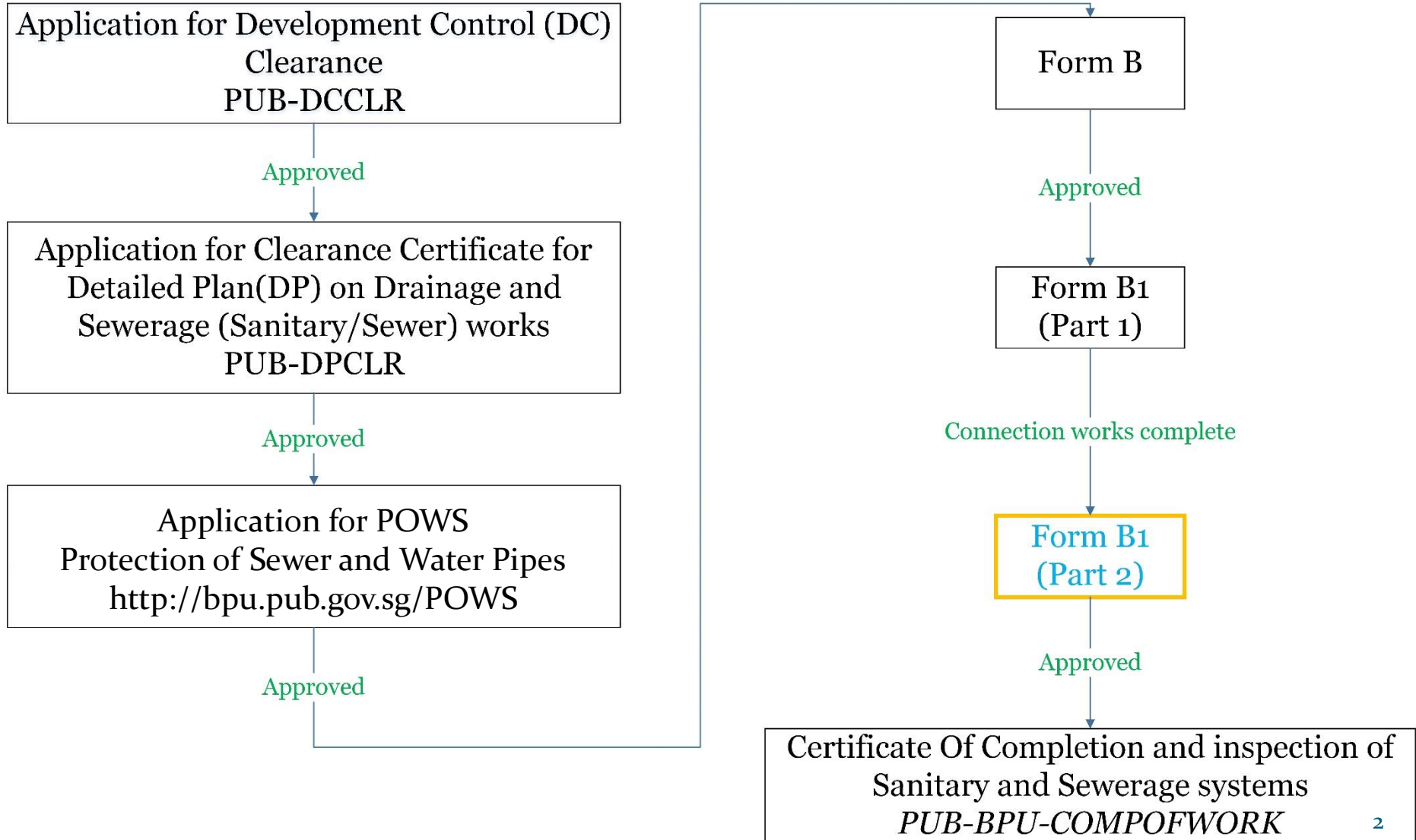


Form B1 Submission Procedure

Punggol Reservoir

Submission Flow



Form B1

There are **2 parts** for Form B1 submission procedure.

- 1) Form B1 part 1
- 2) Form B1 part 2

Note: *QPs are to make all Form B1 submissions.
Temporary pipe connections (i.e temporary in-drop) can be made by the Licensed Plumbers.*

Form B1 Part 1

Notice for carrying out sewer connection work

Notification to commence connection works

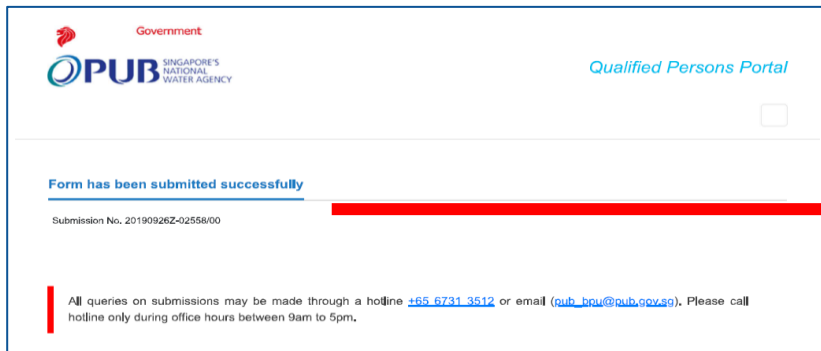
- Submissions are made via the BPU system
- 1 online submission per connection
 - <https://bpu.pub.gov.sg/Forms/EForms>
 - Automated system and e-mail acknowledgements will be generated.

Form B1 Part 1

Notice for carrying out sewer connection work

Approval to commence connection works

- Automated system approval



Government
PUB SINGAPORE'S NATIONAL WATER AGENCY
Qualified Persons Portal

Form has been submitted successfully

Submission No. 20190926Z-02556/00

All queries on submissions may be made through a hotline [+65-6731-3512](tel:+65-6731-3512) or email (pub_bpu@pub.gov.sg). Please call hotline only during office hours between 9am to 5pm.

Form has been submitted successfully

Submission No. 20201234Z-01234/00

- E-mail acknowledgement

Dear [REDACTED]

PROPOSED NEW ERECTION [REDACTED]

Project Ref. No. : [REDACTED]

[Please click here to view your submission.](#)

1. This is to acknowledge receipt of your Form B1 submission dated [REDACTED] for the above development.
2. **You may proceed with the sewer connection work from [REDACTED]** Please proceed to backfill only after the 5th day upon completion to facilitate random audit.
3. Please submit Part 2 of your Form B1 upon completion of work via email at PUB_FORM_B1@pub.gov.sg.
4. For any other enquiries, please email Building Plan Unit at PUB_BPU@pub.gov.sg.

Thank you.

Form B1 Part 2

Submission of Photo Form and required documents

Photo submission

- Submission is made via e-mail to pub_form_b1@pub.gov.sg
 - Approval by PUB Processing Officer
- 1 e-mail submission per connection
- Period of reply may take up to 14 working days

Components of Form B1 part 2 submission

- E-mail Submission Format
 - Attachments Required
 - QP Cover Letter Template
 - LP Cover Letter Template
- Channel Levels
 - Channel Levels Photo
 - Channel Levels Photo Alternatives
- Connection Type
- How to use the photo form?
- Common mistakes & observations

e-Mail submission format

To: PUB_Form_B1@pub.gov.sg

Subject: **Axxx-xxxxx-20xx**

Fill in **ONLY** your project reference No.
Do **NOT** add anything else.

Attachments:



Photo
Form



Longitudinal
Section
Drawing



Site
Layout
Plan

Attachments must be named correctly.
Do **NOT** merge or combine files.

Processing Officer,

Connection: **X** of **Y**

X represents the connection number.
Y represents the total number of
connections in the project.
e.g. Connection 1 of 1 , Connection 2 of 3

Attachments:

1. Photo form
2. Longitudinal Section Drawing
3. Site Layout Plan
4.
5.

Add attachments as required

Sender's Name

Sender's Contact No.



Attachments

Compulsory Attachments:

1. Photo form
2. Longitudinal Section Drawing
3. Site Layout Plan / 1st story plan
4. Sewerage Interpretation Plan
5. Cover letter (Qualified Person) - (*Permanent connections*)
6. Cover letter (Licensed Plumber) - (*Temporary Toilet connections*)

Note:

1. All drawings and photo forms should be in the original PDF format and not a scanned copy.
2. The drawings must reflect the connection details.
3. Do not sign and endorse on the photos and drawings

'If Required' attachments:

1. Brochure for S.S. Collar Joint ("*Y*" *Junction connection*)
2. Prior approval for Permanent In-Drop Pipe
3. Prior approval for Saddle Connection



File Message Insert Options Format Text Review Tell me what you want to do...

Cut Copy Paste Format Painter

Calibri (Box) 11 A A

B I U

Address Book Check Names Attach File Attach Item Signature

Follow Up High Importance Low Importance

Office Add-ins

Clipboard Basic Text Names Include Tags Add-ins

To... PUB Form B1 (PUB);

Cc...

Send

Subject A1234-56789-2018

Attached

- Photo Form.pdf 842 KB
- Longitudinal Section Drawing.pdf 461 KB
- Site Layout Plan.pdf 1 MB
- Sewerage Interpretation Plan.pdf 211 KB
- Cover Letter.pdf 45 KB

Processing Officer,

Connection: 1 of 2

Attachments:

1. Photo Form
2. Longitudinal Section Drawing
3. Site Layout Plan
4. SIP
5. Cover Letter

John Tan
61234567

EXAMPLE

Include email address of the QP / LP

1. Qualified Person – Permanent connections
2. Licensed Plumber – Temporary Toilet connections



Cover letter (QP)

[*Company Letterhead*]

Date: [dd/mm/yyyy]

Network Management Branch
Waterhub
82 Toh Guan Road East
#03-08
Singapore 608576

[*Company Name*]
[*Company Address*]

Cover Letter for sewerage connection work

[Proposed Title]

Project reference No. [*Project reference No.*]
Form B-1 Submission No.: [*Form B-1 Submission No.*]

Form B1 Processing officer,

The following are ensured;

- 1) All works carried out comply with the Code Of Practice On Sewerage and Sanitary Works (COPSS)
- 2) All photos have been checked for appropriateness and their authenticity verified
- 3) Submission(s) has been made according to the Form B1 submission procedure
- 4) Stainless steel collar joints to EN295 Part 4 Specifications have been used for the 'Y' Junction connection

Yours Sincerely,

[QP name]
[QP contact No.]

[QP Signature and Stamp]

Note:

1. Cover Letter needs to be in PDF Format

Applicable only for Y-Junction



Cover letter (LP)

[*Company Letterhead*]

Date: [dd/mm/yyyy]

Network Management Branch
Waterhub
82 Toh Guan Road East
#03-08
Singapore 608576

[*Company Name*]
[*Company Address*]

Cover Letter for Temporary In-drop Pipe

[Proposed Title]

Project reference No. [*Project reference No.*]

Form B-1 Submission No.: [*Form B-1 Submission No.*]

Form E Submission No.: [*Form E Submission No.*]

Form B1 Processing officer,

The following are ensured;

- 1) All photos have been checked for appropriateness and their authenticity verified
- 2) Submission has been made according to the Form B1 Guide
- 3) Stainless steel components are used for the pipe brackets

Yours Sincerely,

[LP name]
[LP contact No.]

[LP Signature and Stamp]

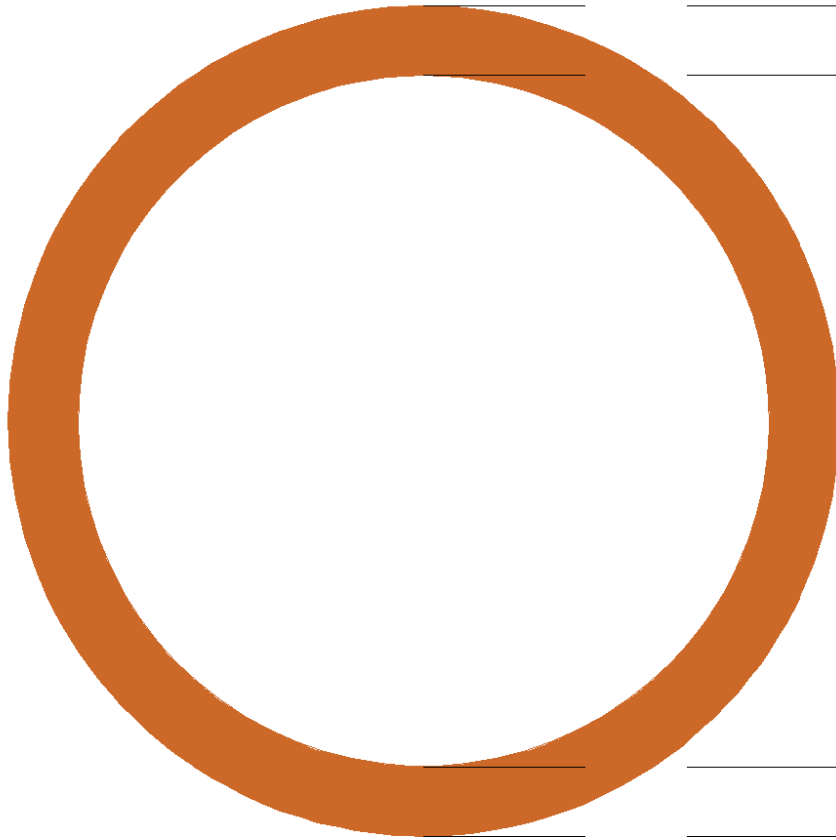
Note:

1. Cover Letter needs to be in PDF Format

Applicable only for in-drop pipes



Pipe Face



Crown

Soffit

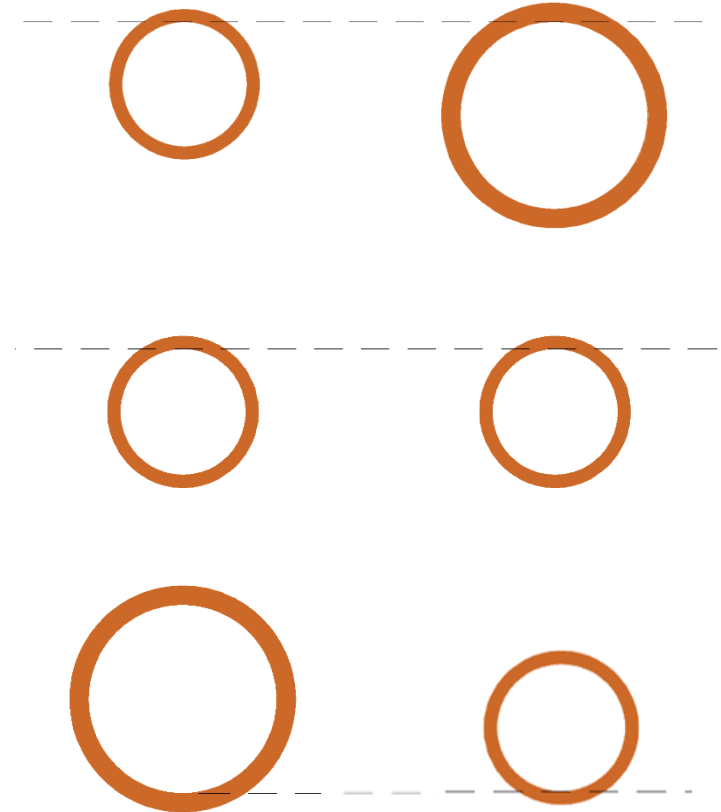
Invert

Barrel



Pipe/Channel levels

- Smaller pipe to bigger pipe
 - Soffit to Soffit
- Equal size pipes
 - Soffit to Soffit
- Bigger pipe to smaller pipe
 - Invert to Invert
- New incoming pipe connection which form sewer junctions at manhole, invert level shall be higher than existing outgoing pipe.



*Rule of thumb: The invert level of the incoming pipe cannot be **lower** than the invert level of the outgoing pipe*



Pipe/Channel levels



Height difference, invert of new channel against invert of existing channel.

