ROAD

PLANS

TYPICAL CROSS SECTION2

NOTE SHEET......3

PLANS & PROFILES......4

DETAIL GRADES.....5

MAINTAINING TRAFFIC.....6-8

QUANTITY SHEETS..... 14

BRIDGE PLANS

SIGNING PLANS

SPECIAL DETAILS.....9-13

TITLE SHEET LEGEND

UNIMPROVED OR CITY STREET

PROPOSED PROJECT

BITUMINOUS

EXISTING ROADS

SECTION LINE .

TOWNSHIP LINE ..

CITY OR VILLAGE LIMITS

SHEET

NOS.

MICHIGAN

DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED

MICHIGAN PROJECT

STP 2000(330)

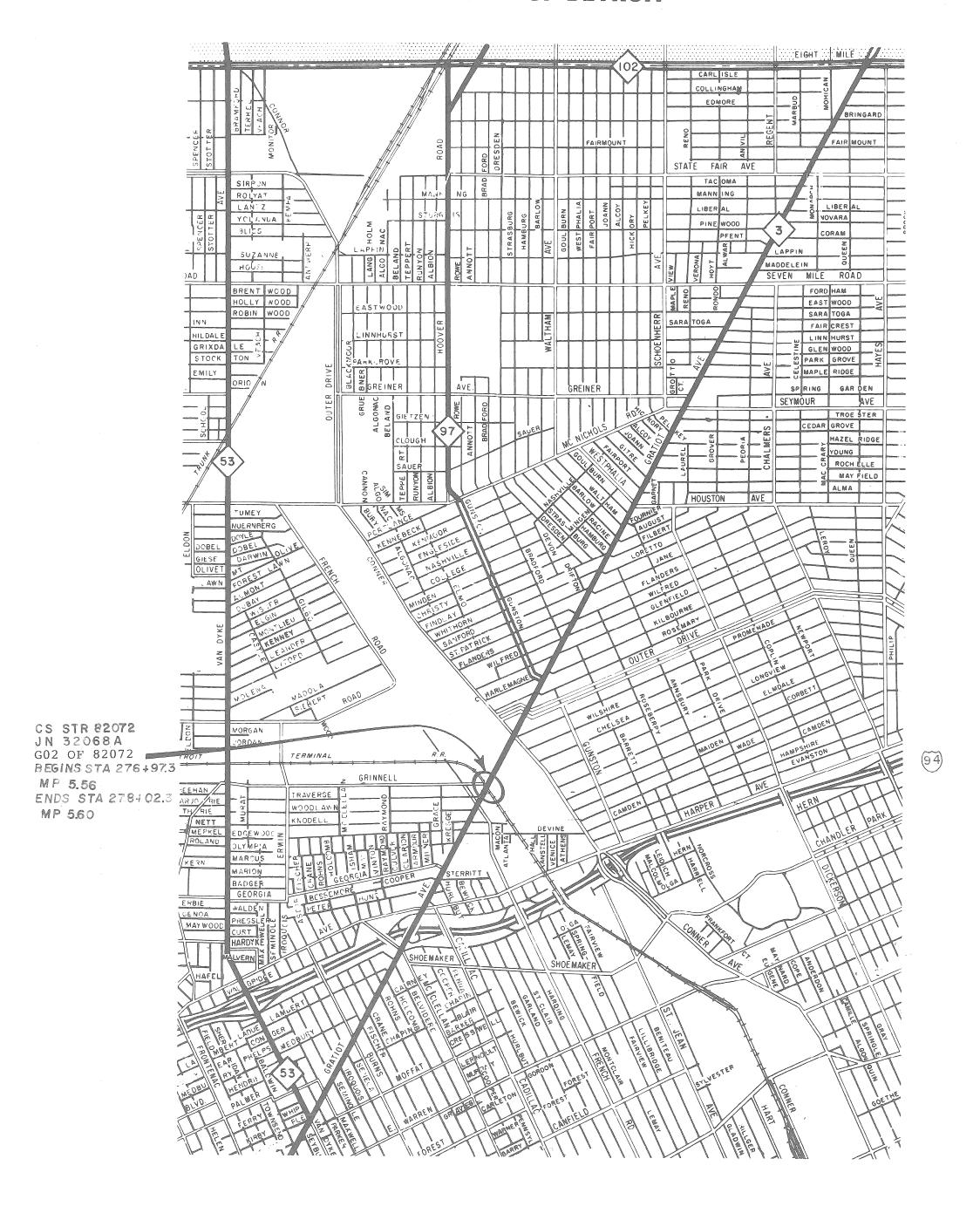
CONTROL SECTION

STR 82072

JOB NUMBER

32068A

WAYNE CO. CITY OF DETROIT



STP 2000(330) 32068A M-3

THE IMPROVEMENT COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 1990 STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS

YEAR 1990

3**6**00

FEDERAL NUMBER NO. SHEETS

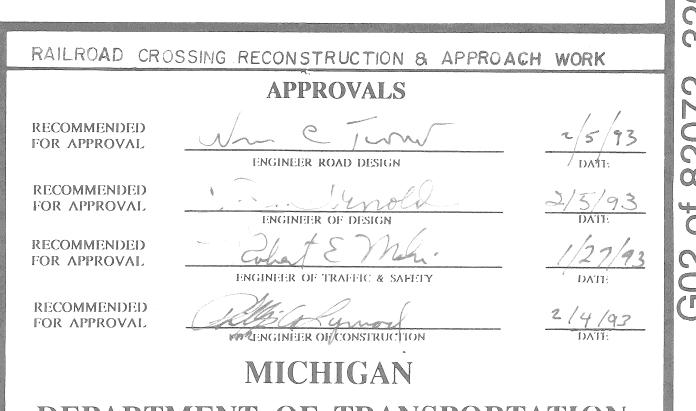
36,800

3.0%

40 MPH DESIGN SPEED ..

TRAINS PER DAY 5

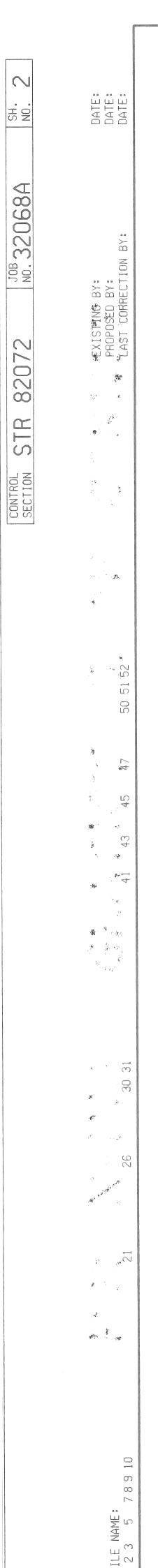
TRAIN SPEED. 15 MPH

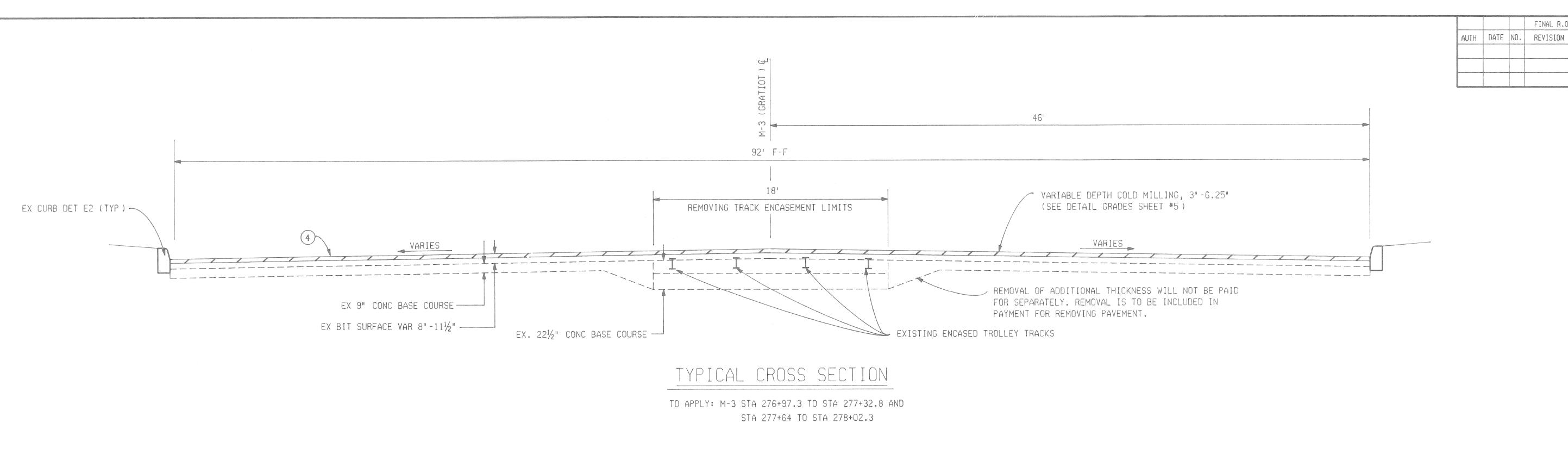


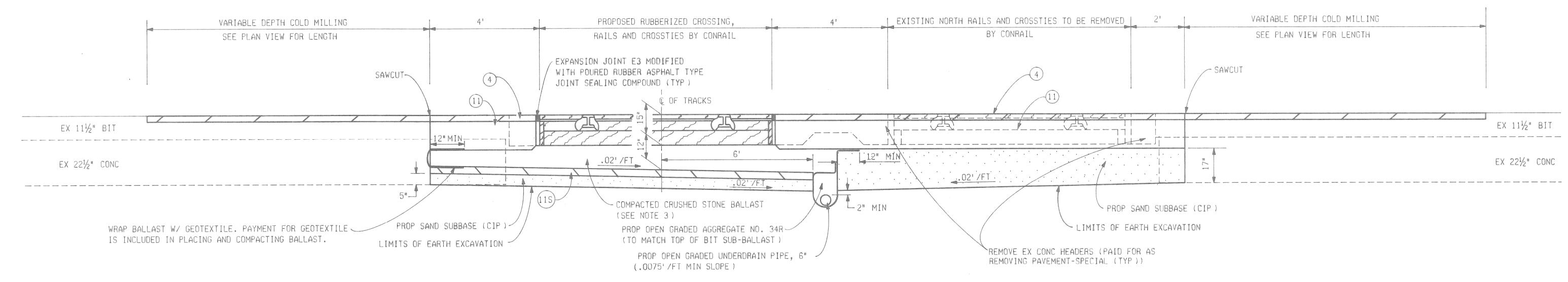
DEPARTMENT OF TRANSPORTATION

PATRICK M. NOWAK - DIRECTOR

APPROVED BY				
	TY DIRECTOR HI	GHWAYS	DATE	
PLANS PREPARED B REPARED B REPARED B REPARED B REPARED B REPARED B REPARED B	0.5. 01	PARTMENT OF TRARAL HIGHWAY ADM	MNISTRATION	1
CONTROL SECTION	JOB NUMBER	FEDERAL NI	IMBEPS	SIII
000 / 000=0		PROSECT	FIFM	(101)
G02 of 82072	32068A	STP 2000 (330)	NA 911	1







NOTES:

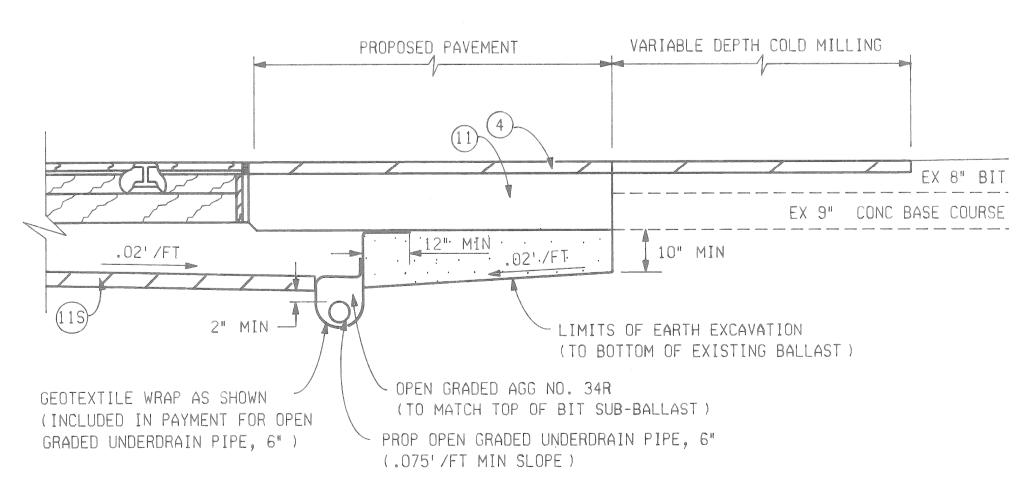
- 1. REMOVAL AND DISPOSAL OF BALLAST WILL BE PAID FOR AS EARTH EXCAVATION.
- 2. EXCAVATION, DISPOSAL OF EXCAVATED MATERIAL, AND GRADING NECESSARY TO PLACE PROPOSED BIT SUB-BALLAST AND PROPOSED SUBBASE, WILL BE PAID FOR AT THE CONTRACT PRICE FOR EARTH EXCAVATION.
- 3. NEW BALLAST WILL BE SUPPLIED AND STOCKPILED AT THE SITE BY CONRAIL FOLLOWING PLACEMENT OF THE BIT SUB BALLAST, THE CONTRACTOR SHALL PLACE AND COMPACT 10" OF NEW BALLAST. (PAID FOR AS PLACING AND COMPACTING BALLAST.) THE REMAINING BALLAST REQUIRED FOR TRACK SUPPORT WILL BE PLACED AND COMPACTED BY CONRAIL. ANY ADDITIONAL BALLAST OUTSIDE THE 1 ON 1 INFLUENCE OF THE RR TRACK SHALL BE PLACED BY THE CONTRACTOR.
- 4. PAYMENT FOR ALL SAWCUTS IS INCLUDED IN PAYMENT FOR REMOVING PAVEMENT-SPECIAL.
- 5. THE WIDTH OF PAVEMENT REMOVAL ADJACENT TO THE 1' CONCRETE HEADERS IS 3' SOUTH OF THE SOUTH CROSSING AND 1' NORTH OF THE NORTH CROSSING. (MEASURED PARALLEL TO THE TRACKS)
- 6. REMOVAL OF ALL CONCRETE, RAILS AND APPURTENANCES WITHIN THE TROLLEY TRACK AREA WILL BE PAID FOR AS REMOVING TRACK ENCASEMENT. REMOVAL OF BITUMINOUS PAVEMENT ABOVE SHALL BE PAID FOR AS REMOVING PAVEMENT.

