TRENCH SAFETY SUPPORT SYSTEM AS REQUIRED BY STATE AND FEDERAL LAW

MATERIAL FOR FLEXIBLE PIPE MATERIAL

METAL TRACER WIRE OVER PVC PIPE

FLEXIBLE PIPE TRENCH

RIGID PIPE TRENCH

WARNING TAPE 2' ABOVE PIPE (TYP)

TRENCH ZONE BACKFILL

PIPE BACKFILL ZONE

BEDDING FOR RIGID PIPE MATERIAL

FOUNDATION STABILIZATION MATERIAL AS SHOWN OR DIRECTED BY THE ENGINEER

TYPICAL PIPE TRENCH

NO SCALE
GENERAL NOTES:

1. MINIMUM ANCHOR BLOCK SIZE 8"x12"x18" UNLESS OTHERWISE NOTED.

2. BLOCKING SHALL BE POURED AGAINST UNDISTURBED SOIL.

3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.

PIPE ANCHOR
NO SCALE
NOTES:
1. COMPLY WITH ALL REGULATORY REQUIREMENTS OF JURISDICTIONAL AUTHORITY.
2. CASING SPACERS CAN BE SUBSTITUTED FOR BLOCKING.
3. PRESENT PROPOSED METHOD FOR BLOCKING AND SUPPORTING PIPE WITHIN CASING TO ENGINEER FOR APPROVAL.

CASING TABLE
SCHEDULE 20 STEEL PIPE UNLESS OTHERWISE INDICATED

<table>
<thead>
<tr>
<th>PIPE DIAMETER</th>
<th>MIN. CASING DIAMETER</th>
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<tbody>
<tr>
<td>6</td>
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<tr>
<td>8</td>
<td>14</td>
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<td>14</td>
<td>20</td>
</tr>
<tr>
<td>16</td>
<td>22</td>
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</table>

CEDAR BLOCKS OR PRESSURE TREATED FIR TO PROVIDE FOR CONTINUOUS PIPE SUPPORT. INSTALL AS DIRECTED.

STAINLESS STEEL BANDS 10 FOOT SPACING MINIMUM 3 REQUIRED

KITSAP COUNTY Dept. of Public Works PIPE CASING DETAIL PD-4
### Type A Blocking

#### Type A Blocking for 11, 1/2 and 22, 1/2 Vertical Blocks

<table>
<thead>
<tr>
<th>Soil</th>
<th>Firm Soil</th>
<th>Firm Soil Eased</th>
<th>Compact Soil</th>
<th>Compact Soil Eased</th>
<th>11 1/2</th>
<th>22 1/2</th>
<th>11 1/2</th>
<th>22 1/2</th>
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### Type B Blocking

#### Type B Blocking for 45° Vertical Bends

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<tr>
<th>Soil</th>
<th>Firm Soil</th>
<th>Firm Soil Eased</th>
<th>Compact Soil</th>
<th>Compact Soil Eased</th>
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### Notes

1. Location and size of blocking for pipe larger than 12" and for soil types different than shown shall be determined by the engineer.
2. All blocking for vertical fittings (poured in place) shall be against undisturbed native ground.
3. All poured thrust blocks shall be in place and sufficient time shall be allowed for the concrete to cure and trench shall be backfilled and compacted prior to pressure testing.
4. All blocking to be 3000 psi concrete.
5. After installation, shackle rods and turnbuckles shall be cleaned and coated with 2 coats of asphaltal varnish. Rostock Rostunite #8124 or approved equal.
6. Shackle rods shall be round mild steel, ASTM A-36 with threads on ends only.
7. Blocking against fittings shall bear against the greatest fitting surface area possible, but shall not cover or enclose bell ends, joint bolts or glands.

