

STATE OF MICHIGAN
DEPARTMENT OF STATE HIGHWAYS

PLANS OF PROPOSED BRIDGES

MICHIGAN PROJECT I-96-4(8)229
STATE PROJECT BI 82123-053

JEFFRIES FREEWAY
WAYNE COUNTY
CITY OF DETROIT

GENERAL NOTES

Except where otherwise indicated on these Plans or in the Proposal and Supplemental Specifications contained therein, all materials and workmanship shall be in accordance with the Michigan Department of State Highways' Standard Specifications for Road and Bridge Construction, 1967 Edition.

The design of these structures is based on the Michigan Department of State Highways' Specifications for the design of Highway Bridges, 1958 Edition and current AASHTO Standard Specifications for Highway Bridges, HS20-44 Loading.
Live load plus impact deflection: 1/1000 of span length and 1/350 of cantilever arm.
The character of all materials and the extent thereof as shown by borings has been obtained by methods and from sources believed to be reliable. The exactness of this information is, however, in no case guaranteed.

All exposed concrete corners shown square on the Plans shall be beveled with 1/2" triangular moldings except as otherwise noted.

The stationing as shown on these Plans for the intersection of the centerline of bridge and roadway is believed to be correct. It shall, however, be checked at the time of starting construction and if the stationing shown on the plans is incorrect it shall be reported to the Design Office at Lansing and the structure shall be staked out using the actual intersection of the centerline of bridge and roadway as the control point.

The contractor shall contact all Utility Companies regarding their facilities prior to starting work.

The following items shown in these plans are to be constructed with the road work: Bridge approach curb and gutter, catch basins, inlets, culverts, sewers, C.M.P., temporary detours, earth excavation and any other items not listed in the bill of materials.

The existing structures shall be checked at the time of starting construction to see that their relationship to the proposed work is as shown on these plans and any differences requiring changes in the new work shall be reported to the Design Office.

The grades and stresses of the structural materials used in these structures are as follows:
Concrete, Grade A $f'_c = 3000$ psi.
Steel Reinforcement: $f_y = 20000$ psi.
Structural Steel A588 $f_y = 27,000$ psi, max.

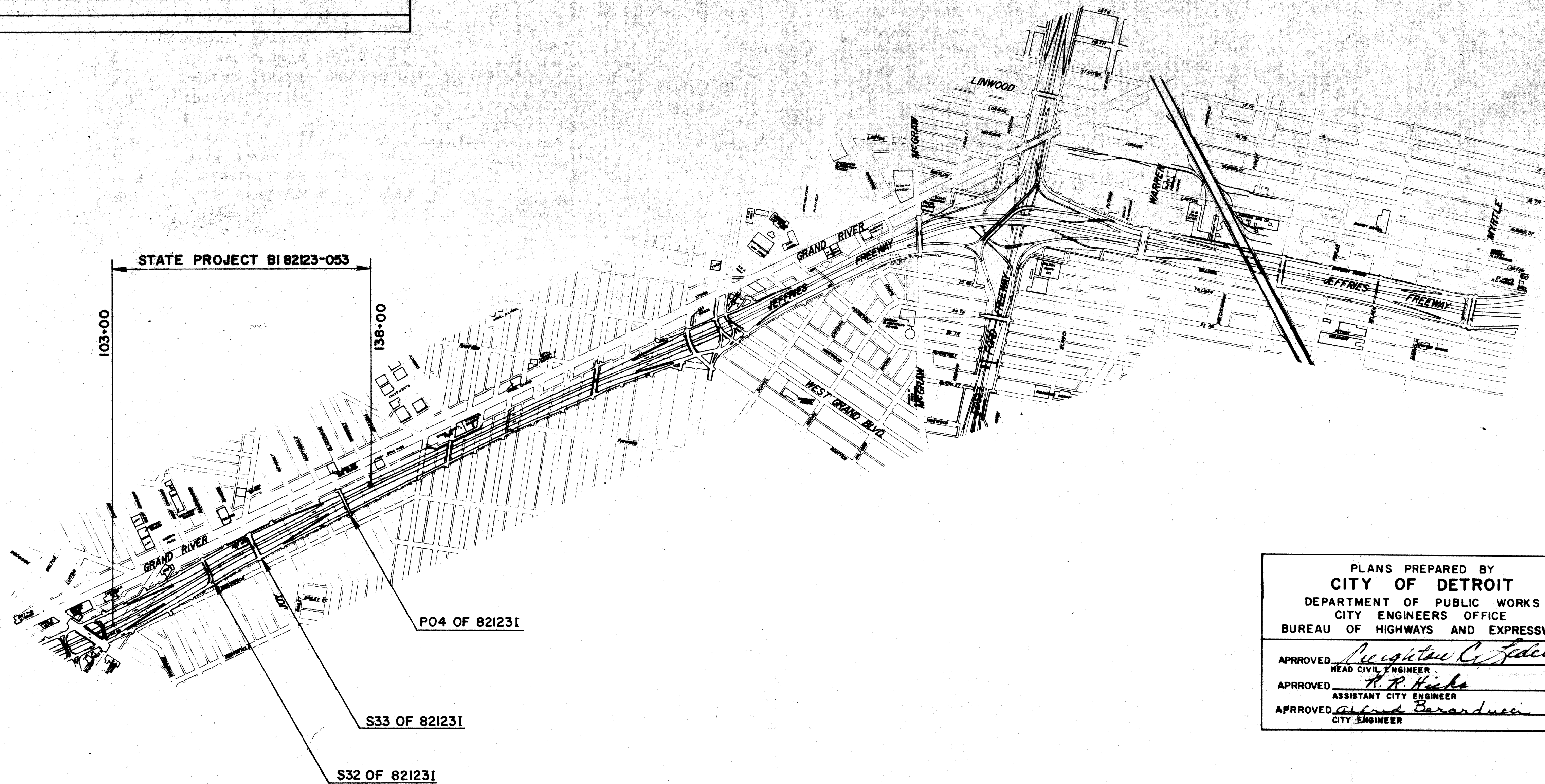
NOTE
Where the following items are called for on the Plans, they are to be constructed according to the Standard Plan given below opposite each item, unless otherwise indicated.

