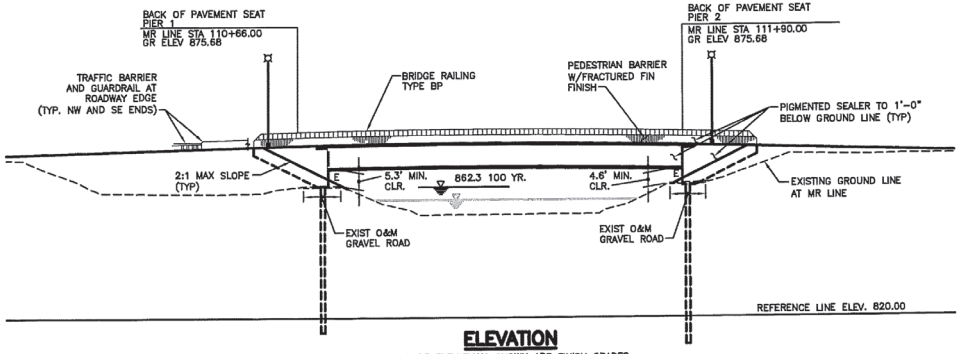
APPENDIX A:
Existing Bridge As-built Plans

SEC. 25, T.7N., R.35E., W.M.
WALLA WALLA COUNTY

PLAN
BEARING OF PIERS IS
AT S87°23'52"E



DATUM
N.A.V.D. 1988

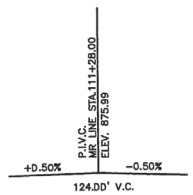
ELEVATION
GRADE ELEVATIONS SHOWN ARE FINISH GRADES
CHAIN LINK FENCE NOT SHOWN FOR CLARITY

GENERAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION–ENGLISH DATED 2006 AND AMENDMENTS.
2. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 3RD EDITION DATED 2004 AND INTERIMS THROUGH 2006. SEISMIC DESIGN OF THIS STRUCTURE HAS BEEN COMPLETED USING AN ACCELERATION COEFFICIENT OF 0.08 AND SOIL PROFILE TYPE I.
3. THE CONCRETE IN THE ROADWAY DECK SHALL BE CLASS 4000D. ALL OTHER CAST–IN–PLACE CONCRETE SHALL BE CLASS 4000.
4. UNLESS OTHERWISE SHOWN IN THE PLANS, THE CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCING STEEL SHALL BE 2 1/2" AT THE TOP OF THE ROADWAY SLAB, 1" AT THE BOTTOM OF THE ROADWAY SLAB, 3" AT THE BOTTOM OF FOOTINGS, 2" AT THE TOP OF FOOTINGS AND 1 1/2" AT ALL OTHER LOCATIONS.
5. THE CONDUIT & JUNCTION BOXES ARE SHOWN FOR REFERENCE ONLY. THE CONTRACTOR SHALL COORDINATE THESE PLANS WITH THE ELECTRICAL PLANS.
6. EXISTING FEATURES AND DIMENSIONS ARE BASED ON INSPECTION REPORTS AND AS–BUILT PLANS.
7. FALSEWORK SHALL BE CAREFULLY RELEASED TO PREVENT IMPACT OR UNDUE STRESS IN THE STRUCTURE.
8. LIMIT THE DIFFERENCE IN BACKFILL HEIGHT BEHIND PIER 1 AND PIER 2 END DIAPHRAGMS TO 3 FEET MAXIMUM.

NOTES

- ## 2–2" ø CONDUIT PIPES IN PEDESTRIAN BARRIER FOR FULL LENGTH OF BRIDGE & WINGWALLS.
- SOIL BORING
- JUNCTION BOX
- * 19'–0" WINGWALL (TYP. AT 4 LOCATIONS)



MR LINE PROFILE

P.C. GIRDERS (W74G)
LOADING: HL–93

USKH
ARCHITECTURE • ENGINEERING
LAND SURVEYING • PLANNING

HDR
HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	MICHAEL A. MURRAY
DESIGNED BY:	BRETT T. AKESSON
	PATRICK T. LI
DRAWN BY:	LARRY D. KELLER
	JOYCE M. LEM
PROJECT NUMBER	22315

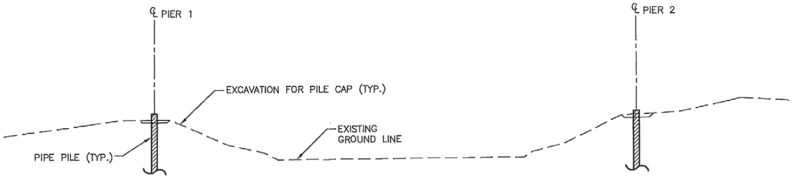
JOYCE MAUREEN LEM
STATE OF WASHINGTON
20941
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 08/10/__

MYRA ROAD EXTENSION PROJECT
CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
BRIDGE LAYOUT

0 1" 2"

FILENAME	00B–01.dwg
SCALE	1"=20'
SHEET	B-01



STAGE 1 – INSTALL PILES

(1) GRADE AND EXCAVATE TO BOTTOM OF PILE CAPS.

(2) INSTALL PIPE PILES

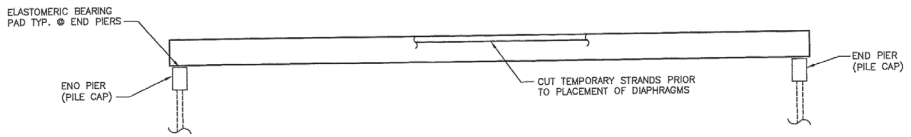
STAGE 2 – CONSTRUCT PILE CAPS

(1) CONSTRUCT PILE CAPS.

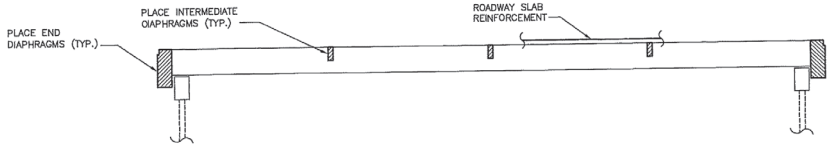
(2) CONSTRUCT SUPERSTRACTURE, SEE CONSTRUCTION SEQUENCE THIS SHEET.

(3) CONSTRUCT WINGWALLS ANO BACKFILL .

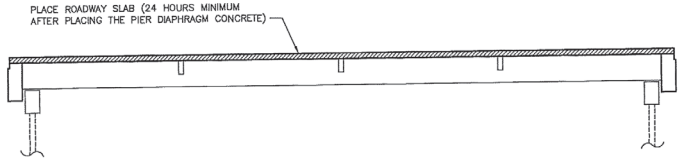
CONSTRUCTION SEQUENCE – SUBSTRUCTURE



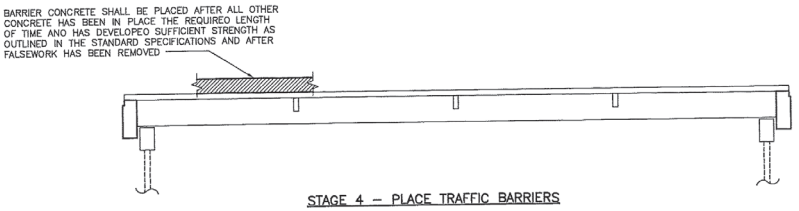
STAGE 1 – SET GIRDERS IN PLACE



STAGE 2 – PLACE DIAPHRAGMS AND PLACE REINFORCEMENT



STAGE 3 – PLACE ROADWAY SLAB



STAGE 4 – PLACE TRAFFIC BARRIERS

CONSTRUCTION SEQUENCE – SUPERSTRUCTURE

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HDR HDR Engineering, Inc.

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	PATRICK T. LI
DRAWN BY:	LARRY O. KELLER
	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM STATE OF WASHINGTON 29541 REGISTERED PROFESSIONAL ENGINEER

EXPIRES 08/10/__

MYRA ROAD EXTENSION PROJECT

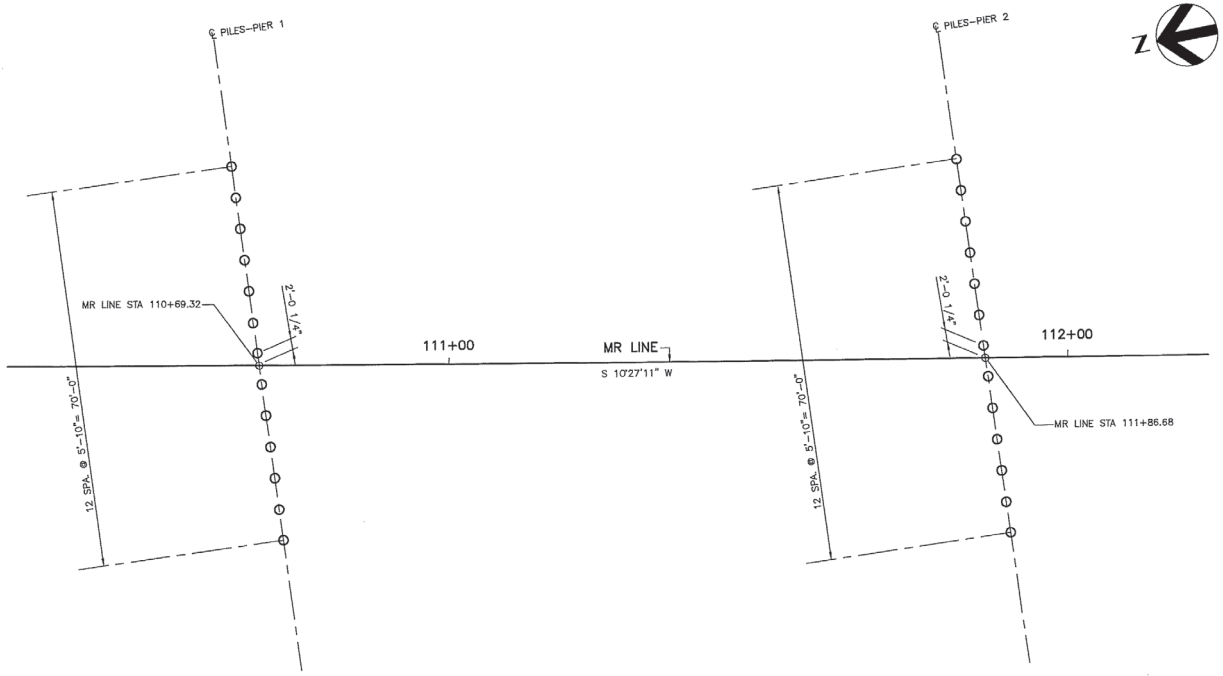
CITY OF WALLA WALLA · WALLA WALLA COUNTY · CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
CONSTRUCTION SEQUENCE

0 1" 2"

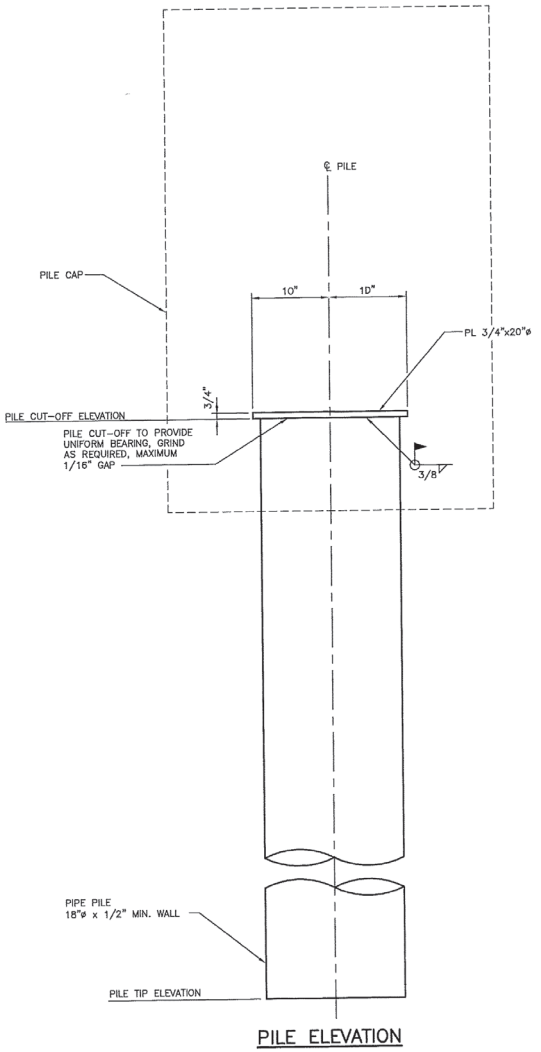
FILENAME	00B-02.dwg
SCALE	NO SCALE

SHEET B-02



FOUNDATION LAYOUT

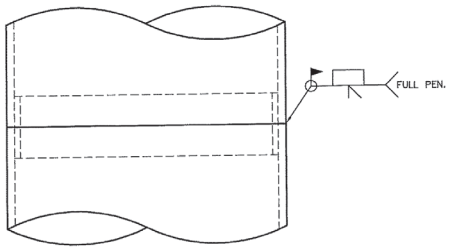
BEARING OF ALL PIERS IS S87°23'52"E



PILE ELEVATION

PILE DATA

PIER	CUT–OFF ELEVATION	EST. TIP ELEVATION	EST. LENGTH (FT)	MINIMUM TIP ELEVATION (FT)	ULTIMATE CAPACITY (KIPS)
1	864	819	45	827	625
2	864	818	46	822	625



PILE SPLICE DETAIL

NOTES

1. STEEL PILES SHALL CONFORM TO ASTM A252 GRADE 2.
2. STEEL PILES SHALL BE DRIVEN CLOSED END AND HAVE PROTECTIVE TIPS.
3. INSTALL PILES AND ISOLATION CASINGS PRIOR TO CONSTRUCTING RETAINING WALL BACKFILL.

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HDR HDR Engineering, Inc.

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	JOYCE M. LEM
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JOYCE MAUREEN LEM — STATE OF WASHINGTON — 23541 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 06/10/____

MYRA ROAD EXTENSION PROJECT

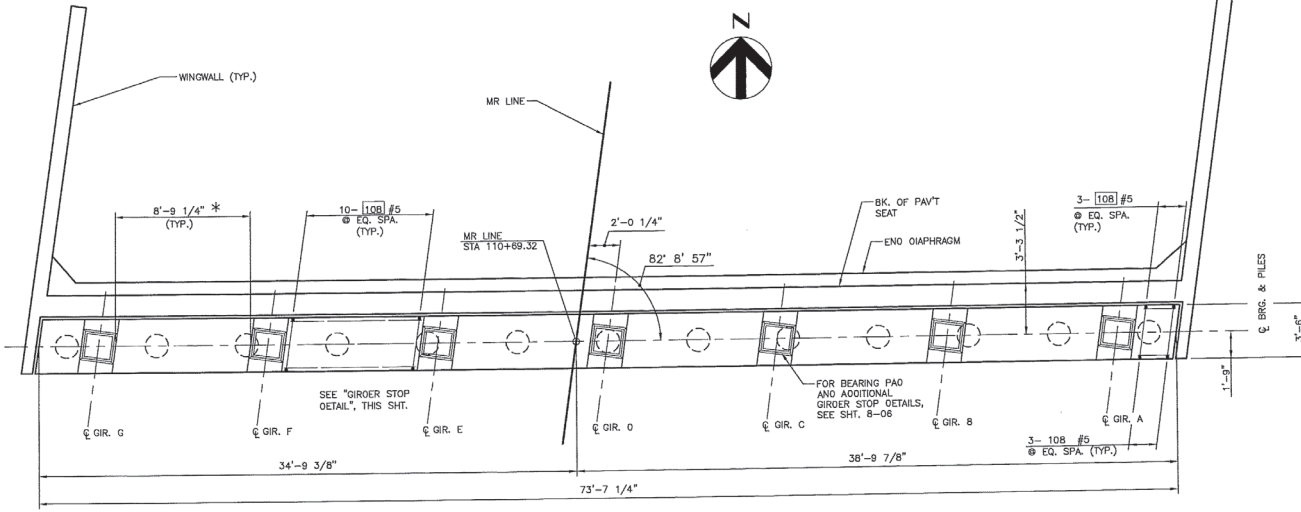
CITY OF WALLA WALLA · WALLA WALLA COUNTY · CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
FOUNDATION PLAN

0 1" 2"

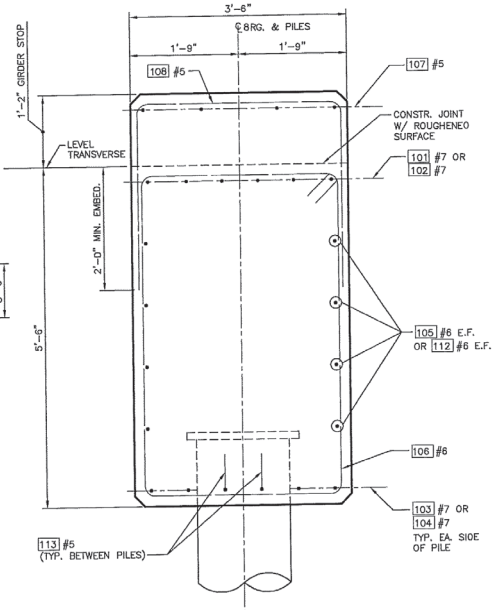
FILENAME	00B–03.dwg
SCALE	NO SCALE

SHEET B-03

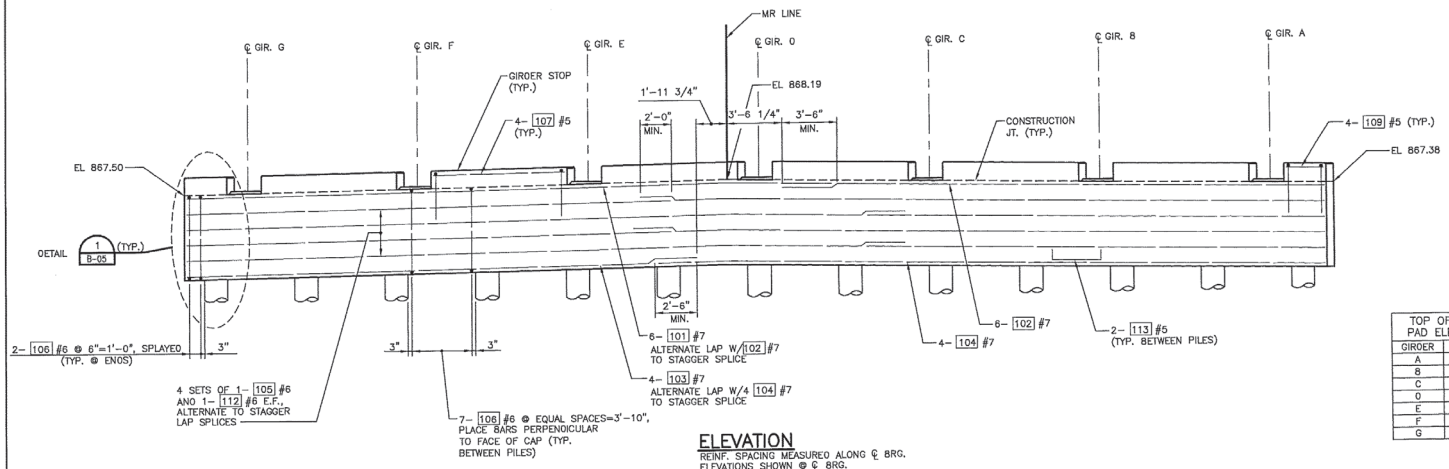


* ADJUST PER SECTION G / B-06

PLAN
1/4"=1'-0"

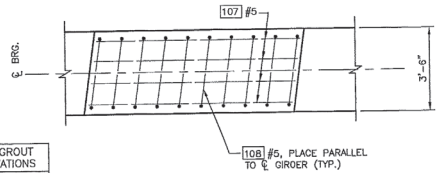


TYPICAL SECTION
1"=1'-0"



ELEVATION
REINF. SPACING MEASURED ALONG ℄ BRG.
ELEVATIONS SHOWN @ ℄ BRG.

TOP OF GROUT PAD ELEVATIONS	
GIRDER	ELEVATION
A	867.60
B	867.82
C	868.05
D	868.27
E	868.14
F	867.93
G	867.72



PLAN
GIRDER STOP DETAIL

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HDR — HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION

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	PATRICK T. LI
DRAWN BY:	LARRY O. KELLER
	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM — STATE OF WASHINGTON — 29041 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06/10/___

MYRA ROAD EXTENSION PROJECT

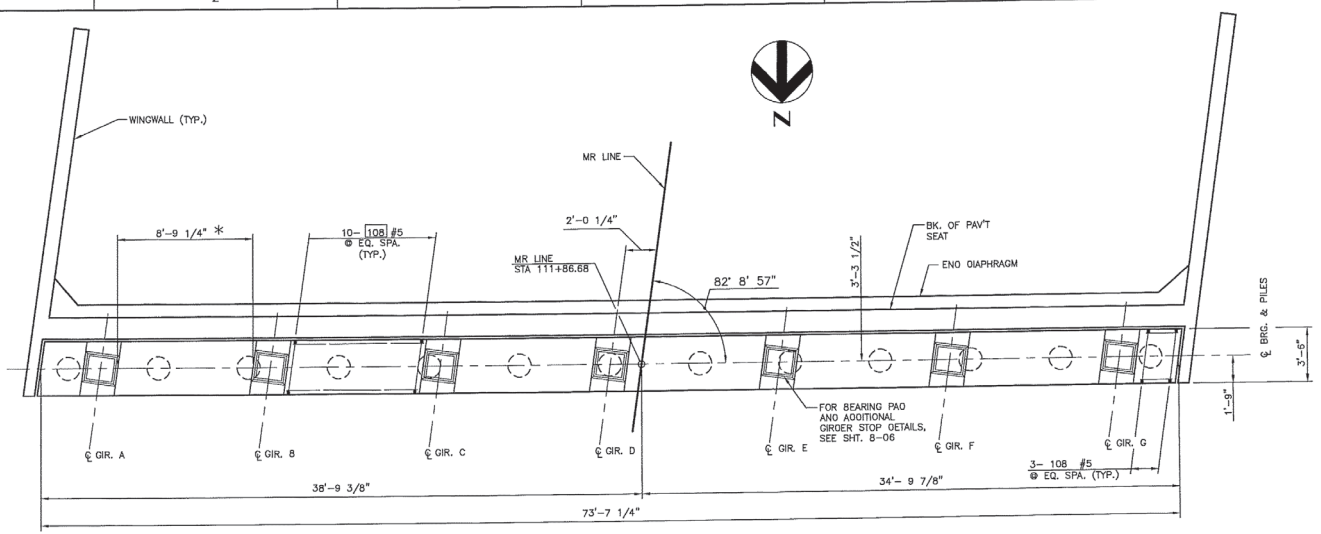
CITY OF WALLA WALLA — WALLA WALLA COUNTY — CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
PIER 1 - PLAN AND ELEVATION

0 1" 2"

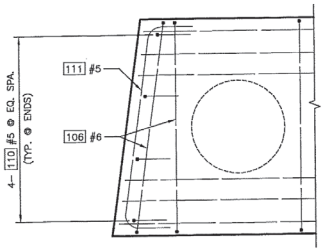
FILENAME	008-04.dwg
SCALE	NO SCALE

SHEET B-04

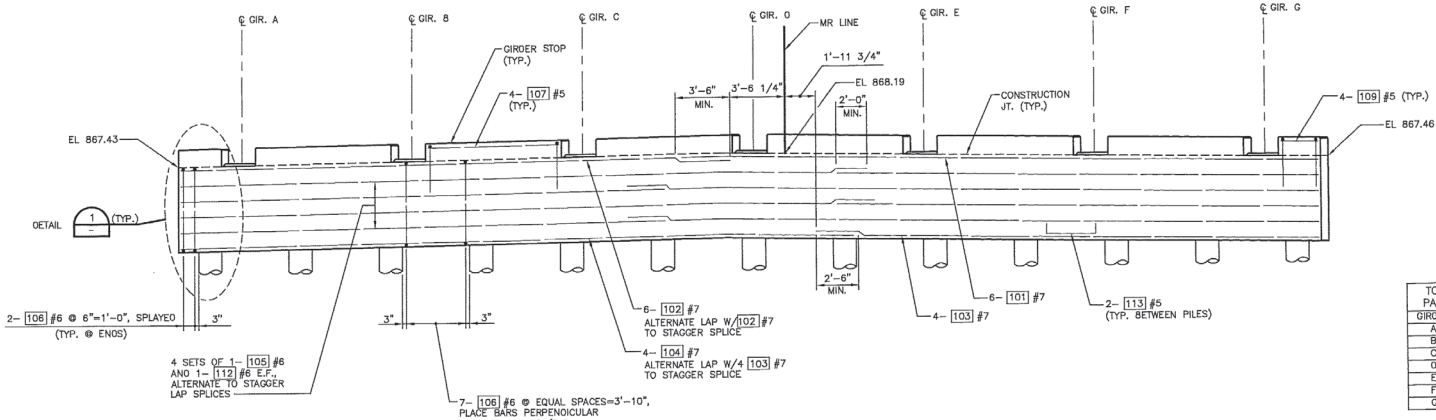


* ADJUST PER SECTION G B-06

PLAN
1/4"=1'-0"

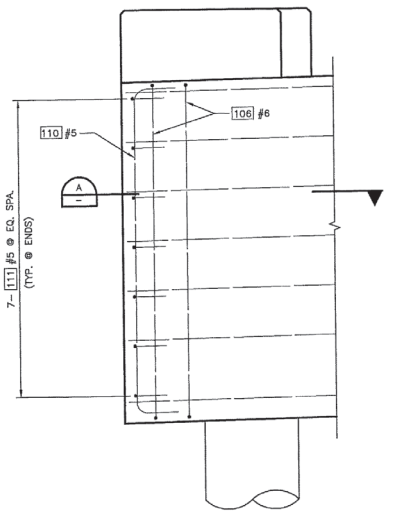


SECTION A



ELEVATION
REINF. SPACING MEASURED ALONG ℄ BRG.
ELEVATIONS SHOWN @ ℄ BRG.

TOP OF GROUT PAD ELEVATIONS	
GIRDER	ELEVATION
A	867.64
B	867.85
C	868.06
D	868.27
E	868.13
F	867.91
G	867.68



END DETAIL 1 B-04

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HDR
HDR Engineering, Inc.

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PROJECT NUMBER	22315

JOYCE MAUREEN LEM — STATE OF WASHINGTON — 23541 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06/10/__

MYRA ROAD EXTENSION PROJECT

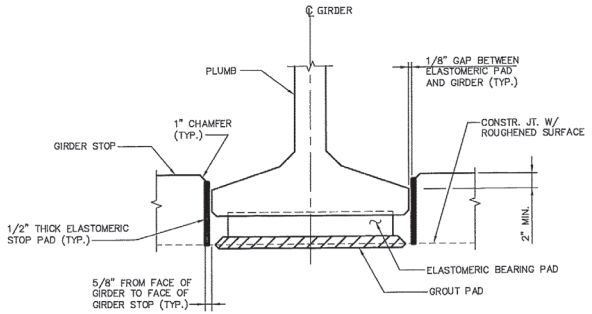
CITY OF WALLA WALLA — WALLA WALLA COUNTY — CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
PIER 2 - PLAN AND ELEVATION

0 1" 2"

FILENAME	00B-05.dwg
SCALE	NO SCALE

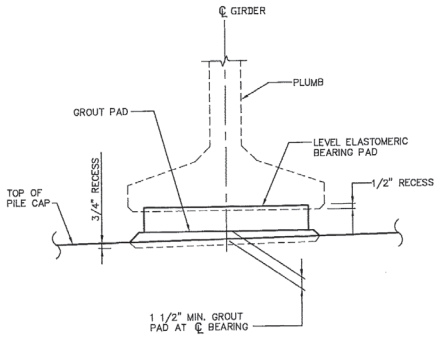
SHEET B-05



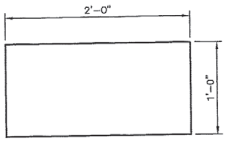
SECTION G

NOTES:

1. GIRDER STOPS SHALL BE CONSTRUCTED AFTER PLACEMENT OF PRESTRESSED GIRDERS.
2. ELASTOMERIC PADS BETWEEN GIRDER AND GIRDER STOPS SHALL BE PLACED AFTER CONSTRUCTING THE GIRDER STOPS. THE PADS SHALL BE CEMENTED TO GIRDER STOPS WITH APPROVED RUBBER CEMENT.



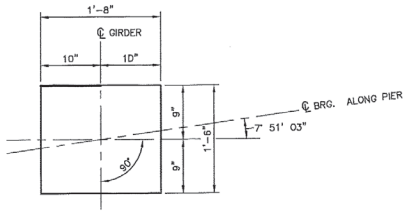
GROUT PAD ELEVATION



ELASTOMERIC STOP PAD

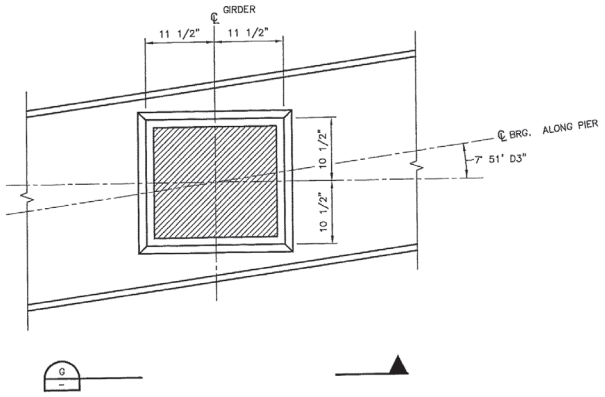
DUROMETER HARDNESS = 60

MAXIMUM COMPRESSIVE SERVICE LOADS		
PIER	DL	LL
1 & 2	213 KIPS	127 KIPS

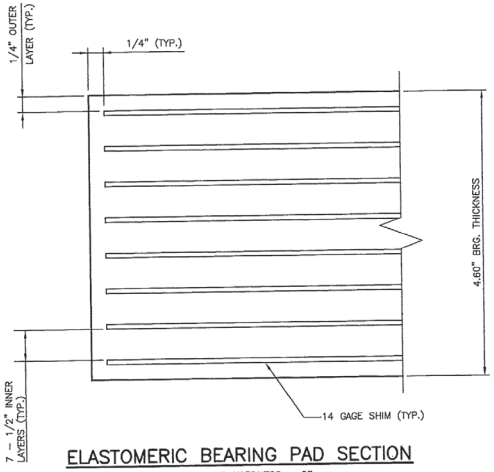


ELASTOMERIC BEARING PAD

LAMINATED ELASTOMERIC BRIDGE PAD 4.60" THICK (8 SHIMS)
DUROMETER HARDNESS = 60



GROUT PAD DETAIL



ELASTOMERIC BEARING PAD SECTION

DUROMETER HARDNESS = 60

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PROJECT NUMBER	22315

JOYCE MAUREEN LEM
STATE OF WASHINGTON
29541
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06/10/____

MYRA ROAD EXTENSION PROJECT

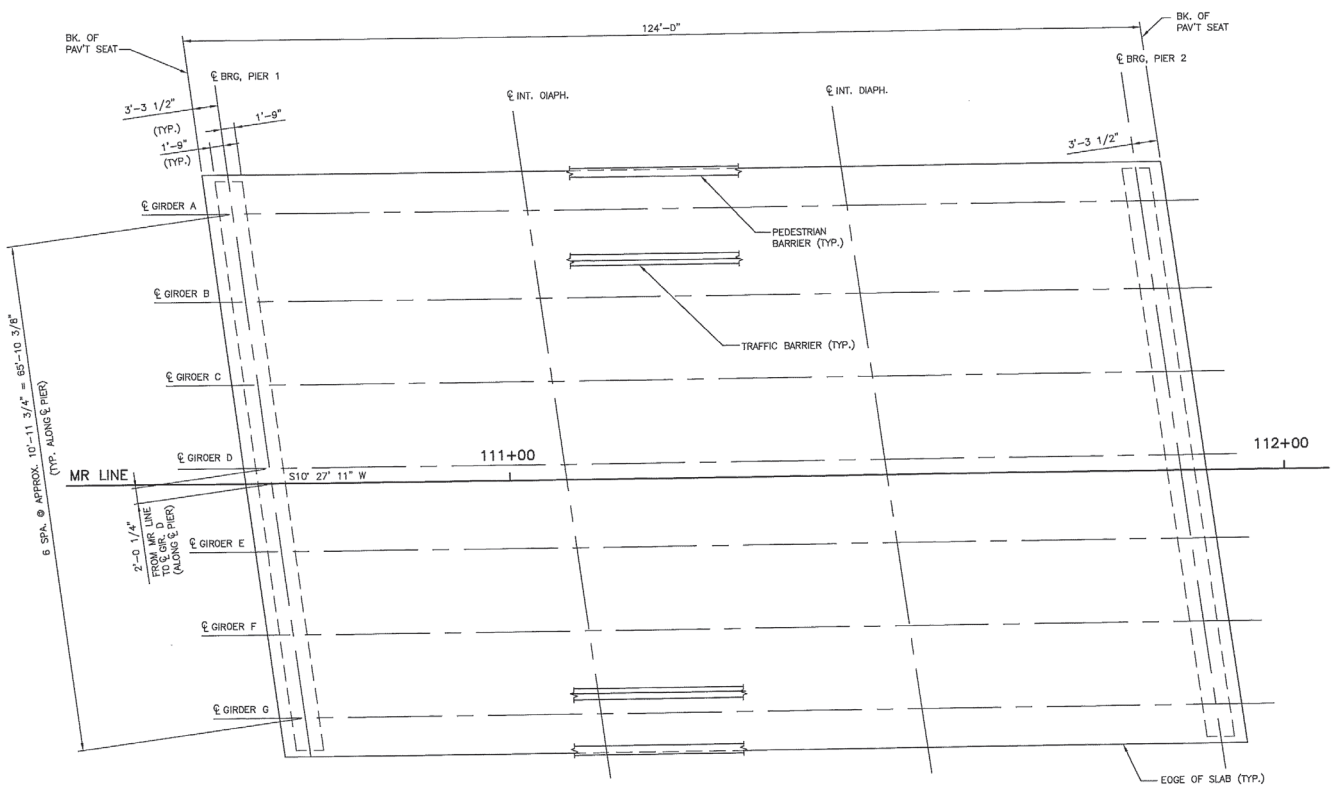
CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

MYRA ROAD
PIER 1 & 2 BEARING DETAILS

0 1" 2"

FILENAME	D08-06.dwg
SCALE	NO SCALE

SHEET B-06



FRAMING PLAN

BEARING OF ALL IS S87°23'52" E

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LAND SURVEYING • PLANNING

HDR
HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION

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	JOYCE M. LEM
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JOYCE MAUREEN LEM
STATE OF WASHINGTON
29541
REGISTERED
PROFESSIONAL ENGINEER
EXPIRES 06/10/___

MYRA ROAD EXTENSION PROJECT

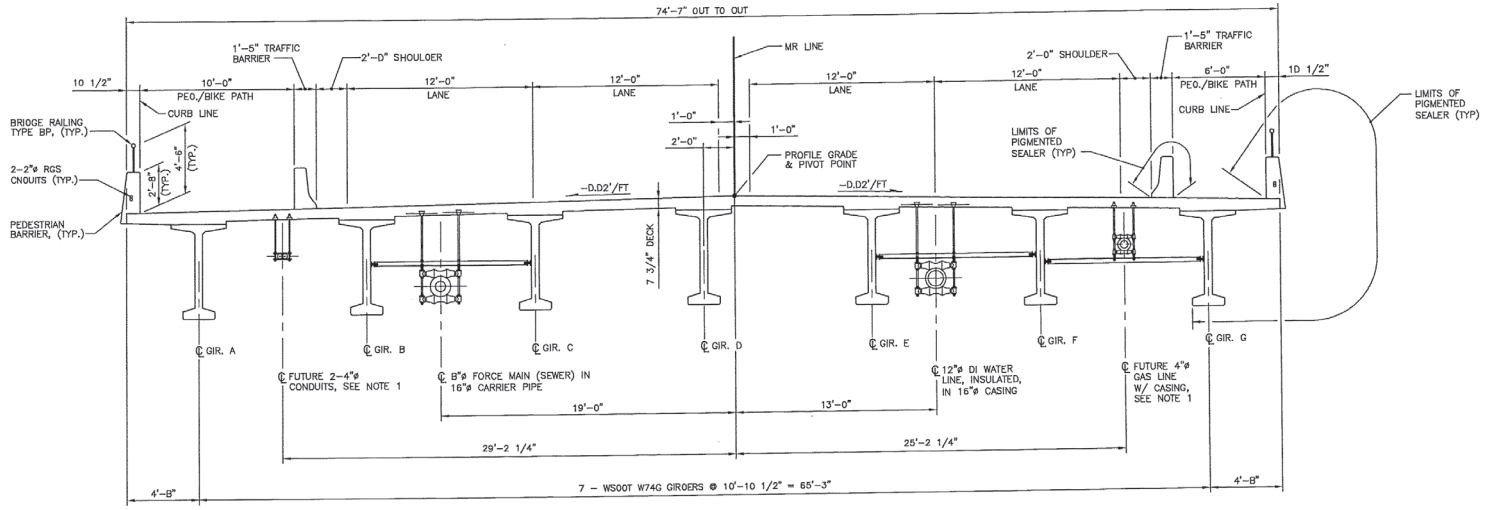
CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
FRAMING PLAN

0 1" 2"

FILENAME	00B-07.dwg
SCALE	NO SCALE

SHEET
B-07



TYPICAL SECTION
(LOOKING SOUTH)

NOTES:

1. INSTALL DECK SLAB INSERTS FOR FUTURE UTILITIES (4"ø CONDUIT & GAS LINE). HANGER RDO ASSEMBLIES, CONDUIT, AND CASINGS FOR FUTURE UTILITIES ARE NOT IN CONTRACT.
2. SEE SHEET B24 FOR UTILITY SUPPORT DETAILS.

USKH — ARCHITECTURE • ENGINEERING — LAND SURVEYING • PLANNING
HDR — HDR Engineering, Inc.

