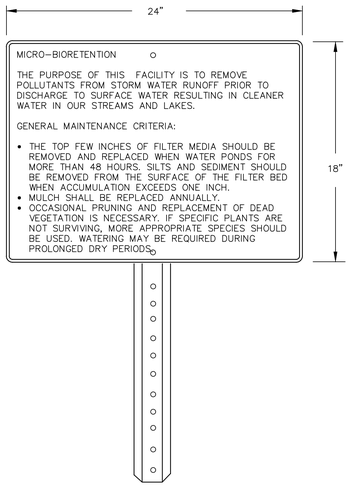
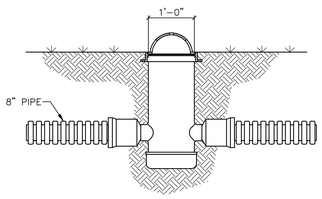
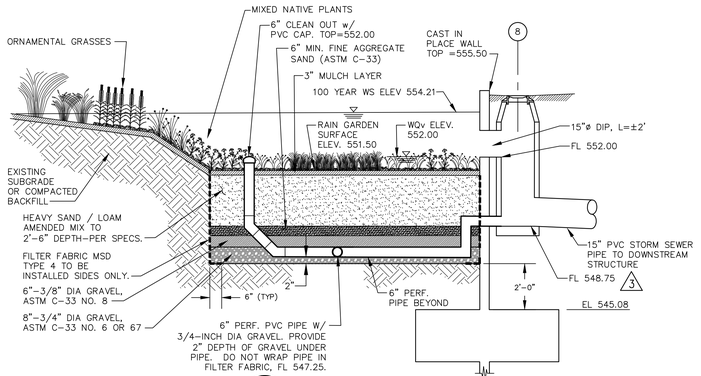


STANDARD 24"X18"X0.080" ALUMINUM SIGN FACE WITH BLACK 0.50" SERIES 2000 STANDARD ALPHABET ON WHITE BACKGROUND GALVANIZED STEEL POST 9'-6" LONG. SET BOTTOM OF SIGN 5'-0" ABOVE GRADE. SET BOTTOM OF POST 3'-0" BELLOW GRADE.

1 C700 BMP INFORMATIONAL SIGN
NOT TO SCALE

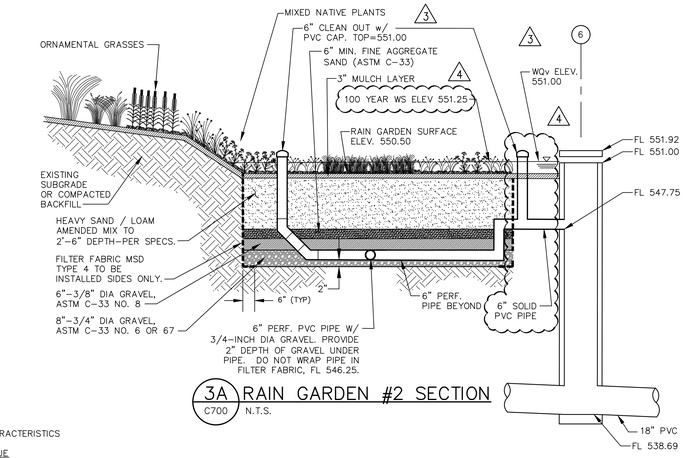


2 C700 YARD DRAIN
N.T.S.



3 C700 RAIN GARDEN #1 SECTION
N.T.S.

NOTE:
1. SEE LANDSCAPE DRAWINGS FOR PLANTING PLAN AND SCHEDULE.
2. SEE PLAN SHEET FOR RAIN GARDEN PERFORATED PIPE LAYOUT.
3. CONTRACTOR TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS TO BE APPROVED BY THE PROJECT ENGINEER & MSD. CONTACT MSD AT 314-335-2072.

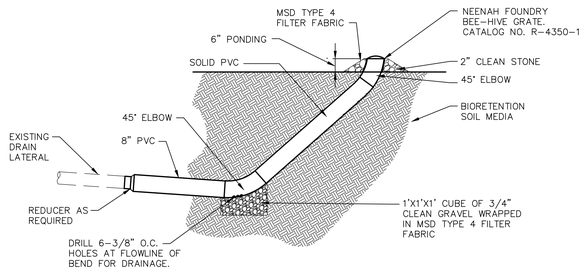


3A C700 RAIN GARDEN #2 SECTION
N.T.S.

