

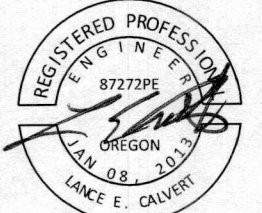
CITY OF WEST LINN

PW-16-03

2017 WATERLINE PROJECTS



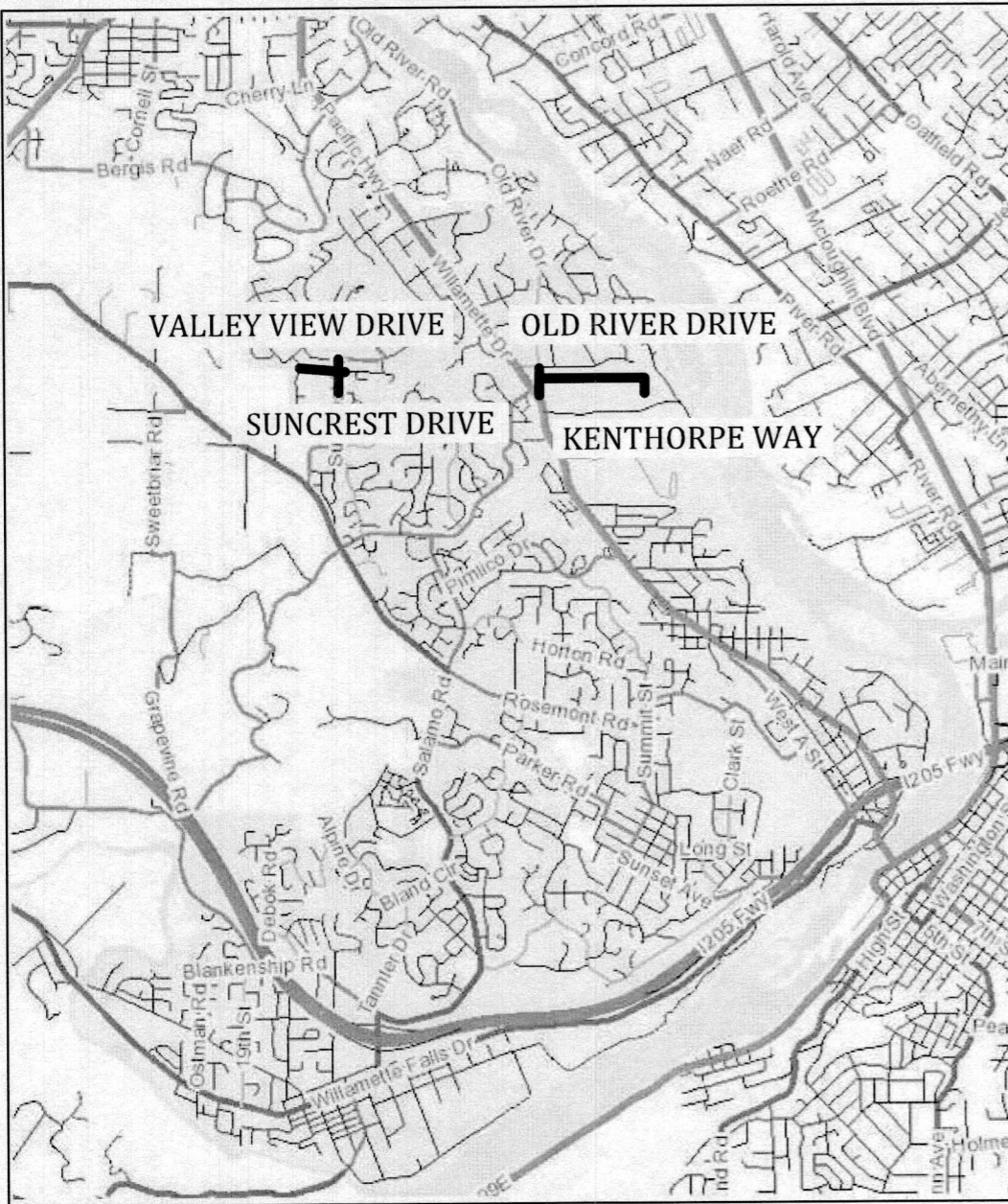
CITY OF WEST LINN
 22500 SALAMO ROAD
 WEST LINN, OREGON 97068
 WWW.WESTLINNOREGON.GOV
 PHONE: (503) 722-5500
 FAX: (503) 656-4106



EXPIRES: 12/31/2017

CONTRACTOR TBD

PW-16-03
 2017 WATERLINE PROJECTS
 Cover Sheet

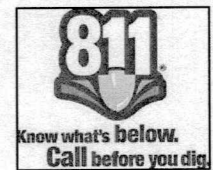


UTILITY PROVIDERS			
UTILITY	OWNER	CONTACT	PHONE
WATER	CITY OF WEST LINN	MATT KAATZ	503-656-6081
STORM & SEWER	CITY OF WEST LINN	MIKE CARDWELL	503-656-6081
POWER	PGE	BOBBIE DANIELSON	503-742-8483
STREET LIGHT	PGE	LORI SWANSON	503-742-8322
GAS	NW NATURAL	DAVID BENTON	503-226-4211 X2357
CATV	COMCAST	BOB BOBMILLAR	360-828-3559
PHONE	QWEST	KENNETH SCIULLI	503-242-0304

GENERAL NOTE
 All work within the public right-of-way shall conform to the current ODOT Oregon Standard Specifications for Construction

ATTENTION
 Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).

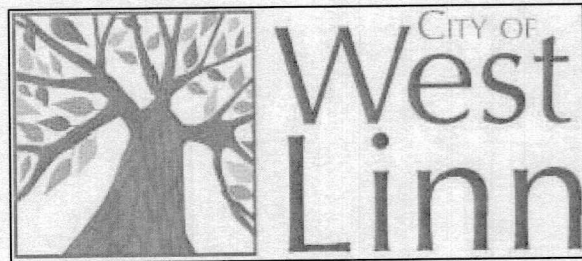
GIS BASE MAP INFORMATION
 Data Source: West Linn GIS
 OGIC Disclaimer: This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.



PROJECT DATA	
Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LALVERT
Date Issued:	1/17/2017

REVISION	
Date	Description

COVER SHEET
CS
 SHEET 1 OF 21

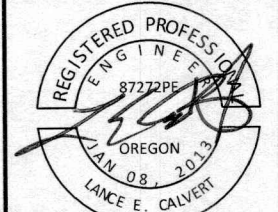


CITY OF WEST LINN PW-16-03

2017 WATERLINE PROJECTS



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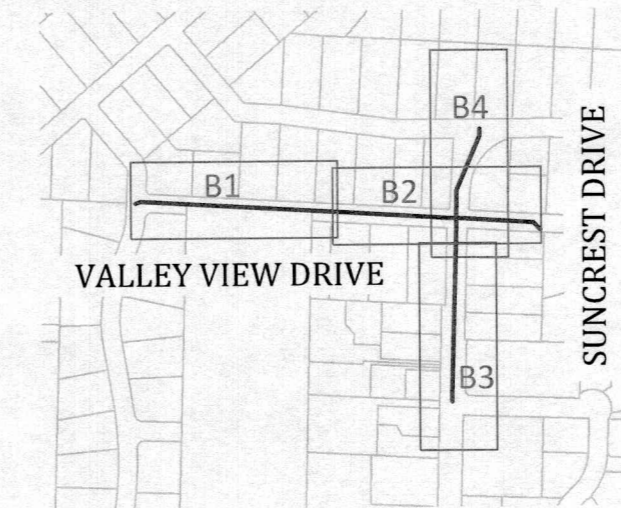
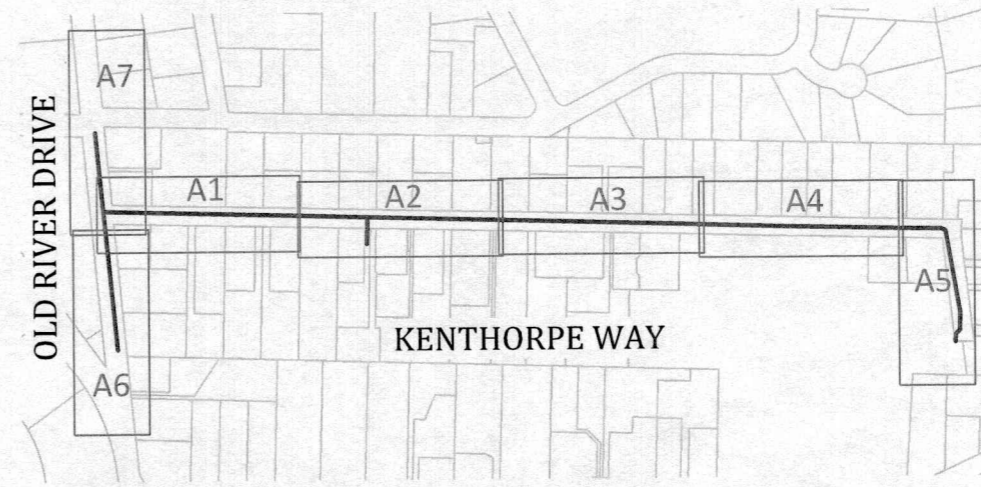
PW-16-03
 2017 WATERLINE PROJECTS
 Index Sheet

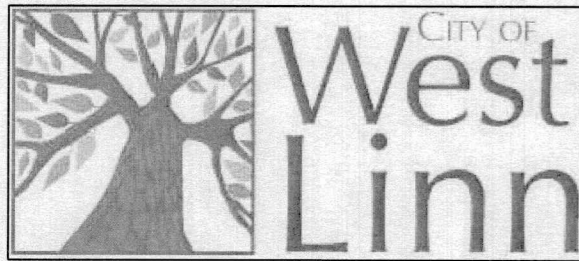
PROJECT DATA	
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REVISION	
Date	Description

INDEX SHEET
IS
SHEET 2 OF 21

SHEET INDEX				
SHEET	NO.	NAME	STA. START	STA. END
CS	1	COVER SHEET	-	-
IS	2	INDEX SHEET	-	-
GN	3	GENERAL NOTES	-	-
QL	4	QUANTITIES SHEET	-	-
A1	5	KENTHORPE WAY	0+00	5+20
A2	6	KENTHORPE WAY	5+20	10+50
A3	7	KENTHORPE WAY	10+50	15+80
A4	8	KENTHORPE WAY	15+80	21+10
A5	9	KENTHORPE WAY	21+10	END
A6	10	OLD RIVER DRIVE	0+00	3+10
A7	11	OLD RIVER DRIVE	3+10	END
B1	12	VALLEY VIEW DRIVE	0+00	5+30
B2	13	VALLEY VIEW DRIVE	5+30	END
B3	14	SUNCREST DRIVE	0+00	4+00
B4	15	SUNCREST DRIVE	4+00	END
D1	16	DETAILS SHEET	-	-
D2	17	DETAILS SHEET	-	-
D3	18	DETAILS SHEET	-	-
D4	19	DETAILS SHEET	-	-
D5	20	DETAILS SHEET	-	-
D6	21	DETAILS SHEET	-	-





CITY OF WEST LINN

PW-16-03

2017 WATERLINE PROJECTS

GENERAL NOTES:

- All construction shall conform to the latest City of West Linn Public Works Standard Construction Specifications and Standard Drawings. The ODOT Standard Specifications for Construction 2015 will apply for measurement and payment.
- This set of plans has been reviewed for compliance with City of West Linn requirements prior to issuance for construction. However, such review shall not prevent the City Engineer from requiring correction of errors or omissions in plans found to be in violation of any law or ordinance.
- The City Engineer does not warrant any quantities shown on these plans.
- The Engineering Division, Inspection Section shall be notified twenty-four (24) hours prior to any construction work by telephone at 503-722-5501. Any work concealed without inspection shall be subject to removal and replacement at the Contractor's expense.
- Any approved set of plans must be available on the job site at all times. The contractor's representative (capable of communicating with the City's representatives) shall be on the job at all times the work is being pursued.
- The Contractor is responsible to provide emergency telephone numbers to the City of West Linn at time of receiving Project Notice to Proceed and have personnel available 24-hours a day to respond to emergencies. If the City is required to respond and make emergency repairs on behalf of the Contractor, the Contractor is responsible to reimburse the City for all costs incurred.
- It is understood that there will be interfering utilities, service laterals, and other underground pipes, drains or structures encountered on underground projects that are not shown or are shown incorrectly on the plans and/or have not been previously discovered in the field. Contractor agrees this is a normal and usual occurrence in the construction of underground improvements. Furthermore, bidders understand and agree that work in some cases must be done in close proximity to said utilities and underground pipes, drains, and structures which may require a change in operations and may cause sloughing of the trench, additional traffic control, additional pavement and backfill costs, and time. The contractor agrees that a reasonable number of these occurrences are usual and ordinary on underground projects and are reflected in the bid and plan of operation.
- It is the responsibility of the contractor to obtain any and all other permits and meet any requirements set forth by other agencies or utilities which have jurisdiction at the contractors expense.

WATER NOTES:

- Water and sanitary sewer line crossings shall conform with the Oregon Administrative Regulation 333-061-0050(9).
- The existing water lines to be taken out of service are marked on the drawings. These lines are to remain in service until the new lines are properly installed and tested, and water services have been connected. Approval from the City Engineer shall be obtained before any line is abandoned. The existing lines shall then be abandoned and their actual location and abandoned designation recorded on all record drawings. Unless called for otherwise, the abandoned lines will remain in the ground. The ends of all pipes which are abandoned shall be plugged with concrete or other methods approved by the City Engineer.
- The contractor shall remove all existing valve boxes, meter boxes, hydrants and other fittings required to properly perform the scope of work, or as shown in the drawings. All such materials shall be transported to an area designated by the City and stockpiled. Materials shall be removed and handled in such a manner which will prevent damage. All other existing valves, meters and hydrants not used in the new system or not specified for removal will be removed by the city after the new system is in operation. Salvaged material shall remain the property of the City.
- The abandoned existing pipe is to remain in the ground, unless otherwise specified.
- The contractor shall apply black bag the same day to all existing hydrants when permanently disconnected from service.
- When working with asbestos cement (AC) pipe, the contractor shall take all precautions necessary to reduce airborne asbestos during construction. See technical provision SP6.
- Pipe bedding, trench backfill, and surfacing are incidental to pipe.
- It is the responsibility of the contractor to schedule water main testing with the City inspector, per West Linn Standards.
- City to provide and install water meter and customer valve once the new water main is in service.
- All work behind the water meter must be performed by a licensed plumber in the City of West Linn and the State of Oregon.
- The plans identify the general location of existing and proposed service lines only, actual locations and types of existing material require field verification and coordination with property owner and the City.
- ALL POTABLE WATER PIPE AND FITTINGS SHALL BE DUCTILE IRON.**
- ALL POTABLE WATER PIPE SHALL HAVE V-BIO ENHANCED POLYETHYLENE ENCASUREMENT INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS AND THE TECHNICAL PROVISION SP2.**

TRAFFIC CONTROL GENERAL NOTES:

- No road closure shall be allowed without City Engineer's prior approval as delegated by the City Manager.
- Traffic control shall conform to the ODOT Temporary Traffic Control Handbook and MUTCD. The Contractor shall submit a Traffic Control Plan to the City of West Linn Engineering Division for review and acceptance a minimum of 48-hours prior to construction. A copy of the accepted Traffic Control Plan must remain on the job site at all times.
- Maintain vehicular, bicycle, pedestrian and emergency vehicle access to area homes throughout construction.