STANDARD PLANS TO BE PRINTED

SHEET NO.	TITLE
R16	Bridge Rolling, Drain Casting, Bar Chair, Molding & Bevel Details
SP2J	Standard Slope Paving Details

STANDARD PLANS NOT TO BE PRINTED

SHEET NO.	TITLE



ITEM NO. 1172

CONTRACT FOR STRUCTURES		
APPROVALS		
CHECKED	DESIGN ENGINEER	DATE
RECOMMENDED FOR APPROVAL	ENGINEER OF BRIDGE AND ROAD DESIGN	DATE
RECOMMENDED FOR APPROVAL	TRAFFIC DIVISION	DATE
RECOMMENDED FOR APPROVAL	CONSTRUCTION DIVISION	DATE
RECOMMENDED FOR APPROVAL	CHIEF-BUREAU OF ENGINEERING	DATE
DEPARTMENT OF STATE HIGHWAYS HENRIK E. STAFSETH-STATE HIGHWAY DIRECTOR		
APPROVED BY	DEPUTY STATE HIGHWAY DIRECTOR	DATE
PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS	U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION BUREAU OF PUBLIC ROADS	
APPROVED	FOR THE DIVISION ENGINEER	DATE
BI 82123-053 S32, S33, PO4	STATE PROJECT NO. BI 82123-053	FEDERAL PROJECT NO. I-96-4(8)229
		SHEET NO. 1

STATE PROJECT NO. BI 82123-053

UNDERWOOD AVE. BRIDGE S32 OF 82123I	
SHEET NO	DESCRIPTION
2	GENERAL PLAN OF SITE
3	GENERAL DRAWING
4	GENERAL PLAN OF STRUCTURE
5	EXISTING UTILITIES AND PROPOSED ALTERATIONS
6-9	ABUTMENT DETAILS
10	PIER DETAILS
11-12	STRUCTURAL STEEL DETAILS
13	METAL EXPANSION JOINT DETAILS
14-18	SUPERSTRUCTURE DETAILS
19-20	STEEL REINFORCEMENT DETAILS

JOY ROAD BRIDGE S33 OF 82123I	
SHEET NO	DESCRIPTION
2	GENERAL PLAN OF SITE
3	GENERAL DRAWING
4	GENERAL PLAN OF STRUCTURE
5	EXISTING UTILITIES AND PROPOSED ALTERATIONS
6-9	ABUTMENT DETAILS
10-11	PIER DETAILS
12-14	STRUCTURAL STEEL DETAILS
15	METAL EXPANSION JOINT DETAILS
16-20	SUPERSTRUCTURE DETAILS
21	STEEL REINFORCEMENT DETAILS

CLARENDON AVE. PEDESTRIAN BRIDGE P04 OF 82123I	
SHEET NO	DESCRIPTION
2	GENERAL PLAN OF SITE
3	GENERAL DRAWING
4-5	GENERAL PLAN OF STRUCTURE
6	EXISTING UTILITIES AND PROPOSED ALTERATIONS
7-10	ABUTMENT AND RAMP DETAILS
11	PIER DETAILS
12-13	STRUCTURAL STEEL DETAILS
14	SUPERSTRUCTURE DETAILS
15	RAILING DETAILS
16	STEEL REINFORCEMENT DETAILS

SHEET NO	DESCRIPTION
I	TITLE SHEET
Ia	INDEX SHEET
Ib	QUANTITY SHEET
R16	BRIDGE RAILING, DRAIN CASTING, BAR CHAIR MOLDING AND BEVEL DETAILS
SP2 J	STANDARD SLOPE PAVING DETAILS

PLANS PREPARED BY
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERS OFFICE
 BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED *H. Hart*
 STRUCTURAL ENGINEER

JOB No.
 990(4)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES FREEWAY IN DETROIT

INDEX SHEET

CITY OF DETROIT

REVISIONS		
NO.	DESCRIPTION	DATE BY

SQUAD BOSS	STURM	5-68
DRAWN BY	MARGERUM	4-68
TRACED BY	-	-
CHECKED BY	IHS	5-68
SHEET 12 OF -		

S32, S33, P04 OF
 82123I

ITEM	CODE NO.	UNIT	CONTR. QUANT.	FINAL QUANT.	UNIT PRICE	FINAL COST	S32 OF 82123 I			S33 OF 82123 I			P04 OF 82123 I			PLAN EXTRAS			
							CONTR. QUANT.	REMARKS (AUTH. NOS.)	FINAL QUANT.	FINAL COST	CONTR. QUANT.	REMARKS (AUTH. NOS.)	FINAL QUANT.	FINAL COST	CONTR. QUANT.	REMARKS (AUTH. NOS.)	FINAL QUANT.	FINAL COST	DATE
8 IN. SEWER CLASS A		L. Ft.	24																
CHAIN LINK FENCE AND FRAMING		L. Ft.	2279																
UNCLASSIFIED EXCAVATION		Cu. Yds	3375			1840													
STEEL PILES FURN AND DRIVEN		L. Ft.	2180																
SPLICES STEEL PILES (12 IN.)		Each	52																
STEEL TEST PILES (12 IN.)		Each	2																
FURNISHING EQUIPMENT FOR DRIVING PILES		Lump	Sum																
STEEL SHEET PILING L.I.P.		Sq. Ft.	1861			1093													
TEMPORARY STEEL SHEET PILING		Sq. Ft.	700																
GRADE A(6A) CONCRETE- SUBSTRUCTURE		Cu. Yds	908.4			422.7													
GRADE A(6AA) CONCRETE-SUBSTRUCTURE		Cu. Yds	506.3			372.0													
PROTECTIVE SEALANT COATING FOR CONCRETE		Sq. Ft.	26																
CLEAR PROTECTIVE COATING FOR SUBSTRUCTURE CONCRETE		Sq. Yds	740			245													
GRADE A(6AA) CONCRETE- SUPERSTRUCTURE		Cu. Yds	758.4			287.0													
GRADE XX CONCRETE		Cu. Yds	19.2																
WATER REDUCING RETARDING ADMIXTURE		Gal.	91			34													
LOW TEMPERATURE PROTECTION SUBSTRUCTURE CONCRETE		Cu. Yds	1801.0			801.8													
LOW TEMPERATURE PROTECTION SUPERSTRUCTURE CONCRETE		Cu. Yds	452																
PROTECTIVE TREATMENT FOR BRIDGE DECKS		Sq. Ft.	20050			7760													
STEEL REINFORCEMENT		Lbs.	325308			127735													
SHEAR DEVELOPERS S-32		Lump	Sum			Lump Sum													
SHEAR DEVELOPERS S-33		Lump	Sum			Lump Sum													
STRUCTURAL STEEL-FURNISHING AND FABRICATING A-588 ROLLED		Lbs.	753400			263600													
STRUCTURAL STEEL-ERECTION ROLLED A-588		Lb.	753400			263600													
CHAIN LINK FENCE- BRIDGE		L. Ft.	108.8																
ELASTOMERIC BEARING PADS		S. Ft.	3.0																
STRUCTURAL TILE - 4x12x12		Each	1393			840													
STRUCTURAL TILE - 6x12x12		Each	1354			504													
1/2 IN. JOINT FILLER		Sq. Ft.	499			204													
3 IN. PREFORMED NEOPRENE JOINT SEALER		L. Ft.	18																
JOINT WATERPROOFING		Sq. Ft.	7309			626													
TWO COMPONENT POLYURETHANE CO.D APPLIED JOINT SEALER		L. Ft.	110			40													
BRIDGE RAILING-SOLID PAPAPET TYPE		L. Ft.	1017.5			518.5													
3 IN. CONDUITS		L. Ft.	111			56													
4 IN. CONDUITS		L. Ft.	1738			348													
8 IN. DUCTILE METAL PIPE		L. Ft.	16																
SLOPE PROTECTION-CLASS A		Sq. Yds	411			193													
SLOPE PROTECTION HEADERS		L. Ft.	475			152													
FOUNDATION DRAINS		L. Ft.	981			380													
TOTAL																			

