

MEMORANDUM OF UNDERSTANDING

BETWEEN

THE CITY OF WASHOUGAL, WA

AND

THE CITY OF CAMAS, WA

The Cities acknowledge the following understanding regarding construction of the 3rd Avenue Bridge Water Line

As the City of Camas is in the process of upgrading the NE 3rd Avenue Bridge over the Washougal River, the City of Washougal would like to prepare for a future water line installation which crosses this bridge, shown on Exhibit A, attached.

Preparation for the future water line requires that openings are installed at the west and east end of the bridge abutments. The cost for this work will be \$4,968.00, including construction administration fees, as set forth in Exhibit "B". This cost will be paid by the City of Washougal, within 45 days upon receipt of an invoice from the City of Camas. If estimated costs exceed this amount, this MOU will be brought back to both cities for approval with the modified amount.

Camas has reviewed and determined that the space on the bridge is not currently needed for Camas planned improvements. Both parties agree that a future MOU or Franchise Agreement shall be negotiated and executed prior to commencing any related construction activity. All engineering plans, specifications, and construction activity within Camas are subject to review and approval by the City of Camas.

Washougal City Manager

Date

Camas Mayor

Date

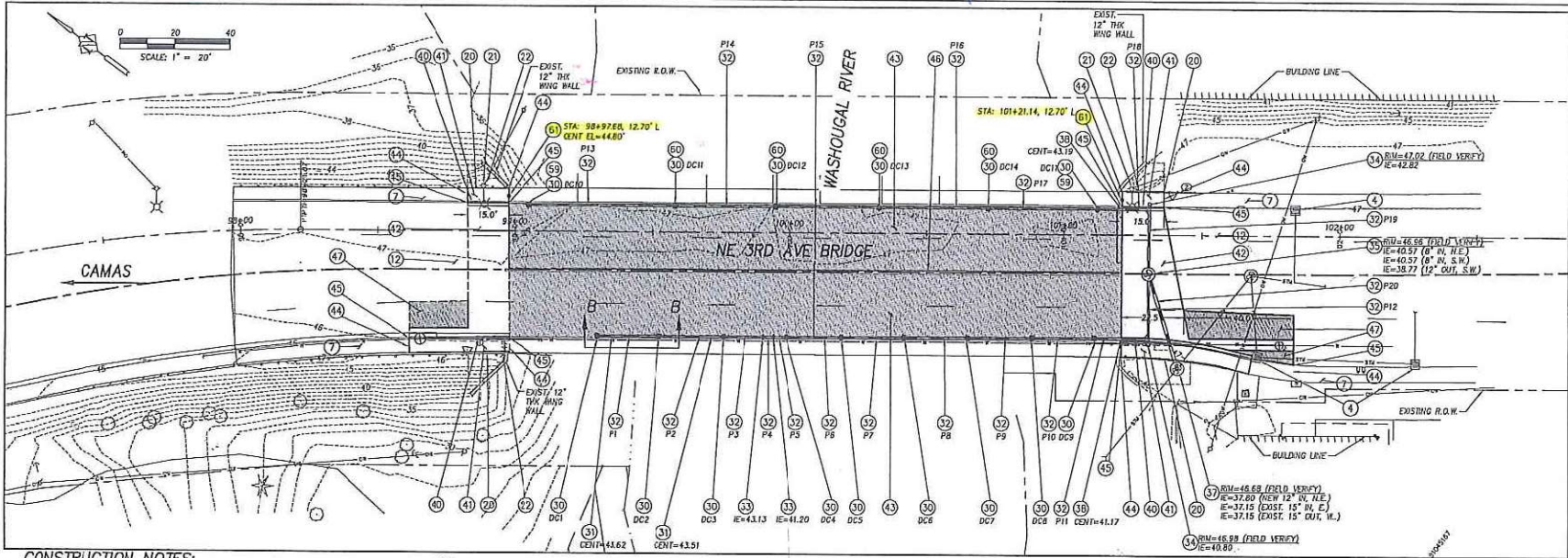
APPROVED AS TO FORM:

