

# PUBLIC IMPROVEMENTS

(CASCADE SUMMIT PHASE IV)

Developed By:

## SIMPSON HOUSING LIMITED PARTNERSHIP

### STORM DRAINAGE GENERAL NOTES

- All storm sewer construction and materials shall conform to these plans and the applicable requirements of City of West Linn and/or APWA.
- Pipe bedding and backfill shall conform to the City of West Linn and/or APWA standards.
- Rim elevations of manholes and cleanouts within pavement are approximate, final finished rim elevations shall match finished pavement grades. Rims outside of pavement shall be set 12" above finished grade and tamperproof lids.
- All storm systems shall be video inspected, pass the required compaction test (95% AASHTO T-99), per City standards.
- All proposed storm sewer pipe shall be submitted to the city of West Linn for approval. Contractor to submit proposed Storm Sewer pipe 7 days prior to construction. A mandrel test will be required. All pipe with less than 3' of cover shall be D.I.P. or reinforced concrete.
- All storm sewer pipe outside the public right-of-way shall be gasketed pipe conforming to the City of West Linn Standards.
- Storm runoff, open channel or piped, shall not enter existing City of West Linn storm system without Clackamas county erosion control measures in place.
- Storm line to be video inspected per City of West Linn Standard specifications. All required testing shall be performed by the contractor.

### GENERAL CONSTRUCTION NOTES

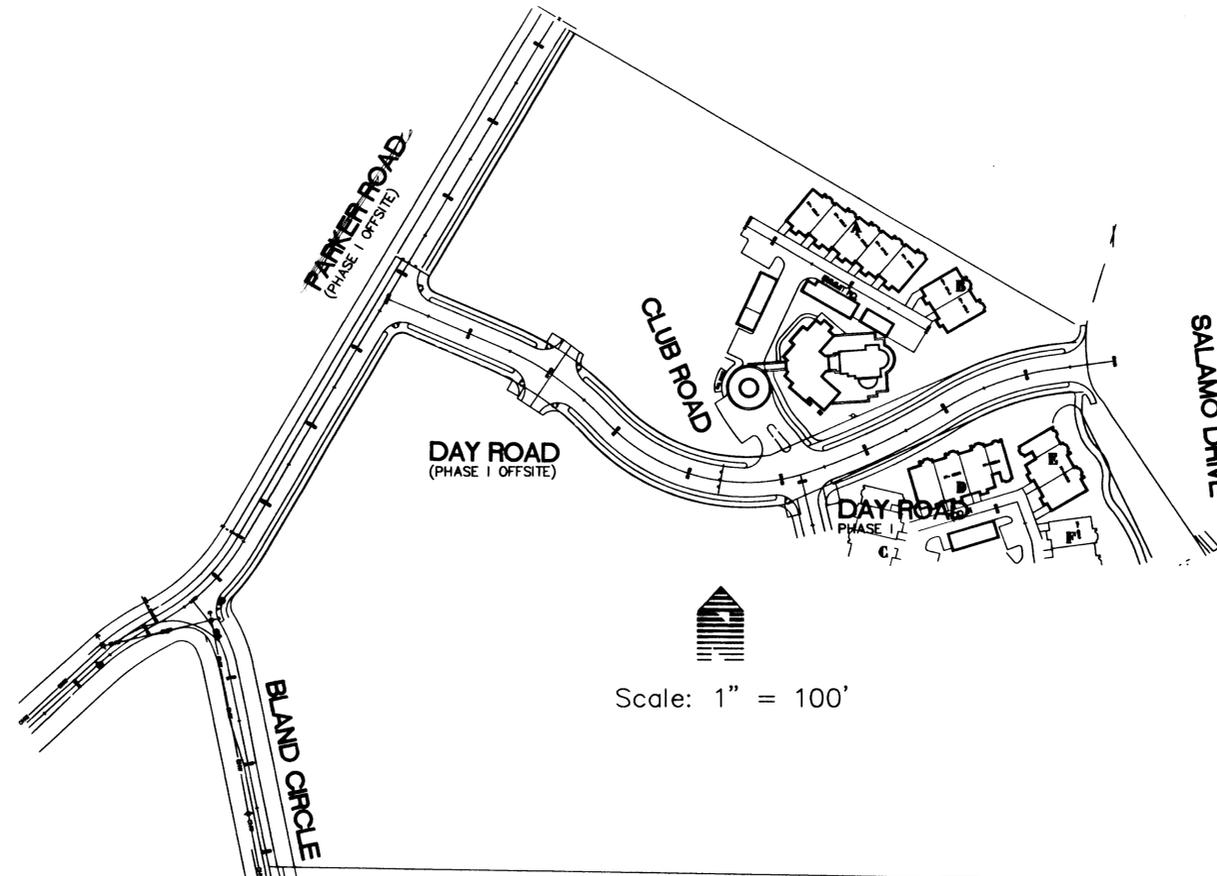
- The Contractor shall be responsible to obtain an up to date copy of the City of West Linn Standard Specifications prior to construction. Location of existing utilities are based on available information. It is the contractors responsibility to field verify depth and location of existing utilities prior to construction and inform the engineer of any discrepancies in the plans. Call for locates at least 48 hours prior to construction.
- The contractor shall at all times abide by applicable safety rules of O.S.H.A. and in particular those pertaining to adequate shoring and trench protection of workmen.
- The contractor shall at all times abide by all appropriate codes, laws and regulations that govern construction in the City of West Linn.
- The contractor is responsible to replace all survey monuments that are disturbed due to construction.
- The contractor shall be responsible for all testing that is required by the City of West Linn and the owner.
- APWA Specifications requirement for issues not addressed in City of West Linn standard specifications for storm and sanitary sewer.
- AWWA Specifications requirement for issues not addressed in City of West Linn standard specifications for public water systems.
- 2'-0" minimum spacing between services on water, sanitary sewer and storm sewers.
- Clackamas County Erosion Control requirements will be strictly followed. All grading erosion control measures shall remain in place.
- All aggregates must meet APWA standards.

### SANITARY SEWER SYSTEM GENERAL NOTES

- Sanitary sewer system shall be constructed in accordance with the City of West Linn and APWA Standard Specifications and Drawings.
- All sanitary sewer pipe (except sewer service laterals) shall be PVC pipe conforming to ASTM specification D3034 (SDR 35). Joints shall be rubber ring type conforming to ASTM specifications D2112. Pipes in areas with less than 3' of cover shall be D.I. pipe.
- All sanitary sewer service laterals shall be 4" PVC pipe conforming to ASTM specification D3034 (SDR-35), unless noted otherwise. Sanitary sewer service laterals shall connect to the main line by means of a prefabricated 8"x4" or 6"x4" sanitary sewer tees.
- Hydrostatic and air testing of sanitary sewer lines and manholes shall be conducted in accordance with the City of West Linn and/or APWA Standards. All necessary tests shall be performed by the contractor and witnessed by a representative of the City of West Linn and the Engineer.
- Finished rim elevations of manholes within pavement are approximate, final finished rim elevations shall match finished pavement grades. Rims outside of pavement shall be set 12" above finished grade and have tamperproof lids.
- Pipe bedding and backfill shall conform to the City of West Linn and/or APWA Standards.
- Sanitary sewer manhole construction shall conform to the City of West Linn Standards.
- All sanitary sewer service laterals shall terminate 2' beyond the public utility easement unless otherwise noted, and shall be plugged to prevent dirt and debris from entering pipe in accordance with the City of West Linn standards. The ends of the laterals shall be marked with a wood 2"x4" set vertically and extending at least 24" above finished grade. The wood marker shall be painted, or marked as directed by a representative from the City of West Linn.
- A minimum of two feet (2') horizontal separation is required between waterlines and sanitary and storm manholes. All construction must meet DEQ and State Water Resources Board Requirements for separation.
- All sanitary sewer systems shall be pressure tested, pass the required compaction test (95% AASHTO T-99), deflection test (Mandrel), and video inspected per City of West Linn Standard specifications. All required testing shall be performed by the contractor. All manholes shall be leak tested as per standard specifications.
- All sanitary sewer must be tested and approved prior to connecting to existing City of West Linn sanitary sewer system.

### WATER SYSTEM GENERAL NOTES

- All water lines and appurtenances shall be installed in accordance with the City of West Linn and/or AWWA Standard Specifications and Drawings. at least equal to that of the adjacent pipe.
- All water lines shall be tyton-joint ductile iron pipe (class 52). Pipe shall be cement-mortar lined and conform to ANSI A21.6 and ANSI A21.11.
- Contractor shall perform all necessary pressure and leakage tests on all newly laid water lines per City of West Linn and/or AWWA standards. All testing shall be witnessed by a representative of the City of West Linn.
- All fittings shall be thrust blocked per City of West Linn standards.
- Prior to being placed in service, the water lines and services shall be flushed, sterilized, and tested, all in accordance with City of West Linn and/or AWWA Standards by the contractor.
- Test waterlines @ minimum pressure of 180 psi.
- The City of West Linn shall be notified at least 48 hours prior to any water line construction.
- Contractor shall maintain a minimum of 3' cover over the water line.
- All water system trenches shall pass the required compaction test (95% AASHTO T-99), per City standards.
- All water lines must be tested and approved prior to connecting to existing City of West Linn water system.



