APPENDIX E

STANDARD DRAWINGS
CONCRETE GRADE RINGS 9" MAXIMUM

SPACE STEPS
12' O.C., LOWEST
STEP 10' MIN.
ABOVE FLOOR
ONLY TOP TWO
STEPS REQUIRED

SEAL ALL JOINTS WITH FLEXIBLE PLASTIC JOINT COMPOUND (RAM-NECK, QUICK SEAL, OR EQUIVALENT)
(2 LAYERS MAY BE REQUIRED TO SEAL BASE) AND PLASTER WITH MORTAR.

REBAR #4 @ 12" EACH WAY.

CAST IRON MANHOLE FRAME AND COVER

15" MAXIMUM
18"-24" MAXIMUM FROM COVER TO FIRST STEP

MORTAR JOINT FOR GRADE RINGS.

CONCENTRIC MANHOLE CONE

PRE-CAST MANHOLE BASE

3/4" CRUSHED AGGREGATE PER
GREENBOOK SECTION 200-1.2

UNDISTURBED EARTH

STEP DETAIL

VARIABLE HEIGHTS OF MANHOLE VERTICAL SECTIONS (24" MINIMUM SECTION PREFERRED).

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY

STANDARD PRECAST CONCRETE MANHOLE

SCALE: NONE
DRAWN BY: J. PICADO
CHECKED BY: P. SEYCK
APPROVED BY: P. HEGGARTY
DATE: SEPT. 13, 2007
DISTRICT MANAGER AND ENGINEER
DRAWING: 2
SEWER CLEANDOUT BOX:

CHRISTY 8" VALVE BOX OR EQUAL
8-1/2" I.D. x 11-3/4" WITH REINFORCED
CONCRETE FBD LID ON GREEN AREAS
LID MUST BE MARKED "SEWER"

CHRISTY 6-5 TRAFFIC VALVE BOX OR
EQUAL 10-3/8" I.D. x 12" CAST IRON
GSC LID IN TRAVELED AREAS.
LID MUST BE MARKED "SEWER"

INSTALL ONE PLASTIC TO PLASTIC FLEX-SEAL ADJUSTABLE
REPAIR COUPLING WITH ARC STAINLESS STEEL SHEAR RING
PARTS M56 44 ARC FOR 4" OR M56 66 ARC FOR 6" BY
MISSION RUBBER PRODUCTS OR EQUAL

NOTES:

ACCEPTABLE PLASTIC PIPE: PVC SDR 26

PVC PIPE

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY
STANDARD SEWER LATERAL CLEANDOUT

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<tr>
<td>NONE</td>
<td>J. PICADO</td>
<td>P. SEVCIK</td>
<td>[Signature]</td>
<td>SEPT. 13, 2007</td>
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Revision By Date
△ A.K. 12/04/2015
FRAME AND COVER BEARING SURFACES
MACHINED TO ASSURE QUIET FIT

ALL MATERIALS USED IN MANUFACTURING
SHALL CONFORM TO A.S.T.M. 48-30

FRAME AND COVER TO BE
MADE DOMESTICALLY. SOUTH
BAY FOUNDRY P-1900 OR
EQUAL.

1 1/2" HIGH LETTERS
RAISED 1/8"
REQUIRED ON PUBLIC
MANHOLES ONLY

FRAME AND COVER SHALL
MEET ALL REQUIREMENTS
OF H-20 HIGHWAY
LOADINGS.

MACHINED SURFACES

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY
STANDARD MANHOLE FRAME AND COVER

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<td>J. PICARD</td>
<td>P. SEVICK</td>
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DATE SEPT. 13, 2007 DISTRICT MANAGER AND ENGINEER
CRUSHED AGGREGATE BASE TO EQUAL EXISTING OR 12", WHICHER IS GREATER. BASE TO BE DEPOSITED AND COMPACTED IN ACCORDANCE WITH SECTIONS 301-28.3 OF THE STANDARD SPECIFICATIONS.

NON-PAVED TRAVELLED AREAS

NATIVE BACKFILL TO TOP OF TRENCH IN NON-TRAVELLED AREAS.

SLOPE DETERMINED BY SOIL CHARACTERISTICS AND SAFETY REGULATIONS.

START SLOPED TRENCH AT TOP OF PIPE.

TRENCH BACKFILLED WITH COMPACTED NATIVE MATERIAL AND ROCKS, BROKEN CONCRETE, OR PAVING PIECES OVER 4" IN GREATEST DIMENSION.

UNDISTURBED SOIL

6" MIN. TO 12" MAX.

EXISTING PAVEMENT

EXISTING BASE

FOR TRENCH BACKFILL AND PAVEMENT RESTORATION, REFER TO CITY OR COUNTY REQUIREMENTS.