### VERTICAL THRUST BLOCKS

No scale

### Kitsap County Dept. of Public Works

**VERTICAL THRUST BLOCKS**

**DETAIL**

PD-5
HORIZONTAL THRUST BLOCKS

<table>
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<tr>
<th>LETTER</th>
<th>CONCRETE AREA IN SQ FT AGAINST SOIL FOR EACH PIPE SIZE</th>
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<tr>
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<td>D</td>
<td>1.0</td>
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<tr>
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NOTE: CONCRETE THRUST BLOCK SHALL EXTEND FROM PIPE FITTING TO UNDISTURBED SOIL. THE AREA IN SQUARE FEET OF THE CONCRETE AT THE END LAYING AGAINST THE UNDISTURBED SOIL SHALL NOT BE LESS THAN THE TABULAR VALUES SHOWN.

NO SCALE
SIDE SEWER CONNECTION

CONNECTEXIST W/ SIDE SEWER TRANSITION COUPLING AT A JOINT (OR CLEAN CUT) IN A SOUND PIPE

MINIMUM 2% SLOPE

MANUFACTURED TEE OR WYE FITTING MATCHING SEWER MAIN MATERIAL

SEWER MAIN

NO SCALE
GENERAL NOTE:
A. ALL MATERIALS AND CONSTRUCTION PROCEDURES SHALL COMPLY WITH KITSAP COUNTY STANDARDS FOR SANITARY SEWER EXTENSION.

CONSTRUCTION NOTE:
1. 6" x 6" x 6" TEE BELOW GRADE
2. 6" x 4" REDUCER
3. 4" BUILDING SEWER
4. 30" MINIMUM FROM BUILDING
5. 18" MINIMUM DEPTH
6. CLEANOUT WITH THREADED PLUG
7. RUBBER COUPLING AT BUILDING

BUILDING SEWER CONNECTION
NO SCALE
TYPICAL SITE PLAN
NO SCALE

PUMP REQUIREMENTS

STATIC HEAD ________ FT.

DYNAMIC HEAD ________ FT. __GPM

TOTAL HEAD ________ FT

DISCHARGE VELOCITY ________ FPS

POWER REQUIREMENTS ________ V, ________ Ω

RECOMMENDED PUMP:

TYPE - GRINDER PUMP

HP - 2 HORSE POWER

MODEL - ________________

MFG. - ________________

SUPPLIER - ________________

FLOW @ HEAD ________ GPM @ ________ FT

SEWER CONNECTION
NO SCALE

KITSAP COUNTY
Dept. of Public Works

INDIVIDUAL PUMP
INSTALLATION A

DETAIL
PD-10
TYPICAL SITE PLAN
NO SCALE

PUMP REQUIREMENTS

STATIC HEAD ___________ FT.
DYNAMIC HEAD ___________ FT. @ __________ GPM
TOTAL HEAD ___________ FT
DISCHARGE VELOCITY _______ FPS
POWER REQUIREMENTS _______ V. _______ φ

RECOMMENDED PUMP:
TYPE - GRINDER PUMP
HP - 2 HORSE POWER
MODEL -
MFG. -
SUPPLIER -
FLOW @ HEAD - ______ GPM @ ______ FT

SADDLE, ROMAC
STYLE 304 OR EQUAL

NO PROTRUSIONS INTO BARREL OF THE PRESSURE WILL BE ACCEPTABLE.

SEWER FORCE MAIN

VALVE BOX W/ COVER MARKED "SEWER"
CHECK VALVE (BRONZE)
SCH 80 PVC
CORR. STOP (BRONZE)

FORCE MAIN CONNECTION
NO SCALE

KITSAP COUNTY
Dept. of Public Works

INDIVIDUAL PUMP INSTALLATION B

DETAIL PD-11
NOTES:

1. RESTORATION SHALL BE IN ACCORDANCE WITH LOCAL REGULATORY REQUIREMENTS.

2. TRENCH BACKFILL SHALL BE COMPACTED AND TESTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND LOCAL REGULATORY REQUIREMENTS.

