

#18054

MICROFILMED
JUL 24 1990

STATE OF OHIO DEPARTMENT OF TRANSPORTATION WOO-199-26.63 PERRYSBURG TOWNSHIP WOOD COUNTY

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		1/20

WOO-199-26.63
WOOD COUNTY

BRS-327(8)
BRZ-8705(1)

MICROFILMED
JUN 1 1992

DESIGN DESIGNATION

Current A.D.T.(1988) = 3060
 Design Year A.D.T.(2008)= 3910
 D.H.V. = 400
 D = 50%
 T = 6%
 V = 60 MPH
 Legal Speed Limit = 55 MPH

CONVENTIONAL SIGNS

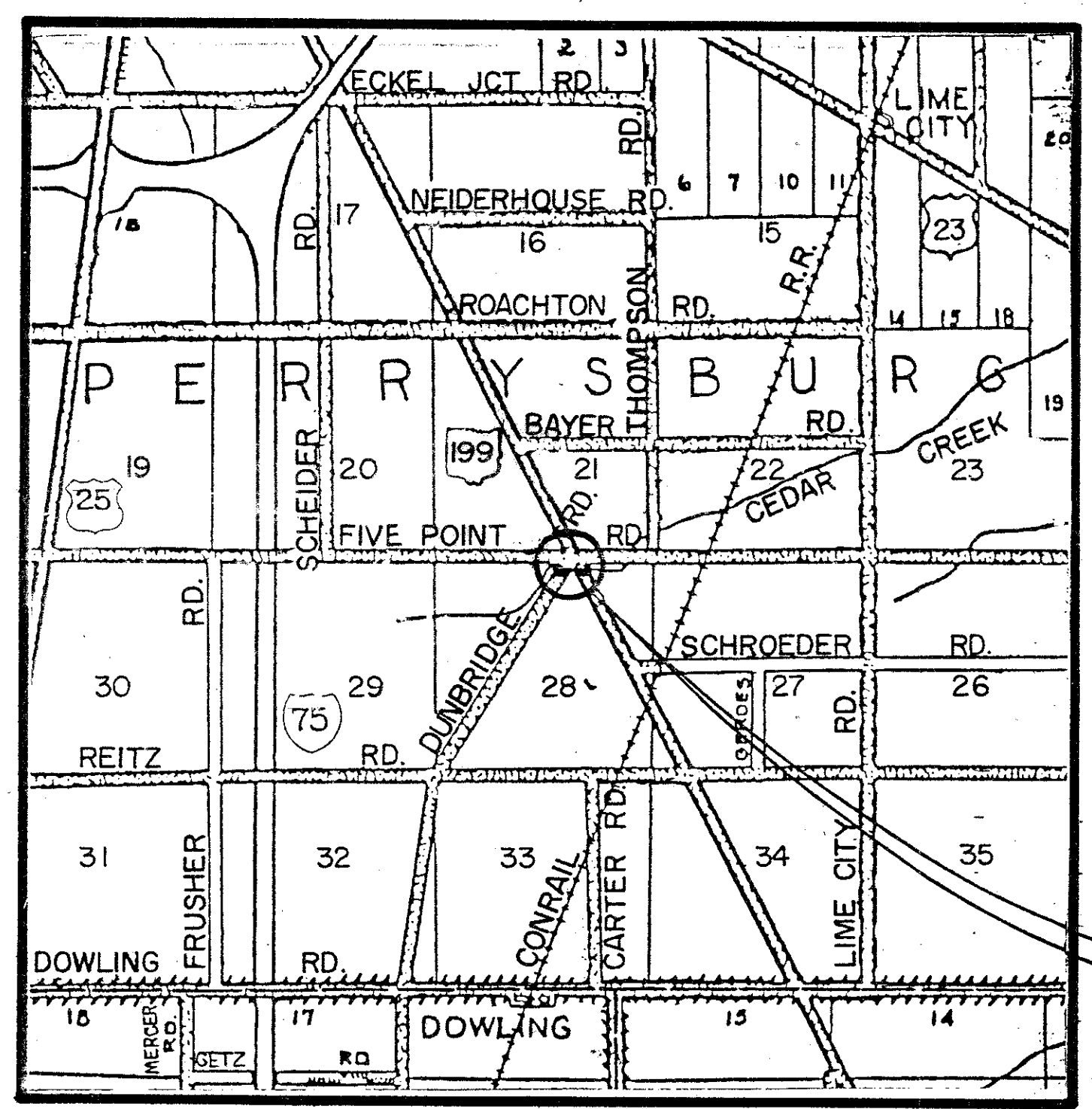
County Line	-----	Limited Access (only)	----- LA
Township Line	-----	Right of Way (only)	----- RW
Section Line	-----	Limited Access & Right of Way	----- LA & RW
Corporation Line	-----	Existing Right of Way	-----
Fence Line (existing)	x x (proposed) x x	Property Line (in existing fence)	x - x
Center Line	352 353	Railroad	----- or -----
Trees	⊙, Stumps ⊙, (to be removed) ⊗	Guardrail (existing)	----- (proposed) -----
Utility Poles: Telephone	⊕, Power		

INDEX OF SHEETS

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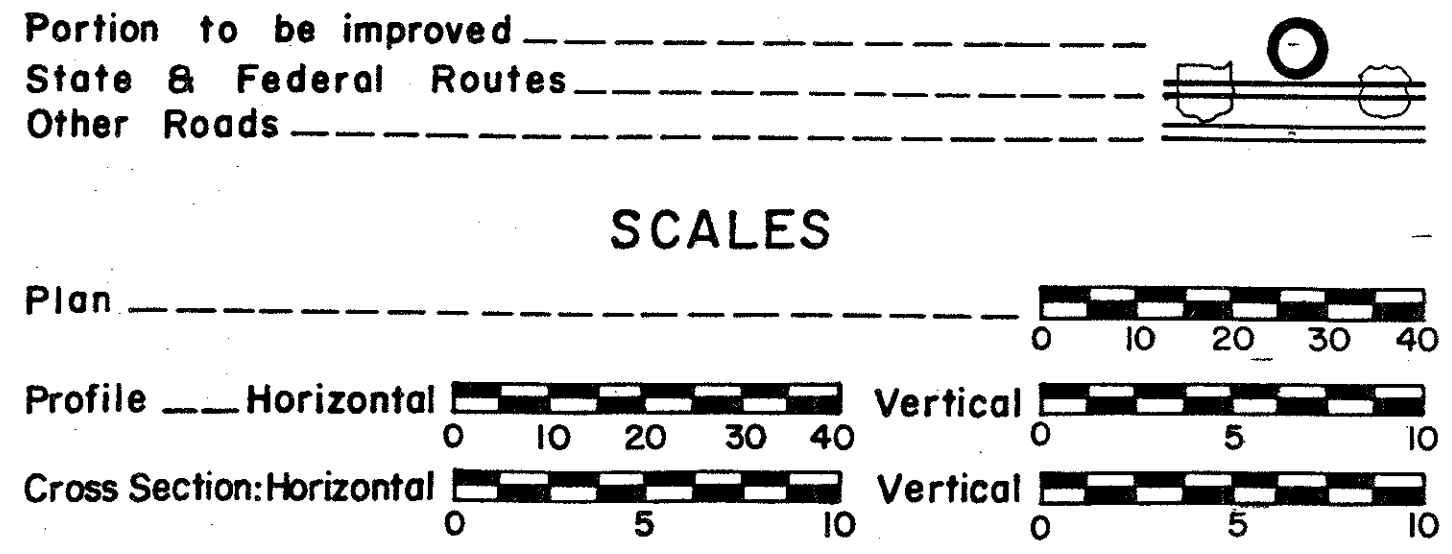
LINE DATA

BEGIN PROJECT ----- STA. 1406+15.00
 END PROJECT ----- STA. 1409+25.00
 NET LENGTH OF PROJECT ----- 310.00 L.F. = 0.059 MILES
 BEGIN WORK ----- STA. 1404+30.00
 END WORK ----- STA. 1410+80.00
 NET LENGTH OF WORK ----- 650.00 L.F. = 0.123 MILES



LOCATION MAP
SCALE IN MILES
0 1/4 1/2 3/4 1 2

UNDERGROUND UTILITIES
 TWO WORKING DAYS
 BEFORE YOU DIG
 Call... 800-362-2764(Toll free)
 OHIO UTILITIES PROTECTION SERVICE
 NON-MEMBERS
 MUST BE CALLED DIRECTLY



SUPPLEMENTAL SPECIFICATIONS	
847	10-17-83
947	10-17-83
836	11-12-85
932	3-25-85

Approved R. J. Gorman
 Date 10-3-86 District Deputy Director of Transportation

Approved Walter J. Jennings / CPD
 Date 10-22-86 Engineer, Bureau of Bridges and Structural Design.

Approved Wayne H. Kautle
 Date 12-10-86 Chief Engineer, Planning and Design

Approved Wanna Smith
 Date 12-10-86 Director, Department of Transportation

STRUCTURE PLANS REVIEWED BY:
bn Burgess & Niple, Limited
 Columbus, Ohio

PLANS PREPARED BY
CHARLES L. BARBER & ASSOCIATES, INC.
 CONSULTING ENGINEERS - TOLEDO, OHIO
Charles L. Barber Date Nov 11, 1986

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS			
BP-5	1-11-85	MC-4	7-26-76
BP-6	6-1-85	MC-8	6-12-75
GR-1	1-11-85	MC-11	8-1-78
GR-2B	2-5-82	HW-4A	4-1-80
GR-3	1-21-85	HW-4B	4-1-80
GR-4	2-5-82		
CB-2-2-A4B	5-1-79		
CB-2-342-4	5-1-79	DBR-2-73	4-10-78

