

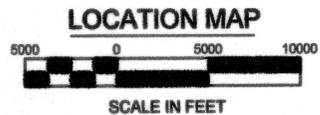
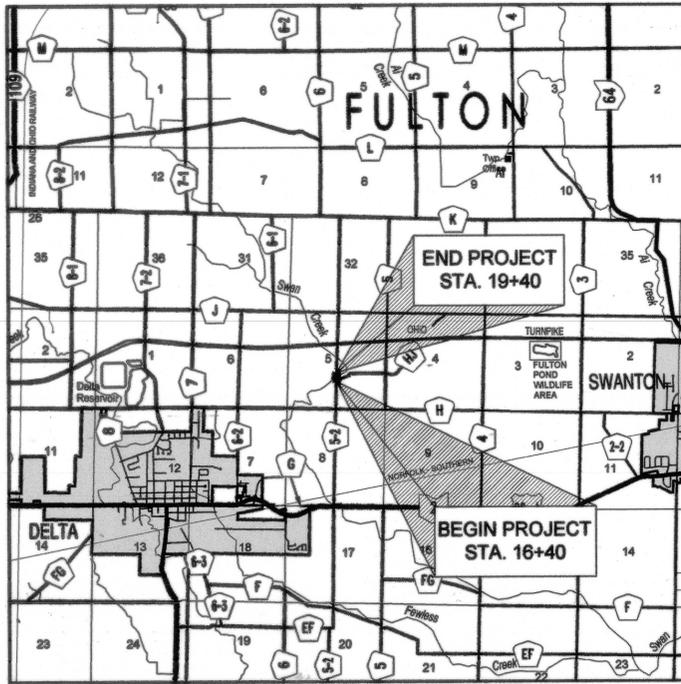
FULTON COUNTY
DEPARTMENT OF HIGHWAYS

BRIDGE 5-2HJ.0 REPLACEMENT

BETWEEN TWP. ROAD HJ & COUNTY ROAD J

FULTON TOWNSHIP, FULTON CO., OHIO

2014



LEGEND

- PORTION TO BE IMPROVED
- STATE AND FEDERAL ROUTES
- OTHER ROADS

DESIGN DESIGNATION

- CURRENT ADT (2013) 559
- DESIGN YEAR ADT (2034) 822
- DESIGN HOURLY VOLUME (2034) 99
- TRUCKS (24 HOUR B & C) 5%
- FUNCTIONAL CLASSIFICATION..... RURAL COLLECTOR

UTILITIES

WINDSTREAM OHIO, INC. PUBLIC UTILITIES DIRECTOR
560 TERNES STREET 9306 COUNTY ROAD 14
ELYRIA, OH 44035 SUITE A
PHONE 1-419-674-1124 WAUSEON, OH 43567
PHONE 1-419-399-7930 PHONE 1-419-337-9263

TOLEDO EDISON
MAIL STOP HLOC-23301832
TOLEDO, OH 43652
PHONE 1-419-249-4139
PHONE 1-800-447-3333

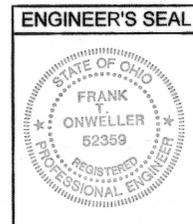
UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

VERTICAL DATUM
ALL VERTICAL CONTROL
IS BASED OFF
NAVD 88 (U.S.G.S.) DATUM
(SEE PLAN AND PROFILE FOR BENCH MARK LOCATIONS)

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STANDARD CONSTRUCTION DRAWINGS		SUPPLEMENTAL SPECIFICATIONS
DRAWING	DATE	DESC.
BP-3.1 ASPHALT PAVING	4-20-12	SS 800
		SS 811
DM-4.4 CONSTRUCTION EROSION CONTROL	7-20-12	SS 832
PIS GR-1.1 GUARDRAIL DETAILS	1-18-13	
PIS GR-2.1 GUARDRAIL TYPE 5 AND 5A	1-18-13	
PIS GR-3.6 BRIDGE TERMINAL ASSEMBLY, TYPE TST	1-18-13	
PIS GR-4.1 TYPE A ANCHOR ASSEMBLY	1-18-13	
PIS GR-4.2 TYPE T ANCHOR ASSEMBLY	1-18-13	
DS-1-92 DRIP STRIP FOR STRUCTURES	7-18-03	
PSBD-2-07 PRESTRESSED CONCRETE BOX BEAM	1-21-11	
TST-1-99 TWIN STEEL TUBE BRIDGE RAILING	4-18-08	



PROJECT DESCRIPTION

A PARTIALLY O.P.W.C. FUNDED PROJECT CONSISTING OF REPLACING AN EXISTING STEEL BEAM AND CONCRETE SLAB BRIDGE OVER SWAN CREEK WITH A PRESTRESSED CONCRETE BOX BEAM STRUCTURE ON GEOSYNTHETICALLY REINFORCED SOIL ABUTMENTS. THE ROADWAY IMPROVEMENT INVOLVES MINOR VERTICAL PROFILE ADJUSTMENT AND WIDENING THE PAVEMENT FROM 18' TO 22' AT BOTH APPROACHES TO THE BRIDGE.

2013 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.

PLAN & PROFILE SCALES:

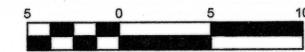


HORIZONTAL SCALE IN FEET



VERTICAL SCALE IN FEET

CROSS SECTION SCALES:



HORIZONTAL SCALE IN FEET



VERTICAL SCALE IN FEET

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED.

APPROVED Perry Rupp
DATE 6-19-14 PERRY RUPP, FULTON COUNTY COMMISSIONER

APPROVED Bill Rufenacht
DATE 6-19-14 BILL RUFENACHT, FULTON COUNTY COMMISSIONER

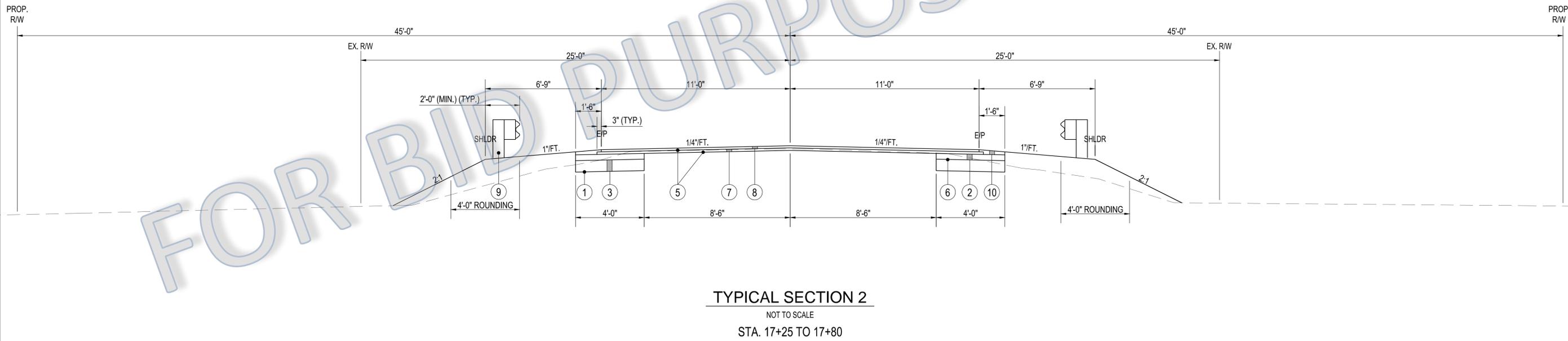
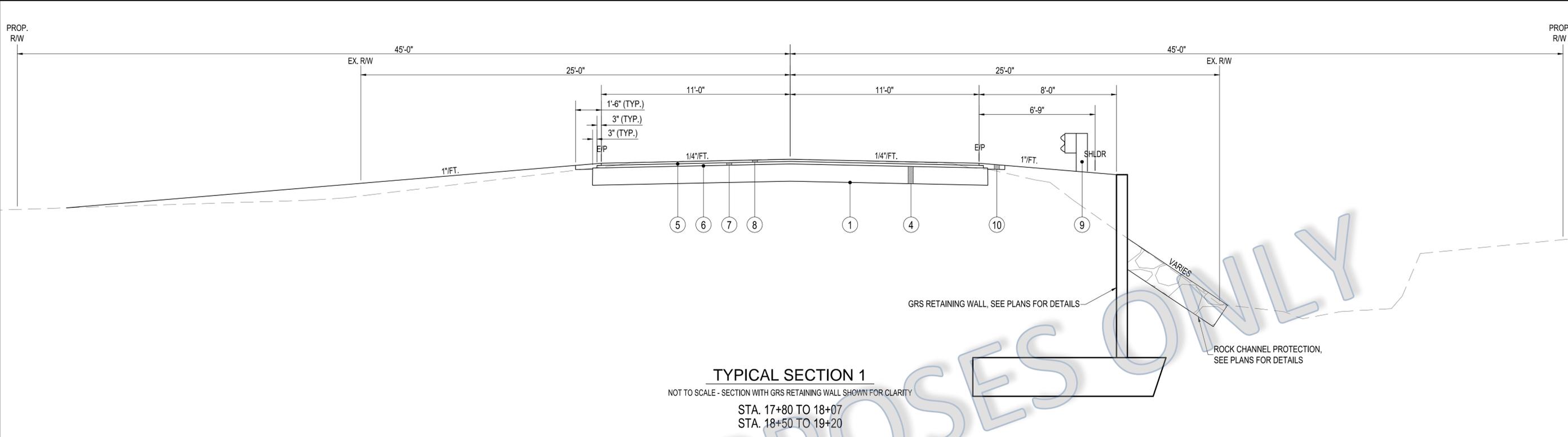
APPROVED Paul Barnaby
DATE 6/19/2014 PAUL BARNABY, FULTON COUNTY COMMISSIONER

APPROVED Frank T. Onweller
DATE 6/19/14 FRANK T. ONWELLER, P.E., P.S., FULTON COUNTY ENGINEER

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Drawn By: BCR Date: 5/22/2014
Checked By: FTO
N/A
Revised: N/A
TITLE SHEET
FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK
FULTON COUNTY ENGINEERING DEPT.
FRANK T. ONWELLER, P.E., P.S. - COUNTY ENGINEER
ROD CREAGER, P.E., P.S. - CHIEF DEPUTY ENGINEER
9120 Co Rd 14, WAUSEON, OHIO, 43567
PHONE (419) 395-3816 FAX (419) 335-1091
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LEGEND

- ① ITEM 204 SUBGRADE COMPACTION
- ② ITEM 301 4" ASPHALT CONCRETE BASE
- ③ ITEM 304 6" AGGREGATE BASE
- ④ ITEM 304 12" AGGREGATE BASE
- ⑤ ITEM 407 TACK COAT (0.10 GAL./S.Y.)
- ⑥ ITEM 408 BITUMINOUS PRIME COAT (0.40 GAL./S.Y.)
- ⑦ ITEM 448 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22
- ⑧ ITEM 448 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22
- ⑨ ITEM 606 GUARDRAIL, TYPE 5
- ⑩ ITEM 617 RECONDITIONING OF SHOULDERS (1.5' x 4"), APPROVED MATERIAL 411

Drawn By: BCR	Date: 5/22/2014	Checked By: FTO	TYPICAL SECTIONS FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK
FULTON COUNTY ENGINEERING DEPT. FRANK T. ONWELLER, P.E., P.S. - COUNTY ENGINEER ROD CREAHER, P.E., P.S. - CHIEF DEPUTY ENGINEER 9120 Co Rd 14, WALUSEON, OHIO, 43087 PHONE (419) 335-3816 FAX (419) 335-1091			2 15

GENERAL NOTES

CONSTRUCTION NOISE ASSESSMENT

IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 10:00 P.M. AND 6:00 A.M. IN ADDITION, ANY POWER OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED 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.

