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DRIVECEL REINFORCED SOIL STRUCTURES **DESIGN DRAWINGS PREPARED FOR**

UNILOCK CONCRETE PAVERS

PAVEMENT STRUCTURE STABILIZATION

TORONTO ONTARIO TITLE SHEET

REVISION R8

DRIVECEL REINFORCED SOIL UNILOCK CONCRETE PAVERS

SHEET 1 OF 11



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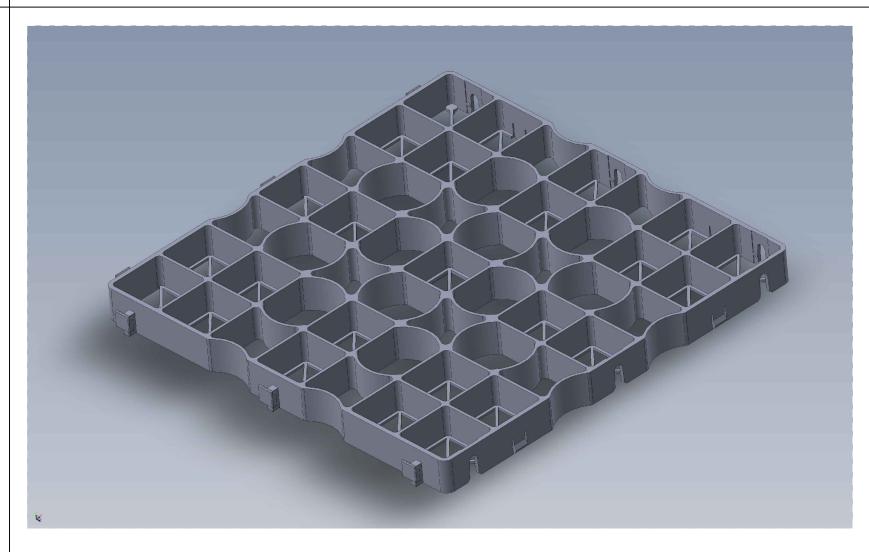


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DRIVECEL

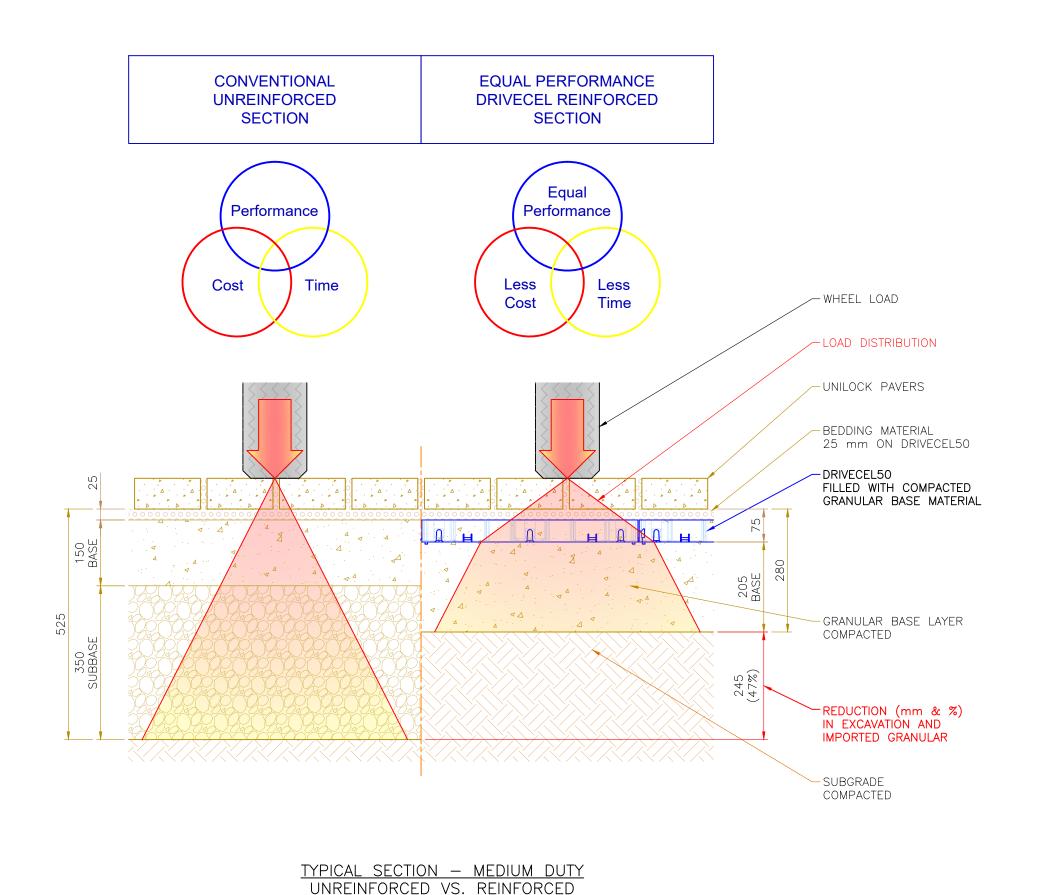
POWERED BY IOWAT STIFF 3D GEOCELL TECHNOLOGY