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PROJECT NUMBER	22315

JOYCE MAUREEN LEM — STATE OF WASHINGTON — 29841 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 06/10/___

MYRA ROAD EXTENSION PROJECT

CITY OF WALLA WALLA — WALLA WALLA COUNTY — CITY OF COLLEGE PLACE

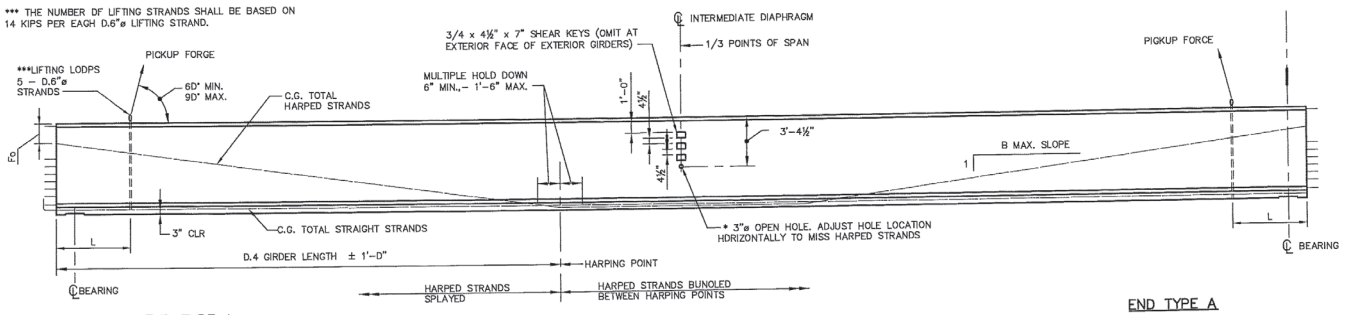
MYRA ROAD
MILL CREEK BRIDGE
TYPICAL SECTION

0 1" 2"

FILENAME	DOB-0B.dwg
SCALE	NO SCALE

SHEET B-08

*** THE NUMBER OF LIFTING STRANDS SHALL BE BASED ON 14 KIPS PER EAGH D.6"ø LIFTING STRAND.

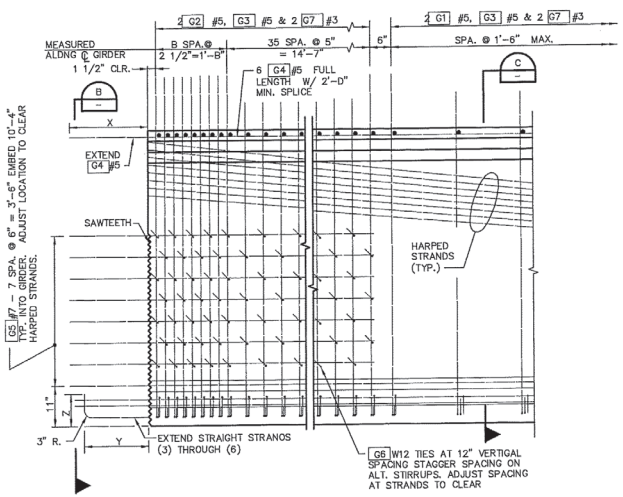


END TYPE A

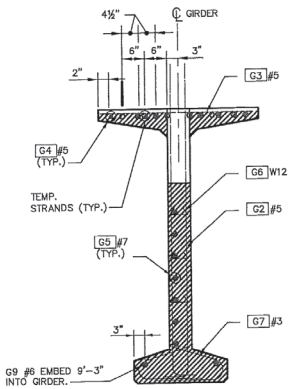
END TYPE A

GIRDER ELEVATION

* OMIT HOLES AND PLACE INSERTS ON THE INTERIOR FAGE OF EXTERIOR GIRDERS. PLACE HOLES AND INSERTS PARALLEL TO SKEW. INSERTS SHALL BE 1" BURKE HI–TENSILE, LANCASTER MALLEABLE, DAYTON–SUPERIOR F–62 FLARED THIN SLAB (1" x 4 5/8") FERRULE INSERT OR APPROVED EQUAL. (TYP.)

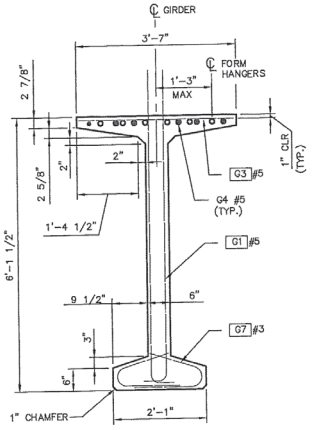


TYPICAL END ELEVATION



VIEW

SAWTEETH SHOWN BY SHADEO AREA



SECTION

NOTES:

1. ALL DETAILS ON THIS SHEET ARE FOR PRETENSIONED DESIGN ONLY.
2. PLAN LENGTH SHALL BE INCREASED AS NEGESSARY TO COMPENSATE FOR SHORTENING DUE TO PRESTRESS AND SHRINKAGE.
3. EXTRA CAUTION MUST BE EXERGISED IN HANDLING AND PLACING GIRDERS. ALL GIRDERS SHALL BE GHECKED BY THE CONTRACTOR TO ENSURE THAT THEY ARE BRACED ADEQUATELY TO PREVENT TIPPING AND TO CONTROL LATERAL BENDING OURING SHIPPING. ONGE ERECTED, ALL GIRDERS SHALL BE BRAGED TO PREVENT TIPPING UNTIL THE INTERMEDIATE DIAPHRAGMS ARE CAST AND GURED.
4. THE GIRDERS MAY NEED TO BE BRACED LATERALLY DURING SHIPPING TO PREVENT TIPPING OR BUCKLING.
5. THE TOP SURFAGE OF THE GIROER FLANGE SHALL BE ROUGHENED IN ACCORDANCE WITH SECTION 6–02.3(25)H OF THE STANDARD SPECIFIGATIONS.
6. IF THE LIFTING LOOPS EXTENO WITHIN 3" OF THE TOP OF THE ROADWAY SLAB, THEY SHALL BE GUT OFF PRIOR TO PLACING THE ROADWAY SLAB. ALL LIFTING STRANOS SHALL BE OF THE SAME MATERIAL AND STRENGTHS AS THE PRESTRESSING STRANDS. WRAP THE LIFTING LOOPS SO THAT EACH STRAND WILL CARRY ITS SHARE OF THE TOTAL LOAD. EXTEND LIFTING LOOPS ENDING WITH A 9" LONG 90° HOOK TO WITHIN 3" GLEAR OF THE BOTTOM OF THE GIRDER.
7. FOR END TYPES A, CUT ALL STRANDS FLUSH WITH THE GIROER ENDS AND PAINT WITH AN APPROVED EPOXY RESIN, EXCEPT FOR EXTENDED STRANDS AS SHOWN.
8. FORMS FOR BEARING PAD RECESSED SHALL BE CONSTRUCTED AND FASTENED IN SUCH A MANNER AS TO NOT GAUSE DAMAGE TO THE GIRDER DURING THE STRAND RELEASE OPERATION.
9. ALL STRANDS SHALL BE D.6"ø LOW RELAXATION STRANOS (AASHTO M2D3 GRADE 27D.)
10. FOR SAWTOOTH DETAILS SEE W74G GIRDER DETAILS 2 OF 2.
11. TEMPORARY STRANDS ARE PRETENSIONED OR POST–TENSIONED. IF PRETENSIONED, THESE TEMPORARY STRANOS SHALL BE UNBONDED OVER ALL BUT THE END 10'–D" OF THE GIRDER LENGTH. AS AN ALTERNATE, TEMPORARY STRANDS MAY BE POST–TENSIONED BEFORE THE GIRDER IS LIFTED FROM THE FORM. TEMPORARY STRANDS SHALL BE CUT BEFORE INTERMEDIATE DIAPHRAGMS ARE GAST.

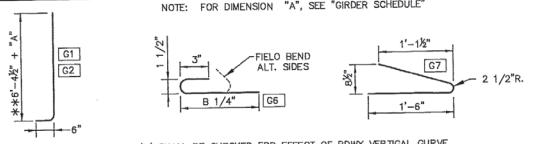
DIAPHRAGM TYPE	END TYPE	BEARING RECESS	X	Y	Z	SAWTEETH
ENO DIAPH. ON GIROER	A	YES	1'–1D"	1'–6"	9"	YES

BENDING DIAGRAM (ALL DIMENSIONS ARE OUT TO OUT)

NOTE: FOR DIMENSION "A", SEE "GIRDER SCHEDULE"

MARK	LOCATION	SIZE		
G1	GIRDER STIRRUPS	5		
G2	GIRDER END STIRRUPS	5		
G3	GIRDER TOP FLANGE	5	STR.	
G4	GIRDER LONGIT. FULL LENGTH	5	STR.	
G5	GIROER END LONGIT.	7	STR.	
G6	GIROER END TIES	W12	≠	
G7	GIRDER BOT. FLANGE TIES	3		
G9	GIROER END LONGIT.	6	STR.	

≠ #3 or #4 MAY BE SUBSTITUTED. FIELD BENDING IS OPTIONAL.



** SHALL BE GHECKED FOR EFFECT OF RDWY VERTIGAL GURVE

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ISSUE	DATE	DESGRIPTION

PROJECT MANAGER	MICHAEL A. MURRAY
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	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM STATE OF WASHINGTON 23541 REGISTERED PROFESSIONAL ENGINEER EXPIRES 06/10/___

MYRA ROAD EXTENSION PROJECT

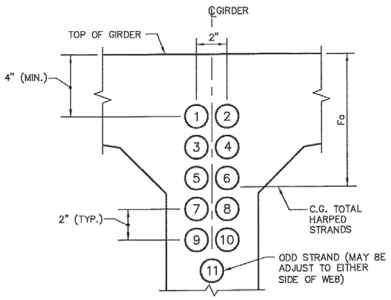
CITY OF WALLA WALLA · WALLA WALLA COUNTY · CITY OF COLLEGE PLACE

MYRA ROAD
W74G GIRDER DETAILS 1 OF 2

0 1" 2"

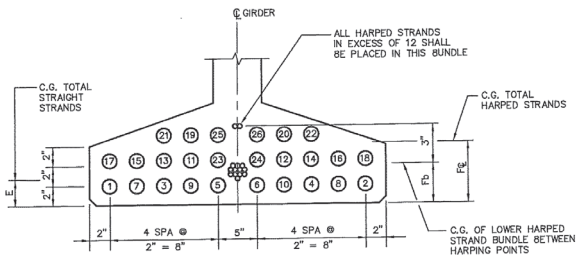
FILENAME	DDB–D9.dwg
SGALE	NO SCALE

SHEET B-09



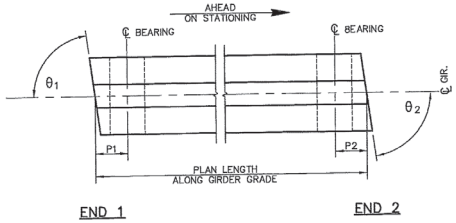
STRAND PATTERN AT GIRDER END

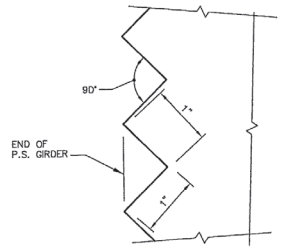
HARPED STRAND LOCATION SEQUENCE SHALL BE AS SHOWN (1), (2) ETC.



STRAND PATTERN AT ℄ SPAN

STRAND LOCATION SEQUENCE SHALL BE AS SHOWN (1), (2) ETC.





SAWTOOTH DETAILS

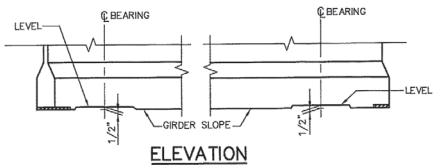
SAWTEETH ARE FULL WIDTH – USE SAWTOOTH KEYS FROM BOTTOM OF BOTTOM FLANGE TO BOTTOM OF LOWEST HARPED STRAND AS WELL AS TOP FLANGE ADJACENT TO HARPED STRANDS AS SHOWN IN VIEW B – W83G GIRDER DETAILS 1 OF 3

GIRDER SCHEDULE

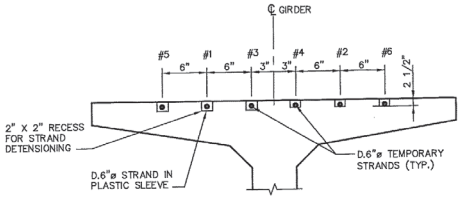
DIMENSION "A" AT ℄ BEARINGS = 11"

BASED ON GIRDER DEFLECTION = "D" AT TIME OF SLAB PLACEMENT (120 DAYS)

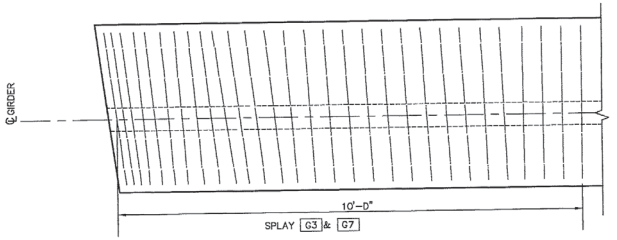
SPAN	GIRDER	END 1 TYPE	END 2 TYPE	L	θ_1	θ_2	P_1	P_2	PLAN LENGTH (ALONG GIRDER GRADE)	MIN. CONC. COMPR. STRENGTH @ FINAL F'C (KSI)	MIN. CONC. COMPR. STRENGTH @ RELEASE F'Ci (KSI)	HARPED NO. OF STRANDS	HARPED JACKING FORCE (KIPS)	STRAIGHT NO. OF STRANDS	STRAIGHT JACKING FORCE (KIPS)	TEMPORARY NO. OF STRANDS	TEMPORARY JACKING FORCE (KIPS)	LOCATION OF C.G. STRANDS (IN.) E	F℄	Fb	Fo	C (IN.)	D @ 4D DAYS (IN.)	D @ 12D DAYS (IN.)
1	ALL	A	A	2'–D"	82.1	82.1	2'–2 1/4"	2'–2 1/4"	121'–11"	9.D	8.D	22	966.7	2D	878.9	6	263.7	3.2D	4.36	3.0D	14.DD	2.20	3.36	3.71



ELEVATION

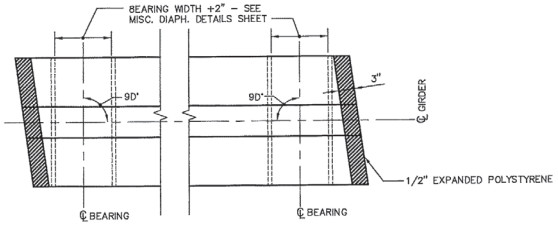


TEMPORARY STRAND BLOCKOUT DETAIL

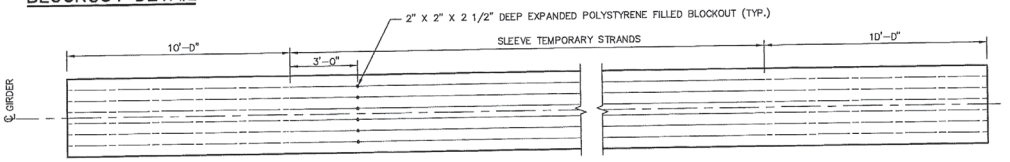


TRANSVERSE REINFORCING SKEWED ENDS

ONLY TRANSVERSE REINF. SHOWN



PLAN – BEARING RECESS AND BOTTOM FLANGE SPALL PROTECTION DETAIL



PLAN VIEW OF TEMPORARY STRANDS

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	PATRICK T. LI
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	JOYCE M. LEM
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JOYCE MAUREEN LEM — STATE OF WASHINGTON — 29541 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 06/10/__

MYRA ROAD EXTENSION PROJECT

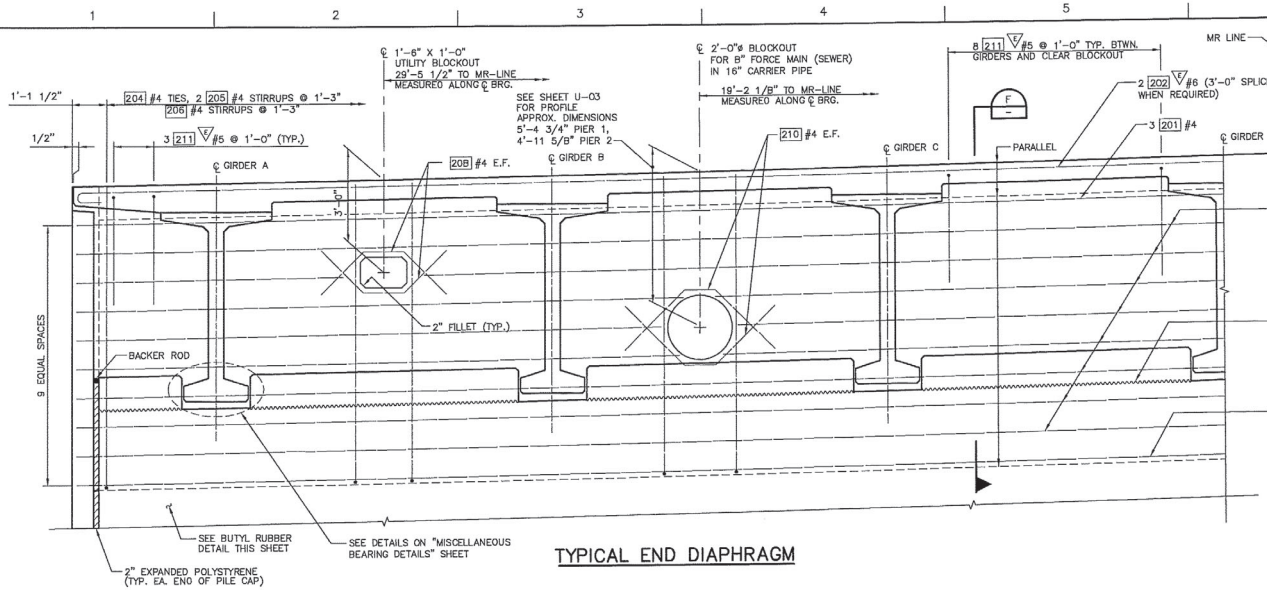
CITY OF WALLA WALLA · WALLA WALLA COUNTY · CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
W74G GIRDER DETAILS 2 OF 2

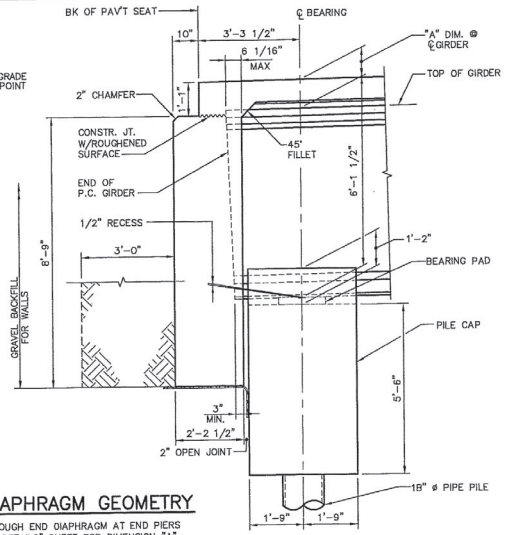
0 1" 2"

FILENAME	008–10.dwg
SCALE	NO SCALE

SHEET B-10

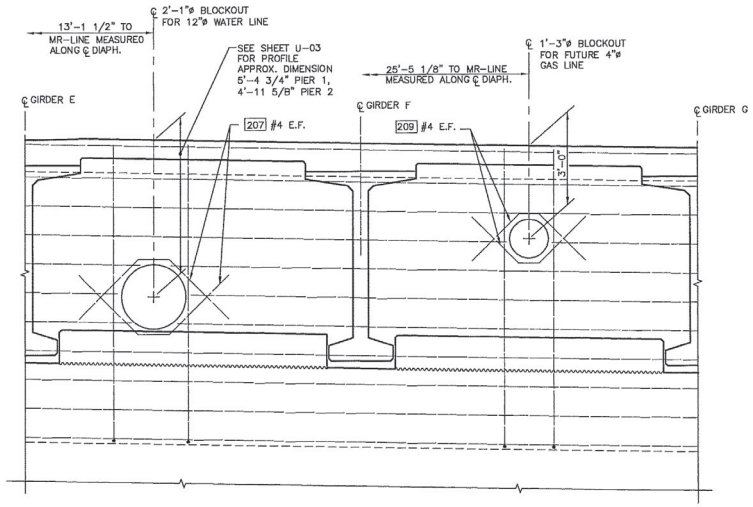


TYPICAL END DIAPHRAGM

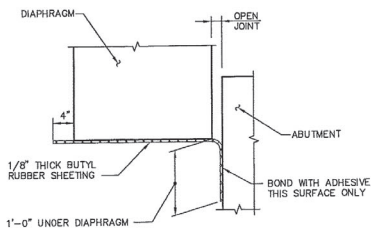


END DIAPHRAGM GEOMETRY

SECTION THROUGH END DIAPHRAGM AT END PIERS
SEE "GIRDER DETAILS" SHEET FOR DIMENSION "A".
ALL LONGITUDINAL DIMENSIONS ARE NORMAL TO SKEW.



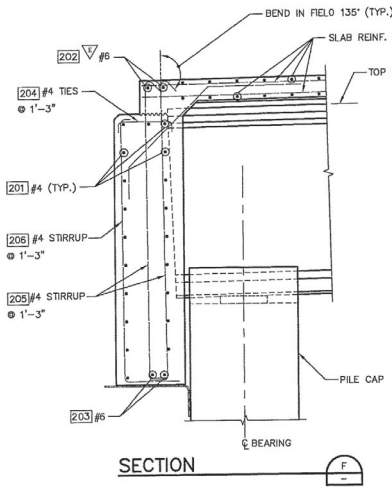
TYPICAL END DIAPHRAGM – CONT.



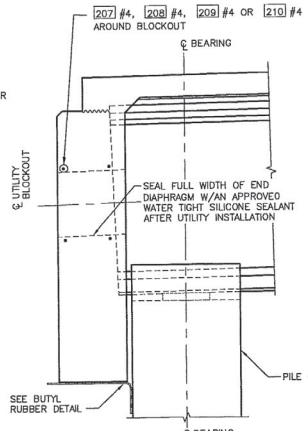
ELEVATION BUTYL RUBBER @ DIAPHRAGM

NOTES:

1. GIRDERS SHALL BE HELD RIGIDLY IN PLACE WHEN DIAPHRAGMS ARE PLACED.
2. TRAFFIC BARRIER AND PEDESTRIAN BARRIER NOT SHOWN FOR CLARITY.
3. ADJUST SPACING OF VERTICAL REINFORCING TO CLEAR BLOCKOUTS.
4. CUT AND BEND HORIZONTAL REINFORCING TO CLEAR BLOCKOUTS.



SECTION



TYPICAL SECTION AT UTILITY BLOCKOUT

FOR DETAILS NOT SHOWN
SEE SECTION F

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	PATRICK T. LI
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	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM — STATE OF WASHINGTON — 29941 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06/10/____

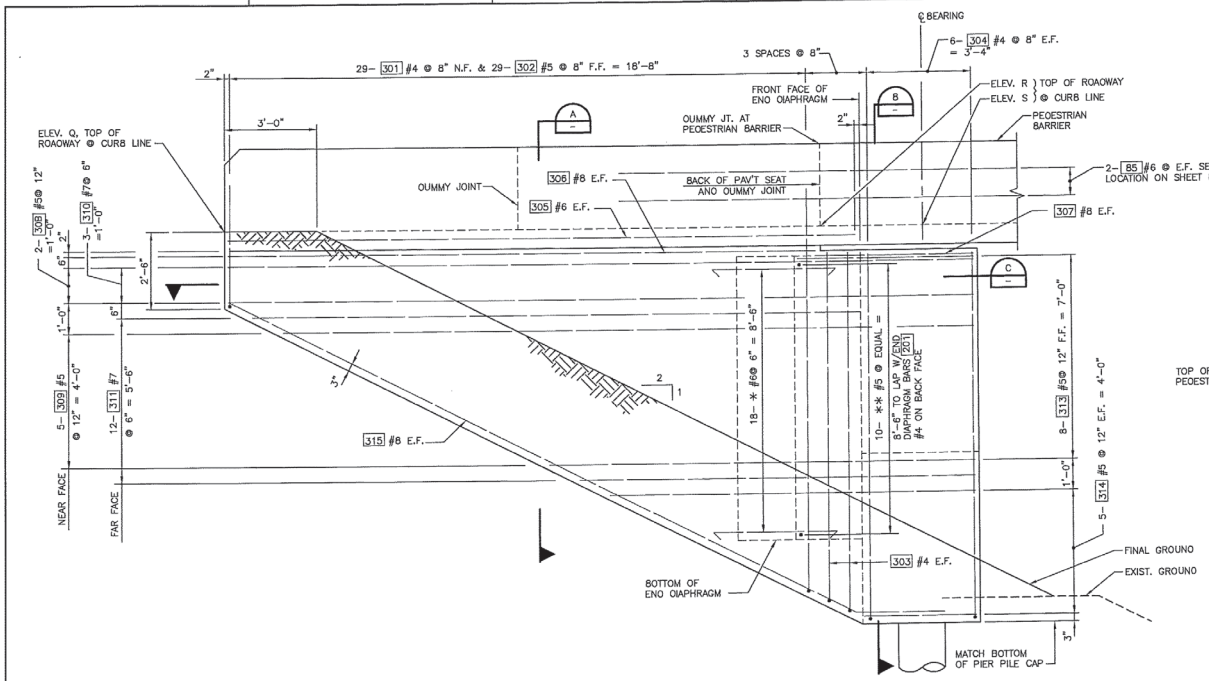
MYRA ROAD EXTENSION PROJECT

CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

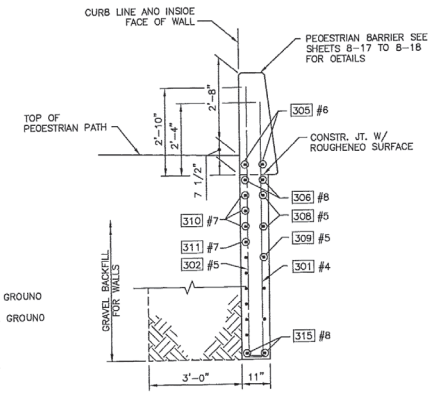
MYRA ROAD
MILL CREEK BRIDGE
END DIAPHRAGM DETAILS

0 1" 2"

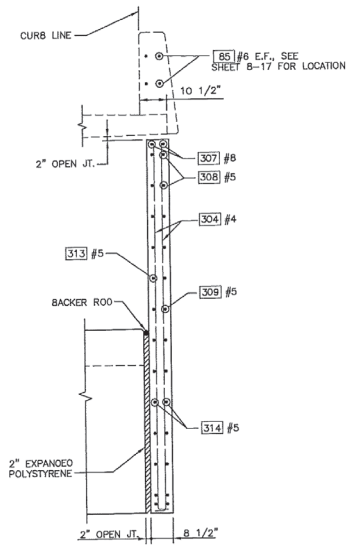
FILENAME	00B-11.dwg
SCALE	NO SCALE
SHEET	B-11



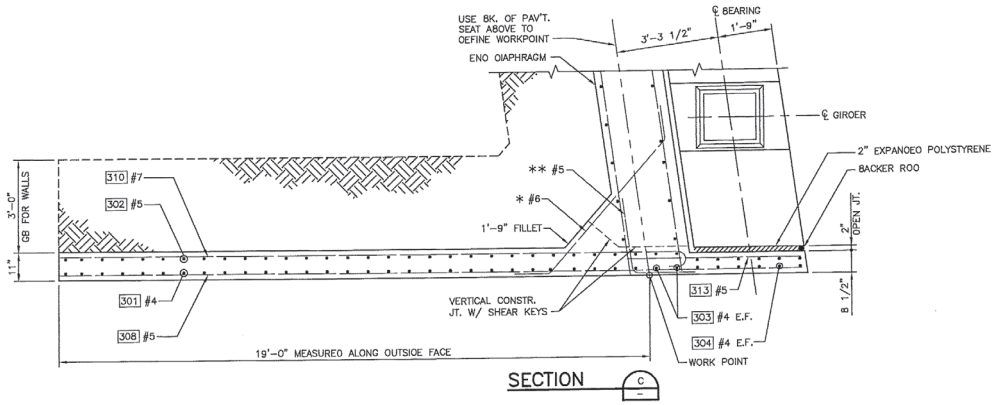
WINGWALL OUTSIDE ELEVATION



SECTION A



SECTION B



SECTION C

WINGWALL ELEVATIONS

WINGWALL LOCATION	ELEVATION POINT		
	Q	R	S
PIER 1 LEFT	874.77	874.87	874.88
PIER 1 RIGHT	874.91	875.00	875.02
PIER 2 LEFT	874.83	874.92	874.94
PIER 2 RIGHT	874.85	874.95	874.96

NOTE: LEFT & RIGHT ARE MEASURED IN THE DIRECTION OF INCREASE IN STATIONING

* 312 #6 @ NW AND SE WINGWALLS
317 #6 @ NE AND SW WINGWALLS
** 316 #5 @ NW AND SE WINGWALLS
318 #5 @ NE AND SW WINGWALLS

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	PATRICK T. LI
DRAWN BY:	LARRY O. KELLER
	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM — STATE OF WASHINGTON — 23541 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 06/10/___

MYRA ROAD EXTENSION PROJECT

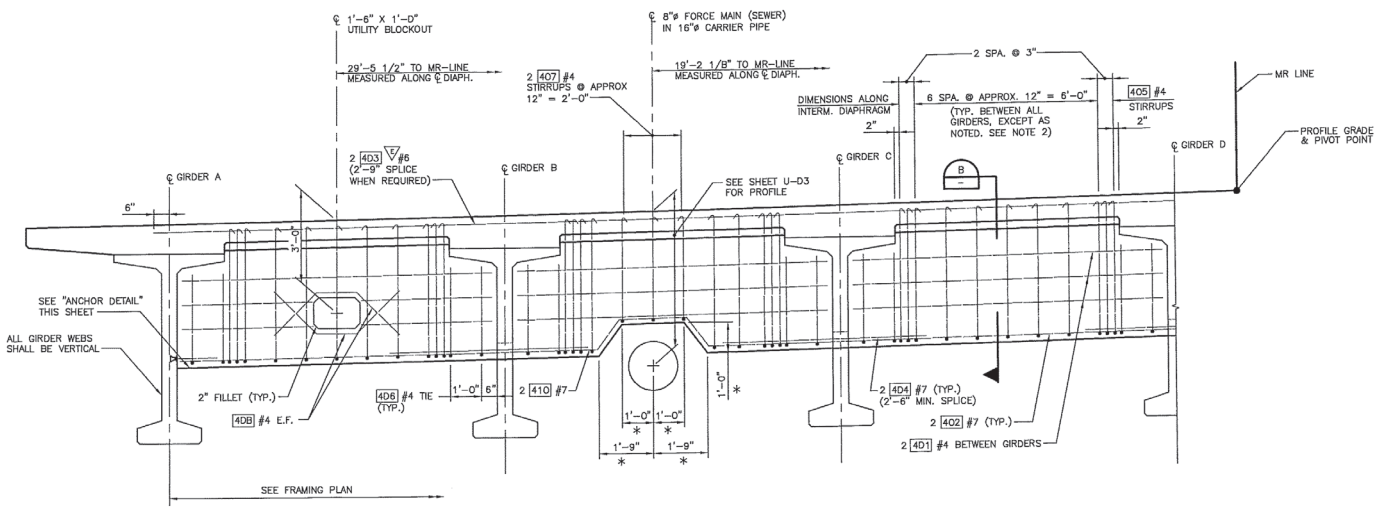
CITY OF WALLA WALLA — WALLA WALLA COUNTY — CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
WINGWALL DETAILS

0 1" 2"

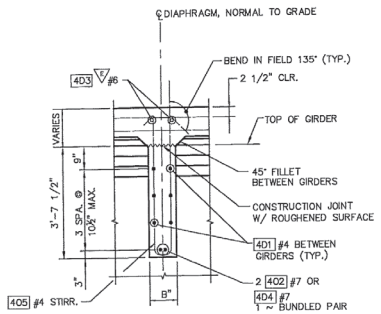
FILENAME	008–12.dwg
SCALE	NO SCALE

SHEET B-12

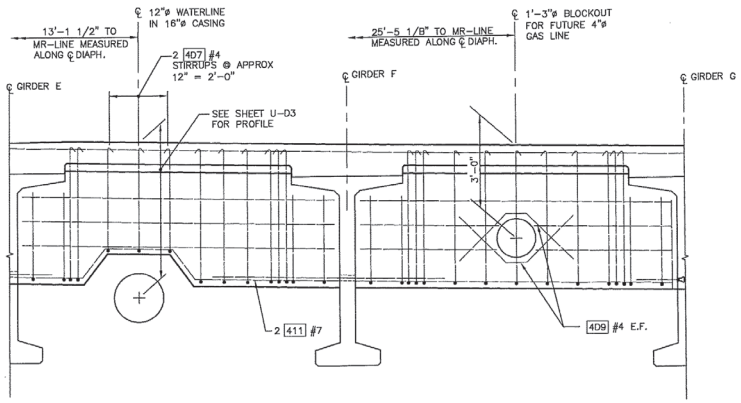


TYPICAL INTERMEDIATE DIAPHRAGM

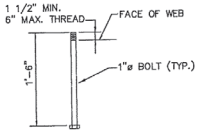
* TYPICAL RECESS DIMENSIONS FOR FORCE MAIN (SEWER) AND WATERLINE



SECTION B



TYPICAL INTERMEDIATE DIAPHRAGM – CONT.



ANCHOR DETAIL

ASTM A-307

NOTES:

1. GIRDERS SHALL BE HELD RIGIDLY IN PLACE WHEN DIAPHRAGMS ARE PLACED. REINFORCING BAR SHALL BE THREADED THROUGH HOLES IN GIRDERS PRIOR TO PLACING OF EXTERIOR GIRDERS. SEE "GIRDER DETAILS" SHEET FOR DIMENSION "A".
2. CUT AND BEND REINFORCING TO CLEAR BLOCKOUTS.
3. TRAFFIC BARRIER AND PEDESTRIAN BARRIER NOT SHOWN FOR CLARITY.

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	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM — STATE OF WASHINGTON — 22541 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 06/10/__

MYRA ROAD EXTENSION PROJECT

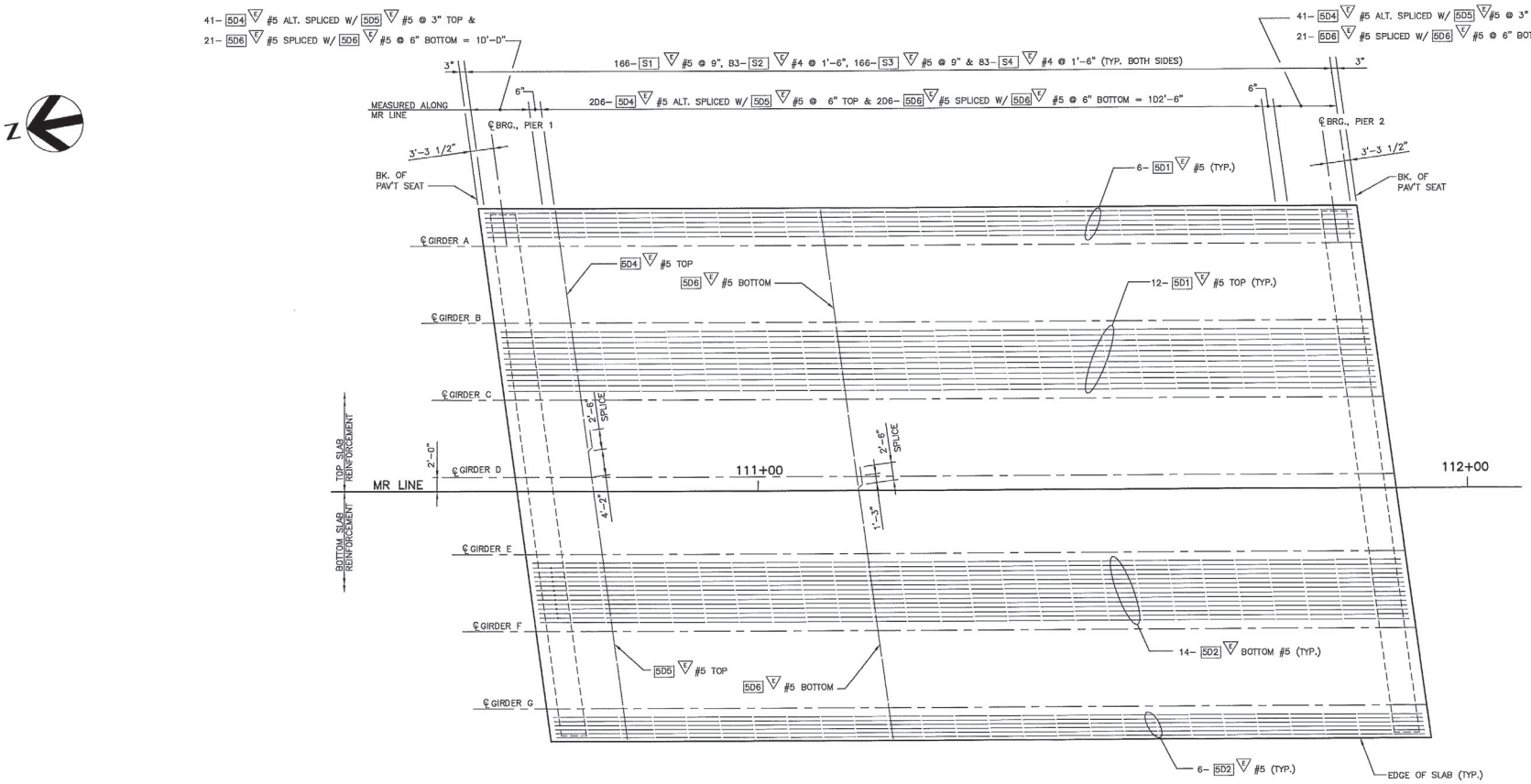
CITY OF WALLA WALLA — WALLA WALLA COUNTY — CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
INTERMEDIATE DIAPHRAGM DETAILS

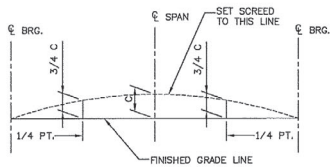
0 1" 2"

FILENAME	OOB-13.dwg
SCALE	NO SCALE

SHEET B-13



SLAB REINFORCING PLAN



SCREED SETTING DIMENSIONS

FOR DIMENSION "C" SEE GIRDER SCHEDULE

TEMPORARY STRAND CUTTING SEQUENCE

1. ERECT AND BRACE GIRDERS.
2. REMOVE EXPANDED POLYSTYRENE IN 2" X 2" RECESSES IN TOP FLANGE OF GIRDERS.
3. CUT STRAND AND PLASTIC SLEEVE IN 2" X 2" RECESS.
4. REMOVE ALL MOISTURE IN RECESS PRIOR TO FILLING RECESS WITH GROUT.
5. CAST INTERMEDIATE & END DIAPHRAGMS.
6. PLACE DECK CONCRETE.
7. SEE SHEET WB3G GIRDER DETAILS 3 OF 3 FOR 2" RECESS BLOCKOUT DETAILS.

NOTES:

1. LOCATION OF 5D1 #5 & 5D2 #5 2'–6" LAP SPLICES AT CONTRACTOR'S OPTION. LOCATE SPLICES SUCH THAT NO MORE THAN 50% OF REBAR IS SPLICED AT THE SAME LOCATION.
2. FOR DETAILS OF S1 #5 & S2 #4 BARS, SEE SHEET B–16.
   FOR DETAILS OF S3 #5 & S4 #4 BARS, SEE SHEET B–17.