UNDERGROUND UTILITIES

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

UTILITIES

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

POWER	TELEPHONE
TOLEDO EDISON	WINDSTREAM OHIO, INC.
MAIL STOP HLOC-2330	560 TERNES ST.
TOLEDO, OH 43528	ELYRIA, OH 44035
PH. 419-249-4139	PH. 419-674-1124
PH. 800-447-3333	

HIGHWAY EASEMENTS

THE FULTON COUNTY COMMISSIONERS HAVE ACQUIRED ALL THE ADDITIONAL RIGHT OF WAY NECESSARY FOR THIS PROJECT. THE CONTRACTOR SHALL NOT PERFORM WORK, NOR STORE EQUIPMENT AND/OR MATERIALS OUTSIDE THE ESTABLISHED HIGHWAY RIGHT OF WAY. IN THE EVENT THAT THE CONTRACTOR NEEDS TO OCCUPY LAND OUTSIDE THE ESTABLISHED HIGHWAY RIGHT OF WAY IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AN AGREEMENT WITH THE LANDOWNER.

BENCH MARK DATUM

ALL ELEVATIONS ARE REFERRED TO A DOUBLE HEADED NAIL WITH TAG IN WEST FACE OF POWERPOLE, STA. 17+18.39, 53.8' RT., ELEVATION 718.48, NAVD 88 (U.S.G.S. DATUM). ADDITIONAL SITE BENCH MARKS HAVE BEEN ESTABLISHED AND CAN BE FOUND ON SHEET 6 OF 15. ANY ADDITIONAL BENCH MARKS THAT MAY BE NEEDED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THIS SHALL BE PAID FOR UNDER ITEM 623 CONSTRUCTION LAYOUT AND STAKING.

CONTROL POINTS

BEFORE ACTUAL CONSTRUCTION OPERATIONS BEGIN, THE ENGINEER WILL REFERENCE ALL EXISTING MONUMENTS, RAILROAD SPIKES, HARROW TEETH, ETC. IN THE SURVEY LINE. UPON COMPLETION OF THE PROPOSED PAVEMENT, THE ENGINEER SHALL RESET ALL CONTROL POINTS IN THE NEW PAVEMENT.

RELOCATION OR REMOVAL OF EXISTING TRAFFIC CONTROL DEVICES

ANY EXISTING TRAFFIC CONTROL SIGNS OR DELINEATORS WHICH CONFLICT WITH THE PROPOSED CONSTRUCTION OPERATIONS WILL BE RELOCATED OR REMOVED PRIOR TO CONSTRUCTION BY THE FULTON COUNTY HIGHWAY DEPARTMENT. TO ALLOW FOR PROPER SCHEDULING OF THE WORK, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO GIVE FULTON COUNTY AT LEAST A THREE WORKING DAY NOTICE OF THEIR INTENT TO BEGIN WORK IN THOSE AREAS WHERE TRAFFIC CONTROL DEVICES MUST BE RELOCATED. FAILURE TO PROVIDE THIS NOTICE WILL RESULT IN THE REMOVAL AND RE-ERECTION OF THE TRAFFIC CONTROL SIGNS BY THE CONTRACTOR AT HIS EXPENSE TO THE SATISFACTION OF THE ENGINEER.

CROSSING EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE OF PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATION ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE CONDUIT ITEM.

FARM DRAINS AND HOUSE CONNECTIONS

EXISTING FARM DRAINS, ROOF DRAINS, CLEAN WATER DRAINS, FOOTER DRAINS, OR YARD DRAINS DISTURBED BY THE PROPOSED WORK SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS BY CONNECTION TO A STORM SEWER, CATCH BASIN, OR OUTLET INTO A DITCH AS DIRECTED BY THE ENGINEER. THE LOCATION, TYPE, SIZE AND GRADE OF THE REQUIRED REPLACEMENT WILL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION. PAYMENT FOR ANY NECESSARY BENDS, TEES, WYES OR OTHER FITTINGS SHALL BE INCLUDED IN THE RESPECTIVE CONDUIT ITEM.

PIPE COLLARS

WHERE CONNECTIONS ARE MADE BETWEEN RIGID AND FLEXIBLE PIPE SECTIONS OR BETWEEN PIPE SECTIONS OF DIFFERENT MATERIAL OR TYPE OF END FABRICATION, WHETHER REQUIRED BY THE PLANS OR ENCOUNTERED IN CONNECTION TO EXISTING FACILITIES, THE JOINT SHALL BE SEALED BY MEANS OF A CONCRETE COLLAR, FERNCO FITTING OR APPROVED EQUAL. PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE RESPECTIVE CONDUIT ITEM.

PIPE FITTINGS

THE UNIT PRICE BID FOR THE CONDUIT ITEMS SHALL INCLUDE ALL PROPOSED BENDS, TEES, WYES, AND OTHER FITTINGS NECESSARY TO CONSTRUCT THE CONDUIT. ALL PIPE FITTINGS SHALL BE FACTORY MADE.

DRAINAGE WITHIN PAVEMENT LIMITS

ALL ITEM 202 PIPE REMOVAL TRENCHES AND ALL PROPOSED CROSSOVER TRENCHES SHALL BE BACKFILLED TO FIVE FEET OUTSIDE THE EDGE OF PROPOSED PAVEMENT BASE WITH NO. 8 GRANULAR BEDDING AND BACKFILL MATERIAL AS PER TYPE B CONDUIT TRENCH DETAIL SHOWN ON SHEET 4 OF 15. THOSE PORTIONS OF THE TRENCHES THAT EXTEND OUTSIDE THE EDGE OF PROPOSED PAVEMENT BASE TO THE RIGHT OF WAY LINE, SHALL CONFORM WITH THE TYPE C CONDUIT TRENCH DETAIL AS SHOWN ON SHEET 4 OF 15.

ITEM SS811 CONDUIT

THE JOINTS OF ALL PIPE PROVIDED FOR TYPE B CONDUIT SHALL BE EQUIPPED WITH GASKETS. ALL CONNECTIONS OF EXISTING TILE TO PROPOSED TYPE B CONDUIT SHALL BE OF A PREMIUM, WATERTIGHT JOINT.

ANY EXISTING TILE TO BE CUT OFF AND DESIGNATED AS "ABANDONED TILE" BY THE ENGINEER, SHALL BE SEALED OFF AND APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL MAKE NOTE OF LOCATION, SIZE AND CONDITION OF ANY EXISTING TILE THAT MAY COME INTO CONTACT WITH THE PROPOSED CONDUIT TRENCH.

ANY TILE THAT IS CUT MUST BE REPAIRED AND REPORTED TO THE ENGINEER. THE REPAIR OF THE TILE SHALL BE APPROVED BY THE ENGINEER BEFORE BACKFILLING.

TYPE B CONDUIT SHALL MEET ANY OF THE FOLLOWING O.D.O.T. ITEMS: 706.02 (CLASS IV), 707.45.
TYPE C CONDUIT SHALL MEET ANY OF THE FOLLOWING O.D.O.T. ITEMS: 706.02 (CLASS IV), 707.33, 707.42, 707.45.
TYPE D CONDUIT SHALL MEET ANY OF THE FOLLOWING O.D.O.T. ITEMS: 707.01.
TYPE E CONDUIT SHALL MEET ANY OF THE FOLLOWING O.D.O.T. ITEMS: 707.33, 707.42, 707.45.

ALL EXPOSED TILE OUTLETS 12" AND UNDER SHALL HAVE ANIMAL GUARDS PLACED AT THE OUTLET AND BE INCLUDED IN THE PAY ITEM OF THE RESPECTIVE CONDUIT. THIS SHALL INCLUDE ALL OUTLETS INTO BASINS WHERE THE OUTLET PIPE IS GREATER THAN 12". DRIVE PIPES ARE EXCLUDED FROM THIS.

ALL PROPOSED CONNECTIONS TO EXISTING STRUCTURES SHALL BE A WATERTIGHT PREMIUM JOINT OR A CONCRETE COLLAR.

SLAG SHALL NOT BE PERMITTED FOR TYPE A OR TYPE B CONDUIT BEDDING/BACKFILL OR ANY STRUCTURES UNDER THE PAVEMENT.

WHERE A CONDUIT CROSSES UNDER A DRIVE, GRANULAR BACKFILL MATERIAL SHALL BE USED TO THE BASE OF THE DRIVE. THE COST OF THE GRANULAR BACKFILL SHALL BE INCLUDED IN THE UNIT PRICE BID ITEM FOR THE RESPECTIVE CONDUIT.

ITEM SS811 DRAINAGE STRUCTURES

ALL CATCH BASINS SHALL HAVE A TWELVE (12)-INCH SUMP, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

ITEM 201 CLEARING AND GRUBBING

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING ALL DEBRIS TO THE ROAD RIGHT OF WAY LINE. THIS SHALL INCLUDE ALL TREES AND STUMPS AS NECESSARY TO COMPLETE THE PROJECT. THE ENGINEER SHALL BE NOTIFIED PRIOR TO THE REMOVAL OF ANY TREE OR CROP.

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 201 CLEARING AND GRUBBING.

ITEM 203 EXCAVATION

ALL EXISTING PAVEMENT (EXCEPT PAVEMENT REMOVAL FOR BUTT JOINTS) AND BASE REMOVAL SHALL BE INCLUDED IN THE QUANTITY AND PAY ITEM 203, EXCAVATION.

EXCAVATION FOR PAVEMENT WIDENING

EXCAVATION FOR PAVEMENT WIDENING SHALL BE CUT TO THE SPECIFIED WIDTH AND DEPTH AS SHOWN. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED WITH BARRICADES AT ALL TIMES. PLACEMENT OF THE PROPOSED MATERIAL SHALL FOLLOW CLOSE BEHIND EXCAVATION OPERATIONS SO THAT THE LENGTH OF OPEN TRENCH IS KEPT TO A MINIMUM. ANY TRENCHING ACROSS DRIVES SHALL BE IMMEDIATELY REPAIRED SO AS TO PERMIT ACCESS. THE TRENCH MAY BE LEFT OPEN OVERNIGHT BUT MUST BE ADEQUATELY MAINTAINED AND PROTECTED USING DRUMS WITH YELLOW LIGHTS ATTACHED. PROPER DRAINAGE OF THE TRENCH IS THE CONTRACTOR'S RESPONSIBILITY.

