Minimum 2% slope to drainage feature

4" min. Compacted drainage aggregate base, (designed by others)

Soil with vegetative cover

Cast in place concrete curb per local standards

½" Expansion Joint (as required)

Belgard Concrete Pavers

Mirafi 160N Nonwoven Filtration Fabric - 12" wide, over expansion joint

Jointing Sand, Conforms to ASTM C144

6" min. Concrete Slab (designed by others)

1" Bedding Layer, conforms to ASTM C33 with <1% passing 0.080 mm

Drain hole – 2" diameter, fill with pea gravel and cover with geotextile. Place at 24" on center along low end of border(s).

Compacted Subgrade, prepare according to recommendations in geotechnical report.

Mirafi 160N Nonwoven Filtration Fabric - 12" wide

at all perimeters, turn up against curb and cut even with the top of pavers

Top of installed pavers shall be 1/8" to 1/4" above adjacent rigid surfaces

Belgard Standard Paving Detail
Sand Set on Concrete Base

Design Notes:
1. Cross section as shown is suitable for pedestrian and vehicular applications. Paver dimensions subject to aspect and plan ratio requirements. Contact Belgard Commercial for product selection guidance based on the intended traffic loading.
2. Depth of aggregate base subject to site specific conditions (traffic loading, soil conditions, groundwater levels, climatic conditions). Contact Belgard Commercial for design assistance.
3. Additional drain holes may be required depending on the size of the pavement area. The rule of thumb is to have at least one drain hole per 500 square feet of surface area. Storm drains should be used at low spots.
4. Drain pipes may be required within the aggregate base depending on the permeability of the subgrade soils. Verify drainage needs with the geotechnical engineer. Ensure drain pipes are able to daylight via gravity flow to surface, or connect to catch basin.
5. Ensure the geotextile above the drain hole has good drainage characteristics and is not prone to clogging.
6. Techniseal HP Nextgel jointing sand conforming to ASTM C144 may be used in pedestrian and light vehicular applications. Please contact Belgard Commercial for design assistance.
Belgard Concrete Pavers

1. Compacted Subgrade, prepare according to recommendations in geotechnical report.
2. Compacted Aggregate Base - minimum 6" thick. Asphalt or cement treatment base can be used over weak or saturated subgrade soils.
3. 1" Bedding Layer, conforms to ASTM C33 with <1% passing 0.080 mm.
4. Mirafi 160N Nonwoven Filtration Fabric on entire bottom of aggregate base (extends beyond curb); optional if sub-base of #2 is used as a drainage layer.
5. Jointing Sand, Conforms to ASTM C144
6. Cast-in-Place Concrete Curb per local standards
7. Soil with vegetative cover
8. Min. 2% slope to drainage feature
9. Design Notes:
   1. Cross section as shown is suitable for pedestrian and vehicular applications. Paver dimensions subject to aspect and plan ratio requirements. Contact Belgard Commercial for product selection guidance based on the intended traffic loading.
   2. Depth of aggregate base subject to site specific conditions (traffic loading, soil conditions, groundwater levels, climatic conditions). Contact Belgard Commercial for design assistance.
   3. Drain pipes may be required within the aggregate base depending on the permeability of the subgrade soils. Verify drainage needs with the geotechnical engineer. Ensure drain pipes are able to daylight via gravity flow to surface, or connect to catch basin.
   4. Ensure the geotextile above the drain hole has good drainage characteristics and is not prone to clogging.
   5. Techniseal HP Nextgel jointing sand conforming to ASTM C144 may be used in pedestrian and light vehicular applications. Please contact Belgard Commercial for design assistance.

Top of installed pavers shall be 1/8" to 1/4" above adjacent rigid surfaces

Belgard Concrete Pavers

Jointing Sand, Conforms to ASTM C144

Compacted Aggregate Base - minimum 6" thick. Asphalt or cement treatment base can be used over weak or saturated subgrade soils

Mirafi 160N Nonwoven Filtration Fabric on entire bottom of aggregate base (extends beyond curb); optional if sub-base of #2 is used as a drainage layer.
Design Notes:
1. Cross section as shown is suitable for pedestrian and vehicular applications. Paver dimensions subject to aspect and plan ratio requirements. Contact Belgard Commercial for product selection guidance based on the intended traffic loading.
2. Condition of existing asphalt pavement and drainage elements should be assessed and determined to be suitable for site specific conditions by a licensed pavement engineer. Contact Belgard Commercial for design assistance.
3. Additional drain holes may be required depending on the size of the pavement area. The rule of thumb is to have at least one drain hole per 500 square feet of surface area. Storm drains should be used at low spots.
4. Drain pipes may be required within the aggregate base depending on the permeability of the subgrade soils. Verify drainage needs with the geotechnical engineer. Ensure drain pipes are able to daylight via gravity flow to surface, or connect to catch basin.
5. Ensure the geotextile above the drain hole has good drainage characteristics and is not prone to clogging.
6. Techniseal HP Nextgel jointing sand conforming to ASTM C144 may be used in pedestrian and light vehicular applications. Please contact Belgard Commercial for design assistance.

