

GENERAL NOTES

MICROFILMED
FEB 3 1986

FHWA REGION	STATE	PROJECT
5	OHIO	

2
6

HAS-799-(0.00)

WORK REQUIRED:

1. Remove superstructure and portions of abutment as per plan.
2. Drive piling and rebuild abutments.
3. Set prestressed concrete bridge members and install approach slabs.
4. Waterproof and pave over deck and approaches.
5. Connect guardrail and bridge rail.
6. Clean-up and seed.

DESIGN SPECIFICATIONS:

The superstructure conforms to Standard Specifications for "Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1977, including the 1978, 1979, and 1980 Interim Specifications and the Ohio Supplement to these Specifications.

DESIGN DATA:

Design Loading - HS 20-44
Concrete Class C - Unit stress 1333 psi. for structure
Reinforcing Steel - ASTM A615, A616, A617 - unit stress 20,000 psi.
Concrete for prestressed concrete beams -
Unit stress: 2200 psi. compression
444 psi. tension

REFERENCE shall be made to Standard Drawings:

P5BD-1-71	Dated	9-1-71
DBR-2-73	}	4-10-73
BP-5		8-11-75
GR-2B		12-6-76
GR-3	Dated	12-6-76
MC-3		6-1-73

UTILITIES:

All expenses involved in relocating affected utilities shall be borne by the owners. The Contractor and Owners are requested to cooperate by arranging any work in such a manner that inconvenience to either will be held to a minimum. Following are owners known to be within work limits:

General Telephone Company of Ohio
Attn: Glen Bosler, Eastern Division Engr.
1121 Tuscarawas Ave. N.W.
New Philadelphia, Ohio 44663 Phone: (216)-364-0581

FIELD OFFICE:

The Contractor shall provide a suitable field office having a minimum of 150 sq. ft. of floor space and in addition to the requirements of Item 619, he shall provide and maintain sanitary provisions as per 107.06. All of the above is included in the lump sum price bid for item 619, Field Office.

PAVEMENT REMOVAL:

Payment shall be included with lump sum price bid for Item 202, Portions of structure removed. The Contractor shall saw cut the pavement at Sta. 105+364.5 and Sta. 105+89.98. The approach slabs may be poured without forming next to existing pavement. The grade of the approach slabs shall meet existing pavement.

BRIDGE SEAT REINFORCING STEEL:

Steel in the vicinity of the Bearing lines on the abutments shall be accurately placed to avoid interference with drilling of Anchor Dowel Holes.

ITEM 601-RIPRAP, AS PER PLAN: The waste masonry obtained under Item 202, Structure removed shall be used as riprap as per Item 601, and shall then be grouted in place at all locations shown on the plan. Excess waste masonry shall be used as directed by the Engineer. (More below)

THE CONTRACTOR: will not be permitted to work in the water with equipment to do channel work or other work. Steel or wood sheeting must be used for cofferdams.

RIGHT OF WAY: All work shall be performed within the Existing Right Of Way.

PAVEMENT ON APPROACHES: The 403 and 404 asphalt pavement courses shall extend off the bridge and be feathered to end 50' off the bridge on each end as shown on Standard Drawing BP-5. An additional 2' width has been included.

REMOVAL OF PORTIONS OF EXISTING STRUCTURE shall include the removal of the superstructure, abutment breastwalls between the limits of the existing stonework, and other material necessary to complete the new work as directed by the Engineer.

ITEM 606 GUARDRAIL, REBUILT TYPE 5 shall be field fitted to existing guardrail at locations shown on the site plan. The locations shown on the plan are subject to adjustment to assure maximum protection to traffic. Cost of removing existing posts shall be included in Item 202, Guardrail removed for re-use or storage. Cost of encasing post in concrete shall be included with the item for bridge terminal assembly. An additional 50 lin. ft. of new guardrail has been included in the quantity for Item 606 Guardrail, Type 5 to be installed where existing rail has been damaged. All guardrail not used including rail across the bridge shall become the property of the State as per 202.07.

ITEM 203 EMBANKMENT: Shall be required as directed by the Engineer. It is intended to be used to replace the embankment that has been washed out from behind the abutments.

MAINTENANCE OF TRAFFIC:

Due to the condition of the existing structure the road is presently closed to traffic. The Contractor shall conform to the requirements of 614.03 for Road Closed.