- THE DRIVECEL PAVEMENT STRUCTURE STABILIZATION DESIGNS CONTAINED HEREIN ARE CONCEPTUAL IN NATURE AND ARE NOT FOR CONSTRUCTION.
- 2. DESIGNS ARE BASED ON THE FOLLOWING ASSUMPTIONS:
 2.1. ADEQUATE SUBGRADE STRENGTH,
 2.2. PROPER DRAINAGE, AND
 2.3. PROPER CONSTRUCTION

- 3. CONTACT UNILOCK TO COORDINATE SITE SPECIFIC DESIGNS AND DRAWINGS FOR CONSTRUCTION FROM PERZIA GEOSOLUTIONS.
- SUPPLY AND INSTALLATION COSTS USED FOR THE COMPARISONS CONTAINED HEREIN ARE BASED ON ACTUAL CONSTRUCTION COSTS FROM GREYSTONE LANDSCAPING LTD., A UNILOCK AUTHORIZED CONTRACTOR.



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DRIVECEL LOAD DISTRIBUTION

MEDIUM DUTY

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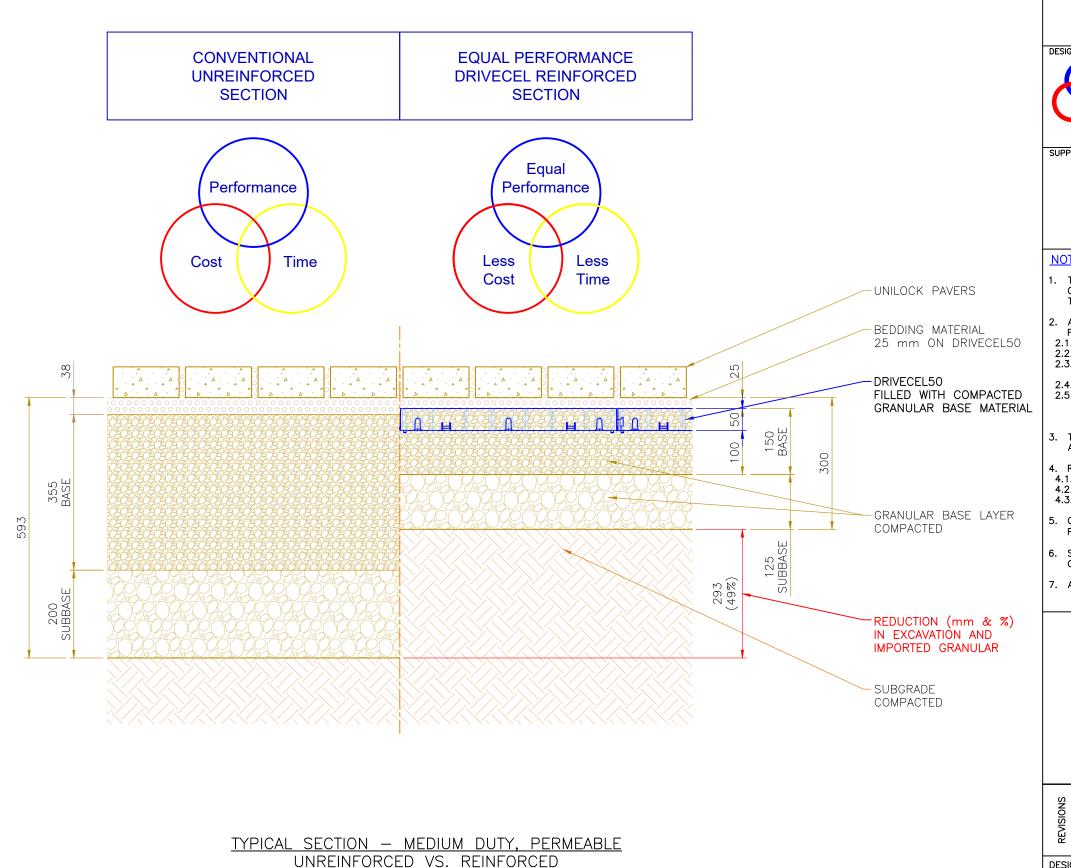
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- THE DRIVECEL PAVEMENT STRUCTURE STABILIZATION CREATES A STIFF LOAD DISTRIBUTION PLATFORM SIMILAR TO A SNOWSHOE.
- 2. ADDING ONE OR TWO LAYERS OF DRIVECEL OFFERS THE FOLLOWING PAVEMENT STRUCTURE BENEFITS:
- 2.1. MAXIMUM STRENGTH, RESILIENCE, AND DURABILITY,
- 2.2. IMPROVED DRIVING SURFACE PERFORMANCE,
- 2.3. REDUCED POTENTIAL FOR RUTTING ESPECIALLY FOR CHANNELIZED TRAFFIC.
- 2.4. LOWER MAINTENANCE AND LIFE CYCLE COSTS, AND 2.5. THE OPTION TO REDUCE THE GRANULAR MATERIAL THICKNESS AND EXCAVATION RESULTING IN TIME &
- 3. THE ADDITION OF DRIVECEL IS SUITABLE FOR REGULAR AND PERMEABLE PAVEMENT STRUCTURES.
- 4. RECOMMENDED GRANULARS:
- 4.1. BEDDING: CONCRETE SAND,
- 4.2. BASE: OPSS GRANULAR A.
- .3. LIMESTONE SCREENINGS ARE NOT RECOMMENDED.
- 5. SITE SPECIFIC DESIGNS ARE AVAILABLE FROM PERZIA GEOSOLUTIONS.
- 6. ALL DIMENSIONS IN mm UNLESS STATED OTHERWISE.