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

ITEM 1172
1-96-4 (81) 229

APPROVED: *[Signature]*
STRUCTURAL ENGINEER

JOB No.
PW 99041

MICHIGAN STATE HIGHWAY DEPARTMENT

THE JEFFRIES FREEWAY IN DETROIT

QUANTITY SHEET

CITY OF DETROIT	
SQUAD BOSS	STURM 5-69
DRAWN BY	L.G. 4-69
TRACED BY	-
CHECKED BY	IHS 5-69
SHEET 76 OF -	

S32, S33, P04 of 82123 I . BI 82123,053

ITEM	CODE NO	UNIT	CONTR. QUANT.	FINAL QUANT.	UNIT PRICE	FINAL COST	S32 OF 82123 I			S33 OF 82123 I			P04 OF 82123 I			PLAN EXTRAS			
							CONTR. QUANT.	REMARKS (AUTH. NOS.)	FINAL QUANT.	FINAL COST	CONTR. QUANT.	REMARKS (AUTH. NOS.)	FINAL QUANT.	FINAL COST	CONTR. QUANT.	REMARKS (AUTH. NOS.)	FINAL QUANT.	FINAL COST	DATE
8 IN. SEWER CLASS A		L. Ft.	94																
CHAIN LINK FENCE AND FRAMING		L. Ft.	207.4																
UNCLASSIFIED EXCAVATION	6040	Cu. Yds.	3844			1840													
STEEL PILES FURN AND DRIVEN	6108	L. Ft.	2170																
SPLICES STEEL PILES (12 IN.)	6120	Each	52																
STEEL TEST PILES (12 IN.)	6127	Each	1																
FURNISHING EQUIPMENT FOR DRIVING PILES	6133	Lump	Sum																
STEEL SHEET PILING L.I.R	6135	Sq. Ft.	1861			1093													
TEMPORARY STEEL SHEET PILING	6140	Sq. Ft.	700																
GRADE A(6A) CONCRETE - SUBSTRUCTURE	6170	Cu. Yds.	903.4			422.8													
GRADE A(6AA) CONCRETE - SUBSTRUCTURE	6175	Cu. Yds.	916.2			379.0													
PROTECTIVE SEALANT COATING FOR CONCRETE	6177	Sq. Ft.	27																
CLEAR PROTECTIVE COATING FOR SUBSTRUCTURE CONCRETE		Sq. Yds.	716			245													
GRADE A(6AA) CONCRETE - SUPERSTRUCTURE	6180	Cu. Yds.	760.1			287.6													
GRADE XX CONCRETE	6188	Cu. Yds.	19.2																
WATER REDUCING RETARDING ADMIXTURE	6194	Gal.	91			34													
LOW TEMPERATURE PROTECTION SUBSTRUCTURE CONCRETE	6231	Cu. Yds.	1791.6			801.8													
LOW TEMPERATURE PROTECTION SUPERSTRUCTURE CONCRETE	6236	Cu. Yds.	452																
PROTECTIVE TREATMENT FOR BRIDGE DECKS	6239	Sq. Ft.	20050			7780													
STEEL REINFORCEMENT	6245	Lbs.	326820			122732													
SHEAR DEVELOPERS S-32		Lump	Sum			Lump Sum													
SHEAR DEVELOPERS S-33		Lump	Sum			Lump Sum													
STRUCTURAL STEEL - FURNISHING AND FABRICATING A-588 ROLLED	6276	Lbs.	732030			269600													
STRUCTURAL STEEL - ERECTION ROLLED A-588	6277	Lbs.	732030			269600													
STRUCTURAL TILE - 4x12x12	6325	Each	1350			840													
STRUCTURAL TILE - 6x12x12	6330	Each	1354			504													
1/2 IN. JOINT FILLER	6345	Sq. Ft.	476			204													
3 IN. PREFORMED NEOPRENE JOINT SEALER	6374	L. Ft.	18																
JOINT WATERPROOFING	6390	Sq. Ft.	1242			626													
TWO COMPONENT POLYURETHANE COLD APPLIED JOINT SEALER	6392	L. Ft.	110			40													
SPECIAL BRIDGE RAILING - 4 TUBE FABRICATION AND ERECTION		L. Ft.	109																
BRIDGE RAILING - SOLID PAPAPEP TYPE	6433	L. Ft.	1017.5			518.5													
3 IN. CONDUITS	6448	L. Ft.	111			56													
4 IN. CONDUITS	6454	L. Ft.	1738			348													
8 IN. DUCTILE METAL PIPE		L. Ft.	14																
SLOPE PROTECTION - CLASS A	6487	Sq. Yds.	411			133													
SLOPE PROTECTION HEADERS	6493	L. Ft.	475			152													
FOUNDATION DRAINS	6507	L. Ft.	935			38.0													
TOTAL																			

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

JOB No.
PW 990(4)

