

# CITY OF SCAPPOOSE

## RIGHT-OF-WAY PERMIT

*emailed*

**Application Date:**  
7/20/2020

(must attach sketch, no larger than 11x17)

**Permit Number:**  
*4-40-30*

**Physical:** 52610 NE 1st St.  
**Mailing:** 33568 E. Columbia Ave.  
**Scappoose, OR 97056 (503)543-7184**

**Permit Fee:** \$200.00  
Payment due with application & sketches.  
Payment Receipt: *1229203* Date: *7-20-2020*

**Applicant's Name:** Margarita Vega/ Work for Comcast Cable.  
**Company Name:** Fisk Communications Contracting Inc  
**Mailing Address:** 2705 NE 65th ave Vancouver, WA, 98661  
**Phone Number:** 360-314-4454

Applicant hereby applies to the City of Scappoose for permission to perform certain operations upon the right-of-way of a City owned or dedicated street as shown on the attached map or plan, hereto and by reference made a part hereof.

- Construct, operate and maintain a \_\_\_\_\_ pole line
- Construct, operate and maintain a \_\_\_\_\_ CATV buried cable
- Construct, operate and maintain a \_\_\_\_\_ pipe line
- Miscellaneous operations and/or facilities as described
- Erect and maintain a non-commercial sign
- Re-construct \_\_\_\_\_

CONSTRUCTION LOCATION:					
Street Name	Between/At/Near	Side Road	Distance From Center Line	From R/W Line	Buried Cable or Pipe Depth / Size and Kind
Joes Dr	33558/33480	SOUTH	17'	60'	2" schedule 80 pipe
<p style="text-align: center;"><b>Description and Location of Non-Commercial Sign, Miscellaneous Operations and/or Facilities</b></p> <p>Directional drill at an approx. depth of 36" approx. 60' in ROW traveling under Joes Dr to the existing ped to provide CATV service to 33480 Havlik Dr, 97056.</p>					

-----DO NOT WRITE BELOW THIS LINE (EXCEPT FOR YOUR SIGNATURE & DATE)-----

APPROVED  
 APPROVED WITH THE FOLLOWING CONDITIONS

- ~City Maintained Street \_\_\_\_\_
  - ~Insurance Required \_\_\_\_\_
  - ~Bond Required \_\_\_\_\_
  - ~Trenching or Tunneling nearer than (\_\_\_\_\_) feet to surfaced portion of road is NOT permitted
  - ~OTHER: *See attached Conditions of Approval and 615 Exhibit (for reference only) & std 329*
- LOCATES (48 HOUR NOTICE PRIOR TO EXCAVATION)

Oregon law requires you to follow the rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through 952-001-0090. You may obtain copies of the rules from the Center by calling (503) 246-1987. One Call System 1-800-332-2344

This permit is issued by the City of Scappoose and subject to the terms and provisions contained herein and attached hereto and is accepted and approved by applicant subject to said terms and provisions.

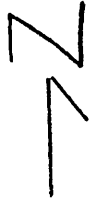
APPLICANT MUST NOTIFY THE CITY 24 HOURS PRIOR TO THE DESIRED HOUR OF COMMENCEMENT OF WORK. THIS PERMIT IS VALID FOR 90 DAYS FROM THE DATE OF ISSUE.

*Margarita Vega*  
SIGNATURE OF APPLICANT      DATE: 7/20/2020

*C. Vega*  
SIGNATURE OF CITY ENGINEER      DATE: 7.22.2020

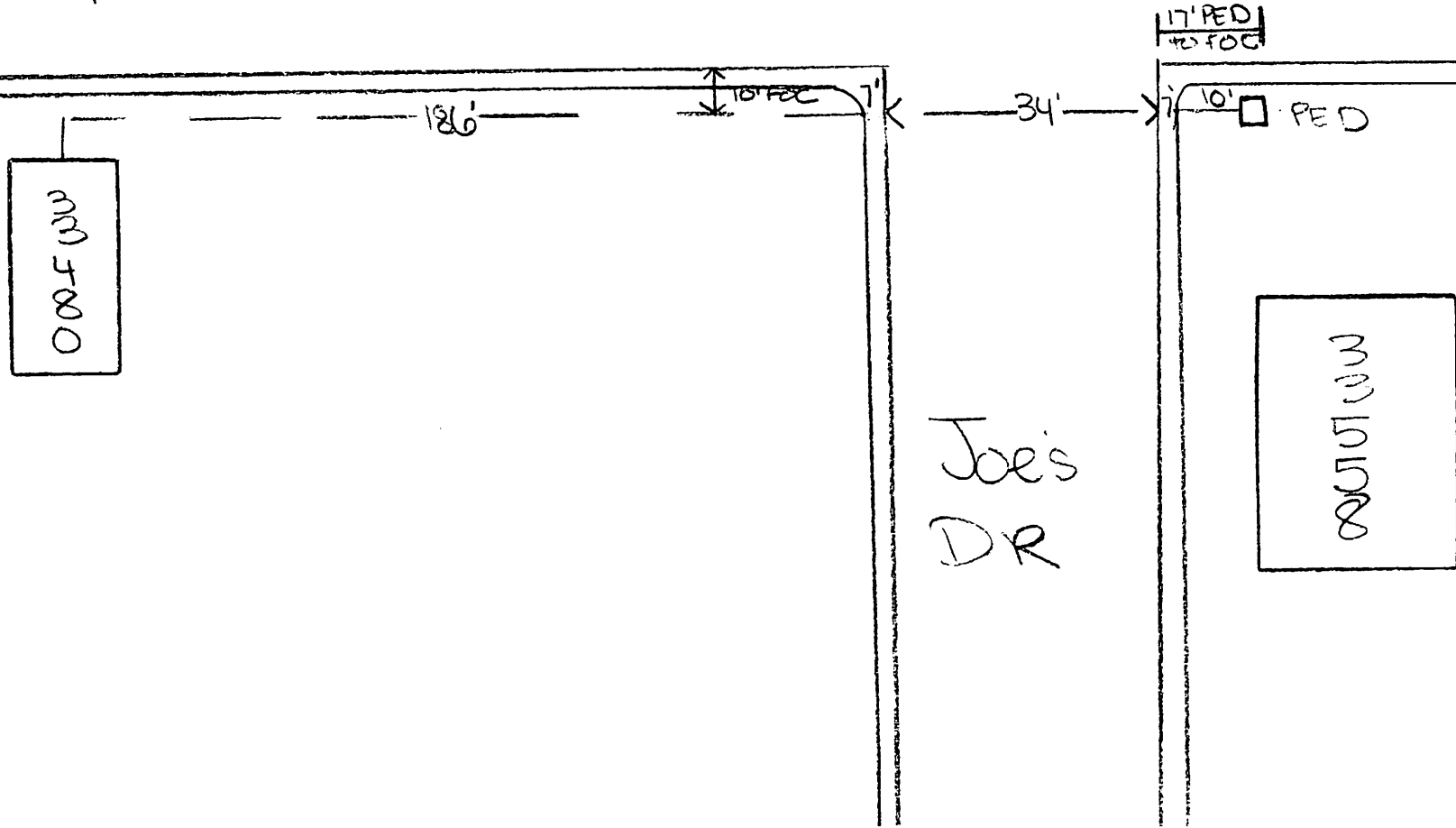
Fisk Communications  
Contracting Inc.