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MEDIUM DUTY. PERMEABLE

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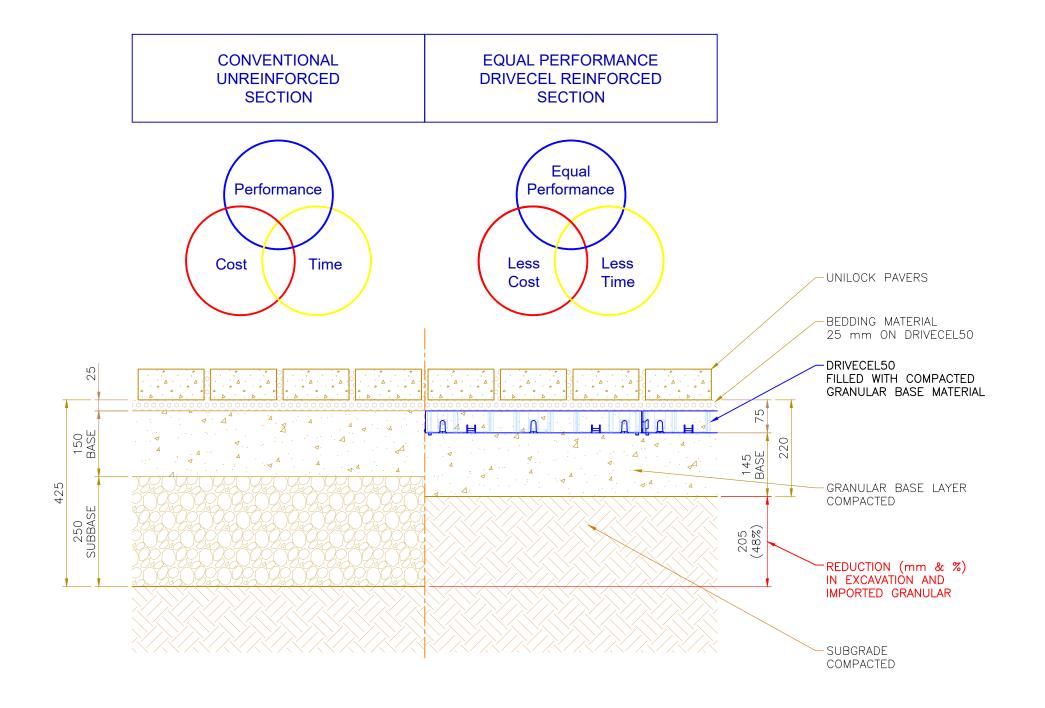
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- LOWER MAINTENANCE AND LIFE CYCLE COSTS, AND THE OPTION TO REDUCE THE GRANULAR MATERIAL THICKNESS AND EXCAVATION RESULTING IN TIME & COST SAVINGS.
- 3. THE ADDITION OF DRIVECEL IS SUITABLE FOR REGULAR AND PERMEABLE PAVEMENT STRUCTURES.
- 4. RECOMMENDED GRANULARS:
- 4.1. BEDDING: 2-6 mm CLEAR CRUSHED STONE,
- BASE: OPSS 19 mm TYPE II CLEAR STONE, AND SUBBASE: OPSS 53 mm CLEAR STONE.
- 5. GRANULAR THICKNESSES MAY NEED TO BE INCREASED
- FOR DRAINAGE/STORAGE REQUIREMENTS. 6. SITE SPECIFIC DESIGNS ARE AVAILABLE FROM PERZIA
- GEOSOLUTIONS.
- 7. ALL DIMENSIONS IN mm UNLESS STATED OTHERWISE.



