

INDEX OF SHEETS

SHEET NO.	DESCRIPTION	# OF SHEET
1	TITLE SHEET	1
2	EXISTING GENERAL PLAN OF SITE	1
3 - 8	MAINTAINING TRAFFIC	6
9	ROAD - REMOVAL	1
10	ROAD - CONSTRUCTION	1
11	ROAD - TYPICAL CROSS-SECTION	1
12 - 31	ROAD - DETAILS	20
32	EXPANSION JOINT DETAILS	1
33 - 57	REFERENCE DRAWINGS	25
58	GENERAL PLAN OF STRUCTURES	1
59	STAGING PLAN	1
60	DECK RESURFACING DETAILS	1
61	DECK CROSS - SECTION	1
62 - 63	DECK RESURFACING DETAILS	2
64 - 65	PIN & HANGER REPLACEMENT DETAILS	2

STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARDS PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED

ROAD

SIDEWALK RAMP DETAILS
 DRIVEWAY OPENINGS & APPROACHES AND CONCRETE SIDEWALKS
 CONCRETE CURB AND CONCRETE CURB & GUTTERS
 LONGITUDINAL PAVEMENT JOINTS
 TYPICAL JOINT LAYOUT FOR CONCRETE PAVEMENT
 LOCATION OF TRANSVERSE JOINTS IN PLAIN CONCRETE PAVEMENT
 CONCRETE PAVEMENT REPAIR
 GUARDRAIL ANCHORAGE, BRIDGE, DETAILS
 GRANULAR BLANKET, UNDERDRAINS AND OUTLET ENDINGS FOR UNDERDRAINS
 SOIL EROSION & SEDIMENTATION CONTROLS MEASURES
 SCODING, SEEDING AND TREE PLANTING
 SUPERELEVATION AND PAVEMENT CROWNS
 TEMPORARY TRAFFIC CONTROL DEVICES
 PLACEMENT OF TEMPORARY CONCRETE BARRICK

BRIDGE

- MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT ASSEMBLY AND NAME PLATE DETAILS
- SEE ROAD PLANS FOR ADDITIONAL STANDARD PLANS & SPECIAL DETAILS.

PUBLIC UTILITIES

<p>AT&T METRO EAST 100 S MAIN ST, SUITE 314 MT CLEMENS, MI 487043-2374 JOE SIKOKI</p> <p>RIGHT OF WAY- METRO WEST 17651 MICHIGAN AVE., RM 301 DEARBORN, MI 48126 KEVIN LOGAN CELL KI29152att.com MARK BRANAM Mark.branam@att.com BRADLEY HALL Bradley.s.hall@att.com DEREK BULKLEY Derek.m.bulkley@att.com</p> <p>NOTE: AT&T WILL REQUIRE FIVE TO SEVEN BUSINESS DAYS ADVANCE NOTICE PRIOR TO ADJUSTING FRAMES AND COVERS, CONTACT AT&T AT (734) 523-6883.</p> <p>CITY OF DETROIT PUBLIC LIGHTING AUTHORITY OF DETROIT 65 CADILLAC SQUARE, SUITE 3100 DETROIT, MI 48226 PHONE WEBSITE: www.pladetroit.org</p> <p>CITY OF DETROIT DETROIT WATER & SEWERAGE DEPARTMENT 6425 HUBER (CSF) A-219 DETROIT, MI 48211 DEBRA SINGLETON dsingleton@dwsd.org EMERGENCY 24 HOUR SERVICE</p>	<p>TELEPHONE (586) 466-6310</p> <p>(313) 240-5482 (734) 223-5645 (313) 982-1029</p> <p>(313) 240-5390</p> <p>(313) 466-1049</p> <p>(313) 240-5480</p> <p>ELECTRIC POWER AND STREET LIGHTING (313) 324-8290</p> <p>WATER MAINS & SEWERS (313) 267-8309 (313) 267-7401</p>	<p>CITY OF DETROIT DETROIT FIRE DEPARTMENT FIRE MARSHAL'S DIVISION 1301 THIRD STREET DETROIT, MI 48226 PHONE CHIEF OTIS B. HOLT FAX</p> <p>CITY OF DETROIT, DETROIT POLICE DEPARTMENT DETROIT PUBLIC SAFETY HEADQUARTERS 1301 THIRD STREET DETROIT, MI 48226 PHONE FAX</p> <p>CITY OF DETROIT TRAFFIC ENGINEERING, D.P.W. 2633 MICHIGAN AVENUE DETROIT, MI 48207 ASHOK PATEL FAX AshPat@detroitmi.gov JUBI CHACKUNKAL JubCha@detroitmi.gov KIRIT PATEL Patelki@detroitmi.gov</p> <p>SIGN SHOP 2425 FENKELL DETROIT, MI 48238 SIGN SHOP MANAGE FAX</p> <p>COMCAST CABLEVISION 12775 LYNDON DETROIT, MI 48227 BARBARA SAUNDERS CELL EXPOSED OR DAMAGED FACILITIES</p>	<p>FIRE CALL BOXES AND FIRE HYDRANTS (313) 596-2900 (313) 224-1311 (313) 596-2978</p> <p>POLICE CALL BOXES (313) 596-2200 (313) 596-1450</p> <p>PAVEMENT MARKINGS, SIGNS & TRAFFIC SIGNALS (313) 224-1610 (313) 224-1304</p> <p>(313) 224-1315 (313) 407-4124 (313) 628-5641</p> <p>(313) 628-2923 (313) 628-4966</p> <p>TV CABLES (313) 934-2600 (313) 934-4824</p>
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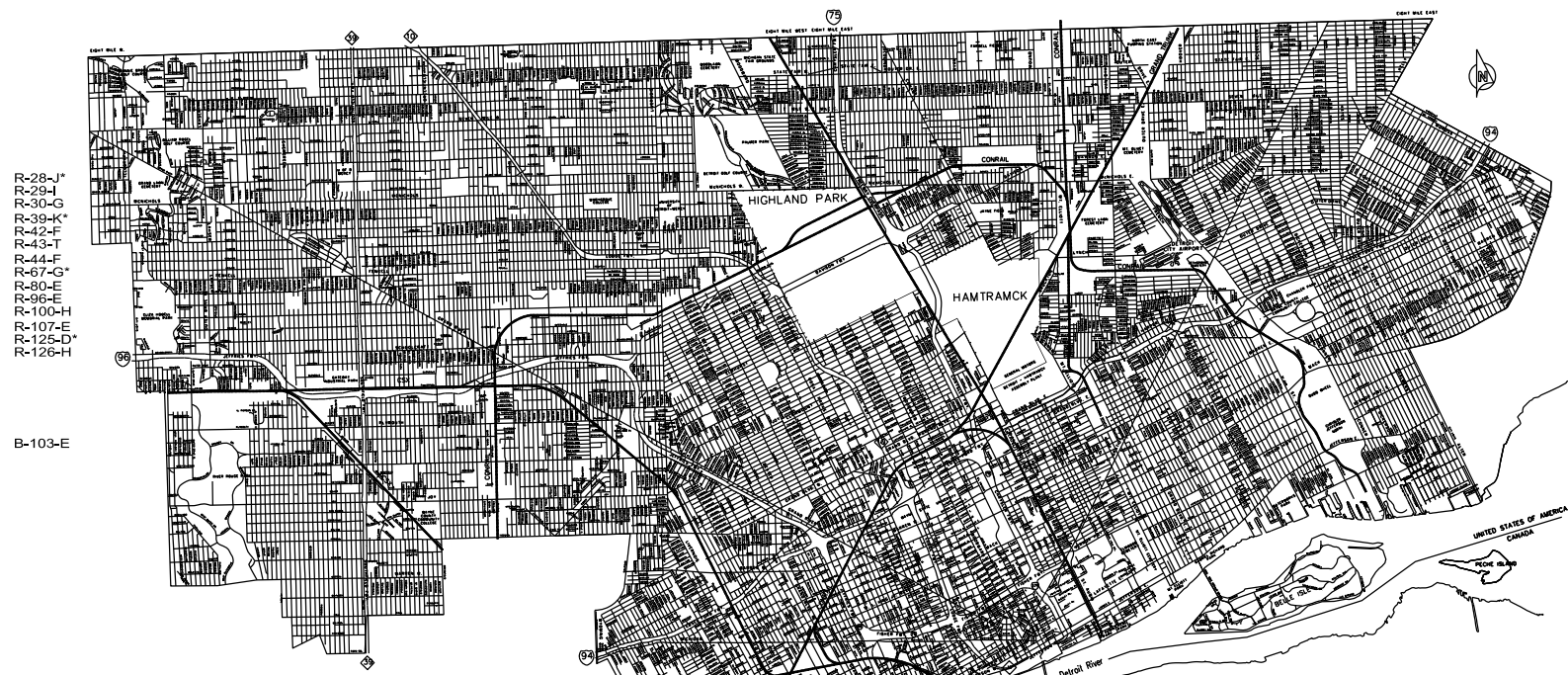
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS



CONTROL SECTION
 R01 82418

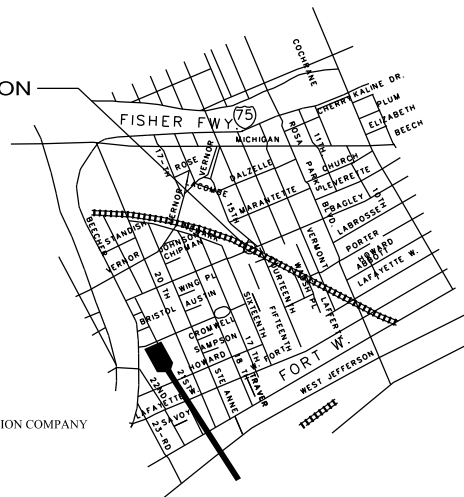
PROJECT JOB NO.
 PW-6985

REHABILITATION PROJECT
 BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.



THE REGULATED WASTE ACTIVITY IDENTIFICATION NUMBERS FOR THIS PROJECT ARE AS FOLLOWS:
 CONTROL SECTION NUMBER: R01 82418

PROJECT LOCATION



THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AMERICAN ASSOCIATION OF THE STATE HIGHWAY AND TRANSPORTATION OFFICIALS, (ASHTO), FOR HIGHWAY BRIDGES HS 25 LOADING, LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/800 OF THE SPAN LENGTH, THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARDS SPECIFICATIONS FOR CONSTRUCTION 2012 EDITION.

ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BELIEVE WITH 1/2" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIALS OF THE FOLLOWING GRADES AND STRESSES.

CONCRETE: GRADE S2	f _c = 3,000 PSI
CONCRETE: GRADE D	f _c = 4,000 PSI
STEEL REINFORCEMENT:	f _y = 60,000 PSI
STRUCTURAL STEEL:	f _y = 50,000 PSI
AASHTO M270, GRADE 50	
STRUCTURAL STEEL:	f _y = 50,000 PSI
AASHTO M270, GRADE 50W	
STRUCTURAL STEEL PINS:	f _y = 50,000 PSI
AASHTO M270, GRADE 50W	
STRUCTURAL STEEL PINS:	f _y = 50,000 PSI
ASTM A276, UNS DESIGNATION S20161 OR S21800	
TEMP SUPPORT HANGER RODS:	f _u = 125,000 PSI
ASTM A 193 GRADE B7 (AISI 4140), 2 1/2" AND UNDER	

ALL DIMENSIONS ON THESE PLANS ARE IN INCHES EXCEPT AS NOTED.

THE STATIONING AS SHOWN ON THESE PLANS FOR THE INTERSECTION OF THE CENTERLINE OF BRIDGE AND ROADWAY (AND THE RAILROAD) CENTERLINE IS BELIEVING TO BE CORRECT, IT SHALL 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 IN LANSING AND THE STRUCTURE SHALL BE STAKE OUT USING THE ACTUAL INTERSECTION OF THE CENTERLINE OF THE BRIDGE AND ROADWAY (AND THE RAILROAD) CENTERLINE AS THE CONTROL POINT.

BIDDERS WILL BE FURNISHED WITH SCANNED IMAGES OF PLAN SHEETS OF THE EXISTING STRUCTURES IF REQUESTED, I USE ON ALL PROJECTS WHERE EXISTING STRUCTURE PLANS ARE KNOWN TO EXIST (I.U. 2-22-2006)

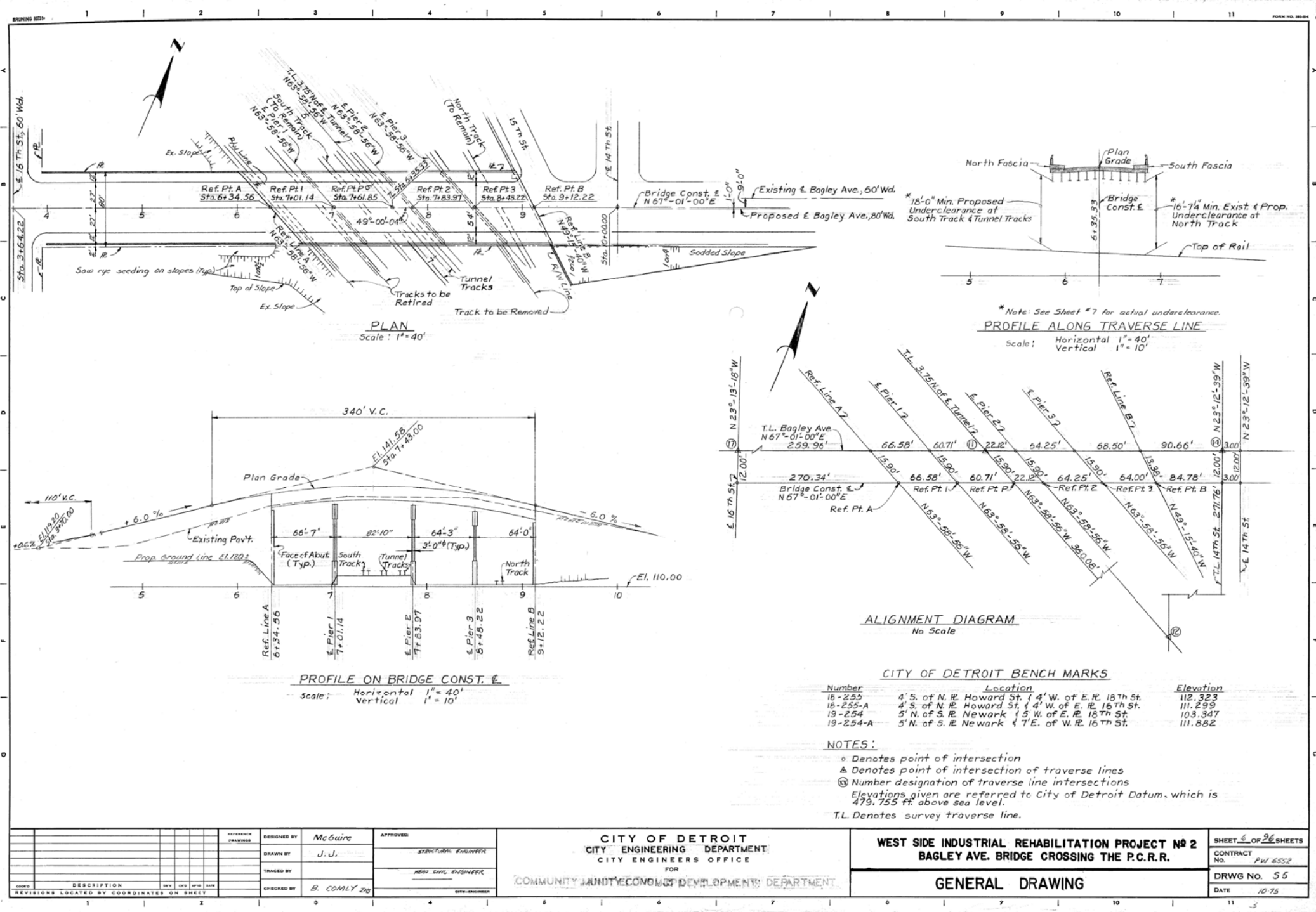


DESIGNED BY LA		Date: 03/23/2018
Drawn WLW		
Checked By KSM	Approved By ---	Job No: PW-6985
CONTRACT FOR: REHABILITATION PROJECT BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.		
LOCAL AUTHORITY APPROVAL CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERING DIVISION		
APPROVED BY	DATE	
PREPARED UNDER THE SUPERVISION OF _____ REGISTERED PROFESSIONAL ENGINEER REGISTRATION NO. _____ CITY OF DETROIT ORGANIZATION CITY ENGINEERING DIVISION, D.P.W. 2 WOODWARD AVE. SUITE 601 DETROIT MI 48216 ADDRESS		
SHEET 01 OF 65		

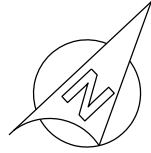
CONTROL SECTION NO.: R01 82418
 JOB NO.: PW-6985

SCALE	HORIZONTAL VERTICAL	BOOK NO.	PG.	LEVEL DATE	BEFORE STARTING CONSTRUCTION BEST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.
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BENCH MARKS ELEV

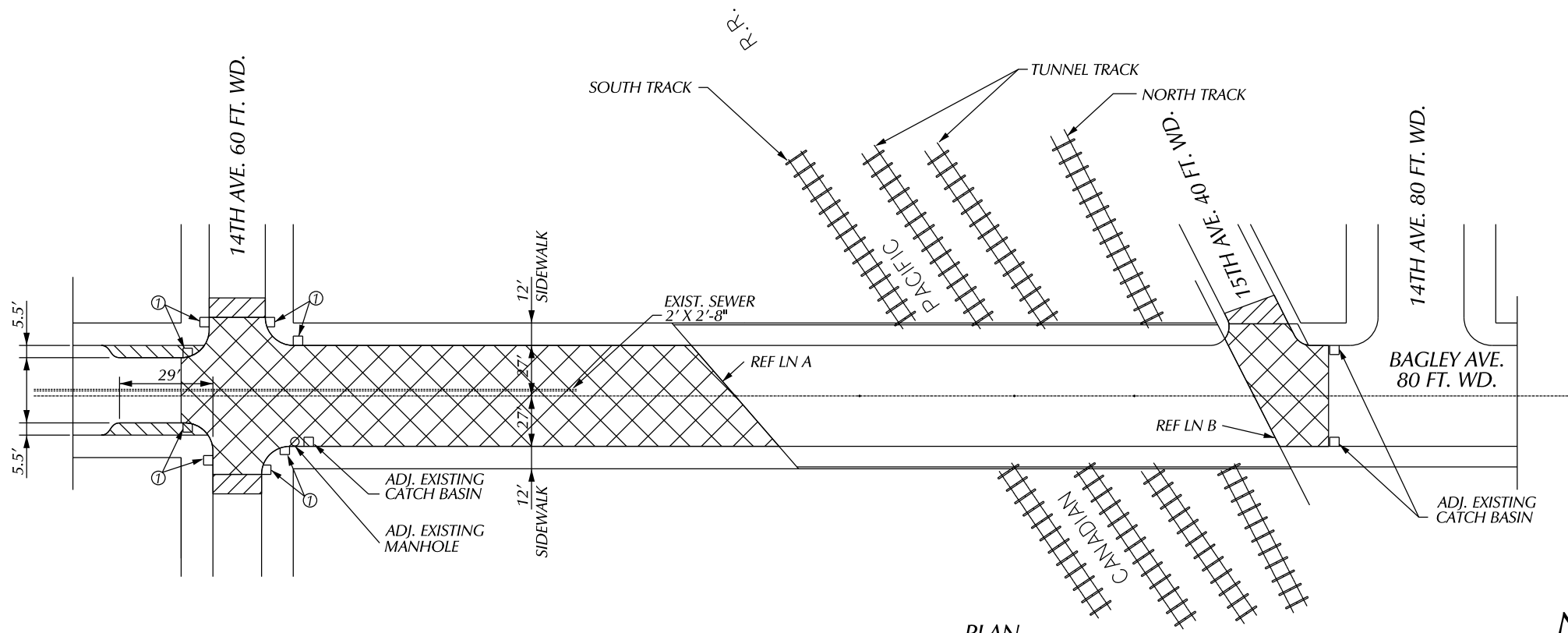


DESCRIPTION	DR	CK	DATE	BY	CHECKED BY	APPROVED:	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R. EXISTING GENERAL PLAN OF SITE	SHEET 2 OF 65 SHEETS
PLAN						CONTRACT NO. PW-6985 ASSIGNMENT NO. DATE 03/23/2018			
GRADE									
ESTIMATE									
REVISIONS	DR	CK	DATE	BY	CHECKED BY	APPROVED:			



LEGEND:

- SIDEWALK - 6" REMOVAL
- STRIP & ADJUST ASPHALT SURFACE
- ① SIDEWALK RAMP, TYPE ① TO BE REPLACED
- COLD MILLING EXISTING PAVEMENT



PLAN

NOTE:

1. CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT THIS OPERATION IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRED RELOCATION WILL BE NOT DISTURBED.

REMOVAL QUANTITIES	
7,000 SYD	COLD MILLING CONC. PAVEMENT
* 400 SYD	HMA PATCH REM
100 FT	INTEGRAL CURB & SIDEWALK
	2 FEET, REM, MODIFIED
100 FT	CURB, REM
** 75 SYD	SIDEWALK, REM
*** 0.5 Acre	CLEARING

- * THIS QUANTITIES FOR HMA PATCH REMOVAL ON APPROACHES. EXACT LOCATION SHALL BE DETERMINE IN THE FIELD.
- ** THIS QUANTITIES FOR SIDEWALK PATCH REMOVAL ON APPROACHES. EXACT LOCATION SHALL BE DETERMINE IN THE FIELD.
- *** THIS QUANTITIES FOR CLEANING BRUSHES AND OTHER VEGETATION ON BRIDGE SIDEWALKS, APPROACHES AND OTHER AREAS AS DIRECTED BY THE ENGINEER

DESCRIPTION	DR	CHK	DATE	BY	CHECKED BY	APPROVED
PLAN						
GRADE						
ESTIMATE						
FINAL	****					
REVISIONS						

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

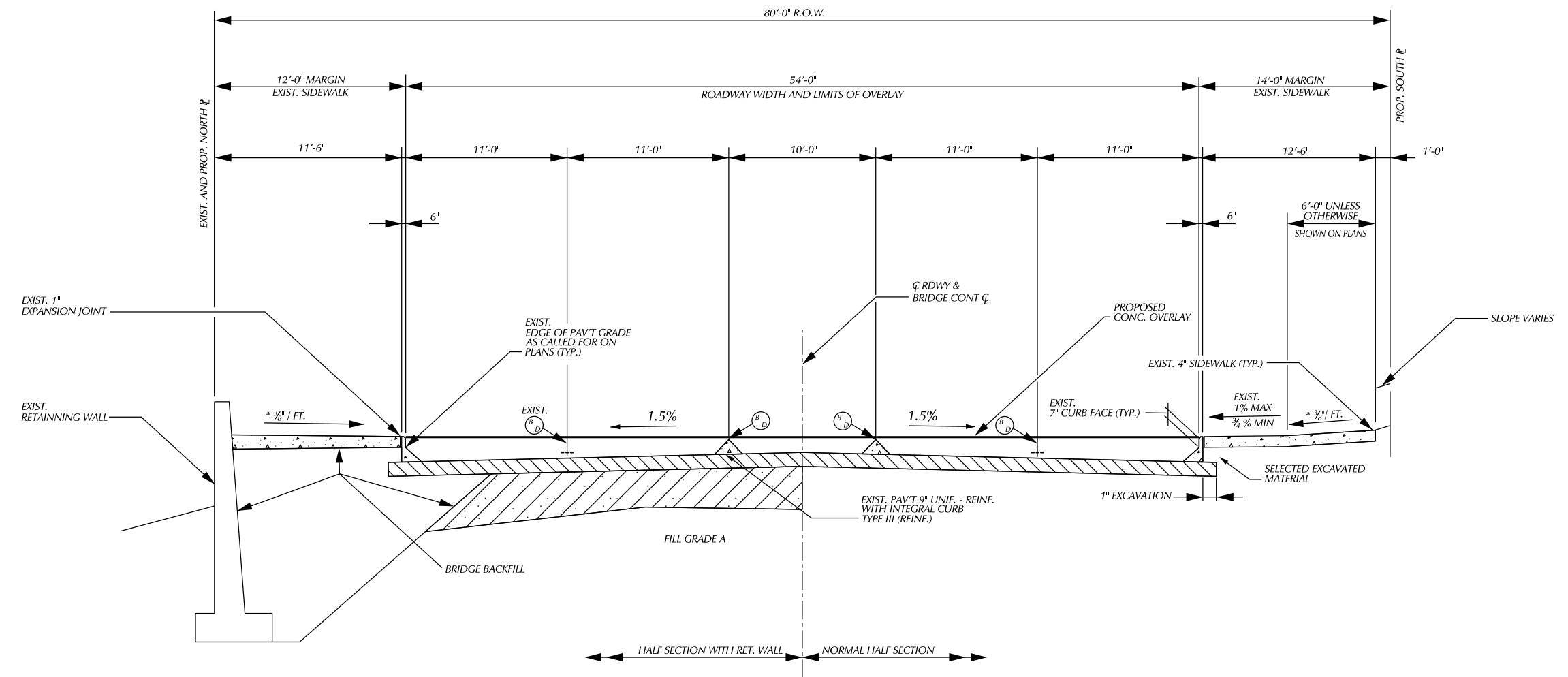
BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

REMOVAL PLAN

SHEET 9 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018

SCALE	HORIZONTAL	BOOK NO.	PG.	LEVEL DATE	CONTRACTOR
	VERTICAL	PAVING COMPLETED			MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.

BENCH MARKS ELEV



TYPICAL CROSS SECTION OF BAGLEY AVE.

PLAN	BY	CHECKED BY	APPROVED:
GRADE			ENGINEER BY STREET
ESTIMATE			
FINAL	****	****	

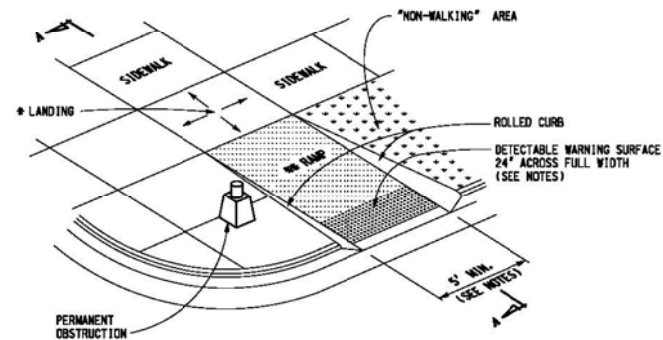
CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

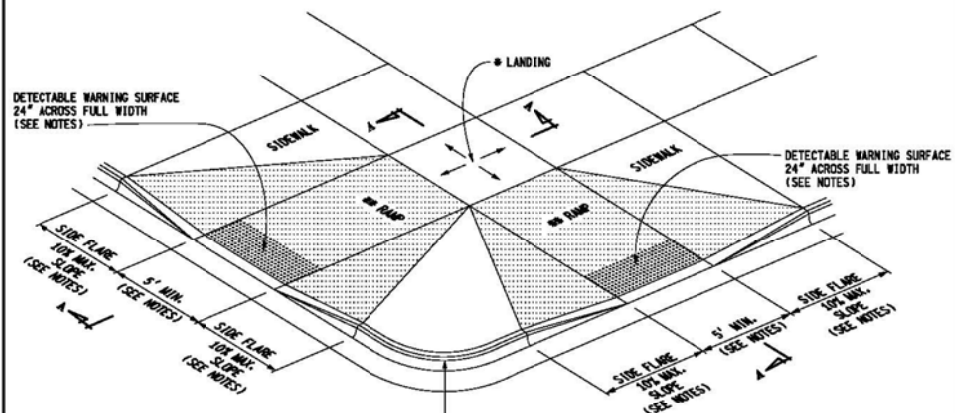
TYPICAL CROSS - SECTION

SHEET 11 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018

• MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.
 •• MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



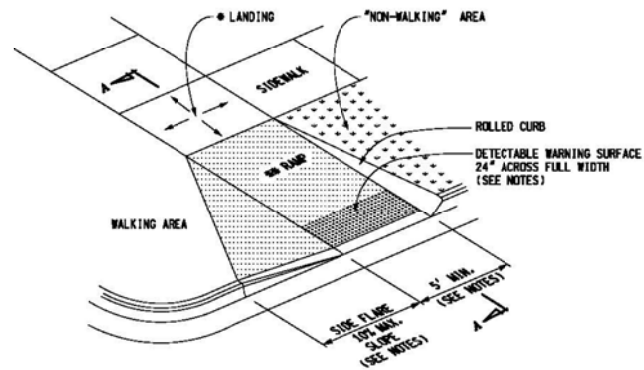
SIDEWALK RAMP TYPE R
(ROLLED SIDES)



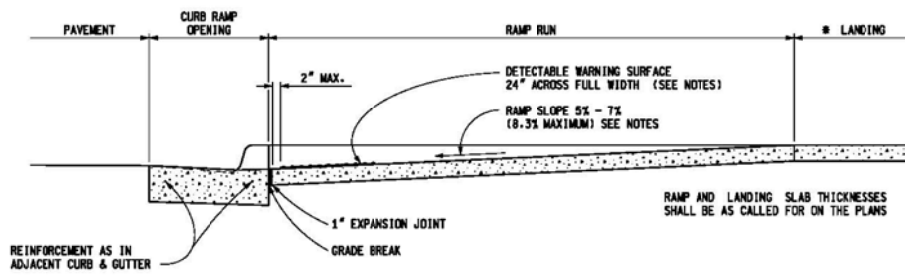
SIDEWALK RAMP TYPE F
(FLARED SIDES, TWO RAMPS SHOWN)

	DEPARTMENT DIRECTOR Kirk T. Steudle	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR
	APPROVED BY: _____ DIRECTOR, BUREAU OF FIELD SERVICES	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
	APPROVED BY: _____ DIRECTOR, BUREAU OF DEVELOPMENT	F.H.W.A. APPROVAL
	12-11-2017 PLAN DATE	R-28-J SHEET 1 OF 7

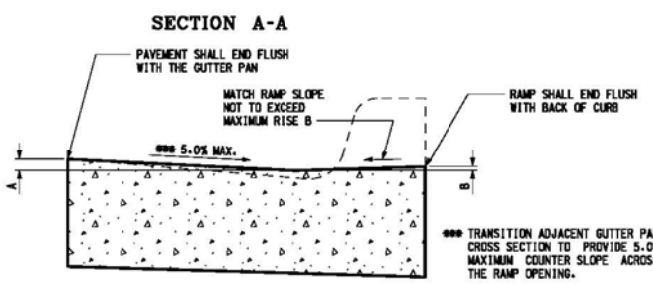
• MAXIMUM LANDING SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.
 •• MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



SIDEWALK RAMP TYPE RF
(ROLLED / FLARED SIDES)



CURB TYPE	MAXIMUM RISE (INCHES)	
	A	B
B1	3/4	1
B2	3/4	1
B3	3/4	1
D1	3/4	1
D2	3/4	1
D3	3/4	1
C1	1/2	1/2
C2	1/2	1/2
C3	3/4	1/2
C4	3/4	1/2
C5	1	1/2
C6	1	1/2
F1	1/2	1/2
F2	1/2	1/2
F3	3/4	1/2
F4	3/4	1/2
F5	1	1/2
F6	1	1/2



SECTION THROUGH CURB RAMP OPENING
(TYPICAL ALL RAMP TYPES)

	DEPARTMENT DIRECTOR Kirk T. Steudle	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR
	APPROVED BY: _____ DIRECTOR, BUREAU OF DEVELOPMENT	SIDEWALK RAMP AND DETECTABLE WARNING DETAILS
	APPROVED BY: _____ DIRECTOR, BUREAU OF DEVELOPMENT	F.H.W.A. APPROVAL
	12-11-2017 PLAN DATE	R-28-J SHEET 2 OF 7

AS-LET PLAN REVISIONS					
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE

VERT. (FT) 0 1 2 HORZ. (FT) 0 1 2

DATE:	CS:	DRAWING SHEET
DESIGN UNIT:	JN:	
TSC:		
FILE:		

EXISTING

FOR INFORMATION ONLY

DO NOT WORK FROM THIS SHEET. THE INFORMATION SHOWN HERE IS FOR REFERENCE ONLY. NO PAY ITEMS ARE SHOWN.