Belgard Standard Paving Detail
Sand Set on Existing Asphalt Base
Design Notes:
1. Cross section as shown is suitable for pedestrian and vehicular applications. Paver dimensions subject to aspect and plan ratio requirements. Contact Belgard Commercial for product selection guidance based on the intended traffic loading.
2. Depth of base, and thickness of concrete slab, subject to site specific conditions (traffic loading, soil conditions, groundwater levels, climatic conditions). Contact Belgard Commercial for design assistance.
3. Additional drain holes may be required depending on the size of the pavement area. The rule of thumb is to have at least one drain hole per 500 square feet of surface area. Storm drains should be used at low spots.
4. Drain pipes may be required within the aggregate base depending on the permeability of the subgrade soils. Verify drainage needs with the geotechnical engineer. Ensure drain pipes are able to daylight via gravity flow to surface, or connect to catch basin.
5. Ensure the geotextile above the drain hole has good drainage characteristics and is not prone to clogging.
6. Techniseal HP Nextgel jointing sand conforming to ASTM C144 may be used in pedestrian and light vehicular applications. Please contact Belgard Commercial for design assistance.
Concrete header curb, 8" to 24" wide. (designed by others)

Saw cut pavement and seal joint

Existing asphalt pavement

Compacted aggregate base, (designed by others)

Drain hole – 2" diameter, fill with pea gravel and cover with geotextile. Place at 24" on center along low end of border(s).

Top of installed pavers shall be 1/8" to 1/4" above adjacent rigid surfaces

Belgard Concrete Pavers

Mirafi 160N Nonwoven Filtration Fabric - 12" wide at all perimeters, turn up against curb and cut even with the top of pavers

Full depth ½" Expansion Joint (as required)

Neoprene adhesive

Jointing Sand, Conforms to ASTM C144

¾" thick Bituminous Sand Bed

Tack coat

6" min. Concrete Slab (designed by others)

4" min. Compacted drainage aggregate base, (designed by others)

Compacted Subgrade, prepare according to recommendations in geotechnical report.

Belgard Standard Paving Detail

Curb Transition Bituminous Set on Concrete Base

Design Notes:
1. Cross section as shown is suitable for pedestrian and vehicular applications. Paver dimensions subject to aspect and plan ratio requirements. Contact Belgard Commercial for product selection guidance based on the intended traffic loading.
2. Depth of base, and thickness of asphalt/concrete slab, subject to site specific conditions (traffic loading, soil conditions, groundwater levels, climatic conditions). Contact Belgard Commercial for design assistance.
3. Additional drain holes may be required depending on the size of the pavement area. The rule of thumb is to have at least one drain hole per 500 square feet of surface area. Storm drains should be used at low spots.
4. When using geotextile separation fabric, consult with the manufacturer to ensure the material has good drainage characteristics and is not prone to clogging.
5. Drain pipes may be required within the aggregate base depending on the permeability of the subgrade soils. Verify drainage needs with the geotechnical engineer. Ensure drain pipes are able to daylight via gravity flow to surface, or connect to catch basin.
6. Techniseal HP Nextgel jointing sand conforming to ASTM C144 may be used in pedestrian and light vehicular applications. Please contact Belgard Commercial for design assistance.
Design Notes:
1. Cross section as shown is suitable for pedestrian and vehicular applications. Paver dimensions subject to aspect and plan ratio requirements. Contact Belgard Commercial for product selection guidance based on the intended traffic loading.
2. Depth of aggregate base subject to site specific conditions (traffic loading, soil conditions, groundwater levels, climatic conditions). Contact Belgard Commercial for design assistance.
3. When traffic flow is perpendicular to the direction of the header, the width of the header curb should be sufficient to ensure that a bouncing tire caused by differential settlement will land on the header and not skip over it.
4. When using geotextile separation fabric, consult with the manufacturer to ensure the material has good drainage characteristics and is not prone to clogging.
5. Drain pipes may be required within the aggregate base depending on the permeability of the subgrade soils. Verify drainage needs with the geotechnical engineer. Ensure drain pipes are able to daylight via gravity flow to surface, or connect to catch basin.
6. Techniseal HP Nextgel jointing sand conforming to ASTM C144 may be used in pedestrian and light vehicular applications. Please contact Belgard Commercial for design assistance.
Paver surface slope towards drains

Holes for drainage around entire perimeter of roof drain

Use ASTM No. 57 aggregate as required between the No. 89 bedding and drainage mat to meet grades.