Scale: 1" = 100'

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C18	GRADING PLAN

### LEGEND

○	UTILITY POLE	---	EXIST. BOUNDARY
⊕	WATER METER	---	EXIST. WATERLINE
□	MAIL BOX	●	EXIST. GATE VALVE
- W -	WATER LINE	---	EXIST. STORM DRAIN
- S -	SEWER LINE	---	EXIST. STORM MANHOLE
- X -	EXISTING FENCE	■	EXIST. CATCH BASIN
★	CONIFEROUS TREE	⊙	EXIST. SANITARY SEWER MANHOLE
○	DECIDUOUS TREE	SS	EXIST. SANITARY SEWER LINE
⊕	CATCH BASIN	---	EXIST. CURB
⊙	SANITARY SEWER MANHOLE	---	PROPOSED STORM LINE
⊕	WATER VALVE	---	PROPOSED SANITARY SEWER LINE
○	FIRE HYDRANT	⊙	PROPOSED STORM MANHOLE
⊕	SIGN POST	■	PROPOSED CATCH BASIN
▨	EXISTING PAVEMENT	⊙	PROPOSED SANITARY SEWER MH
▨	EXISTING BUILDING	---	PROPOSED CURB
		---	PROPOSED SIDEWALK
		---	PROPOSED WATER LINE
		●	PROPOSED GATE VALVE

### AS-BUILT

OCTOBER 29, 1997

THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN ACCORDANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

### BENCHMARK:

ELEVATION SHOWN ARE REFERENCED TO A BENCHMARK FURNISHED BY OTAK ENGINEERING AND IS LOCATED ON THE NORTH EDGE OF BLAND CIRCLE AND IS DESCRIBED AS:  
TBM - PK NAIL SET IN A.C.  
EVEVATION = 611.83'

### ENGINEER/SURVEYOR

WRG DESIGN, INC.  
10450 SW NIMBUS AVE, SUITE RA  
PORTLAND, OR 97223  
(503)603-9933

REV.	DATE	BY
△	2/3/97	JMC
△	2/24/97	JMC
△	5/1/97	WHM

REV.	DATE	BY
△	2/3/97	JMC
△	2/24/97	JMC
△	5/1/97	WHM

PROJECT NO.

SIM001

DATE 11/12/96

DESIGNED J. CLAY

ENGINEER F. GARMIRE

CHECKED

SHEET TITLE

COVER

SHEET NUMBER

C0

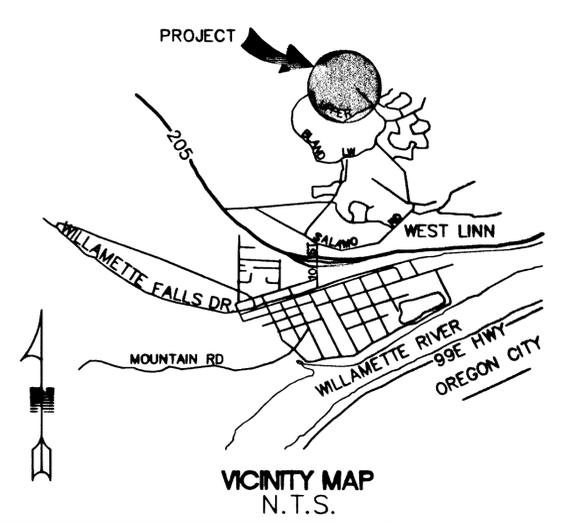
PUBLIC IMPROVEMENTS  
(CASCADE SUMMIT PHASE IV)  
COVER

WEST LINN, OREGON

SIMPSON HOUSING LIMITED PARTNERSHIP 771 NE 97th STREET, SUITE B-202, BOYLLU, WA 98008

W R G  
D E S I G N  
10450 SW NIMBUS AVE., Portland, Oregon 97223  
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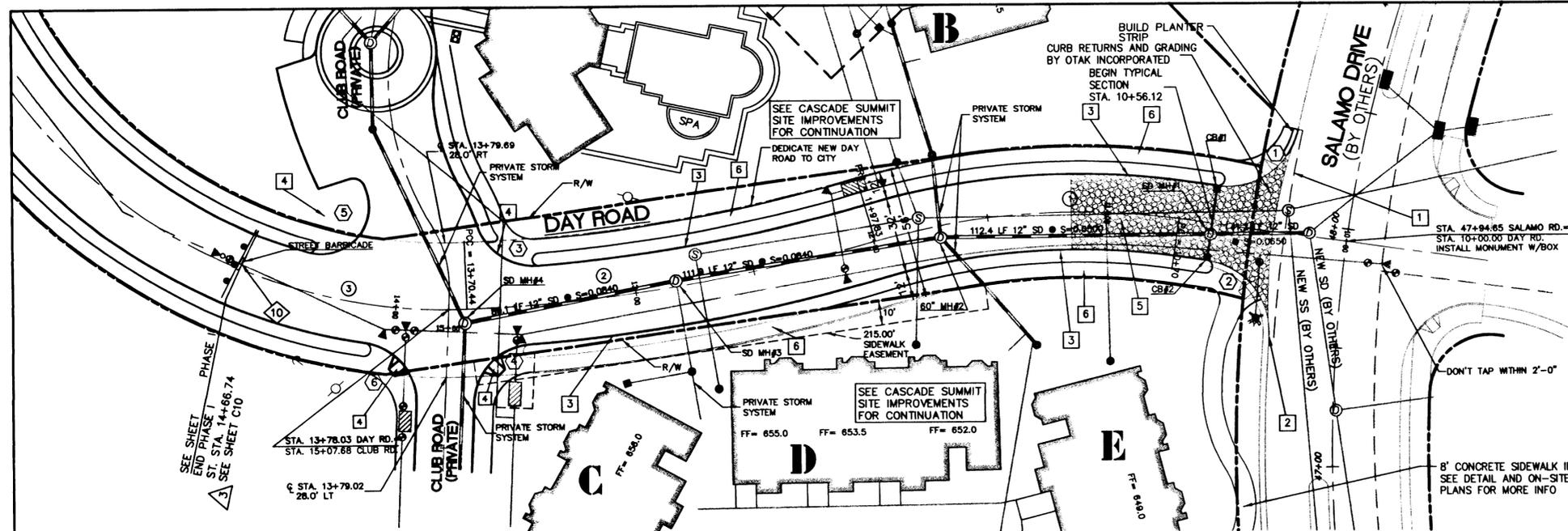
REGISTERED PROFESSIONAL  
ENGINEER  
14,023  
Fred R. Garmire  
EXPIRES 6-30-97



PHASE 1 OF PHASE 4

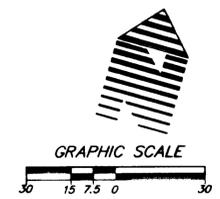
J:\DATA\SIM001\AUTOCAD\ASBTL\Z WRG Design, Inc. (503) 603-9933

J:\DATA\ST001\AUTOCAD\ASB\TALS MRG Design, Inc. (503) 603-9933

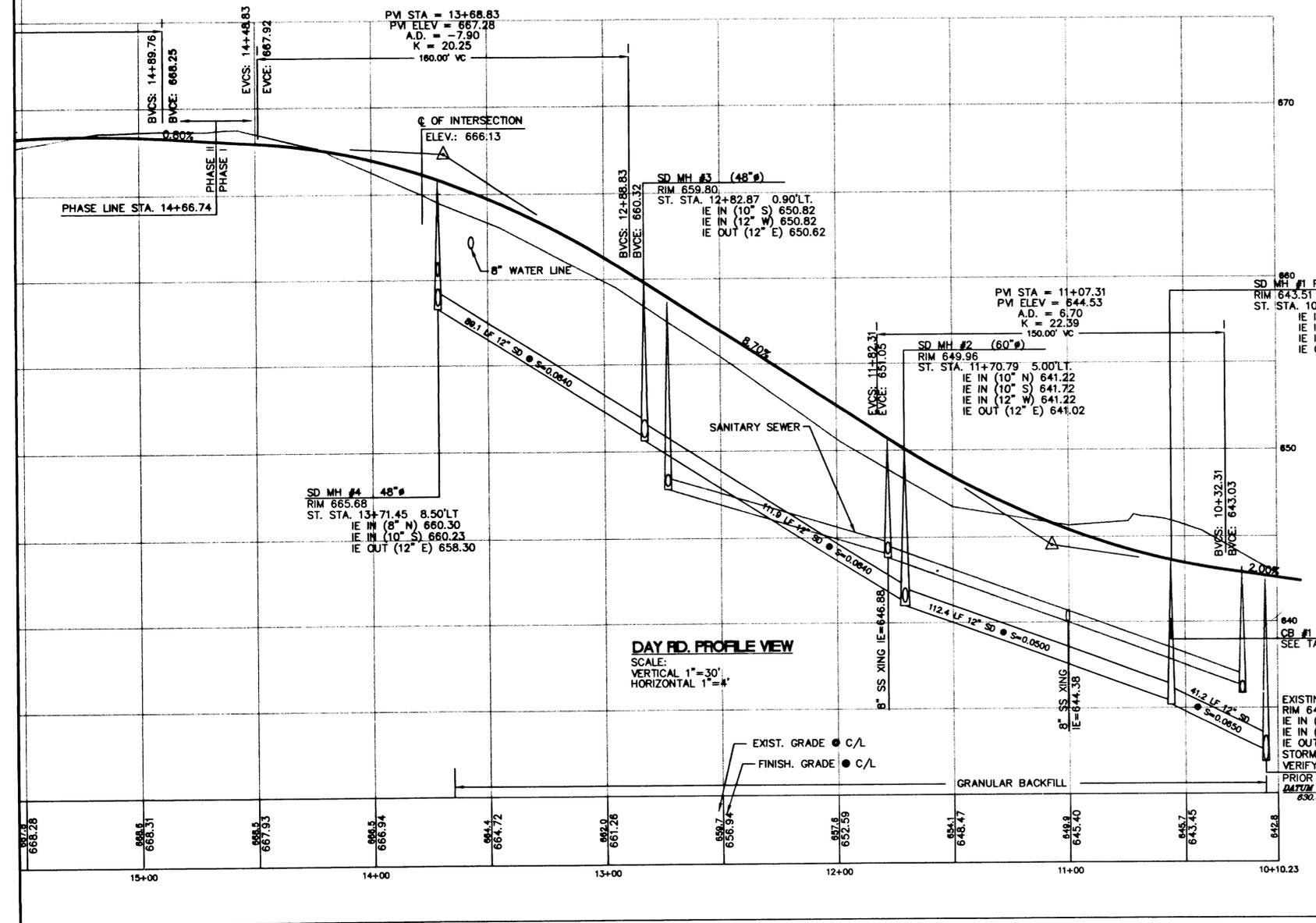


**STORM DRAIN GENERAL NOTES**

1. VERIFY ALL EXISTING UTILITY LOCATION AND MATERIAL TYPE PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCY.
2. ALL CATCHBASINS TO BE STANDARD UNLESS OTHERWISE NOTED.