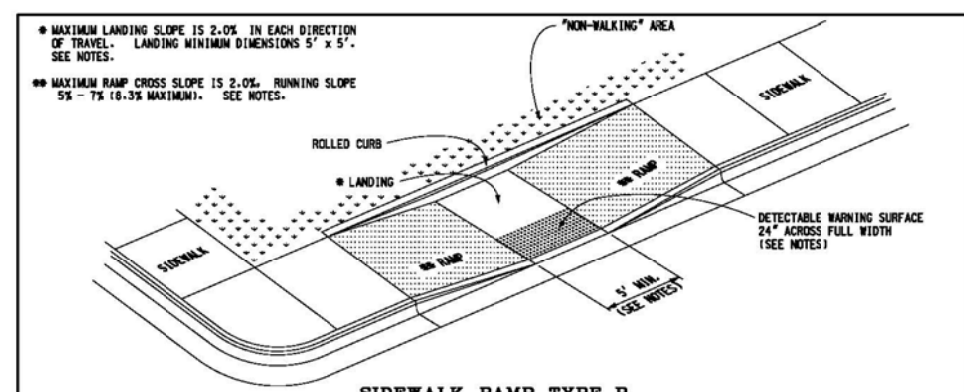
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PLAN							
GRADE							
ESTIMATE							
FINAL							

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

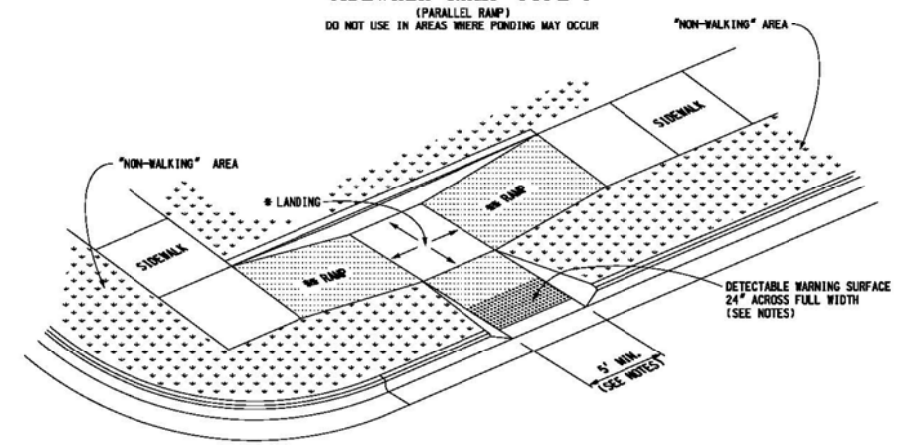
BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

ROAD - DETAILS

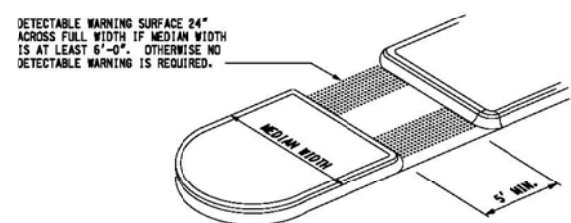
SHEET 12 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018



SIDEWALK RAMP TYPE P
(PARALLEL RAMP)
DO NOT USE IN AREAS WHERE PONDING MAY OCCUR

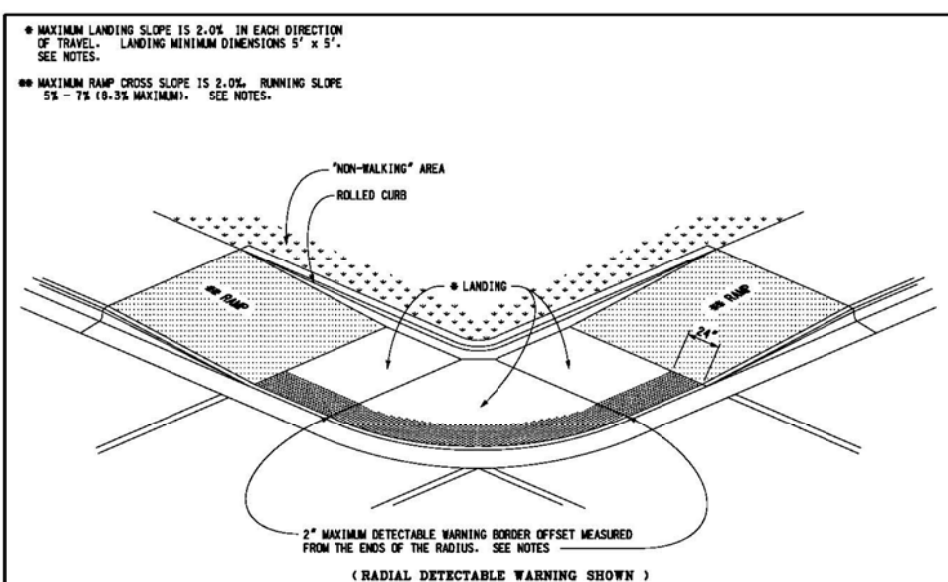


SIDEWALK RAMP TYPE C
(COMBINATION RAMP)

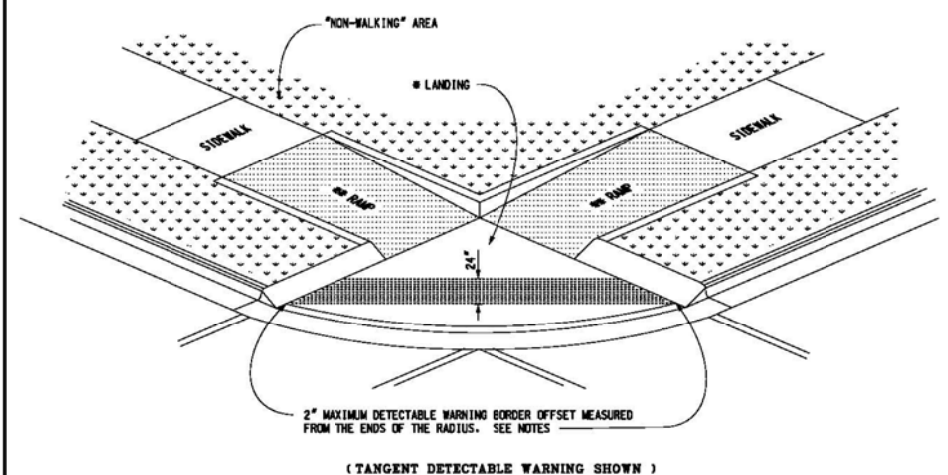


SIDEWALK RAMP TYPE M
(MEDIAN ISLAND)

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
**SIDEWALK RAMP AND
DETECTABLE WARNING DETAILS**
12-11-2017
F.R.W.A. APPROVAL PLAN DATE R-28-J SHEET 3 OF 7



(RADIAL DETECTABLE WARNING SHOWN)

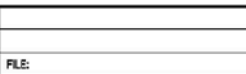


(TANGENT DETECTABLE WARNING SHOWN)

SIDEWALK RAMP TYPE D
(DEPRESSED CORNER)
USE ONLY WHEN INDEPENDENT DIRECTIONAL RAMPS CAN NOT BE CONSTRUCTED FOR EACH CROSSING DIRECTION

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
**SIDEWALK RAMP AND
DETECTABLE WARNING DETAILS**
12-11-2017
F.R.W.A. APPROVAL PLAN DATE R-28-J SHEET 4 OF 7

AS-LET PLAN REVISIONS							
NO.	DATE	AUTH	DESCRIPTION	NO.	DATE	AUTH	DESCRIPTION



DATE:	CS:
DESIGN UNIT:	JN:
TSC:	

DRAWING	SHEET

EXISTING

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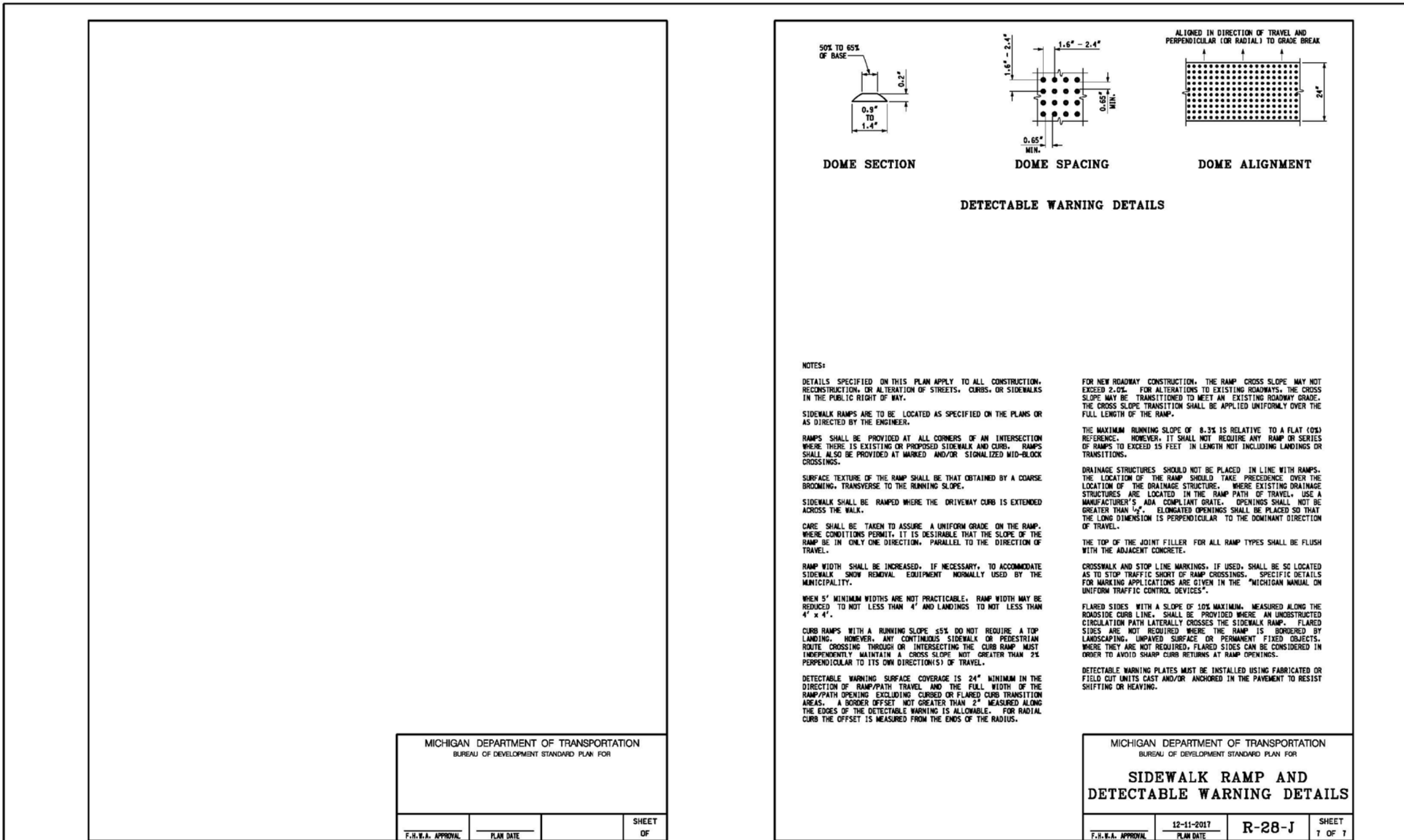
DESCRIPTION	DR	CHK	APP	DATE	FINAL	****	****

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

ROAD - DETAILS

SHEET 13 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018



NOTES:

DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.

SIDEWALK RAMP ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

RAMP SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMP SHALL ALSO BE PROVIDED AT MARKED AND/OR SIGNALIZED MID-BLOCK CROSSINGS.

SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE RUNNING SLOPE.

SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.

CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SNOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.

WHEN 5' MINIMUM WIDTHS ARE NOT PRACTICABLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND LANDINGS TO NOT LESS THAN 4' x 4'.

CURB RAMP WITH A RUNNING SLOPE ≤5% DO NOT REQUIRE A TOP LANDING. HOWEVER, ANY CONTINUOUS SIDEWALK OR PEDESTRIAN ROUTE CROSSING THROUGH OR INTERSECTING THE CURB RAMP MUST INDEPENDENTLY MAINTAIN A CROSS SLOPE NOT GREATER THAN 2% PERPENDICULAR TO ITS OWN DIRECTION(S) OF TRAVEL.

DETECTABLE WARNING SURFACE COVERAGE IS 24" MINIMUM IN THE DIRECTION OF RAMP/PATH TRAVEL AND THE FULL WIDTH OF THE RAMP/PATH OPENING EXCLUDING CURBED OR FLARED CURB TRANSITION AREAS. A BORDER OFFSET NOT GREATER THAN 2" MEASURED ALONG THE EDGES OF THE DETECTABLE WARNING IS ALLOWABLE. FOR RADIAL CURB THE OFFSET IS MEASURED FROM THE ENDS OF THE RADIUS.

FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2.0%. FOR ALTERATIONS TO EXISTING ROADWAYS, THE CROSS SLOPE MAY BE TRANSITIONED TO MEET AN EXISTING ROADWAY GRADE. THE CROSS SLOPE TRANSITION SHALL BE APPLIED UNIFORMLY OVER THE FULL LENGTH OF THE RAMP.

THE MAXIMUM RUNNING SLOPE OF 8.5% IS RELATIVE TO A FLAT (0%) REFERENCE. HOWEVER, IT SHALL NOT REQUIRE ANY RAMP OR SERIES OF RAMP TO EXCEED 15 FEET IN LENGTH NOT INCLUDING LANDINGS OR TRANSITIONS.

DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMP. THE LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER THE LOCATION OF THE DRAINAGE STRUCTURE. WHERE EXISTING DRAINAGE STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A MANUFACTURER'S ADA COMPLIANT GRATE. OPENINGS SHALL NOT BE GREATER THAN 1/2". ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.

CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE ROADSIDE CURB LINE, SHALL BE PROVIDED WHERE AN UNOBSTRUCTED CIRCULATION PATH LATERALLY CROSSES THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE RAMP IS BORDERED BY LANDSCAPING, UNPAVED SURFACE OR PERMANENT FIXED OBJECTS, WHERE THEY ARE NOT REQUIRED, FLARED SIDES CAN BE CONSIDERED IN ORDER TO AVOID SHARP CURB RETURNS AT RAMP OPENINGS.

DETECTABLE WARNING PLATES MUST BE INSTALLED USING FABRICATED OR FIELD CUT UNITS CAST AND/OR ANCHORED IN THE PAVEMENT TO RESIST SHIFTING OR HEAVING.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

F.H.V.A. APPROVAL _____ PLAN DATE _____ SHEET OF _____

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

**SIDEWALK RAMP AND
DETECTABLE WARNING DETAILS**

F.H.V.A. APPROVAL _____ 12-11-2017 PLAN DATE R-28-J SHEET 7 OF 7

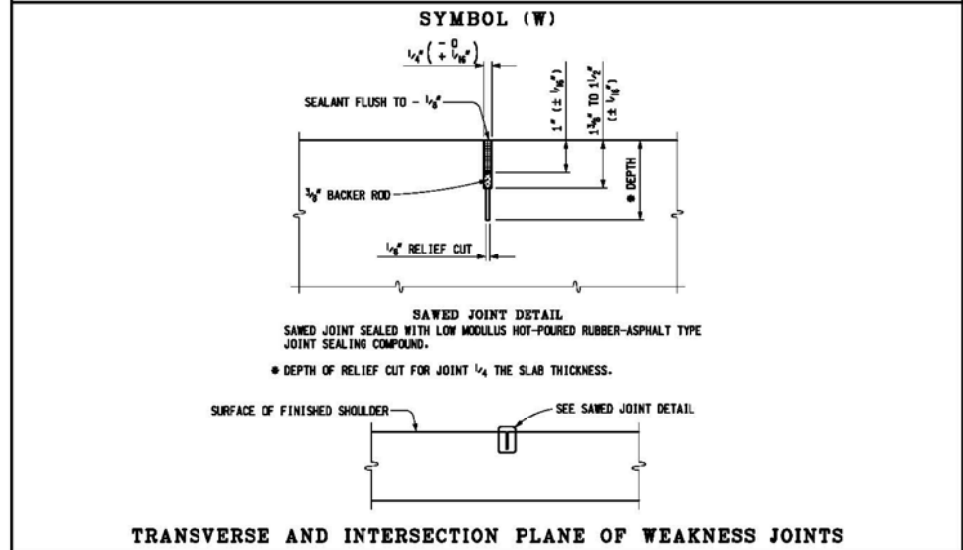
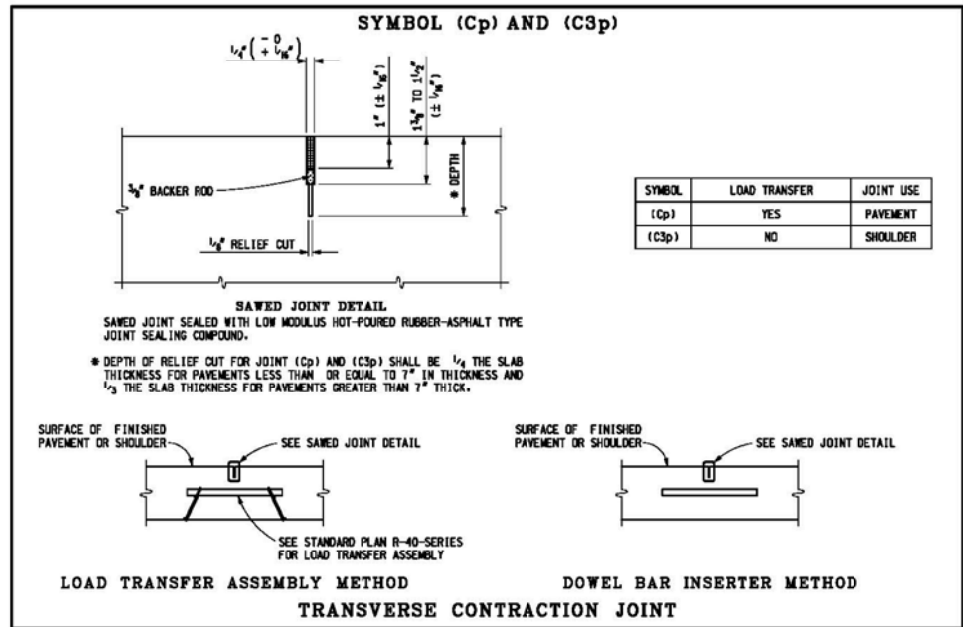
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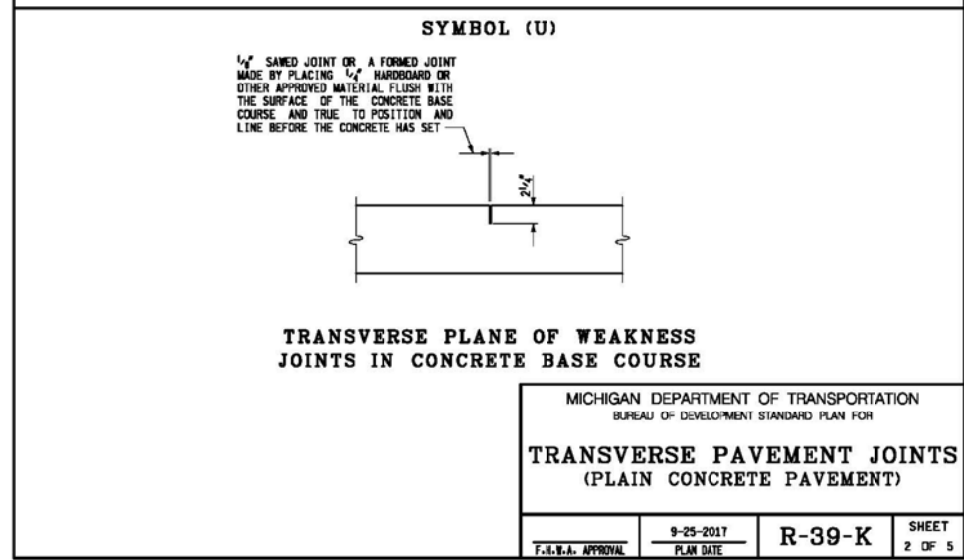
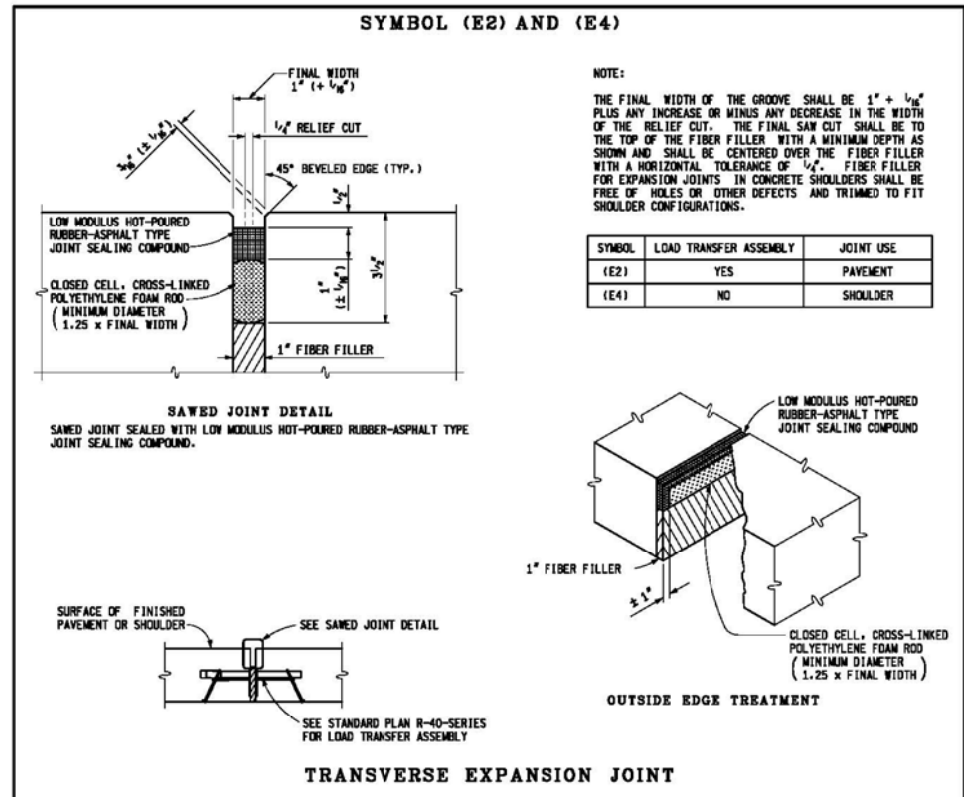
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PLAN	BY	CHECKED BY	APPROVED:	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	ROAD - DETAILS	SHEET 15 OF 65 SHEETS
GRADE							CONTRACT NO. PW-6985
ESTIMATE							ASSIGNMENT NO.
DESCRIPTION OR CHECK DATE	FINAL	****	****				DATE 03/23/2018



	DEPARTMENT DIRECTOR Kirk T. Steudle	MICHIGAN DEPARTMENT OF TRANSPORTATION BUREAU OF DEVELOPMENT STANDARD PLAN FOR
	APPROVED BY: _____ ENGINEER OF DELIVERY	TRANSVERSE PAVEMENT JOINTS (PLAIN CONCRETE PAVEMENT)
DRAWN BY: B.L.L.	APPROVED BY: _____ ENGINEER OF DEVELOPMENT	F.I.E.L.A. APPROVAL
CHECKED BY: V.K.P.		9-25-2017 PLAN DATE
		R-39-K
		SHEET 1 OF 5

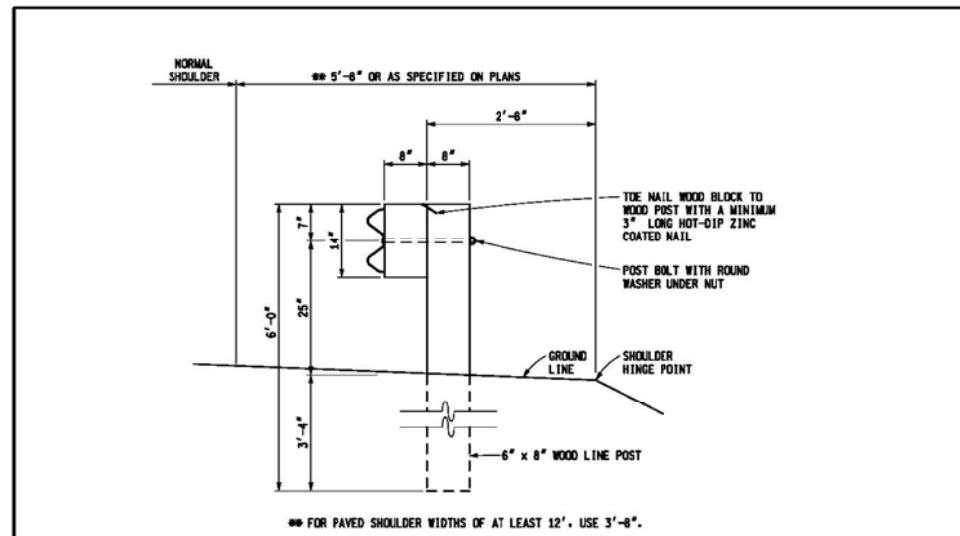


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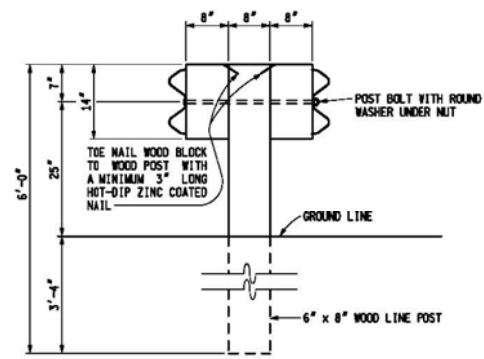
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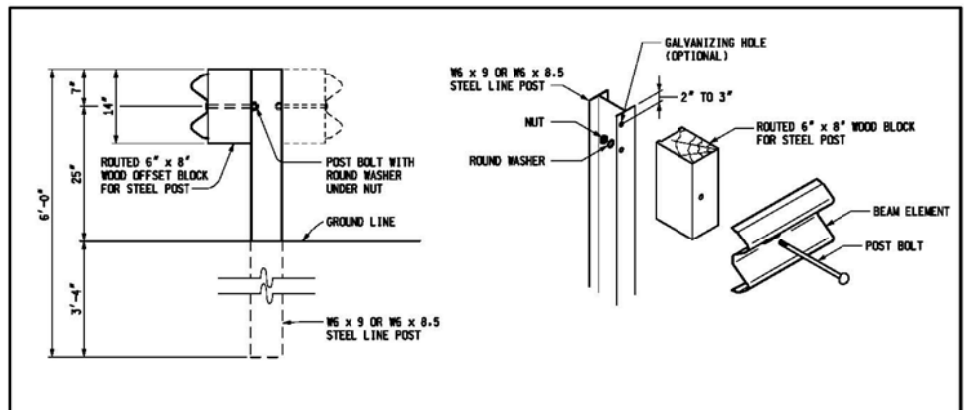
GUARDRAIL, TYPE MGS-8 (WOOD POST)



GUARDRAIL, TYPE MGS-8D (WOOD POST)

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
GUARDRAIL,
TYPES A, B, BD, T, TD,
MGS-8, & MGS-8D

F.H.V.A. APPROVAL _____ 7-26-2017 PLAN DATE R-60-J SHEET 7 OF 17



GUARDRAIL, TYPE MGS-8 (OR MGS-8D) (STEEL POST)

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
GUARDRAIL,
TYPES A, B, BD, T, TD,
MGS-8, & MGS-8D

F.H.V.A. APPROVAL _____ 7-26-2017 PLAN DATE R-60-J SHEET 8 OF 17

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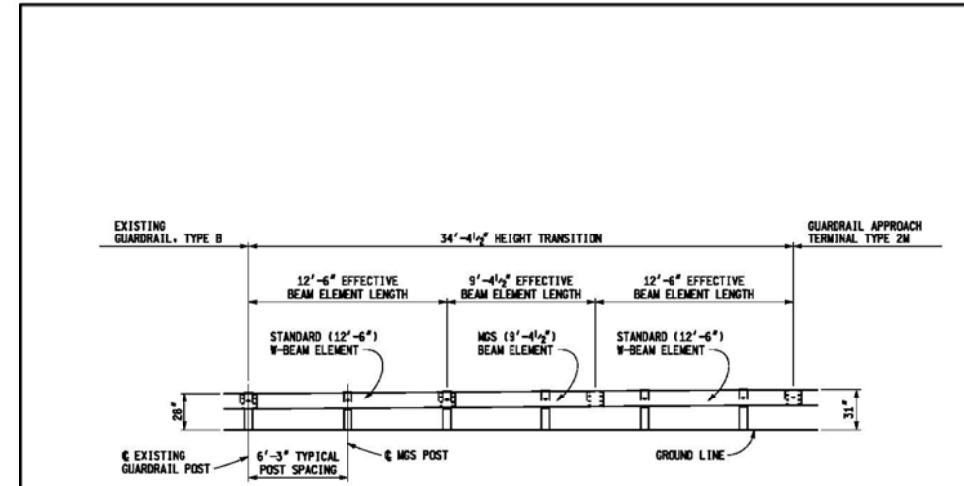
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CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

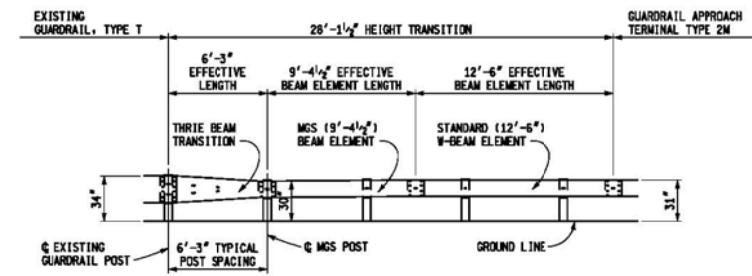
BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

ROAD - DETAILS

SHEET 22 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018



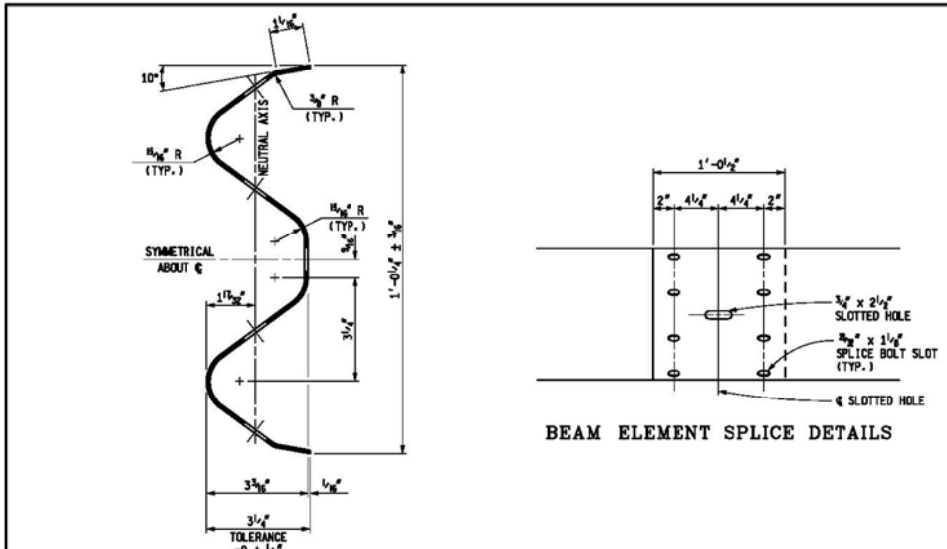
ELEVATION SHOWING TRANSITION DETAIL FOR CONNECTING GUARDRAIL, TYPE B TO GUARDRAIL APPROACH TERMINAL TYPE 2M



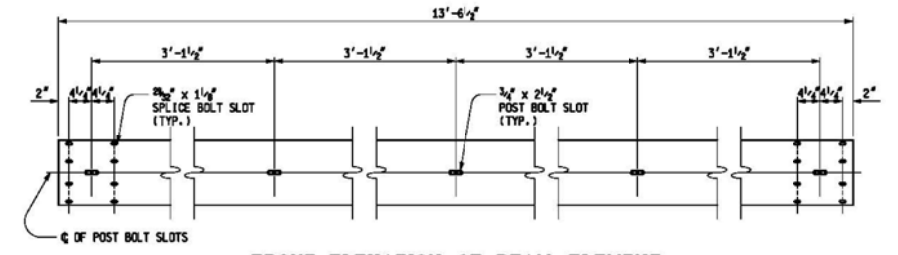
ELEVATION SHOWING TRANSITION DETAIL FOR CONNECTING GUARDRAIL, TYPE T TO GUARDRAIL APPROACH TERMINAL TYPE 2M