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TYPICAL SECTION — LIGHT DUTY UNREINFORCED VS. REINFORCED

LIGHT DUTY

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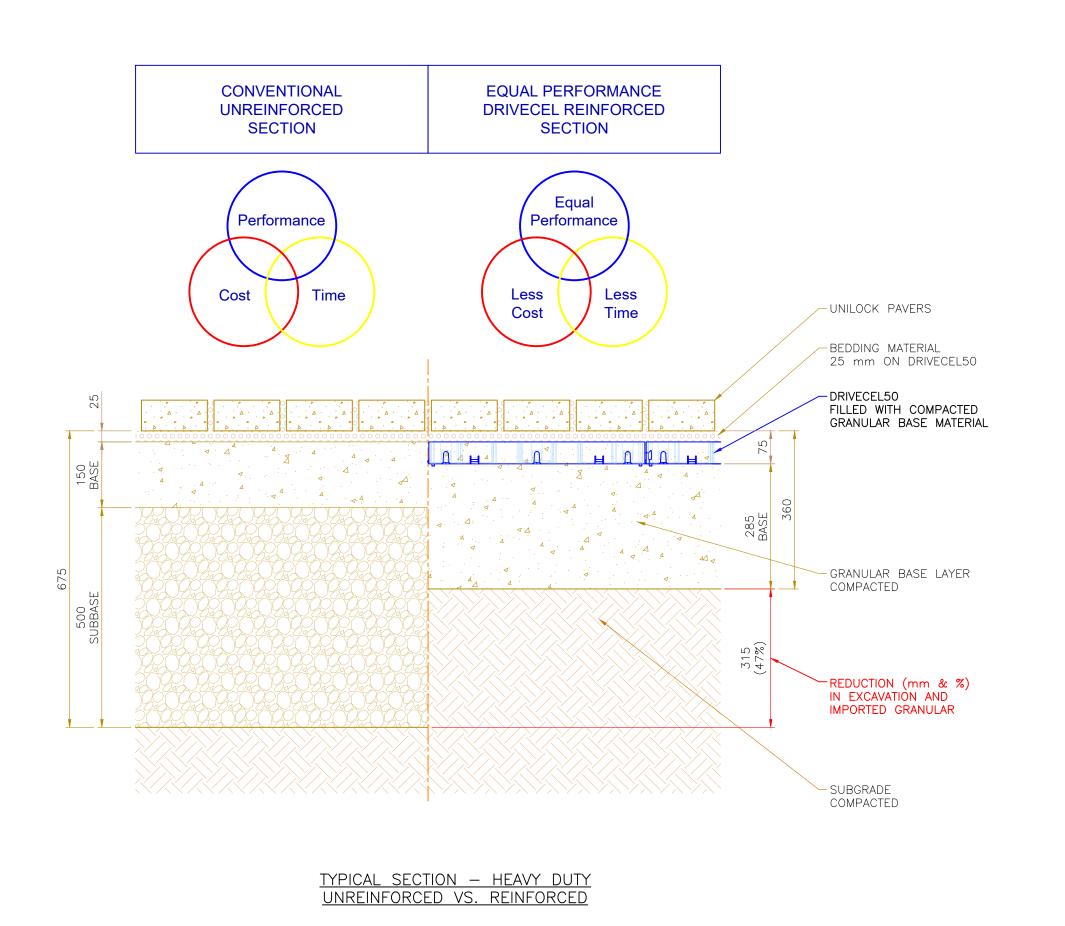
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- 4. RECOMMENDED GRANULARS:
- 4.1. BEDDING: CONCRETE SAND,
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- 4.3. LIMESTONE SCREENINGS ARE NOT RECOMMENDED.
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HEAVY DUTY. 1 LAYER

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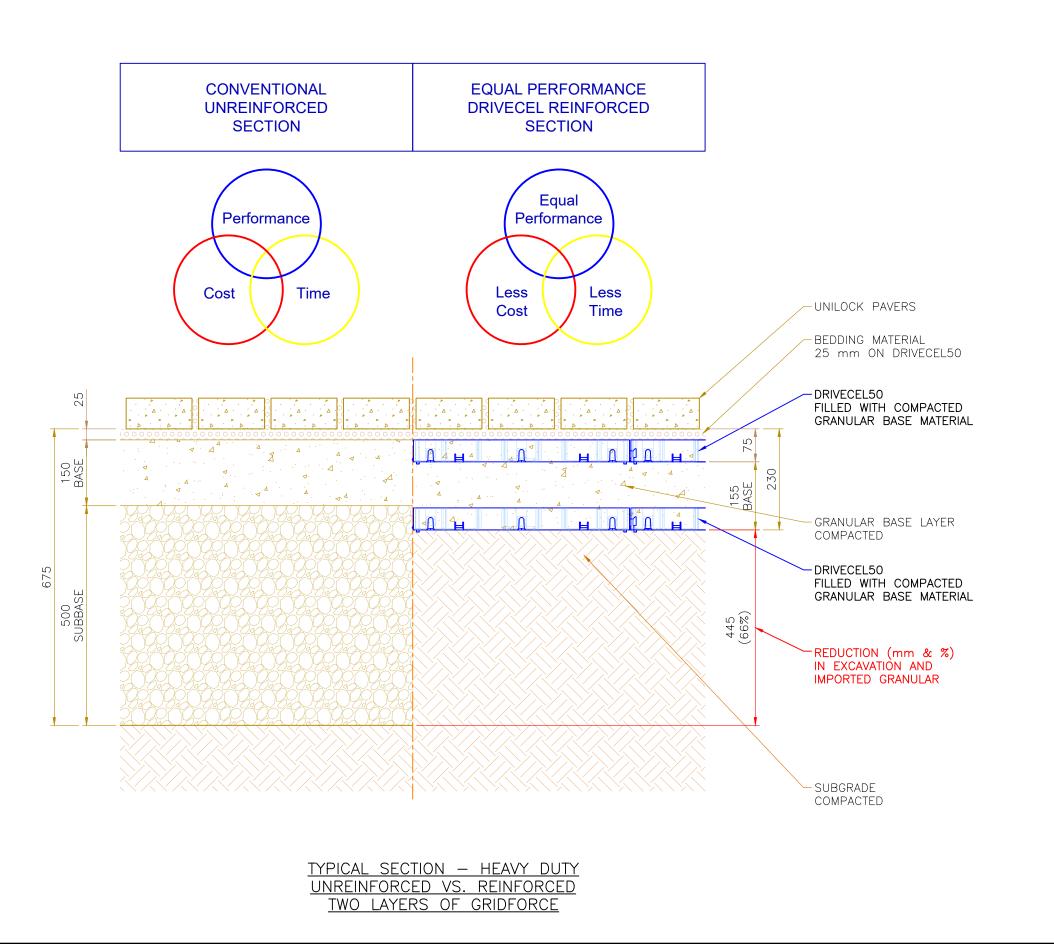
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HEAVY DUTY. 2 LAYERS