MICHIGAN STATE HIGHWAY DEPARTMENT

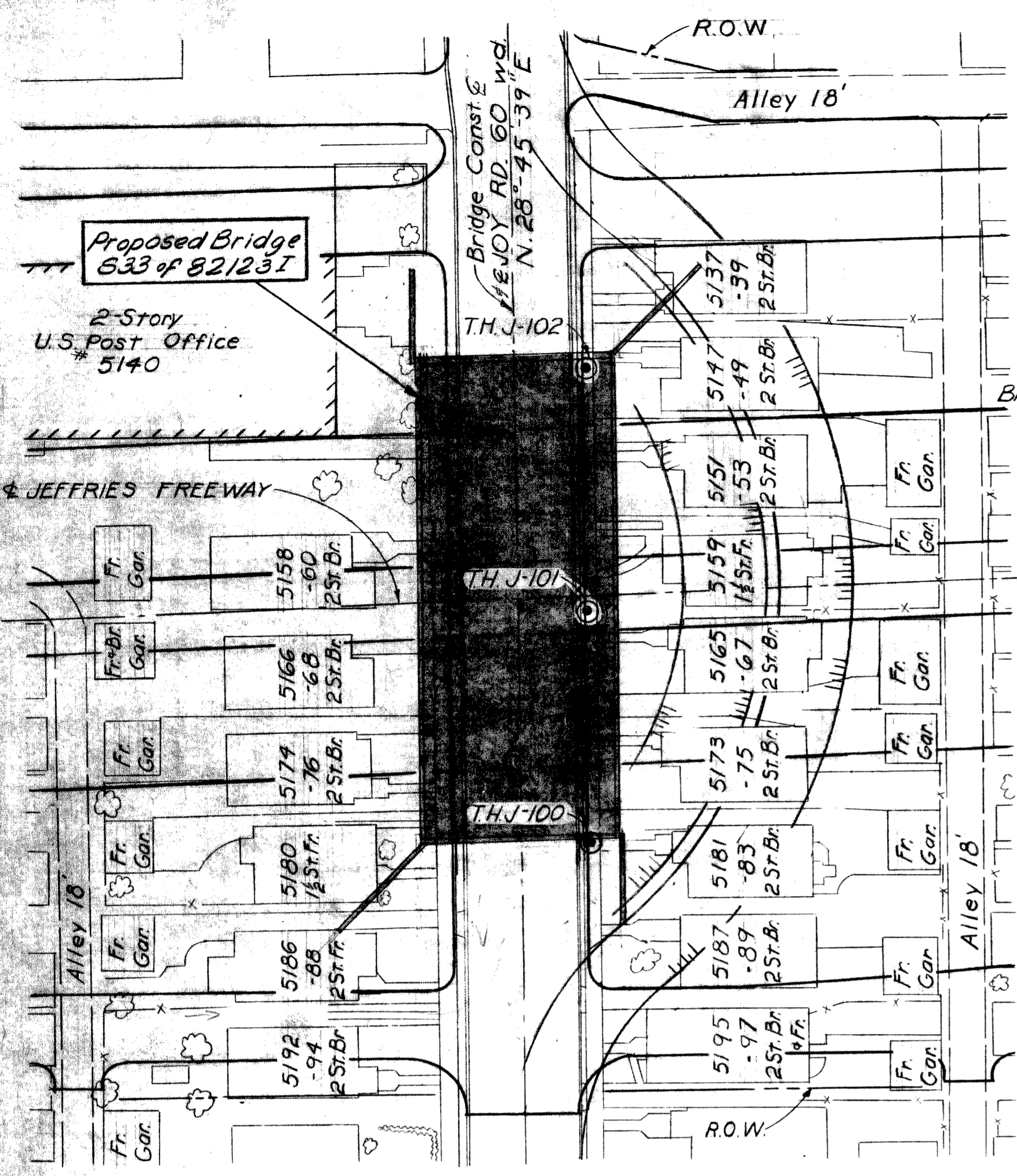
THE JEFFRIES FREEWAY IN DETROIT
QUANTITY SHEET

