Production

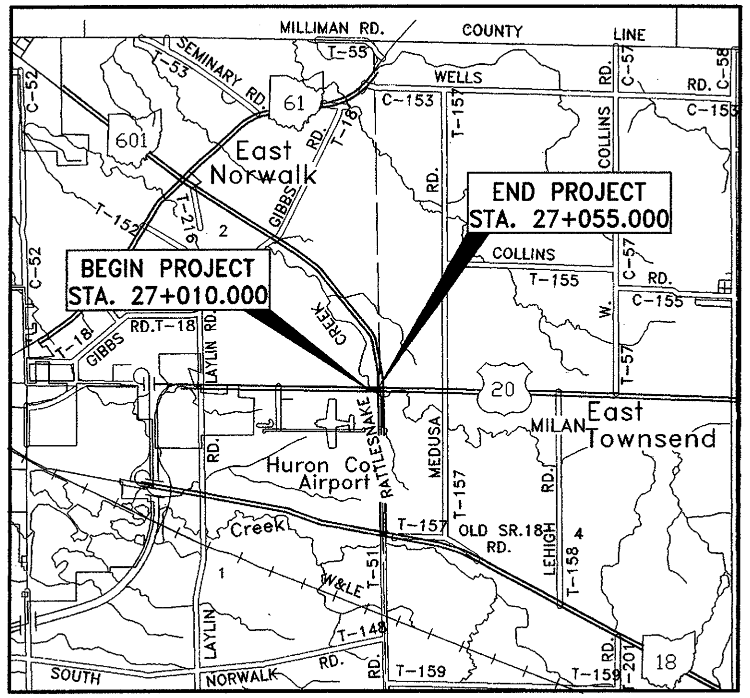
616(99)

metric units

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

HUR-20-27.010

NORWALK TOWNSHIP
HURON COUNTY



LOCATION MAP

LATITUDE: N 41°14'57" LONGITUDE: W 82°32'32"

0 1 2 3 4 5 6
SCALE OF KILOMETERS

N

PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES
OTHER ROADS

PROJECT DESCRIPTION

CURRENT A.D.T. (1999)	5330
DESIGN YEAR A.D.T. (2019)	6930
DESIGN HOURLY VOLUME	693
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	15%
DESIGN SPEED	90 km/hr
LEGAL SPEED LIMIT	55 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
RURAL PRINCIPAL ARTERIAL

DESIGN EXCEPTIONS

NONE REQUIRED

Call TWO WORKING DAYS
BEFORE YOU DIG
OHIO UTILITIES PROTECTION SERVICE
IN OHIO - 1-800-362-2764
OUT OF OHIO - 1-216-744-5191
NON-MEMBERS MUST BE CALLED DIRECTLY

PROUDFOOT ASSOCIATES
CONSULTING ENGINEERS
5360 HEATHERDOWNS BLVD.
TOLEDO, OHIO 43614

HUR-20-27.010
990616
DIST. 03
08-18-99
PID # 13018

13018GT1

INDEX OF SHEETS:

RECEIVED
DEPT. OF TRANSPORTATION
DISTRICT 3
LOCATION / DEPT.

SPECIAL PROVISIONS
Waterway Permit NWP #3 & 13
Dated: 1-28-98

STRUCTURE PLANS REVIEWED
by
URS GREINER

ENGINEERS SEAL:
FOR ENTIRE PLAN

STATE OF OHIO
JEFFREY L. WALDRON
E-61179
REGISTERED
PROFESSIONAL ENGINEER

SIGNED:
DATE: December 23, 1998

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	
BP-3.1M	10-28-94	MT-96.11M	1-30-95	TC-52.10M	7-29-94	806	9-9-97
CB-1.2M	7-12-95	MT-96.20M	1-30-95	TC-52.20M	7-29-94	814	6-2-98
CB-2.3M	7-12-95	MT-96.21M	1-30-95			904	5-5-98
GR-1.1M	10-21-97	MT-96.25M	1-30-95	MT-105.10M	4-25-94	905	4-1-98
GR-1.2M	1-03-96			MT-105.11M	4-25-94	906	5-5-98
GR-1.3M	11-30-94	MT-97.10M	4-25-94			907	10-21-98
GR-2.1M	4-14-98						
GR-3.4M	10-21-97	MT-101.20M	3-01-96			865	1-6-98
GR-5.3M	11-30-94			BP-2.2M	10-21-97		
RM-1.1M	4-8-97	TC-41.20M	7-01-94	CB-1.1M	7-12-95		
RM-4.2M	10-21-97	TC-42.20M	3-31-94	MH-1.1M	10-21-97	842	1-6-99
GR-4.2M	10-21-97	TC-61.10M	3-31-94			899	10-21-98
DM-4.3M	6-30-95	AS-1-81M	10-25-94				
DM-4.4M	6-30-95	DBR-2-73M	8-18-95				
HW-2.2M	7-12-95	DS-1-94M	12-15-94				
DM-1.1M	10-21-97	PSBD-1-93M	12-19-94				
		PCB-91M	3-20-95				

PROJECT DESCRIPTION

IMPROVEMENT OF 0.06 KILOMETERS OF U.S. ROUTE 20 IN NORWALK TOWNSHIP BY THE REPACEMENT OF A CONCRETE BEAM STRUCTURE OVER RATTLESNAKE CREEK WITH A PRECAST PRESTRESSED BOX BEAM TYPE STRUCTURE INCLUDING APPROACH ROADWAY RECONSTRUCTION.

1997 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED [signature]
DATE 1-12-99 DISTRICT DEPUTY DIRECTOR

APPROVED [signature]
DATE 2-10-99 DIRECTOR, DEPARTMENT OF TRANSPORTATION

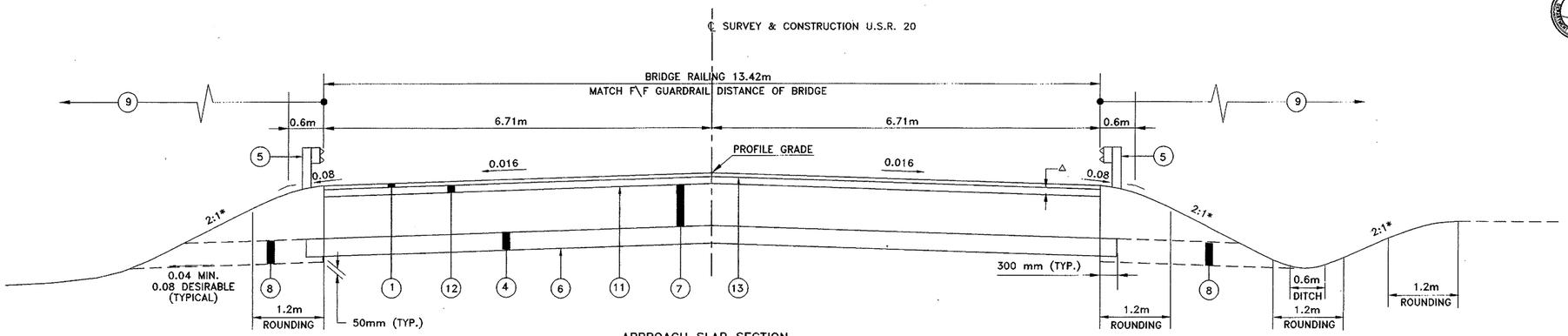
FEDERAL PROJECT NO. 7221-G990 (2)

PID NO. 13018

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

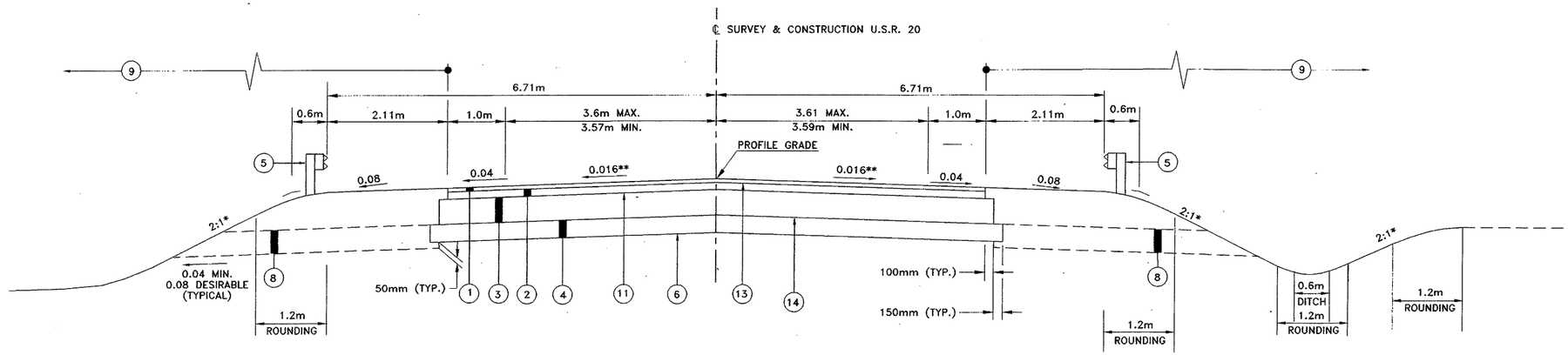
HUR-20-27.010



APPROACH SLAB SECTION

STA. 27+016.699 TO STA. 27+021.299 = 4.600m
STA. 27+042.701 TO STA. 27+047.301 = 4.600m
TOTAL = 9.200m

△ – VARIES 45mm STA. 27+016.694
TO 54mm STA. 27+021.294
VARIES 54mm STA. 27+042.706
TO 45mm STA. 27+047.306



NORMAL PAVEMENT SECTION

STA. 27+010.000 TO STA. 27+016.699 = 6.699 m
STA. 27+047.301 TO STA. 27+055.000 = 7.699 m
TOTAL = 14.398 m

NOTE

1. SCALE ON PAVEMENT COMPOSITION EXAGGERATED TWO TIMES IN THE VERTICAL DIRECTION.

* – UNLESS SHOWN OTHERWISE ON CROSS SECTIONS
** – VARIES TO EXISTING

EDGE OF PAVEMENT TRANSITION TABLE

	LEFT			PROFILE	RIGHT		
STATION	ELEV.	SUPER	OFFSET	GRADE	OFFSET	SUPER	ELEV.
27+010.000	255.73	−0.013	3.60	255.78	3.60	−0.024	255.69
27+016.699	255.75	−0.015	3.60	255.80	3.60	−0.019	255.73
27+021.299	255.76	−0.016	3.60	255.82	3.60	−0.016	255.76
	RATE =	1:925			RATE =	1:407	
27+042.701	255.83	−0.016	3.60	255.89	3.60	−0.016	255.83
27+047.301	255.85	−0.015	3.60	255.91	3.60	−0.018	255.84
27+055.000	255.89	−0.012	3.60	255.93	3.60	−0.021	255.86
	RATE =	1:947			RATE =	1:723	

(1) ITEM 448 – 38 mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1–H
(2) ITEM 448 – 45 mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64–28
(3) ITEM 301 – 200 mm BITUMINOUS AGGREGATE BASE, PG64–22
(4) ITEM 304 – 150 mm AGGREGATE BASE
(5) ITEM 606 – GUARDRAIL, TYPE 5
(6) ITEM 203 – SUBGRADE COMPACTION
(7) ITEM 611 – REINFORCED CONCRETE APPROACH SLAB (T=305mm)
(8) ITEM 605 – AGGREGATE DRAINS
(9) ITEM 659 – SEEDING AND MULCHING (SEE GENERAL NOTE)
(10) ITEM 202 – WEARING COURSE REMOVED
(11) ITEM 407 – TACK COAT (SEE GENERAL NOTE)
(12) ITEM 448 – 45 mm TO 54 mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64–28
(13) ITEM 407 – TACK COAT FOR INTERMEDIATE COURSE (SEE GENERAL NOTES)
(14) ITEM 408 – BITUMINOUS PRIME COAT (APPLY AT A RATE OF 1.8 L/M²)
(A) 203 mm (±) EXISTING ASPHALT PAVEMENT
(B) 101 mm (±) EXISTING BRICK BASE
(C) 101 mm (±) EXISTING CONCRETE BASE

metric units

CALCULATED JLW
CHECKED THY

TYPICAL SECTIONS

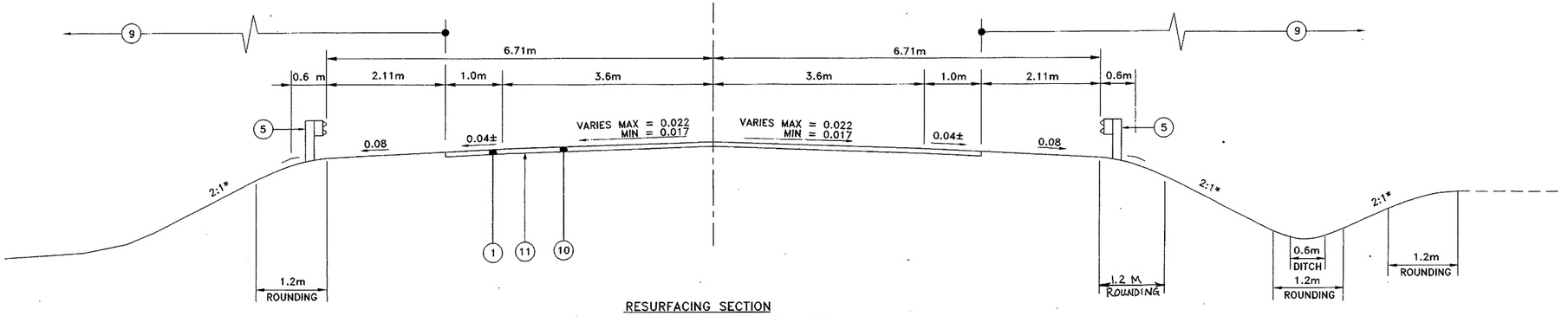
HUR–20–27.010

13018GY1

metric units

DESIGNED JLW
CHECKED THY

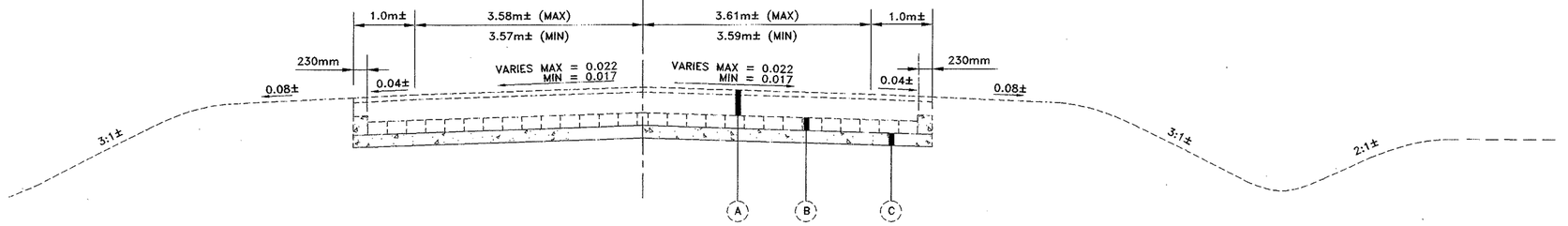
℄ SURVEY & CONSTRUCTION U.S.R. 20



RESURFACING SECTION

STA. 27+000.000 TO STA. 27+010.000 = 10.00 m
STA. 27+055.000 TO STA. 27+065.000 = 10.00 m
TOTAL = 20.00 m

℄ SURVEY & CONSTRUCTION U.S.R. 20



EXISTING TYPICAL SECTION

NOTE

1. SCALE ON PAVEMENT COMPOSITION EXAGGERATED TWO TIMES IN THE VERTICAL DIRECTION.

* – UNLESS SHOWN OTHERWISE ON CROSS SECTIONS

(1) ITEM 448 – 38mm ASPHALT CONCRETE SURFACE COURSE, TYPE 1–H

(2) ITEM 448 – 45 mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64–28

(3) ITEM 301 – 200 mm BITUMINOUS AGGREGATE BASE, PG64–22

(4) ITEM 304 – 150 mm AGGREGATE BASE

(5) ITEM 606 – GUARDRAIL, TYPE 5

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(7) ITEM 611 – REINFORCED CONCRETE APPROACH SLAB (T=305mm)

(8) ITEM 605 – AGGREGATE DRAINS

(9) ITEM 659 – SEEDING AND MULCHING (SEE GENERAL NOTE)

(10) ITEM 202 – WEARING COURSE REMOVED

(11) ITEM 407 – TACK COAT (SEE GENERAL NOTE)

(12) ITEM 448 – 45 mm TO 54 mm ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64–28

(13) ITEM 407 – TACK COAT FOR INTERMEDIATE COURSE (SEE GENERAL NOTES)

(14) ITEM 408 – BITUMINOUS PRIME COAT (APPLY AT A RATE OF 1.8 L/M^2)

(A) 203 mm (±) EXISTING ASPHALT PAVEMENT

(B) 101 mm (±) EXISTING BRICK BASE

(C) 101 mm (±) EXISTING CONCRETE BASE

TYPICAL SECTIONS

HUR–20–27.010

13018GY2

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

LISTED BELOW ARE ALL UTILITIES WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ERIE HURON COUNTY WATER AUTHORITY
P.O. BOX 96
COLLINS, OHIO 44826
1-419-668-7213

GTE
83 TOWNSEND AVE.
NORWALK, OHIO 44857
1-419-744-3619

MEDIA ONE
3157 FERN ROAD
WILLIARD, OHIO 44890
1-419-465-4661

FIRST ENERGY
300 MADISON AVE.
TOLEDO, OHIO 43652-0001
1-800-633-4766

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

REMOVAL OF TREES OR STUMPS

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZES	NO. TREES	NO. STUMPS	TOTAL
0.05M	14	1	15
0.08M	0	0	0
1.20M	0	0	0
1.50M	0	0	0

TREE REMOVAL RESTRICTIONS

THIS PROJECT IS WITHIN THE LIMITS OF THE FEDERAL ENDANGERED INDIANA BAT (MYOTIS SODALIS) AND MAY IMPACT THAT SPECIES HABITAT. TREES OVER 230MM (9 INCHES) IN DIAMETER WITH LOOSE OR PEELING BARK OR CAVITIES SHALL ONLY BE CUT BETWEEN SEPTEMBER 16 AND APRIL 14.

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, FOUNDATION PIER OR ABUTMENT EXCAVATION, CHANNEL CLEAN OUT, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

CHANNEL EMBANKMENTS

PORTIONS OF THE EXISTING CHANNEL SHALL BE FILLED AND SLOPED TO DRAIN AS SHOWN ON THESE PLANS. IN CHANNEL EMBANKMENT AREAS WHICH WILL NOT SUPPORT ANY PORTION OF THE NEW ROAD BED OR STRUCTURAL EMBANKMENTS, THE CONTRACTOR MAY UTILIZE EMBANKMENT METHODS MEETING THE FOLLOWING REQUIREMENTS:

AREAS WHERE CHANNEL EMBANKMENTS ARE TO BE PLACED SHALL BE CLEARED OF WEEDS AND BRUSH. THE REQUIREMENTS FOR MOISTURE, DENSITY CONTROL, BENCHING AND SUITABLE MATERIALS SHALL BE WAIVED. IN LIEU OF THE REQUIREMENTS OF ITEM 203, THE DEPTH OF LAYERS IN WHICH THE EMBANKMENTS ARE TO BE PLACED, AND THEIR COMPACTION, SHALL CONFORM WITH CONSTRUCTION PRACTICES AS DETERMINED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 203, EMBANKMENT.

ITEM 606, ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY SYRO INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330.545.4373).

   THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 15.24M, INCLUSIVE OF TWO 7.62M LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PREAPPROVED SHOP DRAWING:

DWG. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98

1) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL. 60423 (TELEPHONE: 815.464.5917)

   THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 15.24M, INCLUSIVE OF FOUR 3.81 M LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PREAPPROVED SHOP DRAWING:

DWG. #	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

A TYPE C DELINEATOR SHALL BE INSTALLED AT THE HEAD OF ALL TYPE E-98 UNITS LOCATED ON THE RIGHT SIDE OF THE THROUGH ROADWAY. A TYPE D DELINEATOR SHALL BE INSTALLED AT THE HEAD OF ALL TYPE E-98 UNITS LOCATED ON THE LEFT SIDE OF THE THROUGH ROADWAY. DELINEATORS SHALL COMPLY WITH STANDARD TRAFFIC DRAWING TC-61.10M.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, DELINEATORS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 659, SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

DEMOLITION DEBRIS

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

WATERING PERMANENT SEEDED AREAS

THE FOLLOWING ESTIMATED QUANTITY IS TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR PERMANENT SEEDED AREAS PER 659.09:

659, WATER 15 CU. METER

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

207, FILTER FABRIC FENCE 60 METER
207, STRAW OR HAY BALES 16 EACH

EROSION CONTROL

ITEMS 601 IS PROVIDED IN THE PLANS FOR EROSION CONTROL, ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE THIS ITEM.

THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THIS ITEM WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THIS ITEM SHALL MEET THE REQUIREMENT OF 108.04.

FARM DRAINS

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITH THE (RIGHT-OF-WAY) (CONSTRUCTION) LIMITS BY ITEM 603 CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE 300 MM ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1M, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE. PAYMENT FOR THE EROSION CONTROL PADS AND ANIMAL GUARDS AND ANY NECESSARY BENDS OR BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEM.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

603 300 MM CONDUIT, TYPE B 10 METER
603 300 MM CONDUIT, TYPE E 10 METER
603 300 MM CONDUIT, TYPE F 10 METER
601 ROCK CHANNEL PROTECTION TYPE C WITH FABRIC FILTER 4 CU. METER

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND CONSTRUCTING THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1M.

ITEM 407-TACK COAT AND ITEM 407-TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF :

407, TACK COAT 0.45 LITER PER SQ. METER
407, TACK COAT FOR INTERMEDIATE COURSE 0.23 LITER PER SQ. METER

ITEM 642, EDGE LINE, TYPE 2

AFTER ALL CONSTRUCTION IS COMPLETED, EDGE LINES SHALL BE PLACED FROM STA. 26+953.16 TO STA. 27+112.26 OR AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

642, EDGE LINE, TYPE 2 0.32 KILOMETERS

ITEM 642, CENTER LINE, TYPE 2

AFTER ALL CONSTRUCTION IS COMPLETED, CENTERLINES SHALL BE PLACED FROM STA. 26+907.16 TO STA. 27+135. THE CENTERLINE SHALL BE DASHED YELLOW FROM STA. 26+907.16 TO STA. 27+000. FROM STA. 27+000 TO STA. 27+135, THE CENTERLINE SHALL BE DASHED FOR WESTBOUND TRAFFIC (PASSING PERMITTED) AND SOLID FOR EASTBOUND TRAFFIC (PASSING PROHIBITED) UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

642, CENTERLINE, TYPE 2 0.23 KILOMETERS

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 9:00pm AND 7:00am. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO.9 OF 23 AND 10 OF 23.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. THE CONTRACTOR IS ADVISED THAT NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 18.6 M ABOVE THE PROFILE OF THE ROADWAY. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, THE CONTRACTOR IS ADVISED THAT FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION(FAA) WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FILE A NEW FAA FORM 7460-1, ADVISING THE FAA THAT AERONAUTICAL STUDY NO. 98-AGL-4438-OE IS BEING RESUBMITTED AND THAT AN ALTERATION TO THE ORIGINAL SUBMISSION IS REQUESTED. COPIES OF THE ALTERATION AND FORM 7460-1 SHALL BE FORWARDED TO THE ODOT OFFICE OF AVIATION. THE CONTRACTOR IS ADVISED THAT NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

THE CONTRACTOR IS FURTHER ADVISED THAT THE FAA APPROVAL MAY TAKE UP TO 45 DAYS. ALL SUBMISSIONS SHALL BE DIRECTED TO THESE OFFICES:

The Federal Aviation Administration
Great Lakes Regional Office
Air Traffic Division AGL-530
2300 East Devon Avenue
Des Plaines, Illinois 60018
(708) 294-7458

Ohio Department of Transportation
Office of Aviation
2829 West Dublin-Granville Road
Columbus, Ohio 43235
(614) 793-5046

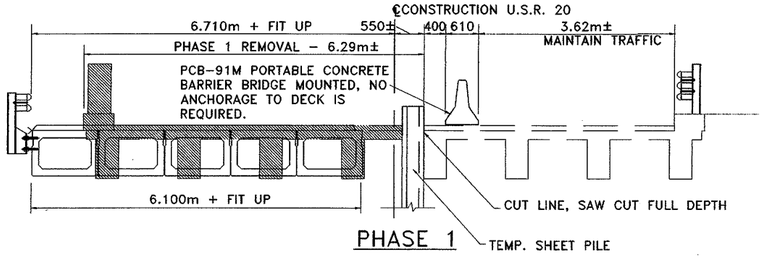
metric units

CALCULATED BDS CHECKED JLW

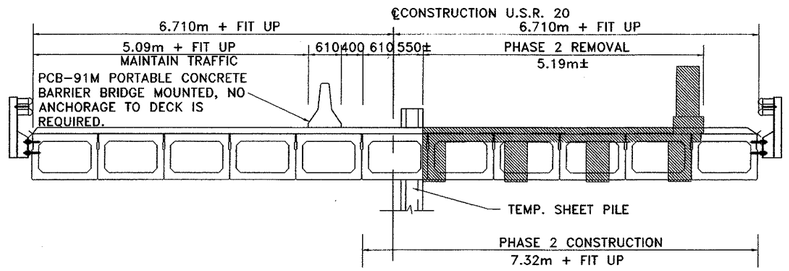
GENERAL NOTES

HUR-20-27.010

13018GN1



PHASE 1



PHASE 2

ITEM 614. MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT, TEMPORARY PAVEMENT AND THE COMPLETED PAVEMENT.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT OF THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

614, BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC.
10 CU. METER

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPERATELY ITEMIZED IN THE PLAN.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECTED TO APPROVAL BY THE ENGINEER.

ITEM 614, BARRIER REFLECTORS

REFLECTORS AND THEIR MOUNTING SHALL CONFORM TO ITEM 626 EXCEPT THAT THE SPACING SHALL BE AS SHOWN ON THE PLAN.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616, WATER	20 CU. METER
616, CALCIUM CHLORIDE	0.5 M TON

ITEM 622, PORTABLE CONCRETE BARRIER

IT IS ANTICIPATED THAT THE SAME BARRIER WILL BE USED IN VARIOUS PHASES OF CONSTRUCTION. MOVEMENT OF THE CONCRETE BARRIER BETWEEN PHASES SHALL BE ACCOMPLISHED IN ONE WORKING DAY. FLAGGERS SHALL BE UTILIZED FOR PROTECTION OF VEHICULAR TRAFFIC UNTIL MOVEMENT OF THE BARRIER IS COMPLETE.

ALL COSTS INVOLVED IN REMOVING AND REINSTALLING THE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 622, PORTABLE CONCRETE BARRIER.

ITEM 615, TEMPORARY PAVEMENT, AS PER PLAN

ON THIS PROJECT THE TEMPORARY PAVEMENT SHALL BE CONSTRUCTED ADJACENT TO EXISTING PAVEMENT AT THE LOCATIONS SHOWN ON THE PLANS, TO OBTAIN A ROADWAY WIDTH NOT LESS THAN 3.6 m FACE TO FACE OF BARRIER FOR PHASE I AND 4.6 m FOR PHASE II. IN LIEU OF 615.05, THE COMPOSITION OF THE PAVEMENT BUILDUP SHALL CONSIST OF 38 mm OF ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64–22, ITEM 407, TACK COAT, APPLIED AT 0.23 LITERS PER SQ. METER, 225 mm OF ITEM 301, BITUMINOUS AGGREGATE BASE, AND COMPACTION OF THE EXCAVATED AREA PER ITEM 203. THE PAVEMENT SHALL REMAIN IN PLACE AFTER PROJECT COMPLETION, EXCEPT AS REQUIRED TO BUILD THE NEW APPROACH SLABS.

AN ESTIMATED QUANTITY OF 63 SQUARE METERS HAS BEEN CARRIED TO THE GENERAL SUMMARY.

FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH PROVISIONS FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, OR WITH THE PROVISIONS OF THE OHIO MANUAL UNIFORM TRAFFIC CONTROL DEVICES THE ROADWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED TO BE IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY FAILURE TO KEEP THE ROADWAY IN THE VICINITY OF THE WORK AREA IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF THIS CONTRACT. THE WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

SEQUENCE OF CONSTRUCTION

THE CONTRACTOR SHALL ADHERE TO THE FOLLOWING SEQUENCE OF CONSTRUCTION OPERATIONS AND RESTRICTIONS. OPERATIONS NOT MENTIONED BELOW SHALL BE SEQUENCED BY THE CONTRACTOR IN AN ORDERLY FASHION. FAILURE TO MEET SPECIFIED INTERIM COMPLETION TIMES SHALL RESULT IN A PENALTY OR PENALTIES UPON THE CONTRACTOR IN THE FORM OF LIQUIDATED DAMAGES. THE PENALTY OR PENALTIES SHALL BE IN ACCORDANCE WITH THE SCHEDULE OF LIQUIDATED DAMAGES IN ODOT SPECIFICATION 108.07. ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC FROM NOVEMBER 15 TO APRIL 15.

PHASE 1

1.) ALL MAINTENANCE OF TRAFFIC ITEMS INCLUDING BARRIERS, SIGNALS, SIGNS, LIGHTS AND TEMPORARY MARKINGS, AND TEMPORARY PAVEMENT AS SHOWN ON SHEET 6 FOR PHASE 1 CONSTRUCTION, MUST BE FURNISHED AND ERECTED BY THE CONTRACTOR BEFORE CONSTRUCTION PROCEEDS. WORK FOR PHASE 1 SHALL BE COMPLETED WITHIN 45 CONSECUTIVE DAYS BEGINNING FROM THE FIRST DAY OF WORK.

2.) WHEN ALL ABOVE REQUIREMENTS HAVE BEEN SATISFIED THE SOUTHBOUND LANE OF U.S.R. 20 SHALL BE OPEN FOR TRAFFIC. THE EXISTING STRUCTURE SHALL BE CUT ALONG THE CUT LINE AND THE RIGHT PORTION OF THE EXISTING SUPERSTRUCTURE AND SUBSTRUCTURE SHALL BE REMOVED TO THE LIMITS SHOWN FOR PHASE 1 CONSTRUCTION. TEMPORARY SHEETING SHALL BE PLACED TO PERMIT THIS REMOVAL AND CONSTRUCTION. CARE SHALL BE TAKEN TO PROTECT THIS REMAINING PORTION OF THE EXISTING STRUCTURE BEING USED AS TEMPORARY ROADWAY DURING CONSTRUCTION.

3.) THE RIGHT PORTION OF THE PROPOSED ROADWAY AND STRUCTURE SHALL BE CONSTRUCTED TO THE LIMITS SHOWN UNDER PHASE 1 CONSTRUCTION.

4.) PHASE 1 WORK WILL PROCEED UNTIL COMPLETED IN TOTAL, PRIOR TO BEGINNING PHASE 2. THIS WILL INCLUDE THE PAVEMENT UP TO AND INCLUDING ITEM 448 INTERMEDIATE COURSE, TYPE 2, PG64–28, PAVEMENT WIDENING, GUARDRAIL AND STRUCTURE REQUIRED TO MAINTAIN TRAFFIC DURING PHASE 2. THE ONE EXCEPTION SHALL BE THE ASPHALT WEARING SURFACE COURSE WHICH SHALL NOT BE PLACED UNTIL AFTER PHASE 2 IS COMPLETED.

PHASE 2

1.) AFTER ALL PHASE ONE CONSTRUCTION HAS BEEN COMPLETED, THE CONTRACTOR SHALL INSTALL THE MAINTENANCE OF TRAFFIC ITEMS AS SHOWN ON SHEET 6 FOR PHASE 2 CONSTRUCTION. WORK FOR PHASE 2 SHALL BE COMPLETED WITHIN 45 CONSECUTIVE DAYS, BEGINNING FROM THE COMPLETION OF PHASE 1.

2.) THE REMAINING PORTIONS OF THE EXISTING SUPERSTRUCTURE AND SUBSTRUCTURE SHALL BE REMOVED.

ITEM	UNIT	DESCRIPTION
614	EACH	TEMPORARY RAISED PAVEMENT MARKER

STATIONING (FROM – TO) (SIDE)	SPACING	TYPE A W	TYPE A Y	REMARKS (LINE TYPE)
PHASE 1				
26+999.16 TO 27+112.26, RT.	1.5m C/C	76	76	SIMULATE EDGE LINE (TWO COLORS)
26+953.16 TO 26+999.16, RT.	1.5m C/C	32		SIMULATE EDGE LINE
26+999.16 TO 27+066.26, LT.	1.5m C/C	46	46	SIMULATE EDGE LINE (TWO COLORS)
PHASE 2				
26+953.16 TO 27+057.11, LT.	1.5m C/C	70	70	SIMULATE EDGE LINE (TWO COLORS)
27+057.11 TO 27+112.26, LT.	1.5m C/C	38		SIMULATE EDGE LINE
26+999.16 TO 27+057.11, RT.	1.5m C/C	40	40	SIMULATE EDGE LINE (TWO COLORS)
TOTALS		302	232	
		534		

TOTAL CARRIED TO GENERAL SUMMARY

3.) THE REMAINING PORTION OF THE PROPOSED ROADWAY AND STRUCTURE SHALL BE CONSTRUCTED, AND TEMPORARY SHEETING REMOVED. THIS WILL INCLUDE THE PAVEMENT UP TO AND INCLUDING ITEM 448 INTERMEDIATE COURSE, TYPE 2, PG64–28, SHOULDER WIDENING, AND GUARDRAIL.

4.) AFTER PHASE 2 CONSTRUCTION IS COMPLETED AND THE MAINTENANCE OF TRAFFIC ITEMS HAVE BEEN REMOVED, THE ASPHALT WEARING SURFACE COURSE SHALL BE CONSTRUCTED AND PERMANENT PAVEMENT MARKINGS SHALL BE PLACED, FOLLOWING STD. DWGS. MT–97.10M AND SHEET No. 7.

THE FOLLOWING QUANTITES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR MAINTAINING TRAFFIC.

PHASE 1

ITEM 614 TEMPORARY STOP LINE,
CLASS 1, 740.06 TYPE 1 ----------8 m
STA. 26+953.16, RT.
STA. 27+112.26, LT.

ITEM 614 TEMPORARY EDGE LINE,
CLASS 1, 740.06 TYPE 1----------0.05 km
STA 27+066.26 TO STA. 27+112.26

ITEM 614 TEMPORARY CENTER LINE,
CLASS 1, 740.06 TYPE 1----------0.07 km
STA 26+907.16 TO STA. 26+953.16
STA 27+112.16 TO STA. 27+135.00

ITEM 614 BARRIER REFLECTOR, TYPE B2 ------16 EACH
STA. 26+984.16 TO STA. 27+096.30

ITEM 614 BARRIER REFLECTOR, TYPE A2, ----------17 EACH
STA. 26+992.0± TO STA. 27+112.5±

ITEM 614 OBJECT MARKER----------32 EACH
STA. 26+984.16 TO STA. 27+096.30

ITEM 622 PORTABLE CONCRETE BARRIER, 813mm----88.5 m
STA. 26+984.16 TO STA. 27+020.51
STA. 27+044.91 TO STA. 27+096.30

ITEM 622 PORTABLE CONCRETE BARRIER, 813mm,
BRIDGE MOUNTED (UNANCHORED)----------24.4 m
STA. 27+020.51 TO STA. 27+044.91

PHASE 2

ITEM 614 TEMPORARY EDGE LINE,
CLASS 1, 740.06 TYPE 1----------0.05 km
STA. 26+953.16 TO STA. 26+999.16

ITEM 614 BARRIER REFLECTOR, TYPE B2 --------15 EACH
STA. 26+969.17 TO STA. 27+072.11

ITEM 614 OBJECT MARKER ----------30 EACH
STA. 26+969.17 TO STA. 27+072.11

ITEM 614 BARRIER REFLECTOR, TYPE A2----------18 EACH
STA. 26+986.00 TO STA. 27+111.18

ITEM 622 PORTABLE CONCRETE BARRIER, 813mm --- 78.0 m
STA. 26+969.17 TO STA. 27+020.51
STA. 27+044.91 TO STA. 27+072.11

ITEM 622 PORTABLE CONCRETE BARRIER, 813mm,
BRIDGE MOUNTED (UNANCHORED)----------24.4 m
STA. 27+020.51 TO STA. 27+044.91

COMPLETION OF PROJECT TO FINAL PAVEMENT MARKINGS

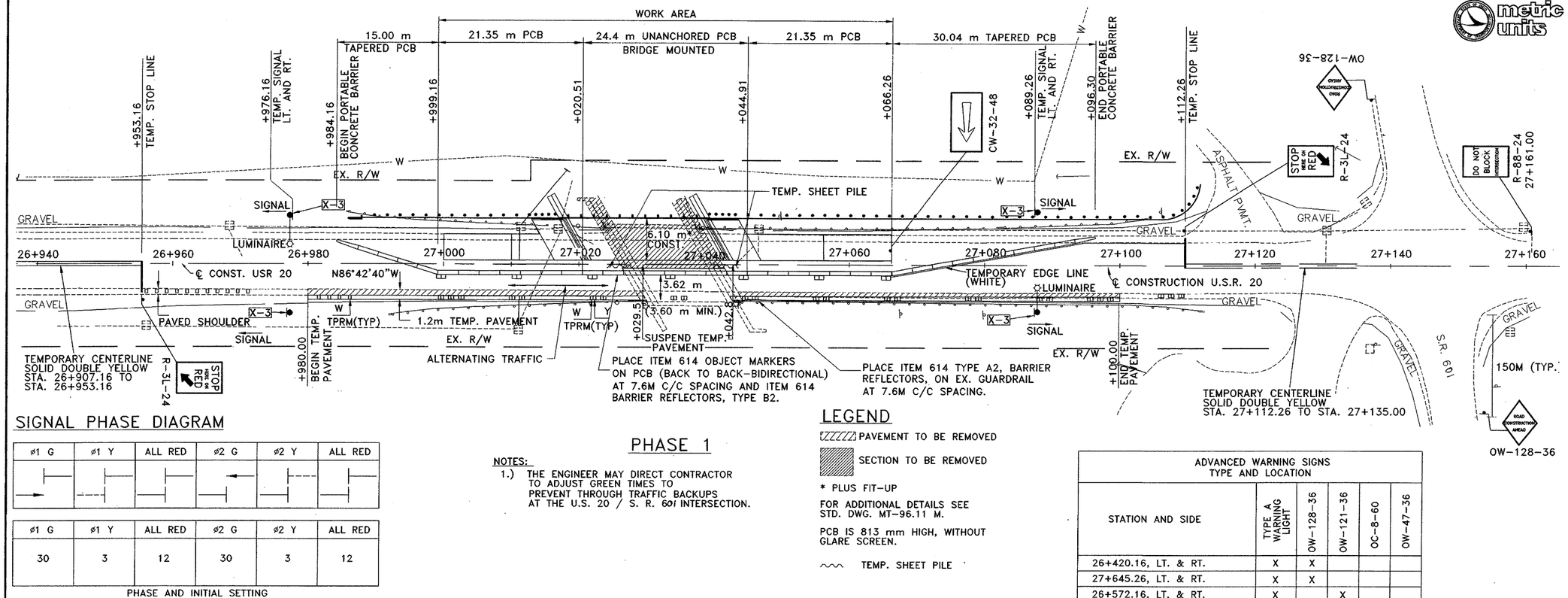
ITEM 614 TEMPORARY CENTERLINE, CLASS 11--------0.16 KM
STA. 26+953.16 TO STA. 27+112.26

metric units

CALCULATED JLW CHECKED THY

MAINTENANCE OF TRAFFIC

HUR–20–27.010



SIGNAL PHASE DIAGRAM

ø1 G	ø1 Y	ALL RED	ø2 G	ø2 Y	ALL RED

ø1 G	ø1 Y	ALL RED	ø2 G	ø2 Y	ALL RED
30	3	12	30	3	12

PHASE AND INITIAL SETTING

PHASE 1

NOTES:
1.) THE ENGINEER MAY DIRECT CONTRACTOR TO ADJUST GREEN TIMES TO PREVENT THROUGH TRAFFIC BACKUPS AT THE U.S. 20 / S. R. 601 INTERSECTION.