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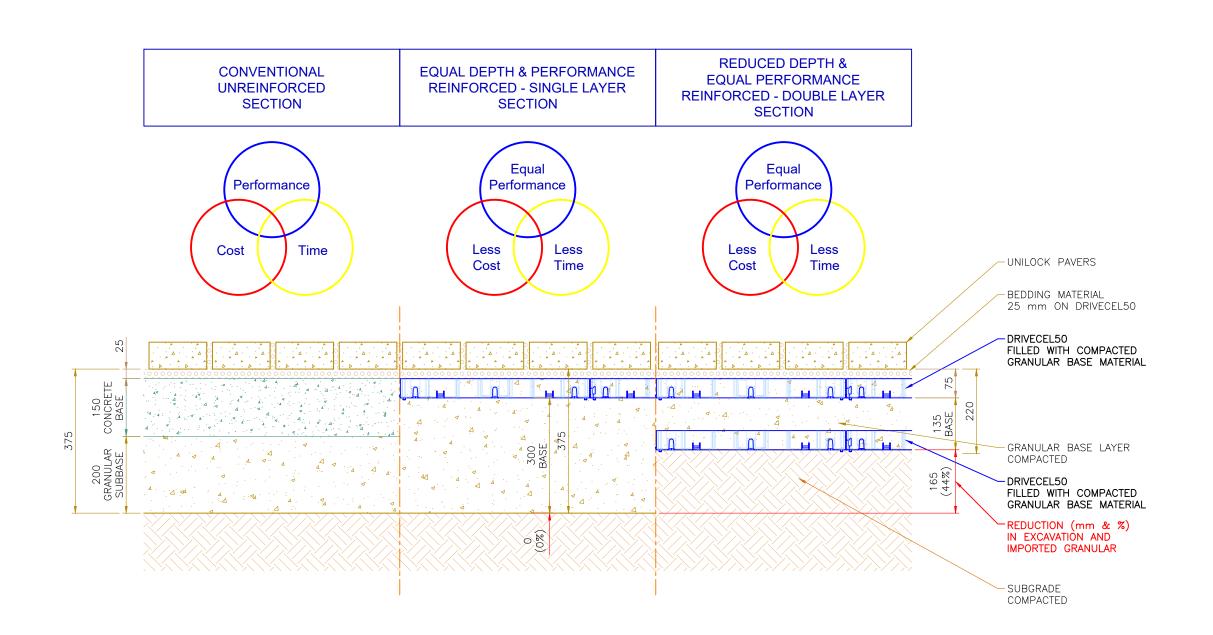


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- THE DRIVECEL PAVEMENT STRUCTURE STABILIZATION CAN BE STRENGTHENED EVEN FURTHER WITH A SECOND LAYER.
- 2. THE SECOND LAYER OF DRIVECEL CAN BE APPLIED FOR: 2.1. HEAVY DUTY APPLICATIONS, AND/OR 2.2. ON SOFTER SUBGRADES.



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TYPICAL SECTION - MEDIUM DUTY PAVERS OVER CONCRETE BASE VS. DRIVECEL REINFORCED (1 & 2 LAYERS) CONCRETE V DRIVECEL. MD

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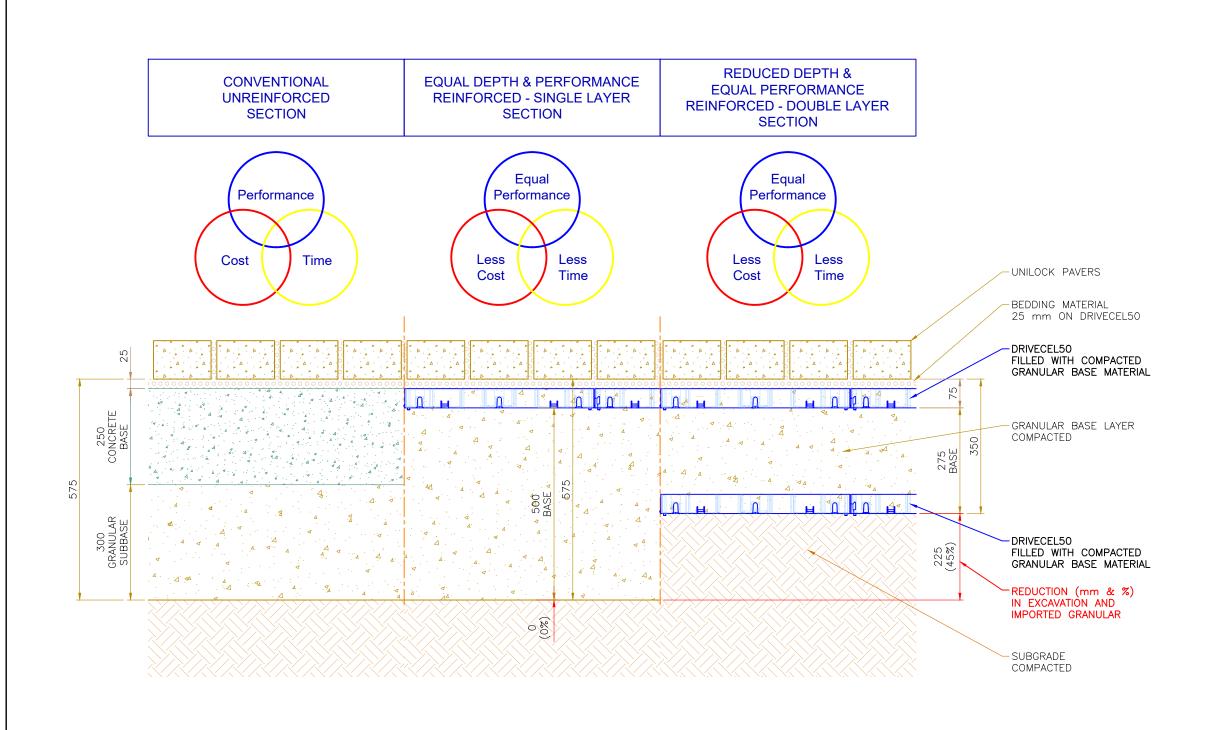
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NOTES:

- THE DRIVECEL STABILIZED BASE PROVIDES A SUPERIOR PERMEABLE SOLUTION THAT REPLACES A CONVENTIONAL CONCRETE BASE.
- 2. THE RESILIENT DRIVECEL BASE OFFERS THE FOLLOWING ADVANTAGES:
- 2.1. DRAINAGE THROUGH THE ENTIRE PAVEMENT STRUCTURE.
- DRAINAGE STORAGE CAPACITY WITHIN THE GRANULAR BEDDING AND BASE MATERIALS.
- A STIFF BASE THAT IS STILL FLEXIBLE SIMILAR TO THE PAVERS BEING SUPPORTED, AND
- A BASE THAT IS MORE STRAIN COMPATIBLE WITH THE PAVERS.
- 3. THE ELIMINATION OF PONDING OF WATER ON TOP OF THE CONCRETE BASE ELIMINATES THE FOLLOWING INHERENT PROBLEMS WITH A CONCRETE BASE: 3.1. DAMAGE FROM FREEZE/THAW CYCLES,
- FROST HEAVE,
- PUMPING OF SATURATED BEDDING MATERIALS, AND
- WEAKENED BEDDING LAYER WHEN SATURATED.
- 4. THE PERMEABILITY AND STORAGE CAPACITY CAN BE ADJUSTED DEPENDING ON THE GRANULAR MATERIALS.
- 5. SITE SPECIFIC CONDITIONS SHALL BE CONSIDERED IN THE DESIGN, E.G.
- SUBGRADE STRENGTH AND PERMEABILITY,
- LOADING CONDITIONS, AND
- OVERALL DRAINAGE REQUIREMENTS.

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TYPICAL SECTION - HEAVY DUTY PAVERS OVER CONCRETE BASE VS. DRIVECEL REINFORCED (1 & 2 LAYERS) CONCRETE V DRIVECEL. HD