TABLE 1: PLANTING SOIL CHARACTERISTICS

PARAMETER	VALUE
pH RANGE	5.2 TO 8.00
ORGANIC MATTER	1.5 TO 5.0%
MAGNESIUM	35 LBS. PER ACRE, MINIMUM
PHOSPHORUS (P_2O_5)	75 LBS. PER ACRE, MINIMUM
POTASSIUM (K_2O)	85 LBS. PER ACRE, MINIMUM
SOLUBLE SALTS	<= 500 PPM.

THE PLANTING SOIL SHOULD BE A SANDY LOAM OR LOAMY SAND (SHOULD CONTAIN A MINIMUM OF 60% SAND, BY VOLUME). THE CLAY CONTENT FOR THESE SOILS SHOULD BE LESS THAN 10% BY VOLUME. THE SOIL SHOULD BE FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 1" IN DIAMETER. BRUSH OR SEEDS FROM NOXIOUS WEEDS, SUCH AS JOHNSON GRASS, MUGWORT, NUTSEDGE, AND CANADIAN THISTLE SHOULD NOT BE PRESENT IN THE SOIL. PLACING OF THE PLANTING SOIL SHOULD BE IN LIFTS OF 12 TO 18 INCHES, LOOSELY COMPACTED (RUBBER WHEELED HEAVY EQUIPMENT AND MECHANICAL TAMPING DEVISES ARE NOT RECOMMENDED FOR COMPACTION).



6 C700 BUBBLER DETAIL
N.T.S.

PERMEABLE PAVER NOTES:

1. THE CONTRACTOR SHALL OBTAIN THE CONCRETE PAVER MANUFACTURER'S CERTIFICATION THAT THE PAVING UNITS SUPPLIED TO CONSTRUCT THE PICP HAVE BEEN APPROVED BY MSD AND MEET THE REQUIREMENTS IN ASTM C936. THIS CERTIFICATION SHALL BE PROVIDED TO THE MSD DIVISION INSPECTOR. THE CERTIFICATION SHALL INCLUDE THE MANUFACTURER'S NAME, AND STATE THAT THE PICP SUPPLIED MEETS THE ASTM C936 SPECIFICATIONS, (TESTING SHOULD BE CURRENT WITHIN PREVIOUS 12 MONTHS) AND THAT THE PAVING MATERIALS MEET ALL REQUIREMENTS AS EVALUATED UNDER THE MANUFACTURER'S QUALITY CONTROL PROGRAM.
2. PRIOR TO OBTAINING A CONSTRUCTION PERMIT FROM MSD TO CONSTRUCT THE PERMEABLE INTERLOCKING CONCRETE PAVEMENT (PICP) FOR A GIVEN PROJECT, THE ENGINEER PROVIDING THE AS-BUILT CERTIFICATION SHALL VERIFY THAT THE INSTALLING CONTRACTOR HAS:
   A. PAST HISTORY DEMONSTRATING APPLICABLE EXPERIENCE.
   B. THE PICP INSTALLATION CONTRACTOR MUST HAVE A CURRENT LEVEL 1 CERTIFICATE FROM THE INTERLOCKING CONCRETE PAVEMENT INSTITUTE'S CONCRETE PAVER INSTALLER PROGRAM.
3. THE CONTRACTOR SHALL PREVENT AND DIVERT SEDIMENT FROM ENTERING THE SUBBASE AND PAVEMENT SURFACE UNTIL THE TRIBUTARY AREAS ARE DEEMED STABLE BY THE ASSIGNED MSD INSPECTOR.
4. VEHICULAR TRAFFIC SHALL BE PROHIBITED ON THE PICP UNTIL THE SITE IS STABLE TO PREVENT MUD FROM BEING DEPOSITED BY VEHICLES.
5. NO PRODUCT OR MATERIAL SUBSTITUTIONS ARE PERMITTED UNLESS PREVIOUSLY APPROVED BY THE MSD PLAN REVIEW ENGINEER OR BY THE MSD FIELD INSPECTOR ASSIGNED TO THE PROJECT. ALL SUBSTITUTIONS SHALL BE PRESENTED TO MSD THROUGH THE ENGINEER RESPONSIBLE FOR THE DESIGN OF THE PICP SYSTEM.
6. STONE SHOULD BE CLEAN, WASHED, 90 PERCENT FRACTURED FACES WITH A LOS ANGELES ABRASION INDEX OF LESS THAN 40 AND CONFORM TO THE GRADING REQUIREMENTS IN ASTM D448.
7. DO NOT CLEAN THE PAVER SURFACE WITH HIGH-PRESSURE HOSES OR ABRASIVES. WHEN CLEANING IS NECESSARY, COMBINATION CLEANING MACHINES THAT COMBINE A WET SPRAY AND VACUUM PROCESS HAVE BEEN FOUND TO BE EFFECTIVE.
8. A PERMANENT SIGN SHALL BE POSTED WARNING THAT CARE SHOULD BE TAKEN DURING SNOW PLOWING; AND PROHIBIT THE FOLLOWING: RESURFACING, THE USE OF SAND ABRASIVES FOR WINTER TIRE TRACTION, AND THE USE OF POWER WASHERS.
9. AT COMPLETION OF THE PROJECT, PRIOR TO FINAL DEDICATION, AN AS-BUILT CERTIFICATION, SIGNED AND SEALED BY A MISSOURI PROFESSIONAL ENGINEER, SHALL BE PROVIDED.