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MYRA ROAD EXTENSION PROJECT

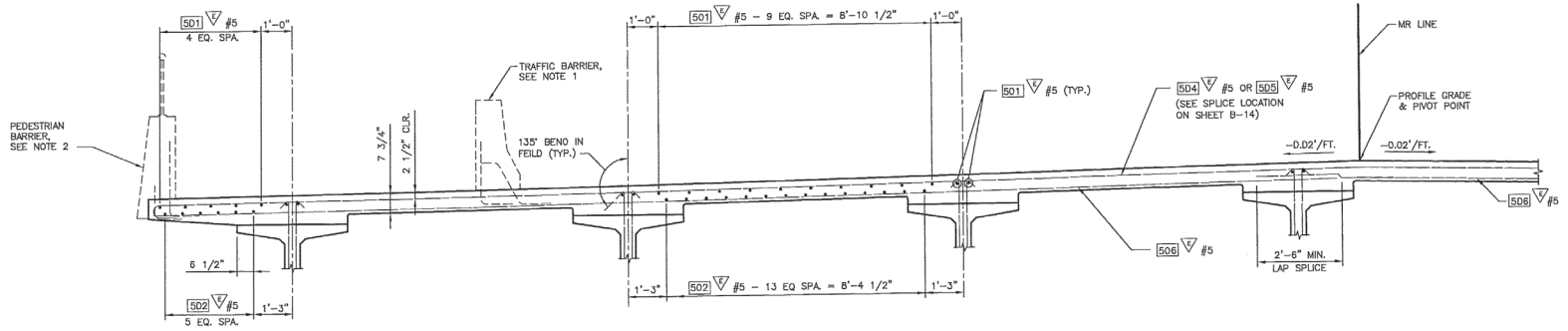
CITY OF WALLA WALLA · WALLA WALLA COUNTY · CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
ROADWAY SLAB REINFORCEMENT PLAN

D 1" 2"

FILENAME	DDB–14.dwg
SCALE	NO SCALE

SHEET B-14



TYPICAL SECTION

1/2"=1'-0"

(SECTION SHOWN NEAR MIDSPAN)

NOTES:

1. FOR DETAILS OF S1 #5 & S2 #4 BARS AT TRAFFIC BARRIERS, SEE SHEET B-16.
2. FOR DETAILS OF S3 #5 & S4 #4 BARS AT PEDESTRIAN BARRIERS, SEE SHEET B-17.
3. FOR UTILITY HANGER INSERTS AND DETAILS, SEE SHEET B-24.

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STATE OF WASHINGTON
23541
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MYRA ROAD EXTENSION PROJECT

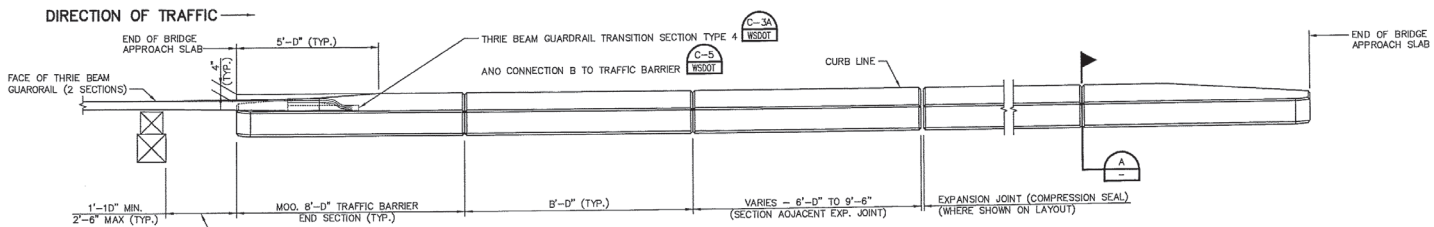
CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
ROADWAY SLAB REINFORCEMENT SECTION

0 1" 2"

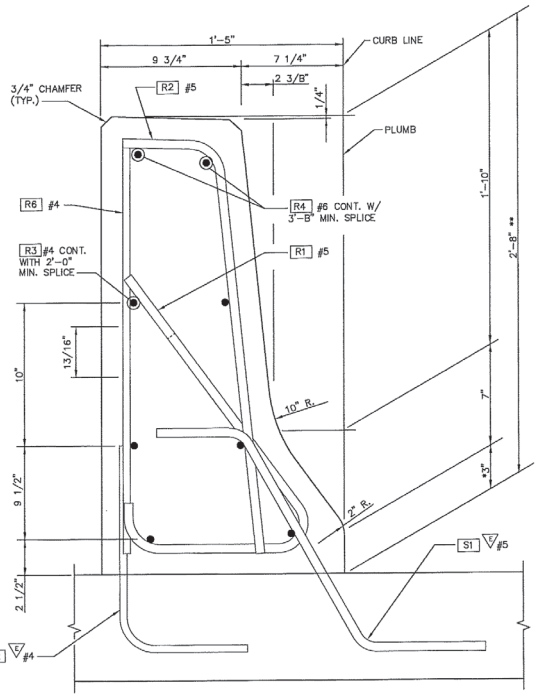
FILENAME	00B-15.dwg
SCALE	NO SCALE

SHEET B-15

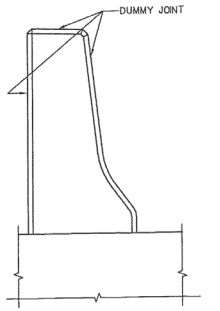


PLAN – TRAFFIC BARRIER

BARRIER CONTINUOUS BETWEEN ROADWAY EXPANSION JOINTS. CONSTRUCTION JOINTS WITH SHEAR KEYS ARE PERMISSIBLE AT DUMMY JOINT LOCATIONS. FORM JOINTS BETWEEN DUMMY JOINTS SHALL NOT BE PERMITTED.

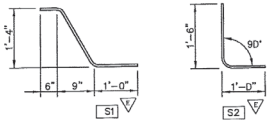


TYPICAL SECTION – TRAFFIC BARRIER



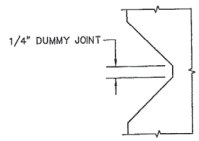
SECTION

ALL CHAMFERS 3/4"

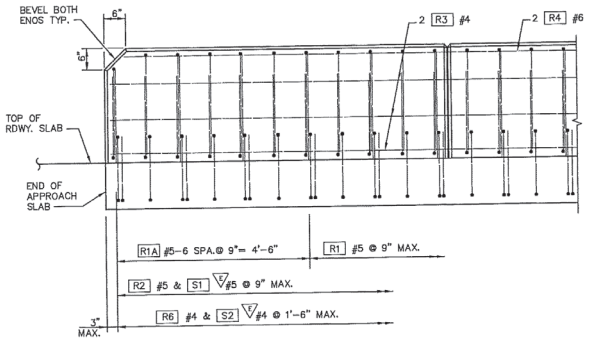


* TOE HEIGHT MAY VARY, 2" MIN. TO 6" MAX.

** HEIGHT MAY VARY IF REQUIRED TO PROVIDE A PROFILE PLEASING TO THE EYE



DUMMY JOINT DETAIL



OUTSIDE ELEVATION
END OF APPROACH SLAB TRAFFIC BARRIER

▽ DENOTES EPOXY COATED

℄ DIMENSIONS TO POINTS OF INTERSECTION

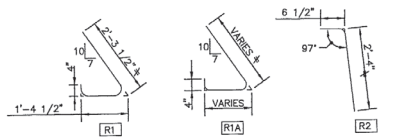
TRAFFIC BARRIER BAR LIST

ALL REINFORCING SHALL BE AASHTO M31, GR. 6D.

MARK	SIZE	LENGTH	BENDING DIAGRAM (ALL DIMENSIONS ARE OUT TO OUT)
R1	5	4'-0"	
R1A	5	(A)	
R2	5	2'-10"	
R3	4	(A)	STR.
R4	6	(A)	STR.
R6	4	2'- 4"	STR.

(A) DETERMINE FROM PLANS

FOR S1 ▽ & S2 ▽ BARS SEE BARLIST



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HDR
HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	MICHAEL A. MURRAY
DESIGNED BY:	BRETT T. AKESSON
	PATRICK T. LI
DRAWN BY:	LARRY D. KELLER
	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM
STATE OF WASHINGTON
20541
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06/10/__

MYRA ROAD EXTENSION PROJECT

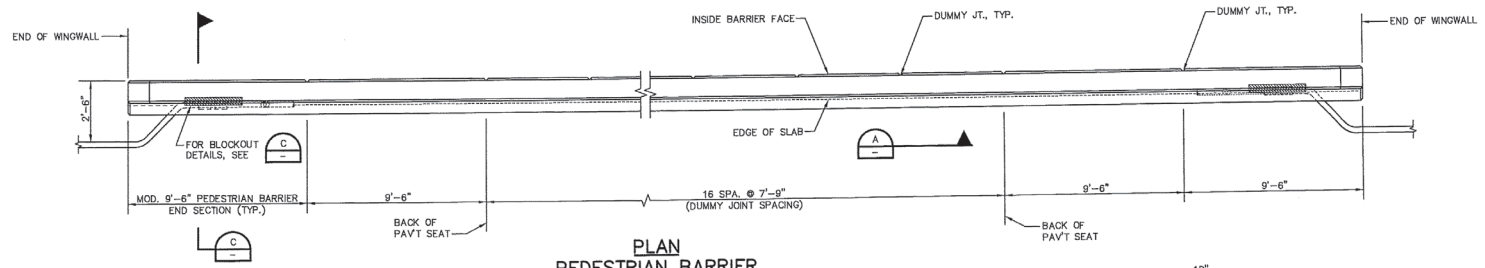
CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
TRAFFIC BARRIER DETAILS

0 1" 2"

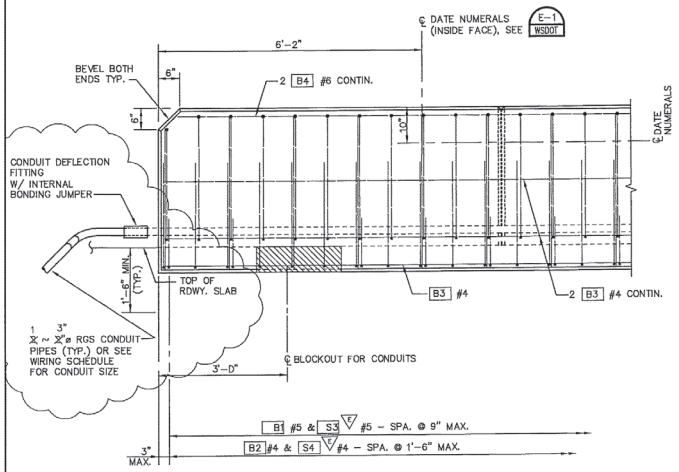
FILENAME	ODB-16.dwg
SCALE	NO SCALE

SHEET B-16



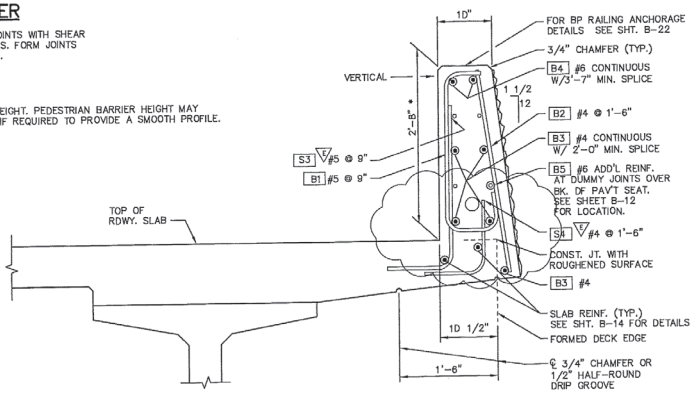
PLAN
PEDESTRIAN BARRIER

BARRIER SHALL BE CONTINUOUS. CONSTRUCTION JOINTS WITH SHEAR KEYS ARE PERMISSIBLE AT DUMMY JOINT LOCATIONS. FORM JOINTS BETWEEN DUMMY JOINTS SHALL NOT BE PERMITTED.



OUTSIDE ELEVATION
END OF MODIFIED PEDESTRIAN BARRIER

* MIN. HEIGHT. PEDESTRIAN BARRIER HEIGHT MAY VARY IF REQUIRED TO PROVIDE A SMOOTH PROFILE.



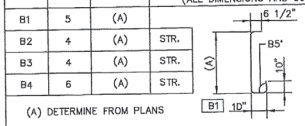
TYPICAL SECTION
PEDESTRIAN BARRIER

V EPOXY COATED

PEDESTRIAN BARRIER BAR LIST

ALL REINFORCING SHALL BE AASHTO M 31, GR. 60.

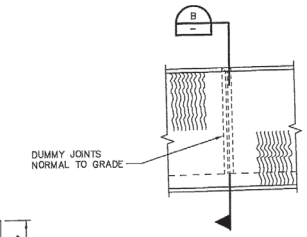
MARK	SIZE	LENGTH	BENDING DIAGRAM (ALL DIMENSIONS ARE OUT TO OUT)
B1	5	(A)	
B2	4	(A)	STR.
B3	4	(A)	STR.
B4	6	(A)	STR.



(A) DETERMINE FROM PLANS

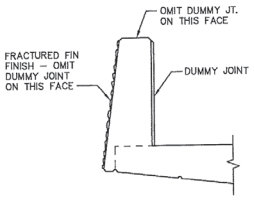
FOR S3 V & S4 V BARS SEE BRIDGE BARLIST.

SEE BAR MARK B5 # 6 IN BAR LIST ON SHEET B-25.

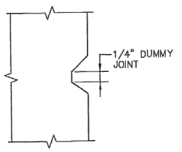


VIEW A

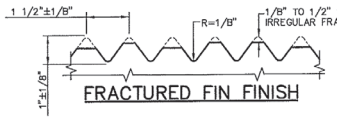
ALL CHAMFERS 3/4". SEE "LAYOUT" FOR APPLICABLE SURFACE FINISH.



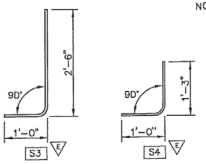
SECTION B

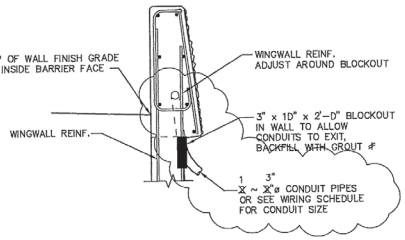


DUMMY JOINT DETAIL



FRACTURED FIN FINISH





WALL SECTION C

SEE WINGWALL DETAILS FOR WINGWALL REINFORCING NOT SHOWN. FOR BARRIER DETAILS NOT SHOWN SEE "OUTSIDE ELEVATION" AND "TYPICAL SECTION ~PEDESTRIAN BARRIER"

BLOCKOUT WIDTH MAY BE INCREASED TO 6" TO ALLOW CONDUITS OF A LARGER DIAMETER THAN 2" TO EXIT BARRIER OR WALL WITHOUT REBAR CONFLICT

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HDR HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	MICHAEL A. MURRAY
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	PATRICK T. LI
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	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM — STATE OF WASHINGTON — 23541 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 06/10/__

MYRA ROAD EXTENSION PROJECT

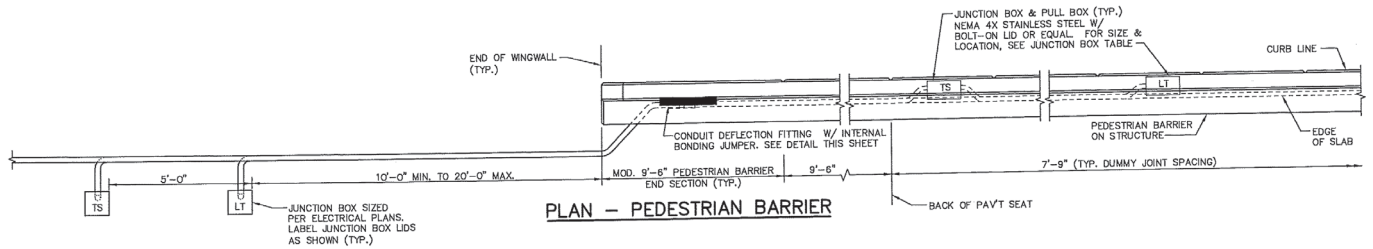
CITY OF WALLA WALLA · WALLA WALLA COUNTY · CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
PEDESTRIAN BARRIER DETAILS 1 OF 2

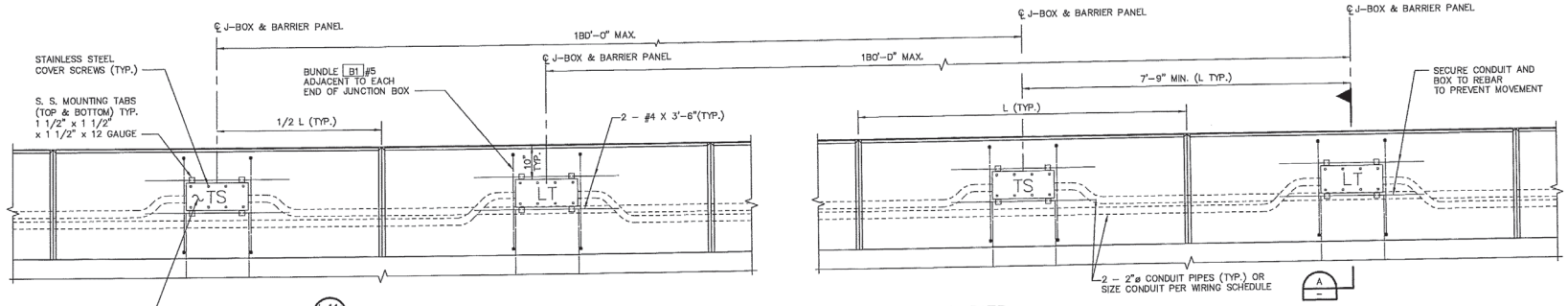
0 1" 2"

FILENAME	ODB-17.dwg
SCALE	NO SCALE

SHEET B-17

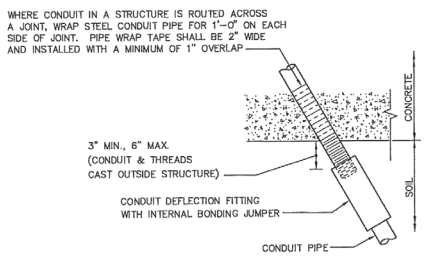


PLAN – PEDESTRIAN BARRIER



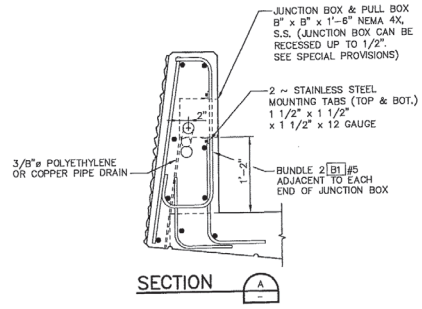
ELEVATION – CONDUITS & J-BOX IN PEDESTRIAN BARRIER

ADJACENT JUNCTION BOXES ARE SHOWN CENTERED BETWEEN ADJACENT DUMMY JOINTS. IF THE DISTANCE BETWEEN ADJACENT DUMMY JOINTS IS 16'-0" OR GREATER, PLACE ADJACENT JUNCTION BOXES SYMMETRICALLY ON EITHER SIDE OF THE CENTER OF ONE DUMMY PANEL WHILE MAINTAINING 8'-0" MINIMUM BETWEEN CENTER LINES OF THE JUNCTION BOXES.



CONDUIT DEFLECTION FITTING A

CONDUIT FITTING – TYPE DX FOR DEFLECTION OF 30° AND 3/4" MOVEMENT. PLACE AT CONDUIT PIPE EXIT FROM STRUCTURE



SECTION

JUNCTION BOX LOCATIONS ARE APPROXIMATE. CENTER JUNCTION BOX INSTALLATION BETWEEN BARRIER DUMMY JOINTS

JUNCTION BOX LOCATIONS		
STATION	OFFSET	LABEL
MR 110+53.25	LT	LT
MR 110+59.75	RT	LT
MR 111+96.25	LT	LT
MR 112+02.75	RT	LT

TS = TRAFFIC SYSTEM
LT = LIGHTING SYSTEM
INSTALL ALL CONDUIT RUNS TO DRAIN TO A BRIDGE END OR PROVIDE DRAIN AT ALL LOW POINTS IN CONDUIT RUN ON BRIDGE.

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	PATRICK T. LI
DRAWN BY:	LARRY D. KELLER
	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE M. LEM — STATE OF WASHINGTON — 29541 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06/10/___

MYRA ROAD EXTENSION PROJECT

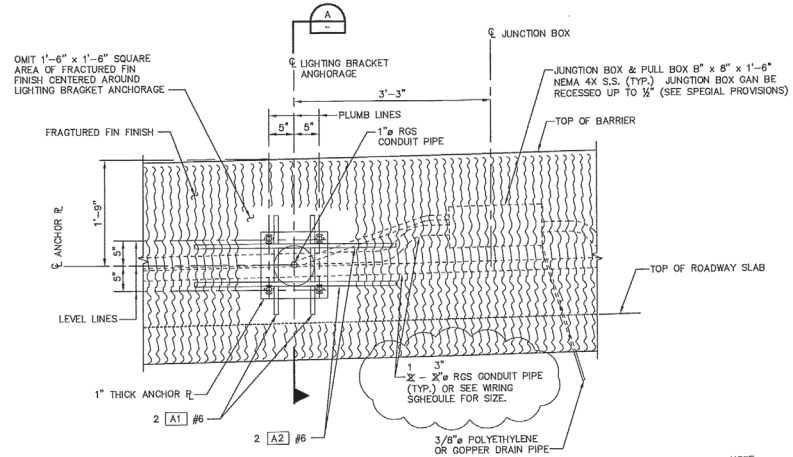
CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
PEDESTRIAN BARRIER DETAILS 2 OF 2

0 1" 2"

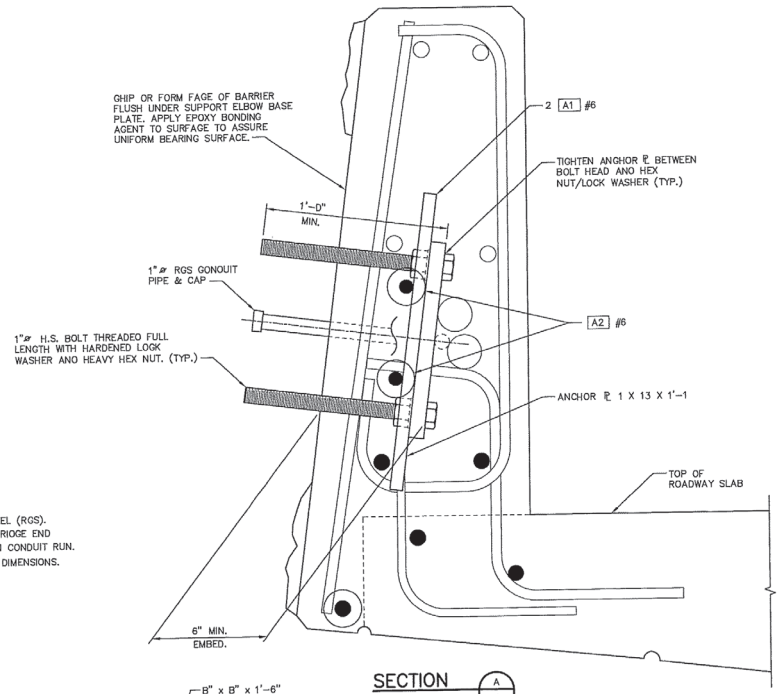
FILENAME	DDB-18.dwg
SCALE	NO SCALE

SHEET B-18

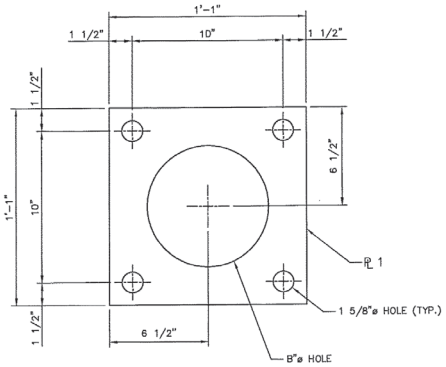


ELEVATION

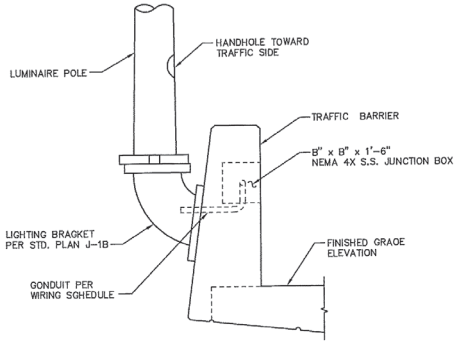
NOTE:
ALL CONDUIT SHALL BE RIGID GALVANIZED STEEL (RGS).
INSTALL ALL CONDUIT RUNS TO ORAIN TO A BRIOGE END OR PROVIDE DRAIN AT ALL LOW POINTS WITHIN CONDUIT RUN.
SEE "TRAFFIG BARRIER SHEETS" FOR BARRIER DIMENSIONS.



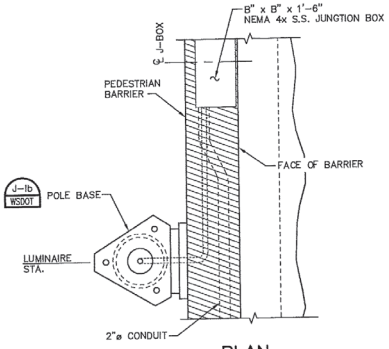
SECTION A



ANCHOR PLATE
GALVANIZE PER AASHTO M 111



ELEVATION PROFILE
LUMINAIRE SUPPORT
(SHOWN FOR BRIDGE, SIMILAR FOR WALLS)



PLAN

LUMINAIRE POLE LOCATIONS ON BRIDGE & WALLS	
STATION	OFFSET
MR 110+56.50	40.6' LT.
MR 110+56.50	36.6' RT.
MR 111+99.50	40.6' LT.
MR 111+99.50	36.6' RT.

ANCHORAGE BARLIST
ALL REINF. SHALL BE AASHTO M31, GRADE 60.

MARK #	SIZE	LENGTH	BEND TYPE
A1	6	1'-9"	STRAIGHT
A2	6	5'-0"	STRAIGHT

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DESIGNED BY:	BRETT T. AKESSON
	PATRICK T. LI
DRAWN BY:	LARRY D. KELLER
	JOYGE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM STATE OF WASHINGTON 29541 REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06/10/__

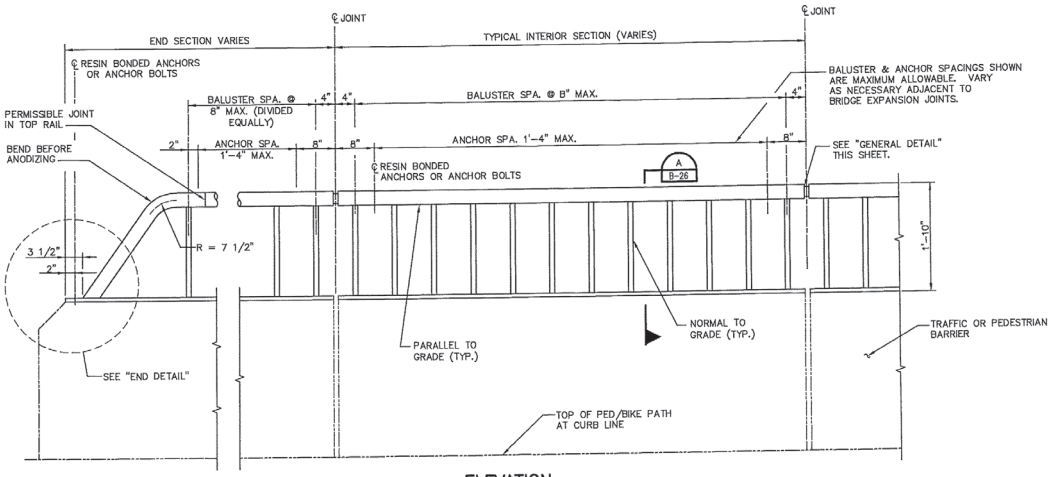
MYRA ROAD EXTENSION PROJECT
CITY OF WALLA WALLA · WALLA WALLA COUNTY · CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
PEDESTRIAN BARRIER LUMINAIRE
ANCHORAGE DETAILS

0 1" 2"

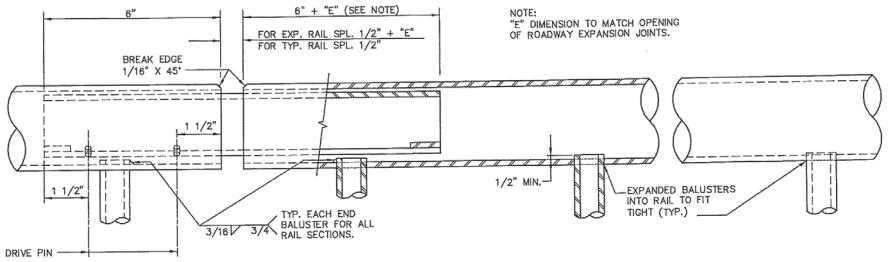
FILENAME	ODB-19.dwg
SGALE	NO SCALE

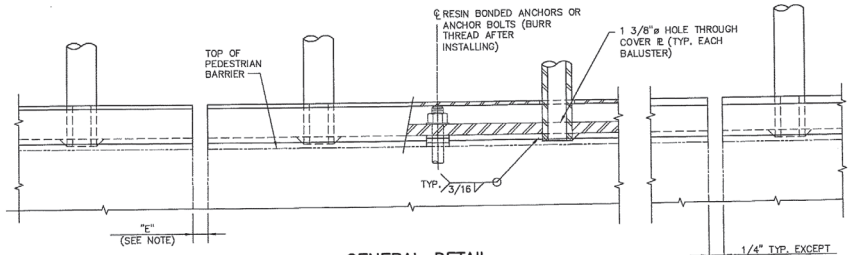
SHEET B-19



ELEVATION

BALUSTER AND GUARDRAIL SECTION
ATTACHMENT DETAILS NOT SHOWN.





GENERAL DETAIL

NOTES:

1. PIPE RAILING, PIPE RAILING SPLICES, COVER PLATES AND BOTTOM EXTRUDED CHANNELS SHALL BE BENT TO THE HORIZONTAL CURVE WHERE THE RADIUS OF CURVATURE IS LESS THAN 2DO FEET.
2. SHOP DRAWINGS OF RAILING SHALL BE SUBMITTED FOR APPROVAL SHOWING COMPLETE DIMENSIONS AND DETAILS OF FABRICATION AND INCLUDING AN ERECTION DIAGRAM. MATERIAL BEING USED SHALL BE SPECIFIED IN THE SHOP DRAWINGS.
3. PIPE RAILING, PIPE RAILING SPLICES, COVER PLATES AND BOTTOM EXTRUDED CHANNELS MAY BE HEATED TO NOT MORE THAN 4DD°F FOR A PERIOD NOT TO EXCEED 3D MINUTES TO FACILITATE FORMING OR BENDING TO HORIZONTAL CURVATURE.
4. CUTTING SHALL BE DONE BY SAWING OR MILLING AND ALL CUTS SHALL BE TRUE AND SMOOTH. FLAME CUTTING WILL NOT BE PERMITTED.
5. WELDING OF ALUMINUM SHALL CONFORM TO STD. SPEC. SECTION 9-2B.14(3).
6. AFTER FABRICATION, POSTS SHALL BE HEAT TREATED IN ACCORDANCE WITH SECTION 6.5 OF THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS DATED 2DD1 AND INTERIMS THROUGH 2DD2.
7. ALL ALUMINUM PARTS SHALL BE GIVEN A CLEAR ANODIC COATING OF AT LEAST D.DDD6 INCHES THICK AND SEALED TO MEET THE REQUIREMENTS OF ASTM B 5BD WITH A UNIFORM FINISH.
8. PIPE RAILING, PIPE BALUSTERS AND PIPE RAILING SPLICES SHALL BE ADEQUATELY WRAPPED TO INSURE SURFACE PROTECTION DURING HANDLING AND TRANSPORTATION TO THE JOB SITE.

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	PATRICK T. LI
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	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM
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PROFESSIONAL ENGINEER
EXPIRES 06/10/__

MYRA ROAD EXTENSION PROJECT

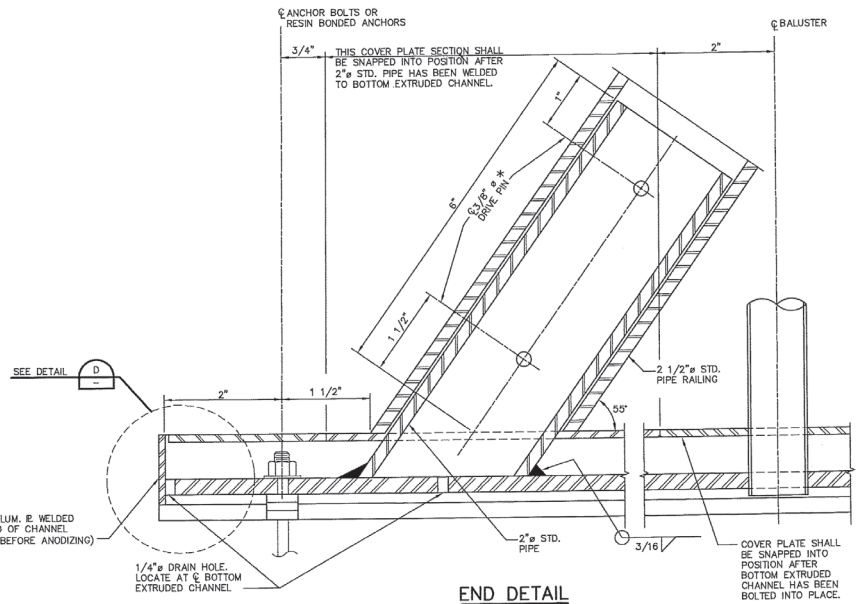
CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
BRIDGE RAILING TYPE BP DETAILS 1 OF 2

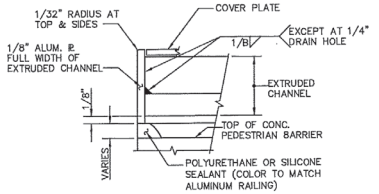
0 1" 2"

FILENAME	DDB-2D.dwg
SCALE	NO SCALE

SHEET B-20

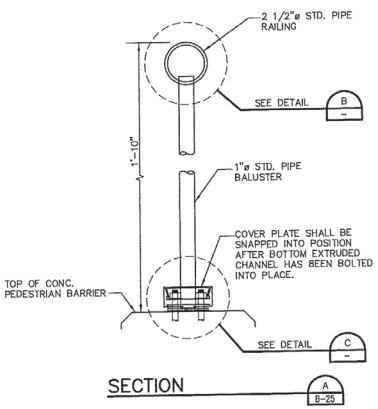


END DETAIL

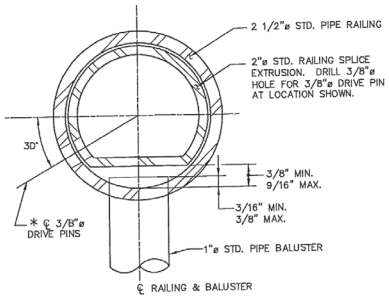


DETAIL
DRAIN HOLES NOT SHOWN
D

PART	MATERIAL SPECIFICATION
PIPES	ASTM B221– 6005–T5 ASTM B241 OR B429 6061–T6
EXTRUDED CHANNELS, COVER PLATES & BAR	ASTM B221– 6005–T5
ANCHOR BOLTS, NUTS & WASHERS	AASHTO M164 (GALVANIZE IN ACCORDANCE WITH AASHTO SPECIFICATION M232)
STRIP	ASTM A36
DRIVE PINS	ASTM A–276 TYPE 302 STAINLESS STEEL

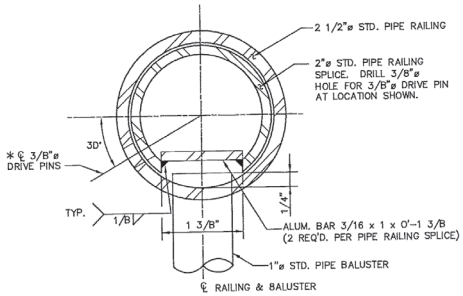


SECTION
A
B-25



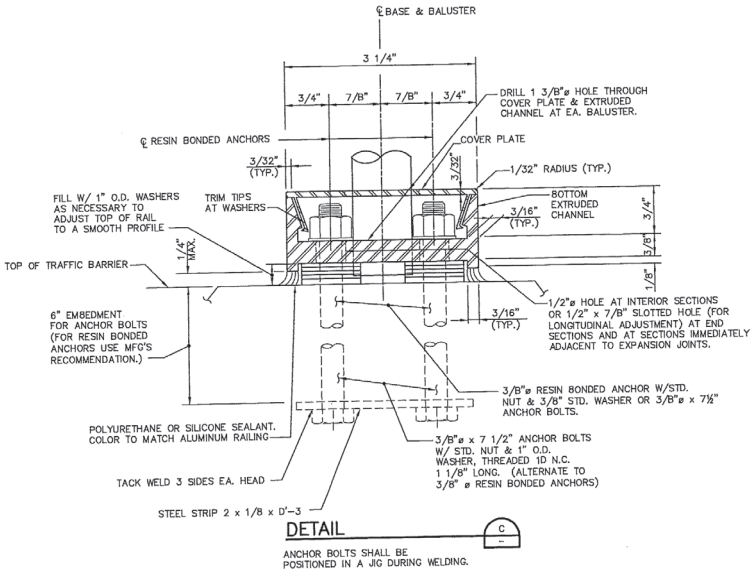
DETAIL
OPTION #1
B

* LOCATE ON OPPOSITE SIDE OF TRAFFIC. DRIVE PINS SHALL BE DRIVEN FLUSH WITH THE OUTSIDE FACE OF THE RAILING.



DETAIL
OPTION #2
B

* LOCATE ON OPPOSITE SIDE OF TRAFFIC. DRIVE PINS SHALL BE DRIVEN FLUSH WITH THE OUTSIDE FACE OF THE RAILING.



DETAIL
ANCHOR BOLTS SHALL BE POSITIONED IN A JIG DURING WELDING.
C

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	PATRICK T. LI
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	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM — STATE OF WASHINGTON — 29541 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06/10/__

MYRA ROAD EXTENSION PROJECT

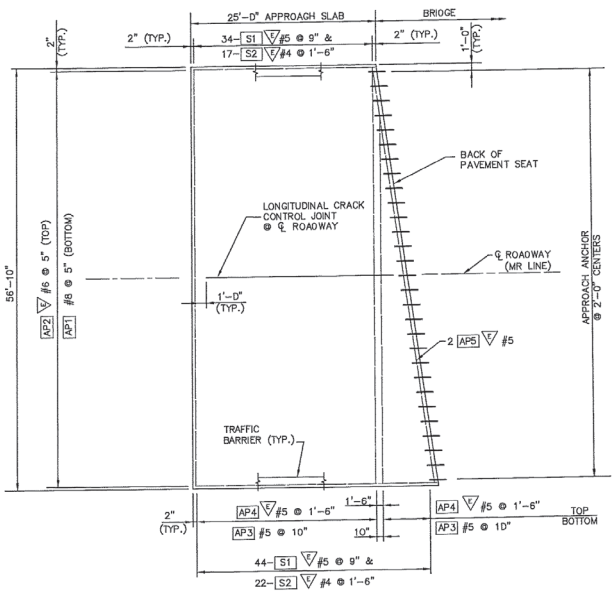
CITY OF WALLA WALLA

MYRA ROAD
MILL CREEK BRIDGE
BRIDGE RAILING TYPE BP DETAILS 2 OF 2

D 1" 2"

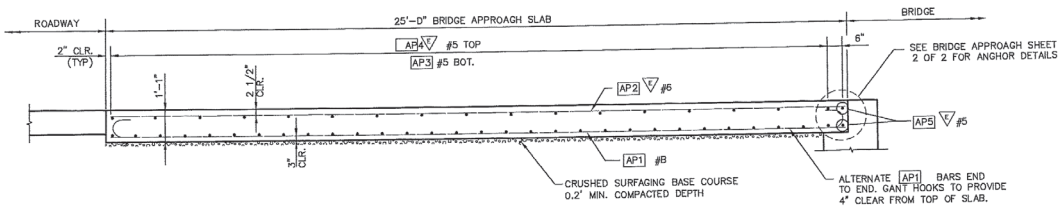
FILENAME	DDB–21.dwg
SCALE	NO SCALE

SHEET B-21



PLAN

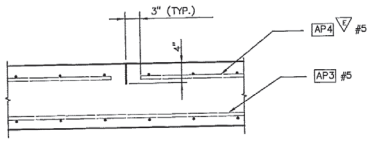
PIER 1 APPROACH SLAB SHOWN
PIER 2 APPROACH SLAB SIMILAR



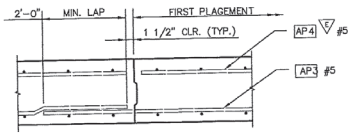
LONGITUDINAL SECTION

NOTES:

1. ALL EDGES OF BRIDGE APPROACH SLAB SHALL HAVE 1/2" RADIUS.
2. LONGITUOINAL JOINTS SHALL BE PLACED ON LANE LINES AND SHALL BE GONSTRUGTED ANO SEALED IN AGGORDANCE WITH STD. SPEG. SEGTION 5-05.3(8). JOINTS MAY BE EITHER A SAW CUT GRAGK CONTROL JOINT OR A GONSTRUCTION JOINT. SAWCUT JOINTS SHALL TERMINATE 1'-0" BEFORE REAGHING EDGE OF SLAB AND MUST BE SAW CUT AS SOON AS POSSIBLE AFTER PLAGEMENT OF GONGRETE.
   (A) BRIDGE APPROACH SLABS LESS THAN 40' WIDE – NO JOINT IS REQUIRED.
   (B) BRIDGE APPROACH SLABS WIDER THAN 40' – ONE OR MORE JOINTS ARE REQUIRED TO DIVIDE THE SLAB INTO APPROXIMATELY 24' WIDE SEGTIONS.