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
**GUARDRAIL,
TYPES A, B, BD, T, TD,
MGS-8, & MGS-8D**

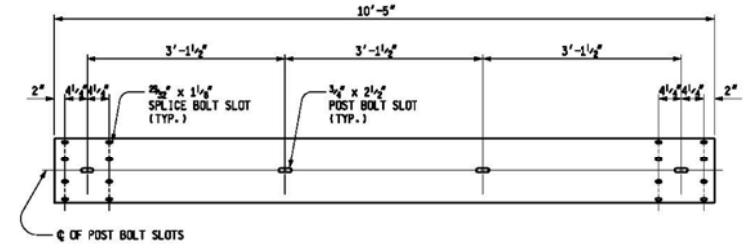
F.H.S.A. APPROVAL	7-26-2017 PLAN DATE	R-60-J	SHEET 11 OF 17
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SECTION THROUGH BEAM ELEMENT



FRONT ELEVATION OF BEAM ELEMENT



FRONT ELEVATION OF MGS (9'-4 1/2") BEAM ELEMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
**GUARDRAIL,
TYPES A, B, BD, T, TD,
MGS-8, & MGS-8D**

F.H.S.A. APPROVAL	7-26-2017 PLAN DATE	R-60-J	SHEET 12 OF 17
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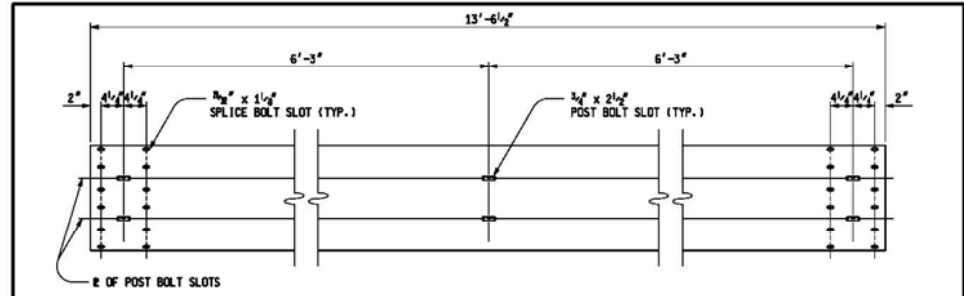
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CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

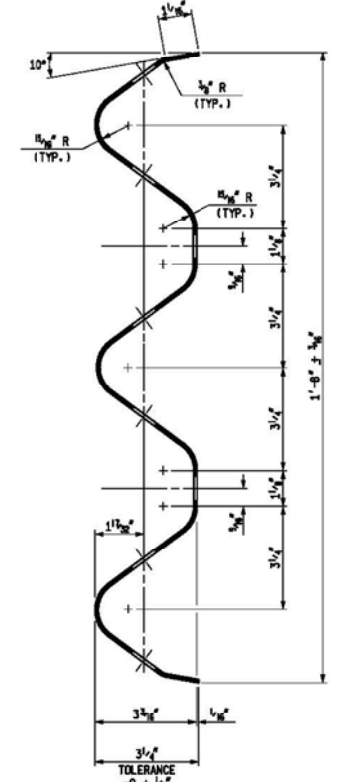
BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

ROAD - DETAILS

SHEET 24 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018



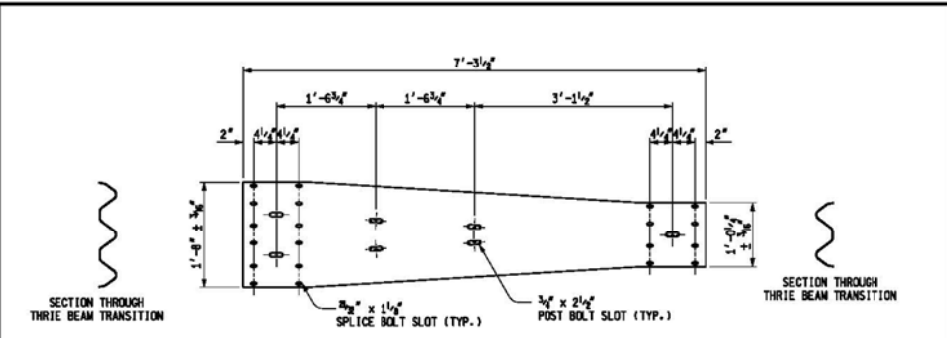
FRONT ELEVATION OF THRIE BEAM ELEMENT



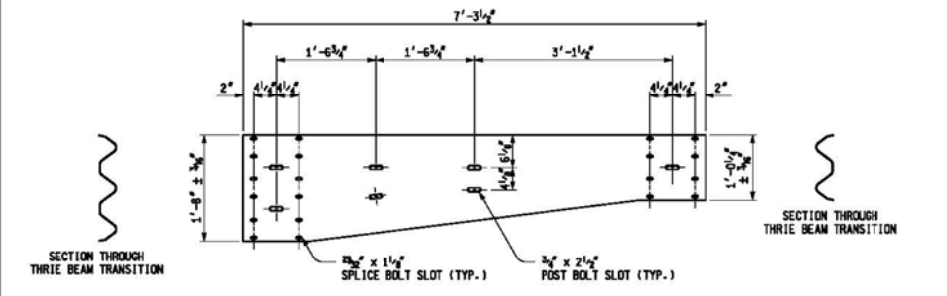
SECTION THROUGH THRIE BEAM ELEMENT
(FOR GUARDRAIL, TYPE T AND TD)

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
GUARDRAIL,
TYPES A, B, BD, T, TD,
MGS-8, & MGS-8D

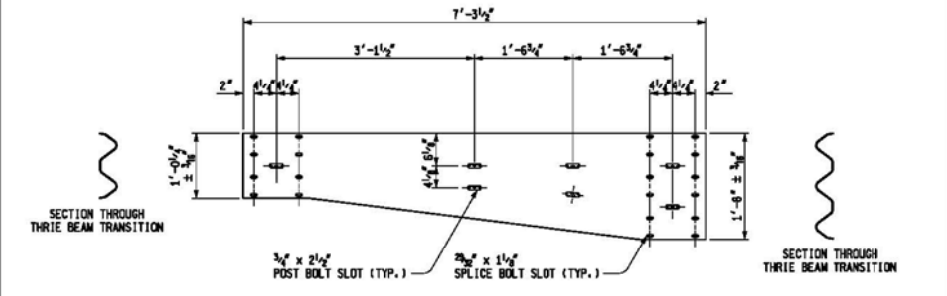
F.H.W.A. APPROVAL 7-26-2017 PLAN DATE R-60-J SHEET 13 OF 17



THRIE BEAM TRANSITION



AS YMMETRICAL THRIE BEAM TRANSITIONS
NOTE: ASYMMETRICAL TRANSITION TYPE WILL VARY BY LOCATION DEPENDING ON GUARDRAIL LAYOUT



MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR
GUARDRAIL,
TYPES A, B, BD, T, TD,
MGS-8, & MGS-8D

F.H.W.A. APPROVAL 7-26-2017 PLAN DATE R-60-J SHEET 14 OF 17

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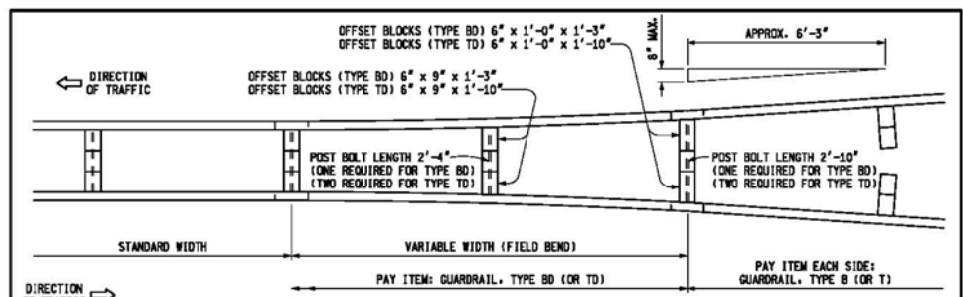
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CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

ROAD - DETAILS

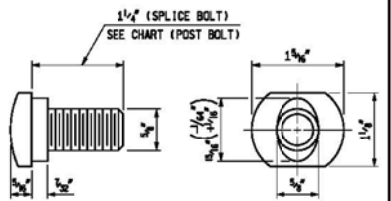
SHEET 25 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018



DETAIL SHOWING TRANSITION FROM GUARDRAIL, TYPE B (OR TYPE T) TO GUARDRAIL, TYPE BD (OR TYPE TD)

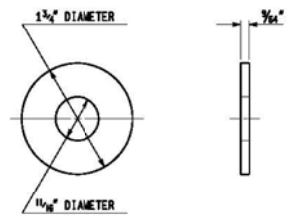
POST BOLTS, SPLICE BOLTS AND WASHERS AT BEAM ELEMENT SPLICE POSTS AND AT INTERMEDIATE POSTS						
GUARDRAIL TYPE	POST	OFFSET BLOCK	POST BOLTS		SPLICE BOLTS (1/4" LONG) (NO. REQ'D)	WASHERS (ROUND) (NO. REQ'D)
			NO. REQ'D	LENGTH		
A	WOOD	N/A	1	9 1/2"	8	1
	STEEL	N/A	1	2"		
B	WOOD	WOOD	1	18"	8	1
	STEEL	WOOD	1	9 1/2"		
BD	WOOD	WOOD	1	26 1/2"	16	2
	STEEL	WOOD	2	9 1/2"		
T	WOOD	WOOD	2	18"	12	2
	STEEL	WOOD	2	9 1/2"		
TD	WOOD	WOOD	2	26 1/2"	24	4
	STEEL	WOOD	4	9 1/2"		

MINIMUM POST BOLT THREAD LENGTH	
BOLT LENGTH	MINIMUM THREAD LENGTH
9 1/2"	1 1/4"
18"	2 1/2"
26 1/2"	3"

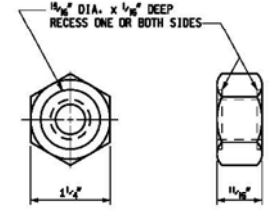


SPLICE BOLT AND POST BOLT

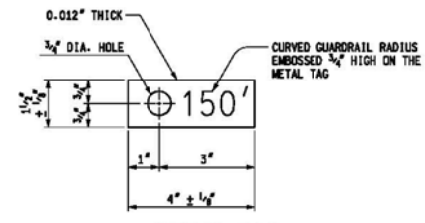
THREE BEAM TRANSITIONS REQUIRE 20 SPLICE BOLTS EACH (12 ON TYPE T END AND 8 ON TYPE B END).
 * EXCEPT AS SPECIFIED ON DETAIL SHOWING TRANSITION FROM GUARDRAIL, TYPE B (OR TYPE T) TO GUARDRAIL, TYPE BD (OR TYPE TD), POST BOLTS SHALL NOT EXTEND MORE THAN 1/2" BEYOND NUT.



ROUND WASHER



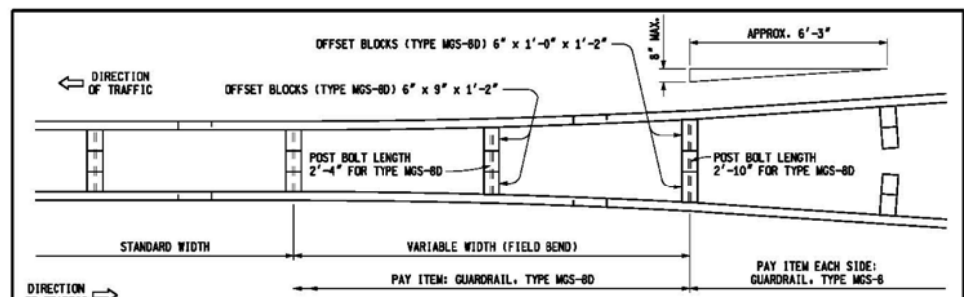
NUT



METAL TAG FOR CURVED GUARDRAIL WITH RADIUS OF 150' OR LESS

MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF DEVELOPMENT STANDARD PLAN FOR
GUARDRAIL,
 TYPES A, B, BD, T, TD,
 MGS-8, & MGS-8D

F.I.E.L. APPROVAL 7-26-2017 PLAN DATE R-60-J SHEET 15 OF 17



DETAIL SHOWING TRANSITION FROM GUARDRAIL, TYPE MGS-B TO GUARDRAIL, TYPE MGS-8D

POST BOLTS, SPLICE BOLTS AND WASHERS AT BEAM ELEMENT SPLICE POSTS AND AT INTERMEDIATE POSTS						
GUARDRAIL TYPE	POST	OFFSET BLOCK	POST BOLTS		SPLICE BOLTS (1/4" LONG) (NO. REQ'D)	WASHERS (ROUND) (NO. REQ'D)
			NO. REQ'D	LENGTH		
MGS-B	WOOD	WOOD	1	18"	8	1
	STEEL	WOOD	1	9 1/2"		
MGS-8D	WOOD	WOOD	1	26 1/2"	16	2
	STEEL	WOOD	2	9 1/2"		

MINIMUM POST BOLT THREAD LENGTH	
BOLT LENGTH	MINIMUM THREAD LENGTH
9 1/2"	1 1/4"
18"	2 1/2"
26 1/2"	3"

THREE BEAM TRANSITIONS REQUIRE 20 SPLICE BOLTS EACH (12 ON TYPE T END AND 8 ON TYPE MGS END).

* EXCEPT AS SPECIFIED ON DETAIL SHOWING TRANSITION FROM GUARDRAIL, TYPE MGS-B TO GUARDRAIL, TYPE MGS-8D POST BOLTS SHALL NOT EXTEND MORE THAN 1/2" BEYOND NUT.

MICHIGAN DEPARTMENT OF TRANSPORTATION
 BUREAU OF DEVELOPMENT STANDARD PLAN FOR
GUARDRAIL,
 TYPES A, B, BD, T, TD,
 MGS-8, & MGS-8D

F.I.E.L. APPROVAL 7-26-2017 PLAN DATE R-60-J SHEET 16 OF 17

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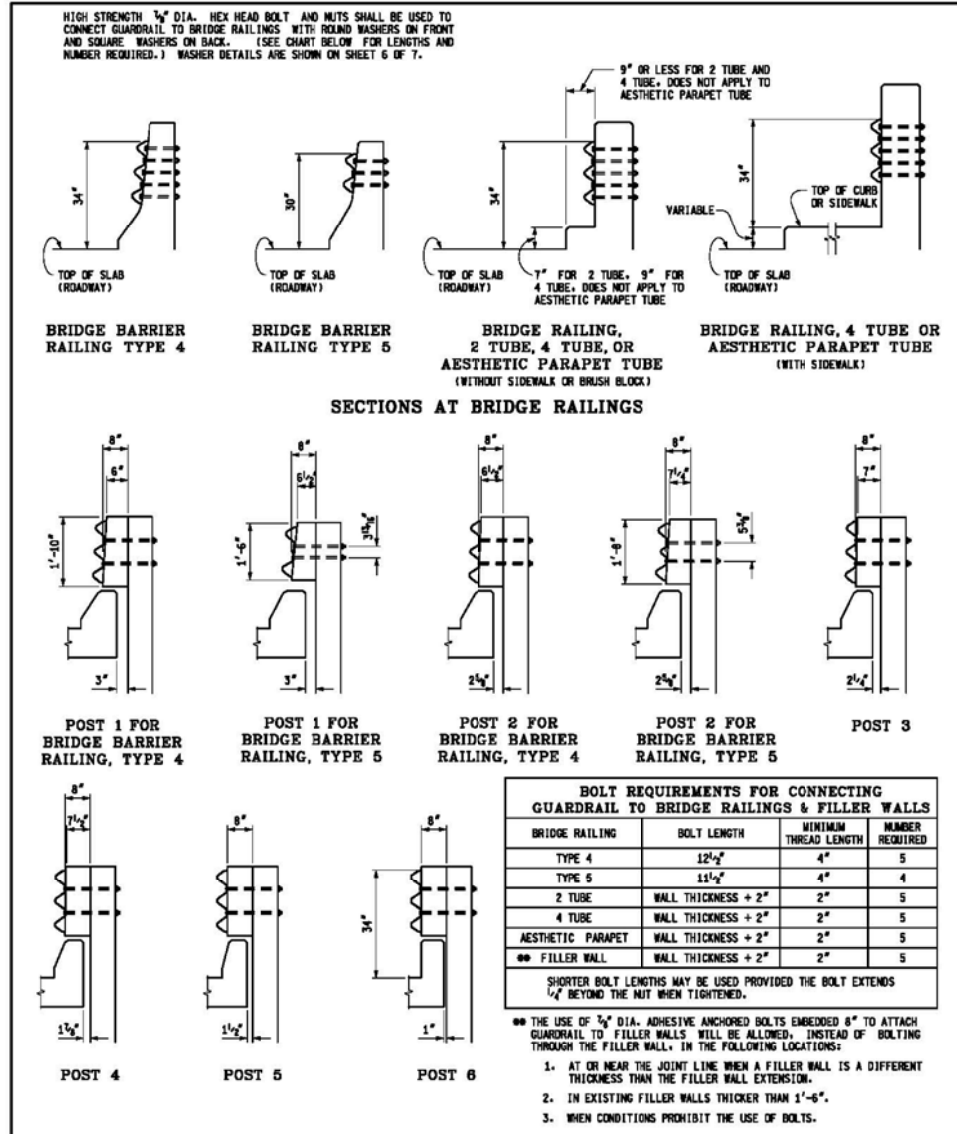
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CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

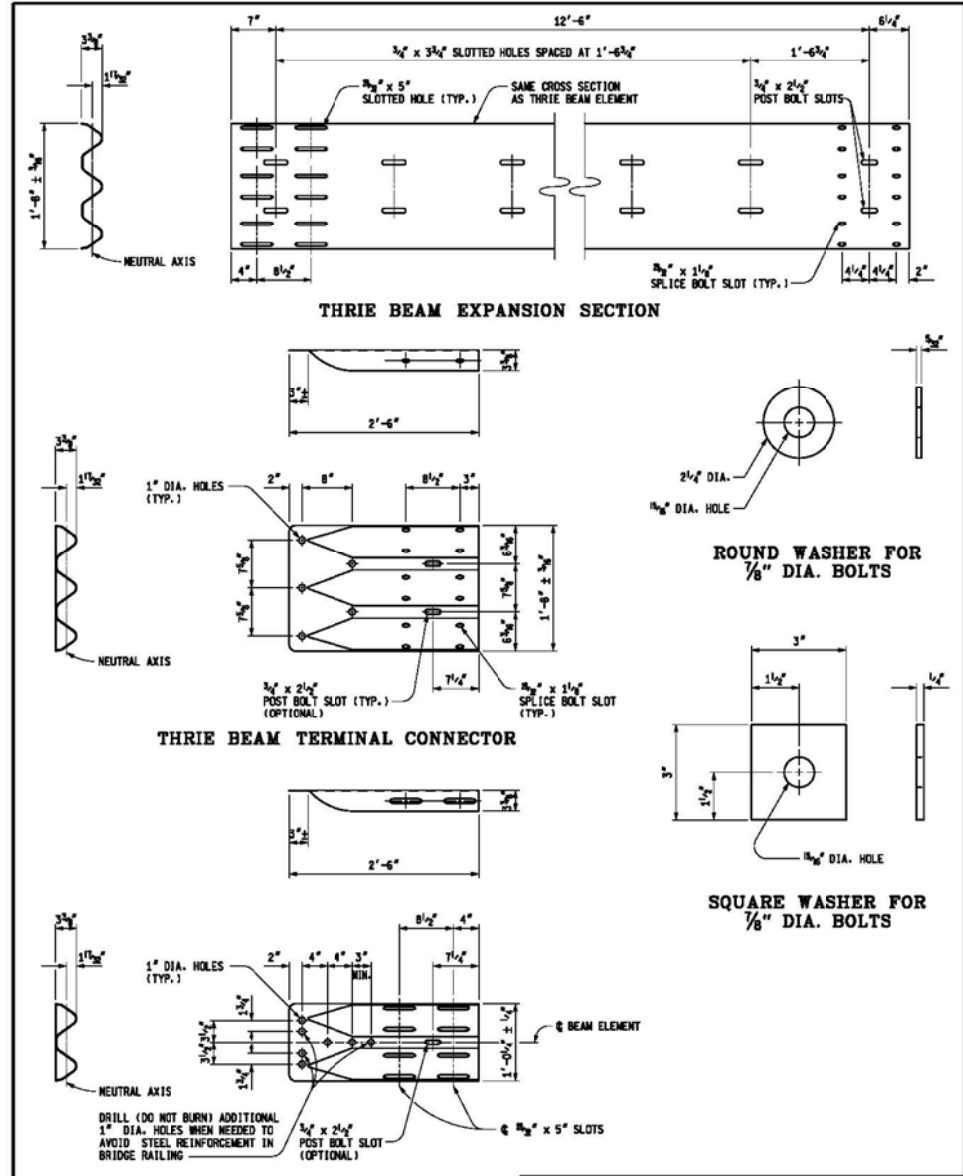
BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.
 ROAD - DETAILS
 SHEET 26 OF 65 SHEETS
 CONTRACT NO. PW-6985
 ASSIGNMENT NO. _____
 DATE 03/23/2018



MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

GUARDRAIL ANCHORAGE, BRIDGE, DETAILS

8-9-2017 PLAN DATE R-67-G SHEET 5 OF 7



MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

GUARDRAIL ANCHORAGE, BRIDGE, DETAILS

8-9-2017 PLAN DATE R-67-G SHEET 6 OF 7

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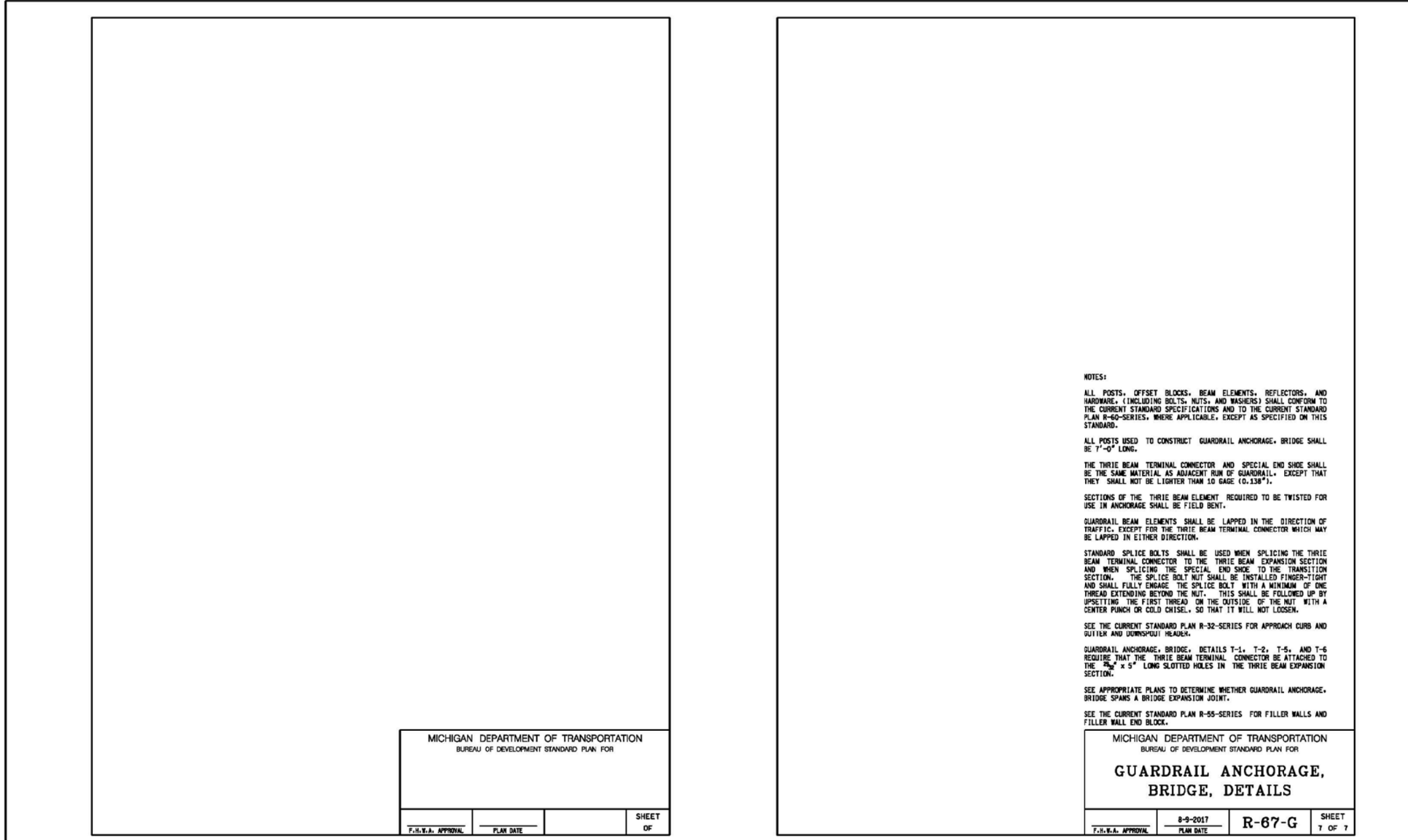
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BENCH MARKS ELEV



NOTES:

ALL POSTS, OFFSET BLOCKS, BEAM ELEMENTS, REFLECTORS, AND HARDWARE, (INCLUDING BOLTS, NUTS, AND WASHERS) SHALL CONFORM TO THE CURRENT STANDARD SPECIFICATIONS AND TO THE CURRENT STANDARD PLAN R-60-SERIES, WHERE APPLICABLE, EXCEPT AS SPECIFIED ON THIS STANDARD.

ALL POSTS USED TO CONSTRUCT GUARDRAIL ANCHORAGE, BRIDGE SHALL BE 7'-0" LONG.

THE THRIE BEAM TERMINAL CONNECTOR AND SPECIAL END SHOE SHALL BE THE SAME MATERIAL AS ADJACENT RUN OF GUARDRAIL, EXCEPT THAT THEY SHALL NOT BE LIGHTER THAN 10 GAGE (0.138").

SECTIONS OF THE THRIE BEAM ELEMENT REQUIRED TO BE TWISTED FOR USE IN ANCHORAGE SHALL BE FIELD BENT.

GUARDRAIL BEAM ELEMENTS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC, EXCEPT FOR THE THRIE BEAM TERMINAL CONNECTOR WHICH MAY BE LAPPED IN EITHER DIRECTION.

STANDARD SPLICE BOLTS SHALL BE USED WHEN SPLICING THE THRIE BEAM TERMINAL CONNECTOR TO THE THRIE BEAM EXPANSION SECTION AND WHEN SPLICING THE SPECIAL END SHOE TO THE TRANSITION SECTION. THE SPLICE BOLT NUT SHALL BE INSTALLED FINGER-TIGHT AND SHALL FULLY ENGAGE THE SPLICE BOLT WITH A MINIMUM OF ONE THREAD EXTENDING BEYOND THE NUT. THIS SHALL BE FOLLOWED UP BY UPSETTING THE FIRST THREAD ON THE OUTSIDE OF THE NUT WITH A CENTER PUNCH OR COLD CHISEL, SO THAT IT WILL NOT LOOSEN.

SEE THE CURRENT STANDARD PLAN R-32-SERIES FOR APPROACH CURB AND GUTTER AND DOWNSPOUT HEADS.

GUARDRAIL ANCHORAGE, BRIDGE, DETAILS T-1, T-2, T-5, AND T-6 REQUIRE THAT THE THRIE BEAM TERMINAL CONNECTOR BE ATTACHED TO THE 2 1/2" x 5" LONG SLOTTED HOLES IN THE THRIE BEAM EXPANSION SECTION.

SEE APPROPRIATE PLANS TO DETERMINE WHETHER GUARDRAIL ANCHORAGE, BRIDGE SPANS A BRIDGE EXPANSION JOINT.

SEE THE CURRENT STANDARD PLAN R-55-SERIES FOR FILLER WALLS AND FILLER WALL END BLOCK.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

F.H.W.A. APPROVAL	PLAN DATE	SHEET OF
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MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN FOR

GUARDRAIL ANCHORAGE, BRIDGE, DETAILS

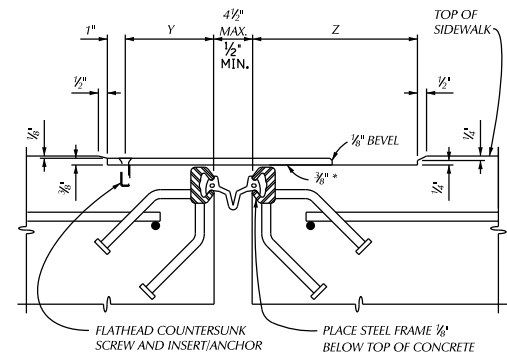
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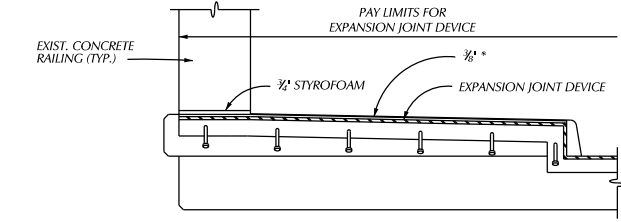
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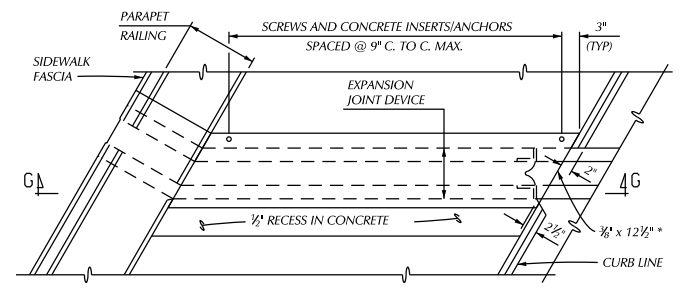
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SECTION THROUGH EXPANSION JOINT AND COVER PLATE



SECTION G - G



PLAN AT PARAPET RAILING WITH SIDEWALK

TOTAL TRAVEL *	PLATE WIDTH	Y	Z
2" - 3"	12"	3 1/2"	7 1/2"

TOTAL TRAVEL *	PLATE WIDTH	Y	Z
1 1/2" - 3 1/2"	10"	2 1/2"	7"

* SEE TABLE FOR MINIMUM TOTAL TRAVEL ALONG CENTERLINE OF BRIDGE

STRUCTURE NUMBER	ANGLE OF CROSSING TO NEAREST 10°	LOCATION OF JOINT	MIN. TOT. TRAVEL ALONG CENTERLINE OF BRIDGE	REQUIRED LENGTH OF EXPANSION JOINT DEVICE
R01	49°	PIER 1		103'-5"
R01	49°	PIER 3		103'-5"

ITEM	UNIT	AMOUNT
EXPANSION JOINT DEVICE	FT	207'-0"
EXPANSION JOINT DEVICE COVER PLATE	FT	86'-0"

SIDEWALK SECTIONS

ALL STEEL FOR COVER PLATE SHALL BE AASHTO M270, GRADE 36, MEET THE REQUIREMENTS OF ASTM A786 AND GALVANIZED (ASTM A123).

USE ASTM F 593 (TYPE 304) STAINLESS STEEL 1/2" OR 3/4" DIAMETER FLATHEAD COUNTERSUNK SCREWS WITH 3/4" OR 1/2" DIAMETER INSERTS OR FLUSH TYPE EXPANSION ANCHORS WITH A MINIMUM ALLOWABLE OR SAFE WORKING TENSION LOAD CAPACITY OF 1200 POUNDS.

CAST CURBS AND SIDEWALKS WITH 1/8" SLIDING PLATES IN PLACE TO INSURE THAT INSERTS AND SCREWS ARE ALIGNED PROPERLY. APPLY BOND BREAKER TO SLIDING PLATES PRIOR TO INSTALLATION.

FORM CONCRETE RECESS AREA IN SIDEWALK AND GRIND TO PROVIDE SMOOTH SURFACE. TOOL OR GRIND CONCRETE EDGES TO 1/4" RADIUS. APPLY ONE COAT OF EPOXY RESIN ADHESIVE TO ALLOW BENT SLIDING PLATE TO MOVE FREELY WITHOUT FRICTION. CARE SHALL BE TAKEN SO THAT NO ADHESIVE COMES IN CONTACT WITH ANY PART OF THE EXPANSION JOINT DEVICE OR GLAND. REMOVE ANY FOREIGN PARTICLES FROM THE SURFACE PRIOR TO INSTALLING PLATES.

INSTALL PLATES SO THAT THE SCREWS AND INSERTS ARE SET ON THE HIGH SIDE OF LONGITUDINAL SIDEWALK GRADE.

