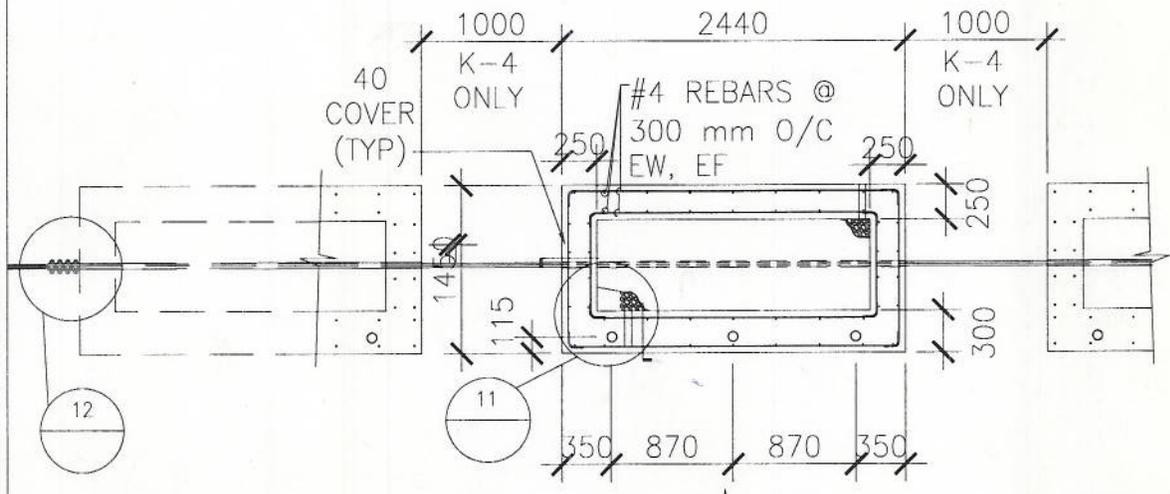


**1 BARRIER ELEVATION**  
SCALE: N.T.S.



**2 BARRIER PLAN**  
SCALE: N.T.S.

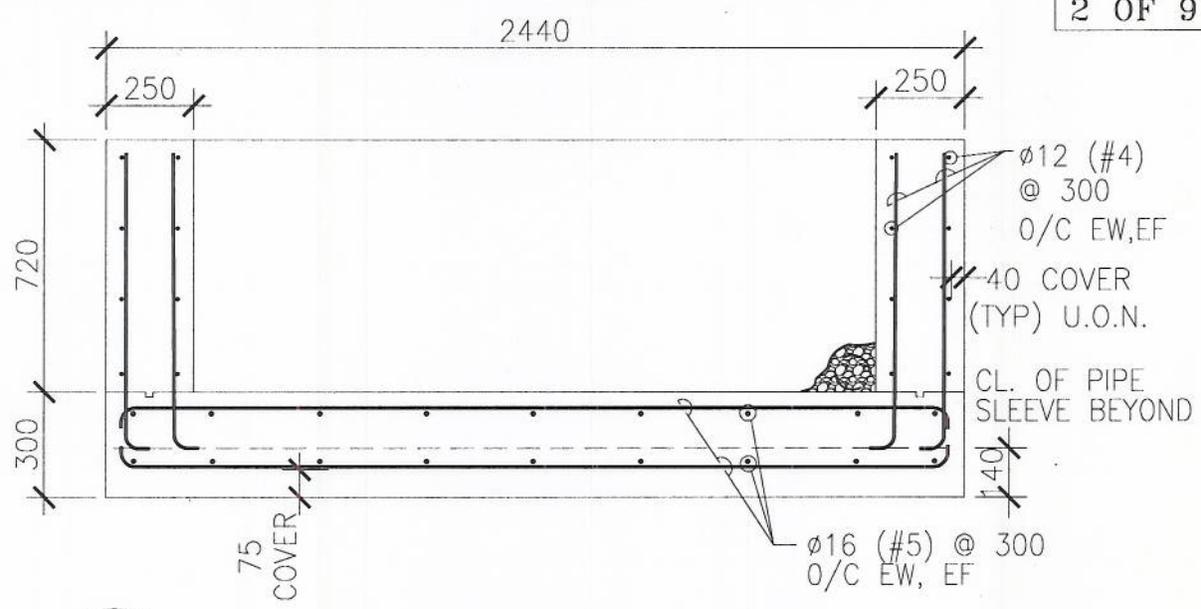
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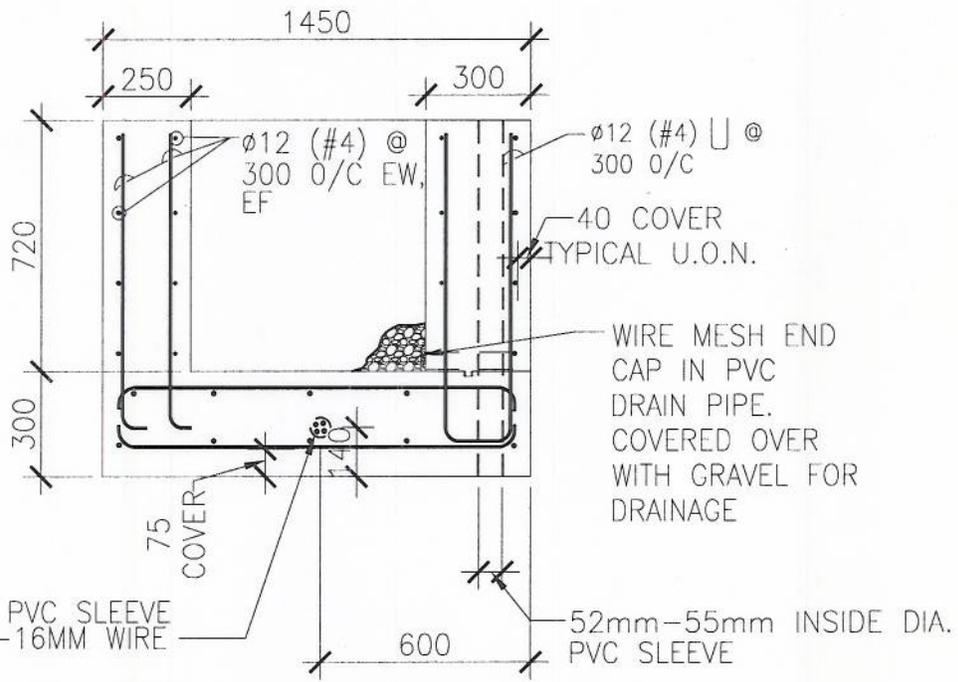
