

MasterSeal[®] 730 PA

Pre-Applied Waterproofing Membrane for below grade waterproofing

Application Guideline

MasterSeal 730 PA

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MasterSeal® 730 PA

Pre-Applied Waterproofing Membrane for below grade waterproofing Watch Points.

1. Do not use MasterSeal 730 PA as lake or pond liner, if used it has to be sandwiched between two slab.
2. Avoid small curves, depression in the formwork/blinding.
3. Do not use protection layer or concrete screed on MasterSeal 730 PA.
4. Do not bond the edges/overlap in presence of water.
5. Do not allow water to stagnate below MasterSeal 730 PA prior to concrete placement.
6. Do not allow the vibrator to come in contact with MasterSeal 730 PA
7. Blinding concrete should be fairly smooth. Local depression greater than 10 mm should be filled.
8. Fold MasterSeal 730 PA to form crease at change of direction to ensure maximum contact to the substrate.
9. On permanent formwork extend MasterSeal 730 PA above the pour height to ensure easy overlap of adjacent membrane.
10. Prior to placing concrete remove all dust and debris. Repair damages with MasterSeal 937 Tape or patch with MasterSeal 730 PA.

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11. Ensure all release paper has been removed.
12. Do not leave the MasterSeal 730 PA exposed to direct sunlight for more than 42 days.

Material Storage

- Material should be stored in a shaded area away from direct sunlight.
- Material should be stacked vertically.
- If re-rolling back of the material is required, it should be rolled back on to its original cardboard roll.

General tools and equipment: -

- Heavy Duty Lap Roller (Minimum 80 mm width)
- Vee roller.
- Utility Knife with Hook blade
- Measuring Tape
- Straight Edge 2 m long
- Hand Held Mixing Machine with Paddle
- Trowel and Paint Brush

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- Cotton cleaning Cloths



Lap Roller



Vee Roller



Knife



Trowel



Measuring Tape



Straight Edge

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General Site condition: -

- a) For Horizontal Area/below raft area- Blinding concrete is suitable as a base layer to receive MasterSeal 730 PA. alternatively a well compacted soil, drainage board or a 19 mm ply can be used as a substrate. The base layer should be rigid and should not move under load of concrete.
- b) For Vertical Area: - For Blind side waterproofing a smooth finish shotcrete/block work or 19 mm sacrificial ply wood would serve as substrate. The ply wood/drainage board should be rigid and should not move under the load of concrete. Single side formwork is recommended for blind side waterproofing.
- c) The area should be relatively dry with no standing water.
- d) At site where water table is high and or water logging is anticipated, sump pits/dewatering system should be installed. No water should be allowed to stagnate below MasterSeal 730 PA till concrete for the raft/slab is completed.
- e) The rebar chair used should not be sharp, it may damage MasterSeal 730 PA. Concrete blocks or PVC rebar chair which has a larger base to distribute the load is recommended for use.

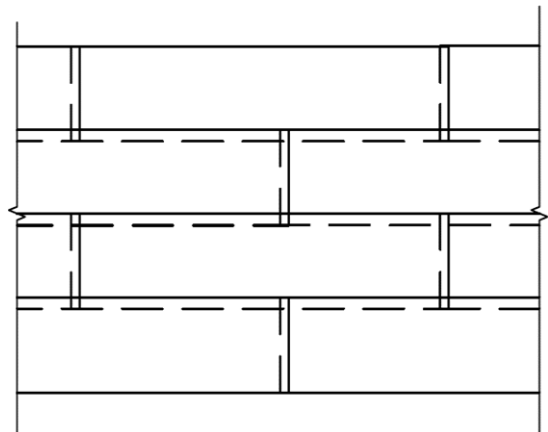
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Membrane Layout: -

The HDPE side should always face the substrate, whereas the adhesive side will receive the fresh concrete. The membrane layout should be such that the joints are staggered. Horizontal membrane should be laid first.

For seldge side- Overlap the adjacent membrane to minimum 75 mm. Remove the release liner partially from the seldge area and place the adjacent membrane. Firmly press the membrane with hand followed by rolling. Ensure no fish-mouth occurs, if fish-mouth occurs, apply MasterSeal 937 tape over the fish-mouth area.

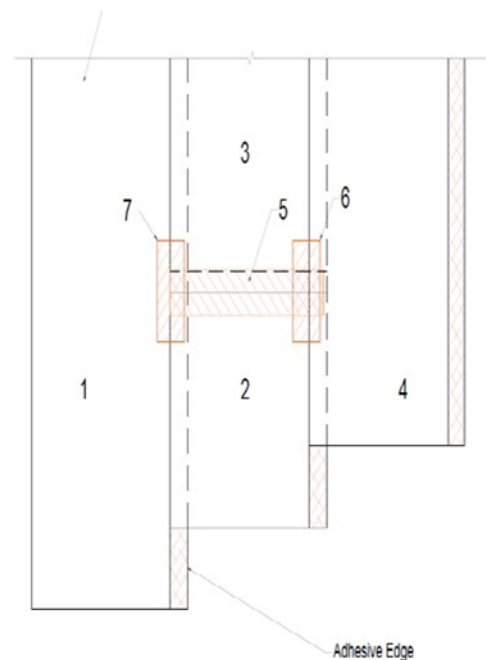


End Laps (without seldge)

Option1-

- Place the membrane in sequence as shown 1,2,3, and 4 and roll.
- Apply MasterSeal 937 tape centrally at the lap area as shown- 5 and roll
- Apply MasterSeal 937 tape as shown 6 and 7 and roll.