CONSTRUCTION NOTES:

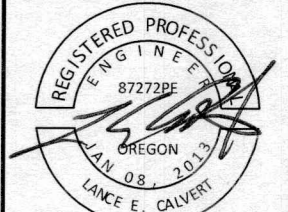
- Contractor shall provide erosion control best management practices per City of West Linn Standards. Provide catch basin protection and continual sweeping so that no mud, sediment, or rock is left on the streets, with no additional compensation.
- The contractor is responsible for all construction surveying and construction staking for the project with no additional compensation.
- Location of hydrants and water meters shall be determined in the field by City of West Linn prior to construction.
- Drain abandoned pipes and plug watertight. Plug abandoned pipes with gasketed mechanical plugs or grout seals, as directed.
- All new water main and services shall be tested and approved prior to connection. All tests to follow West Linn Standard Construction Specifications, Section 403.
- Water used for construction must be filled at the designated tanker fill sites located next to 1970 8th Avenue and Wilderness Park Parking Lot - No hydrant meters will be provided.
- Contractor shall provide ingress and egress to residential driveways with limited delay.
- Working Hours: 7:00 AM - 5:00 PM Monday - Friday, 9:00 AM - 5:00 PM Saturday - Sunday & Holidays

ADDITIONAL NOTES:

- Contractor shall be responsible for all construction surveying and construction staking. Final grades as determined by City Engineer.
- Asphalt concrete pavement repair shall include aggregate base backfill/removal as necessary for meeting final grade.
- All existing asphalt/concrete shall be sawcut for removals with no additional compensation.



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EXPIRES: 12/31/2017

CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS

General Notes

PROJECT DATA

Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date Issued:	1/17/2017

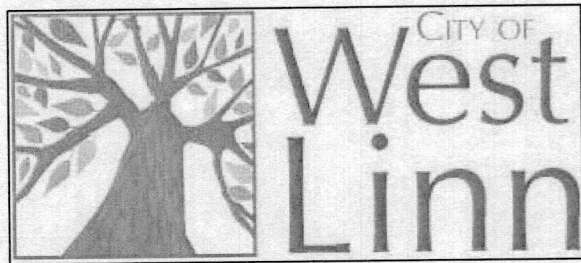
REVISION

Date	Description

NOTES SHEET

GN

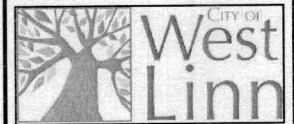
SHEET 3 OF 21



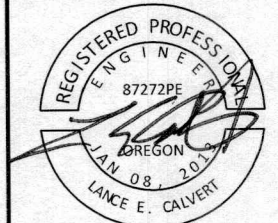
CITY OF WEST LINN

PW-16-03

2017 WATERLINE PROJECTS



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CONTRACTOR TBD

**PW-16-03
2017 WATERLINE PROJECTS**

Quantities and Legend

QUANTITIES BY SHEET														
SYMBOL	DESCRIPTION	UNIT	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	TOTAL
8V	8 INCH GATE VALVE	EA	1	1	0	1	2	0	0	1	2	0	0	8
8P	8 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	520	532	529	528	421	0	0	527	537	0	0	3595
H	HYDRANT ASSEMBLY (WL-401)	EA	1	1	2	1	2	0	0	2	0	0	1	10
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	10	19	12	7	13	4	2	4	2	12	0	85
12P	12 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	0	0	0	0	0	311	266	0	0	402	322	1300
12C	12 INCH CONNECTION TO 12 INCH EXISTING MAIN	EA	0	0	0	0	0	1	1	0	0	1	0	3
12V	12 INCH BUTTERFLY VALVE	EA	0	0	0	0	0	0	0	0	0	0	2	2
8C	8 INCH CONNECTION TO 8 INCH EXISTING MAIN	EA	0	0	0	0	1	0	0	1	0	0	0	2
10C	12 INCH CONNECTION TO 10 INCH EXISTING MAIN	EA	0	0	0	0	0	0	0	0	0	0	1	1
BV	REMOVE EXISTING BLOWOFF ASSEMBLY	EA	0	0	0	0	3	0	0	0	0	1	0	4
PG	CUT AND PLUG EXISTING ASBESTOS CEMENT PIPE	EA	0	0	0	0	1	1	1	1	1	1	1	7
6C	8 INCH CONNECTION TO 6 INCH EXISTING MAIN	EA	0	0	0	0	0	0	0	0	1	0	0	1
HS	SALVAGE EXISTING HYDRANT	EA	1	0	1	0	0	0	0	1	1	1	0	5
6P	6 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	12	95	36	19	34	0	0	35	0	0	21	254
2B	BLOWOFF ASSEMBLY, 2 INCH (WL-404A)	EA	0	1	0	0	0	0	0	0	0	0	0	1
SS	WATER SAMPLING STATION (DETAIL SS)	EA	0	0	0	1	0	0	0	0	0	0	0	1

LEGEND

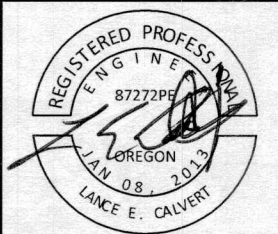
- | | | |
|---|--|--|
| <p>SANITARY SEWER</p> <ul style="list-style-type: none"> Ⓢ MANHOLE —SAN— MAIN AND LATERALS <p>STORM DRAIN</p> <ul style="list-style-type: none"> ⓈD MANHOLE ⓈD CATCH BASIN —STM— MAIN AND LATERALS | <p>WATER</p> <ul style="list-style-type: none"> //// MAIN, TO BE ABANDONED —W— MAIN, EXISTING TO REMAIN —w— MAIN, TO BE INSTALLED ⊕ HYDRANT, TO BE INSTALLED ⊗ VALVE, TO BE INSTALLED ⊠ SERVICE AND METER, TO BE INSTALLED ■ SAMPLING STATION, TO BE INSTALLED | <p>OTHER</p> <ul style="list-style-type: none"> --- PROPERTY LINE —G— GAS LINE (NW NATURAL) —P— UNDERGROUND POWER (PGE) XXXX PAVED STREET SURFACE, EXISTING |
|---|--|--|

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REVISION	
Date	Description

QUANTITIES/LEGEND SHEET

QL

SHEET 4 OF 21



EXPIRES: 12/31/2017

CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS

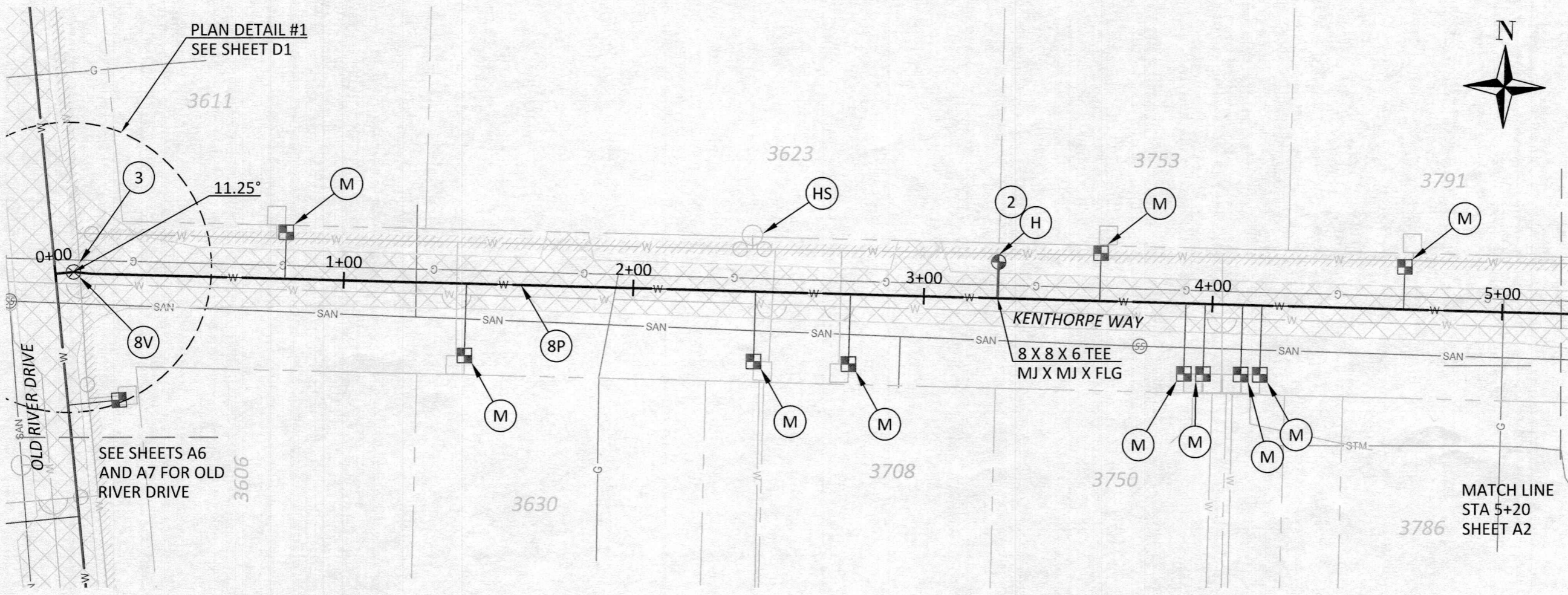
Kenthorpe Way
 Station 0+00 to 5+20

PROJECT DATA	
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REVISION	
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PLAN SHEET

A1
 SHEET 5 OF 21



PLAN DETAIL #1
 SEE SHEET D1

SEE SHEETS A6
 AND A7 FOR OLD
 RIVER DRIVE

MATCH LINE
 STA 5+20
 SHEET A2

SHEET A1 QUANTITIES

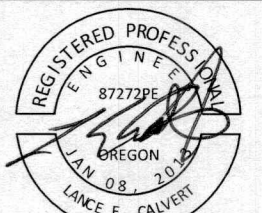
SYMBOL	DESCRIPTION	UNIT	QUANTITY
8V	8 INCH GATE VALVE	EA	1
8P	8 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	520
H	HYDRANT ASSEMBLY (WL-401)	EA	1
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	10
HS	SALVAGE EXISTING HYDRANT	EA	1
6P	6 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	12

CONSTRUCTION NOTES:

1. CONNECT NEW 8-INCH MAIN ON KENTHORPE WAY TO NEW 12 X 12 X 8, MJ X MJ X FLG TEE AT INTERSECTION OF OLD RIVER DRIVE. SEE SHEET A7 FOR OLD RIVER DRIVE MAIN.
2. HYDRANT ASSEMBLY LOCATION TO BE FIELD VERIFIED DURING CONSTRUCTION.
3. WHEN CROSSING EXISTING ASBESTOS CEMENT WATER MAIN, POTHOLE TO DETERMINE DEPTH.



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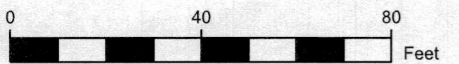
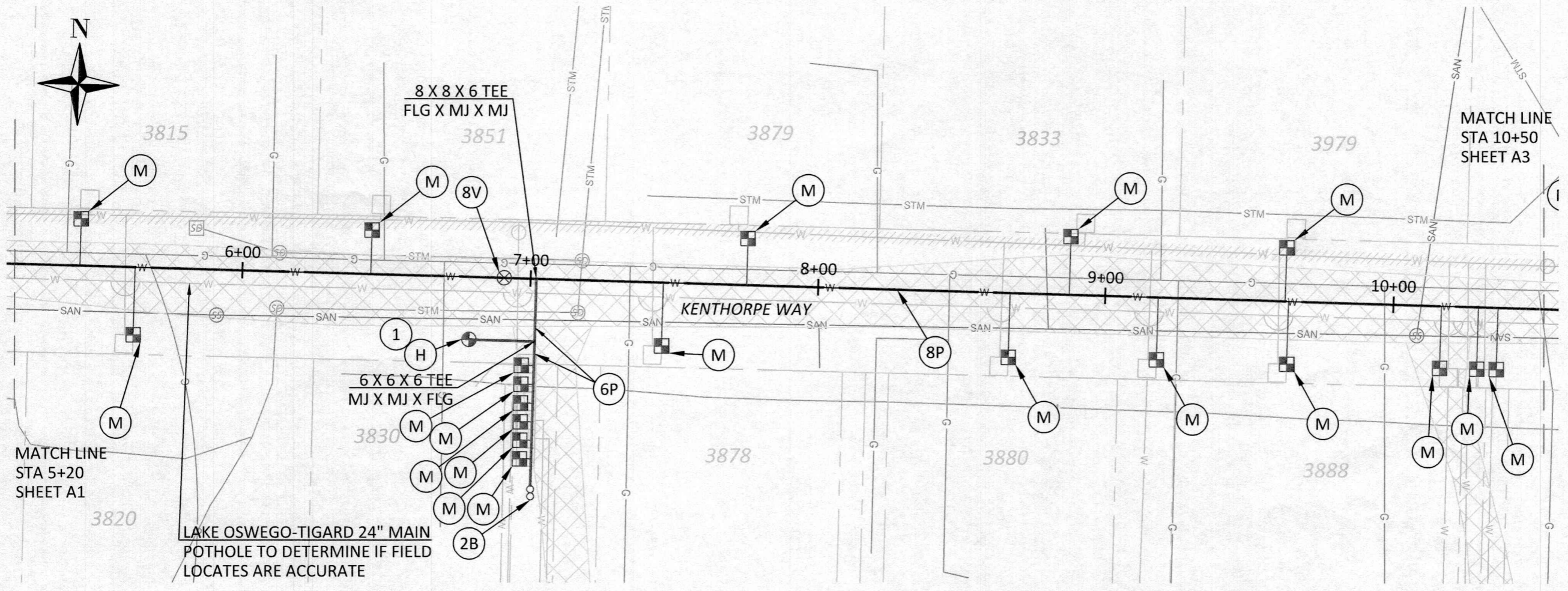
CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS
 Kenthorpe Way
 Station 5+20 to 10+50

PROJECT DATA	
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PLAN SHEET
A2
 SHEET 6 OF 21