**ANTI-RAM SURFACE PLANTER**  
**DS-60 (K-4/K-12)**

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**3** SECTION  
SCALE: N.T.S.



**4** SECTION  
SCALE: N.T.S.

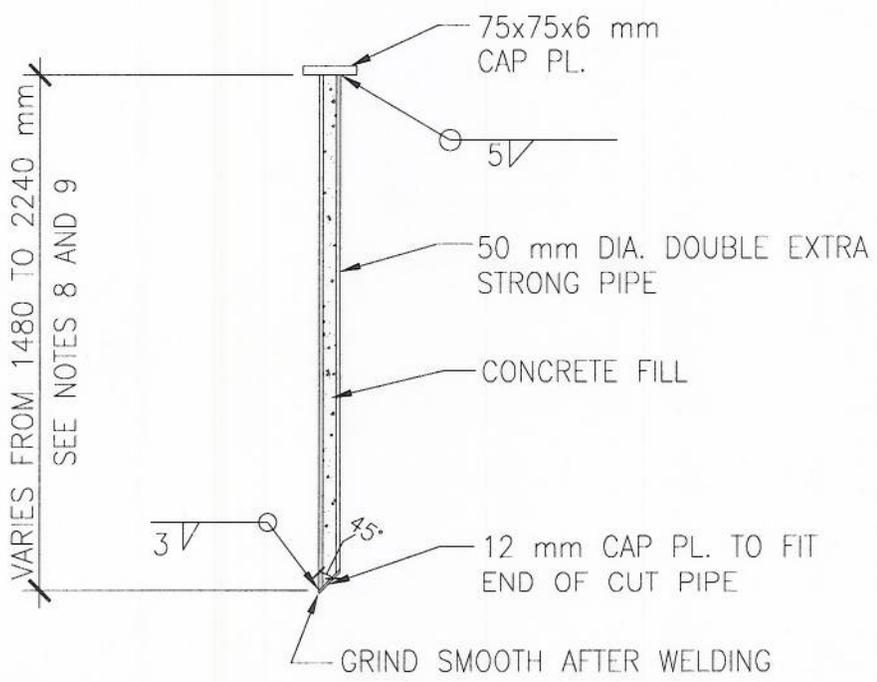
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DS-60 (K-4/K-12)**