Note: - Due to thickness of MasterSeal 730 PA there is a step down formation at the overlap area. When MasterSeal 937



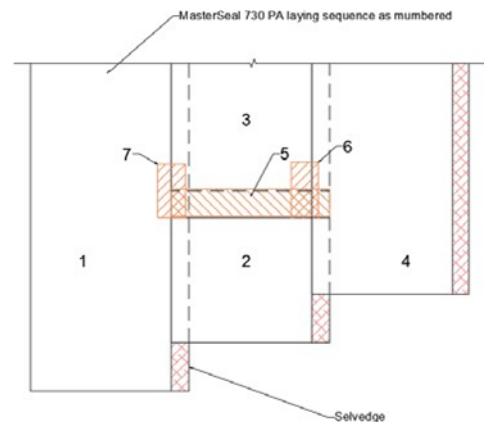
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tape is applied over the area, a small air channel is formed. This area should be carefully rolled using a Vee Roller or a pointed roller.

Option 2-

- Place membrane 1, 2 and 3. Bond the membrane 1 and 2 at the seldge.
- Apply MasterSeal 936 tape at the end lap of membrane 2. Remove the release liner of MasterSeal 936 tape, bond membrane 3 onto MasterSeal 936 tape and seldge of membrane 1.
- Place membrane 4 and bond to membrane 2 and 3.
- Apply MasterSeal 937 tape as shown 6 and 7 and roll.



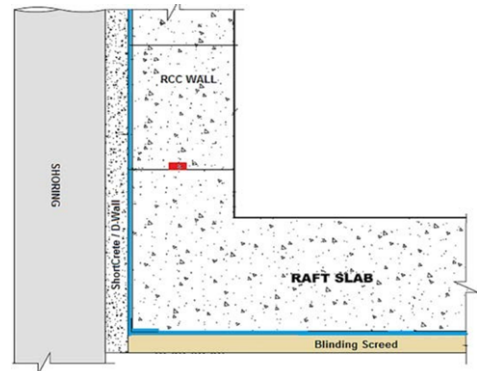
Note: - Due to thickness of MasterSeal 730 PA there is a step down formation at the overlap area. When MasterSeal 937 tape is applied over the area, a small air channel is formed. This area should be carefully rolled using a Vee Roller or a pointed roller.

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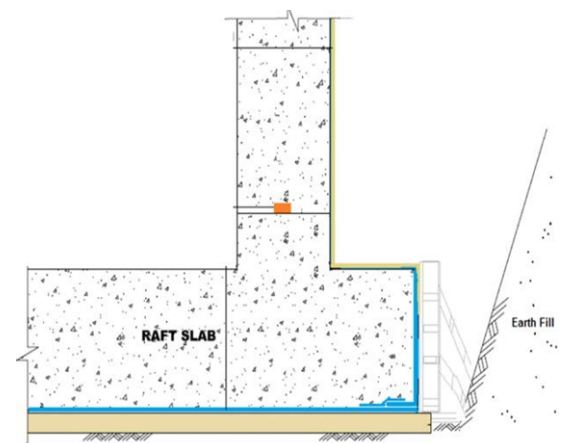
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System Approach

- a) **Standalone-** This system is generally used where there is no space between the boundary line of the building and the excavation line. This system is also referred as blind side waterproofing. In this system waterproofing of the Horizontal (raft) as well as the Vertical (retaining wall) section of the structure is done with MasterSeal 730 PA.



- b) **Composite-** This system is generally used where there is sufficient gap between the boundary line of the building and the excavation line so as to apply waterproofing membrane from the positive side. In this system the horizontal area waterproofing is done with MasterSeal 730 PA whereas the vertical area is done with MasterSeal 726 / MasterSeal M800 / MasterSeal 811.