Kenneth B. Woodrich, City Attorney for Washougal

Shawn MacPherson, City Attorney for Camas

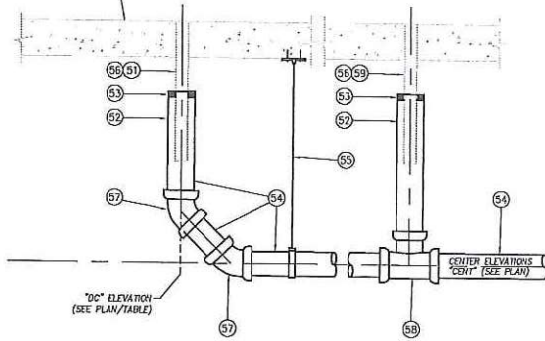
Exhibit A

1/2



CONSTRUCTION NOTES:

- 4) INSTALL INLET PROTECTION PER DETAIL, SHEET C8.
- 7) PROTECT EXISTING CURB AND SIDEWALK.
- 12) PROTECT EXISTING PAVEMENT.
- 20) REMOVE AND RESET BEAM GUARDRAIL AS REQUIRED FOR BRIDGE FOUNDATION AND DRAINAGE WORK. SEE SHEET C11 FOR GUARDRAIL DETAILS.
- 21) REMOVE, RESET, AND STABILIZE STREETLIGHT POLE AS REQUIRED FOR BRIDGE FOUNDATION WORK.
- 22) REMOVE AND RESET SIGN AS REQUIRED FOR BRIDGE FOUNDATION WORK.
- 30) CONNECT TO EXISTING BRIDGE STORM DOWNSPOUT PER DETAIL ON SHEET C8. SEE PLAN FOR INVERT ELEVATION.
- 31) CORE EXISTING INTERIOR DIAPHRAGM TO 10" DIAMETER. SEE PLAN FOR LOCATION AND CORE CENTER ELEVATION. SEE STRUCTURAL PLANS FOR CORING REQUIREMENTS AND DETAILS.
- 32) INSTALL STORM PIPE. SEE PLAN FOR SIZE, TYPE, AND SLOPE. SEE STRUCTURAL PLANS FOR PIPE HANGER LOCATIONS AND DETAILS. SEE CITY STANDARD DETAIL G2 ON SHEET C9 FOR TRENCH DETAILS.
- 33) INSTALL 8" STORM 22.5' VERTICAL BEND. SEE PLAN FOR INVERT ELEVATION.
- 34) INSTALL 90° STORM WYE WITH CLEANOUT PER DETAIL ON SHEET C10. LOCATE CLEANOUT BEHIND NEW CURB IN NEW SIDEWALK. SEE PLAN FOR ROW AND INVERT ELEVATIONS.
- 35) INSTALL 60° STORMWATER TREATMENT MANHOLE WITH 4 LOW DROP CARTRIDGES. BASIS OF DESIGN IS CONTECH STORM FILTER (SFMS60) PER DETAIL, SHEET C16.
- 37) CONNECT TO EXISTING 15" CONCRETE STORM PIPE WITH 48" MANHOLE PER DETAIL ON SHEET C10. SEE PLAN FOR ROW AND INVERT ELEVATIONS.