(360) 314-4454



Job # 138318  
Depth - 36"  
Row - 60'  
Street - 34'  
Method -  
Directional  
Bore

HAVLIK DR



**Stationary Lane Closure with Flagging****Diagram 320**

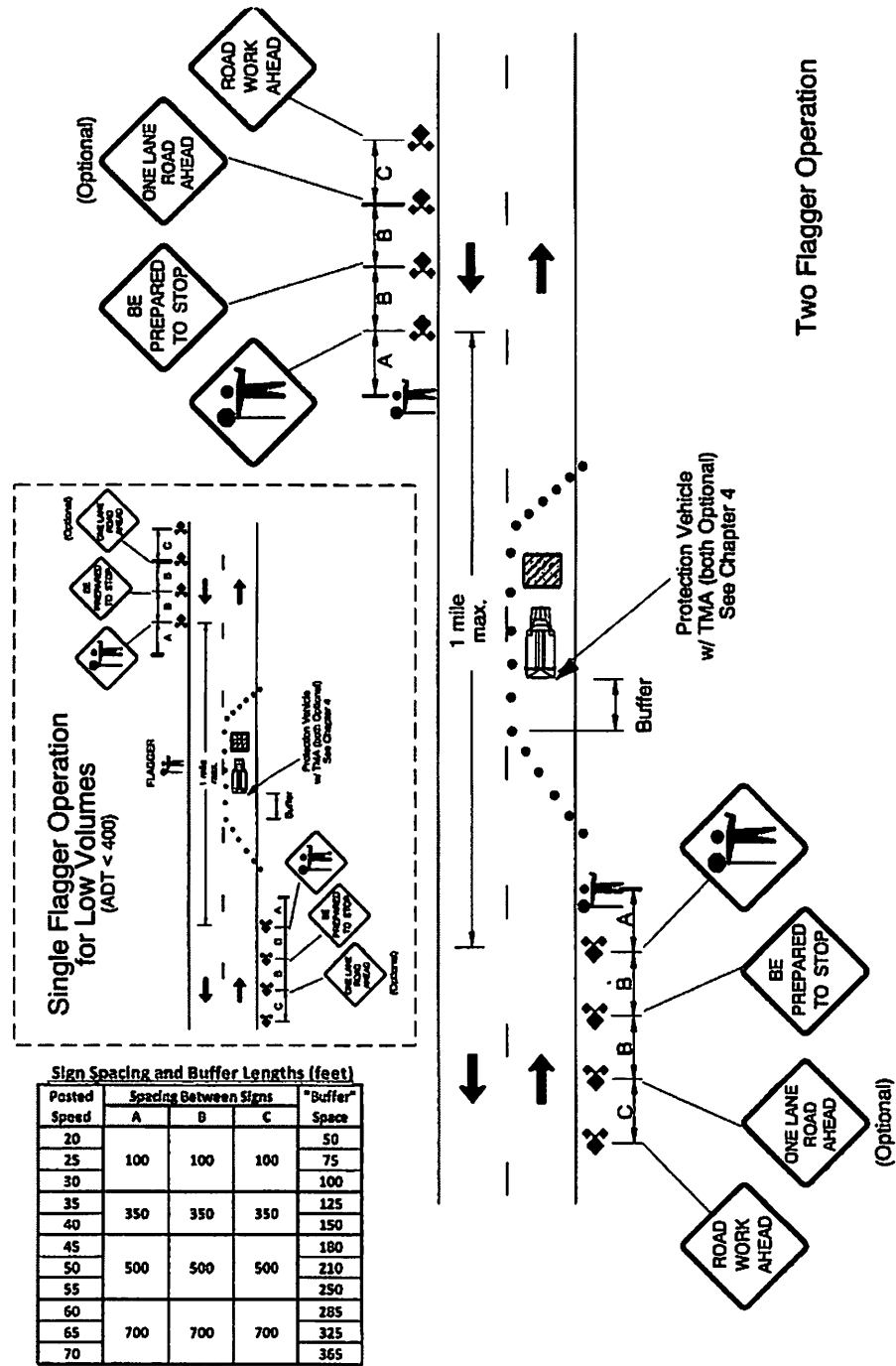
Diagram 320 covers total closure of one lane of a two-lane, two-way roadway. See the detail inset for the layout if using a single flagger to control both directions of traffic on low volume roads (less than 400 ADT) with good sight distance as discussed below.

1. Use truck-mounted flashing warning lights on work and protection vehicles. See Section 4.3 – Lights and Lighted Signs for exceptions.
2. For added visibility, a truck-mounted arrow board or PCMS in caution mode may be used.
3. Flaggers at each approach are required if any of the following conditions exist:
  - a. Night Operations.
  - b. Work space is over 200 feet in length.
  - c. Sight distance is less than 750 feet from each approach through the lane closure.
  - d. Traffic volumes are greater than 400 ADT.
4. The length between the Flagger Ahead signs shall not exceed one mile. Use Diagram 340 – Lane Closure with Pilot Car if exceeding one mile.
5. Cones should be used to outline the work space when curves or other roadway alignments prevent clear direction for the motorists to pass the work space safely.
6. Cones along the work space are recommended when posted speeds are 45 mph or greater, when working under heavy traffic or when travel lanes are narrower than 11 feet.
7. Extended queue signing (see Diagram 5-4) should be used when traffic queues extend beyond the initial advance warning sign.
8. When flagging near an intersection, the “Flagger Ahead” (CW23-2) sign should be visible to traffic entering from any side road. Additional advance warning and Flagger Ahead symbol signs may be placed on the side road(s).
9. Sign set-up and flagger placement shown may be used for intermittent full road closures of 20 minutes or less.
10. The “ONE LANE ROAD AHEAD” (W20-4) sign is optional and should be considered on high volume or high speed roads, or when extended queues are expected.