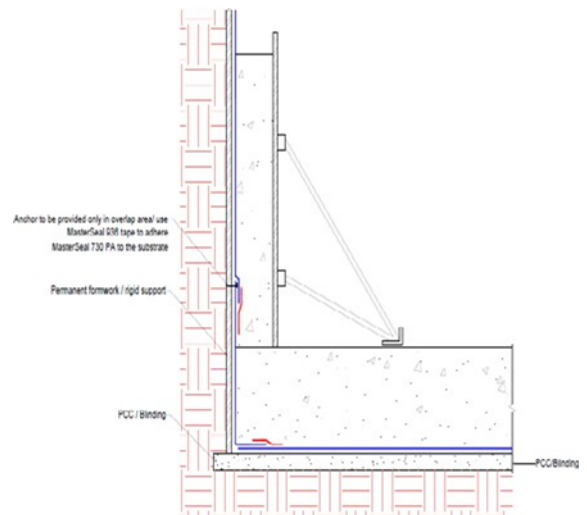
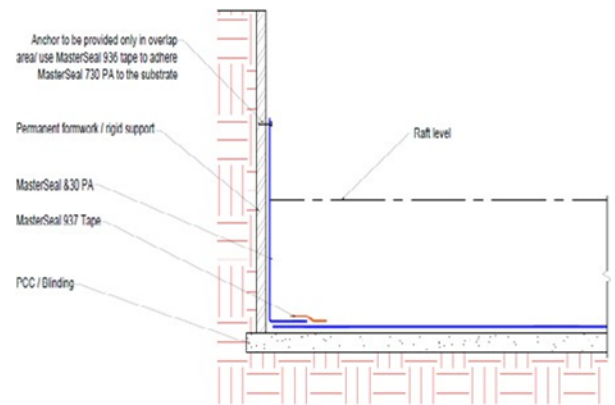


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Blind Side waterproofing- Standalone system.

- 1) Raft foundation-
 - a) Lay the horizontal membrane on the blinding screed/substrate with a minimum overlap of 75 mm
 - b) Lay the membrane on the vertical rigid support
 - c) The minimum height of vertically installed membrane should either be 500mm more than the finished level of raft or 500 mm more than the height of reinforcement, whichever is greater. Subsequent height of the membrane should at least be kept 500 mm more than the height of reinforcement.
 - d) Anchors to hold the membrane in position should be provided in the overlap area. If anchors are not within the overlap area, provide a small patch of MasterSeal 730 PA adhered by MasterSeal 936 tape over the anchor and overlapping all around with minimum 75 mm. (150 mm dia patch to be used)
 - e) Remove the release liner on the vertical section only to the height to which the concrete will be poured. This will keep the balance membrane clean from concrete splashes and better adhesion for subsequent layer of membrane. If the membrane gets dirty with concrete splashes at the overlap area, tug the top membrane behind the bottom membrane and use MasterSeal 936 Tape (Adhesive side of top membrane will bond to HDPE side of bottom membrane)

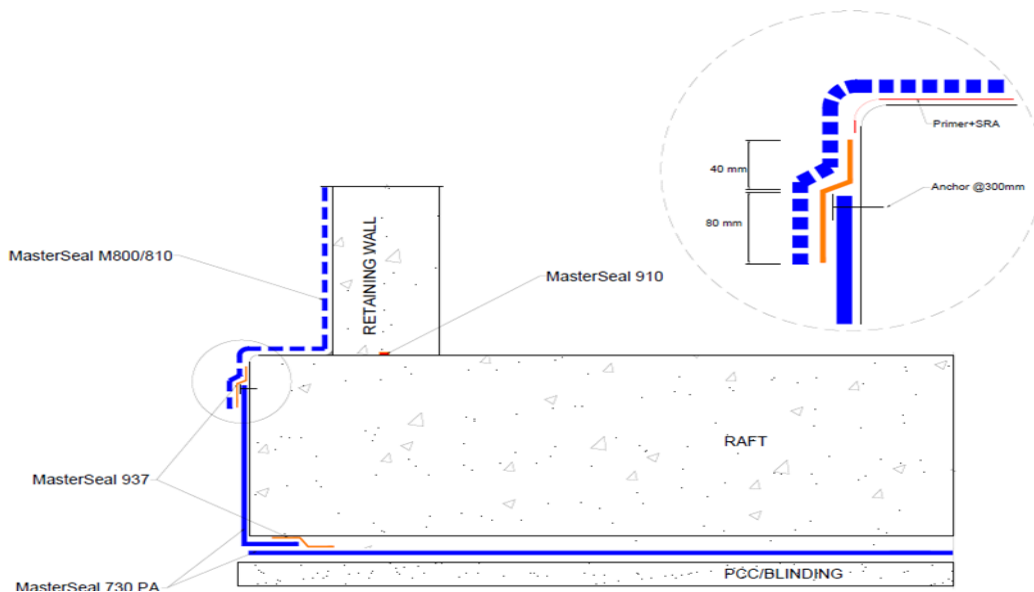


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Positive side waterproofing- Composite System.

- 1) Raft foundation-
 (MasterSeal 730 PA with MasterSeal M800/811 combination)
 - a) Lay the horizontal membrane on the blinding screed/substrate with a minimum overlap of 75 mm
 - b) The height of vertical membrane laid should at least be 50 mm below the top level of raft level.
 - c) Strike the formwork only after concrete has achieved strength of minimum 10 Mpa.
 - d) After striking formwork anchor the membrane to the concrete @300 mm c/c
 - e) Apply MasterSeal 937 tape on the HDPE side of the exposed membrane. This activity to be carried out while undertaking the spray work for the vertical/retaining wall
 - f) Apply primer only on the concrete surface, primer should not be applied on MasterSeal 937 tape.
 - g) Mask the HDPE area below MasterSeal 937 tape.
 - h) Spray MasterSeal M800/811 on the vertical area and the overlap area (MasterSeal 937 tape)
 - i) Remove the masking tape before MasterSeal M800/811 cures.