Pipe/Channel levels



Soffit to soffit connection



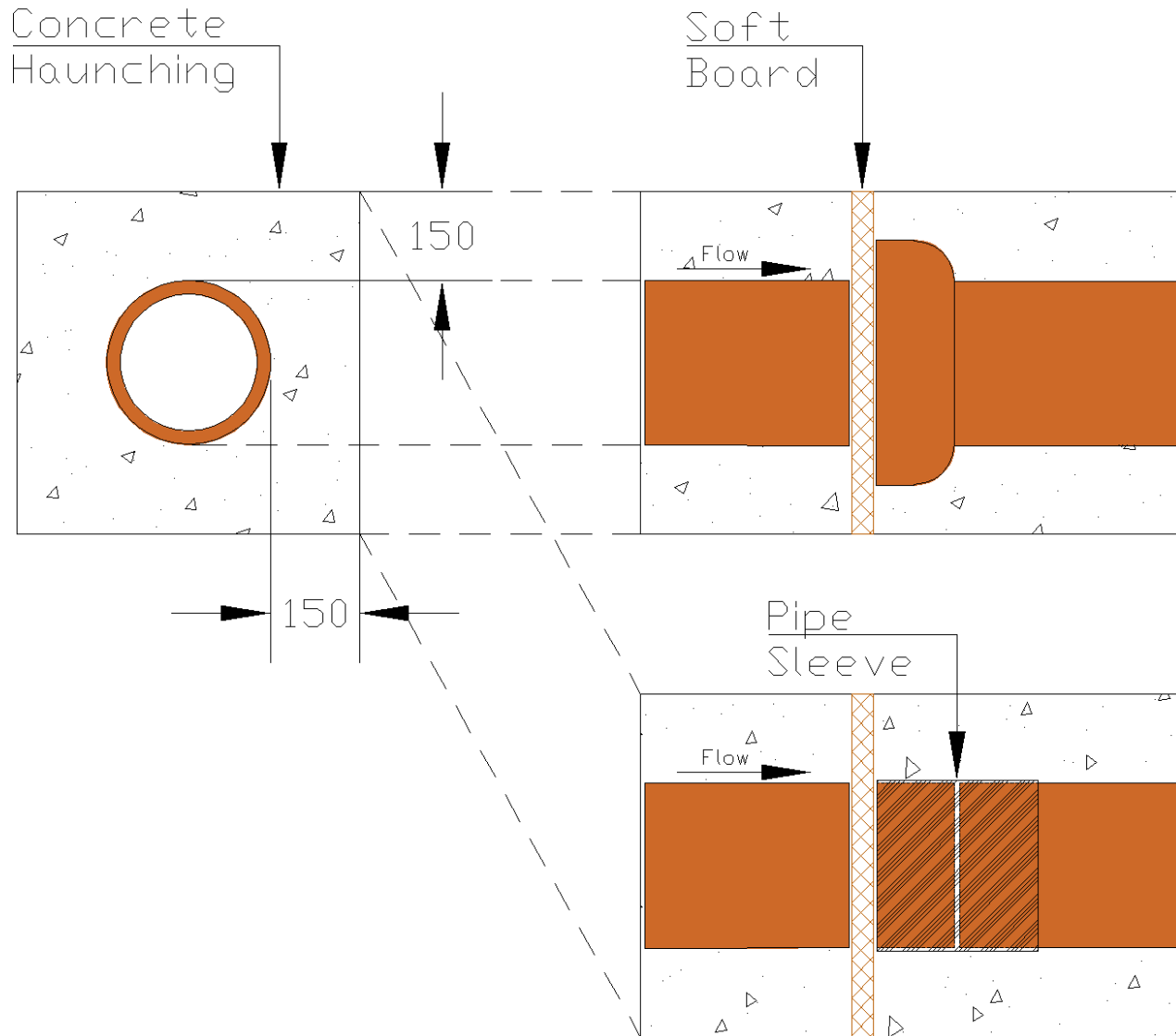
Pipe/Channel levels



In the event when you are unable to measure the channel levels, these are the alternatives.



Soft Board placement



Connection Types

- Straight-In (Open Cut)
- Straight In (Pipe Jacking)
- Straight In (Pipe Sleeve)
- Tumbling Bay
- Backdrop
- Manhole sunk on an existing sewer
- Reconstructed Manhole
- 'Y' Junction
- Raised Junction
- Saddle Connection
- Vortex Drop
- Temporary In-Drop Pipe
- Permanent In-Drop Pipe

Note: For other type of connections, please consult PUB prior to Form B1 Part 1 submission. Please email to pub_form_b1@pub.gov.sg if you require clarification.



Straight In (Open Cut)

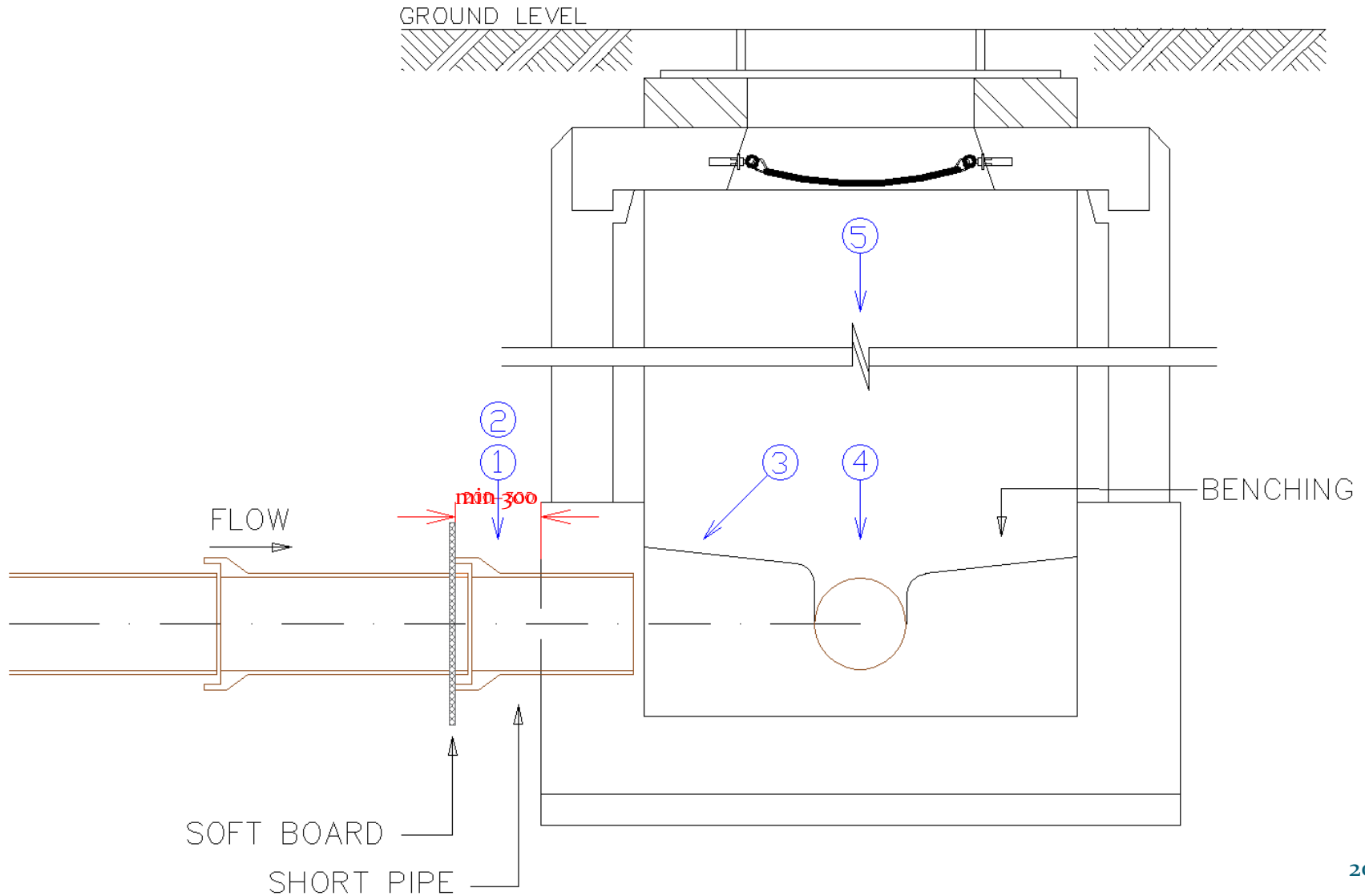


Photo guide

1. Short Pipe
 - Top view
 - Before casting
 - Minimum 300mm
 - Place a measuring tape along the length of the pipe to indicate the length
 - Soft board required

2. Short Pipe
 - Top view
 - After casting

3. Point of entry of short pipe into manhole
 - Side view
 - Manhole wall to have been made good

4. Channel height difference
 - New incoming/outgoing channel versus existing channel

5. Overall overview/ Finished Benching / Flow through pipe (diversion works)
 - Top view
 - To show new and existing channels



Straight In (Open Cut) Examples of Photos



Photo 1



Photo 2

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Straight In (Open Cut) Examples of Photos



Photo 3

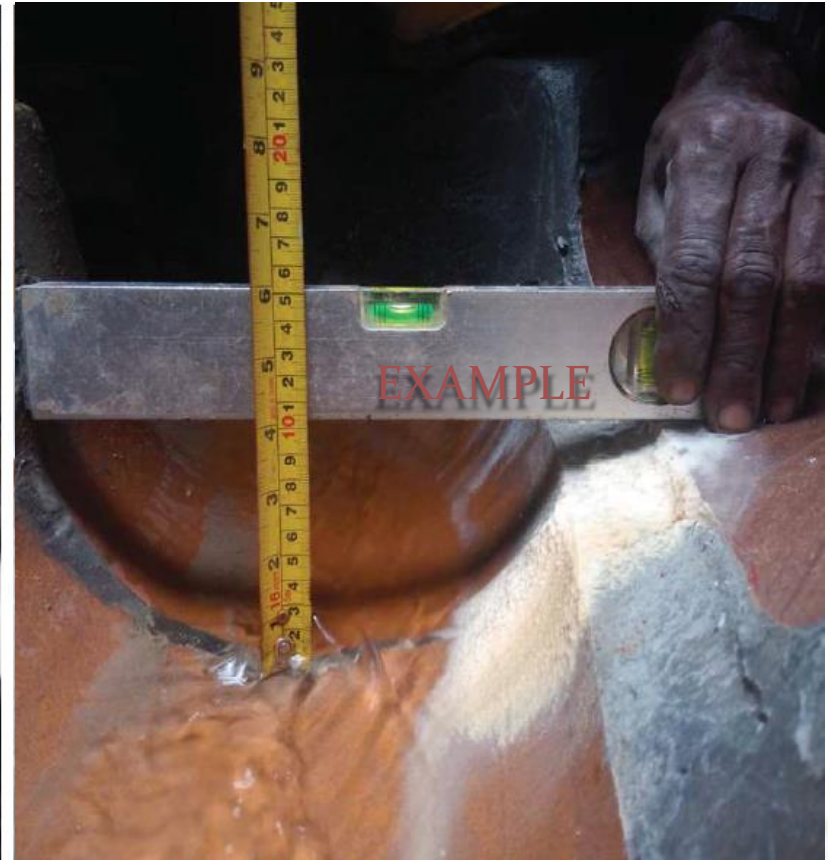


Photo 4

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Straight In (Open Cut) Examples of Photos



PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Straight In (*Pipe Jacking/Sleeve*)

Applicable **ONLY** when using existing manhole as a receiving shaft.

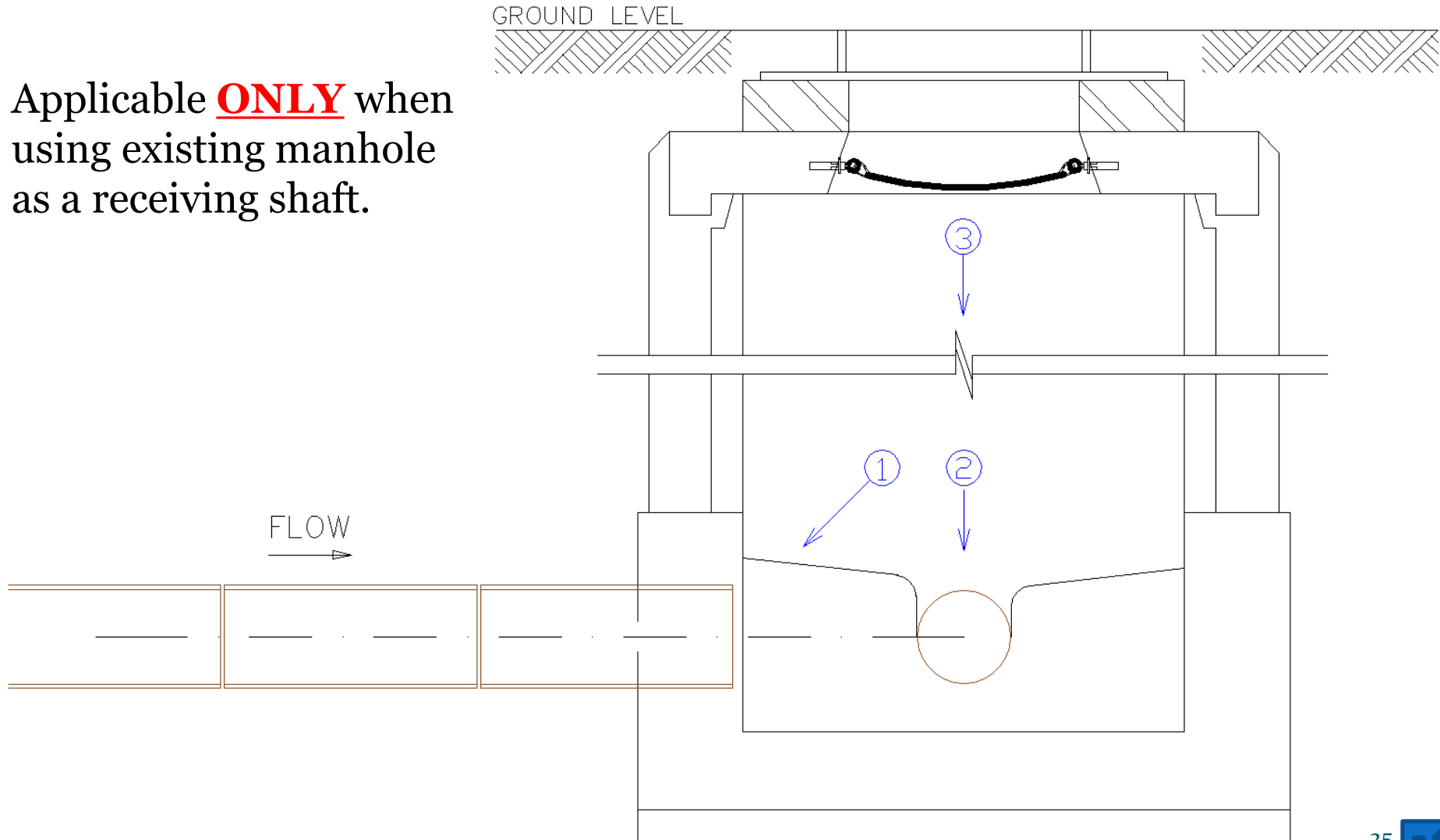


Photo guide

Straight In (*Pipe Jacking/Sleeve*)

1. Point of entry of short pipe into manhole
 - Side view
 - Manhole wall to have been made good
2. Channel height difference
 - New incoming/ outgoing channel versus existing channel
3. Overall overview/ Finished Benching / Flow through pipe (diversion works)
 - Top view
 - To show new and existing channels

Additional photos for Straight In (*Pipe Jacking/Sleeve*) Sunk Manhole. Provision of soft board when the joint is exposed.