LAKE OSWEGO-TIGARD 24" MAIN
 POTHOLE TO DETERMINE IF FIELD
 LOCATES ARE ACCURATE

SHEET A2 QUANTITIES

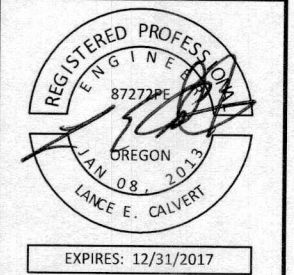
SYMBOL	DESCRIPTION	UNIT	QUANTITY
8V	8 INCH GATE VALVE	EA	1
8P	8 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	532
H	HYDRANT ASSEMBLY (WL-401)	EA	1
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	19
6P	6 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	95
2B	BLOWOFF ASSEMBLY, 2 INCH (WL-404A)	EA	1

CONSTRUCTION NOTES:

1. HYDRANT ASSEMBLY LOCATION TO BE FIELD VERIFIED DURING CONSTRUCTION.



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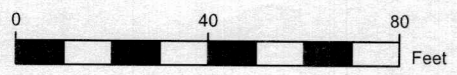
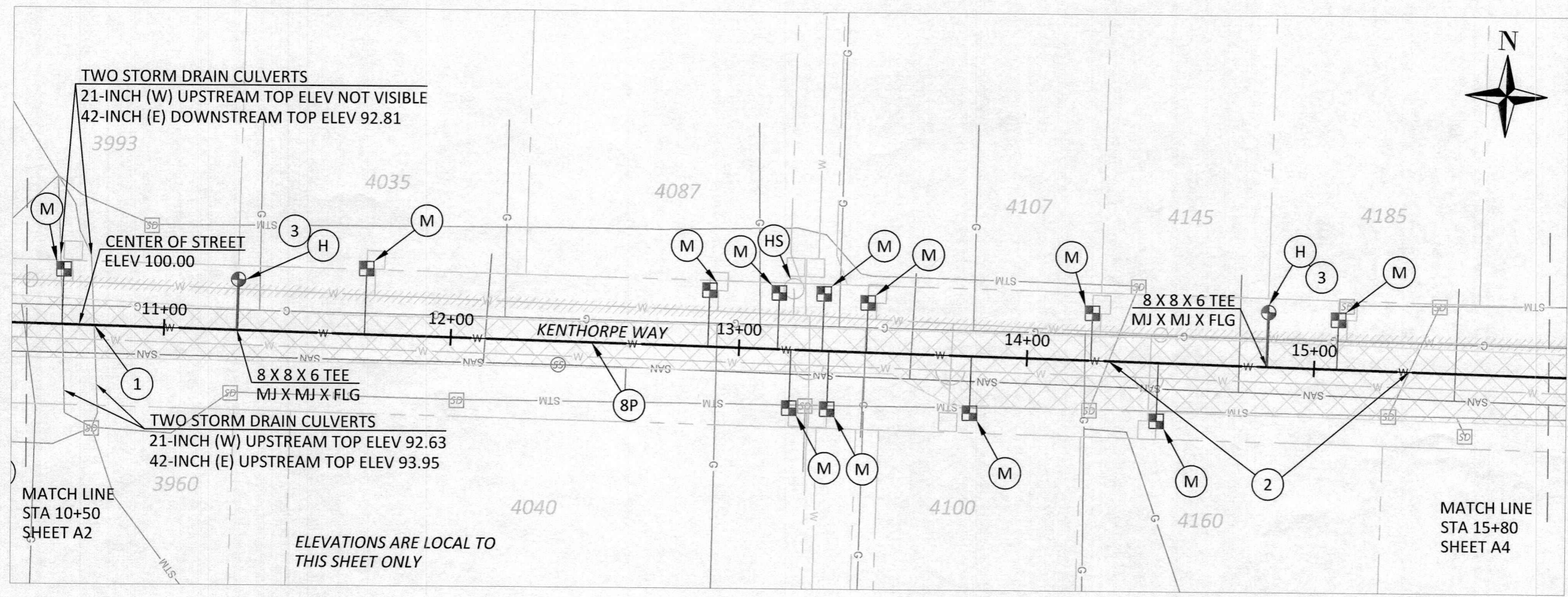
CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS
 Kenthorpe Way
 Station 10+50 to 15+80

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PLAN SHEET
A3
 SHEET 7 OF 21

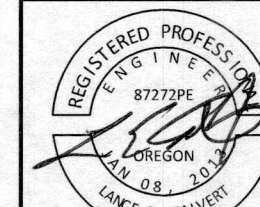


SHEET A3 QUANTITIES			
SYMBOL	DESCRIPTION	UNIT	QUANTITY
8P	8 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	529
H	HYDRANT ASSEMBLY (WL-401)	EA	2
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	12
HS	SALVAGE EXISTING HYDRANT	EA	1
6P	6 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	36

- CONSTRUCTION NOTES:**
1. MAINTAIN MINIMUM 36 INCH COVER OVER WATER MAIN AND ADEQUATE SEPARATION WHILE CROSSING OVER TWO STORM CULVERTS ON KENTHORPE WAY. SEE ELEVATIONS ON THIS SHEET.
 2. MAINTAIN ADEQUATE CLEARANCE ABOVE WATER MAIN WHEN CROSSING BENEATH EXISTING STORM DRAINS.
 3. HYDRANT ASSEMBLY LOCATION TO BE FIELD VERIFIED DURING CONSTRUCTION.



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PW-16-03
2017 WATERLINE PROJECTS

Kenthorpe Way
 Station 15+80 to 21+10

PROJECT DATA

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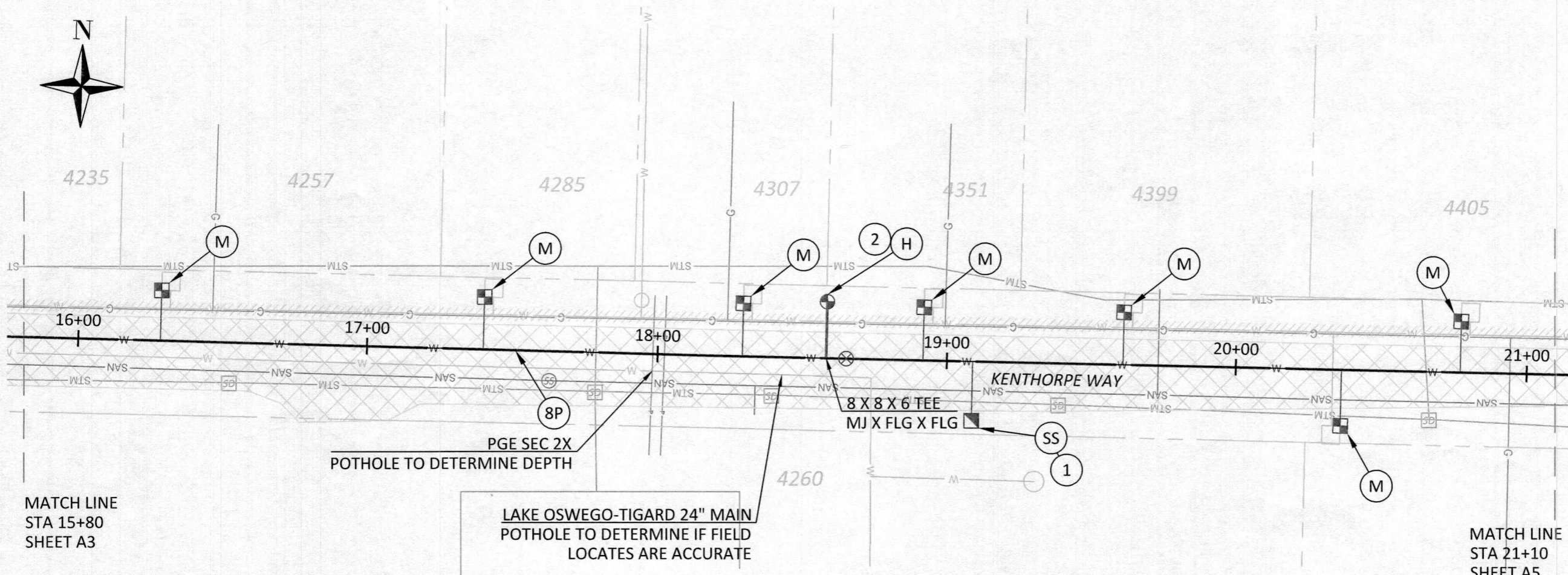
REVISION

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PLAN SHEET

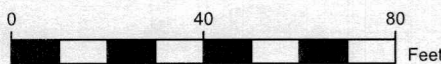
A4

SHEET 8 OF 21



MATCH LINE
 STA 15+80
 SHEET A3

MATCH LINE
 STA 21+10
 SHEET A5



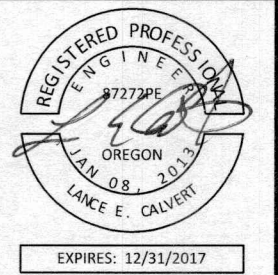
SHEET A4 QUANTITIES			
SYMBOL	DESCRIPTION	UNIT	QUANTITY
8V	8 INCH GATE VALVE	EA	1
8P	8 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	528
H	HYDRANT ASSEMBLY (WL-401)	EA	1
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	7
SS	WATER SAMPLING STATION (DETAIL SS)	EA	1
6P	6 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	19

CONSTRUCTION NOTES:

1. WATER SAMPLING STATION TO BE INSTALLED PER DETAIL SS "WATER SAMPLING STATION" (SEE SHEET D1) ALONG THE FRONTAGE OF THE LAKE-OSWEGO TIGARD WATER TREATMENT PLANT PROPERTY. LOCATION TO BE SET DURING CONSTRUCTION.
2. HYDRANT ASSEMBLY LOCATION TO BE FIELD VERIFIED DURING CONSTRUCTION.



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 22500 SALAMO ROAD
 WEST LINN, OREGON 97068
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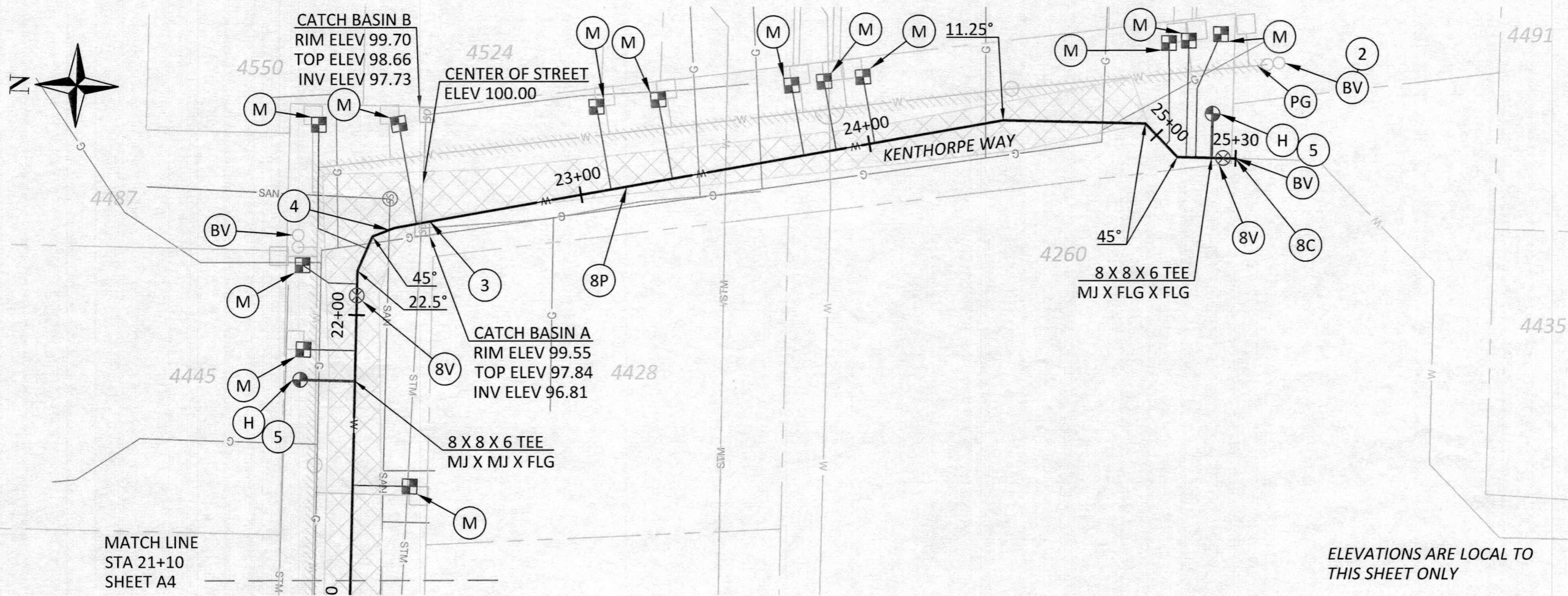
CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS
 Kenthorpe Way
 Station 21+10 to End

PROJECT DATA	
Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date Issued:	1/17/2017