- 38) CORE EXISTING ABUTMENT TO 10" DIAMETER. SEE PLAN FOR LOCATION AND CORE CENTER ELEVATION (CENT.). SEE STRUCTURAL PLANS FOR CORING REQUIREMENTS AND DETAILS.
- 40) REMOVE AND CONSTRUCT CEMENT CONCRETE CURB AND OUTER PER DETAIL ST12, SHEET C8.
- 41) REMOVE AND CONSTRUCT CEMENT CONCRETE SIDEWALK PER DETAIL S17A, SHEET C8.
- 42) REMOVE AND CONSTRUCT HMA PER SECTIONS, SHEET C9.
- 43) PLANE AND REMOVE EXISTING ASPHALT PAVEMENT TO EXISTING CONCRETE DECKING. PAVE WITH 6" 20' HMA. SEE SHEET C2 FOR EXISTING ASPHALT DETAILS.
- 44) MATCH NEW SIDEWALK TO EXISTING SIDEWALK.
- 45) MATCH NEW CURB TO EXISTING CURB.
- 46) SEE STRUCTURAL PLANS FOR LONGITUDINAL JOINT CONSTRUCTION.
- 47) PLANE AND INLAY EXISTING ASPHALT PER CITY STANDARD DRAWING C2A.
- 50) EXISTING CONCRETE BRIDGE DECK.
- 51) EXISTING 4" VERTICAL DRAIN PIPE.
- 52) INSTALL 8" O.D. PIPE. LENGTH AS REQUIRED.
- 53) INSTALL FLEXIBLE PIPE COMPRESSION JOINT SEALER (DOVUT)
- 54) 8" O.D. MECHANICAL JOINT PIPE (RESTRAIN ALL JOINTS)
- 55) INSTALL PIPE HANGERS PER STRUCTURAL DRAWINGS. (SHEET BR15)
- 56) ADJUST LENGTH OF EXISTING 4" DRAIN PIPE AS REQUIRED.
- 57) INSTALL 0" O.D. 45' M.J. BEND. (RESTRAIN ALL JOINTS)
- 58) INSTALL 0" O.D. U.J. TEE. (RESTRAIN ALL JOINTS)
- 59) EXISTING 4" VERTICAL DRAIN PIPE.
- 60) NEW DRAIN AND VERTICAL DRAIN PIPE. SEE STRUCTURAL PLANS FOR BRIDGE DECK CORING AND INSTALLATION OF NEW DRAIN PIPE. CONTRACTOR TO COORDINATE WITH STRUCTURAL PLANS AND VERIFY LOCATION PRIOR TO CONSTRUCTION.
- 61) PROVIDE 18" DIA BLOCK OUT FOR WATERMAN. SEE PLAN FOR LOCATION AND CENTER ELEVATION. CONTRACTOR TO COORDINATE WITH STRUCTURAL PLANS AND VERIFY LOCATION PRIOR TO CONSTRUCTION.