The new bridge may be opened to traffic after the placement of prestressed box beams is completed without waterproofing and asphalt concrete surface course, if weather conditions do not permit application of these items. The application shall be made as directed by the Engineer as conditions allow. The road may closed to traffic for placement of asphalt and waterproofing for a period not to exceed four (4) days. The surface of the concrete shall be washed clean as per 512.03 prior to applying waterproofing.

ITEM 617 COMPACTED AGGREGATE shall be placed on Township Road 305 as directed by the Engineer.

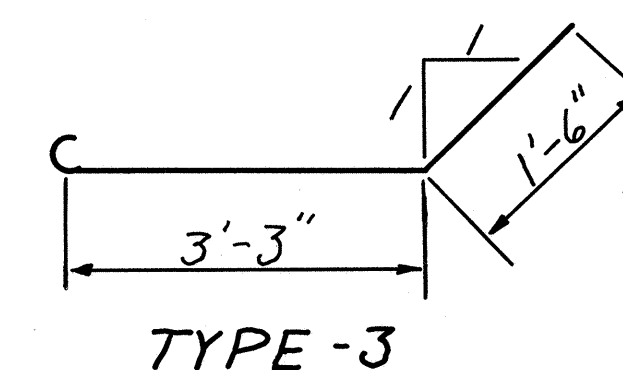
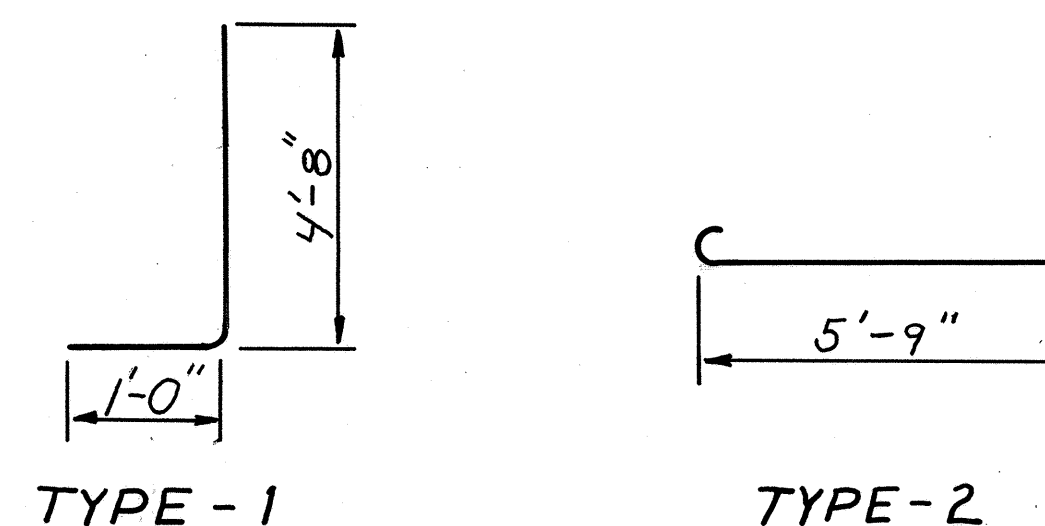
ITEM 601 - RIPRAP, AS PER PLAN

A 6" bed of #3 or #4 crushed gravel, stone or slag shall be placed immediately under the riprap and the cost thereof including all equipment, labor and incidentals necessary to place the bed shall be included with this item for payment.

REINFORCING STEEL LIST

MARK	NUMBER			LENGTH	WEIGHT	TYPE
	REAR	FWD.	TOTAL			
A501	18	18	36	24'-6"	920	st.
*A502	8	8	16	3'-8"	61	st.
A503	4	4	8	33'-4"	278	st.
A504	20	20	40	12'-0"	501	st.
*A505	28	28	56	3'-6"	204	st.
A506	2		2	6'-8"	14	st.
A507		2	2	4'-6"	9	st.
A508	2		2	7'-9"	16	st.
A509		2	2	6'-9"	14	st.
*A510	18	20	38	4'-4"	172	st.
*A511	8	8	16	2'-10"	47	st.
A512	4		4	9'-6"	40	st.
A513		4	4	7'-3"	30	st.
A601	20	20	40	5'-6"	330	1
A602	20	20	40	11'-9"	706	st.
*A603	14	14	28	3'-3"	137	st.
A701	20	20	40	6'-7"	538	2
D801	16	16	32	5'-6"	553	3