Stationary Lane Closure with Flagging

Diagram 320

2-Lane, 2-Way







U-20-20  
Permit #

PERMIT ISSUED TO: Comcast Cable, Margarita Vega/Fisk Communications Contracting  
WORK SITE: 33558 and 33480 Havlik Dr, Scappoose OR 97056  
DATE: July 22, 2019

Conditions of Approval for Right-of-Way Work

- 1. Prepave inspection required prior to any sidewalk or street repair.
2. Notify all adjacent private property owners concerning work planned in the Right-of-Way 7-days prior to start of work.
3. Call Utility Locates and pothole all utilities as needed (including sewer laterals and water services). 1-800-332-2344 or 811
4. In addition to the listed requirements, the contractor is responsible for following all requirements of the Public Works Design Standards and Franchise Agreement, as applicable. https://www.ci.scappoose.or.us/engineering
5. Traffic control plan and schedule shall be provided for approval prior to work in the roadway. Traffic control should be performed as specified in the Manual on Uniform Traffic Control Devices.
6. Contractor shall coordinate with City of Scappoose Police Department, Scappoose Rural Fire District, Scappoose School District and Post Office regarding road closures and expected delays and shall have certified flaggers directing traffic at all times.
7. Notify City Engineer, at 503-543-7184, two working days prior to the start of ROW construction. Bore under all sidewalks, driveways, curbs, and pavements, if possible. Sawcut, excavation and trench backfill per Public Works Design Standards detail 329. Call for subgrade inspection prior to AC paving or re-pouring concrete panels and provide compaction test results, if required.
8. Notify Public Works, at 503-543-8404, two working days prior to any utility main line taps, if applicable. Public Works official must be present when the tap is done.
9. Restore all vegetation and private property disturbed by construction.
10. Obtain a final inspection from the City Engineer and/or Inspector when the construction is complete.
11. Maintain the Visual Clearance Area per SMC 12.10; A visual clearance area shall contain no vehicles, RV's watercraft, parts designed to be affixed to a vehicle of any type, hedge, planting, fence, wall structure, sign or temporary/permanent obstruction that would impede visibility between a height of 3' and 10' above the center line grades of the intersecting streets or railroad.
12. All non-metallic service laterals shall include trace wire per OPSC.

Additional Requirements

Table with 1 column and 6 rows containing additional requirements such as 'Maintain min. 3-ft clear from any existing public utilities...' and 'Be advised that there are numerous existing utilities to be crossed in Joe's Drive...'.

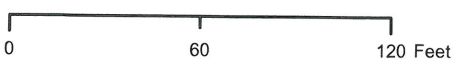
C: Dave Sukau, Public Works Director & Doug Nassimbene, Field Services Supervisor



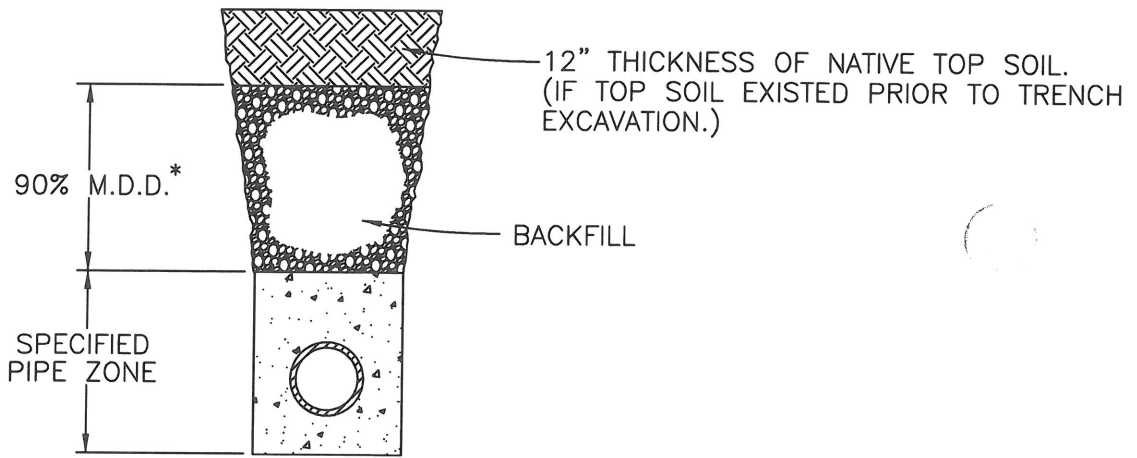


**Legend**

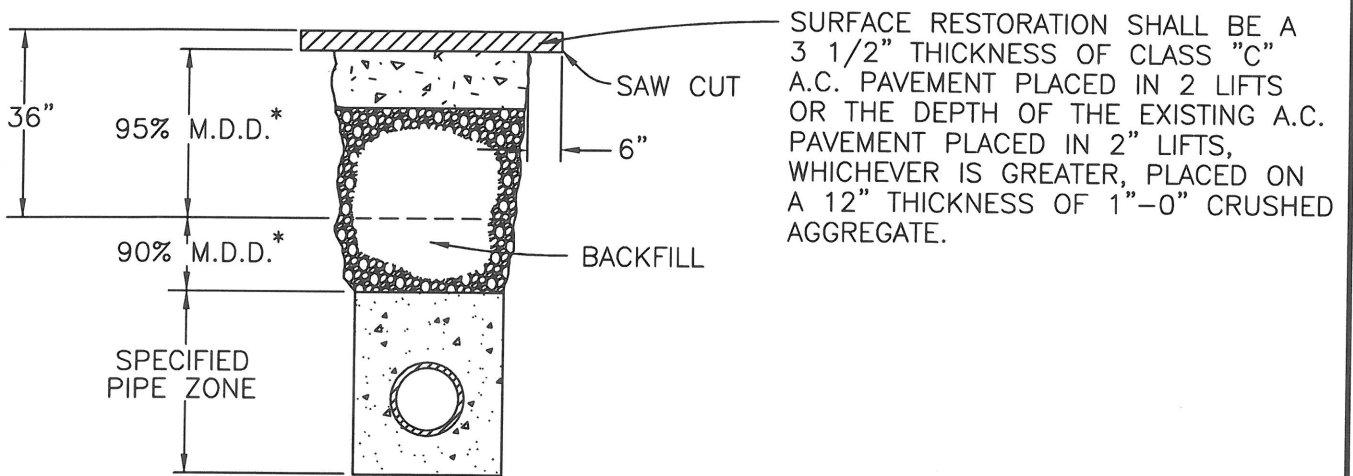
- Streets
- Water
- Sanitary Sewer
- Storm Drainage
- Rivers
- City Limits Boundary
- Taxlots Boundary