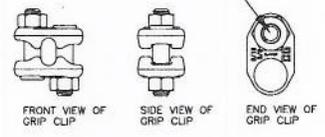
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**5 STEEL PEG**  
SCALE: N.T.S.

SEE NOTE 4 FOR REQUIREMENTS



**6 FIST CABLE CLAMPS**  
SCALE: N.T.S.

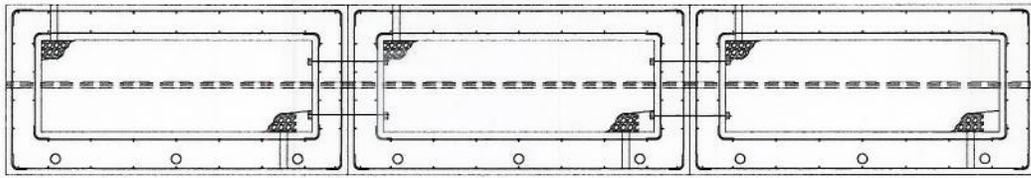
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**DS-60 (K-4/K-12)**

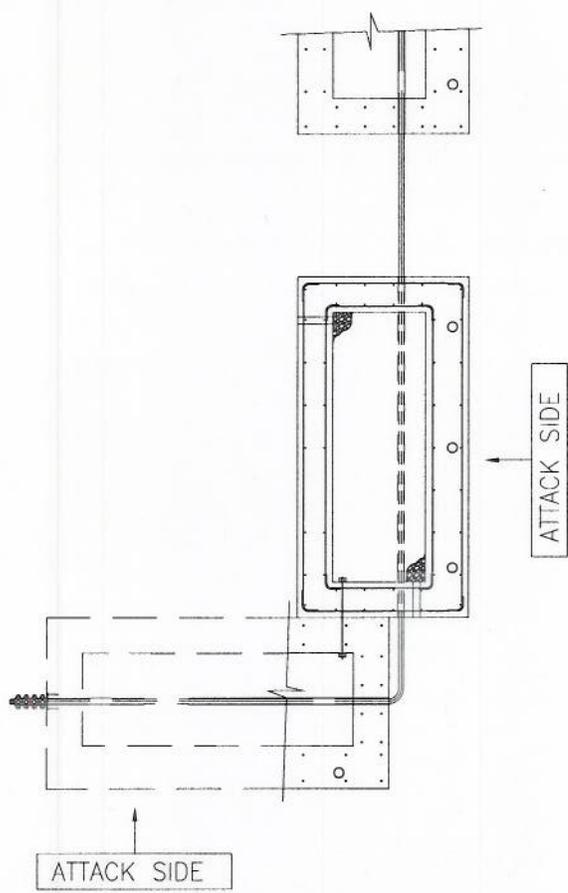
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NOTE:  
 FOR THE K12 PLANTER USE 1" DIAMETER ALLOY STEEL THREADED ROD 4140B-7. ROD MUST MEET ASTM A-193 B7 SPECIFICATION (ULTIMATE STRENGTH = 125,000 PSI). HOLES FOR RODS MUST BE DRILLED AFTER PLANTERS HAVE BEEN PLACED IN FINAL CONDITION.