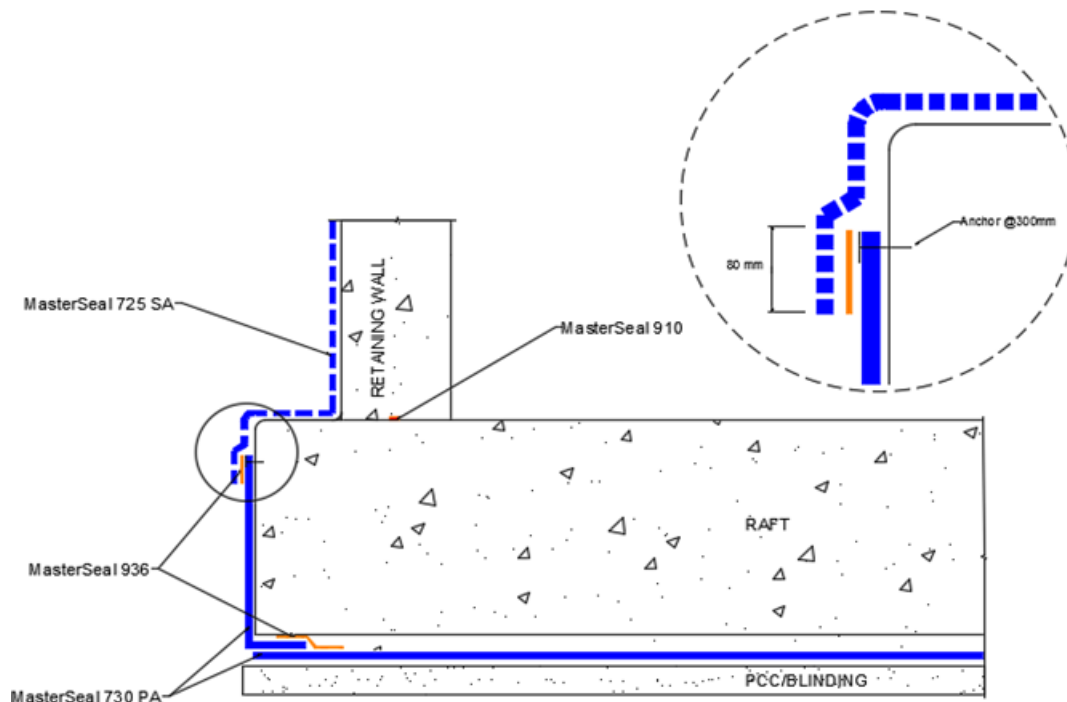


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MasterSeal 730 PA with MasterSeal 726 combination)

- Lay the horizontal membrane on the blinding screed/substrate with a minimum overlap of 75 mm
- The height of vertical membrane laid should at least be 50 mm below the top level of raft level.
- Strike the formwork only after concrete has achieved strength of minimum 10 Mpa.
- After striking formwork anchor the membrane to the concrete @300 mm c/c
- Apply MasterSeal 936 tape on the HDPE side of the exposed membrane. This activity to be carried out while undertaking the spray work for the vertical/retaining wall
- Apply MasterSeal 726 with overlapping MasterSeal 936 Tape.