BITUMINOUS APPLICATION TABLE

IDENT NO.	ITEM	RATE PER SYD	ASPHALT PENETRATION	REMARKS
4	BIT MIX 4B	330	85-100	PAID FOR AS BIT APPROACH
11	BIT MIX 11A	1540	85-100	BIT BASE COURSE
115	BIT MIX 11A	440	85-100	BIT SUB BALLAST
0.00	O 0.10 GAL/SYD BITUMINOUS BOND COAT	AS DIRECTED	BY ENGINEER	

TYPICAL CROSS SECTION

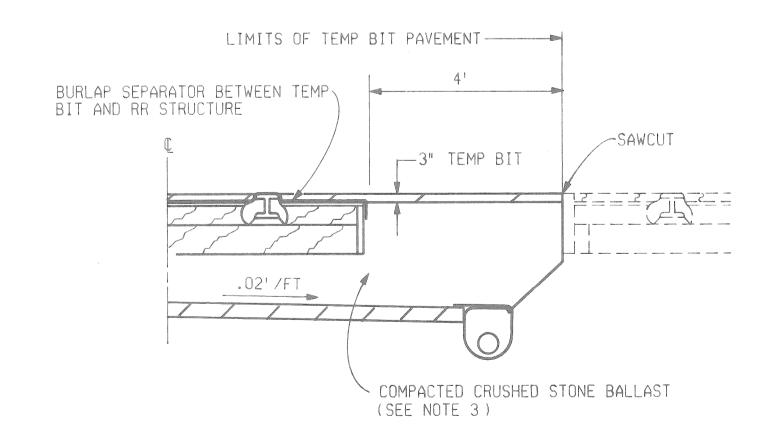
PERPENDICULAR TO RR TRACK WITHIN TROLLEY AREA



TYPICAL HALF SECTION

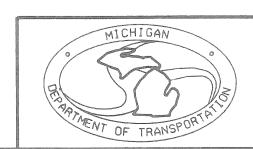
PERPENDICULAR TO RR TRACK OUTSIDE OF TROLLEY AREA

ADDITIONAL EXCAVATION AND OPEN GRADED AGGREGATE NEEDED TO MAINTAIN REQUIRED DEPTH OF UNDERDRAIN IS INCLUDED IN PAYMENT FOR OPEN GRADED UNDERDRAIN PIPE, 6".



TYPICAL HALF SECTION (TEMPORARY PAVEMENT-NB LANES)

PERPENDICULAR TO RR TRACK (SEE TYPICAL CROSS SECTION FOR DETAILS NOT SHOWN)



CONRAIL	CROSSIN	NG M-3	TYPICAL	CROSS	SECT	ION
DATE	SCALE	CONT. SEC.	JOB NO.	DES	IGN UNIT	SHEET

FINAL R.O.W.

ı			
	ENGINEERING REPORT NO	ENVIRON IMPACT STMT	
-	METHOD OF SURVEY		YEAR
and the owner own to see	SURVEY ORDER	SURVEY CHIEF G. HOBGOOD	YEAR 1991
The state of the s	AERIAL SURVEY NO		YEAR
The same of the same of	HORIZ DATUM	VERT DATUM	
-	ROAD DESIGN INITIATED	COMPLETED	
-	PRELIMINARY PLANS BY W. ERBEN	FINAL PLANS BY W. ERBEN	
-	FIELD INSPECTION (GI) BY H. J. NYQUIST		DATE 3/30/92
organisment and a second	PLANS-IN-HAND BY (FHWA)	AND (MDOT)	DATE
-			

GENERAL PLAN NOTES

UNDERGROUND UTILITIES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, 1974, THE CONTRACTOR SHALL DIAL 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

UNDERGROUND ELECTRICAL CONDUIT

CONRAIL WILL REMOVE AND REPLACE AN EXISTING UNDERGROUND ELECTRICAL CONDUIT FOR THE WEST CROSSING SIGNAL WHICH IS LOCATED WITHIN THE LIMITS OF THE EXCAVATION. PRIOR TO EXCAVATION, CONRAIL WILL LOCATE THE EXISTING CONDUIT WHICH IS NOT INCLUDED IN THE MISS DIG SYSTEM.

OLD PLANS

THE FOLLOWING OLD PLANS WERE REFERRED TO IN THE DESIGN OF THIS PROJECT.

C.S. RRS 82072 11623 PROJ. 82-11 U-180(27)

IN ADDITION, OTHER OLD PLANS THAT PREDATE THIS PROJECT MAY BE AVAILABLE. THESE PLANS MAY BE REVIEWED IN THE LANSING DESIGN OFFICE DURING NORMAL WORKING HOURS.

STATIONING

STATIONING ON THIS PROJECT WAS TAKEN FROM OLD PLANS AND PAVEMENT STENCILED STATIONING AND IS NOT NECESSARILY CORRECT.

SIGNS

ANY MDOT SIGNS REQUIRING RELOCATION DUE TO CONSTRUCTION OPERATIONS SHALL BE SALVAGED AND RESET BY THE CONTRACTOR AT LOCATIONS DESIGNATED BY THE ENGINEER. THIS WORK WILL BE CONSIDERED INCLUDED IN PAYMENT FOR OTHER CONTRACT ITEMS.

PAVEMENT REMOVAL QUANTITIES

PAVEMENT REMOVAL AS SHOWN ON THE PLANS SHALL BE AS DIRECTED BY THE ENGINEER. ADJUSTMENTS CAN BE MADE IN THE QUANTITIES AS NECESSARY, TO PROVIDE THE PROPER CROSS SECTION AND BASE.

PLAN ELEVATION

ELEVATIONS SHOWN ON THESE PLANS ARE BASED ON CITY OF DETROIT DATUM.

PUBLIC UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO IT'S ACCURACY AND THE LOCATION OF EXISTING UTILITIES.

NAME OF OWNER

KIND OF UTILITY

ELECTRIC

TELEPHONE

GAS

WATER MAINS AND SEWERS

STREET LIGHTING

DETROIT EDISON COMPANY ATTN: GLENN SPENCE

2000 SECOND AVENUE - RM. 660 SB DETROIT, MI 48226

PHONE: 237-6447 FAX: 237-6495

MICHIGAN BELL TELEPHONE COMPANY ATTN: GARY SAMKOWIAK

MICHIGAN CONSOLIDATED GAS COMPANY

11780 MERRIMAN ROOM 635 LIVONIA, MI 48150

PHONE: 523-7544

ATTN: CRAIG STROUD 3200 HOBSON DETROIT, MI 48201

PHONE: 577-7150

DETROIT WATER AND SEWERAGE DEPARTMENT 735 RANDOLPH ST. WATER BOARD BUILDING DETROIT, MI. 48226

PHONE: 224-4800 DETROIT PUBLIC LIGHTING DEPARTMENT

9449 GRINNELL DETROIT, MI 48213 PHONE: 267-7228

NOTES APPLYING TO STANDARD PLANS

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

DRIVEWAY OPENINGS & APPROACHES, AND CONCRETE SIDEWALKS	II-29E
CONCRETE CURB AND CONCRETE CURB & GUTTER	II-30D
TRACK CROSSINGS	VI-121D (SPECIAL DETAIL)
RAILROAD CROSSING SIGNALS	VI-122D
GRANULAR BLANKET, UNDERDRAINS, AND UNDERDRAIN END SECTIONS	IV-80D
LIGHTED ARROWS AND BARRICADES	VI-125H
TEMPORARY CONCRETE BARRIER	II-52F (SPECIAL DETAIL)
PLACEMENT OF TEMPORARY CONCRETE BARRIER	VI-126E

MISCELLANEOUS ESTIMATES

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN AND PROFILE SHEETS:

MOBILIZATION	1	LSUM
REMOVING PAVEMENT MARKING, LONGITUDINAL	4500	
LIGHTED ARROW, TYPE A, FURNISHED	6	EACH
LIGHTED ARROW, TYPE A, OPERATED	6	EACH
BARRICADE, TYPE II LIGHTED, FURNISHED	150	EACH
BARRICADE, TYPE II LIGHTED, OPERATED	150	EACH
BARRICADE, TYPE III LIGHTED, FURNISHED	20	EACH
BARRICADE, TYPE III LIGHTED, OPERATED	20	EACH
MINOR TRAFFIC DEVICES	1	LSUM
SIGN, TYPE B TEMPORARY-FURNISHED	600	SFT
TEMPORARY PAVEMENT MARKING, TYPE R, 4" WHITE	10000	LFT
TEMPORARY PAVEMENT MARKING, TYPE R, 4" YELLOW	10000	Land T
FAST-CURE POLYESTER PAVEMENT MARKING, 4", WHITE.	1500	LFT
FAST-CURE POLYESTER PAVEMENT MARKING, 4", YELLOW.	2500	LFT
TEMPORARY CONCRETE BARRIER-FURNISHED	90	LFT
SIGN, TYPE A TEMPORARY-FURNISHED	700	SFT
SIGN, TYPE D TEMPORARY-FURNISHED	70	SFT
CLEANING DRAINAGE STRUCTURE	1	EACH
CLEANING DRAINAGE STRUCTURE LEADS	75	LFT
TEMPORARY BITUMINOUS	16	TON
REMOVING CURB	4	LFT
SIGN, TYPE B TEMPORARY - OPERATED	600	SFT
SIGN, TYPE A TEMPORARY-OPERATED	700	SFT
SIGN, TYPE D TEMPORARY - OPERATED	70	SFT
TEMPORARY CONCRETE BARRIER-OPERATED	90	LFT
TEMPORARY CONCRETE BARRIER-RELOCATED	90	LFT
NON-HAZARDOUS CONTAMINATED MATERIAL HANDLING AND DISPOSAL	155	CYD

THE FOLLOWING ITEMS ARE ESTIMATED FOR THE ENTIRE PROJECT TO CORRECT POSSIBLE UNSUITABLE SUBGRADE CONDITIONS WHERE DESIGNATED BY THE ENGINEER.