ADEQUATE SHEETING, SHORING, AND BRACING MUST BE PROVIDED IN ALL TRENCHES.

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY
PIPE BEDDING, TRENCH BACKFILL & RESURFACING

SCALE: NONE
DRAWN BY: J. PICADO
CHECKED BY: P. SEVCIK
APPROVED BY: [Signature]
DATE: SEPT. 13, 2007
DISTRICT MANAGER AND ENGINEER

DRAWING 6
WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY

SUPPORT FOR UTILITY CROSSINGS, WHERE REQUIRED

SCALE NONE
DRAWN BY: J. PICADO
CHECKED BY: P. SEVCIK
APPROVED BY: (Signature)
DATE: SEPT. 13, 2007
DISTRIBUTING MANAGER AND ENGINEER

DRAWING 7
FACTORY MADE WYE FITTING CONSTRUCTED OF SAME MATERIAL AS MAIN SEWER.

INSTALL PROPER FLEX-SEAL ADJUSTABLE REPAIR COUPLINGS WITH ARC STAINLESS STEEL SHEAR RING BY MISSION RUBBER PRODUCTS OR EQUAL

MAIN SEWER MACHINE CUT FOR INSERTING FACTORY MADE WYE

INSERTION OF FACTORY MADE WYE

PVC SDR-35 SADDLE TEE OR WYE W/ STAINLESS STEEL CLAMPS. GASKET SKIRT AND GASKET INLET. BY PLASTIC TREND INC. OR SIMILAR.

HOLE WITH DIAMETER EQUAL TO INSIDE DIAMETER OF THE TEE CUT IN MAIN SEWER. CUT TO BE DONE WITH POWER DRILL.

INSTALL RUBBER GASKET AS SUPPLIED BY MANUFACTURER

STAINLESS STEEL BANDS FOR CONNECTING WYE OR TEE TO THE CEMENTED AREA IN THE MAIN SEWER LINE.

NOTE: THE STRAPS SHOULD NOT BE OVER-TIGHTENED. OVER TIGHTENING MAY CAUSE A LOSS OF THE SEAL OVER TIME.

RIGID SEWER MAINLINE

SADDLE TEE OR WYE

HOLE WITH DIAMETER EQUAL TO INSIDE DIAMETER OF THE TEE CUT IN MAIN SEWER. CUT TO BE DONE WITH POWER DRILL.

TAPERED PLASTIC COMPRESSION FITTING

STAINLESS STEEL BAND

SYNTHETIC RUBBER INSERT TEE FOR COUPLING BUILDING LATERAL TO MAIN SEWER PIPE

RIGID SEWER MAINLINE

THE DISTRICT WILL REQUIRE THE WEDGED INSERT TEE WHEN CONNECTING NEW LATERAL TO THE MAIN SEWER UNLESS OTHERWISE DIRECTED BY THE DISTRICT ENGINEER

SYNTHETIC RUBBER WEDGED INSERT TEE (TAP TITE)

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY

STANDARD METHODS FOR INSTALLING TEE OR WYE FITTING IN EXISTING RIGID MAIN SEWER

SCALE DRAWD BY: CHECKED BY: APPROVED BY: DATE SEPT. 13, 2007 DISTRICT MANAGER AND ENGINEER

NONE J. PICADO P. SEVCIK

DRAWING 8
PVC LATERAL CONNECTION TO FLEXIBLE MAINLINE

GENERAL NOTES:

1. ALL CONNECTIONS ARE ONLY TO BE USED WHEN CONNECTING TO EXISTING LINES. NEW LINES SHALL HAVE WYES.
2. CONNECTIONS SHALL BE MADE WITH PIPE STUBS CONTOURED SO THAT INSIDE SURFACE OF MAINLINES IS NOT OBSTRUCTED.
3. MAXIMUM LATERAL SIZE ALLOWABLE WITH SADDLE CONNECTION IS SIX INCHES.

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY

STANDARD METHODS FOR INSTALLING TEE OR WYE FITTING IN EXISTING FLEXIBLE MAIN SEWER

SCALE: None
DRAWN BY: J. PICADO
CHECKED BY: P. SEVCIK
APPROVED BY: Date Sept. 13, 2007 District Manager and Engineer
DRAWING 9A
INFORMATION OF FACTORY MADE WYE

PVC SDR-35 SADDLE TEE OR WYE W/ STAINLESS STEEL CLAMPS, GASKET SKIRT AND GASKET INLET BY PLASTIC TRAP INC. OR SIMILAR

HOLE WITH DIAMETER EQUAL TO INSIDE DIAMETER OF THE TEE CUT IN MAIN SEWER. CUT TO BE DONE WITH POWER DRILL

INSTALL RUBBER GASKET AS SUPPLIED BY MANUFACTURER

STAINLESS STEEL BANDS FOR CONNECTING WYE OR TEE TO THE CEMENTED AREA IN THE MAIN SEWER LINE.
NOTE: THE STRAPS SHOULD NOT BE OVER-TIGHTENED. OVER-TIGHTENING MAY CAUSE A LOSS OF THE SEAL OVER TIME