MANUFACTURER'S PREQUALIFICATION:

THE PICP MANUFACTURER SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING A QUALITY CONTROL PROGRAM TO ASSURE COMPLIANCE WITH REQUIREMENTS IN ASTM C936. PRIOR TO USE ON PROJECTS REQUIRING MSD APPROVAL, THE MANUFACTURE SHALL SUBMIT FIVE (5) COPIES OF A COMPLETED PERVIOUS PAVING APPLICATION AS WELL AS DOCUMENTATION DESCRIBING THE QUALITY CONTROL PROGRAM. THE COMPLETED APPLICATION AND OTHER DOCUMENTATION SHALL BE SUBMITTED TO:

MSD BMP COMMITTEE
METROPOLITAN ST. LOUIS SEWER DISTRICT
2350 MARKET STREET
ST. LOUIS, MISSOURI 63103-2555

MATERIAL CERTIFICATION:

THE CONTRACTOR SHALL OBTAIN THE CONCRETE PAVER MANUFACTURER'S CERTIFICATION THAT THE PAVING UNITS SUPPLIED TO CONSTRUCT THE PICP HAVE BEEN APPROVED BY MSD AND MEET THE REQUIREMENTS IN ASTM C936. THIS CERTIFICATION SHALL BE PROVIDED TO THE MSD DIVISION INSPECTOR. THE CERTIFICATION SHALL INCLUDE THE MANUFACTURER'S NAME, AND STATE THAT THE PICP SUPPLIED MEETS THE ASTM C936 SPECIFICATIONS, (TESTING SHOULD BE CURRENT WITHIN PREVIOUS 12 MONTHS) AND THAT THE PAVING MATERIALS MEET ALL REQUIREMENTS AS EVALUATED UNDER THE MANUFACTURER'S QUALITY CONTROL PROGRAM.

CONTRACTOR PREQUALIFICATION:

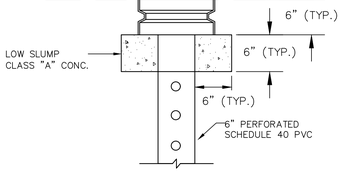
PRIOR TO OBTAINING A CONSTRUCTION PERMIT FROM MSD TO CONSTRUCT THE PERMEABLE INTERLOCKING CONCRETE PAVEMENT (PICP) FOR A GIVEN PROJECT, THE ENGINEER PROVIDING AS-BUILT CERTIFICATION SHALL VERIFY THAT THE INSTALLING CONTRACTOR HAS:

1. PAST HISTORY DEMONSTRATING APPLICABLE EXPERIENCE.
2. THE PICP INSTALLATION CONTRACTOR MUST HAVE A CURRENT LEVEL 1 CERTIFICATE FROM THE INTERLOCKING CONCRETE PAVEMENT INSTITUTE'S CONCRETE PAVER INSTALLER PROGRAM.