ITEM 203 ROADBED/CHANNEL EMBANKMENTS

PORTIONS OF THE EXISTING CHANNEL OUTSIDE OF THE ROADBED, SHALL BE FILLED AND SLOPED TO GRADE, AS CALLED FOR ON THE PLANS. THE CONTRACTOR SHALL USE SUITABLE MATERIALS, TO THE EXTENT AVAILABLE, FOR CHANNEL EMBANKMENTS. WHEN BORROW IS SPECIFIED IN THE PLANS AND TO BE PROVIDED BY THE CONTRACTOR, ALL MATERIAL SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

NO PROVISIONS OF THE SPECIFICATIONS SHALL BE WAIVED FOR EMBANKMENT WHICH SUPPORT ANY PORTION OF THE NEW ROADBED OR STRUCTURAL MEMBERS.

PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EMBANKMENT.

ITEM 204 PROOF ROLLING OF THE WIDENING TRENCH

THE CONTRACTOR SHALL PROOF ROLL THE SUBGRADE AND ANY OTHER AREAS AS DIRECTED BY THE ENGINEER. PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 204, SUBGRADE COMPACTION.

ITEM 304 AGGREGATE BASE

MATERIALS FURNISHED FOR THIS ITEM SHALL EXCLUDE ALL SLAG, LIMESTONE ONLY.

ITEM 617 ~ RECONDITIONING SHOULDERS

APPROVED MATERIAL FOR THIS ITEM SHALL BE IN ACCORDANCE WITH O.D.O.T. ITEM 411, LIMESTONE ONLY.

ITEM 407 TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT, AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.10 GALLONS PER SQUARE YARD FOR THE ESTIMATING PURPOSES ONLY.

ITEM 408 PRIME COAT

THE RATE OF APPLICATION OF THE 408 PRIME COAT SHALL BE SUBJECT TO ADJUSTMENT, AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.40 GALLONS PER SQUARE YARD FOR ESTIMATING PURPOSES ONLY.

ROUNDING

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

LOCAL DRIVE ACCESS

THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL DRIVES AT ALL TIMES UNLESS AN AGREEMENT IS MADE WITH ENGINEER OR LANDOWNER.

TEMPARORY SEDIMENT AND EROSION CONTROL

THE CONTRACTOR SHALL TAKE ANY AND ALL APPROPRIATE MEASURES TO LIMIT SOIL EROSION PRIOR TO ANY EXCAVATION, GRADING, OR FILLING OPERATIONS AND INSTALLATION OF THE PROPOSED STRUCTURES AUTHORIZED HEREIN.

THE CONTRACTOR SHALL PROVIDE AND INSTALL EROSION CONTROL DEVICES AS PER ODOT STD. DWG. DM-4.4, ODOT SUPPLEMENTAL SPECIFICATIONS 832, AND AS DIRECTED BY THE ENGINEER THROUGHOUT THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL PLACE THE INLET PROTECTION IMMEDIATELY AFTER DISTURBING THE SURROUNDING EARTH. COST SHALL INCLUDE PLACING, MAINTAINING AND REMOVING OF EROSION CONTROL DEVICES.

ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY IS PROVIDED FOR TEMPORARY SEDIMENT AND EROSION CONTROL IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATION 832:

ITEM 832 - EROSION CONTROL 2500 EACH

THE ENGINEER SHALL CHECK AND NON-PERFORM OR ADJUST LOCATION AND QUANTITIES FOR THIS ITEM WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

EXISTING STORM STRUCTURES

THE CONTRACTOR SHALL PROTECT EXISTING AND PROPOSED INLETS AND STORM SEWERS FROM SOIL AND DEBRIS DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY AND ALL STORM SEWERS OR CULVERTS THAT BECOME FILLED OR PARTIALLY FILLED WITH SOLIDS DUE TO THIS CONTRACT WORK.

ITEM 614 MAINTAINING TRAFFIC

METHODS OF MAINTAINING TRAFFIC SHALL BE IN ACCORDANCE WITH O.D.O.T. ITEM 614 AND THE LATEST EDITION OF THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (OMUTCD).

SHOULD ADDITIONAL SIGNS AND/OR BARRICADES BE REQUIRED TO PROVIDE CLARITY TO THE TRAFFIC CONTROL SCHEMES SET FORTH IN THE PLANS OR THE O.M.U.T.C.D. OR SHOULD ANY SIGNS AND/OR BARRICADES REQUIRE RELOCATION TO PROVIDE THIS CLARITY AS DIRECTED BY THE ENGINEER, THIS WORK SHALL BE INCLUDED IN ITEM 614, MAINTAINING TRAFFIC.

THE CONTRACTOR SHALL NOTIFY THE FULTON COUNTY ENGINEER IN WRITING SEVEN (7) WORKING DAYS PRIOR TO THE CLOSING OF THE ROAD UNDER CONSTRUCTION.

THE CONTRACTOR SHALL FOLLOW THE TRAFFIC MAINTENANCE DIAGRAM AS DETAILED ON THE SPECIFIED SHEET BEING TRAFFIC MAINTENANCE (SHEET 5 OF 15).

THE CONTRACTOR SHALL PLACE CONSTRUCTION DRUMS ALONG THE EDGE(S) OF PAVEMENT THROUGHOUT THE DURATION OF CONSTRUCTION IN PERTINENT AREAS.

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING AND KEEPING INFORMED, THE FULTON COUNTY SHERIFF AND ALL AFFECTED SCHOOL DISTRICTS DURING THE ENTIRE PROJECT.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND/OR CONSTRUCTING ACCESS FOR RESIDENTS AND EMERGENCY VEHICLES TO ALL DRIVES THROUGHOUT THE DURATION OF THE PROJECT.

PAYMENT FOR PROVIDING THE ABOVE METHOD OF TRAFFIC CONTROL SHALL BE INCLUDED IN ITEM 614, MAINTAINING TRAFFIC.

POSTAL SERVICE

THE CONTRACTOR SHALL ARRANGE WITH THE POSTAL SERVICE TO RELOCATE ANY MAILBOXES WITHIN THE RIGHT OF WAY TO A SAFE LOCATION DURING CONSTRUCTION WHILE MAINTAINING ACCESS FOR DELIVERY AND COLLECTION OF MAIL. ANY DISTURBED MAILBOXES WILL BE RESET UPON COMPLETION OF WORK. PAYMENT FOR THE ABOVE COMPLETED WORK SHALL BE INCLUDED IN THE LUMP SUM ITEM 614, MAINTAINING TRAFFIC.

DAILY ROAD MAINTENANCE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING THE ROADWAY FREE OF DEBRIS FROM CONSTRUCTION ACTIVITY ON A DAY-TO-DAY BASIS OR AT THE REQUEST OF THE ENGINEER. MEANS AND METHODS MAY BE AT THE CONTRACTOR'S DISCRETION AND SHALL MEET THE APPROVAL OF THE ENGINEER. PAYMENT FOR THE ABOVE COMPLETED WORK SHALL BE INCLUDED IN THE LUMP SUM ITEM 614, MAINTAINING TRAFFIC.

SEEDING AND MULCHING

THE SEEDING AND MULCHING IS TO BE PERFORMED BY FULTON COUNTY. THE CONTRACTOR SHALL KEEP THE AMOUNT OF DISTURBED SOIL TO A MINIMUM. IT IS THE INTENT OF FULTON COUNTY TO PERFORM THE SEEDING AND MULCHING ONCE AN AREA HAS REACHED FINAL GRADE. THIS WILL BE COORDINATED SO THAT THE COUNTY DOES NOT DISTURB THE WORK OF THE CONTRACTOR.

ITEM 659 SEEDING AND MULCHING SITE PREPARATION

ITEM 659.10 AND 659.11 SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

UNDER ITEM 659.10, SECTION B IS EXCLUDED. THE CONTRACTOR SHALL BE RESPONSIBLE TO RETURN THE LANDOWNERS' FRONTAGE TO ITS ORIGINAL CONDITION OR BETTER.

UNDER ITEM 659.11, THE CONTRACTOR WILL BE RESPONSIBLE TO FURNISH 4" OF TOP SOIL ON ALL FRONTAGE THAT IS MAINTAINED AS LAWN. THE REMAINDER OF THE PROJECT SHALL HAVE TOPSOIL PLACED, ENOUGH SO THAT IT IS SUITABLE FOR SEEDING. SUITABLE MATERIAL FROM THE PROJECT CAN BE USED FOR TOPSOIL, OTHERWISE THE CONTRACTOR WILL BE RESPONSIBLE TO HAUL IN SUITABLE MATERIAL PRIOR TO SEEDING.

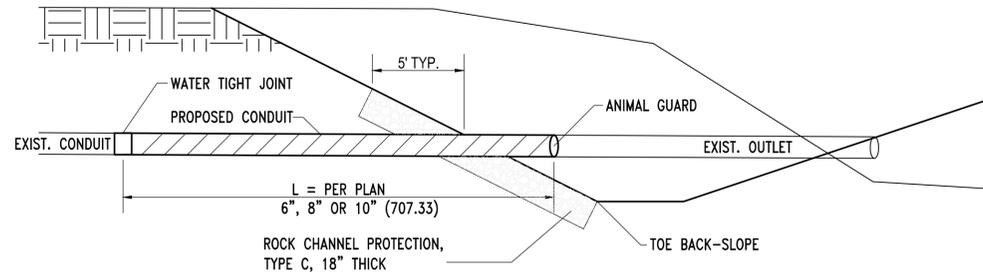
PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED IN ITEM 659, SEEDING AND MULCHING SITE PREPARATION.

GUARDRAIL REMOVED FOR STORAGE

ALL EXISTING GUARDRAIL WILL BE REMOVED PRIOR TO CONSTRUCTION BY FULTON COUNTY. TO ALLOW FOR PROPER SCHEDULING OF THE WORK, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO GIVE FULTON COUNTY AT LEAST A THREE WORKING DAY NOTICE OF THEIR INTENT TO BEGIN WORK IN THOSE AREAS WHERE EXISTING GUARDRAIL MUST BE REMOVED. FAILURE TO PROVIDE THIS NOTICE WILL RESULT IN THE REMOVAL AND STORAGE OF THE GUARDRAIL BY THE CONTRACTOR AT HIS EXPENSE TO THE SATISFACTION OF THE ENGINEER.