CITY OF DETROIT

SQUAD BOSS	DRAWN BY	TRACED BY	CHECKED BY
	L. G.		4-69
SHEET	OF		

S32, S33, P04 of 82123 I

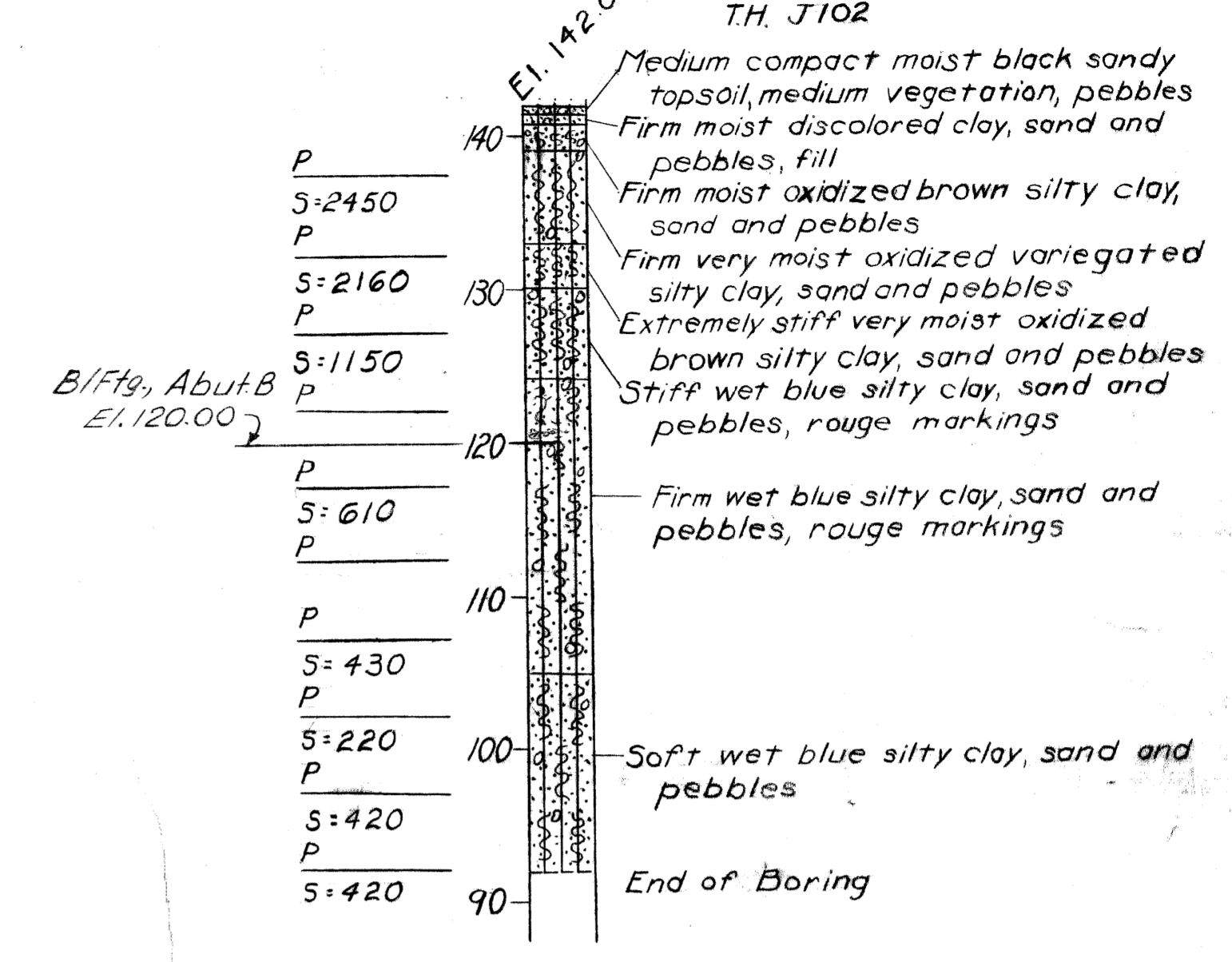
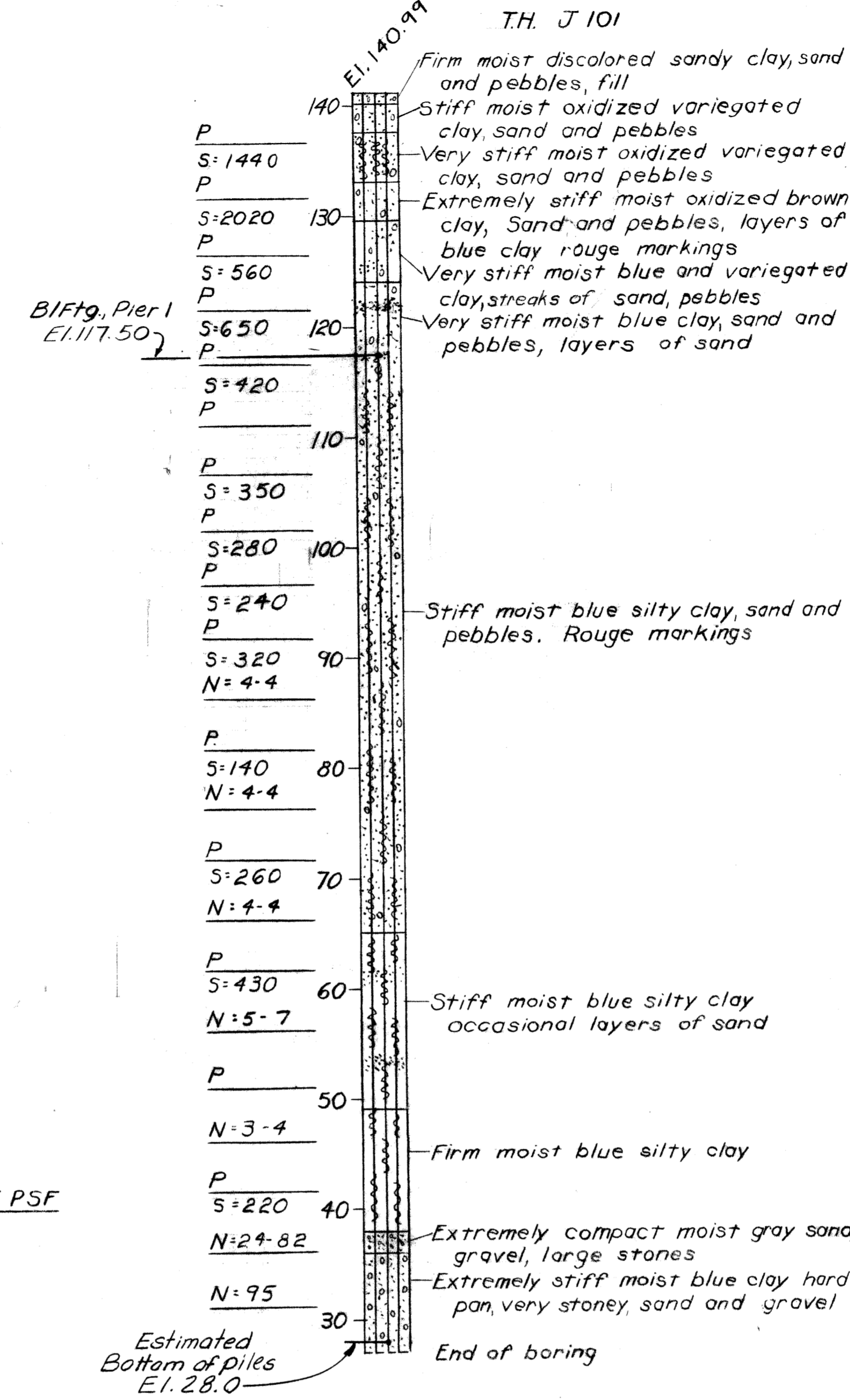
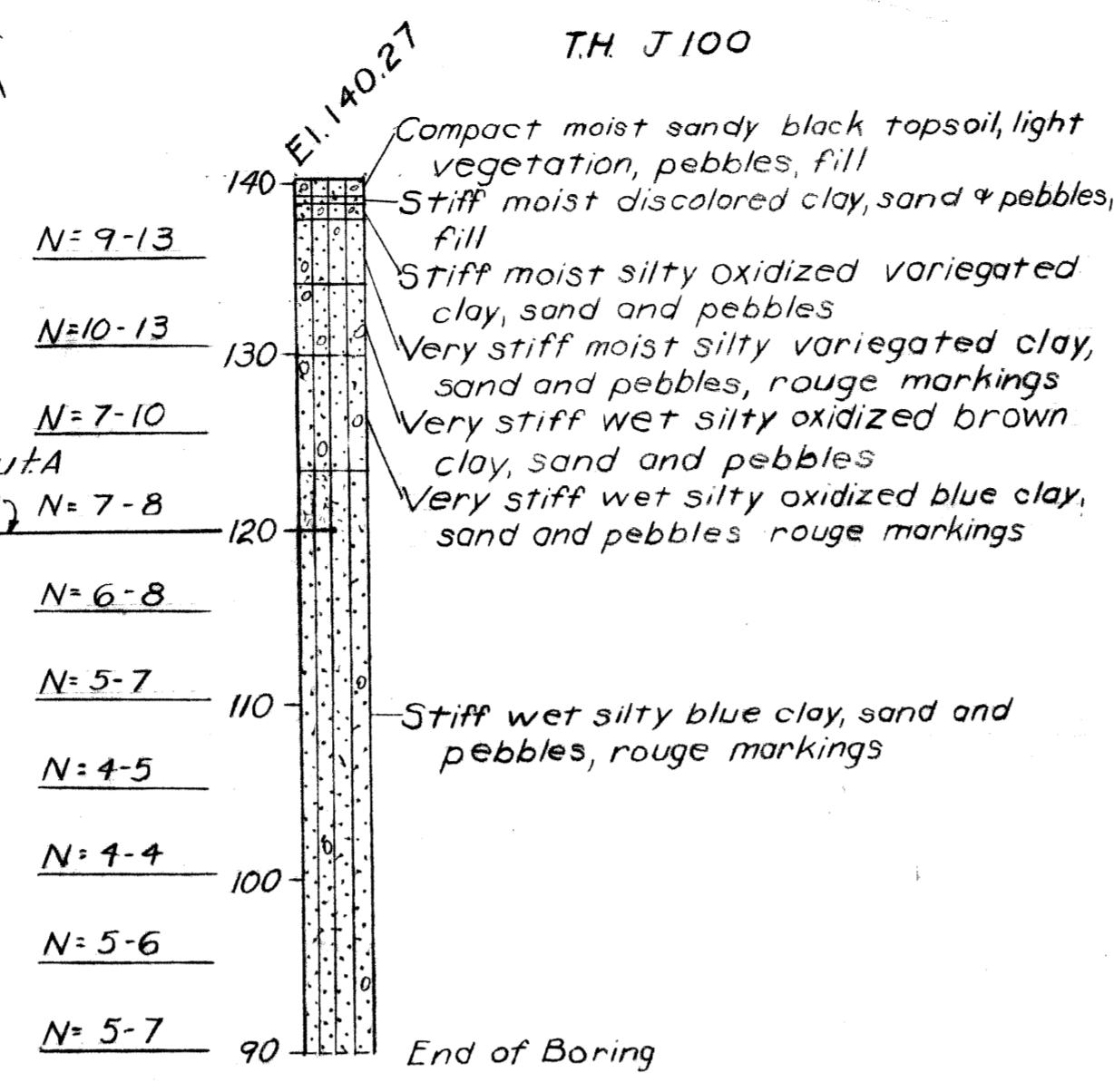
LOG OF SOIL BORINGS