**DAY ROAD PLAN VIEW**  
SCALE: 1"=30'



**CATCH BASIN TABLE**

CB#1	ST. STA. 10+57.37 16' RT GRATE 643.51 IE 10" OUT 638.90 INSTALL 19.4 LF 10" ADS @ S=0.1580
CB#2	ST. STA. 10+57.39 16' LT GRATE 643.51 IE 10" OUT 639.56 INSTALL 10.1 LF 10" ADS @ S=0.3700

**CENTERLINE CURVE TABLE**

①	R=300.00' L=127.83' Δ=24°24'49" T=64.90' PC STA 10+70.00 PT STA 11+97.83
②	R=700.00' L=172.61' Δ=14°07'43" T=86.75' PC STA 11+97.83 PT STA 13+70.44
③	R=200.00' L=226.18' Δ=64°47'42" T=126.41' PC STA 13+70.44 PT STA 15+96.62

**STREET CONSTRUCTION NOTES**

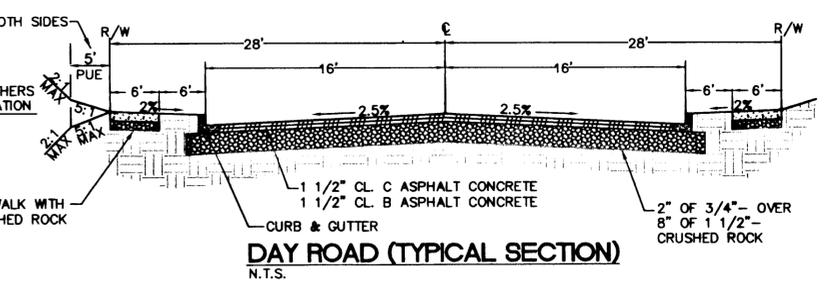
- 1 SAWCUT & REMOVE EXISTING PAVEMENT 2' INSIDE OF CURB, IF PAVEMENT AND CURB ARE IN PLACE.
- 2 MATCH EXISTING CURB.
- 3 CONSTRUCT CURB AND GUTTER. SEE DETAIL SHEET C4.
- 4 CONSTRUCT HANDICAP RAMP PER CITY OF WEST LINN STANDARDS.
- 5 GRAVEL CONSTRUCTION ENTRANCE
- 6 CONSTRUCT 6' WIDE CONCRETE SIDEWALK.

**CURB RETURN TABLE**

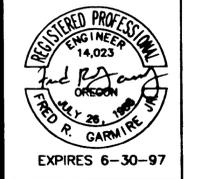
①	SEE SALAMO ROAD NORTH PLANS PT STA 13+45.55, LT 16' DAY RD. TC: 643.63
②	SEE SALAMO ROAD NORTH PLANS PT STA 10+56.11, RT 16' DAY RD. TC: 643.63
③	R=25.00' L=32.83' Δ=75°14'20" PC STA 13+42.05, RT 16' DAY RD. TC: 664.35 1/4Δ: 664.90 1/2Δ: 665.41 3/4Δ: 665.70 PT STA 15+38.46, RT 12' CLUB RD. TC: 665.80
④	R=25.00' L=36.43' Δ=83°29'53" PC STA 13+45.55, LT 16' DAY RD. TC: 664.56 1/4Δ: 665.23 1/2Δ: 665.06 3/4Δ: 664.74 PT STA 14+69.77, RT 12' CLUB RD. TC: 665.38
⑤	R=25.00' L=61.48' Δ=140°54'20" PC STA 15+92.24, LT 12' CLUB RD. TC: 667.98 1/4Δ: 667.38 1/2Δ: 667.28 3/4Δ: 667.68 PT STA 14+66.74, RT 16' DAY RD. TC: 668.16 LP: 667.26
⑥	R=25.00' L=36.25' Δ=83°05'11" PC STA 14+68.27, LT 12' CLUB RD. TC: 665.34 1/4Δ: 665.70 1/2Δ: 666.33 3/4Δ: 666.99 PT STA 14+10.16, LT 16' DAY RD. TC: 667.34

**AS-BUILT**  
OCTOBER 29, 1997  
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- △ REVISION PER CITY REVIEW
- △ REVISION PER 2nd CITY REVIEW
- △ PLANS UPDATED TO REFLECT REVISIONS TO DATE AND SHEETS C10 THROUGH C18 ADDED.
- △ RIGHT OF WAY CHANGE (DAY ROAD ALONG PHASE I)



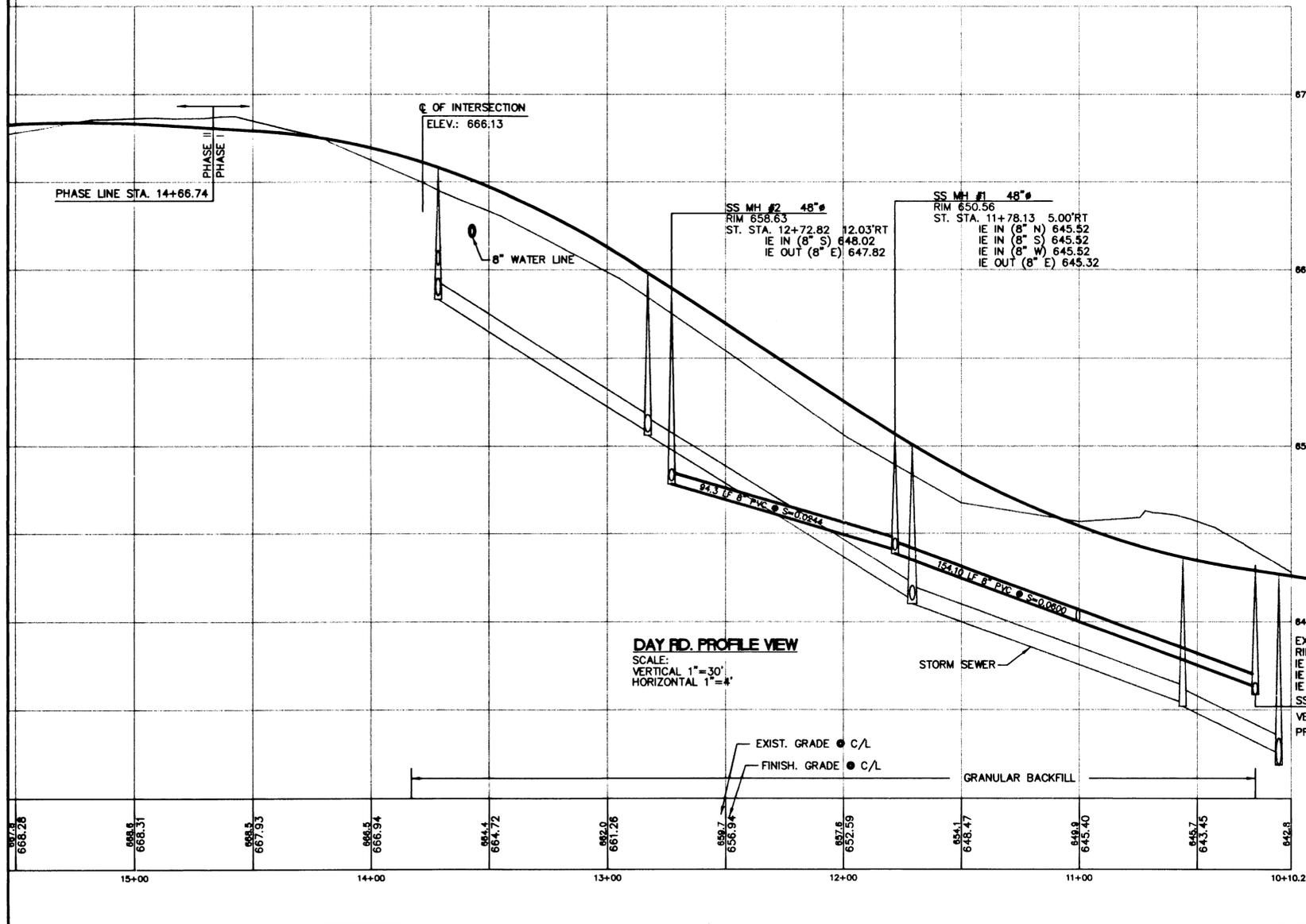
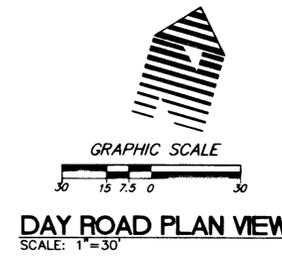
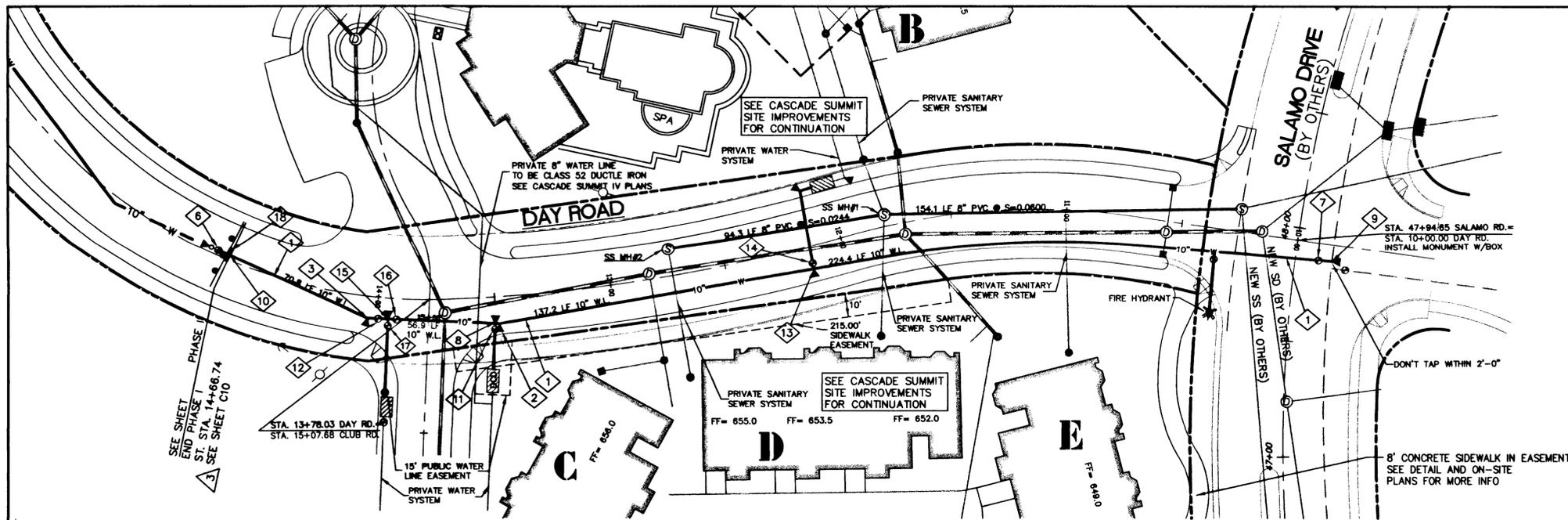
**W R G**  
**DESIGN INC**  
10450 SW Nimbus Ave., Portland, Oregon 97223  
503 603-9933  
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PLANNERS • ENGINEERS • LANDSCAPE ARCHITECTS • SURVEYORS