TYPICAL LONGITUDINAL CRACK CONTROL JOINT DETAIL

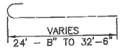


TYPICAL LONGITUDINAL CONSTRUCTION JOINT

EDGE FIRST POUR ONLY WITH 1/8 " RADIUS.

APPROAGH SLAB BAR LIST				
LOCATION	MARK #	SIZE	NO.	LENGTH
LONGITUDINAL BOTTOM	AP1	8	137	VARIES 25'-7" TO 33'-5"
LONGITUDINAL TOP	AP2	▽6	137	VARIES 24'-8" TO 32'-6"
TRANSVERSE BOTTOM	AP3	5	40	VARIES 56'-6" TO 5'-11"
TRANSVERSE TOP	AP4	▽5	23	VARIES 56'-6" TO 10'-6"
TRANSVERSE END BAR	AP5	▽5	2	57'-0"

BENDING DETAIL FOR QUANTITIES



SEE BARLIST FOR BENDING DETAILS OF TRAFFIG BARRIER BARS S1 & S2

ALL REINFORGING BARS SHOWN ON THIS SHEET SHALL BE AASHTO M-31 UNLESS NOTED OTHERWISE.

▽ = EPOXY GOATED REINFORGING STEEL

USKH ARCHITECTURE • ENGINEERING LAND SURVEYING • PLANNING

HDR HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	MICHAEL A. MURRAY
DESIGNED BY:	BRETT T. AKESSON
	PATRICK T. LI
DRAWN BY:	LARRY D. KELLER
	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM — STATE OF WASHINGTON — 29541 — REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06/10/__

MYRA ROAD EXTENSION PROJECT

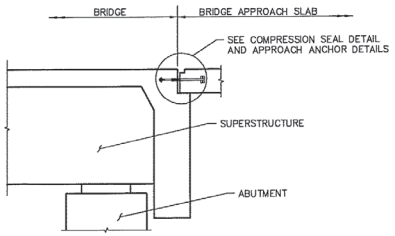
CITY OF WALLA WALLA — WALLA WALLA COUNTY — CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
BRIDGE APPROACH SLAB DETAILS 1 OF 2

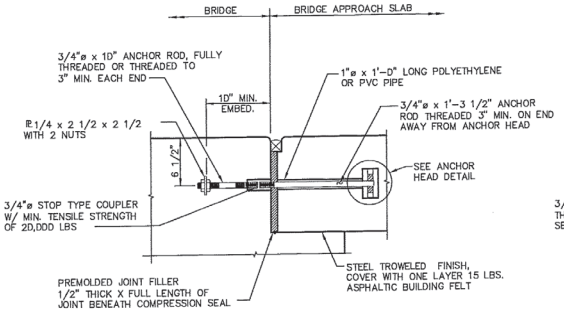
0 1" 2"

FILENAME	DDB-22.dwg
SGALE	NO SGALE

SHEET B-22

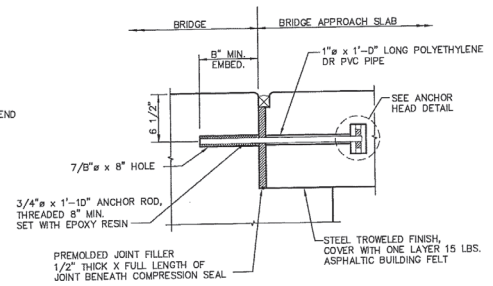


SEMI–INTEGRAL TYPE ABUTMENT



APPROACH ANCHOR – METHOD A

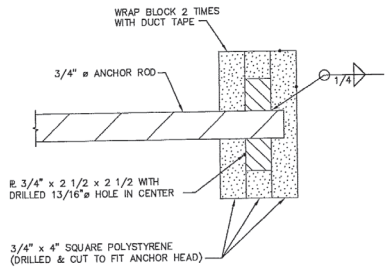
SEMI–INTEGRAL TYPE ONLY



APPROACH ANCHOR – METHOD B

SEMI–INTEGRAL TYPE ONLY

NOTE:
PAINT METAL COMPONENTS OF APPROACH ANCHOR WITH ONE COAT OF INORGANIC ZINC OR FORMULA A–11–99. PAINT IN ACCORDANCE WITH STD. SPEC. 9–08.2.

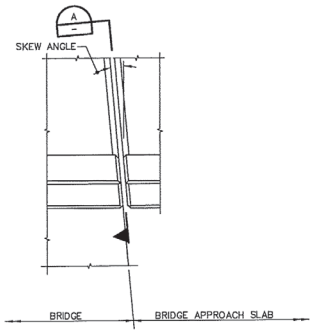


ANCHOR HEAD DETAIL

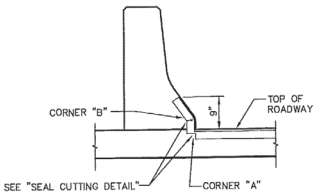
COMPRESSION SEAL TABLE

D.S. BROWN		WATSON BOWMAN ACME	
SEAL	W (in.)	SEAL	W (in.)
CV–2502	2½"	WA–250	2½"

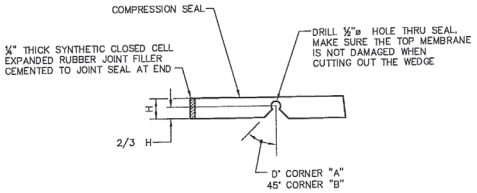
TESTING SHALL BE PER AASHTO M–220 PRIOR TO USE.



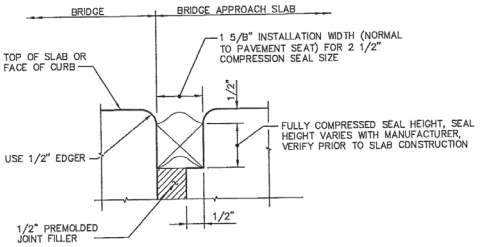
PLAN EXPANSION JOINT



SECTION A



SEAL CUTTING DETAIL



COMPRESSION SEAL DETAIL

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HDR
HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	MICHAEL A. MURRAY
DESIGNED BY:	BRETT T. AKESSON
	PATRICK T. LI
DRAWN BY:	LARRY D. KELLER
	JOYCE M. LEM
PROJECT NUMBER	22315

JOYCE MAUREEN LEM
STATE OF WASHINGTON
29341
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 08/10/__

MYRA ROAD EXTENSION PROJECT

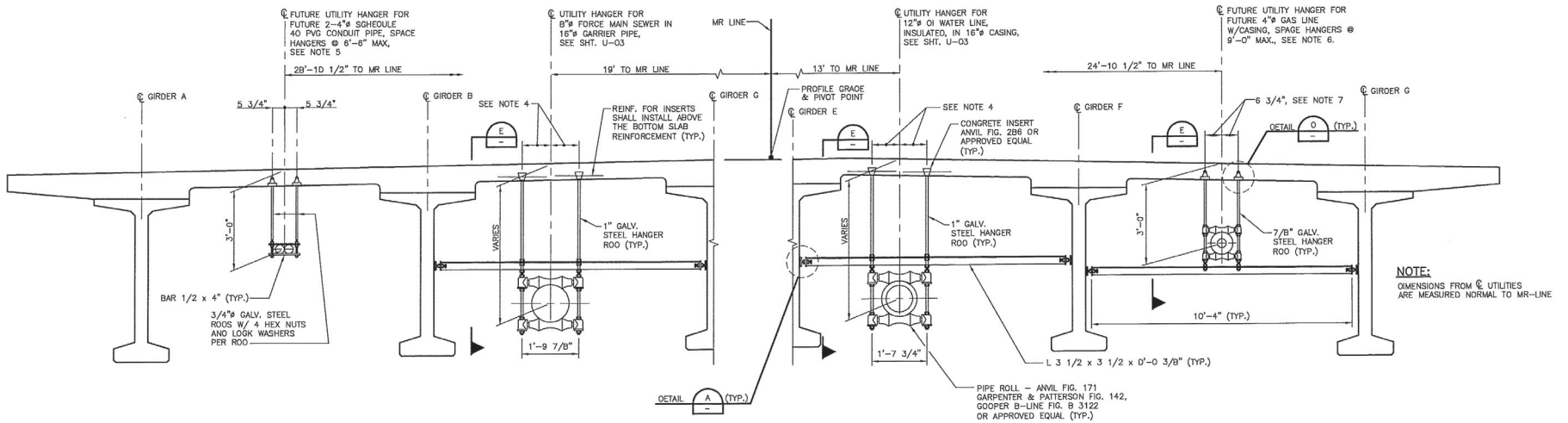
CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
BRIDGE APPROACH SLAB DETAILS 2 OF 2

D 1" 2"

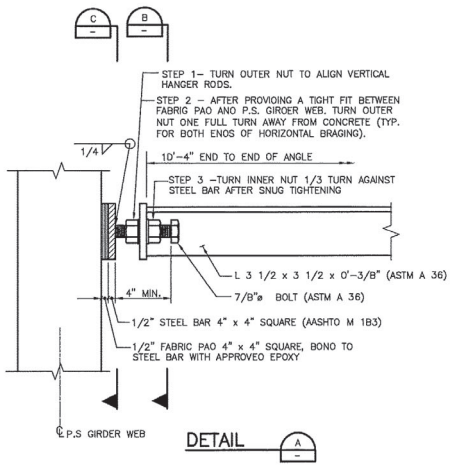
FILENAME	DDB–23.dwg
SCALE	NO SCALE

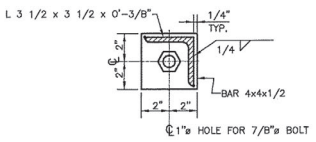
SHEET B-23

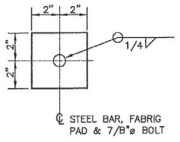


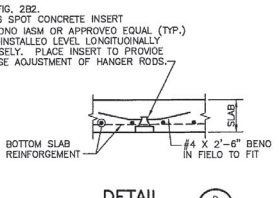
TYPICAL SECTION – UTILITY HANGERS

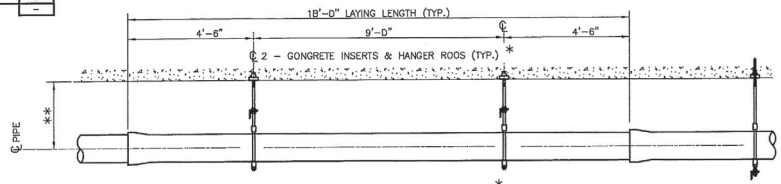
LOOKING SOUTH











NOTES:

1. ALL MATERIALS SHALL BE GALVANIZEO AFTER FABRICATION PER AASHTO M 111 OR AASHTO M 232 EXCEPT GRINNELL PIPE ROLL.
2. PAINT ROLLERS WITH THREE COATS OF GALVANIZING REPAIR PAINT. SEE STO. SPEG. 9–OB.2.
3. WHERE UTILITY EXPANSION JOINTS ARE LOGATEO, PROVIOE HANGER SUPPORTS AT EAGH ENO OF JOINTS IN ACCOROANGE WITH REGOMMENDATIONS BY MANUFAGTURER OF UTILITY JOINT.
4. AOJUST DIMENSION TO MATGH PIPE ROLL.
5. PROVIOE SLAB INSERTS ONLY. HANGER ROOS, NUTS ANO PLATES NOT IN GONTRAGT.
6. PROVIDE INSERTS ONLY. HANGER ROOS, PIPE ROLLS, TRANSVERSE BRAGE NOT IN GONTRACT.
7. 6" OIMENSION IS BASEO ON ANVIL PIPE ROLL FOR B"ø CASING. GONTRACTOR SHALL VERIFY THE CASING OIAMETER ANO PIPE ROLLS WITH UTILITY ANO AOJUST OIMENSIONS AS NECESSARY.

* SEE SHEET U–03 FOR HANGER LOCATIONS.

** 2'–4 1/2" FOR PVG CONDUIT PIPE ANO 4"ø GAS LINE.

FOR FORGE MAIN SEWERS ANO WATERLINE, SEE PROFILE ON SHEET U–03.

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LAND SURVEYING • PLANNING

HDR
HDR Engineering, Inc.

ISSUE	OATE	OESCRIPTION

PROJECT MANAGER:	MICHAEL A. MURRAY
OESIGNED BY:	BRETT T. AKESSON
	PATRICK T. LI
ORAWN BY:	LARRY O. KELLER
	JOYGE M. LEM
PROJEGT NUMBER	22315

JOYCE MAUREEN LEM
STATE OF WASHINGTON
22541
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 06/10/__

MYRA ROAD EXTENSION PROJECT

CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
BRIDGE UTILITY SUPPORTS

0 1" 2"

FILENAME	DOB–24.dwg
SCALE	NO SGALE

SHEET B-24

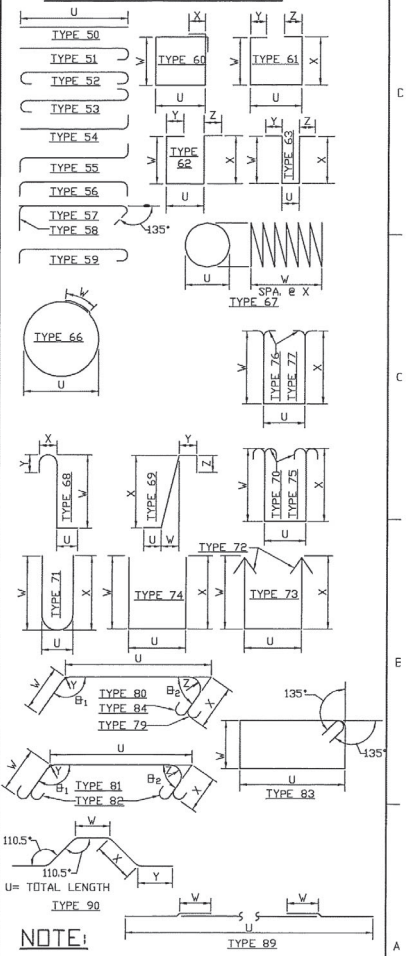
S = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES
L = LUMP SUM QUANTITY
T = TRANSVERSE
DR S = SEISMIC
E = BAR IS TO BE EPOXY COATED
V = BAR DIMENSIONS VARY BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.

MARK NO.	LOCATION	SIZE	NO. REQ'D	BEND TYPE	T OR DR S	TIE OR STIR	LUMP SUM	SUBSTR.	EPOXY COAT	VARIES	NO. EACH	DIMENSIONS (OUT TO OUT) U Ft.	U In.	W Ft.	W In.	X Ft.	X In.	Y Ft.	Y In.	Z Ft.	Z In.	B_1 DEG	B_2 DEG	LENGTH Ft.	LENGTH In.	WEIGHT
	PIER CAP																									
101	Top Long	7	12	50				S				41	4.0											41	4	1014
102	Top Long	7	12	50				S				35	6.0											35	6	871
103	Bottom Long	7	8	50				S				32	1.0											32	1	525
104	Bottom Long	7	8	50				S				43	9.0											43	9	715
105	Side Long	6	8	50				S				38	8.0											38	8	465
106	Stirrup	6	176	83	T			S				3	2.0											17	6	4621
107	Girder Stop, Int	5	48	50				S				8	6.0											8	6	426
108	Girder Stop	5	132	74				S				3	2.0	3	2.0	3	2.0							9	3	1272
109	Girder Stop, Ext	5	16	50				S				2	6.0											2	6	42
110	End Vert	5	16	56	T			S				5	2.0											5	11	98
111	End Horiz	5	28	80	T			S				3	2.0	0	10.0	0	10.0	0	4.0	0	4.0	98	82	4	5	130
112	Side Long	6	8	50	T			S				36	7.0											36	7	440
113	Bottom Long	5	48	56				S				3	10.0											5	3	262
	END DIAPHRAGM																									
201	Horiz	4	40	89		L						74	7.0	2	0.0									76	7	2046
202	Horiz	6	4	89		L			E			74	7.0	3	0.0									77	7	466
203	Horiz	6	4	89		L						74	7.0	2	6.0									77	1	463
204	Tie	6	120	56	T	L						1	6.0											3	2	575
205	Stirrup	4	240	58	T	L						9	6.0											10	2	1629
206	Stirrup	4	120	74	T	L						8	6.0	0	8.0	1	10.0							10	10	868
207	Utility Blockout	4	8	80		L						1	0.0	2	6.0	2	6.0	0	2.0	0	2.0	135	135	5	11	32
208	Utility Blockout	4	8	80		L						1	3.0	2	0.0	2	0.0	0	2.0	0	2.0	135	135	5	2	28
209	Utility Blockout	4	8	80		L						0	8.0	2	2.0	2	2.0	0	2.0	0	2.0	135	135	4	11	26
210	Utility Blockout	4	8	80		L						0	10.0	3	0.0	3	0.0	0	2.0	0	2.0	135	135	6	9	36
211	Diagonal	5	108	80		L			E			3	10.5	1	0.0	3	0.0	0	4.0	0	4.0	135	135	7	10	879
	INTERMEDIATE DIAPHRAGM																									
401	Horiz	4	72	50		L						10	0.0											10	0	481
402	Horiz	7	16	50		L						10	0.0											10	0	327
403	Horiz	6	4	89		L			E			66	11.0	2	9.0									69	8	419
404	Thru Girder	7	20	50		L						5	10.0											5	10	238
405	Stirrup	4	122	71	T	L						0	4.0	5	3.0	5	3.0							10	8	866
406	Stirrup	4	48	71	T	L						0	4.0	2	9.0	2	9.0							5	8	180
407	Stirrup	4	12	71	T	L						0	4.0	4	8.0	4	8.0							9	6	76
408	Utility Blockout	4	8	80		L						1	3.0	2	0.0	2	0.0	0	2.0	0	2.0	135	135	5	2	28
409	Utility Blockout	4	8	80		L						0	8.0	2	2.0	2	2.0	0	2.0	0	2.0	135	135	4	11	26
410	Utility Blockout	7	4	90		L								2	2.0	1	3.0	3	10.0	2	5.5	127	127	10	12	90
411	Utility Blockout	7	4	90		L								2	2.0	1	3.0	4	9.0	1	10.0	127	127	11	3	92
	DECK SLAB																									
501	Top Long	5	84	89		L			E			123	6.0	2	6.0									131	0	11476
502	Bottom Long	5	96	89		L			E			123	6.0	2	6.0									131	0	13115
504	Top Transv	5	288	51		L			E			33	4.0											33	11	10184
505	Top Transv	5	288	51		L			E			44	2.0											44	9	13438
506	Bottom Transv	5	576	50		L			E			38	9.0											38	9	23277
S1	Traffic Barrier	5	332	80	T	L			E			1	7.0	0	6.0	1	0.0	0	3.0	0	3.0	120	241	2	12	1029
S2	Traffic Barrier	4	166	74	T	L			E			1	0.0	1	6.0									2	5	268
S3	Pedestrian Barrier	5	332	74	T	L			E			1	0.0	2	6.0									3	5	1174
S4	Pedestrian Barrier	4	166	74	T	L			E			1	0.0	1	3.0									2	2	240

S = BAR IS INCLUDED IN SUBSTRUCTURE QUANTITIES
L = LUMP SUM QUANTITY
T = TRANSVERSE
DR S = SEISMIC
E = BAR IS TO BE EPOXY COATED
V = BAR DIMENSIONS VARY BETWEEN DIMENSIONS SHOWN ON THIS LINE AND THE FOLLOWING LINE.

MARK NO.	LOCATION	SIZE	NO. REQ'D	BEND TYPE	T OR DR S	TIE OR STIR	LUMP SUM	SUBSTR.	EPOXY COAT	VARIES	NO. EACH	DIMENSIONS (OUT TO OUT) U Ft.	U In.	W Ft.	W In.	X Ft.	X In.	Y Ft.	Y In.	Z Ft.	Z In.	B_1 DEG	B_2 DEG	LENGTH Ft.	LENGTH In.	WEIGHT
	WINGWALL																									
301	Vertical	4	116	74				S		V	4	4	0.0	0	7.0									4	6	
												13	7.0	0	7.0									14	1	718
302	Vertical	5	116	74				S		V	4	4	6.0	0	7.0									4	11	
												14	1.0	0	7.0									14	6	1179
303	Vertical	4	16	74				S		V	8	11	2.0	0	7.0									11	8	
												11	6.0	0	7.0									11	12	126
304	Vertical	4	48	74				S				11	9.0	0	4.5									12	0	385
305	Horiz	6	8	50				S				20	11.0											20	11	251
306	Horiz	8	8	50				S				20	11.0											20	11	447
307	Horiz	8	8	50				S				5	6.0											5	6	117
308	Horiz	5	8	50				S				23	9.0											23	9	198
309	Horiz	5	20	50				S		V	4	14	2.0											14	2	
												22	2.0											22	2	379
310	Horiz	7	12	51				S				20	11.0											21	9	533
311	Horiz	7	48	51				S		V	4	8	11.0											9	9	
												19	11.0											20	9	1493
312	Horiz	6	30	80				S				5	8.0	1	0.0	1	0.0	0	4.5	0	4.5	131	131	7	7	341
313	Horiz	5	32	50				S				5	7.0											5	7	186
314	Horiz	5	40	50				S		V	8	3	2.0											3	2	
												11	2.0											11	2	299
315	Bottom Horiz	8	8	80				S				22	9.0	3	3.0			0	6.0			153		25	12	555
316	Horiz	5	20	80				S				2	6.0	2	6.0			0	3.0			98		4	10	147
317	Horiz	5	30	80				S				6	6.0	1	0.0	1	0.0	0	4.5	0	4.5	139	139	8	5	380
318	Horiz	6	20	80				S				2	6.0	2	6.0			0	3.0			82		4	10	144
B5	Horiz	6	16	50				S				12	0.0											12	0	288

BENDING DIAGRAMS



NOTE:

ALL REINFORCING BARS ON THIS SHEET SHALL BE AASHTO M-31 UNLESS SHOWN OTHERWISE.

REINFORCING FOR TRAFFIC BARRIERS NOT SHOWN IN THIS BAR LIST, SEE SHEET ____.

BEND FOR TRANSVERSE BARS DUE TO ROADWAY CROWN CONDITIONS HAVE NOT BEEN SHOWN. THESE BARS SHALL BE BENT AS REQUIRED TO CONFORM TO THE CONFIGURATION OF THE STRUCTURE.

USKH
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LAND SURVEYING • PLANNING

HDR
HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	MICHAEL A. MURRAY
DESIGNED BY:	BRETT T. AKESSON
	PATRICK T. LI
DRAWN BY:	LARRY D. KELLER
	JOYCE M. LEM
PROJECT NUMBER	22315

MYRA ROAD EXTENSION PROJECT

CITY OF WALLA WALLA
WALLA WALLA COUNTY
CITY OF COLLEGE PLACE

MYRA ROAD
MILL CREEK BRIDGE
BAR LIST

0 1" 2"

FILENAME	008-25.dwg
SCALE	NO SCALE

SHEET B-25

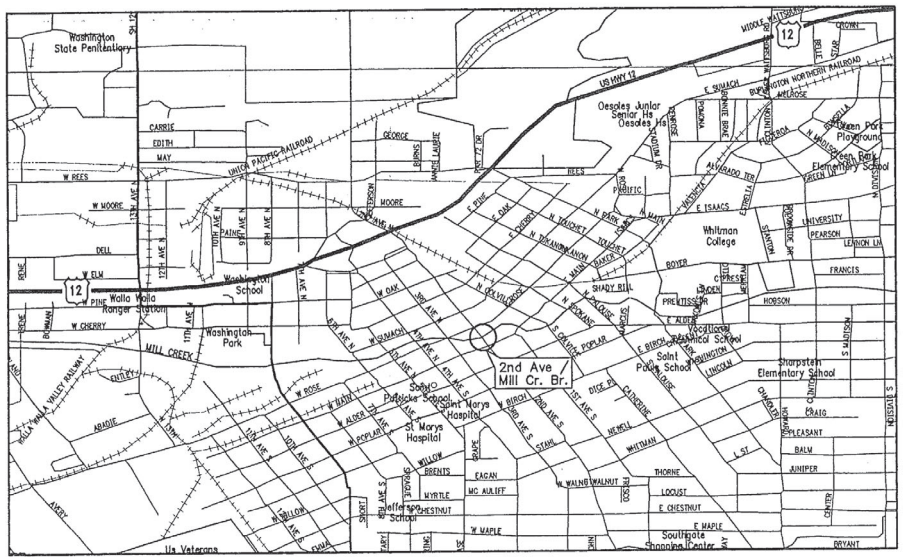
GENERAL NOTES:

All materials and work shall be in accordance with the requirements of the State of Washington, Department of Transportation, Standard Specifications for Road, Bridge, and Municipal Construction (English Version), dated 1998.

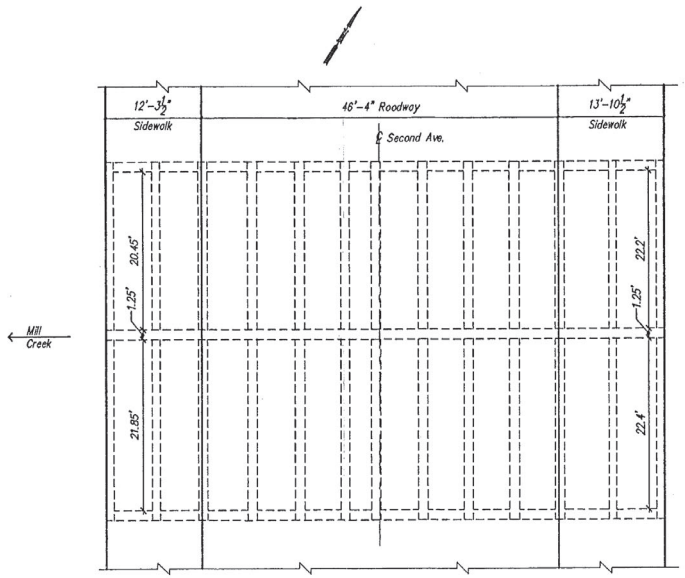
All cast-in-place concrete shall be class 4000 mix, modified to have a minimum compressive strength of 3000 psi in 72 hours with no increase in shrinkage from the normal class 4000 mix.

All reinforcing steel shall meet the requirements of AASHTO M31, Grade 60.

The contractor shall field verify all existing dimensions and shall make necessary adjustments to plan dimensions.



CITY OF WALLA WALLA VICINITY MAP



LAYOUT & FRAMING PLAN

(Located Between Rose St. & Main St., Existing Holes In Sidewalks Can Be Used For Establishing Position.)

PLAN CHECK	DATE
DESIGNED BY: C.E. Mayhan	
CHECKED BY: W.A. Whitney	
DETAILED BY: J.E. Welsh	

ISSUED:	DATE	NO.	REVISION	BY

FEDERAL AID PROJECT NO. BHM-7183(001)

PROJECT NO. PWE- 95-502

CHARLES E. MAYHAN — STATE OF WASHINGTON — 13508 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 12/3/99

SARGENT
Sargent Engineers, Inc.
320 West Bay Drive, Suite 101 • Olympia, Washington 98502
Tel. 360 943-3590 • Fax 360 352-3581

WALLA WALLA
DEPARTMENT OF PUBLIC WORKS

ENGINEER – DATE – PROJECT NO.

SECOND AVENUE BRIDGE REHABILITATION

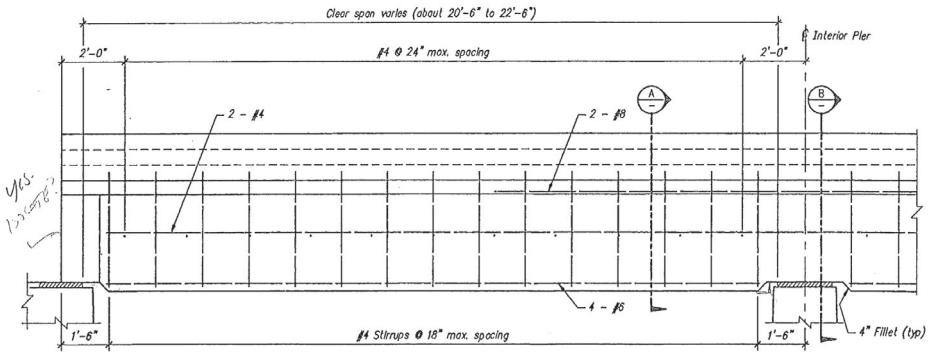
City of Walla Walla, Washington

VICINITY MAP & FRAMING PLAN

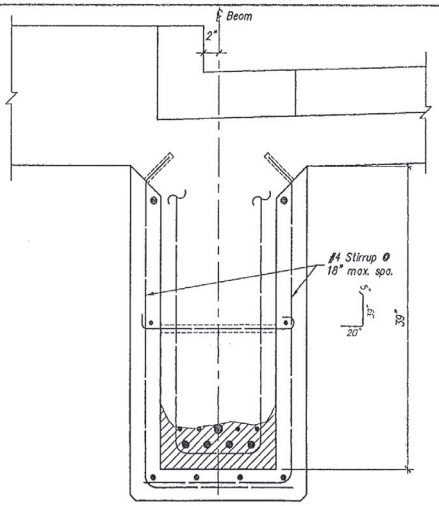
SHEET 1 OF 3 SHEETS

SEI REF NO. 97235

Plot: 06/19/98 Time: 09:00 Last Detailer: J.E. Welsh File Name: 97235-01.dwg

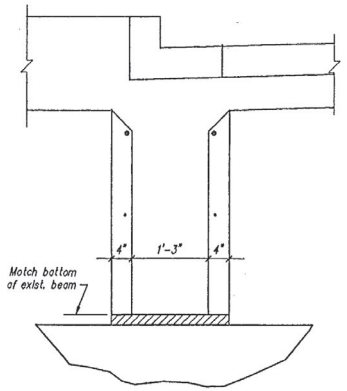


ELEVATION ~ WEST BEAM



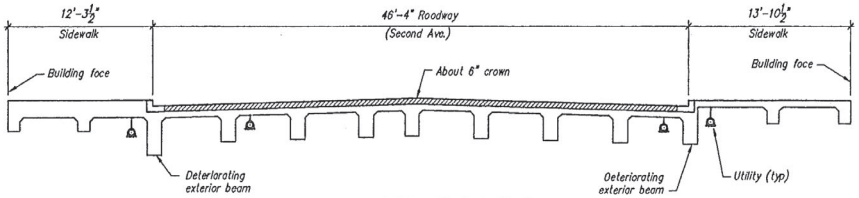
WEST BEAM (A)

See East Beam for Details not Shown



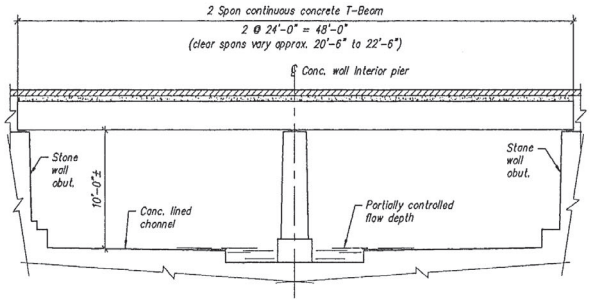
SECTION @ INT. PIER (B)

West Beam Shown
East Beam Similar



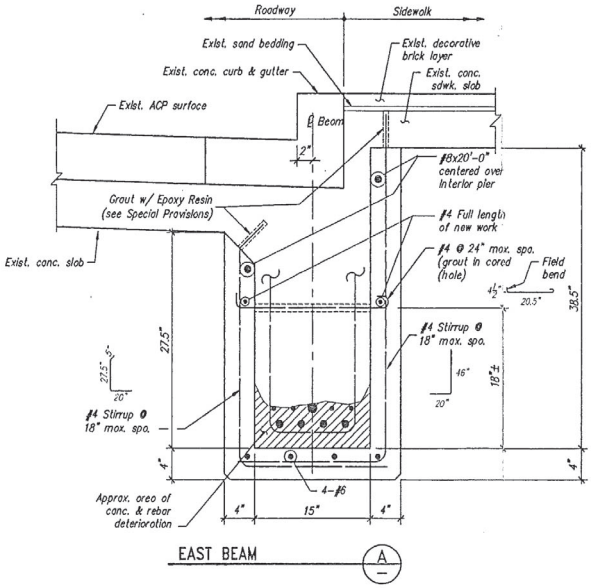
SECTION THRU SUPERSTRUCTURE

(Normal to Second Avenue)
Looking North-NorthWest



SECTION PARALLEL TO SECOND AVENUE

Looking East-NorthEast



EAST BEAM (A)

PLAN CHECK	DATE
DESIGNED BY: C.E. Mayhan	
CHECKED BY: W.A. Whitney	
DETAILED BY: J.E. Welsh	

ISSUED:	DATE	NO.	REVISION	BY

FEDERAL AID PROJECT NO. BHM-7183(001)

PROJECT NO. PWE 95-502

CHARLES E. MAYHAN — STATE OF WASHINGTON — 13558 — REGISTERED PROFESSIONAL ENGINEER — EXPIRES 12/3/99 — 6/19/98

SARGENT

Sargent Engineers, Inc.
320 West Bay Drive, Suite 101 • Olympia, Washington 98502
Tel. 360 943-3590 • Fax 360 352-3581

WALLA WALLA
DEPARTMENT OF PUBLIC WORKS

ENGINEER – DATE – PROJECT NO.

SECOND AVENUE BRIDGE REHABILITATION

City of Walla Walla, Washington

SECTIONS & DETAILS

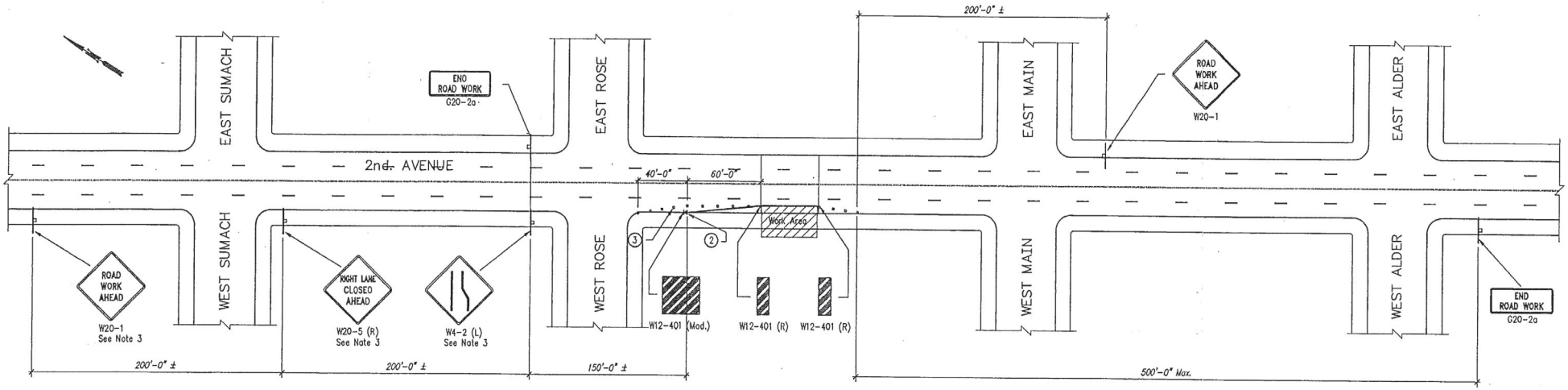
SHEET 2 OF 3 SHEETS

SEI REF NO. 97235

Plot: 06/19/98 Time: 09:05 Last Detailer: J.E. Welsh File Name: 97235-02.dwg

NOTES

1. Conflicting pavement markings and those no longer applicable shall be removed or obliterated.
2. Exposed ends of concrete barriers must be fitted with impact attenuators
3. Steady burning warning lights (TYPE C, MUTCD) shall be used to mark channelizing devices at night.



LEGEND
Channelizing Devices
Concrete Barrier
Impact attenuators (see Note)

TRAFFIC CONTROL PLAN

PLAN CHECK	DATE
DESIGNED BY: C.E. Mayhan	
CHECKED BY: W.A. Whitney	
DETAILED BY: J.E. Welsh	

ISSUED:	DATE	NO.	REVISION	BY

FEDERAL AID PROJECT NO. BHM-7183(001)

PROJECT NO. PWE 95-502

CHARLES E. MAYHAN — STATE OF WASHINGTON — 13054 — REGISTERED PROFESSIONAL ENGINEER — 4/1/98 — EXPIRES 12/3/99

SARGENT
Sargent Engineers, Inc.
320 West Bay Drive, Suite 101 • Olympia, Washington 98502
Tel. 360 943-3590 • Fax 360 352-3581

WALLA WALLA
DEPARTMENT OF PUBLIC WORKS

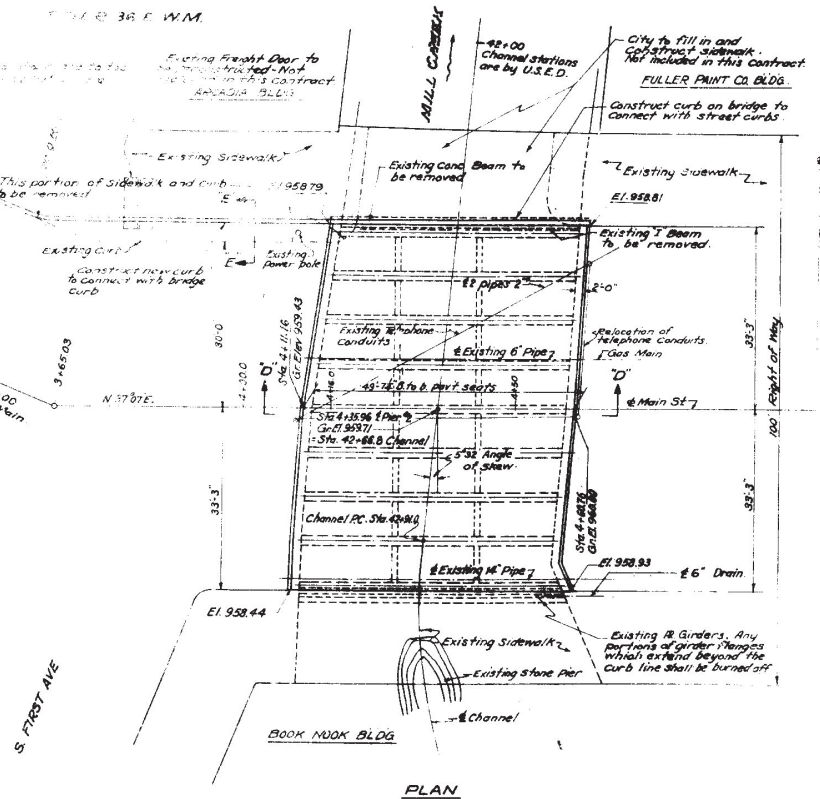
ENGINEER – DATE – PROJECT NO.