GENERAL NOTES
FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK

FULTON COUNTY ENGINEERING DEPT.
FRANK J. DWYER, P.E., P.S. - COUNTY ENGINEER
ROD CREAHER, P.E., P.S. - CHIEF DEPUTY ENGINEER
9120 Co Rd 14, WAUSEON, OHIO, 43087
PHONE (419)335-3816 FAX (419)335-1091

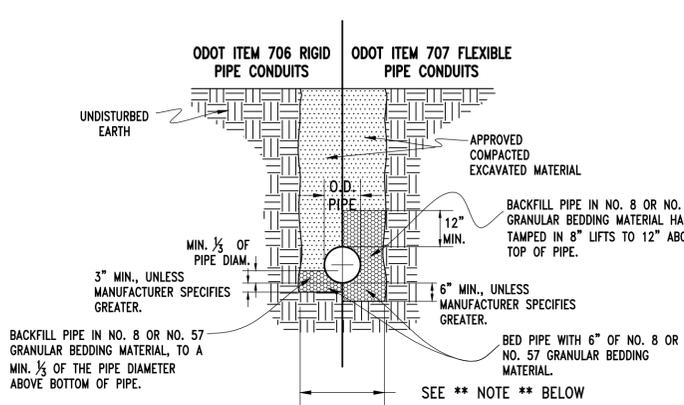


PROPOSED TYPICAL DRAINAGE OUTLET INTO PROPOSED DITCH
NOT TO SCALE

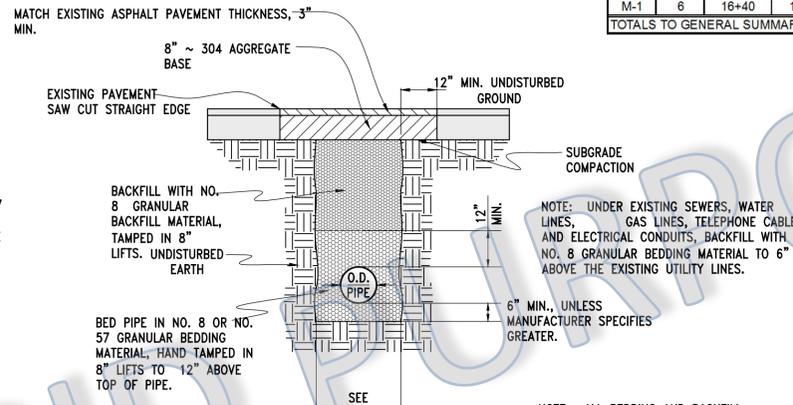
EARTHWORK TABLE "E"				
SHEET NO.	STATION		EXCAVATION	EMBANKMENT
	FROM	TO		
7	16+25	18+00	25	20
8	18+25	19+50	314	48
TOTALS TO GENERAL SUMMARY			339	68

PAVEMENT MARKINGS TABLE "M"						
REFERENCE NUMBER	SHEET NO.	STATION		LENGTH (L)	CENTER LINE, TYPE 1 -L/5280	EDGE LINE, TYPE 1
		FROM	TO			
M-1	6	16+40	19+40	300.00	0.06	0.11
TOTALS TO GENERAL SUMMARY					0.06	0.11

GENERAL SUMMARY						
SHEET NO.	ITEM	GRAND TOTAL	UNIT	DESCRIPTION	ORIGIN	
6	201	1	LUMP	ROADWAY CLEARING AND GRUBBING	PLANS	
4	202	153	SQ YD	PAVEMENT REMOVED FOR BUTT JOINTS	TABLE P	
4	202	147	SQ YD	PAVEMENT REMOVED, VARIABLE DEPTH	TABLE P	
4	202	58	FT	PIPE REMOVED UNDER 24"	TABLE D	
4	203	339	CU YD	EXCAVATION	TABLE E	
4	203	68	CU YD	EMBANKMENT	TABLE E	
4	204	297	SQ YD	SUBGRADE COMPACTION	TABLE P	
4	606	231.25	FT	GUARDRAIL, TYPE 5	TABLE G	
4	606	25	FT	GUARDRAIL, TYPE 5, 15' RADIUS	TABLE G	
4	606	1	EACH	FLARED END SECTION	TABLE G	
4	606	3	EACH	ANCHOR ASSEMBLY, TYPE T	TABLE G	
4	606	3	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE TST	TABLE G	
4	606	1	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE TST, AS PER PLAN	TABLE G	
4	606	12.5	FT	THREE BEAM GUARDRAIL, 5' RADIUS	TABLE G	
EROSION CONTROL						
4	601	118	TON	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER, 18" THICK	TABLE D	
3	832	2500	EACH	EROSION CONTROL	PLANS	
DRAINAGE						
4	811	46	FT	6" CONDUIT, TYPE C	TABLE D	
4	811	43	FT	8" CONDUIT, TYPE B	TABLE D	
4	811	148	FT	8" CONDUIT, TYPE C	TABLE D	
4	811	1	EACH	CATCH BASIN, NO. 2-2B	TABLE D	
PAVEMENT						
4	301	6	CU YD	ASPHALT CONCRETE BASE (4")	TABLE P	
4	304	8	CU YD	6" AGGREGATE BASE	TABLE P	
4	304	84	CU YD	12" AGGREGATE BASE	TABLE P	
4	407	96	GALLON	TACK COAT	TABLE P	
4	408	128	GALLON	PRIME COAT	TABLE P	
4	448	31	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	TABLE P	
4	448	34	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	TABLE P	
4	617	6	CU YD	RECONDITIONING OF SHOULDERS	TABLE P	
TRAFFIC CONTROL						
4	642	0.06	MILE	CENTER LINE, TYPE 1	TABLE M	
4	642	0.11	MILE	EDGE LINE, TYPE 1	TABLE M	
FOR STRUCTURE GENERAL SUMMARY, SEE SHEET 9						
INCIDENTALS						
	103	1	LUMP	PREMIUM FOR CONTRACT PERFORMANCE BOND AND MAINTENANCE GUARANTEE BOND		
	614	1	LUMP	MAINTAINING TRAFFIC		
	623	1	LUMP	CONSTRUCTION LAYOUT AND STAKING		

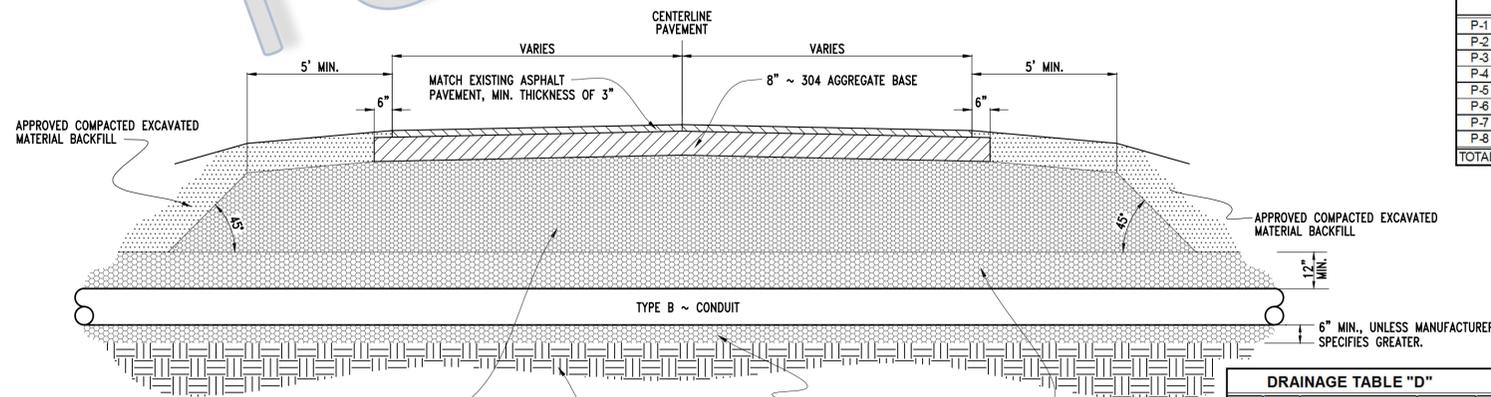


TYPE C CONDUIT ~ TRENCH DETAIL
(OUTSIDE 5 FT. OF EDGE OF PAVEMENT)
* NOT TO SCALE



TYPE B CONDUIT ~ TRENCH DETAIL
(UNDER AND/OR WITHIN 5 FT. OF EDGE OF PAVEMENT)
* NOT TO SCALE

PAVEMENT TABLE "P"																				
REFERENCE NO.	SHEET NO.	STATION		LENGTH	EXISTING PAVEMENT WIDTH	PROPOSED PAVEMENT WIDTH	PAVEMENT REMOVAL FOR BUTT JOINTS	PAVEMENT REMOVAL VARIABLE DEPTH	WEARING COURSE REMOVED	SUBGRADE COMPACTION	ASPHALT CONCRETE BASE (4")	304 AGGREGATE BASE (6")	304 AGGREGATE BASE (12")	TACK COAT (0.1 GAL./S.Y.)	BITUMINOUS PRIME COAT (0.4 GAL./S.Y.)	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22, (1.75")	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, (1.5")	RECONDITIONING OF SHOULDERS		
		FROM	TO																	
P-1	6	16+40.00	16+80.00	40.0	VARIES	VARIES	110.0							1.0	11.0			0.2	4.6	
P-2	6	16+80.00	17+13.00	33.0	VARIES	VARIES		119.0							11.9				5.0	
P-3	6	17+13.00	17+25.00	12.0	VARIES	VARIES		27.8							5.6				1.4	
P-4	6	17+25.00	17+80.00	55.0	18.4	22.0				48.9	5.4	8.1		27.2	19.6			6.7	5.6	2.0
P-5	6	17+80.00	18+07.00	27.0	18.4	22.0				69.0			23.0	6.6	27.0			3.3	2.8	1.0
P-6	6	18+07.00	18+50.00	43.0	23.5	32.0			77.0					30.6				10.5	6.4	
P-7	6	18+50.00	19+20.00	70.0	18.4	22.0				178.9				59.6	17.1	70.0		8.5	7.1	2.6
P-8	6	19+20.00	19+40.00	20.0	19.6	19.6	43.0							4.4					1.8	
TOTALS TO GENERAL SUMMARY							153	147	77	297	6	8	84	114	117	31	34	6		