Project: WOO-199-26.65
 Date of Letting _____ 19____ Contract No. _____

DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

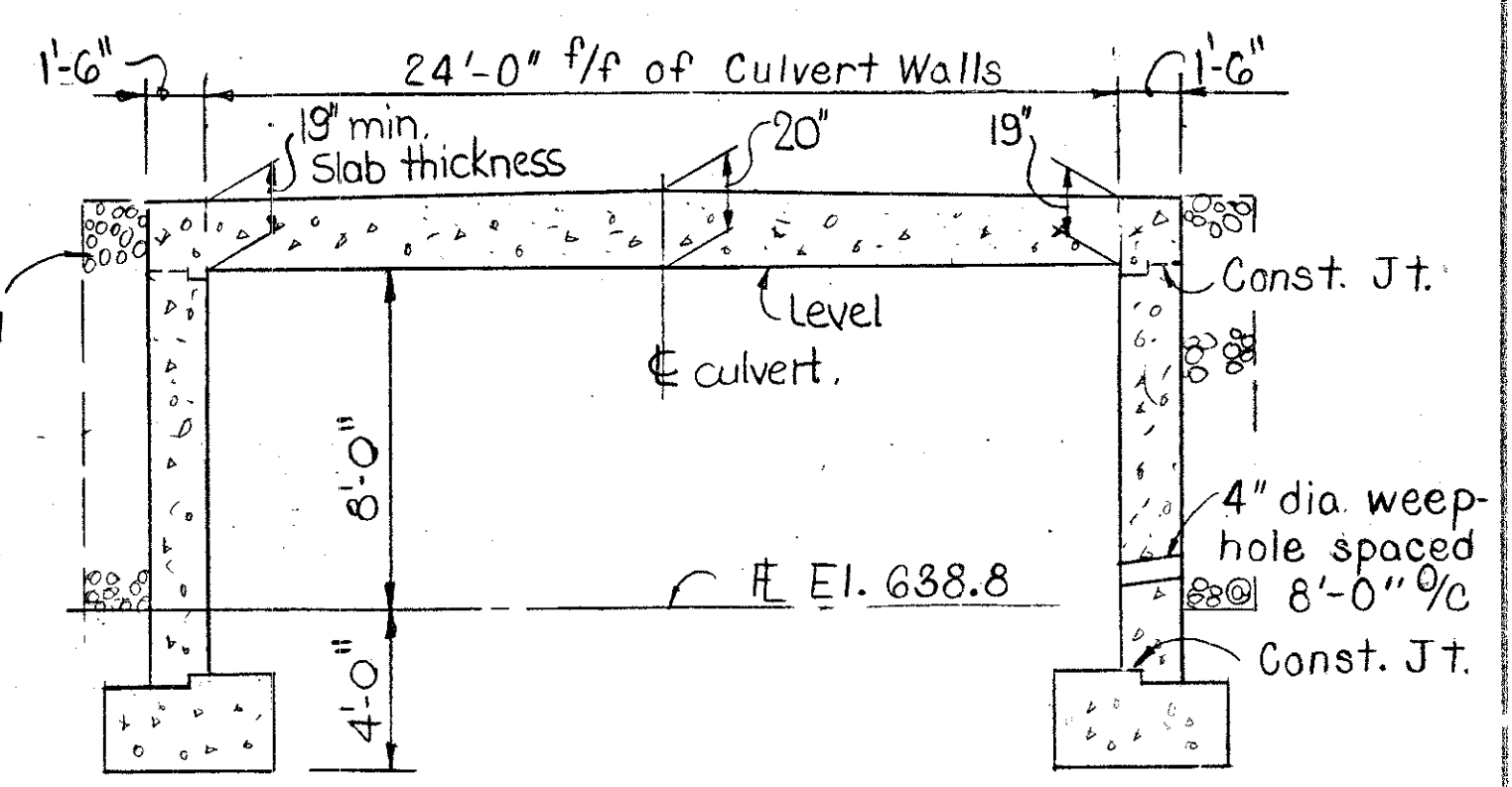
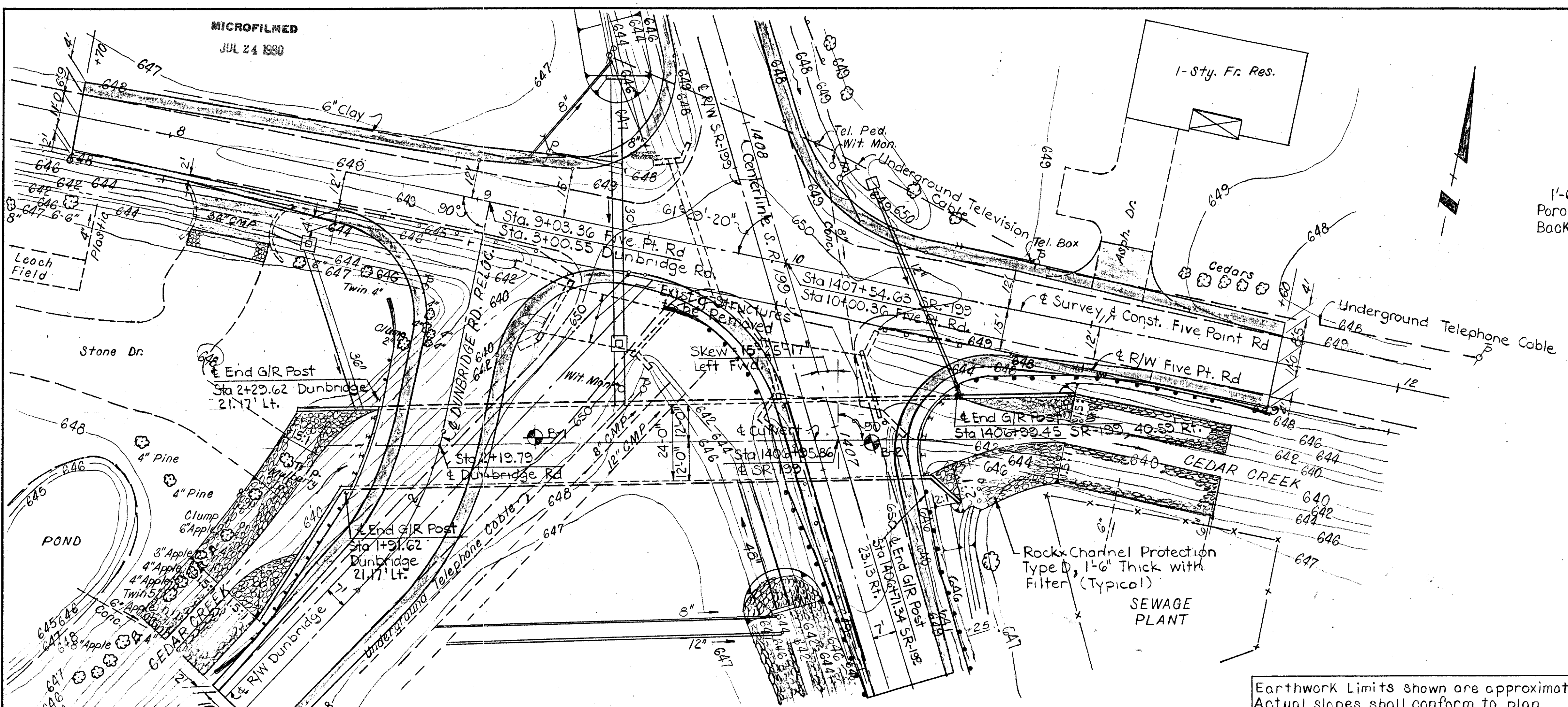
APPROVED: _____
 DIVISION ADMINISTRATOR DATE _____

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F.H.W.A. REGION	STATE	PROJECT
5	OHIO	

14
20

W00-199-26.63
WOOD COUNTY



TYPICAL SECTION

PROPOSED STRUCTURE
 TYPE ... REINFORCED CONCRETE SLAB TOP CULVERT (24'x8')
 SPAN ... 24'-0" f/f of CULVERT WALLS
 LOADING HS 20-44 and Alternate Military Loading
 SKEW 15°-25'-17" Left Fwd.
 ALIGNMENT ... Tangent

EXISTING STRUCTURES
 (at Proposed Site to be Removed)
 STA: 1407+17 S. R. 199
 TYPE: Concrete Slab w/Concrete faced Stone Abuts.
 SPAN: 18'-6" f/f of Abutments
 ROADWAY WIDTH: 28' f/f of Parapets
 ALIGNMENT: Tangent
 SKEW: 24° Left Fwd.
 CONDITION: Poor
 DRAINAGE AREA: 4750 Acres
 DATE CONSTRUCTED: 1926

STA: 2+80 DUNBRIDGE RD.
 TYPE: Concrete Slab with Stone Abutments
 SPAN: 18'-0" f/f of Abutments
 ROADWAY WIDTH: Varies
 ALIGNMENT: Tangent
 SKEW: 32° Right Fwd.
 CONDITION: Poor
 DRAINAGE AREA: 4284 Acres
 DATE CONSTRUCTED: Unknown

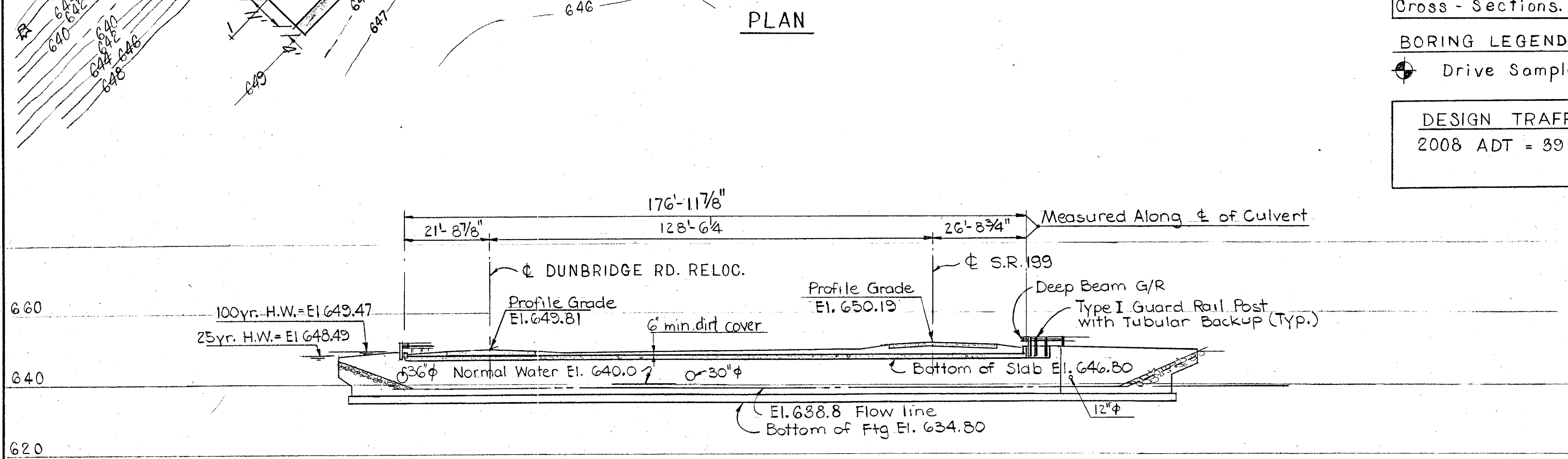
HYDRAULIC DATA

V25 = 289 fps	Q 25 = 554 cfs
V100 = 374 fps	Q 100 = 718 cfs
Drainage Area = 4750 Acres	

Earthwork Limits shown are approximate
Actual slopes shall conform to plan
Cross - Sections.

BORING LEGEND
 ⊕ Drive Sample Core Boring.

DESIGN TRAFFIC
 2008 ADT = 3910



PROFILE ALONG C PROPOSED CULVERT

B.M. Sta 8+08.0 Five Pt. Rd, 17.7' Rt.
El. 648.62, S.W. corner of west
concrete headwall
For Reference Points see
Roadway Plan Sheets.

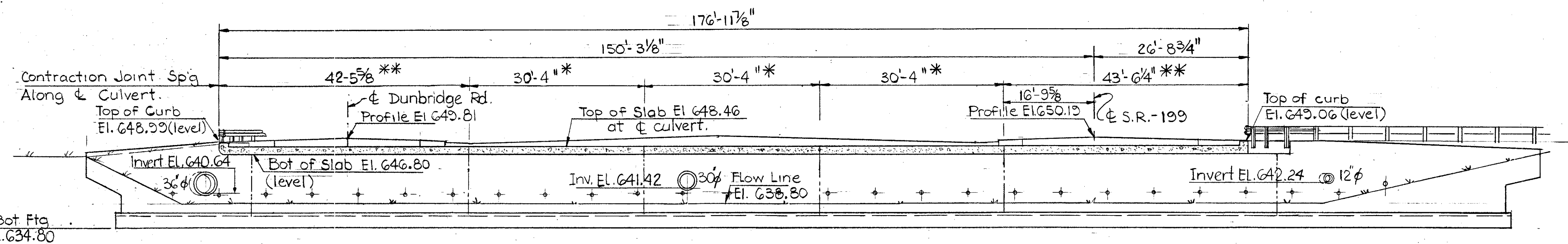
REVIEWED BY BURGESS & NIPLE, LTD.
M.P.B. 6/5/86

CHARLES L. BARBER & ASSOCIATES INC.
ENGINEERS • ARCHITECTS
TOLEDO, OHIO 1/6
SITE PLAN
SLAB TOP CULVERT
BRIDGE NO. W00-199-26.65
S. R. 199 OVER CEDAR CREEK

PRESENT TOPOGRAPHY	PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED
District	A.A.A.	J.T.B.	AAA.	R.H.B.
				K.L.S.

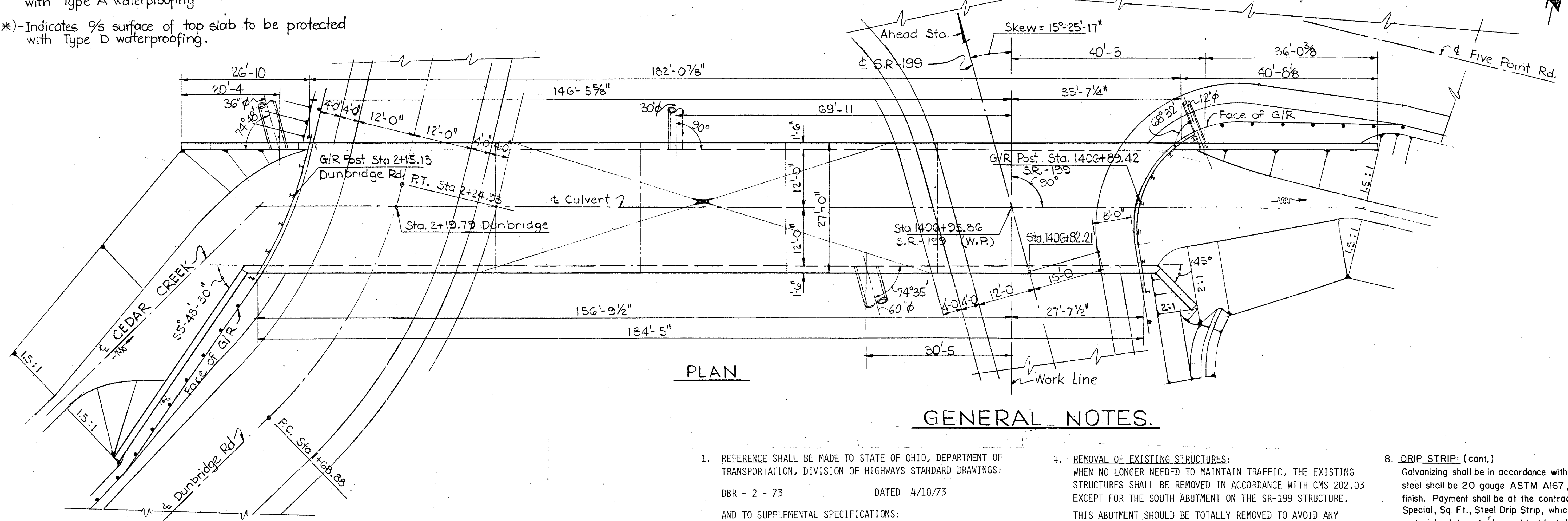
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WOO-199-26.63
WOOD COUNTY.