THE COST OF ALL MATERIALS AND LABOR REQUIRED FOR PROPER INSTALLATION OF THE COVER PLATE IS INCLUDED IN THE PAYMENT FOR THE EXPANSION JOINT DEVICE COVER PLATE.

NOTES:

JOINT TYPES

THE EXPANSION JOINT DEVICE SHALL BE OF A TYPE THAT INCLUDES A CONTINUOUS NEOPRENE (OR EQUIVALENT) SEAL ACROSS THE DECK. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR HAS THE OPTION OF USING ANY OF THE DEVICES LISTED BELOW:

DEVICE	MANUFACTURER
WABO STRIP SEAL - TYPE M	WATSON-BOWMAN & ACME, INC.
WABO STRIP SEAL - TYPE A	WATSON-BOWMAN & ACME, INC.
STEEFLEX-SSA2	D.S. BROWN
STEEFLEX-SSCM	D.S. BROWN
ONFLEX-40 SS	STRUCTURAL RUBBER PRODUCTS CO.
ONFLEX-40 SSA	STRUCTURAL RUBBER PRODUCTS CO.

THE MODEL OF THE JOINT TYPE SELECTED SHALL BE SUITABLE TO ACCOMMODATE THE TOTAL MOVEMENT NOTED ON THE PLANS.

COMPLETE WORKING DRAWINGS OF ALL DETAILS OF FABRICATION OF THE EXPANSION JOINT DEVICE SHALL BE SUBMITTED FOR REVIEW IN ACCORDANCE WITH STANDARD SPECIFICATION 104.02. THIS REQUIREMENT IS WAIVED FOR EXPANSION JOINT DEVICES FOR WHICH A SET OF STANDARD INSTALLATION DETAILS HAS BEEN APPROVED. STANDARD INSTALLATION DETAILS CAN BE OBTAINED FROM THE DESIGN DIVISION.

FABRICATION AND INSTALLATION

REMOVE SHIPPING BOLTS PRIOR TO PLACEMENT OF CONCRETE.

THE EXPANSION JOINT SHALL BE SHOP FABRICATED TO CONFORM TO THE CONTOUR OF THE BRIDGE DECK, BARRIERS, ETC. IT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS SUBJECT TO NOTES HEREIN AND THE APPROVAL OF THE ENGINEER.

THE DECK REINFORCING STEEL TO STEEL FRAME ANCHORS TO MAXIMUM EXTENT PRACTICABLE WITHOUT DAMAGING GALVANIZED OR EPOXY COATINGS.

THE TOP OF THE EXPANSION JOINT DEVICE SHALL BE SET 1/2" - 3/8" BELOW THE CONCRETE SLAB (PAVEMENT).

THE STEEL ANCHORAGE FOR STRIP SEAL GLANDS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SUBSECTION 707.03C.17 OF THE STANDARD SPECIFICATIONS.

THE AREA OF THE STEEL ANCHORAGE AND SEALING GLAND WHICH WILL BE IN CONTACT WITH A SEALANT, OR LUBRICANT-ADHESIVE SHALL BE CLEANED WITH TOLUENE OR OTHER APPROVED SOLVENT.

IN THE EVENT THAT SPlicing IS REQUIRED OF THE SEALING GLAND, IT SHALL BE SPliced BY AN APPROVED METHOD (SUCH AS COLD VULCANIZATION) BY A TRAINED REPRESENTATIVE OF THE MANUFACTURER.

DETAILS AT CURBS OR BARRIERS

THE DETAILS ON THIS SHEET SHOW AN APPROVED MEANS OF TERMINATING THE EXPANSION JOINT DEVICE AT CURBS OR BARRIERS. VARIATIONS OR ALTERNATIVE SCHEMES WILL BE CONSIDERED AND MAY BE USED IF APPROVED BY THE ENGINEER.

MATERIALS

THE COST OF ALL MATERIALS AND LABOR REQUIRED FOR PROPER INSTALLATION OF THE EXPANSION JOINT AND THE TERMINAL ASSEMBLIES AT THE CURBS, SIDEWALKS, OR BARRIERS IS INCLUDED IN THE PAYMENT FOR THE EXPANSION JOINT DEVICE.

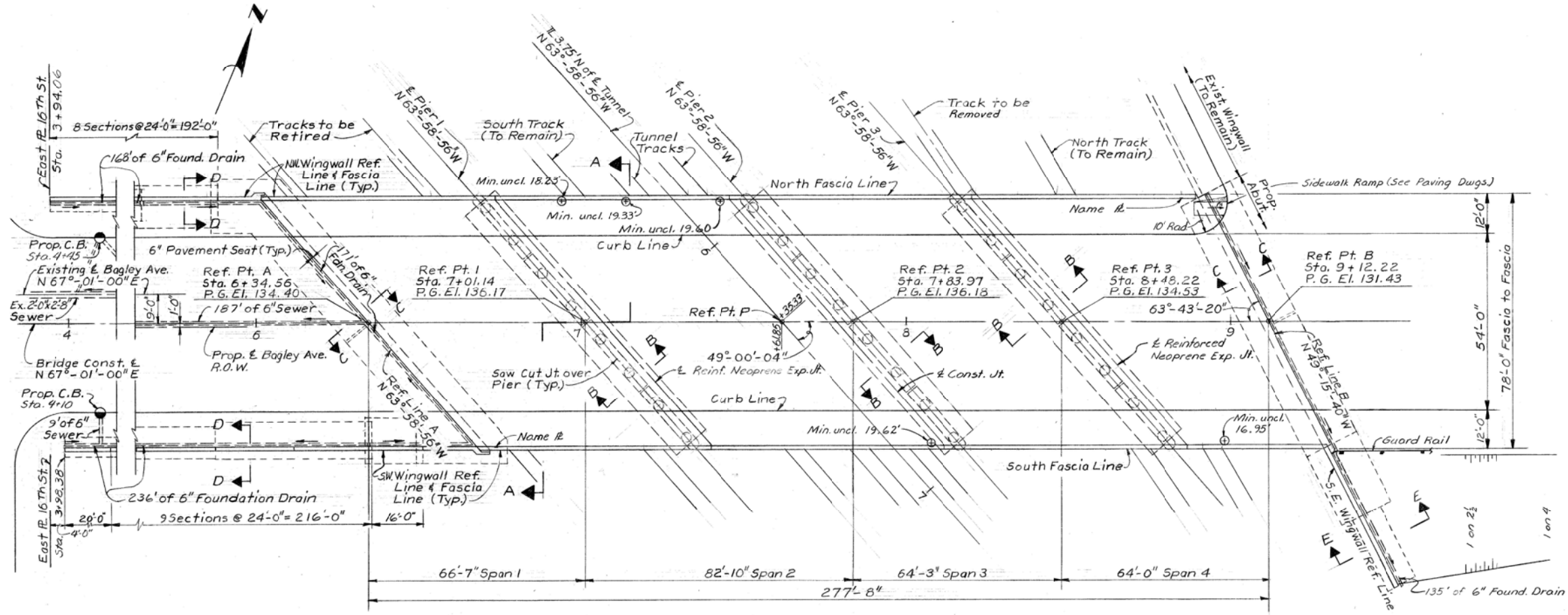
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	PLAN		
	GRADE		
	ESTIMATE		
	DESCRIPTION	OR CHECK DATE	FINAL *****
	REVISIONS		

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

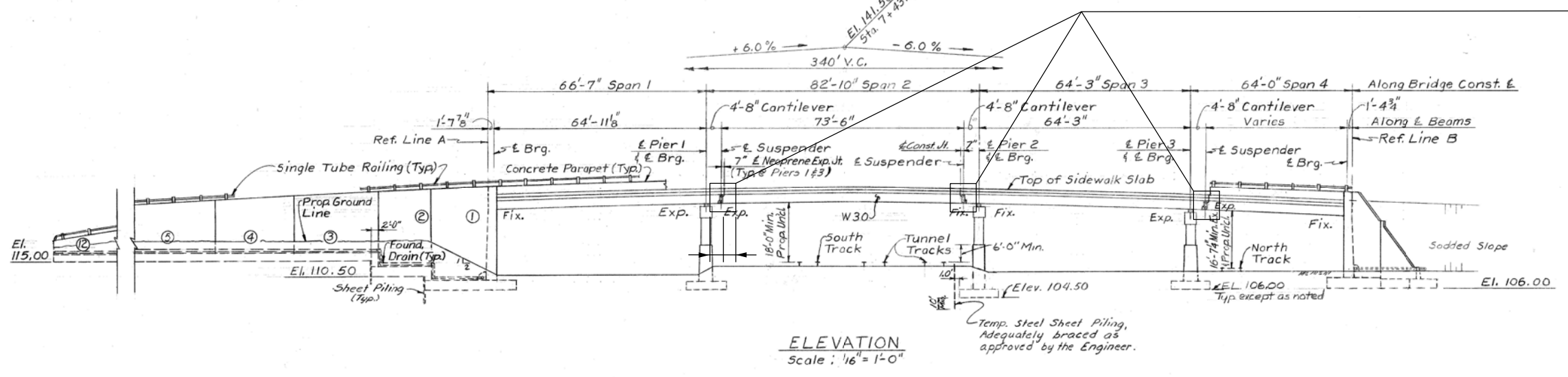
BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

EXPANSION JOINT DETAILS

SHEET **32** OF 65 SHEETS
CONTRACT NO. **PW-6985**
ASSIGNMENT NO.
DATE **03/23/2018**



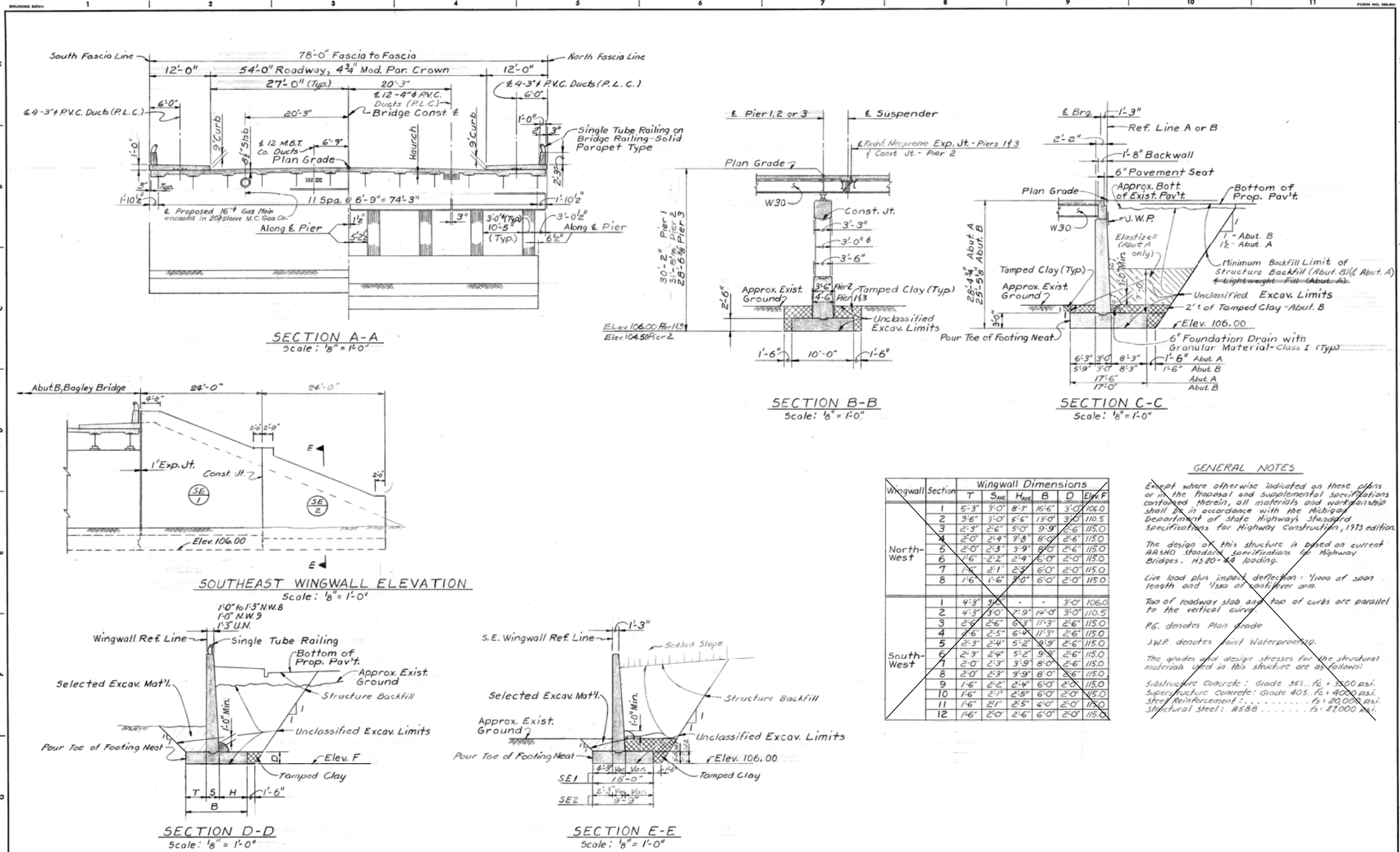
PLAN
Scale: 1/16" = 1'-0"



ELEVATION
Scale: 1/16" = 1'-0"

PW-6985
PROPOSED WORK: P & H REPLACEMENT, JOINT REPLACEMENT, SHALLOW OVERLAY, STEEL PAINTING, SUBSTRUCTURE & SUPERSTRUCTURE REPAIR, APPROACH WORK AND MAINTAIN TRAFFIC

DESCRIPTION		BY	CHECKED BY	APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	SHEET 33 OF 40 SHEETS
REVISIONS							CONTRACT NO. PW-6985
FINAL						GENERAL PLAN OF STRUCTURE	ASSIGNMENT NO.
							DATE 03/23/2018



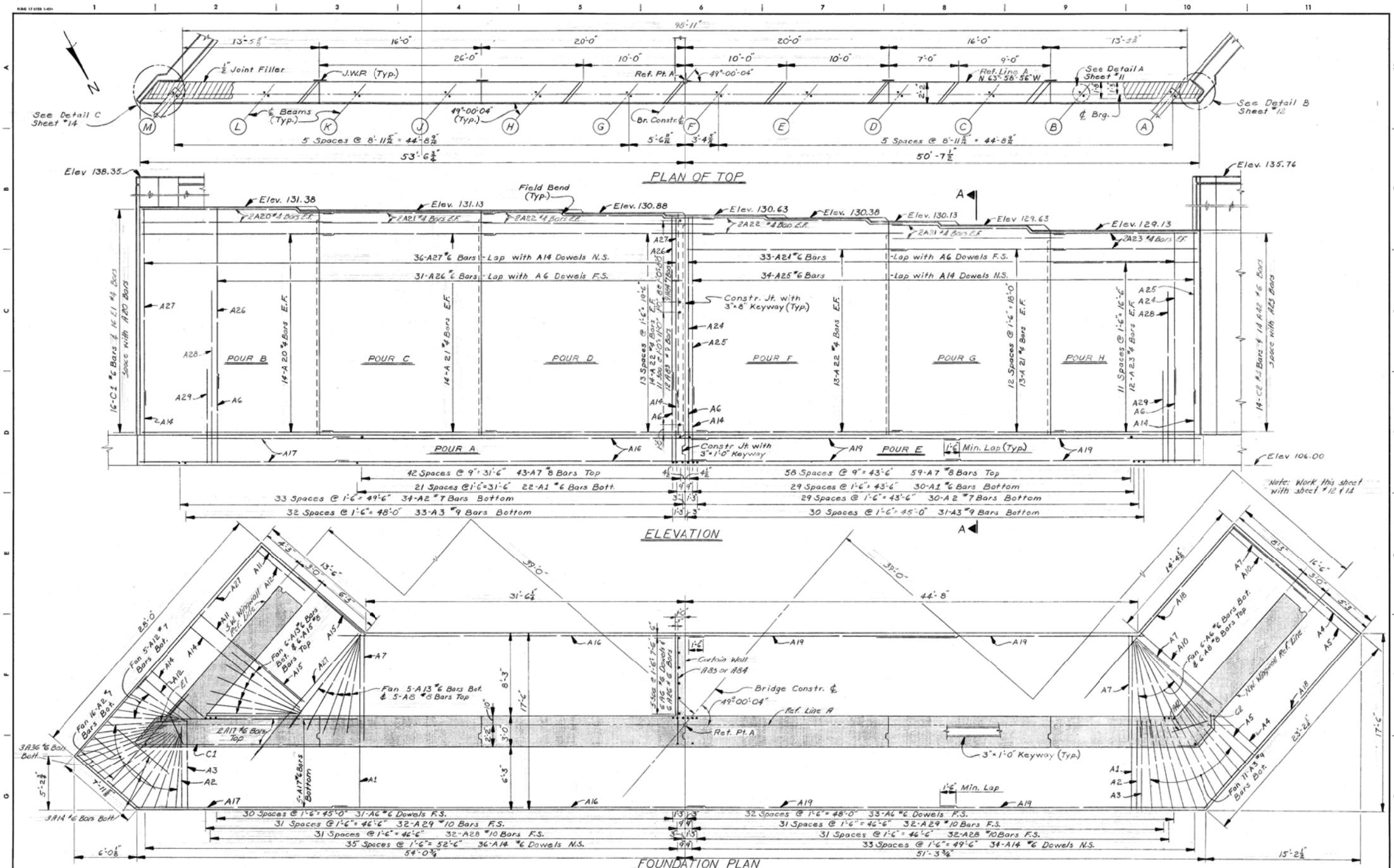
DESIGNED BY Mc Guire	APPROVED	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT NO 2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 8 OF 26 SHEETS
DRAWN BY J. J.	STRUCTURAL ENGINEER			CONTRACT NO. PW 6552
TRACED BY	HEAD CIVIL ENGINEER	GENERAL PLAN OF STRUCTURE	DRWG No. 57	DATE 10-73
CHECKED BY B. COMLY JWS				

EXISTING

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DESCRIPTION	DATE	BY	CHECKED BY	APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	SHEET 33 OF 65 SHEETS CONTRACT NO. PW-6985
REVISIONS	DATE	BY	CHECKED BY	APPROVED			
PLAN							ASSIGNMENT NO.
GRADE							DATE
ESTIMATE							
FINAL							



DESIGNED BY <i>M. J. [Signature]</i>	APPROVED STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT No.2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R. ABUTMENT A DETAILS	SHEET 59 OF 65 SHEETS
DRAWN BY R. Rosik	ASST. CIVIL ENGINEER			CONTRACT NO. PW-6985
TRACED BY	CITY ENGINEER			DRWG No. 59
CHECKED BY M.C.				DATE 10-73

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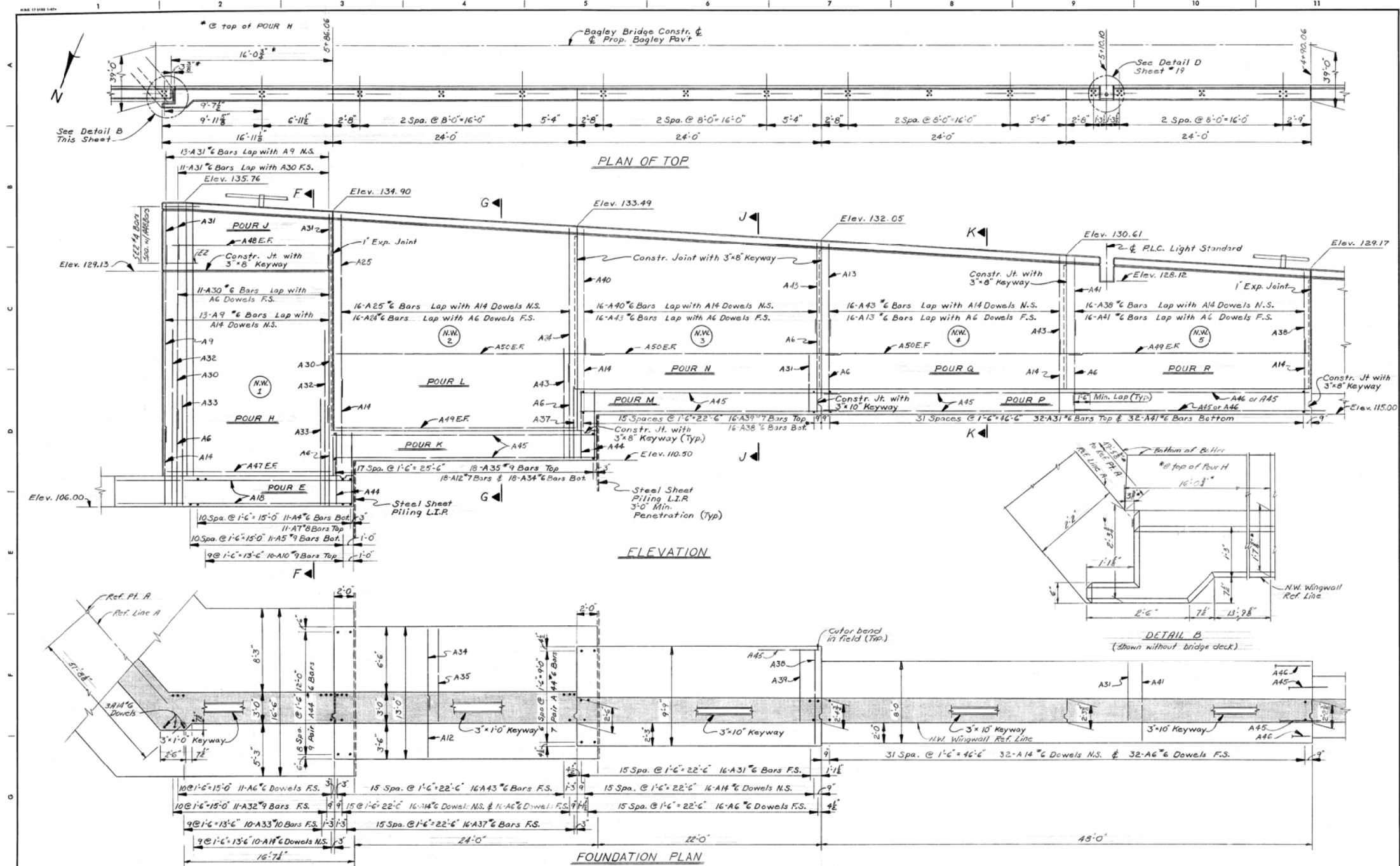
NO.	DESCRIPTION	DATE	BY	CHECKED BY	APPROVED

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

EXISTING ABUTMENT A DETAILS

SHEET 34 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE



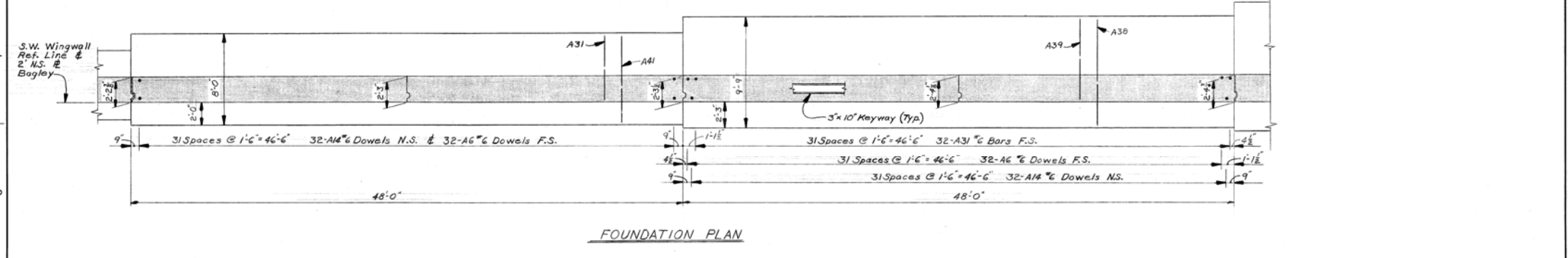
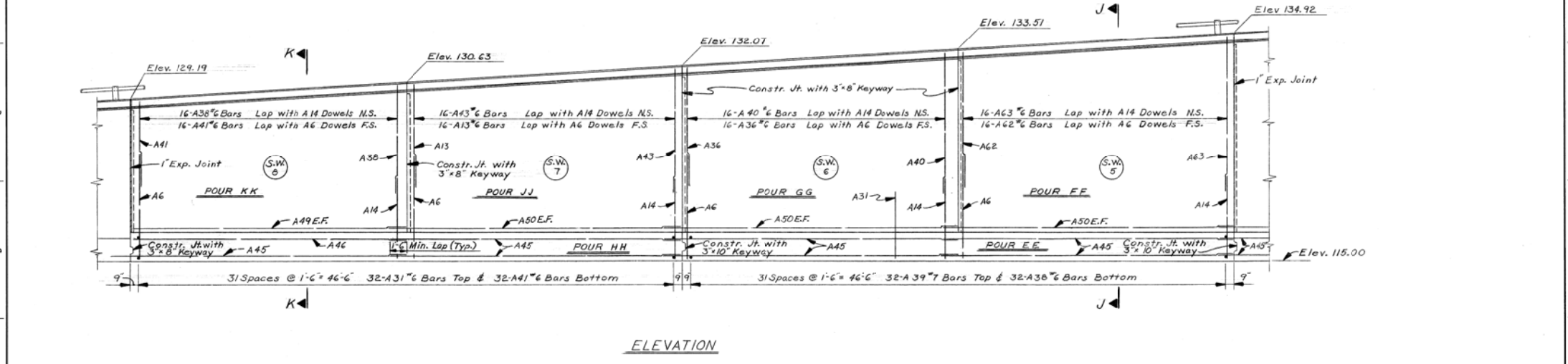
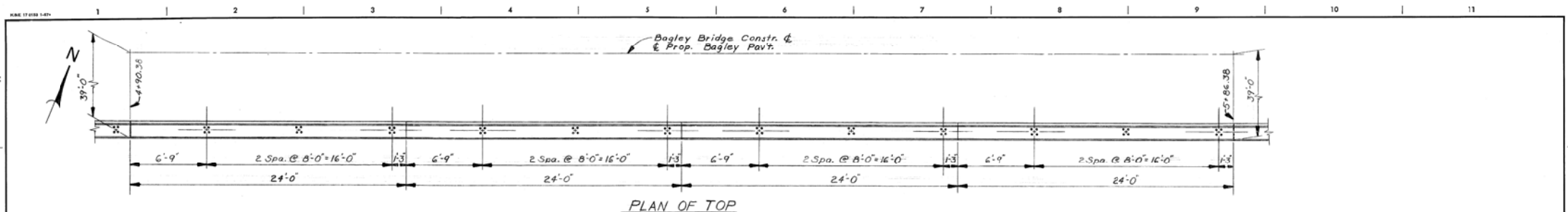
DESIGNED BY <i>M. Jure</i>	APPROVED _____ STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT No.2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 12 OF 26 SHEETS
DRAWN BY R. Rosik	_____ HEAD CIVIL ENGINEER			CONTRACT No. PW 6552
CHECKED BY M.C.			N.W. WINGWALL DETAILS	DRWG No. 5 11
				DATE 7/10/73

EXISTING

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DESCRIPTION	DR	CHK	DATE	BY	CHECKED BY	APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	EXISTING N.W. WINGWALL DETAILS	SHEET 36 OF 65 SHEETS CONTRACT NO. PW-6985 ASSIGNMENT NO. DATE
REVISIONS	OR	CHK	DATE	FINAL	****	****				



DESIGNED BY <i>M. J. J.</i>	APPROVED STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT No. 2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 39 OF 65 SHEETS
DRAWN BY R. Rosik	HEAD CIVIL ENGINEER			CONTRACT No. PW 6552
CHECKED BY M.C.	DATE ENGINEER	S.W. WINGWALL DETAILS	DRWG No. 514	DATE 10-73

EXISTING

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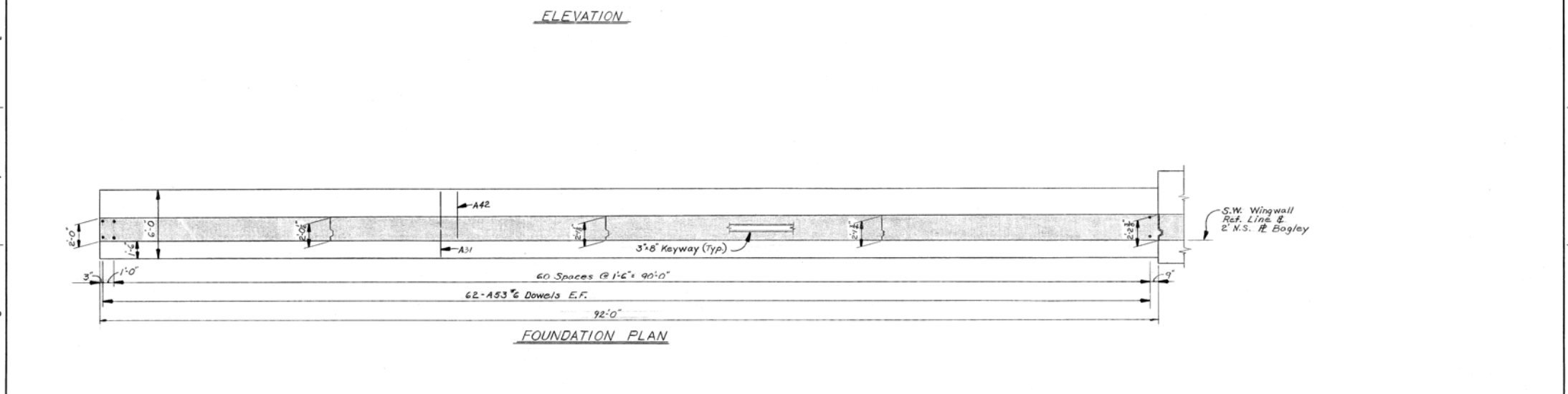
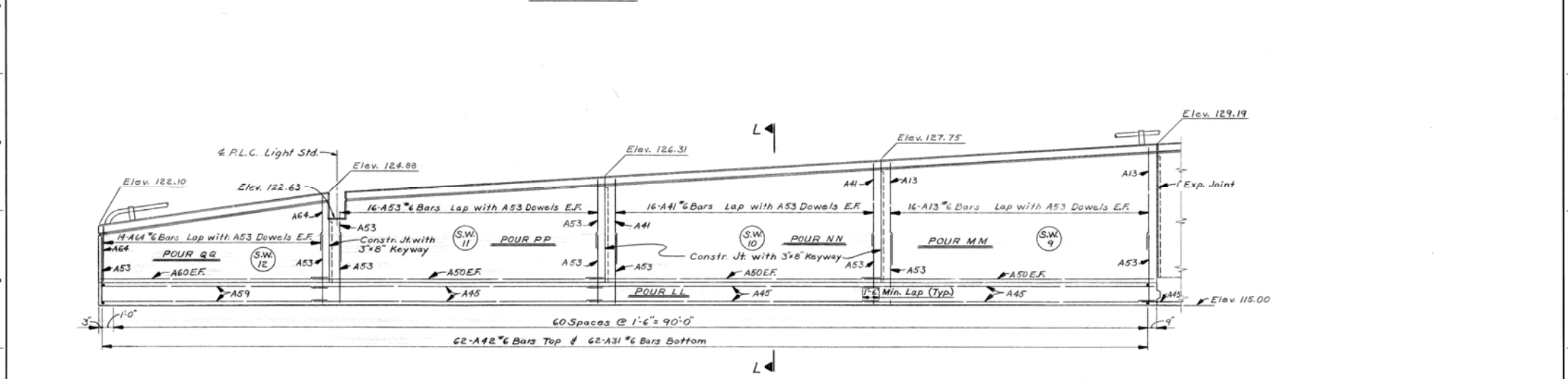
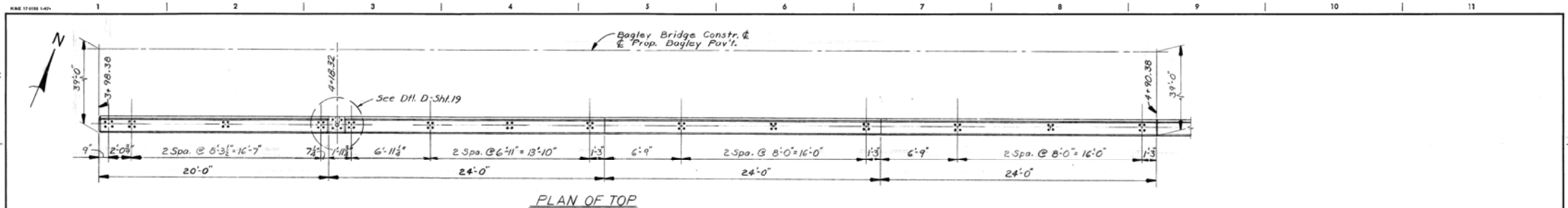
DESCRIPTION	REVISIONS	BY	CHECKED BY	APPROVED
PLAN				
GRADE				
ESTIMATE				
FINAL				