Total Weight → 4570*

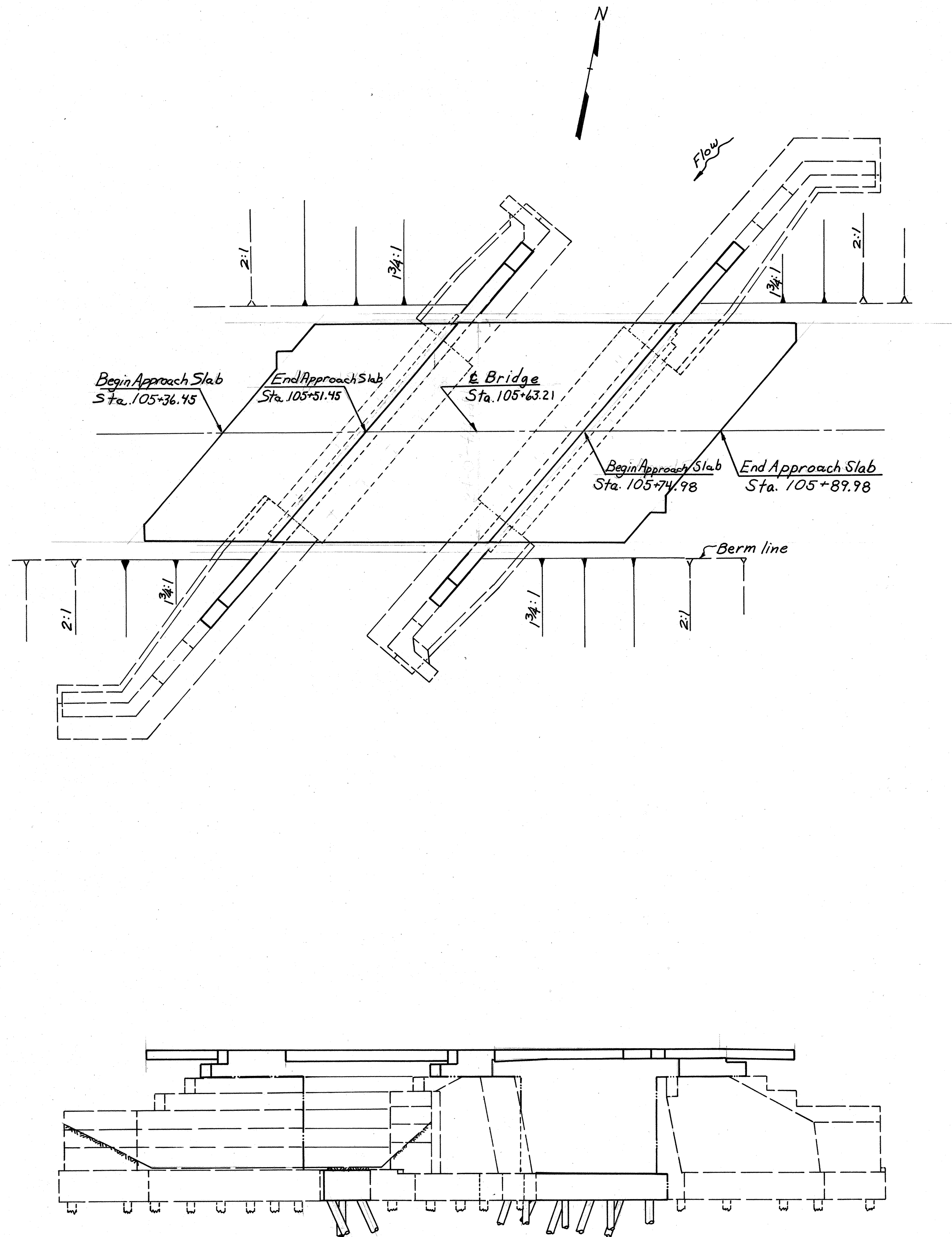


* Indicates dowels
(Total number of doweled rods=140)

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BUREAU OF MAINTENANCE

GENERAL NOTES
AND REINFORCING STEEL LIST
BRIDGE NO. HAS-799-0563
OVER McFADDEN RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JLO	SLU		JUN			