REVISION	
Date	Description

PLAN SHEET
A5
 SHEET 9 OF 21



ELEVATIONS ARE LOCAL TO THIS SHEET ONLY

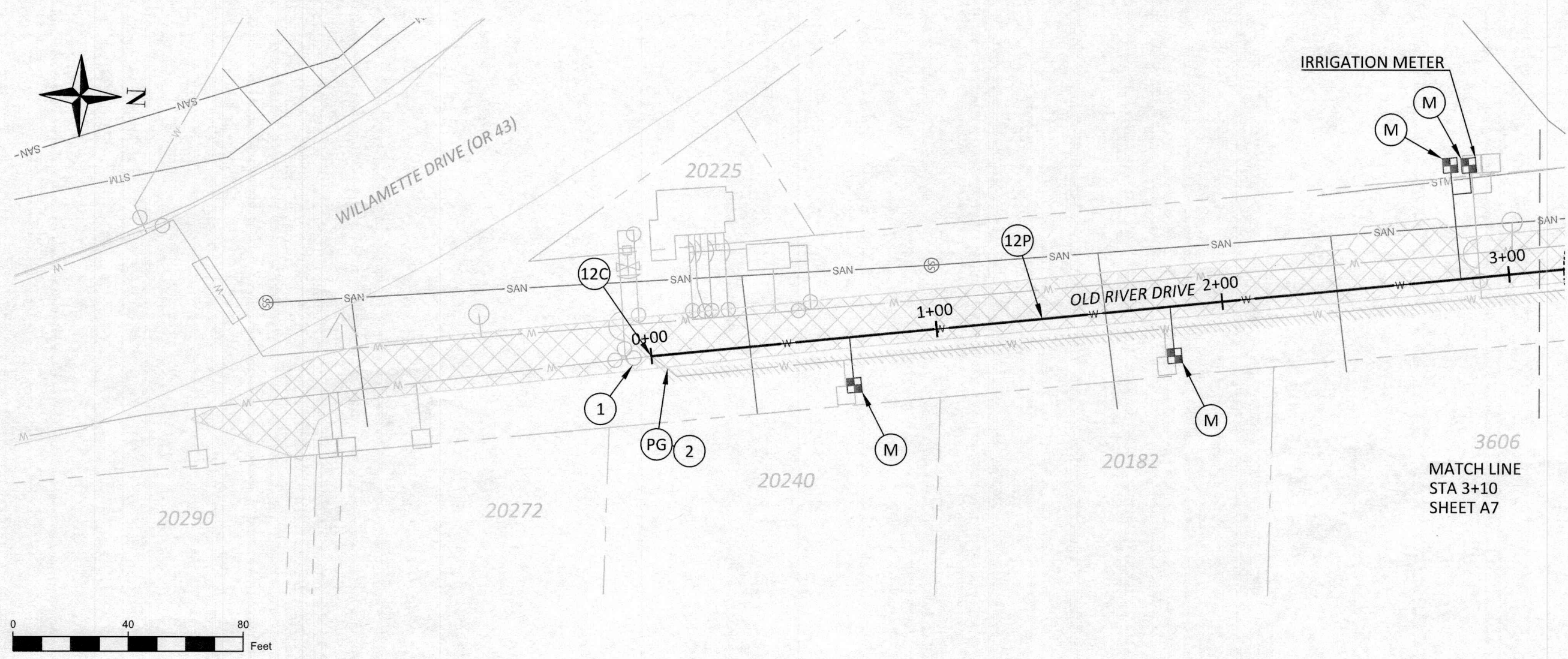
MATCH LINE
 STA 21+10
 SHEET A4

SHEET A5 QUANTITIES

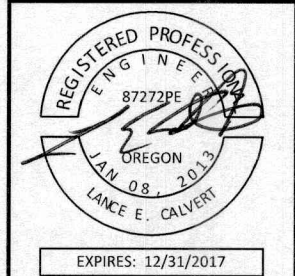
SYMBOL	DESCRIPTION	UNIT	QUANTITY
8V	8 INCH GATE VALVE	EA	2
8P	8 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	421
H	HYDRANT ASSEMBLY (WL-401)	EA	2
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	13
8C	8 INCH CONNECTION TO 8 INCH EXISTING MAIN	EA	1
BV	REMOVE EXISTING BLOWOFF ASSEMBLY	EA	3
PG	CUT AND PLUG EXISTING ASBESTOS CEMENT PIPE	EA	1
6P	6 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	34

CONSTRUCTION NOTES:

- CONNECT NEW 8 INCH MAIN ON KENTHORPE WAY AT EXISTING 8 INCH MAIN.
- REMOVE EXISTING BLOWOFF ASSEMBLY AND PLUG EXISTING 6-INCH A.C. PLUG ONCE NEW 8-INCH LINE IS LIVE.
- MAINTAIN MINIMUM 36 INCH COVER OVER WATER MAIN AND ADEQUATE SEPARATION WHILE CROSSING UNDER STORM DRAIN AT CORNER OF KENTHORPE WAY. SEE ELEVATIONS ON THIS SHEET.
- MAINTAIN MINIMUM 36 INCH COVER AND ADEQUATE CLEARANCE OF WATER MAIN WHILE CROSSING OVER SANITARY SEWER MAIN. INVERT OF CLOSEST MANHOLE IS 7.7- FEET BELOW RIM.
- HYDRANT ASSEMBLY LOCATION TO BE FIELD VERIFIED DURING CONSTRUCTION.



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CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS

Old River Drive
 Station 0+00 to 3+10

SHEET A6 QUANTITIES			
SYMBOL	DESCRIPTION	UNIT	QUANTITY
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	4
12P	12 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	311
12C	12 INCH CONNECTION TO 12 INCH EXISTING MAIN	EA	1
PG	CUT AND PLUG EXISTING ASBESTOS CEMENT PIPE	EA	1

CONSTRUCTION NOTES:

- EXISTING 12 INCH BUTTERFLY VALVE AT LAKE OSWEGO INTERTIE PUMP STATION TO REMAIN CLOSED WHEN CONNECTING NEW 12 INCH MAIN ON OLD RIVER DRIVE.
- CUT AND PLUG EXISTING 10 INCH ASBESTOS CEMENT MAIN IN ORDER TO ABANDON IN PLACE.

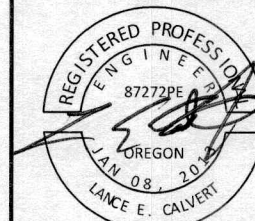
PROJECT DATA	
Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date Issued:	1/17/2017

REVISION	
Date	Description

PLAN SHEET
A6
 SHEET 10 OF 21



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EXPIRES: 12/31/2017

CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS

Old River Drive
 Station 3+10 to End

PROJECT DATA

Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date Issued:	1/17/2017

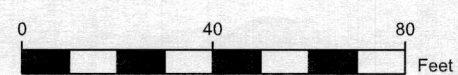
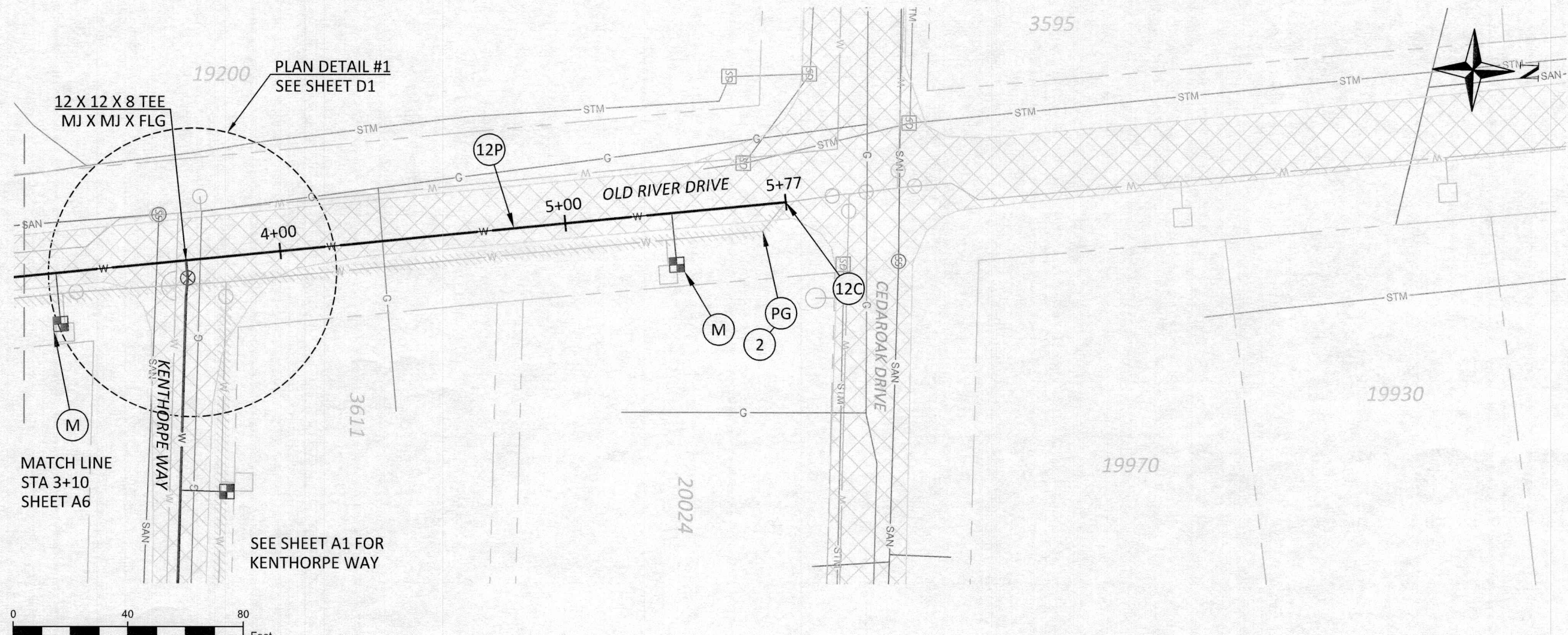
REVISION

Date	Description

PLAN SHEET

A7

SHEET 11 OF 21



SHEET A7 QUANTITIES			
SYMBOL	DESCRIPTION	UNIT	QUANTITY
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	2
12P	12 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	266
12C	12 INCH CONNECTION TO 12 INCH EXISTING MAIN	EA	1
PG	CUT AND PLUG EXISTING ASBESTOS CEMENT PIPE	EA	1

CONSTRUCTION NOTES:

1. CONNECT NEW 12 INCH MAIN ON OLD RIVER DRIVE TO EXISTING 12 INCH MAIN AT THE INTERSECTION WITH CEDARROAK DRIVE.
2. CUT AND PLUG EXISTING 10 INCH ASBESTOS CEMENT MAIN IN ORDER TO ABANDON IN PLACE.

MATCH LINE
 STA 3+10
 SHEET A6

SEE SHEET A1 FOR
 KENTHORPE WAY



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EXPIRES: 12/31/2017

CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS

Valley View Dr
 Station 0+00 to 5+30

PROJECT DATA

Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date issued:	1/17/2017

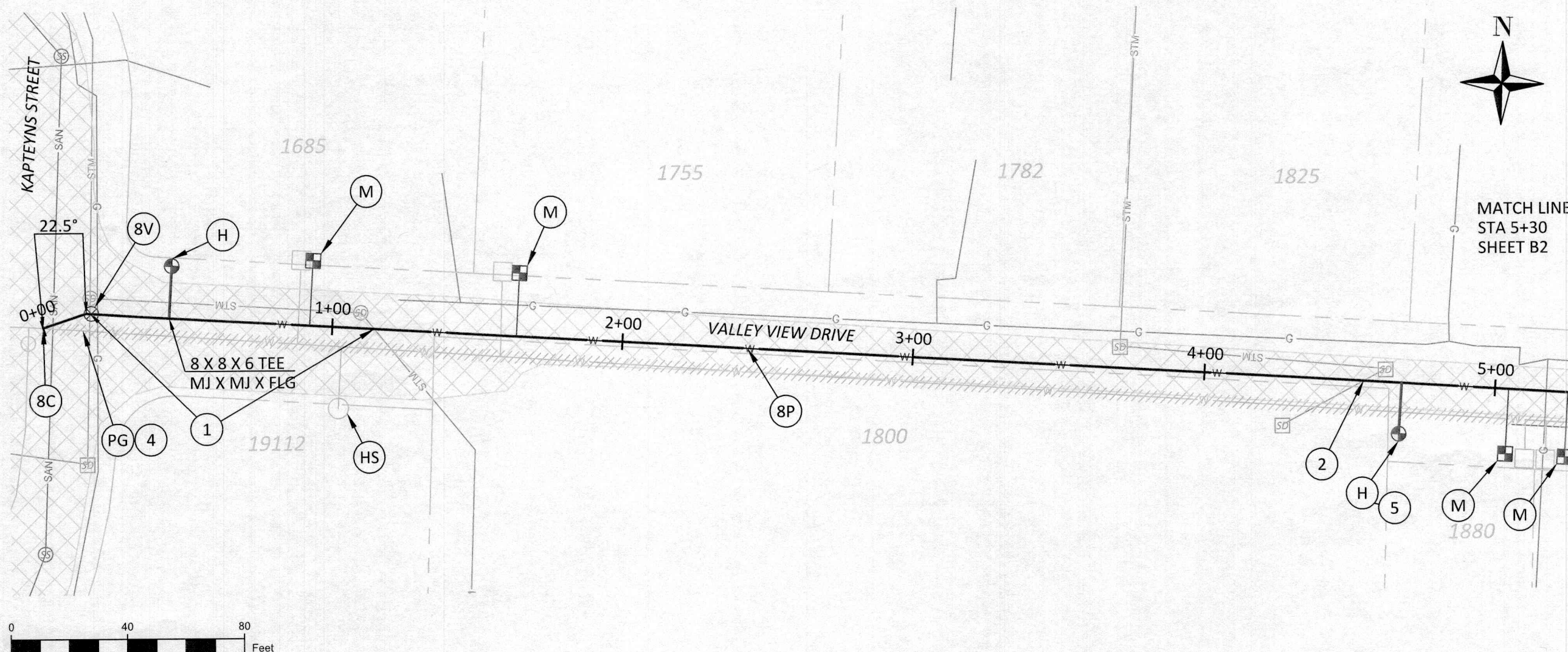
REVISION

Date	Description

PLAN SHEET

B1

SHEET 12 OF 21

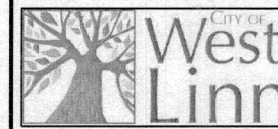


SHEET B1 QUANTITIES

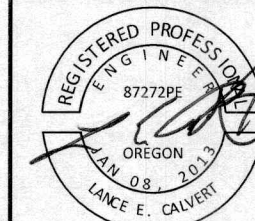
SYMBOL	DESCRIPTION	UNIT	QUANTITY
8V	8 INCH GATE VALVE	EA	1
8P	8 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	527
H	HYDRANT ASSEMBLY (WL-401)	EA	2
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	4
8C	8 INCH CONNECTION TO 8 INCH EXISTING MAIN	EA	1
PG	CUT AND PLUG EXISTING ASBESTOS CEMENT PIPE	EA	1
HS	SALVAGE EXISTING HYDRANT	EA	1
6P	6 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	35

CONSTRUCTION NOTES:

1. MAINTAIN MINIMUM 36 INCH COVER WHILE CROSSING WATER MAIN OVER EXISTING STORM DRAIN.
2. MAINTAIN MINIMUM 36 INCH COVER AND ADEQUATE CLEARANCE ABOVE WATER MAIN WHEN CROSSING UNDER EXISTING STORM DRAIN.
3. CONNECT NEW 8 INCH MAIN ON VALLEY VIEW DRIVE TO EXISTING 8 INCH MAIN AT THE INTERSECTION WITH KAPTEYNS STREET.
4. CUT AND PLUG EXISTING 8 INCH ASBESTOS CEMENT MAIN ON VALLEY VIEW DRIVE IN ORDER TO ABANDON IN PLACE.
5. HYDRANT ASSEMBLY LOCATION TO BE FIELD VERIFIED DURING CONSTRUCTION.