(*) - Indicates 0/s surface of top slab to be protected with Type A waterproofing
 (**)- Indicates 0/s surface of top slab to be protected with Type D waterproofing.

SECTION ALONG CENTERLINE CULVERT



PLAN

GENERAL NOTES.

- REFERENCE SHALL BE MADE TO STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS STANDARD DRAWINGS:
 DBR - 2 - 73 DATED 4/10/73
 AND TO SUPPLEMENTAL SPECIFICATIONS:
 836 DATED 11/12/85
- DESIGN SPECIFICATIONS:
 THIS STRUCTURE CONFORMS TO STANDARD SPECIFICATIONS FOR HIGHWAY AND TRANSPORTATION OFFICIALS, 1983, AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.
- DESIGN DATA:
 DESIGN LOADING - HS 20-44 AND THE ALTERNATE MILITARY LOADING
 CONCRETE CLASS S - UNIT STRESS 1500 P.S.I. FOR SLAB TOP
 CONCRETE CLASS C - UNIT STRESS 1333 P.S.I. FOR WALLS AND FOOTINGS
 REINFORCING STEEL - ASTM A615, A616 OR A617, GRADE 60 - UNIT STRESS 24,000 P.S.I.
- DRIP STRIP:
 Prior to applying deck membrane waterproofing, a bent drip strip shall be installed along the edges of the deck as shown on sheet no.18. The strips shall be fastened at 1'-6" maximum with 1/4" x 5/16" x 1/4" flat head drive pin and washer. (Length x Shank Dia. x Head Dia.) or #10 galvanized screws and expansion anchors, subject to the approval of the Engineer. The strips shall be placed the full length of the deck, ending at the face of the abutment wingwall or steel end dam angle. Where splices are required a 3" (Min.) lap shall be used with a fastener through the lap. Steel for galvanized strips shall be 8"x0.105" and shall meet the requirements of ASTM A568. (cont.)
- REMOVAL OF EXISTING STRUCTURES:
 WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURES SHALL BE REMOVED IN ACCORDANCE WITH CMS 202.03 EXCEPT FOR THE SOUTH ABUTMENT ON THE SR-199 STRUCTURE. THIS ABUTMENT SHOULD BE TOTALLY REMOVED TO AVOID ANY INTERFERENCE WITH THE NEW STRUCTURE. ESTIMATED BOTTOM OF FOOTING ELEVATION IS 638.1.
- FOUNDATION BEARING PRESSURE:
 CULVERT WALL FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 2.5 TONS PER SQ.FT.
- UTILITY LINES:
 ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNERS. THE CONTRACTOR AND OWNERS ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.
- DRIP STRIP: (cont.)
 Galvanizing shall be in accordance with 711.02. Stainless steel shall be 20 gauge ASTM A167, Type 304, mill finish. Payment shall be at the contract price bid for item Special, Sq. Ft., Steel Drip Strip, which shall include all materials, labor, tools, and incidentals necessary to complete the item.

ESTIMATED QUANTITIES.

ITEM	QUANTITY			UNIT	DESCRIPTION
	BRZ	BRS	TOTAL		
202	10% Lump	90% Lump	Lump		Structure removed.
503	50% Lump	50% Lump	Lump	Sum	Cofferdams cribs and sheeting.
503	368	450	818	Cu. Yd.	Unclassified excavation.
509	30,668	41,494	72,162	Lb.	Reinforcing steel.
511	121	174	295	Cu. Yd.	Class "S" concrete, in slab. (See Proposal Note)
511	221	270	491	Cu. Yd.	Class "C" concrete, in footings and walls. (See Proposal Note)
512	91	182	273	Sq. Yd.	Type A waterproofing
512	19	27	46	Sq. Yd.	Type B waterproofing
512	132	132	264	Sq. Yd.	Type D waterproofing
516	4.5	4.5	9	Sq. Ft.	1/2" Preformed expansion joint filler.
517	31.25	37.50	68.75	Lin. Ft.	Railing (deep beam rail with steel tubular backup and type 1 steel posts and bolts.)
518	99	122	221	Cu. Yd.	Porous backfill
Special	23	23	46	Sq. Ft.	Steel drip strip.
516	0	18	18	Sq. Ft.	1" Preformed expansion joint filler

CHARLES L. BARBER & ASSOCIATES INC.
 ENGINEERS • ARCHITECTS
 TOLEDO, OHIO

**GENERAL PLAN, ELEVATION,
 QUANTITIES & NOTES**
 SLAB TOP CULVERT
 BRIDGE NO. WOO-199-26.65
 S. R. 199 OVER CEDAR CREEK

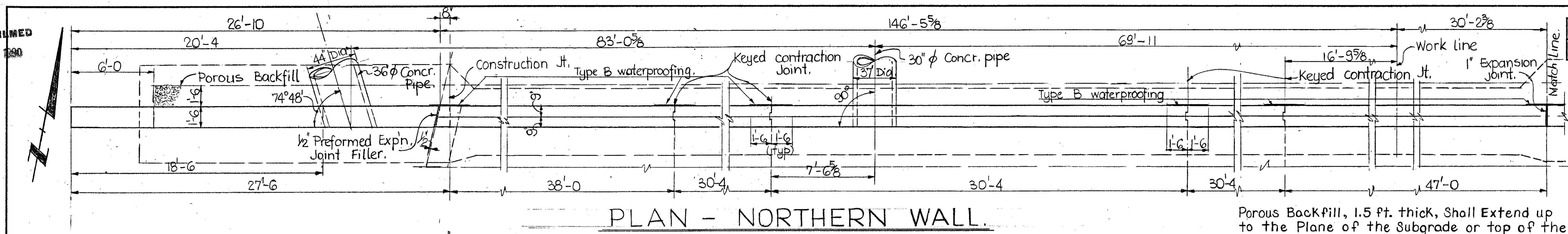
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JTB	EWK		KLS	RHB	4/86	1-8-87

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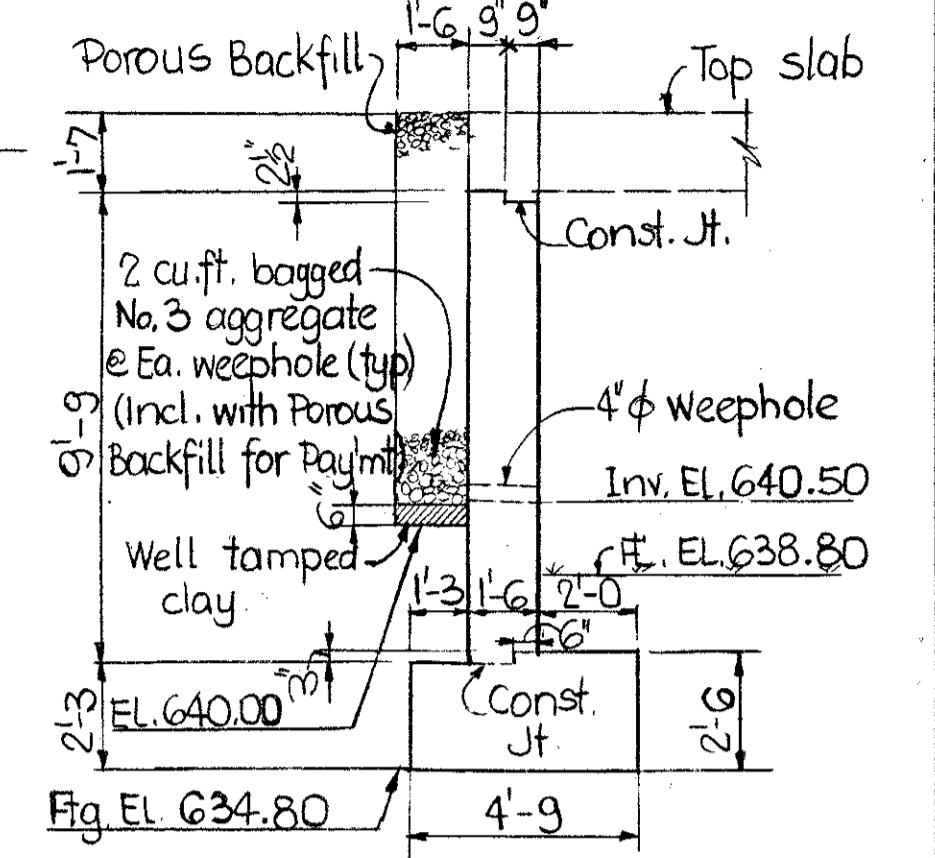
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WOO-199-26.63
WOOD COUNTY.

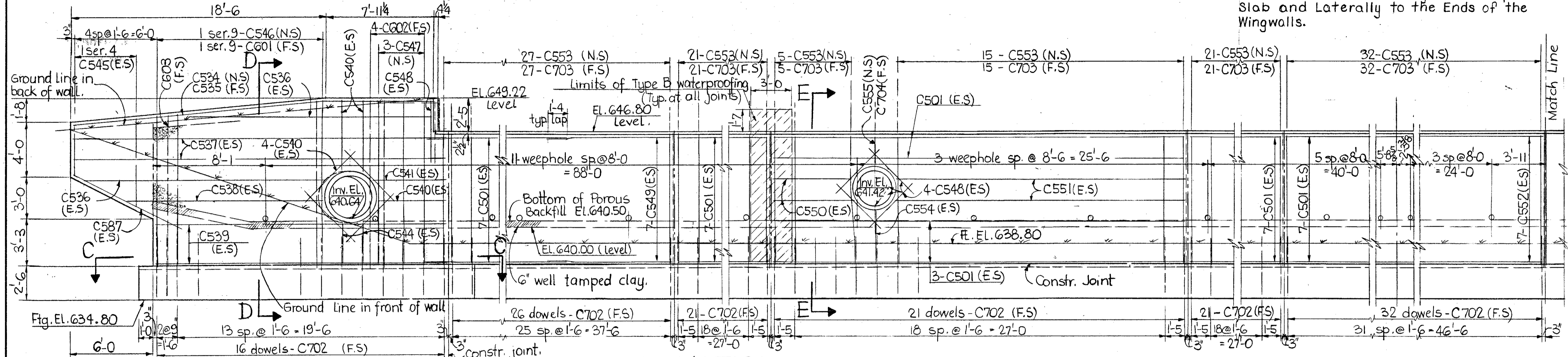


PLAN - NORTHERN WALL.

Porous Backfill, 1.5 ft. thick, Shall Extend up to the Plane of the Subgrade or top of the Slab and Laterally to the Ends of the Wingwalls.