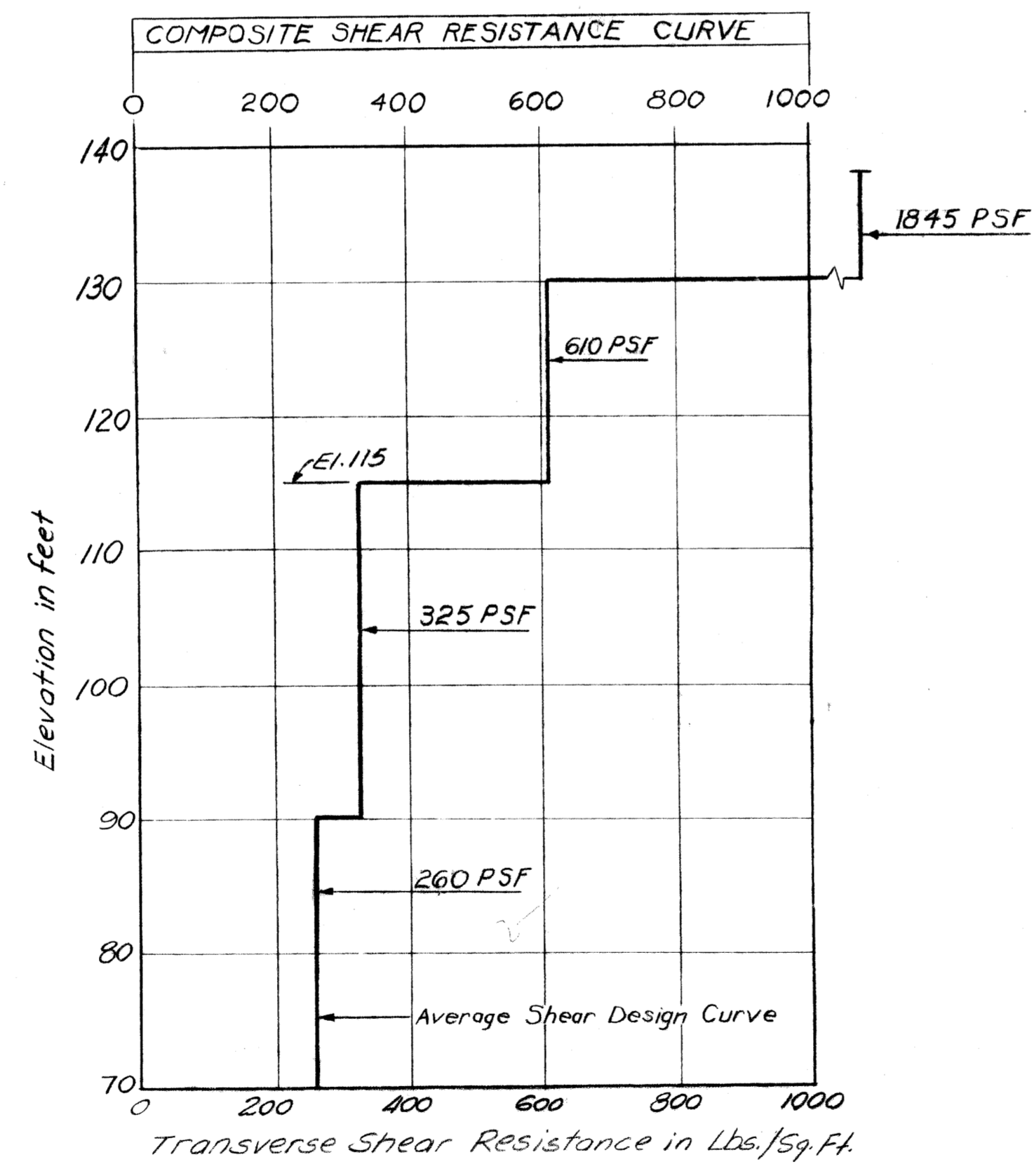
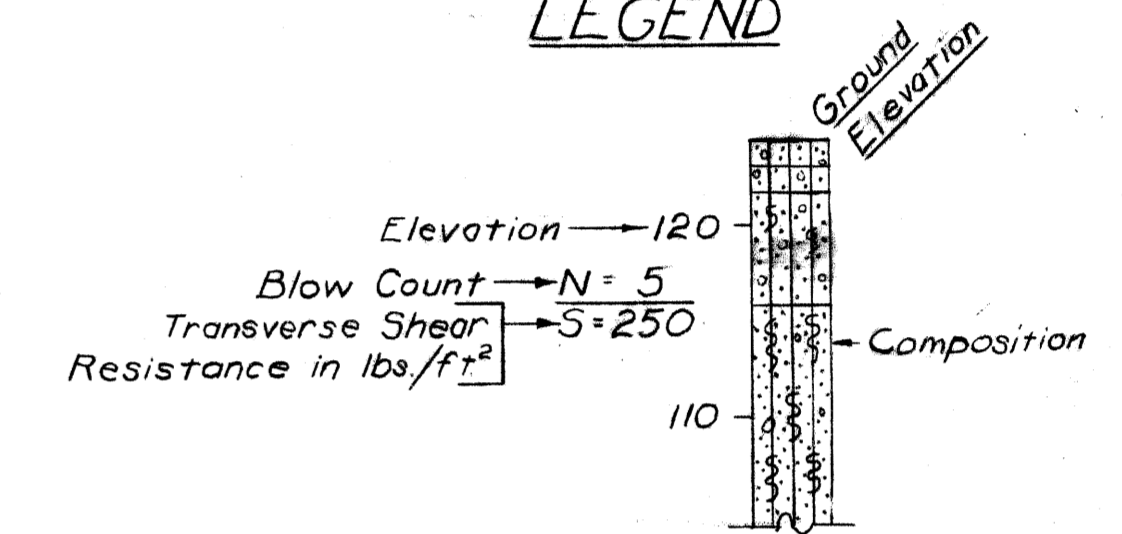
SURVEY PLAN
Scale 1"=40'