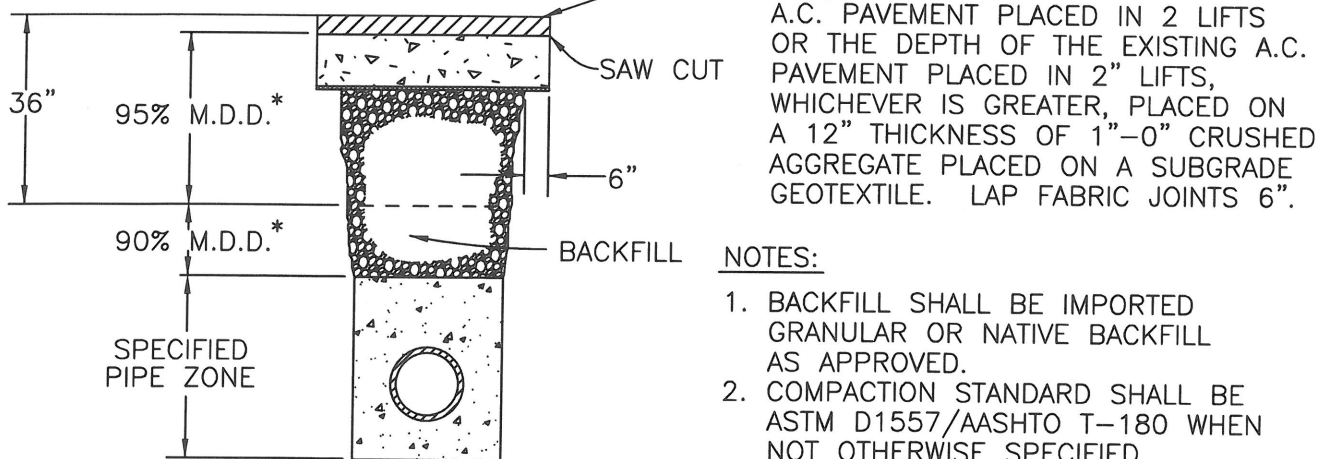




IN OFF-ROAD AREAS



ASPHALT CONCRETE  
SURFACE STREET



ASPHALT CONCRETE  
SURFACE STREET &  
GEOTEXTILE FABRIC

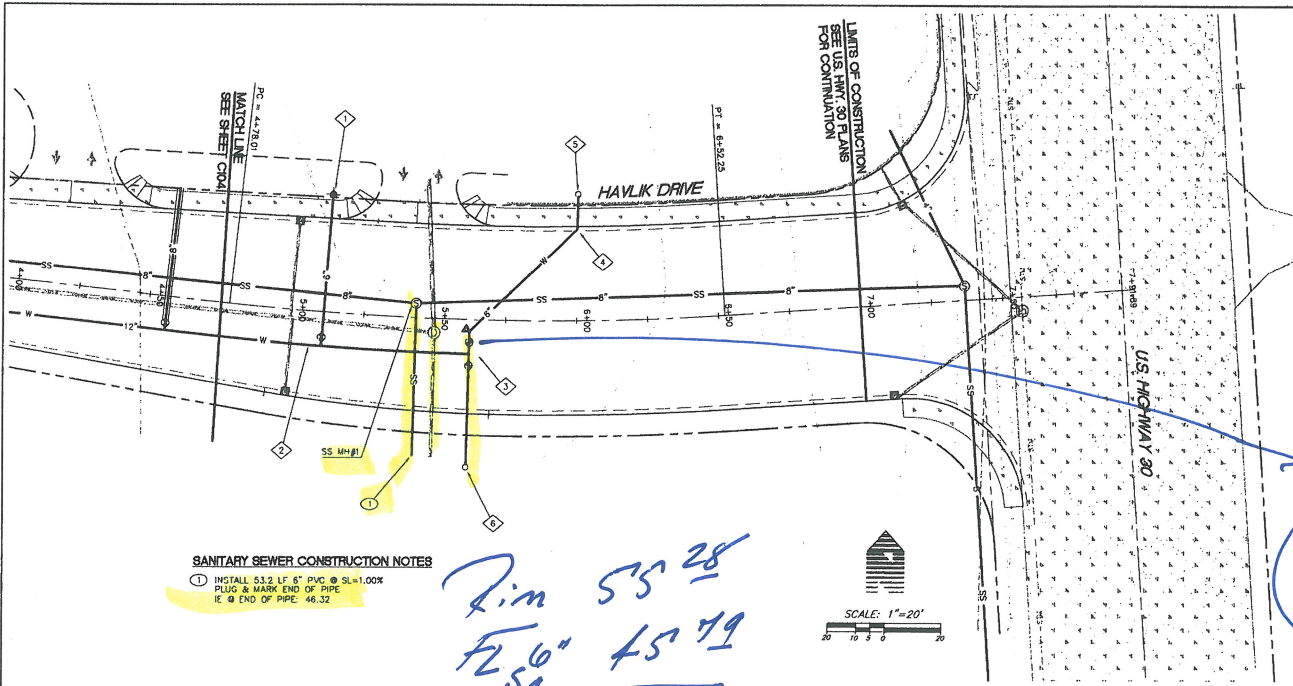
SURFACE RESTORATION SHALL BE A 3 1/2" THICKNESS OF CLASS "C" A.C. PAVEMENT PLACED IN 2 LIFTS OR THE DEPTH OF THE EXISTING A.C. PAVEMENT PLACED IN 2" LIFTS, WHICHEVER IS GREATER, PLACED ON A 12" THICKNESS OF 1"-0" CRUSHED AGGREGATE.

NOTES:

1. BACKFILL SHALL BE IMPORTED GRANULAR OR NATIVE BACKFILL AS APPROVED.
2. COMPACTION STANDARD SHALL BE ASTM D1557/AASHTO T-180 WHEN NOT OTHERWISE SPECIFIED.
3. PRIOR TO SURFACE RESTORATION SAWCUT EXISTING SURFACING 6" OUTSIDE EXTENT OF DISTURBED SOILS.

\* M.D.D. = MAX. DRY DENSITY

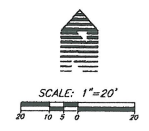
DRAWN WRH			<b>COMMUNITY DEVELOPMENT</b>	SCALE N.T.S.
DIV.				<b>CITY OF SCAPPOOSE</b>
REV.	DATE	APPR.	34485 E. COLUMBIA AVENUE, PO BOX "P", CITY OF SCAPPOOSE, OR. 97056	
			TYPICAL TRENCH SECTION BACKFILL and SURFACING	DWG. NO. 329



**SANITARY SEWER CONSTRUCTION NOTES**

① INSTALL 53.2 LF 8" PVC @ SL=1.00%  
 PLUG & MARK END OF PIPE  
 E @ END OF PIPE: 46.32

*Dim 55' 28"*  
*FL 50' 45' 19"*  
*9' 49"*



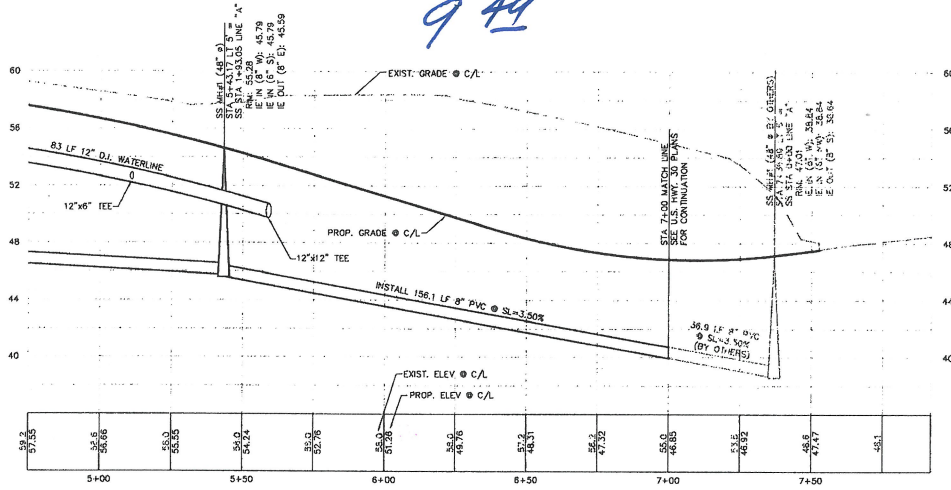
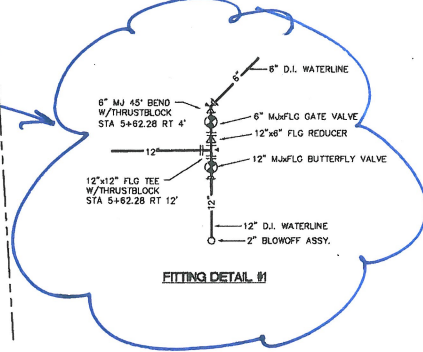
**WATER CONSTRUCTION NOTES**