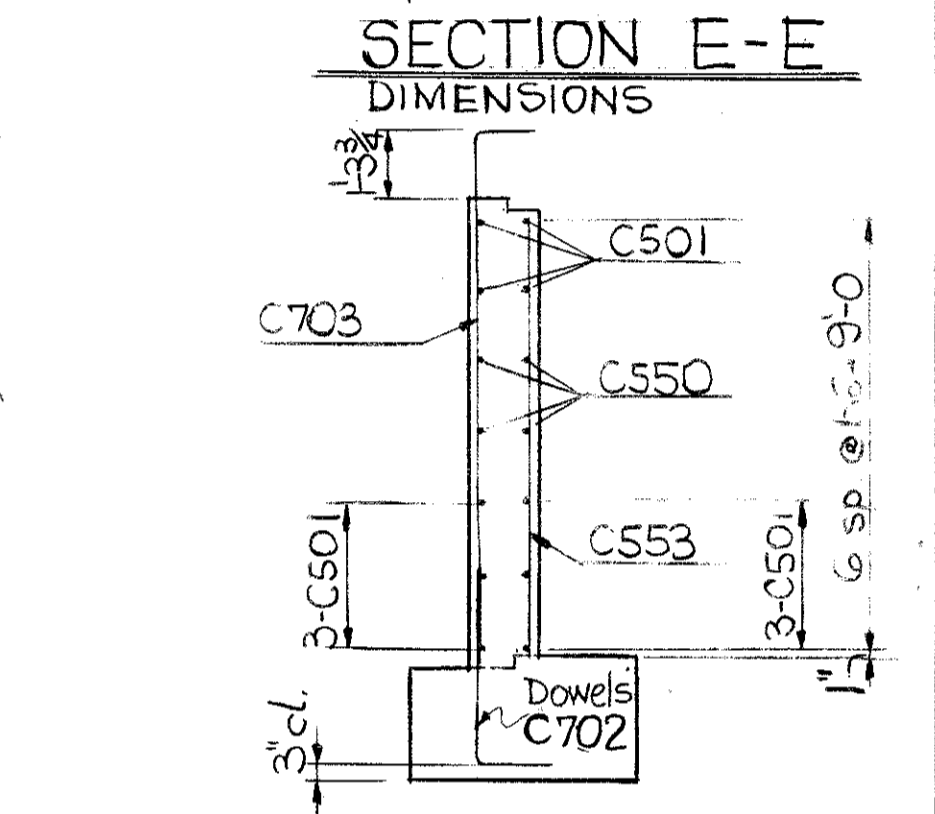


SECTION E-E
DIMENSIONS

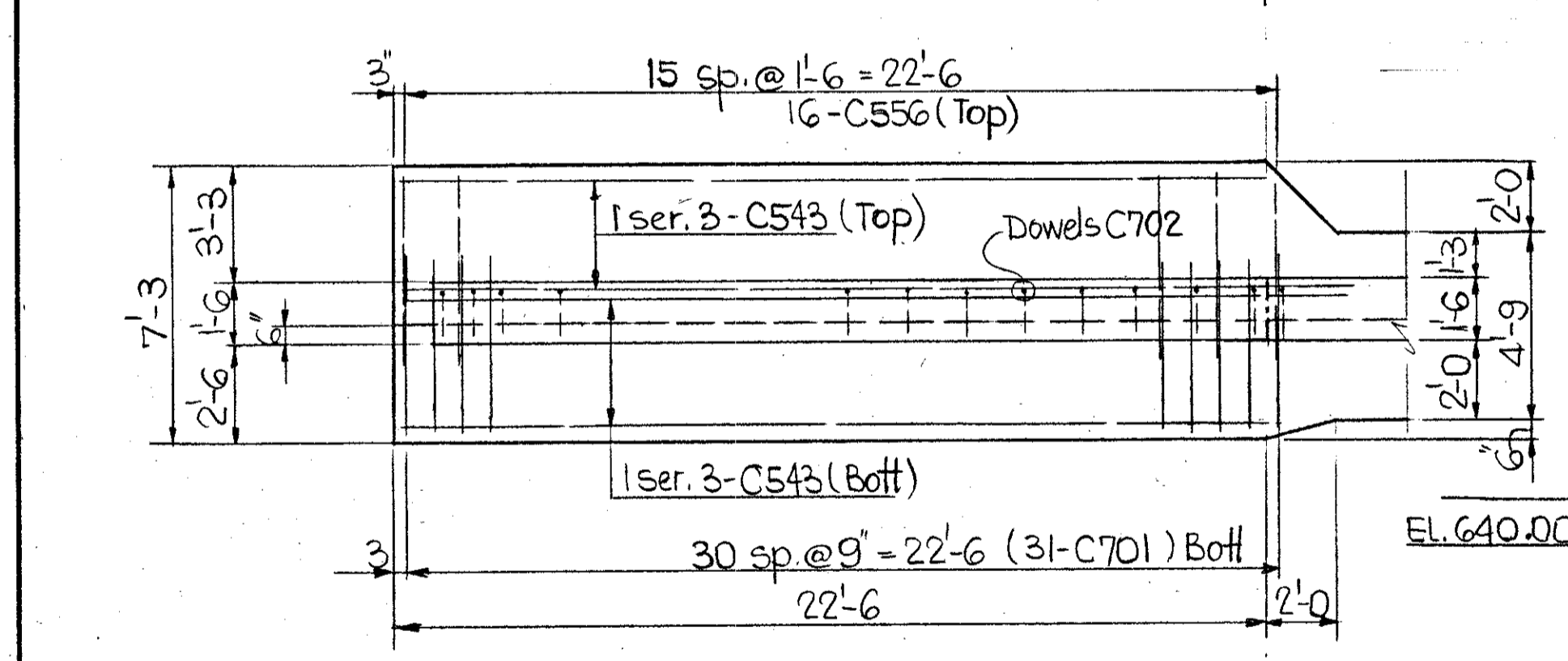


ELEVATION

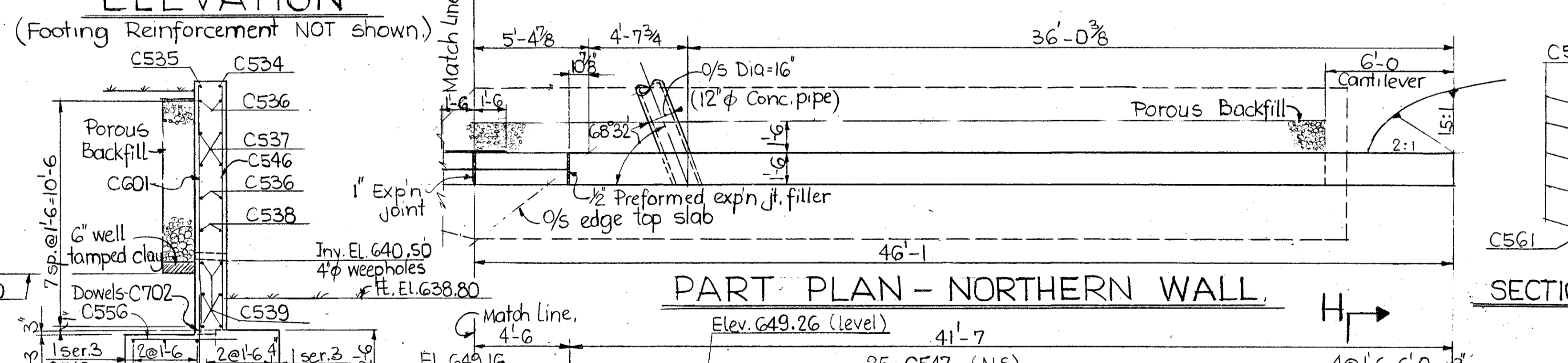
(Footing Reinforcement NOT shown).



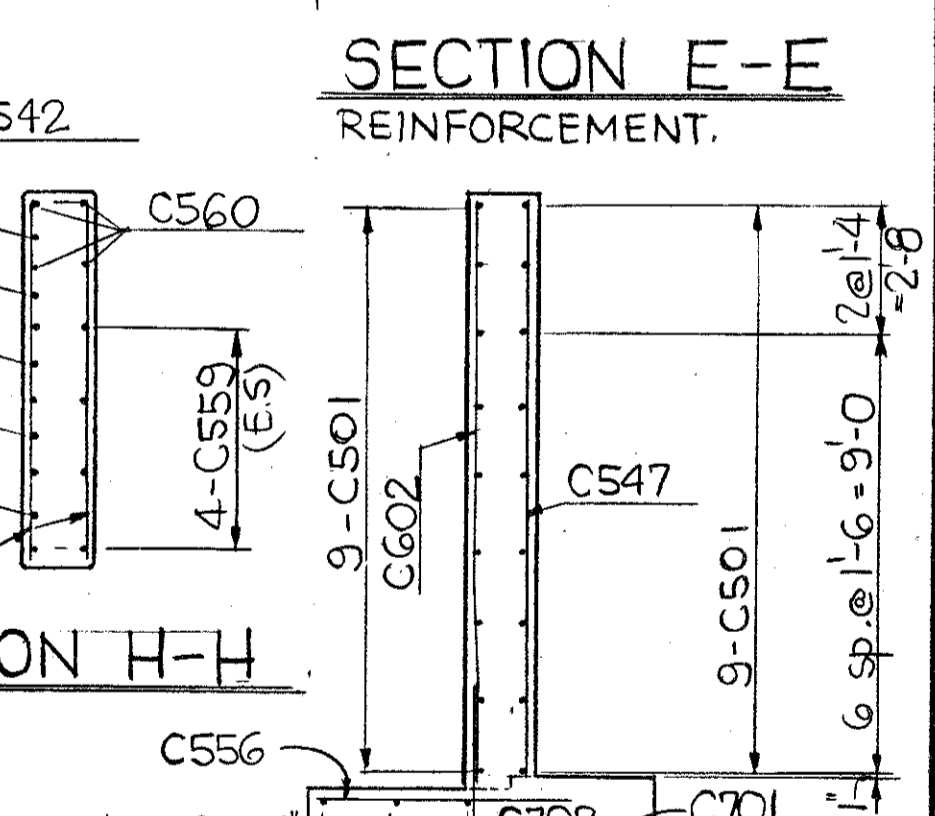
SECTION E-E
REINFORCEMENT.