3. SEE EASEMENT CLEANOUT FRAME & COVER DETAIL FOR CLEANOUTS LOCATED IN EASEMENTS

CLEANOUT

NO SCALE

KITSAP COUNTY
Dept. of Public Works

CLEANOUT AND
STREET USE COVER

DETAIL
PD-12
NYLON LIFTING ROPE INSTALLED BY CONTRACTOR

4" CAULKING

INFLUENT HUB

24" MIN

CONC LEVELING SLAB

ROMOTE MOUNTED CONTROL PANEL

INFLUENT HUB

CONC GROUT TO PREVENT FLOATATION

SCHD 80 PVC PIPE

QUICK DISCONNECT

SWING CHECK VALVE

ANTI-FLOATION FLANGE

LIFTING EYEBOLT, NUT AND LOCK WASHERS (2)

PUMP FEET (4)

2 HP GRINDER PUMP

SCREENED VENT NEMA 4 J. BOX

2" NPT PIPE COUPLING FOR CONDUIT CONNECTION

TANK

FLOAT TREE

ALARM

PUMP ON

PUMP OFF

3 FLOAT CONTROLS

28" DIA

24" DIA

SST DISCONNECT GUIDE HANDLE

18"

60"

42"

INDIVIDUAL SEWAGE PUMP

NO SCALE

KITSAP COUNTY
Dept. of Public Works

INDIVIDUAL SEWAGE PUMP

DETAIL PS-1
GENERAL CONSTRUCTION NOTES

1. Construction materials and workmanship shall conform to the requirements of the most recent edition of "Kitsap County Department of Public Works Standards for Sanitary Sewer Extensions" in conjunction with the most recent edition of "The Standard Specifications For Road, Bridge, and Municipal Construction" prepared by the Washington State Chapter of the American Public Works Association.

2. The contractor shall arrange for a preconstruction conference prior to commencing construction. The engineer and/or inspector for the Wastewater Division of the Kitsap County Public works Department shall be in attendance.

3. All sewer installation inspections and test observations shall be made by Kitsap County Department of Public Works Wastewater Division. The County inspector shall be notified two days in advance of commencing work on a sanitary sewer extension. Prior to final acceptance of all installations, the County shall conduct an inspection of all main lines by the use of television equipment. Final acceptance of sewer installations will not be made until tests and inspections are complete and prove satisfactory.

4. (Pipe requirements)

5. (Bedding requirements)

6. (Backfill material and compaction requirements)

7. The physical connection to an existing manhole or sewer shall not be made until authorized by the County. Such authorization will not be given until all upstream lines have been completely cleaned and all debris removed.

8. Gravity mains shall be tested by the low pressure air method. Pressure mains shall be tested by the hydrostatic test method. All tests shall be made in the presence of the County inspector.

9. Drop manholes shall, in all respects, be constructed as a standard manhole with the exception of the outside drop connection as shown on the standard plan "Drop Manhole Connection".

10. Manholes shall be precast reinforced concrete units with eccentric cones conforming to the standard plan "Type 1 Manhole". Joints between precast wall sections shall be confined O-ring type.

11. Manhole frame and covers shall be cast iron, three bolt locking type, Olympic Foundry type MH300/D/T, or equal. Bolts shall be 5/8" stainless steel socket head, countersunk. The cover shall have the word "SEWER" in 2" raised letters cast in it.

12. Cleanout frame and covers shall be cast iron two bolt locking type, Olympic Foundry type M1025, or equal. Bolts shall be 5/8" stainless steel socket head, countersunk.

13. All side sewers shall be 6" diameter minimum and laid on a minimum slope of 2 percent. All side sewers shall be provided with a cleanout and test tees for each lot to be served.

14. Check dams shall be placed at 100 foot intervals on gravity mains laid on 6 percent or greater slopes.

15. Concrete pipe anchors shall be placed on sewer mains where slopes exceed 20 percent. Anchors shall be placed on 36 foot centers for slopes 20 to 35 percent, on 24 foot centers for slopes 35 to 50 percent, and on 16 foot centers for slopes 50 percent and greater.

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<table>
<thead>
<tr>
<th>KITSAP COUNTY</th>
<th>GENERAL CONDITIONS/NOTES</th>
<th>DETAIL MD-1</th>
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