4. Provision of softboard before casting. (Note: length of short pipe min. 300mm)
5. Provision of softboard after casting



Straight In (*Pipe Jacking/Sleeve*)

Existing Manhole as receiving shaft

Examples of Photos

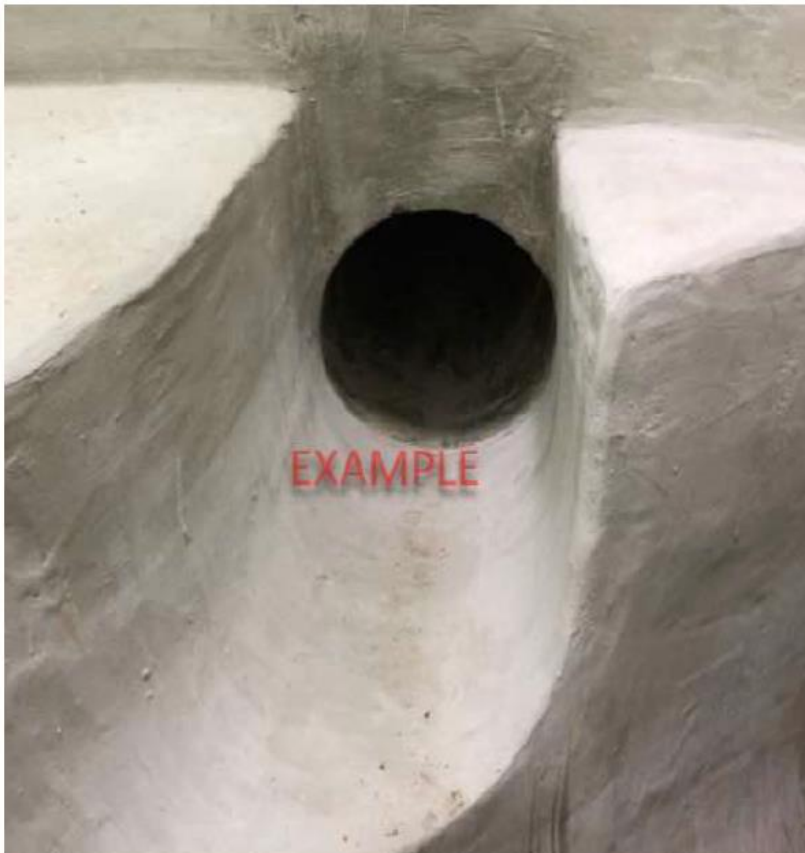


Photo 1

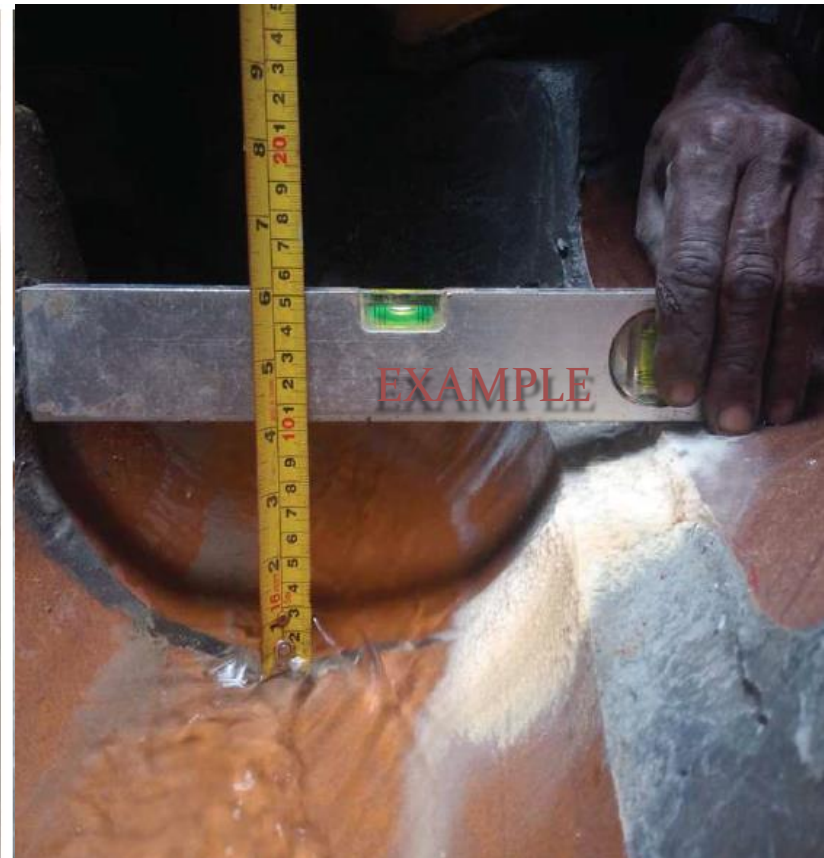


Photo 2

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Straight In (*Pipe Jacking/Sleeve*)

Existing Manhole as receiving shaft

Examples of Photos



PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Additional photos for Straight In (Pipe Jacking/Sleeve) Sunk Manhole. Provision of soft board when the joint is exposed.

Examples of Photos

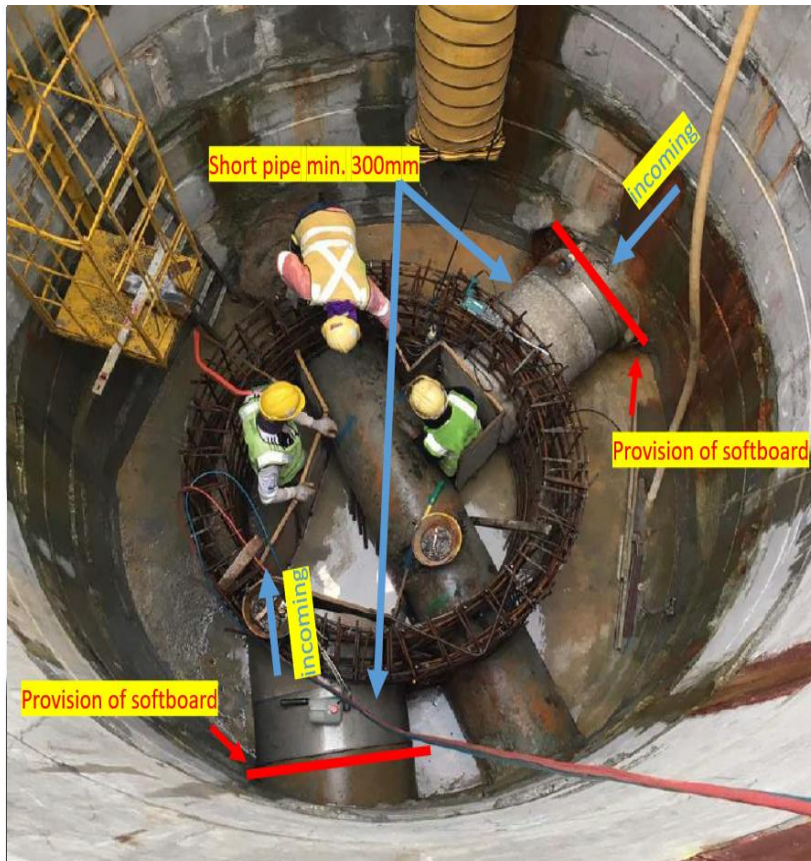


Photo 4



Photo 5

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Tumbling Bay

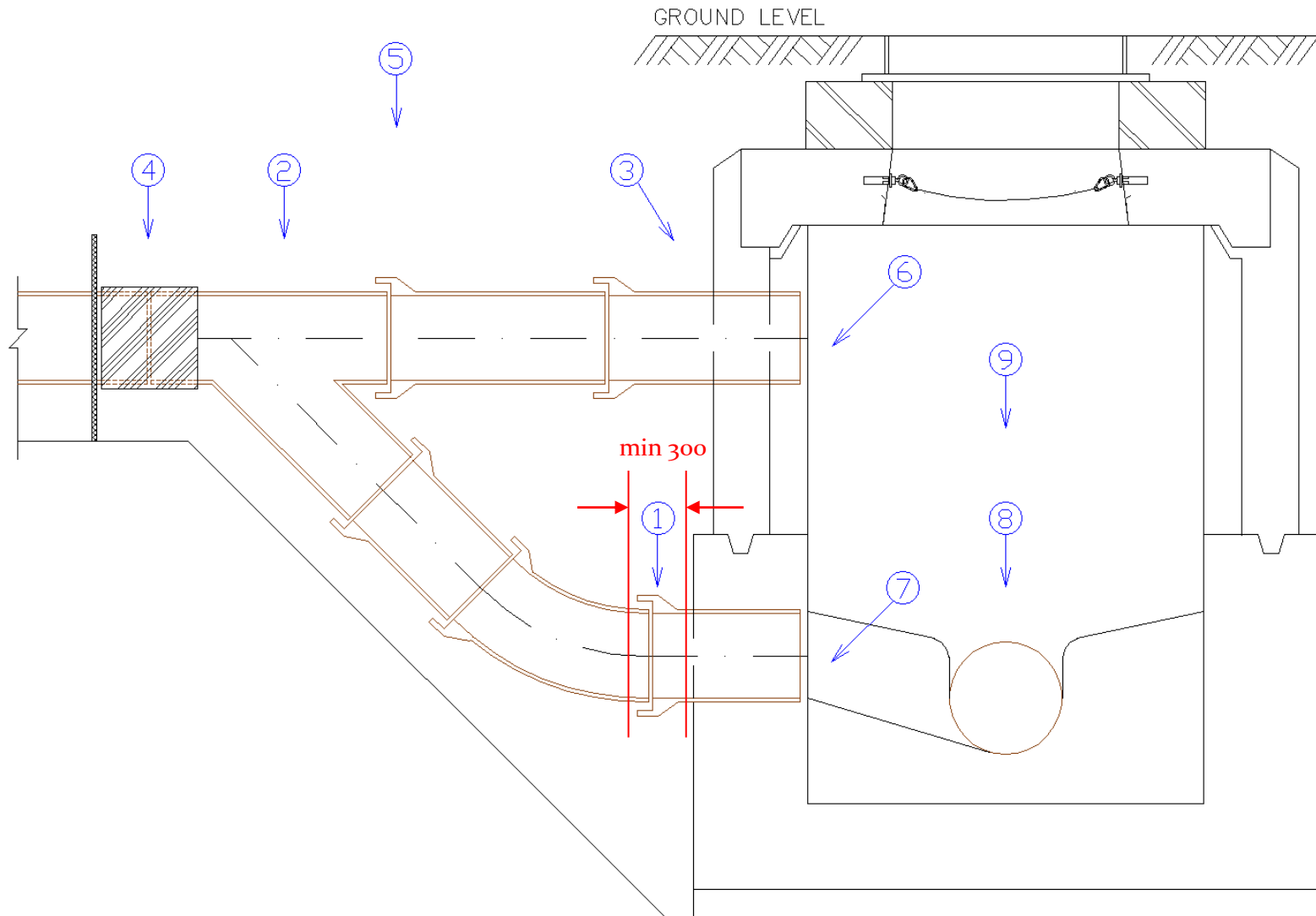


Photo guide

1. Short Pipe
 - Top view
 - Before casting
 - Min 300mm
 - Place a measuring tape along the length of the pipe to indicate the length
 - No soft board required

2. T-Joint
 - Top view
 - Before casting

3. Telescopic/overhang pipe through manhole wall
 - Top view
 - Before casting

4. Incoming pipe to T-Joint
 - Top view
 - Before casting
 - Soft board required

5. 2, 3 & 4
 - Top view
 - After casting



Photo guide

6. Point of entry of telescopic/overhang pipe into manhole
 - Side view
 - Manhole wall to have been made good
7. Point of entry of short pipe into manhole
 - Side view
 - Manhole wall to have been made good
8. Channel height difference
 - New incoming/outgoing channel versus existing channel
9. Overall overview/ Finished Benching / Flow through pipe (diversion works)
 - Top view
 - To show new and existing channels



Tumbling Bay

Examples of Photos



Photo 1



Photo 2

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Tumbling Bay Examples of Photos

Note:
1. Soft Board
should be placed
before the Tee-
Joint.



Photo 3



Photo 4

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Tumbling Bay

Examples of Photos



Photo 5



Photo 6

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Tumbling Bay

Examples of Photos



Photo 7

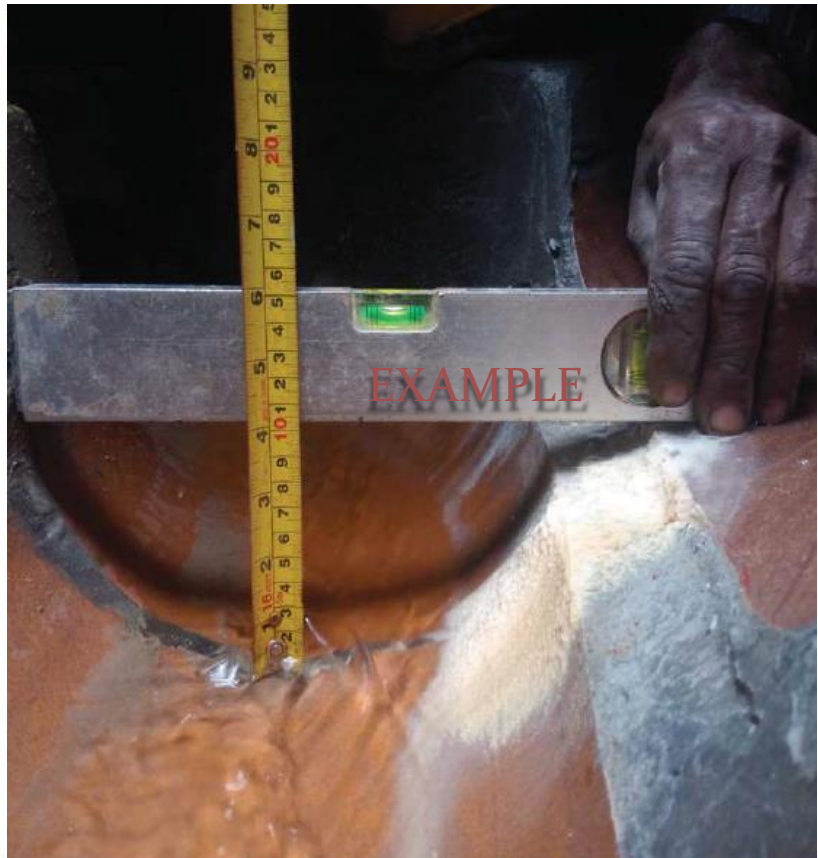


Photo 8

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Tumbling Bay

Examples of Photos



Photo 9

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Back Drop

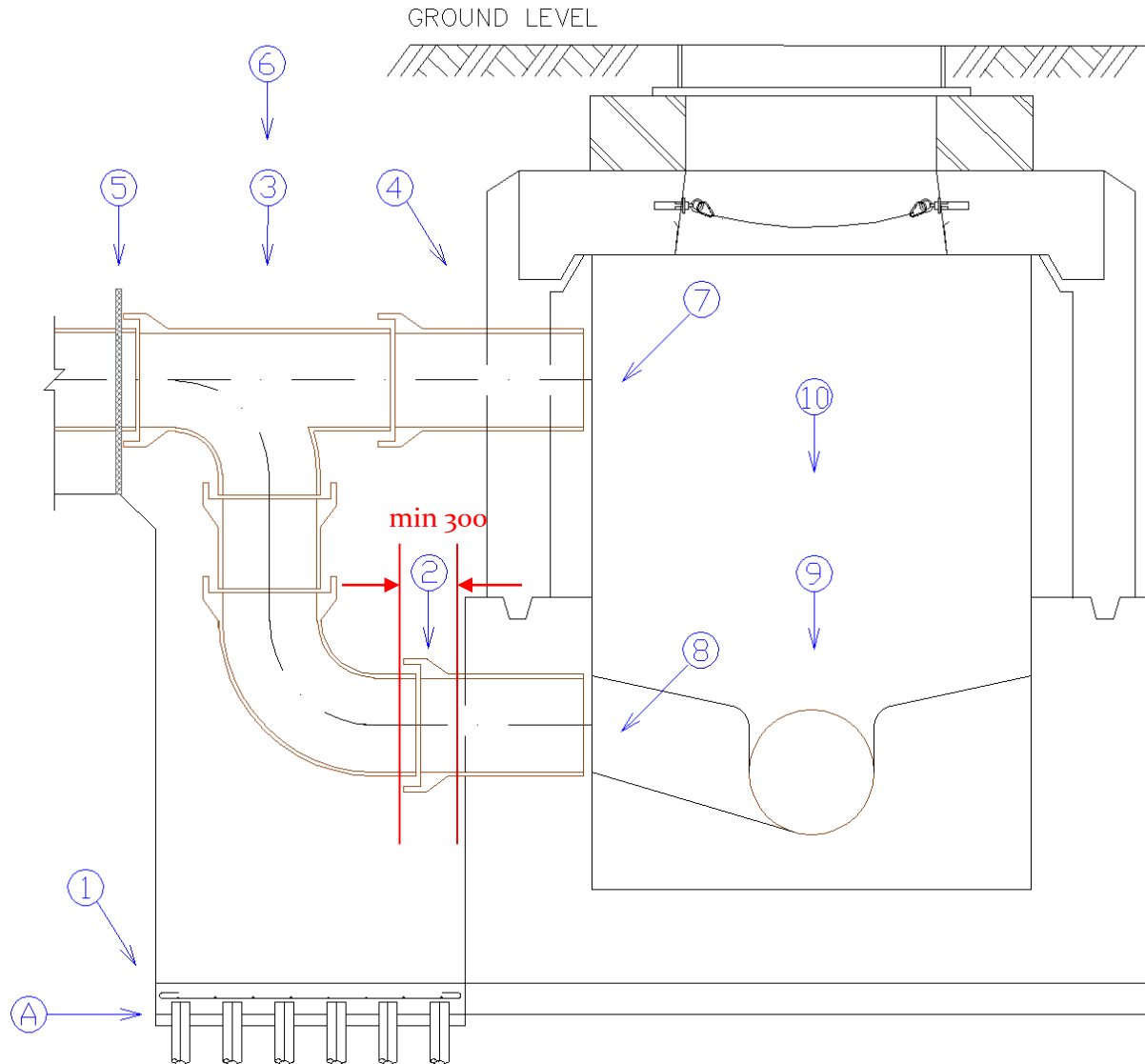


Photo guide

A. Bakau Pile (If required)

- Top view
- Before casting

Bakau piles are determined by the QP.