UTILITY LEGEND

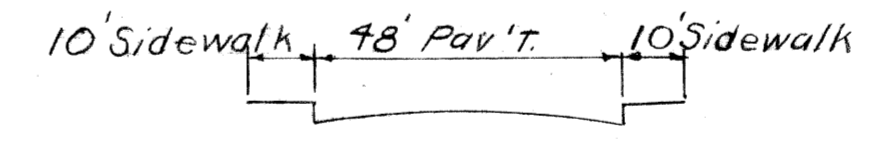
- Sewer Manhole
- Sewer Inlet or Catch Basin
- ⊙ Test Hole for Soil Profile
- ⊕ Tree
- x- Fence



LEGEND



NOTES:
N Indicates number of blows to drive a sampler 6" (or as noted) using a 140# hammer falling 30".
S Indicates Transverse Shearing Resistance in lbs./ft.² as determined by M.S.H.D. Standard Test.
P Indicates sampler was pushed.
Soil Boring Elevations are based on City of Detroit Datum.



APPROACH ROAD SECTION

GENERAL NOTES:

The work covered by these plans includes construction of the proposed bridge and placing slope protection to the limits shown. All other work is included in the Road Plans which are a part of this contract.
Removal of fences and buildings is not part of this contract.
The contractor shall locate all active underground utilities prior to starting work and shall conduct his operations in such a manner as to insure that those utilities not requiring re-location will not be disturbed.
Datum refers to City of Detroit datum.
Topography shown here on represents conditions existing at the time the field survey was made. However, these conditions may have been materially altered by the operations of others before the work has been started.

PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERS OFFICE BUREAU OF HIGHWAYS AND EXPRESSWAYS		MICHIGAN DEPARTMENT OF STATE HIGHWAYS JOY ROAD OVER JEFFRIES FREEWAY IN DETROIT GENERAL PLAN OF SITE	
APPROVED _____ STRUCTURAL ENGINEER	JOB No. PW 9001	APPROVED _____ DESIGN SUPERVISING ENGINEER	CITY OF DETROIT SQUAD BOSS DRAWN BY TRACED BY CHECKED BY SHEET 2 OF 21
REVISIONS		S33 of 821231	
NO.	DESCRIPTION	DATE	BY

STATE OF MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PLANS OF PROPOSED BRIDGES

MICHIGAN PROJECT STATE PROJECT BI 82123-053

JEFFRIES FREEWAY WAYNE COUNTY CITY OF DETROIT

GENERAL NOTES

Except where otherwise indicated on these Plans or in the Proposal and Supplemental Specifications contained therein, all materials and workmanship shall be in accordance with the Michigan Department of State Highways' Standard Specifications for Road and Bridge Construction, 1967 Edition.

The design of these structures is based on the Michigan Department of State Highways' Specifications for the Design of Highway Bridges, 1958 Edition and current AASHTO Standard Specifications for Highway Bridges, HS20-44 Loading. Live load plus impact deflection = 1/1000 of span length and 1/350 of cantilever arm. The character of all materials and the extent thereof as shown by borings has been obtained by methods and from sources believed to be reliable. The exactness of this information is, however, in no case guaranteed.

All exposed concrete corners shown square on the Plans shall be beveled with 1/2" triangular moldings except as otherwise noted.

The stationing as shown on these Plans for the intersection of the centerline of bridge and roadway is believed to be correct. It shall, however, be checked at the time of starting construction and if the stationing shown on the plans is incorrect it shall be reported to the Design Office at Lansing and the structure shall be staked out using the actual intersection of the centerline of bridge and roadway as the control point.

The contractor shall contact all Utility Companies regarding their facilities prior to starting work.