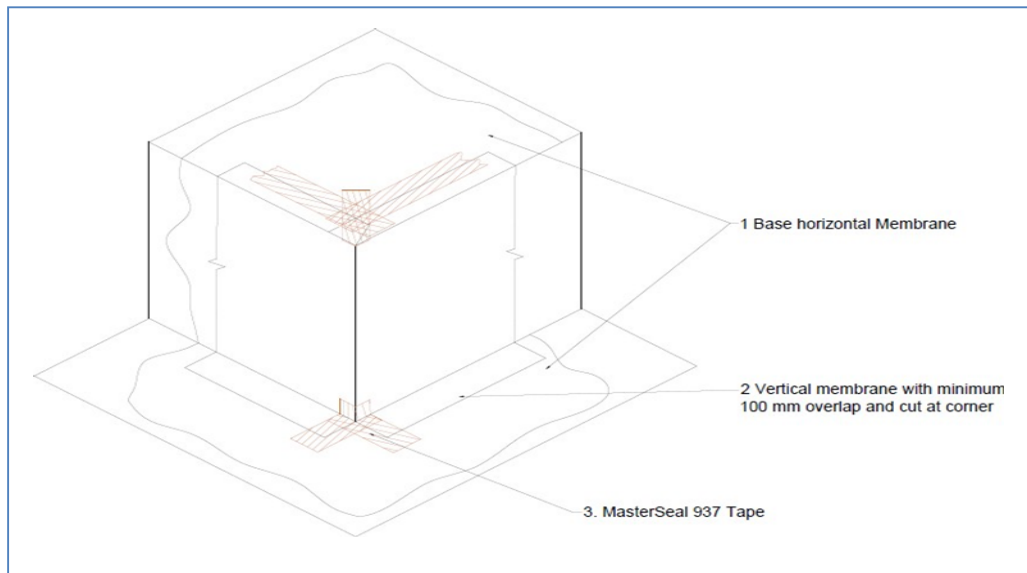


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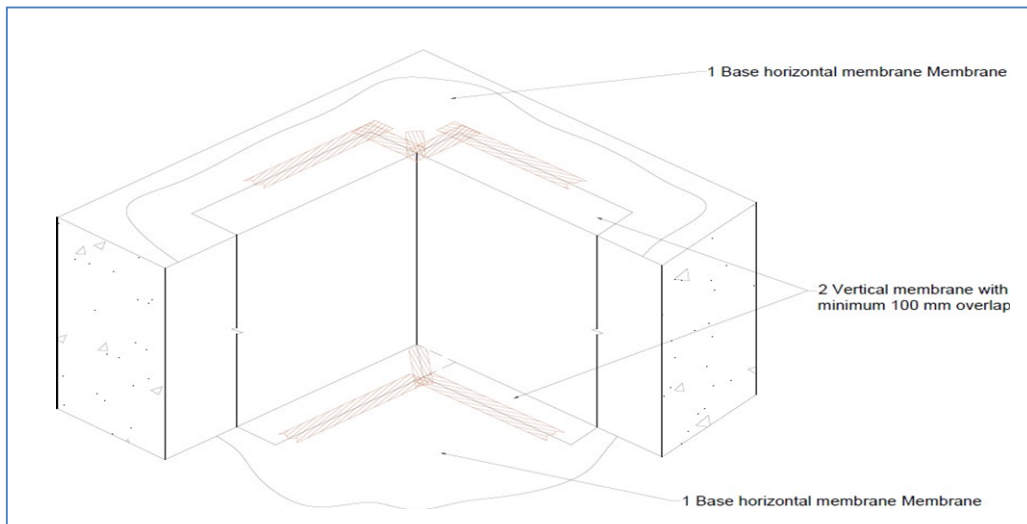
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Detailing