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DRIVECEL REINFORCED SOIL UNILOCK CONCRETE PAVERS

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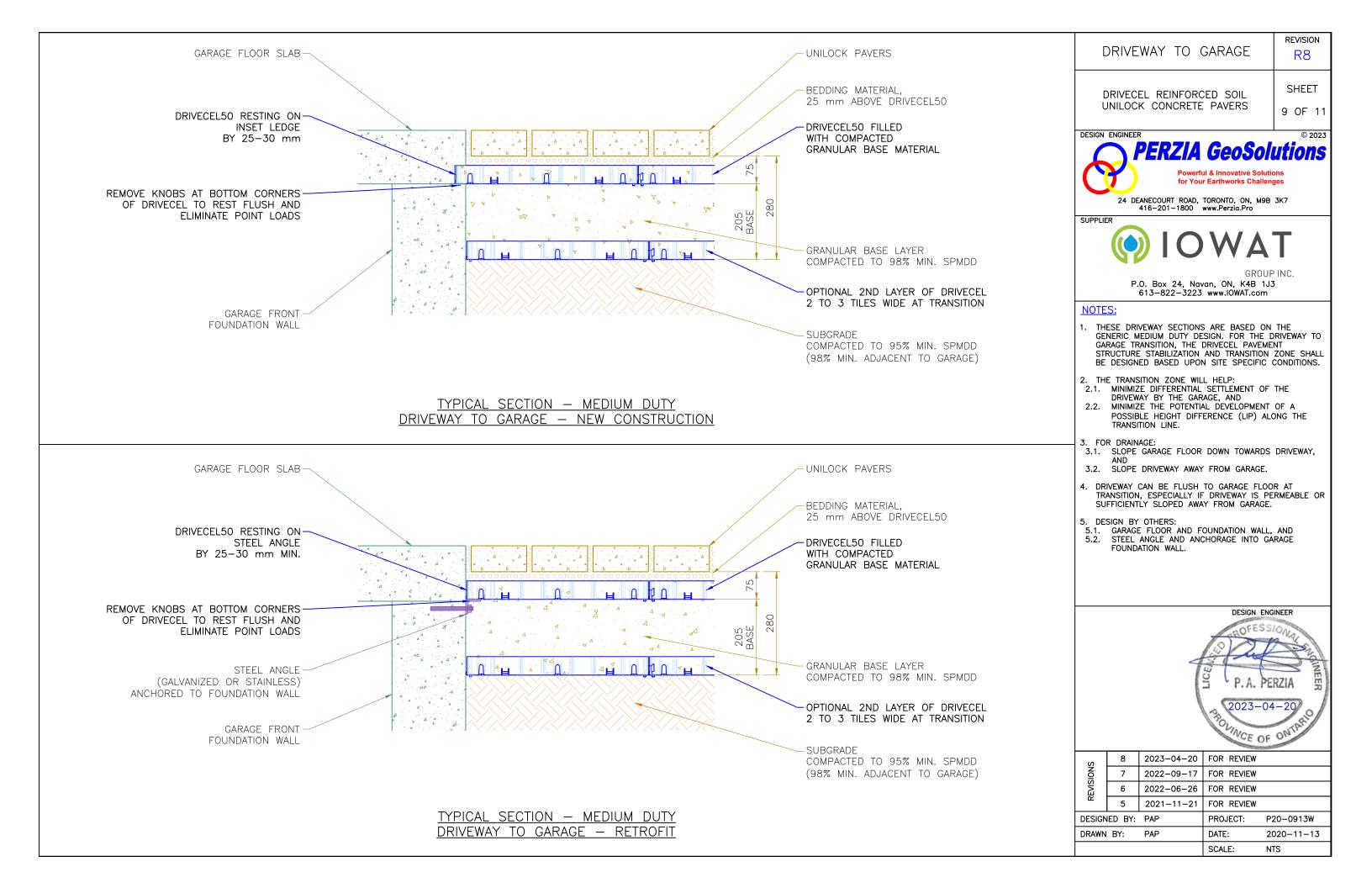
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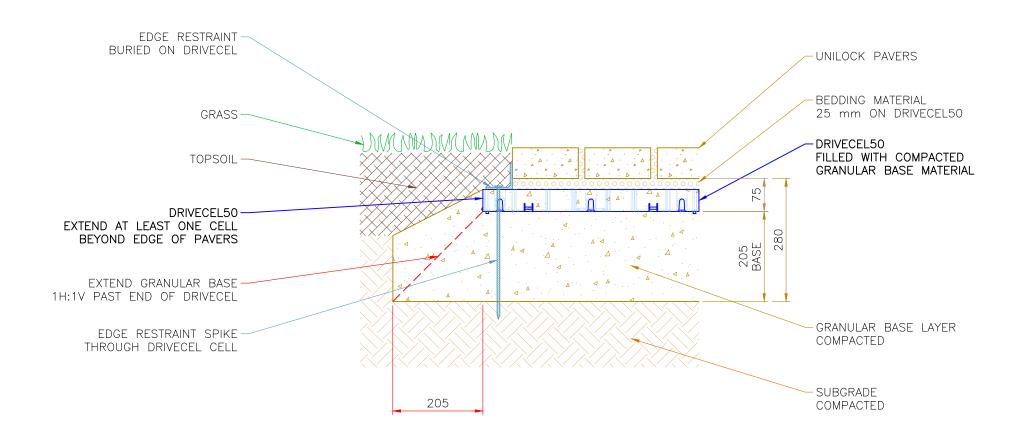
- THE DRIVECEL STABILIZED BASE PROVIDES A SUPERIOR PERMEABLE SOLUTION THAT REPLACES A CONVENTIONAL CONCRETE BASE.
- 2. THE RESILIENT DRIVECEL BASE OFFERS THE FOLLOWING ADVANTAGES:
- 2.1. DRAINAGE THROUGH THE ENTIRE PAVEMENT STRUCTURE.
- DRAINAGE STORAGE CAPACITY WITHIN THE GRANULAR
- BEDDING AND BASE MATERIALS. A STIFF BASE THAT IS STILL FLEXIBLE SIMILAR TO THE PAVERS BEING SUPPORTED, AND
- A BASE THAT IS MORE STRAIN COMPATIBLE WITH THE PAVERS.
- 3. THE ELIMINATION OF PONDING OF WATER ON TOP OF THE CONCRETE BASE ELIMINATES THE FOLLOWING INHERENT PROBLEMS WITH A CONCRETE BASE:
- 3.1. DAMAGE FROM FREEZE/THAW CYCLES,
- 3.2. 3.3. FROST HEAVE,
- PUMPING OF SATURATED BEDDING MATERIALS, AND
- WEAKENED BEDDING LAYER WHEN SATURATED.
- 4. THE PERMEABILITY AND STORAGE CAPACITY CAN BE ADJUSTED DEPENDING ON THE GRANULAR MATERIALS.
- 5. SITE SPECIFIC CONDITIONS SHALL BE CONSIDERED IN
- THE DESIGN, E.G. SUBGRADE STRENGTH AND PERMEABILITY,
- LOADING CONDITIONS, AND
- OVERALL DRAINAGE REQUIREMENTS.