SECOND AVENUE
BRIDGE REHABILITATION
City of Walla Walla, Washington
TRAFFIC CONTROL PLAN

SHEET 3 OF 3 SHEETS

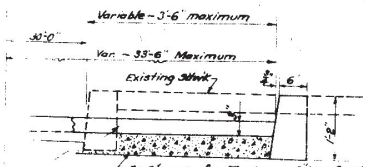
SEI REF NO. 97235

Plot: 06/19/98 Time: 08:09 Last Detailer: J.E. Welsh File Name: 97235-03.dwg



PLAN

℄ Main Street



SECTION "E-E"
Sta. 3+40 to 4+16

GENERAL NOTES

All material and workmanship shall be in accordance with the requirements of the State of Washington, Department of Highways, Standard Specifications for Road and Bridge Construction, dated April 1946.
All concrete shall be Class "A" mix.

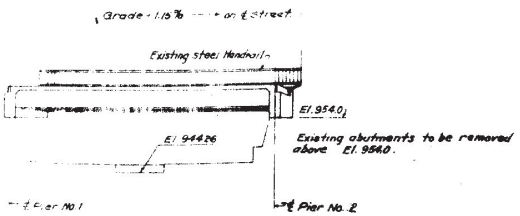
SUMMARY OF QUANTITIES

Sta. 4+11.16 to Sta. 4+60.76 — Length = 49.60 Ft.

ITEM NO.	ITEM	QUANTITY	UNIT
1	Structure Excavation	27	Cu. Yds.
2	Mechanical Tamper	1	Days
3	Concrete Class "A"	215	Cu. Yds.
4	Crushed Stone Surfacing, Top Course	5	Cu. Yds.
5	Steel Reinforcing Bars	5,000	Lbs.
6	Type I-1 Asphaltic Concrete Pavement - Class C Wearing Course	4	Tons
7	Removing Portions of Existing Structure		

NOTE: For Special Features See Special Provisions.

H 20-S16 LOADING



SECTION "G-G" ALONG ℄ OF ROADWAY.
Scale 1" = 10'-0"

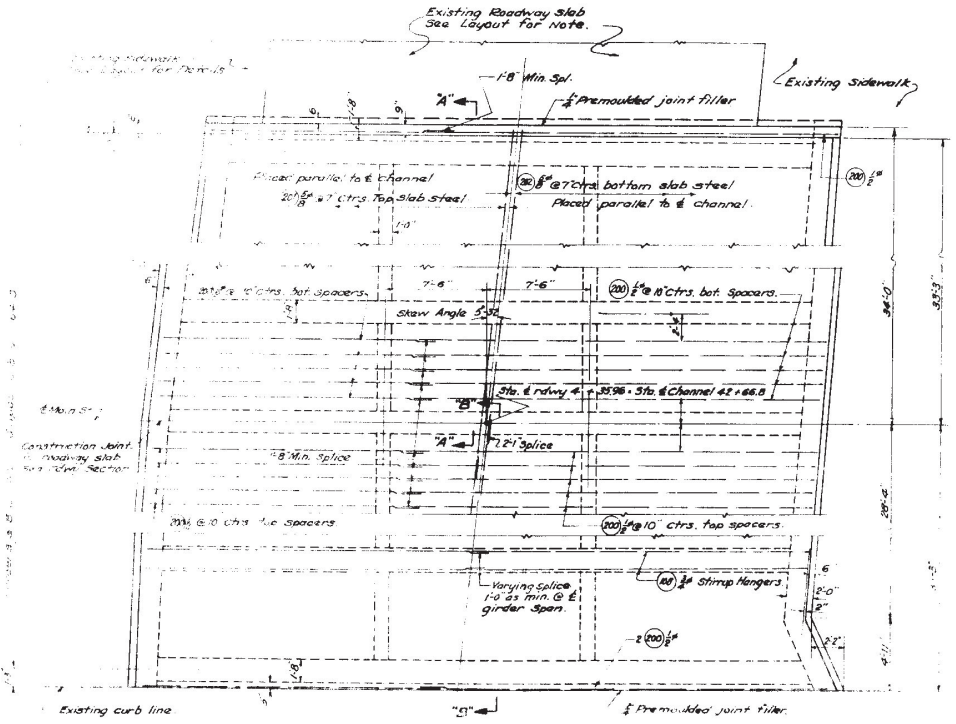
PRIMARY STATE HIGHWAY NO. 3
MILL CREEK BRIDGE NO. 3/606.5
IN WALLA WALLA
WALLA WALLA COUNTY

LAYOUT

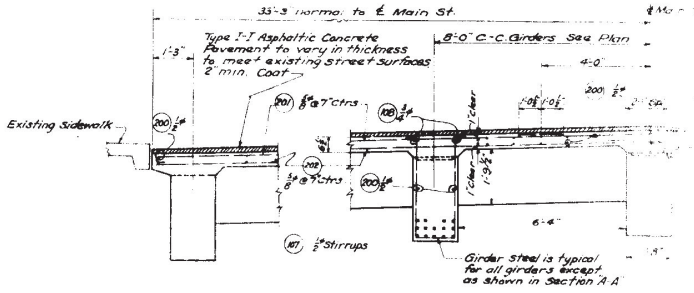
STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

Engr. of Bridges

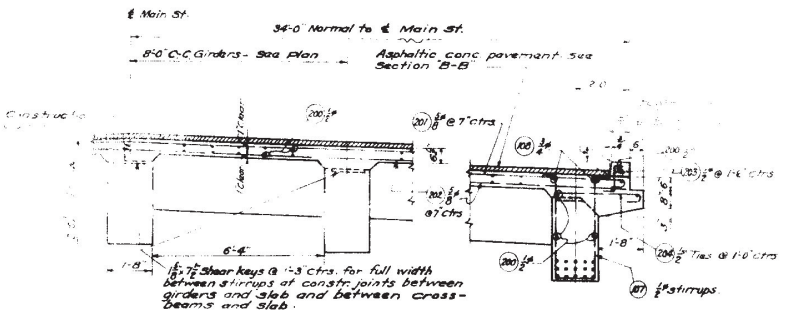
SHEET 1 OF 3 SHEETS



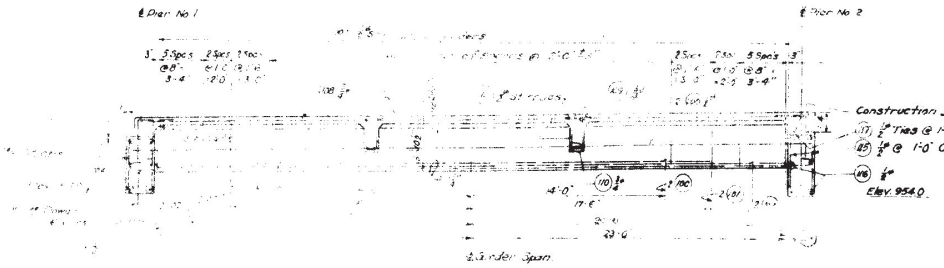
PLAN



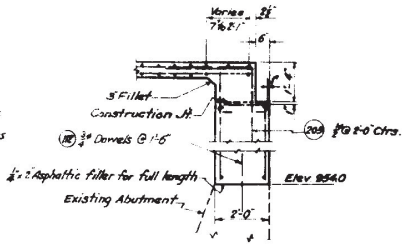
TYPICAL R'DWY. SECTION - SECTION "B-B"



TYPICAL ROADWAY SECTION - SECTION "A-A"



TYPICAL [illegible] LONGITUDINAL SECTION



TYPICAL SECTION THRU END WALL.

PRIMARY STATE HIGHWAY NO. 3
MILL CREEK BRIDGE NO. 3 606.5
IN WALLA WALLA
WALLA WALLA COUNTY

PLAN & SECTIONS

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

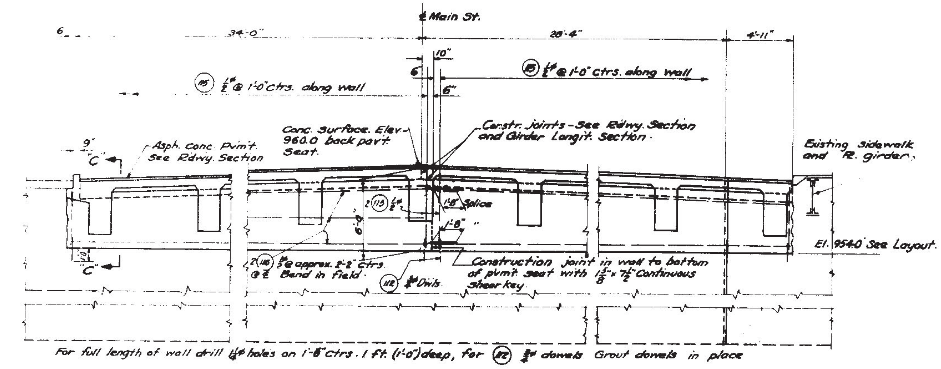
APPROVED: W. A. Bugge
DIRECTOR OF HIGHWAYS

APPROVED: Sergent Hauan
CHIEF ENGINEER

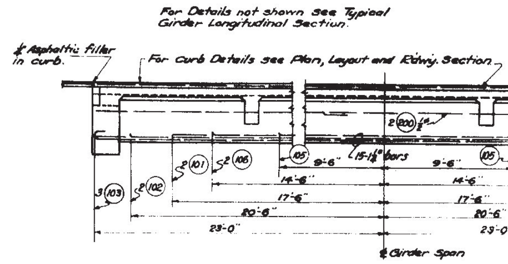
SHEET 2 OF 3 SHEETS
CONTRACT NUMBER 5546

WILLIAM A. BUGGE
REGISTERED PROFESSIONAL ENGINEER

2-6565

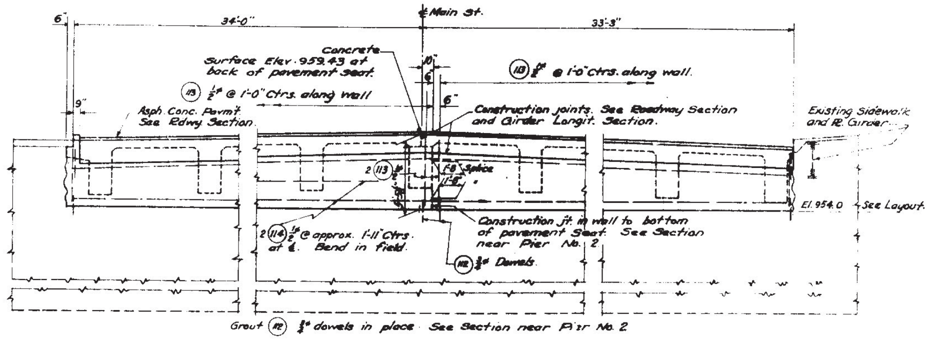


SECTION NEAR PIER NO. 2

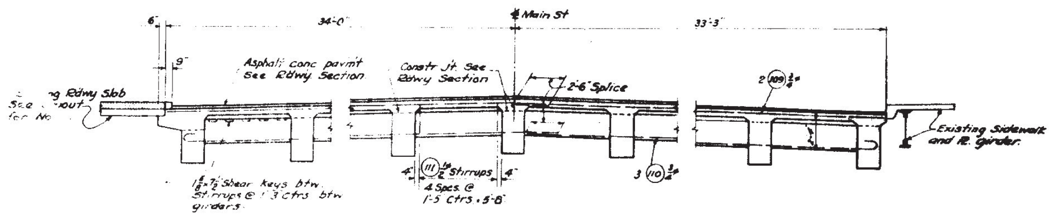


SECTION C-C.

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	WASH.				



ELEVATION NEAR PIER NO. 1



SECTION NEAR CROSS BEAM.

BAR LIST

All dimensions are out to out.

MARK	LOCATION	NO.	SIZE	LENGTH	BENDING DIAGRAM
	GIRDERS, CROSS BEAMS and END WALLS				
100	Typical Girder, bot.	16	1¼"	25'-0"	Str.
101	All " "	18	1¼"	35'-0"	"
102	" " "	18	1¼"	41'-0"	"
103	" " "	27	1¼"	46'-0"	"
104	" " "	45	1¼"	Varies	20 @ [illegible] and 5 ea. @ 54'-0", 51'-4", 50'-7", 49'-10" [illegible]
105	Left Ext. Girder - bot.	1	1¼"	19'-0"	Str.
106	" " " "	2	1¼"	29'-0"	"
107	Girder Stirrups	296	½"	9'-8"	
108	" " Hangers	36	¾"	25'-11"	Str.
109	X-bm. stirrup hangers	8	¾"	Varies	Str. 4 ea. @ 33'-0" and 36'-4"
110	" bottom	12	¾"	"	6 ea. @ 32'-5" and 36'-7"
111	" Stirrups	80	½"	5'-8"	
112	End Walls dowels	96	¾"	2'-0"	Str.
113	Pier No. 1 - Vertical	186	½"	Varies	" [illegible] 4'-0"
114	" " 1 - horiz.	12	½"	"	" 6 ea. @ 32'-3" and 37'-4"
115	" " 2 - Vert.	136	½"	"	" [illegible]
116	" " 2 - horiz.	12	½"	"	" 6 ea. @ 35'-8" and 36'-11"
117	Pavement Seat Ties	91	½"	2'-9"	
	ROADWAY SLAB and CURB				
200	Rdwy. Slab - longit.	296	½"	Varies	Str. [illegible]
201	" " transv. top	164	½"	"	82 ea. 30'-6" & 30'-9"
202	" " " - bot.	180	½"	"	Str. 90 ea. @ 30'-11" and 33'-0"
203	Curb Ties	32	½"	1'-10"	
204	Sdwk. Seat Ties	48	½"	3'-6"	
205	Slab and End Wall	48	½"	6'-0"	

PRIMARY STATE HIGHWAY NO. 3
MILL CREEK BRIDGE NO. 3 606.5
IN WALLA WALLA
WALLA WALLA COUNTY

BAR LIST & SECTIONS

STATE OF WASHINGTON
DEPARTMENT OF HIGHWAYS
OLYMPIA, WASHINGTON

SHEET 3 OF 3 SHEETS

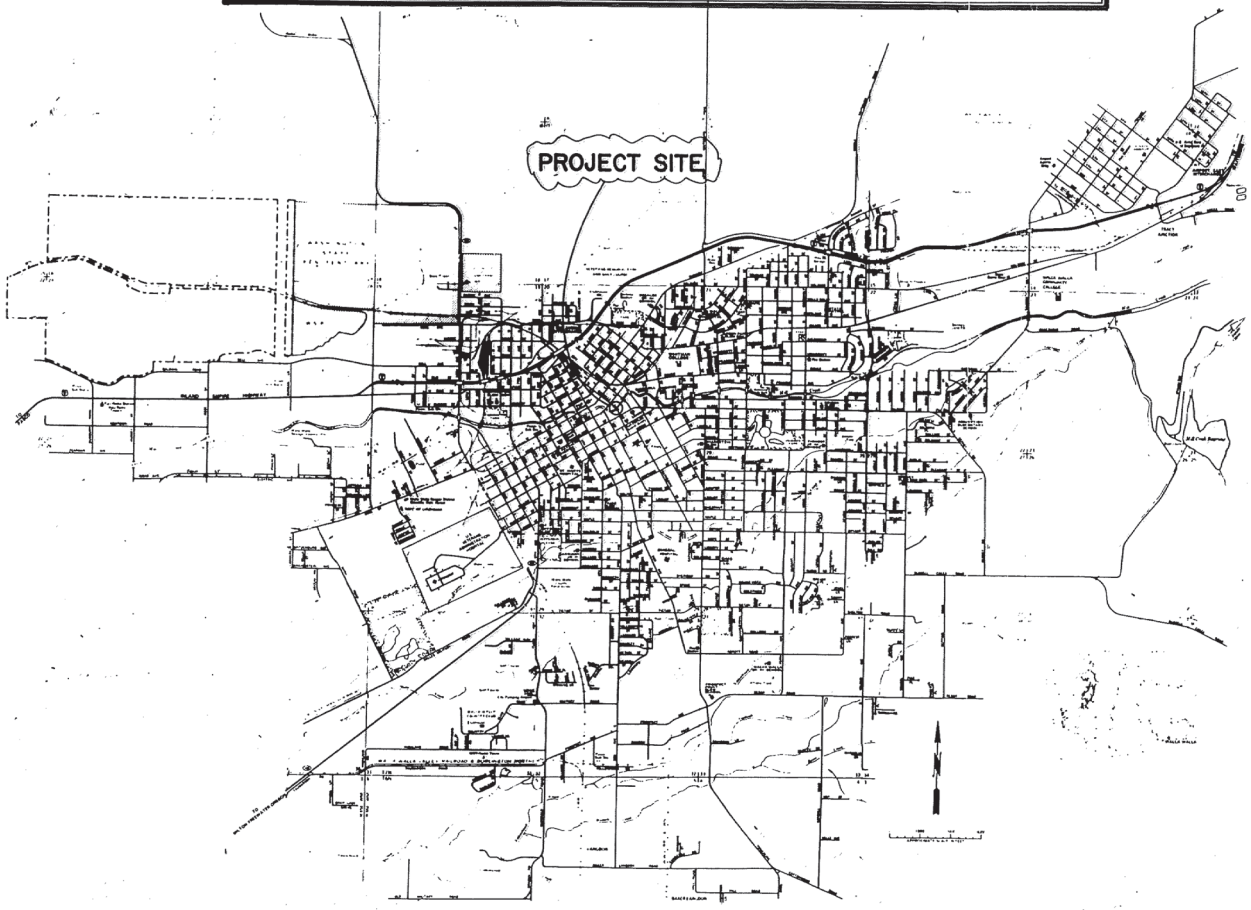
2 6565

FED. ROAD DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
10	WASH.	BRM-7187(1)	1989	1	8

CITY OF WALLA WALLA, WASHINGTON

COLVILLE BRIDGE

P.W.E. 85-501



MAYOR
B. LOYAL SMITH

COUNCIL
ELLEN HAUN
MIKE JOHNSON
FRED MITCHELL
WILLIAM FLEENOR
TOM WILLIAMS
JOHN "DAN" SWANK

CITY MANAGER
HARRY D. KINZER

CITY ENGINEER
JACK MOLSNESS, P.E.

JOHN E. MOLSNESS
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER

INDEX OF DRAWINGS

PROJECT NO. 85-501
COPY NO. _____
CONTRACTOR _____
COST _____

FED. ROAD DIV. NO.	STATE	FED AID PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
10	WASH.	BRM-7187(1)	1989	2	8

PROJECT LIMITS:
COLVILLE STREET

STA. 2+25 to STA. 4+75

SUMMARY OF QUANTITIES

LENGTH: 250 L.F.

ITEM NO.	TOTAL QUANTITY	UNIT	ITEM	GROUP 1 BRIDGE STA. 3+25 To STA. 3+74	GROUP 2 STA 2+25 To STA. 4+75 (LESS BRIDGE
			PREPARATION		
1	LUMP SUM	L.S.	MOBILIZATION 100% 8-15-89	L.S.	L.S.
2	LUMP SUM	L.S.	REMOVE PORTION OF EXISTING BRIDGE, COLVILLE BRIDGE 70% 8-15-89, 100% 8-25-89	L.S.	
3	75	S.Y.	REMOVE CEMENT CONCRETE SIDEWALK 10-30-89 = 48.43 yds², 10-31-89 = 44.06 yds²		75
4	70	L.F.	REMOVE CEMENT CONCRETE CURB AND GUTTER 10-30-89, 84 L.F.		100
5	1	Ea.	REMOVE CONCRETE INLET 10-30-89, 1 ea.		1
			GRADING		
6	1110	S.Y.	REMOVE EXISTING SUBGRADE AND PAVEMENT 60'(long) X 40'(wide) for bridge = 266.67 yds², 8-15-89, Total 10-30-89 844.44 yds. (Not Counting bridge)		1110
			UTILITIES		
7	2	Ea.	CONCRETE INLET 10-30-89		2
8	30	L.F.	6" DUCTILE IRON PIPE N.E. & S.W. Cor. 10-30-89		30
9	130	L.F.	DUCTILE IRON PIPE FOR WATER MAIN, 8" DIA. (South) 10-12-89, (North) 10-30-89		130
10	LUMP SUM	L.S.	COLVILLE BRIDGE WATERLINE CROSSING 100% 9-29-89		L.S.
			STRUCTURE		
11	21	C.Y.	STRUCTURE EXCAVATION CLASS A, INCLUDING HAUL South Abut 8-25-89	21	
12	12	C.Y.	GRAVEL BACKFILL FOR WALL N & S = 10-17-89 North Abut 9-5-89	12	
13	3100	LBS.	EPOXY-COATED STEEL REINFORCING BAR	3100	
14	28,200	LBS.	STEEL REINFORCING BAR Abuts & Pier Caps = 2439.82 lbs 9-27-89	28,200	
15	150	C.Y.	CONCRETE CLASS 'AX' FOR SLAB	150	
16	30	C.Y.	CONCRETE CLASS 'AX' FOR BRIDGE SIDEWALK 10-30-89	30	
17	18	C.Y.	CONCRETE CLASS 'AX' FOR ABUTMENT/PIER CAPS 21.02 yds³ 9-27-89	18	
18	86	L.F.	PEDESTRIAN BARRIER 10-30-89	86	
19	86	L.F.	HAND RAILING 11-6-89	86	
20	55	S.Y.	EXPOSED AGGREGATE FINISH 11-9-89	55	
			STREET		
21	105	TON	CRUSHED SURFACING TOP COURSE		55
22	225	TON	ASPHALT TREATED BASE INCLUDING PAVING ASPHALT 11-1-89		225
23	210	TON	ASPHALT CONCRETE PAVEMENT INCLUDING PAVING ASPHALT 11-3-89	37	173
			OTHER		
24	2	Ea.	GATE VALVE, 8" (South) 10-12-89, (North) 10-30-89		2
25	70	L.F.	CEMENT CONCRETE CURB AND GUTTER 10-30-89		65
26	90	S.F.	TEMPORARY SIGNING 8-15-89		90
27	10	Ea.	TYPE III BARRICADE 8-15-89		10
28	75	S.Y.	CEMENT CONCRETE SIDEWALK 10-30-89, 10-31-89		75
29	3	L.F.	CHAIN LINK FENCE, TYPE 6 11-6-89		3
			MOH Water stuff, 10-2-89		
			MOH Re-bar, 10-2-89		
			#801, Bridge Superstructure		

NOTE. For special features see special provisions.

JOHN R. MOLSNESS
STATE OF WASHINGTON
11072
REGISTERED
PROFESSIONAL ENGINEER

CITY OF WALLA WALLA

ENGINEERING DIVISION

COLVILLE BRIDGE

SUMMARY OF QUANTITIES

2/8

FED. ROAD DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
10	WASH.	BRM-7187(1)	1989	3	8

LEGEND

	PROPOSED	EXISTING
SANITARY SEWER		
STORM SEWER		
WATER		
GAS		
POWER (Underground) UG		
TELEPHONE UG		
TELEVISION UG		
POWER (Overhead) OH		
TELEPHONE OH		
TELEVISION OH		
STREET LIGHT POLE		
UTILITY POLE - Wood		
- Steel		
ANCHOR / GUY WIRE		
SIGNALS - Mastarm		
- Spanwire		
SIGN		
JUNCTION / SPLICE BOX		
UTILITY VAULT		
MANHOLE - Sanitary		
- Storm		
CATCH BASIN / INLET		
VALVE		
FIRE HYDRANT		
METER - Water		
- Gas		
SEWER TEE / WYE		
SEWER SERVICE CONNECTION		
GRADE		
RIGHT-OF-WAY / PROPERTY LINE		
INTERIOR LOT LINES		
EASEMENT LINE		
CENTERLINE		
CURB (FACE)		
EDGE OF ROAD		
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
SECTION CORNER		FND.
MONUMENT		FND.
BUILDING		
BRIDGE / TUNNEL		
RAILROAD		
GUARD RAIL		
FENCE		
CULVERT		
STREAM		
DITCH		
TREES - Deciduous		
- Evergreen		
HEDGE		
ROCKERY		
RETAINING WALL		

GENERAL NOTES

1. In addition to the Plans and Specifications included in this package, the 1988 W.S.D.O.T. Standard Specifications for Road, Bridge and Municipal Construction, and the 1988 APWA Amendments to Division one made a part of this contract.
2. Vehicle access must be maintained to the Sears Automotive garage at all times and pedestrian access is required at the regular entrances to the other businesses on the street. In addition, access must be maintained to the Bon Marche loading entrance on Colville Street.
3. The contractor will be responsible for informing the adjacent business owners of any planned or unplanned water, sewer, T.V. cable, etc. interruptions and will be required to deal directly with the appropriate utilities.
4. Extreme care must be used to prevent damage to the existing Abutments, Pier and Concrete channel. The Abutments will have to be braced prior to the deck removal to prevent movement. The contractor will be required to submit a bracing and demolition plan that must be approved by the engineer before any demolition work begins.
5. Tracer identifying tape shall be installed in the water line trench as per standard plan No. 18. The cost for supplying and installing the tape shall be incidental to the unit price for "Ductile Iron Pipe for Water Main, 8" Diameter".
6. There are additional notes on the individual plan sheets with specific information for the work involved on that sheet.

JOHN R. MOLSNESS
STATE OF WASHINGTON
11072
REGISTERED
PROFESSIONAL ENGINEER

NO.	REVISION	BY	DATE

DESIGNED
DRAWN R. KEEN
CHECKED
APPROVED

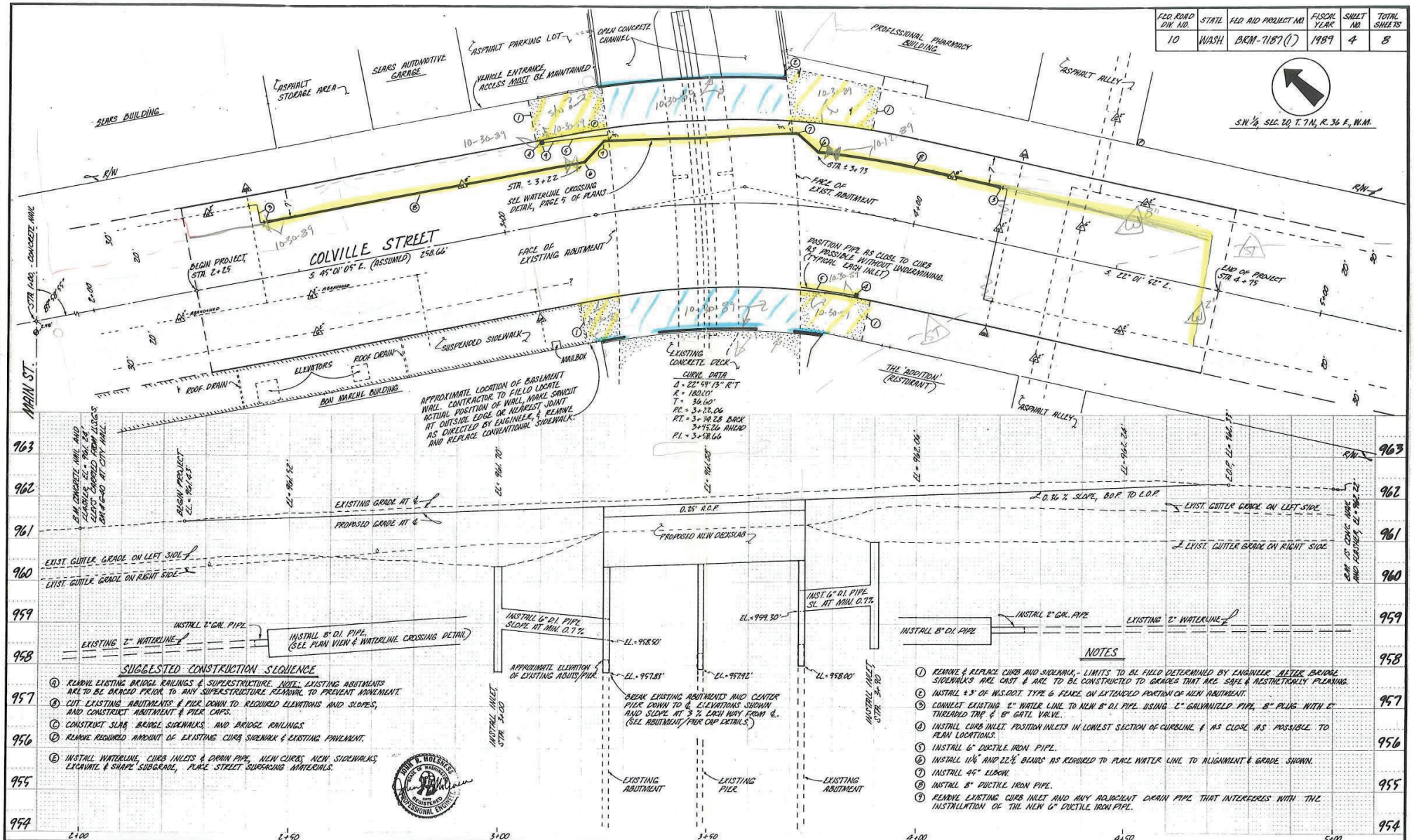
AS BUILT DATE
SCALE: HORIZ.
VERT.
FILE NO.

CITY OF WALLA WALLA
PUBLIC WORKS / ENGINEERING
P.O. BOX 478
WALLA WALLA, WASHINGTON 99362

LEGEND, GENERAL NOTES

COLVILLE BRIDGE

3 OF 8



FED. ROAD DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
10	WASH.	BRM-7187(1)	1989	4	8

SUGGESTED CONSTRUCTION SEQUENCE

(A) REMOVE EXISTING BRIDGE RAILINGS & SUPERSTRUCTURE. NOTE: EXISTING ABUTMENTS ARE TO BE BRACED PRIOR TO ANY SUPERSTRUCTURE REMOVAL TO PREVENT MOVEMENT.
(B) CUT EXISTING ABUTMENTS & PIER DOWN TO REQUIRED ELEVATIONS AND SLOPES, AND CONSTRUCT ABUTMENT & PIER CAPS.
(C) CONSTRUCT SLAB, BRIDGE SIDEWALKS, AND BRIDGE RAILINGS.
(D) REMOVE REQUIRED AMOUNT OF EXISTING CURB, SIDEWALK & EXISTING PAVEMENT.
(E) INSTALL WATERLINE, CURB INLETS & DRAIN PIPE, NEW CURBS, NEW SIDEWALKS, EXCAVATE & SHAPE SUBGRADE, PLACE STREET SURFACING MATERIALS.

JOHN C. HOLZERS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

NOTES

(1) REMOVE & REPLACE CURB AND SIDEWALK, - LIMITS TO BE FIELD DETERMINED BY ENGINEER. AFTER BRIDGE SIDEWALKS ARE CAST & ARE TO BE CONSTRUCTED TO GRADES THAT ARE SAFE & AESTHETICALLY PLEASING.
(2) INSTALL ± 3' OF W.S.D.O.T. TYPE 6 FENCE ON EXTENDED PORTION OF NEW ABUTMENT.
(3) CONNECT EXISTING 2" WATER LINE TO NEW 8" D.I. PIPE USING 2" GALVANIZED PIPE, 8" PLUG WITH 2" THREADED TAP, & 8" GATE VALVE.
(4) INSTALL CURB INLET. POSITION INLETS IN LOWEST SECTION OF CURBLINE & AS CLOSE AS POSSIBLE TO PLAN LOCATIONS.
(5) INSTALL 6" DUCTILE IRON PIPE.
(6) INSTALL 11¼° AND 22½° BENDS AS REQUIRED TO PLACE WATER LINE TO ALIGNMENT & GRADE SHOWN.
(7) INSTALL 45° ELBOW.
(8) INSTALL 8" DUCTILE IRON PIPE.
(9) REMOVE EXISTING CURB INLET AND ANY ADJACENT DRAIN PIPE THAT INTERFERES WITH THE INSTALLATION OF THE NEW 6" DUCTILE IRON PIPE.

NO.	REVISION	BY	DATE

DESIGNED Kelley McFarley
DRAWN Kelley McFarley
CHECKED
APPROVED
AS BUILT DATE
SCALE: HORIZ. 1" = 10 FEET
VERT. 1" = 1 FOOT
FILE NO.

CITY OF WALLA WALLA
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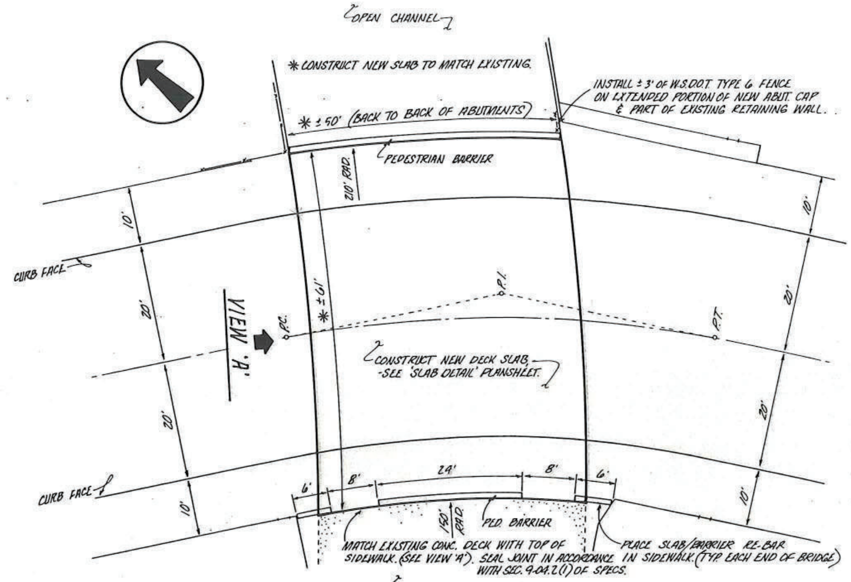
PLAN & PROFILE

COLVILLE BRIDGE

4 OF 8 DWG.

FED. ROAD DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
10	WASH.	BRM-7187(1)	1989	5	8

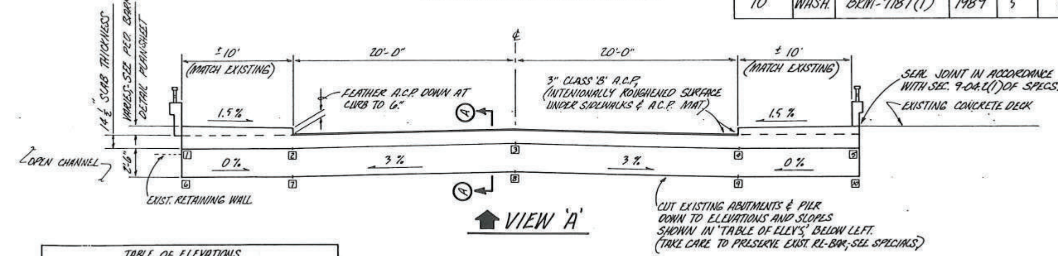
NOTE: SLAB, SIDEWALK, PEDESTRIAN BARRIER & HAND RAILING DETAILS ON OTHER PLANSHEETS.



CURVE DATA

Δ = 22°59' 13" R'T
R = 180.00'
T = 36.60'
L = 72.22'
E = 3.68'
L.C. = 71.73'
M = 3.61'
P.C. = 3+22.06'
P.I. = 3+58.66'
P.T. = 3+94.28 BACK
3+95.26 AHEAD

SLAB & PEDESTRIAN BARRIER LAYOUT



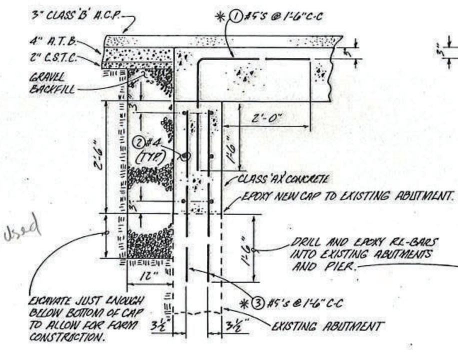
VIEW 'A'

TABLE OF ELEVATIONS

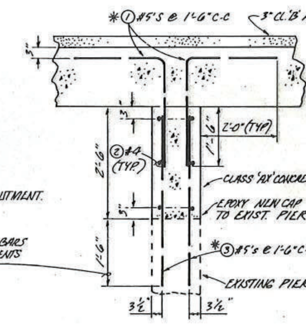
POINT	NORTH ABUTMENT	CENTER PIER	SOUTH ABUTMENT
1	959.73'	959.82'	959.90'
2	959.73'	959.82'	959.90'
3	960.33'	960.42'	960.50'
4	959.73'	959.82'	959.90'
5	959.73'	959.82'	959.90'
6	957.23'	957.32'	957.40'
7	957.23'	957.32'	957.40'
8	957.83'	957.92'	958.00'
9	957.23'	957.32'	957.40'
10	957.23'	957.32'	957.40'

ABUTMENT/PIER CAP BAR LIST

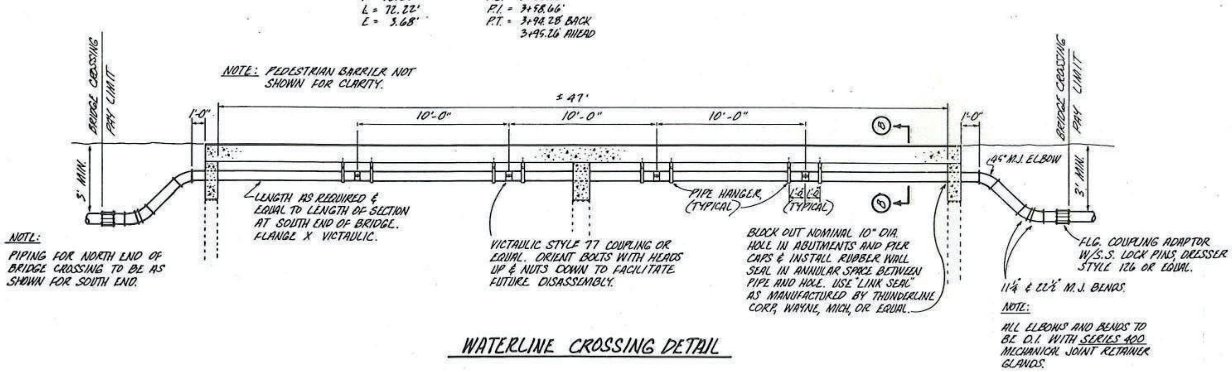
MARK	NO.	SIZE	LENGTH	WEIGHT	REMARKS
*(1)	168	#5	3'-5"	600 lbs	EPOXY COATED Not Used
(2)	54	#4	20'-0"	725 lbs	24" MIN. LAP
	18	#4	7'-0"	85 lbs	24" MIN LAP
*(3)	250	#5	4'-0"	1045 lbs	EPOXY COATED
* DENOTES EPOXY COATED RE-BARS					



SEC. (A) AT ABUTMENT



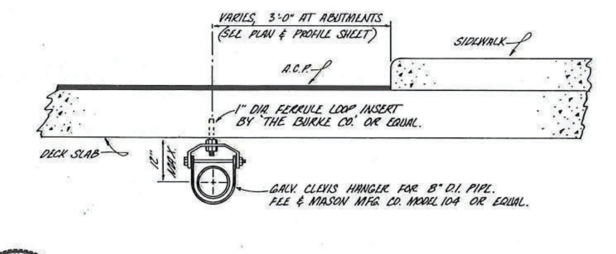
SEC. (A) AT PIER



NOTE: PIPING FOR NORTH END OF BRIDGE CROSSING TO BE AS SHOWN FOR SOUTH END.