**7** TYPICAL K-12 CONFIGURATION  
 SCALE: N.T.S.



**8** K12 90° CORNER OF PLANTERS  
 SCALE: N.T.S.

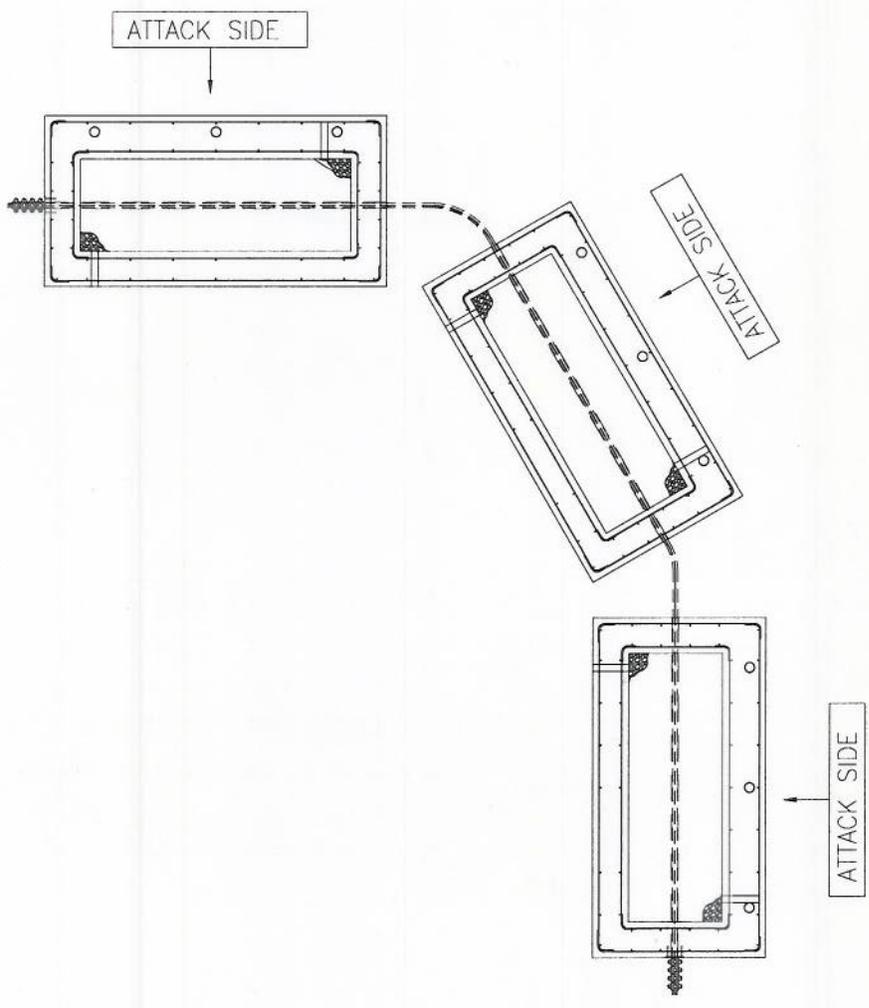
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ANTI-RAM SURFACE PLANTER  
 DS-60 (K-4/K-12)

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9 K4 CURVED CORNER OF PLANTERS  
 SCALE: N.T.S.

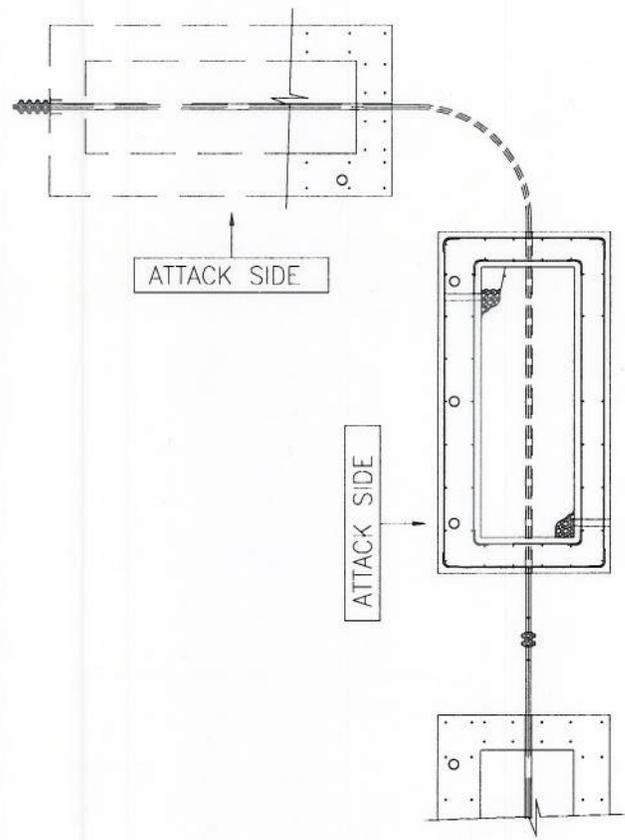
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**ANTI-RAM SURFACE PLANTER**  
**DS-60 (K-4/K-12)**