1) Internal Corner



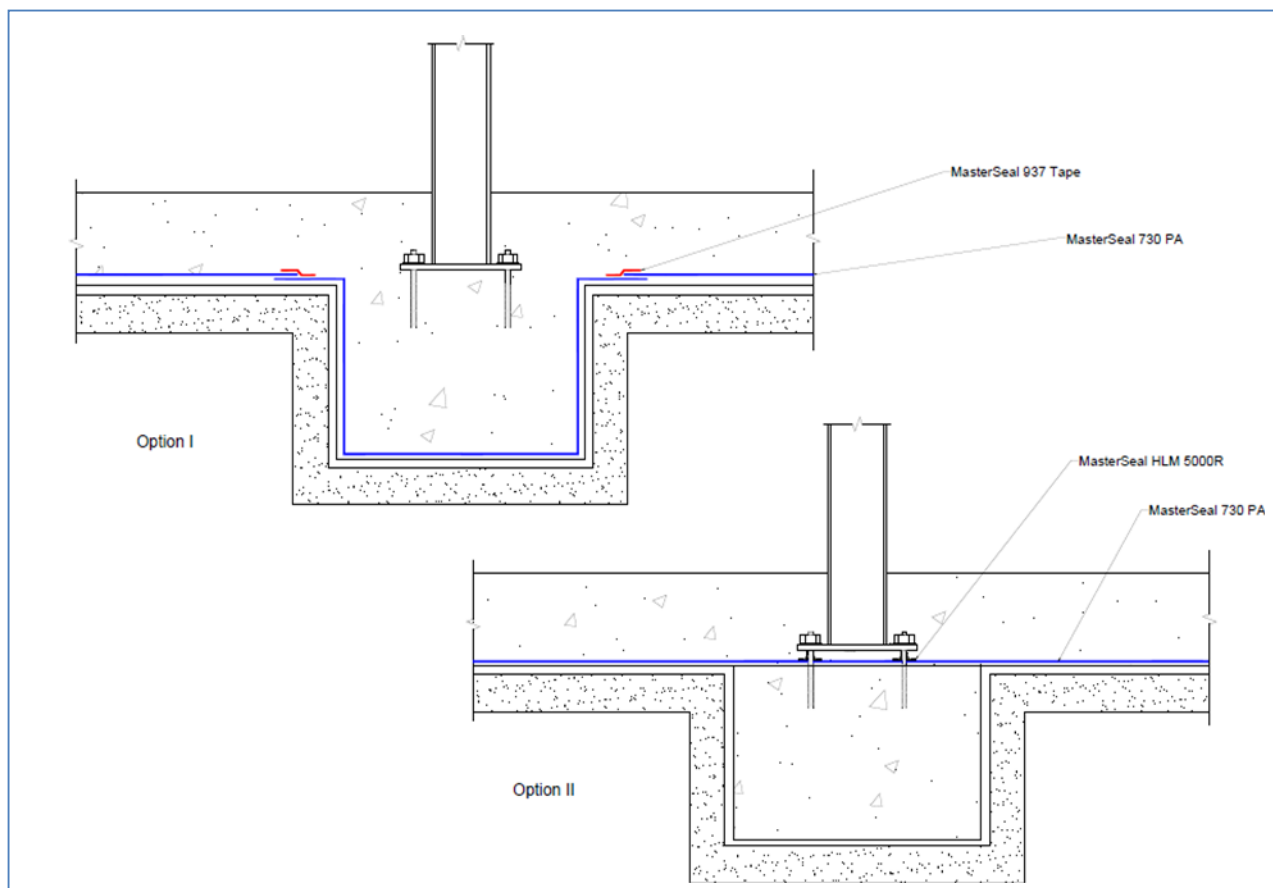
2) External Corner



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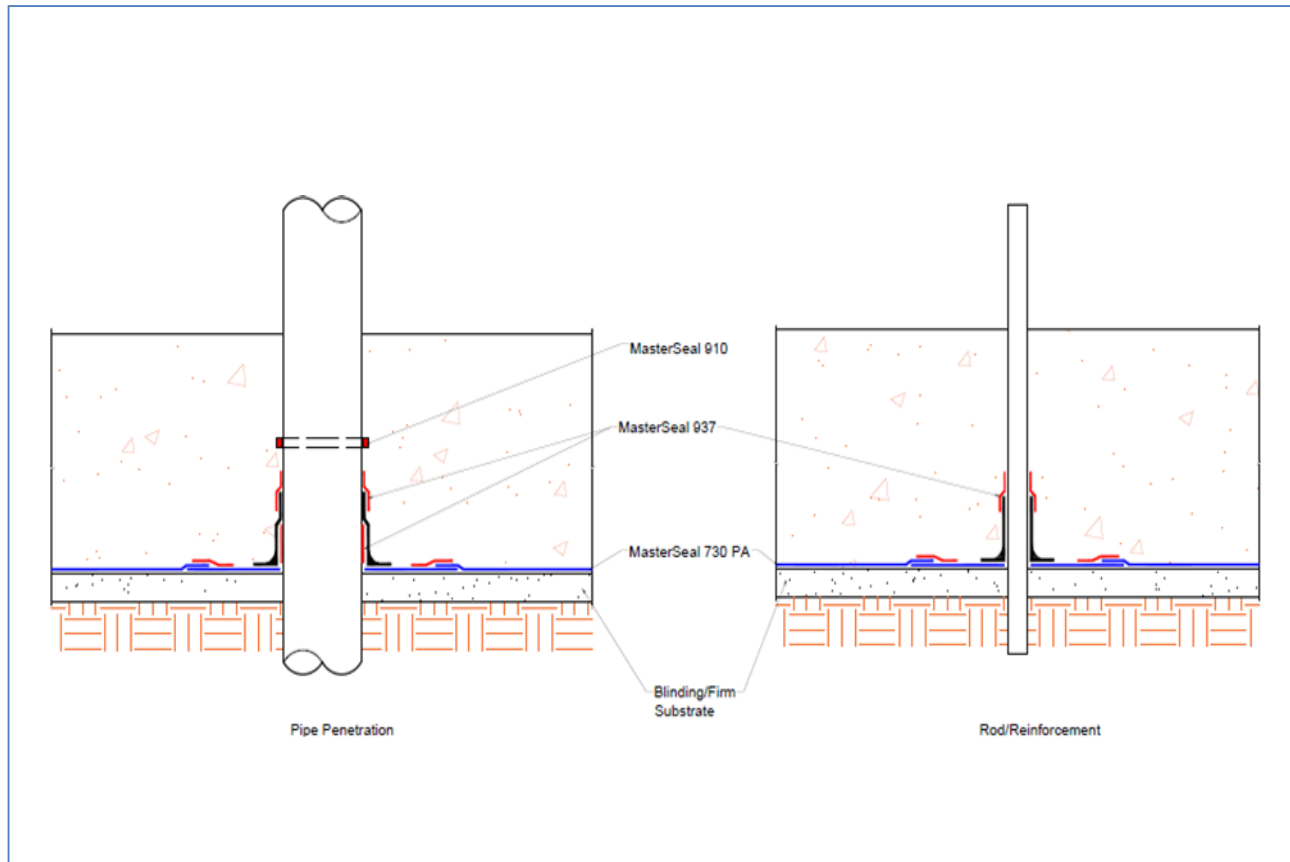
Anchor through floor slab