NOTE: ALL ELBOWS AND BENDS TO BE D.I. WITH SERIES 400 MECHANICAL JOINT RETAINER GLANDS.

WATERLINE CROSSING DETAIL



SECTION (B)

JOHN R. MOLSNESS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER

NO.	REVISION	BY	DATE	DESIGNED Kelley McFarley 3-2-88	AS BUILT	DATE
				DRAWN K.M.	SCALE: HORIZ. DO NOT SCALE	
				CHECKED	VERT.	
				APPROVED	FILE NO.	

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PUBLIC WORKS / ENGINEERING
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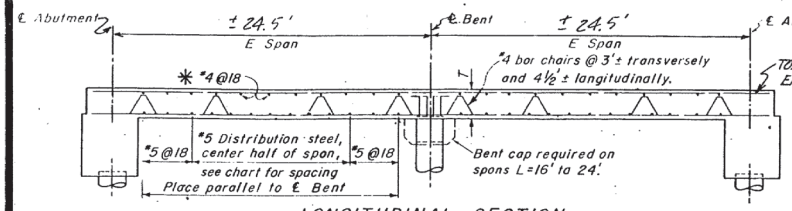
WALLA WALLA, WASHINGTON 99362

SLAB LAYOUT, WATERLINE CROSSING & ABUTMENT/PIER CAP DETAILS

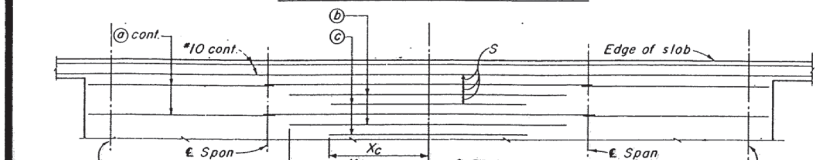
COLVILLE BRIDGE

DWG. 5 OF 8

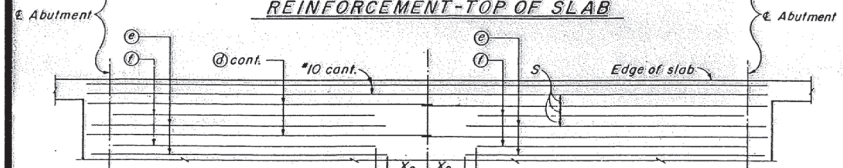
FED. ROAD DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
10	WASH.	BRM-7187(1)	1939	6	8



LONGITUDINAL SECTION



REINFORCEMENT-TOP OF SLAB



REINFORCEMENT-BOTTOM OF SLAB

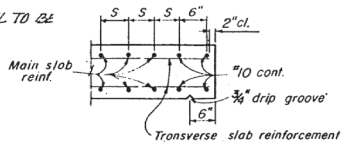
USE THIS SPAN LENGTH.

L=Length of Span			16'	18'	20'	22'	24'	26'	28'	30'	32'	34'	36'	38'	40'	42'	44'
REINFORCEMENT Top of Slab	ⓒ bars	Size	#8	#9	#9	#8	#11	#10	#9	#9	#8	#9	#10	#9	#10	#11	#11
		Length	34'-0"	38'-0"	42'-0"	46'-0"	50'-0"	54'-0"	61'-0"	65'-0"	69'-0"	73'-0"	77'-6"	81'-0"	86'-0"	90'-0"	94'-0"
	ⓓ bars	Size	#7	#7	#7	#8	#7	#8	#9	#9	#10	#10	#10	#11	#10	#11	#11
		Length	12'-0"	11'-6"	12'-6"	15'-0"	11'-0"	13'-0"	15'-6"	16'-6"	19'-0"	19'-0"	18'-6"	21'-6"	20'-0"	20'-0"	21'-0"
	ⓑ	Xb	6'-0"	5'-9"	6'-3"	7'-6"	5'-6"	6'-6"	7'-9"	8'-3"	9'-6"	9'-6"	9'-3"	10'-9"	10'-0"	10'-0"	10'-6"
* Bottom of Slab	ⓒ bars	Size	#7	#7	#8	#8	#7	#9	#10	#10	#10	#10	#10	#11	#11	#11	#11
		Length	6'-6"	6'-6"	7'-6"	8'-0"	7'-0"	7'-6"	9'-0"	9'-6"	10'-0"	10'-0"	10'-0"	11'-0"	13'-0"	12'-0"	12'-0"
	ⓒ	Xc	3'-3"	3'-3"	3'-9"	4'-0"	3'-6"	3'-9"	4'-6"	4'-9"	5'-0"	5'-0"	5'-0"	5'-6"	6'-6"	6'-0"	6'-0"
	ⓓ bars	Size	#8	#8	#9	#8	#11	#11	#10	#10	#10	#10	#9	#9	#9	#9	#9
		Length	34'-0"	38'-0"	42'-0"	46'-0"	50'-0"	54'-0"	58'-0"	64'-0"	68'-0"	72'-0"	76'-0"	80'-0"	84'-0"	88'-0"	92'-0"
	ⓔ bars	Size	#7	#7	#7	#8	#7	#9	#8	#9	#9	#9	#9	#9	#9	#10	#10
		Length	14'-6"	16'-6"	17'-6"	19'-6"	19'-0"	21'-0"	23'-6"	25'-6"	26'-6"	28'-0"	30'-0"	31'-6"	33'-6"	35'-0"	36'-6"
	ⓔ	Xe	2'-6"	2'-6"	3'-6"	3'-6"	6'-0"	6'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-0"	7'-6"	7'-6"	8'-0"	8'-6"
	ⓕ bars	Size	#7	#8	#8	#8	#7	#6	#9	#8	#8	#9	#10	#10	#11	#11	#11
		Length	10'-0"	12'-0"	13'-0"	14'-0"	11'-6"	11'-0"	17'-0"	16'-0"	17'-0"	19'-0"	22'-6"	24'-6"	27'-6"	26'-0"	27'-6"
	ⓕ	Xf	4'-3"	4'-6"	5'-3"	6'-6"	8'-6"	10'-0"	8'-0"	9'-9"	10'-6"	10'-9"	10'-0"	10'-3"	10'-6"	12'-0"	12'-6"
Dist.-Steel Spacing			11"	11"	11"	10"	10"	10"	10"	9"	9"	9"	9"	9"	9"	9"	9"
T=Thickness of slab			10½"	11⅛"	11¾"	12⅜"	13"	14"	15"	16"	17"	18"	19¾"	20¾"	22"	23"	24"
S=Bar Spacing			6"	6"	6"	5½"	5½"	6"	6"	5½"	5½"	5½"	5½"	5½"	5"	5½"	5"
Clearance to main reinforcing			1½"	1½"	1½"	1½"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"
Quantities per ft. of slab width		Conc. ft³	14.9	17.6	20.5	24.5	28.1	32.7	37.5	42.7	48.2	54.0	60.9	67.5	75.0	82.4	90.0
		Steel-lbs.	145	175	205	230	310	315	330	385	395	450	495	510	600	655	735
Deflection at Midspan Δ			.00'	.00'	.00'	.02'	.02'	.03'	.03'	.04'	.04'	.05'	.05'	.06'	.07'	.07'	.08'

*Length includes allowance for one splice.

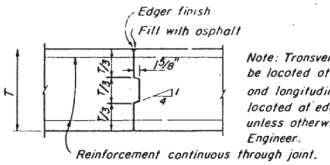
LIVE LOADING: HS 20-44

*TOP OF SLAB STEEL TO BE EPOXY COATED IN CONFORMANCE WITH AASHTO SPEC M 284 AND ADDITIONAL MODIFICATIONS AS PER SECTION 9-07.3 OF CONTRACT SPECIFICATIONS.



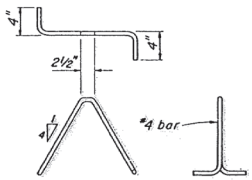
EDGE OF SLAB DETAIL

Curb and railing not shown



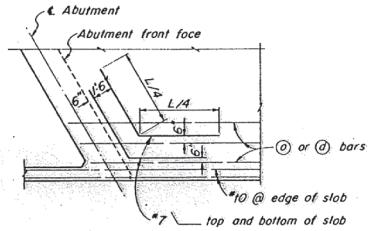
Note: Transverse joints, if used, to be located at ¼ point of span and longitudinal joint to be located at edge of traffic lanes unless otherwise permitted by the Engineer.

LONGITUDINAL OR TRANSVERSE SLAB CONSTRUCTION JOINT

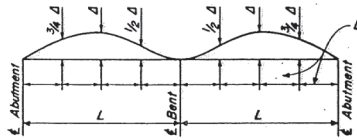


BAR CHAIR DETAIL

(CHAIRS TO BE EPOXY COATED)



OBTUSE CORNER DETAIL



CAMBER DIAGRAM

TOTAL SLAB DEFLECTION DUE TO DEAD LOADS

The total deflection will be reached about 4 years after falsework removal. For values at time of falsework removal divide those shown by 4.

The amount of camber for construction will be determined by the Engineer.

Notes: Top reinforcement to be spliced 35 dia. at ℄ Span when necessary.
Bottom reinforcement to be spliced 20 dia. at ℄ Bent when necessary.
Distribution steel spacing measured along ℄ Roadway.

JOHN R. MOLSNESS
STATE OF WASHINGTON
11072
REGISTERED PROFESSIONAL ENGINEER

NO.	REVISION	BY	DATE

DESIGNED
DRAWN KELLEY MC FARLEY
CHECKED
APPROVED

AS BUILT DATE
SCALE: HORIZ. DO NOT SCALE
VERT.
FILE NO.

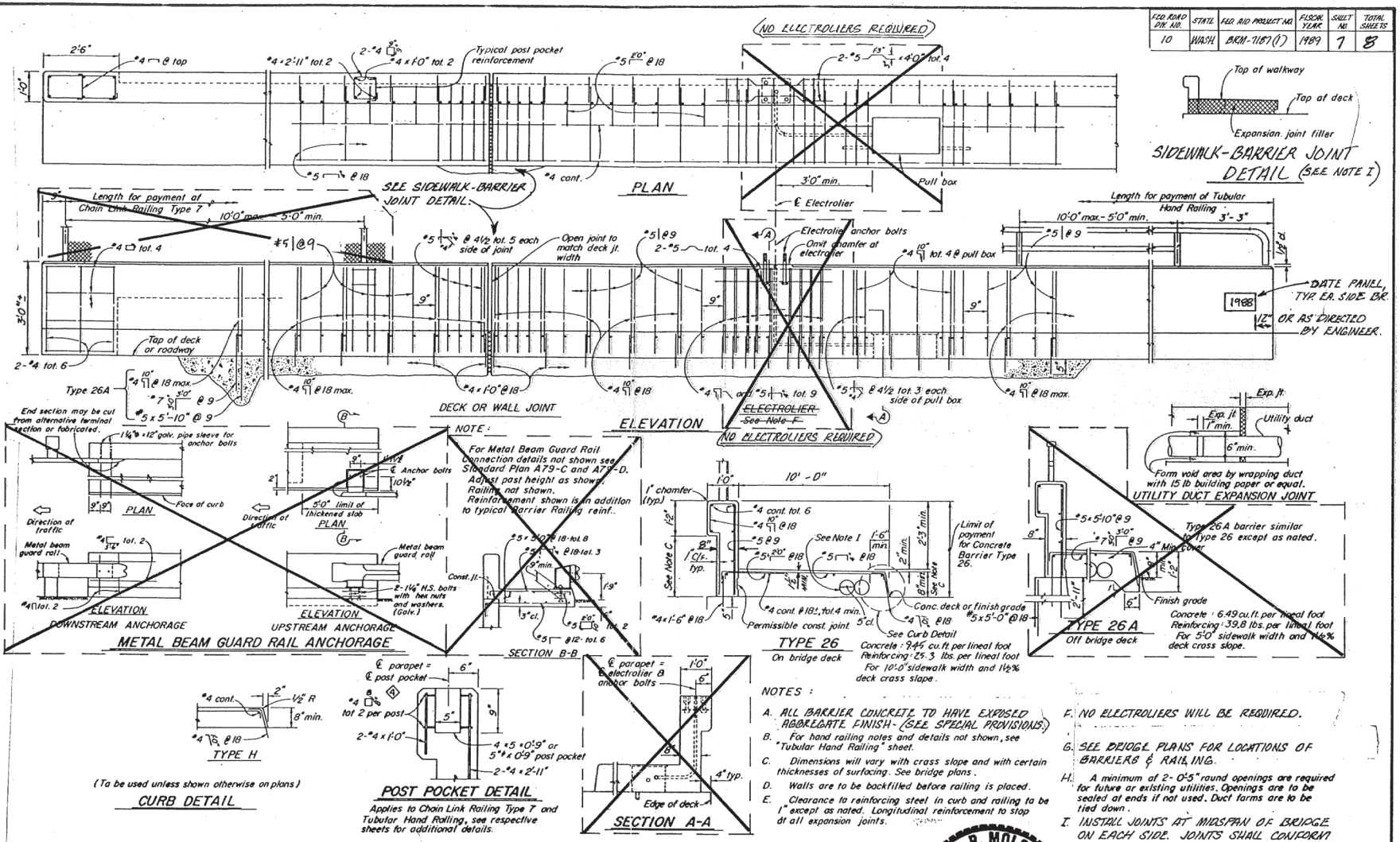
CITY OF WALLA WALLA
PUBLIC WORKS / ENGINEERING
P.O. BOX 478
WALLA WALLA, WASHINGTON 99362

SLAB DETAILS

COLVILLE BRIDGE

6 of 8 DWG.

FED. ROAD DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
10	WASH.	BRM-7187(1)	1989	7	8



NOTES :

A. ALL BARRIER CONCRETE TO HAVE EXPOSED AGGREGATE FINISH - (SEE SPECIAL PROVISIONS.)
B. For hand railing notes and details not shown, see "Tubular Hand Railing" sheet.
C. Dimensions will vary with cross slope and with certain thicknesses of surfacing. See bridge plans.
D. Walls are to be backfilled before railing is placed.
E. Clearance to reinforcing steel in curb and railing to be 1" except as noted. Longitudinal reinforcement to stop at all expansion joints.
F. NO ELECTROLIERS WILL BE REQUIRED.
G. SEE BRIDGE PLANS FOR LOCATIONS OF BARRIERS & RAILING.
H. A minimum of 2- 0'-5" round openings are required for future or existing utilities. Openings are to be sealed at ends if not used. Duct forms are to be tied down.
I. INSTALL JOINTS AT MIDSPAN OF BRIDGE ON EACH SIDE. JOINTS SHALL CONFORM TO SEC. 9-04 OF SPECS PERTAINING TO EXPANSION JOINTS. CONTROL J'TS CONFORMING TO CITY PLAN NO. 24 SHALL BE INSTALLED ON 10' CENTERS EA. WAY FROM EXPANSION JOINTS.

INDICATES AREAS THAT ARE DELETED FROM THIS STANDARD PLAN.

JOHN R. MOLSNESS STATE OF WASHINGTON 11072 REGISTERED PROFESSIONAL ENGINEER

NO.	REVISION	BY	DATE

DESIGNED
DRAWN K.M. 2-29-88
CHECKED
APPROVED
AS BUILT
SCALE: HORIZ. DO NOT SCALE
VERT.
DATE
FILE NO.

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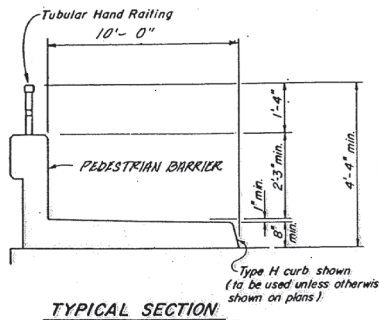
P.O. BOX 478
WALLA WALLA, WASHINGTON 99362

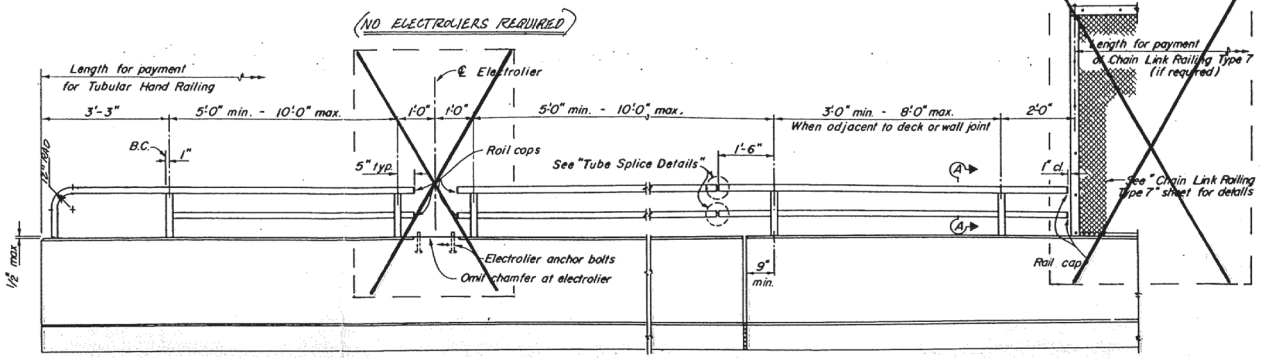
PEDESTRIAN BARRIER DETAILS — COLVILLE BRIDGE

7 of 8 SHTS.

FED. ROAD DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
10	WASH.	BRM-7167(1)	1989	8	8

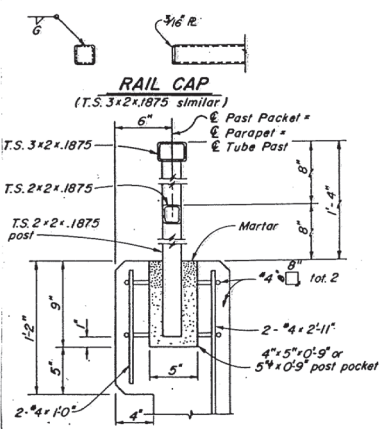


TYPICAL SECTION

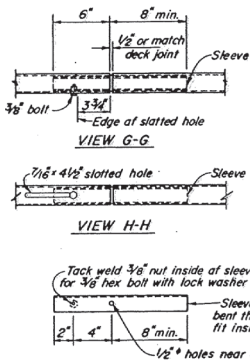


END POST | ELECTROLIER | DECK OR WALL JOINT | ~~CHAIN LINK RAILING TYPE 7~~ (NOT REQUIRED)

ELEVATION

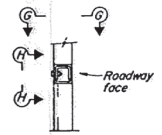


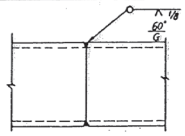
POST ANCHORAGE DETAILS



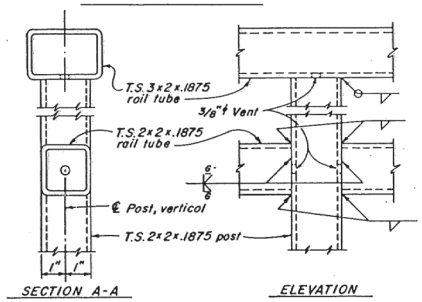
TUBE SPLICE DETAIL
(T.S. 3x2x.1875 similar)

Note: 3/8" nut tack welded to sleeve may be replaced by drilled and tapped hole in sleeve.





TUBE - WELDED SPLICE



RAIL CONNECTION DETAILS

NOTES:

1. Galvanize rail assembly after fabrication.
2. Posts shall be normal to roiling.
3. Rail tubes shall be shop bent or fabricated to fit horizontal curve when radius is less than 950 ft.
4. Tube splices shall be located in the tubes spanning deck or wall joints. Increase joint width in tubes to match expansion joint width and increase sleeve length correspondingly.
5. Top rail tube shall be continuous over not less than two posts except a short length is permitted near deck or wall joints, electroliers, or other rail discontinuities.
6. For details and reinforcement not shown see PEDESTRIAN BARRIER DETAILS.
7. See bridge plans for limits of Tubular Hand Railing.

JOHN R. MOLSNESS — STATE OF WASHINGTON — 11672 — REGISTERED PROFESSIONAL ENGINEER

☒ INDICATES AREAS TO BE DELETED FROM THIS STANDARD PLAN.

NO.	REVISION	BY	DATE

DESIGNED
DRAWN K.M. 2-24-88
CHECKED
APPROVED

AS BUILT DATE
SCALE: HORZ. VERT.
FILE NO.

CITY OF WALLA WALLA
PUBLIC WORKS / ENGINEERING
P.O. BOX 478
WALLA WALLA, WASHINGTON 99362

HAND RAILING DETAILS

COLVILLE BRIDGE

8 OF 8 DWG

OTIS STREET BRIDGE

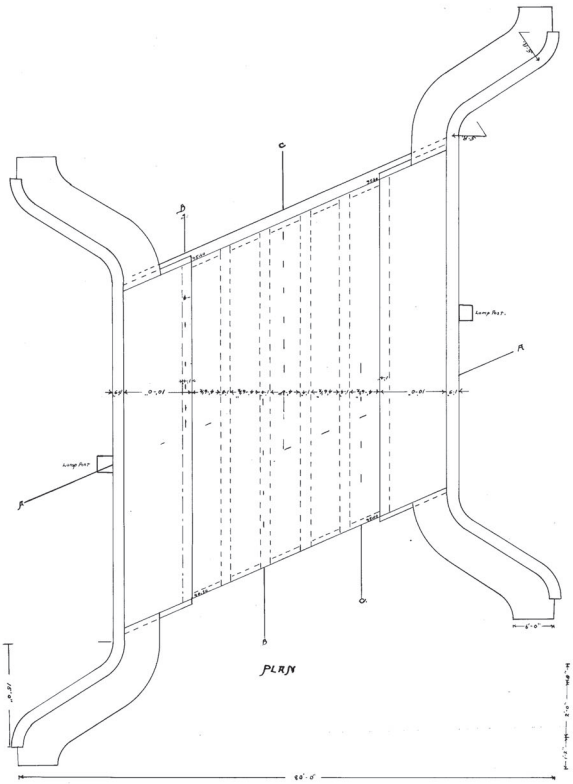
CROSSING MILL CREEK

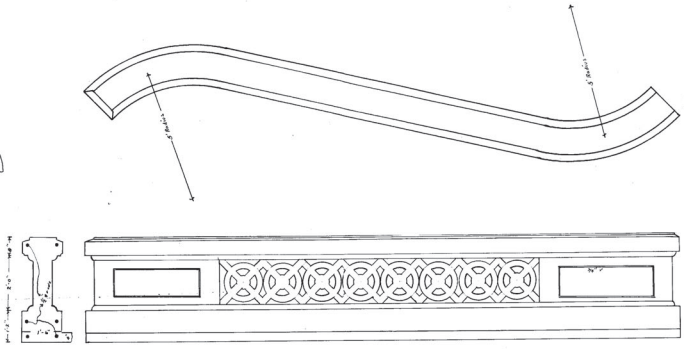
WALLA WALLA WASH.

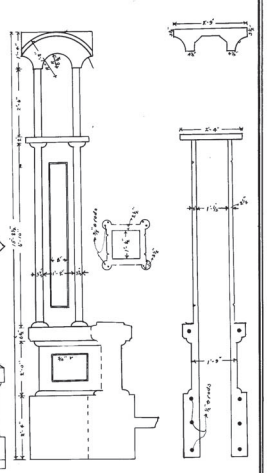
JUNE 1923

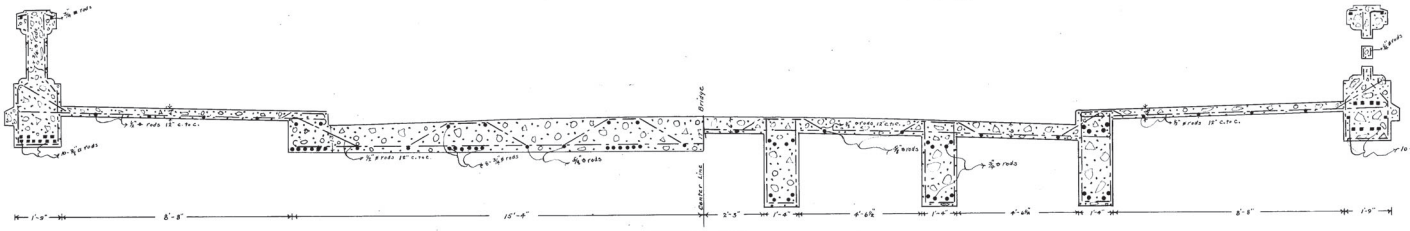
W.R.REHORN
CITY ENG'R.

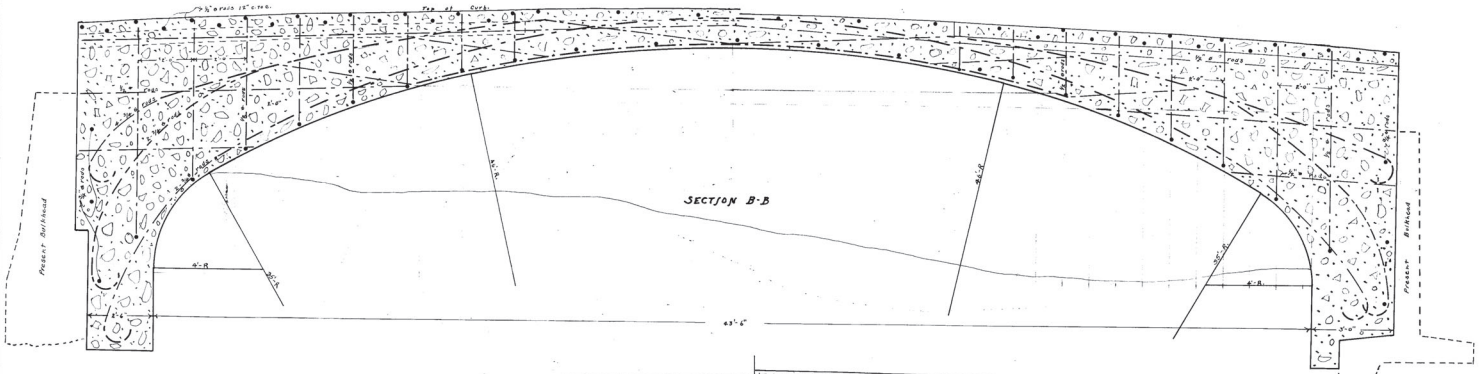
SCALE 1/8" = 1'

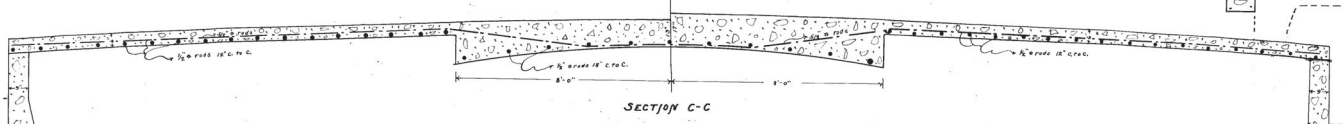


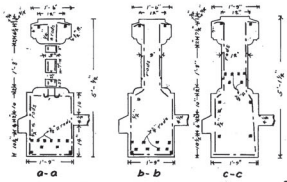


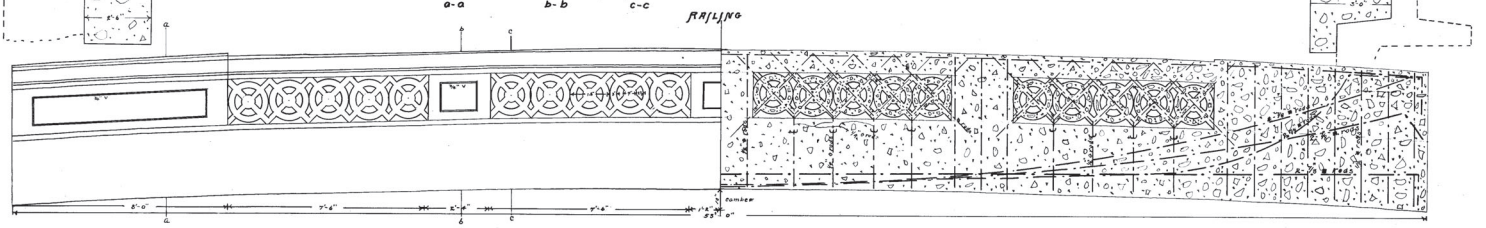












MERRIAM STREET BRIDGE

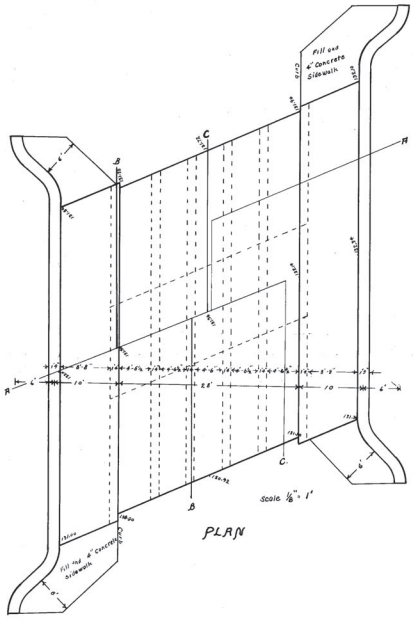
CROSSING MILL CREEK

WALLA WALLA WASH

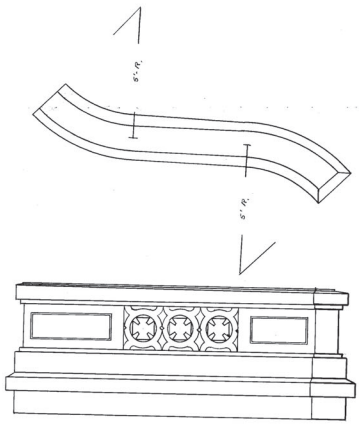
SCALE 1/8" = 1'

MAY 1924

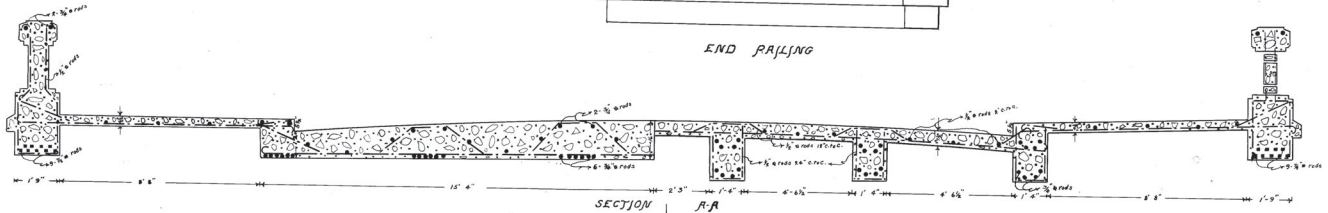
W. R. Reburn.
CITY ENGINEER



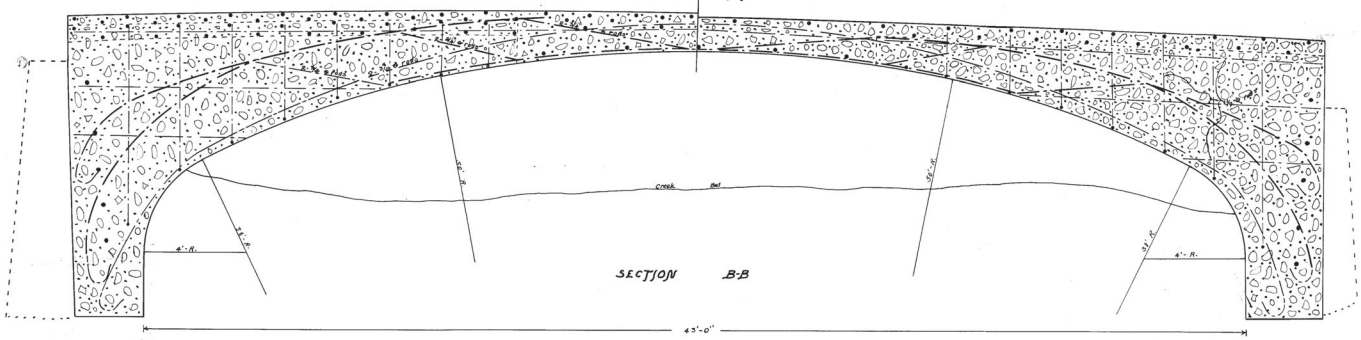
PLAN



END RAILING



SECTION A-A



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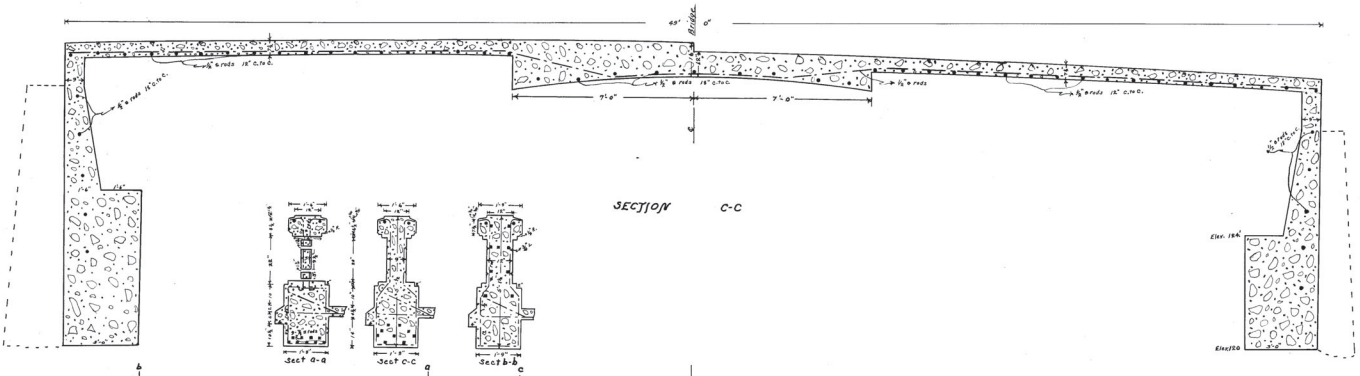
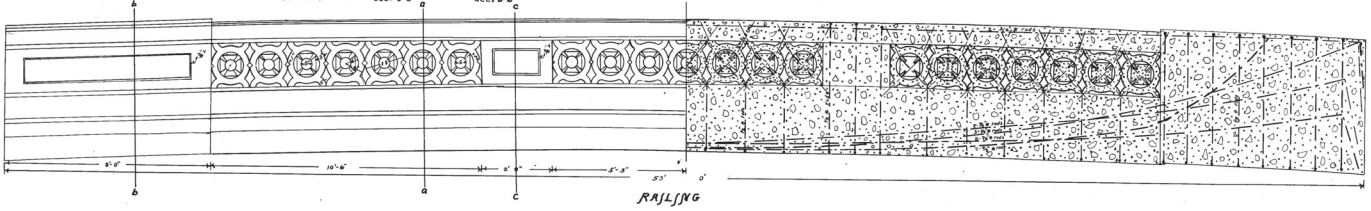


SECTION C-C



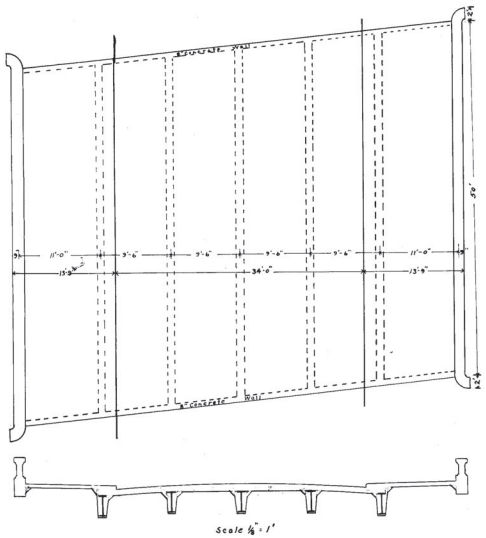
RAILING

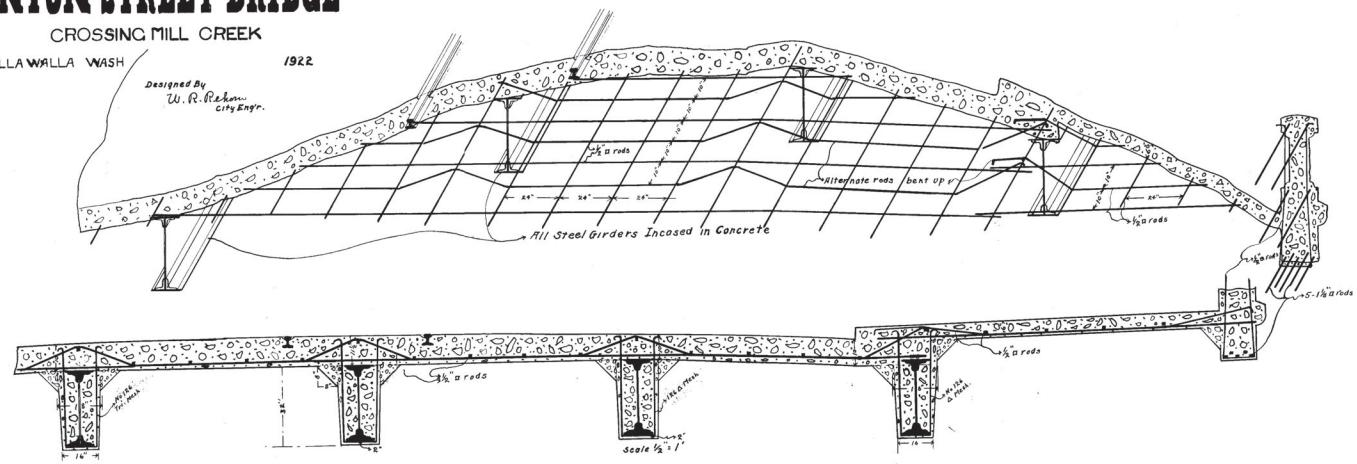
CLINTON STREET BRIDGE

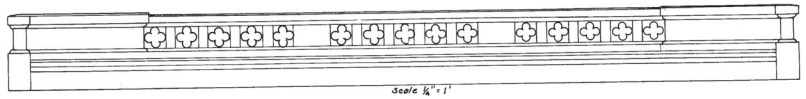
CROSSING MILL CREEK

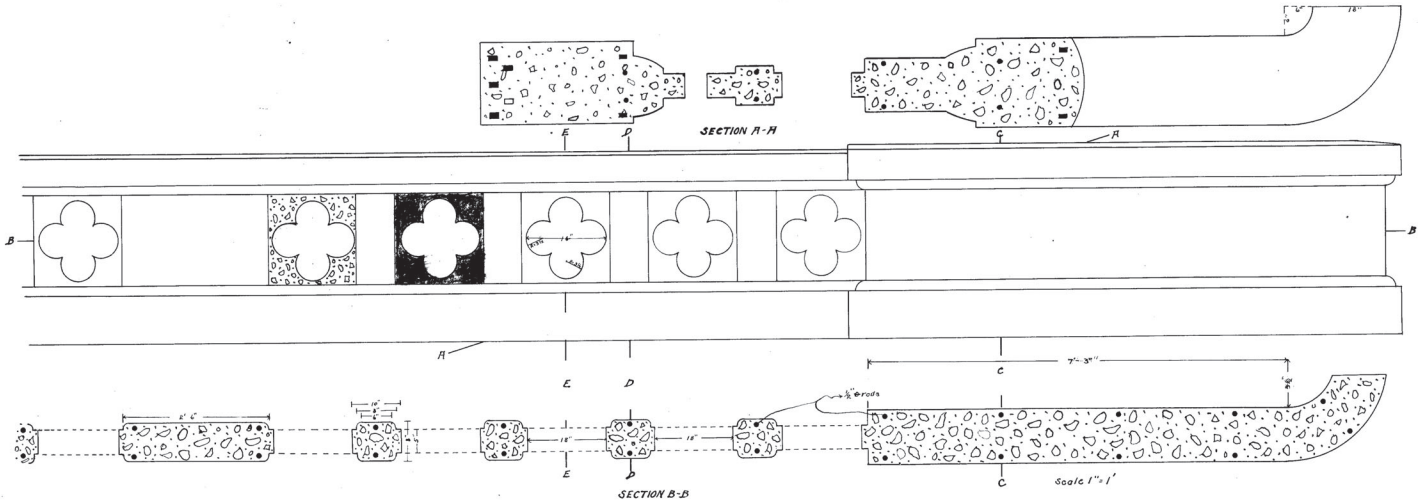
WALLA WALLA WASH 1922

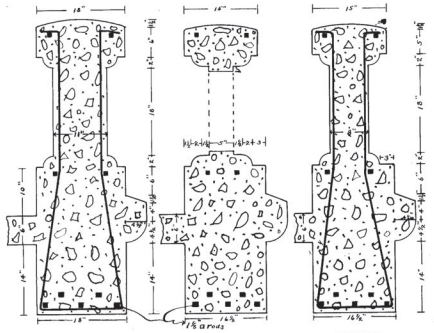
Designed By
W. R. Rahm
City Engr.