SYNTHETIC RUBBER WEDGED INSERT TEE (TAP TITE)

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY
STANDARD METHODS FOR INSTALLING TEE OR WYE FITTING IN EXISTING FLEXIBLE MAIN SEWER

SCALE
MINE

DRAWN BY:
J. PICADO

CHECKED BY:
P. SEVCIK

APPROVED BY: 
DATE SEPT. 13, 2007 DISTRICT MANAGER AND ENGINEER

DRAWING 9B
JOINING OF PIPES OF DIFFERING OUTSIDE DIAMETER

STAINLESS STEEL STRAPS.
NOTE: THE STRAPS SHOULD NOT BE
OVER-TIGHTENED. OVER TIGHTENING
MAY CAUSE A LOSS OF THE SEAL
OVER TIME

RUBBER BUSHING

ELASTOMERIC SLEEVE

RUBBER BUSHING
STANDARD VERTICAL RISER (SEE DRAWING NUMBER 5)

FILL AREA BETWEEN TRENCH WALL AND MANHOLE WITH 2-SACK SLURRY BACKFILL

SAME DIAM. AS MAIN LINE

STANDARD DOUBLE TEE

REMOVABLE MECHANICAL PLUG

CONCRETE BASE POURLED AGAINST UNDISTURBED SOIL.

CONCRETE BLOCK

2" MAXIMUM

TRENCH WALL

2" MAXIMUM

STANDARD POUR IN PLACE MANHOLE OR STANDARD PRE-CAST CONCRETE MANHOLE (SEE DRAWINGS 1 AND 2)

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY

DROP MANHOLE CONNECTION

J. PICADO

P. SEVCIK

DATE SEPT. 13, 2007

DRAWING 11
WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY

MANHOLE / VERTICAL RISER ADJUSTMENT DETAIL
GRADE RING JOINT
LIFT EYE EACH SIDE AT BALANCE POINTS

PLAN

SECTION A-A'

MANHOLE JOINT BELOW

LIFTING EYE, NO. 4 BAR BEND AS SHOWN

58" DIAMETER

"A" DIAM.

8"

8" X 2"

MANHOLE JOINT

DASHED FIGURE INDICATES PREVIOUS SECTION TO BE REMOVED

EXISTING FRAME AND COVER TO BE REUSED

NEW PRE-CAST SLAB TO BE INSTALLED

48" DIAM. MANHOLE

EXISTING STRUCTURE TO BE PRESERVED

HEIGHT Varies

Varies

NOTES:
ALL SLABS ARE PRE-CAST REINFORCED AND DESIGNED TO SUPPORT HDD HIGHWAY LOADINGS.
NUMBER OF GRADE RINGS VARIES ACCORDING TO THE DESIRED HEIGHT

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY
REDUCER CONCRETE SLAB FOR MANHOLES

SLAB WEIGHTS

<table>
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<th>MODEL</th>
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<td>48&quot; X 24&quot; DIAM.</td>
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DIMENSIONS ARE IN INCHES AND WEIGHTS ARE IN POUNDS

SCALE
NONE

DRAWN BY: J. PICASSO
CHECKED BY: P. SEVCIK
APPROVED BY: DISTRICT MANAGER AND ENGINEER

DATE: SEPT. 13, 2007

DRAWING: 13
NOTES

1. EXCEPT AS OTHERWISE INDICATED HEREIN OR ON THE PROJECT PLANS, ALL HOUSE CONNECTION REPAIR SHALL CONFORM TO THE APPLICABLE PORTIONS OF STANDARD PLAN 222, HOUSE CONNECTION SEWER, AND W.V.S.D. STANDARD SPECIFICATIONS.


3. EXISTING SEWERS ARE INDICATED BY DASHED LINES. HOUSE CONNECTION SEWERS TO BE CONSTRUCTED ARE INDICATED BY SOLID LINES AND SHALL BE OF THE SAME MATERIAL AS THE EXISTING SEWER.

4. 1/16 (2.5 DEGREES) OR 1/8 (45 DEGREES) BENDS SHALL BE USED TO REPAIR OR CONSTRUCT ANY SEWER ON A CURVE OR AT ANY CHANGE IN ALIGNMENT, WHERE PHYSICAL OR GEOMETRIC LIMITATIONS PRECLUDE THE USE OF 1/8 (2.5 DEGREES) OR 1/8 (45 DEGREES) BENDS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL HIS PROPOSED METHOD OF REPAIR OR CONSTRUCTION.