1. Wire Mesh / Rebar

- Top view

2. Short Pipe

- Top view
- Before casting
- Min 300mm
- Place a measuring tape along the length of the pipe to indicate the length
- No soft board required

3. T-Joint

- Top view
- Before casting

4. Telescopic/overhang pipe through manhole wall

- Top view
- Before casting



Photo guide

5. Incoming pipe to T-Joint
 - Top view
 - Before casting
 - Soft board required

6. 3, 4 and 5
 - Top view
 - After casting

7. Point of entry of telescopic/overhang pipe into manhole
 - Side view
 - Manhole wall to have been made good

8. Point of entry of short pipe into manhole
 - Side view
 - Manhole wall to have been made good

9. Channel height difference
 - New incoming/ outgoing channel versus existing channel

10. Overall overview/ Finished Benching / Flow through pipe (diversion works)
 - Top view
 - To show new and existing channels



Back Drop

Examples of Photos



Photo A



Photo 1

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Back Drop Examples of Photos



Photo 2



Photo 3

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Back Drop

Examples of Photos

Note:
1. Soft Board should be placed before the Tee-Joint.



Photo 4

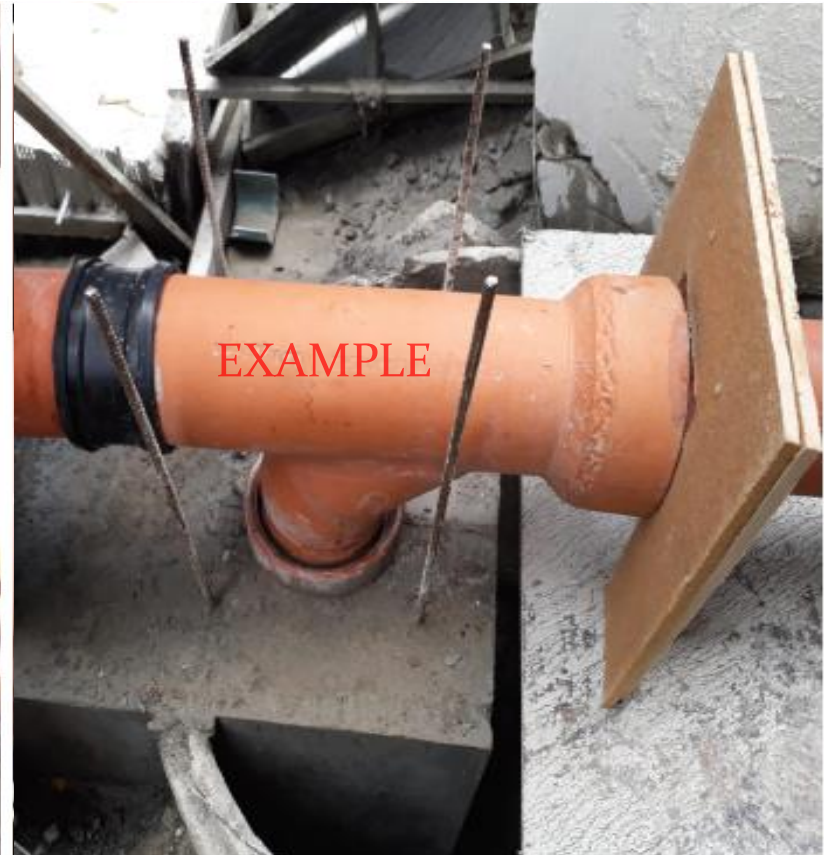


Photo 5

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Back Drop

Examples of Photos



Photo 6



Photo 7

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Back Drop

Examples of Photos



Photo 8

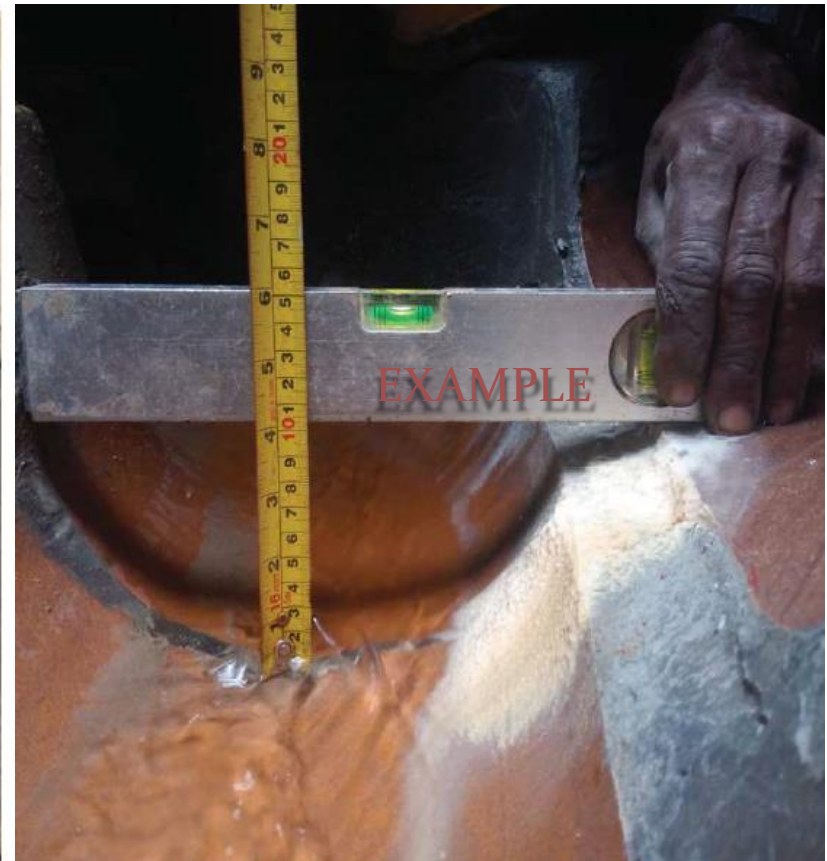


Photo 9

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER

Back Drop

Examples of Photos

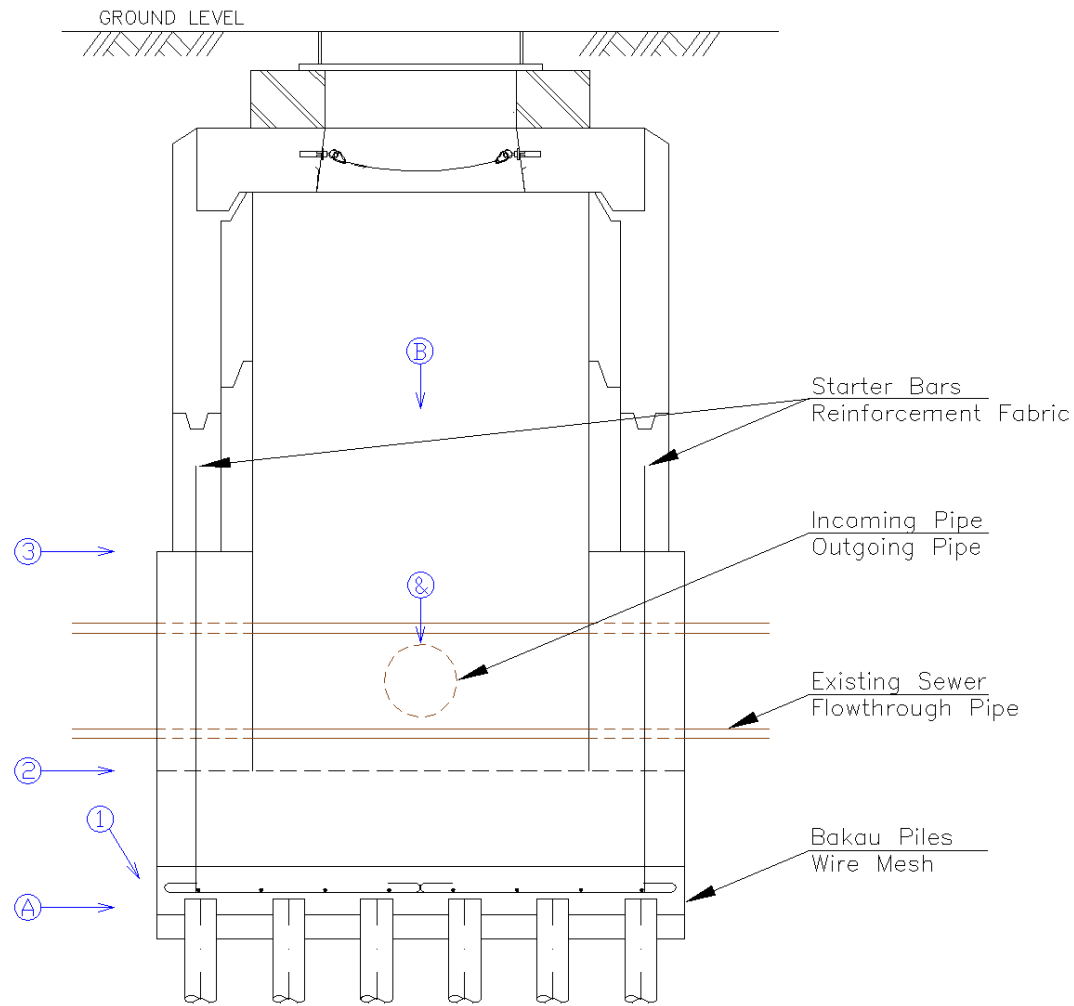


Photo 10

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Sunk/Reconstructed Manhole



SUNK MANHOLE



Photo guide

A. Bakau piles (If required)

- Top View
- Before casting
- Wire meshes to have a minimum over lap of 350mm

Bakau piles are determined by the QP.

1. Wire mesh / Rebar, and Starter Bars

- Top view
- Before casting
- Wire meshes to have a minimum over lap of 350mm

2. Base with starter bars

- Top view

3. Base wall with starter bars

- Top view

B. Overall overview/ Flow through pipe for sewer diversion

- Top view
- To show new and existing channels

"&" refers to the second (or more) set of photos to show the new incoming/outgoing connection.

&. New Incoming/Outgoing Connection

EXAMPLE: if the new incoming is a back drop, for the "&" set of photos, please provide the photos to show the back drop.



Sunk/Reconstructed Manhole Examples of Photos



Photo A



Photo 1

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Sunk/Reconstructed Manhole Examples of Photos



Photo 2



Photo 3

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Sunk/Reconstructed Manhole Examples of Photos

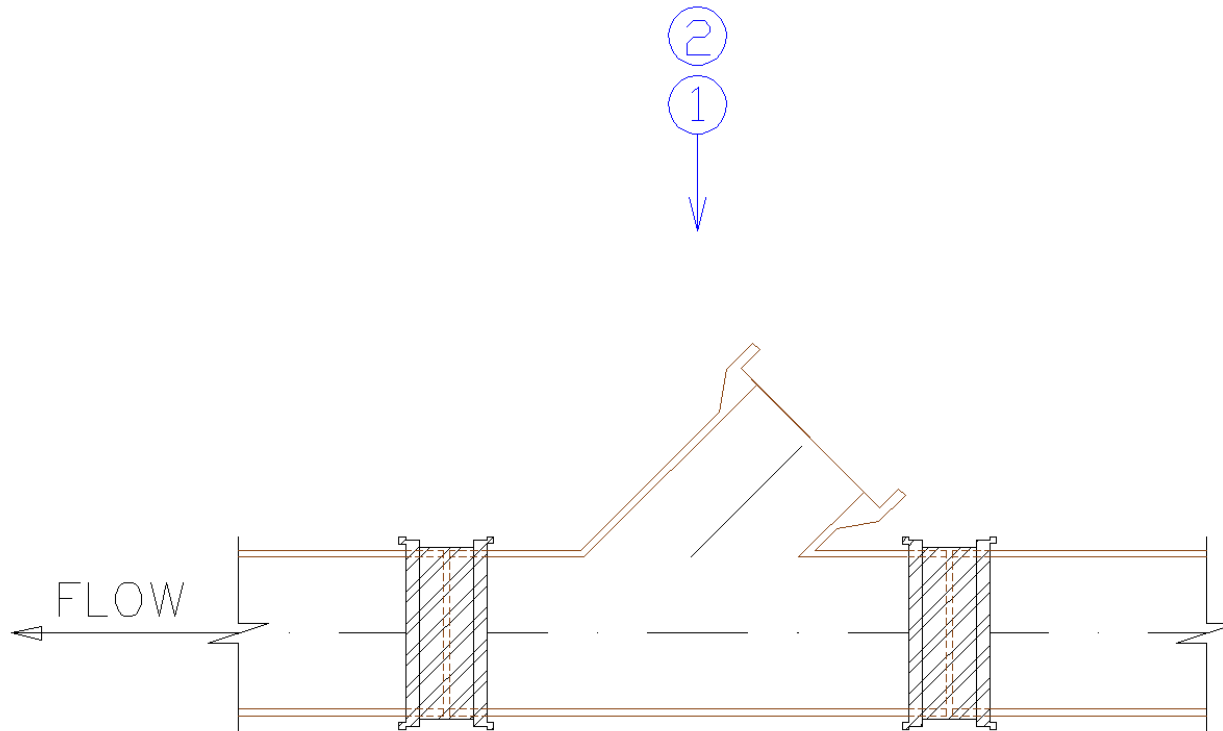


Note:
1. Photo B is only
applicable to
Diversion Work

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



“Y” – Junction / Raised Junction



For retrofitted “Y” junctions, the spigot end of the new junction shall be connected to the existing sewer using **STAINLESS STEEL COLLAR JOINTS TO EN295 PART 4 SPECIFICATION**.

- Ref: DRG. NO. PUB/WRN/STD/007B
 - Notes: Point 4.