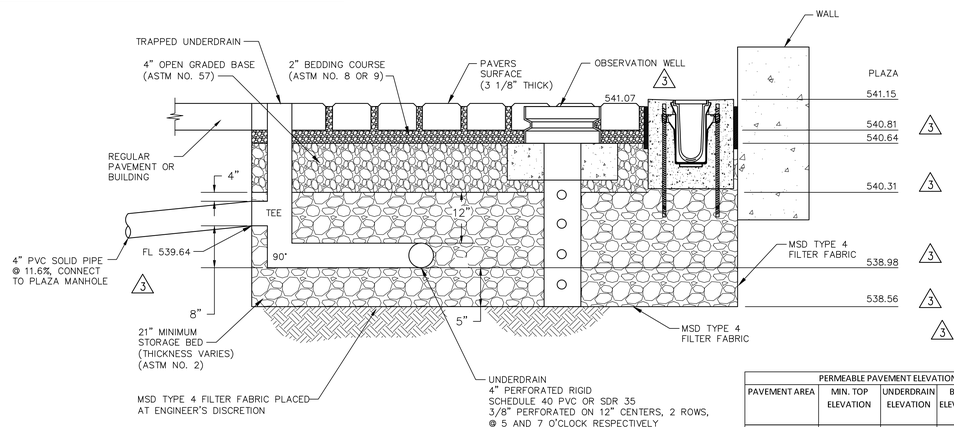
AS-BUILT CERTIFICATION:

AT COMPLETION OF THE PROJECT, PRIOR TO FINAL DEDICATION, AN AS-BUILT CERTIFICATION, SIGNED AND SEALED BY A MISSOURI PROFESSIONAL ENGINEER, SHALL BE PROVIDED CERTIFYING:

1. THE PICP SYSTEM WAS BUILT IN ACCORDANCE WITH THE DETAILS, DIMENSIONS, AND MATERIALS AS APPROVED BY MSD FOR THIS PROJECT.
2. THE PICP SYSTEM WAS INSTALLED BY A QUALIFIED CONTRACTOR, AND HAS SATISFIED ALL APPLICABLE QUALITY CONTROL AND PERFORMANCE TESTS.
3. THE PICP SYSTEM INSTALLATION WAS WITNESSED BY THE CERTIFYING ENGINEER OR A REPRESENTATIVE UNDER HIS DIRECT SUPERVISION.



OBSERVATION WELL DETAIL



PERMEABLE PAVEMENT ELEVATION TABLE				
PAVEMENT AREA	MIN. TOP ELEVATION	UNDERDRAIN ELEVATION	BOTTOM ELEVATION #1	BOTTOM ELEVATION #2
1 (Plaza)	541.07	538.98	540.31	538.56

5 C701 PERMEABLE INTERLOCKING CONCRETE PAVEMENT AND TRAPPED UNDERDRAIN TYPICAL SECTION
N.T.S.

PERVIOUS INTERLOCKING CONCRETE PAVEMENT

POWER WASHING, RESURFACING, AND THE USE OF SAND ABRASIVES FOR WINTER TIRE TRACKING ARE PROHIBITED.

CARE SHALL BE TAKEN DURING SNOW PLOWING

PICP INFORMATION SIGN
(NOT TO SCALE)

NOTES:
1. STANDARD 18"x12"x.080" ALUMINUM SIGN FACE WITH BLACK TEXT ON WHITE BACKGROUND GALVANIZED STEEL POST 9'-6" LONG
2. SET BOTTOM OF SIGN 5'-0" ABOVE GRADE
3. SET BOTTOM OF POST 3'-0" BELOW GRADE

DETAILS SHOWN FOR PRIVATE CONSTRUCTION ONLY. REFER TO MSD SPECIFICATIONS AND DETAILS FOR PUBLIC SEWER AND PRIVATE UNDER MSD INSPECTION SEWER CONSTRUCTION.

2

MSD P# 28874-01 MSD BASE MAP 23K2

MSD FIELD CHANGE 1 (SHEET 4 OF 4)

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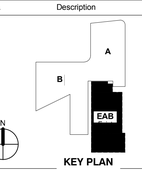
1400 S. 3rd Street, Suite 201
St. Louis, MO 63104
314.588.0600

STATE OF MISSOURI
MARK EDWARD DAVIS
NUMBER E-24050
6-9-17
REGISTERED PROFESSIONAL ENGINEER
EXP. 12-31-18

No.	Description	Date
4	ASI 070 RAIN GARDEN 2 RECONFIG	09 JUN 2017
3	ADDENDUM 1-12	16 JUN 2016
2	ADDENDUM 1-10	5 MAY 2016
1	ADDENDUM 1-1	29 JAN 2016
-	ISSUED FOR CONSTRUCTION (BP1)	15 JAN 2016



KEY PLAN

Drawing Title:

CIVIL DETAILS

Project No.: 04561.00 Checked by:

C700

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