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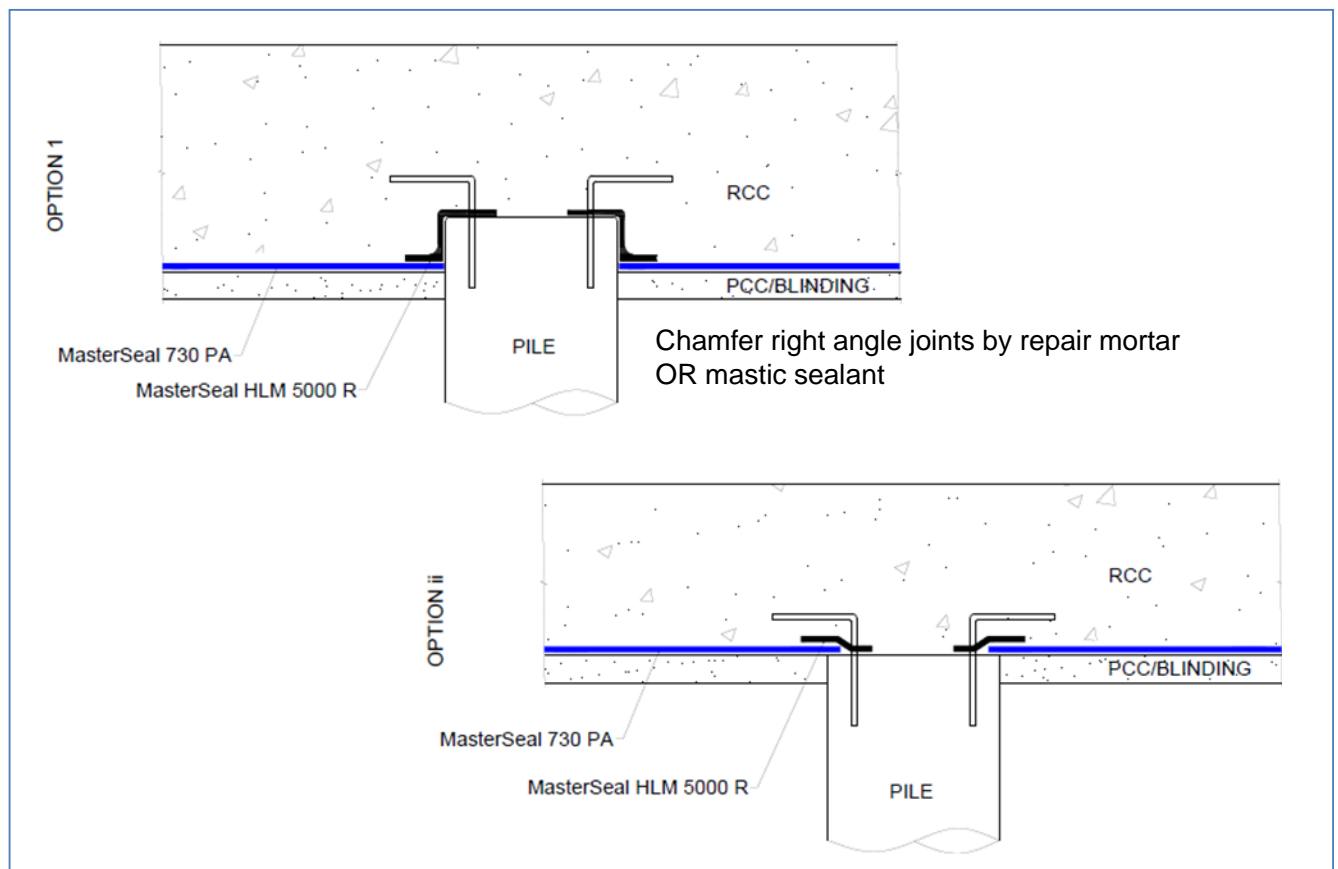
Penetration through slab and retaining wall.