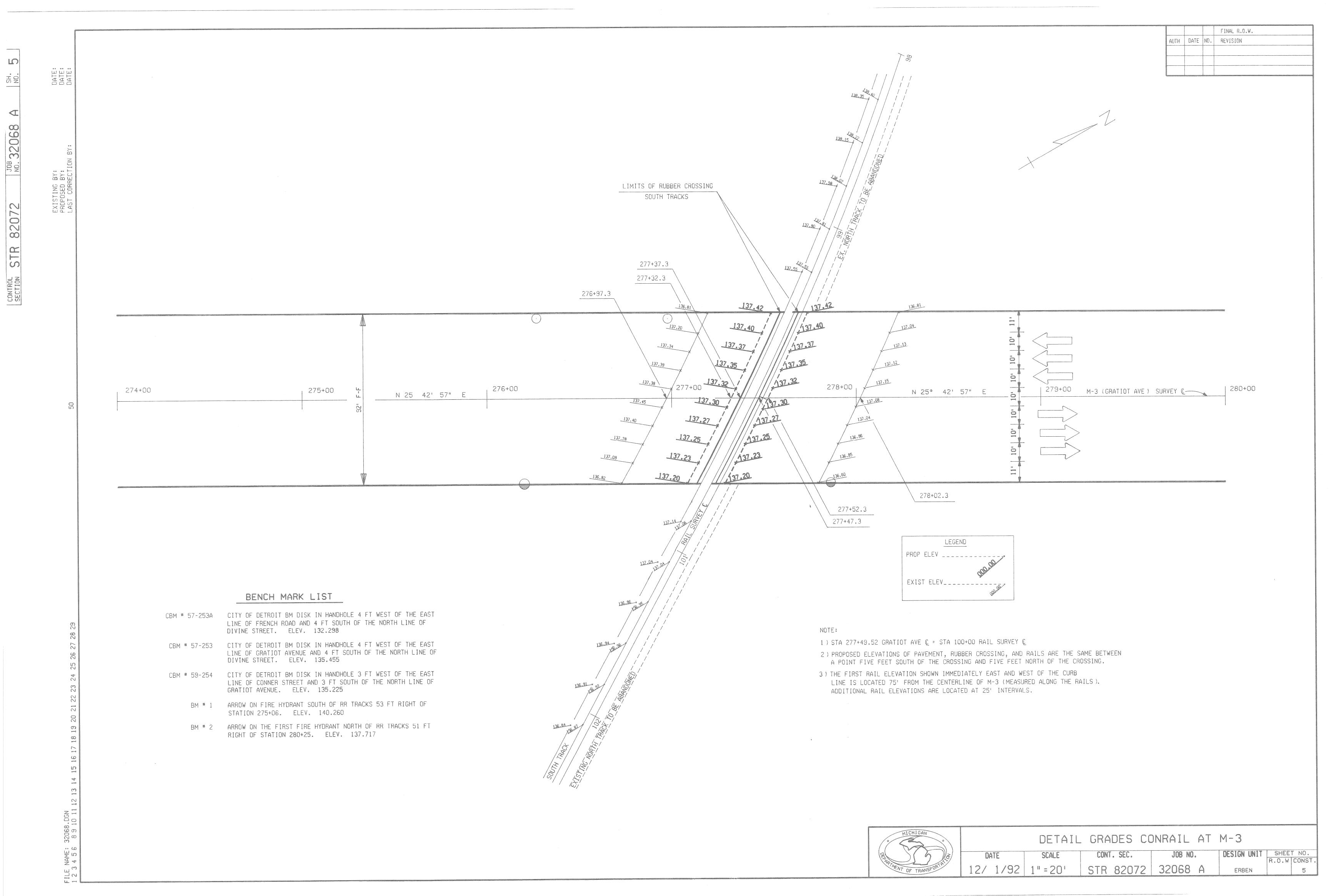
SUBGRADE UNDERCUTTING, TYPE II SUBGRADE UNDERDRAIN, 6" 150 LFT

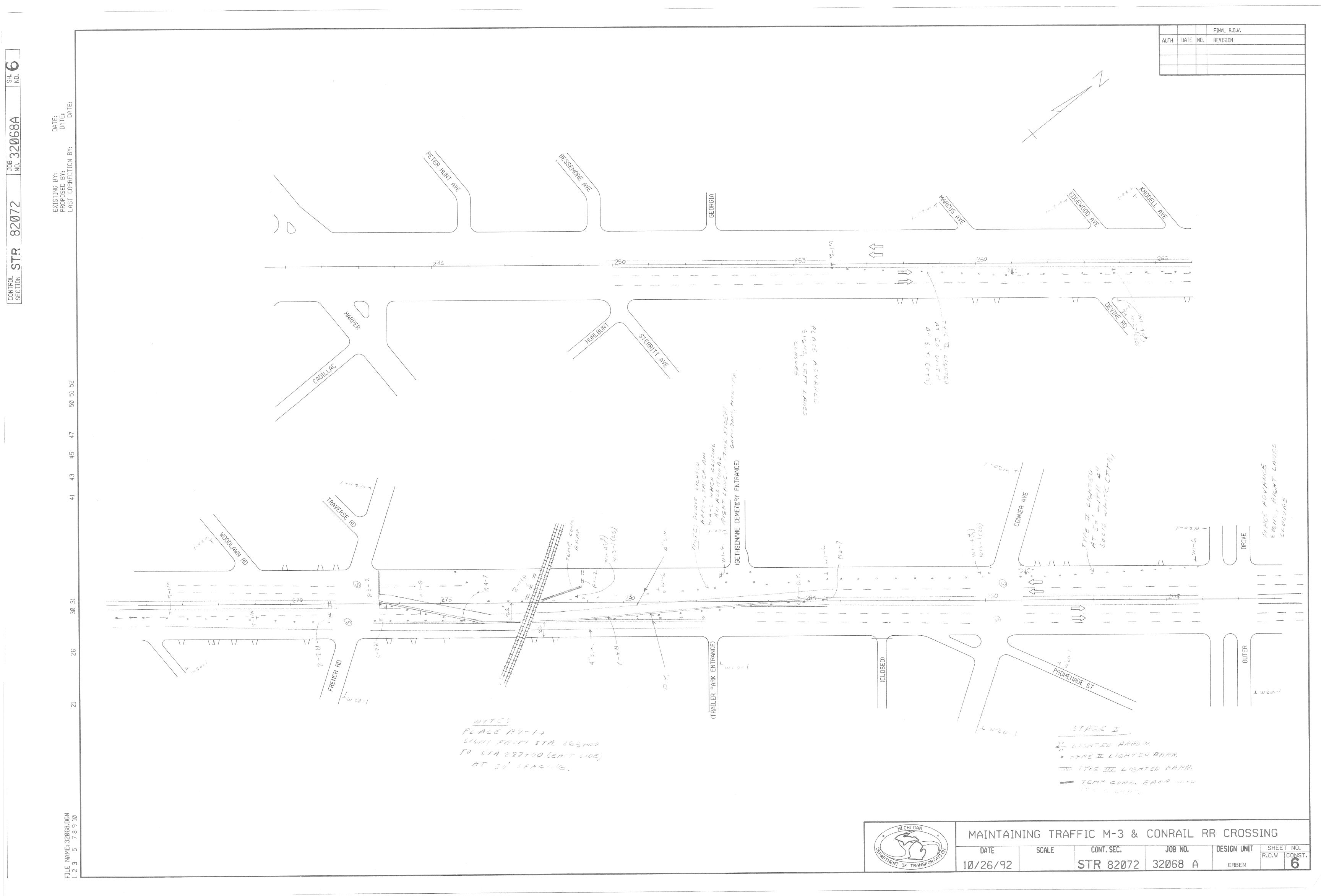
NOTE SHEET

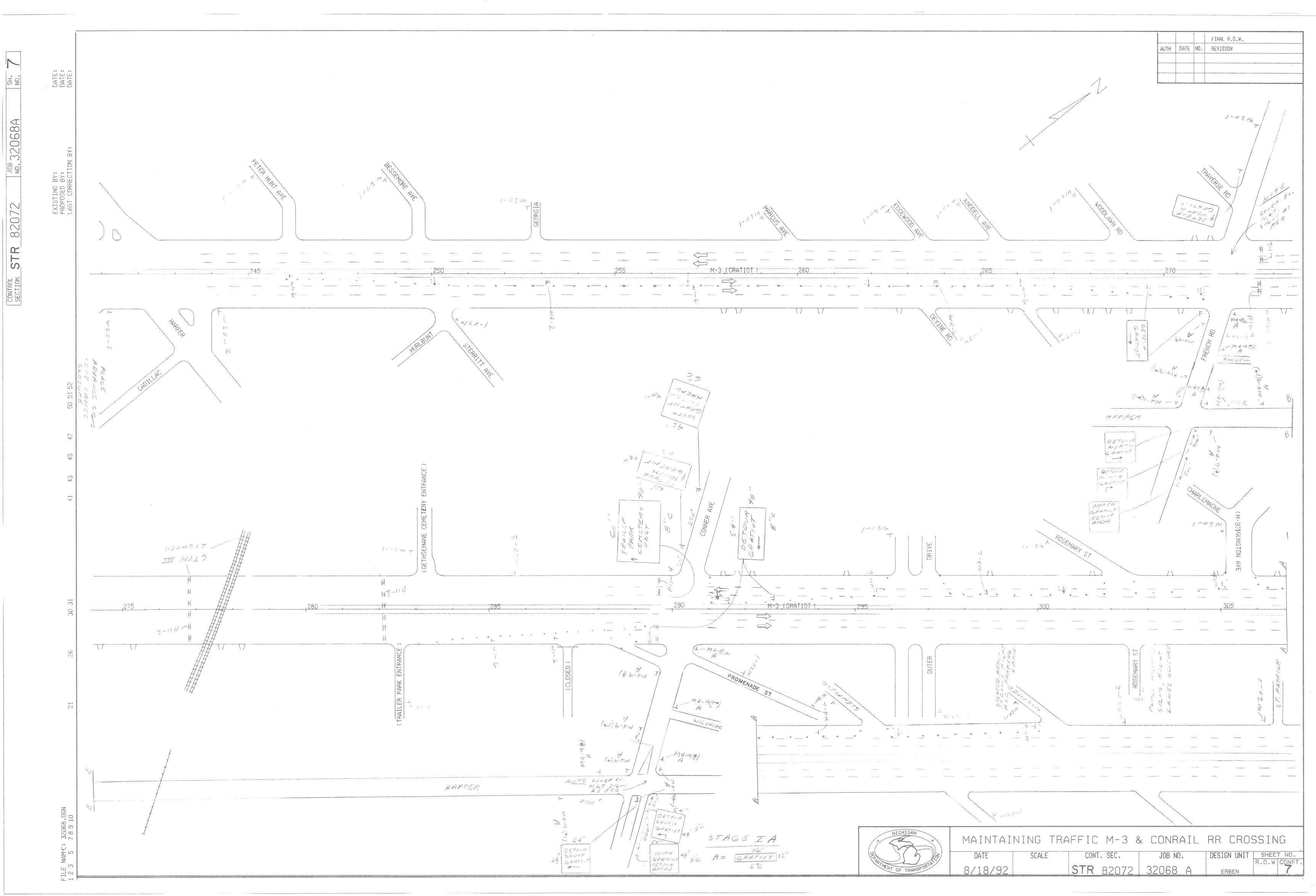
		AUTH. DATE NO. REVISION DRAWN DESIGNED DESIGN UNIT COMP
HAZARDOUS OR FLAMMABLE MATERIAL EX.BUILDING EX.G.CONC S.W. EX.G.CONC S.W.	EX SIGNAL & GATE - EX SIGNAL & GATE	
275 EX J2" STORM SEWER TH#1 POT STA 275 + 78.82 PK. NAIL & REF. TAG REMOVE EX. BEAM GUARDRAIL (BM#I) STORM SEWER TH#1 EX G. CONC. S.W.	M-3 (GRATIOT AVE.) SURVEY & OPEN GRADED UNDERDRAIN PIPE, 6" UNDERDRAIN OUTLET 6" & SE WER TAP, 6" EX.CONC. DRIVE OPEN GRADED UNDERDRAIN PIPE, 6" (E.X., BIT. OVER CONC. PAVEMENT)	80 TY BM#2) V
EX. BUILDING PROP. 4" CONC. SIDEWALK LEGEND REMOVING PAVEMENT & CONCRETE HEADERS COLD-MILL BIT SURFACE REMOVING SIDEWALK	TOUNDERDRAIN OUTLET, ("T" CONNECTION), IS 100 CYD PLACING AND COMPAR INCLUDED IN THE PAY ITEM FOR UNDERDRAIN OUTLET, 6." 56 CYD SUBBASE (CIP)	RDRAIL ENT, SPECIAL RDRAIL ENCASEMENT URE-IIA DACH FUNIINOUS SURFACE ACTING BALLAST (CIP)
	2. THE REMOVAL OF CONCRETE HEADERS WILL BE PAID FOR AS REMOVING PAVEMENT, SPECIAL. 105 LFT OPEN GRADED UND 202 LFT EXPANSION JT E3- 115 SYD SLOPE RESTORATION 430 SFT CONC. SUDE WALK, 44 43 LFT CONC. CURB, DET IN 6 LFT UNDERDRAIN OUT 155 CYD EARTH EXCANATION	