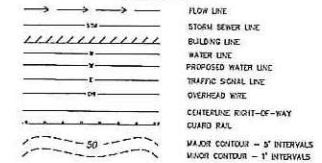
SECTION B-B BRIDGE DOWNSPOUT CONNECTIONS (TYP)

N.T.S.

ABBREVIATIONS

CMF	= CORRUGATED METAL PIPE
CONC	= CONCRETE
CP	= CORRUGATED PLASTIC PIPE
FD	= FOUND
IE	= INVERT ELEVATION
P	= PIPE
R	= RISE
MAG	= MANHOLE
DRN	= DRAIN
PVC	= RIGID PLASTIC PIPE
VP	= YELLOW PLASTIC CAP
CP	= CONTROL POINT

LEGEND



DOWNSPOUT CONNECTION TABLE*

NUMBER	INVERT ELEV.
DC1	43.31
DC2	43.24
DC3	43.17
DC4	41.19
DC5	41.13
DC6	41.06
DC7	41.00
DC8	40.93
DC9	40.86
DC10	40.80
DC11	43.34
DC12	43.23
DC13	43.12
DC14	43.00
DC15	42.80

* INVERTS, PIPES LENGTHS, AND SLOPES TO BE VERIFIED IN THE FIELD.

PIPE TABLE*

PIPE NO.	SIZE	MATERIAL	APPROX. LENGTH	SLOPE
P1	8"	Ductile Iron	22.7 L.F.	0.30%
P2	8"	Ductile Iron	23.1 L.F.	0.30%
P3	8"	Ductile Iron	14.7 L.F.	0.30%
P4	8"	Ductile Iron	3.8 L.F.	50.00%
P5	8"	Ductile Iron	4.5 L.F.	0.30%
P6	8"	Ductile Iron	20.2 L.F.	0.30%
P7	8"	Ductile Iron	22.9 L.F.	0.30%
P8	8"	Ductile Iron	23.1 L.F.	0.30%
P9	8"	Ductile Iron	23.6 L.F.	0.30%
P10	8"	Ductile Iron	22.8 L.F.	0.30%
P11	8"	Ductile Iron	19.5 L.F.	0.30%
P12	8"	PVC	23.3 L.F.	1.00%
P13	8"	Ductile Iron	53.4 L.F.	0.30%
P14	8"	Ductile Iron	36.6 L.F.	0.30%
P15	8"	Ductile Iron	37.7 L.F.	0.30%
P16	8"	Ductile Iron	40.1 L.F.	0.30%
P17	8"	Ductile Iron	39.6 L.F.	0.30%
P18	8"	Ductile Iron	18.7 L.F.	0.30%
P19	8"	PVC	23.3 L.F.	0.65%
P20	12"	PVC	35.6 L.F.	2.75%

ROAD AND DRAINAGE PLAN
NE 3RD AVE. BRIDGE SEISMIC RETROFIT
CAMAS, WASHINGTON

Harper
Houff Peterson
Righellis Inc.
1220 Main Street, Suite 105, Vancouver, WA 98668
Phone: 360-595-1311 www.hpr.com Doc: 240355.131