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EXPIRES: 12/31/2017

CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS

Valely View Dr
 Station 5+30 to End

PROJECT DATA

Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date Issued:	1/17/2017

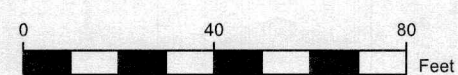
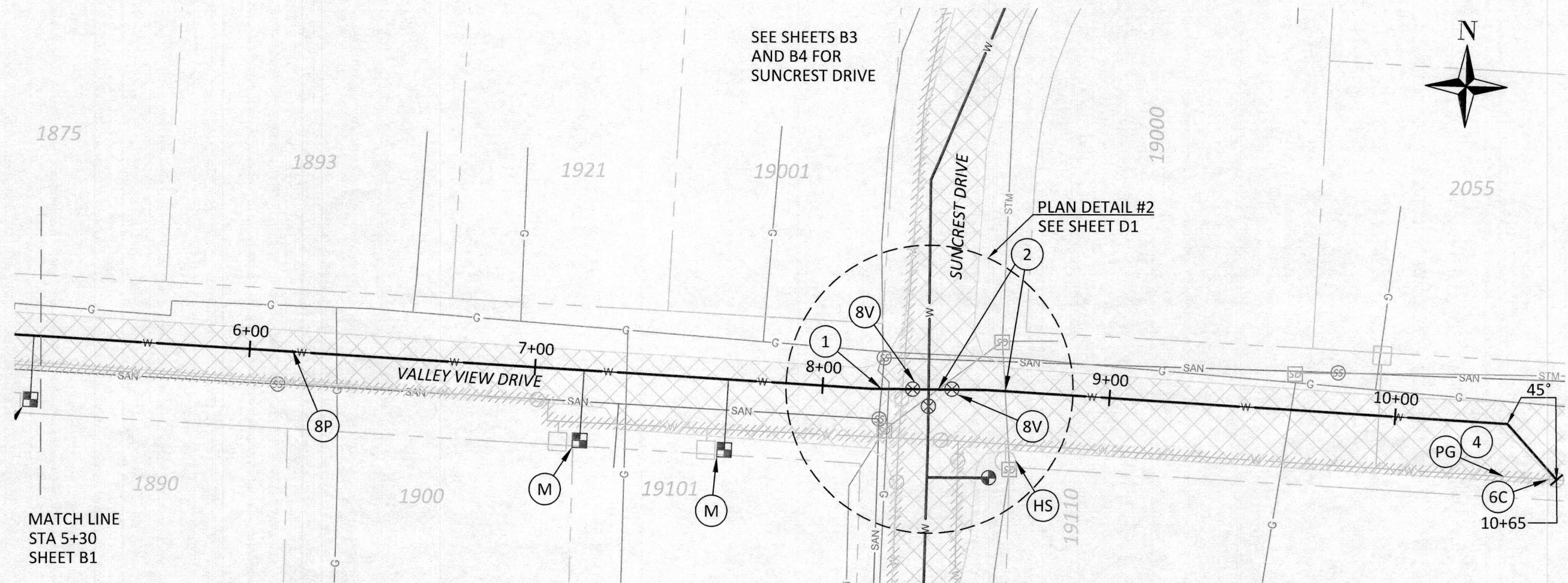
REVISION

Date	Description

PLAN SHEET

B2

SHEET 13 OF 21



MATCH LINE
 STA 5+30
 SHEET B1

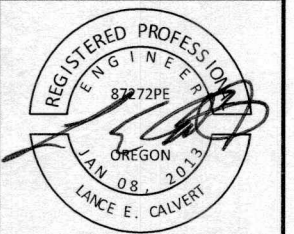
SHEET B2 QUANTITIES			
SYMBOL	DESCRIPTION	UNIT	QUANTITY
8V	8 INCH GATE VALVE	EA	2
8P	8 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	537
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	2
6C	8 INCH CONNECTION TO 6 INCH EXISTING MAIN	EA	1
PG	CUT AND PLUG EXISTING ASBESTOS CEMENT PIPE	EA	1
HS	SALVAGE EXISTING HYDRANT	EA	1

CONSTRUCTION NOTES:

1. MAINTAIN MINIMUM 36 INCH COVER OVER WATER MAIN WHEN CROSSING OVER THE EXISTING SANITARY SEWER MAIN. SEE DETAIL WL-409 FOR CROSSING.
2. DUE TO SHALLOW STORM DRAINS, INSTALL NEW WATER MAIN BENEATH EXISTING STORM DRAIN CROSSING VALLEY VIEW DRIVE. MAINTAIN MINIMUM 36 INCH COVER OVER WATER MAIN AND ADEQUATE SEPARATION FROM STORM DRAIN.
3. CONNECT NEW 8 INCH MAIN ON VALLEY VIEW DRIVE TO EXISTING 6 INCH MAIN TO THE EAST OF THE INTERSECTION WITH SUNCREST DRIVE.
4. CUT AND PLUG EXISTING 6 INCH CAST IRON MAIN ON VALLEY VIEW DRIVE IN ORDER TO ABANDON IN PLACE.



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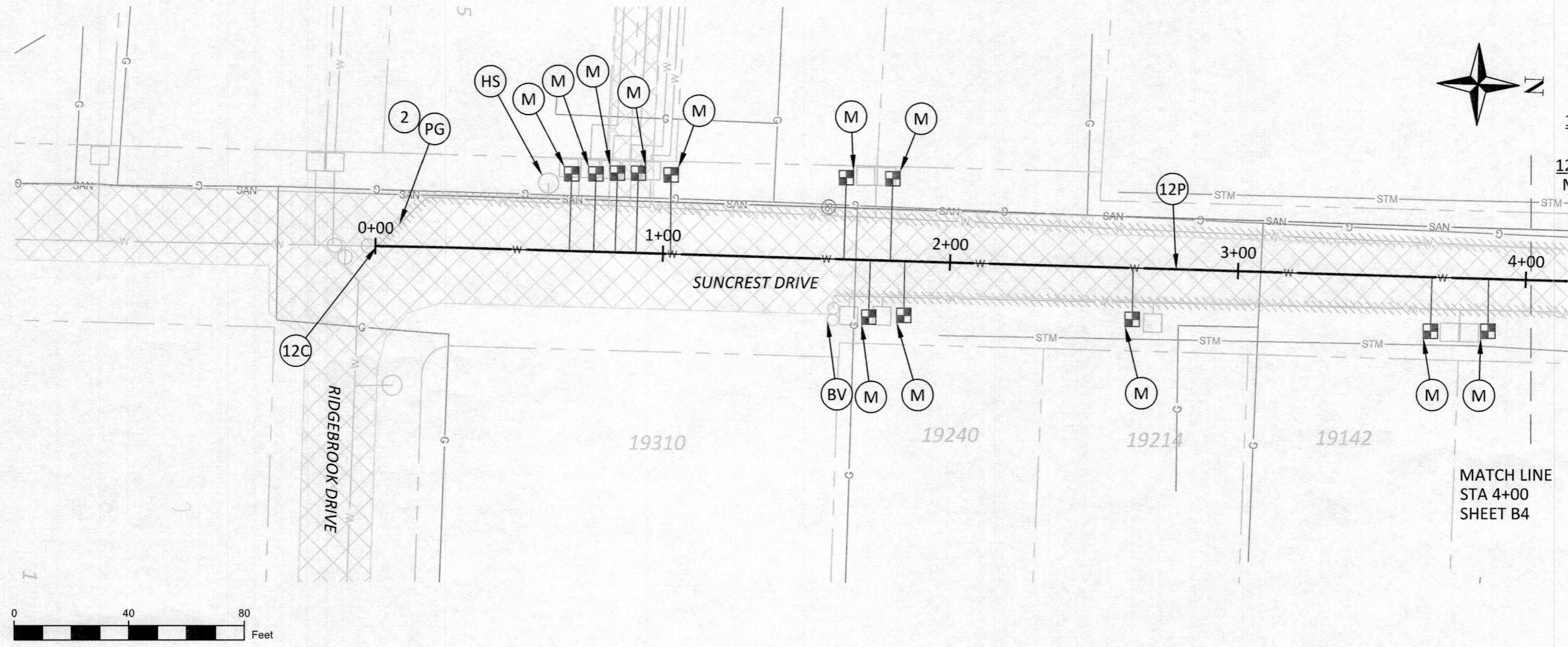
CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS
 Suncrest Drive
 Station 0+00 to 4+00

PROJECT DATA	
Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date Issued:	1/17/2017

REVISION	
Date	Description

PLAN SHEET
B3
 SHEET 14 OF 21

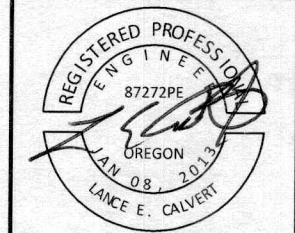


SHEET B3 QUANTITIES			
SYMBOL	DESCRIPTION	UNIT	QUANTITY
M	1 INCH WATER SERVICE CONNECTIONS (WL-402)	EA	12
12P	12 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	402
12C	12 INCH CONNECTION TO 12 INCH EXISTING MAIN	EA	1
HS	SALVAGE EXISTING HYDRANT	EA	1
PG	CUT AND PLUG EXISTING ASBESTOS CEMENT PIPE	EA	1
BV	REMOVE EXISTING BLOWOFF ASSEMBLY	EA	1

- CONSTRUCTION NOTES:**
- CONNECT NEW 12 INCH MAIN ON SUNCREST DRIVE TO EXISTING 12 INCH MAIN AT THE INTERSECTION WITH RIDGEBROOK DRIVE.
 - CUT AND PLUG EXISTING 8 INCH ASBESTOS CEMENT MAIN ON SUNCREST DRIVE IN ORDER TO ABANDON IN PLACE.



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CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS
 Suncrest Drive
 Station 4+00 to End

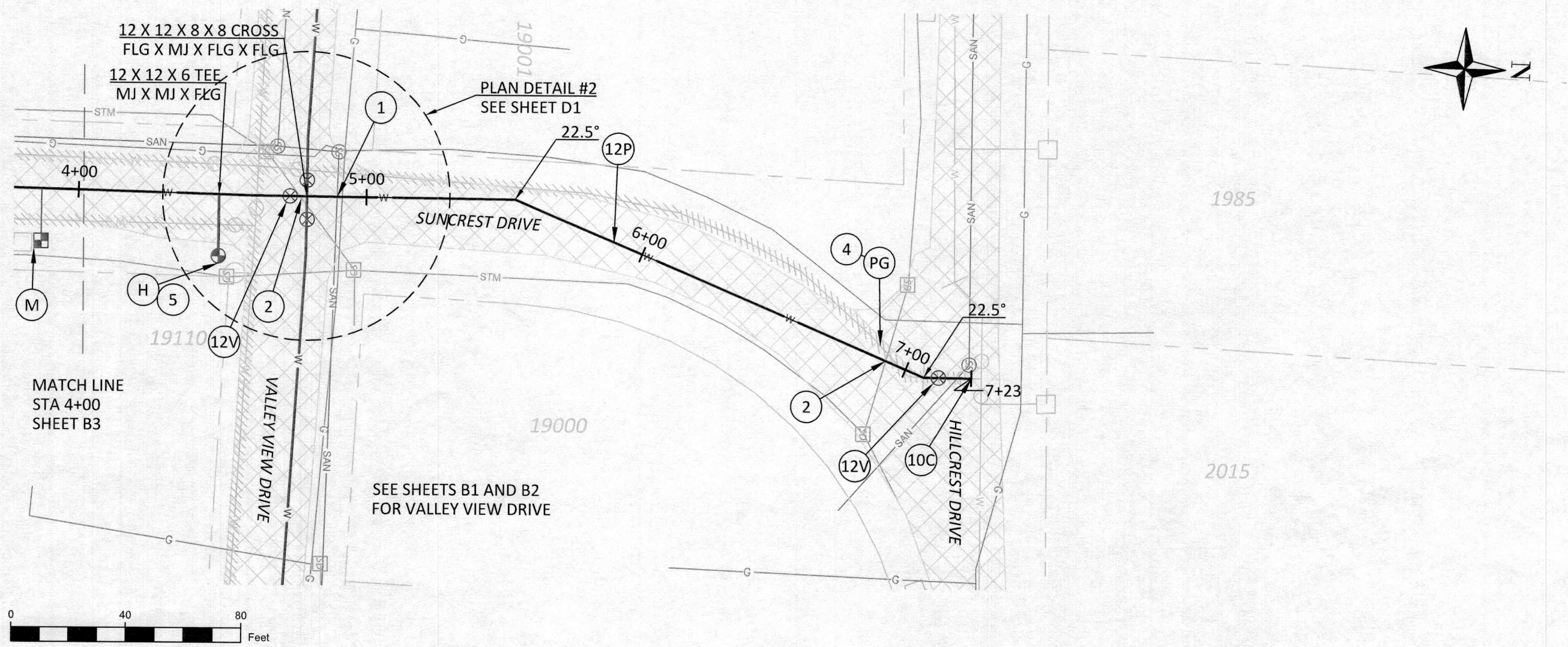
PROJECT DATA	
Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date Issued:	1/17/2017

REVISION	
Date	Description

PLAN SHEET

B4

SHEET 15 OF 21



SEE SHEETS B1 AND B2 FOR VALLEY VIEW DRIVE

SHEET B3 QUANTITIES

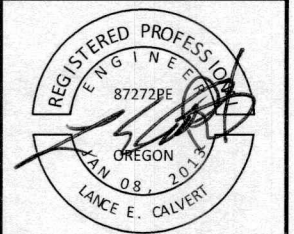
SYMBOL	DESCRIPTION	UNIT	QUANTITY
12P	12 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	322
10C	12 INCH CONNECTION TO 10 INCH EXISTING MAIN	EA	1
12V	12 INCH BUTTERFLY VALVE	EA	2
H	HYDRANT ASSEMBLY (WL-401)	EA	1
PG	CUT AND PLUG EXISTING ASBESTOS CEMENT PIPE	EA	1
6P	6 INCH POTABLE WATER PIPE, FITTINGS AND COUPLINGS WITH RESTRAINED JOINTS AND CLASS B BACKFILL	LF	21

CONSTRUCTION NOTES:

1. MAINTAIN MINIMUM 36 INCH COVER WHEN CROSSING WATER MAIN OVER THE EXISTING SANITARY SEWER MAIN. SEE DETAIL WL-409 FOR CROSSING.
2. MAINTAIN ADEQUATE CLEARANCE AND MINIMUM 36 INCH COVER WHEN CROSSING WATER MAIN UNDER EXISTING STORM DRAIN.
3. CONNECT NEW 12 INCH MAIN ON SUNCREST DRIVE TO EXISTING 10 INCH MAIN AT THE INTERSECTION WITH HILLCREST DRIVE.
4. CUT AND PLUG EXISTING 8 INCH MAIN ON SUNCREST DRIVE IN ORDER TO ABANDON IN PLACE.
5. HYDRANT ASSEMBLY LOCATION TO BE FIELD VERIFIED DURING CONSTRUCTION.



