CAST IRON COVERS
MANHOLES AND INLETS

CAST IRON MANHOLE
COVERS
(LOCK TYPE)

LOCKING DEVICE
FOR TYPE 'T'
LOCK TYPE MANHOLE COVER

LOCKING DEVICE
FOR TYPE 'N'
LOCK TYPE MANHOLE COVER

NOTE:
ALL INLETS OR INLET-MANHOLES CONSTRUCTED WITHIN OR ABUTTING A PAVED AREA SHALL HAVE GUTTER SUMPS. THE PAYLINE FOR THE SUMP SHALL BE CONSIDERED 2' WIDE BY THE ACTUAL LENGTH.

FOR MULTIPLE UNIT INLET, SEE NEXT SHEET.

GUTTER SUMPS FOR
VERTICAL CURBS

GUTTER SUMPS FOR
VERTICAL CURB

PICKETT RAY & SILVER
CIVIL ENGINEERS
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VILLAS AT CRYSTAL RIDGE
CONSTRUCTION DETAILS

Prepared For:
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THE GUTTER SUMP OF AN INLET LOCATED AT THE LOW POINT IN GRADE AND RECEIVING FLOW FROM EACH DIRECTION SHALL BE CONSTRUCTED SYMMETRICALLY ABOUT THE CENTERLINE OF THE INLET AS SHOWN IN PLAN FOR SECTION B1-B3 FOR A SINGLE INLET, AND IN PLAN FOR SECTION C1-C3 FOR A MULTIPLE UNIT INLET.

GUTTER SUMP
FOR LIP CURB

FLARED END SECTION

NOTES
A. MECHANICALLY COMPACT BACKFILL IN TRENCHES OR CLOSURES OF ABANDONED CHANNELS TO DENSITY NOT LESS THAN THAT IN ADJACENT BANK. PROTECT WITH A BLANKET OF CRUSHED LIMESTONE OR PAVING WHERE NECESSARY.
B. CHANNEL PAVING OR BANK PAVING OR BOTH MAY BE REQUIRED TO PREVENT EROSION AT CURVES IN ALIGNMENT OR AT LOCATION OF POSSIBLE EROSION DUE TO DISCHARGE OF LARGE FLOWS
C. 457 AT UNPAVED CHANNELS AND FOR LARGE FLOWS ENTERING SMALL CHANNELS. 307 AT PAVED CHANNELS AND FOR SMALL FLOWS ENTERING LARGE CHANNELS.

STORMWATER
CHANNELS

1. 6" V.C.P. WITH COMPRESSION JOINT.
2. 6" V.C.P. WITHOUT COMPRESSION JOINT. USE SEWER TITE AND OAKUM.
3. 8" x 6" HOUSE CONNECTION IS APPROVED, A 4" TO 6" INCREASER IS REQUIRED.
4. 8" 6" P.V.C. IS USED A FERNCO ADAPTOR OR SEWER TITE AND OAKUM MAY BE USED TO MAKE THE JOINT.
5. A CLEAN, DRY BEDDING MATERIAL IS REQUIRED AROUND THE COMPLETED CONNECTION BEFORE BACK FILLING. THE BEDDING MATERIAL SHALL BE ONE OF THE FOLLOWING:
   A. M.S.D. NO. 1 BEDDING
   B. 1 TO 3 CEMENT AND SAND
   C. PRE-MIX CONCRETE

HOUSE CONNECTION
TO EXISTING
TEE OR WYE

GENERAL NOTES:

1. 6" V.C.P. OR 6" P.V.C. HOUSE CONNECTION INTO PUBLIC V.C.P. MAIN 8" TO 24" DIAMETER AND NO WYE OR TEE AVAILABLE, A MACHINE TAP IS REQUIRED.
2. THE DISTRICT WILL CUT THE HOLE IN THE MAIN, PROVIDE AND EPOXY THE SADDLE TO THE MAIN. ALL OTHER MATERIAL AND LABOR ARE THE RESPONSIBILITY OF THE CONTRACTOR.
3. A CLEAN DRY BEDDING MATERIAL IS REQUIRED AROUND THE COMPLETED CONNECTION BEFORE BACK FILLING. THE BEDDING MATERIAL SHALL BE ONE OF THE FOLLOWING:
   A. M.S.D. NO. 1 BEDDING
   B. 1 TO 3 CEMENT TO SAND
   C. PRE-MIX CONCRETE
4. 8" 4" HOUSE CONNECTION IS APPROVED, A 4" TO 6" INCREASER IS REQUIRED AT MACHINE TAP.
5. IN ORDER THAT THE INSPECTOR MAKE AN INSPECTION, ALL EXCAVATION MUST BE ADEQUATELY BRACED.
6. ALL MATERIAL REQUIRED TO MAKE AN APPROVED CONNECTION MUST BE ON THE CONNECTION SITE AT THE TIME OF ARRIVAL OF THE TAP TRUCK. IF THE MATERIAL IS NOT AVAILABLE, THE TAP MUST BE RESCHEDULED.

MACHINE TAP

NOTE:
THE OPENING SHALL BE CUT BY THE CONTRACTOR TO A SUFFICIENT SIZE TO PERMIT INSERTING A TEE SADDLE OR SHORT LENGTH OF PIPE AT THE REQUIRED ELEVATION AND ANGLE TO ALLOW AT LEAST TWO (2) INCHES SPACE AROUND THE PIPE. THIS SPACE WILL BE SOLIDLY FILLED WITH 1-3 CEMENT-SAND MORTAR AND THE NEW PIPE NEATLY TRIMMED AND POINTED UP FLUSH WITH THE INSIDE OF THE MAIN SEWER.

IF THERE ARE REINFORCING BARS IN THE SEWER WALL, ONLY THOSE PREVENTING INSERTION OF THE PIPE MAY BE CUT. ALL OTHERS SHALL BE BENT INTO A CLASS "A" CONCRETE COLLAR AT THE JUNCTION OF THE CONNECTION PIPE AND THE MAIN SEWER.

HOUSE CONNECTIONS
ALLOWED BY
TEE SADDLE

WHEN A CONNECTION TO A PLASTIC PIPE IS ALLOWED AND A CONNECTION IS LARGER THAN 6" IN DIAMETER, A SOLVENT WELD WYE OR TEE FITTING OF A SIMILAR MATERIAL MUST BE USED. (EXAMPLE: 10"X 8")

THIS IS ACCOMPLISHED BY CAREFULLY CUTTING A HOLE WITH A SAW IN THE MAIN AT THE REQUIRED LOCATION. AFTER CUTTING AND SHAPING THE HOLE TO THE SIZE OF THE FITTING, THE FOLLOWING STEPS SHOULD BE TAKEN:

1. CLEAN AND DRY BOTH INSIDE SADDLE WYE SURFACE AND PIPE SURFACE TO BE SOLVENT CEMENTED.
2. IMPORTANT: APPLY A LIBERAL, HEAVY COAT OF A ONE-STEP SOLVENT CEMENT TO THE INSIDE SURFACE OF THE SADDLE WYE AND TO THE EXTERIOR WELDING SURFACE TO THE PIPE.
3. WITHOUT DELAY, MATE THE SURFACES AND STRAP DOWN TIGHTLY. A BEAD OF SOLVENT SHOULD APPEAR AFTER SADDLE HAS BEEN STAPPED DOWN TIGHTLY.
4. USING A RAG OR PAPER TOWEL, WIPE BEAD AND ANY EXCESS SOLVENT CEMENT OFF PIPE AND SADDLE.
5. ALLOW 30-60 MINUTES FOR SET-UP TIME BEFORE BACKFILLING. CURE TIME DEPENDS ON SIZE AND FIT OF MATERIALS BEING INSTALLED AND VARIOUS COLD DAMP CONDITIONS.
6. DISCARD OLD SOLVENT IF IT BECOMES JELLED OR LUMPY.
7. A CLEAN, DRY BEDDING MATERIAL IS REQUIRED AROUND THE COMPLETED CONNECTION BEFORE BACKFILLING. THE BEDDING MATERIAL SHOULD BE ONE OF THE FOLLOWING:
   A. M.S.D. #1 BEDDING
   B. 1 TO 3 CEMENT TO SAND MIX
   C. "PRE-MIX" CONCRETE