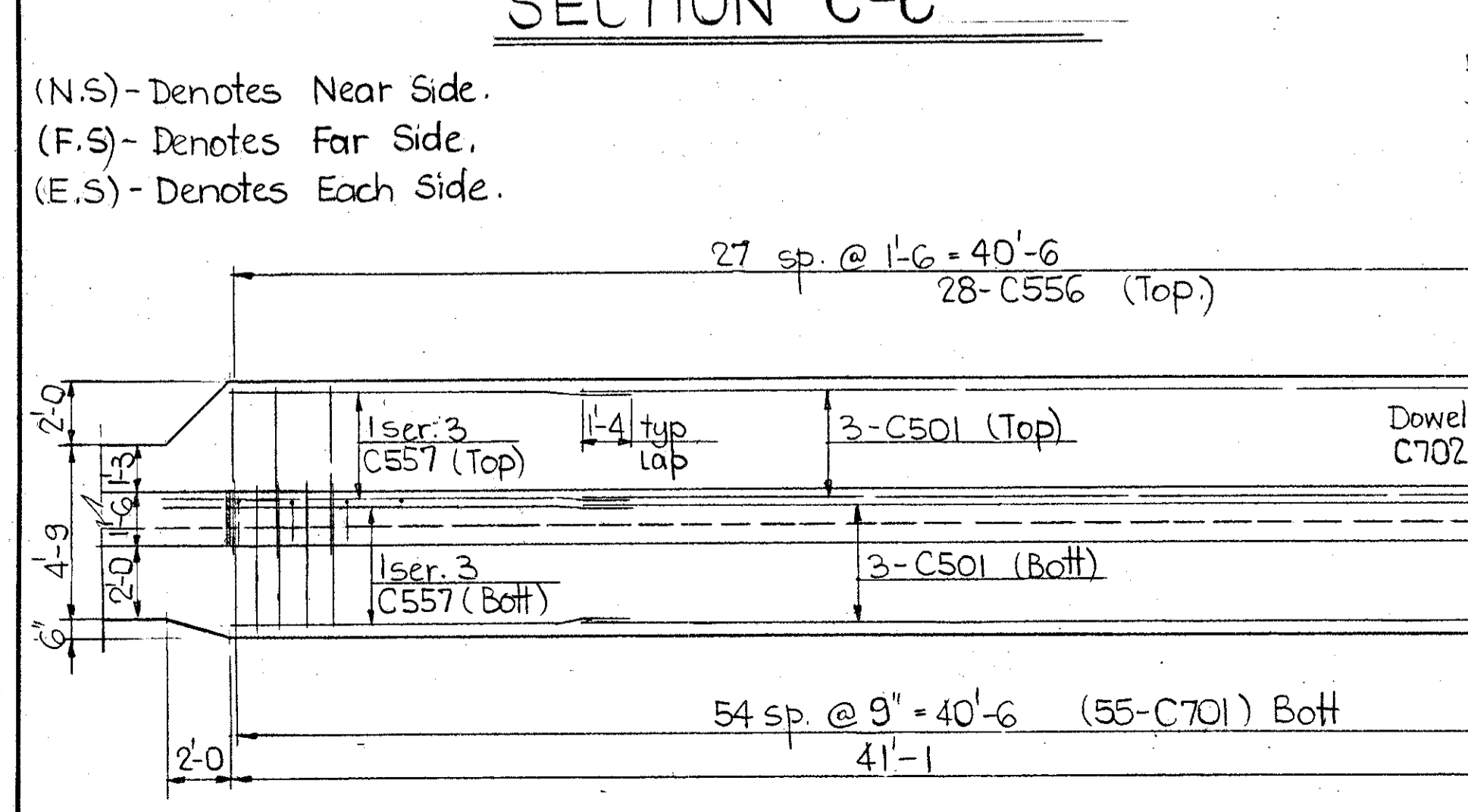
SECTION C-C



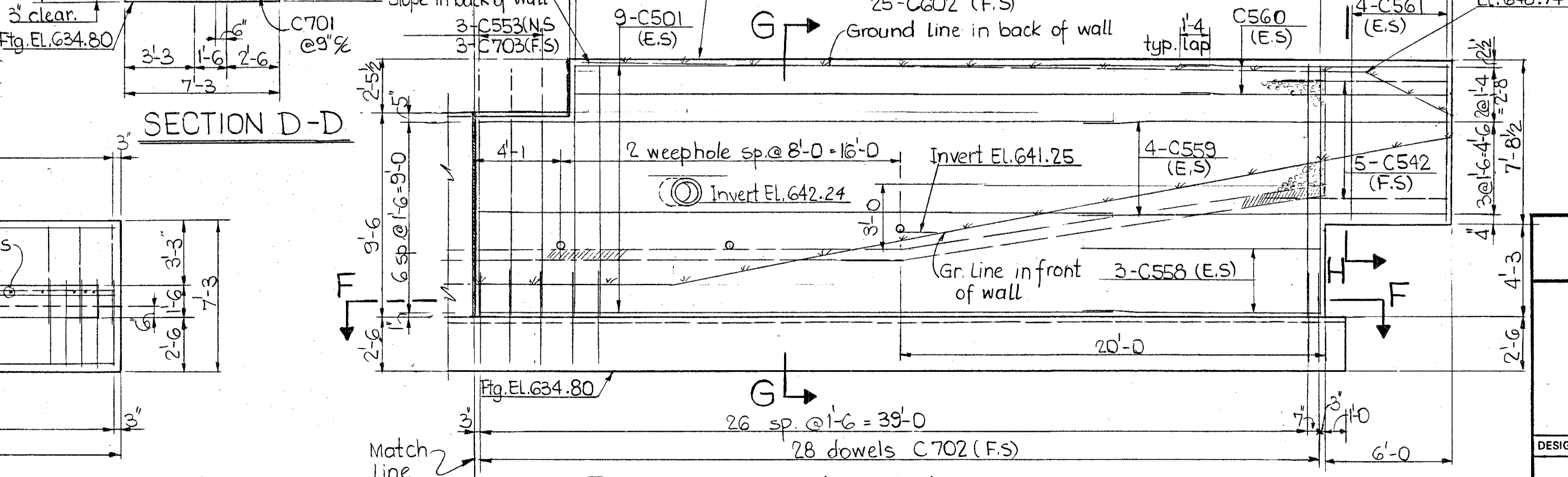
PART PLAN - NORTHERN WALL.



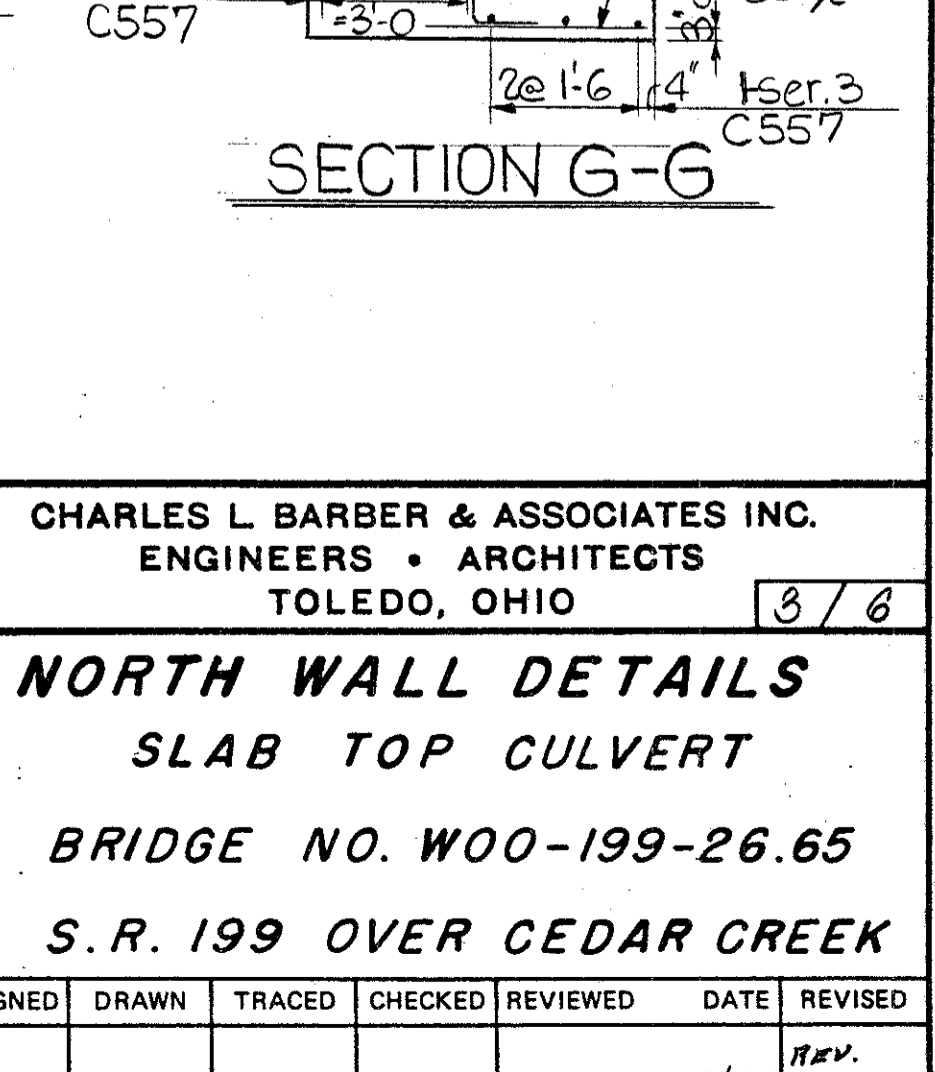
SECTION H-H



SECTION D-D



PART ELEVATION (Footing Reinf. NOT shown).



SECTION G-G

(N.S.) - Denotes Near Side.
(F.S.) - Denotes Far Side.
(E.S.) - Denotes Each Side.

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ENGINEERS • ARCHITECTS
TOLEDO, OHIO

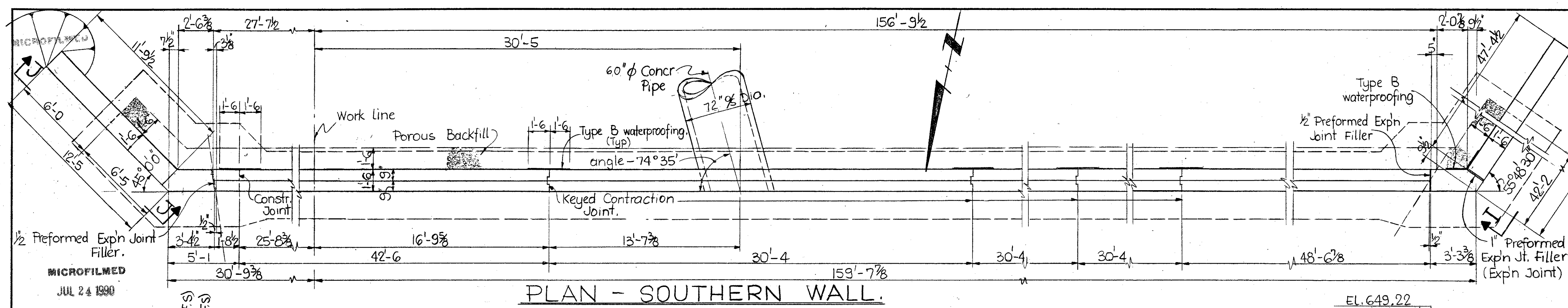
NORTH WALL DETAILS
SLAB TOP CULVERT
BRIDGE NO. WOO-199-26.65
S.R. 199 OVER CEDAR CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JTB	ENK		KLS	RHB	4/86	REV. 1-8-87

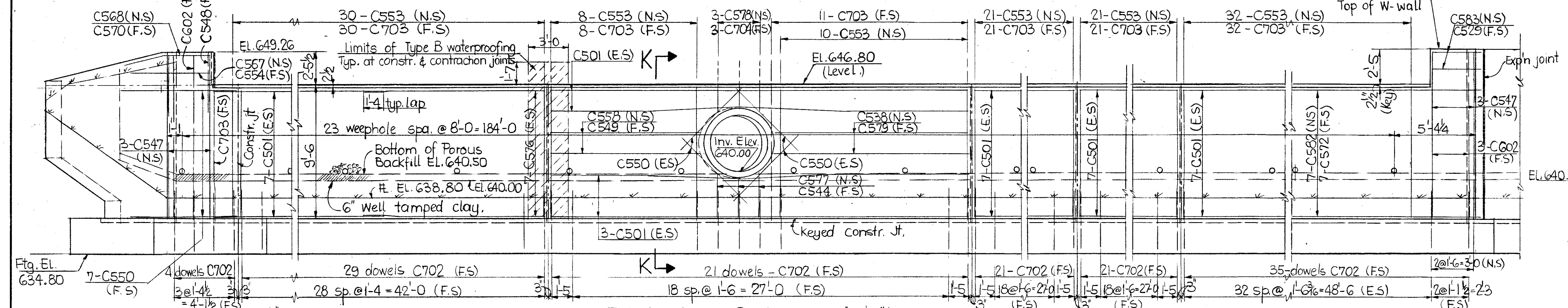
WOO-199-26.63
WOOD COUNTY.

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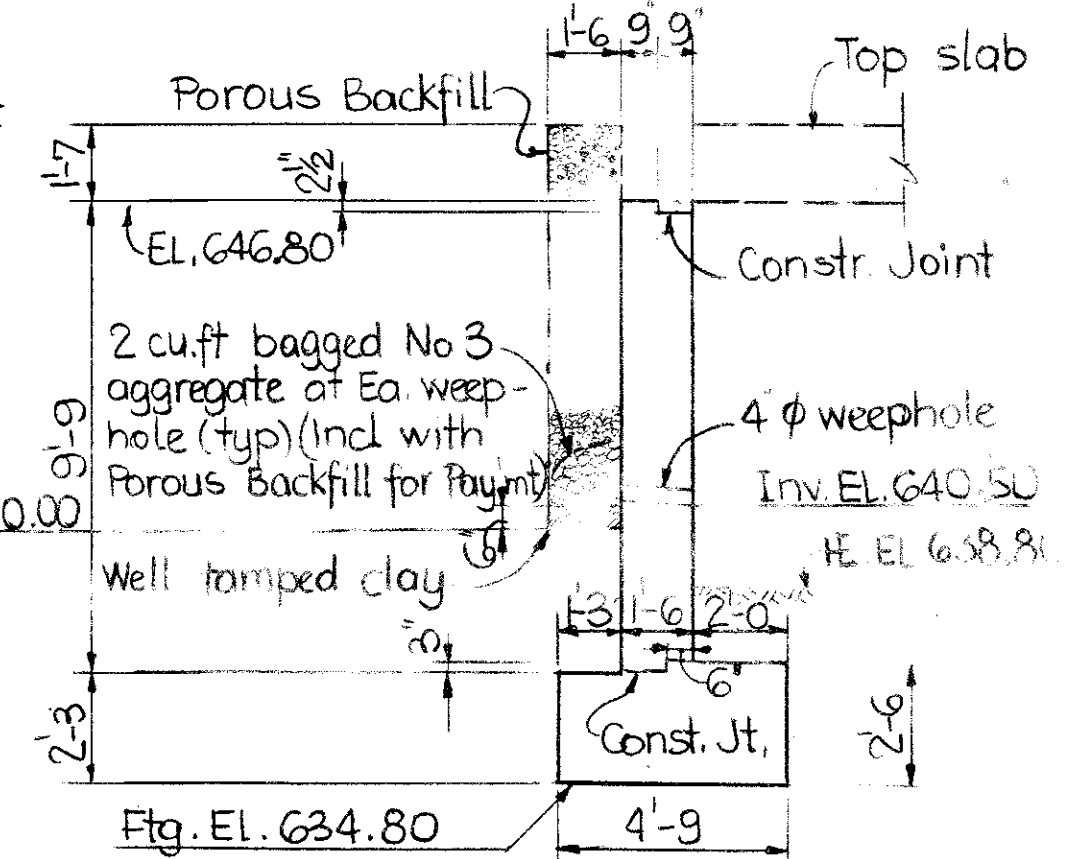
Porous Backfill Shall Extend up to the Plane of Subgrade or Top of Slab and Laterally to the End of the Wingwall.