GENERAL QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
202	—	Lump Sum	Portions of structure removed
202	300	Lin. ft.	Guardrail removed for re-use or storage
203	43	Cu. yds.	Embankment
403	9	Cu. yds.	Asphalt concrete, AC-20
404	10	Cu. yds.	Asphalt concrete, AC-20
407	14	Gals.	Tack coat, SS-1, SS-1H, MS-2, RS-1 or RC-250
407	0.6	Ton.	Cover aggregate
503	—	Lump Sum	Cofferdams, cribs and sheeting
503	52	Cu. yds.	Unclassified excavation
509	4570	Lbs.	Reinforcing steel
510	140	Each	Dowel holes
511	87	Cu. yds.	CLASS C concrete, abutments
512	143	Sq. yds.	Type "D" waterproofing
515	6	Each	Prestressed concrete bridge member (B12-48)
516	24	Each	1/2"x5"x10" preformed bearing pads
516	4	Sq. ft.	1/8" preformed bearing pads
516	7	Sq. ft.	1" preformed expansion joint filler
516	75	Sq. ft.	1/2" preformed expansion joint filler
517	47.06	Lin. ft.	Railing (Deep beam with tubular backup, Type 2 posts and bolts)
518	53	Cu. yds.	Porous backfill
601	50	Sq. yds.	Riprap, as per plan
606	52.94	Lin. ft.	Guardrail, Type 5
606	4	Each	Bridge terminal assembly, Type B
606	200	Lin. ft.	Guardrail, Rebuilt, Type 5
611	80	Sq. yds.	Reinforced concrete approach slabs (12" thickness)
614	—	Lump Sum	Maintaining traffic
617	2	Cu. yds.	Compacted aggregate
617	1	M gallons	Water
619	—	Lump Sum	Field office
623	—	Lump Sum	Construction layout stakes
624	—	Lump Sum	Mobilization
659	0.01	Ton	Commercial fertilizer (12-12-12)
659	0.02	Ton	Agricultural liming
659	50	Sq. yds.	Seeding and mulching
Special	31	Sq. ft.	Galvanized or stainless steel drip strip
507	540	Lin. ft.	12" diameter cast-in-place reinforced concrete piles

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BUREAU OF MAINTENANCE

GENERAL PLAN AND ELEVATION
AND GENERAL QUANTITIES

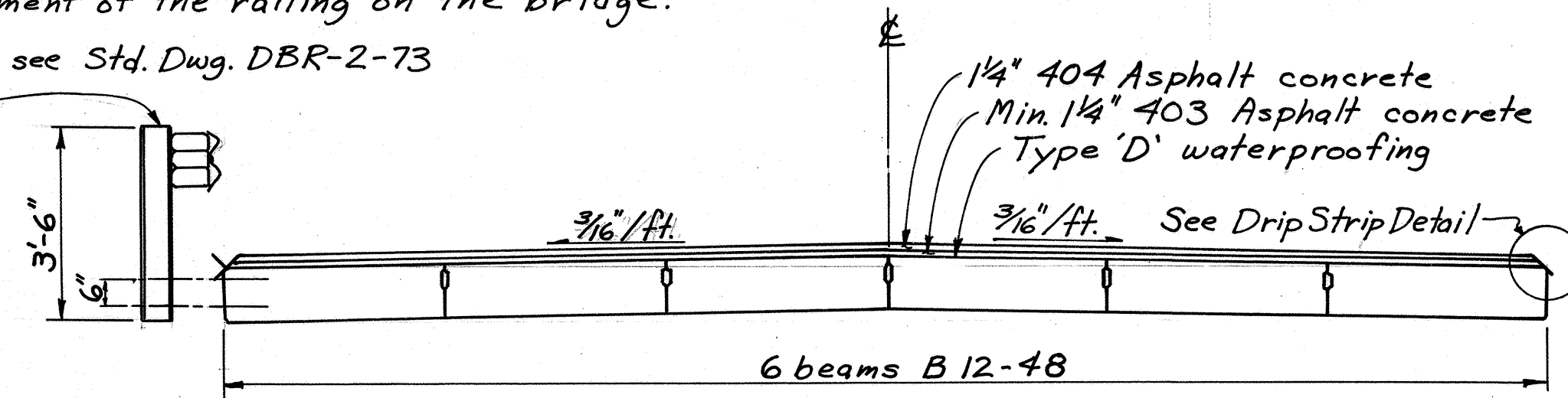
BRIDGE NO. HAS-799-0563
OVER McFADDEN RUN