8" (8 LARGER) CONNECTION
TO PLASTIC MAIN

WHEN A CONNECTION IS ALLOWED LARGER THAN 8" DIAMETER A SADDLE MAY BE USED IF THE I.D. OF THE CONNECTION PIPE IS NOT GREATER THAN ONE-HALF (1/2) THE I.D. OF THE MAIN SEWER. (EXAMPLE, 24"X 10")

IF THE I.D. OF THE CONNECTION PIPE IS GREATER THAN ONE-HALF (1/2) THE I.D. OF THE MAIN SEWER THE WYE OR TEE MUST BE "ROLLED-IN" (EXAMPLE: 15"X8")

THIS IS ACCOMPLISHED BY BREAKING AWAY AND REMOVING ONE SECTION OF PIPE. THE TOP HALF OF THE BELL ON THE PIPE LYING ADJACENT TO THE GAP IS CAREFULLY BROKEN OFF. THE TOP HALF OF THE BELL ON THE MAIN REPLACEMENT SECTION (WITH A "TEE" OR "WYE" FITTING) IS ALSO BROKEN OFF. THE REPLACEMENT PIPE IS THEN PLACED ON THE LINE GAP WITH THE STUB POINTED IN THE WRONG DIRECTION. THE BROKEN BELLS ON THE RE-PLACEMENT AND THE ADJOINING PIPE MAKE IT POSSIBLE FOR THE REPLACEMENT SECTION TO FIT INTO THE SEWER LINE WITHOUT DISTURBING THE ADJOINING PIPE SECTIONS. THE PLACEMENT SECTION IS THEN ROTATED TO THE DESIRED POSITION AND THE BROKEN BELLS ARE ENCASED WITH A 6" CLASS "A" CONCRETE ENCASEMENT.

"ROLL-IN"
(FOR EXISTING CLAY OR CONCRETE PIPE)

NOTES: OPENING INTO EXISTING SEWER TO BE CUT CAREFULLY TO AVOID DAMAGE TO ADJACENT MASONRY.

HOLE TO BE CUT TO PROPER GRADE AND ELEVATION AND TO BE OF SUCH SIZE AS TO PERMIT A TWO-INCH SPACE ALL AROUND THE OUTSIDE OF THE PIPE.

THIS SPACE SHALL BE CAREFULLY FILLED WITH ONE PART CEMENT AND THREE PARTS SAND MORTAR COMPACTED INTO PLACE AFTER THE PIPE HAS BEEN INSERTED AND PROPERLY SUPPORTED TO LINE AND GRADE.

EXISTING REINFORCING BARS ARE TO BE BENT BACK INTO THE CONCRETE COLLAR AROUND THE PIPE TO PROVIDE REINFORCEMENT EQUALLY ON ALL SIDES.

CONNECTIONS TO
LARGE SEWERS

REVISIONS NO	DATE	REVISED PER CITY OF O'FALLON
1	8/11/03	

ENGINEERS AUTHENTICATION

The responsibility for professional engineering liability on this project is hereby limited to the set of plans authenticated by the seal, signature, and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes revisions later this date unless reauthenticated.

PICKETT, RAY & SILVER, INC

STATE OF MISSOURI — TIMOTHY J. ELMER — NUMBER: E-18146 — REGISTERED PROFESSIONAL ENGINEER

8/13/03

DRAWN	DATE
E.J.S.	04/09/03
CHECKED	DATE
D.W.D.	04/09/03

PROJECT # 01212.SUP0.02R
TASK # 2 FIELD BOOK

VILLAS AT CRYSTAL RIDGE
CONSTRUCTION DETAILS

SHEET 21 OF 26

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