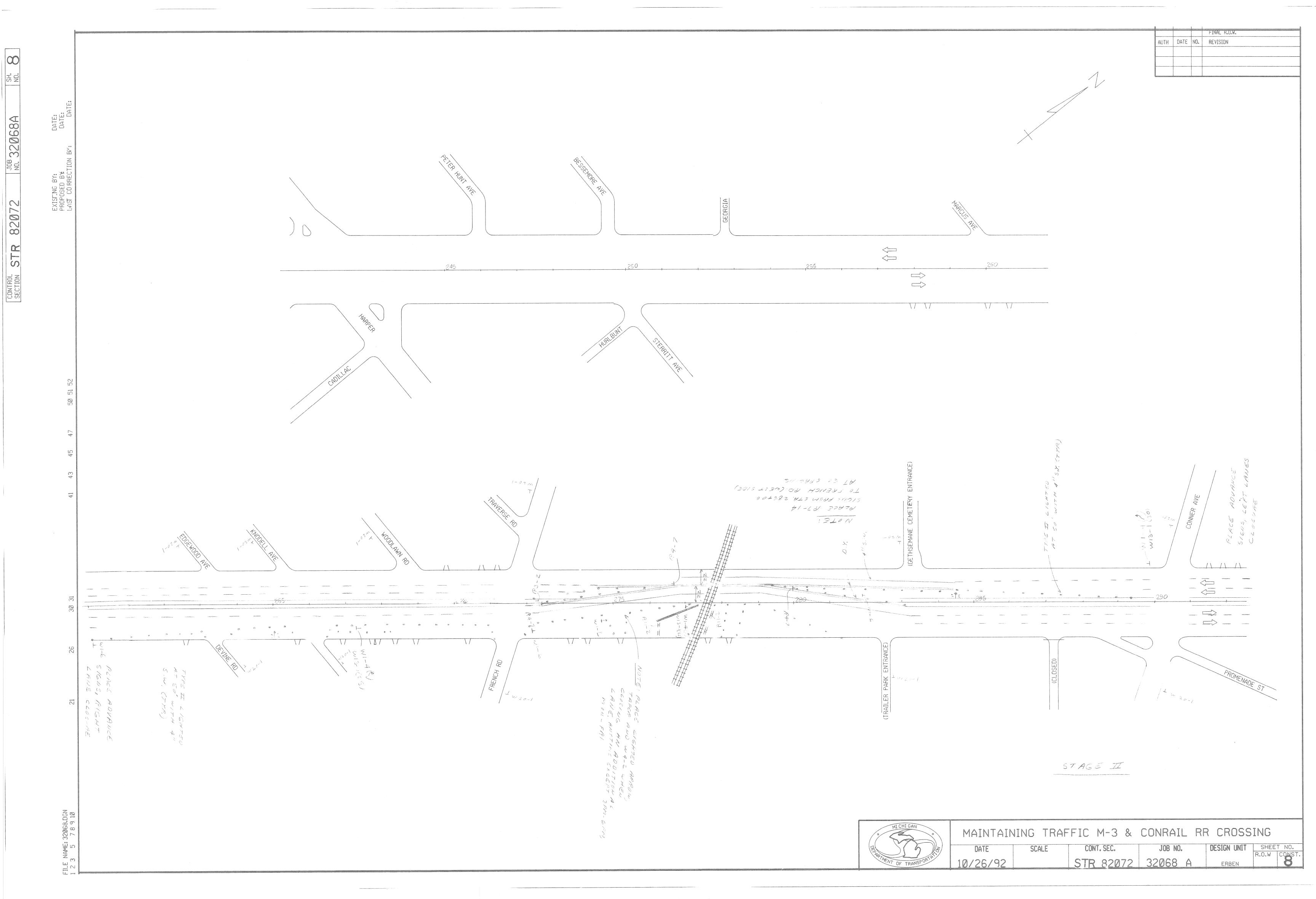


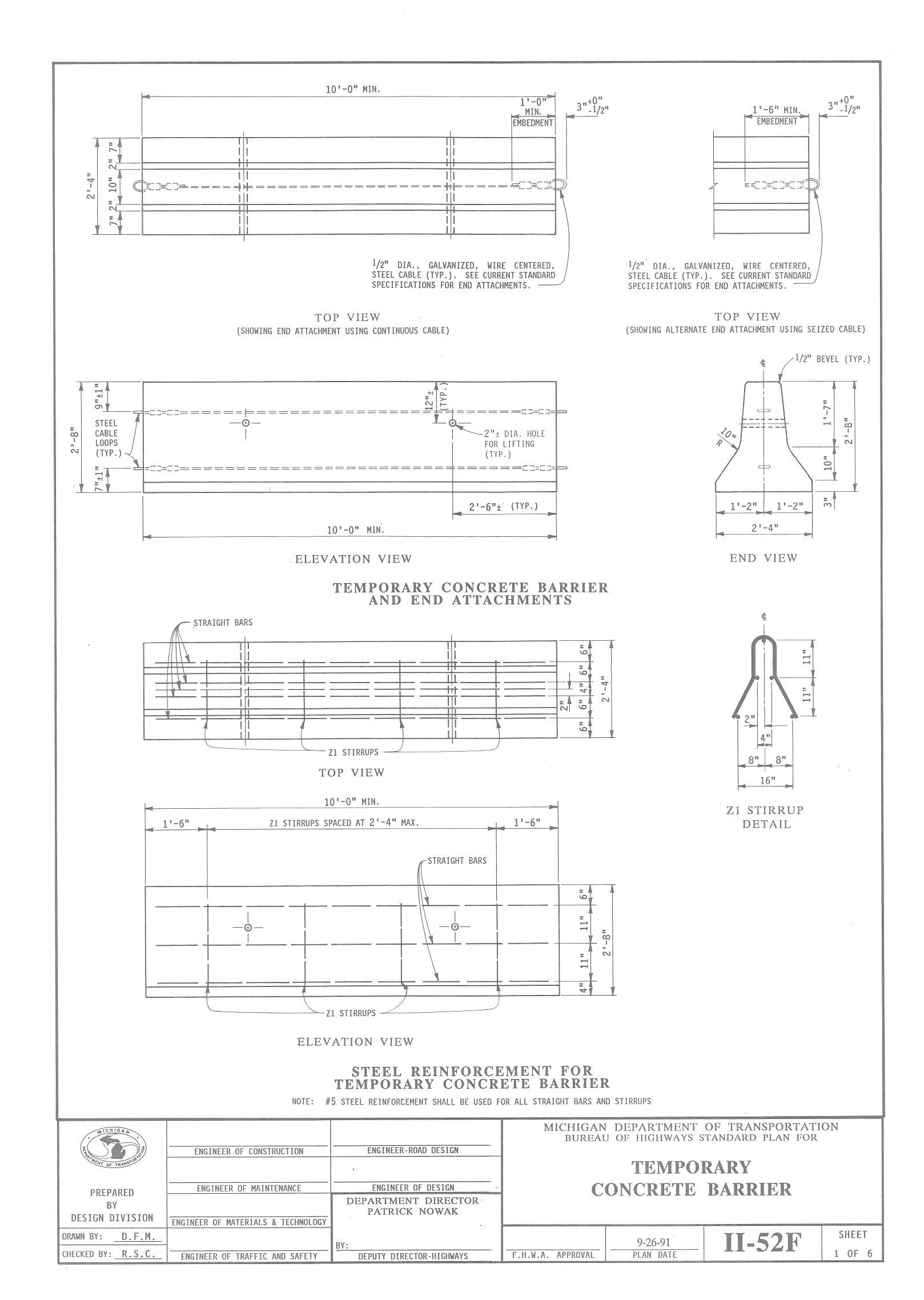
APPROACH RECONSTRUCTION - CONRAIL AT M-3 DATE SCALE CONT. SEC. JOB NO. DESIGN UNIT SHEET NO. 12-28-92 1" = 20 STR 82072 32068A ERBEN R. O. W. CONST. 4