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CONTRACTOR TBD

PW-16-03
2017 WATERLINE PROJECTS
 Plan Details # 1 and #2

PROJECT DATA	
Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date Issued:	1/17/2017

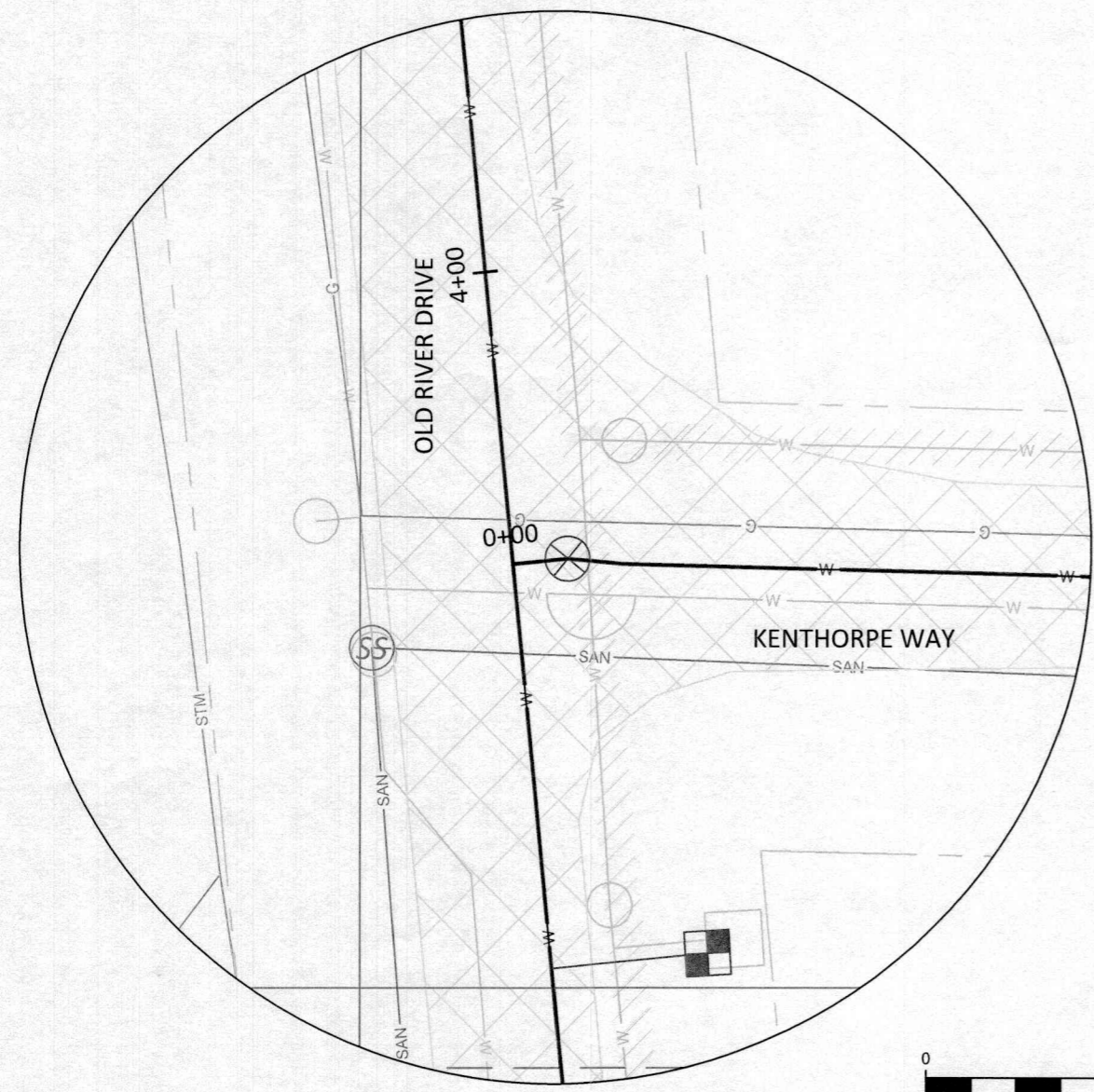
REVISION	
Date	Description

DETAILS SHEET

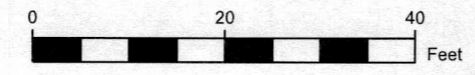
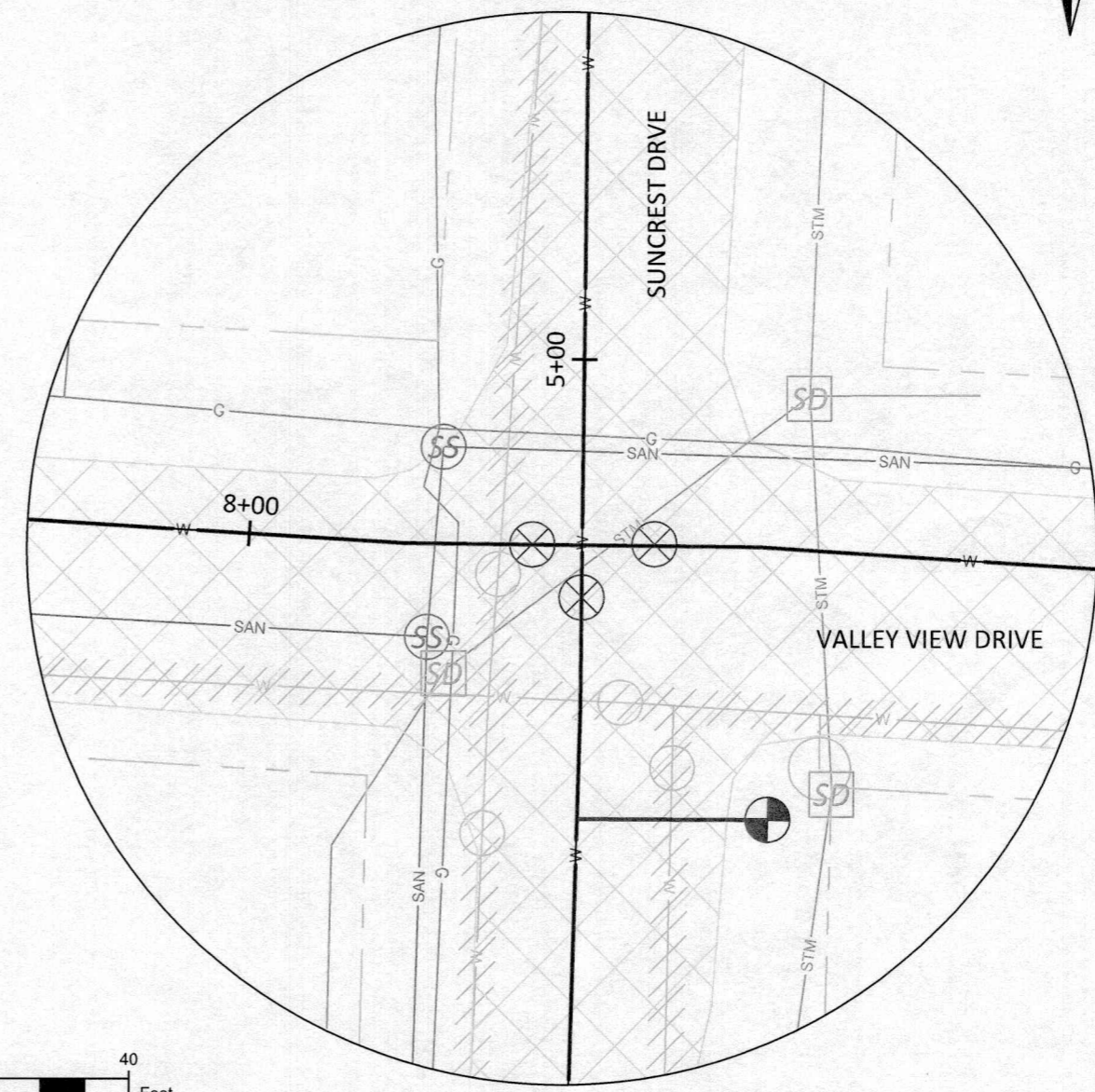
D1

SHEET 16 OF 21

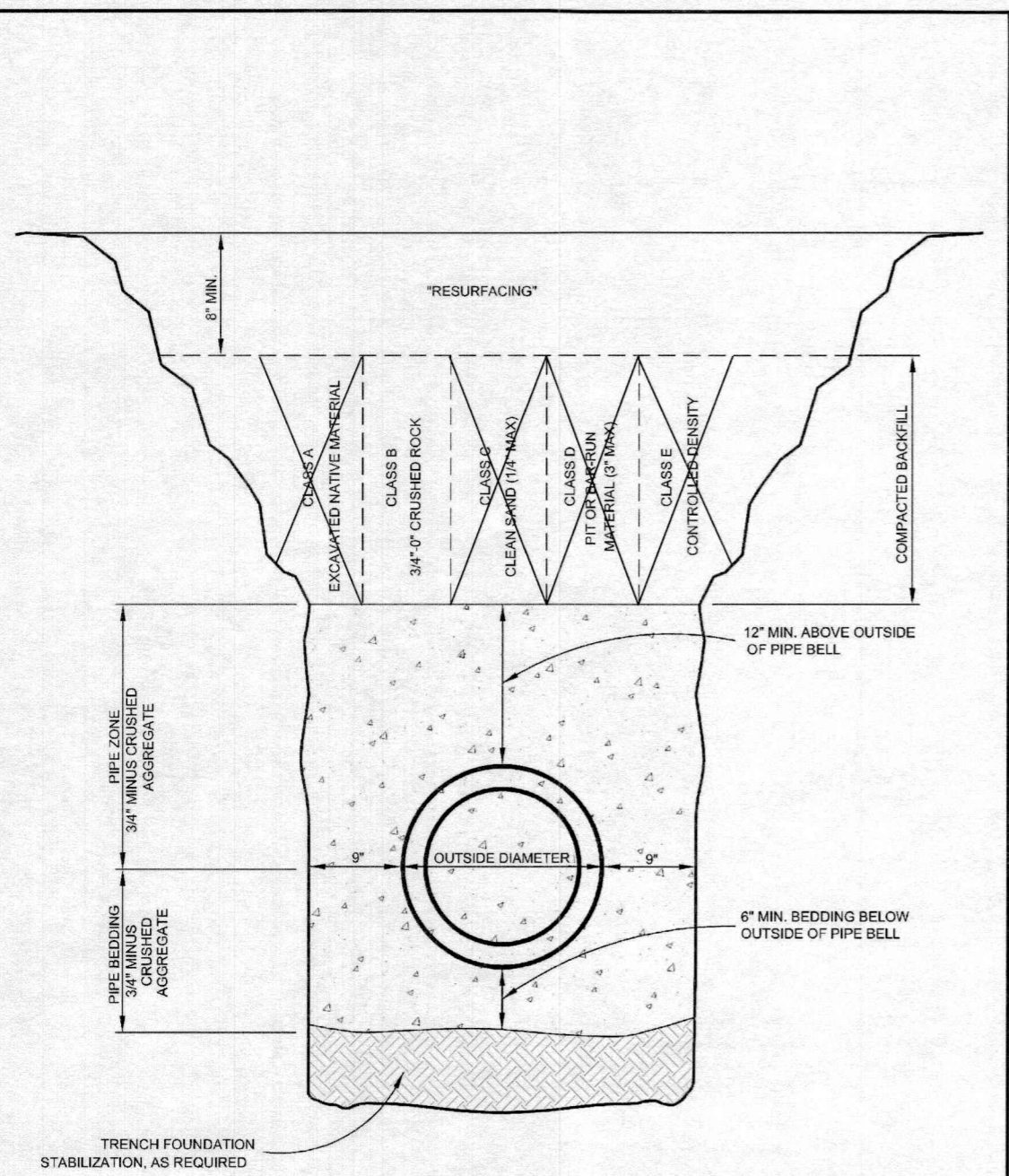
PLAN DETAIL #1



PLAN DETAIL #2



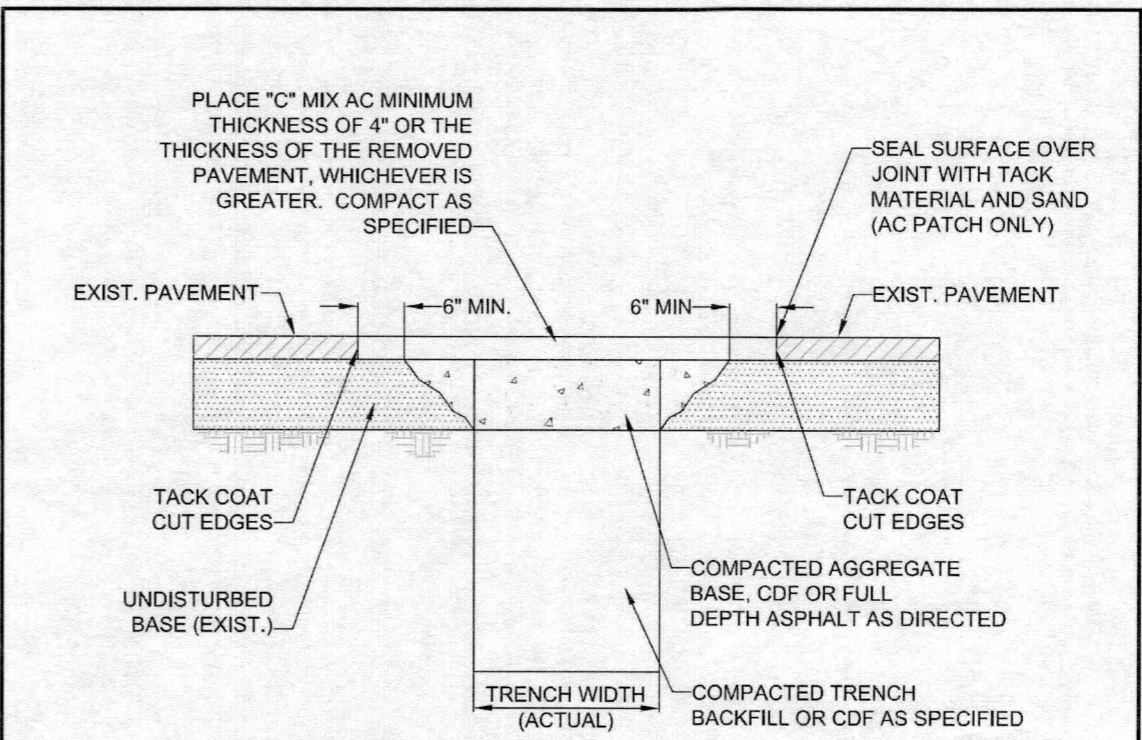
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**TRENCH BACKFILL
BEDDING AND
PIPE ZONE**

CITY OF West Linn	DATE: 2010
	DRAWING NO. WL-200
	FILE NO.

THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.