Photo guide

1. Stainless Steel Collar Joints
 - Top view
 - All stainless steel collar joints to be captured in the photo
2. “Y” – Junction / Raised Junction
 - Top view
 - After casting



“Y” – Junction / Raised Junction

Examples of Photos



Photo 1



Photo 2

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Saddle Connection

Note:

1. Saddle Connection shall not be used for retrofitted connection if the existing sewer has an internal liner
 - Ref: DRG. NO. PUB/WRN/STD/007B
 - Notes: Point 5.
2. Approval by PUB BPD is required for saddle connection

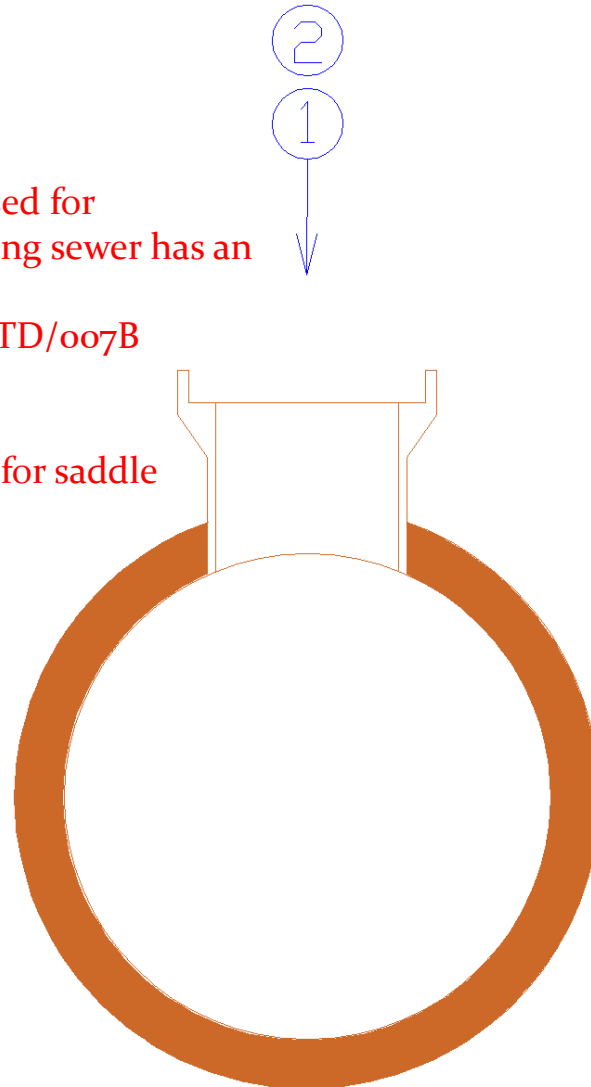


Photo guide

1. Incoming pipe
 - Top view
 - Before Casting
2. Incoming pipe
 - Top view
 - After casting
3. Connection hole of the existing pipe with reference to pipe width



Saddle Connection Examples of Photos



Photo 1



Photo 2

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Saddle Connection Examples of Photos



PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER

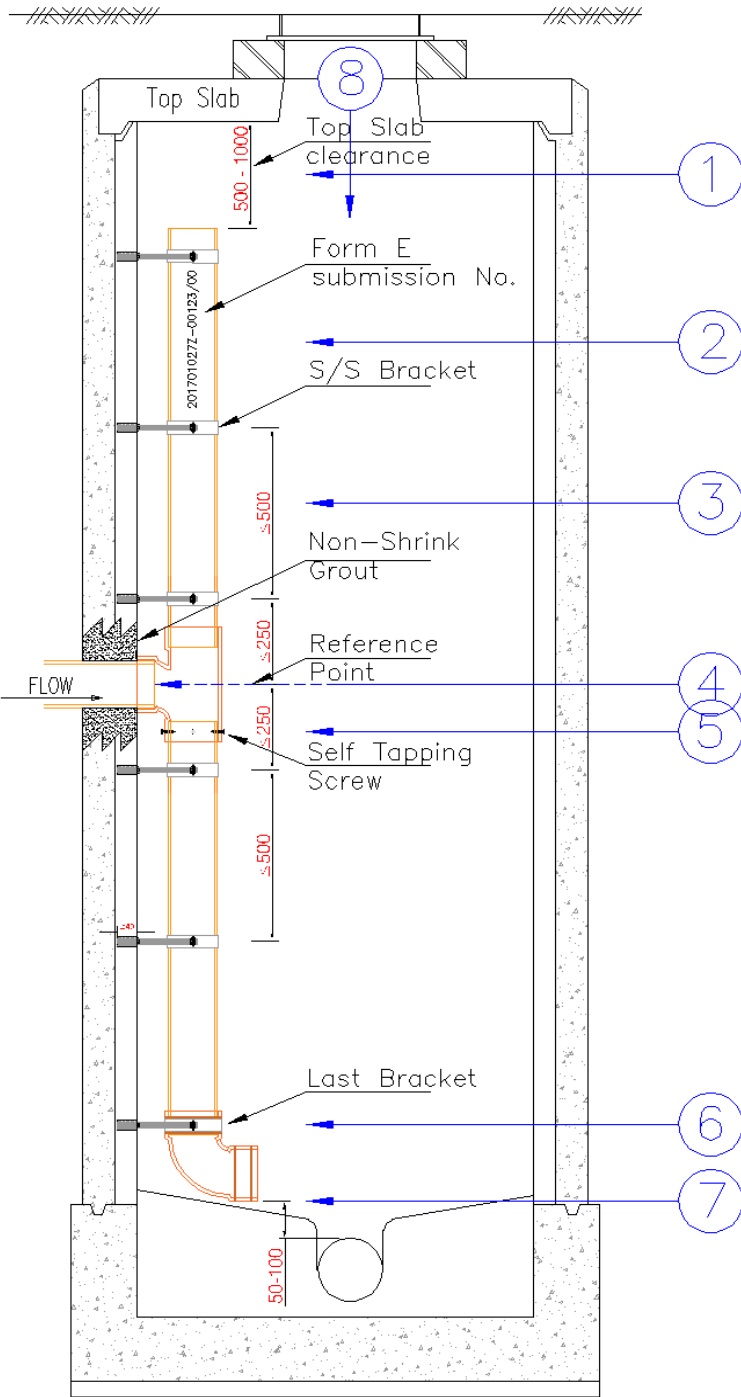


Vortex Drop

Requirements for Vortex drops are on a case-by-case basis. Before commencement of work, please make an appointment with the Form B1 Processing Officer for consultation.

You are required to bring along the longitudinal section drawing and method of statement for the consultation.



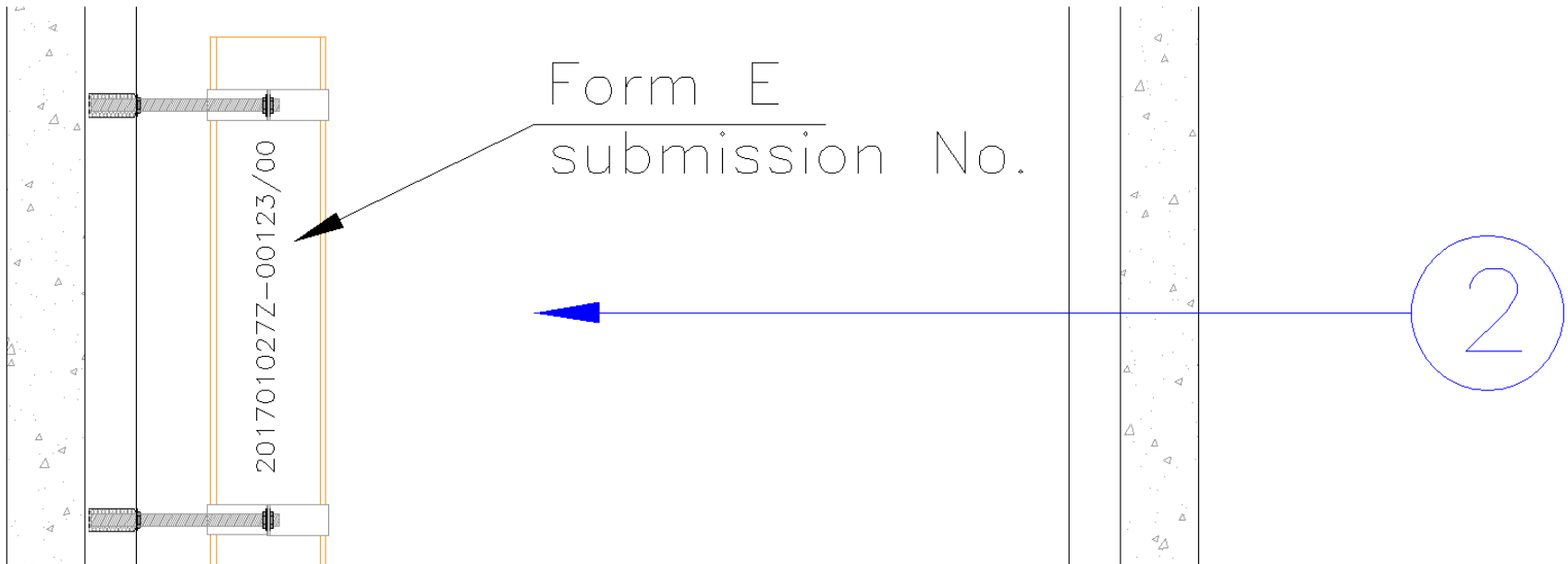


Temporary In-Drop Pipe

1. SS213 is **not** allowed for Temporary In-Drop Pipes
2. Pipe shall not block manhole entry
3. Pipe shall not exit through manhole brickwall
4. Pipe shall be straight with no bends



Form E Submission No.

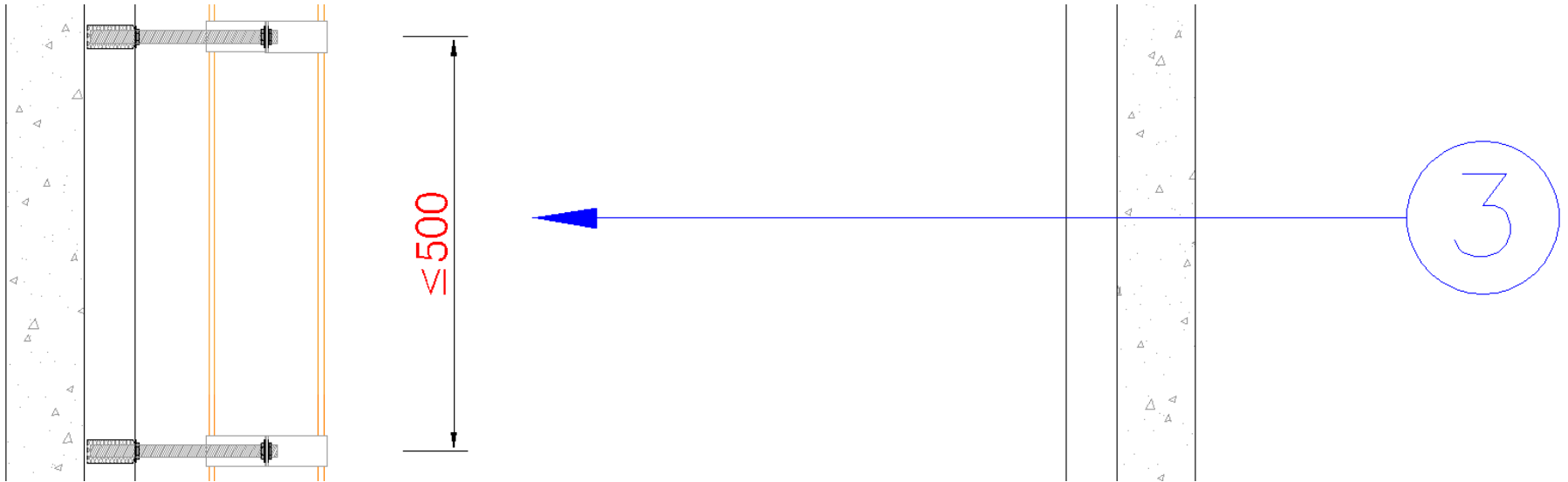


Form E submission No. to be written on the pipe legibly. It may be written in 2 lines.

It is the responsibility of the Plumber who applied for Form E to remove the in-drop pipe after the temporary toilet has been dismantled.



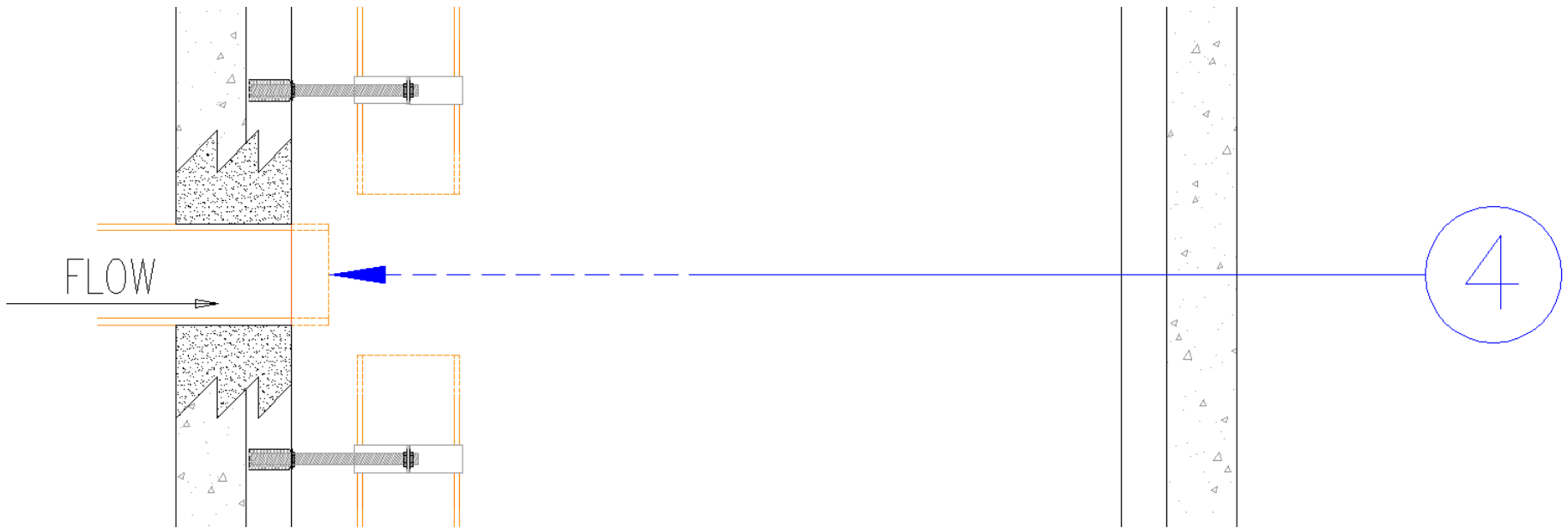
Bracket Distance



Brackets must be spaced at a maximum of 500mm c/c apart from one another. The distance between only 1 pair of brackets need to be shown.