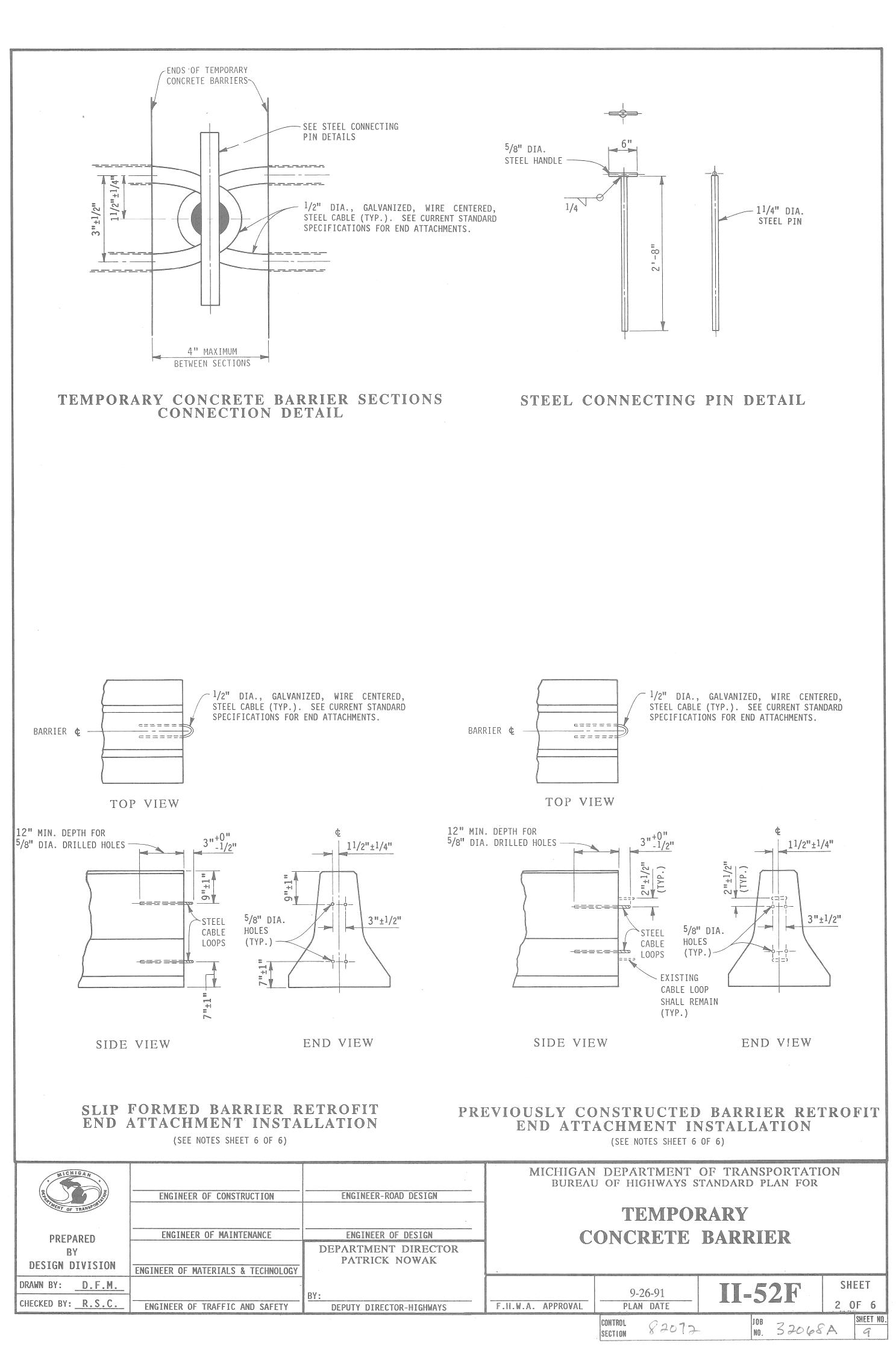


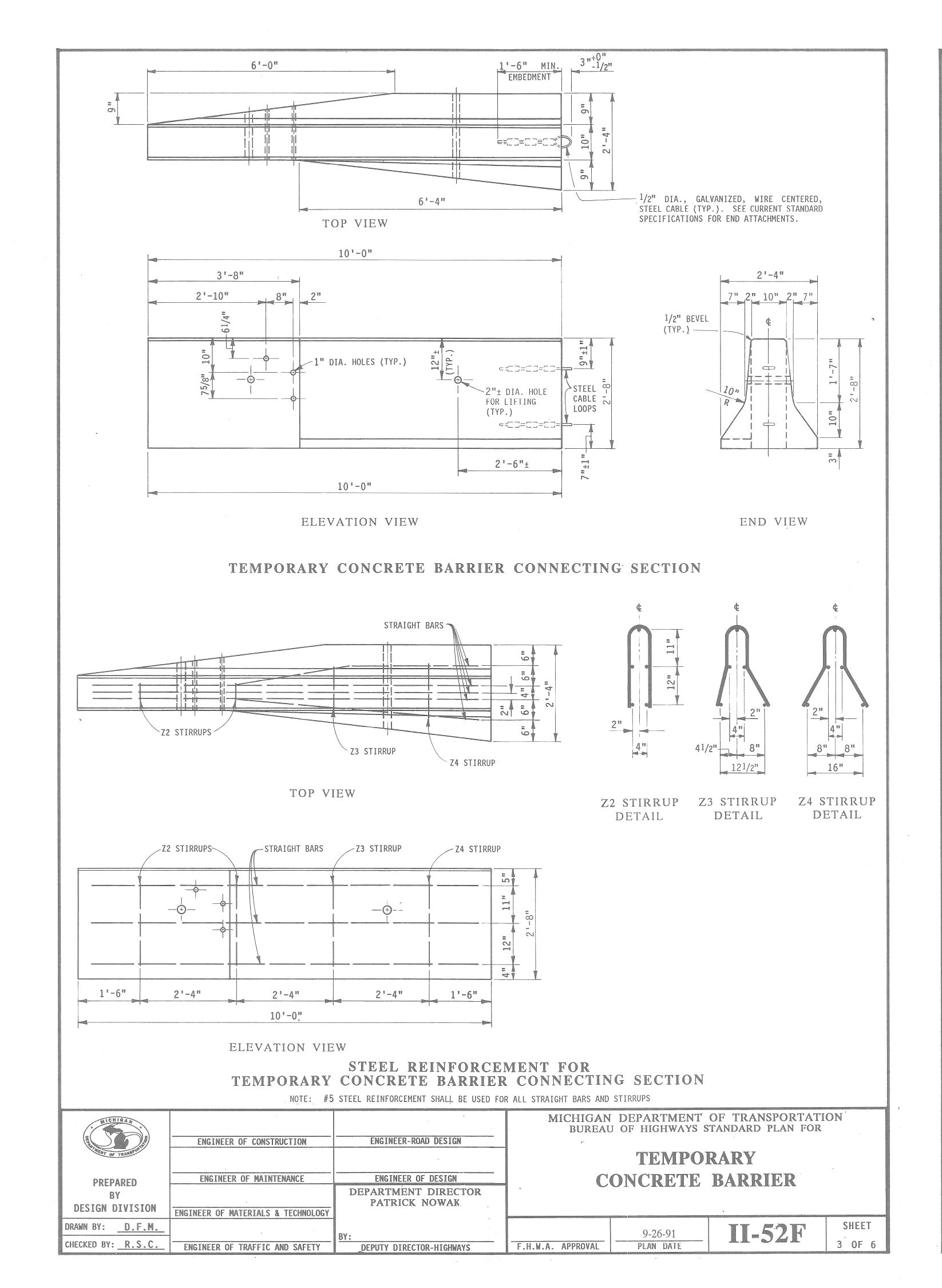


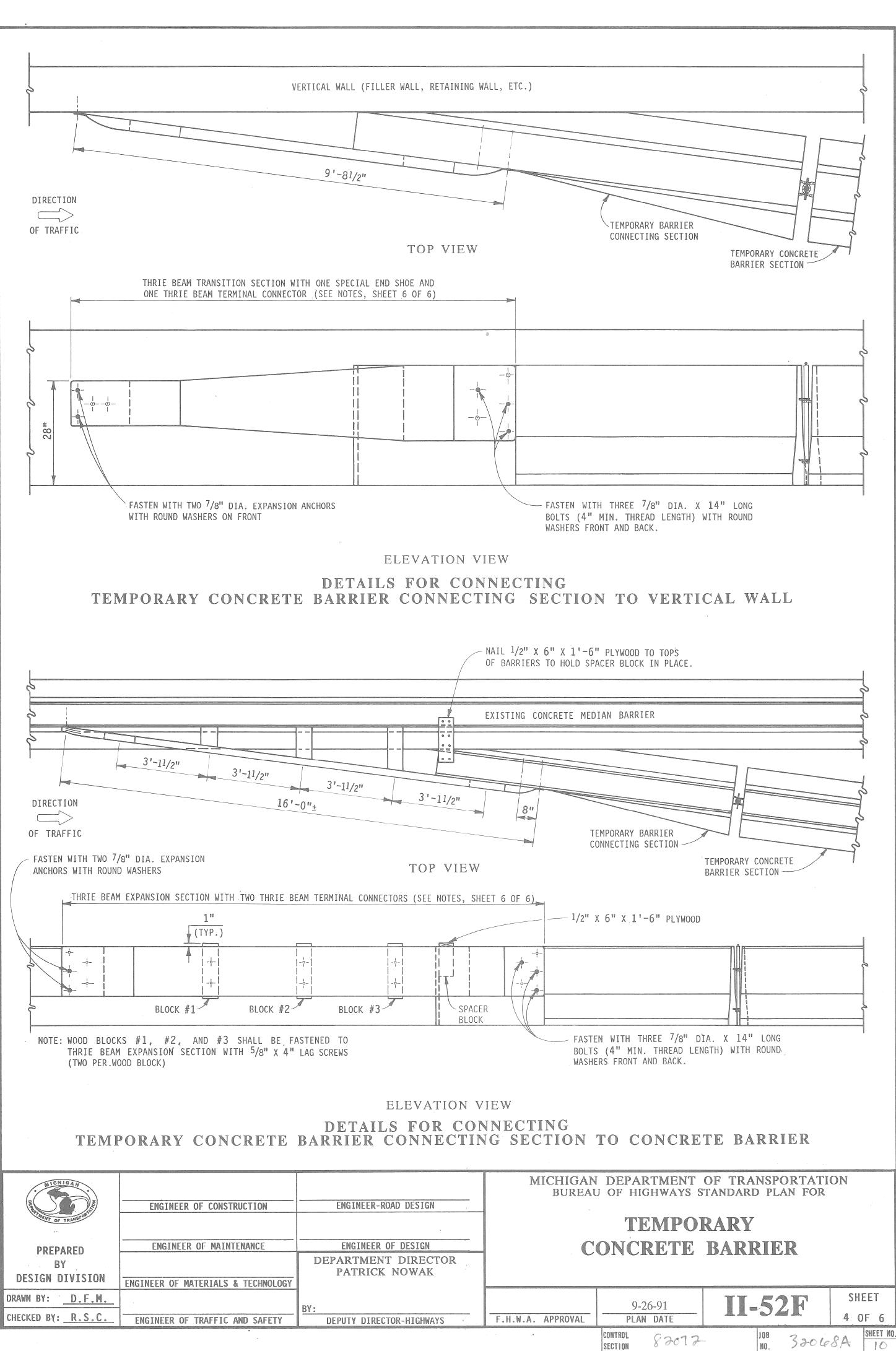






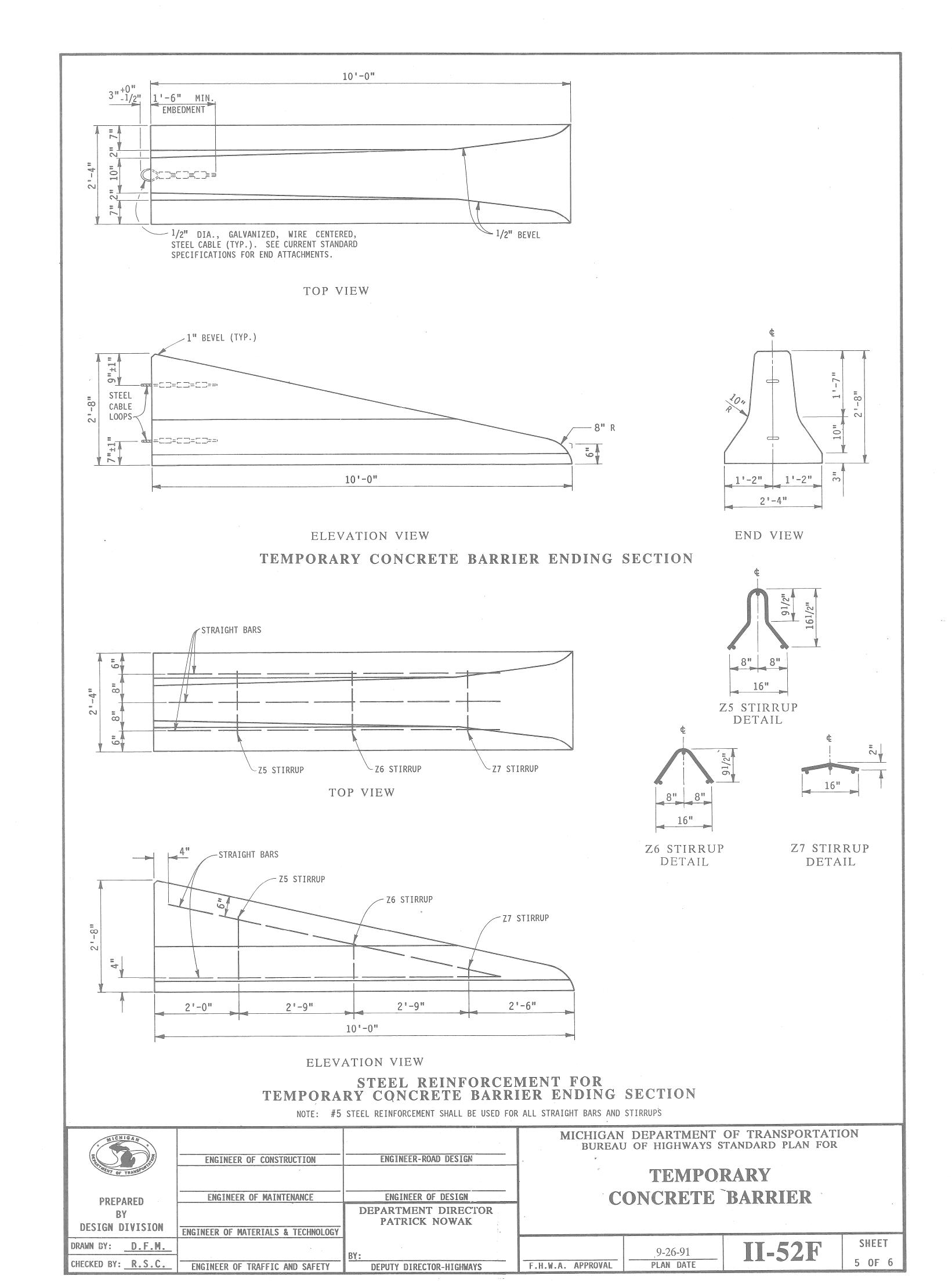


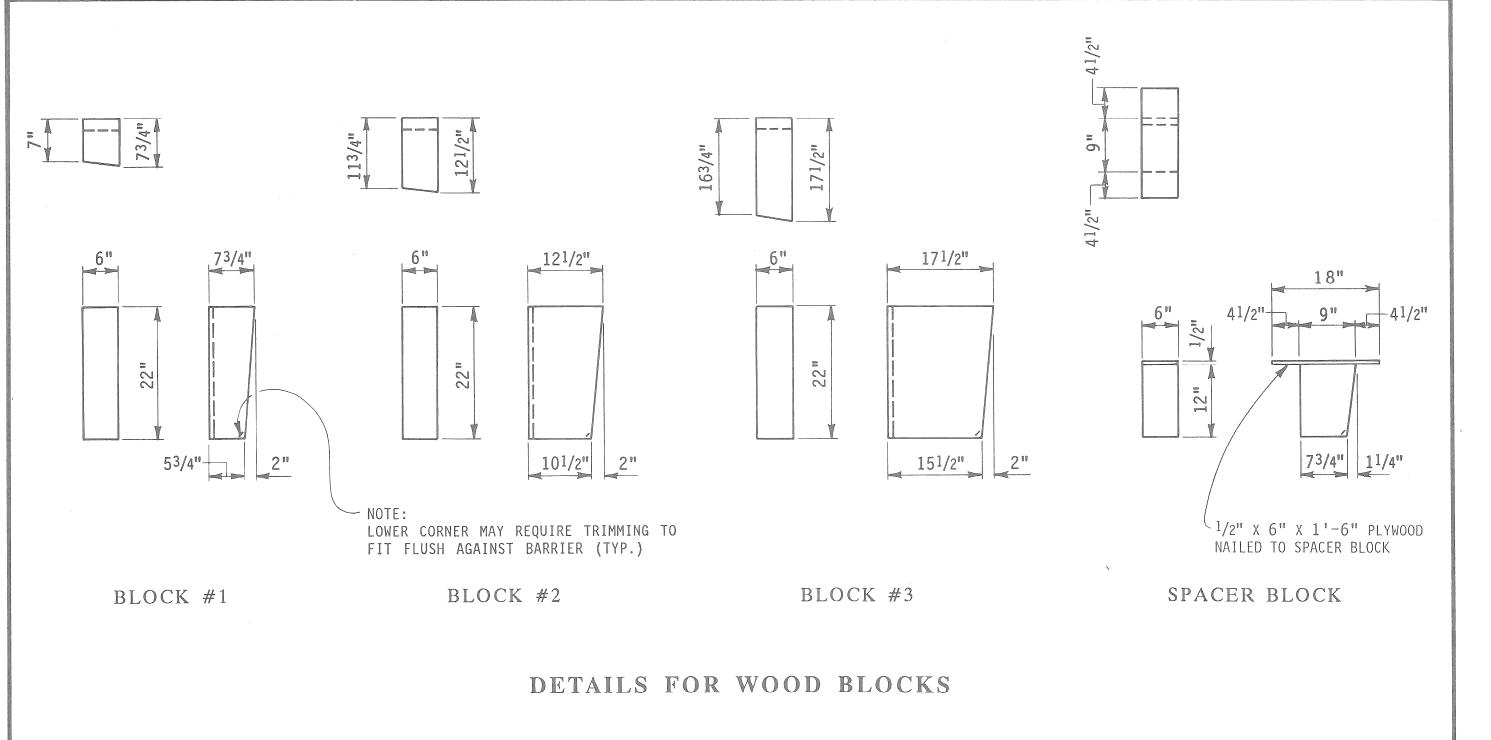












NOTES:

THE TEMPORARY CONCRETE BARRIER SHOWN ON THIS PLAN CONFORMS TO THE "NEW JERSEY SHAPE".