LEGEND

PAVEMENT TO BE REMOVED

SECTION TO BE REMOVED

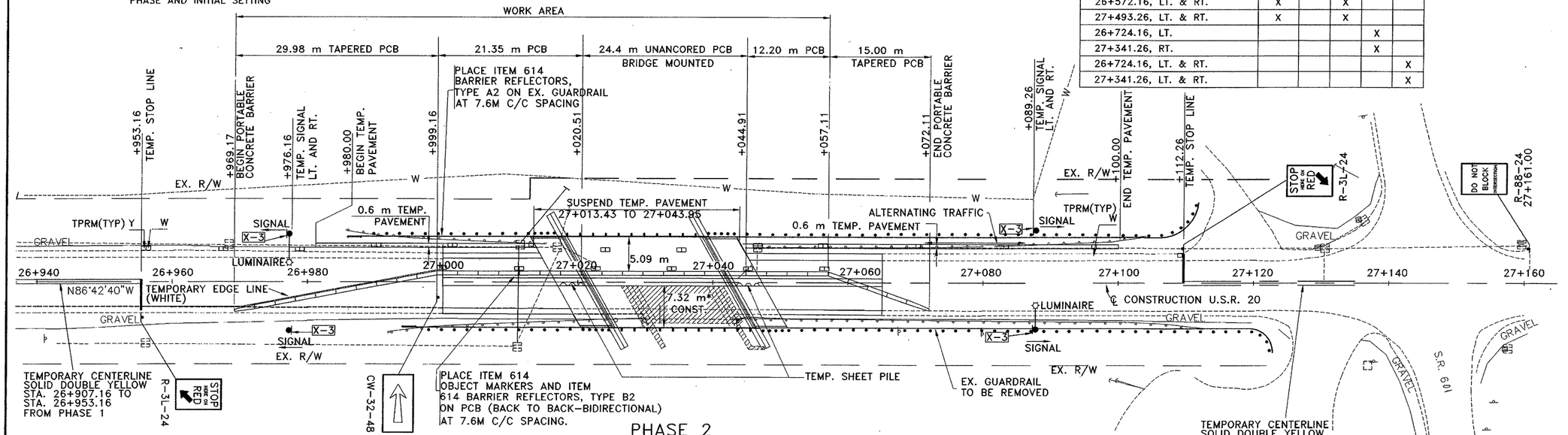
* PLUS FIT-UP

FOR ADDITIONAL DETAILS SEE STD. DWG. MT-96.11 M.

PCB IS 813 mm HIGH, WITHOUT GLARE SCREEN.

TEMP. SHEET PILE

ADVANCED WARNING SIGNS TYPE AND LOCATION					
STATION AND SIDE	TYPE A WARNING LIGHT	OW-128-36	OW-121-36	OC-8-60	OW-47-36
26+420.16, LT. & RT.	X	X			
27+645.26, LT. & RT.	X	X			
26+572.16, LT. & RT.	X		X		
27+493.26, LT. & RT.	X		X		
26+724.16, LT.				X	
27+341.26, RT.				X	
26+724.16, LT. & RT.					X
27+341.26, LT. & RT.					X



PHASE 2

metric units

1 CM/CONTA. SCALE IN METERS

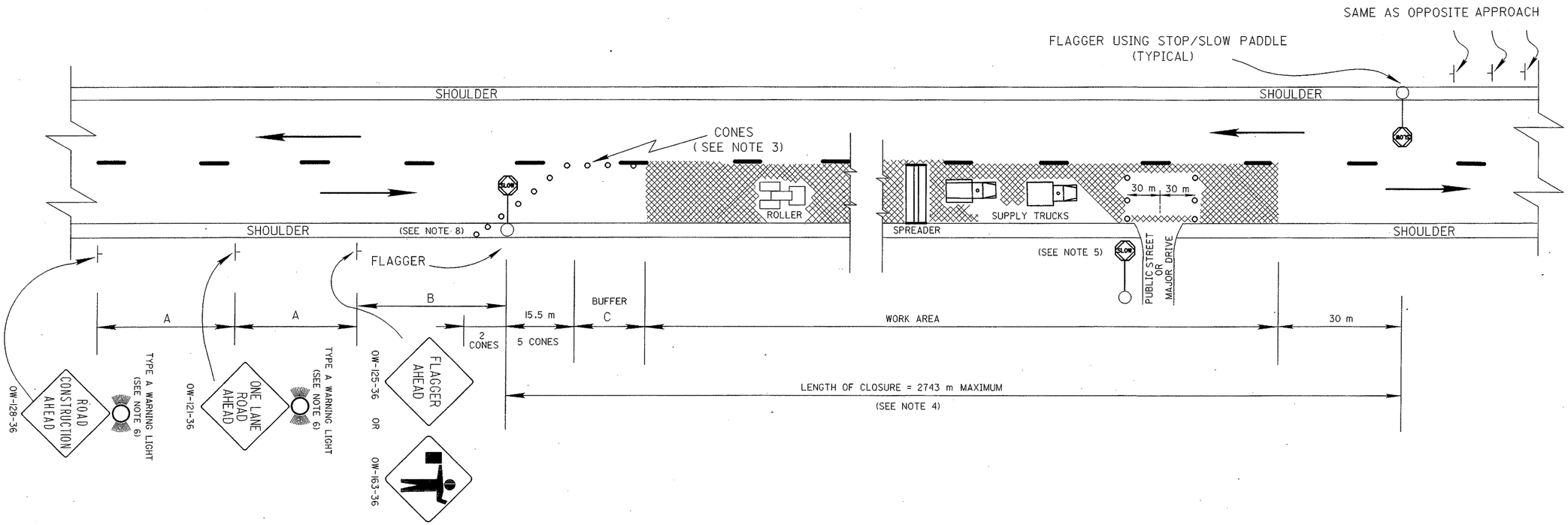
CALC. BATT. JLW
CHECKED THY

MAINTENANCE OF TRAFFIC
STA. 26+935 TO STA. 27+160

HUR-20-27.010

metric units

FLAGGER CLOSING 1 LANE OF A 2 LANE HIGHWAY FOR PAVING OPERATIONS



GENERAL NOTES:

1. THE LOCATION OF THE ADVANCE WARNING SIGNS SHOULD BE ADJUSTED TO PROVIDE FOR ADEQUATE SIGHT DISTANCE FOR THE EXISTING VERTICAL AND HORIZONTAL ROADWAY ALIGNMENT.

2. FLAGGERS, ONE FOR EACH DIRECTION, SHALL BE USED TO CONTROL TRAFFIC CONTINUOUSLY FOR AS LONG AS A ONE LANE OPERATION IS IN EFFECT. THE FLAGGERS SHALL BE ABLE TO COMMUNICATE WITH EACH OTHER AT ALL TIMES.

3. CONES ON THE TAPERS SHALL BE SPACED AT 3 m CENTER TO CENTER. CONES IN THE BUFFER SHALL BE SPACED AT 12 m CENTER TO CENTER. CONES SHALL HAVE A MINIMUM HEIGHT OF 0.7 m AND SHALL BE SAFELY STABILIZED TO PREVENT THEM FROM BLOWING OVER. CLOSURES AT NIGHT SHALL USE DRUMS RATHER THAN CONES.

4. IT IS REQUIRED THAT THE LENGTH OF CLOSURE BE KEPT TO A MINIMUM AT ALL TIMES, AS DIRECTED BY THE ENGINEER.

   WHEN THE AMBIENT TEMPERATURE EXCEEDS 29° C, THE ENGINEER MAY INCREASE THE MAXIMUM ALLOWABLE LENGTH OF CLOSURE TO ALLOW FOR SUFFICIENT COOLING OF NEW PAVEMENT.

   THE ENGINEER MAY SHORTEN THE MAXIMUM ALLOWABLE LENGTH OF CLOSURE TO RELIEVE EXCESSIVE TRAFFIC BACKUPS OR TO IMPROVE TRAFFIC OPERATION.

4. CONT. ALL TRAFFIC CONTROL SIGNS, CONES (OR DRUMS), AND THE FLAGGER SHALL BE MOVED FORWARD AS A GROUP BEFORE THE CLOSURE REACHES THE MAXIMUM ALLOWABLE LENGTH. ONLY ONE SIDE OF THE ROAD SHALL BE CLOSED AT ANY TIME.

5. WITHIN THE LENGTH OF CLOSURE, PROVISION SHALL BE MADE TO CONTROL TRAFFIC ENTERING FROM INTERSECTING STREETS AND MAJOR DRIVES AS NECESSARY TO PREVENT WRONG WAY MOVEMENTS AND TO KEEP VEHICLES OFF OF NEW PAVEMENT NOT READY FOR TRAFFIC. AS A MINIMUM, THE CONTRACTOR SHALL:

   A) PROVIDE AN ADDITIONAL FLAGGER AT EVERY PUBLIC STREET INTERSECTION AND MAJOR DRIVEWAY OR -
   B) PLACE A ROW OF 3 CONES ACROSS THE CLOSED LANE APPROXIMATELY 30 m ON EACH SIDE OF THE INTERSECTION OR DRIVEWAY.

   ROWS OF CONES MAY BE MOVED OFF THE ROAD TO ALLOW PASSAGE OF ROLLERS, PAVING SPREADER OR SUPPLY TRUCKS BUT SHALL BE MOVED BACK ONTO THE ROAD WHEN THE ACTIVITY HAS PASSED.

6. THE TYPE A FLASHING WARNING LIGHTS ARE REQUIRED ON THE OW-128 AND THE OW-121 SIGNS WHENEVER A NIGHT LANE CLOSURE IS NECESSARY.

7. ADEQUATE AREA ILLUMINATION OF EACH FLAGGER STATION SHALL BE PROVIDED AT NIGHT BY USING 150 WATT MINIMUM HIGH PRESSURE SODIUM LUMINAIRES OR 250 WATT MINIMUM MERCURY LUMINAIRES. LUMINAIRES SHALL BE LOCATED ADJACENT TO ONE FLAGGER STATION FOR EACH DIRECTION OF TRAFFIC.

8. TWO (2) CONES REQUIRED ON PAVED SHOULDER.

MINIMUM DISTANCE (METERS)	A MINIMUM	B RANGE	C MINIMUM
URBAN	61	61 TO 107	30
RURAL	152	152 TO 305	61

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE C & M SPECIFICATIONS AS WELL AS IN ACCORDANCE WITH PART 7 OF OMUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS TO PROVIDE THIS METHOD OF TRAFFIC CONTROL SHALL BE INCLUDED IN THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

REVISED BY: DATE:

2097IIM

PLAN INSERT SHEET WCC

HUR-20-27.010

7/23

calculated | checked

DESIGN FILE: i:\users\r ivoli\dgn\plnins7.dg
WORKSTATION: rtrivoli DATE: 13 JAN 99

PAVEMENT CALCULATIONS

STATION TO STATION	SIDE	DISTANCE D	AVERAGE WIDTH W	SURFACE AREA A = D X W	448 ① 38 mm 0.038A	448 ② 45 mm 0.045A	301 ③ 200 mm 0.2A	304 ④ 150 mm 0.15A	203 ⑥ A	611 ⑦ A	202 ⑩ A	407 ⑪ 0.45 L·m⁻² 0.34A	448 ⑫ 45 mm to 54 mm 0.050A	407 ⑬ 0.23 L·m⁻² 0.23A	408 ⑭ 1.8 L·m⁻² 1.8A
		meter	meter	sq.m.	cu. m.	cu. m.	cu. m.	cu. m.	sq. m.	sq. m.	sq. m.	Liters	cu. m.	Liters	Liters
27+000.00 TO 27+010.00	Lt&Rt	10.00	9.2	92.0	3.5						92.0	41.4			
27+010.00 TO 27+016.69	Lt&Rt	6.70	9.2	61.7	2.3	2.8			61.7			27.8		14.2	
27+010.00 TO 27+016.69	Lt&Rt	6.70	9.4	63.0			12.6								113.4
27+010.00 TO 27+016.69	Lt&Rt	6.70	9.7	65.0				9.8							
27+016.69 TO 27+021.29	Lt&Rt	4.60	13.4	61.7	2.4				61.7	61.7		27.8	3.1	14.2	
27+016.69 TO 27+021.29	Lt&Rt	4.60	14.1	64.9				9.8							
27+042.70 TO 27+047.30	Lt&Rt	4.60	13.4	61.7	2.4				61.7	61.7		27.8	3.1	14.2	
27+042.70 TO 27+047.30	Lt&Rt	4.60	14.1	64.9				9.8							
27+047.30 TO 27+055.00	Lt&Rt	7.70	9.2	70.9	2.7	3.2			70.9			31.9		16.3	
27+047.30 TO 27+055.00	Lt&Rt	7.70	9.4	72.4			14.5								130.3
27+047.30 TO 27+055.00	Lt&Rt	7.70	9.7	74.7				11.2							
27+055.00 TO 27+065.00	Lt&Rt	10.00	9.2	92.0	3.5						92.0	41.4			
TOTALS (THIS CHART)					16.8	6.0	27.1	40.6	256.0	123.4	184.0	198.1	6.2	58.9	243.7
TOTALS TO GEN. SUMMARY					17	6	28	41	256	124	184	198	7	59	244

ITEM 202 PAVEMENT REMOVED
(14.40M LENGTH x 9.2M WIDTH) = 132.5 SQ. METER
USE 133 SQ. METER

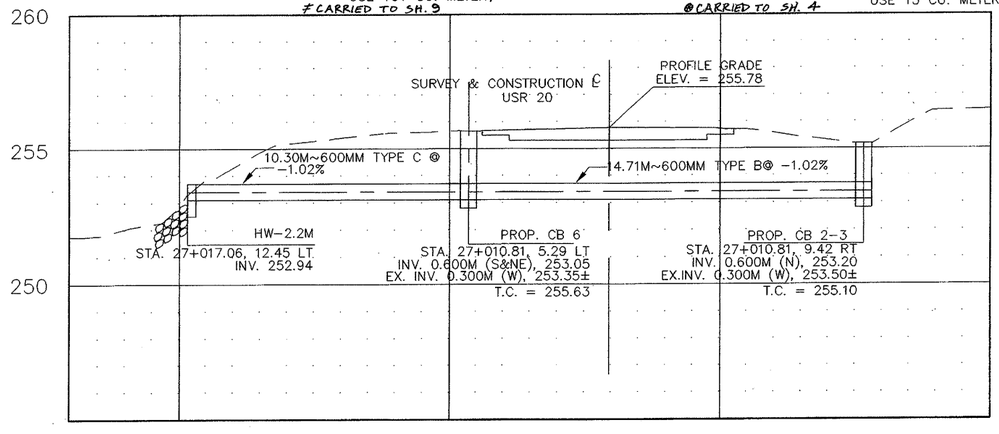
ITEM 601 ROCK CHANNEL PROTECTION, TYPE B, WITH FABRIC FILTER
REAR ABUTMENT = 153 SQ. METERS
FORWARD ABUTMENT = 61 SQ. METERS
= 214 SQ. METER x 0.75 M = 160.5 CU. METERS
USE 161 CU. METER #

ITEM 659 COMMERICIAL FERTILIZER
(0.1KG/SQ. METER)(735 SQ. METERS) = 73.5 KG.
USE 74 KG.

ITEM 202 APPROACH SLAB REMOVED
(9.14M WIDTH x 5.79M LENGTH)(2 EA.) = 105.84 SQ. METER
USE 106 SQ. METER

ITEM 659 WATER
(9.8 CU. METERS / 1000 SQ. METERS) x 735 SQ. METERS x 2 APPLICATIONS = 14.4 CU. METER
USE 15 CU. METER @

CARRIED TO SH. 9
@ CARRIED TO SH. 4



STORM SEWER PROFILE
(SEE SHEET 9 OF 23 FOR PLAN)

SHEET NUMBER 4	5	8	9	10	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	A.P.P. REF
									ROADWAY	
LUMP					201	11000	LUMP		CLEARING AND GRUBBING	
		106			202	22900	106	SQ. METER	APPROACH SLAB REMOVED	
		133			202	23000	133	SQ METER	PAVEMENT REMOVED	
		184			202	23500	184	SQ METER	WEARING COURSE REMOVED	
			34		202	35100	34	METER	PIPE REMOVED, 600 mm AND UNDER	
			77	136	202	38000	213	METER	GUARDRAIL REMOVED	
				22	202	54000	22	EACH	RAISED PAVEMENT MARKER REMOVED	
			2		202	58100	2	EACH	CATCH BASIN REMOVED	
			486		203	12000	486	CU METER	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
			101		203	20000	101	CU METER	EMBANKMENT	
		256			203	50000	256	SQ METER	SUBGRADE COMPACTION	
				2	604	38500	2	EACH	MONUMENT ASSEMBLY	
			30.48	132.5	606	13000	162.98	METER	GUARDRAIL, TYPE 5	
			2		606	22010	2	EACH	ANCHOR ASSEMBLY, TYPE E-98	
				2	606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T	
			2	2	606	35140	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 4	
									EROSION CONTROL	
60					207	30000	60	METER	FILTER FABRIC FENCE	
16					207	70000	16	EACH	STRAW OR HAY BALES	
			19		601	12000	19	SQ METER	RIPRAP, GROUTED	
			161		601	32104	161	CU METER	ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER	
4					601	32204	4	CU METER	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	
			735		659	10000	735	SQ METER	SEEDING AND MULCHING	
		74			659	20000	74	KILOGRAM	COMMERCIAL FERTILIZER	
15					659	35000	15	CU METER	WATER	
									DRAINAGE	
		0.39			602	20000	0.39	CU METER	CONCRETE MASONRY	
10					603	04400	10	METER	300MM CONDUIT, TYPE B	
10					603	05100	10	METER	300MM CONDUIT, TYPE E	
10					603	05200	10	METER	300MM CONDUIT, TYPE F	
		15			603	10400	15	METER	600MM CONDUIT, TYPE B, 706.02	
		10			603	10600	10	METER	600MM CONDUIT, TYPE C, 706.02	
		1			604	02000	1	EACH	CATCH BASIN, NO. 6	
		1			604	04900	1	EACH	CATCH BASIN, NO. 2-3	
				11	605	31100	11	METER	AGGREGATE DRAIN	
									PAVEMENT	
		28			301	46000	28	CU METER	BITUMINOUS AGGREGATE BASE, PG64-22	
		41			304	20000	41	CU METER	AGGREGATE BASE	
		198			407	10000	198	LITER	TACK COAT	
		59			407	14000	59	LITER	TACK COAT FOR INTERMEDIATE COURSE	
		244			408	10000	244	LITER	BITUMINOUS PRIME COAT	
		13			448	46040	13	CU METER	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28	
		17			448	50000	17	CU METER	ASPHALT CONCRETE SURFACE COURSE, TYPE 1H	
		124			611	10000	124	SQ METER	REINFORCED CONCRETE APPROACH SLAB (T=305mm)	
									TRAFFIC CONTROL	
				22	621	00100	22	EACH	RAISED PAVEMENT MARKER	
				12	626	00100	12	EACH	BARRIER REFLECTOR, TYPE A	
0.32					642	00102	0.32	KILOMETER	EDGE LINE, TYPE 2	
0.23					642	00302	0.23	KILOMETER	CENTER LINE, TYPE 2	
									MAINTENANCE OF TRAFFIC	
	534				614	12800	534	EACH	TEMPORARY RAISED PAVEMENT MARKER	
	10				614	13000	10	CU METER	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	
	35				614	13202	35	EACH	BARRIER REFLECTOR, TYPE A2	
	31				614	13303	31	EACH	BARRIER REFLECTOR, TYPE B2, AS PER PLAN	
	62				614	13350	62	EACH	OBJECT MARKER	
	0.07				614	21200	0.07	KILOMETER	TEMPORARY CENTER LINE, CLASS I, 740.06, TYPE I	
	0.16				614	21400	0.16	KILOMETER	TEMPORARY CENTER LINE CLASS II	
	0.10				614	22200	0.10	KILOMETER	TEMPORARY EDGE LINE, CLASS I, 740.06, TYPE I	
	8				614	26400	8	METER	TEMPORARY STOP LINE, CLASS I, 740.06, TYPE I	
	63				615	35001	63	SQ METER	TEMPORARY PAVEMENT, AS PER PLAN	
	20				616	10000	20	CU METER	WATER	
	0.5				616	20000	0.5	M TON	CALCIUM CHLORIDE	
	166.5				622	40020	166.5	METER	PORTABLE CONCRETE BARRIER, 813mm	
	48.8				622	40040	48.8	METER	PORTABLE CONCRETE BARRIER, 813mm, BRIDGE MOUNTED	
									FOR STRUCTURE QUANTITIES SEE SHEET 18 OF 22	
LUMP					614	11000	LUMP		MAINTAINING TRAFFIC	
					623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
					624	10000	LUMP		MOBILIZATION	
					806	16000	3	MONTH	FIELD OFFICE, TYPE A	

