

Grout adjusting rings inside, outside and between. Grout under casting.

Manhole Frame and Cover per the Standard Detail. Locate as shown on plan.

Minimum requirement for adjustment shall be (2) - 4" rings.

Eccentric cone.

1' section below cone is required.

Confined O-ring rubber gasket joints and butyl sealant strips (typ.)

varies - 8' min. (typ.)

Copolymer Polypropylene Plastic Steps & Ladder per the Standard Detail. Locate as shown on plan view below.

Provide grout at knock-out. Provide sand collar for PVC pipe.

first step  
14" min - 18" max  
14" min - 26" max  
8" min

Mortar

12" typ.

24"

5"

48"

3/4" pipe dia.

slope 3/8"/ft

flow

Poured in place Class 4000 cement concrete base.

Kor-n-Seal boot by NPC, Inc., or approved equal.

ELEVATION

Pea gravel bedding per the Specifications.

Foundation gravel per the Specifications, if required.

Notes:

1. Marker posts may be required in easements.

2" (typ)  
12" min

flow

Manhole steps.

Frame and cover.

PLAN

## SADDLE MANHOLE

NOT TO SCALE

Detail Approvals  
 Engineer GSM  
 Manager DPK

NORTHSHORE UTILITY DISTRICT  
 STANDARD SEWER DETAILS

2

August 2011  
 S2(SADDLEMH).DWG