THE PLACEMENT OF 2"± DIAMETER HOLES, DRILLED OR PREFORMED, AND LOCATED AS SHOWN ON THIS PLAN MAY BE USED FOR THE PURPOSE OF LIFTING THE BARRIER UNITS. CARE SHALL BE TAKEN NOT TO SEVER THE REINFORCING STEEL WHEN DRILLING.

PRECAST UNITS MUST BE CAST MONOLITHICALLY, THAT IS, A "COLD JOINT" RESULTING FROM SEPARATE POURING OPERATIONS WILL NOT BE PERMITTED.

THE END ATTACHMENTS FOR PRECAST BARRIER SECTIONS SHALL MEET THE REQUIREMENTS OF THE CURRENT STANDARD SPECIFICATIONS.

STIRRUPS MAY BE OMITTED DURING CASTING, IF A SATISFACTORY METHOD OF HOLDING LONGITUDINAL REINFORCING BARS IN POSITION IS USED.

ALTERNATE METHODS OF REINFORCING THAT MAY BE USED ARE AS FOLLOWS: USE FIVE #5 "A" BARS, GRADE 40 STEEL AND POSITION THE STEEL AS SHOWN ON SHEET #1 OF THESE PLANS; OR USE THREE #6 "A" BARS, GRADE 60 STEEL AND POSITION THE TOP BAR SAME AS THE TOP BAR ON SHEET #1 AND POSITION THE TWO OTHER BARS THE SAME AS THE TWO BOTTOM BARS ON SHEET #1 OF THESE PLANS. THESE THREE #6 BARS MAY ALSO BE PLACED IN VERTICAL ALIGNMENT WITH THE TOP BAR 6" BELOW THE TOP OF THE BARRIER AND THE BOTTOM BAR 4" ABOVE THE BOTTOM OF THE BARRIER; THE MIDDLE BAR SHALL BE CENTERED BETWEEN THESE TWO BARS.

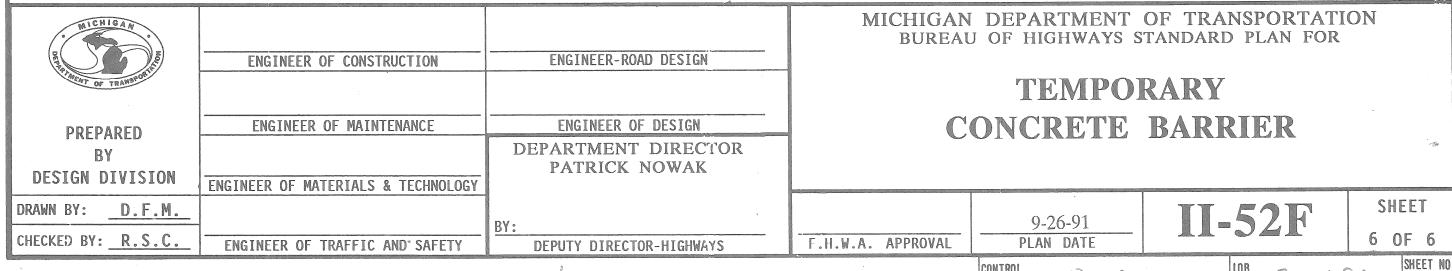
CAST-IN-PLACE BARRIERS MAY BE USED IN LIEU OF PRECAST UNITS. THE UNITS SHALL BE REINFORCED AS SHOWN ON THESE PLANS. THE UNITS MAY BE CUT FOR MOVING TO ANOTHER LOCATION PROVIDED THE CUT ENDS ARE VERTICALLY STRAIGHT AND SMOOTH ENOUGH TO ALLOW INSTALLATION OF 1/2" DIAMETER GALVANIZED WIRE CENTERED STEEL CABLE. THE RETROFIT END ATTACHMENTS SHALL BE AS SHOWN ON SHEET 2 OF 6 OF THESE PLANS AND IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS.

THRIE BEAM EXPANSION ELEMENT, THRIE BEAM TRANSITION ELEMENT, SPECIAL END SHOE, THRIE BEAM TERMINAL CONNECTOR, BEAM ELEMENT SPLICES, USED TO CONNECT TEMPORARY BARRIER TO EXISTING CONCRETE BARRIER SHALL BE IN ACCORDANCE WITH CURRENT STANDARD PLANS III-60 SERIES AND III-67 SERIES. GUARDRAIL ELEMENTS, BOLTS, WASHERS, ETC., SHALL BE GALVANIZED.

THE CONCRETE CONNECTING BLOCK AND WOOD BLOCKS ARE DESIGNED TO CONNECT TO THE LEFT SIDE OF "NEW JERSEY SHAPE" CONCRETE MEDIAN BARRIER. THE SHAPE OF THE CONCRETE CONNECTING BLOCK AND THE BEVELS ON THE WOOD BLOCKS MUST BE REVERSED TO FIT AGAINST BARRIER WALLS ON THE RIGHT. THE DESIGN OF THE WOOD BLOCKS MUST BE ALTERED WHEN CONNECTING TEMPORARY CONCRETE BARRIER HAVING ANOTHER SHAPE OR WHEN THE SKEW OF THE CONNECTIONS IS OTHER THAN 1 ON 8.

ALTERNATE DESIGNS FOR 2'-8" CONNECTING PINS ("J" OR "L" SHAPE) WITH 6" MINIMUM LATERAL OFFSET MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

ANY ALTERATIONS TO THE DESIGN OF THE UNITS NOT SPECIFICALLY CALLED FOR ON THE PLANS ARE SUBJECT TO THE FINAL APPROVAL OF THE ENGINEER OF CONSTRUCTION.



82012 SECTION

CHECKED BY: I.R.G.

ENGINEER OF TRAFFIC AND SAFETY

VI-121D

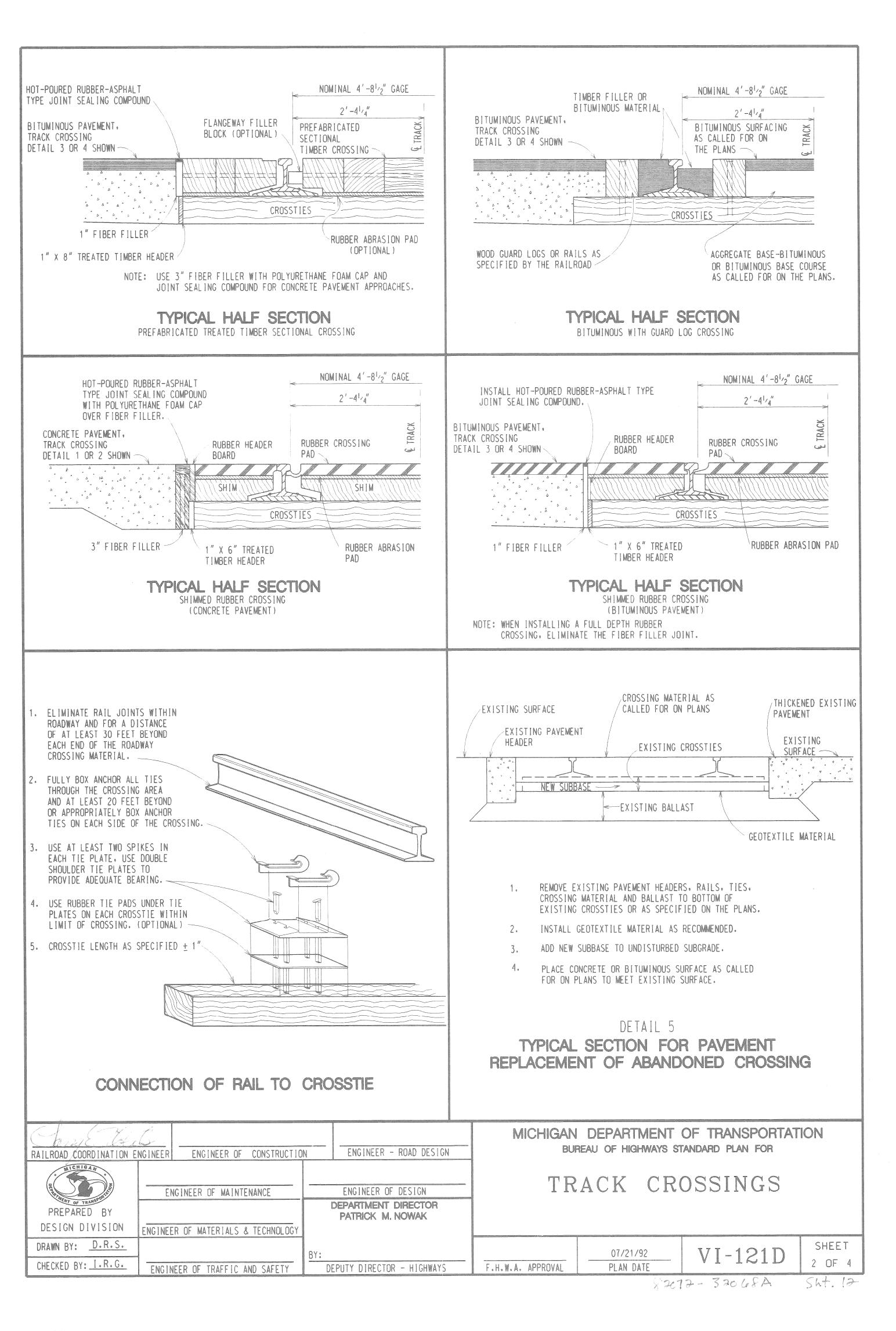
1 OF 4

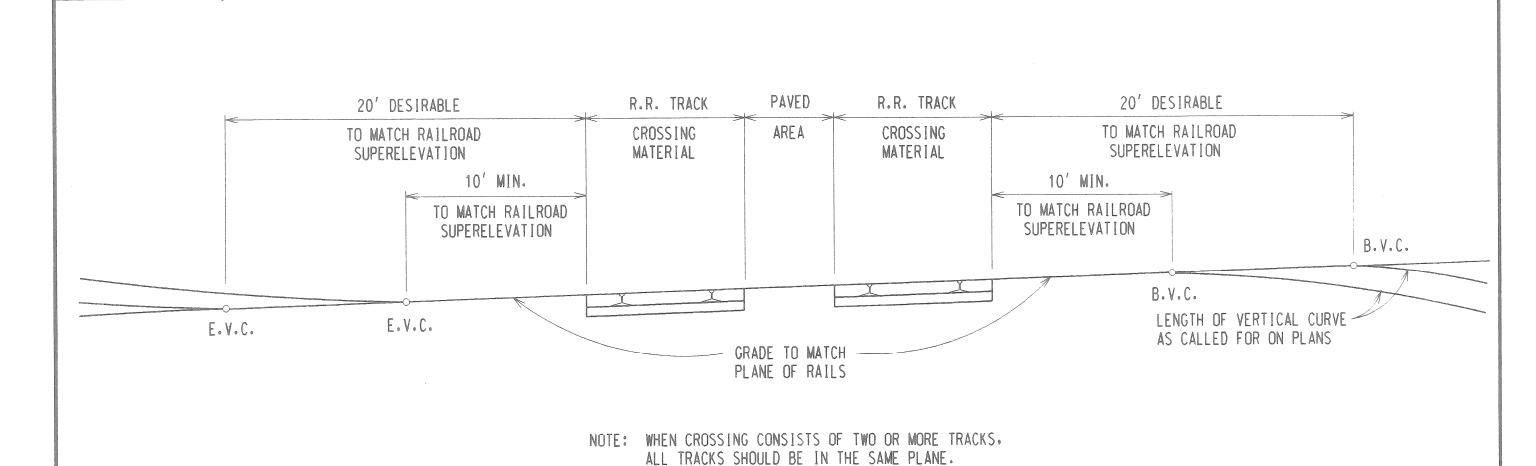
07/21/92

PLAN DATE

F.H.W.A. APPROVAL

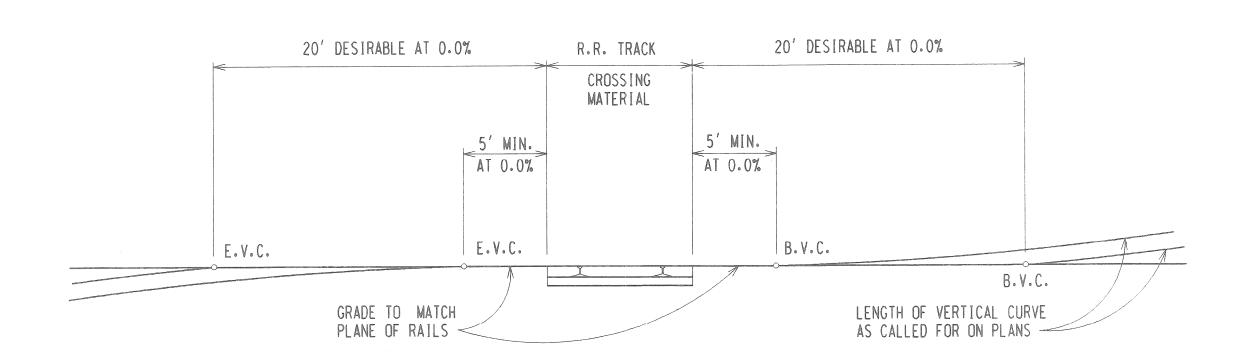
DEPUTY DIRECTOR - HIGHWAYS





E.V.C. = END OF VERICAL CURVE B.V.C. = BEGINING OF VERICAL CURVE

TYPICAL SECTION WITH RAILROAD IN SUPERELEVATION



TYPICAL SECTION WITH RAILROAD ON LEVEL PLANE

NOTES:

THE RAILROAD COMPANY WILL FURNISH AND INSTALL THE CROSSING STRUCTURE INCLUDING UNDERDRAIN, GEOTEXTILE MATERIAL, BALLAST, WOOD TIES, RAILS, CROSSING SURFACE, AND HEADERS.