metric units

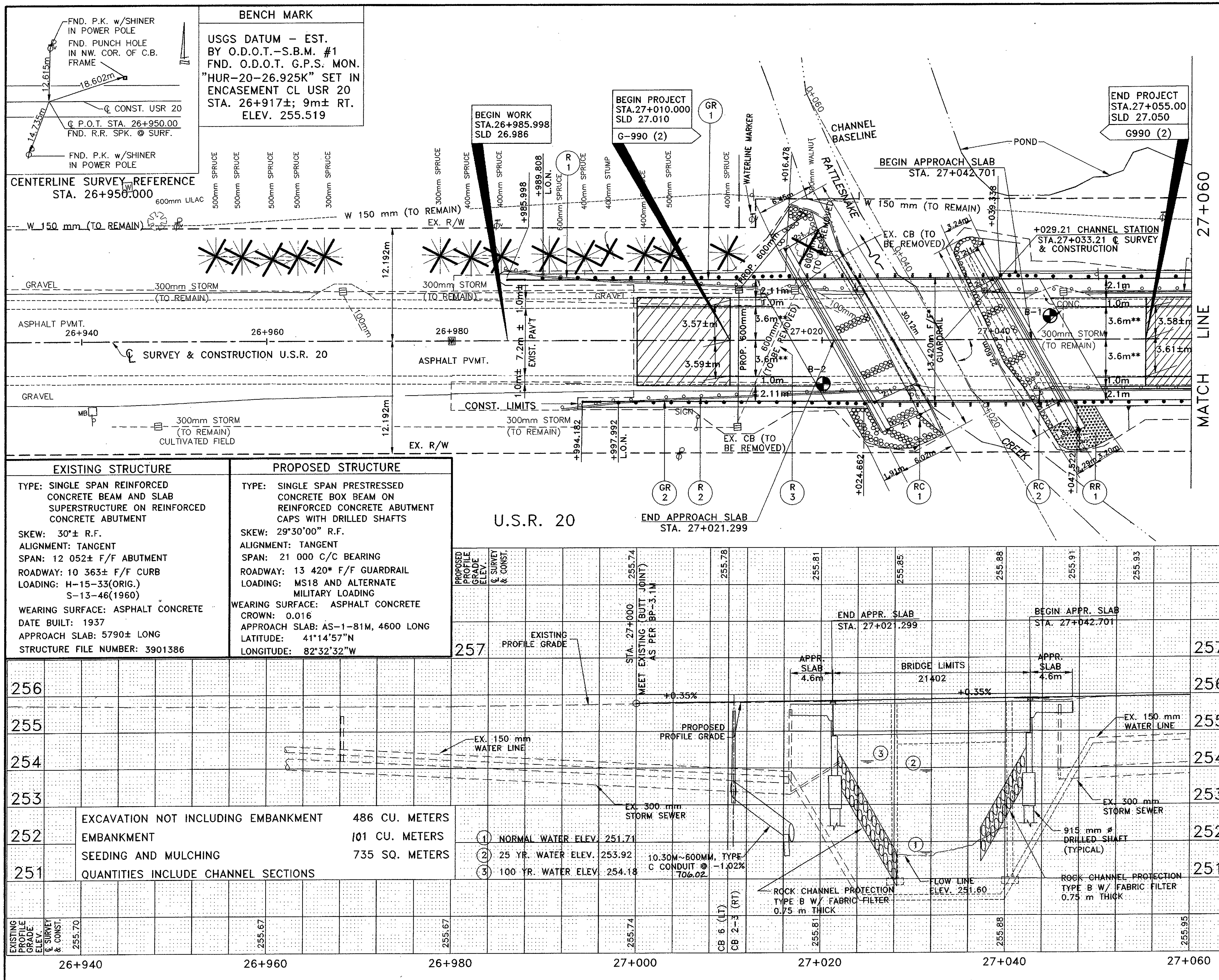
CALCULATED JLW CHECKED THY

GENERAL SUMMARY AND CALCULATIONS

HUR-20-27.010

8
23

13018GG1



FND. P.K. w/SHINER IN POWER POLE
FND. PUNCH HOLE IN NW. COR. OF C.B. FRAME
12.615m
18.602m
14.735m
℄ CONST. USR 20
℄ P.O.T. STA. 26+950.00
FND. R.R. SPK. @ SURF.
FND. P.K. w/SHINER IN POWER POLE
CENTERLINE SURVEY REFERENCE
STA. 26+950.000
BEGIN WORK
STA.26+985.998
SLD 26.986
BEGIN PROJECT
STA.27+010.000
SLD 27.010
G-990 (2)
END PROJECT
STA.27+055.00
SLD 27.050
G990 (2)
CHANNEL BASELINE
RATTLESNAKE CREEK
POND
BEGIN APPROACH SLAB
STA. 27+042.701
END APPROACH SLAB
STA. 27+021.299
+029.21 CHANNEL STATION
STA.27+033.21 ℄ SURVEY & CONSTRUCTION
W 150 mm (TO REMAIN)
EX. R/W
300mm STORM (TO REMAIN)
EX. CB (TO BE REMOVED)
℄ SURVEY & CONSTRUCTION U.S.R. 20
ASPHALT PVMT.
GRAVEL
CONST. LIMITS
CULTIVATED FIELD
MATCH LINE 27+060
U.S.R. 20
26+940
26+960
26+980
27+000
27+020
27+040
27+060
257
256
255
254
253
252
251
EXISTING PROFILE GRADE
PROPOSED PROFILE GRADE
+0.35%
END APPR. SLAB STA. 27+021.299
BEGIN APPR. SLAB STA. 27+042.701
BRIDGE LIMITS 21402
APPR. SLAB 4.6m
EX. 150 mm WATER LINE
EX. 300 mm STORM SEWER
915 mm ⌀ DRILLED SHAFT (TYPICAL)
ROCK CHANNEL PROTECTION TYPE B W/ FABRIC FILTER 0.75 m THICK
FLOW LINE ELEV. 251.60
STA. 27+000 MEET EXISTING (BUTT JOINT) AS PER BP-3.1M
10.30M~600MM, TYPE C CONDUIT @ -1.02%

BENCH MARK

USGS DATUM - EST.
BY O.D.O.T.-S.B.M. #1
FND. O.D.O.T. G.P.S. MON.
"HUR-20-26.925K" SET IN
ENCASEMENT CL USR 20
STA. 26+917±; 9m± RT.
ELEV. 255.519

EXISTING STRUCTURE

TYPE: SINGLE SPAN REINFORCED CONCRETE BEAM AND SLAB SUPERSTRUCTURE ON REINFORCED CONCRETE ABUTMENT
SKEW: 30°± R.F.
ALIGNMENT: TANGENT
SPAN: 12 052± F/F ABUTMENT
ROADWAY: 10 363± F/F CURB
LOADING: H-15-33(ORIG.)
S-13-46(1960)
WEARING SURFACE: ASPHALT CONCRETE
DATE BUILT: 1937
APPROACH SLAB: 5790± LONG
STRUCTURE FILE NUMBER: 3901386

PROPOSED STRUCTURE

TYPE: SINGLE SPAN PRESTRESSED CONCRETE BOX BEAM ON REINFORCED CONCRETE ABUTMENT CAPS WITH DRILLED SHAFTS
SKEW: 29°30'00" R.F.
ALIGNMENT: TANGENT
SPAN: 21 000 C/C BEARING
ROADWAY: 13 420* F/F GUARDRAIL
LOADING: MS18 AND ALTERNATE MILITARY LOADING
WEARING SURFACE: ASPHALT CONCRETE
CROWN: 0.016
APPROACH SLAB: AS-1-81M, 4600 LONG
LATITUDE: 41°14'57"N
LONGITUDE: 82°32'32"W

EXCAVATION NOT INCLUDING EMBANKMENT	486 CU. METERS
EMBANKMENT	101 CU. METERS
SEEDING AND MULCHING	735 SQ. METERS
QUANTITIES INCLUDE CHANNEL SECTIONS	

① NORMAL WATER ELEV. 251.71
② 25 YR. WATER ELEV. 253.92
③ 100 YR. WATER ELEV. 254.18

metric units

NOTES:
1. SEE SHEET 8 OF 23 FOR STORM PROFILE AND QUANTITIES
2. SEE SHEET 10 OF 23 FOR AGGREGATE DRAIN LOCATIONS

HORIZONTAL SCALE IN METERS

LEGEND

- SOIL BORING LOCATION
- * PLUS FIT-UP
- ** MATCH EXISTING WIDTH
- TREE TO BE REMOVED
- WEARING SURFACE REMOVED AND RESURFACING
- ROCK CHANNEL PROTECTION
- GROUTED RIPRAP

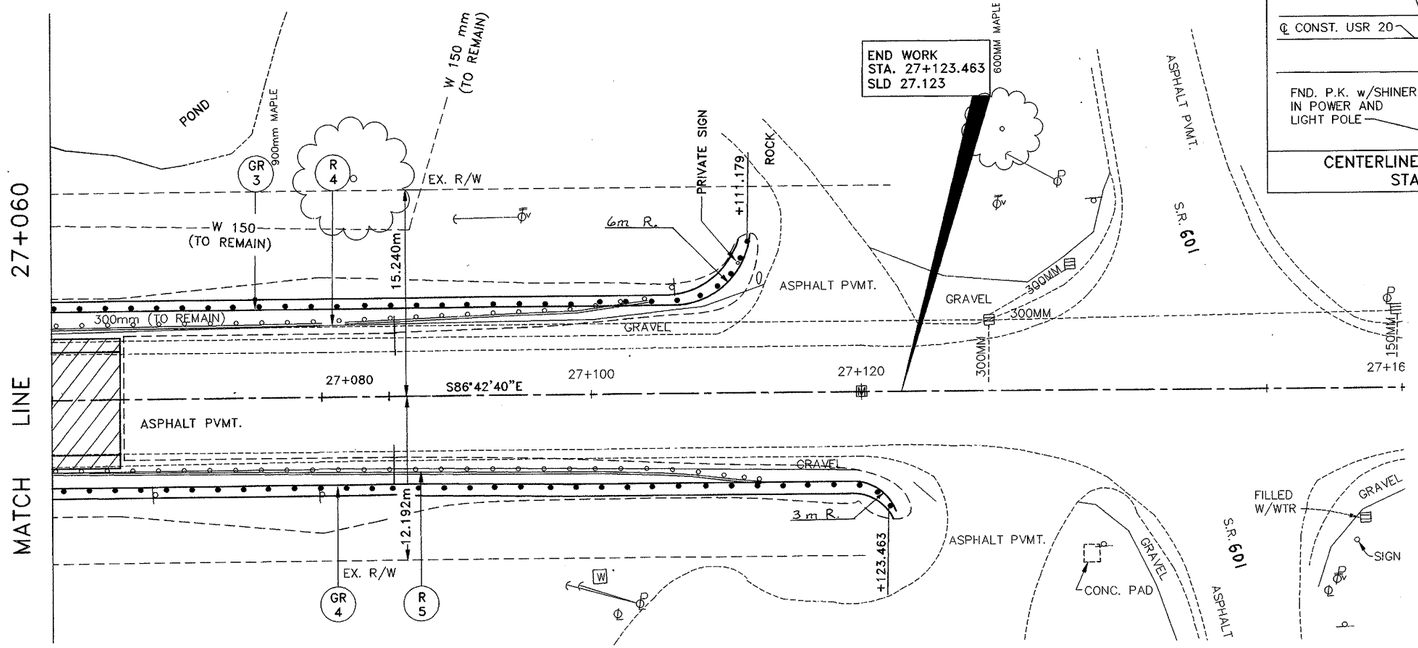
ESTIMATED QUANTITIES

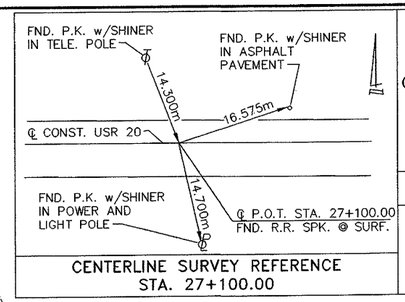
REF. NO.	STATION FROM	STATION TO	SIDE	202 GUARDRAIL REMOVED (METER)	202 PIPE REMOVED 600 mm AND UNDER (METER)	202 CATCH BASIN REMOVED (EACH)	601 RIPRAP, GROUTED (SQ. METER)	601 ROCK CHANNEL PROTECTION, TYPE B W/FABRIC FILTER (CU. METER)	606 BRIDGE TERMINAL ASSEMBLY TYPE 4 (EACH)	606 GUARDRAIL TYPE 5 (METER)	606 ANCHOR ASSEMBLY, TYPE E-98 (EACH)
GR-1	26+985.998	27+016.478	LT.						1	15.24	1
GR-2	26+994.182	27+024.662	RT.						1	15.24	1
R-1	26+985.620	27+023.890	LT.	38.3							
R-2	26+991.840	27+030.015	RT.	38.2							
R-3	27+010.809	27+019.200	LT./RT.		34	2					
RC-1	27+014.000	27+033.000	LT./RT.					115			
RC-2	27+034.000	27+051.000	LT./RT.					46			
RR-1	27+044.900	27+051.200	RT.				19				
TOTAL				76.5	34	2	19	161	2	30.48	2

CALCULATED JLW
CHECKED THY

PLAN AND PROFILE STA. 26+920 TO STA. 27+060

HUR-20-27.010





CENTERLINE SURVEY REFERENCE
STA. 27+100.00

BENCH MARK
S.B.M. #4
CUT " □ " ON SW. COR. OF CONCRETE PAD AT SW. COR. OF USR 20 & SR 601
STA. 27+136±; 12m± RT.
ELEV. 255.795

metric units

LEGEND
- SOIL BORING LOCATION
- * PLUS FIT-UP
- WEARING SURFACE REMOVED AND RESURFACING

HORIZONTAL SCALE IN METERS

DESIGNED JLW
CHECKED THY

ITEM 621 — UNIT EACH — DESCRIPTION RAISED PAVEMENT MARKERS

STATIONING (FROM – TO) (SIDE)	SPACING	TYPE A W	TYPE A Y	REMARKS (LINE TYPE)
26+968 TO 27+102 ℄	12m C/C		12	CENTERLINE
26+980 TO 27+102 RT.	24m C/C	6		EDGELINE
27+029 TO 27+102 LT.	24m C/C	4		EDGELINE
		10	12	
TOTALS		22		

TOTALS ARE CARRIED TO THE GENERAL SUMMARY

ITEM 202 RAISED PAVEMENT MARKER REMOVED
STA. 26+968 TO 27+102, ℄, 12m C/C± = 12 EA
STA. 26+980 TO 27+102, RT, 12m C/C± = 6 EA
STA. 27+029 TO 27+102, LT, 24m C/C± = 4 EA
22 TOTAL

TOTALS ARE CARRIED TO THE GENERAL SUMMARY

ITEM 202 MONUMENT ASSEMBLIES
STA. 26+980, ℄ SURVEY & CONSTRUCTION 1 EA.
STA. 27+120, ℄ SURVEY & CONSTRUCTION 1 EA.
2 TOTAL

QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY.

ITEM 605 AGGREGATE DRAIN

STATION	METERS	SIDE
27+010	4.0	RT.
27+010	1.0	LT.
27+040	2.0	LT.
27+055	2.0	LT.
27+047.5	2.0	RT.
	11.0 m	

TIE DRAIN @ 27+010 RT, LT, TO PROPOSED CATCH BASINS

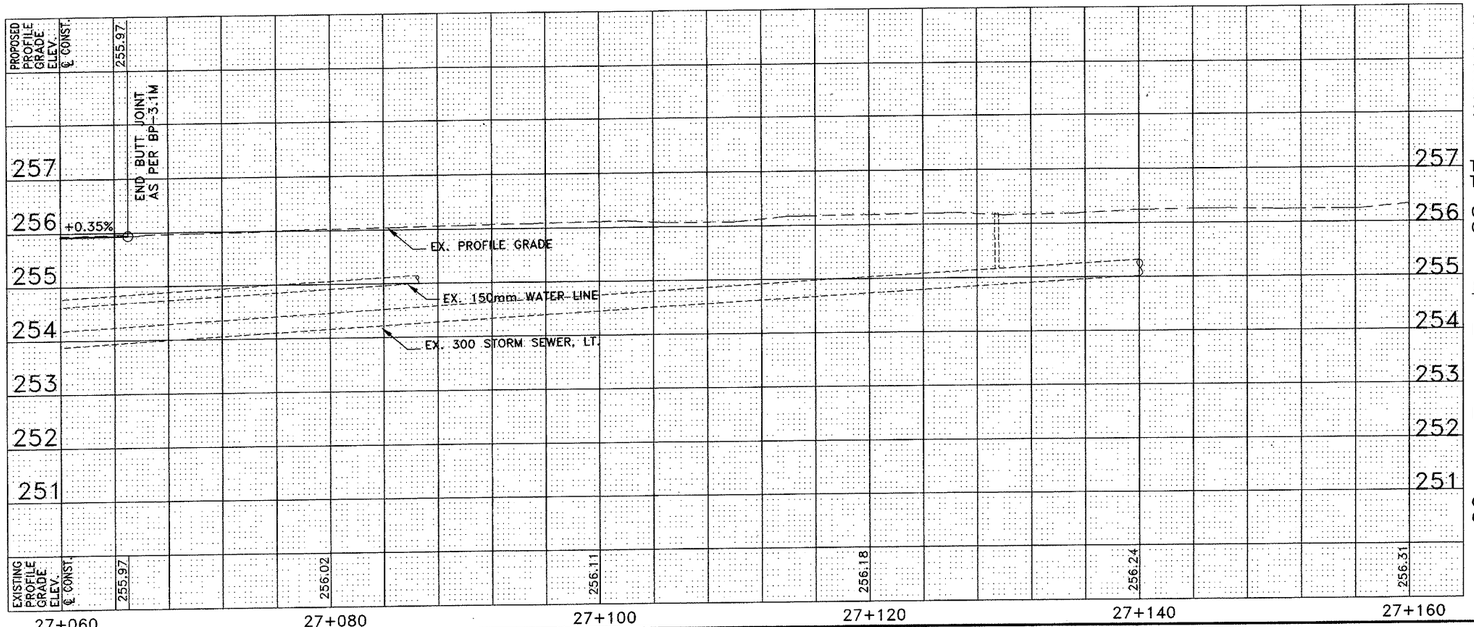
QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY.