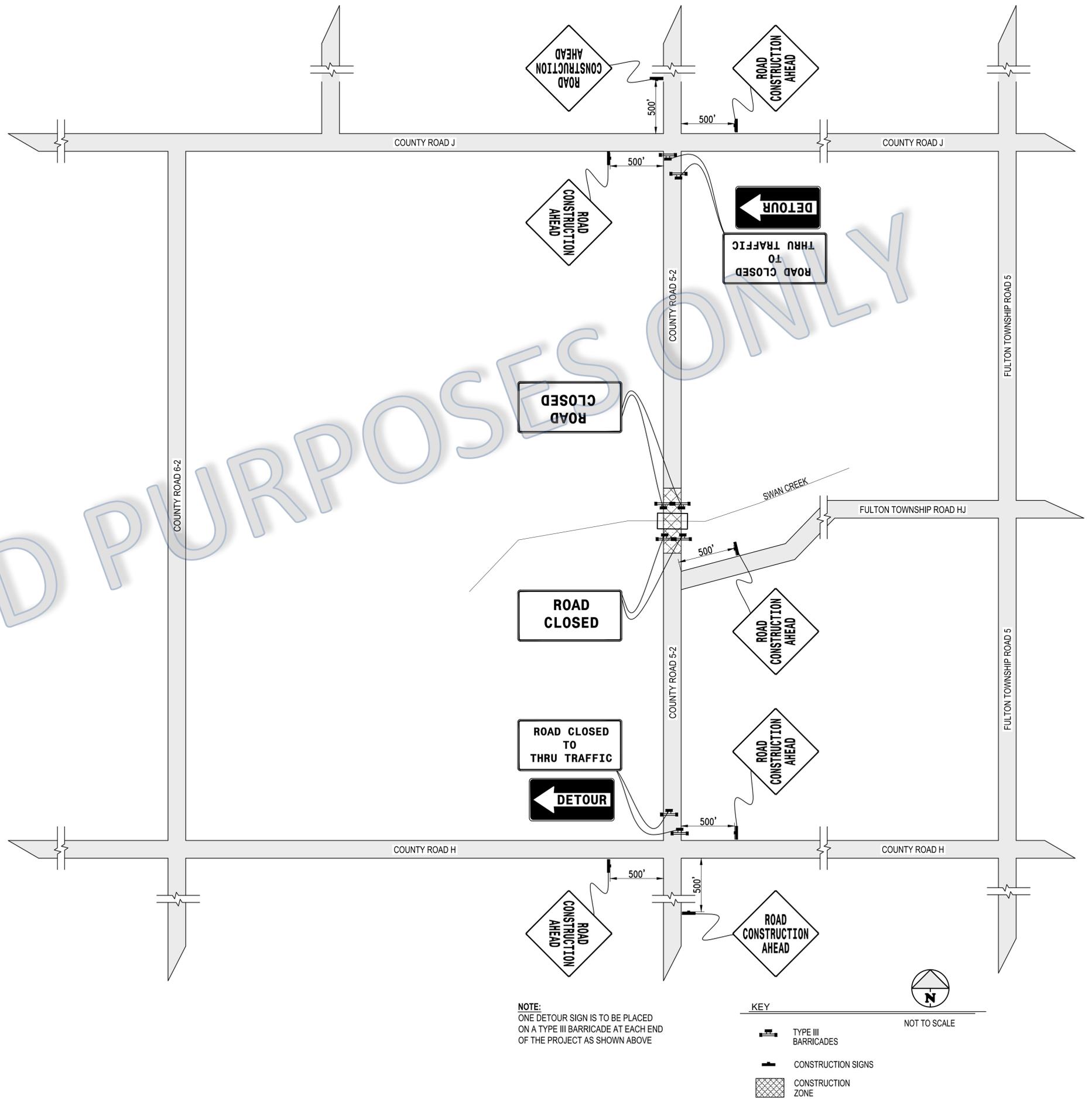


CROSS-SECTION DETAIL ~ OPEN CUT
* NOT TO SCALE

DRAINAGE TABLE "D"									
REFERENCE NUMBER	SHEET NUMBER	STATION		SIDE	PIPE REMOVED UNDER 24"	TYPE "C" ROCK CHANNEL PROTECTION W/ FILTER, 18" THICK	TYPE C		
		FROM	TO				6"	8"	
D-1	6	16+49.73	17+97.75	LT. & RT.	20		191	1	
D-2	6	CHANNEL		BOTH	118				
D-3	6	18+29.20	18+73.00	LT.	38	46			
TOTALS TO GENERAL SUMMARY					58	118	46	191	1

GUARDRAIL TABLE "G"																	
REFERENCE NUMBER	SHEET NO.	STATION		OUT TO FACE	SIDE	RAILING (TWIN STEEL TUBE)	517		606								
		FROM	TO				GUARDRAIL, TYPE 5	GUARDRAIL, TYPE 5, 15' RADIUS	FLARED END SECTION	ANCHOR ASSEMBLY, TYPE T	BRIDGE TERMINAL ASSEMBLY, TYPE TST	BRIDGE TERMINAL ASSEMBLY, TYPE TST, AS PER PLAN	THREE BEAM GUARDRAIL, 5' RADIUS				
G-1	6	17+10.13	17+97.1	16.0	LT.		75.00										
G-2	6	17+08.77	18+17.18	16.0	RT.		81.25	25									
G-3	6	17+97.37	18+39.54	16.0	LT.	42.17											
G-4	6	18+17.45	18+59.62	16.0	RT.	42.17											
G-5	6	18+39.27	18+57.03	16.0	LT.		18.75			1							12.5
G-6	6	18+59.35	19+28.24	16.0	RT.		56.25										
TOTALS TO GENERAL SUMMARY							84.34	231.25	25	1	3	3	1	12.5			

NOTE: ALL GUARDRAIL POSTS SHALL BE STEEL POSTS.

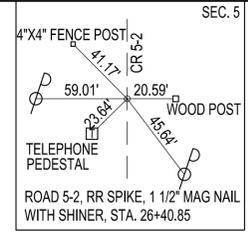
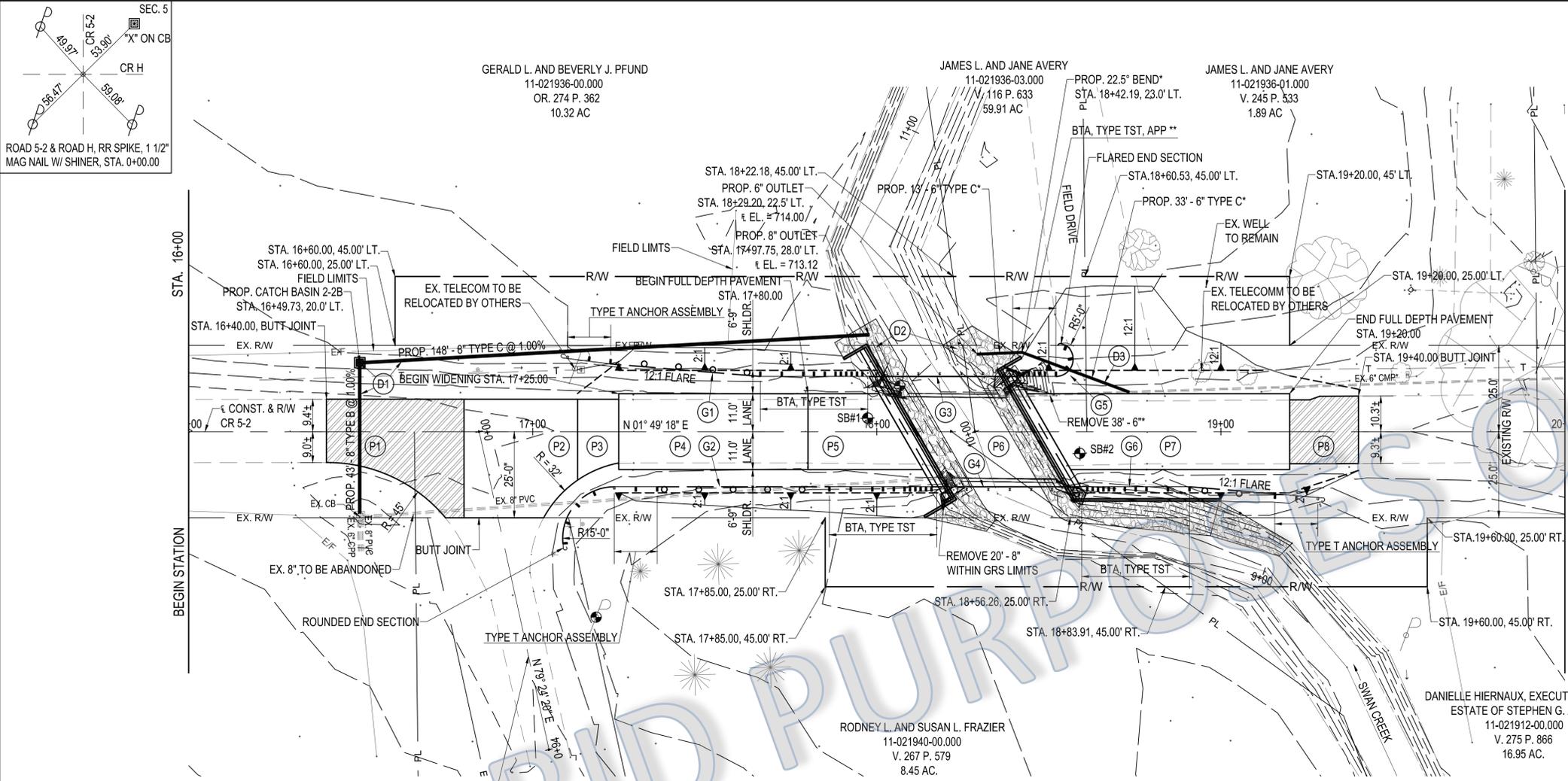


Drawn By: BDJ/BCR
Date: 5/22/2014
Revised: N/A

Checked By: FTO

TRAFFIC MAINTENANCE LAYOUT
FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK

FULTON COUNTY ENGINEERING DEPT.
FRANK T. ONWELLER, P.E., P.S. - COUNTY ENGINEER
ROD CREAGER, P.E., P.S. - CHIEF DEPUTY ENGINEER
9120 Co Rd 14, WAUSEON, OHIO, 43567
PHONE (419) 335-3816 FAX (419) 335-1091



SWAN CREEK HYDRAULIC DATA AT PROPOSED SITE

DRAINAGE AREA, A = 9.22 SQ. MI
 MAIN CHANNEL SLOPE, SL = 7.04 FT./MI.
 DESIGN Q - 10 YEAR = 580 CFS
 100 YEAR = 876 CFS
 25 YEAR W.S.E. = 717.66, VELOCITY = 2.88 FT./SEC.
 100 YEAR W.S.E. = 718.28, VELOCITY = 3.09 FT./SEC.

EXISTING STRUCTURE

TYPE: SINGLE SPAN STEEL BEAM WITH JACK ARCH CONCRETE DECK WIDENED IN 1947 WITH REINFORCED CONCRETE SLAB ON GRAVITY TYPE CONCRETE ABUTMENTS
 SPAN: 28'-3" C/C BEARING
 ROADWAY WIDTH: 23'-6" F/F CONCRETE CURB
 LOADING: H20
 SKEW: 30°
 APPROACH SLABS: NONE
 ALIGNMENT: TANGENT
 CROWN: 0.02 FT./FT.
 STRUCTURAL FILE NUMBER: 2632667
 DATE BUILT: 1920
 DISPOSITION: POOR
 LOAD CAPACITY: 65% LEGAL

PROPOSED STRUCTURE

TYPE: SINGLE SPAN PRECAST PRESTRESSED CONCRETE BOX BEAM SUPERSTRUCTURE WITH ASPHALT CONCRETE WEARING SURFACE ON GRS ABUTMENTS
 SPAN: 39'-9 5/8" C/C BEARING
 ROADWAY WIDTH: 32.0' F/F GUARDRAIL
 SKEW: 30°
 DESIGN LOAD: HL-93
 APPROACH SLAB: NONE
 ALIGNMENT: TANGENT
 DESIGN ADT: 822 (2034)
 CURRENT ADT: 559 (2013)
 CROSS SLOPE: 1/4" / FT.
 STRUCTURE FILE NUMBER: 2632675
 COORDINATES: LATITUDE N 41° 35' 36"
 LONGITUDE W 83° 58' 12"