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10 K4 90° CORNER OF PLANTERS  
 SCALE: N.T.S.

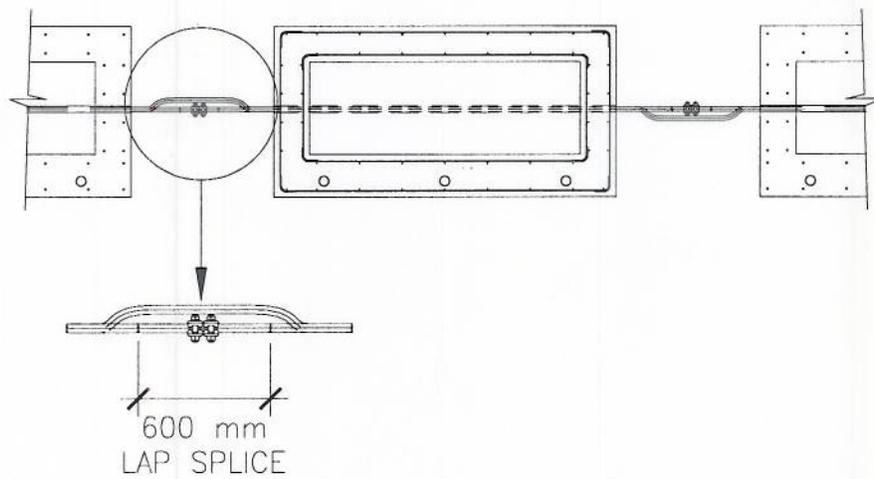
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ANTI-RAM SURFACE PLANTER  
 DS-60 (K-4/K-12)

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10 TYPICAL CABLE SPLICE  
SCALE: N.T.S.

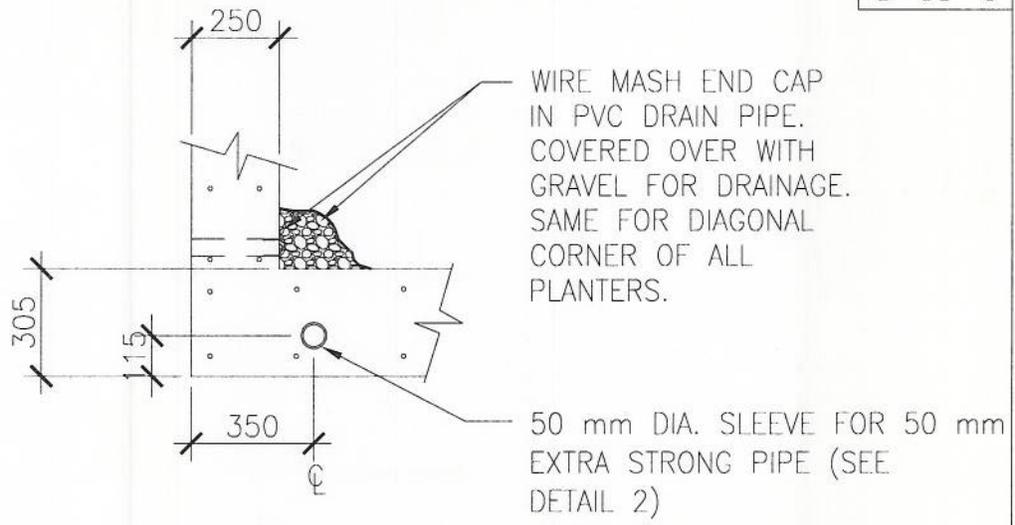
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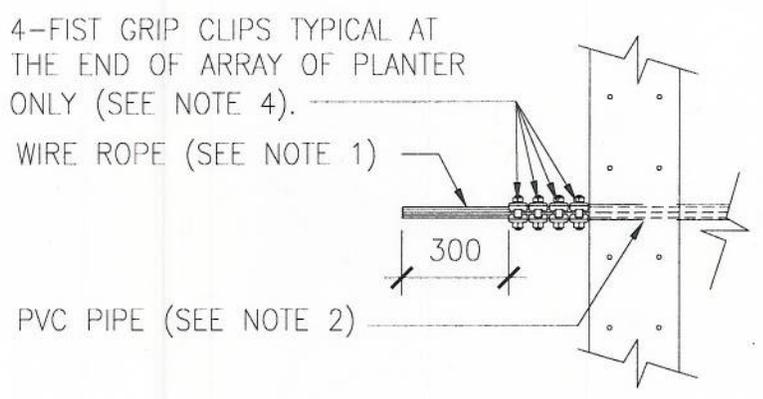
ANTI-RAM SURFACE PLANTER  
DS-60 (K-4/K-12)