ITEM 626, BARRIER REFLECTORS, TYPE A

LEFT SIDE: 6 EACH, 6.71 m LT. EVEN SPACED STA. 26+985.998 TO STA. 27+111.179

RIGHT SIDE: 6 EACH, 6.71 m LT. EVEN SPACED STA. 26+994.182 TO STA. 27+123.463

QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY.



ESTIMATED QUANTITIES

REF. NO.	STATION FROM	STATION TO	SIDE	202 GUARDRAIL REMOVED METER	606 GUARDRAIL TYPE 5 METER	606 ANCHOR ASSEMBLY, TYPE T EACH	601 BRIDGE TERMINAL ASSEMBLY, TYPE 4 CU METER
GR-3	27+039.388	27+111.179	LT.		64.2	1	1
GR-4	27+047.522	27+123.463	RT.		68.3	1	1
R-3	27+0.37.359	27+104.172	LT.	66.8			
R-4	27+043.543	27+112.510	RT.	69.0			
TOTAL				135.8	132.5	2	2

PLAN AND PROFILE
STA. 27+060 TO STA. 27+160

HUR-20-27.010

10/23

13018GP2

SEEDING END WIDTH	SEEDING SQ. M.	16	14	12	10	8	6	4	2	0	2	4	6	8	10	12	14	16
										℄ SURVEY & CONSTRUCTION U.S.R. 20								
										BRIDGE LIMITS 27+021.29 TO 27+042.701								
10.5		AHEAD SEE CHANNEL SECTION																
	36.3									255.81 27+021.299 END APPROACH SLAB(29°–30° SKEW) 255.81								
5.3		AHEAD																
8.4		BACK								255.80 27+016.699 END FULL DEPTH CONSTRUCTION/BEGIN APPROACH SLAB (29°–30° SKEW) 255.81								
	47.6																	
5.8																		
	42.5									255.78 27+010 BEGIN PROJECT END RESURFACING/BEGIN FULL DEPTH CONSTRUCTION 255.77								
2.7																		
	15.7									255.74 27+000 BEGIN RESURFACING 255.74								
2.7		+999.18 BEGIN SEEDING LEFT															+994.18 BEGIN EARTHWORK RIGHT	
										BEGIN WORK 26+985.998			+994.18 HALF SECTION					
										26+980 255.67								
										℄ SURVEY & CONSTRUCTION U.S.R. 20								
142.1																		
143	SHEET TOTAL																SHEET TOTAL	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	0		
4.4	11.1		
		20.2	26.7
5.0	0.6		
1.5	1.1		
		10.0	4.0
1.5	0.1		
0	0.1		
		0.5	0.5
0.1	0		
		30.7	31.2
		31	32

metric units

HORIZONTAL SCALE IN METERS 0 1:50 2

CALCULATED BDS CHECKED JLW

CROSS SECTIONS
STA 26+980 TO STA 27+021.299

HUR-20-27.010

11/23

SEEDING END WIDTH	SEEDING SQ. M.
7.1	7.6
8.1	47.4
4.2	
2.1	15.2
4.5	
0	
	138.6
	139

16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14

℄ SURVEY & CONSTRUCTION U.S.R. 20

metric units

257 256 255 254

EX. R/W

2:1

EXISTING 300MM

255.94
27+065
END RESURFACING/CONTINUE SHOULDER WORK
255.94

255.93
27+055
END PROJECT
END FULL DEPTH CONSTRUCTION/BEGIN RESURFACING
255.93

AHEAD
BACK
BACK SEE CHANNEL SECTIONS

255.91
27+047.301
END APPROACH SLAB/BEGIN FULL DEPTH CONSTRUCTION
255.91

1.8:1

GROUTED RIPRAP

AHEAD ONLY

255.89
27+042.701
BEGIN APPROACH SLAB
255.90

1.5:1

℄ SURVEY & CONSTRUCTION U.S.R. 20

SHEET TOTAL

END AREA	CUT	FILL
	0	0.3
AHEAD	0	0.8
BACK	0.4	0.8
AHEAD	0.4	2.5
BACK	4.5	2.1
AHEAD	4.1	7.7
BACK–SEE CHANNEL SECTIONS	0	0
	23.1	40.7
SHEET TOTAL	24	41

VOLUME	CUT	FILL
	0	5.5
	3.1	12.7
	20.0	22.5

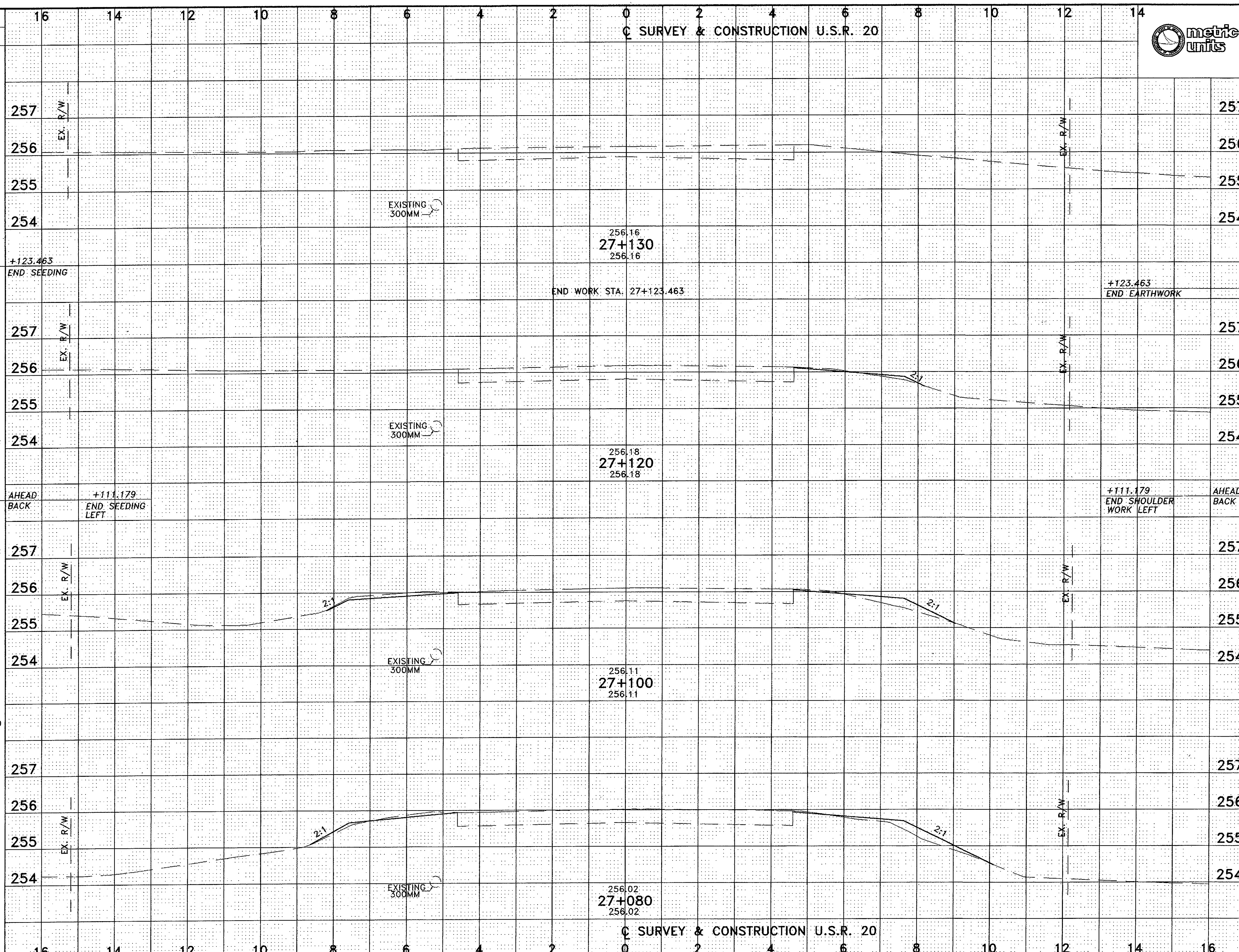
CALCULATED BDS
CHECKED JLW

CROSS SECTIONS
STA 27+042.701 TO STA 27+065

HUR-20-27.010

12/23

13018XS2.DWG



SEEDING END WIDTH	SEEDING SQ. M.	Station
3.7		27+123.463 (END SEEDING)
	12.8	
3.7		27+120
	36.6	
4.6 (AHEAD) / 8.2 (BACK)		27+111.179
	91.6	
8.2		27+100
	183.0	
10.1		27+080
	129	
	453	
SHEET TOTAL	453	

Station	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
+123.463 END EARTHWORK	0	0		
			0.2	0.2
27+120	0.1	0.1		
			0.4	2.6
+111.179 AHEAD	0	0.5		
+111.179 BACK	0.5	0.5		
			5.6	5.6
27+100	0.5	0.5		
			7.0	11.0
27+080	0.2	0.6		
			1.5	6.8
			14.7	26.2
SHEET TOTAL			15	27

metric units

0 .50 2 HORIZONTAL SCALE IN METERS

CALCULATED BDS
CHECKED JLW

CROSS SECTIONS
STA 27+080 TO STA 27+130

HUR-20-27.010

SEEDING	
END WIDTH	SQ. M.

C BRIDGE CHANNEL U.S.R. 20

SEE ROAD CROSS SECTION FOR EARTHWORK

SEE ROAD CROSS SECTION FOR EARTHWORK

SEE ROAD CROSS SECTION FOR EARTHWORK

SEE ROAD CROSS SECTION FOR EARTHWORK

2:1

25:1

1.5:1

EX.

0+022.8
251.67

0+019.8
251.69

0+013
253.7

0+010.8
253.8

BEGIN EARTHWORK LEFT

SEE SHEET 11 OF 23,
STATION 27+021.299 FOR
EARTHWORK BEHIND ABUTMENTS

SEE SHEET 11 OF 23
STATION 27+042.701 FOR
EARTHWORK BEHIND ABUTMENTS

BEGIN EARTHWORK

+016.2 AHEAD
+016.2 BACK

+014.2

C BRIDGE CHANNEL U.S.R. 20

16 14 12 10 8 6 4 2 0 2 4 6 8 10 12 14 16

256 255 254 253 252

END AREA		VOLUME	
CUT	FILL	CUT	FILL
19.0	0		
		36.6	0
5.4	0		
		16.8	0
5.4	0		
		5.4	0.1
0	0.1		
		0	0.1
0	0.1		
		0	0.1
0	0		
		58.8	0.3
SHEET TOTAL		59	1

metric units

HORIZONTAL SCALE IN METERS
0 1:50 2

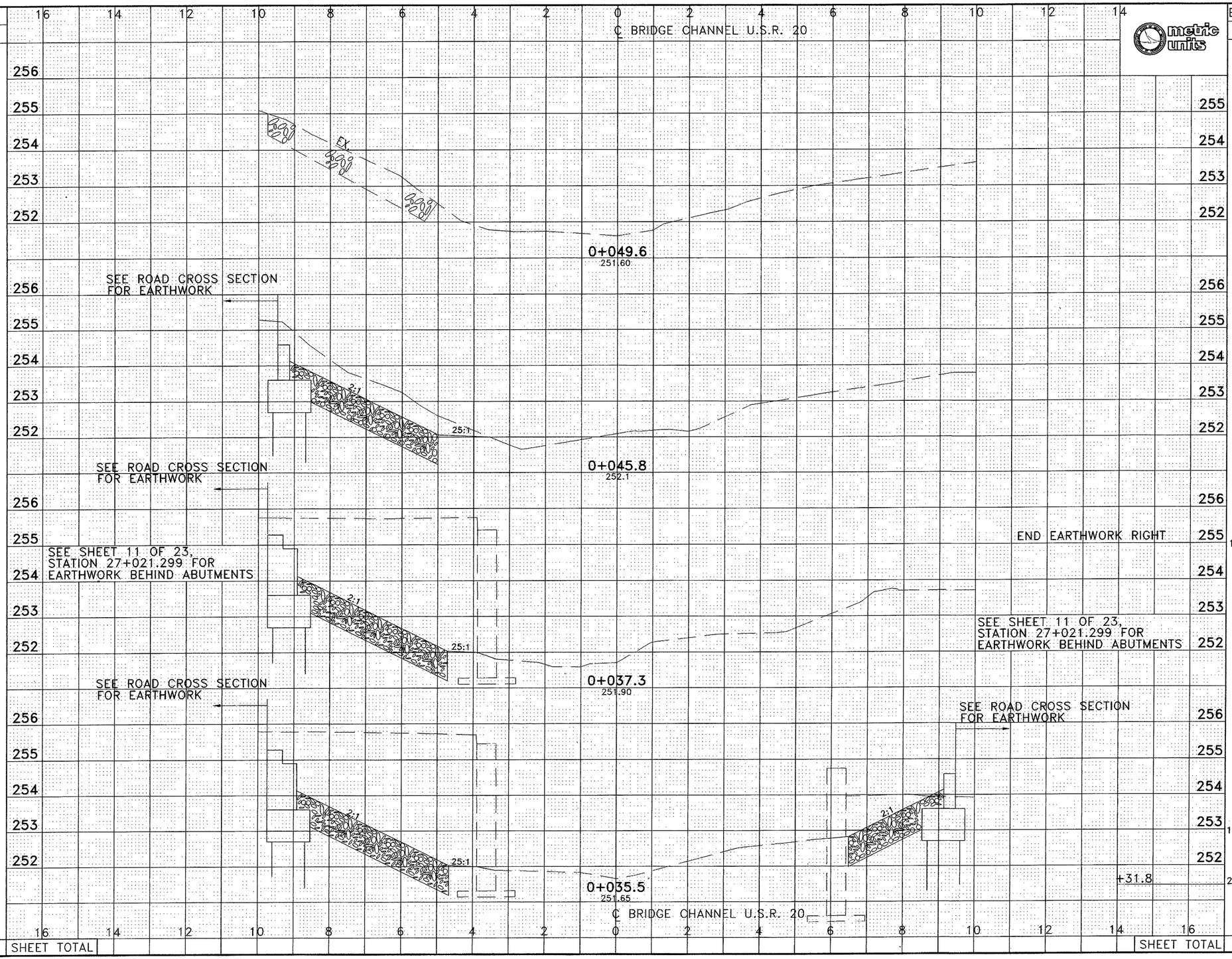
CALCULATED RRP
CHECKED JLW

BRIDGE CHANNEL CROSS SECTIONS
STA 0+010 TO STA 0+023.2

HUR-20-27.010

14
23

SEEDING END WIDTH	SEEDING SQ. M.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		0	0		
				6.8	0
		3.6	0		
				78.2	0
		14.8	0		
				28.0	0
		16.3	0		
				67.5	0
		20.2	0		
				176.4	0
SHEET TOTAL				356.9	0
				357	0



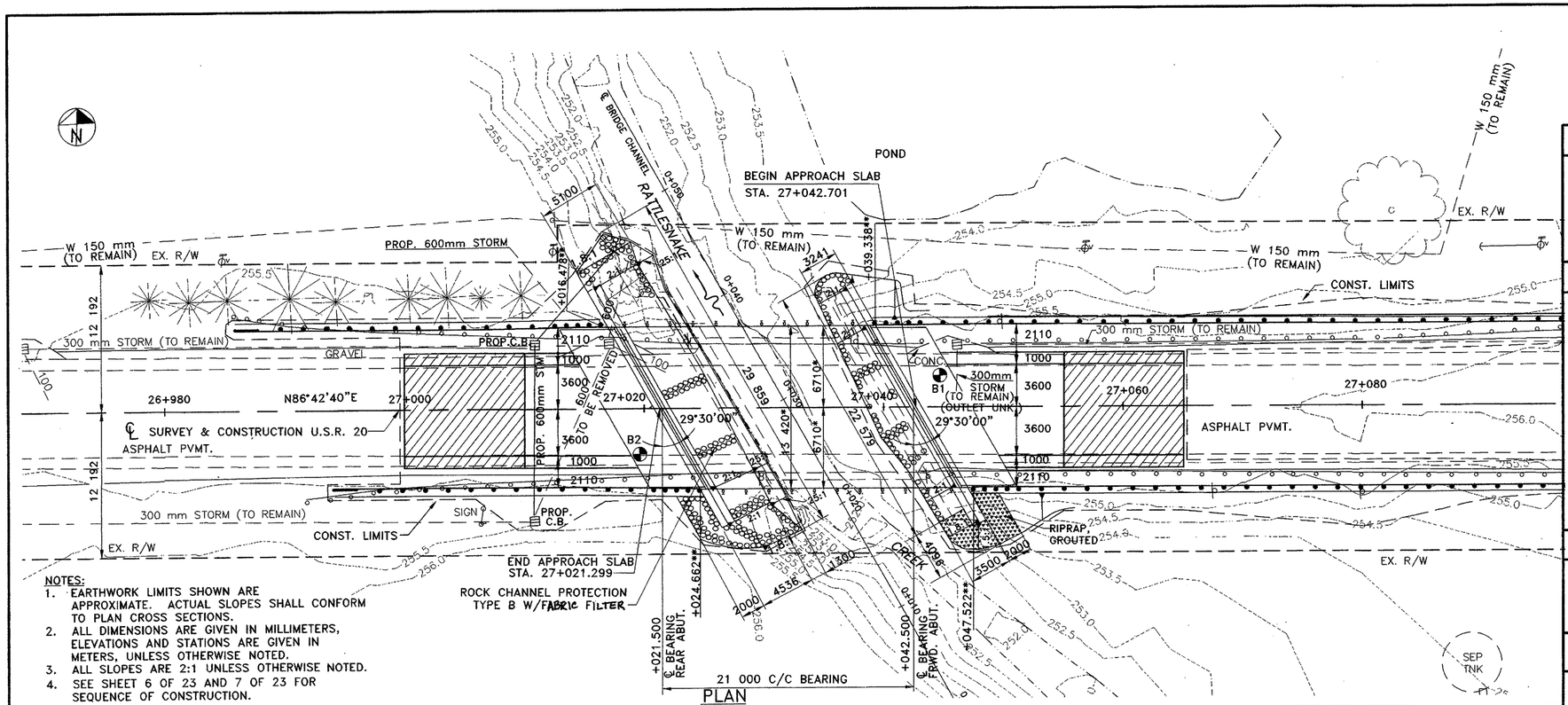
CALCULATED RRP
CHECKED JLW

HORIZONTAL SCALE IN METERS
0 50 2

BRIDGE CHANNEL CROSS SECTIONS
STA 0+035.5 TO STA 0+049.6

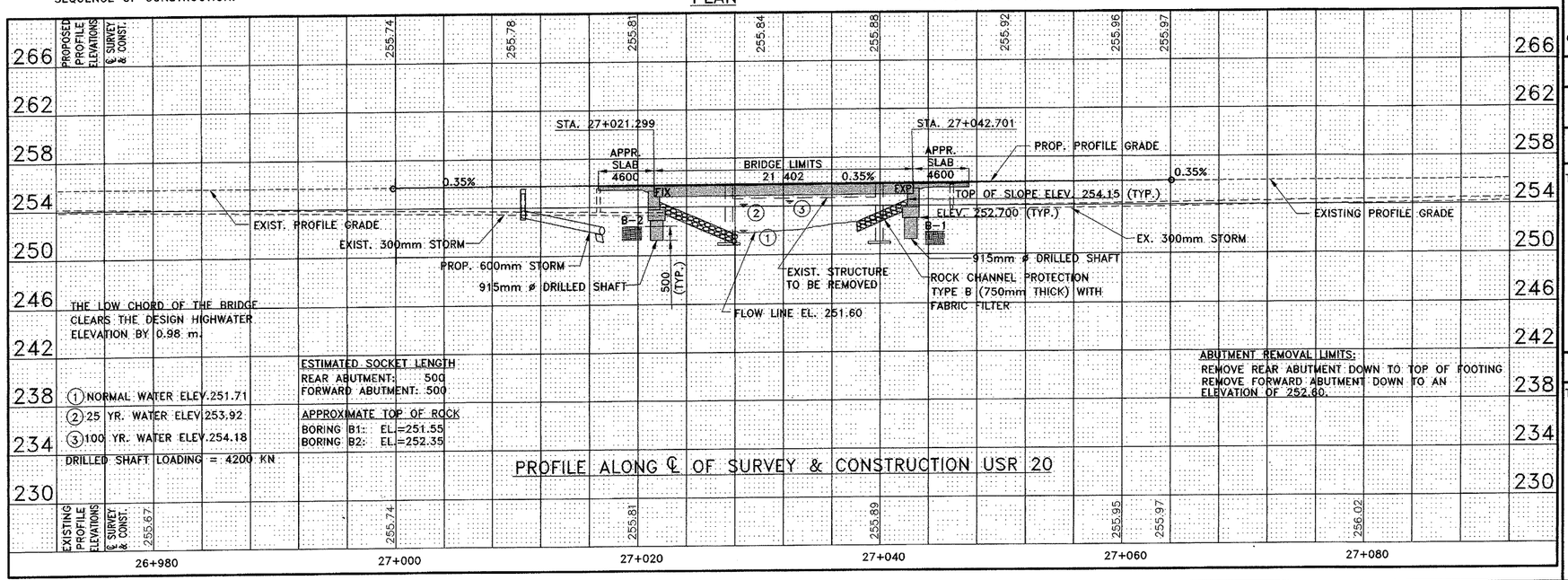
HUR-20-27.010

15
23



NOTES:
1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. ALL DIMENSIONS ARE GIVEN IN MILLIMETERS, ELEVATIONS AND STATIONS ARE GIVEN IN METERS, UNLESS OTHERWISE NOTED.
3. ALL SLOPES ARE 2:1 UNLESS OTHERWISE NOTED.
4. SEE SHEET 6 OF 23 AND 7 OF 23 FOR SEQUENCE OF CONSTRUCTION.