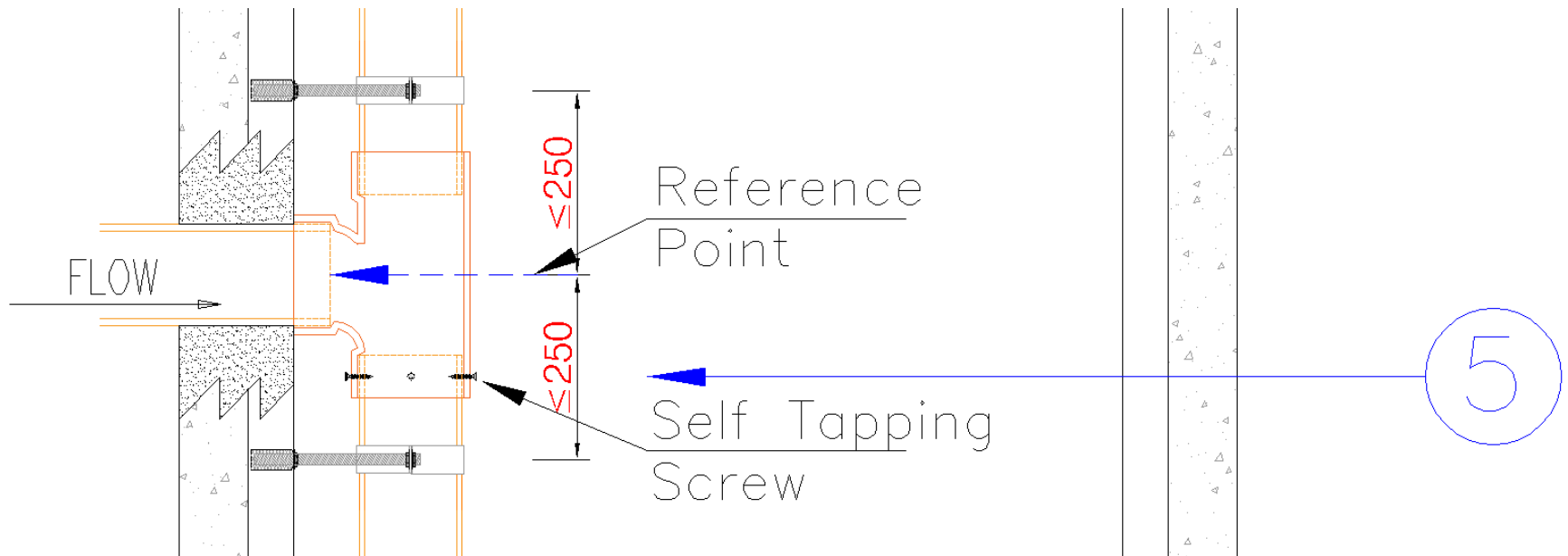
Incoming Pipe



Manhole wall to have been made good. The T-Joint should not be connected.



T – Joint with self tapping screws

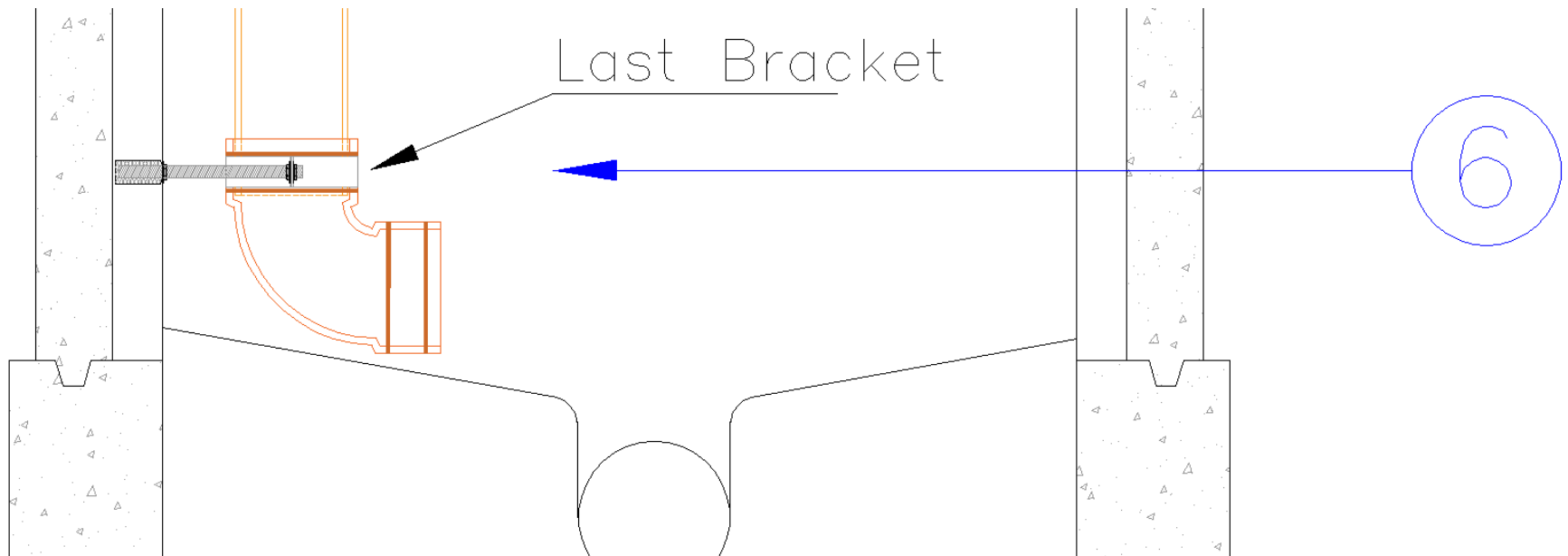


4 screws at the bottom of the T – Joint.

Use the reference point to determine the placement of the brackets.



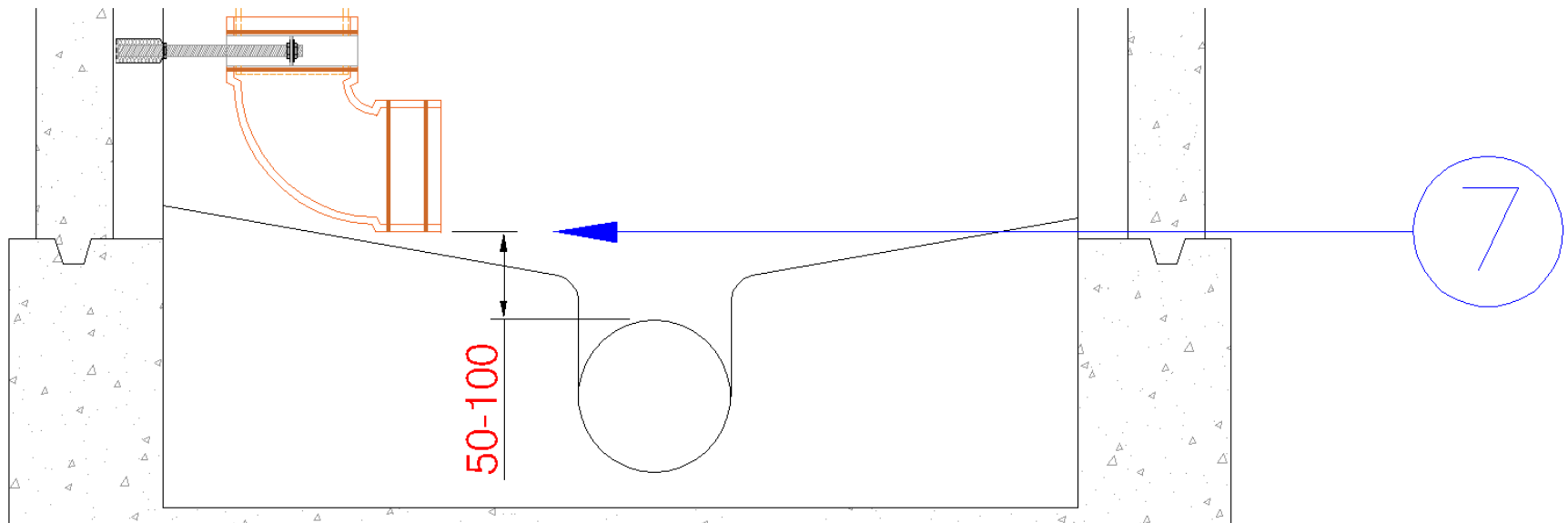
Elbow Joint with Bracket



The last bracket should be used to secure the elbow joint. It should be placed in-between the grooves of the elbow joint.



Barrel & Crown Clearance



The barrel of the pipe must have a clearance of between 50 to 100mm above the benching/crown of the existing pipe.



Complete installation

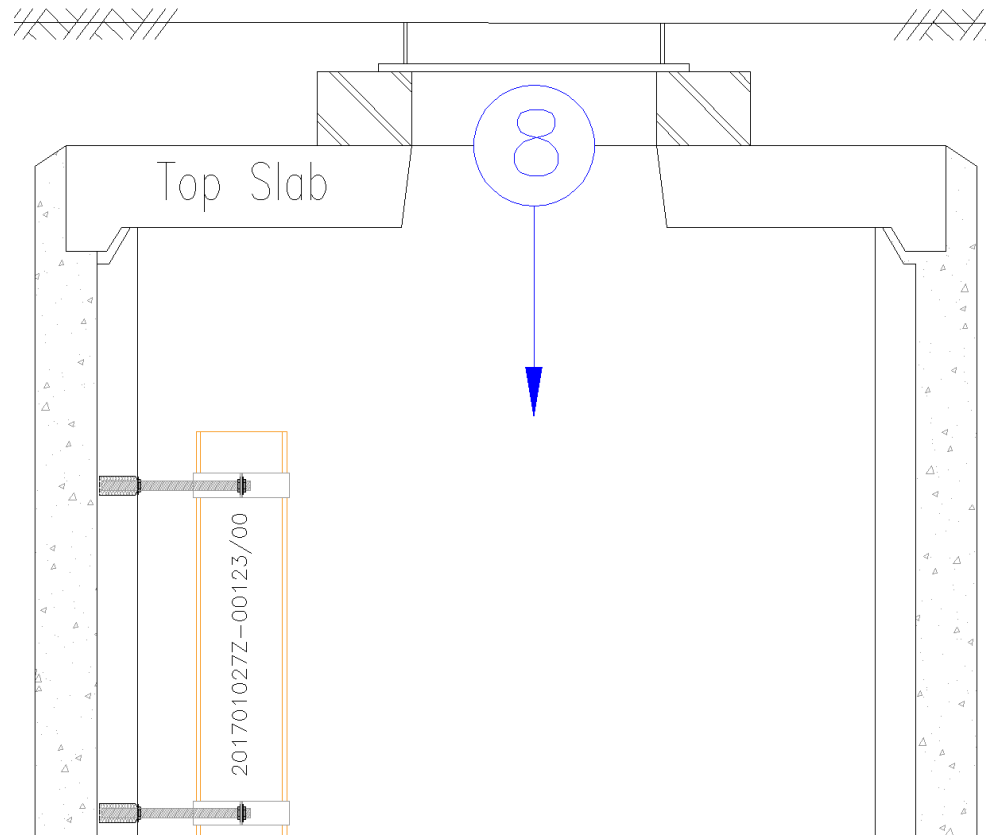


Photo should be taken from the top of the manhole and capture the entire length of the in-drop pipe.



Temporary In-Drop Pipe Examples of Photos



Photo 1



Photo 2

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Temporary In-Drop Pipe Examples of Photos



Photo 3

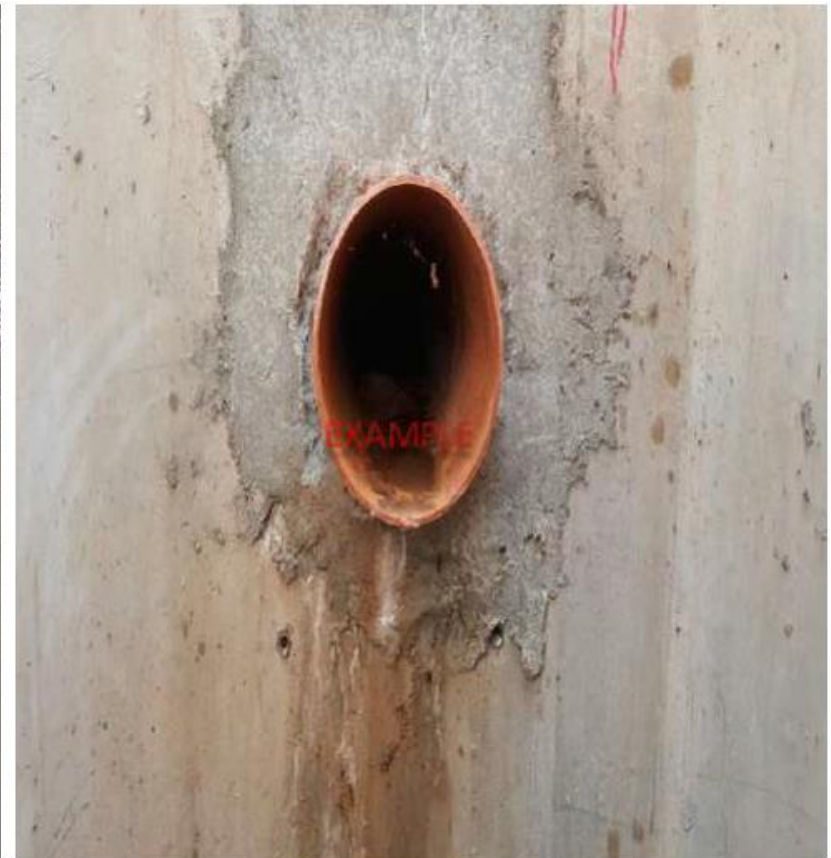


Photo 4

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Temporary In-Drop Pipe Examples of Photos



Photo 5



Photo 6

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER



Temporary In-Drop Pipe Examples of Photos



Photo 7



Photo 8

PLEASE NOTE THAT THESE ARE EXAMPLES, ACTUAL PHOTOS TAKEN ON SITE MAY DIFFER

Permanent In-Drop Pipe

Permanent In-Drop Pipes have the same requirements as Temporary In-Drop Pipes except for a few differences i.e.

1. Approval by PUB BPD is required for permanent in-drop
2. Pipe material have to be approved by PUB BPD
3. Bracket distance is reduced from 500mm to 300mm

If approved material is stainless steel

1. The pipe material has to be SS316. PVC/uPVC is not allowed
2. Brackets have to be of Stainless Steel grade 316



How to use the photo form?



FORM B1 PHOTO FORM

Reset Form

Print to PDF

Form B1 Submission No. : Project Reference No. : *Form E Submission No. :

Point of Connection : Existing MH/Sewer id : Incoming Pipe Ø : Outgoing Pipe Ø :

Type of Connection : * Sunk Manhole & : Incoming Pipe Matl :

Step 1: Fill in all the necessary information

Photo

Photo

Remarks :

Remarks :

* If Applicable

First Page

Next Page

Previous Page

Last Page

Page



FORM B1 PHOTO FORM

Reset Form

Print to PDF


Form B1 Submission No. : Project Reference No. : *Form E Submission No. :

Point of Connection : Existing MH/Sewer id : Incoming Pipe Ø : Outgoing Pipe Ø :

Type of Connection : * Sunk Manhole & : Incoming Pipe Matl :

Cannot Save Form Information

Cannot Save Form Information

 **Please Note:** You cannot save a completed copy of this form on your computer.
If you would like a copy for your records, please fill it in and print it

Don't show again

Close



Step 2: You might be prompted. Just click "Close"

Photo

Photo

Remarks :

Remarks :

* If Applicable

FORM B1 PHOTO FORM

Reset Form

Print to PDF

Form B1 Submission No. :	<input type="text" value="20181029Z-12345/00"/>	Project Reference No. :	<input type="text" value="A1234-00012-2020"/>	*Form E Submission No. :	<input type="text"/>		
Point of Connection :	<input type="text" value="Existing Manhole"/>	Existing MH/Sewer Id :	<input type="text" value="123456"/>	Incoming Pipe Ø :	<input type="text" value="300"/>	Outgoing Pipe Ø :	<input type="text" value="450"/>
Type of Connection :	<input type="text" value="Back Drop"/>	* Sunk Manhole & :	<input type="text"/>	Incoming Pipe Matl :	<input type="text" value="Vitrified Clay"/>		

Step 3: Click here again to insert photos

Photo

Photo

Remarks :

Remarks :

* If Applicable

FORM B1 PHOTO FORM

Reset Form

Print to PDF

Form B1 Submission No.: Project Reference No.: *Form E Submission No.:

Point of Connection: Existing MH/Sewer id: Incoming Pipe Ø: Outgoing Pipe Ø:













Type of Connection: * Sunk Manhole &: Incoming Pipe Matl:

Select Image File

Form B1 Photos > Back Drop

Organize New folder

- OneDrive
- This PC
- 3D Objects
- Desktop
- Documents
- Downloads
- Music
- Pictures
- SSD (S:)
- Videos
- OSDisk (C:)
- Network

 Bakau Pile	 Capture	 Channel Height Difference	 Haunching
 Made Good (bottom)	 Made Good (top)	 Overview	 Short Pipe
			

File name: Image Files (*.jpg,*.gif,*.png,*.t)