NOTES AND LEGEND

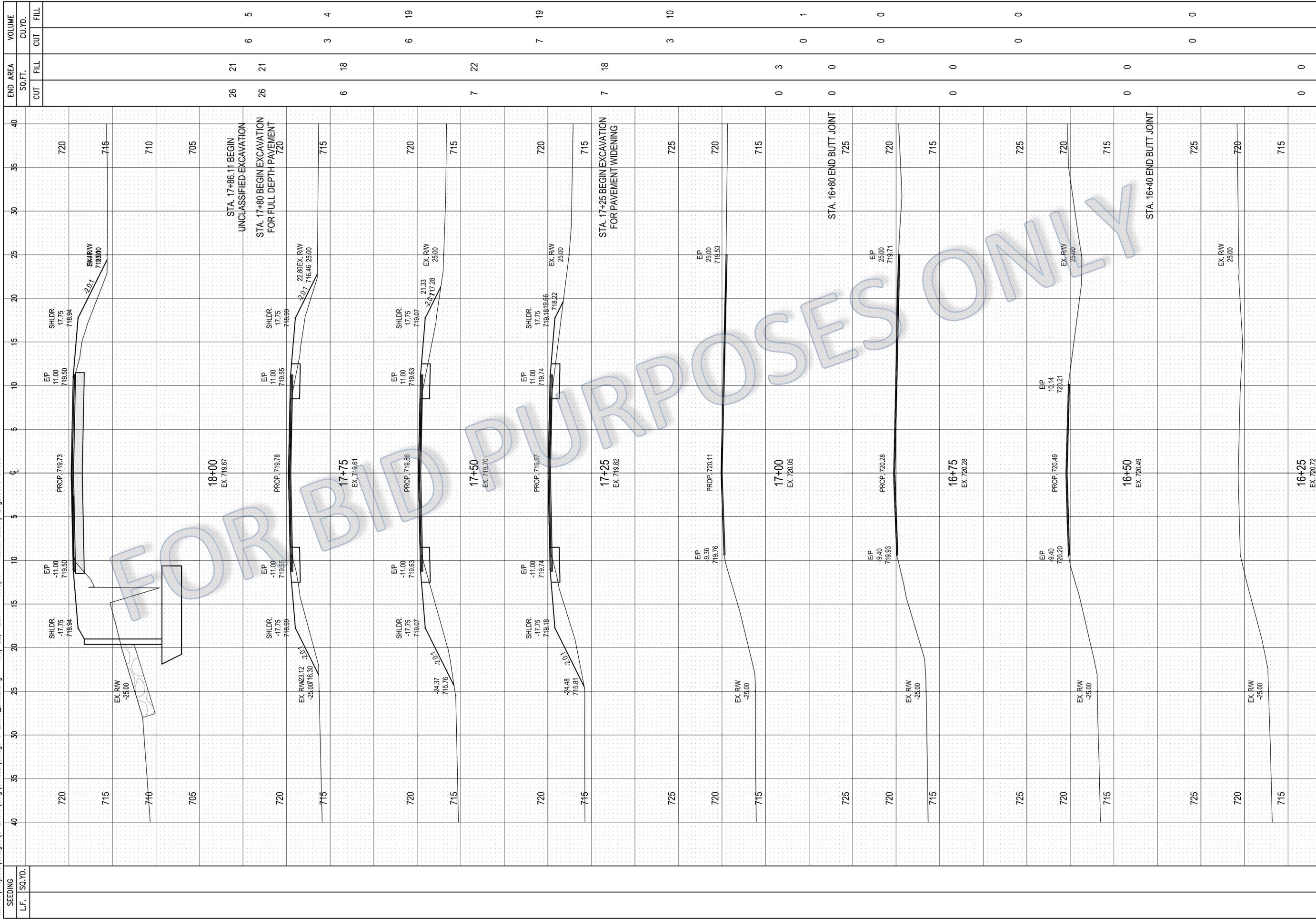
- SOIL BORING LOCATION
- LIMITS OF PAVEMENT BUTT JOINT
- EX. 6" CMP LOCATION AND SLOPE UNKNOWN. CONTRACTOR SHALL DETERMINE LOCATION IN THE FIELD PRIOR TO ANY WORK BEING PERFORMED TO THE SATISFACTION OF THE ENGINEER.
- INSTALL FIRST SEVEN (7) POSTS OF BRIDGE TERMINAL ASSEMBLY, TYPE TST, AS PER PLAN ONLY. THIS SECTION SHALL CONTAIN THE TWO (2) SECTIONS OF NESTED THREE BEAM AND WILL TRANSITION INTO THE THREE BEAM GUARDRAIL 5' RADIUS.

BENCHMARK DESCRIPTIONS

SBM1 - DOUBLE HEADED NAIL WITH TAG IN WEST FACE PPOLE STA. 17+18.39, 53.8' RT. - ELEV. 718.48
 SBM2 - DOUBLE HEADED NAIL WITH TAG IN SOUTHWEST FACE PPOLE, STA. 21+54.18, 21.6' RT. - ELEV. 725.55

PROP. GUTTER LT. / PROP. GUTTER RT.	PROP. DITCH LT. / PROP. DITCH RT.	EXIST. CL ELEVATIONS / PROP. CL ELEVATIONS	16+00	17+00	18+00	19+00	20+00
695	695	721.01					720.54
700	700	720.77					720.21
705	705	720.57					720.04
710	710	720.57					719.88
715	715	720.41					719.78
720	720	720.40					719.78
725	725	720.23					719.79
730	730	720.24					719.88

PLAN AND PROFILE
FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK
FULTON COUNTY ENGINEERING DEPT.
 FRANK T. ONWELLER, P.E., P.S. - COUNTY ENGINEER
 ROD CREAGER, P.E., P.S. - CHIEF DEPUTY ENGINEER
 9120 Co Rd 14, WALUSEON, OHIO, 43087
 PHONE (419) 335-3816 FAX (419) 335-1091



SEEDING L.F.	END AREA		TOTAL	Drawn By: BCR	Checked By: N/A	Date: 5/22/2014
	SQ. FT.	CUT				
720	26	21	0			
715	26	21	0			
710	6	18	0			
705	7	22	0			
720	7	18	0			
715	7	18	0			
725	0	3	0			
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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

DS-1-92 REVISED 7-18-03

PSBD-2-07 REVISED 1-21-11

TST-1-99 REVISED 4-18-08

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2012, AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING

DESIGN LOADING: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ. FT.

DESIGN DATA

CONCRETE CLASS QC 1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

CONCRETE FOR PRESTRESSED BEAMS:

COMPRESSIVE STRENGTH (FINAL) - 7 KSI

COMPRESSIVE STRENGTH (RELEASE) - 5 KSI

PRESTRESSING STRAND:

AREA = 0.167 SQ. IN.

ULTIMATE STRENGTH = 270 KSI

INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

DECK PROTECTION METHOD

MEMBRANE WATERPROOFING
ASPHALT CONCRETE OVERLAY
STEEL DRIP STRIP
SEALING OF CONCRETE SURFACES

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 COPING. THE ENGINEER WILL PROVIDE THE CONTRACTOR ONE (1) SURVEY DISC FOR THE STRUCTURE WHICH THE CONTRACTOR WILL PLACE IN THE SURFACE OF THE FRESH CONCRETE. THE LOCATION OF THE DISC SHALL BE ON THE WINGWALL AND ON A FLAT, HORIZONTAL SURFACE BEYOND THE EDGE OF THE DECK AND RAILING. THE BENCHMARK SHALL BE ACCESSIBLE TO A SURVEYOR'S ROD WITHOUT ANY OBSTRUCTIONS. COST OF THIS WORK SHALL BE INCLUDED WITH ITEM 511.

ITEM 202, STRUCTURE REMOVED, AS PER PLAN

WHEN NO LONGER REQUIRED TO MAINTAIN TRAFFIC, THE EXISTING BRIDGE SHALL BE REMOVED TO AN ELEVATION OF 707.15. EXISTING CONCRETE REMOVED MAY BE USED AS CHANNEL PROTECTION MATERIAL, AS DIRECTED BY THE ENGINEER PROVIDING THE MATERIAL MEETS THE REQUIREMENTS OF 601.08.

ITEM 503, UNCLASSIFIED EXCAVATION

UNCLASSIFIED EXCAVATION SHALL APPLY TO ALL EXCAVATION SHOWN ON THE PLANS BETWEEN STATIONS 17+86.11 AND 18+70.78 NOT ACCOUNTED FOR IN THE ROADWAY CROSS SECTIONS.

ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

A CONCRETE SEALER SHALL BE SHOP APPLIED TO THE SURFACES INDICATED IN THESE PLANS AND AS DESCRIBED BELOW:

THE PRESTRESSED BOX BEAM EXTERIOR FACE PLUS 6 INCHES UNDERDECK AND INTERIOR BEAM FACES FROM BOTTOM OF KEY TO BOTTOM OF BEAM PLUS 6 INCHES UNDERDECK, EACH SIDE OF BEAM.

ITEM 512, TYPE B WATERPROOFING

A BITUMEN COATING SHALL BE SHOP APPLIED TO ALL CONCRETE BEAMS WHERE IT WILL BE EMBEDDED WITHIN THE GRS ABUTMENT AND WINGWALLS TO PREVENT CORROSION OF THE EMBEDDED CONCRETE. THIS COATING SHALL BE CONSIDERED INCIDENTAL TO THE BOX BEAMS.

ABUTMENT ITEMS

ALL ABUTMENT ITEMS SHALL BE PAID AS PLACED TO ACCOUNT FOR VARIATION IN QUANTITIES.

ITEM 203 GRANULAR EMBANKMENT #89 STONE

THIS ITEM SHALL INCLUDE FURNISHING AND PLACING COARSE AGGREGATE CONFORMING TO THE #89 GRADATION. THE STONE BACKFILL SHALL BE PLACED BEHIND EACH LAYER OF CMU BLOCK IN A LIFT THICKNESS NOT TO EXCEED THE CMU BLOCK HEIGHT. PLACEMENT OF THE AGGREGATE SHALL BE FROM THE WALL FACE BACKWARD TO PREVENT THE FORMATION OF AND TO REMOVE ANY WRINKLES IN THE GEOTEXTILE. FILL SHALL BE COMPLETELY COMPACTED AS PER 203.07. THIS IS GENERALLY ACHIEVED BY:

- 1.) RODDING THE AGGREGATE FILL BEHIND EACH CMU BLOCK APPROXIMATELY EVERY FOOT WHILE EXERTING DOWNWARD PRESSURE ON THE CMU BLOCK TO PREVENT LATERAL MOVEMENT.
- 2.) USING A VIBRATORY PLATE COMPACTOR (> 4 PASSES) DIRECTLY BEHIND THE CMU BLOCK WHILE EXERTING DOWNWARD PRESSURE ON THE CMU BLOCK TO PREVENT LATERAL MOVEMENT.
- 3.) LARGER VIBRATORY COMPACTORS MAY BE USED FOR THE BALANCE OF THE AREA MORE THAN 2 FEET BEHIND THE CMU BLOCK. MULTIPLE PASSES OF A VIBRATORY PLATE COMPACTOR CAN ALSO ACHIEVE THE PROPER DENSITY.

AT THE END OF THE DAY'S OPERATIONS, SLOPE THE LAST LIFT OF BACKFILL AWAY FROM THE WALL TO DIRECT SURFACE RUNOFF AWAY FROM THE WALL. DO NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE WALL CONSTRUCTION AREA.

