NONE



NOTE:

FILTER BASKETS TO BE PLACED IN ALL CATCH BASINS IN THE VICINITY OF NEW CONSTRUCTION. CATCH BASINS ARE TO BE

OF THE MINIMUM WEEKLY MAINTENANCE, 1 PROTECTED AS SHOWN, WITH MINIMUM WEEKLY MAINTENANCE, OR AS REQUIRED AND REPLACED IF NECESSARY

SEDIMENT FILTER INLET PROTECTION



BRIAN G. YERGATIAN DATE

PROFESSIONAL ENGINEER

GROUND-MOUNTED PHOTOVOLTAIC **SYSTEM**

200 HAYNES STREET

STURBRIDGE **MASSACHUSETTS** (WORCESTER COUNTY)

DETAIL SHEET II

AUGUST 1, 2023

REVISIONS:		
NO.	DATE	DESC.
1	11/15/23	PER PEER REVIEW
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PREPARED FOR:

STURBRIDGE PV, LLC 2420 17TH STREET DENVER, CO 80202



349 Main Street - Route 28 West Yarmouth, Massachusetts

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SCALE: NOT TO SCALE

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SHEET 9 OF 9 JOB. NO: 5-0745.00