PLAN



PROFILE ALONG ℄ OF SURVEY & CONSTRUCTION USR 20

LEGEND

- RB–BORING LOCATION AT ROADWAY
- B–BORING LOCATION AT BRIDGE
- * PLUS FIT–UP
- ** FIRST POST OF BRIDGE
- WEARING COURSE TO BE REMOVED

BENCH MARKS

BENCH MARK
USGS DATUM – EST. BY O.D.O.T. –
S.B.M. #1
FND. O.D.O.T. G.P.S. MON.
"HUR–20–26.925K" SET IN
ENCASEMENT CL USR 20
STA. 26+917±; 9M± RT.
ELEV. 255.519

BENCH MARK
S.B.M. #4
CUT " □ " ON SW. COR. OF
CONCRETE PAD AT SW.
COR. OF USR 20 & SR 601
STA. 27+136±; 12M± RT.
ELEV. 255.795

TRAFFIC DATA

CURRENT A.D.T. (1999) 5330 v.p.d.
DESIGN YEAR A.D.T. (2019) 6930 v.p.d.
CURRENT A.D.T.T. (1999) 800 t.p.d.
V: 90 km/hr (55 m.p.h.)

HYDRAULIC DATA

DRAINAGE AREA: 1346 hectares
CHANNEL SLOPE: 0.0036
Q25=27.9 cms Q100=38.2 cms

PROPOSED STRUCTURE

V25=1.47 m/s	HW25=253.92
V100=1.72 m/s	HW100=254.18

EXISTING STRUCTURE

TYPE: SINGLE SPAN REINFORCED CONCRETE BEAM AND SLAB SUPERSTRUCTURE ON REINFORCED CONCRETE ABUTMENTS
SKEW: 30°± R.F.
ALIGNMENT: TANGENT
SPAN: 12 052± F/F ABUTMENTS
ROADWAY: 10 363± F/F CURB
LOADING: H–15–33(ORIG.) S–13–46(1960)
WEARING SURFACE: ASPHALT CONCRETE
DATE BUILT: 1937
APPROACH SLABS: 5790± LONG
STRUCTURE FILE NUMBER: 3901386

PROPOSED STRUCTURE

TYPE: SINGLE SPAN PRESTRESSED CONCRETE BOX BEAM ON REINFORCED CONCRETE ABUTMENT CAPS WITH DRILLED SHAFTS
SKEW: 29°30'00" R.F.
ALIGNMENT: TANGENT
SPAN: 21 000 C/C BEARING
ROADWAY: 13 420* F/F GUARDRAIL
LOADING: MS18 AND ALTERNATE MILITARY LOADING
WEARING SURFACE: ASPHALT CONCRETE
CROWN: 0.016
APPROACH SLABS: AS–1–81M, 4600 LONG
LATITUDE: 41°14'57"N LONGITUDE: 82°32'32"W

metric units

DESIGN AGENCY
PROUDFOOT ASSOCIATES
5380 HEATHERDOWNS BLVD., TOLEDO, OHIO 43614

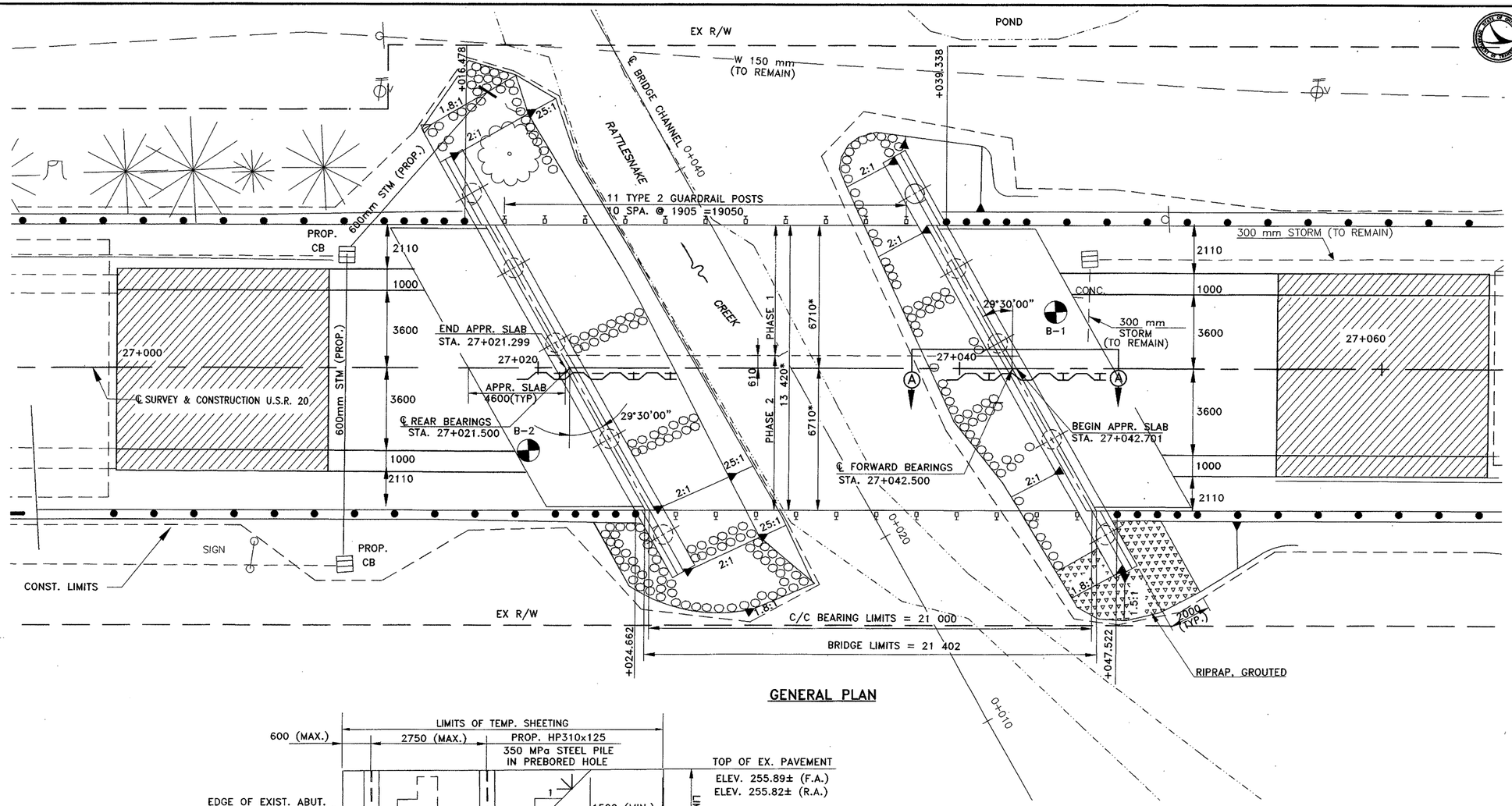
DATE 11–25–98
REVIEWED PEP
STRUCTURE FILE NUMBER 3901394
DRAWN RNC
REVISED
DESIGNED JLW
CHECKED THY

HURON COUNTY
27+021.299
27+042.701

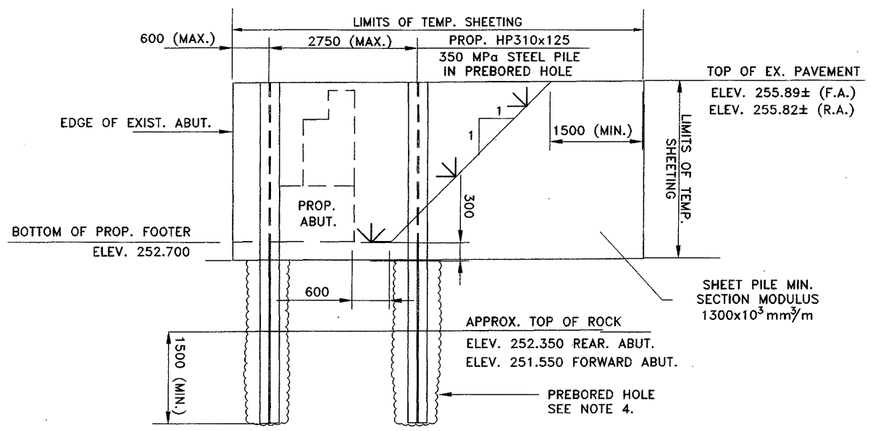
SITE PLAN
BRIDGE NO. HUR–20–27021
OVER RATTLESNAKE CREEK

HUR–20–27.010

1/8
16/23



GENERAL PLAN



SECTION A-A

TYPICAL TEMPORARY SHEETING DETAIL

NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. ALL DIMENSIONS ARE GIVEN IN MILLIMETERS, ELEVATIONS AND STATIONS ARE GIVEN IN METERS, UNLESS OTHERWISE NOTED.
3. ALL SLOPES ARE 2:1 UNLESS OTHERWISE NOTED.
4. PREBORED HOLE TO BE FILLED WITH LEAN CONCRETE ONCE PILE IS PLACED. PREBORED HOLES, LEAN CONCRETE, AND ALL MATERIALS, LABOR ASSOCIATED WITH THIS WORK TO BE PAID FOR IN THE ITEM, COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN.
5. SEE SHEETS 5 OF 23, 6 OF 23, AND 16 OF 23 FOR ABUTMENT REMOVAL LIMITS.

metric units

DESIGN AGENCY
PROUDFOOT ASSOCIATES
5380 HEATHERDOWNS BLVD., TOLEDO, OHIO 43614

DESIGNED JLW | DRAWN MAK | REVIEWED PEP 11-25-98 | DATE
CHECKED THY | REVISED | STRUCTURE FILE NUMBER 3901394

GENERAL PLAN
BRIDGE NO. HUR-20-27021
RATTLESNAKE CREEK

HUR-20-27.010

ESTIMATED QUANTITIES

CALC. BY: M.A.K. DATE: 11/25/98
CHECKED BY: J.L.W. DATE: 11/26/98

ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	ABUT.	SUPER.	GEN.	APP. REF.
202	11003	LUMP		STRUCTURE REMOVED, OVER 6 METER SPAN, AS PER PLAN			LUMP	1
407	10000	129	LITER	TACK COAT		129		
407	14000	66	LITER	TACK COAT FOR INTERMEDIATE COURSE		66		
448	46040	11.3	CU METER	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-28		11.3		
448	50000	10.9	CU METER	ASPHALT CONCRETE SURFACE COURSE, TYPE 1H		10.9		
503	11101	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN	LUMP			2
503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	LUMP			3
842	43501	95	CU METER	CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING, AS PER PLAN	95			3
512	33010	303	SQ. METER	TYPE 3 WATERPROOFING		303		
512	44400	5	SQ. METER	TYPE B WATERPROOFING	5			
SPECIAL	51267510	101	SQ METER	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	59	42		
516	13600	30.8	SQ METER	25 MM PREFORMED EXPANSION JOINT FILLER	30.8			
SPECIAL	51631300	31.13	METER	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM		31.13		
516	41100	22	EACH	3 MM PREFORMED BEARING PAD, 711.21	22			
516	43101	44	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN, 200 MM x 190 MM x 25 MM (50 DUROMETER)	44			6
517	72300	45.72	METER	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS AND ANCHOR BOLTS)		45.72		
518	21231	LUMP		POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	LUMP			3
SPECIAL	51822300	48.58	METER	STEEL DRIP STRIP		48.58		
518	40000	45	METER	150MM PERFORATED CORRUGATED PLASTIC PIPE	45			
518	40011	15.5	METER	150MM NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	15.5			4
524	94702	7.8	METER	DRILLED SHAFTS, 915 MM DIAMETER, ABOVE BEDROCK	7.8			
524	94704	5	METER	DRILLED SHAFTS, 915 MM DIAMETER, INTO BEDROCK	5			
865	10090	11	EACH	PRESTRESSED CONCRETE NON-COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, B840-1220		11		

FOR REINFORCED CONCRETE APPROACH SLAB QUANTITIES, SEE ROADWAY PLANS, SHEET 8 OF 23.

GENERAL NOTES:

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, SPECIFICATIONS **INCLUDING 1997 INTERIM SPECIFICATIONSAND THE ODOT. BRIDGE DESIGN MANUAL.**

REFERENCE: SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81M	DATED 10/25/94
DBR-2-73M	DATED 8/18/95
DS-1-94M	DATED 12/15/94
PSBD-1-93M	DATED 12/19/94
DM-1.1M	DATED 10/21/97

REFERENCE: SHALL BE MADE TO SUPPLEMENTAL SPECIFICATIONS:

865 PRECASTED CONCRETE BRIDGE MEMBERS
DATED 1/6/98

814 EMBANKMENT CONSTRUCTION USING PETROLEUM CONTAMINATED SOIL JUNE 2, 1998

904 STANDARDIZATION OF 499.031 CONCRETE PROPORTIONING OPTIONS MAY 5, 1998

905 OPEN HEARTH AND BASIC OXYGEN FURNACE STEEL SLAG AGGREGATE USED FOR ITEMS 203,304, 306,307,410,411,617,503, OR 603 APRIL 01,1998

907 SULPHUR LEACHATE TEST FOR AIR COOLED BLAST FURNACE SLAG FOR ACCEPTANCE OF ITEMS 203, 304, 306, 307, 503, 603, AND S.S.855 (ASPHALT TREATED FREE DRAINING BASE) DATE 10/21/98

DESIGN DATA:

DESIGN LOADING - MS18 AND THE ALTERNATE MILITARY LOADING
CONCRETE CLASS C - COMPRESSIVE STRENGTH 27.5 MPa (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615M, A616M, OR A617M GRADE 400, MINIMUM YIELD STRENGTH 400 MPa

CONCRETE FOR PRESTRESSED BEAMS - COMPRESSIVE STRENGTH 38.0 MPa
UNIT STRESSES - 15.2 MPa COMPRESSION 3.1 MPa TENSION

PRESTRESSING STRAND - ASTM A416M
f's = 1860 MPa
INITIAL STRESS = 0.75 f's (LOW RELAXATION STRANDS)

MILD REINFORCING STEEL FOR THE CONCRETE PRESTRESSED BEAMS GRADE 400, MINIMUM YIELD STRENGTH 400 MPa.

516, 517, AND 518 - FABRICATED MEMBERS
SEE THE PROPOSAL NOTE 516, 517, AND 518 - FABRICATED MEMBERS FOR THE FOLLOWING ITEMS:

516 ELASTOMERIC BEARINGS WITH INTERVAL LAMINATES ONLY (NEOPRENE), AS PER PLAN

517 RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS AND ANCHOR BOLTS)

ITEM SPECIAL - POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ITEM SPECIAL - STEEL DRIP STRIP

ITEM 511 - CLASS C CONCRETE, AS PER PLAN
THE AGGREGATE SHALL CONSIST OF NO. 8 LIMESTONE. THESE ITEMS SHALL INCLUDE THE COSTS OF REINFORCING STEEL.

DRILLED SHAFT CONSTRUCTION METHOD
CONSTRUCTION ON THIS PROJECT SHALL PROCEED PER 524.04(D) PERMANENT CASING CONSTRUCTION METHOD.

ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN
THE MATERIAL SHALL BE NO. 57 GRAVEL.

ITEM 512 - SPECIAL - SEALING OF CONCRETE SURFACES
EPOXY - URETHANE SHALL BE THE "BUFF" COLOR MEETING FEDERAL COLOR STANDARD NO. 37722 AS PER THE DETAILS IN THE PLANS. (SEE PROPOSAL NOTE)

DECK PROTECTION METHOD:
WATERPROOFING AND ASPHALT CONCRETE OVERLAY.
STEEL DRIP STRIP.

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING STRUCTURE SHALL BE REMOVED. ABUTMENTS SHALL BE REMOVED:
REAR ABUTMENT DOWN TO THE TOP OF FOOTING
FORWARD ABUTMENT DOWN TO AN ELEVATION OF 252.60

BEARING PAD SHIMS: 3 mm THICK PREFORMED BEARING PAD SHIMS, PLAN AREA 160 mm BY 160 mm SHALL BE PLACED UNDER THE ELASTOMERIC BEARINGS PADS WHERE REQUIRED FOR PROPER BEARING, THE AMOUNT SUPPLIED IS SUFFICIENT FOR 2 SHIMS PER BEAM. PAYMENT WILL BE MADE AT THE CONTRACT BID PRICE FOR ITEM 516-3 mm PREFORMED BEARING PADS. ANY UNUSED SHIMS SHALL BECOME THE PROPERTY OF THE STATE.

UTILITY LINES: [redacted]. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN:
UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 GRANULAR MATERIAL PLACED IN 150mm LIFTS AND COMPACTED IN ACCORDANCE WITH 304.04.

metric units

MECHANICAL CONNECTIONS: AN APPROVED TYPE OF NON-PROTRUDING MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE FURNISHED. INSTALLATION OF THE CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES. IF A DOWEL BAR SPLICE TYPE OF CONNECTOR IS FURNISHED. THE MINIMUM DOWEL BAR LENGTH TO BE PROVIDED WITH CONNECTOR SHALL BE 1295 mm. CONNECTORS AND DOWEL BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATION WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS. THE CONNECTORS SHALL CONFORM WITH ITEM 509 AND BE INCLUDED IN THE BID PRICE PER CUBIC METER OF ITEM 511.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT HIS PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) ADJACENT TO AND/OR UNDER THE STRUCTURE TO THE DIRECTOR FOR APPROVAL. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

PAYMENT: THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINENT PROVISIONS OF 202, AND TO THE SATISFACTION OF THE ENGINEER.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGE SCHEDULED FOR DEMOLITION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER AT THE PRECONSTRUCTION MEETING. THE CONTRACTOR SHALL COMPLETE THE FORM AND RETURN IT TO THE DISTRICT CONSTRUCTION ENGINEER. THE DISTRICT CONSTRUCTION ENGINEER SHALL SUBMIT IT TO (OEPA DISTRICT OFFICE OR THE LOCAL AIR AUTHORITY) AT LEAST TEN(10) WORKING DAYS PRIOR TO THE START OF THE DEMOLITION OF THE BRIDGE. THE DISTRICT CONSTRUCTION ENGINEER SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE CONTRACTOR. THE CONTRACTOR SHALL NOT COMMENCE DEMOLITION OF THE STRUCTURE UNTIL THE ABOVE REQUIREMENTS ARE MET.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE:
- THE CONTRACTORS NAME AND ADDRESS
- THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL OR RENOVATION
- A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED

A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 3 OFFICE, 906 N. CLARK STREET, ASHLAND,OHIO, 44805.