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JLO	JLO		JJN			

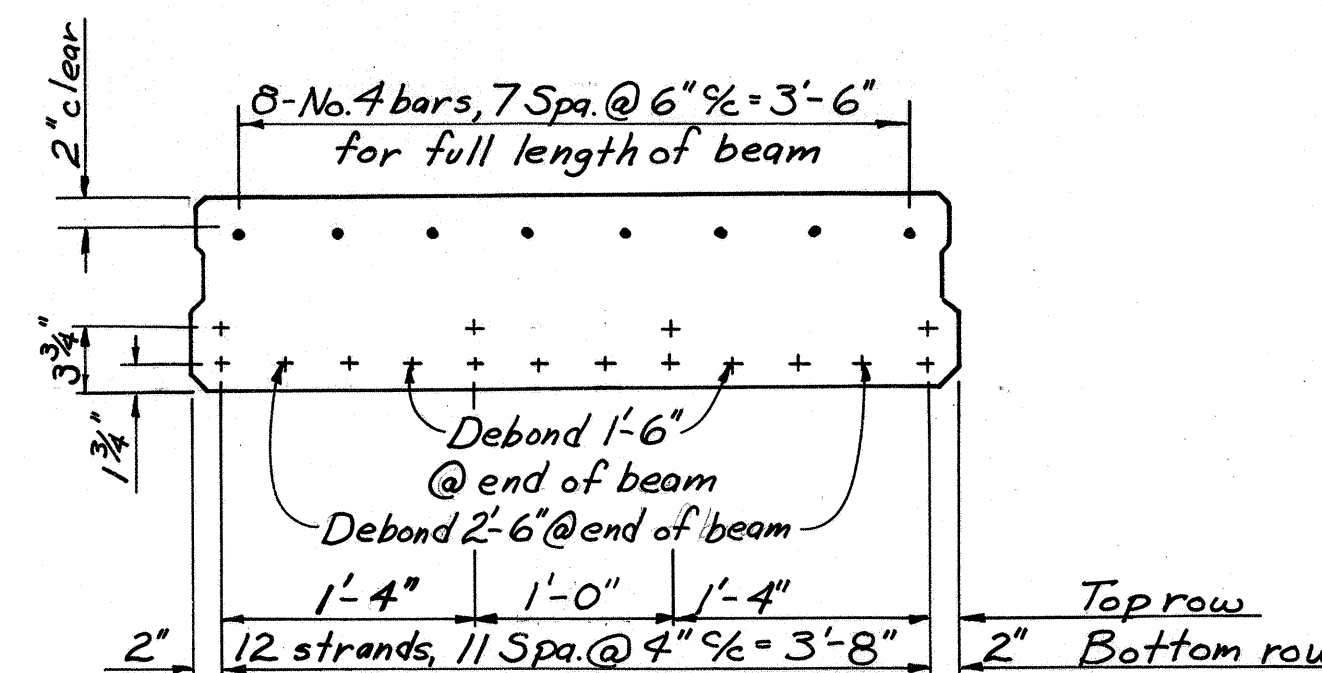
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Guardrail posts shall be fabricated with 1/2" x 2 1/4" slotted holes for post anchors instead of 1 1/2" holes for adjustment of the railing on the bridge.