① STA 5+10.89 LT 41.36' HAWLIK DR. INSTALL FIRE HYDRANT ASSY. - COMPLETE INCLUDING 12" M&JFLG TEE, 6" M&JFLG GATE VALVE, & 53 LF 6" D.I. WATERLINE  
 INSTALL 83 LF 12" D.I. WATERLINE  
 SEE FITTING DETAIL #1 THIS SHEET

② STA 6+00.46 LT 32.01' HAWLIK DR. INSTALL 6" M&J 45° BEND WITH THRUST BLOCKING

③ STA 6+00.46 LT 44.47' HAWLIK DR. INSTALL 2" BLOWOFF ASSY. - COMPLETE SEE SHEET C206 FOR DETAILS

④ STA 5+62.28 RT 51.38' HAWLIK DR. INSTALL 2" BLOWOFF ASSY. - COMPLETE SEE SHEET C206 FOR DETAILS



**MNWRIP**  
 PLANNERS  
 ENGINEERS  
 LANDSCAPE ARCHITECTS

233 SW FRONT  
 PORTLAND, OR  
 97204  
 503/225/0822  
 503/273/8353

**PROFESSIONAL ENGINEER**  
 STATE OF OREGON  
 REG. NO. 16,107  
 REV. E. WILLIAMS  
 EXP. 6/30/96

**FRED MEYER - SCAPPOOSE**  
**HAWLIK DRIVE STA 4+75 TO STA 7+00**  
**OFF-SITE CONSTRUCTION PLANS**

FRED MEYER INC., P.O. BOX 42121, PORTLAND, OR 97242

**AS-BUILT**  
 IDENTIFIED DURING  
 CONSTRUCTION  
 AS OF 11/20/96

PROJECT NO.  
**JK9013.1**

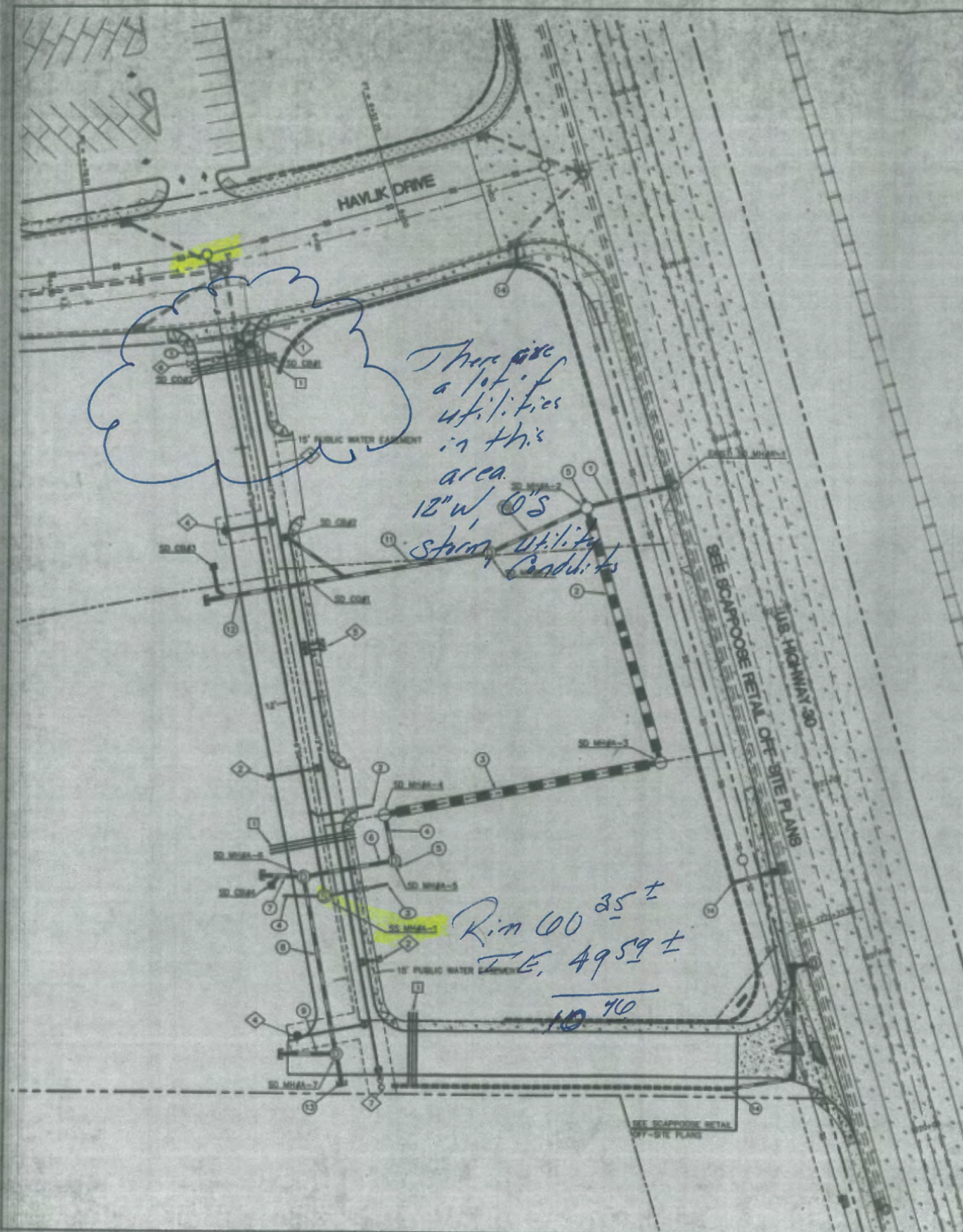
DATE 7/3/95  
 DESIGNED J SLATER  
 ENGINEER B WILLIAMS  
 CHECKED D WELBORN