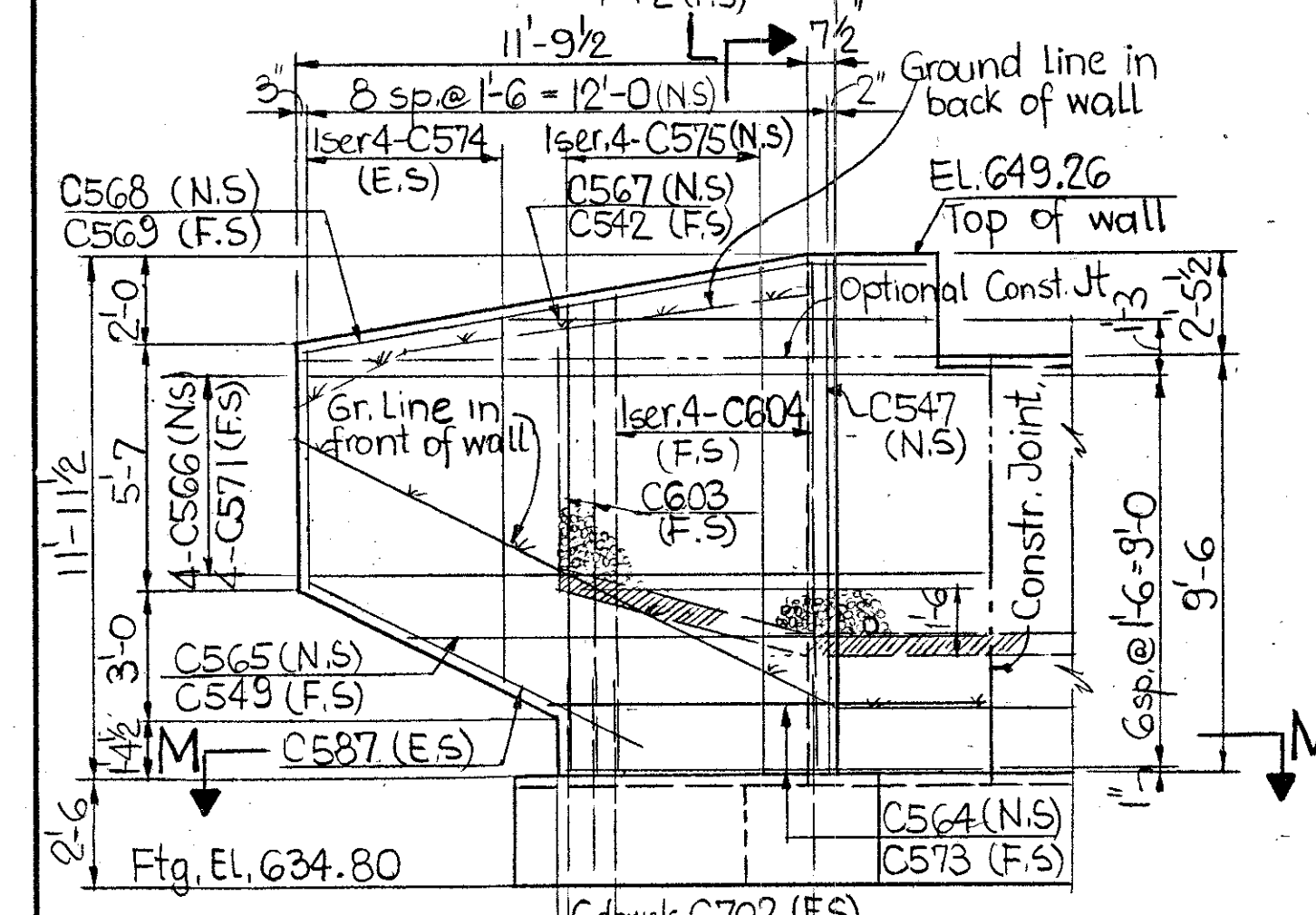
PLAN - SOUTHERN WALL.