For details see Std. Dwg. DBR-2-73

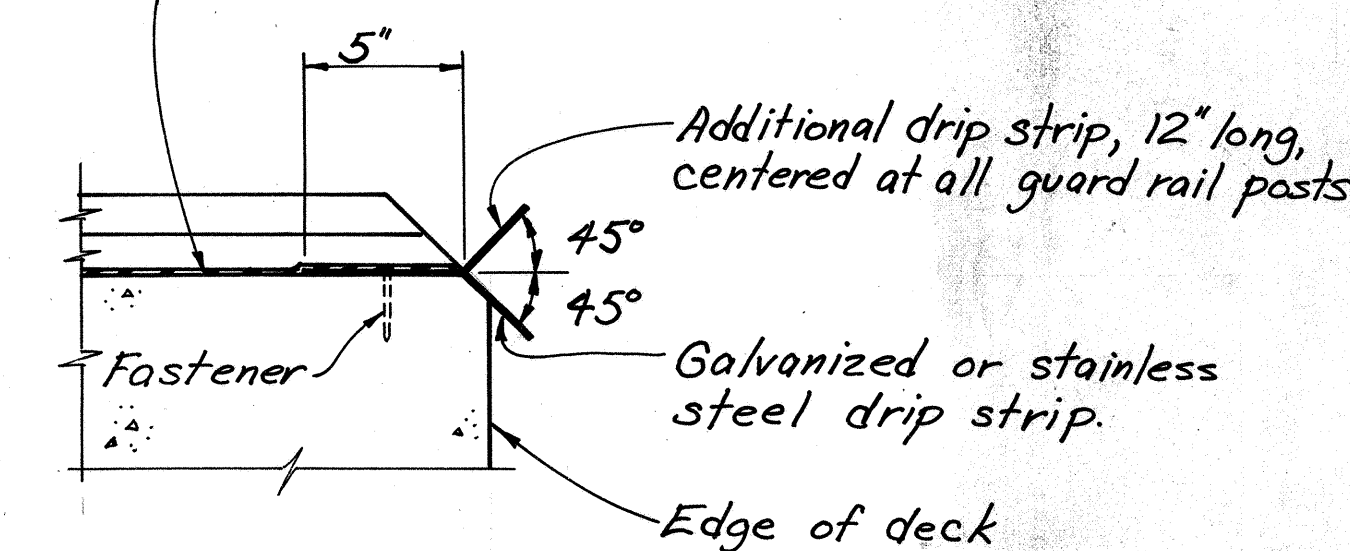


CROSS-SECTION



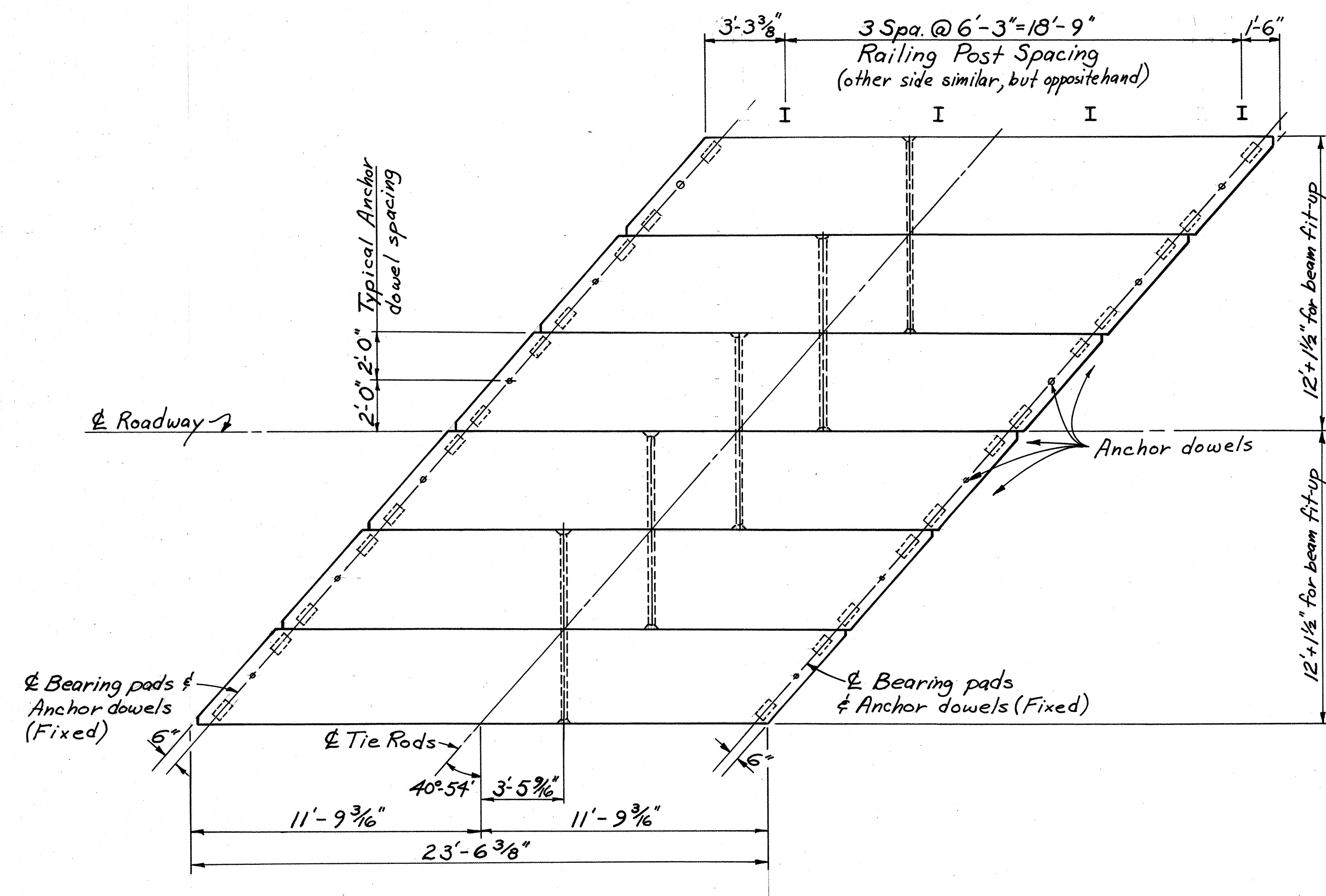
TYPICAL STRAND LOCATION
B 12-48

Type 'D' Waterproofing



DRIP STRIP DETAIL

DRIP STRIP: Prior to applying deck membrane waterproofing, a bent drip strip shall be installed along the edges of the deck as shown. The strips shall be fastened at 1'-6" maximum with power driven pins 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. Where splices are required a 3" (min.) lap shall be used with a fastener through the lap. Steel for galvanized strips shall be 8" x 0.105" and shall meet the requirements of ASTM A568. 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.



BEAM LAYOUT PLAN

PRESTRESSED CONCRETE BOX BEAM DATA

PRESTRESSING STRANDS:

ASTM A416 1/2" dia. seven-wire, uncoated, stress-relieved strands. $f_s = 270,000$ p.s.i. $A_s = 0.154$ sq. in. Initial tension = 28,900 lbs. per strand

CONCRETE STRESSES:

Min. concrete strength at 28 days, $f'_c = 5500$ p.s.i.
Min. concrete strength at time of initial prestress, $f'_c = 4000$ p.s.i.

THE FOLLOWING NOTES AND DETAILS SHOWN ON STANDARD DRAWING PSBD-1-71 SHALL APPLY:

- Transverse Tie Rods
- Galvanizing
- Anchor Dowels
- Non-shrinking Mortar and Grout
- Mortaring of shear keys
- Beam Lifting Inserts
- Details and Reinforcement Beam Ends
- Normal Crown Treatment, Joint at Roadway
- End Details of Transverse Tie Rods and Anchorage
- Beam Dimensional Tolerances
- B12-48 with all data for 48" wide beams

BEARING PAD SHIMS: Two 1/8" x 5" x 10" preformed bearing pads as per 711.21 shall be provided with each beam to shim where needed for proper seating, and shall be included with Item 516, Sq. Ft. 1/8" preformed bearing pads for payment. Unused shims shall become the property of the State.