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EDGE RESTRAINT

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NOTES:

- 1. THE DRIVECEL SHALL EXTEND AT LEAST ONE FULL CELL BEYOND THE EXTENT OF THE PAVERS.
- 2. THE GRANULAR BASE SHALL EXTEND AT LEAST 1H:1V BEYOND THE EXTENT OF THE DRIVECEL.
- 3. DRIVECEL MAXIMIZES THE PERFORMANCE OF THE PAVERS BY:
- 3.1. STABILIZING THE EDGE RESTRAINT,
- 3.2. MAXIMIZING CONFINEMENT OF THE PAVERS AND BEDDING MATERIAL, AND
- 3.3. PREVENTING LATERAL SPREADING.

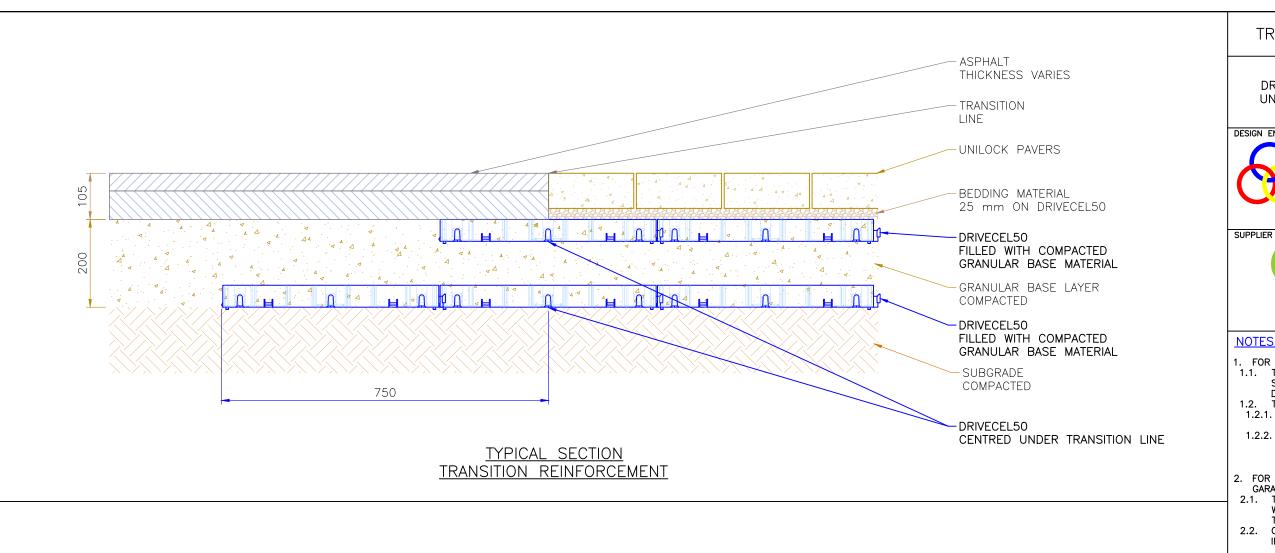
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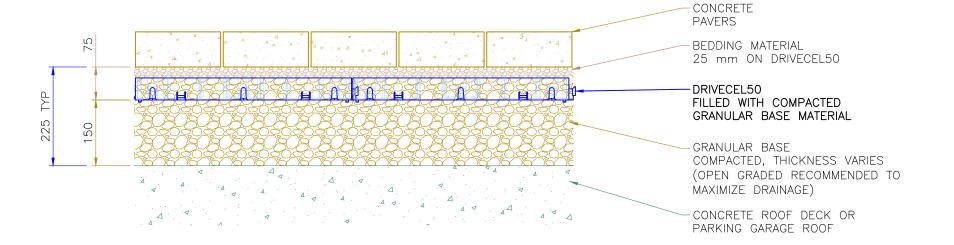
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<u>TYPICAL SECTION — MEDIUM DUTY</u> <u>DRIVECEL STABILIZATION OF PAVERS EDGE RESTRAINT</u>





TYPICAL SECTION PAVERS OVER CONCRETE ROOF OR GARAGE DECK TRANSITIONS & DECKS

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NOTES:

- FOR TRANSITIONS:
 THE DRIVECEL REINFORCED SOIL PAVEMENT STRUCTURE AND TRANSITION ZONE SHALL BE DESIGNED BASED UPON SITE SPECIFIC CONDITIONS.
- 1.2. THE TRANSITION ZONE WILL HELP:
 1.2.1. MINIMIZE DIFFERENTIAL MOVEMENT BETWEEN THE TWO ADJACENT PAVEMENT STRUCTURES, AND MINIMIZE THE POTENTIAL DEVELOPMENT OF A CRACK AND POSSIBLY A HEIGHT DIFFERENCE
- (LIP) ALONG THE TRANSITION LINE.
- FOR CONCRETE PAVERS OVER CONCRETE ROOF OR GARAGE DECKS:
 2.1. THE PAVEMENT STRUCTURE DEPTH AND THEREFORE WEIGHT CAN BE REDUCED TO REDUCE THE LOAD ON THE STRUCTURE BELOW, AND
 2.2. OPEN GRADED GRANULARS CAN BE USED TO INCREASED DRAINAGE FLOW RATES AND CAPACITIES.

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