Open Cancel

Step 4: Select the appropriate photo

Remarks: Remarks:

* If Applicable

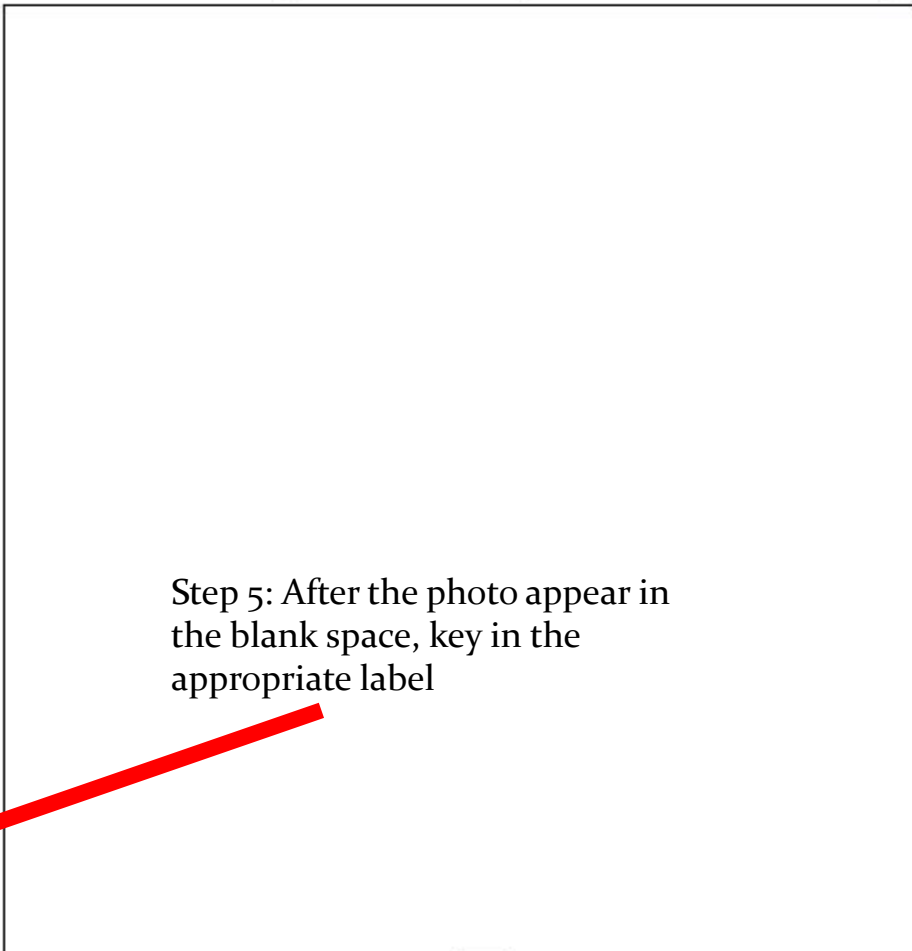
FORM B1 PHOTO FORM

Reset Form Print to PDF

Form B1 Submission No. : Project Reference No. : *Form E Submission No. :

Point of Connection : Existing MH/Sewer id : Incoming Pipe Ø : Outgoing Pipe Ø :

Type of Connection : * Sunk Manhole & : Incoming Pipe Matl :



Step 5: After the photo appear in the blank space, key in the appropriate label

Photo

Photo

Remarks :

Remarks :

* If Applicable

First Page Next Page Previous Page Last Page

FORM B1 PHOTO FORM

Reset Form

Print to PDF

Form B1 Submission No. : 20181029Z-12345/00

Project Reference No. : A1234-00012-2020

*Form E Submission No. :

Point of Connection : Existing Manhole

Existing MH/Sewer id : 123456

Incoming Pipe Ø : 300

Outgoing Pipe Ø : 450

Type of Connection : Back Drop

* Sunk Manhole & :

Incoming Pipe Matl : Vitrified Clay

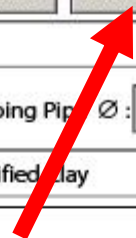
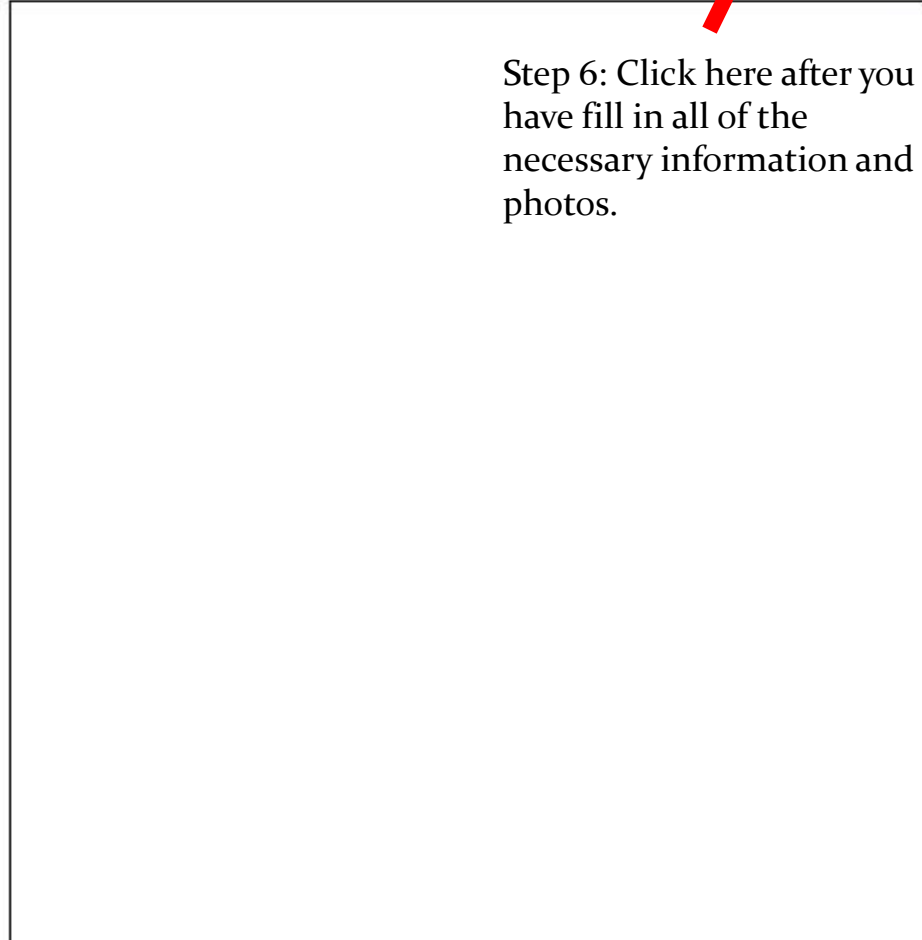


Photo A



Photo

Remarks :

Remarks :

* If Applicable

Print

Printer: Microsoft Print to PDF ▼ Properties Advanced Help ?

Copies: Fax Print in grayscale (black and white)
Microsoft Print to PDF Save ink/toner ⓘ

Pages to: All
 Current page
 Pages 1 - 7
▶ More Options

Comments & Forms
Document ▼
e Comments
11.69 x 8.27 Inches

Page Sizing & Handling ⓘ
Size Poster Multiple Booklet

Fit
 Actual size
 Shrink oversized pages
 Custom Scale: 100 %
 Choose paper source by PDF page size

Orientation:
 Auto portrait/landscape
 Portrait
 Landscape

11.69 x 8.27 Inches

Page 1 of 7

< >

Page Setup... Print Cancel

Step 7: At the "Printer" section, click the drop down list and select "Microsoft Print to PDF"

Form B1 Submission No. :
Point of Connection :
Type of Connection :



Remarks :
* If Applicable



FORM B1 PHOTO FORM

Reset Form

Print to PDF

Print

X

Printer: **Microsoft Print to PDF**

Properties

Advanced

Help ?

Copies: 1

Print in grayscale (black and white)

Save ink/toner ⓘ

Pages to Print

All

Current page

Pages 1 - 7

▶ More Options

Comments & Forms

Document

Summarize Comments

Document: 11.0 x 8.5in

Page Sizing & Handling ⓘ

Size

Poster

Multiple

Booklet

Fit

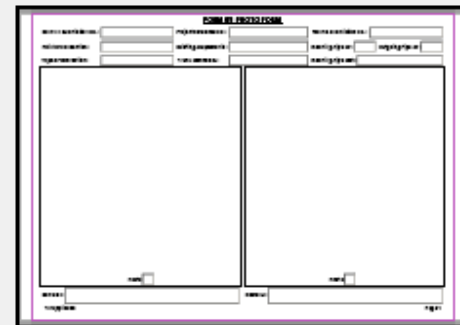
Actual size

Shrink oversized pages

Custom Scale: 100 %

Choose paper source by PDF page size

11.69 x 8.27 Inches



Step 8: Click
"Print"

Page 1 of 7

Print

Cancel

Page Setup...

Form B1 Submissi

Point of Connecti

Type of Connecti

Remarks:

* If Applicable

First Page

Next Page

Previous Page

Last Page

Page



FORM B1 PHOTO FORM

Reset Form

Print to PDF

Form B
Point o
Type of

Save Print Output As



← → ▾ ↑ << Form B1 P... > Pipe-Jacking or Sleeving ▾ ↻ Search Pipe-Jacking or Sleeving 🔍

Organize ▾ New folder



- This PC
- 3D Objects
- Desktop
- Documents

No items match your search.

OSDisk (C:)

File name:

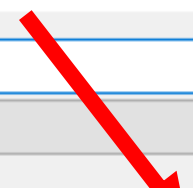
Save as type: PDF Document (*.pdf)

^ Hide Folders

Save

Cancel

Step 9: after you type in the appropriate file name, click "Save".



Remarks:

Remarks:

* If Applicable

First Page

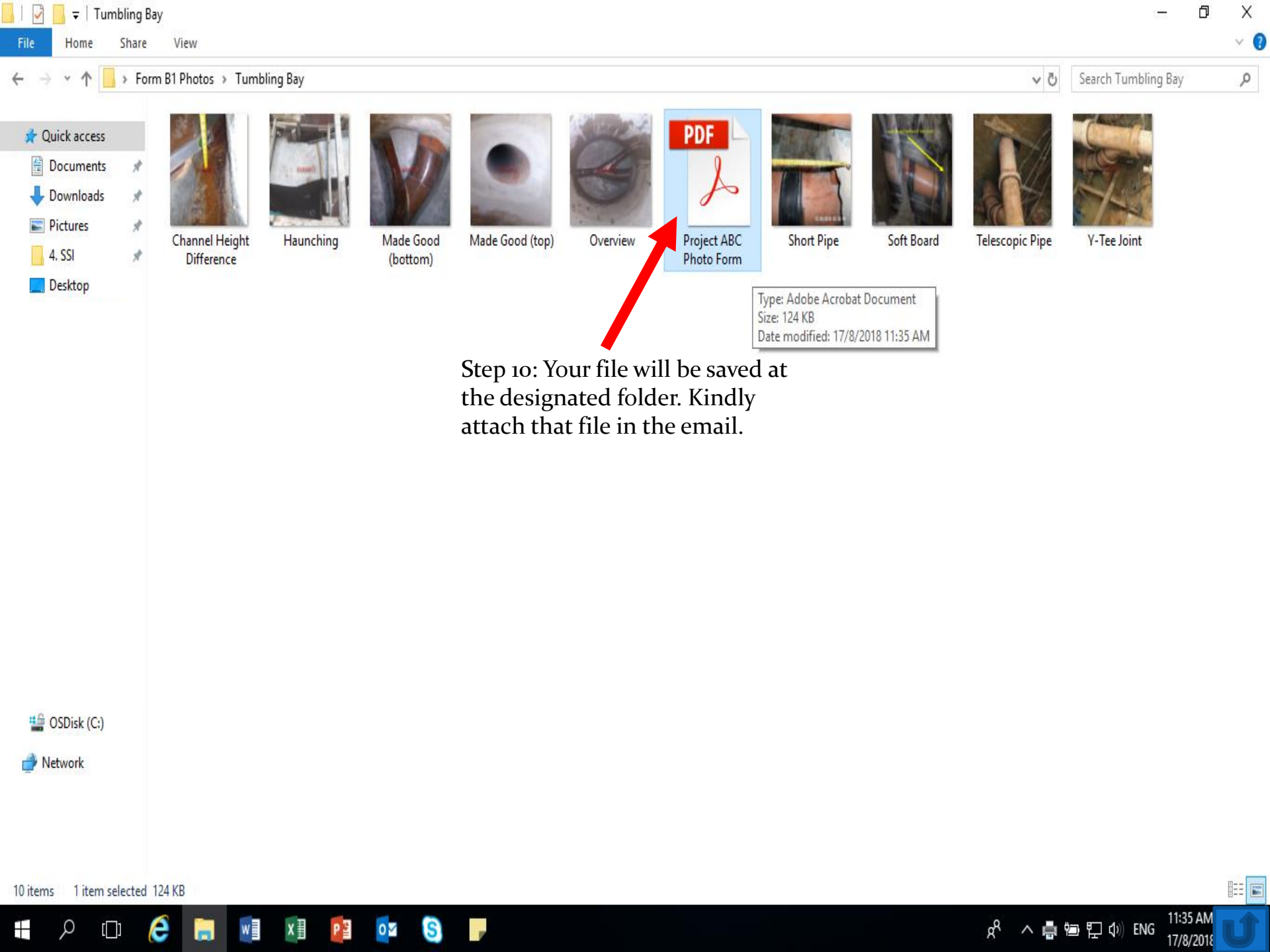
Next Page

Previous Page

Last Page

Page





Step 10: Your file will be saved at the designated folder. Kindly attach that file in the email.

FORM B1 PHOTO FORM

Reset Form Print to PDF

Form B1 Submission No. : Project Reference No. : *Form E Submission No. :

Point of Connection : Existing MH/Sewer id : Incoming Pipe Ø : Outgoing Pipe Ø :

Type of Connection : * Sunk Manhole & : Incoming Pipe Matl :

Fill in ONLY either Existing Manhole ID or Existing Sewer ID

Applicable to Temporary Toilet

This section is only applicable if the type of connection is sunk/reconstructed manhole.

If the Type of Connection is Sunk Manhole/Reconstructed Manhole, kindly indicate the new incoming/outgoing connection type.

If there are more than 1 new incoming/outgoing connections to the new/reconstructed manhole, kindly use an additional photo form and indicate the 2nd connection type in the 2nd photo form.

Photo labelling follow the procedure

Write things that you wish to tell us, if not, just leave it blank.

Photo

Remarks :

Photo

Remarks :

* If Applicable

Common mistakes & observations

- No prior approval for any connections or materials used outside of PUB standard drawings and Code of Practice of Sewerage and Sanitary Works
- Soft Board in the wrong position
- Incorrect pipe connection levels
- Short pipe length not indicated
 - Place a measuring tape along the length of the pipe to indicate the length
- Poor quality/blur/wrong/black and white photos.
- Incorrect method of showing channel height difference
- Photos submitted does not comply with Form B1 guide requirements
 - Photos are not checked immediately after they are taken. QPs should receive these photos as the construction of the connection progresses.
- Workers captured in photos
- Submissions, attachments and formats does not comply to form B1 guide
- Lack or no sewer and connection details in drawings
- Details and information does not tally between submitted attachments
- Form E submission no. only applicable for temporary toilet submission. Not applicable to permanent connection.
- Type of connection indicated in FORM B1 part 1 is different from Part 2
 - If the connection type changes, resubmit Form B1 part 1 **before** commencement of work.