BASIS FOR PAYMENT
THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE BID ITEM 202-STRUCTURE REMOVED, OVER 6 METER SPAN, AS PER PLAN.

SURVEY DISC ON STRUCTURE: THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST ONE(1) WEEK IN ADVANCE OF POURING THE CONCRETE FOR COMPLETION OF THE WINGWALL. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE(1) SURVEY DISC FOR EACH STRUCTURE (OBTAINED FROM THE DISTRICT SURVEYOR) WHICH THE CONTRACTOR SHALL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE WINGWALLS, AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF DECK AND GUARDRAIL OR PARAPET. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK IS CONSIDERED INCIDENTAL TO THE CONCRETE BID ITEM.

DESIGN AGENCY
PROUDFOOT ASSOCIATES
5360 HEATHERDOWNS BLVD., TOLEDO, OHIO 43614

DATE REVISED PEP 11-25-98
STRUCTURE FILE NUMBER 3901394

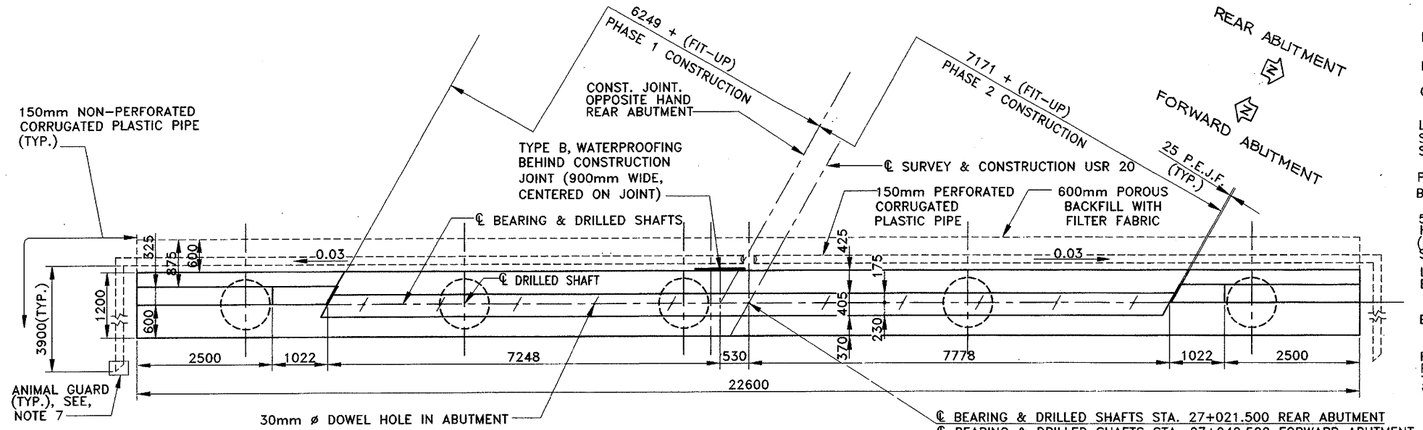
DRAWN MAK REVISED
DESIGNED JLW CHECKED THY

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. HUR-20-27021
OVER RATTLESNAKE CREEK

HUR-20-27.010

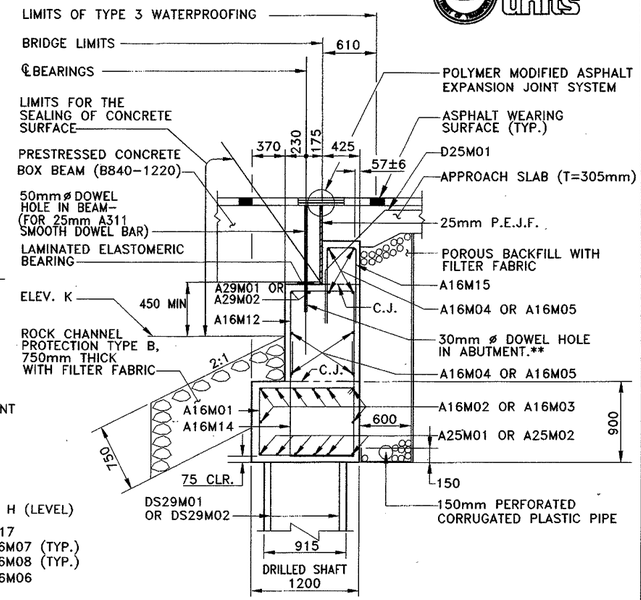
3/8

18/23



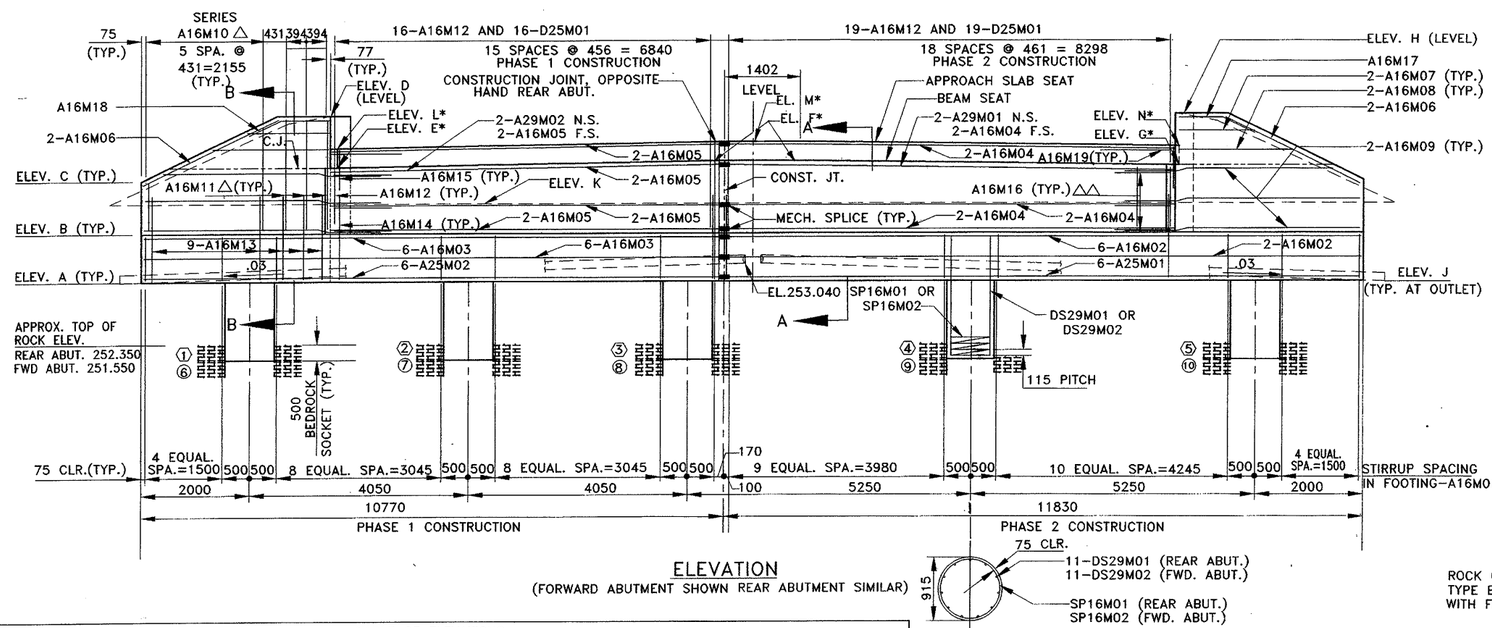
PLAN

(FORWARD ABUTMENT SHOWN REAR ABUTMENT SIMILAR)



SECTION A-A

(SHOWING SUPERSTRUCTURE AND APPROACH SLAB)



ELEVATION

(FORWARD ABUTMENT SHOWN REAR ABUTMENT SIMILAR)

TABLE OF ELEVATIONS													
ABUT./ELEV.	A	B	C	D	E*	F*	G*	H	J	K	L*	M*	N*
REAR ABUT.	252.700	253.600	254.578	255.695	254.738	254.850	254.763	255.720	252.583	254.150	255.240	255.352	255.265
FORWARD ABUT.	252.700	253.600	254.578	255.768	254.811	254.832	254.838	255.795	252.583	254.150	255.313	255.436	255.340

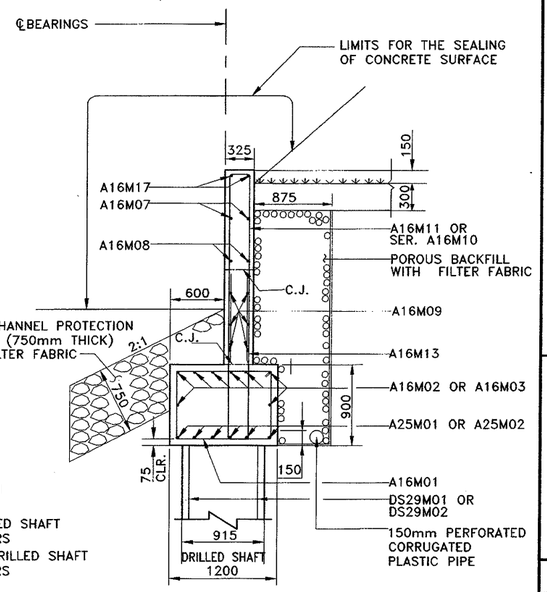
NOTES

1. POROUS BACKFILL WITH FILTER FABRIC, 600mm THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 300mm BELOW THE EMBANKMENT SURFACE AND LATERALLY TO THE ENDS OF THE WINGWALLS. GEOTEXTILE FABRIC SHALL CONFORM WITH 712.09, TYPE A. THE BOTTOM OF THE POROUS BACKFILL SHALL BE SLOPED LATERALLY TO DRAIN. GEOTEXTILE FABRIC IS INCLUDED WITH POROUS BACKFILL FOR PAYMENT.
2. ALL REINFORCING BARS ARE TO BE EPOXY COATED.
3. REINFORCING STEEL IN THE VICINITY OF THE BRIDE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF ANCHOR DOWEL HOLES.
4. ABUTMENT CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT SHALL NOT BE PLACED UNTIL THE PRESTRESSED CONCRETE BOX BEAMS HAVE BEEN ERECTED.
5. MINIMUM COVER IS 50mm UNLESS OTHERWISE SPECIFIED.
6. MINIMUM BAR LAPS SHALL BE AS FOLLOWS:
   #16M - 720
   #25M - 1400
7. ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLETS OF THE DRAINAGE PIPES. SEE STD. DRAWING DM-1.1M FOR DETAILS. THIS ITEM IS INCIDENTAL TO ITEM 518-150mm NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN.

LEGEND

* ELEVATION AT THE CENTERLINE OF BEARING
** FOR FIXED: FILL HOLE WITH NON-SHRINK GROUT, BOND BREAKER SHALL BE APPLIED TO DOWEL ABOVE BRIDGE SEAT
FOR EXPANSION: FILL HOLE WITH 705.04 JOINT SEALER

N.S.	NEAR SIDE
F.S.	FAR SIDE
C.J.	CONSTRUCTION JOINT
P.E.J.F.	PREFORMED EXPANSION JOINT FILLER
⬡	REAR ABUTMENT DRILLED SHAFT IDENTIFICATION NUMBERS
○	FORWARD ABUTMENT DRILLED SHAFT IDENTIFICATION NUMBERS
△	SPLICE WITH A16M13
△△	SPLICE WITH A16M04, A16M05, A29M01, OR A29M02.



SECTION B-B

metric units

DESIGN AGENCY
PROUDFOOT ASSOCIATES
5360 HEATHERDOWNS BLVD., TOLEDO, OHIO 43614

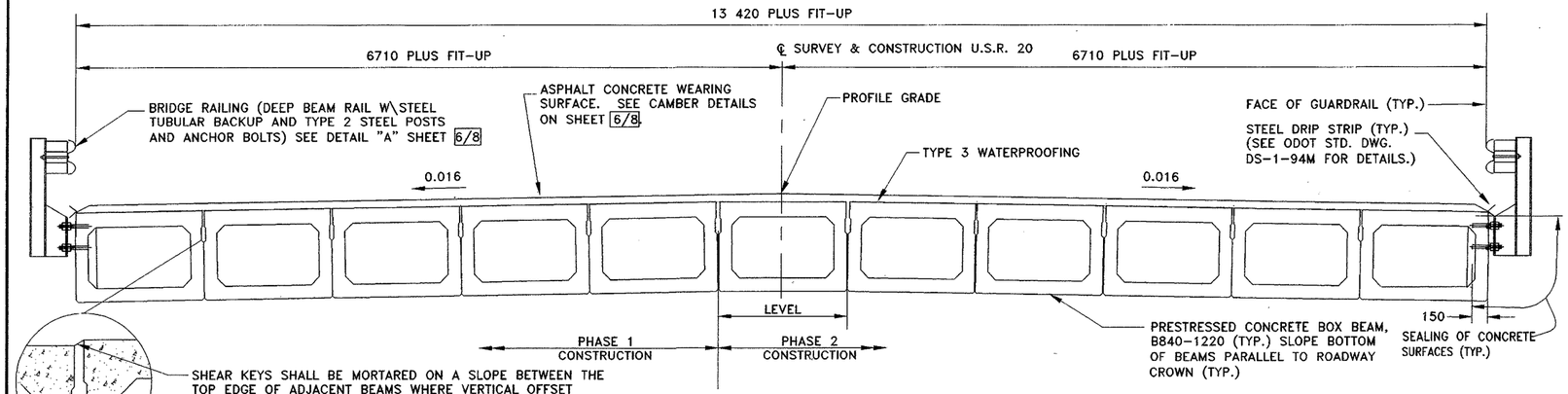
DESIGNED	DRAWN	REVIEWED	DATE
JLW	MAK	PEP	11-25-98
CHECKED	REVISED	STRUCTURE FILE NUMBER	
THY		3901394	

ABUTMENT DETAILS
BRIDGE NO. HUR-20-27 021
OVER RATTLESNAKE CREEK

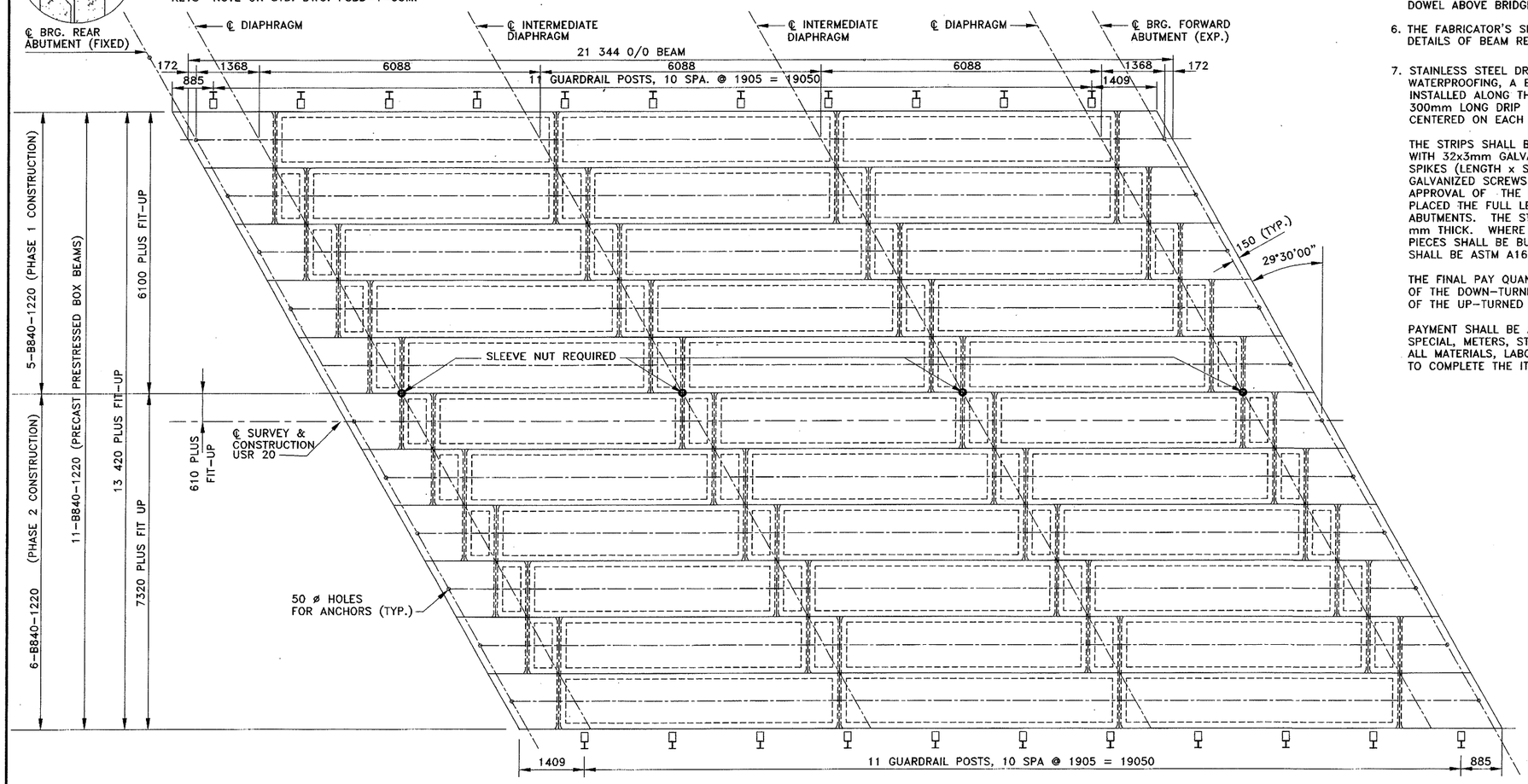
HUR-20-27.010

4 / 8

19
23



TRANSVERSE SECTION



BEAM LAYOUT PLAN

NOTES

1. PRESTRESSING STRANDS: ASTM A416 GRADE 270, 12.7 mm DIAMETER SEVEN-WIRE, UNCOATED, LOW RELAXATION STRANDS.
   AREA = 99 mm 2 EACH
   INITIAL STRESS: 0.75 F's = 1400 MPa
2. FOR DETAILS NOT SHOWN, SEE STANDARD DRAWING PSBD-1-93M SHEETS 1 THRU 4 FOR: BEAM LIFTING INSERTS, REINFORCEMENT AT BEAM ENDS, END DETAILS OF TRANSVERSE TIE ROD ANCHORAGE, TYPICAL PLANS OF DIAPHRAGMS, TRANSVERSE TIE RODS, SLEEVE NUT DETAIL, AND TYPICAL CROSS SECTIONS OF B430-1220.
3. FOR LAMINATED ELASTOMERIC BEARING DETAILS AND ADDITIONAL DETAILS AND NOTES. SEE SHEET 6/8.
4. THE FOLLOWING NOTES SHOWN ON STANDARD DRAWING PSBD-1-93M SHEETS 1 THRU 4 SHALL APPLY TO THIS PROJECT: TRANSVERSE TIE RODS, GALVANIZING, ANCHOR DOWELS, BEARING PADS, BEAM ENDS, DRIP GROOVES AND MORTARING OF SHEAR KEYS.
5. DOWEL BARS SHALL BE 25mm ø AND SHALL BE INSTALLED ACCORDING TO ITEM 510 EXCEPT NON-SHRINKING GROUT SHALL BE USED. BOND BREAKER SHALL BE APPLIED TO DOWEL ABOVE BRIDGE SEAT.
6. THE FABRICATOR'S SHOP DRAWING SHALL SHOW COMPLETE DETAILS OF BEAM REINFORCING.
7. STAINLESS STEEL DRIP STRIP: PRIOR TO APPLYING WATERPROOFING, A BENT DRIP STRIP SHALL BE INSTALLED ALONG THE EDGES OF THE DECK. AN ADDITIONAL 300mm LONG DRIP STRIP SHALL ALSO BE INSTALLED CENTERED ON EACH POST.