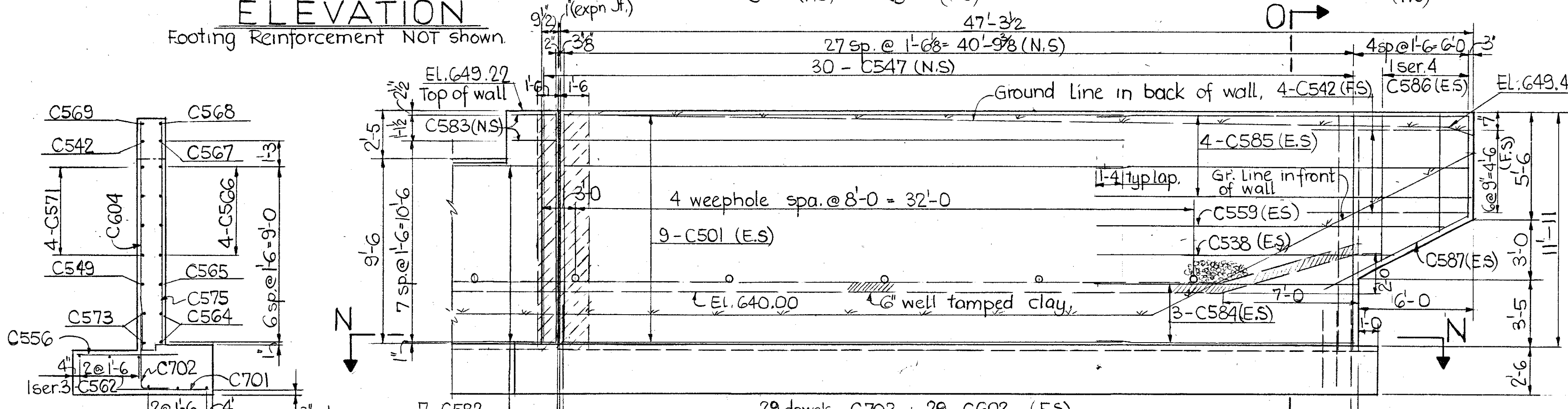
ELEVATION



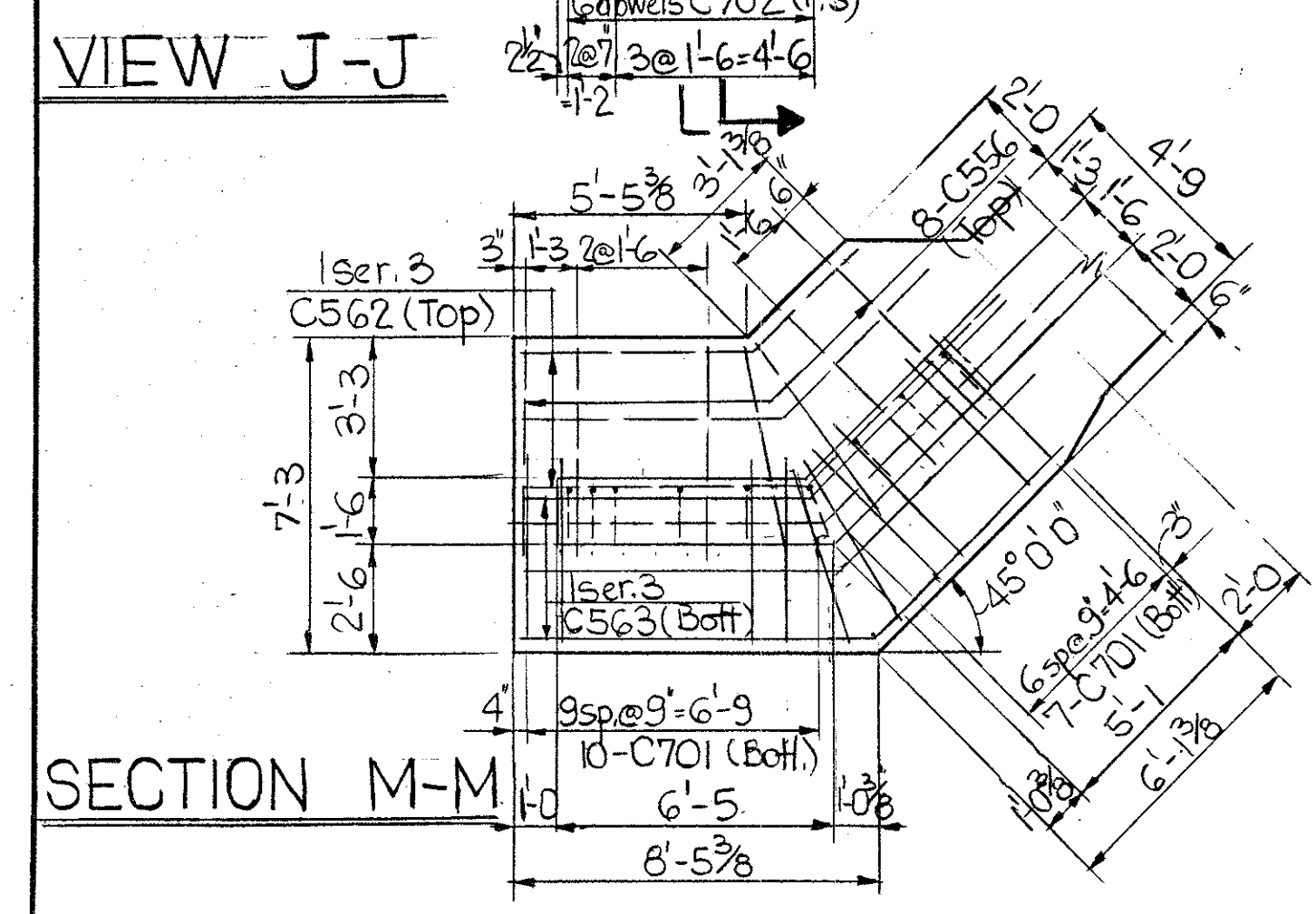
SECTION K-K
DIMENSIONS



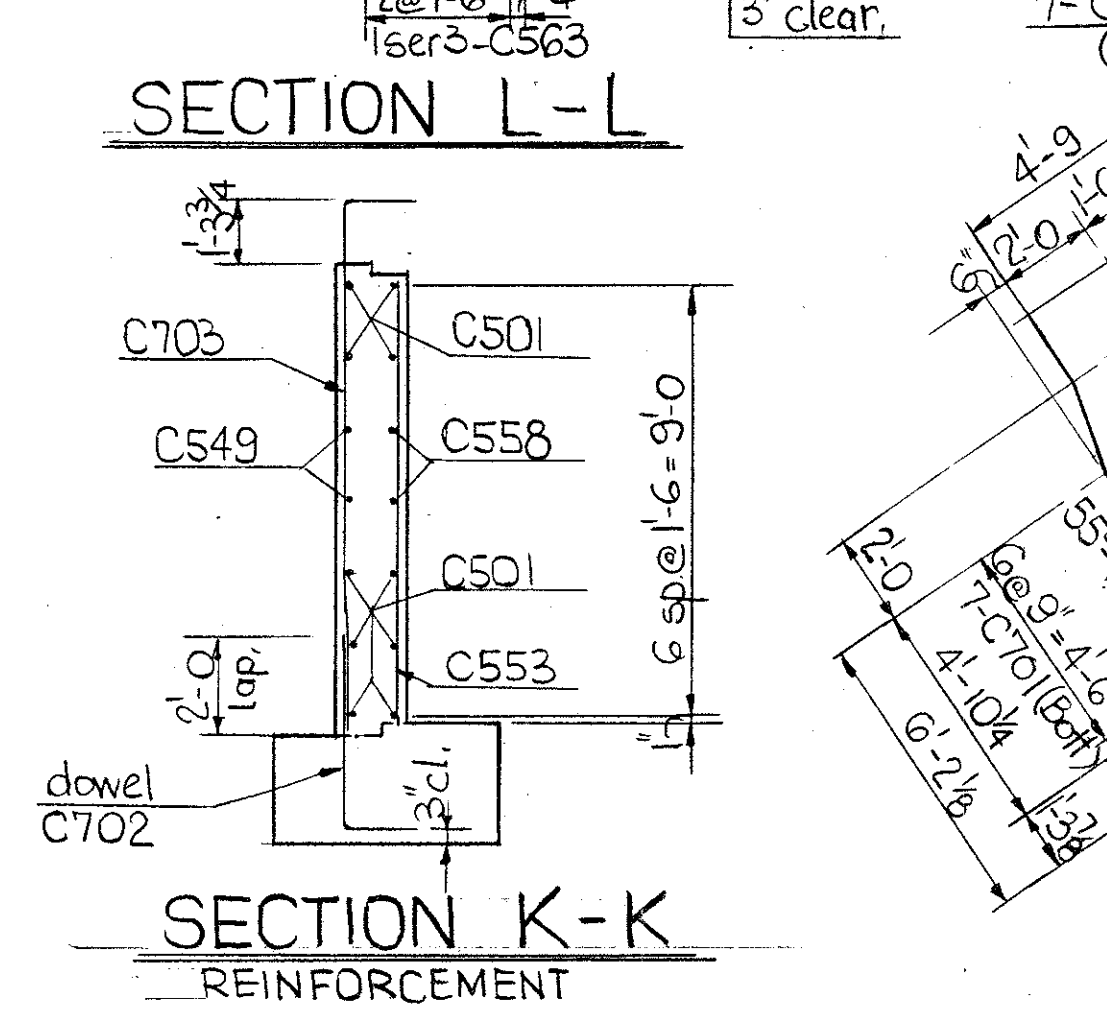
VIEW J-J



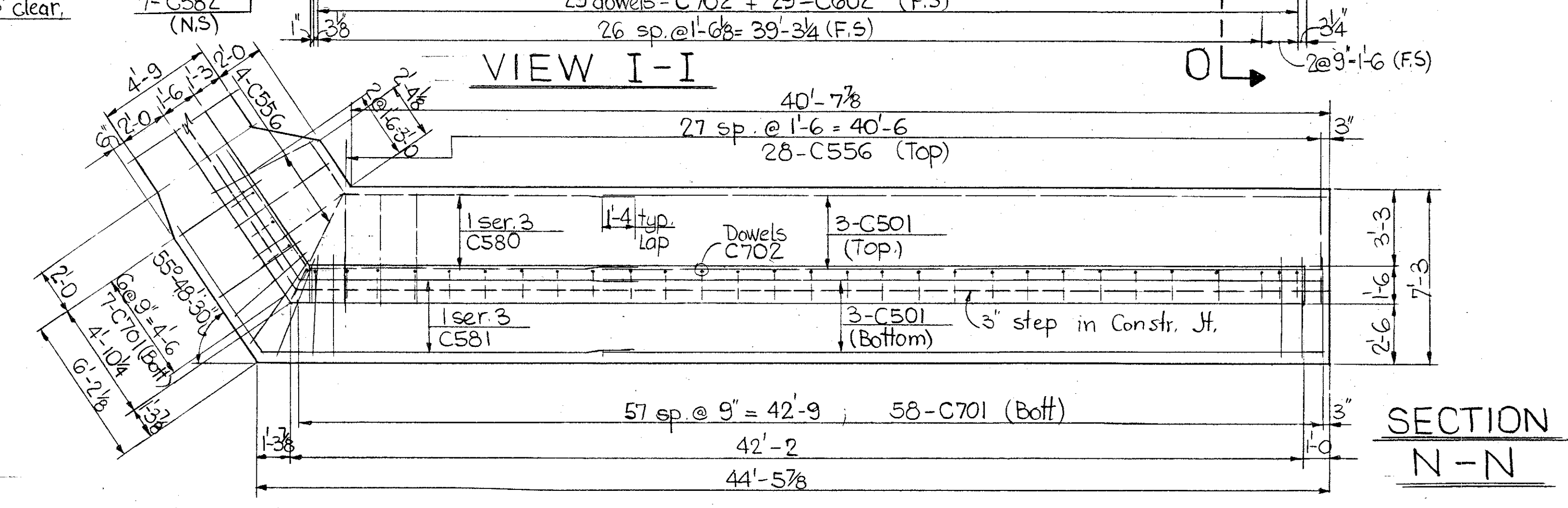
SECTION L-L



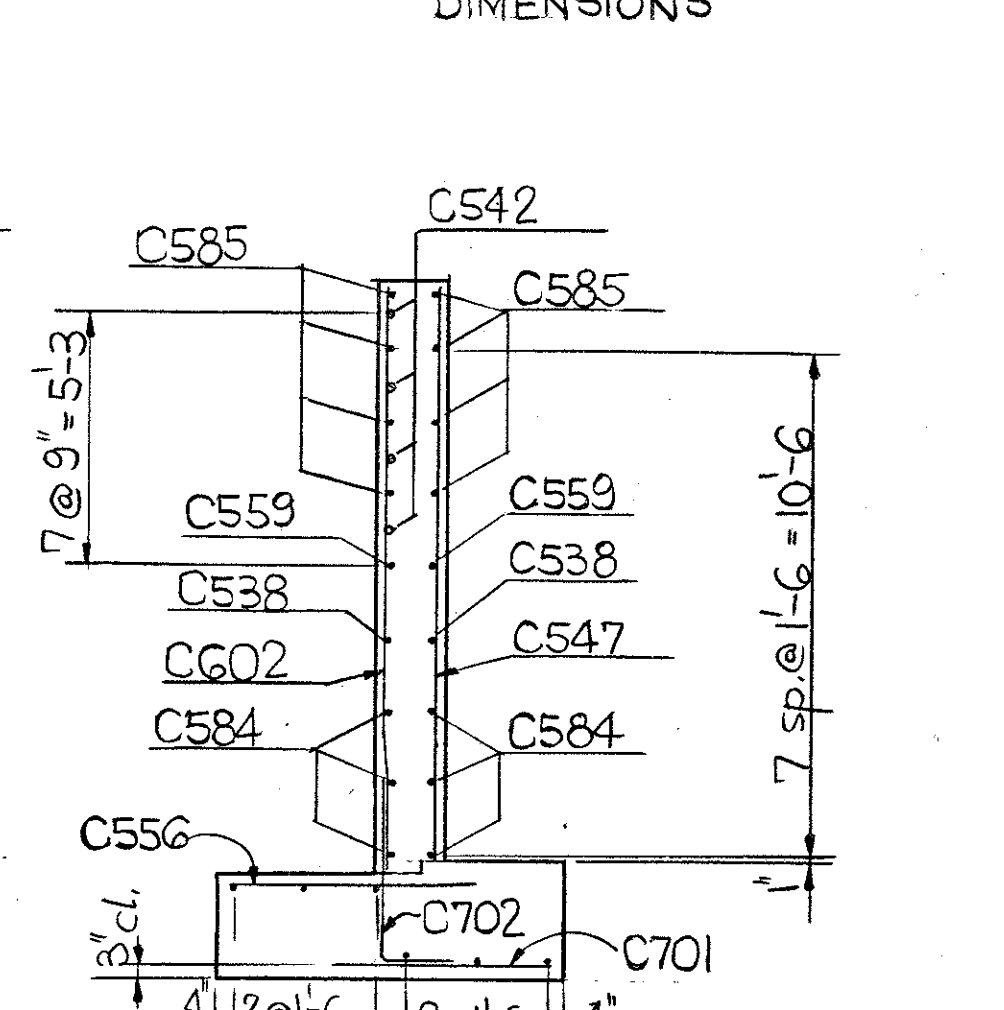
SECTION M-M



SECTION K-K
REINFORCEMENT



VIEW I-I



SECTION O-O

CHARLES L. BARBER & ASSOCIATES INC.
ENGINEERS • ARCHITECTS
TOLEDO, OHIO 4/6

SOUTH WALL DETAILS
SLAB TOP CULVERT
BRIDGE NO. WOO-199-26.65
S.R. 199 OVER CEDAR CREEK

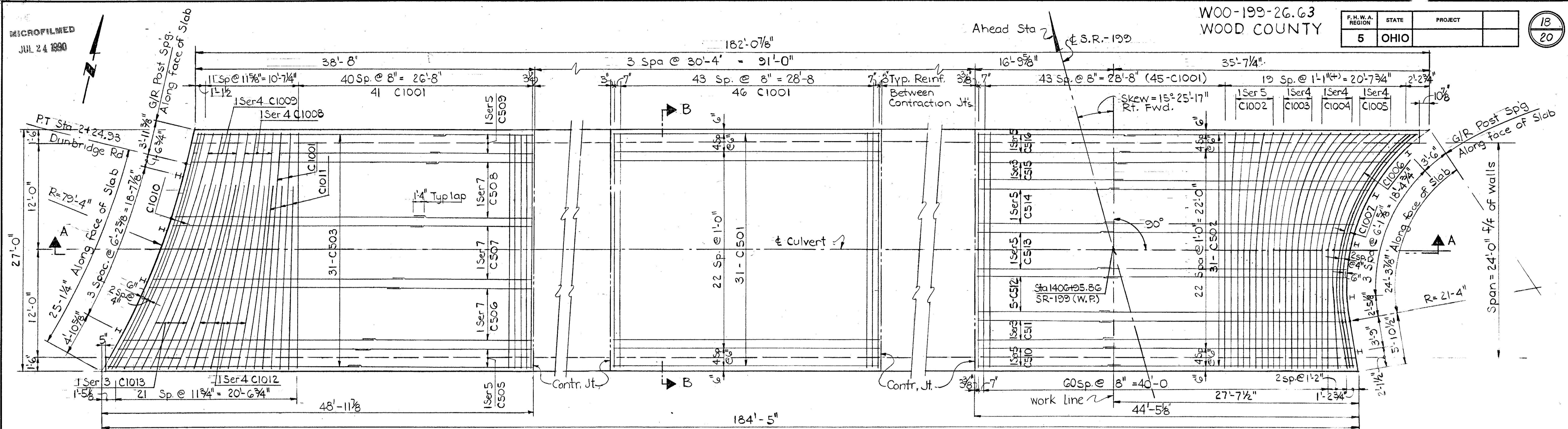
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JTB	EWK		KLS	RHB	4/86	REV. 1-8-87

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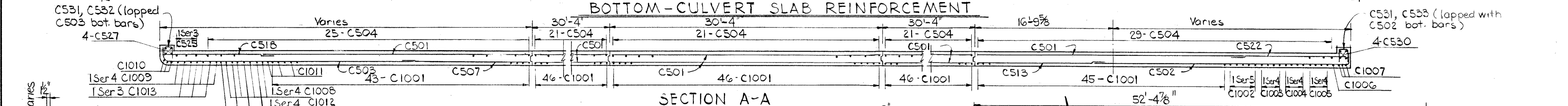
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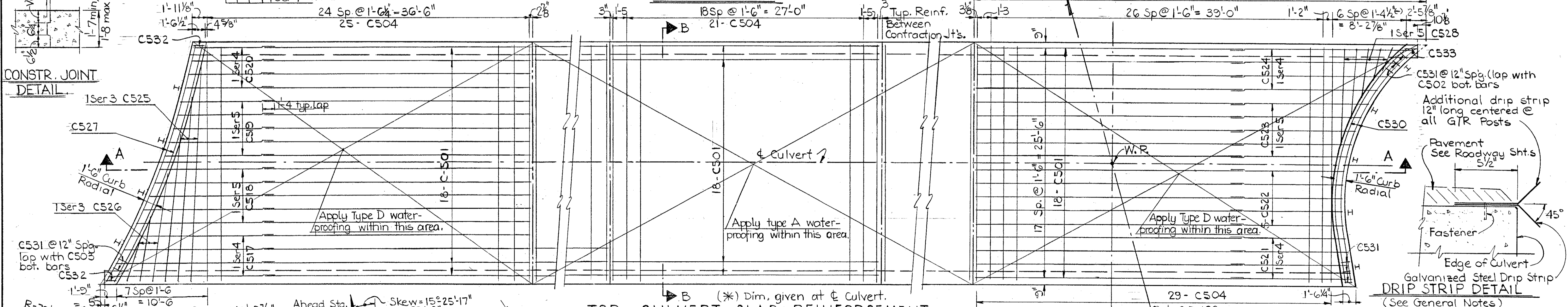
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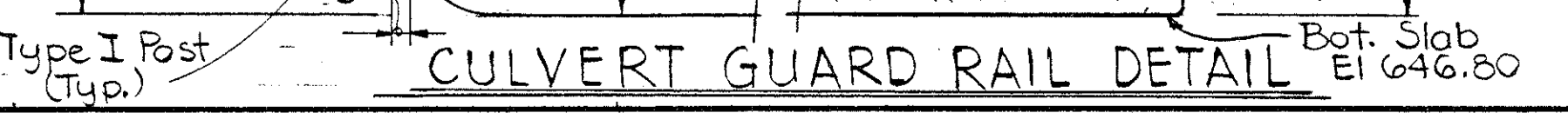
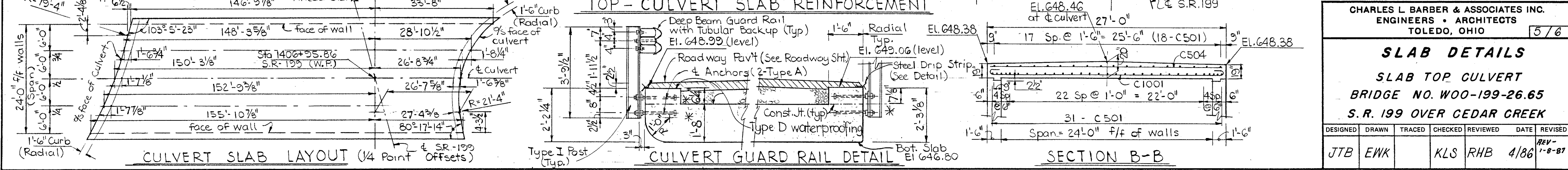
BOTTOM-CULVERT SLAB REINFORCEMENT