ITEM 203 GRANULAR EMBANKMENT #304 STONE

THIS ITEM SHALL INCLUDE FURNISHING AND PLACING COARSE AGGREGATE CONFORMING TO THE ODOT 304 GRADATION. THE STONE BACKFILL SHALL BE PLACED IN COMPACTOR LIFTS NOT TO EXCEED 9 INCHES AND SHALL BE COMPACTED AS PER 203.07. THE BOTTOM OF THE EXCAVATION SHALL BE SOUND SOIL AS DETERMINED BY THE ENGINEER. IF ADDITIONAL EXCAVATION IS REQUIRED, IT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM. THIS ITEM SHALL BE PAID AS PLACED. SINCE THE REINFORCED SOIL FOUNDATION IS THICKER THAN 18 INCHES, AN INTERMEDIATE FABRIC LAYER SHALL BE PLACED AND PAID FOR AT THE UNIT PRICE BID.

ITEM 511, CLASS QC 1 CONCRETE, AS PER PLAN

THIS ITEM SHALL INCLUDING PROVIDING AND PLACING CLASS QC 1 CONCRETE. ALL CMU BLOCK SHALL HAVE THE FABRIC CUT OR REMOVED TO ALLOW THE VOIDS TO BE TIED TOGETHER TO A DEPTH OF 3 FULL BLOCK. A PIECE OF #4 REBAR SHALL BE PLACED IN EACH VOID. THIS WILL LIKELY HAVE TO BE DONE IN AT LEAST TWO (2) SEPARATE POURS AS THE VOIDS BELOW THE BEAMS MUST BE FILLED BEFORE BEAM PLACEMENT AND THE VOIDS IN THE BALANCE MUST BE POURED AFTER BEAM PLACEMENT. THE TOP OF ANY EXPOSED CONCRETE MUST BE SHAPED TO SHED WATER. THE COST OF THE CONCRETE, PLACING, REBAR, AND FABRIC PREPARATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLASS QC 1 CONCRETE, AS PER PLAN.

ITEM SPECIAL - BEAM SEAT CONSTRUCTION

THIS ITEM SHALL INCLUDE ALL MATERIALS AND LABOR NOT INCLUDED IN OTHER PAY ITEMS INCLUDING BUT NOT LIMITED TO FOAM AND ALUMINUM FASCIA NEEDED TO COMPLETE THE BEAM SEAT DETAIL SHOWN ON SHEET 13 OF 15. THE FABRIC, STONE, AND CMU BLOCK USED IN THE BEAM SEAT PADS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

ITEM 704, SPLITFACE CONCRETE MASONRY BLOCK

THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING SPLITFACE HOLLOW CORE CONCRETE MASONRY UNITS (CMU) MEETING ASTM C90 WITH THE MODIFICATIONS THAT THE BLOCK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AND A MAXIMUM ABSORPTION RATE OF 6.5%. PLACE CMU BLOCKS SIDE BY SIDE FOR THE FULL LENGTH OF EACH COURSE OF THE WALL. CHECK WALL PLUMBNESS A MINIMUM OF EVERY THREE (3) LAYERS AND CORRECT DEVIATIONS GREATER THAN 1/4". CORRECT MISALIGNED, IMPROPERLY SEATED, OR OUT OF LEVEL CMU BLOCKS. ASSURE THAT THE TOPS OF ALL CMU BLOCKS ARE FREE OF LOOSE MATERIAL PRIOR TO PLACEMENT OF THE NEXT LAYER OF GEOTEXTILE AND CMU BLOCKS. THIS BLOCK IS DESIGNATED TO BE USED IN ZONE B AS SHOWN ON PAGE 13 OF 15.

ITEM 704, SOLID CONCRETE MASONRY BLOCK

THIS ITEM SHALL CONSIST OF FURNISHING AND PLACING SOLID CONCRETE MASONRY UNITS (CMU) COLORED RED MEETING ASTM C90 WITH THE MODIFICATIONS THAT THE BLOCK SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AND A MAXIMUM ABSORPTION RATE OF 6.5%. BEGIN CONSTRUCTION OF THE ABUTMENT BY PLACING ONE FULL LENGTH COURSE OF CMU BLOCK AT A TIME. THE FIRST ROW OF CMU BLOCK MUST BE CAREFULLY LEVELED IN BOTH DIRECTIONS TO ASSURE PROPER ALIGNMENT FOR THE BALANCE OF THE WALL. CHECK WALL PLUMBNESS A MINIMUM OF EVERY THREE (3) LAYERS AND CORRECT DEVIATIONS GREATER THAN 1/4". CORRECT MISALIGNED, IMPROPERLY SEATED, OR OUT OF LEVEL CMU BLOCKS. ASSURE THAT THE TOPS OF ALL CMU BLOCKS ARE FREE OF LOOSE MATERIAL PRIOR TO THE PLACEMENT OF THE NEXT LAYER OF GEOTEXTILE AND CMU BLOCKS. THIS BLOCK IS DESIGNATED TO BE USED IN ZONE A AS SHOWN ON PAGE 13 OF 15.

ITEM SPECIAL - HIGH STRENGTH WOVEN POLYPROPYLENE FABRIC

THIS ITEM SHALL HAVE A WIDE WIDTH TENSILE STRENGTH OF 4800 LBS PER FOOT IN BOTH DIRECTIONS AS PER ASTM D-4595. THE GEOSYNTHETIC REINFORCEMENT SHALL BE PLACED AS SHOWN ON PAGE 13 OF 15. THE WIDTH AND LENGTH VARY AS SHOWN ON THE DRAWING AND REINFORCEMENT SCHEDULE. GEOSYNTHETIC REINFORCEMENT SHALL EXTEND BETWEEN THE LAYERS OF CMU BLOCK TO PROVIDE A FRICTIONAL CONNECTION. THE GEOSYNTHETIC REINFORCEMENT SHALL NEARLY COMPLETELY COVER THE TOP OF THE CMU BLOCK. PULL THE GEOSYNTHETIC REINFORCEMENT TAUT PRIOR TO BACKFILLING TO REMOVE WRINKLES. THE PRICE BID SHALL INCLUDE FURNISHING AND PLACING THIS MATERIAL. TO LIMIT CONSTRUCTION DAMAGE TO THE GEOTEXTILE REINFORCEMENT, CONSTRUCTION EQUIPMENT SHALL NOT DRIVE DIRECTLY OVER THE GEOTEXTILE. AN AGGREGATE THICKNESS OF SIX (6) INCHES IS SUFFICIENT TO PREVENT EQUIPMENT FROM DAMAGING THE GEOTEXTILE. NO LAPPING OF FABRIC SHALL BE PERMITTED ALONG THE FACE. WHERE LAPPED ELSEWHERE, A 0.25 INCH THICKNESS OF STONE SHALL BE SPREAD BETWEEN PIECES OF FABRIC.

ITEM SPECIAL - MEDIUM STRENGTH WOVEN POLYPROPYLENE FABRIC

THIS ITEM SHALL HAVE A WIDE WIDTH TENSILE STRENGTH OF 2400 LBS PER FOOT IN BOTH DIRECTIONS AS PER ASTM D-4595. THE GEOSYNTHETIC REINFORCEMENT SHALL BE PLACED AS SHOWN ON PAGE 13 OF 15. THE WIDTH AND LENGTH VARY AS SHOWN ON THE DRAWING AND REINFORCEMENT SCHEDULE. GEOSYNTHETIC REINFORCEMENT SHALL EXTEND TO THE BACK OF LAYERS OF CMU BLOCK WITHOUT CONNECTION. PULL THE GEOSYNTHETIC REINFORCEMENT TAUT PRIOR TO BACKFILLING TO REMOVE WRINKLES. THE PRICE BID SHALL INCLUDE FURNISHING AND PLACING THIS MATERIAL. TO LIMIT CONSTRUCTION DAMAGE TO THE GEOTEXTILE REINFORCEMENT, CONSTRUCTION EQUIPMENT SHALL NOT DRIVE DIRECTLY OVER THE GEOTEXTILE. AN AGGREGATE THICKNESS OF SIX (6) INCHES IS SUFFICIENT TO PREVENT EQUIPMENT FROM DAMAGING THE GEOTEXTILE. A 0.25 INCH THICKNESS OF STONE SHALL BE SPREAD BETWEEN PIECES OF FABRIC WHERE LAPPED.

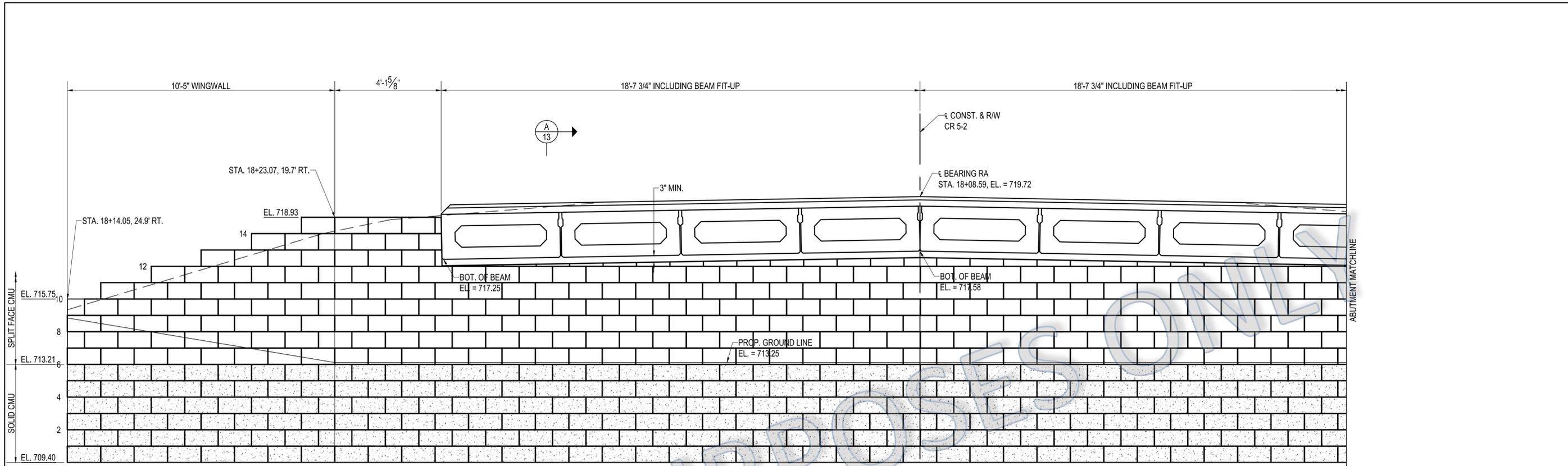
GENERAL SUMMARY, BRIDGE 5-2HJ.0					
SHEET NO.	ITEM	GRAND TOTAL	UNIT	DESCRIPTION	ORIGIN
9	202	1	LUMP	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	PLAN
4	202	76	SQ YD	WEARING COURSE REMOVED	TABLE P
10	203	620	TON	GRANULAR EMBANKMENT #89 STONE	TABLE GRS
10	203	450	TON	GRANULAR EMBANKMENT #304 STONE	TABLE GRS
10	204	3310	SQ YD	SPECIAL - HIGH STRENGTH WOVEN POLYPROPYLENE FABRIC	TABLE GRS
10	204	666	SQ YD	SPECIAL - MEDIUM STRENGTH WOVEN POLYPROPYLENE FABRIC	TABLE GRS
6,10,13	503	1	LUMP	UNCLASSIFIED EXCAVATION	PLAN
11,12,13	511	3	CU YD	CLASS QC 1 CONCRETE, AS PER PLAN	PLAN
14	512	133	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	PLAN
13, 14	512	174	SQ YD	TYPE 3 WATERPROOFING	PLAN
14,15	515	8	EACH	PRESTRESSED CONCRETE NON-COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, B21-48	PLAN
4	517	84.33	FT	RAILING (TWIN STEEL TUBE)	TABLE G
14	518	91	FT	SPECIAL - STEEL DRIP STRIP	PLAN
10	704	916	EACH	SPLITFACE CONCRETE MASONRY BLOCK	TABLE GRS
10	704	762	EACH	SOLID CONCRETE MASONRY BLOCK	TABLE GRS
11, 12, 13	SPECIAL	1	LUMP	BEAM SEAT CONSTRUCTION	PLAN