- NOTE:**
1. ALL EXISTING AC OR PCC PAVEMENT SHALL BE SAWCUT TO NEAT, STRAIGHT LINES PRIOR TO REPAVING.
 2. CONCRETE PAVEMENT SHALL BE REPLACED WITH CONCRETE TO A MINIMUM THICKNESS OF REMOVED PAVEMENT, WHICHEVER IS GREATER.
 3. IF EXISTING BASE MATERIAL IS CTB OR ATB, THEN REPLACEMENT BASE MATERIAL SHALL MATCH EXISTING.
 4. ALL UTILITIES SHALL HAVE A MINIMUM COVER OF 36".
 5. ALL TRENCH BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY PER AASHTO T-180 OR AS SPECIFIED IN THE CONTRACT DOCUMENTS.
 6. ALL TRENCH BACKFILL AND PATCHING SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF WEST LINN.
 7. APPROVED CDF SHALL BE USED OR 3/4 - 0" GRAVEL BACKFILL SHALL BE PLACED AND COMPACTED IN 12" MAXIMUM LIFTS. IF 3/4-0" GRAVEL BACKFILL IS USED, COMPACTION TESTING BY A CERTIFIED TESTING COMPANY IS REQUIRED AT DEPTH INTERVALS AS SPECIFIED BY THE CITY ENGINEER.
 8. T-CUT MAY BE ENLARGED AT THE DISCRETION OF THE CITY ENGINEER OR CITY INSPECTOR DUE TO SITE CONDITIONS OR PROJECT REQUIREMENTS.
 9. ALL CUT EDGES SHALL BE SAND SEALED.
 10. COMPACTED BACKFILL OR CDF MUST EXTEND 2 FEET OUTSIDE OF PAVEMENT SURFACE.

STREET T-CUT

CITY OF West Linn	DATE: 2010
	DRAWING NO. WL-203
	FILE NO.



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EXPIRES: 12/31/2017

CONTRACTOR TBD

**PW-16-03
2017 WATERLINE PROJECTS**

Standard Details

PROJECT DATA	
Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date Issued:	1/17/2017

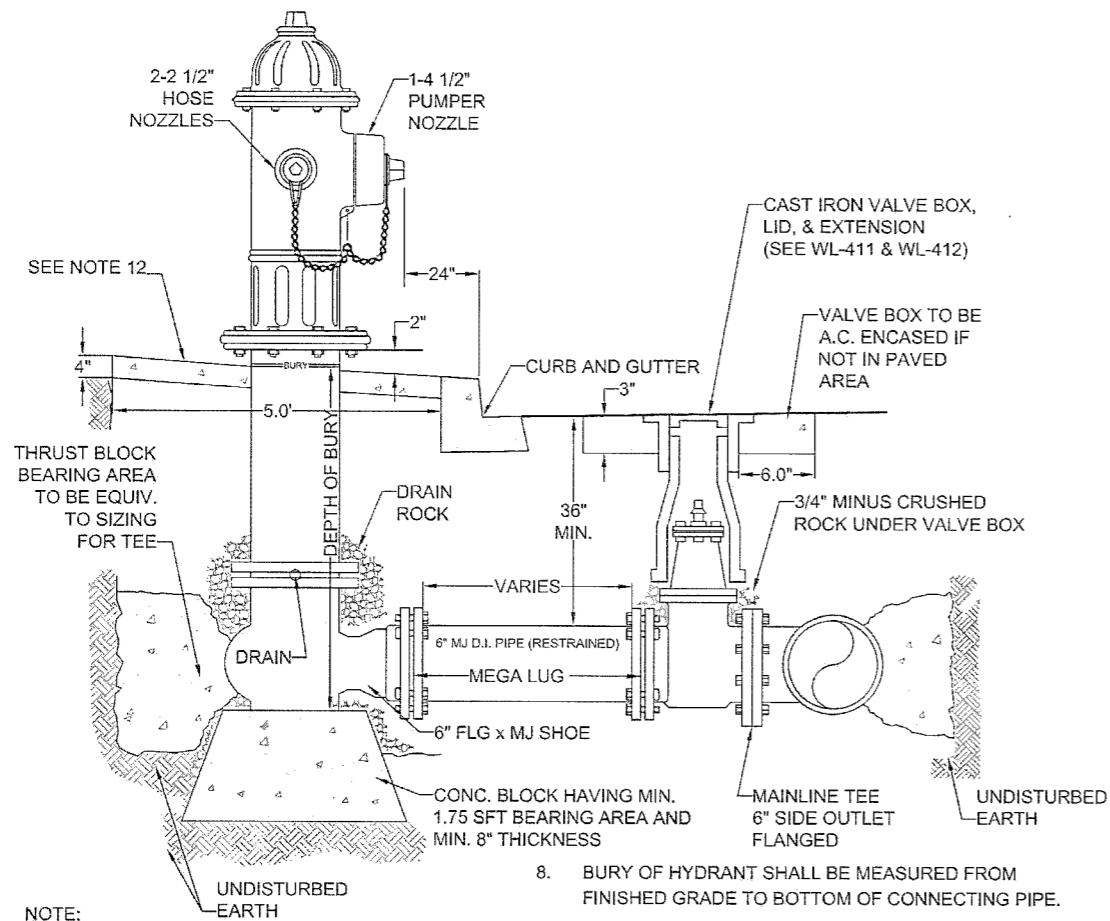
REVISION	
Date	Description

DETAILS SHEET

D2

SHEET 17 OF 21

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NOTE:

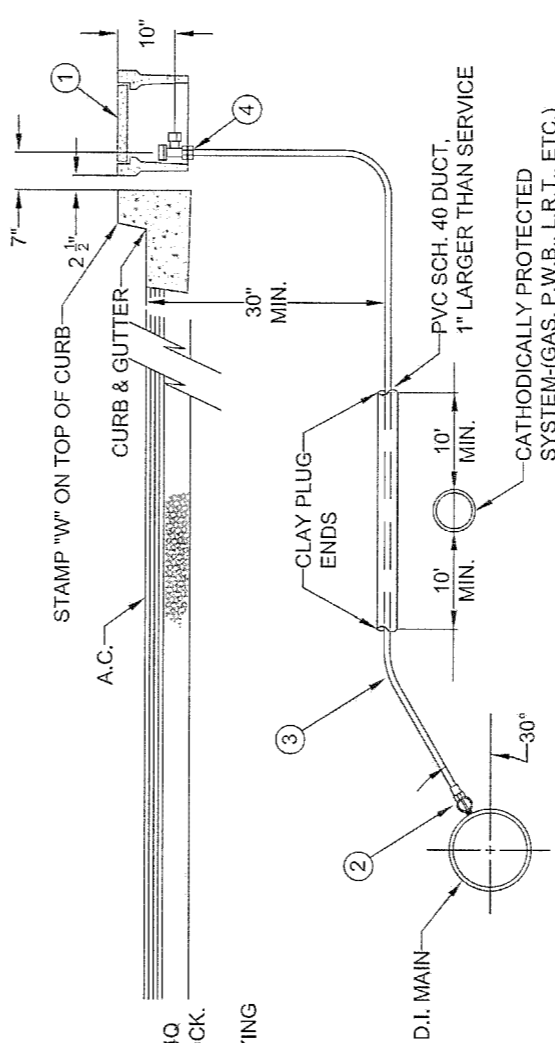
1. HYDRANT TO BE MUELLER CENTURION MDL A-423 ONLY WITH 1 1/2" OPER. NUTS OR CLOW MEDALLION F-2545.
2. HYDRANT COLOR TO BE MILLER EQUIP. ENAMEL 0 E 40 (SAFETY YELLOW).
3. JOINTS TO BE RESTRAINED BY 3/4" DIA. GALVANIZED STEEL RODS AND THRUST BLOCKS OR MEGALUGS AND THRUST BLOCKS.
4. ALL FITTINGS IN CONTACT W/CONCRETE SHALL BE WRAPPED IN PLASTIC, HYDRANT DRAIN HOLES TO REMAIN OPEN TO DRAIN ROCK AND OPERATIONAL.
5. MIN. 4 CFT OF 1 1/2" - 3/4" CLEAN DRAIN ROCK SHALL BE PLACED AROUND SHOE UP TO A MIN. OF 6" ABOVE DRAIN OUTLETS.
6. WHERE PLANTER STRIP EXISTS, HYDRANT SHALL BE PLACED SO THE FRONT PORT IS A MINIMUM OF 24" BEHIND THE FACE OF THE CURB.
7. WHERE INTEGRAL S/W & CURB EXISTS, HYDRANT SHALL BE PLACED AT BACK OF THE SIDEWALK, OR AS DIRECTED BY ENGINEER.
8. BURY OF HYDRANT SHALL BE MEASURED FROM FINISHED GRADE TO BOTTOM OF CONNECTING PIPE.
9. THRUST BLOCK AT FIRE HYDRANT TEE SHALL BE EQUIVALENT TO TEE PIPE SIZING (SEE WL-406).
10. HYDRANT VALVE SHALL BE MUELLER RESILIENT WEDGE GATE VALVE #A-2360-16 ONLY.
11. NO EXTENSIONS ALLOWED
12. HYDRANT SHALL HAVE A 5' x 5' x 4" THICK CONCRETE APRON. THERE SHALL BE 2" OF CLEARANCE BETWEEN THE TOP OF THE APRON AND THE BOTTOM OF THE FLANGED BOLT PATTERN OF THE HYDRANT.
13. CONCRETE SHALL BE COMMERCIAL MIXED WITH A BREAKING STRENGTH OF NOT LESS THAN 3000 PSI.

STANDARD FIRE HYDRANT ASSEMBLY



DATE: 2010
DRAWING NO. WL-401
FILE NO.

THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.



MATERIAL:

1. BROOKS METER BOX, BODY NO. 37, LID AND COVER NO.37-S.
2. MUELLER CORP. STOP NO. H-15008 OR FORD F1000-4Q CORP. STOP WITH OPERATING NUT AT 3 OR 9 O'CLOCK.
3. 1" SOFT TEMPER, TYPE "K" COPPER TUBING COMPLYING WITH ASTM B-88.
4. MUELLER ANGLE METER STOP NO. H-14258 (FORD NO. KV43-444W-Q).

NOTE:

1. MACHINE DRILLED AND TAPPED ONLY. NO HAND DRILLING IS ALLOWED.
2. SUBSTITUTES FOR ANY MATERIALS SHOWN SHALL BE APPROVED BY THE CITY ENGINEER.
3. ALL PIPE AND STRUCTURE ZONE SHALL BE BACKFILLED USING 3/4" MINUS CRUSHED AGG. AND COMPACTED TO 95% MAX DENSITY AS DETERMINED BY AASHTO T-190.
4. WHEN AN ACTIVE CATHODIC PROTECTED SYSTEM IS ENCOUNTERED, SCH. 40 PVC SHALL BE INSTALLED AS SHOWN ABOVE WITH CLAY PLUG.
5. METER BOX SHALL BE CENTERED OVER THE COMPLETED METER ASSEMBLY.
6. TAPS INTO MAIN TO HAVE 18" SEPARATION ON CENTER MINIMUM.
7. ANGLE METER STOPS TO BE 18" FROM PROPERTY LINE AND NOT IN DRIVEWAY APPROACH.
8. METER BOXES IN CURB TIGHT SIDEWALK AND THOSE SUBJECT TO INCIDENTAL AUTO TRAFFIC MUST HAVE METAL LIDS AND BE TRAFFIC RATED.

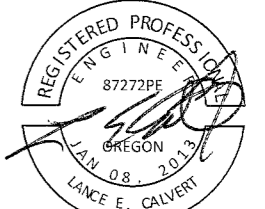
STANDARD 1" WATER SERVICE



DATE: 2010
DRAWING NO. WL-402
FILE NO.



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EXPIRES: 12/31/2017

CONTRACTOR TBD

**PW-16-03
2017 WATERLINE PROJECTS**

Standard Details

PROJECT DATA

Project No:	PW-16-03
Designed By:	ELAIS
Drawn By:	MPALMER
Checked By:	LCALVERT
Date Issued:	1/17/2017

REVISION

Date	Description

DETAILS SHEET

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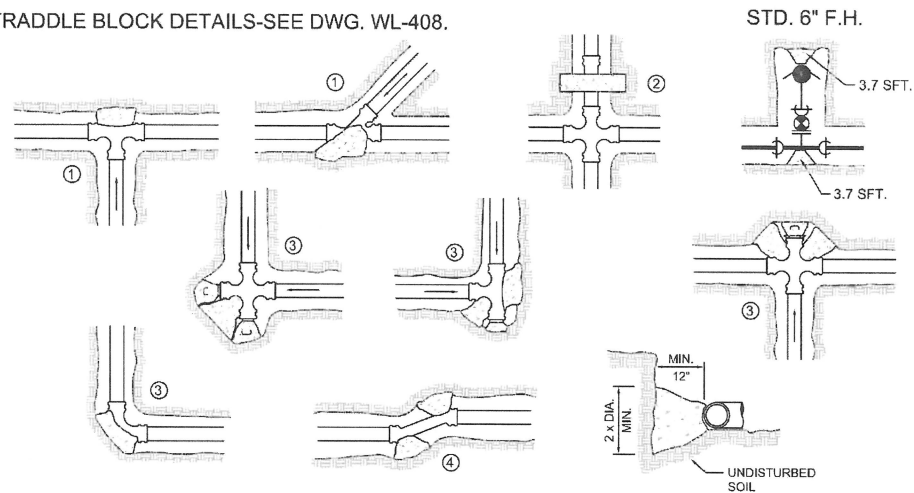
SHEET 18 OF 21

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FITTING SIZE (Inches)	TEE, WYE, & HYDRANTS ①	STRADDLE BLOCK ②	90° BEND PLUGGED CROSS TEE PLUGGED-RUNS ③	45° BEND ④	22 1/2° BEND ④	11 1/2° BEND ④
2	*	*	*	*	*	*
4	1.7	2.1	2.4	1.3	*	*
6	3.7	4.9	5.3	2.9	1.5	*
8	6.7	8.7	9.5	5.1	2.7	1.3
10	10.5	13.6	14.8	8	4.1	2
12	15.1	19.6	21.3	11.6	5.9	2.9
14						
16	26.8	34.8	37.9	20.5	10.4	5.2
18	33.9	44	47.9	25.9	12.8	6.7
LARGER	**	**	**	**	**	**

BEARING AREA OF THRUST BLOCKS (sq. ft.)

- ALL VALUES ARE BASED ON THE FOLLOWING ASSUMPTIONS:
AVG. PRESSURE = 100 PSI X 2 (safety factor); 1500 PSF SOIL BEARING CAPACITY; NORMAL DISTRIBUTION DESIGN VELOCITY NOT TO EXCEED 5 F/S.
- ALL FITTINGS SHALL BE WRAPPED IN 8 MM PLASTIC PRIOR TO PLACEMENT OF CONCRETE.
- BEARING SURFACE OF THRUST BLOCKING SHALL BE AGAINST UNDISTURBED SOIL
- ALL CONCRETE MIX SHALL HAVE A MIN. 28 DAY STRENGTH OF 3000 PSI.
- ALL PIPE ZONES SHALL BE GRAVEL FILLED AND COMPACTED.
- THRUST BLOCKS FOR PLUGGED CROSS AND PLUGGED TEE SHALL HAVE #4 REBAR LIFTING LOOPS INSTALLED AS SHOWN.
- VERTICAL THRUST DETAILS-SEE DWG. WL-407.
- STRADDLE BLOCK DETAILS-SEE DWG. WL-408.