REINFORCING STEEL for prestressed concrete box beams is included in the unit price bid for the beams. However, the fabricator's shop drawings shall show complete reinforcing details.

NON-SHRINKING MORTAR AND GROUT shall be included with Item 515 for payment. In lieu of the requirements given on Std. Dwg. PSBD-1-71, non-shrinking mortar may be made as follows:
2680 lbs. sand, 703.02, @ 6% moisture
9 bags cement, 701.02 or 701.05
40 gallons water, 499.02
9 lbs. expanding grouting-aid admixture, Interplast-N by Sika Chemical Corporation, or approved equal.

The cement, sand and water shall be mixed first, then the admixture added. Batch size shall be limited so placement can be completed in 30 minutes. Water shall not be added to increase flowability that has decreased due to delayed use of mortar.

TRANSPORTATION OF PRESTRESSED BOX BEAMS:

The Contractor is advised in hauling the beams to the job site that Br. No. Has-799-0391 has a load limit posted at 85% of legal load.

ASPHALT CONCRETE SURFACE COURSE shall consist of a variable thickness of 403 and a 1/4" thickness of 404. The 403 shall be placed in two operations. The first course shall be feathered to place the surface parallel to and 1/4" below final pavement surface elevation. Calculated beam camber at the time of paving, including an allowance for camber growth due to creep is 1/4". Therefore, the quantity of 403 has been calculated using a 2 1/2" thickness at abutments and 1 1/4" at midspan. Actual thickness shall be determined by the Engineer.

Note: Refer to Std. Dwg. PSBD-1-71 for details not shown. The Contractor shall field check all dimensions before ordering the prestressed concrete bridge members.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS BUREAU OF MAINTENANCE						
SUPERSTRUCTURE DETAILS						
BRIDGE NO. HAS-799-0563 OVER Mc FADDEN RUN						
DESIGNED Dist. II	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JLO	JLO		JJN			