**DAY ROAD**  
(PHASE I OF PHASE IV)  
**STREET/STORM PLAN AND PROFILE**  
WEST LINN, OREGON  
SIMPSON HOLDING LIMITED PARTNERSHIP 771 NE 17th STREET, SUITE B-208, BOTTLE, WA 98001

REV.	DATE	BY
△	2/3/97	JMC
△	2/25/97	JMC
△	5/1/97	WHM
△	8/21/97	JMC

PROJECT NO. **SIM001**  
DATE 11/12/96  
DESIGNED BY J. CLAY  
ENGINEER F. GARMIRE  
CHECKED  
SHEET TITLE **PLAN/PROFILE**  
SHEET NUMBER **C1**



- ### WATERLINE NOTES
- 1 10" D.I. WATER LINE
  - 2 10" M.J. 11.25' BEND WITH THRUST BLOCK STA. 13.46.6 11.6' LT.
  - 3 10" M.J. 22.5' BEND WITH THRUST BLOCK STA. 14+03.6 9.7' LT.
  - 4 NOT USED
  - 5 FOR WATERLINE CONTINUATION SEE CASCADE SUMMIT IV SITE PLANS
  - 6 10" M.J. CAP AND 2" BLOW OFF ASSEMBLY WITH THRUST BLOCK STA. 14+72.4 0.0'
  - 7 10" M.J. GATE VALVE STA. 9+89.84 8.0' LT.
  - 8 10"x8" M.J. TEE WITH THRUST BLOCK STA. 13+50.40 11.4' LT.
  - 9 10" SADDLE TAP WITH THRUST BLOCK STA. 9+84.2 7.7' LT. TAP TO BE 2.0' FROM TEE SUPPLYING CASCADE SUMMIT IV
  - 10 PHASE II FUTURE EXTENSION STA. 14+66.74
  - 11 8" GATE VALVE STA. 13+50.40 11.45' LT.
  - 12 10" M.J. GATE VALVE STA. 13+97.2 0.0'
  - 13 10" M.J. X 4" FLG TEE WITH THRUST BLOCK STA. 12+14.8 10.4' LT.
  - 14 4" FLG X M.J. GATE VALVE STA. 12+14.8 10.4' LT.
  - 15 10"x4" M.J. TEE WITH THRUST BLOCK STA. 13+95.2 9.2' LT.
  - 16 10" M.J. GATE VALVE STA. 13+91.8 9.0' LT.
  - 17 4" M.J. GATE VALVE STA. 13+95.2 9.2' LT.
  - 18 INSTALL SADDLE BLOCK FOR FUTURE CONNECTION

- ### WATER CONSTRUCTION GENERAL NOTES
1. WATER MAINS SHALL BE DUCTILE IRON PIPE CONFORMING TO AWWA C151. PIPE IS TO HAVE CEMENT MORTAR LINING AND BITUMINOUS SEAL COAT CONFORMING TO AWWA C104. JOINTS TO BE TYTON JOINT. (6-INCH TO 8-INCH PIPE IS TO BE CLASS 52; 10 INCH AND UP SHALL BE CLASS 52, UNLESS SPECIFIED BY THE DISTRICT.) PIPE FITTINGS ARE TO BE CAST IRON OR DUCTILE IRON, CONFORMING TO AWWA C110 OR C153, AND OF DOMESTIC ORIGIN. PIPE IS TO BE Laid SUCH THAT IT IS SUPPORTED ALONG ITS FULL LENGTH, INCLUDING DIGGING OF "BELL HOLES".
  2. WATER MAINS TO HAVE A MINIMUM COVER OF 42".
  3. THRUST BLOCKS ARE TO BE PROVIDED AT ALL CHANGES IN DIRECTION AND BRANCHES. THRUST BLOCK CONCRETE STRENGTH IS TO BE 2000 PSI. SEE SCHEDULE FOR THRUST BLOCK SIZING. POUR THRUST BLOCKS AGAINST UNDISTURBED EARTH.
  4. GATE VALVES (4" THROUGH 12") SHALL BE RESILIENT-SEATED TYPE CONFORMING TO AWWA C509. BUTTERFLY VALVES (14" AND LARGER) SHALL BE CLASS 1508 SHORT BODY TYPE IN CONFORMANCE WITH AWWA C504. WHERE WATER SYSTEM STATIC PRESSURES EXCEED 100 PSI, BUTTERFLY VALVES SHALL BE CLASS 2508, SHORT BODY TYPE IN CONFORMANCE WITH AWWA C504. VALVE BOXES SHALL BE VANCOUVER 910/18" LONG WITH 6" P.V.C. 3034 AS BOTTOM SECTION. SAW CUT A LINE IN VALVE BOX FLANGE SO THAT THEY ARE PARALLEL WITH THE PIPELINE. VALVE BOXES THAT ARE LOCATED OUTSIDE AREAS TO BE PAVED SHALL HAVE A 2' X 2' X 2" THICK COLLAR OF HOT ASPHALT PLACED AROUND THEM. WHERE THE TOP OF THE VALVE OPERATING NUT IS 48" OR MORE BELOW FINISHED GRADE, OPERATING EXTENSIONS SHALL BE PROVIDED TO BRING THE OPERATING NUT TO A POINT 18" BELOW FINISHED GRADE. THE EXTENSION STEM SHALL BE CONSTRUCTED OF STEEL.
  5. FIRE HYDRANTS SHALL BE MUELLER CENTURION, M & H 929 RELIANT OR CLOW F-2500 WITH 6" M.J. INLET AND 5-1/4" VALVE OPENING. FIRE HYDRANTS ARE TO HAVE A 4-1/2" AND TOW 2-1/2" OUTLETS. PUMPER OUTLET TO FACE THE DIRECTION OF ACCESS.
  6. TAPPING SLEEVES SHALL BE EITHER EPOXY COATED STEEL WITH STAINLESS STEEL BOLTS OR CAST IRON (DUCTILE IRON) MECHANICAL JOINT SLEEVES.
  7. GRANULAR MATERIAL USED FOR PIPE BASE, PIPE ZONE AND TRENCH BACKFILL SHALL BE 3/4"-0 CRUSHED ROCK. PIPE BASE SHALL BE A MINIMUM OF 4" DEEP AT THE PIPE BARREL, AND NOT LESS THAN 3" DEEP AT THE BELL. GRANULAR BACKFILL IS TO BE COMPACTED TO 95% MAXIMUM DENSITY PER AASHTO 199 TEST METHOD AND NATIVE MATERIAL SHALL TO 25% OF IN-PLACE DENSITY OF SURROUNDING SOIL. BACKFILL UNDER STREETS SHALL BE IN ACCORDANCE WITH DETAIL ON PAGE C4.
  8. INSPECTION OF THE WATER IMPROVEMENTS WILL BE MADE BY PUBLIC IMPROVEMENT PERSONNEL OR OTHERS DESIGNATED BY THE PERSONNEL. THE PRESSURE TEST IS TO BE MADE AFTER ALL SERVICES ARE INSTALLED, CURBS ARE IN, AND ROAD BASE ROCK IS PLACED. TEST PRESSURE SHALL BE 1.5 TIMES STATIC LINE PRESSURE (MINIMUM 100 PSI) AT THE LOWEST POINT IN THE SYSTEM BEING TESTED; 30-MINUTE DURATION; NO PRESSURE LOSS.
  9. ALL MATERIALS, INSTALLATION, TESTS AND CHLORINATION TO BE IN STRICT ACCORDANCE WITH THE STANDARDS AND CODES OF THE CITY OF WEST LINN AND THE OREGON STATE HEALTH DIVISION ADMINISTRATIVE RULES, CHAPTER 333.
  10. THE CONTRACTOR SHALL PROVIDE THE CITY OF WEST LINN WITH A CERTIFICATE AND WILL HAVE TO BE QUALIFIED BY THE CITY, IF NOT ALREADY SO, TO DO WORK ON THE WATER SYSTEM. THE DEVELOPER SHALL PROVIDE THE CITY OF WEST LINN WITH A 18-MONTH MAINTENANCE BOND, AN IRREVOCABLE LETTER OF CREDIT OR AN ASSIGNMENT OF FUNDS.
  11. CITY WILL PROVIDE WATER METERS (656-6081 - LYLE)
    - REVISION PER CITY REVIEW
    - REVISION PER 2nd CITY REVIEW
    - PLANS UPDATED TO REFLECT REVISIONS TO DATE AND SHEETS C10 THROUGH C18 ADDED

**AS-BUILT**  
OCTOBER 1, 1997

THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN ACCORDANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