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**11** DETAIL  
SCALE: N.T.S.



**12** DETAIL  
SCALE: N.T.S.

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**ANTI-RAM SURFACE PLANTER**  
**DS-60 (K-4/K-12)**

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## GENERAL NOTE:

THIS A SINGLE, PRE-CAST SURFACE PLANTER SYSTEM THAT CAN BE MADE LOCALLY IN APPROPRIATE QUANTITIES FOR PERIMETER ARRANGEMENTS. EMBLACEMENT CAN BE MADE WITH DIFFERENT SPACING AND CONNECTION DETAILS TO PROVIDE PROTECTION AGAINST A RANGE OF APPROACH IMPACT SPEEDS. THE DETAILED LAYOUT BEGINS WITH IDENTIFICATION OF REQUIRED PEDESTRIAN ACCESS LOCATIONS, HIGH SPEED RAMMING APPROACHES, SURFACE CONDITIONS FOR ANCHORAGE (ASPHALT, CONCRETE, SOIL) ETC.. MULTIPLE CABLES ARE USED RATHER THAN ONE LARGE CABLE FOR MANIPULATION AND INSTALLATION WHERE PEDESTRIAN ACCESS IS ANTICIPATED, THE CABLES CONNECTING THE PLANTERS MAY BE COVERED WITH A RAMP (PRE-CAST POURED IN PLACE AT SAME TIME AS PLANTERS, OR MADE OF ASPHALT, ETC.)

## NOTES:

1. USE 4-16 mm DIA. WIRE ROPE MEETING ASTM 1023 STANDARDS.
2. USE 50mm PVC PIPE FOR 4-16mm DIA. CABLES.
3. MAXIMUM SPACING BETWEEN BOLLARDS FOR K-4 APPLICATIONS IS 1 METER.
4. USE G-429 FIST GRIP CLIPS BY THE CROSBY GROUP (SEE [WWW.THECROSBYGROUP.COM](http://WWW.THECROSBYGROUP.COM))
5. ALL REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615 GRADE 60.
6. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE WITH COMPRESSIVE STRENGTH 25 Mpa @28 DAYS.
7. ALL CONCRETE SHALL BE AIR ENTRAINED (5% ± 1).
8. WHEN PLANTER IS SET ON ASPHALT OR CONCRETE SURFACE THE PEGS TO HOLD PLANTER IN PLACE SHALL EXTEND A MINIMUM OF 450mm BELOW GRADE.
9. WHEN PLANTER IS SET ON SOIL ONLY (E.G. NO PAVING MATERIAL) THE STEEL PEGS TO HOLD PLANTER IN PLACE SHALL EXTEND A MINIMUM OF 1220mm BELOW GRADE.

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Office of  
Overseas Buildings Operations

## ANTI-RAM SURFACE PLANTER DS-60 (K-4/K-12)

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