5. ALL HOUSE CONNECTION SEWERS TO BE CONSTRUCTED UNDER A PROPOSED CONDUIT SHALL BE ENCASED IN CONCRETE AS SHOWN HEREIN. WHEN THE HOUSE CONNECTION SEWER SLOPE EXCEEDS 1:1, THE CONTRACTOR MAY, AT HIS OPTION, PLACE A CIRCULAR CROSS SECTION WITH MINIMUM COVER EQUAL TO DIMENSION "X" AS SHOWN ON SECTION A-A HEREIN IN LIEU OF A SQUARE CROSS SECTION OF CONCRETE. CONCRETE BEDDING AND ENCASTEMENT SHALL BE CLASS 250C14 (500-C-2000) AND SHALL EXTEND TO THE FIRST PIPE JOINT AT LEAST 1 FT. BEYOND THE O.D. OF EACH SIDE OF THE PROPOSED CONDUIT.

6. FOR CASES R AND S, WHEN THE SLOPE OF THE PIPE EXCEEDS 1:1, THE CONTRACTOR MAY, AT HIS OPTION, CONSTRUCT A CHIMNEY CONFORMING TO STANDARD PLAN 220 ON THE NEW SEWER IN LIEU OF CONSTRUCTING THE ENCASTEMENT SHOWN HEREIN.

7. FOR CASES E AND F, SADDLES SHALL BE CONNECTED EITHER TO THE LENGTH OF PIPE CONTAINING THE EXISTING TEE OR WYE OR TO THE ADJACENT DOWNSTREAM PIPE LENGTH.

8. CONDUITS TO BE INSTALLED OVER OR WITHIN 1 INCH OF ANY CONCRETE ENCASTEMENT OR STRUCTURE, WHETHER EXISTING OR TO BE PLACED IN CONFORMITY WITH THE REQUIREMENTS HEREIN SHALL BE INSTALLED ON A 1 INCH SAND Cushion or Approved Expansion Joint Material. Concretes Encastements Installed Pursuant to this Standard Plan shall be Separated from Existing Conduit with 1 Inch Thick Expansion Joint Material.

9. THOSE PORTIONS OF AN ABANDONED PIPE LOCATED BENEATH OR WITHIN 6 INCHES OF A RELOCATED HOUSE CONNECTION SEWER SHALL BE REMOVED. THE EXCAVATION SHALL BE REFILLED TO THE GRADE OF THE NEW PIPE INVERT WITH CLASS 6070 (100-E-100) CONCRETE. THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE MECHANICALLY COMPACTED BACKFILL IN LIEU OF THE CLASS 6070 (100-E-100) CONCRETE. THOSE PORTIONS OF ABANDONED PIPE NOT REMOVED SHALL BE SEALED. WHERE CAPS ARE USED, THEY SHALL BE SEALED BY FILLING THE SPACE ABOVE THE CAP WITH SAND AND 1 INCH THICK COATING OF TYPE "F" MORTAR.

10. SUPPORT WALLS SHALL CONFORM TO STANDARD PLAN 224.

11. WHEN INDICATED ON THE PROJECT PLANS OR THE SPECIAL SPECIFICATIONS, A CLEANDOUT SHALL BE CONSTRUCTED IN CONJUNCTION WITH CASE E AS FOLLOWS:

A. SUBSTITUTE A "Y" FOR THE 45 DEGREES BEND.
B. PLACE A 45 DEGREES BEND ON THE UPPER END OF THE "Y".
C. CAP TOP OF 45 DEGREES BEND WITH A CAP.

12. DIMENSION SHOWN ON THIS PLAN ARE FOR ENGLISH UNITS ONLY.

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY
SEWER LATERAL REPAIR NOTES

SCALE: NONE  DRAWN BY: J. PICADO
CHECKED BY: P. SEVCIK  APPROVED BY:  DATE: SEPT. 13, 2007
DRAWING: 14C  DISTRICT MANAGER AND ENGINEER
NOTES:
1. TO CONNECT FOUR INCHES LATERAL, INSTALL WYE OR SADDLE IN EXISTING WASTEWATER MAIN.
2. SERVICE LATERALS LARGER THAN SIX INCHES SHALL BE CONNECTED WITH A MANHOLE.
3. LOCATION OF ALL LATERALS SHALL BE SHOWN ON AS-BUILT DRAWINGS.

WEST VALLEY SANITATION DISTRICT OF SANTA CLARA COUNTY

SERVICE LATERAL TO MAIN SEWER

SCALE: 1:100

DRAWN BY: J. PICADO
CHECKED BY: P. SEVCIK
APPROVED BY: J. PETER
DATE: SEPT. 13, 2007

DRAWING 15