Geotextile 36" wide at all perimeters, wrap over end of bedding sand 12"

Expansion joint material between wall and pavers

Parapet or building wall

Expansion joint material (may not be present based on building design)

Roof Drain

Turn geotextile up sides of drain to prevent washout of bedding sands

Jointing material, ASTM No. 10 aggregate

Gasket

Joint Filler/Sealant (Optional - See note 6)

Sealant (Optional - See note 6)

Belgard Concrete Pavers

Drainage mat (plastic structure covered by geotextile), overlap entire plate

Galvanized steel angles (Optional - See note 6)

2" Bedding Layer, ASTM No. 89 aggregate

Protective board (As required – See note 3)

Structural Slab, Minimum 2% slope to roof Drains

Galvanized steel angles

Waterproof Membrane, Overlap entire plate (see note 7)

Design Notes:

1. Cross section as shown is intended for pedestrian use. If any vehicular traffic loading is expected, contact Belgard Commercial for design assistance, as additional static and dynamic loads need to be accounted for.
2. Structural analysis to verify that the roof deck can handle the additional weight of the pavers and aggregate is by others.
3. Consult with the waterproof membrane supplier to determine if a protective board is required.
4. Check with the local building codes for ballast requirements (based on wind loading).
5. Ensure the geotextile to be used has good drainage characteristics and is not prone to clogging.
6. Continuation of the structural slab expansion joint to surface is not required with aggregate set pavers, consult with a design engineer.
7. Waterproof membrane may not be required over some precast concrete structural slabs, consult with the design engineer.
Design Notes:
1. Cross section as shown is intended for pedestrian use. If any vehicular traffic loading is expected, contact Belgard Commercial for design assistance, as additional static and dynamic loads need to be accounted for.
2. Structural analysis to verify that the roof deck can handle the additional weight of the pavers and sand is by others.
3. Thickness of rigid insulation based on local codes and climatic conditions.
4. Check with the local building codes for ballast requirements (based on wind loading).
5. Ensure the geotextile to be used has good drainage characteristics and is not prone to clogging.
6. Continuation of the structural slab expansion joint to surface is not required with aggregate set pavers, consult with the design engineer.
Design Notes:
1. Cross section as shown is intended for pedestrian use. If any vehicular traffic loading is expected, contact Belgard Commercial for design assistance, as additional static and dynamic loads need to be accounted for.
2. Structural analysis to verify that the roof deck can handle the additional weight of the pavers and aggregate is by others.
3. Consult with the waterproof membrane supplier to determine if a protective board is required.
4. Check with the local building codes for ballast requirements (based on wind loading).
5. Ensure the geotextile to be used has good drainage characteristics and is not prone to clogging.
6. Continuation of the structural slab expansion joint to surface is not required with sand set pavers, consult with a design engineer.
7. Waterproof membrane may not be required over some precast concrete structural slabs, consult with the design engineer.
Design Notes:
1. Cross section as shown is intended for pedestrian use. If any vehicular traffic loading is expected, contact Belgard Commercial for design assistance, as additional static and dynamic loads need to be accounted for.
2. Structural analysis to verify that the roof deck can handle the additional weight of the pavers and sand is by others.
3. Thickness of rigid insulation based on local codes and climatic conditions.
4. Check with the local building codes for ballast requirements (based on wind loading).
5. Ensure the geotextile to be used has good drainage characteristics and is not prone to clogging.
6. Continuation of the structural slab expansion joint to surface is not required with sand set pavers, consult with the design engineer.
Design Notes:
1. No cut faces are to be placed directly against an outside curb.
2. Cut pavers shall be no less than 1/3 of a full piece.
Add rebar to collar as required (designed by others)

Concrete collar min. 8" wide X 8" deep
Elevation to be 1/4" below pavers
Rebar as required (designed by others)

1 in. bedding layer
1 in. diameter weep holes, one per side.
Bottom of weep holes to be level with the surface of base.

Concrete brick as required
Precast concrete drainage structure
Aggregate, Concrete or Asphalt base
Geotextile 12" wide, turn up against collar and cover all weep holes to prevent bedding material loss.