SHEET TITLE  
**SANITARY/WATER**

SHEET NUMBER  
**C205**

Map P 0512 225/0822





**STORM MANHOLE DATA**

EXISTING SD MHA-1 RM: 49.50 PROP. IE IN (W) 18": 41.00 EXIST. IE IN (W) 24": 39.81 EXIST. IE IN (NW) 12": 43.63 EXIST. IE OUT (S) 24": 38.81	SD MHA-2 (72" W/CONTROL STRUCTURE) RM: 56.79 IE IN (W) 12": 50.29 IE IN (S) 36": 45.18 IE IN (N) 10": 50.85 IE OUT (N) 18": 45.58 SEE SHEET C10 FOR MANHOLE DETAIL	SD MHA-3 (60" DIA.) RM: 58.50 IE IN (W) 36": 45.82 IE OUT (N) 36": 45.82	SD MHA-4 (60" DIA.) RM: 59.00 IE IN (S) 12": 51.32 IE OUT (E) 24": 48.09	SD MHA-5 (48" POLLUTION CONTROL) RM: 58.50 IE IN (W) 12": 51.88 IE IN (S) 10": 51.98 IE OUT (N) 12": 51.58 SUMP IE: 47.88	SD MHA-6 (48" DIA.) RM: 60.30 IE IN (W) 12": 52.44 IE IN (S) 12": 52.44 IE OUT (S) 12": 52.24	SD MHA-7 (48" DIA.) RM: 57.25 IE IN (W) 12": 53.04 IE OUT (N) 12": 53.44	SD MHA-8 (48" POLLUTION CONTROL) RM: 57.25 IE IN (W) 12": 50.98 IE OUT (NE) 12": 50.89 SUMP IE: 48.35
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**SANITARY SEWER CONSTRUCTION NOTES**

- INSTALL 307 LF 6" PVC @ SL=1.00%  
CONNECT TO EXISTING 6" SS LINE, VERIFY LOCATION PRIOR TO CONSTRUCTION
- INSTALL 25 LF 4" PVC @ SL=2.0% (MFL)  
PLUG & MARK END OF PIPE FOR FUTURE CONNECTION  
IE @ END OF LATERAL: 49.82
- INSTALL 25 LF 4" PVC @ SL=2.0% (MFL)  
PLUG & MARK END OF PIPE FOR FUTURE CONNECTION  
IE @ END OF LATERAL: 50.29
- INSTALL 22 LF 6" PVC @ SL=1.3%  
PLUG & MARK END OF PIPE FOR FUTURE CONNECTION  
IE @ END OF LATERAL: 49.82

**SANITARY MANHOLE DATA**

SS MHA-1 (48" DIA.) RM: 60.36 IE IN (W) 6": 49.79 IE IN (S) 4": 49.59 IE OUT (N) 6": 49.59
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**CATCH BASIN DATA**

SD CB#1 RM: 53.33 IE IN @ END OF PIPE: 49.75 INSTALL 13 LF 8" SD @ SL=11.30% SEE SHEET C8 FOR DETAILS	SD CB#2 RM: 56.00 IE IN @ END OF PIPE: 52.50 INSTALL 20 LF 8" SD @ SL=2.17% SEE SHEET C8 FOR DETAILS	SD CB#3 RM: 57.61 IE IN @ END OF PIPE: 54.89 INSTALL 15 LF 8" SD @ SL=14.73% SEE SHEET C8 FOR DETAILS	SD CB#4 RM: 60.05 IE IN @ END OF PIPE: 56.55 INSTALL 5 LF 8" SD SEE SHEET C8 FOR DETAILS
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**CLEANOUT DATA**

SD CO#1 RM: 57.19 IE: 51.88	SD CO#2 RM: 53.65 IE: 48.28
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**STORM CONSTRUCTION NOTES**

- INSTALL 30 LF 18" SD @ SL=3.6%  
CONNECT TO EXISTING MHA #A-1
- INSTALL 142 LF 36" SD @ SL=0.30%  
INSTALL 6 LF 36" SD @ SL=0.30%
- INSTALL 100 LF 36" SD @ SL=0.30%  
INSTALL 6 LF 36" SD @ SL=0.30%
- INSTALL 26 LF 12" SD @ SL=1.00%
- INSTALL 1 LF 10" SD - PLUG END OF PIPE
- INSTALL 50.0 LF 12" SD @ SL=1.13%
- INSTALL 28 LF 12" SD @ SL=1.10%  
PLUG & MARK END OF PIPE  
IE @ END OF PIPE: 52.75
- INSTALL 100 LF 12" SD @ SL=1.00%
- INSTALL 32 LF 12" SD @ SL=1.00%  
PLUG & MARK END OF PIPE  
IE @ END OF PIPE: 53.95
- INSTALL 60 LF 12" SD @ SL=1.00%
- INSTALL 100 LF 12" SD @ SL=1.00%
- INSTALL 60 LF 12" SD @ SL=1.00%  
PLUG & MARK END OF PIPE  
IE @ END OF PIPE: 52.58
- INSTALL 18 LF 12" SD @ SL=1.00%
- INSTALL 4" LEAD FOR FOOTING DRAIN FROM  
STORM BASIN @ MARK SL=1.00%

**WATER CONSTRUCTION NOTES**

- CONNECT TO EXISTING 12" WATERLINE, VERIFY LOCATION PRIOR TO CONSTRUCTION
- INSTALL WATER SERVICE AND 2" WATERLINE FOR FUTURE CONNECTION  
PLUG & MARK END OF LINE. SEE SHEET C7 FOR DETAIL
- INSTALL 419 LF OF 12" WATERLINE
- INSTALL FIRE HYDRANT ASSEMBLY - COMPLETE INCLUDING  
12" W/ MAPLE TEE, 6" GATE VALVE, AND 6" WATERLINE  
SEE SHEET C7 FOR DETAILS
- INSTALL (2) 1 1/2" WATER METER BOXES AND 22 LF OF 2" WATERLINE. SEE SHEET C7 FOR DETAILS. METER TO BE INSTALLED BY MCDONALD'S
- INSTALL 6" WATERLINE WITH 6" GATE VALVE, PLUG & MARK END OF PIPE. INSTALL 2" BLOW-OFF ASSEMBLY
- INSTALL 6" BLOW-OFF ASSEMBLY WITH 12" WATERVALVE  
SEE SHEET C7 FOR DETAILS

**PRIVATE UTILITY CONSTRUCTION NOTES**

- CONSTRUCT JOINT UTILITY TRENCH WITH AGGREGATE BACKFILL  
INSTALL ALL CONDUIT WITH PULL STRING  
2 - 6" PVC CONDUIT  
2 - 4" PVC CONDUIT  
2 - 2" PVC CONDUIT  
MARK END OF CROSSING WITH 2"x4" PAINTED ORANGE

**LEGEND**

	PROPOSED RETAINING WALL
	PROPOSED STORM LINE
	PROPOSED STORM DETENTION LINE
	PROPOSED SANITARY SEWER LINE
	PROPOSED WATER LINE
	PROPOSED WATER EASEMENT LINE
	EXISTING STORM LINE
	EXISTING SANITARY SEWER LINE
	EXISTING WATER LINE
	PROPOSED SANITARY MANHOLE
	PROPOSED STORM MANHOLE
	PROPOSED CATCH BASIN
	PROPOSED WATER METER
	PROPOSED FIRE HYDRANT
	PROPOSED WATER BLOW-OFF
	PROPOSED STORM CLEANOUT
	PROPOSED SANITARY CLEANOUT
	EXISTING SANITARY MANHOLE
	EXISTING STORM MANHOLE
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING WATER METER
	EXISTING CATCH BASIN