**W R G**  
DESIGN INC.

REGISTERED PROFESSIONAL ENGINEER  
14,023  
JULY 26, 1988  
F. GARMIRE, P.E.  
EXPIRES 6-30-97

10450 SW Nimbus Ave., Portland, Oregon 97223  
503 603-9933  
503 603-9933

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**DAY ROAD (PHASE I OF PHASE IV) SANITARY/WATER PLAN AND PROFILE**

WEST LINN, OREGON

BARSON HOLDING LIMITED PARTNERSHIP 771 NE 77th STREET, SUITE B-202, BOYD, WA 98001

REV.	DATE	BY
1	2/3/97	JMC
2	2/25/97	JMC
3	5/1/97	WHM
4	8/21/97	JMC

PROJECT NO. **SIM001**

DATE 11/12/96

DESIGNED J. CLAY

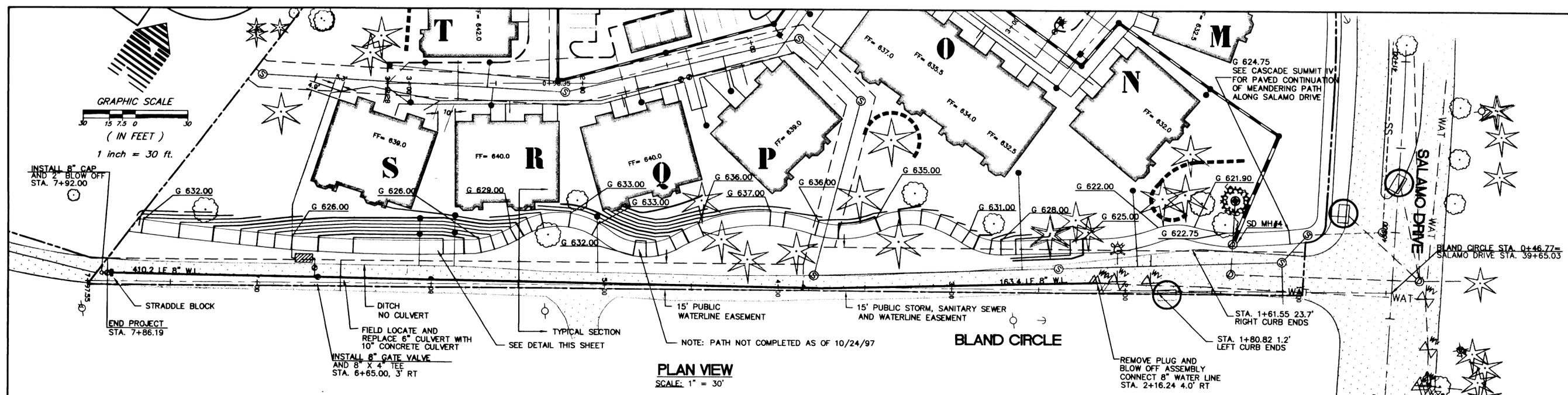
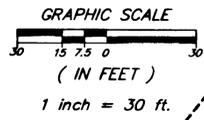
ENGINEER F. GARMIRE

CHECKED \_\_\_\_\_

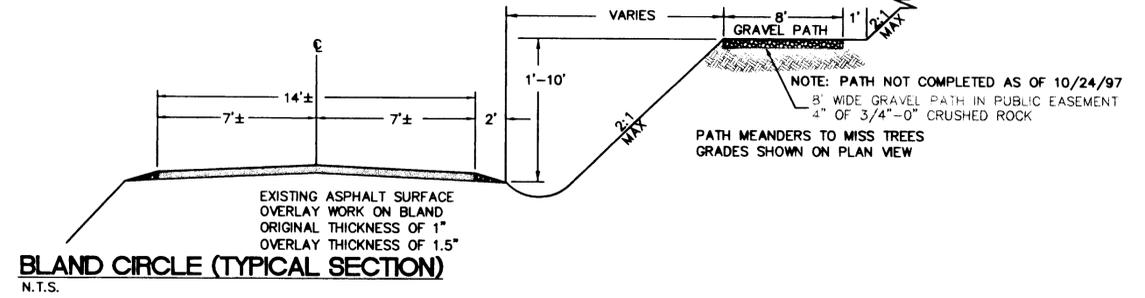
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SHEET NUMBER \_\_\_\_\_

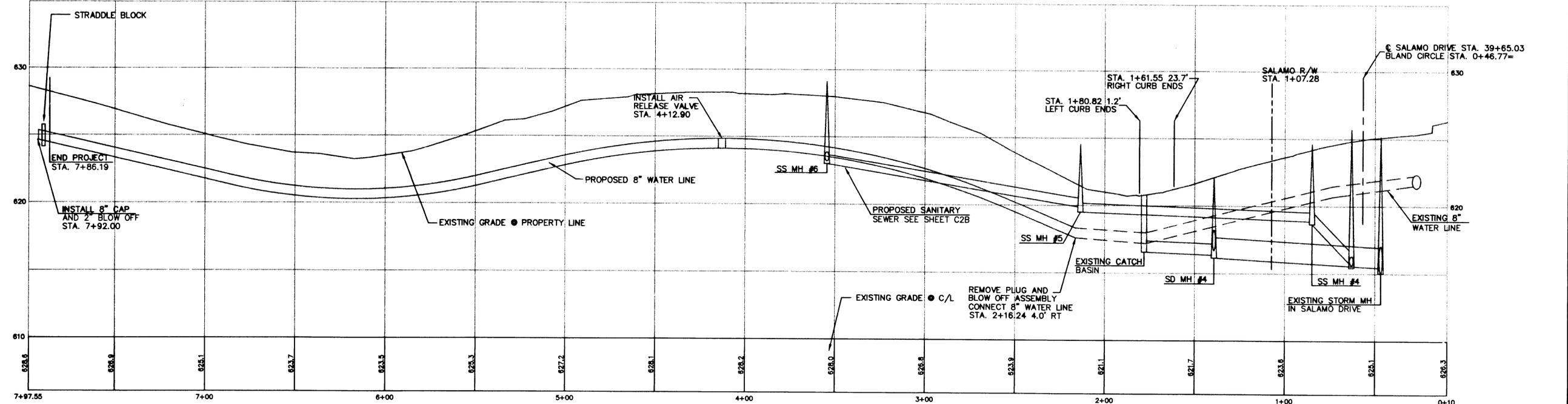
C2



**PLAN VIEW**  
SCALE: 1" = 30'



**BLAND CIRCLE (TYPICAL SECTION)**  
N.T.S.



**BLAND CIRCLE PROFILE**

SCALE:  
VERTICAL 1"=4'  
HORIZONTAL 1"=30'

**AS-BUILT**

OCTOBER 29, 1997

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- △ PER CITY REVIEW
- △ PLANS UPDATED TO REFLECT REVISIONS TO DATE, SHEET C1 THROUGH C18 ADDED

**W R G**  
DESIGN INC.  
10450 SW Nimbus Ave., Portland, Oregon 97223  
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**CASCADE SUMMIT PHASE IV**  
(PHASE I OF PHASE IV)  
**BLAND CIRCLE PLAN AND PROFILE**

WEST LINN, OREGON

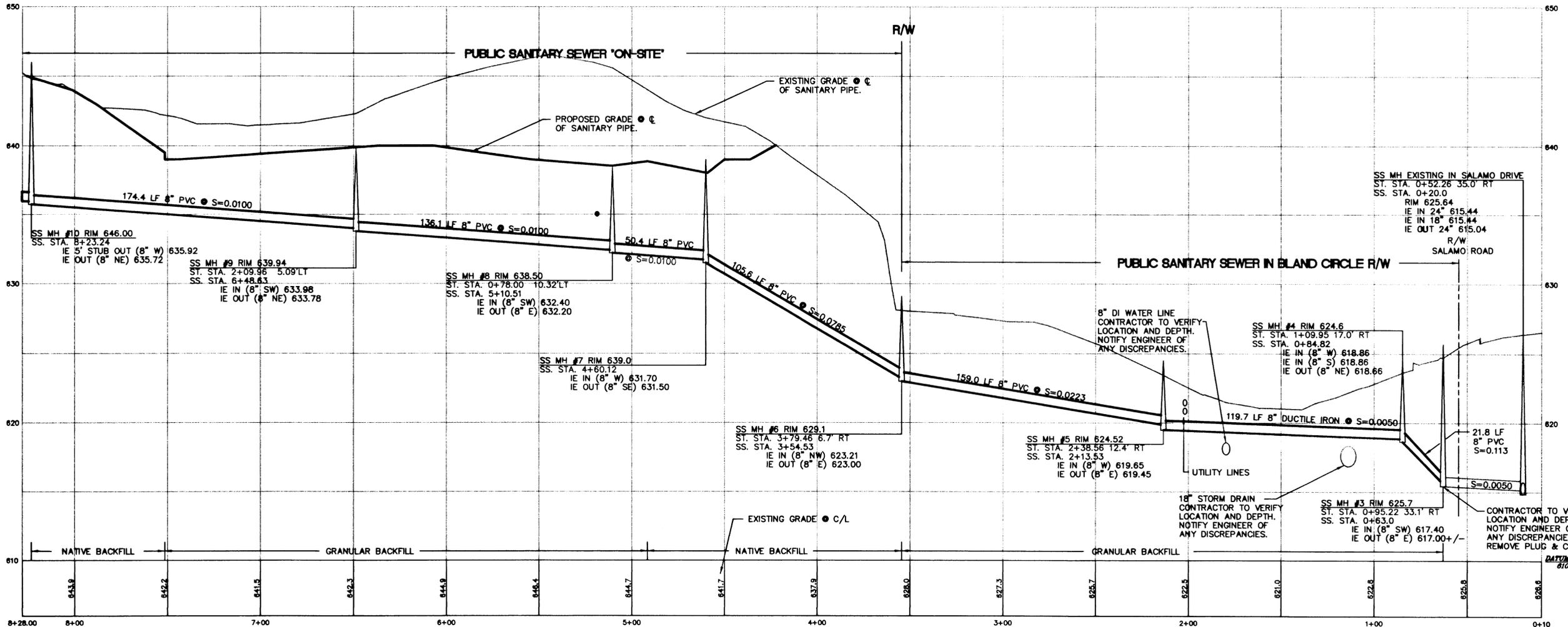
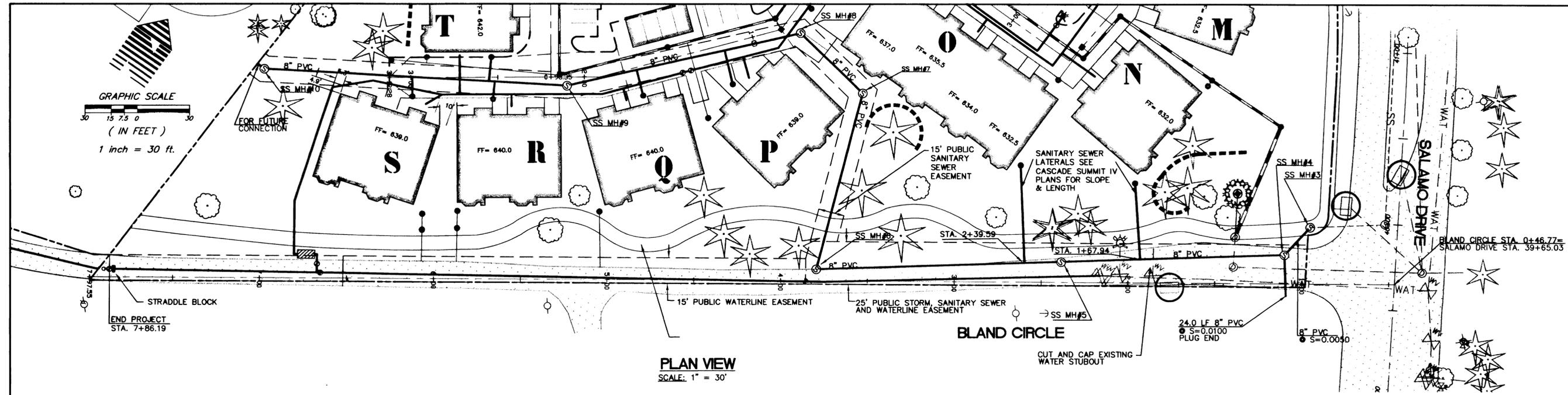
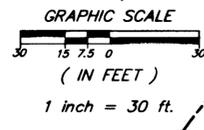
SAFARI HOLDINGS LIMITED PARTNERSHIP 771 NE 57TH STREET, SUITE B-208, BETHLEHEM, WA 98008