   THE STRIPS SHALL BE FASTENED AT 450mm C/C MAXIMUM WITH 32x3mm GALVANIZED OR STAINLESS BUTTON HEAD SPIKES (LENGTH x SHANK DIAMETR) OR A 3mm GALVANIZED SCREWS AND EXPANSION ANCHORS, SUBJECT TO APPROVAL OF THE ENGINEER. THE STRIPS SHALL BE PLACED THE FULL LENGTH OF THE DECK, ENDING AT THE ABUTMENTS. THE STIPS SHALL BE 200 mm WIDE x 0.8 mm THICK. WHERE SPLICES ARE REQUIRED THE INDIVIDUAL PIECES SHALL BE BUTTED TOGETHER. STAINLESS STEEL SHALL BE ASTM A167, TYPE 304, MILL FINISH.

   THE FINAL PAY QUANTITY SHALL BE THE LENGTH OF THE DOWN-TURNER STRIPS PLUS THE LENGTH OF THE UP-TURNED STRIPS.

   PAYMENT SHALL BE AT THE CONTRACT PRICE BID FOR ITEM SPECIAL, METERS, STEEL DRIP STRIP, WHICH SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.

metric units

DESIGN AGENCY
PROUDFOOT ASSOCIATES
5380 HEATHERDOWNS BLVD., TOLEDO, OHIO 43614

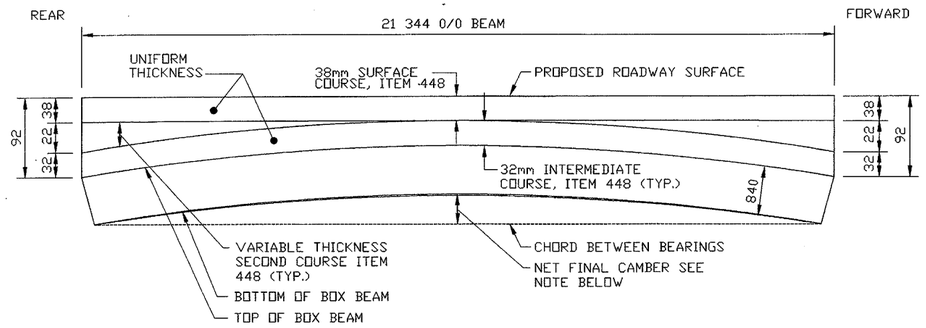
DESIGNED	DRAWN	REVIEWED	DATE
JLW	MAK	PEP	11-25-98
CHECKED	REVISED	STRUCTURE FILE NUMBER	
THY		3901394	

STRUCTURE DETAILS
BRIDGE NO. HUR-20-27021
OVER RATTLESNAKE CREEK

HUR-20-27.010

5 / 8

20 / 23



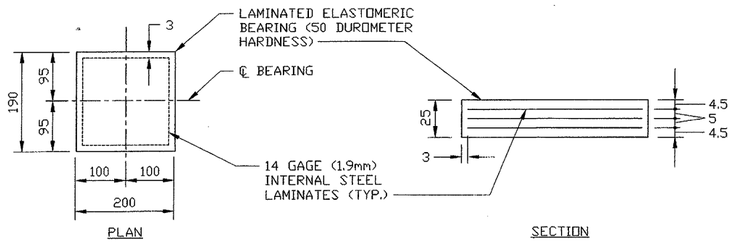
CAMBER AND SURFACE COURSE DIAGRAM

CALCULATED CAMBER AT TIME OF PAVING, INCLUDING ALLOWANCE FOR CAMBER GROWTH DUE TO CREEP, IS 31mm

CALCULATED DEFLECTION DUE TO WEIGHT OF SURFACE COURSE AND RAILING IS 9 mm.

NET FINAL CAMBER OF BEAMS IS 22mm. THIS IS 22mm IN EXCESS OF THE AMOUNT REQUIRED TO PLACE THE TOP OF THE BEAM PARALLEL TO PROFILE GRADE. THIS EXCESS AMOUNT SHALL BE COMPENSATED FOR BY THICKENING THE 448 ASPHALT CONCRETE INTERMEDIATE COURSE FROM 32mm AT CENTER OF SPAN TO 54mm AT THE ABUTMENTS.

ASPHALT CONCRETE SURFACE COURSE SHALL CONSIST OF A VARIABLE THICKNESS OF 448 INTERMEDIATE COURSE AND 38 mm THICKNESS OF 448 SURFACE COURSE. THE 448 INTERMEDIATE COURSE SHALL BE PLACED IN TWO OPERATIONS. THE FIRST COURSE SHALL BE OF 32 mm UNIFORM THICKNESS. THE INTERMEDITATE COURSE SHALL BE FEATHERED TO PLACE THE SURFACE PARALLEL TO AND 38 mm BELOW FINAL PAVEMENT SURFACE ELEVATION.

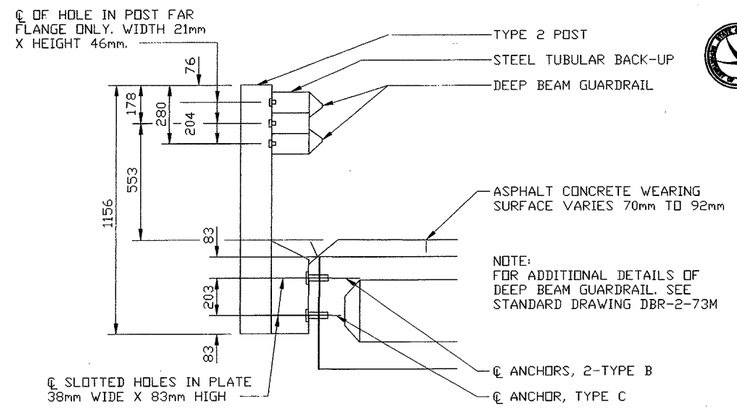


LAMINATED ELASTOMERIC BEARING

(NOT TO SCALE)

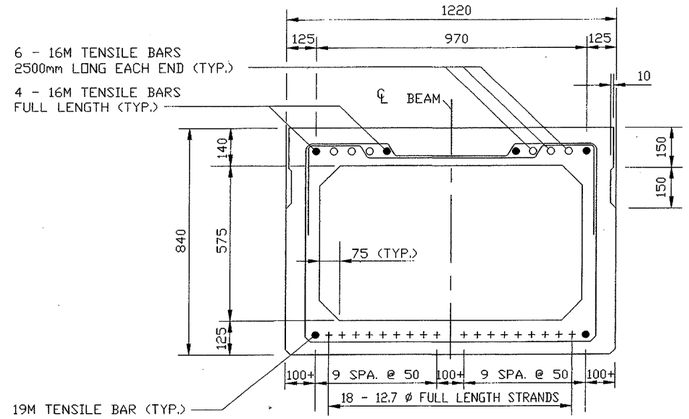
DEAD LOAD REACTION = 105.0 KN
LIVE LOAD REACTION = 42.2 KN
MAX. DESIGN LOAD = 91.9 KN

ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.6 OF SECTION 14, BEARINGS, DIVISION I, DESIGN. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, EACH.



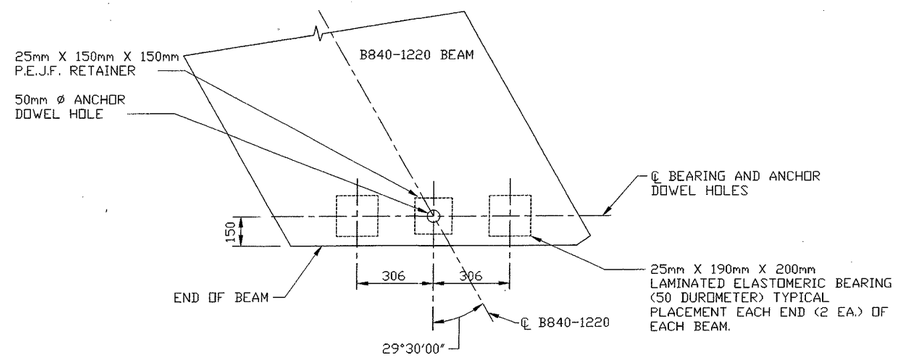
DETAIL A

(DEEP BEAM GUARDRAIL)



BEAM DETAIL B840-1220

BEAMS [1] THRU [11]



ANCHOR DOWEL AND BEARING PAD LAYOUT

(REAR ABUTMENT SHOWN)

metric units

DESIGN AGENCY
PROUDFOOT ASSOCIATES
5360 HEATHERDOWNS BLVD., TOLEDO, OHIO 43614

DESIGNED JLW | DRAWN MAK | REVIEWED PEP | DATE 11-25-98
CHECKED THY | REVISED | STRUCTURE FILE NUMBER 3901394

STRUCTURE DETAILS
BRIDGE NO. HUR-20-27021
OVER RATTLESNAKE CREEK

HUR-20-27.010

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MARK	NO. REQD.	LENGTH	TYPE	A (mm)	B (mm)	C (mm)	INCRM.	REAR ABUT.		FORWARD ABUT.		WEIGHT (kg)
								PHASE 1	PHASE 2	PHASE 1	PHASE 2	
ABUTMENTS												
A16M01	102	3825	1	775	1100	140		27	24	27	24	606
A16M02	16	11725	7					8		8		291
A16M03	16	10675	6						8		8	265
A16M04	16	7925	7					8		8		197
A16M05	16	6875	6						8	8		171
A16M06	8	2700	ST					2	2	2	2	34
A16M07	8	1500	ST					2	2	2	2	19
A16M08	8	2100	ST					2	2	2	2	26
A16M09	24	4475	ST					6	6	6	6	167
SER.		1700		775				1	1	1	1	
A16M10	SET OF	TO	2		225		400	SET OF	SET OF	SET OF	SET OF	101
	4	3700		1775				6	6	6	6	
A16M11	12	4450	2	2145	225			2	2	2	2	83
A16M12	70	2800	2	1075	730			17	20	17	20	304
A16M13	36	3250	2	1545	225			9	9	9	9	182
A16M14	70	3750	2	1545	730			17	20	17	20	407
A16M15	70	2675	2	1217	325			17	20	17	20	291
A16M16	12	2400	8	413	720	730		3	3	3	3	45
A16M17	2	3225	3	910	785	225			1		1	10
A16M18	2	3600	3	1095	968	225		1		1		11
A16M19	4	1925	8	185	720	325		1	1	1	1	12
A25M01	12	11725	7					6		6		559
A25M02	12	10675	6						6		6	509
A29M01	4	7925	7					2		2		160
A29M02	4	6875	6						2		2	139
D25M01	70	1675	4	305	810			16	19	16	19	466
DS29M01	55	1625	ST					33	22			452
DS29M02	55	2425	ST							33	22	675
SP16M01	5	31025	5	765	115	725		3	2			241
SP16M02	5	65450	5	765	115	1525				3	2	505
										SHEET	TOTALS	6928

NOTE:

BAR SIZE – THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST TWO DIGITS INDICATE THE BAR NUMBER. FOR EXAMPLE, AN A16M01 IS A # 16M BAR. BAR DIMENSIONS ARE SHOWN OUT TO OUT UNLESS OTHERWISE INDICATED.

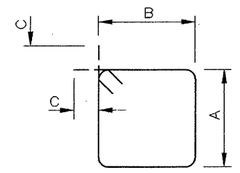
ALL REINFORCING STEEL TO BE EPOXY COATED.

SPACERS

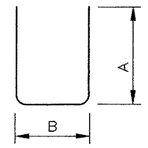
CONCRETE SPACERS OR OTHER APPROVED NONCORROSIVE SPACING DEVICES SHALL BE USED AT SUFFICIENT INTERVALS (NEAR THE BOTTOM AND AT INTERVALS NOT EXCEEDING 3050MM) TO INSURE CONCENTRIC SPACING FOR THE ENTIRE CAGE LENGTH. SPACERS SHALL BE CONSTRUCTED OF APPROVED MATERIAL EQUAL IN QUALITY AND DURABILITY TO THE CONCRETE SPECIFIED FOR THE SHAFT. THE SPACERS SHALL HAVE ADEQUATE DIMENSIONS TO ENSURE A MINIMUM 75MM CLEAR SPACE BETWEEN THE OUTSIDE OF THE REINFORCING CAGE AND THE DESIGN DIMENSION OF THE DRILLED SHAFT OR COLUMN. CYLINDRICAL CONCRETE FEET(BOTTOM SUPPORTS) SHALL BE PROVIDED TO ENSURE THAT THE BOTTOM OF THE CAGE IS MAINTAINED AT THE PROPER DISTANCE ABOVE THE BASE.

ALL BAR DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE NOTED. PAYMENT FOR REINFORCING BARS SHALL BE INCLUDED WITH ITEM **842.**

*WEIGHTS ARE GIVEN FOR INFORMATIONAL PURPOSES ONLY.



TYPE 1



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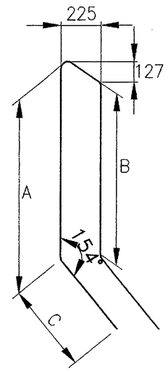

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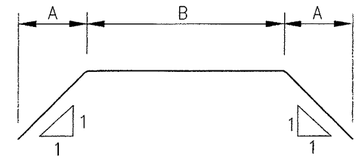

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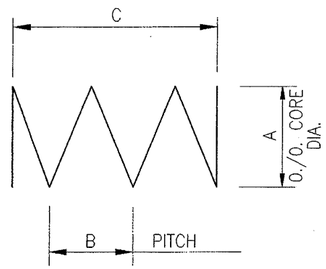

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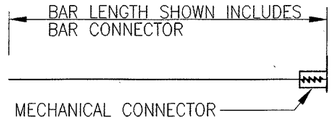
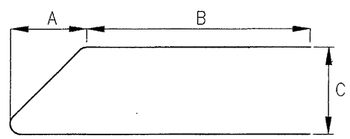


TYPE 6



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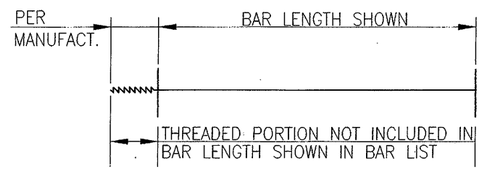

TYPE 7

DESIGN AGENCY
PROUDFOOT ASSOCIATES
5360 HEATHERDOWNS BLVD., TOLEDO, OHIO 43614

DATE
REVIEWED PEP 11-25-98
STRUCTURE FILE NUMBER 3901394

DRAWN MAK
REVISED

DESIGNED JLW
CHECKED THY

REINFORCING BAR SCHEDULE
BRIDGE NO. HUR-20-27021
OVER RATTLESNAKE CREEK

HUR-20-27.010

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SHTNUM

ITEM SPECIAL – POLYMER–MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER–MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE HAS BEEN COMPLETED.

D.S. BROWN COMPANY
P.O. BOX 158
300 E. CHERRY ST.
N. BALTIMORE, OH 45872–0158
TEL: 1–800–258–0162

LINEAR DYNAMICS, INC.
RD #2 BOX 311
MUNCY, PA 17756
TEL: (717) 546–6041

INFASTRUCTURE SYSTEMS, INC.
830 E. Higgins Road
Chicago, IL 60173–4792
SUITE 111 M
TEL: (708) 706–9230

HARRIS SPECIALTY CHEMICAL, INC.
10245 CENTURION PARKWAY, N.
JACKSONVILLE, FL 32256
TEL: (904) 996–6000

MATERIALS:

BRIDGING PLATE:

MILD STEEL 3 mm OR 6 mm THICK PLATE, 200 mm WIDE OR 18 GAUGE (APPROX. 1.3 mm) ALUMINUM, 204 mm WIDE.

BINDER:

TYPE:	POLYMER MODIFIED ASPHALT
SOFTENING POINT:	180 DEGREES F. MIN.
FLOW:	3 mm. MAX. AT 140 DEGREES F.
PENETRATION:	9 mm. MAX. AT 77 DEGREES F. 1 mm. MAX AT 0 DEGREES F. ASTM D 3407
DUCTILITY:	40 cm. MIN. ASTM D 113
RESILIENCE:	60% MIN. AT 77 DEGREES F.
TENSILE ADHESION:	700% MIN.
SPECIFIC GRAVITY:	1.10 ? 0.05
POURING TEMP:	350 – 390 DEGREES F.

AGGREGATE:

TYPE:	CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT
GRADATION	THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER ROD SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN 51 MILLIMETERS DEEP (508 mm CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER–PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 1649 DEGREES C. AT A VELOCITY OF 914 METERS PER SECOND WITH 103.4 kPa GAGE CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 152 mm OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (PRE–STRESSED BOX OR CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 3 mm OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 3 mm AND 30 mm BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 300 mm INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1 mm THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 177 AND 199 DEGREES C. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 210 DEGREES C. NOR ALLOWED TO EXCEED 199 DEGREES C. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD–UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 135 TO 163 DEGREES C., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS NOT LESS THAN 13 MILLIMETERS NOR EXCEEDING 64 MILLIMETERS. THE THICKNESS OF EACH LAYER CAN BE VARIED, WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MINIMUM 51 mm). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 13 mm AND 25 mm. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

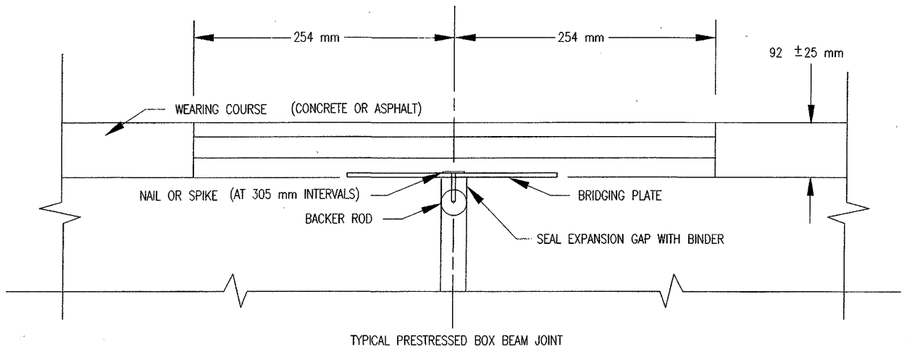
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF–WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF 51 MILLIMETERS OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON–WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE LITER SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T. TESTING LABORATORY.

PAYMENT:

PAYMENT FOR ALL THE ABOVE WILL BE AT THE UNIT PRICE BID PER LINEAR METER OF SEALED JOINT IN PLACE FOR ITEM SPECIAL, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM (92 MILLIMETERS THICK). THIS WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.



TYPICAL PRESTRESSED BOX BEAM JOINT

DESIGN AGENCY
PROUDFOOT ASSOCIATES
5360 HEATHERDOWNS BLVD., TOLEDO, OHIO 43614

DESIGNED	DRAWN	REVIEWED	DATE
JLW	MAK	PEP	11–25–98
CHECKED	REVISED	STRUCTURE FILE NUMBER	
THY		3901394	

POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
BRIDGE NO. HUR–20–27021
OVER RATTLESNAKE CREEK

HUR–20–27.010

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