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

EXISTING S.W. WINGWALL DETAILS

SHEET 39 OF 65 SHEETS
CONTRACT No. PW-6985
ASSIGNMENT No.
DATE



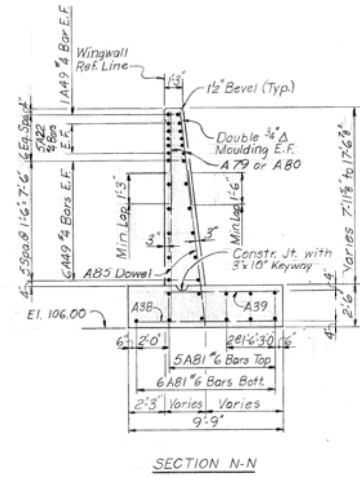
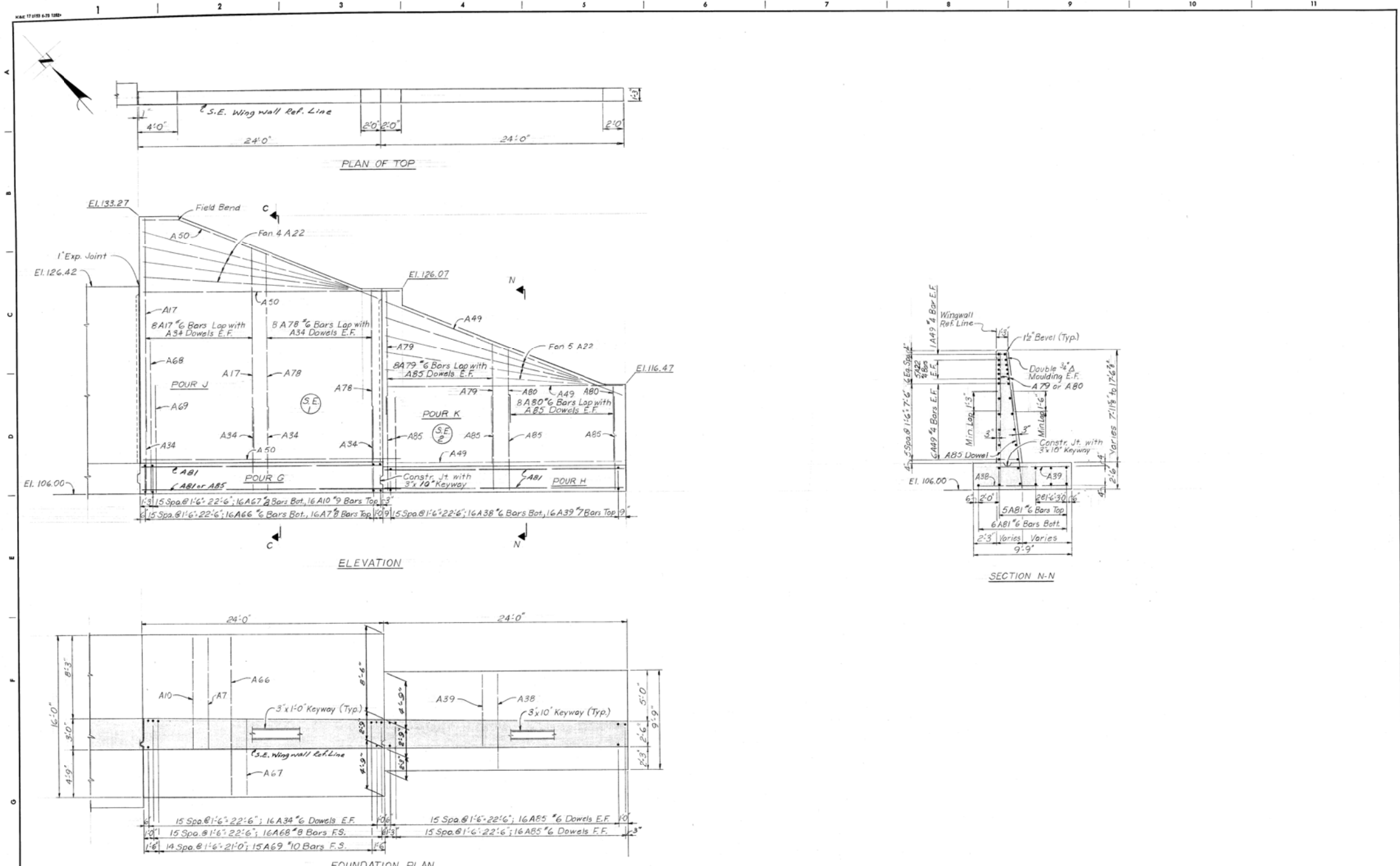
DESIGNED BY <i>M. Jure</i>	APPROVED STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT No.2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 40 OF 65 SHEETS
DRAWN BY R. Rosik	HEAD CIVIL ENGINEER			CONTRACT No. PW-6985
CHECKED BY M.C.			S.W. WINGWALL DETAILS	DATE 10-73

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DESCRIPTION	BY	CHECKED BY	APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	SHEET 40 OF 65 SHEETS CONTRACT NO. PW-6985 ASSIGNMENT NO. DATE
REVISIONS	PLAN					



DESIGNED BY	M. J. J.	APPROVED	
DRAWN BY	L.G.	STRUCTURAL ENGINEER	
TRACED BY		HEAD CIVIL ENGINEER	
CHECKED BY	M.C.		

CITY OF DETROIT
 CITY ENGINEERING DEPARTMENT
 CITY ENGINEERS OFFICE
 FOR
 COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT

WEST SIDE INDUSTRIAL REHABILITATION PROJECT No. 2
 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.
 FOR
 S.E. WINGWALL DETAILS

SHEET	11	OF	26	SHEETS
CONTRACT NO.	PW 6552			
DRWG No.	S 16			
DATE	10-73			

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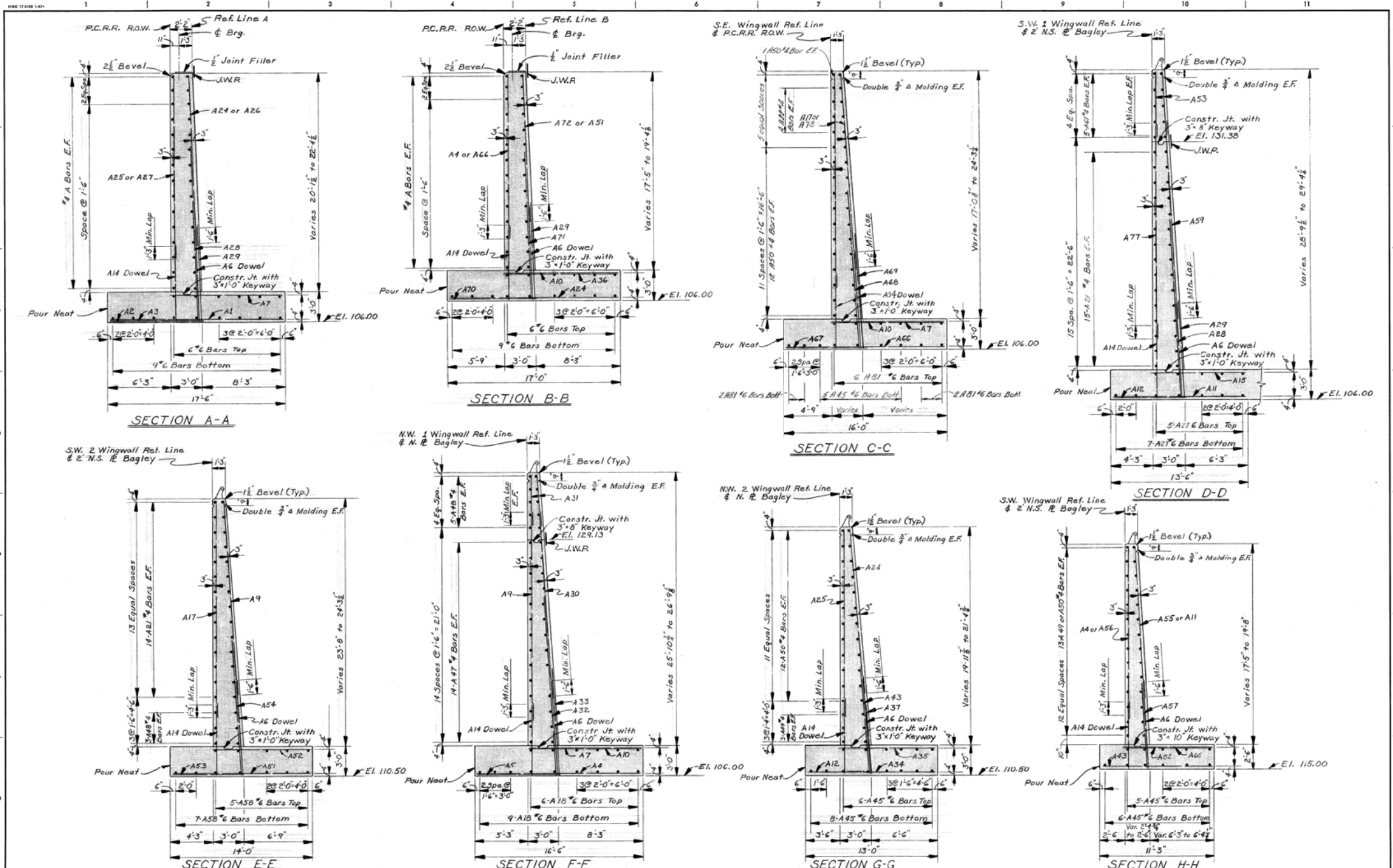
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PLAN						
GRADE						
ESTIMATE						
REVISIONS						

CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

EXISTING S.E. WINGWALL DETAILS

SHEET	41	OF	65	SHEETS
CONTRACT NO.	PW-6985			
ASSIGNMENT NO.				
DATE				



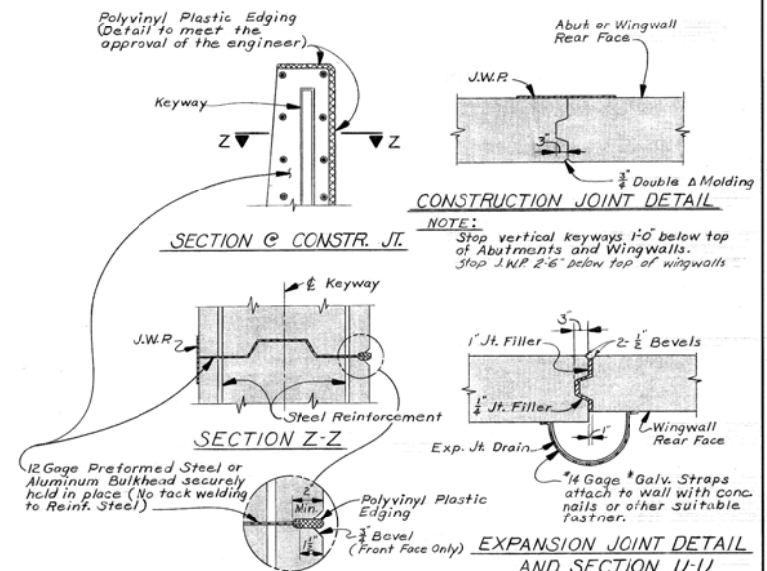
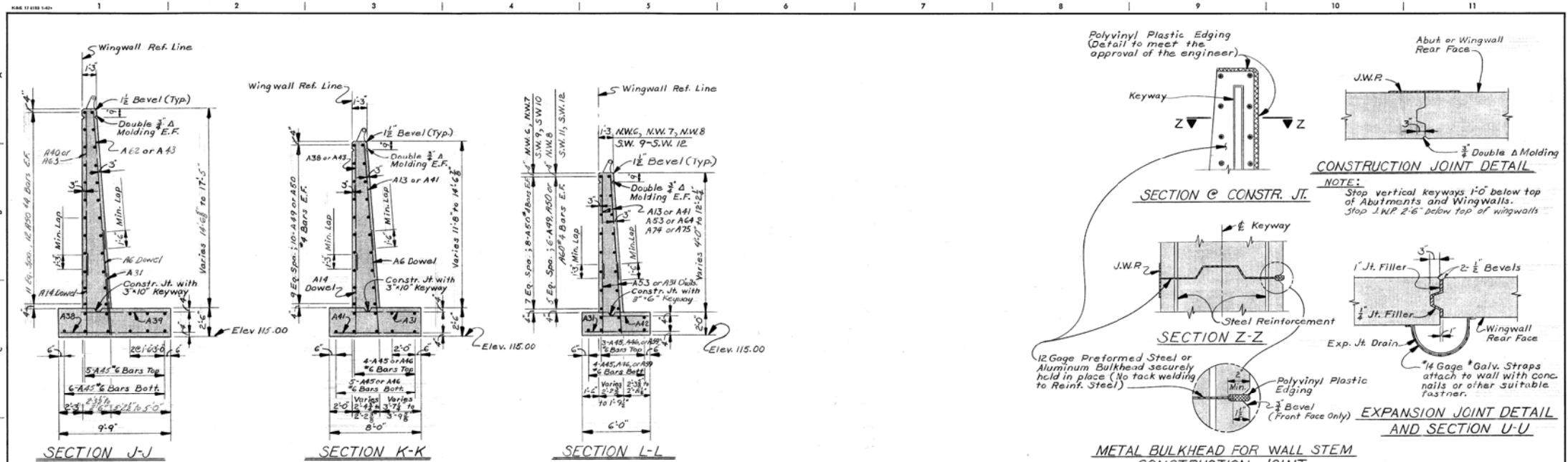
DESIGNED BY <i>M. Jurek</i>	APPROVED _____ STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT No.2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 10 OF 26 SHEETS
DRAWN BY R. Rosik	_____ HEAD CIVIL ENGINEER			CONTRACT NO. PW 6552
CHECKED BY M.C.		ABUTMENT AND WINGWALL DETAILS	DRWG No. 517	DATE 10-73

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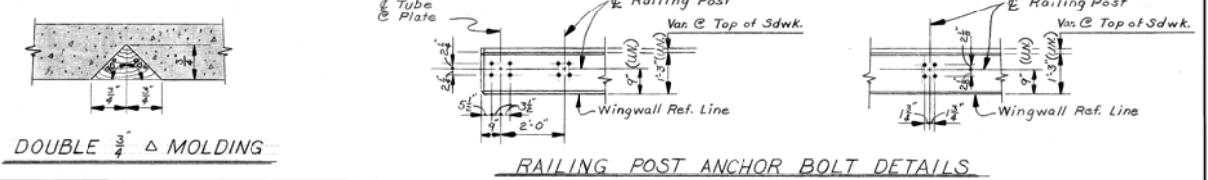
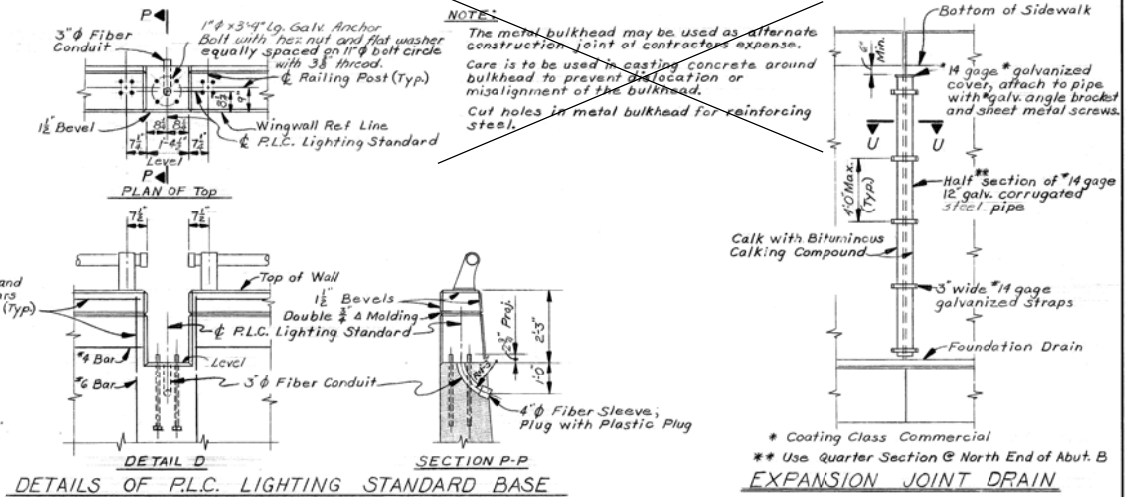
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BY	CHECKED BY	APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	SHEET 42 OF 65 SHEETS
PLAN				EXISTING ABUTMENT AND WINGWALL DETAILS	CONTRACT NO. PW-6985
GRADE					ASSIGNMENT NO.
ESTIMATE					DATE
REVISIONS	DR	CHK	DATE		



GENERAL NOTES:
 J.W.P. denotes Joint Waterproofing; N.S. denotes Near Side; F.S. denotes Far Side; E.F. denotes Each Face; U.N. denotes Unless Noted.
 Position Dowels shall be accurately set to a template.
 The bridge seat and the front face of both abutments shall be given an application of Clear Protective Coating for Substructure Concrete.
 Steel sheet piling left in place shall be of the continuous interlock type, either new or used, in good condition, weighing not less than 22 pounds per square foot of wall and shall be furnished with suitable connecting and corner pieces. Lode analysis and mill reports are not required. The piling shall be driven to its final penetration before adjacent concrete is poured. If it is necessary to lower the top of the sheathing after the concrete has been poured, the excess shall be removed by cutting.
 Foundation Drains shall be perforated clay pipe, sloped 1/8" in ft. min., continuous over the length of the abutment and wingwall footings and placed as shown on the General Plan of Structure.
 Maximum average foundation pressure (D.L. only) = 2400 lbs./Sq. Ft.
 Maximum foundation pressure D.L. + L.L. = 3900 lbs./Sq. Ft.
 Pour lettering shall not be interpreted to mean a required pour sequencing. The exposed faces of the retaining walls and abutment walls shall have special architectural treatment in accordance with Section 5.03.06 (c) of the Standard Specifications.



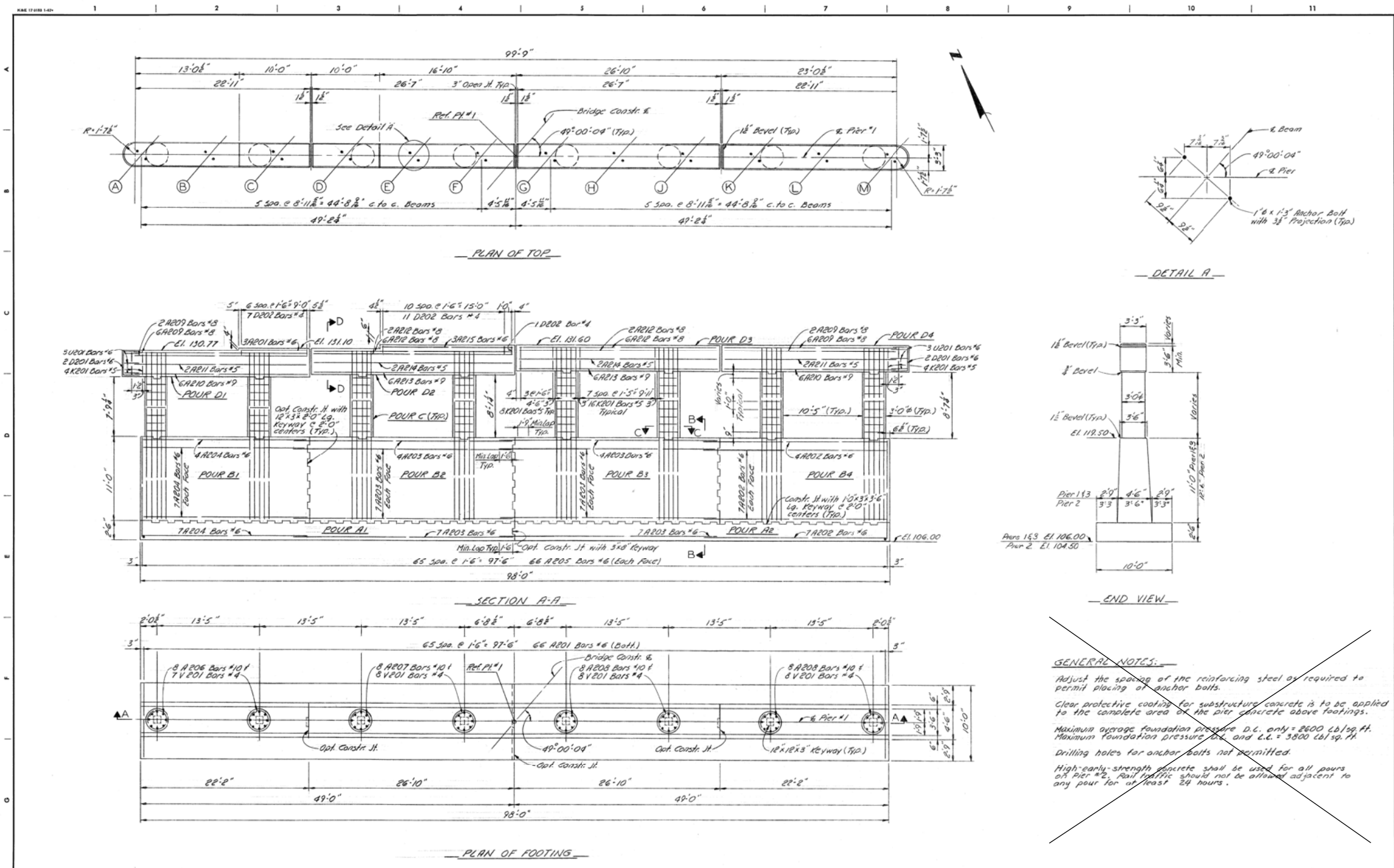
DESIGNED BY <i>M. J. J...</i>	APPROVED STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT No. 2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 19 OF 26 SHEETS
DRAWN BY R. Resik	HEAD CIVIL ENGINEER			CONTRACT NO. PW 6552
CHECKED BY M.C.		ABUTMENT AND WINGWALL DETAILS	DRWG No. 518	DATE 10-73

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DESCRIPTION	DR	CHK	APPY	DATE	BY	CHECKED BY	APPROVED:	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	SHEET 43 OF 65 SHEETS CONTRACT NO. PW-6985 ASSIGNMENT NO. DATE
REVISIONS	FINAL	****	****				ENGINEER BY SPECIES		EXISTING ABUTMENT AND WINGWALL DETAILS	



GENERAL NOTES:

- Adjust the spacing of the reinforcing steel as required to permit placing of anchor bolts.
- Clear protective coating for substructure concrete is to be applied to the complete area of the pier concrete above footings.
- Maximum average foundation pressure D.C. only = 2600 lb./sq. ft. Maximum foundation pressure C.C. and C.L. = 3800 lb./sq. ft.
- Drilling holes for anchor bolts not permitted.
- High-early-strength concrete shall be used for all pours on Pier #2. Rail traffic should not be allowed adjacent to any pour for at least 24 hours.

DESIGNED BY M.C.	APPROVED STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT NO. 2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 21 OF 26 SHEETS
DRAWN BY A.G.	APPROVED HEAD CIVIL ENGINEER			CONTRACT NO. PW 6552
CHECKED BY J.M.			PIER DETAILS	DRWG NO. 520
				DATE 10-73

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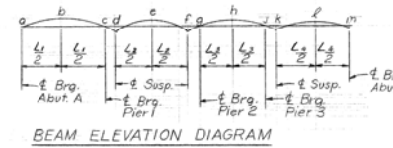
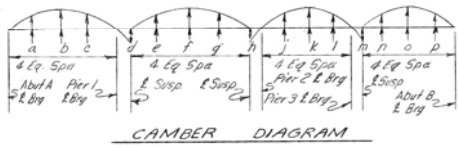
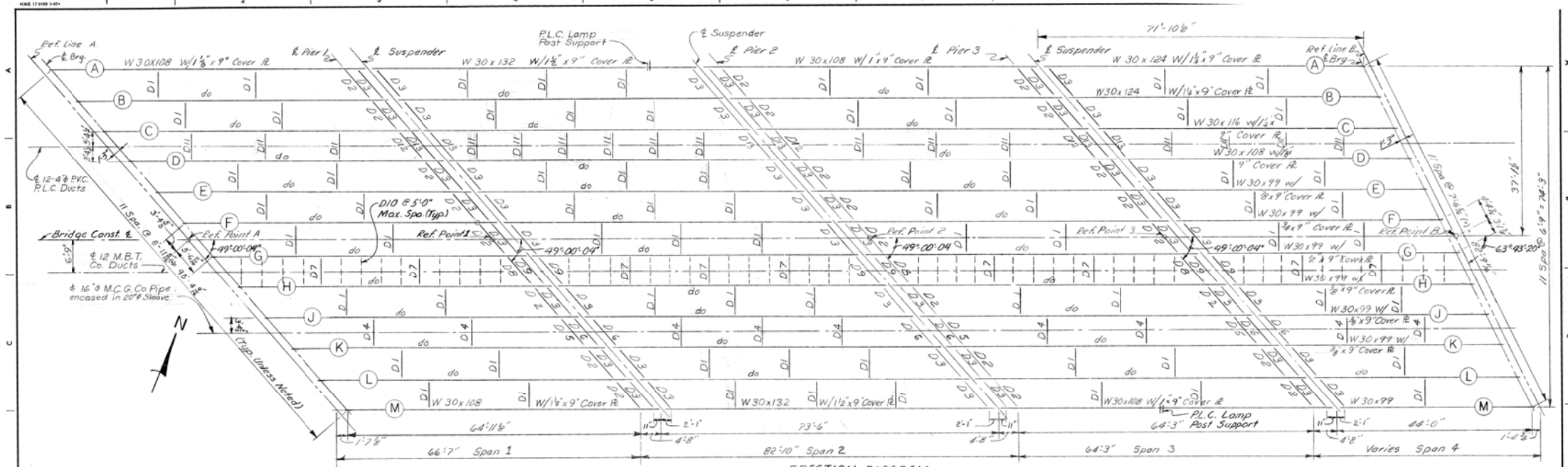
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DESCRIPTION	DATE	BY	CHECKED BY	APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	SHEET 45 OF 65 SHEETS CONTRACT NO. PW-6985
REVISIONS							
							DATE

SCALE	HORIZONTAL	BOOK NO.	PG.	LEVEL
	VERTICAL	PAGES COMPLETED		DATE

BEFORE STARTING CONSTRUCTION CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.

BENCH MARKS ELEV



	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
A	3 1/2	4 1/2	3 1/2	1 1/2	4 3/8	6 1/2	4 1/2	1	2 1/2	3 1/2	2 1/2	1	4 3/8	6 1/2	4 1/2	3 1/2
B	3 1/2	4 1/2	3 1/2	1 1/2	4 3/8	6 1/2	4 1/2	1	2 1/2	3 1/2	2 1/2	1	4 3/8	6 1/2	4 1/2	3 1/2
C	3 1/2	4 1/2	3 1/2	1 1/2	4 3/8	6 1/2	4 1/2	1	2 1/2	3 1/2	2 1/2	1	4 3/8	6 1/2	4 1/2	3 1/2
D	2 1/2	3 1/2	2 1/2	1	3 1/2	5 1/2	2 1/2	3/4	2 1/2	3 1/2	2 1/2	1	3 1/2	5 1/2	2 1/2	2 1/2
E	2 1/2	3 1/2	2 1/2	1	3 1/2	5 1/2	2 1/2	3/4	2 1/2	3 1/2	2 1/2	1	3 1/2	5 1/2	2 1/2	2 1/2
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G	2 1/2	3 1/2	2 1/2	1	3 1/2	5 1/2	2 1/2	3/4	2 1/2	3 1/2	2 1/2	1	3 1/2	5 1/2	2 1/2	2 1/2
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L	3 1/2	4 1/2	3 1/2	1 1/2	4 3/8	6 1/2	4 1/2	1	2 1/2	3 1/2	2 1/2	1	4 3/8	6 1/2	4 1/2	3 1/2
M	3 1/2	4 1/2	3 1/2	1 1/2	4 3/8	6 1/2	4 1/2	1	2 1/2	3 1/2	2 1/2	1	4 3/8	6 1/2	4 1/2	3 1/2

	g	r	s	t
A	1/4	1/4	1/4	1/4
B	1/4	1/4	1/4	1/4
C	1/4	1/4	1/4	1/4
D	1/4	1/4	1/4	1/4
E	1/4	1/4	1/4	1/4
F	1/4	1/4	1/4	1/4
G	1/4	1/4	1/4	1/4
H	1/4	1/4	1/4	1/4
J	1/4	1/4	1/4	1/4
K	1/4	1/4	1/4	1/4
L	1/4	1/4	1/4	1/4
M	1/4	1/4	1/4	1/4

	a	b	c	d	e	f	g	h	j	k	l	m
A	131.93	133.48	134.37	134.60	135.36	135.32	135.33	135.15	134.79	134.24	133.91	133.42
B	132.26	133.69	134.33	134.60	135.45	135.31	135.31	135.07	134.25	134.09	133.08	131.23
C	132.55	133.97	134.72	134.79	135.55	135.34	135.33	135.03	134.14	133.97	132.93	131.11
D	133.07	134.32	134.97	135.02	135.71	135.43	135.41	135.04	134.08	133.90	132.84	131.04
E	133.29	134.51	135.19	135.24	135.76	135.49	135.49	135.09	134.00	133.82	132.69	130.96
F	133.81	134.92	135.45	135.49	135.78	135.43	135.37	134.78	133.64	133.44	132.28	130.44
G	133.95	134.99	135.45	135.48	135.78	135.26	135.20	134.55	133.35	133.14	131.97	130.37
J	134.03	135.01	135.41	135.43	135.64	135.09	135.00	134.20	133.00	132.77	131.61	130.06
K	134.09	135.00	135.32	135.33	135.49	134.83	134.75	133.95	132.64	132.39	131.24	129.74
L	134.20	135.08	135.30	135.29	135.45	134.62	134.54	133.72	132.27	132.03	130.91	129.47
M	134.37	135.17	135.32	135.30	135.38	134.48	134.39	133.51	132.00	131.75	130.64	129.27

Note: Elevations given are for Top of Steel Erected with no other loads applied.

STRUCTURAL STEEL NOTES

DESIGN: Current AASHTO Standard Specifications for Highway Bridges (MS20-44 Loading)

SHOP CONNECTIONS: shall be welded as shown on the plans.

FIELD CONNECTIONS: shall be bolted with 3/4" φ high strength bolts, except as noted.

CAMBER: The beams are to have a parabolic camber with ordinates as shown on the diagram. This camber is to be measured with the beam lying on its side. Allowable camber tolerance shall be ± 1/4" (at center). Heating is to be used, if necessary, to assure camber permanency within the above tolerance.

SOLE PLATES: 3" or more in thickness may be built up by welding together plates not less than 1/4" in thickness. Edges must be beveled & are welded with a continuous weld for the full perimeter. Welds shall be ground flush with faces of plates.

All steel material used for bearings, with exception of portion welded to beams, shall be galvanized in accordance with ASTM Designation A123. Galvanizing shall be applied after fabrication of bearing. Mill scale and foreign material shall be removed prior to galvanizing.

WELDING: Magnetic particle inspection of welds is required and shall consist of 100% inspection of not less than one fabricated section selected at random from each ten sections or fractions thereof.

STEEL: All structural steel shall be unpainted ASTM Designation A-588. Position Dockets and Anchor Bolts (including nuts and washers) shall be galvanized in accordance with ASTM Designation A-153. Steel in arches Bolts may be ASTM A-307. Bronze for washers shall be ASTM B-100 or ASTM B-52. Stainless Steel for Cotter Pins shall be ASTM A-304.

ANCHOR BOLTS: Anchor bolt lengths shown on the plans are minimum. Bolts longer than those shown may be furnished at no additional cost.

FABRICATION: Michigan Department of State Highways Standard Specifications for Highway Construction - 1973 Edition.