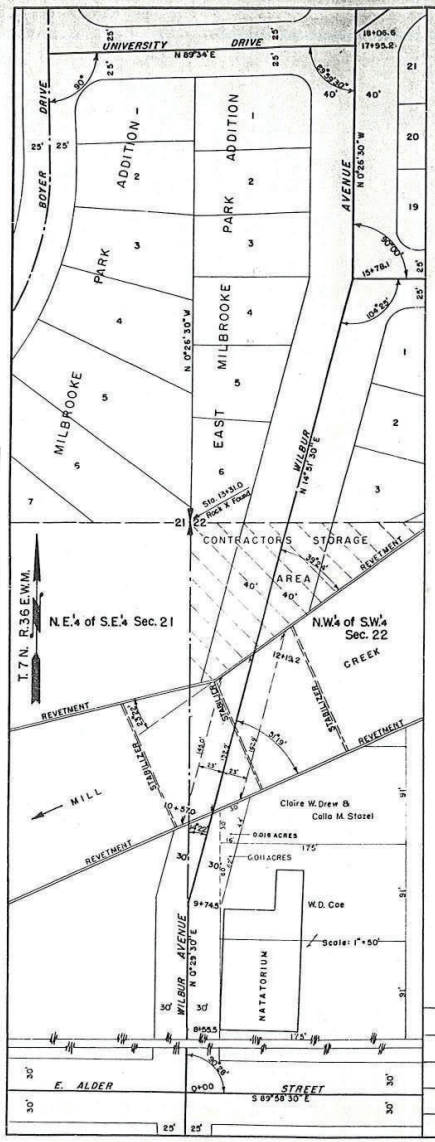


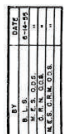


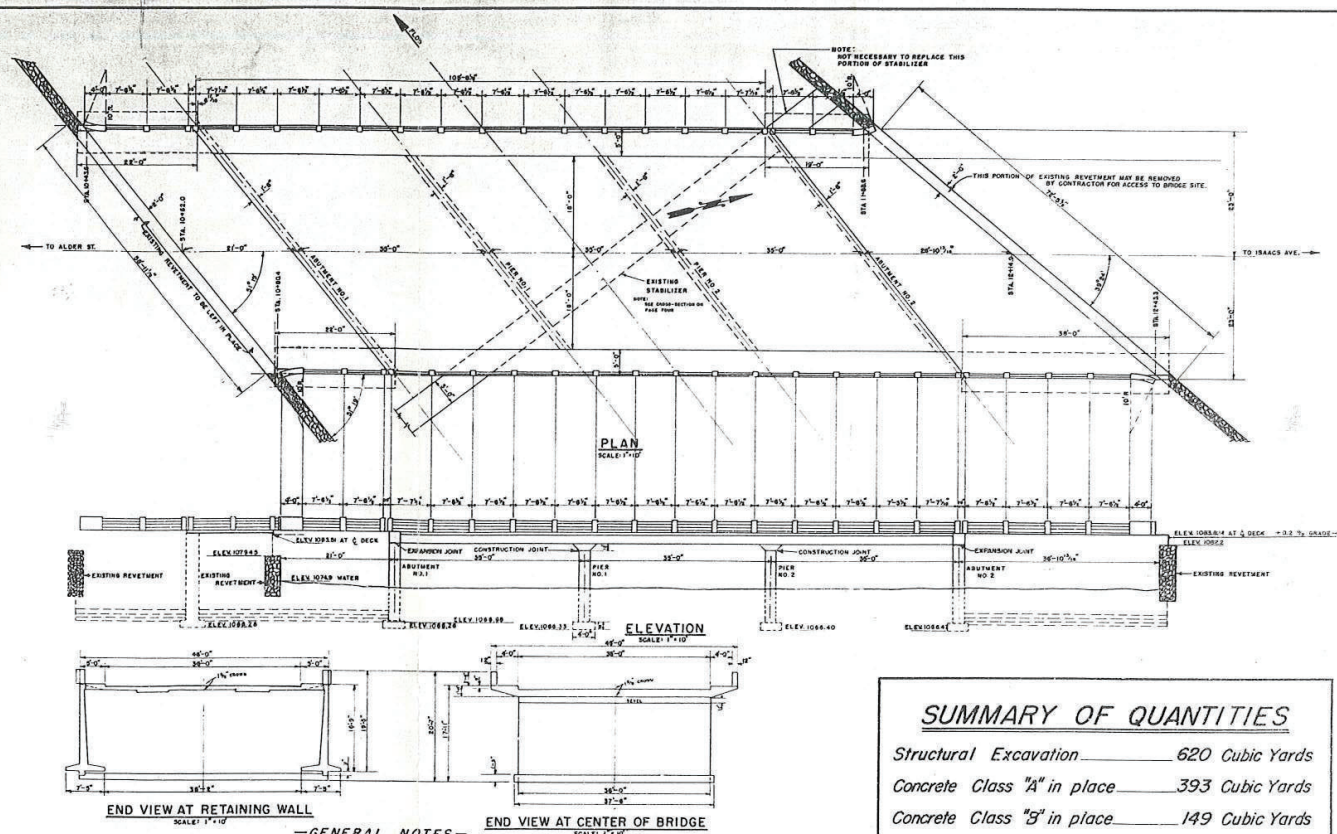










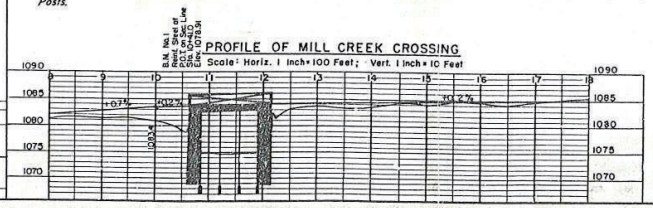


GENERAL NOTES

All material and workmanship shall be in accordance with the requirements of the "Standard Specifications for Road and Bridge Construction" dated April 1949, Department of Highways, State of Washington, together with all current amendments thereto. Footing Elevations are subject to change depending upon the foundation material encountered, exact footing elevation to be determined in the field by the County Engineer. Concrete in all footings of this bridge shall be of Class "B". Concrete in wingwalls shall be of Class "B". All other concrete shall be of Class "A". All reinforcing steel in this structure shall be of STRUCTURAL grade. Shear Keys of suitable size shall be provided at all cold construction joints. All exposed corners shall be chamfered three fourths (3/4") inch. The thickness of Concrete cover main reinforcement bars shall be 2" except as otherwise noted on these plans. The minimum cover over ties shall be 1". All falsework shall be released prior to the placing of the concrete Handrail Posts.

SUMMARY OF QUANTITIES

Structural Excavation	620 Cubic Yards
Concrete Class "A" in place	393 Cubic Yards
Concrete Class "B" in place	149 Cubic Yards
Reinforcing Steel in place	104,300 Pounds
Bridge Drains in place	6 Each
Bridge Railing in place	308 Lineal Feet



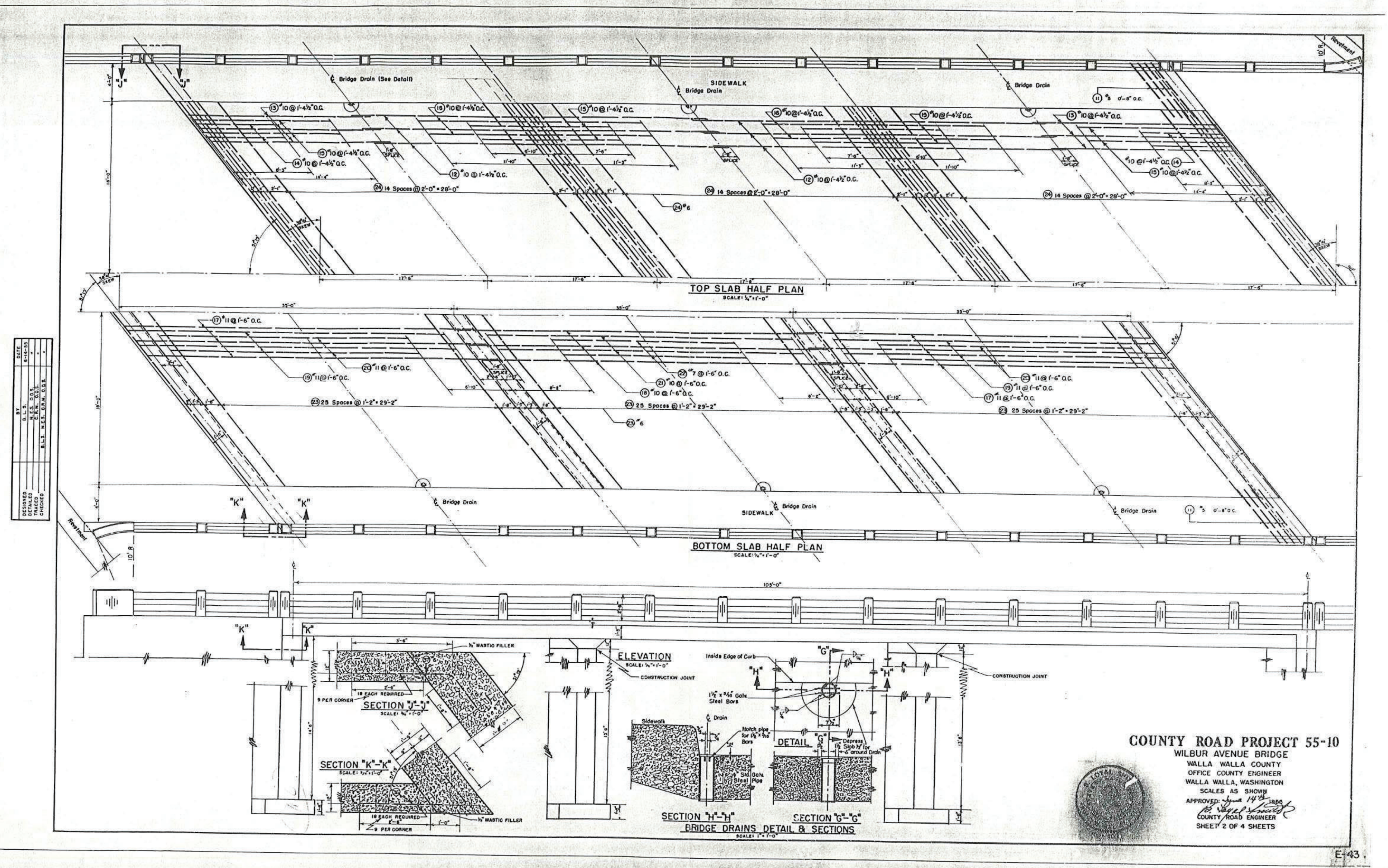
NOTE

WALLA WALLA COUNTY WILL HAVE A BRIDGE INSPECTOR FROM THE COUNTY ENGINEER'S OFFICE ON JOB AT ALL TIMES DURING THE BRIDGE CONSTRUCTION.

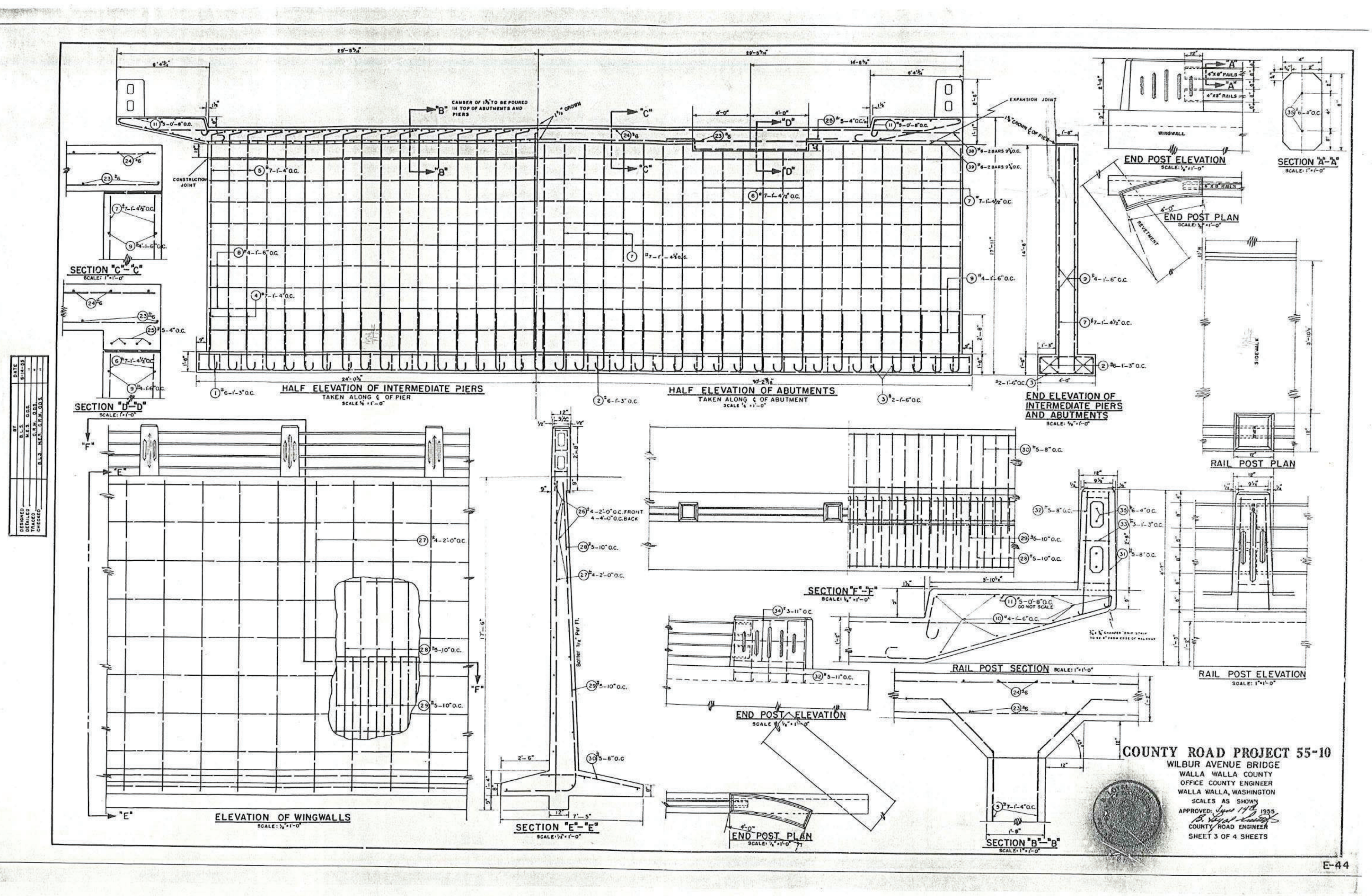
COUNTY ROAD PROJECT 55-10

WILBUR AVENUE BRIDGE
WALLA WALLA COUNTY
OFFICE COUNTY ENGINEER
WALLA WALLA, WASHINGTON
SCALES AS SHOWN
APPROVED: June 14, 1955
COUNTY ROAD ENGINEER
SHEET 1 OF 4 SHEETS

E-42

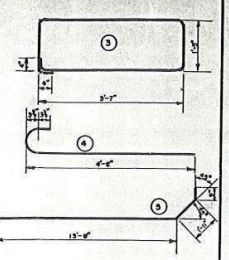


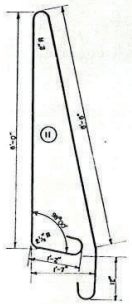
TOP SLAB HALF PLAN
SCALE: 1/4" = 1'-0"
BOTTOM SLAB HALF PLAN
SCALE: 1/4" = 1'-0"
ELEVATION
SECTION "J"-"J"
SECTION "K"-"K"
SECTION "H"-"H"
SECTION "G"-"G"
DETAIL "G"
BRIDGE DRAINS DETAIL & SECTIONS
SIDEWALK
Bridge Drain
CONSTRUCTION JOINT
COUNTY ROAD PROJECT 55-10
WILBUR AVENUE BRIDGE
WALLA WALLA COUNTY
OFFICE COUNTY ENGINEER
WALLA WALLA, WASHINGTON
SCALES AS SHOWN
APPROVED
COUNTY ROAD ENGINEER
SHEET 2 OF 4 SHEETS
E-43

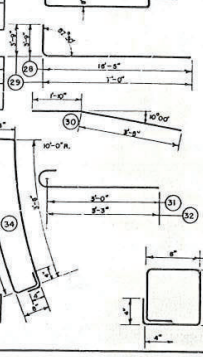

HALF ELEVATION OF INTERMEDIATE PIERS
TAKEN ALONG ℄ OF PIER
HALF ELEVATION OF ABUTMENTS
TAKEN ALONG ℄ OF ABUTMENT
CAMBER OF 1¾" TO BE POURED IN TOP OF ABUTMENTS AND PIERS
CONSTRUCTION JOINT
EXPANSION JOINT
END ELEVATION OF INTERMEDIATE PIERS AND ABUTMENTS
END POST ELEVATION
SECTION "A"-"A"
END POST PLAN
REVETMENT
WINGWALL
SECTION "C"-"C"
SCALE: 1"=1'-0"
SECTION "D"-"D"
SCALE: 1"=1'-0"
ELEVATION OF WINGWALLS
SECTION "E"-"E"
SECTION "F"-"F"
RAIL POST SECTION
RAIL POST PLAN
RAIL POST ELEVATION
SIDEWALK
SECTION "B"-"B"
SCALE: 1"=1'-0"
COUNTY ROAD PROJECT 55-10
WILBUR AVENUE BRIDGE
WALLA WALLA COUNTY
OFFICE COUNTY ENGINEER
WALLA WALLA, WASHINGTON
SCALES AS SHOWN
APPROVED: June 17th 1955
COUNTY ROAD ENGINEER
SHEET 3 OF 4 SHEETS
DESIGNED
DETAILED
TRACED
CHECKED
E-44

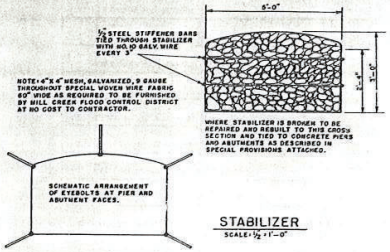
BAR LIST

MARK	LOCATION	NO.	SIZE	LENGTH	BENDING DIAGRAM
1	Intermediate Pier Footings	32	#6	20'-1"	Straight
2	End Pier Footings	48	#6	21'-10"	Straight
3	Footings Hooping	148	#2	10'-6"	
4	Footings Dowels	316	#7	4'-10"	
5	Vertical Intermediate Abutment	140	#7	16'-4"	
6	End Vertical Abutment	48	#7	13'-10"	Straight
7	End Vertical Abutment	128	#7	14'-4"	Straight
8	Horizontal Spacers	72	#4	23'-11"	Straight
9	Horizontal Spacers	108	#4	20'-9"	Straight
10	Sidewalk and Curb	56	#4	27'-10"	Straight
11	Sidewalk Hoops	319	#5	14'-1"	
12	Top Slab Deck Longitudinal Steel	56	#10	36'-8"	Straight
13	Top Slab Deck Longitudinal Steel	56	#10	18'-2"	Straight
14	Top Slab Deck Longitudinal Steel	52	#10	8'-3"	Straight
15	Top Slab Deck Longitudinal Steel	108	#10	14'-4"	Straight
16	Top Slab Deck Longitudinal Steel	54	#10	23'-1"	Straight
17	Bottom Slab Deck Longitudinal Steel	52	#11	36'-7"	Straight
18	Bottom Slab Deck Longitudinal Steel	26	#10	36'-8"	Straight
19	Bottom Slab Deck Longitudinal Steel	50	#11	33'-3"	Straight
20	Bottom Slab Deck Longitudinal Steel	50	#11	26'-1"	Straight
21	Bottom Slab Deck Longitudinal Steel	25	#10	31'-4"	Straight
22	Bottom Slab Deck Longitudinal Steel	25	#7	18'-8"	Straight
23	Bottom Slab Deck Transverse Steel	172	#6	24'-3"	Straight
24	Top Slab Deck Transverse Steel	118	#6	27'-7"	Straight
25	End Pier Key Bars	16	#5	13'-8"	
26-1	Retaining Wall Horizontal	34	#4	21'-8"	Straight
26-2	Retaining Wall Horizontal	51	#4	18'-6"	Straight
27	Retaining Wall Vertical	51	#4	16'-5"	Straight
28	Retaining Wall Vertical	121	#5	19'-11"	
29	Retaining Wall Vertical	121	#5	10'-9"	
30	Retaining Wall Horizontal	152	#5	5'-3"	
31	Guard Rail Post Vertical	60	#3	3'-7"	
32	Guard Rail Post Vertical	140	#5	3'-10"	
33	Guard Rail Post Hoops	120	#3	3'-4"	
34	Guard Rail Post Hoops End	12	#3	9'-10"	
35	Guard Rails	152	#6	7'-5½"	Straight
36	Wingwall Abutment Ties	18	#6	7'-3"	
37	Wingwall Abutment Ties	18	#6	7'-0"	
38	Sidewalk Abutment Dowel	8	#6	3'-11"	Straight
39	Sidewalk Abutment Dowel	8	#6	6'-8"	Straight



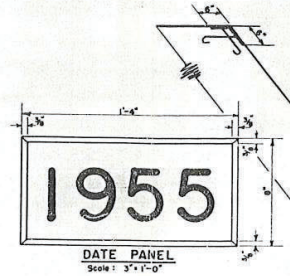






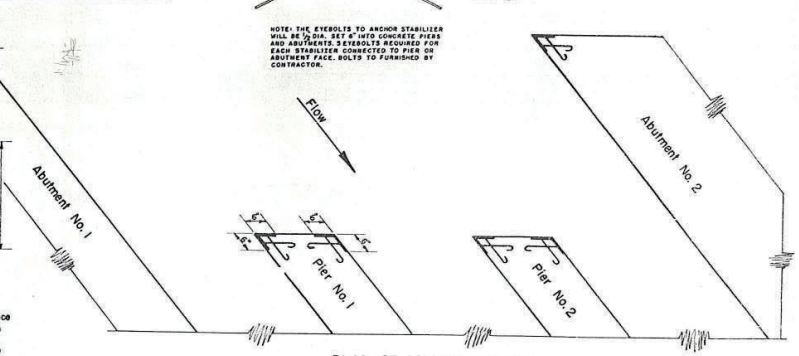
STABILIZER
SCALE: ½" = 1'-0"

NOTE: THE EYEBOLTS TO ANCHOR STABILIZER WILL BE ⅝" DIA. SET 6" INTO CONCRETE PIERS AND ABUTMENTS. 3 EYEBOLTS REQUIRED FOR EACH STABILIZER CONNECTED TO PIER OR ABUTMENT FACE. BOLTS TO FURNISHED BY CONTRACTOR.



DATE PANEL
Scale: 3" = 1'-0"

Standard Date Panel To Be Placed At Center Of Inside Face Of Right Hand End Post For Approaching Traffic At Each End Of Bridge. The Inside Faces Of The Other Two End Posts To Be Plain With No Decorations. Date Panels To Be Furnished By Walla Walla County.



PLAN OF COLUMN SHIELDS
Scale: ¾" = 1'-0"

NOTE:
¾" X 6" X 6" Steel Column Shields will be welded as required to fit the 6 exposed corners of the upstream side only of Abutments and Piers. Said steel to be made 9' long and anchored with 8 ¾" X 12" long Bolts welded to each Shield. Said Shields to be Furnished by Contractor as an incidental expense to Concrete Class "A". No pay item authorized for said Shields. Top end of Shield to be extended to Construction Joint.

SEQUENCE OF POURING CONCRETE

1. Footings _____ Class "B" Concrete
2. Pier No.1 and Pier No.2 to Construction Joint _____ Class "A" Concrete
3. Abutment No.1 and Abutment No.2 to Expansion Joint _____ Class "A" Concrete
4. Deck, Curb and Sidewalk _____ Class "A" Concrete
5. Wingwall Footings _____ Class "B" Concrete
6. Wingwalls _____ Class "B" Concrete
7. Handrail Posts _____ Class "A" Concrete

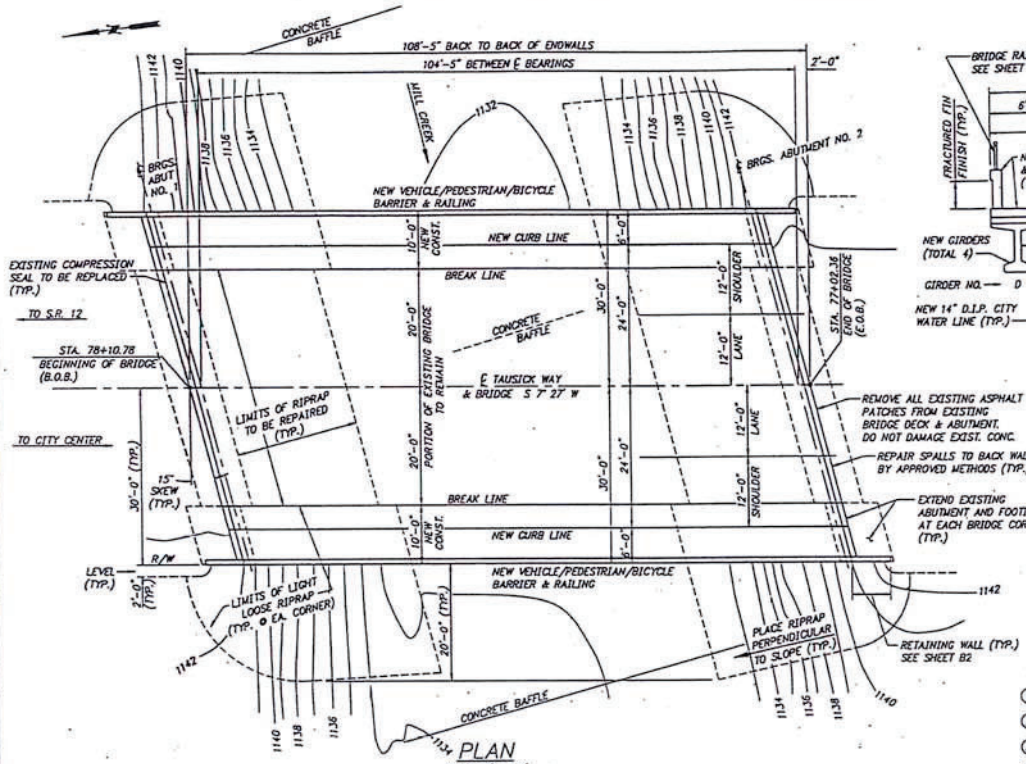
NOTE: Deck to be One Continuous Pour

COUNTY ROAD PROJECT 55-10

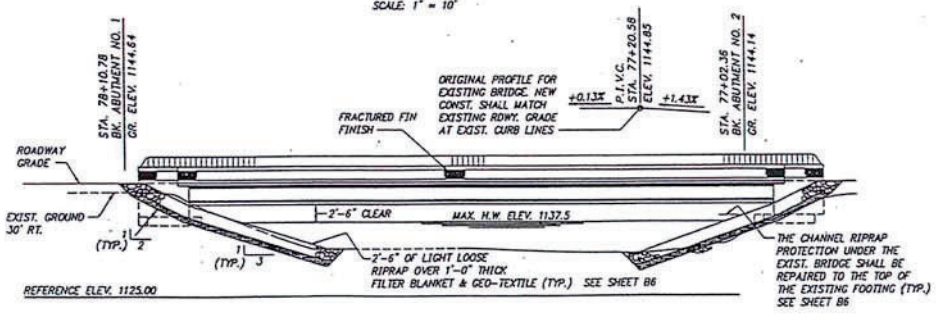
WILBUR AVENUE BRIDGE
WALLA WALLA COUNTY
OFFICE COUNTY ENGINEER
WALLA WALLA, WASHINGTON
SCALES AS SHOWN
APPROVED Oct 14 1958
COUNTY ROAD ENGINEER
SHEET 4 OF 4 SHEETS

E-45

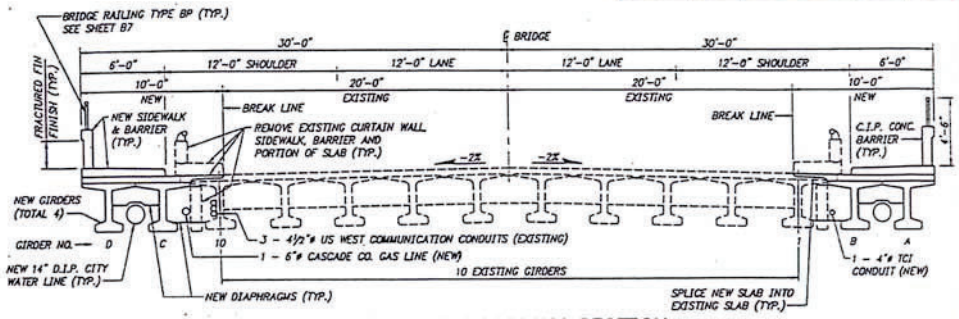
REGION NO.	STATE	FEDERAL AID PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
16	WASH.	STPF-7200(001)	29	80



PLAN
SCALE: 1" = 10'



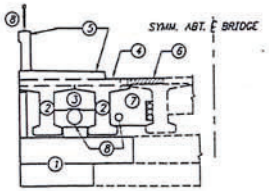
ELEVATION
SCALE: 1" = 10'



TYPICAL ROADWAY SECTION
LOOKING BACK ON STATIONING, NEAR MIDSPAN
SCALE: ¼" = 1'-0"

FOLLOWING DEMOLITION OF EXISTING DECK, SIDEWALK AND BARRIER:

1. EXTEND ABUTMENT AND PLACE RIPRAP
2. POSITION GIRDERS
3. CAST DIAPHRAGMS BETWEEN NEW GIRDERS ONLY
4. CAST ROADWAY SLAB
5. CAST SIDEWALK AND BARRIER
6. CAST CLOSURE POUR
7. CAST DIAPHRAGMS BETWEEN NEW AND EXISTING GIRDERS (FILL BLOCKOUT W/SAME CONCRETE AND FINISH FLUSH W/SLAB)
8. INSTALL D.I.P. WATER LINE, BRIDGE RAILING & UTILITIES



CONSTRUCTION SEQUENCE
N.T.S.

GENERAL NOTES

1. ALL MATERIALS AND WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE OF WASHINGTON, DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, DATED 1994".
2. THE GIRDERS FOR THE WIDENING ARE DESIGNED FOR AASHTO HS-25 LIVE LOAD PLACED AT TWO FEET FROM THE CURB LINE AND ASSUMING SIMPLE SPAN DISTRIBUTION, AND CHECKED FOR THE CONDITION OF NO SIDEWALK AND USING THE APPROPRIATE AASHTO DISTRIBUTION FACTOR. THE GIRDERS ARE DESIGNED BY A COMBINATION OF WORKING STRESS AND LOAD FACTOR METHODS.
3. THE DESIGN OF ALL ELEMENTS HAS BEEN PERFORMED IN ACCORDANCE WITH "AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1992", WITH ALL INTERIMS THROUGH 1994.
4. ALL SUBSTRUCTURE CONCRETE SHALL BE CLASS-4000 CONCRETE. THE DECK SLAB, DIAPHRAGMS, SIDEWALKS, AND BARRIERS SHALL USE CLASS-5000 CONCRETE. THE CONCRETE USED FOR THE CLOSURE POUR SHALL CONFORM TO CLASS-5000LS CONCRETE. ALL CLASS 4000, 5000 AND 5000LS CONCRETE SHALL HAVE 6% AIR ENTRAINED. THE PRESTRESSED GIRDER CONCRETE SHALL HAVE A STRENGTH OF 6500 PSI AT THE TIME OF RELEASE OF THE STRANDS, AND A STRENGTH OF 8500 PSI AT 28 DAYS.
5. TO HELP ASSURE COMPATIBILITY WITH THE EXISTING STRUCTURE, ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. IN ADDITION, THE CAMBER OF THE NEW GIRDERS SHALL BE CLOSELY MONITORED AND CONTROLLED TO ASSURE PROFILE COMPATIBILITY WITH THE EXISTING DECK ELEVATIONS.

THOMAS H. WHITEMAN — STATE OF WASHINGTON — PROFESSIONAL ENGINEER
EXPIRES 03-25-95
9/9/94

NO.	REVISION	BY	DATE

DESIGNED T. WHITEMAN
DRAWN B. KROMCS KDS
CHECKED M. MOGGE
APPROVED D.B. GREEN
AS BUILT DATE
SCALE: HORIZ. VERT.
FILE NO.

CITY OF WALLA WALLA
PUBLIC WORKS / ENGINEERING
P.O. BOX 478
WALLA WALLA, WASHINGTON 99362

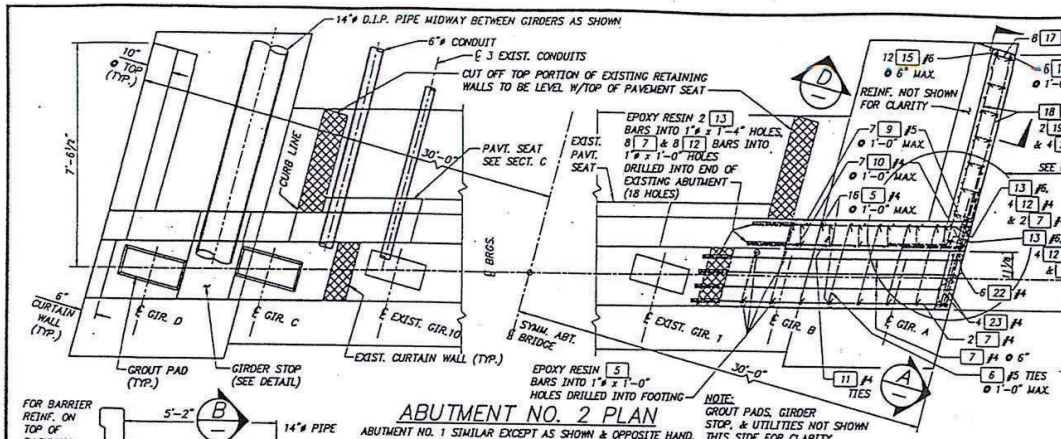
AGA
ARVID GRANT ASSOCIATES
CONSULTING ENGINEERS
OLYMPIA, WASHINGTON
FILE DATA: 09/09/1994 @ 07:53 hrs. C:\MILLCREK\SHEET-1

ALDER/TAUSICK/AIRPORT ROAD – TIB RECONSTRUCTION
MILL CREEK BRIDGE
GENERAL PLAN

B1 of 8
DWG.

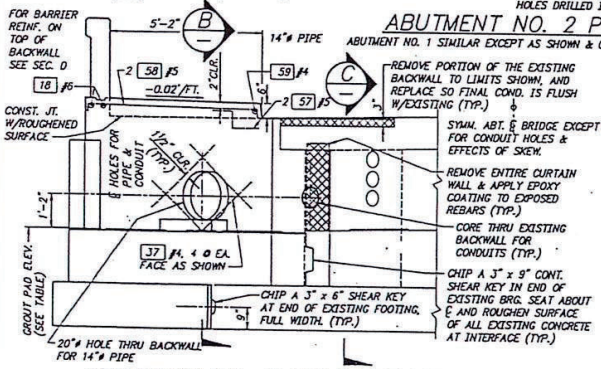
5-1-98

REGION NO.	STATE	FEDERAL AID PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
16	WASH.	STPF-7200(001)	30	80



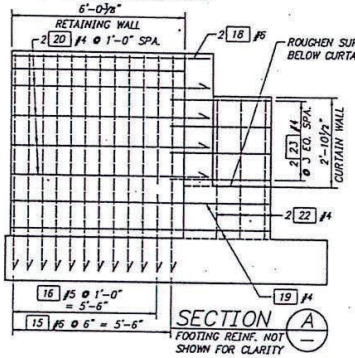
ABUTMENT NO. 2 PLAN

ABUTMENT NO. 1 SIMILAR EXCEPT AS SHOWN & OPPOSITE HAND.



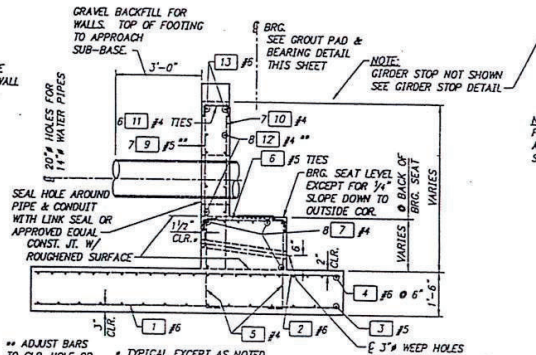
ABUTMENT NO. 2 HALF ELEVATION

LOOKING BACK ON STATIONING.
ABUTMENT NO. 1 SIMILAR EXCEPT AS SHOWN & OPPOSITE HAND.