Design Notes:
1. Paver dimensions subject to plan aspect ratio requirements, contact Belgard Commercial for product selection guidance based on the intended traffic loading.
2. Ensure the geotextile adjacent to the drain holes has good drainage characteristics and is not prone to clogging.
Add rebar to collar as required (designed by others)

Concrete collar min. 8" wide X 8" deep
Elevation to be 1/4" below pavers
Rebar as required (designed by others)

1 in. bedding layer

Geotextile as required, turn up against valve box

Design Notes:
1. Paver dimensions subject to plan aspect ratio requirements, contact Belgard Commercial for product selection guidance based on the intended traffic loading.
2. Ensure the geotextile adjacent to the drain holes has good drainage characteristics and is not prone to clogging.
3. Do not place this assembly at lowest pavement elevations.

Sailor course of pavers around collar. No cuts directly against collar.

Geotextile 12" wide, turn up against collar.

Belgard Concrete Paver (see note 1)

Aggregate base

Subgrade

Cast iron valve box and lid

Geotextile as required, turn up against valve box

Concrete collar min. 8" wide X 8" deep
Elevation to be 1/4" below pavers
Rebar as required (designed by others)

1 in. bedding layer
EDGE RESTRAINT - SAND SET ON CONCRETE BASE

- **Belgard Concrete Pavers**
- **Geotextile 12" wide at all perimeters, turn up against angle**
- **1" Bedding Layer, conforms to ASTM C33 with <1% passing 0.080 mm**
- **4" min. Concrete slab (designed by others)**
- **3"X3"X3/16" galv steel angle pre-drilled at 24" o.c.**
- **½" dia x 12" long galv steel anchoring pin. Ensure min 3" from outside edge and any drain holes**
- **Drain hole – 2" diameter, fill with pea gravel and cover with geotextile. Place at 24" on center along low end of border(s).**

EDGE RESTRAINT - SAND SET ON AGGREGATE BASE

- **Belgard Concrete Pavers**
- **Geotextile 12" wide at all perimeters, turn up against curb**
- **1" Bedding Layer, conforms to ASTM C33 with <1% passing 0.080 mm**
- **4" min. Compacted Drainage Aggregate Base, (designed by others)**
- **Minimum length equal to base thickness**
- **2 x #4 Rebar**

EDGE RESTRAINT - SAND SET ON EXISTING ASPHALT BASE

- **Belgard Concrete Pavers**
- **Geotextile 12" wide at all perimeters, turn up against curb**
- **1" Bedding Layer, conforms to ASTM C33 with <1% passing 0.080 mm**
- **Existing Asphalt Slab (designed by others)**
- **3"X3"X3/16" galv steel angle pre-drilled at 24" o.c.**
- **Existing compacted aggregate base (designed by others)**
- **½" dia x 12" long galv steel anchoring pin. Ensure min 3" from outside edge and any drain holes**
- **Drain hole – 2" diameter, fill with pea gravel and cover with geotextile. Place at 24" on center along low end of border(s).**
Drain hole – 2” diameter, fill with pea gravel and cover with geotexile. Place at 24” on center along low end of border(s).

3”X3”X3/16” galv steel angle pre-drilled at 24” o.c.

½” dia x 12” long galv steel anchoring pin. Ensure min 3” from outside edge and any drain holes

Soil with vegetative cover

Geotexile 12” wide at all perimeters, turn up against angle

4” min. Compacted Drainage Aggregate Base, (designed by others)

3”X3/16” galv steel angle pre-drilled at 24” o.c.

½” dia x 12” long galv steel anchoring pin. Ensure min 3” from outside edge and any drain holes

Drain hole – 2” diameter, fill with pea gravel and cover with geotexile. Place at 24” on center along low end of border(s).

Neoprene adhesive

¾” thick bituminous sand bed

Tack coat (optional)

EDGE RESTRAINT - BITUMINOUS SET ON CONCRETE BASE

EDGE RESTRAINT - BITUMINOUS SET ON EXISTING ASPHALT BASE

Belgard Concrete Pavers

Geotexile 12” wide at all perimeters, turn up against angle

Belgard Concrete Pavers

Geotexile 12” wide at all perimeters, turn up against angle

Neoprene adhesive

¾” thick bituminous sand bed

Tack coat (optional)

Existing asphalt pavement (designed by others)

Existing compacted aggregate base (designed by others)

Drain hole – 2” diameter, fill with pea gravel and cover with geotexile. Place at 24” on center along low end of border(s).