REV.	DATE	BY
△	2/25/97	JMC
△	5/1/97	WHM

PROJECT NO.  
**SIM001**  
DATE 2/25/97  
DESIGNED J. CLAY  
ENGINEER F. GARMIRE  
CHECKED

SHEET TITLE  
**BLAND CIRCLE**  
SHEET NUMBER

**C2A**



J:\DATA\SI\001\AUTOCAD\ASB\TALX.MRG Design, Inc. (503) 603-9933

**W R G**  
**D E S I G N I N G**  
10450 SW Nimbus Ave., Portland, Oregon 97223  
503 603-9933 FAX: 503 603-9944  
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**CASCADE SUMMIT PHASE IV**  
**(PHASE I OF PHASE IV)**  
**ON-SITE PUBLIC SANITARY SEWER**  
WEST LINN, OREGON  
SIMPSON HOLDING LIMITED PARTNERSHIP 771 NE 176th STREET, SUITE B-300, BOYD, WA 98001

REV.	DATE	BY
1	2/25/97	JMC
2	5/1/97	WHM

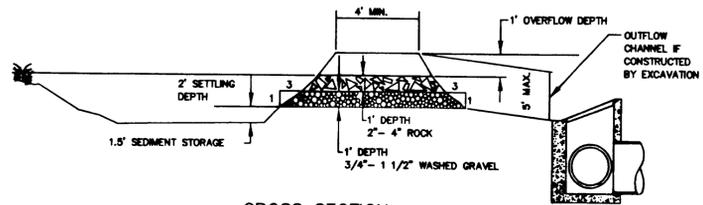
PROJECT NO.  
**SIM001**  
DATE: 2/25/97  
DESIGNED: J. CLAY  
ENGINEER: F. GARMIRE  
CHECKED:

SHEET TITLE  
**ON-SITE UTILITY**  
SHEET NUMBER

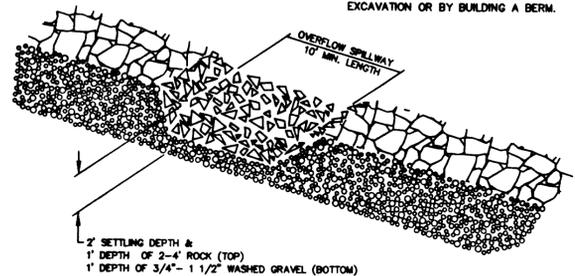
**C2B**

**AS-BUILT**  
OCTOBER 29, 1997  
THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN ACCORDANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

- △ PER CITY REVIEW
- △ PLANS UPDATED TO REFLECT REVISIONS TO DATE, SHEETS C1 THROUGH C18 ADDED

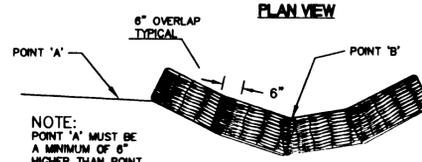
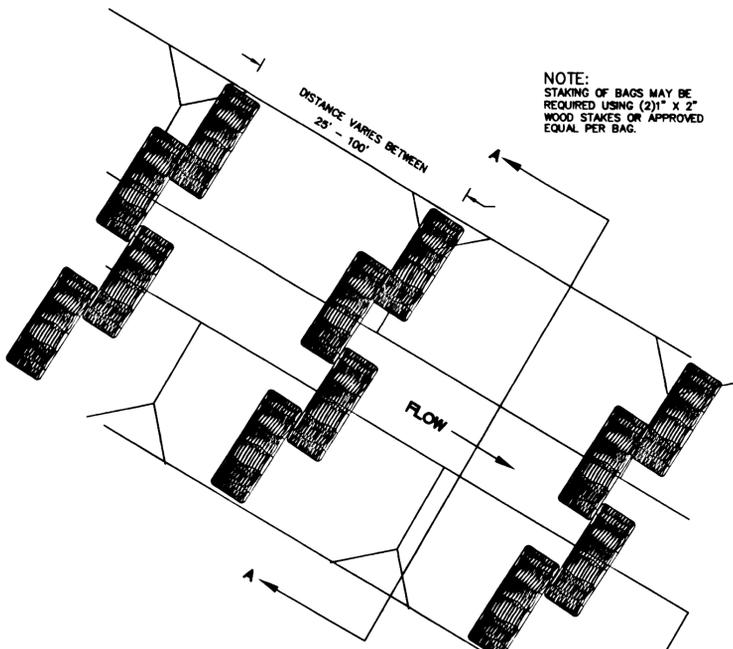


NOTE: MAY BE CONSTRUCTED BY EXCAVATION OR BY BUILDING A BERM.

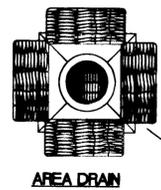


**ROCK CHECK DAM**  
SCALE: N.T.S.

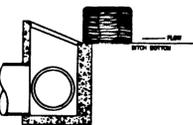
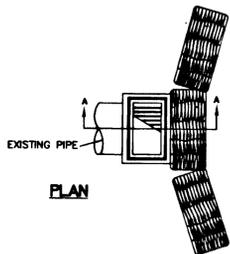
NOTE: A FILTER FABRIC FENCE OR SIMILAR FILTER MUST BE CONSTRUCTED TO FILTER RUNOFF FROM THE CHECK DAM PRIOR TO DISCHARGE FROM THE CONSTRUCTION SITE.



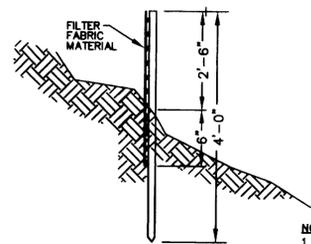
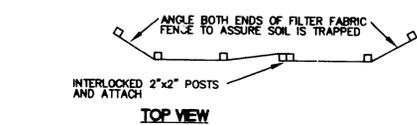
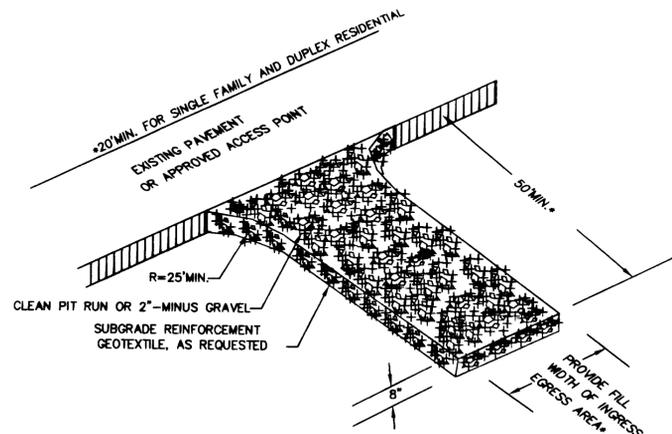
**BIO-BAG DITCH PROTECTION**  
N.T.S.



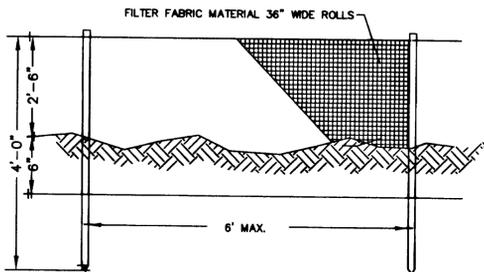
MAY BE USED SHORT TERM W/ UTILITY WORK AND W/ PHASING OF DEVELOPMENT.



**CURB INLET SEDIMENT BARRIER**  
N.T.S.



NOTES:  
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.  
2. 2"x2" FIR, PINE, OR STEEL FENCE POSTS.  
3. STITCHED LOOPS TO BE INSTALLED UPHILL SIDE OF SLOPE.  
4. COMPACT ALL AREAS OF FILTER FABRIC TRENCH.