SECTION A

FOOTING REINF. NOT SHOWN FOR CLARITY

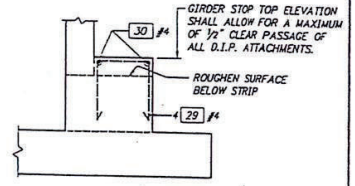


** ADJUST BARS TO CLR. HOLE OR CUT BARS TO FIT

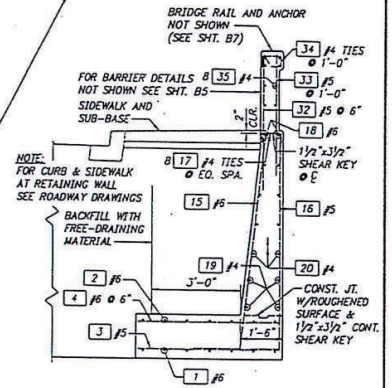
* TYPICAL EXCEPT AS NOTED

SECTION B

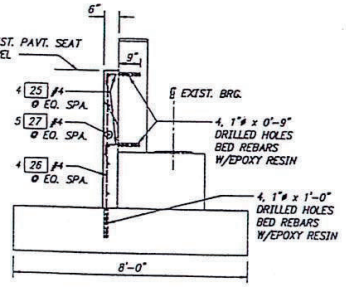
NOTE: EXIST. RETAINING & CURTAIN WALLS NOT SHOWN



GIRDER STOP DETAIL

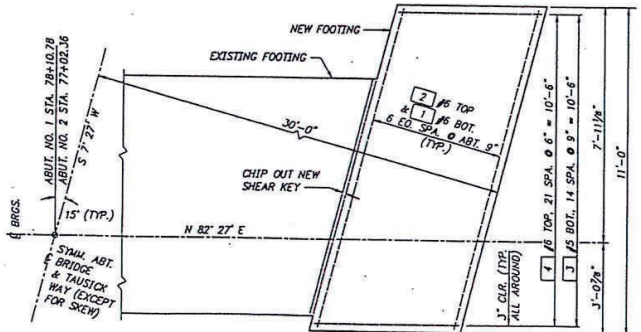


SECTION D



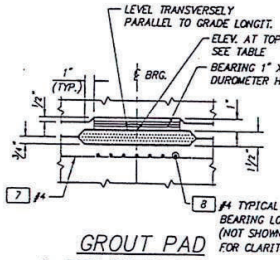
SECTION C

PAVT. SEAT EXTENSION. CONDUITS NOT SHOWN.



HALF FOOTING NO. 2 PLAN

ABUTMENT NO. 1 SIMILAR EXCEPT AS SHOWN & OPPOSITE HAND.



GROUT PAD & BEARING DETAIL

NOT TO SCALE

GROUT PAD ELEVATIONS

℄ BRGS. ALONG BRG. SEAT

ABUTMENT	GIRDER	ELEVATION
1	A	1140.44
	B	1140.44
	C	1140.45
	D	1140.45
2	A	1139.97
	B	1139.98
	C	1140.09
	D	1140.10

NOTES: 1. BOTTOM ELEVATION FOR FOOTING IS 1137.00 FT.
2. TOP OF BACKWALL TO BE FLUSH WITH ROADWAY.

THOMAS H. WHITEMAN — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER
9/9/94
EXPIRES 03-25-95

NO.	REVISION	BY	DATE

DESIGNED T. WHITEMAN, R. DETHLEFS
DRAWN B. KROHCS KDS
CHECKED M. ROGGE
APPROVED D.B. GREEN
AS BUILT
SCALE: HORIZ. 1/2" = 1'-0" VERT.
FILE NO.

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CONSULTING ENGINEERS
OLYMPIA, WASHINGTON
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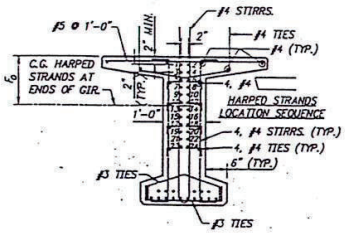
ALDER/TAUSICK/AIRPORT ROAD – TIB RECONSTRUCTION
MILL CREEK BRIDGE
ABUTMENT DETAILS

82 OF 8
DWG.

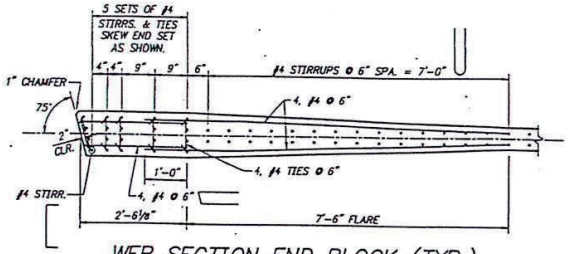
5-I-97

REGION NO.	STATE	FEDERAL AID PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
16	WASH.	STPF-7200(001)	31	80



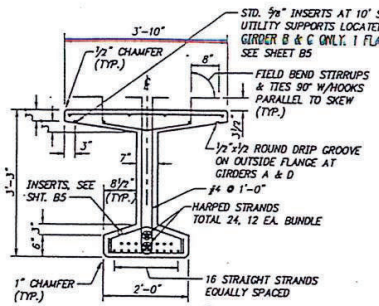
VIEW (A)

FOR DETAILS NOT SHOWN SEE SECT. B
SCALE: 3/4" = 1'-0"



WEB SECTION END BLOCK (TYP.)

SCALE: 3/4" = 1'-0"



SECTION (B)

FOR DETAILS NOT SHOWN SEE VIEW A
SCALE: 3/4" = 1'-0"

GIRDER NOTES

1. THE GIRDER CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6,500 PSI AT TIME OF RELEASE OF THE PRESTRESSING STRANDS. THE GIRDER CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 8,500 PSI AT 28 DAYS.
2. ALL PRESTRESSING STRANDS SHALL HAVE AN ULTIMATE TENSILE STRENGTH OF 270 KSI. ALL STRANDS SHALL CONFORM TO ASTM A416 GRADE 270 SPECIFICATIONS AND SHALL BE 1/2 INCH DIAMETER, LOW-RELAXATION, 7 WIRE STRANDS.
3. ALL CALCULATIONS ASSUMED A CONCRETE WEIGHT OF 155 PCF, WITH THE CONCRETE MODULES OF ELASTICITY, $E = 63{,}700\sqrt{f'c}$.
4. THE JACKING FORCE FOR PRESTRESSED STRANDS SHALL MEASURE 31,000 POUNDS (.75f'_s) AT TRANSFER. THE FINAL PRESTRESS FORCE ASSUMES 45 KSI FOR ALL NORMALLY ANTICIPATED LOSSES SUCH AS ELASTIC SHORTENING, CREEP AND SHRINKAGE OF CONCRETE, AND RELAXATION OF THE STEEL STRANDS.
5. THE GIRDERS SHALL BE TRANSPORTED AND ERECTED IN A MANNER THAT ASSURES THAT THE GIRDERS ARE NOT SUBJECTED TO STRESSES WHICH COULD CAUSE THE CONCRETE TO CRACK, OR THE GIRDER TO BEND TRANSVERSELY. ALL GIRDER MANUFACTURE AND ERECTION DETAILS, INCLUDING GIRDER TRANSPORT AND HANDLING, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO COMMENCING WITH THE FABRICATION OPERATIONS.
6. GIRDER CAMBER CONTROL MEASURES MAY BE NECESSARY AFTER RELEASE OF THE PRESTRESS FORCE AND PRIOR TO PLACEMENT OF THE SLAB TO REDUCE THE DEFLECTION. POSSIBLE MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, a) PRE-LOADING OF THE GIRDER, B) TEMPORARY TOP FLANGE POSTTENSIONING (TO BE DESIGNED BY THE CONTRACTOR AND SUBMITTED FOR THE ENGINEER'S APPROVAL), OR C) FABRICATION OF THE GIRDER WITH A NEGATIVE CAMBER.
7. THE CALCULATIONS AND SHOP DRAWINGS FOR THE GIRDERS, AS PERFORMED AND CHECKED BY THE FABRICATOR, SHALL BEAR THE SEAL AND SIGNATURE OF A REGISTERED PROFESSIONAL ENGINEER.
8. THE GIRDER SURFACES SHALL COMPLY WITH THE STANDARD SPECIFICATIONS FOR FINISHING, 6-03.3(25)M, EXCEPT AT AREAS TO BE COVERED BY DIAPHRAGMS APPLY AN APPROVED RETARDANT FOR 1/4" ETCH TO SIDE FORMS OR 1/4" ROUGHENED SURFACE TREATMENT BY AN APPROVED MECHANICAL METHOD.
9. ENDS OF ALL PRESTRESSING STRANDS AFTER CUTTING SHALL BE PAINTED WITH AN APPROVED CORROSION RESISTANCE EPOXY.
10. LIFTING DEVICES OF ADEQUATE STRENGTH TO SAFELY LIFT THE GIRDERS SHALL BE PROVIDED BY THE FABRICATOR. THEY SHALL BE SHOWN ON THE SHOP DRAWINGS FOR APPROVAL.
11. UNLESS OTHERWISE NOTED, ALL REINFORCING BARS SHALL HAVE A 1" CLEAR CONCRETE COVER.

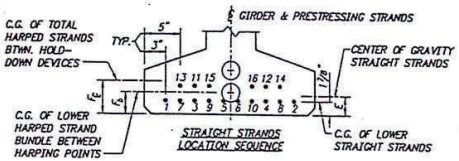
GIRDER DATA

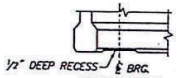
DATA ASSUMES TWO GIRDER DISTRIBUTION FOR ALL DEADLOADS, EXCEPT WATER LINE WHICH ASSUMES THREE GIRDER DISTRIBUTION

GIRDER SCHEDULE C= INITIAL CAMBER AT RELEASE

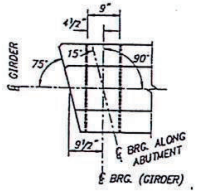
SPAN LENGTH	MIN. CONC. COMPR. STRENGTH @ 28 DAYS f'c KSI	MIN. CONC. COMPR. STRENGTH @ RELEASE f'ci KSI	MAX. STIRR. SPACING "S" (INCHES)	HARPED & STRAIGHT PRETENSIONED STRANDS: HARPED NO. OF STRANDS	HARPED STRAND JACKING FORCE (KIPS)	STRAIGHT NO. OF STRANDS	STRAIGHT STRAND JACKING FORCE (KIPS)	TOTAL NO. OF 1/2" ø 270K STRANDS	LOCATION OF C.G. STEEL AREA (IN.) ℄	f_E	f_F	f_G	f_H	EST. CAMBER (IN.)
104.4'	8.5	6.5	12	24	31	16	31	40	2.63	4.5	3.0	10.5	1.91	3.75

EST. CAMBER AT TIME OF SLAB PLACEMENT. SEE NOTE 6.





ELEVATION

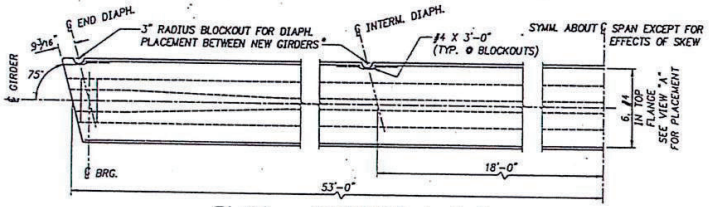


PLAN

BEARING RECESS DETAIL

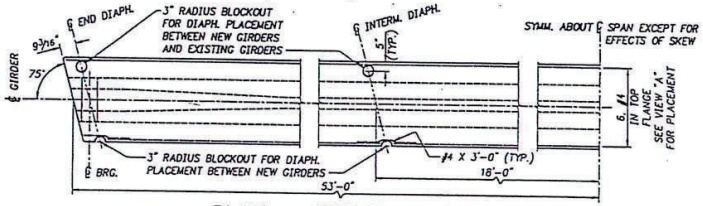
SCALE: 3/4" = 1'-0"

NOTE:
FORMS FOR BEARING PAD RECESSES SHALL BE CONSTRUCTED AND FASTENED IN SUCH A MANNER SO AS NOT TO CAUSE DAMAGE TO THE GIRDERS DURING STRAND RELEASE OPERATION.



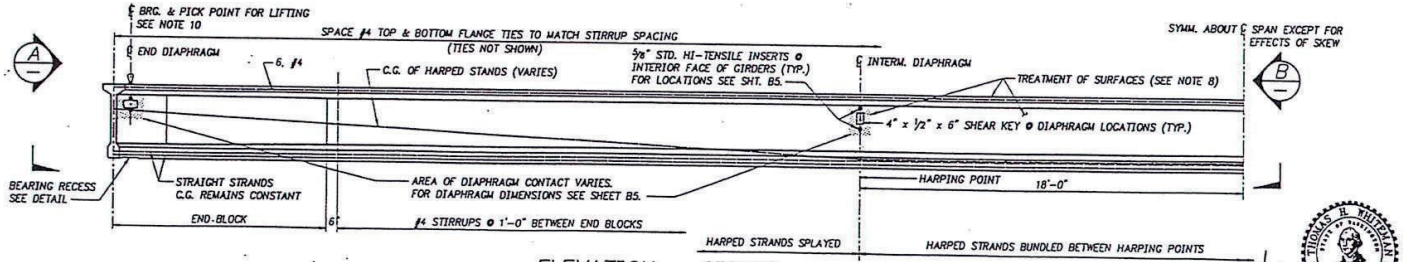
PLAN — GIRDERS A & D

GIRDER "A" SHOWN. GIRDER "D" SIMILAR EXCEPT DETAILS FOR DIAPHRAGMS ARE OPPOSITE HAND.
SCALE: 3/8" = 1'-0"



PLAN — GIRDERS B & C

GIRDER "B" SHOWN. GIRDER "C" SIMILAR EXCEPT DETAILS FOR DIAPHRAGMS ARE OPPOSITE HAND.
SCALE: 3/8" = 1'-0"



ELEVATION — GIRDER

4 GIRDERS REQUIRED.
SCALE: 3/8" = 1'-0"

T. L. Whiteman 9/9/94

OPWS 03-25-95

NO.	REVISION	BY	DATE

DESIGNED T. WHITEMAN | AS BUILT | DATE
DRAWN B. KROMES KDS | SCALE: HORIZ. AS NOTED | VERT.
CHECKED M. ROGGE
APPROVED D.B. GREEN | FILE NO.

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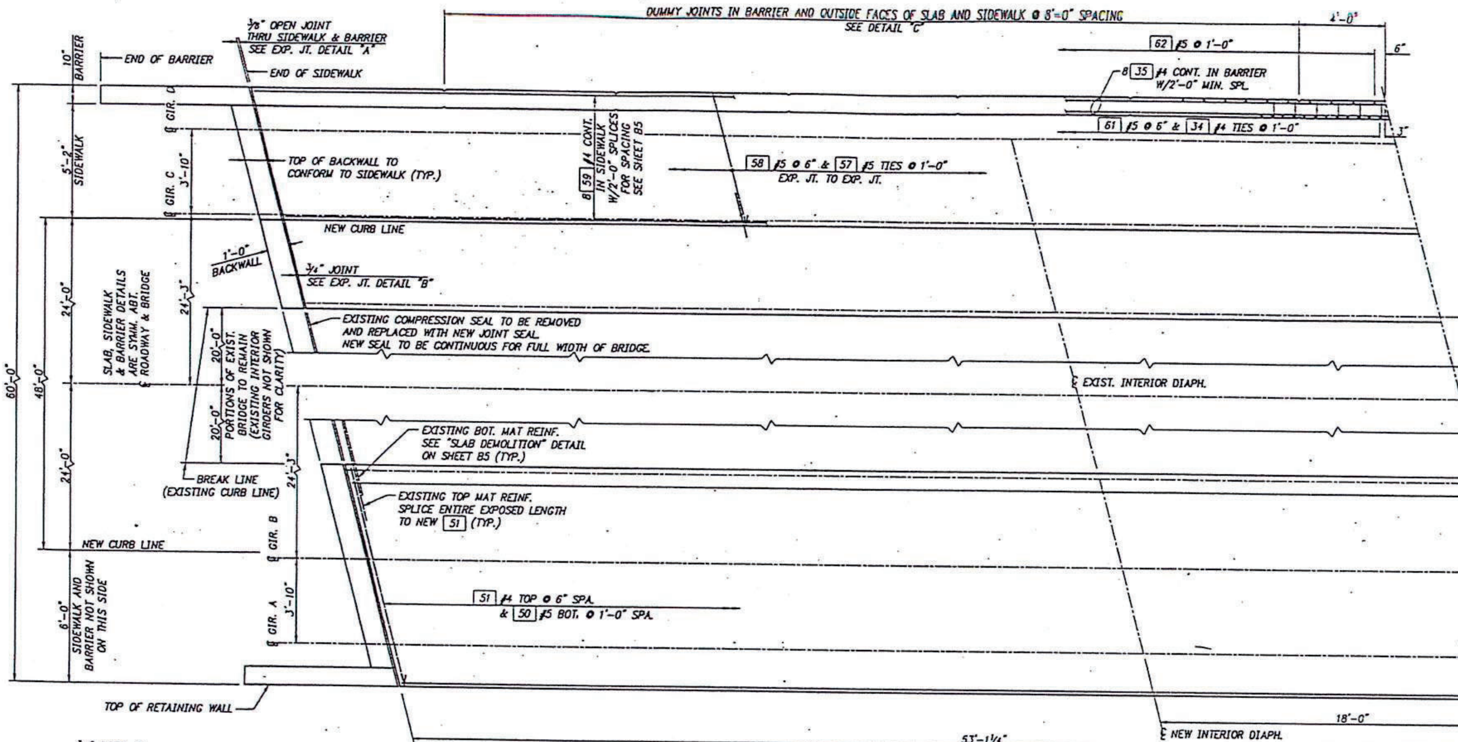
ALDER/TAUSICK/AIRPORT ROAD — TIB RECONSTRUCTION
MILL CREEK BRIDGE
GIRDER DETAILS

83 OF 8
DWG.

5-I-96

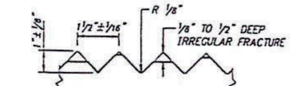
REGION NO.	STATE	FEDERAL AID PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
16	WASH.	STPF-7200(001)	32	80



HALF PLAN FRAMING, ROADWAY SLAB, SIDEWALK & BARRIER

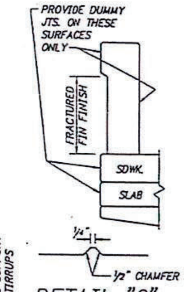
SCALE: 3/8" = 1'-0"

NOTE: SET SCREEDS FOR A TOTAL OF 2.03 INCHES CAMBER ABOVE GRADE AT CENTER SPAN.



FRACTURED FIN FINISH

N.T.S.



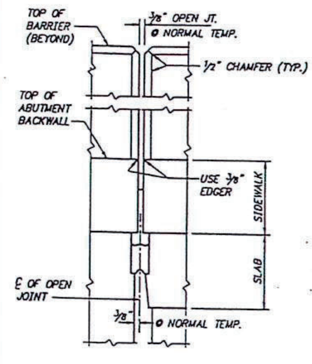
DETAIL "C"

TYP. DUMMY JOINT
N.T.S.

COMPRESSION SEAL TABLE *

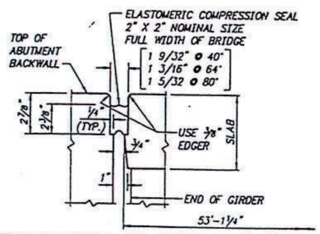
D. S. BROWN		WATSON BOWMAN ACME		ELASTOMER SEALS		STRUCTURAL ACCESSORIES	
SEAL	W (in.)	SEAL	W (in.)	SEAL	W (in.)	SEAL	W (in.)
CV-2000	2	WA-200	2	X-2000	2	SA-2000	2

* TESTING SHALL BE PER AASHTO M-220 PRIOR TO USE.



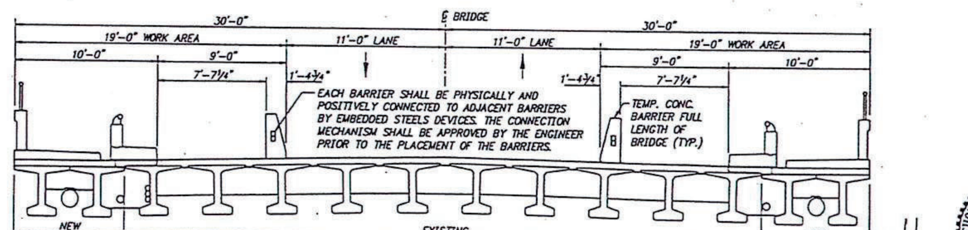
EXPANSION JT. DETAIL "A"

FOR DETAILS NOT SHOWN SEE DETAIL "A"
SCALE: 3" = 1'-0"



EXPANSION JT. DETAIL "B"

SCALE: 3" = 1'-0"



TRAFFIC CONTROL PLAN

SCALE: 1/4" = 1'-0"

9/9/94

THOMAS R. WHITEMAN — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON
EXPIRES 03-25-95

NO.	REVISION	BY	DATE				
				DESIGNED	T. WHITEMAN	AS BUILT	DATE
				DRAWN	B. KRONES KDS	SCALE: HORIZ.	AS NOTED
				CHECKED	M. ROGGE	VERT.	
				APPROVED	D.B. GREEN	FILE NO.	

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OLYMPIA, WASHINGTON
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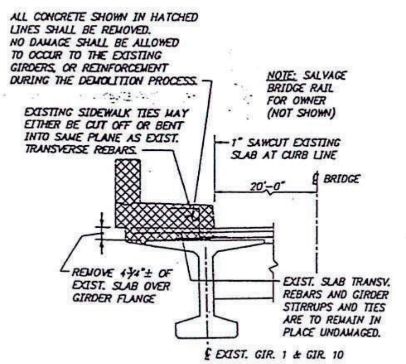
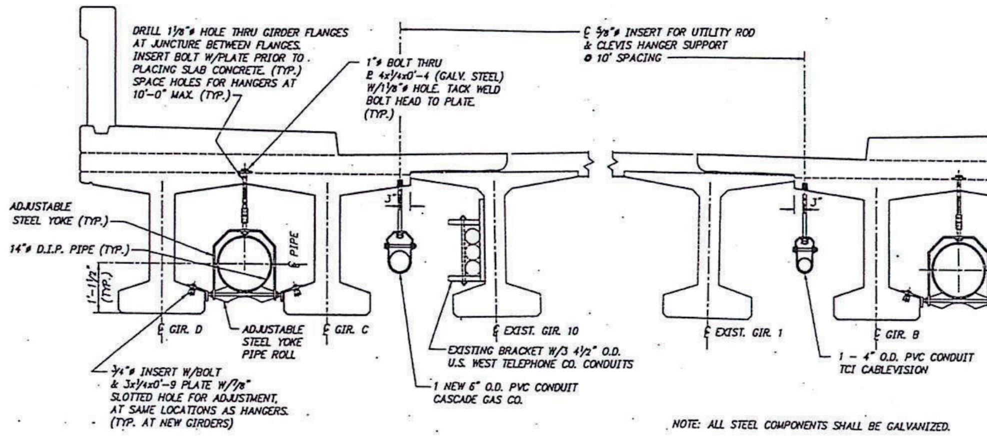
ALDER/TAUSICK/AIRPORT ROAD - TIB RECONSTRUCTION
MILL CREEK BRIDGE 5-1-95
ROADWAY SLAB, SIDEWALK & BARRIER PLAN

B4 of 8
DWG.

REGION NO.	STATE	FEDERAL AID PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
16	WASH.	STPF-7200(001)	33	80



SLAB DEMOLITION

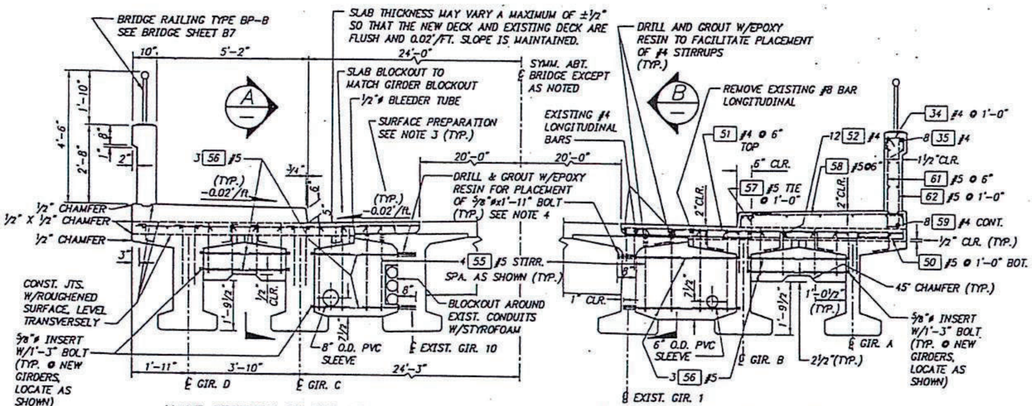


UTILITY SUPPORT DETAILS

SCALE: ¾" = 1'-0"

NOTES

1. THE SLAB SHALL HAVE OBTAINED 75% OF ITS 28 DAY STRENGTH CAPACITY PRIOR TO PLACEMENT OF ANY ADDITIONAL LOADS.
2. POSITIVE LOCATION OF REINFORCEMENT IN EXISTING GIRDER FLANGES, WHICH MAY INTERFERE WITH FIELD DRILLED HOLES, SHALL BE MADE. EVERY EFFORT SHALL BE MADE TO MISS THE EXISTING REINFORCEMENT IN THE DRILLING OPERATIONS.
3. CLOSURE POUR SURFACE TREATMENT: SURFACE MUST BE CLEAN OF ALL DELETERIOUS MATERIAL AND CONTAIN NO SPALLING OR DELAMINATION OF CONCRETE. REMOVE ALL LOOSE MATERIAL MECHANICALLY BY SANDBLASTING. CLEAN WITH WATER AFTER SANDBLASTING. AT TIME OF PLACING CLASS-5000LS CONCRETE THE SURFACE MUST BE DAMP (SATURATED SURFACE DRY) BUT FREE OF ANY STANDING WATER, AND CONTAIN NO MATERIAL THAT MIGHT IN ANY WAY ADVERSLY AFFECT THE BOND BETWEEN NEW AND OLD CONCRETE.
4. DRILLING FOR ⅝"ø BOLTS REQUIRE ⅞"ø HOLES. AT THE END DIAPHRAGMS IT IS POSSIBLE THAT THE EXISTING STEEL STRANDS WILL INTERFERE WITH THE DRILLING – THIS IS ACCEPTABLE, ALTHOUGH IT IS PREFERRED THAT EVERY EFFORT BE MADE TO MISS THE STRANDS. HOWEVER, UNDER NO CIRCUMSTANCES SHALL THE STEEL REINFORCEMENT BE DAMAGED AT THE END DIAPHRAGM LOCATIONS, OR THE STEEL STRANDS DAMAGED AT THE INTERIOR DIAPHRAGM LOCATIONS. THEREFORE, POSITIVE LOCATION OF ALL STEEL IS REQUIRED PRIOR TO DRILLING.



HALF SECTION AT END DIAPHRAGM

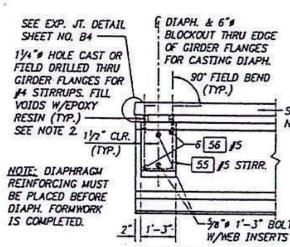
NEAR ABUTMENT NO. 2; ABUTMENT NO. 1 SIMILAR. FOR DETAILS NOT SHOWN SEE HALF SECTION AT INTERIOR DIAPHRAGM

HALF SECTION AT INTERIOR DIAPHRAGM

FOR DETAILS NOT SHOWN SEE HALF SECTION AT END DIAPHRAGM

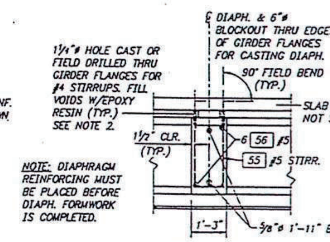
ROADWAY SECTION

LOOKING BACK ON STATIONING
SCALE: ½" = 1'-0"



SECTION (A)

NORMAL TO SKEW
SIDEWALK NOT SHOWN



SECTION (B)

NORMAL TO SKEW
SIDEWALK NOT SHOWN

THOMAS R. WHITEMAN — PROFESSIONAL ENGINEER
EXPIRES 03-25-95
9/9/94

NO.	REVISION	BY	DATE					
				DESIGNED	T. WHITEMAN	AS BUILT	DATE	
				DRAWN	B. KRONICS KDS	SCALE:	HORIZ.	AS NOTED
				CHECKED	M. ROGGE		VERT.	
				APPROVED	D.B. GREEN	FILE NO.		

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OLYMPIA, WASHINGTON

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ALDER/TAUSICK/AIRPORT ROAD – TIB RECONSTRUCTION
MILL CREEK BRIDGE
SECTIONS

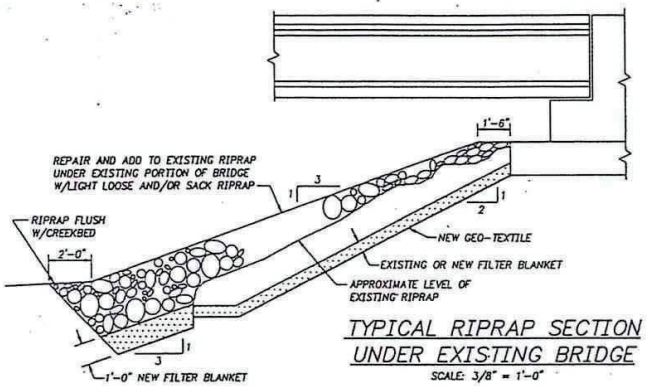
B5 of
DWG.

5-I-94

REGION NO.	STATE	FEDERAL AID PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
16	WASH.	STPF-7200(001)	34	80

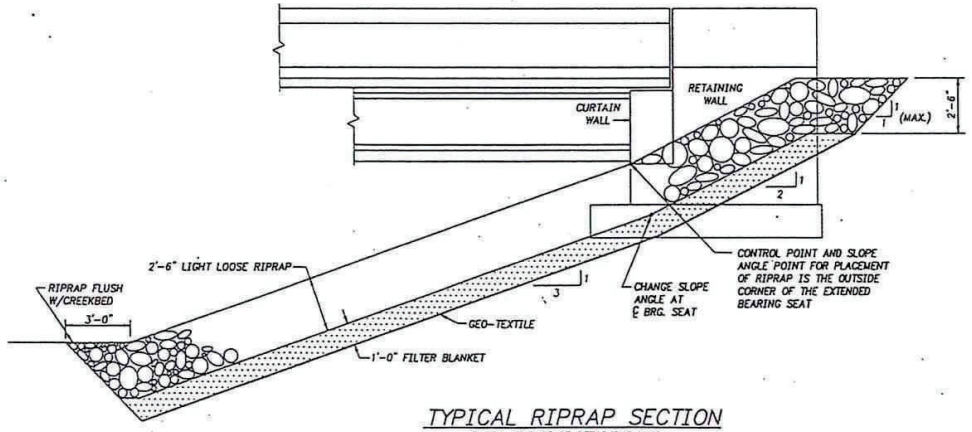
NOTES FOR CHANNEL PROTECTION

1. WORK AROUND EXISTING CONCRETE BAFFLES IN RIVERBED.
2. USE EXISTING RIPRAP AS NECESSARY.
3. USE SACK RIPRAP AND FILTER BLANKET TO FILL IN HOLES AND GAPS IF EXISTING RIPRAP CANNOT BE MOVED.
4. PRIOR TO CONSTRUCTION OF THE CHANNEL PROTECTION THE CONTRACTOR SHALL MEET WITH AN ENGINEER REPRESENTING THE COUNTY AND THE CITY TO REVIEW PROCEDURES FOR PLACING THE RIPRAP.



TYPICAL RIPRAP SECTION UNDER EXISTING BRIDGE

SCALE: 3/8" = 1'-0"



TYPICAL RIPRAP SECTION

TAKEN AT FACE OF RETAINING WALL
SCALE: 3/8" = 1'-0"

THOMAS H. MORTENSEN — STATE OF WASHINGTON — PROFESSIONAL ENGINEER

APPROVED 03-26-85

TL Mortensen 9/9/94

NO.	REVISION	BY	DATE

DESIGNED	T. WHITEMAN	AS BUILT	DATE
DRAWN	B. KRONES KDS	SCALE: HORIZ.	AS NOTED
CHECKED	M. ROGGE	VERT.	
APPROVED	D.B. GREEN	FILE NO.	

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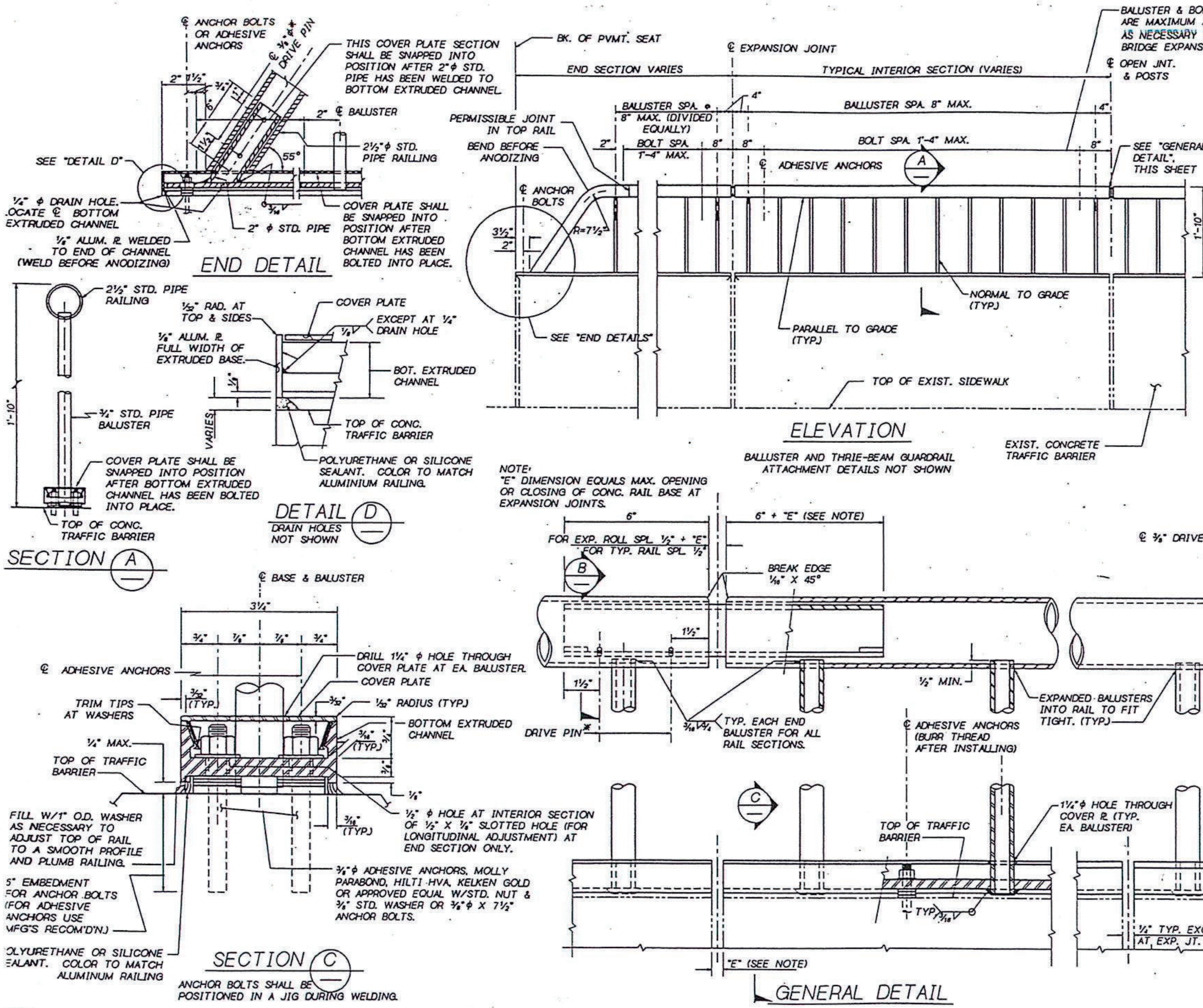
ALDER/TAUSICK/AIRPORT ROAD – TIB RECONSTRUCTION
MILL CREEK BRIDGE
MISCELLANEOUS DETAILS

B6 OF DWG.

5-I-93



NOTES

PIPE RAILING, PIPE RAILING SPLICES, COVER PLATES AND BOTTOM EXTRUDED CHANNELS SHALL BE BENT TO THE HORIZONTAL CURVE WHERE THE RADIUS OF CURVATURE IS LESS THAN 200 FEET.

SHOP DRAWINGS OF RAILING SHALL BE SUBMITTED FOR APPROVAL SHOWING COMPLETE DIMENSIONS AND DETAILS OF FABRICATION AND INCLUDING AN ERECTION DIAGRAM. MATERIAL BEING USED SHALL BE SPECIFIED IN THE SHOP DRAWINGS.

ALL ALUMINUM PARTS SHALL BE GIVEN A BRONZ ANODIC COATING AT LEAST 0.0006" THICK, AND SHALL BE SEALED TO MEET THE REQUIREMENTS OF ASTM B 136 AND SHALL HAVE UNIFORM FINISH.

PIPE RAILING, PIPE RAILING SPLICES, COVER PLATES AND BOTTOM EXTRUDED CHANNELS MAY BE HEATED TO NOT MORE THAN 400°F FOR A PERIOD NOT TO EXCEED 30 MIN. TO FACILITATE FORMING OR BENDING.

CUTTING SHALL BE DONE BY SAWING OR MILLING AND ALL CUTS SHALL BE TRUE AND SMOOTH. FLAME CUTTING WILL NOT BE PERMITTED.

PIPE ROLLING, PIPE BALUSTERS, PIPE ROLLING SPLICES, COVER PLATES AND BOTTOM EXTRUDED CHANNELS SHALL BE ADEQUATELY WRAPPED TO INSURE SURFACE PROTECTION DURING HANDLING AND TRANSPORTATION TO THE JOB SITE.

WELDING OF ALUMINUM SHALL BE IN ACCORDANCE WITH SECTION 5 OF THE LATEST AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS.

MAT'L	PART	MATERIAL SPECIFICATION
ALUMINUM	PIPES	ASTM B241 OR B249 ALLOY 6061-T6 OR 6005-T5 SCHEDULE 40 (STD. PIPE)
ALUMINUM	EXTRUDED CHANNELS & COVER PLATES	ASTM B221 ALLOY 6061-T6 OR 6005-T5
STEEL	ANCHOR BOLTS, NUTS & WASHERS	AASHTO M164 (GALVANIZE IN ACCORDANCE WITH AASHTO SPECIFICATION M232)
STEEL	PLATES	AASHTO M 183
STEEL	DRIVE PINS	ASTM A-276 TYPE 300 STAINLESS STEEL

Bridge Design Engr.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
Supervisor	10 WASH.			
Designed By	JOB NUMBER			
Checked By				
Detailed By				

CITY OF WALLA WALLA
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AGA ARVID GRANT ASSOCIATES
CONSULTING ENGINEERS

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MILL CREEK BRIDGE 5-I-92

B7