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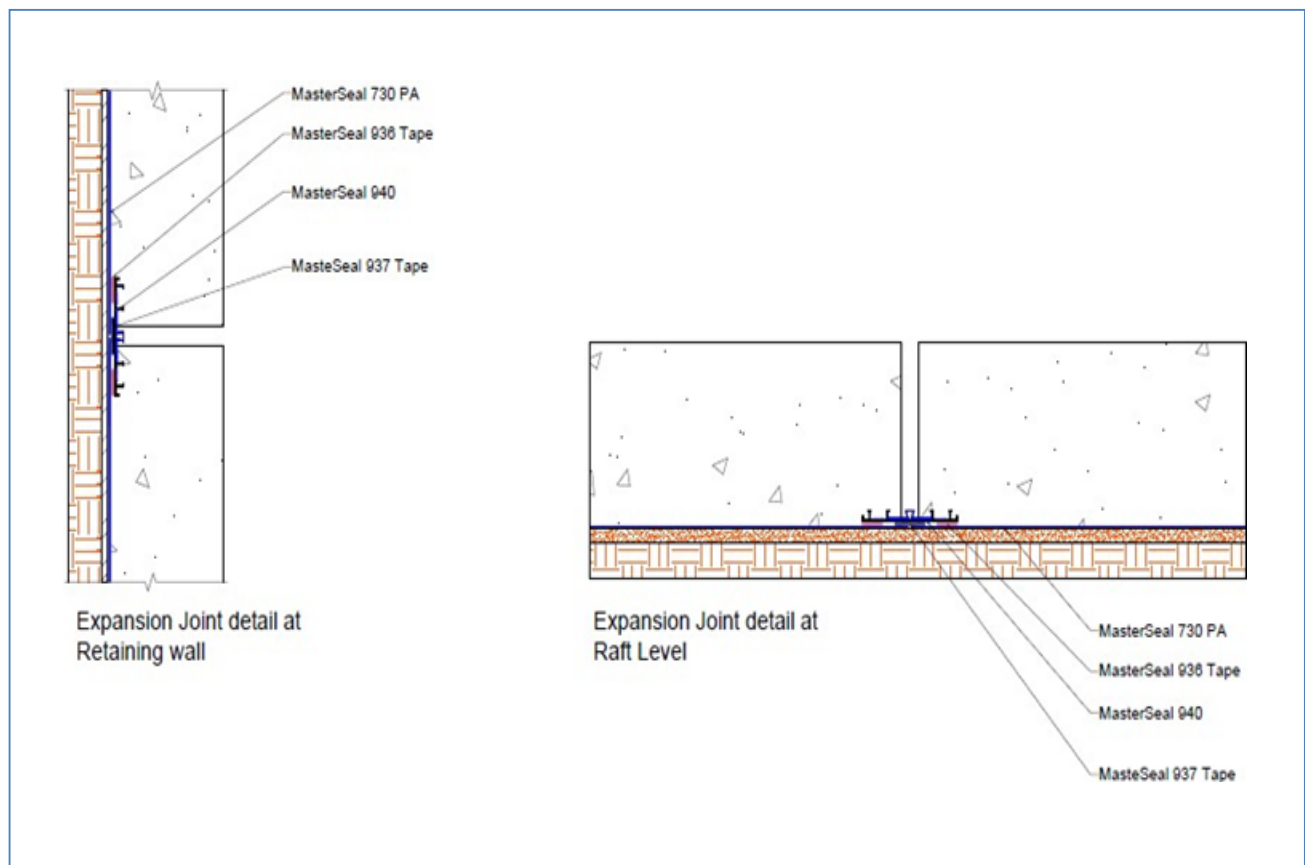
Pile cap Treatment



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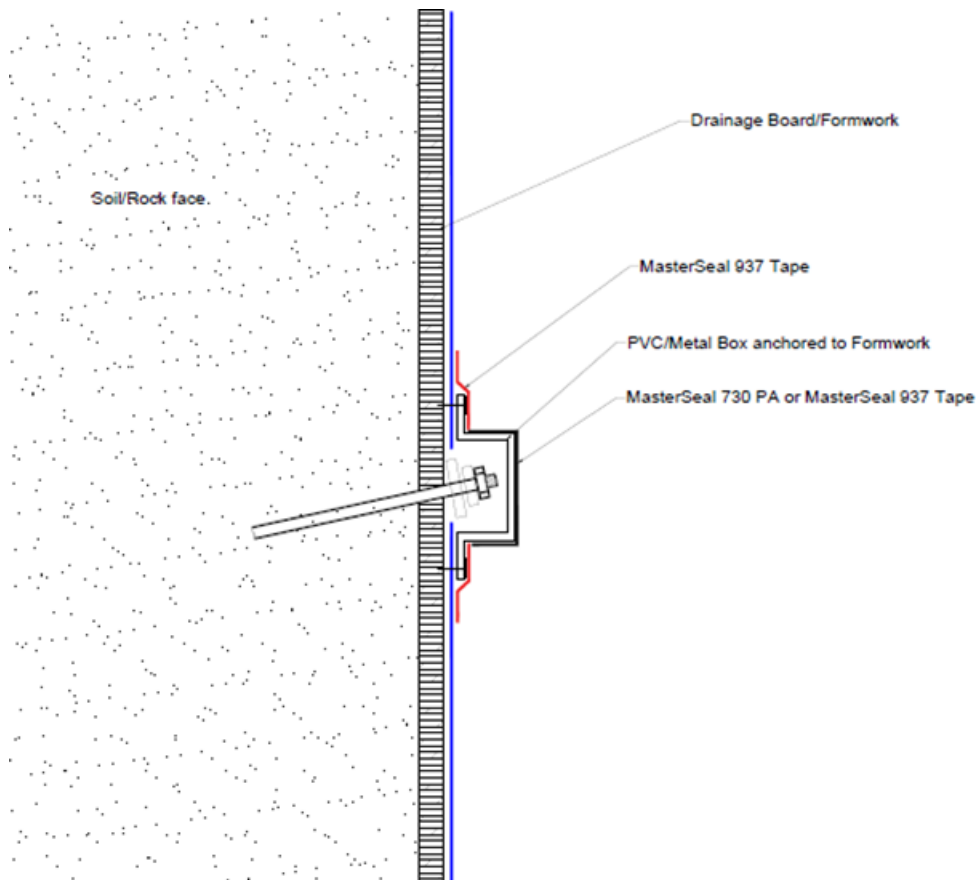
Expansion Joints.



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Rock Anchor in retaining wall



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