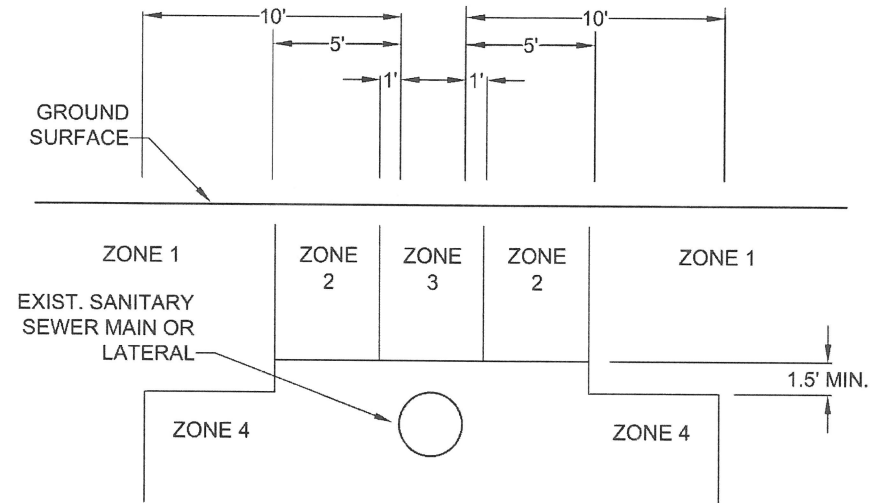
- * BLOCK TO UNDISTURBED TRENCH WALLS.
- ** THRUST BLOCKS FOR PIPES LARGER THAN 18" WILL BE INDIVIDUALLY DESIGNED BY THE ENGINEER.

HORIZONTAL THRUST BLOCKING



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- ZONE 1: ONLY CROSSING RESTRICTIONS APPLY
- ZONE 2: CASE-BY-CASE DETERMINATION
- ZONE 3: PARALLEL WATERLINE PROHIBITED
- ZONE 4: PARALLEL WATERLINE PROHIBITED

NOTE:

- WHERE THE PROPOSED WATERLINE WILL BE INSTALLED PARALLEL TO AN EXISTING GRAVITY SANITARY SEWER MAIN OR LATERAL LINE, THE SEPARATION BETWEEN THE TWO SHALL BE AS INDICATED ABOVE.
- CROSSINGS:
 - WHEREVER POSSIBLE, THE BOTTOM OF THE WATERLINE SHALL BE 1.5 FEET ABOVE THE TOP OF THE SEWER LINE, AND ONE FULL LENGTH OF WATERLINE SHALL BE CENTERED AT THE CROSSING.
 - WHERE IT IS NOT POSSIBLE FOR THE WATER LINE TO BE 1.5 FEET ABOVE THE SEWER LINE, OR THE WATERLINE PASSES UNDER THE SEWER LINE, THE EXISTING SEWER LINE SHALL BE EXPOSED FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, AND SHALL BE REPLACED WITH C-900 PVC WITH STRUCTURAL REQUIREMENT OF DR18 OR DR 25 OR CLASS 50 DUCTILE IRON PIPE AS APPROVED BY THE CITY ENGINEER, AND A LENGTH OF WATER PIPE SHALL BE CENTERED AT THE CROSSING, OR AS APPROVED BY THE CITY ENGINEER.

STANDARD SANITARY SEWER CROSSING



DATE: 2010
DRAWING NO. WL-409
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PW-16-03
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Standard Details

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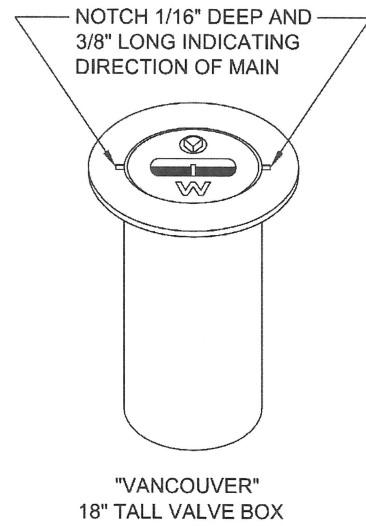
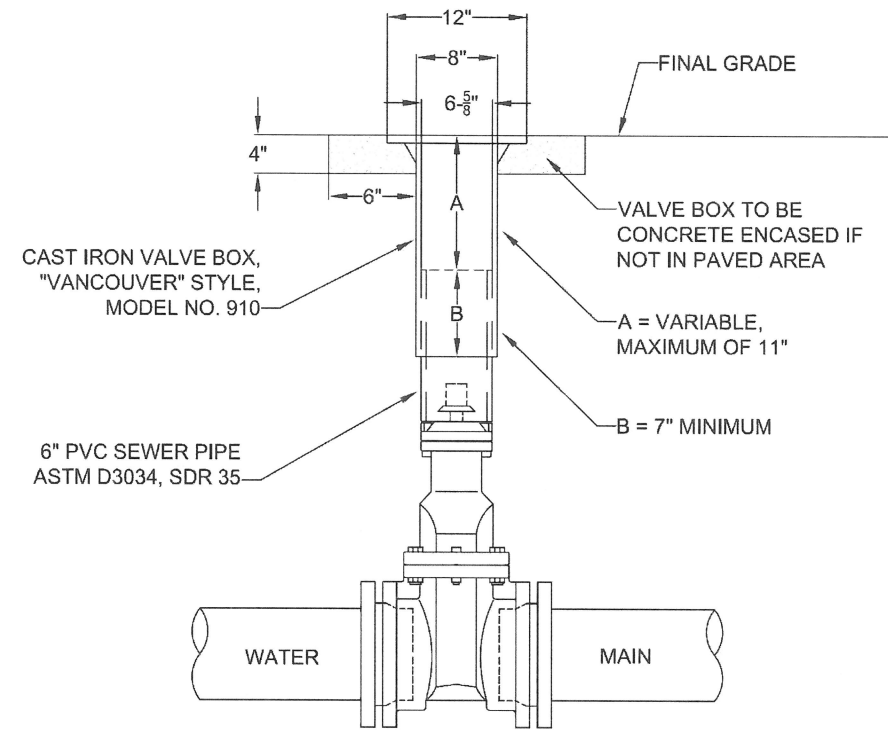
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DETAILS SHEET

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SHEET 19 OF 21

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NOTE:

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.
4. ON VALVES 8" AND LARGER, PVC SHALL BE NOTCHED OVER VALVE PACKING BOLTS SO PVC SITS ON BONNET.

STANDARD VALVE BOX
DETAIL

DATE: 2010

DRAWING NO. WL-411

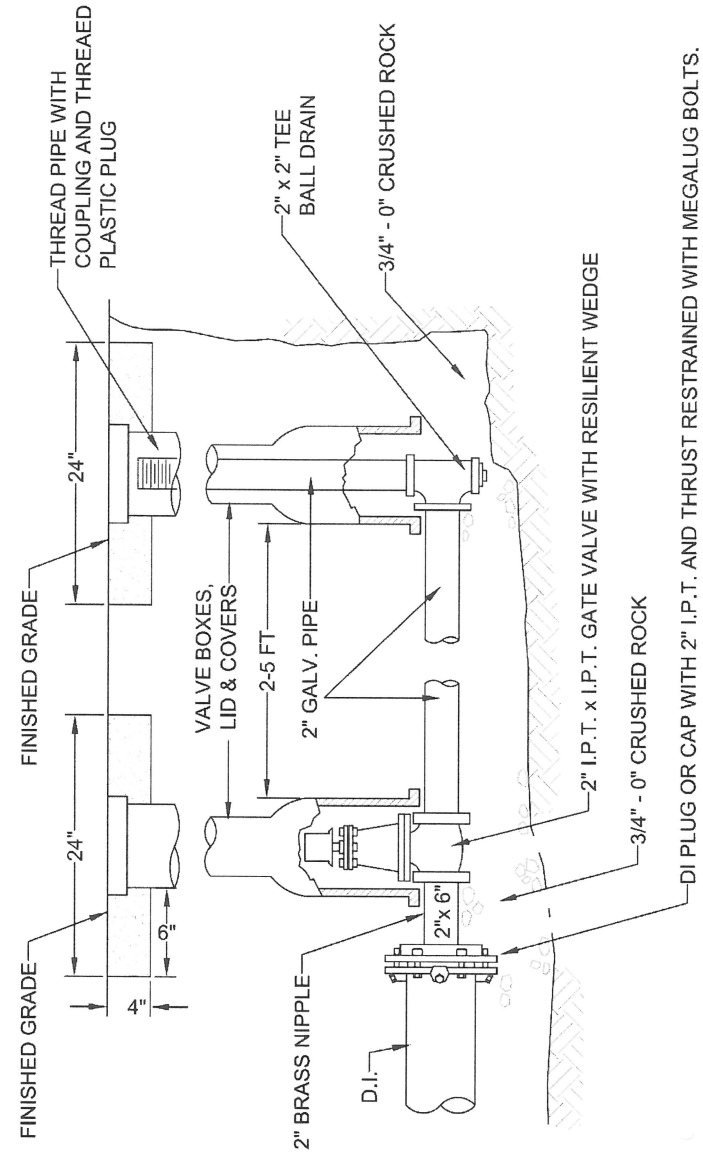
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NOTE:

1. VALVE BOX SHALL BE PER STANDARD DETAIL WL-411.
2. VALVE BOX TO BE CONCRETE ENCASED AS SHOWN, IF NOT IN PAVED AREA.
3. BLOW-OFF UNIT SHALL BE BACKFILLED WITH 3/4"-0" CRUSHED ROCK AND COMPACTED TO 95% OF MAXIMUM DENSITY DETERMINED BY AASHTO T-180.
4. PLACE BLOW-OFF STANDPIPE 3 FT. INSIDE R.O.W. LINE AT END OF STREET (2 FT FROM BARRICADE).

BLOW-OFF SIZES REQUIRED	
MAIN SIZE	BLOW-OFF SIZE
4" TO 6"	2"



STANDARD 2"
BLOW-OFF ASSEMBLY

DATE: 2010

DRAWING NO. WL-404A

FILE NO.



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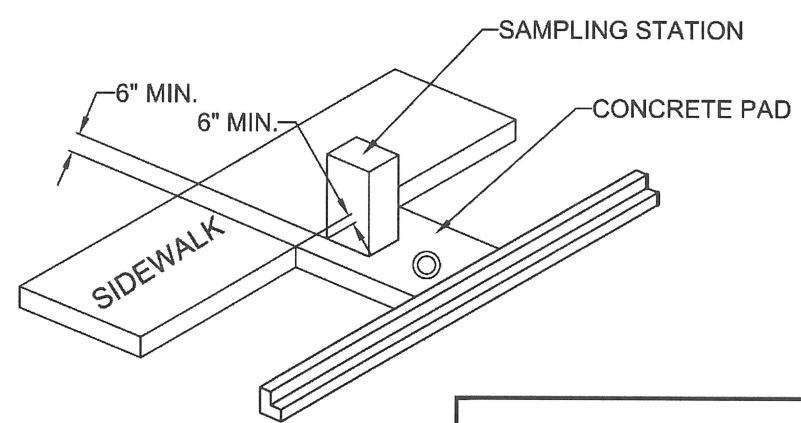
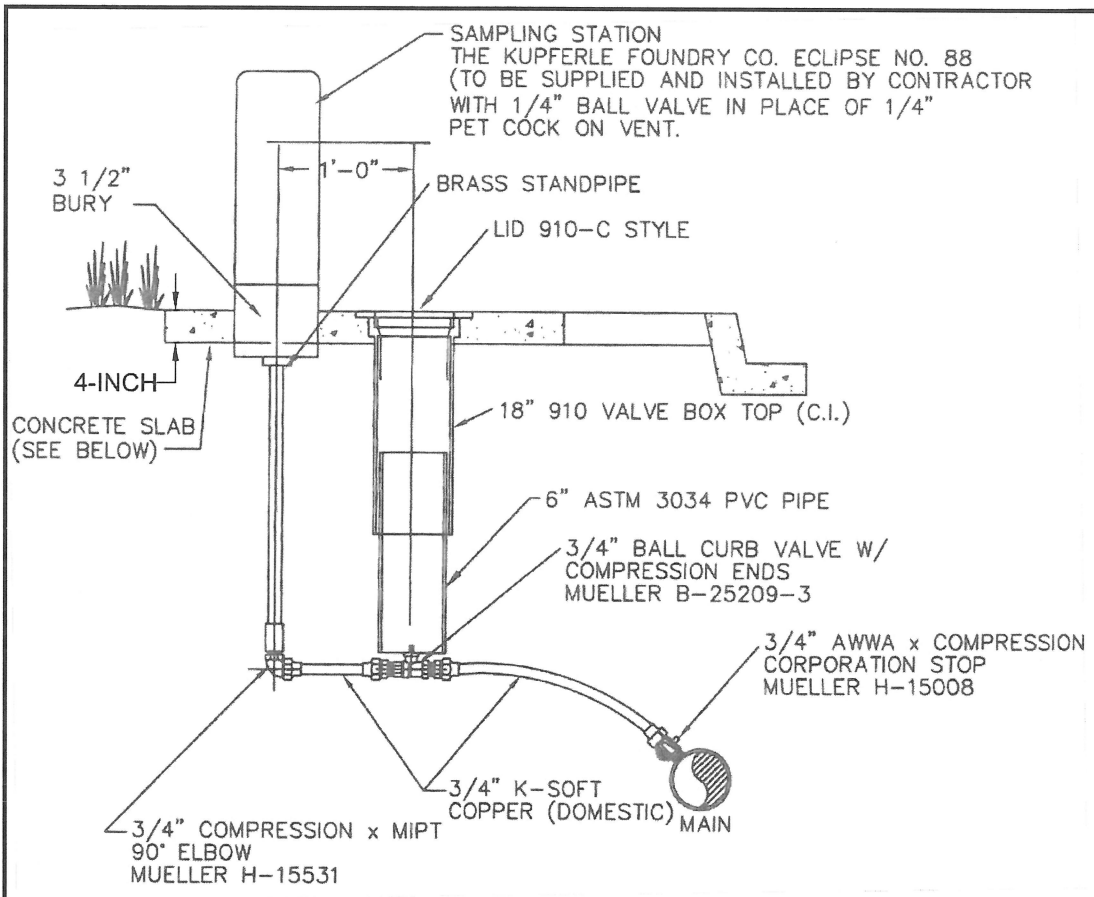
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DETAILS SHEET

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SHEET 20 OF 21

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WATER SAMPLING STATION	
	
DATE:	2017
DRAWING NO.	SS
FILE NO.	



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REVISION	
Date	Description

DETAILS SHEET

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SHEET 21 OF 21