**SEDIMENT FENCE**  
N.T.S.

W R G  
D E B I G Z I N G  
10450 SW Nimbus Ave., Portland, Oregon 97223  
503 | 603-9933 FAX: 503 | 603-9944  
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EXPIRES 6-30-97

**DAY ROAD**  
(CASCADE SUMMIT PHASE IV)  
**GRADING/EROSION DETAILS**

WEST LINN, OREGON

BARPOON HOUSING LIMITED PARTNERSHIP 778 NE 17th STREET, SUITE B-208, BETHLE, WA 98018

REV. DATE BY

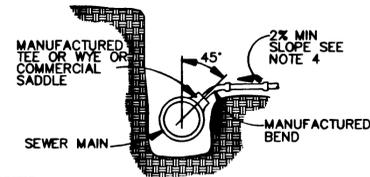
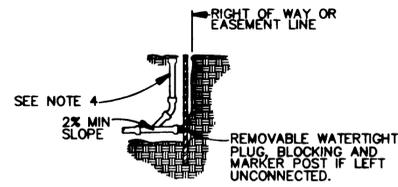
PROJECT NO. SIM001  
DATE 10/10/96  
DESIGNED J. CLAY  
ENGINEER F. GARMIRE  
CHECKED

SHEET TITLE DETAILS  
SHEET NUMBER

**AS-BUILT**  
OCTOBER 29, 1997

THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN ACCORDANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

C3



**NOTES:**

1. PIPE AND FITTINGS SHALL BE COMPATIBLE. ONLY MANUFACTURED FITTINGS SHALL BE USED.
2. MINIMUM DEPTH AT RIGHT OF WAY OR EASEMENT LINE SHALL BE 4 FEET.
3. MARKER POSTS AND BLOCKING SHALL BE TREATED WOOD. POST SHALL BE 2" x 4" FIR. POST TO EXTEND 12" MINIMUM ABOVE FINISH GRADE AND EXPOSED AREA SHALL BE PAINTED WHITE.
4. WHEN REQUIRED, A CLEANOUT SHALL BE INSTALLED.

**SHALLOW TRENCH SERVICE CONNECTION**

SCALE: N.T.S.

**W R G**  
**D E S I G N I N G**  
 10450 SW Nimbus Ave., Portland, Oregon 97223  
 503 603-9933 FAX: 503 603-9944  
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**DAY ROAD**  
 (CASCADE SUMMIT PHASE IV)  
**SANITARY DETAILS**  
**WEST LINN, OREGON**  
 GARMIRE HOLLAND LIMITED PARTNERSHIP 774 NE 79th STREET, SUITE B-200, BOTTLE, WA 9801

REV.	DATE	BY
1	2/3/97	JMC
2	2/3/97	JMC

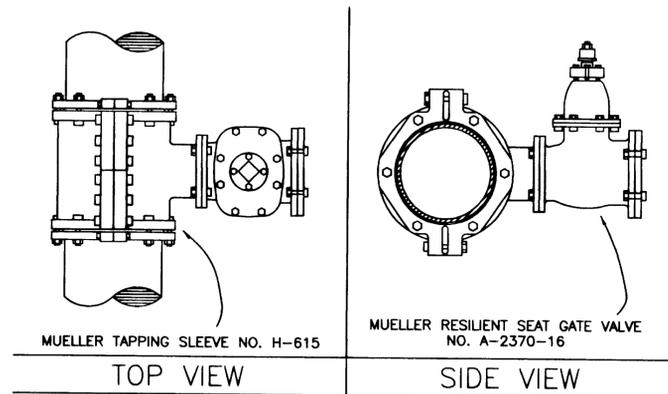
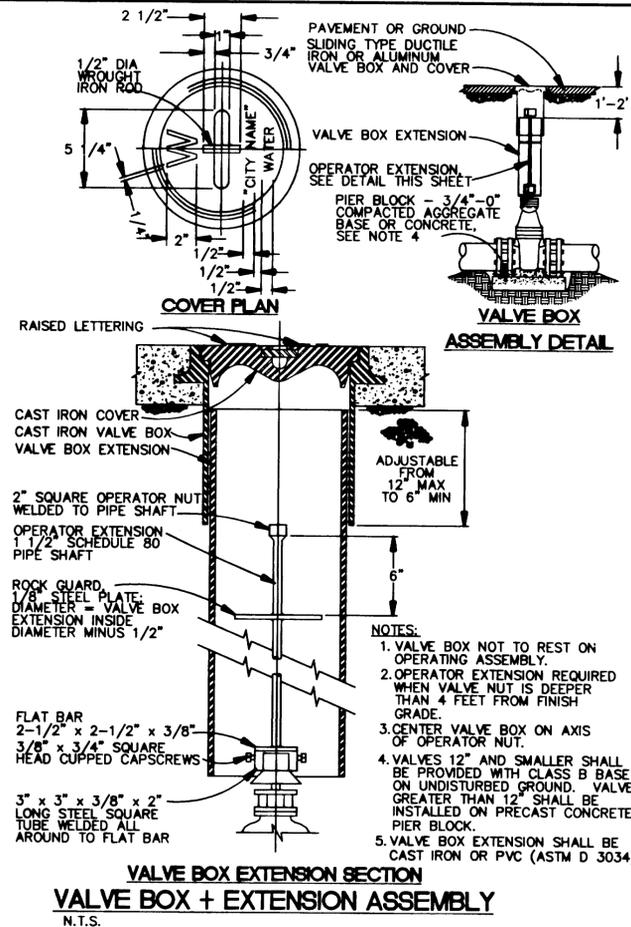
PROJECT NO. **SIM001**  
 DATE 10/10/96  
 DESIGNED J. CLAY  
 ENGINEER F. GARMIRE  
 CHECKED

**AS-BUILT**  
 OCTOBER 29, 1997  
 THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN ACCORDANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

▲ REVISION PER CITY REVIEW  
 ▲ REVISION PER 2nd CITY REVIEW

SHEET TITLE \_\_\_\_\_  
**DETAILS**  
 SHEET NUMBER \_\_\_\_\_

C5



- NOTES:**
1. WATER MAIN SHALL BE CLEANED BEFORE ATTACHING SLEEVE.
  2. SLEEVE AND VALVE SHALL BE PRESSURE TESTED BEFORE MAKING TAP.
  3. PRESSURE TEST AND TAP SHALL BE MADE IN THE PRESENCE OF AN AUTHORIZED CITY REPRESENTATIVE.
  4. PROPER TAPPING MACHINE SHALL BE USED TO MAKE TAP.
  5. 3/4 INCH CRUSHED AGGREGATE SHALL BE PLACED AND COMPACTED TO 95% OF MAX. DENSITY AS DETERMINED BY AASHTO T-180.
  6. THRUST BLOCKING REQUIREMENTS SHALL BE DETERMINED BY THE ENGINEER.
  7. TAP SHALL BE MADE NO CLOSER THAN 18 INCHES FROM THE NEAREST JOINT.
  8. SLEEVE AND VALVE SHALL BE WRAPPED WITH 8 MIL PLASTIC.

**STANDARD WET TAP DETAIL**  
N.T.S.

D:\DATA\SM001\AUTOCAD\ASB\TALZ MRG Design, Inc. (503) 603-9933

**W R G**  
DESIGN INC.

10450 SW Nimbus Ave., Portland, Oregon 97223  
503 603-9933 FAX: 503 603-9944  
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**DAY ROAD**  
(CASCADE SUMMIT PHASE IV)  
**WATER DETAILS**

WEST LINN, OREGON

SARGENT & LUNDY LIMITED PARTNERSHIP 771 NE 70th STREET, SUITE 8-208, BOYLLU, WA 98008

REV.	DATE	BY
1	2/3/97	JMC

PROJECT NO.  
**SM001**

DATE 10/10/96

DESIGNED J. CLAY

ENGINEER F. GARMIRE

CHECKED

**AS-BUILT**  
OCTOBER 29, 1997

THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN ACCORDANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