The following items shown in these plans are to be constructed with the road work: Bridge approach curb and gutter, catch basins, inlets, culverts, sewers, C.M.P., temporary detours, earth excavation and any other items not listed in the bill of materials.

The existing structures shall be checked at the time of starting construction to see that its relationship to the proposed work is as shown on these plans and any differences requiring changes in the new work shall be reported to the Design Office.

The grades and stresses of the structural materials used in these structures are as follows:

Concrete, Grade A $f'_c = 3000$ psi.
Steel Reinforcement; intermediate or Hard Grade $f_y = 20000$ psi.
Structural Steel A588 $f_y = 27,000$ psi, max.

AASHTO '65
A441 for 3/4" max

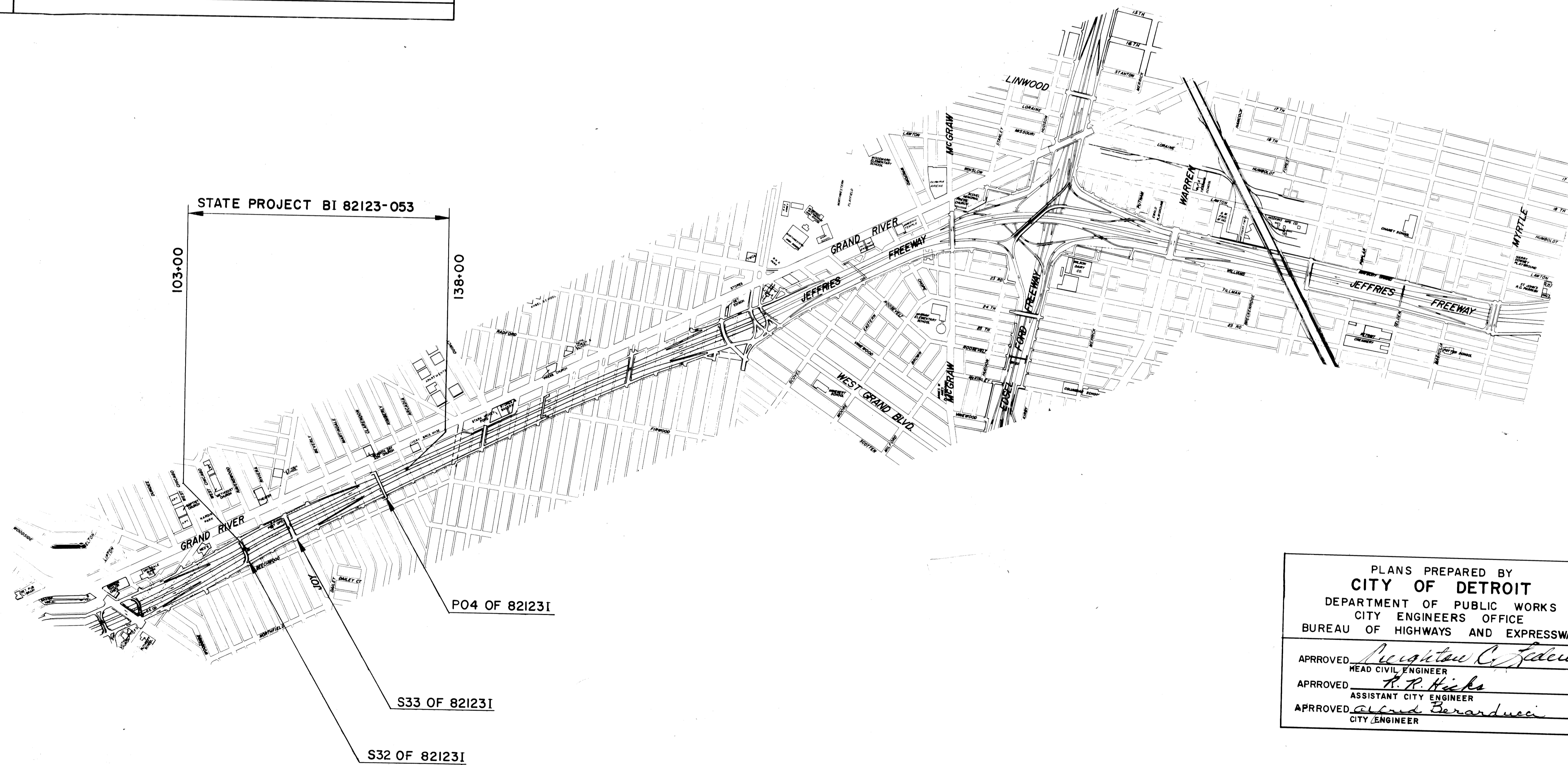
NOTE
Where the following items are called for on the Plans, they are to be constructed according to the Standard Plan given below opposite each item, unless otherwise indicated.

STANDARD PLANS TO BE PRINTED

SHEET NO.	TITLE
R16	Bridge Rolling, Drain Casting, Bar Chair, Molding & Bevel Details
SP2	Standard Slope Paving Details

STANDARD PLANS NOT TO BE PRINTED

SHEET NO.	TITLE



PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED: *Richard C. Felner*
HEAD CIVIL ENGINEER
APPROVED: *R. P. Hicks*
ASSISTANT CITY ENGINEER
APPROVED: *Alfred Berarducci*
CITY ENGINEER

ITEM NO.			
CONTRACT FOR STRUCTURES			
APPROVALS			
CHECKED	DESIGN ENGINEER		DATE
RECOMMENDED FOR APPROVAL	ENGINEER OF BRIDGE AND ROAD DESIGN		DATE
RECOMMENDED FOR APPROVAL	TRAFFIC DIVISION		DATE
RECOMMENDED FOR APPROVAL	CONSTRUCTION DIVISION		DATE
RECOMMENDED FOR APPROVAL	CHIEF - BUREAU OF ENGINEERING		DATE
DEPARTMENT OF STATE HIGHWAYS HENRIK E. STAFSETH - STATE HIGHWAY DIRECTOR			
APPROVED BY		DEPUTY STATE HIGHWAY DIRECTOR	DATE
PLANS PREPARED BY CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS		U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION BUREAU OF PUBLIC ROADS	
APPROVED		FOR THE DIVISION ENGINEER	
DATE		DATE	
BI 82123-053 S32, S33, P04		STATE PROJECT NO. BI 82123-053	FEDERAL PROJECT NO.
		SHEET NO. 1	

STATE PROJECT NO. BI 82123-053