NO.	DESCRIPTION	DATE	BY	CHECKED BY	APPROVED

DESIGNED BY: R. Bunce
 DRAWN BY: M. Sucech
 TRACED BY: M. Sucech
 CHECKED BY: R. B.
 APPROVED: _____
 CITY OF DETROIT
 CITY ENGINEERING DEPARTMENT
 CITY ENGINEERS OFFICE
 FOR
 COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT

WEST SIDE INDUSTRIAL REHABILITATION PROJECT NO.2
 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.
 STRUCTURAL STEEL DETAILS

SHEET 24 OF 26 SHEETS
CONTRACT NO. PW-6982
DRWG No. 523
DATE 10-75

EXISTING

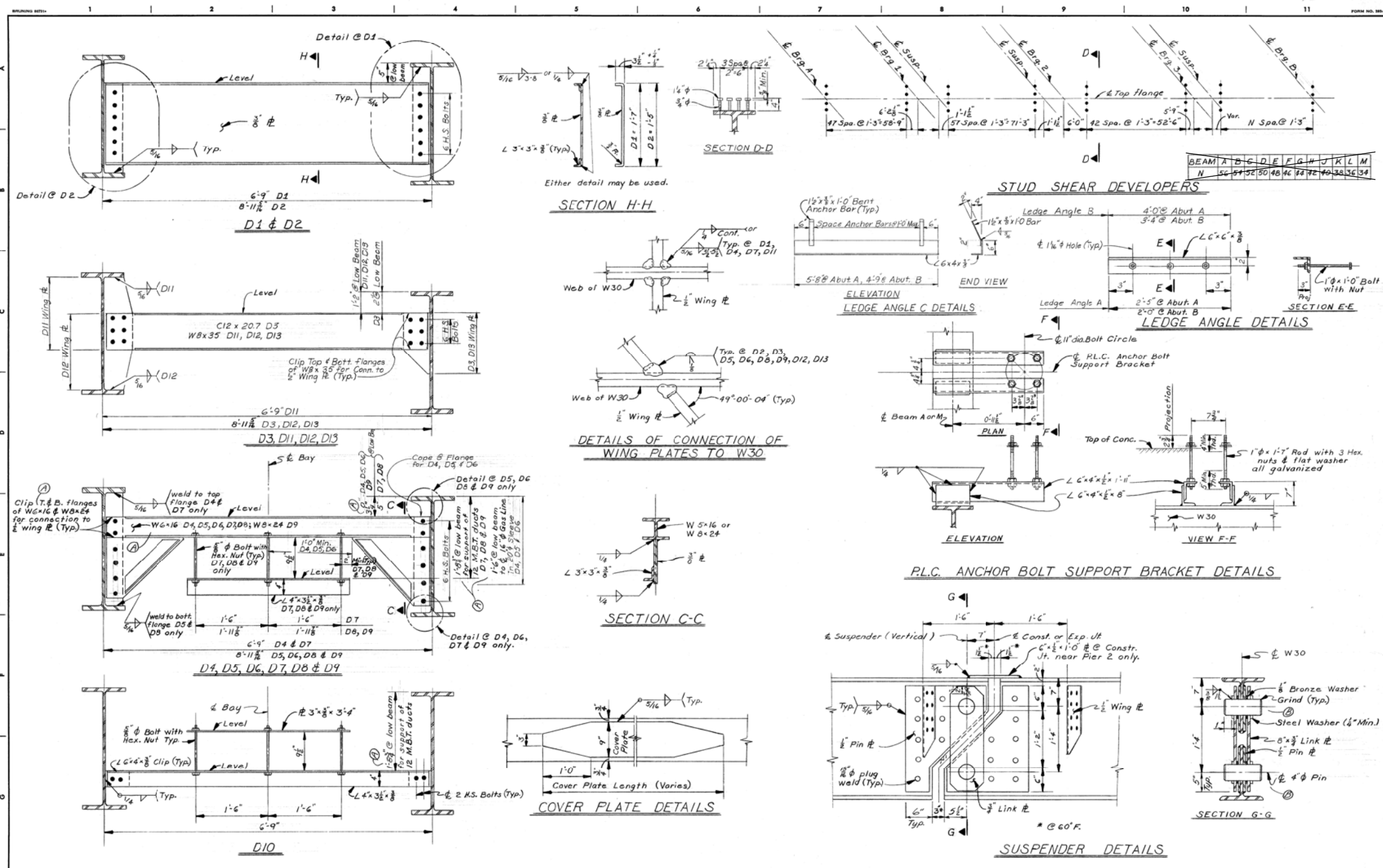
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NO.	DESCRIPTION	DATE	BY	CHECKED BY	APPROVED

CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAU OF STREETS AND HIGHWAYS
 FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	SHEET 48 OF 65 SHEETS
EXISTING STRUCTURAL STEEL DETAILS	CONTRACT NO. PW-6985
	ASSIGNMENT NO.
	DATE



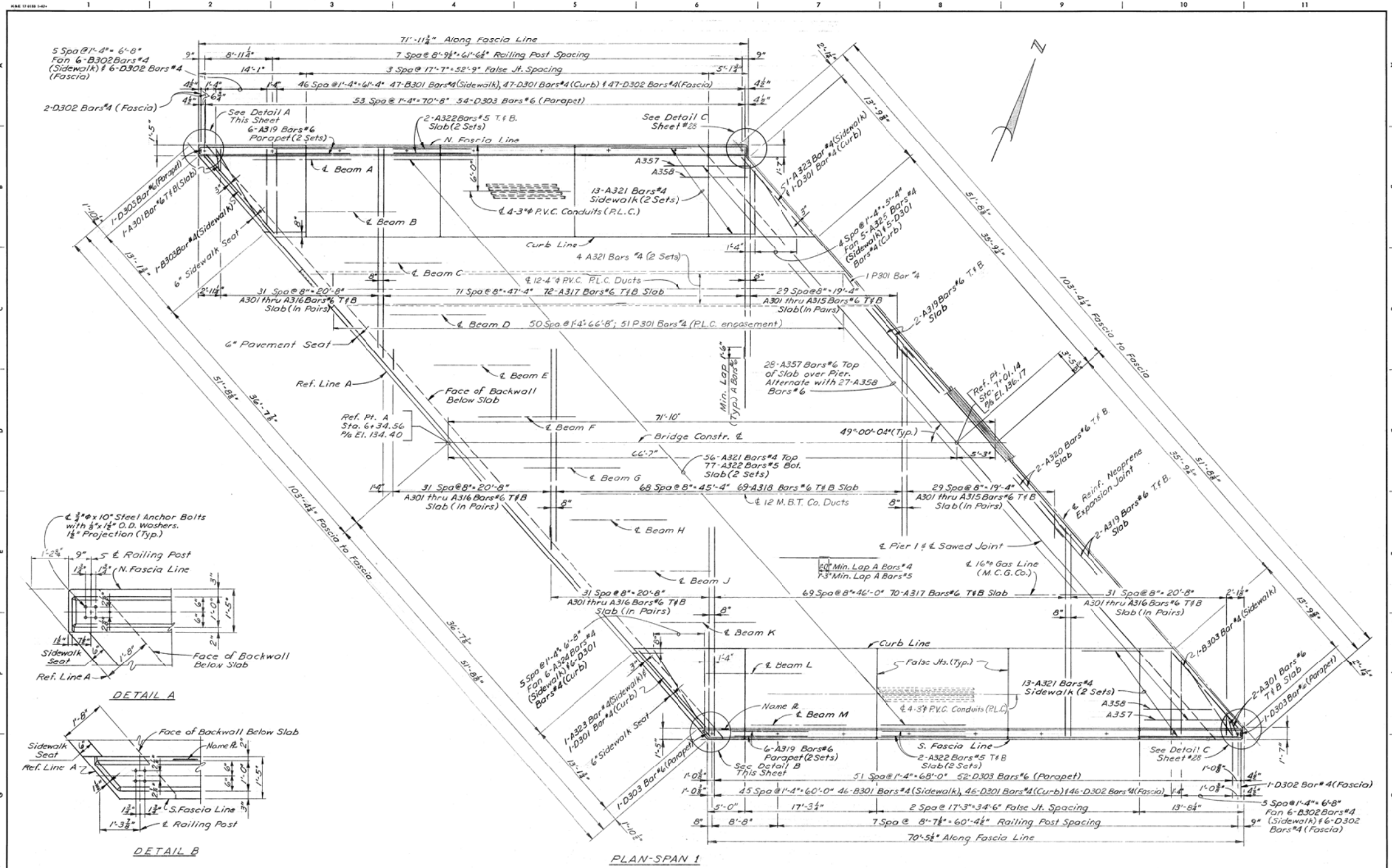
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EXISTING

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<p>DESCRIPTION</p> <p>REVISIONS</p>	<p>DATE</p> <p>BY</p> <p>CHECKED BY</p> <p>APPROVED</p>	<p>CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR</p>	<p>BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.</p> <p>EXISTING N.E. WINGWALL DETAILS</p>	<p>SHEET 50 OF 65 SHEETS</p> <p>CONTRACT No. PW-6985</p> <p>ASSIGNMENT No.</p> <p>DATE</p>
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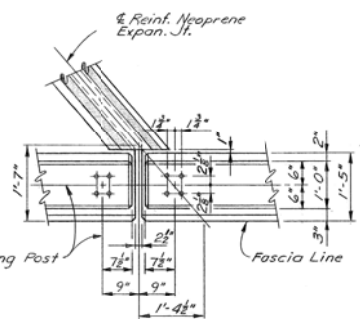
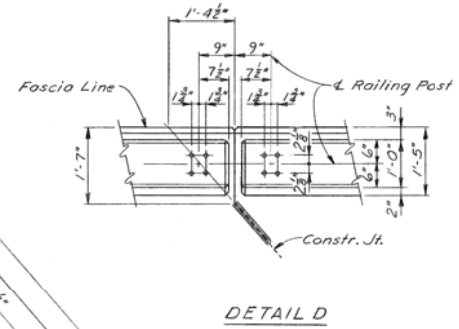
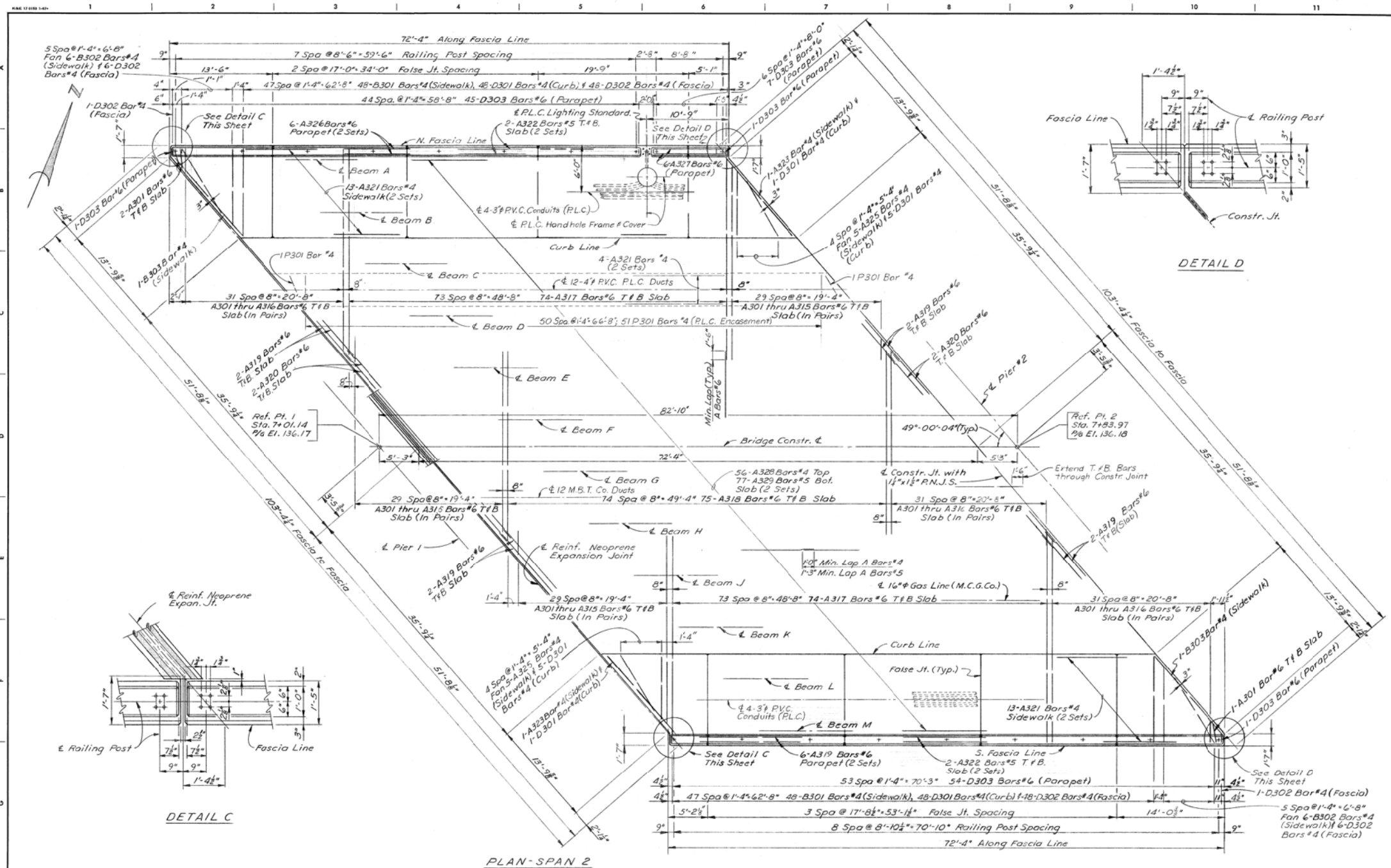
DESIGNED BY <i>M. J. ...</i>	APPROVED STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT No.2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 27 OF 26 SHEETS CONTRACT No. PW 6852 DRWG No. 526 DATE 10-73
DRAWN BY <i>R. Harris</i>	HEAD CIVIL ENGINEER			
CHECKED BY <i>J. M.</i>				

EXISTING

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PLAN	BY	CHECKED BY	APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	EXISTING SUPERSTRUCTURE DETAILS	SHEET 51 OF 65 SHEETS CONTRACT No. PW-6985 ASSIGNMENT NO. DATE
GRADE							
ESTIMATE							
DESCRIPTION	OR	NO	DATE				
REVISIONS							



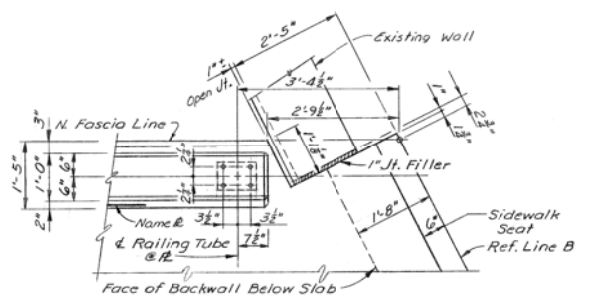
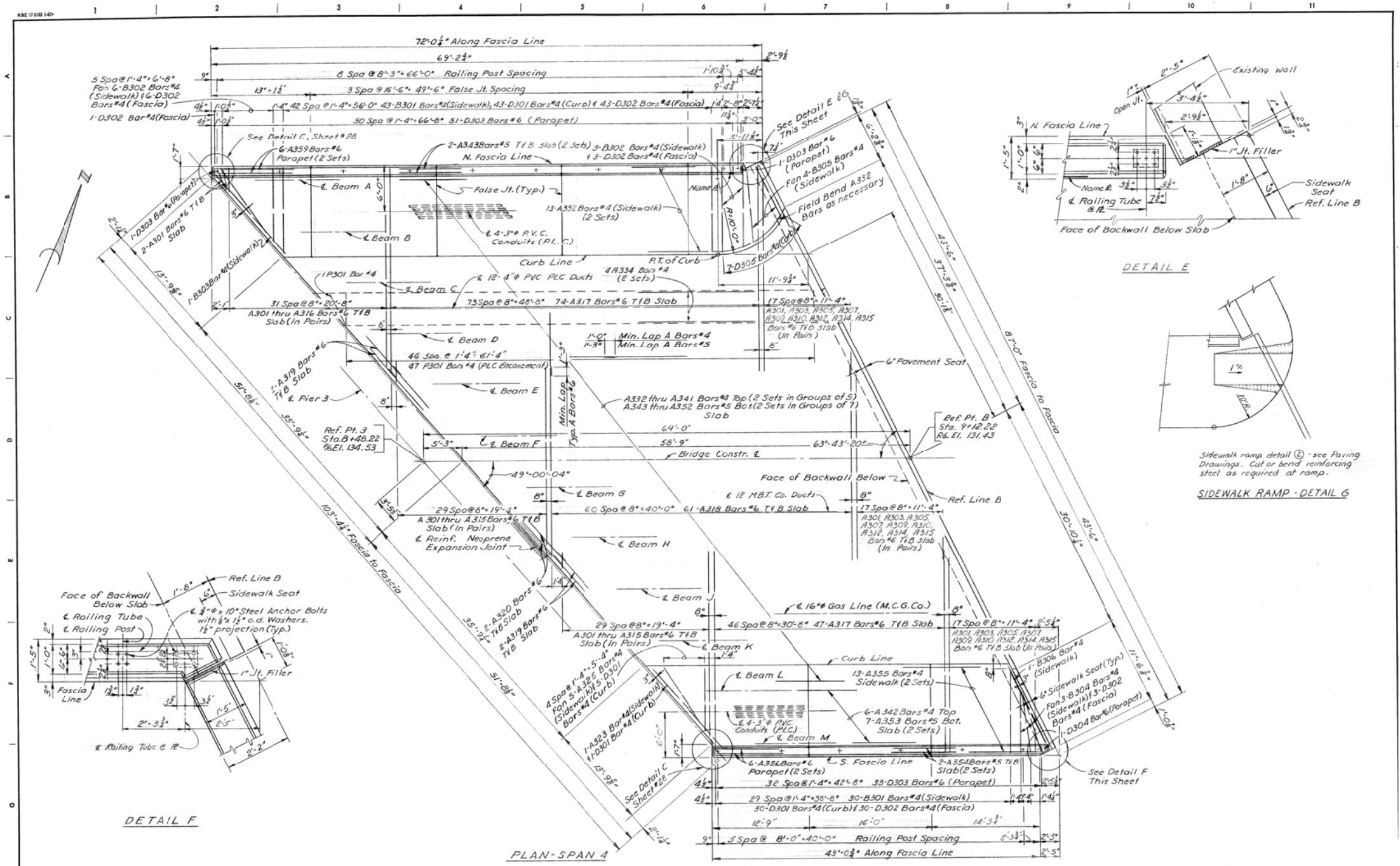
DESIGNED BY <i>M. J. Jurek</i>	APPROVED _____ STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT NO. 2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 52 OF 65 SHEETS CONTRACT NO. PW-6985 DRWG No. 5 27 DATE 10-78
DRAWN BY <i>R. Harris</i>	_____ HEAD CIVIL ENGINEER			
TRACED BY	_____ CITY ENGINEER			
CHECKED BY <i>J. M.</i>				

EXISTING

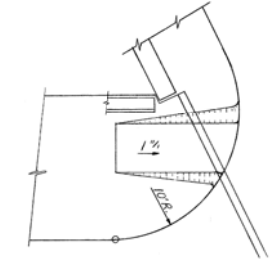
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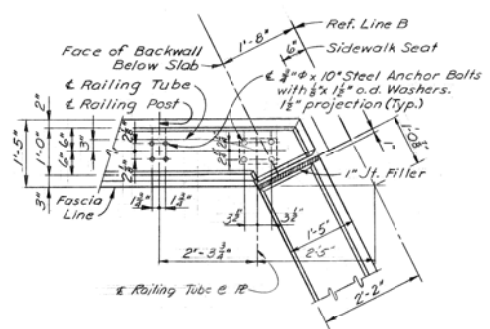
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REVISIONS	PLAN	GRADE	ESTIMATE				



DETAIL E



SIDEWALK RAMP - DETAIL G



DETAIL F

DESIGNED BY	APPROVED
DRAWN BY	STRUCTURAL ENGINEER
TRACED BY	HEAD CIVIL ENGINEER
CHECKED BY	

CITY OF DETROIT
 CITY ENGINEERING DEPARTMENT
 CITY ENGINEERS OFFICE
 FOR
 COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT

WEST SIDE INDUSTRIAL REHABILITATION PROJECT No.2
 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.
 SUPERSTRUCTURE DETAILS

SHEET 30 OF 26 SHEETS
CONTRACT NO. PW 6352
DRWG No. 529
DATE 10-73

EXISTING

FOR INFORMATION ONLY

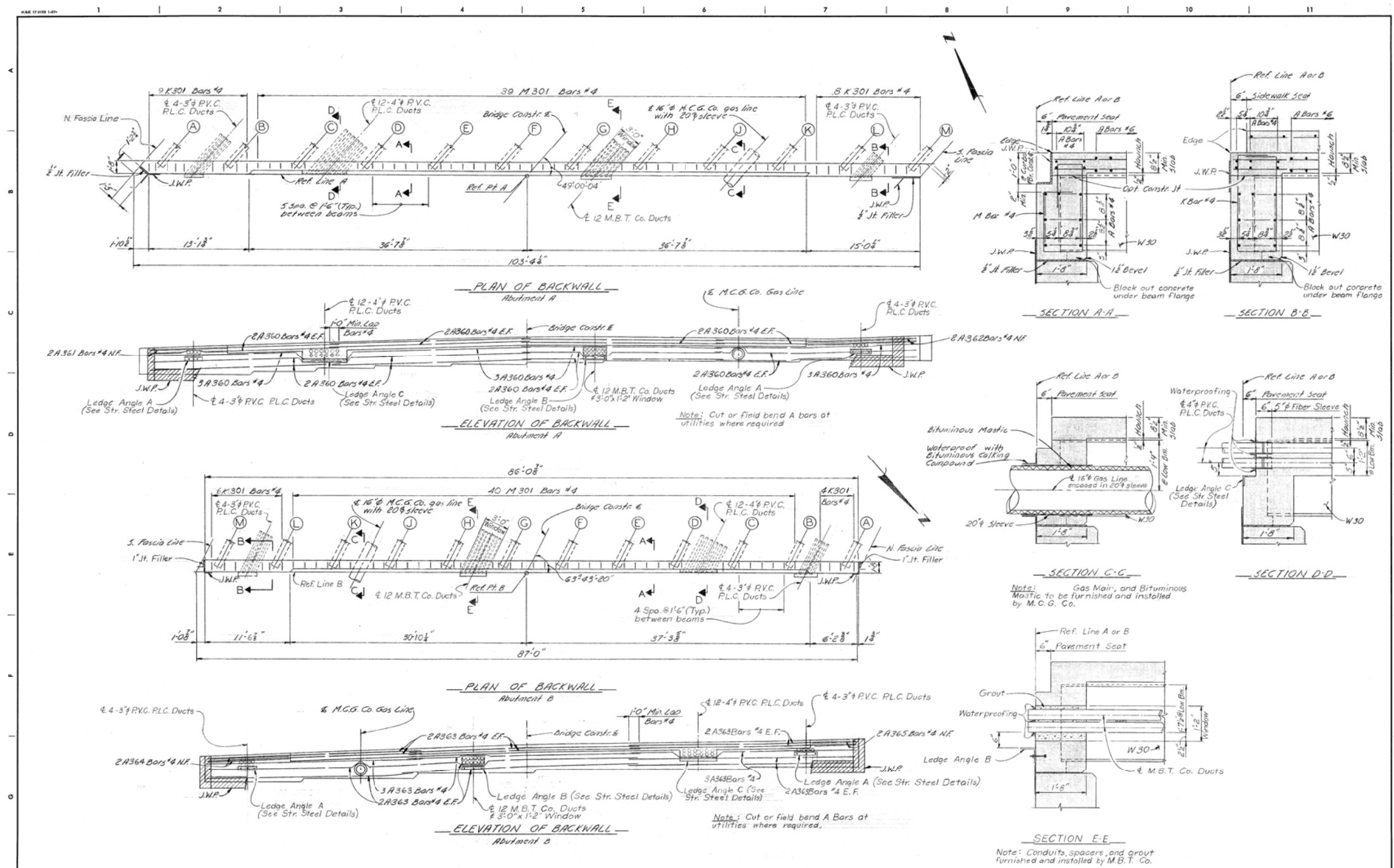
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DESCRIPTION	DR	CHK	DATE	BY	CHECKED BY	APPROVED
REVISIONS						

CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.
 EXISTING SUPERSTRUCTURE DETAILS

SHEET 54 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE



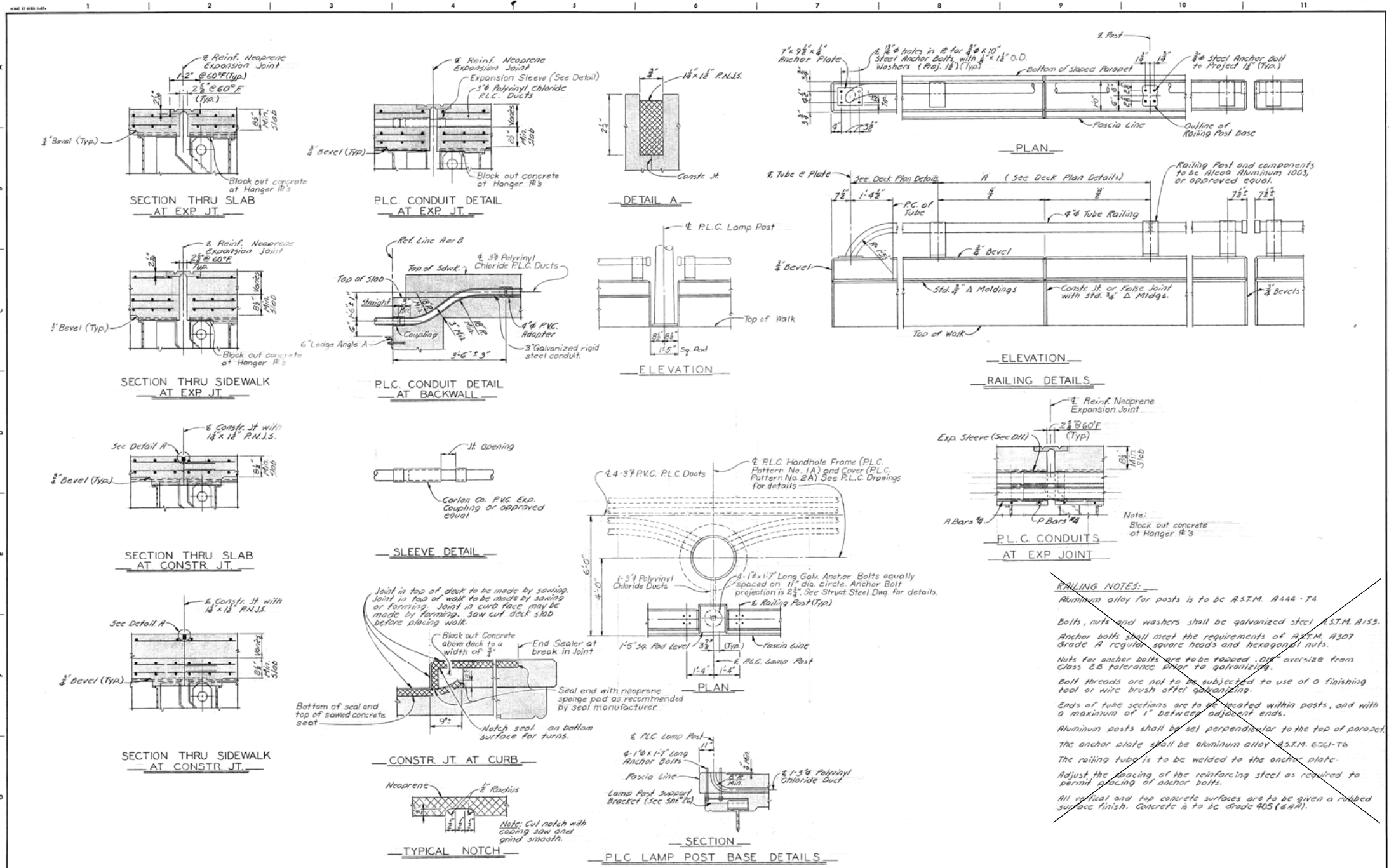
DESIGNED BY <i>M. J. Jule</i>	APPROVED STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT NO. 2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 32 OF 26 SHEETS
DRAWN BY <i>A.G.</i>	HEAD CIVIL ENGINEER			CONTRACT NO. <i>PW 6552</i>
CHECKED BY <i>A.P.</i>			SUPERSTRUCTURE DETAILS	DRWG No. <i>531</i>
				DATE <i>10-73</i>

EXISTING

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DESCRIPTION	DATE	BY	CHECKED BY	APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAUS OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.	EXISTING SUPERSTRUCTURE DETAILS	SHEET 56 OF 65 SHEETS
PLAN				ENGINEER BY STREET				CONTRACT NO. <i>PW-6985</i>
GRADE								ASSIGNMENT NO.
ESTIMATE							DATE	
REVISIONS								



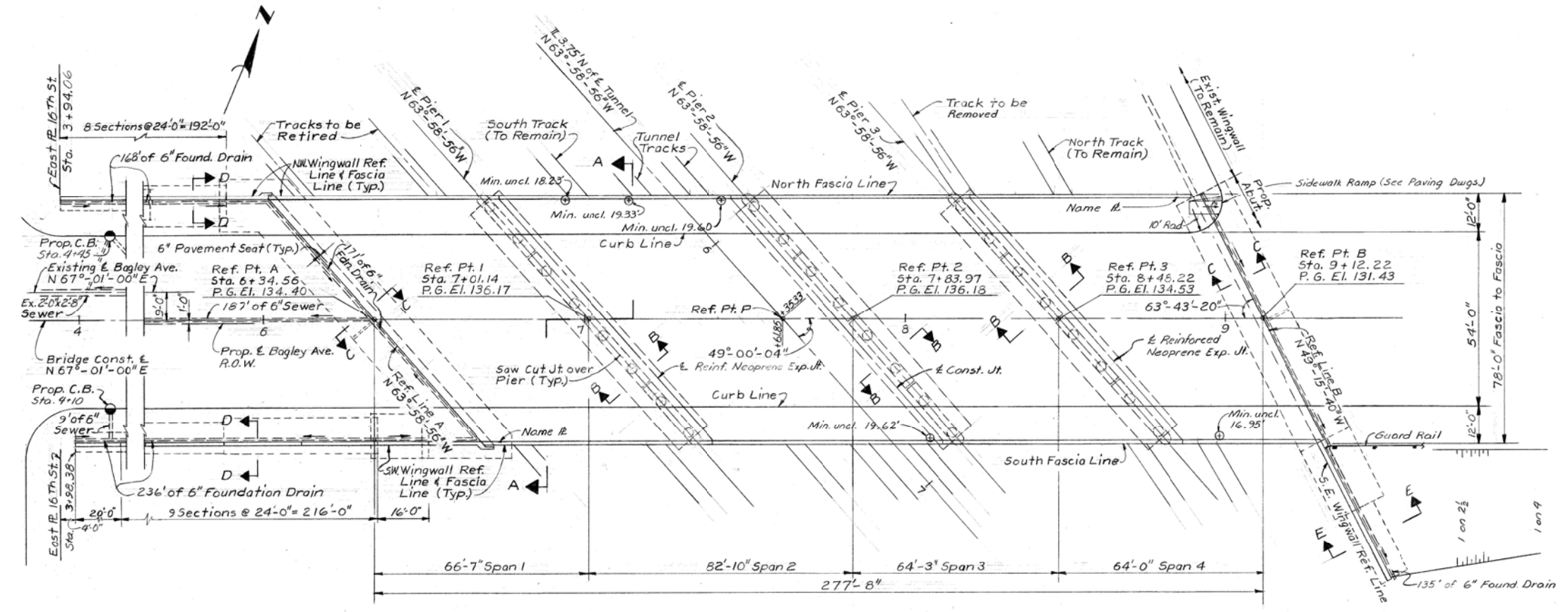
DESIGNED BY <i>M. Sime</i>	APPROVED STRUCTURAL ENGINEER	CITY OF DETROIT CITY ENGINEERING DEPARTMENT CITY ENGINEERS OFFICE FOR COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT	WEST SIDE INDUSTRIAL REHABILITATION PROJECT NO. 2 BAGLEY AVE. BRIDGE CROSSING THE P.C.R.R.	SHEET 33 OF 26 SHEETS
DRAWN BY A. G.	MFG. CIV. ENGINEER		SUPERSTRUCTURE DETAILS	CONTRACT NO. PW 6552
CHECKED BY J. M.				DRWG No. 532
				DATE 10-73