SEE SHEET C10 FOR GENERAL UTILITY CONSTRUCTION NOTES

WESTON COLUMBIA CO., L.L.C. 2164 N.E. BROADWAY, PORTLAND, OREGON 97232  
 503 603-9933 FAX 503 603-9944  
 PLANNING & ENGINEERING ARCHITECT & SURVEYORS



**PHASE I UTILITY PLAN**  
**SCAFFOOSE RETAIL CENTER**  
 SCAFFOOSE, OREGON

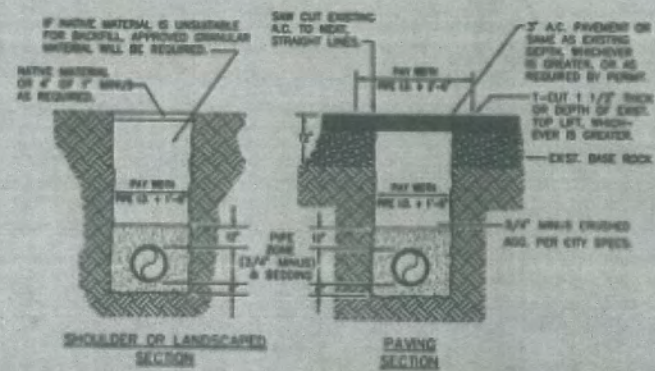
REV.	DATE	BY

**AS-BUILT**  
 BASED ON CHANGES IDENTIFIED DURING CONSTRUCTION

PROJECT NO. WC1001  
 DATE: 8/1/97  
 DESIGNED BY: PARSON ENGINEER & ARCHITECT  
 CHECKED BY: D. WELBORN

SHEET TITLE: UTILITIES  
 SHEET NUMBER: C5



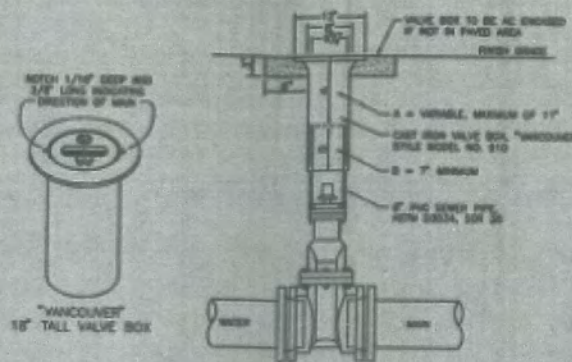


**NOTES**

1. ALL WATER MAINS SHALL HAVE A MIN. COVER OF 36".
2. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95% OF MAX. DENSITY PER AASHTO T-193 OR AS SPECIFIED IN THE CONTRACT DOCUMENTS.
3. ALL TRENCH BACKFILL AND FINISHING SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE GOVERNING AGENCY.
4. PAYMENT FOR PAVEMENT CUT AND REPAIR SHALL INCLUDE ALL A.C. AND CRUSHED AGGREGATE 12" BELOW FINISH GRADE.
5. SHOULDER BACKFILL WILL BE REQUIRED IN PIPE ZONE WHEN PIPE LINE IS TO BE POLYGRADED.
6. BACKFILL SHALL BE PLACED AND COMPACTED IN A MIN. OF 18" LIFTS.

**STANDARD TRENCH SECTION**  
NOT TO SCALE

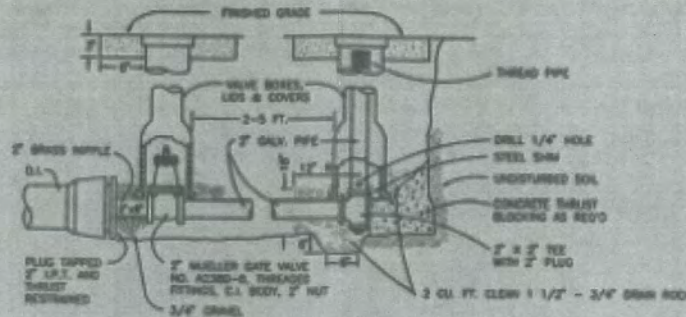
*Water 36" Min. Cover*



**NOTES**

1. VALVE BOXES SHALL BE CENTERED DIRECTLY OVER THE VALVE NUT IN A VERTICAL POSITION.
2. VALVE BOX TOP SHALL BE ADJUSTED TO MEET FINISHED GRADE.
3. PVC SHALL BE ONE CONTINUOUS PIECE, NO BELLS OR COUPLERS.

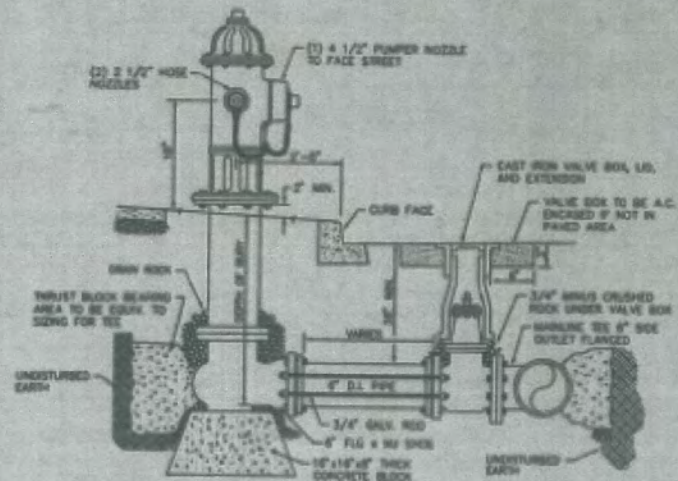
**STANDARD VALVE BOX DETAIL**  
NOT TO SCALE



**NOTES**

1. VALVE BOX SHALL BE PER STANDARD DETAIL NO. 414 OR 415.
2. VALVE BOX TO BE ASPHALT ENCASED AS SHOWN, IF NOT IN PAVED AREA.
3. BLOW-OFF UNIT SHALL BE GRADE, BACK-FILLED AND COMPACTED.