REVISION PER CITY REVIEW

SHEET TITLE  
**DETAILS**

SHEET NUMBER  
**C6**



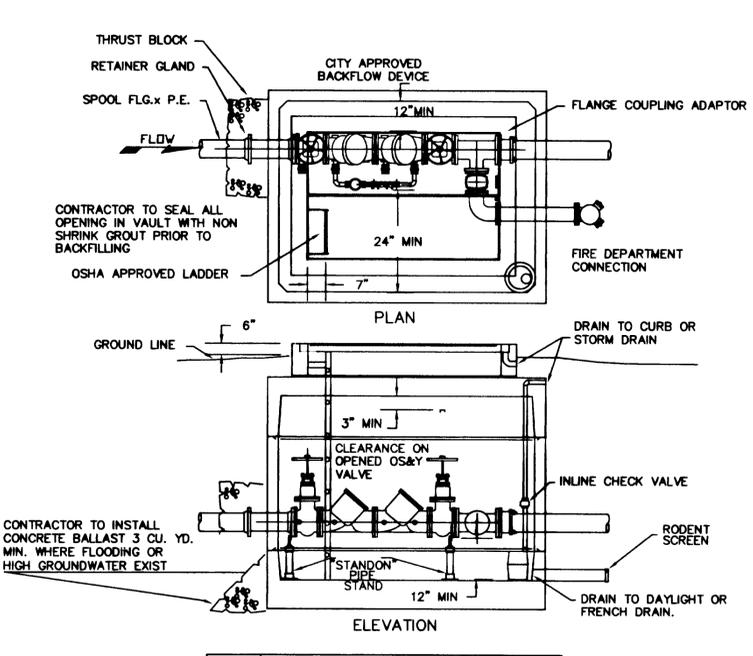
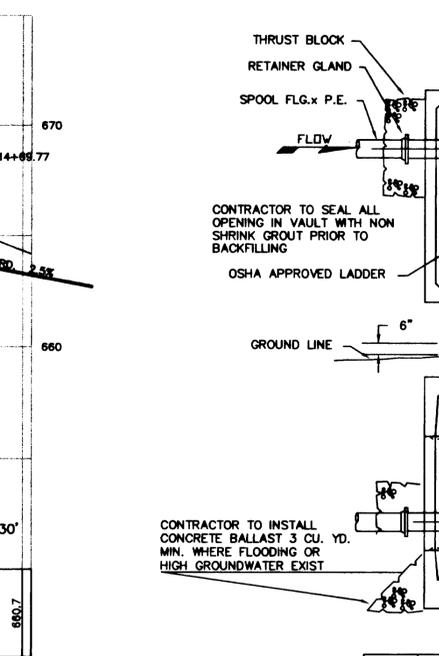
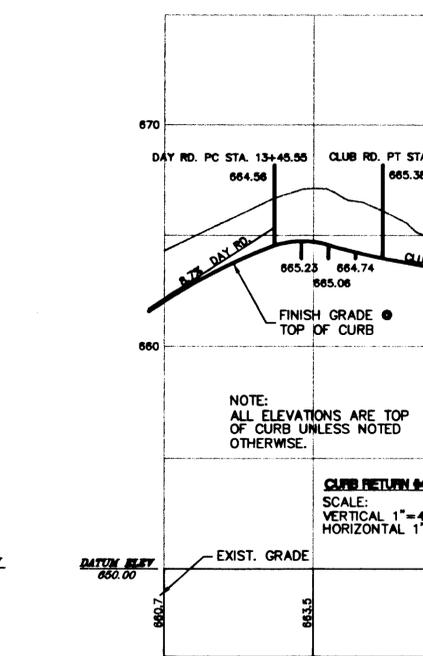
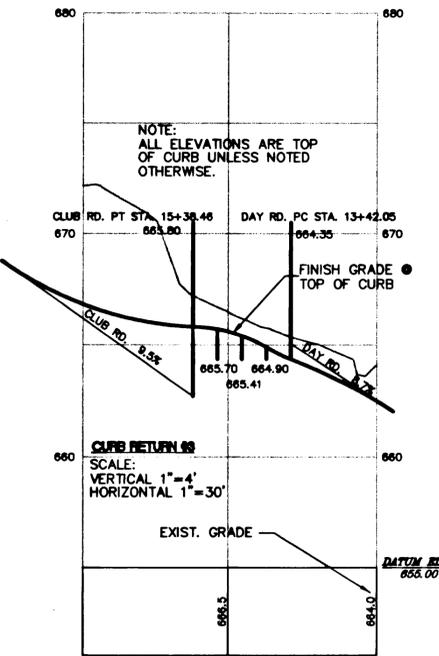
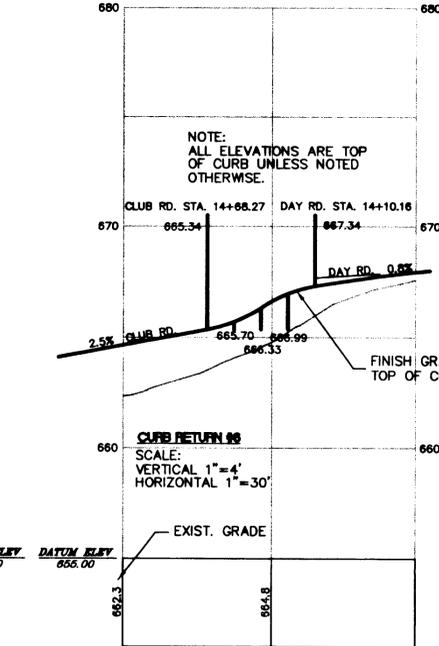
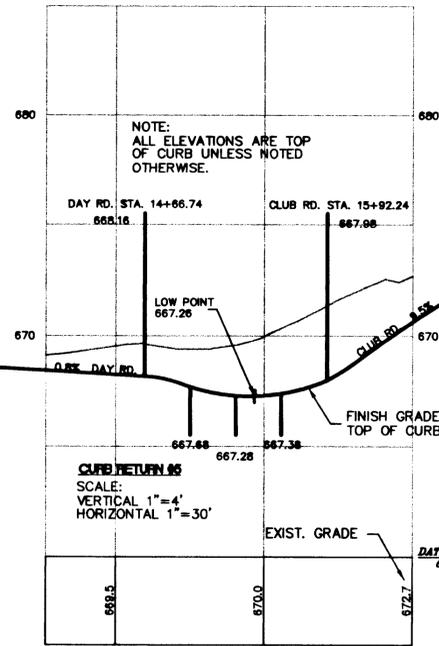
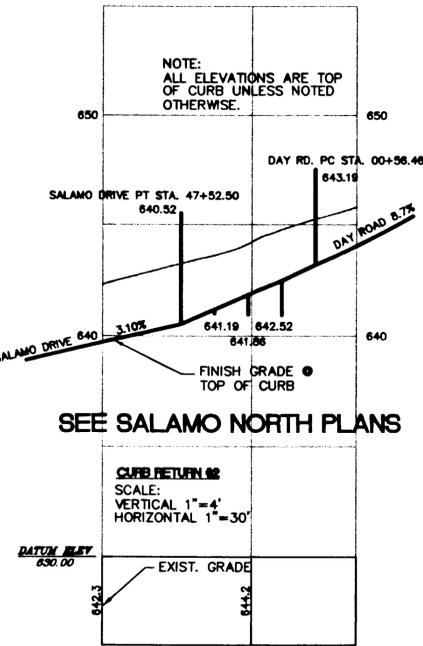
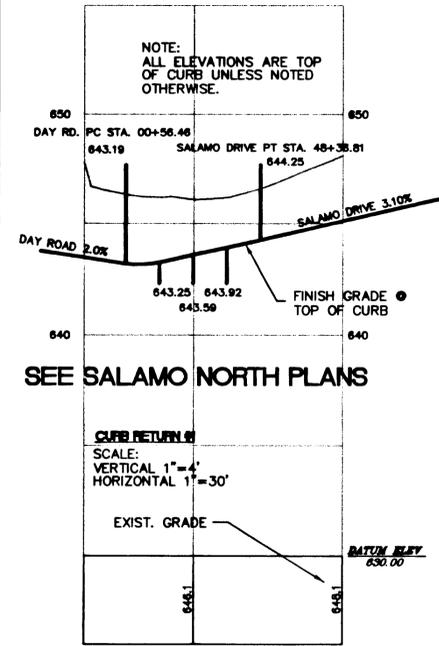
**DAY ROAD**  
(CASCADE SUMMIT PHASE IV)  
**WATER DETAILS AND CURB PROFILES**  
WEST LINN, OREGON  
SIMPSON HOLDINGS LIMITED PARTNERSHIP 771 NE 17th STREET, SUITE B-208, BOTHELL, WA 98041

REV.	DATE	BY
1	2/3/97	JMC
2	2/24/97	JMC
3	5/1/97	WJM

PROJECT NO.  
**SIM001**  
DATE 2/25/97  
DESIGNED J. CLAY  
ENGINEER F. GARMIRE  
CHECKED

SHEET TITLE  
**WATER DETAILS AND CURB PROFILES**  
SHEET NUMBER

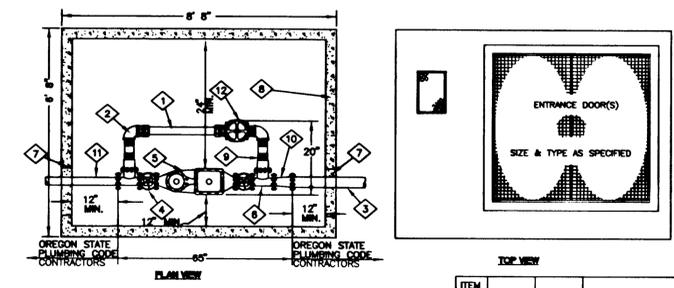
**C7**



SIZE	UTILITY VAULT OR *EQUAL		BILCO DOOR OR *EQUAL
	WITH F.D.C.	WITHOUT F.D.C.	
4	676-WA	577-WA	J-5AL
6	687-WA	676-WA	J-5AL
8	5106-LA	687-WA	JD-3AL
10	5106-LA	5106-LA	JD-3AL

\* DISTRICT ENGINEER APPROVED EQUAL

**DOUBLE CHECK DETECTOR ASSEMBLY AND VAULT**  
N.T.S.

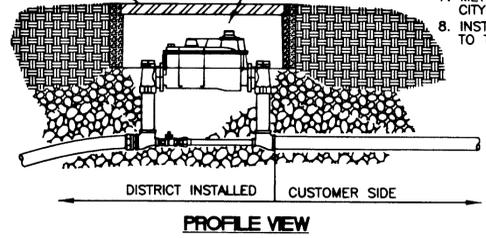
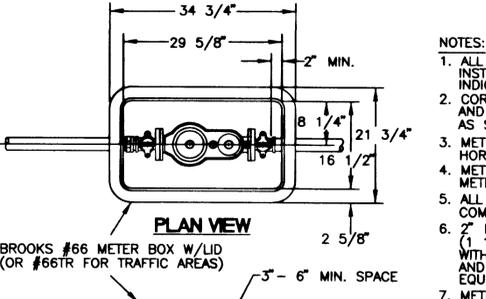


TOP VIEW

ITEM NO.	SIZE	QUAN.	DESCRIPTION
1.	3" #	1 EACH	BYPASS LINE
2.	3" #	2 EACH	90° ELBOW
3.	4" #	AS REQD.	4" DP WATER LINE
4.	3" #	2 EACH	GATE VALVE
5.	3" #	1 EACH	3" WATER METER
6.	3" x 3" #	2 EACH	TEE
7.	N/A	AS REQD.	NONSHRINK GROUT TO FILL KNOCK OUT
8.	BYE#7	1 EACH	887-LA UTILITY VAULT
9.	3" #	2 EACH	BYPASS LINE
10.	4" TO 3" #	1 EACH	CONCENTRIC REDUCER
11.	3" #	AS REQD.	3" DP WATER LINE
12.	3" #	1 EACH	GATE VALVE

- NOTES:
1. THE INSTALLATION/REMOVAL OF EQUIPMENT ON VAULT WILL DETERMINE THE NUMBER OF DOORS REQUIRED. DOORS SHALL BE GALVANIZED DIAMOND PLATE AND SPRING ASSISTED W/H-20 RATING FOR TRAFFIC AREAS; AND H-10 RATING FOR LANDSCAPED AREAS. CONTRACTOR TO VERIFY NUMBER OF DOORS.
  2. VAULT SHALL DRAIN TO STORM SYSTEM WHEN POSSIBLE. WHEN NOT A FRENCH DRAIN FACILITY NEAR THE VAULT MUST BE PROVIDED.

**3" WATER METER ASSEMBLY**  
N.T.S.



**2" WATER METER ASSEMBLY**  
N.T.S.

**AS-BUILT**

OCTOBER 29, 1997  
THESE AS-BUILT DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED AND FURNISHED BY THE CONTRACTOR AND OTHERS. THE ENGINEER CERTIFIES THAT THESE PLANS REPRESENT ACTUAL IMPROVEMENTS CONSTRUCTED AND THAT THESE IMPROVEMENTS ARE IN ACCORDANCE WITH GOVERNING JURISDICTIONAL STANDARDS.

- REVISION PER CITY REVIEW
- REVISION PER 2nd CITY REVIEW
- REVISION PER JOE SCHIWE COMMENTS DATED 3/1/97