SECTION A-A



TOP-CULVERT SLAB REINFORCEMENT



SECTION B-B

CHARLES L. BARBER & ASSOCIATES INC.
ENGINEERS • ARCHITECTS
TOLEDO, OHIO 5/6

SLAB DETAILS
SLAB TOP CULVERT
BRIDGE NO. WOO-199-26.65
S.R. 199 OVER CEDAR CREEK

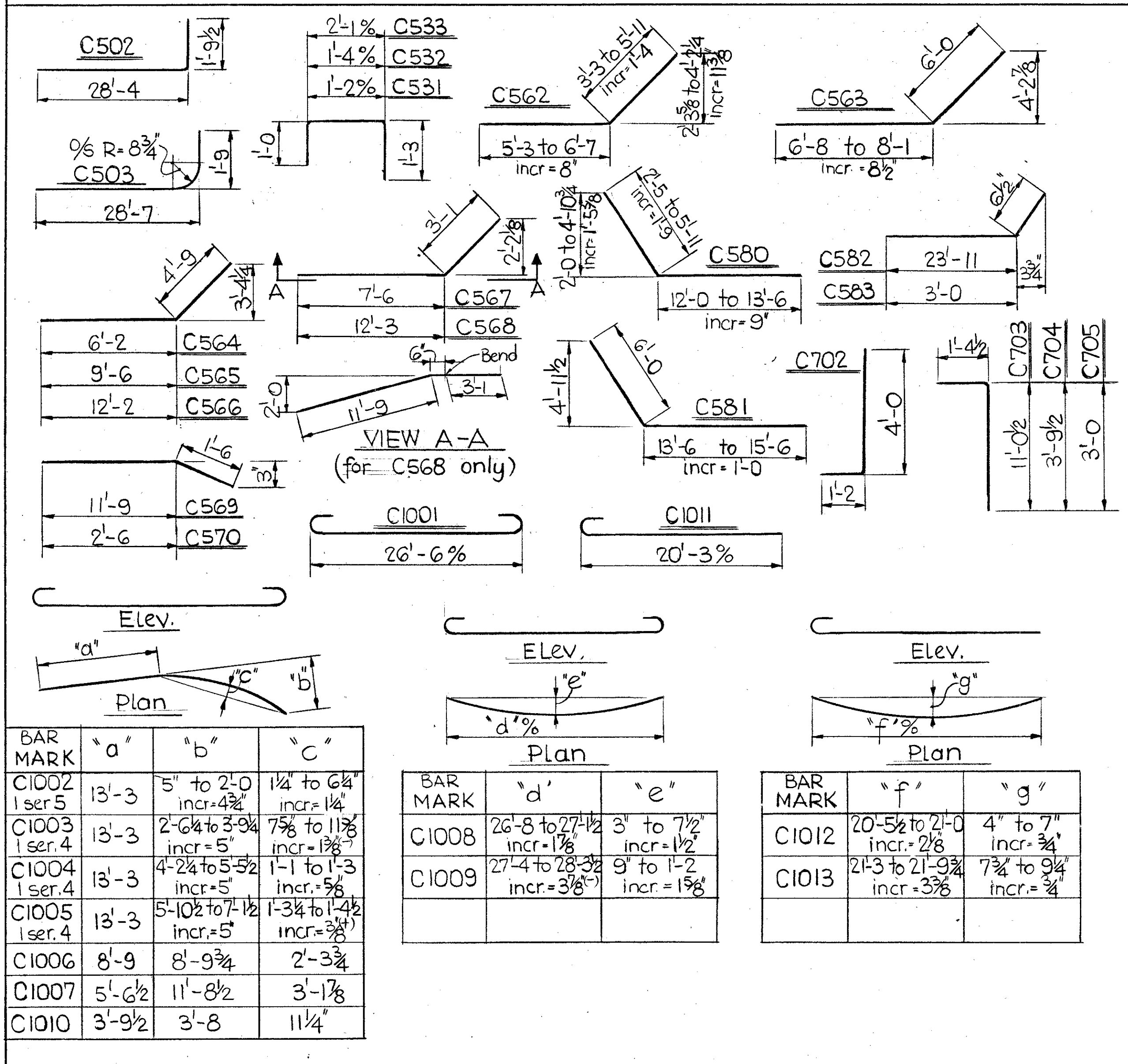
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JTB	EWK		KLS	RHB	4/86	REV-1-8-87

REINFORCEMENT SCHEDULE

MARK	NO.	LENGTH	SHAPE	SER. INCR.	WEIGHT (LBS)
C501	363	30'-0	STR		11,358
C502	31	30'-0	BT.		970
C503	31	30'-0	BT.		970
C504	117	26'-6	STR		3,234
C505	1 ser. 5	19'-11 to 21'-1	STR	3 1/2"	107
C506	1 ser. 7	16'-5 to 19'-5	STR	6"	131
C507	1 ser. 7	13'-10 to 16'-1	STR	4 1/2"	109
C508	1 ser. 7	11'-10 1/2 to 13'-6	STR	3 3/4"	93
C509	1 ser. 5	11'-2 to 11'-8	STR	1 1/2"	60
C510	1 ser. 5	16'-8 to 17'-0	STR	1"	88
C511	1 ser. 3	16'-2 to 16'-5	STR	1 1/2"	51
C512	5	15'-11	STR		83
C513	1 ser. 5	15'-10 to 16'-8	STR	2 1/2"	85
C514	1 ser. 5	17'-0 to 18'-10	STR	5 1/2"	93
C515	1 ser. 3	19'-6 to 21'-1	STR	9 1/2"	63
C516	1 ser. 5	22'-0 to 24'-4	STR	7"	121
C517	1 ser. 4	17'-0 to 19'-3	STR	9"	76
C518	1 ser. 5	13'-7 to 16'-3	STR	8"	78
C519	1 ser. 5	11'-3 to 13'-1	STR	5 1/2"	63
C520	1 ser. 4	9'-10 to 10'-10	STR	4"	43
C521	1 ser. 4	15'-6 to 16'-3	STR	3"	66
C522	5	15'-3	STR		80
C523	1 ser. 5	15'-9 to 18'-2	STR	7 1/4"	88
C524	1 ser. 4	18'-10 to 23'-4	STR	1'-6	88
C525	1 ser. 3	16'-6 to 24'-0	STR	3'-9	63
C526	1 ser. 3	5'-0 to 11'-6	STR	3'-3	26
C527	4	28'-5	STR*		119
C528	1 ser. 5	2'-6 to 9'-9	STR	1'-9 3/4	32
C529	2	2'-3	STR		5
C530	4	29'-2	STR*		122
C531	51	3'-2	BT.		168
C532	2	3'-4	BT.		7
C533	1	4'-1	BT.		4
C534	1	26'-2	STR*		27
C535	1	26'-5	STR*		28
C536	4	17'-6	STR		73
C537	4	27'-2	STR		113
C538	6	14'-0	STR		88
C539	6	21'-2	STR		132
C540	14	5'-1	STR		74
C541	2	5'-4	STR		11
C542	10	8'-6	STR		89
C543	2 ser. 3	22'-4 to 24'-4	STR	1'-0	146
C544	7	3'-1	STR		23
C545	2 ser. 4	3'-9 to 6'-4 1/2	STR	10 1/2"	42
C546	1 ser. 9	10'-8 to 11'-8	STR	1 1/2"	105
C547	63	11'-9	STR		772
C548	10	4'-0	STR		42
C549	17	10'-6	STR		186
C550	19	5'-9	STR		114
C551	4	21'-0	STR		88
C552	14	18'-0	STR		263
C553	246	9'-1 1/2	STR		2341
C554	3	3'-9	STR		12
C555	1	2'-1	STR		2
C556	84	4'-9	STR		416
C557	2 ser. 3	12'-0 to 14'-0	STR	1'-0	81
C558	8	10'-11	STR		91
C559	10	16'-11	STR		176

MARK	NO.	LENGTH	SHAPE	SER. INCR.	WEIGHT (LBS)
C560	4	12'-7	STR		53
C561	8	7'-4	STR		61
C562	1 ser. 3	8'-6 to 12'-6	BT	2'-0	33
C563	1 ser. 3	12'-8 to 14'-1	BT.	8 1/2"	42
C564	2	10'-10	BT		23
C565	1	14'-2	BT.		15
C566	4	16'-10	BT.		70
C567	1	10'-6	BT.		11
C568	1	15'-3	BT.		16
C569	1	13'-3	BT.		14
C570	1	4'-0	BT		4
C571	4	13'-1	STR		55
C572	7	22'-2	STR		162
C573	1	7'-1	STR		7
C574	2 ser. 4	5'-4 to 8'-4	STR	1'-0	57
C575	1 ser. 4	10'-8 to 11'-5	STR	3'	46
C576	14	15'-0	STR		219
C577	3	2'-10	STR		9
C578	3	1'-4	STR		4
C579	2	14'-3	STR		30
C580	1 ser. 3	14'-5 to 19'-5	BT	2'-6	53
C581	1 ser. 3	18'-5 to 21'-5	BT	1'-0	62
C582	7	24'-5	BT		178
C583	2	3'-6	BT.		7
C584	3	12'-4	STR		39
C585	8	18'-4	STR		153
C586	2 ser. 4	5'-3 to 7'-6	STR	9"	53
C587	6	8'-0	STR		50
C601	1 ser. 9	10'-11 to 11'-11	STR	1 1/2"	154
C601	62	12'-0	STR		1117
C603	3	10'-11	STR		49
C604	1 ser. 4	11'-2 to 11'-11	STR	3"	69
C701	168	5'-0	STR		1717
C702	325	5'-0	BT.		3322
C703	248	12'-3	BT		6210
C704	1	5'-0	BT.		10
C705	3	4'-2 1/2	BT.		26
C1001	226	29'-4	BT		28526
C1002	1 ser. 5	29'-4 to 29'-6 1/2	BT	5/8"	633
C1003	1 ser. 4	29'-7 to 30'-0	BT	1 5/8"	513
C1004	1 ser. 4	30'-2 to 30'-8	BT.	2"	524
C1005	1 ser. 4	30'-10 1/2 to 31'-5 1/2	BT	2 3/8"	536
C1006	1	31'-8	BT.		136
C1007	3	32'-0	BT.		413
C1008	1 ser. 4	29'-6 to 29'-11	BT.	1 1/4"	511
C1009	1 ser. 4	30'-3 to 31'-3	BT.	4"	529
C1010	3	31'-3	BT.		403
C1011	3	21'-8	BT.		280
C1012	1 ser. 4	21'-11 to 22'-5 1/2	BT.	2 1/8"	382
C1013	1 ser. 3	22'-8 1/2 to 23'-4	BT.	3 3/4"	297
CULVERT TOTAL:					72,162

BENDING DIAGRAM.



REINFORCING STEEL SAMPLES

Refer to CMS Sections 106.03, 700, 709.01 through 709.05 and 709.08. Sufficient additional reinforcing steel shall be provided for sampling. Random samples shall be replaced in the structures by the additional steel, spliced in accordance with 509.08.

(*) Bend in field.

WOO-199-26.63
WOOD COUNTY.

CHARLES L. BARBER & ASSOCIATES INC.
ENGINEERS • ARCHITECTS
TOLEDO, OHIO 6/6

REINFORCEMENT SCHEDULE
SLAB TOP CULVERT
BRIDGE NO. WOO-199-26.65
S. R. 199 OVER CEDAR CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JTB	EWK		KLS	RHB	4/86	REV-1-8-87