THE EDGES OF THE PAVEMENT GUTTERS, AND THE CROWN OF EITHER SIDE OF THE CROSSING, SHALL BE SMOOTHLY TRANSITIONED TO MEET THE PROPOSED GRADE OF THE RAILROAD TRACK. THE CROSSING SHOULD BE INSTALLED APPROXIMATELY 1/2" ABOVE THE PROPOSED PLAN GRADE TO ALLOW FOR SETTLEMENT AT ACTIVE MAIN LINE TRACKS. TEMPORARY BITUMINOUS WEDGING MAY BE REQUIRED.

THE HEIGHT OF ANY CURB ADJACENT TO THE RAILROAD TRACKS SHALL BE REDUCED TO ONE INCH AT A POINT 8'-6" FROM THE CENTERLINE OF THE TRACK, NORMAL TO THE TRACK, BY STANDARD TRANSITIONS SHOWN ON STANDARD PLAN II-30 SERIES, UNLESS OTHERWISE SHOWN ON THE PLANS.

UNDERDRAINS WRAPPED IN GEOTEXTILE SHALL BE PLACED WHERE DRAINAGE IS NEEDED AND A POSITIVE OUTLET CAN BE PROVIDED.

PAVEMENT HEADERS FORMED BY THICKENING THE ENDS OF THE CONCRETE PAVEMENT OR THE BASE COURSE FOR THE BITUMINOUS OVERLAY WILL BE INCLUDED IN THE ITEMS OF CONCRETE PAVEMENT, CONCRETE BASE COURSE, BITUMINOUS BASE COURSE, OR AGGREGATE BASE COURSE-BITUMINOUS.

EXPANSION JOINTS AT THE RAILROAD CROSSINGS SHALL BE CONSTRUCTED AS SHOWN ON THIS PLAN. THE ADDITIONAL JOINTS IN THE PAVEMENT SHALL BE LOCATED AS SHOWN ON STANDARD PLAN II-43 SERIES AND CONSTRUCTED IN ACCORDANCE WITH STANDARD PLAN II-39 SERIES.

PAVEMENTS ILLUSTRATED ON THIS PLAN ARE TYPICAL TREATMENTS ONLY, AND THE TYPE OF PAVEMENT USED WILL BE AS CALLED FOR ON THE PLANS.

THE APPROACHES TO RAILROAD CROSSINGS SHOULD PROVIDE A SMOOTH TRANSITION FOR VEHICULAR TRAFFIC. THE APPROACH ADJACENT TO THE CROSSING SHOULD MATCH THE PLANE OF THE RAILS AND HAVE LIBERAL VERTICAL CURVES TO THE APPROACH GRADE. THE APPROACH GRADE SHOULD BLEND INTO THE EXISTING PAVEMENT TO ELIMINATE UNNECESSARY UNDULATION IN THE VERTICAL PROFILE.

THE FULL WIDTH OF SHOULDERS SHOULD BE PAVED WITH BITUMINOUS AT THE CROSSING TO MEET THE CROSSING SURFACE MATERIAL. SHORT TAPERS WILL EXTEND BACK TO THE PAVED PORTION OF THE SHOULDER.

WHEN A RAILROAD CROSSING STRUCTURE IS RAISED, THE PAVEMENT TAPER TO MEET THE RAISED CROSSING STRUCTURE SHOULD BE 3/4" IN 25', 1 1/2" IN 50', 21/2" IN 75', OR AS DETERMINED BY THE ENGINEER. THE PROPOSED TRANSITION LENGTH SHOULD BE SHOWN ON THE PLANS. THE EXISTING PAVEMENT SHOULD BE REMOVED OR MILLED TO PROVIDE A STRAIGHT AND VERTICAL BUTT JOINT.

TREATED TIMBER AND/OR RUBBER HEADER BOARDS WILL BE USED WHEN SPECIFIED AND SHALL BE INSTALLED BY THE RAILROAD COMPANY.

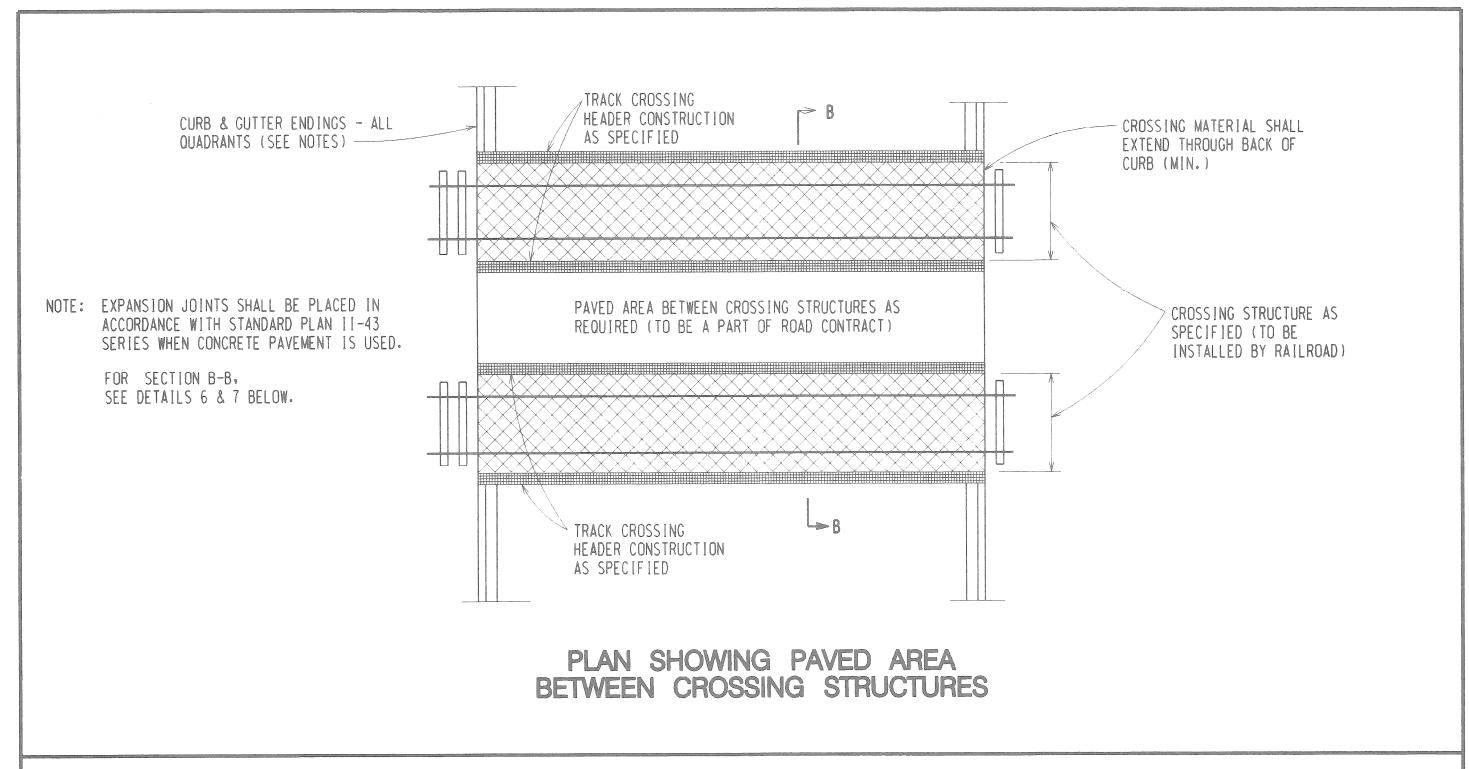
IF COLD PATCH MATERIAL OR GRAVEL IS USED AS TEMPORARY FILL IN THE GAP BETWEEN THE CROSSING AND THE PAVEMENT, IT SHALL BE REMOVED PRIOR TO REPLACEMENT WITH A PLANT MIX. THE BITUMINOUS MATERIAL ADJACENT TO THE CROSSING SHALL BE COMPACTED WITH A ROLLER ACCORDING TO THE STANDARD SPECIFICATIONS.

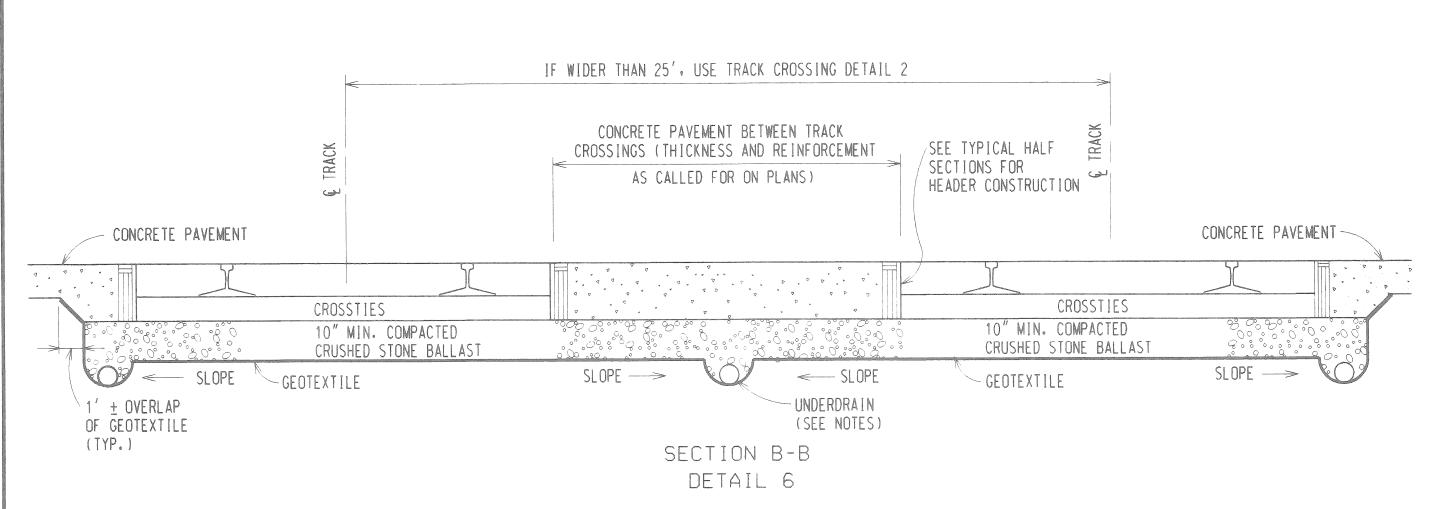
SIDEWALK CROSSINGS WILL NORMALLY BE CONSTRUCTED OF BITUMINOUS, TIMBER, OR RUBBER PADS SIMILAR TO THE CROSSING, EXCEPT THAT THE FIBER FILLER AND TREATED TIMBER HEADER MAY BE OMITTED.