**STANDARD BLOW-OFF ASSEMBLY**  
NOT TO SCALE

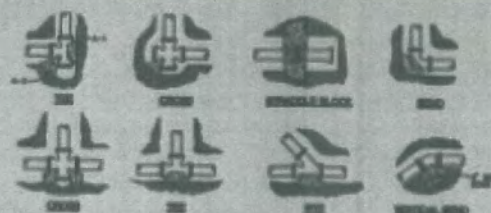


**NOTES**

1. HYDRANTS TO BE MUELLER CENTURION HGL OR APPROVED EQUAL.
2. HYDRANT COLOR TO BE MILLER EQUIPMENT ORANGE, D E 40 (SAFETY YELLOW).
3. JOINTS TO BE RESTAINED BY 3/8" "ALL-THREAD" GALVANIZED OR CATHAN PLATED STEEL RODS.
4. ALL FITTINGS IN CONTACT WITH CONCRETE SHALL BE WRAPPED IN PLASTIC. HYDRANT DRAIN HOLES TO REMAIN OPEN TO DRAIN ROCK AND OPERATIONAL.
5. 1 1/2" - 3/4" CLEAN DRAIN ROCK SHALL BE PLACED A MINIMUM OF 8" ABOVE DRAIN OUTLET.
6. WHERE PLANTER STRIP EXISTS, HYDRANT SHALL BE PLACED SO THAT THE FRONT PORT IS A MINIMUM OF 2'-0" BEHIND FACE OF CURB.
7. WHERE INTERIOR SIDEWALK AND CURB EXISTS, HYDRANT SHALL BE PLACED AT BACK OF SIDEWALK, OR AS DIRECTED BY THE ENGINEER.
8. BURY DEPTH OF HYDRANT SHALL BE MEASURED FROM FINISH GRADE TO BOTTOM OF CONNECTING PIPE.
9. THRUST BLOCK AT FIRE HYDRANT TEE SHALL HAVE 3.7 SQ. FT. BEARING AREA.
10. ALL HYDRANTS SHALL BE EQUIPPED WITH STORTZ COUPLERS MEETING THE APPROVAL OF THE FIRE DEPT.

**STANDARD FIRE HYDRANT ASSEMBLY**  
NOT TO SCALE

HORIZONTAL BEARING AREA OF THRUST BLOCKS IN SQUARE FEET					
PIPE SIZE	MIN. BURY DEPTH	MIN. BEARING AREA	MIN. BEARING AREA	MIN. BEARING AREA	MIN. BEARING AREA
1/2"	24"	1.5	2.0	2.5	3.0
3/4"	24"	2.0	2.5	3.0	3.5
1"	24"	2.5	3.0	3.5	4.0
1 1/2"	24"	3.5	4.0	4.5	5.0
2"	24"	5.0	5.5	6.0	6.5



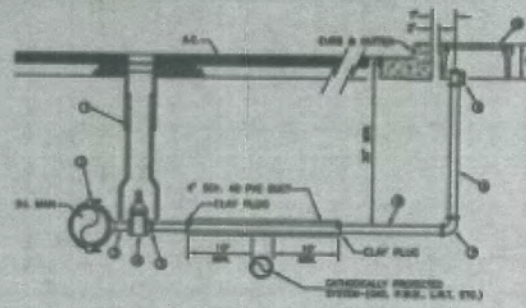
**NOTES**

1. ABOVE BEARING AREAS BASED ON TEST PRESSURE OF 150 PSI AND AN ALLOWABLE SOIL BEARING STRESS OF 1000 POUNDS PER SQ. FT. TO COMPUTE BEARING AREAS FOR DIFFERENT TEST PRESSURES AND SOIL BEARING STRESSES, USE THE FOLLOWING EQUATION:  

$$\text{BEARING AREA} = (\text{TEST PRESSURE}/150) \times (1000/\text{SOIL BEARING STRESS}) \times (\text{TABLE VALUE})$$
2. ABOVE VOLUMES BASED ON TEST PRESSURE OF 150 PSI AND THE HEIGHT OF CONCRETE = 4000 POUNDS PER CUBIC YARD. TO COMPUTE FOR DIFFERENT TEST PRESSURES, USE THE FOLLOWING EQUATION:  

$$\text{VOLUME} = (\text{TEST PRESSURE}/150) \times (\text{TABLE VALUE})$$
3. CONCRETE BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
4. ALL CONCRETE TO BE 2400 PSI @ 28 DAYS, MINIMUM.
5. INSTALL ISOLATION MATERIAL BETWEEN PIPE AND/OR FITTINGS BEFORE POURING CONCRETE BLOCKING.
6. CONCRETE SHALL BE KEPT CLEAR OF ALL JOINTS AND ACCESSORIES, DO NOT POUR CONCRETE DIRECTLY ON PIPE.
7. ALL THRUST BLOCKS MUST BE INSPECTED BY COUNTY FORCES BEFORE COVERING.

**HORIZONTAL THRUST BLOCKING**  
NOT TO SCALE



**MATERIALS**

1. CAST IRON VALVE BOX AND LID (SEE STD. NO. 414 & 415)
2. PIPE O.D. = 2" TEE OR ROCKWELL NO. 317 SERVICE SADDLE
3. 2" x 2" BRASS L.P.C. NIPPLE
4. 2" L.P.C. x 1/2" GATE VALVE (MUELLER NO. A-2260-B)
5. 2" x 2" L.P.C. x 1/2" OR FL. OR MUELLER 110 COMP. COUPLING
6. 2" ASTM B-88 300 1/2" COPPER TUBING, 30PT TEACH REDS, WITH FLARE FITTING
7. 2" OF 5/8" DIA. PIPE OR MUELLER 110 STD. COMPRESSION
8. 1 1/2" - 2" ANGLE METER BOX, MUELLER NO. 14278 OR 14277, FORD NO. P03-177W
9. BRASS METER BOX, BODY NO. 20 (1-1/2"), 85 (2"), LID & COVER NO. 20-S (1-1/2"), 85-S (2")

**NOTES**

1. SUBSTITUTES FOR ANY MATERIALS SHOWN SHALL BE APPROVED BY THE CITY ENGINEER.
2. ALL PVC AND STRUCTURE ZONES SHALL BE BACKFILLED USING 3/4" BRASS CRUSHED AGG. AND CONNECTED TO 80# MAX. DENS. AS DETERMINED BY AASHTO T-193.
3. WHEN AN ANTI-CORROSION PROTECTED SYSTEM IS ENCASED, BOX AND PVC SHALL BE INSTALLED AS SHOWN WITH CLAY PLUG.
4. METER BOX SHALL BE CENTERED OVER THE COMPLETED METER AND FITTING ASSEMBLY.
5. CUSTOMER SHALL INSTALL AN APPROVED BACKFLOW PREVENTION DEVICE.

**STANDARD 1 1/2" AND 2" WATER SERVICE**  
NOT TO SCALE

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G  
10450 SW Nimbus Ave., Portland, Oregon 97223  
503 | 603-9933 FAX: 503 | 603-9844



**WATER DETAILS**  
**SCAPOOSE RETAIL CENTER**  
SCAPOOSE, OREGON  
WESTON COLUMBIA CO., L.L.C. 2154 N.E. BROADWAY, PORTLAND, OREGON 97232

REV. DATE BY  
  
  
  
  
  
**AS-BUILT**  
BASED ON CHANGES IDENTIFIED DURING CONSTRUCTION

PROJECT NO. **WC1001**  
DATE **8/1/97**  
DESIGNED BY **PARTRISH**  
ENGINEER **G. WILLIAMS**  
CHECKED **G. WELBORN**  
SHEET TITLE **DETAILS**  
SHEET NUMBER **C8**