FAQ

- How do I make an appointment for consultation?
 - Write in to pub_form_b1@pub.gov.sg
 - Subject: Form B1 consultation
 - Provide 3 dates with time
 - ✓ E.g. 21/06/2017 @ 1400hrs, 23/06/2017 @ 0900hrs and 25/06/2017 @
1600hrs



END

Pipe Brackets

- The brackets will be made up of 6 components
 - Saddle clamps (min thickness: 2mm) X 2
 - Threaded Rod (min ϕ : 10mm) X 2
 - Wall Anchor (min length: 50mm) X 2
 - Hex Locknut x 2
 - Hex Nuts x 4
 - Washers x 6
- All components should be made of Stainless Steel; Grade 304/316

Pipe Bracket components



Saddle Clamp



Threaded Rod



Washer



Lock Nut

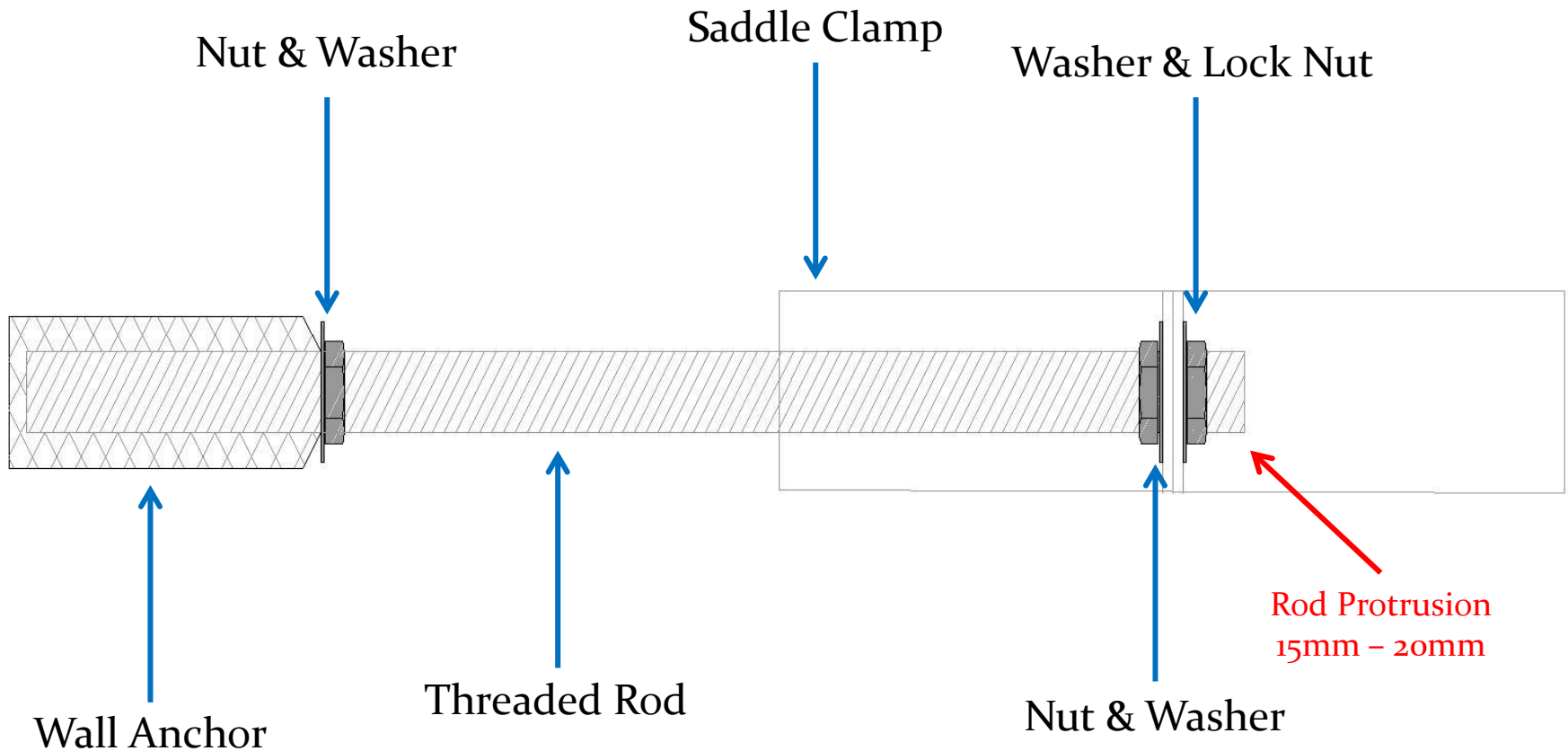


Hex Nut



Wall Anchor

Pipe Bracket components



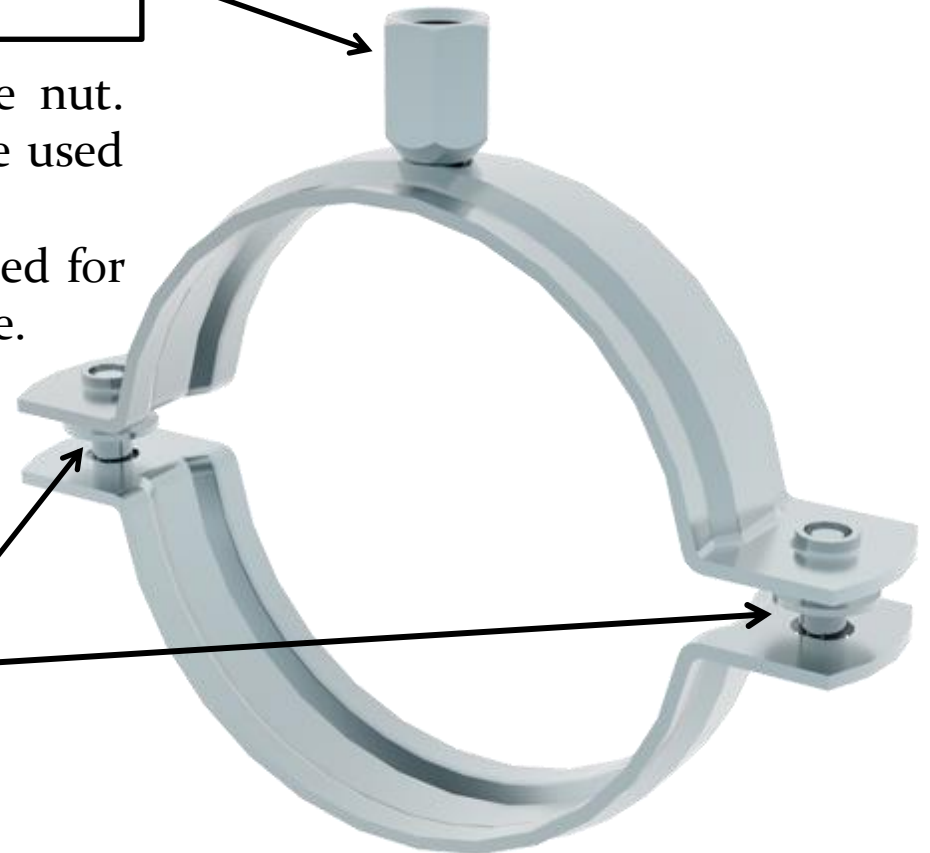
Pipe Bracket components

Combine Nut

Some pipe clamps come with a combine nut. There is no requirement for this nut to be used in the anchoring process.

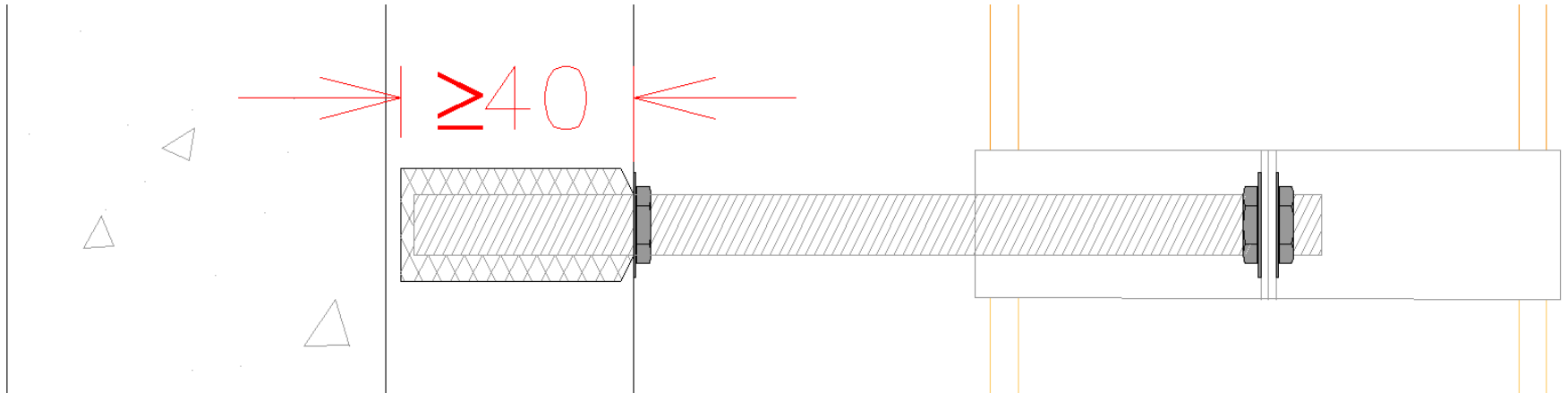
A center stabilizing rod should only be used for additional support and not as an alternative.

Replace the bolts with threaded rods

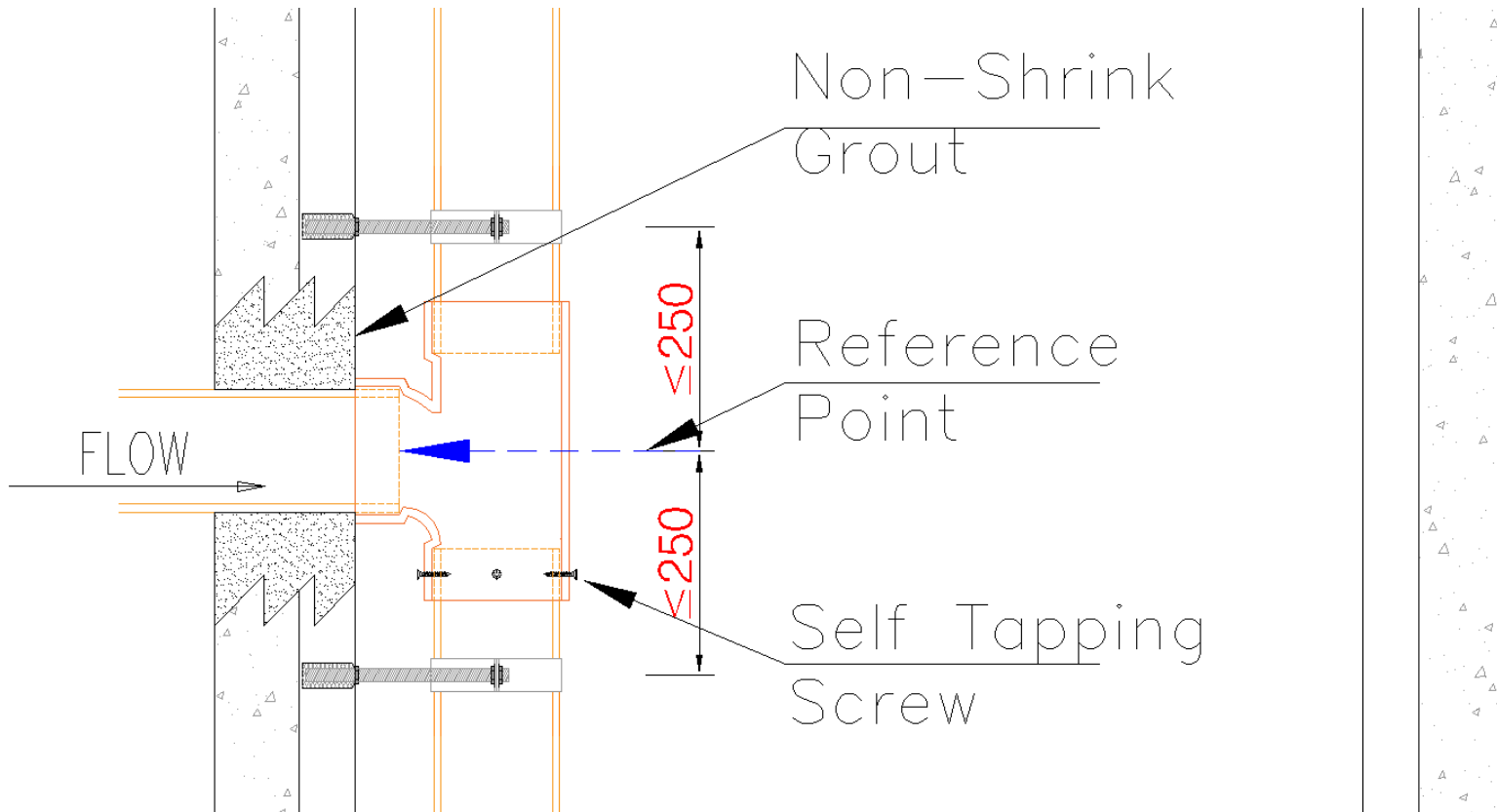


Pipe Bracket components

Anchor bolts must be installed with a **minimum depth of 40mm**.



Pipe Brackets



Attach the drop pipe to the manhole wall using a minimum of 2 S/S brackets with a maximum center to center interval of 500mm.

Use the center point of the Tee joint as a reference point to determine the location of the brackets.

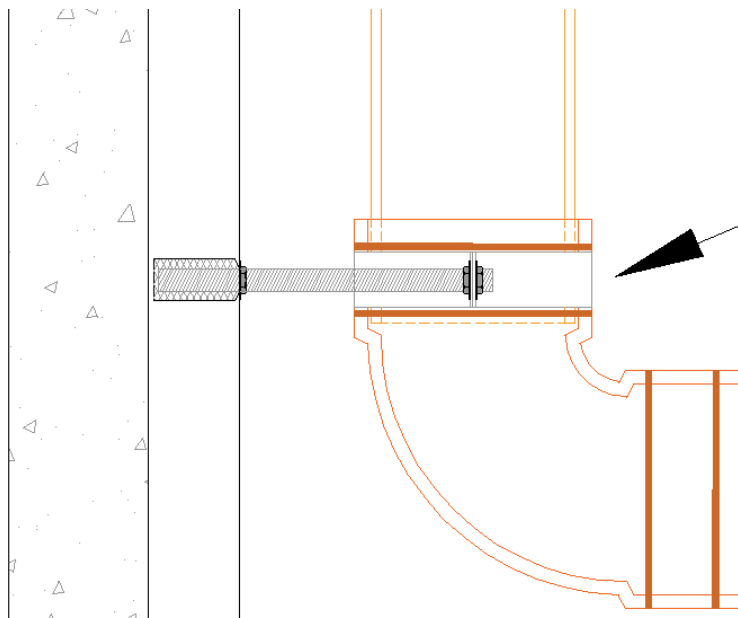
Elbow Fittings



Elbow Bend $> 85^\circ$



Elbow Fittings

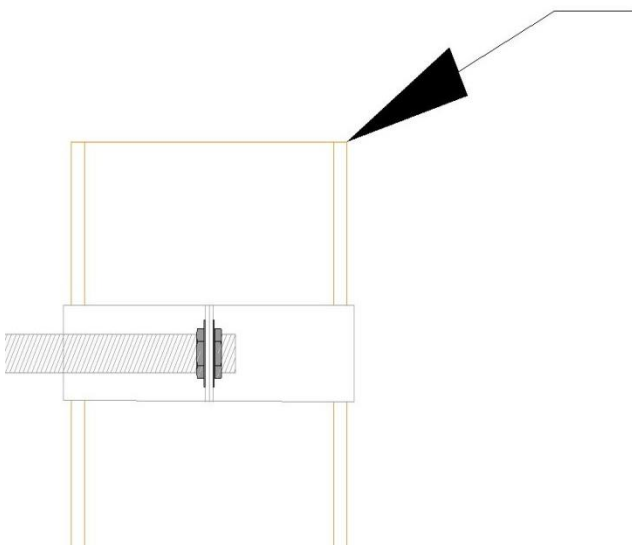


Last Bracket



Join elbow fittings to the bottom of the vertical in-drop pipe using solvent weld cement and secure it the manhole wall with a S/S bracket.

Pipe Caps



Open
pipe
face



Do **NOT** install a Pipe Cap