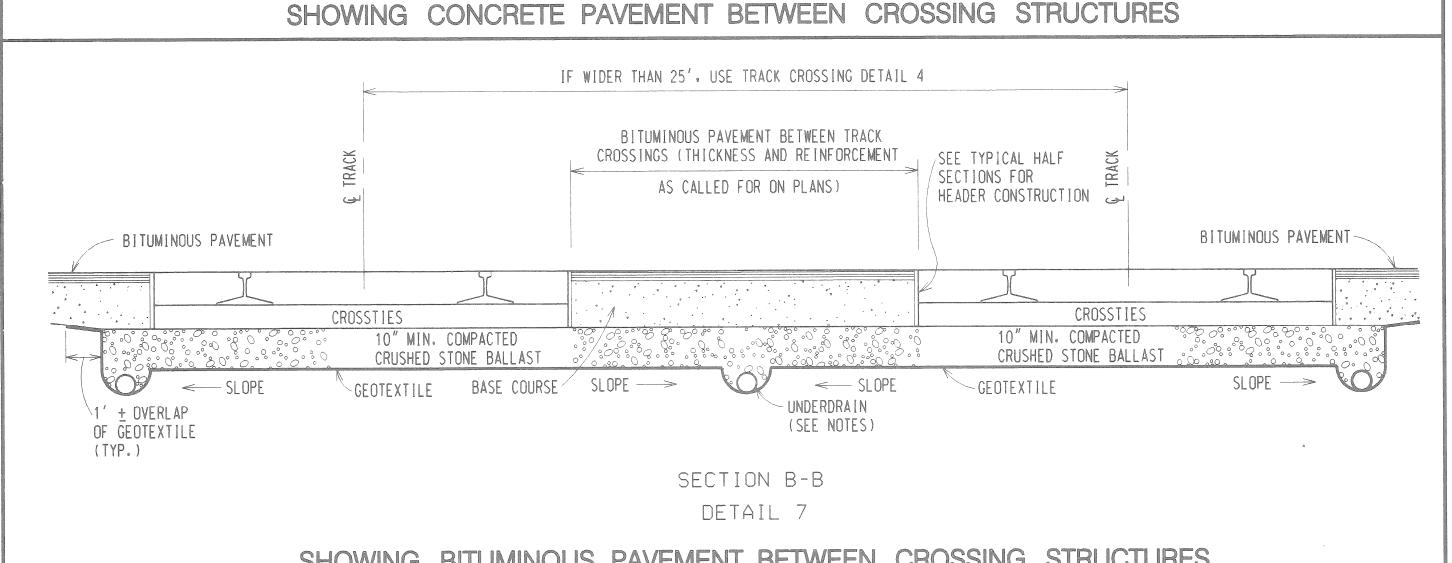
THE OPEN ROADWAY AREA BETWEEN THE SAWED PAVEMENT EDGE AND THE NEWLY INSTALLED CROSSING SHALL BE ROLLER COMPACTED PRIOR TO THE PAVEMENT CONTRACTOR FILLING THIS AREA WITH CONCRETE OR BITUMINOUS.

PROPRIETARY CROSSING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

RAILROAD COORDINATION E	Kathanian Engineer of Construction	N ENGINEER - ROAD DESIGN		I DEPARTMENT PREAU OF HIGHWAYS ST	OF TRANSPORTAT	ION
PREPARED BY	ENGINEER OF MAINTENANCE	ENGINEER OF DESIGN DEPARTMENT DIRECTOR PATRICK M. NOWAK	TR	RACK CR	OSSINGS	
DESIGN DIVISION	ENGINEER OF MATERIALS & TECHNOLOGY					
DRAWN BY: D.R.S.		BY:		07/21/92	VI-121D	SHEET
CHECKED BY: I.R.G.	ENGINEER OF TRAFFIC AND SAFETY	DEPUTY DIRECTOR - HIGHWAYS	F.H.W.A. APPROVAL	PLAN DATE	VI INID	3 OF 4







	SHOWING BIT	UMIINOUS PAVEIMENT B	EIVVEEN CHO	SSING SINUC	IUNES	
RAILROAD COORDINATION E	NGINEER ENGINEER OF CONSTRUCTION	N ENGINEER - ROAD DESIGN		DEPARTMENT (REAU OF HIGHWAYS ST	OF TRANSPORTAT	ION
PREPARED BY DESIGN DIVISION	ENGINEER OF MAINTENANCE ENGINEER OF MATERIALS & TECHNOLOGY	ENGINEER OF DESIGN DEPARTMENT DIRECTOR PATRICK M. NOWAK	TF	RACK CR	OSSINGS	
DRAWN BY: D.R.S. CHECKED BY: I.R.G.	ENGINEER OF TRAFFIC AND SAFETY	BY: DEPUTY DIRECTOR - HIGHWAYS	F.H.W.A. APPROVAL	07/21/92 PLAN DATE	VI-121D	SHEET 4 OF 4
				C:3/.*	12 - 320/28A	56+ 13

X 26 17 - 54068 K SWI. 13

REMOVING PAVEMENT REMOVING CURB REMOVING SIDEWALK REMOVING BEAM CUARDRAIL REMOVING TRACK ENCASEMENT REMOVING PAVEMENT, SPECIAL EARTH EXCAVATION SUBGRADE UNDERCUTTING TYPE II CURB AND GUTTER INLET FILTER 2137 COLD-MILLING BITUMINOUS SURFACE 4000 BITUMINOUS MIXTURE - 11A 4000 BITUMINOUS APPROACH TEMPORARY BITUMINOUS PLACING AND COMPACTING BALLAST (CIP) 4037	507277 LFT 202 130621 EACH 1 0 140014 EACH 1 0	85 85 4 4 4 35 35 105 105 7 7 7 29 29 155 155 10 10 5 56 56 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SUMMARY			
REMOVING PAVEMENT 2070 REMOVING SIDEWALK 2070 REMOVING SIDEWALK 2070 REMOVING BEAM CUARDRAIL 2070 REMOVING TRACK ENCASEMENT 2070 REMOVING PAVEMENT, SPECIAL 2077 EARTH EXCAVATION 2080 SUBGRADE UNDERCUTTING TYPE II 2080 SUBBASE (CIP) 2110 CURB AND GUTTER INLET FILTER 2137 COULD-MILLING BITUMINOUS SURFACE 4000 BITUMINOUS MIXTURE - 11A 4000 BITUMINOUS APPROACH 4000 TEMPORARY BITUMINOUS 4037 PLACING AND COMPACTING BALLAST (CIP) 4037	SYD 85	85 85 4 4 35 35 105 105 7 7 29 29 155 155 10 10 56 56 1 1 1 156 213 213 177 16 16 100 100				
REMOVING SIDEWALK 2070 REMOVING BEAM GUARDRAIL 2070 REMOVING TRACK ENCASEMENT 2070 REMOVING PAVEMENT. SPECIAL 2077 EARTH EXCAVATION 2080 SUBGRADE UNDERCUTTING TYPE II 2080 SUBBASE (CIP) 2110 CURB AND GUTTER INLET FILTER 2137 COLD-MILLING BITUMINOUS SURFACE 4000 BITUMINOUS MIXTURE - 11A 4000 BITUMINOUS APPROACH 4000 TEMPORARY BITUMINOUS 4037 EXPANSION JOINT E3 - MODIFIED 4507	070003	177 177 16 16 100 100				
REMOVING SIDEWALK REMOVING BEAM QUARDRAIL. REMOVING TRACK ENCASEMENT REMOVING PAVEMENT SPECIAL EARTH EXCAVATION SUBGRADE UNDERCUTTING TYPE II CURB AND GUTTER INLET FILTER 2137 COLD-MILLING BITUMINOUS SURFACE: 4000 BITUMINOUS MIXTURE - IIIA 4000 BITUMINOUS APPROACH TEMPORARY BITUMINOUS PLACING AND COMPACTING BALLAST (CIP) EXPANSION JOINT E3 - MODIFIED 4507	070006 SYD 35 070009 LFT 105 070011 CYD 7 077003 CYD 29 080001 CYD 155 080031 CYD 10 110002 CYD 56 137002 EACH 1 000004 TON 156 0000120 TON 177 037001 TON 16 037003 CYD 100 507277 LFT 202 130621 EACH 1 140014 EACH 1	177 177 16 16 100 100				
REMOVING TRACK ENCASEMENT 2070 REMOVING PAVEMENT.SPECIAL 2077 EARTH EXCAVATION 2080 SUBGRADE UNDERCUTTING TYPE II 2080 SUBBASE (CIP) 2110 CURB AND GUTTER INLET FILTER 2137 COLD-MILLING BITUMINOUS SURFACE 4000 BITUMINOUS MIXTURE - 11A 4000 BITUMINOUS APPROACH 4000 TEMPORARY BITUMINOUS 4037 PLACING AND COMPACTING BALLAST (CIP) 4037 EXPANSION JOINT E3 - MODIFIED 4507	0770011 CYD 7 077003 CYD 29 080001 CYD 155 080031 CYD 10 110002 CYD 56 137002 EACH 1 000004 TON 156 0000120 TON 177 037001 TON 16 037003 CYD 100 507277 LFT 202 130621 EACH 1 140014 EACH 1	177 177 16 16 100 100				
EARTH EXCAVATION 2080 SUBGRADE UNDERCUTTING TYPE II 2080 SUBBASE (CIP) 2110 CURB AND GUTTER INLET FILTER 2137 COLD-MILLING BITUMINOUS SURFACE 4000 BITUMINOUS MIXTURE - 11A 4000 BITUMINOUS APPROACH 4000 TEMPORARY BITUMINOUS 4037 PLACING AND COMPACTING BALLAST (CIP) 4037 EXPANSION JOINT E3 - MODIFIED 4507	080001 CYD 155 080031 CYD 10 110002 CYD 56 137002 EACH 1 000004 TON 156 000041 TON 213 000120 TON 177 037001 TON 16 037003 CYD 100 507277 LFT 202 130621 EACH 1 140014 EACH 1	177 177 16 16 100 100				
SUBGRADE UNDERCUTTING TYPE !! 2080 SUBBASE (CIP) 2110 CURB AND GUTTER INLET FILTER 2137 COLD-MILLING BITUMINOUS SURFACE 4000 BITUMINOUS MIXTURE - !!!A 4000 BITUMINOUS APPROACH 4000 TEMPORARY BITUMINOUS 4037 PLACING AND COMPACTING BALLAST (CIP) 4037 EXPANSION JOINT E3 - MODIFIED 4507	080031 CYD 10 110002 CYD 56 137002 EACH 1 0000004 TON 156 0000041 FON 213 000120 TON 177 037001 TON 16 037003 CYD 100 507277 LFT 202 130621 EACH 1 140014 EACH 1	177 177 16 16 100 100				
COLD-MILLING BITUMINOUS SURFACE: 4000 BITUMINOUS MIXTURE - 11A 4000 BITUMINOUS APPROACH 4000 TEMPORARY BITUMINOUS 4037 PLACING AND COMPACTING BALLAST (CIP) 4037 EXPANSION JOINT E3 - MODIFIED 4507	137002 EACH 1 000004 TON 156 0000041 TON 213 0000120 TON 177 037001 TON 16 037003 CYD 100 507277 LFT 202 13062! EACH 1 140014 EACH 1	177 177 16 16 100 100				
BITUMINOUS MIXTURE - 11A 4000 BITUMINOUS APPROACH 4000 TEMPORARY BITUMINOUS 4037 PLACING AND COMPACTING BALLAST (CIP) 4037 EXPANSION JOINT E3 - MODIFIED 4507	000041 FON 213 0 5 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	177 177 16 16 100 100				
TEMPORARY BITUMINOUS 4037 PLACING AND COMPACTING BALLAST (CIP) 4037 EXPANSION JOINT E3 - MODIFIED 4507	037001 TON - 16 037003 CYD 100 507277 LFT 202 130621 EACH 1				The state of the s	
EXPANSION JOINT E3 - MODIFIED 4507	507277 LFT 202 130621 EACH 1 0 140014 EACH 1 0					
	130621 EACH 1 0	202 202				
The state of the s						
CLEANING DRAINAGE STRUCTURE LEADS 5140	140015 LFT 75	75 75				
	020061 LFT 105	105				
UNDERDRAIN OUTLET, 6" 6020	020101 LFT 150 H 2 O	6 6				
CONCRETE SIDEWALK. 4" 6110	090002 LFT 43 0 00	430 430				
	230001 LSUM 1					
The state of the s	290158 LFT 1500	1500 1500				
11/2 / 12/	290159 LFT 2500 310011 EACH 6	2500 2500 6 6				
LIGHTED ARROW, TYPE A - OPERATED 6310	310011 EACH 6	6 6				
No. 1 No. 2 December 1 No. 2 December 1 Dece	310026 EACH 150 310061 SFT 700	150 150 700 700				
BARRICADE, TYPE II.	310027 EACH 150	150 150				
BARRICADE, TYPE III,	3:0036 EACH 20	20 20				
BARRICADE, TYPE IVI.	310037 EACH 20					
TEMPORARY CONCRETE BARRIER-FURNISHED 631						
SIGN, TYPE B TÉMPORARY-OPERATED 631	310066 SFT 600 310060 SFT 700	600 600 700 700				
SIGN, TYPE B TEMPORARY-FURNISHED 631	3100 65 SFT 600 3.	70 70 70 TO				
	310085 LFT 10000	10000 10000				
TEMPORARY PAVEMENT MARKING. TYPE R. 4", YELLOW 631	310086 LFT 10000	10000 10000				
REMOVING PAVEMENT MARKING.	3310076 SFT 70	70 70		F-75		
SLOPE RESTORATION 653	3310139 LFT 4500 3530036 SYD 115	115				
TEMPORARY CONCRETE BARRIER-OPERATED 631 TEMPORARY CONCRETE BARRIER-RELOCATED 6310	The Control of the Co	90 90 90				
NON-HAZARDOUS CONTAMINATED MATERIAL HANDLING AND DISPOSAL 208	087000 CYD 155	155 155				
MUNDELLA SUN DISLOZUE 508	087000 CYD 135					
						TY SHEET OB NO. DESIGN UNIT SHE
						2068A