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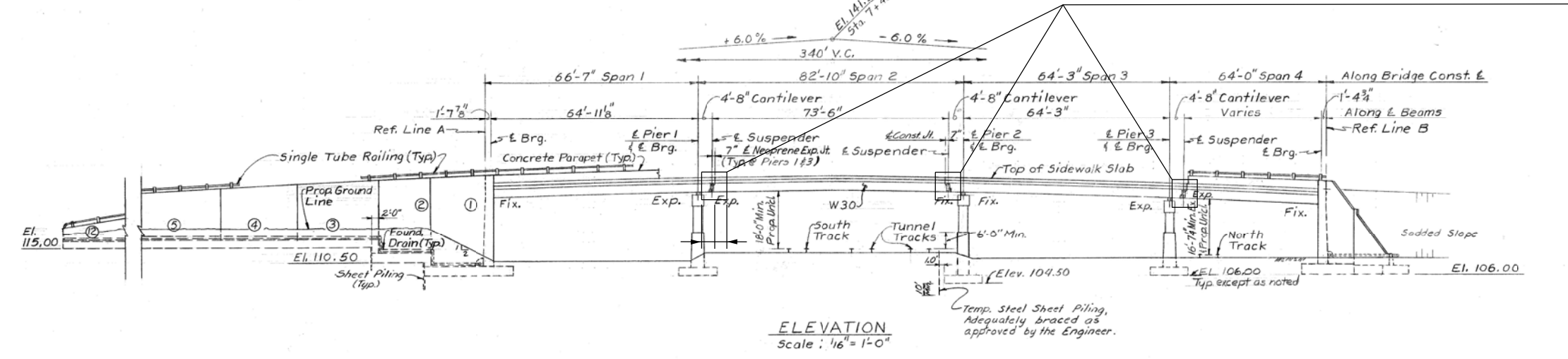
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REVISIONS					EXISTING SUPERSTRUCTURE DETAILS	CONTRACT NO. PW-6985
						ASSIGNMENT NO.
						DATE



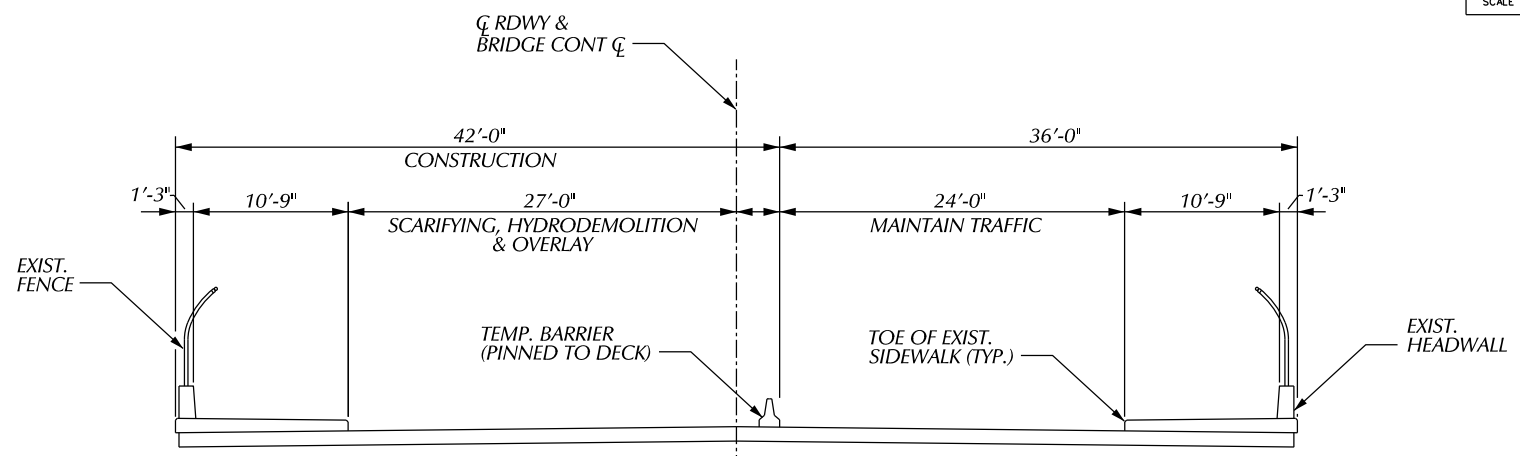
PLAN
Scale: 1/16" = 1'-0"



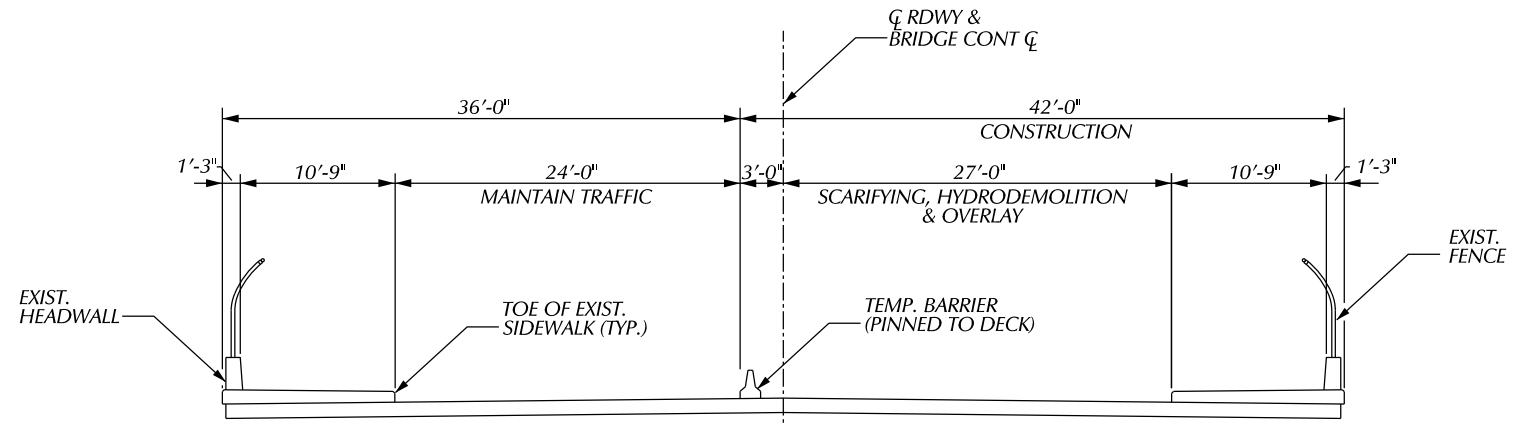
ELEVATION
Scale: 1/16" = 1'-0"

PW-6985
PROPOSED WORK: P & H REPLACEMENT, JOINT REPLACEMENT, SHALLOW OVERLAY, STEEL PAINTING, SUBSTRUCTURE & SUPERSTRUCTURE REPAIR, APPROACH WORK AND MAINTAIN TRAFFIC

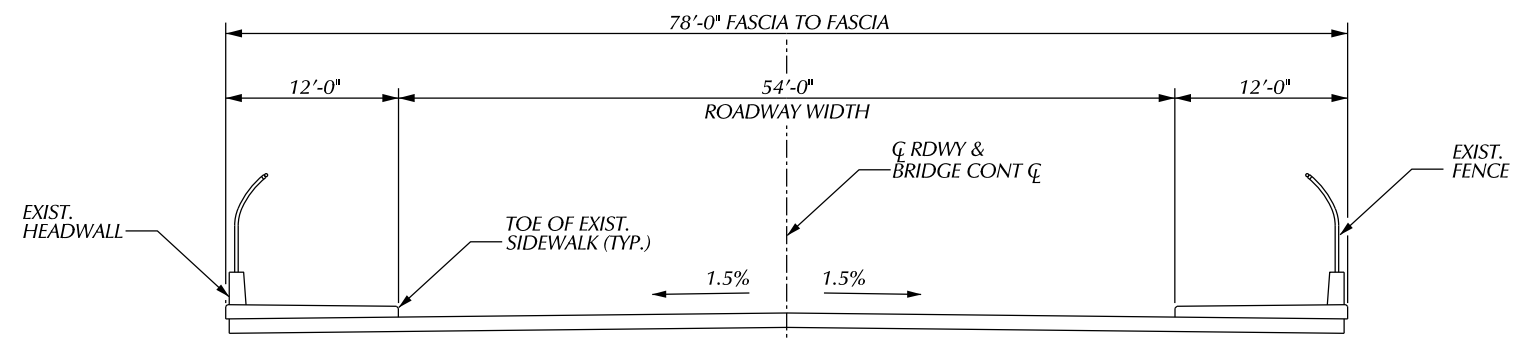
PLAN GRADE ESTIMATE FINAL		BY CHECKED BY APPROVED	CITY OF DETROIT CITY ENGINEERING DIVISION - D.P.W. BUREAU OF STREETS AND HIGHWAYS FOR	BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R. GENERAL PLAN OF STRUCTURE	SHEET 58 OF 65 SHEETS CONTRACT NO. PW-6985 ASSIGNMENT NO. DATE 03/23/2018
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STAGE I
(Part - Width)



STAGE II
(Part - Width)



STAGE III
(Open to Traffic)

NOTES:

1. TRAFFIC IS TO BE MAINTAINED OVER THE BRIDGE BY PART-WIDTH CONSTRUCTION.
2. PLACEMENT OF TEMPORARY BARRIER SHALL BE ACCORDING TO STANDARD PLAN R-126-SERIES OR AS APPROVED BY ENGINEER (INCLUDED IN PAY ITEM "CONC BARRIER, TEMP, FURN").

MISCELLANEOUS QUANTITIES

1,500 FT	CONCRETE BARRIER TEMP, FURN
1,500 FT	CONCRETE BARRIER TEMP, OPER

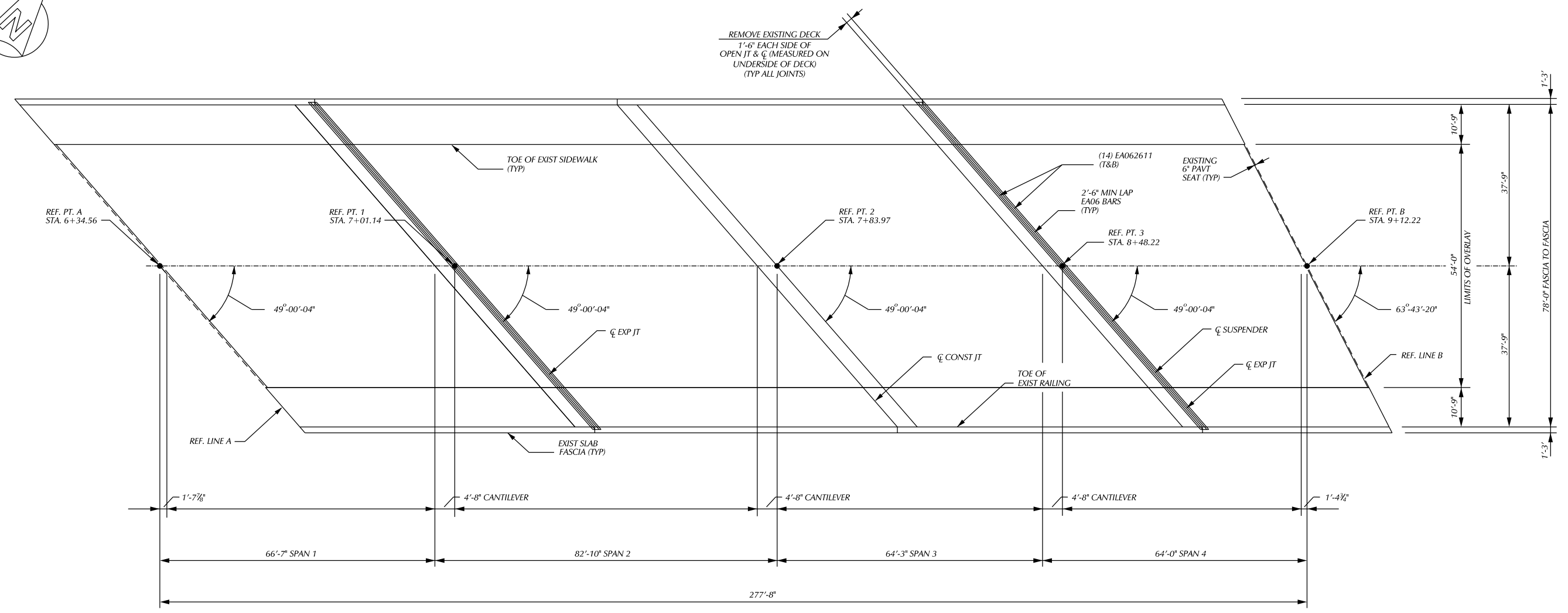
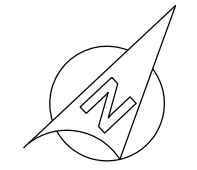
PLAN	BY	CHECKED BY	APPROVED
GRADE			
ESTIMATE			
DESCRIPTION	DR	CHK	DATE
REVISIONS	FINAL	****	****

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAU OF STREETS AND HIGHWAYS
FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

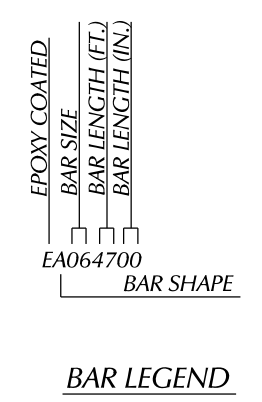
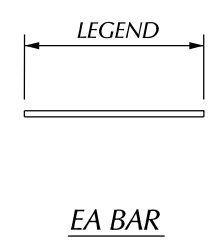
STAGING PLAN

SHEET 59 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018



PLAN OF DECK
(R.R. TRACKS NOT SHOWN)

EPOXY COATED STEEL REINFORCEMENT		
BAR	NO. REQ'D	TOTAL WT
EA065204	28	2,201
OVERRUN		109
TOTAL		2,310



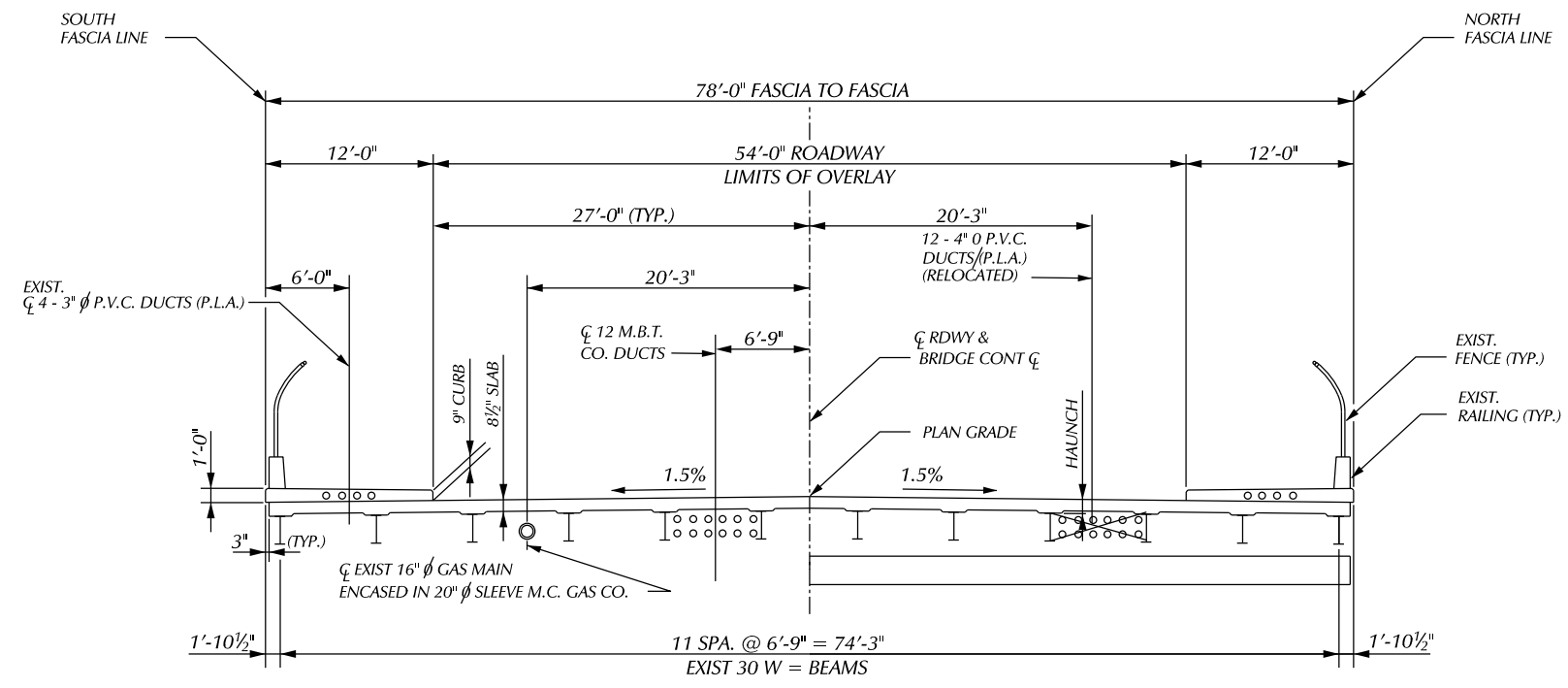
				BY	CHECKED BY	APPROVED:
PLAN						
GRADE						
ESTIMATE						
DESCRIPTION	DR	CHK	APP	DATE		
REVISIONS						

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

DECK RESURFACING DETAILS

SHEET 60 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018



SECTION A-A
(LOOKING DOWNSTATION)

DESCRIPTION	DR	CHK	APP	DATE
REVISIONS				
PLAN				
GRADE				
ESTIMATE				
FINAL				

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

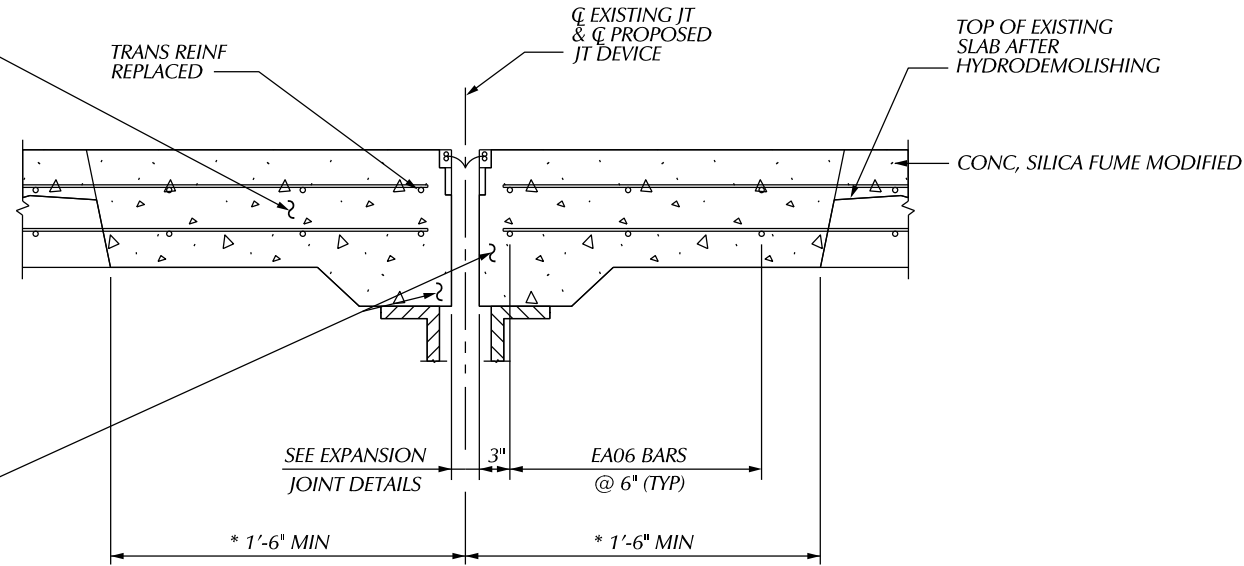
DECK CROSS - SECTION

SHEET 61 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018

SCALE	HORIZONTAL	BOOK NO.	PG.	LEVEL DATE	BEFORE STARTING CONSTRUCTION CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.
	VERTICAL				

BENCH MARKS ELEV

REMOVE EXISTING EXPANSION JOINT. CONCRETE REMOVAL IS INCLUDED IN THE BID ITEM "DECK JOINT, REM". EXISTING LONGITUDINAL REINFORCEMENT SHALL BE LEFT INTACT AND BLAST CLEANED, TRANSVERSE REINFORCEMENT SHALL BE REPLACED AS SHOWN, AND PAID FOR AS "REINFORCEMENT, STEEL, EXPOXY COATED".

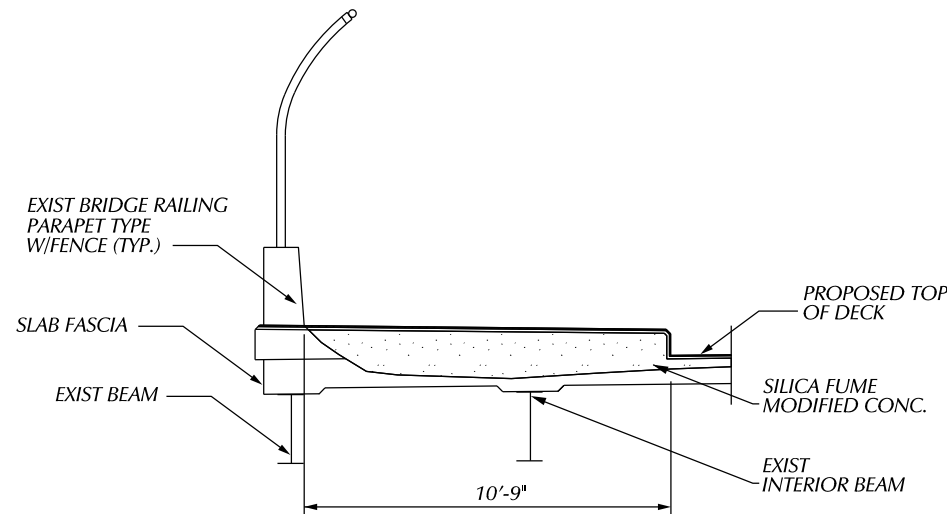


CONC. GRADE D, (CONC, SILICA FUME MODIFIED, MAY BE SUBSTITUTED BUT WILL BE PAID FOR AS "CONC, GRADE D") COST OF FORMING IS INCLUDED IN BID ITEM "CONC, GRADE D". IF CONC, SILICA FUME MODIFIED IS USED, THE EXPANSION JOINT REPLACEMENT AREA SHALL BE CAST AS AN INTERGAL PART OF THE OVERLAY.

SECTION AT PROPOSED TRANSVERSE JOINT
 * BEFORE FORMING, SOUND CONCRETE TO SEE IF ADDITIONAL REMOVAL WILL BE REQUIRED.

NOTES:

- THE WORK COVERED BY THESE PLANS INCLUDES RESURFACING THE EXISTING BRIDGE DECK WITH A DEEP OVERLAY, DECK JOINT REPLACEMENT, COATING OF STRUCTURAL STEEL, P&H REPLACEMENT, BEAM END REPAIR, SUBSTRUCTURE REPAIR AND MAINTAINING TRAFFIC.
- THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- BAGLEY AVE. TRAFFIC IS TO BE MAINTAINED OVER THE BRIDGE BY PART-WIDTH CONSTRUCTION.
- THE VOLUME OF SILICA FUME MODIFIED CONC. IS BASED ON THE OVERLAY AND AN ESTIMATE QUANTITY TO REPLACE UNSOUND CONCRETE AND TO MAKE GRADE ADJUSTMENTS AS DETERMINED BY THE ENGINEER.
- THE CONTRACTOR SHALL REMOVE AND REPLACE ONLY THAT PORTION OF THE BRUSH BLOCK THAT IS NECESSARY FOR INSTALLATION OF THE DECK JOINT.
- THE ITEM "DECK JOINT, REM" INCLUDES HAND CHIPPING WITHIN LIMITS REQUIRED FOR REMOVAL.
- BEFORE OVERLAYING, SOUND CONCRETE TO DETERMINE WHETHER 1'-6" REMOVAL AT EACH SIDE OF TRANSVERSE JOINTS WILL BE ADEQUATE. INCREASE THE REMOVAL LIMITS IF NECESSARY.
- WHERE STRUCTURAL STEEL IS EXPOSED DURING THE REMOVAL OF UNSOUND DECK CONCRETE, IT SHALL BE CLEANED AND COATED. CLEANING SHALL BE BY BLASTING OR POWER TOOLS. THE PROTECTION OF WORK AND ENVIRONMENT DURING CLEANING WILL BE PAID FOR AS EXTRA WORK.



SECTION THRU BARRIER AT PROP EXPANSION JOINT DEVICE

MISCELLANEOUS QUANTITIES	
2,310 LB	REINFORCEMENT, STEEL, EXPOXY COATED
1,200 SFT	* PATCH, FORMING
30 CYD	* PATCHING CONC. C-L
160 CYD	CONC. SILICA FUME MODIFIED
21,660 SFT	FALSE DECKING
600 CFT	* HAND CHIPPING, OTHER THAN DECK
1,666 SYD	HYDRODEMOLITION, FIRST PASS
67 SYD	HYDRODEMOLITION, SECOND PASS
209 FT	DECK JOINT, REM
1,666 SYD	BRIDGE DECK SURFACE CONSTRUCTION
1,666 SYD	SCRAFYING
8,000 DLR	RAILROAD INSPECTION AND FLAGGING
112 SYD	HAND CHIPPING, SHALLOW

THE ACTUAL QUANTITY OF SILICA FUME MODIFIED CONCRETE PLACED ON THE DECK WAS _____ CUBIC YARDS. (THIS INFORMATION IS TO BE FILLED IN BY THE ENGINEER WHEN SUBMITTING AS CONSTRUCTED PLANS.)

* TO BE USED FOR SUBSTRUCTURE REPAIR AS DIRECTED BY THE ENGINEER.

- FALSE DECKING SHALL INCLUDE THE AREA BOUND BY REFERENCE LINES A & B AND OUTSIDE FLANGE FASCIA BEAMS OF A & M.
- BRIDGE OVERLAY CROSS SLOPE SHALL BE 1.5%.
- MEASURES SHALL BE TAKING TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE.
- ALL STEEL FOR EXPANSION JOINT SHALL BE AASHTO M270, GRADE 36.
- THE CONTRACTOR WILL BE FURNISHED WITH PLANS OF THE EXISTING STRUCTURE IF REQUESTED.
- WORK FOR REMOVAL AND REINSTALLATION OF PORTIONS OF THE EXISTING THREE BEAM GUARDRAIL REQUIRED FOR ACCESS TO SCREED THE DECK SHALL BE INCLUDED IN THE BID ITEM, "BRIDGE DECK SURFACE CONSTRUCTION".
- WORK FOR REMOVAL AND REINSTALLATION OF PORTIONS OF THE EXISTING THREE BEAM GUARDRAIL REQUIRED FOR ACCESS TO SCREED THE DECK SHALL BE INCLUDED IN THE BID ITEM, "DECK JOINT, REM".
- NO PORTION OF THE DECK WORK SHALL ENCR OACH ON THE EXISTING UNDERCLEARANCE.
- FIELD BEND STEEL REINFORCEMENT IF NECESSARY TO CLEAR OBSTRUCTIONS AND BEND BACK INTO PLACE FOR EMBEDMENT INTO PROPOSED CONCRETE. INCLUDED IN THE BID ITEM "REINFORCEMENT, STEEL, EXPOXY COATED".
- THE CONTRACTOR SHALL NOTIFY EACH UTILITY COMPANY 48 HOURS IN ADVANCE OF PREFORMING WORK ON THAT COMPANY'S CONDUITS OR FACILITIES.
- FORMS FOR LARGE PATCHES SHALL BE INSTALLED IN 2'-0" TO 4'-0" HIGH SECTIONS WITH THE TOP OF FORM NO MORE THAN 4'-0" ABOVE THE LEVEL OF CONCRETE AS THE POUR PROGRESSES.

PLAN	BY	CHECKED BY	APPROVED
GRADE			
ESTIMATE			
REVISIONS	DR	CHK	DATE
	FINAL	****	****

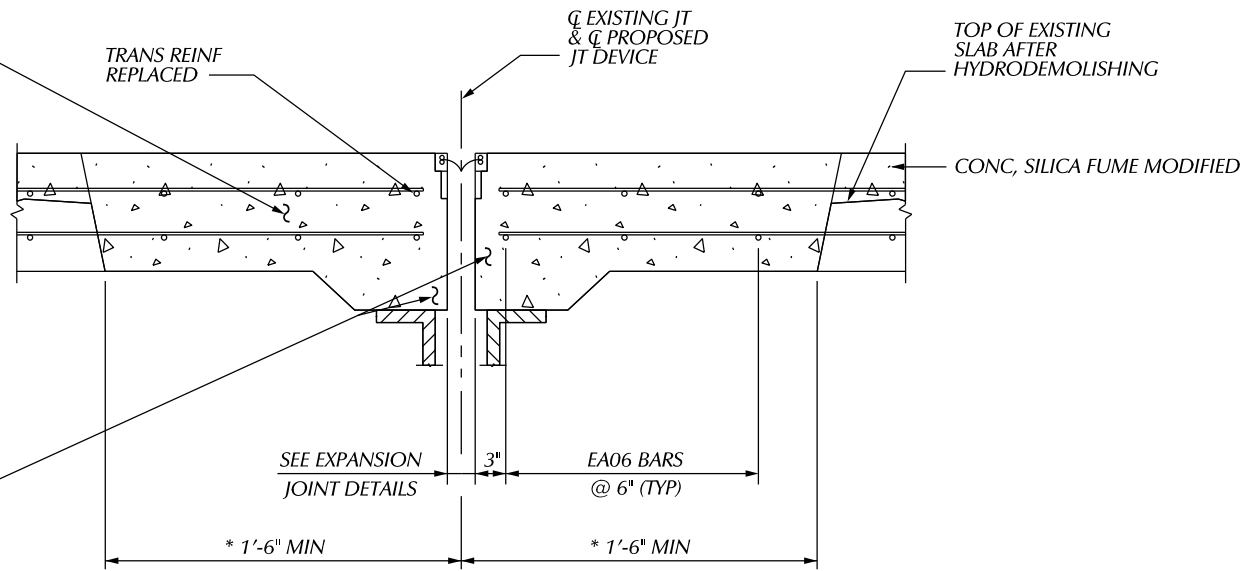
CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAUS OF STREETS AND HIGHWAYS
 FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

DECK RESURFACING DETAILS

SHEET 62 OF 65 SHEETS
 CONTRACT NO. PW-6985
 ASSIGNMENT NO.
 DATE 03/23/2018

REMOVE EXISTING EXPANSION JOINT. CONCRETE REMOVAL IS INCLUDED IN THE BID ITEM "DECK JOINT, REM". EXISTING LONGITUDINAL REINFORCEMENT SHALL BE LEFT INTACT AND BLAST CLEANED. TRANSVERSE REINFORCEMENT SHALL BE REPLACED AS SHOWN, AND PAID FOR AS "REINFORCEMENT, STEEL, EXPOXY COATED".

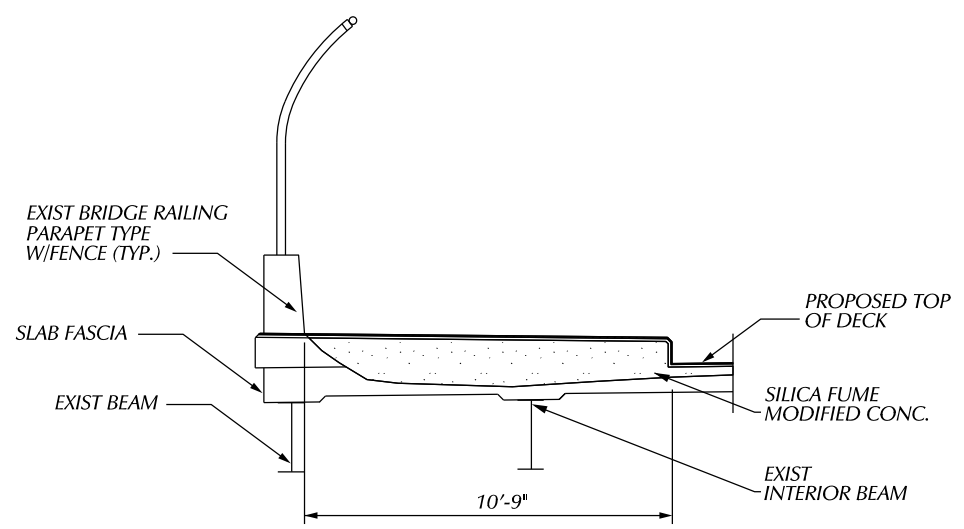


CONC. GRADE D, (CONC, SILICA FUME MODIFIED, MAY BE SUBSTITUTED BUT WILL BE PAID FOR AS "CONC, GRADE D") COST OF FORMING IS INCLUDED IN BID ITEM "CONC, GRADE D". IF CONC, SILICA FUME MODIFIED IS USED, THE EXPANSION JOINT REPLACEMENT AREA SHALL BE CAST AS AN INTERGAL PART OF THE OVERLAY.