DESIGNED BY	CHRIS JIN	DATE	12/17/2020
DRAWN BY	JOSIE JIN	CHECKED BY	DLH
DATE		DESCRIPTION	
NO.			
DATE			

SHEET NO.
C6
JOB NO. CAM-14

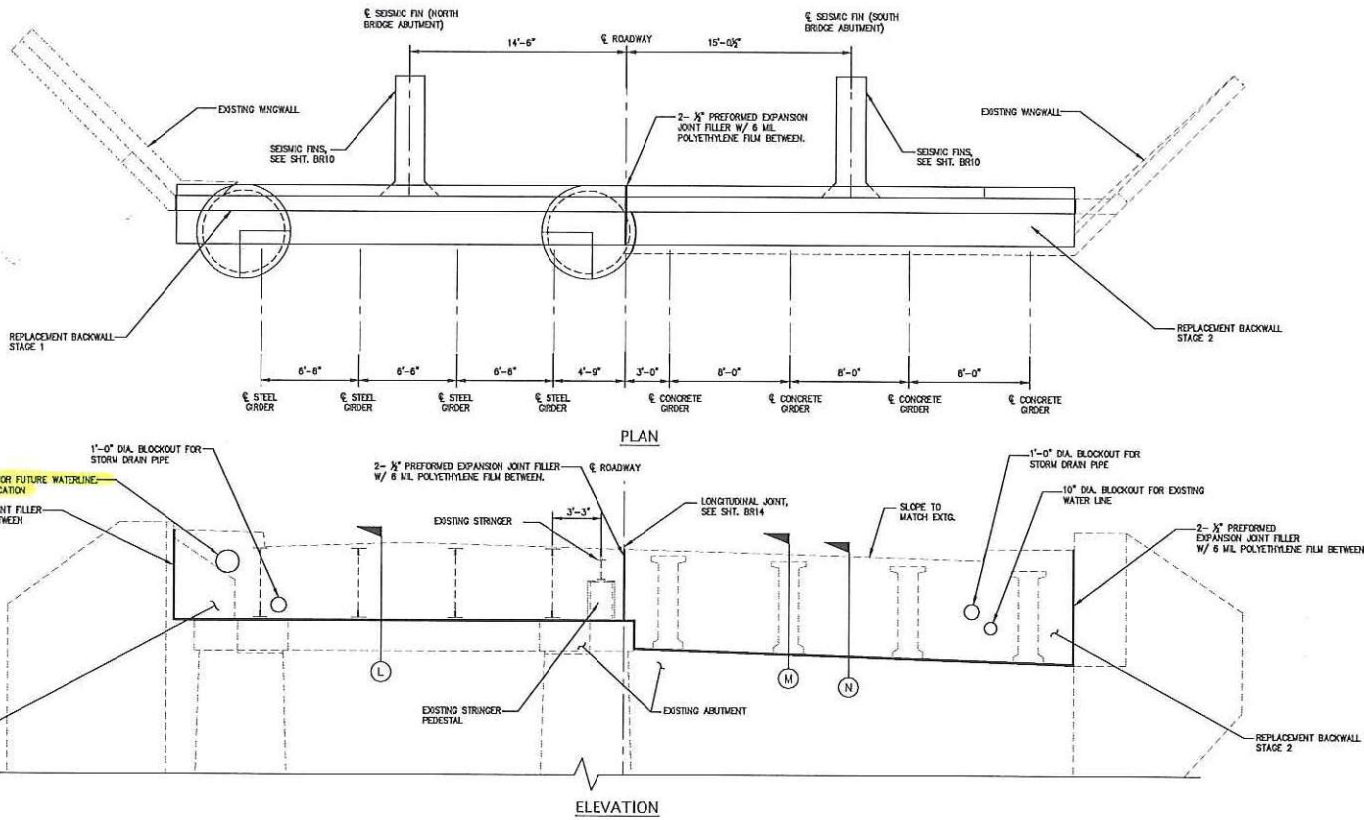
Exhibit A

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BACKWALL REPLACEMENT AND SEISMIC FINIS
NE 3RD AVE. BRIDGE SEISMIC RETROFIT
CAMAS, WASHINGTON



DESIGNED	PP	DATE	12/11/2020
DRAWN	REB		
CHECKED	EDB		
DATE			
R E V I S I O N S			
SHEET NO.	BR09		
JOB NO.	CAM-14		



REPLACEMENT BACKWALL CONSTRUCTION LIMITS, ABUTMENT NO. 2 (ABUTMENT NO. 1 SIMILAR)
SCALE: 1/4" = 1'-0"

NOTE:
NEW BEARINGS, AND SUPERSTRUCTURES NOT SHOWN FOR CLARITY.
MATCH TOP OF BACKWALL WITH TOP OF EXISTING DECK AND SIDEWALK.
FOR SECTION L, SEE SHT. BR11. FOR SECTIONS M AND N, SEE SHT. BR10.
SEE SHT. C5 FOR UTILITY ELEVATIONS.

C:\Users\Burrill\OneDrive\Documents\Projects\2020\14-CAM-14\Drawings\ASD\09-BR09.dwg, 08 - Backwall Replacement and Seismic Finis

Exhibit B

3rd Avenue Bridge - Seismic Retrofit
Washougal Watermain Blockouts at End Walls
Engineers Estimate
January 12, 2021



**Harper
Houf Peterson
Righellis Inc.**

ENGINEERS ♦ PLANNERS
LANDSCAPE ARCHITECTS ♦ SURVEYORS

Description	Unit	Unit Price	Total Price
Materials, including additional rebar, pipe for blockout, and foam plug.	EA Blockout	\$600	\$1,200
Labor - Insert pipe, additional rebar tying, adjustments to forming, fill blockout with foam.	EA Blockout	\$1,200	\$2,400
Overhead, mobilization etc. @ 20%			\$720
Construction Cost - 2 blockouts			\$4,320
Inspection / Admin at 15%			\$648
Total Cost - 2 blockouts			\$4,968

HHPR // DOWL
RAV



01/12/2021