SECTION AT PROPOSED TRANSVERSE JOINT
* BEFORE FORMING, SOUND CONCRETE TO SEE IF ADDITIONAL REMOVAL WILL BE REQUIRED.

NOTES:

- THE WORK COVERED BY THESE PLANS INCLUDES RESURFACING THE EXISTING BRIDGE DECK WITH A DEEP OVERLAY, DECK JOINT REPLACEMENT, COATING OF STRUCTURAL STEEL, P&H REPLACEMENT, BEAM END REPAIR, SUBSTRUCTURE REPAIR AND MAINTAINING TRAFFIC.
- THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- BAGLEY AVE. TRAFFIC IS TO BE MAINTAINED OVER THE BRIDGE BY PART-WIDTH CONSTRUCTION.
- THE VOLUME OF SILICA FUME MODIFIED CONC, IS BASED ON THE OVERLAY AND AN ESTIMATE QUANTITY TO REPLACE UNSOUND CONCRETE AND TO MAKE GRADE ADJUSTMENTS AS DETERMINED BY THE ENGINEER.
- THE CONTRACTOR SHALL REMOVE AND REPLACE ONLY THAT PORTION OF THE BRUSH BLOCK THAT IS NECESSARY FOR INSTALLATION OF THE DECK JOINT.
- THE ITEM "DECK JOINT, REM" INCLUDES HAND CHIPPING WITHIN LIMITS REQUIRED FOR REMOVAL.
- BEFORE OVERLAYING, SOUND CONCRETE TO DETERMINE WHETHER 1'-6" REMOVAL AT EACH SIDE OF TRANSVERSE JOINTS WILL BE ADEQUATE. INCREASE THE REMOVAL LIMITS IF NECESSARY.



SECTION THRU BARRIER AT PROP EXPANSION JOINT DEVICE

MISCELLANEOUS QUANTITIES

2,310 LB	REINFORCEMENT, STEEL, EXPOXY COATED
1,200 SFT	* PATCH, FORMING
30 CYD	* PATCHING CONC. C-L
160 CYD	CONC. SILICA FUME MODIFIED
21,660 SFT	FALSE DECKING
600 CFT	* HAND CHIPPING, OTHER THAN DECK
1,666 SYD	HYDRODEMOLITION, FIRST PASS
67 SYD	HYDRODEMOLITION, SECOND PASS
209 FT	DECK JOINT, REM
1,666 SYD	BRIDGE DECK SURFACE CONSTRUCTION
1,666 SYD	SCRAFYING
8,000 DLR	RAILROAD INSPECTION AND FLAGGING
112 SYD	HAND CHIPPING, SHALLOW
22 CYD	CONC., GRADE D

THE ACTUAL QUANTITY OF SILICA FUME MODIFIED CONCRETE PLACED ON THE DECK WAS _____ CUBIC YARDS. (THIS INFORMATION IS TO BE FILLED IN BY THE ENGINEER WHEN SUBMITTING AS CONSTRUCTED PLANS.)

* TO BE USED FOR SUBSTRUCTURE REPAIR AS DIRECTED BY THE ENGINEER.

- WHERE STRUCTURAL STEEL IS EXPOSED DURING THE REMOVAL OF UNSOUND DECK CONCRETE, IT SHALL BE CLEANED AND COATED. CLEANING SHALL BE BY BLASTING OR POWER TOOLS. THE PROTECTION OF WORK AND ENVIRONMENT DURING CLEANING WILL BE PAID FOR AS EXTRA WORK.
- FALSE DECKING SHALL INCLUDE THE AREA BOUND BY REFERENCE LINES A & B AND OUTSIDE FLANGE FASCIA BEAMS OF A & M.
- BRIDGE OVERLAY CROSS SLOPE SHALL BE 1.5%.
- MEASURES SHALL BE TAKEN TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE.
- ALL STEEL FOR EXPANSION JOINT SHALL BE AASHTO M270, GRADE 36.
- THE CONTRACTOR WILL BE FURNISHED WITH PLANS OF THE EXISTING STRUCTURE IF REQUESTED.
- WORK FOR REMOVAL AND REINSTALLATION OF PORTIONS OF THE EXISTING THREE BEAM GUARDRAIL REQUIRED FOR ACCESS TO SCREED THE DECK SHALL BE INCLUDED IN THE BID ITEM, "BRIDGE DECK SURFACE CONSTRUCTION".
- WORK FOR REMOVAL AND REINSTALLATION OF PORTIONS OF THE EXISTING THREE BEAM GUARDRAIL REQUIRED FOR ACCESS TO SCREED THE DECK SHALL BE INCLUDED IN THE BID ITEM, "DECK JOINT, REM".
- NO PORTION OF THE DECK WORK SHALL ENCROACH ON THE EXISTING UNDERCLEARANCE.
- FIELD BEND STEEL REINFORCEMENT IF NECESSARY TO CLEAR OBSTRUCTIONS AND BEND BACK INTO PLACE FOR EMBEDMENT INTO PROPOSED CONCRETE. INCLUDED IN THE BID ITEM "REINFORCEMENT, STEEL, EXPOXY COATED".
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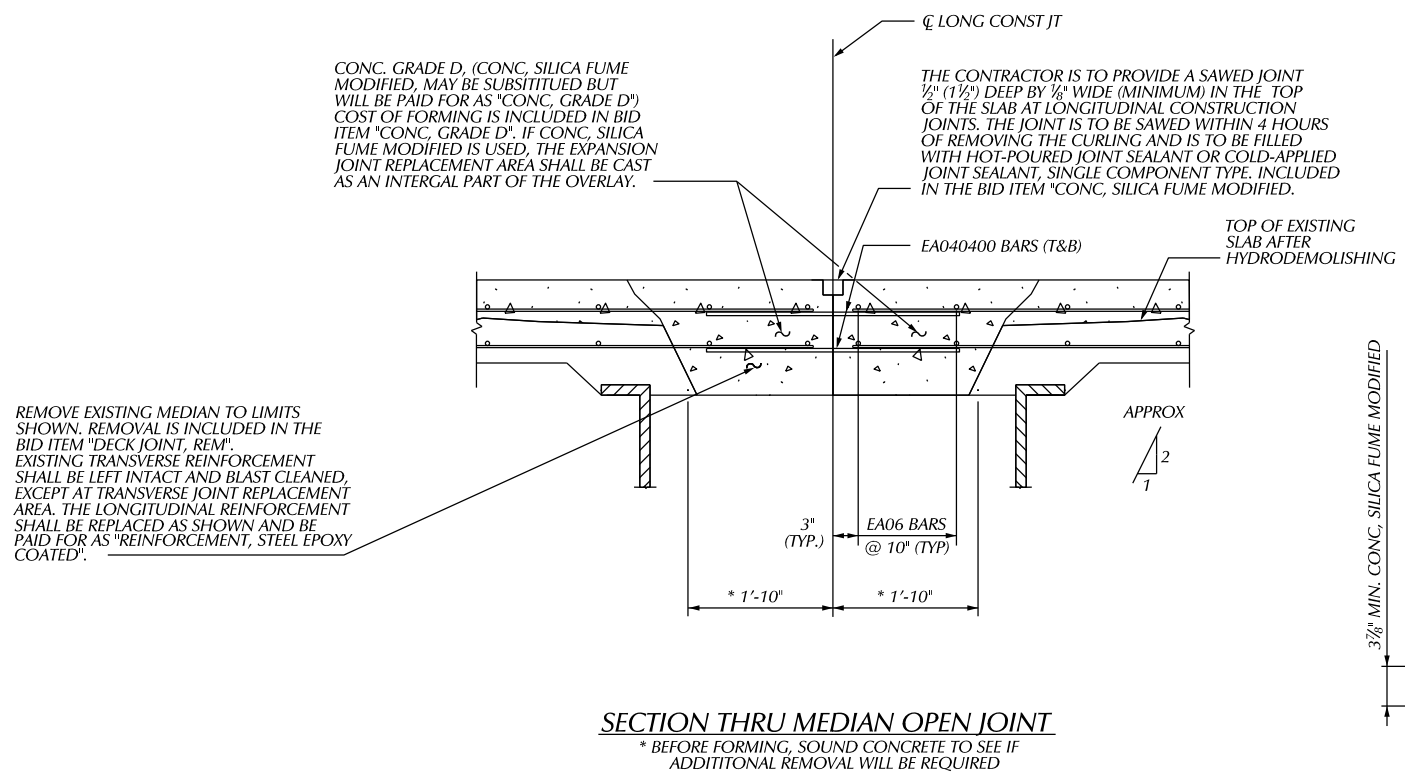
PLAN	BY	CHECKED BY	APPROVED:
GRADE			ENGINEER OF STRUCTS
ESTIMATE			
REVISIONS	DR	CHK	APV
	DATE	DATE	DATE
	FINAL	CHK	APV

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAUS OF STREETS AND HIGHWAYS
FOR

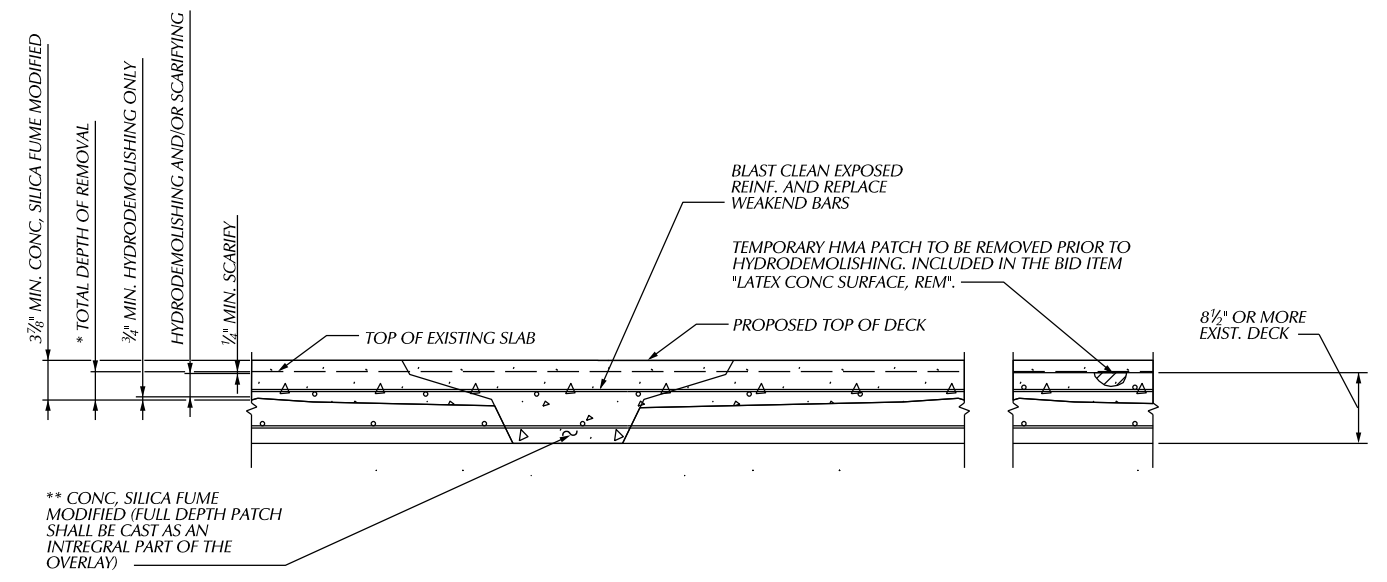
BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.

DECK RESURFACING DETAILS

SHEET 62 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018



REMOVE EXISTING MEDIAN TO LIMITS SHOWN. REMOVAL IS INCLUDED IN THE BID ITEM "DECK JOINT, REM". EXISTING TRANSVERSE REINFORCEMENT SHALL BE LEFT INTACT AND BLAST CLEANED, EXCEPT AT TRANSVERSE JOINT REPLACEMENT AREA. THE LONGITUDINAL REINFORCEMENT SHALL BE REPLACED AS SHOWN AND BE PAID FOR AS "REINFORCEMENT, STEEL EPOXY COATED".



					BY	CHECKED BY	APPROVED:
				PLAN			
				GRADE			DESIGNED BY STREET
				ESTIMATE			
				FINAL	DATE	DATE	
REVISIONS							

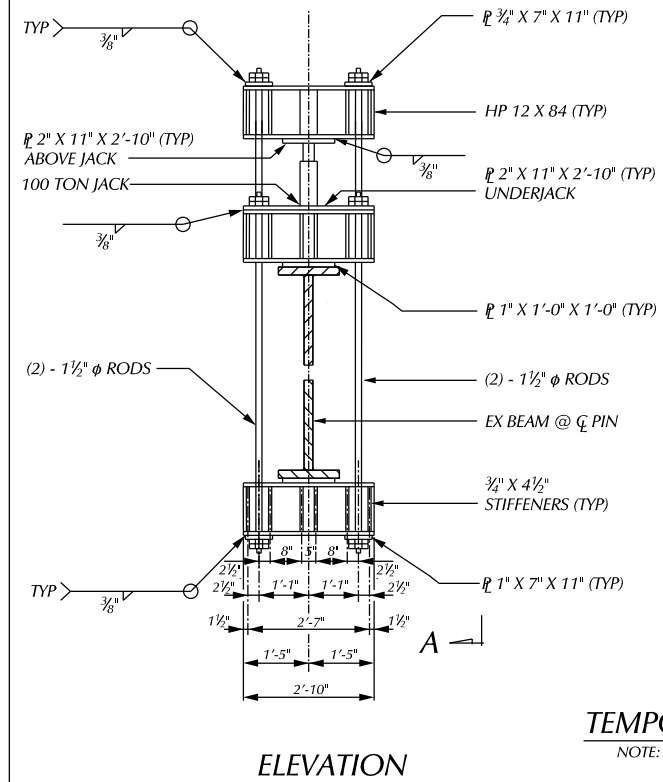
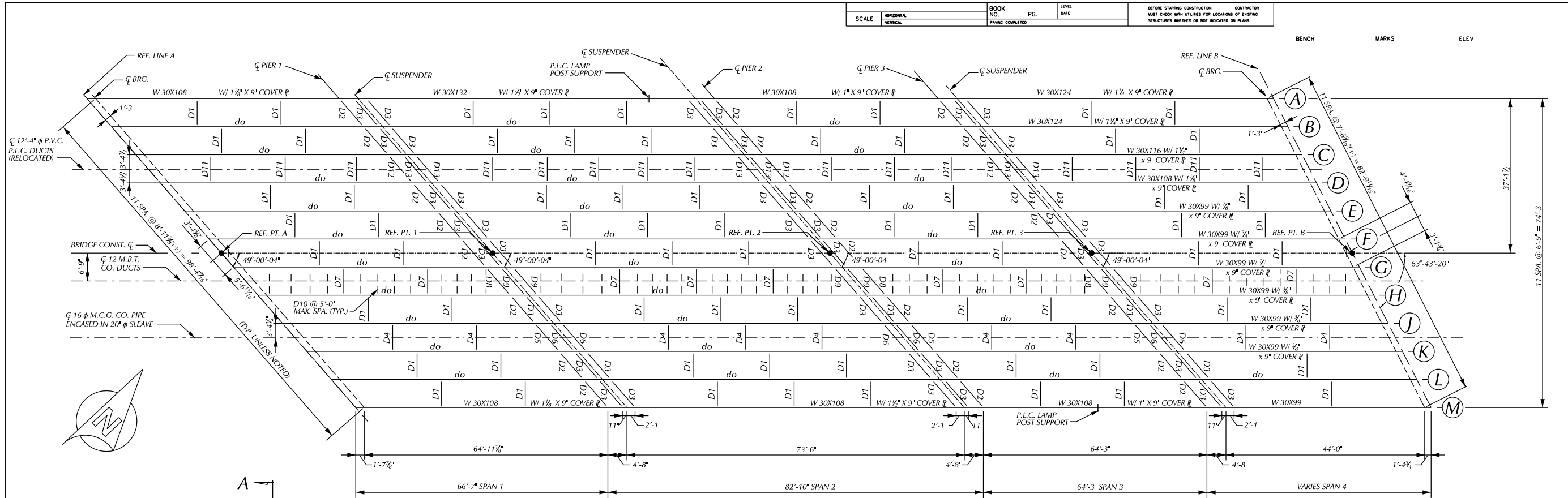
CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
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BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.
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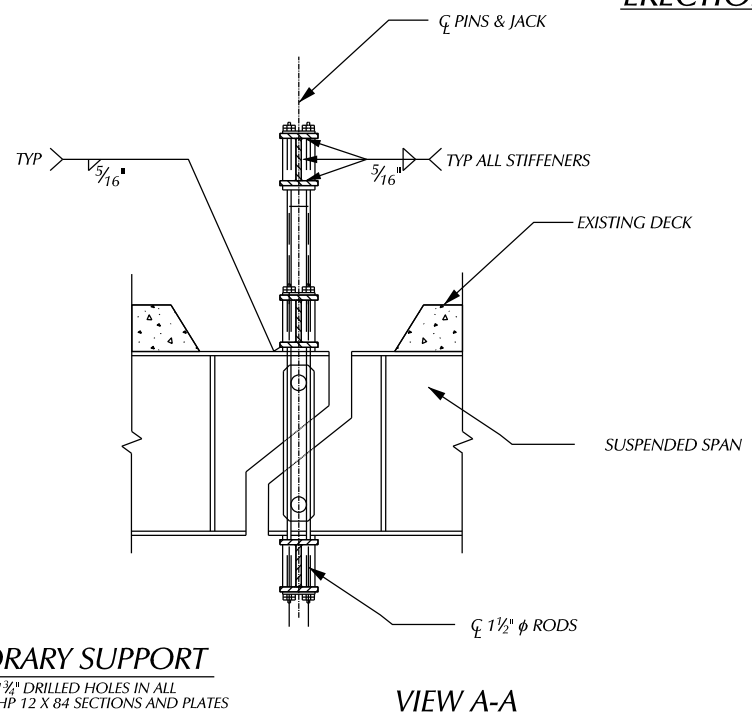
BEFORE STARTING CONSTRUCTION CONTRACTOR MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.

BENCH MARKS ELEV

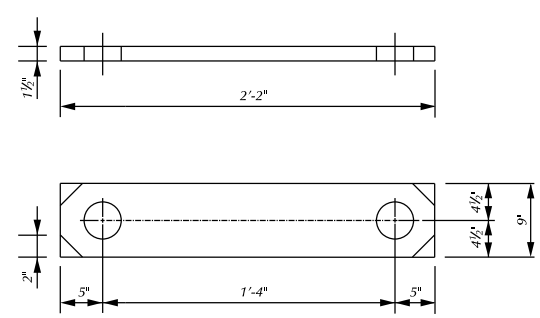


TEMPORARY SUPPORT

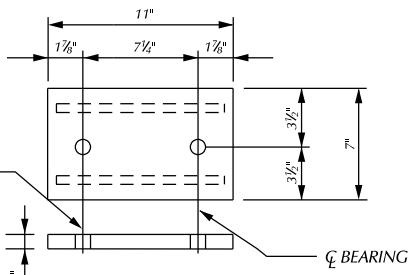
NOTE: 1 3/8" DRILLED HOLES IN ALL HP 12 X 84 SECTIONS AND PLATES
NUTS ARE USED AS SHIMS
STOP WELD 1/2" SHORT OF CORNER CLIPS, WRAP WELD AROUND OUTSIDE EDGE AT STIFFENERS



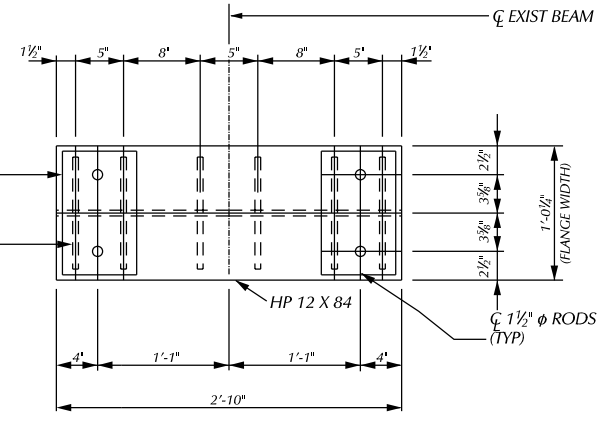
ERECTION DIAGRAM



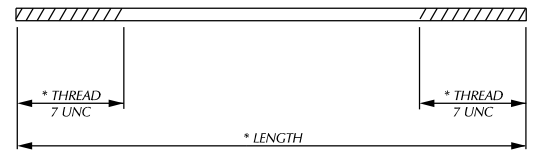
LINK PLATE
(72 REQ'D)



DETAIL A
(4 REQ'D PER ASSEMBLY)



PLAN OF TEMPORARY SUPPORT



SUSPENDER ROD DETAIL

* CONTRACTOR SHALL DETERMINE ROD AND THREAD LENGTH TO FIT SITUATION
4 REQUIRED PER ASSEMBLY W/7 HEAVY HEX NUTS & 4 HARDENED WASHERS PER ROD

DESCRIPTION	DR	CHK	APP	DATE
REVISIONS				
PLAN				
GRADE				
ESTIMATE				
FINAL	***	***		

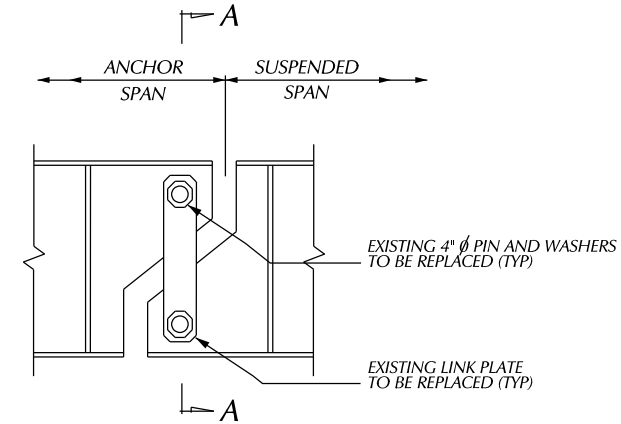
CITY OF DETROIT
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FOR

BAGLEY AVE. BRIDGE OVER CANADIAN PACIFIC R.R.
PIN & HANGER REPLACEMENT DETAILS

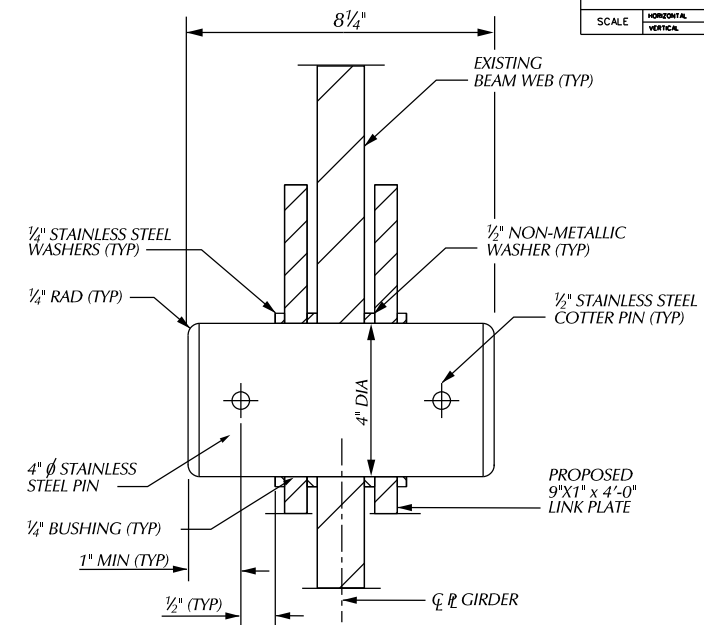
SHEET 64 OF 65 SHEETS
CONTRACT NO. PW-6985
ASSIGNMENT NO.
DATE 03/23/2018

SCALE	HORIZONTAL	BOOK NO.	PC.	LEVEL	DATE	BEFORE STARTING CONSTRUCTION MUST CHECK WITH UTILITIES FOR LOCATIONS OF EXISTING STRUCTURES WHETHER OR NOT INDICATED ON PLANS.
	VERTICAL	NO. PAINTING COMPLETED				

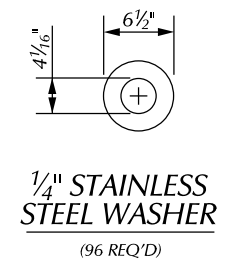
BENCH MARKS ELEV



ELEVATION AT PIN



PROPOSED PIN DETAIL
(72 REQ'D)

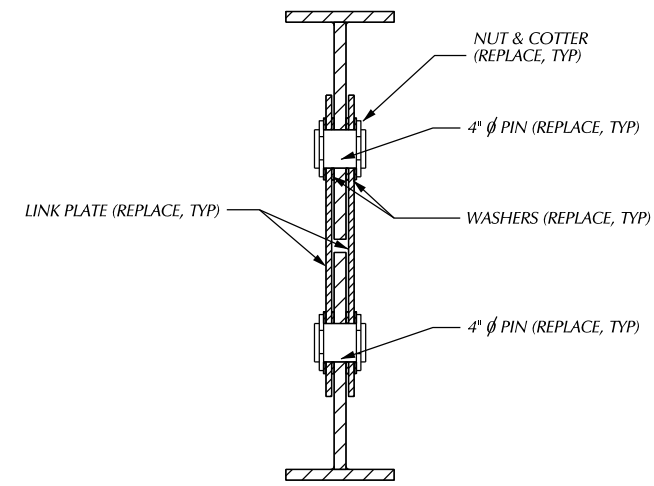


MISCELLANEOUS QUANTITIES	
1,555 FT	BEAM PLATE, SEAL PERIMETER
** 1 LS	CONC SURFACE COATING (R01 OF 82418)
112 SYD	SUBSTRUCTURE HORIZONTAL SURFACE SEALER
834 FT	PROTECTIVE SHIELD, UTILITY PIPE
36 EA	SUPPORT, SUSPENSION, TEMP
36 EA	HANGER ASSEMBLY, FIELD MEASUREMENT
36 EA	HANGER ASSEMBLY, REM AND ERECT
7,730 LBS	STRUCTURAL STEEL, FURN AND FAB, PIN AND HANGER
144 EA	BUSHING
1 LS	STEEL STRUCTURE, CLEANING, TYPE 4 (R01 OF 82418)
1 LS	STEEL STRUCTURE, COATING, TYPE 4 (R01 OF 82418)
1 LS	FIELD REPR OF DAMAGE COATING (R01 OF 82418)

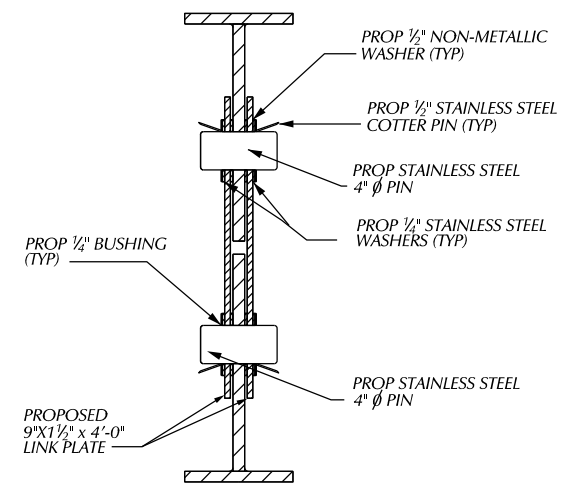
* THE ESTIMATE AREA OF STRUCTURAL STEEL TO BE PAINTED IS 84,300 SQUARE FEET.
** THE ESTIMATE AREA OF CONC. SURFACE COATING IS 1,510 SYD.

NOTES:

- THIS BRIDGE IS COATED WITH LEAD BASED PAINT.
- SEE SUBSECTION 715 OF THE STANDARD SPECIFICATIONS FOR PROTECTION OF WORK AND ENVIRONMENT DURING THE BLAST CLEANING OF STRUCTURES.
- CONDUITS SHALL NOT BE CLEANED AND COATED. (SEE SUBSECTION 715 OF THE STANDARD SPECIFICATIONS).
- SUBSTRUCTURE HORIZONTAL SURFACE COATING SHALL BE APPLIED TO THE TOP OF ALL PIERS.
- CONCRETE SURFACE COATING SHALL BE APPLIED TO THE ENTIRE EXPOSED SURFACES OF ALL PIERS EXCEPT TOP, CRASHWALL, CONCRETE RAILING AND SLAB FASCIA.
- THE AREA BEHIND AND AROUND THE HANGER ASSEMBLY SHALL BE COATED PRIOR TO INSTALLING THE NEW LINK PLATES AND PINS. PROPOSAL LINK PLATES SHALL BE SHOP COATED.
- THE PROTECTION OF THE WORK AND ENVIRONMENT DURING BLAST CLEANING OF WEBS BEHIND AND AROUND HANGER ASSEMBLIES SHALL BE ACCORDING TO SUBSECTION 715 OF THE STANDARD SPECIFICATIONS. (INCLUDED IN THE BID ITEM "HANGER ASSEMBLY, REMOVE AND ERECT").
- WELDING ON EXISTING GIRDERS WILL NOT BE PERMITTED.
- THE PERMISSIBLE HYDRAULIC JACK CAPACITY SHALL BE LIMITED TO 100 TON.
- ALTERNATE DESIGNS OF THE TEMPORARY SUPPORT SHALL BE BASED ON LOADS AS FOLLOWS:
200 KIPS VERTICAL GIRDER LOAD.
- THE ENGINEER SHALL INSPECT THE STRUCTURAL STEEL PARTS THAT HAVE BEEN BLAST CLEANED FOR EVIDENCE OF CRACKS OR LOSS OF SECTION DUE TO CORROSION OF MORE THAN 25 PERCENT. SUCH DETERIORATION SHALL BE REPORTED IN WRITING TO THE REGION BRIDGE ENGINEER.
- THE SIGNS OVER CANADIAN PACIFIC R.R. SHALL BE REMOVED FOR CLEANING AND COATING OF THE FASCIA BEAMS. SIGNS SHALL BE REINSTALLED USING NEW CONNECTION HARDWARE ACCORDING TO SUBSECTION 919.02 OF THE STANDARD SPECIFICATIONS (INCLUDING IN THE BID ITEMS FOR CLEANING AND COATING EXISTING STEEL STRUCTURES).
- SEALANT SHALL BE APPLIED AROUND THE PERIMETER OF THE BEARING PLATES TO CONCRETE CONTACT SURFACES AFTER CUTTING AWAY ANY PROTRUDING PORTION OF LEAD PLATE.
- SEALANT SHALL BE APPLIED AROUND THE PERIMETER OF THE BOLTED END DIAPHRAGM CONNECTION PLATES AND ANGLES.
- SEALANT SHALL BE APPLIED AROUND THE PERIMETER OF ALL BEAM ENDS WHERE ENCASED IN THE BACKWALLS.
- ALL STRUCTURAL STEEL SHALL BE COATED ACCORDING TO SUBSECTION 716 OF THE STANDARD SPECIFICATIONS. THE COLOR OF THE URETHANE PROTECTIVE COAT SHALL BE LIGHT GREY. FEDERAL STANDARD 595B COLOR NUMBER 16440.
- THE CONTRACTOR SHALL TAKE NECESSARY MEASURES TO AVOID OVERSPRAY ON ADJACENT SUBSTRUCTURE AND SUPERSTRUCTURE CONCRETE SURFACES AND ON SIGNS ATTACHED TO THE STRUCTURE. (INCLUDING IN THE BID ITEM "STEEL STRUCTURE, COATING, TYPE 4").
- IF END DIAPHRAGMS INTERFERE WITH THE PLACEMENT OF THE TEMPORARY SUPPORT, THEY SHALL BE REMOVED AND RE-INSTALLED WITH NEW HARDWARE. INCLUDED IN THE BID ITEM "SUPPORT, SUSPENSION, TEMP".



SECTION A-A (EXISTING)



SECTION A-A (PROPOSED)

PROPOSED CROSS SLOPE
(LOOKING UPSTATION)

PLAN	BY	CHECKED BY	APPROVED
GRADE			
ESTIMATE			
REVISIONS	DR	CHK	APPV DATE
	FINAL	****	****

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
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SHEET 65 OF 65 SHEETS
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