File: G:\Projects\Bridges\5-2HJ.0\dwg\Civil\3D\5-2HJ.0EQ001.dwg - May 22, 2014 - 1:19pm - Fulton County Engineer's Office

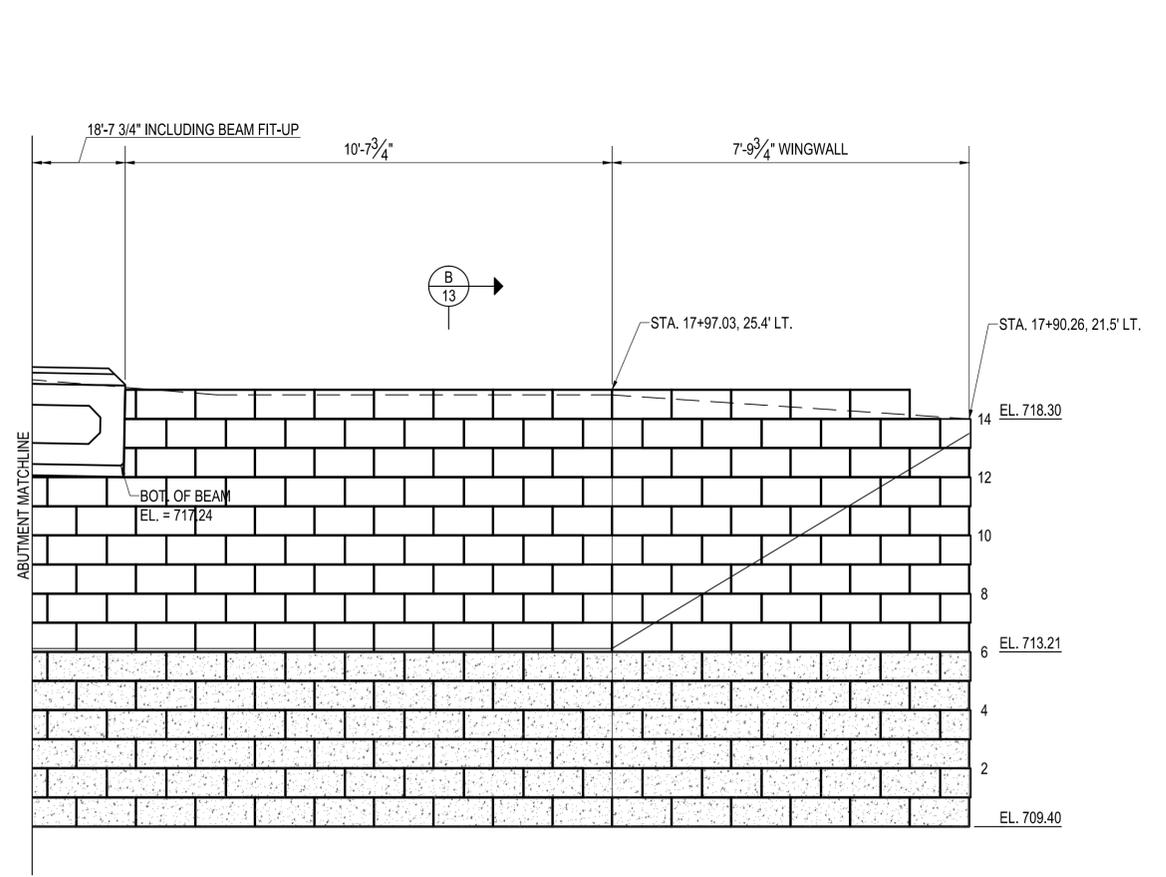
Drawn By: BCR
Date: 5/22/2014
Checked By: FTO
Revised: N/A

BRIDGE GENERAL NOTES AND ESTIMATED QUANTITIES
FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK

FULTON COUNTY ENGINEERING DEPT.
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REAR ABUTMENT ELEVATION

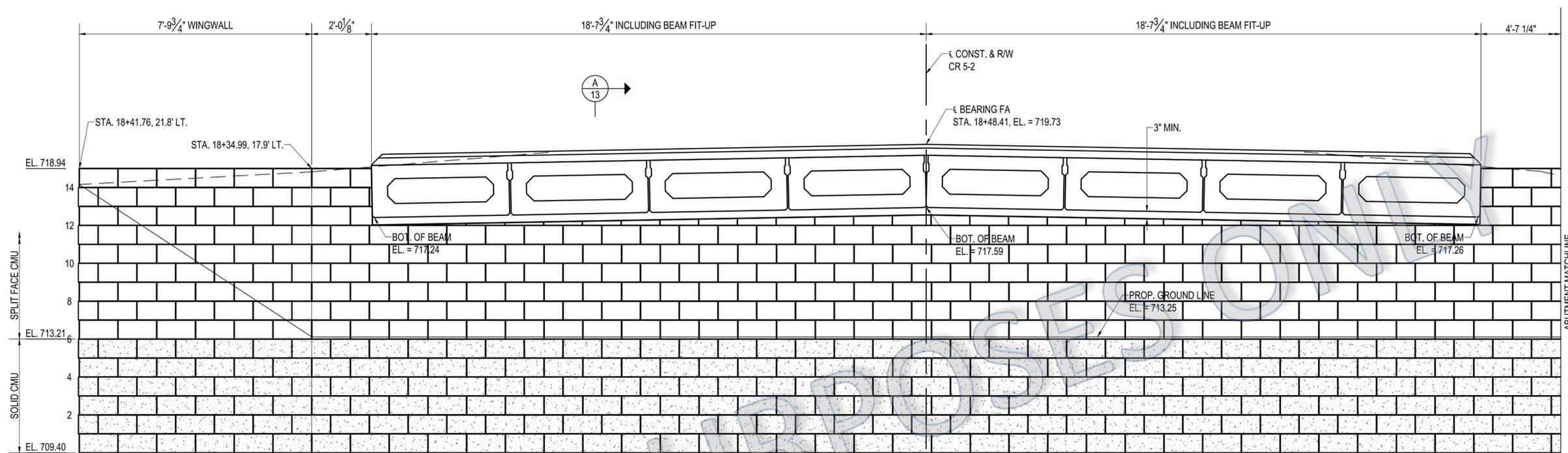


NOTES:
- WINGWALLS ARE FOLDED OUT FOR ELEVATION VIEW.

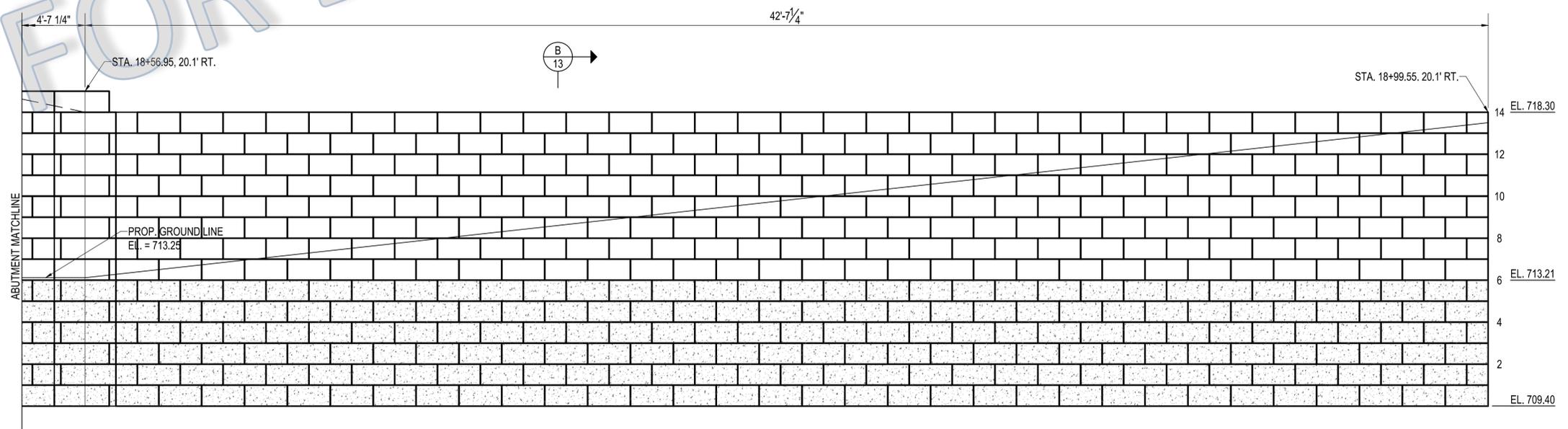
Drawn By:	BCR
Date:	5/22/2014
Checked By:	FTO
Revised:	N/A

GRS REAR ABUTMENT DETAILS
FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK

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FORWARD ABUTMENT ELEVATION

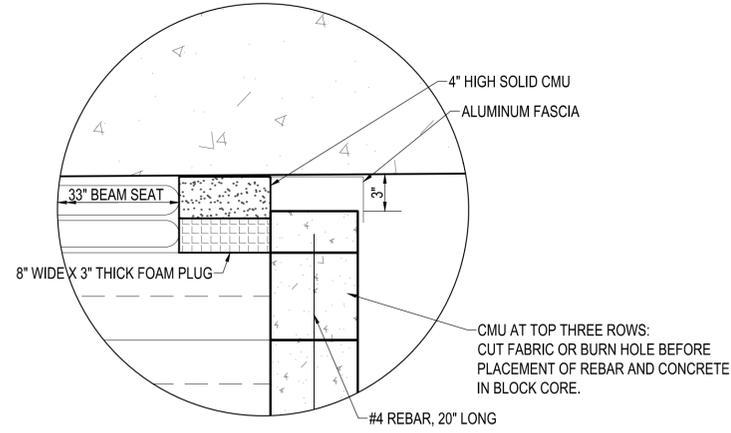


FORWARD ABUTMENT RETAINING WALL ELEVATION

NOTES:
 - WINGWALLS ARE FOLDED OUT FOR ELEVATION VIEW.

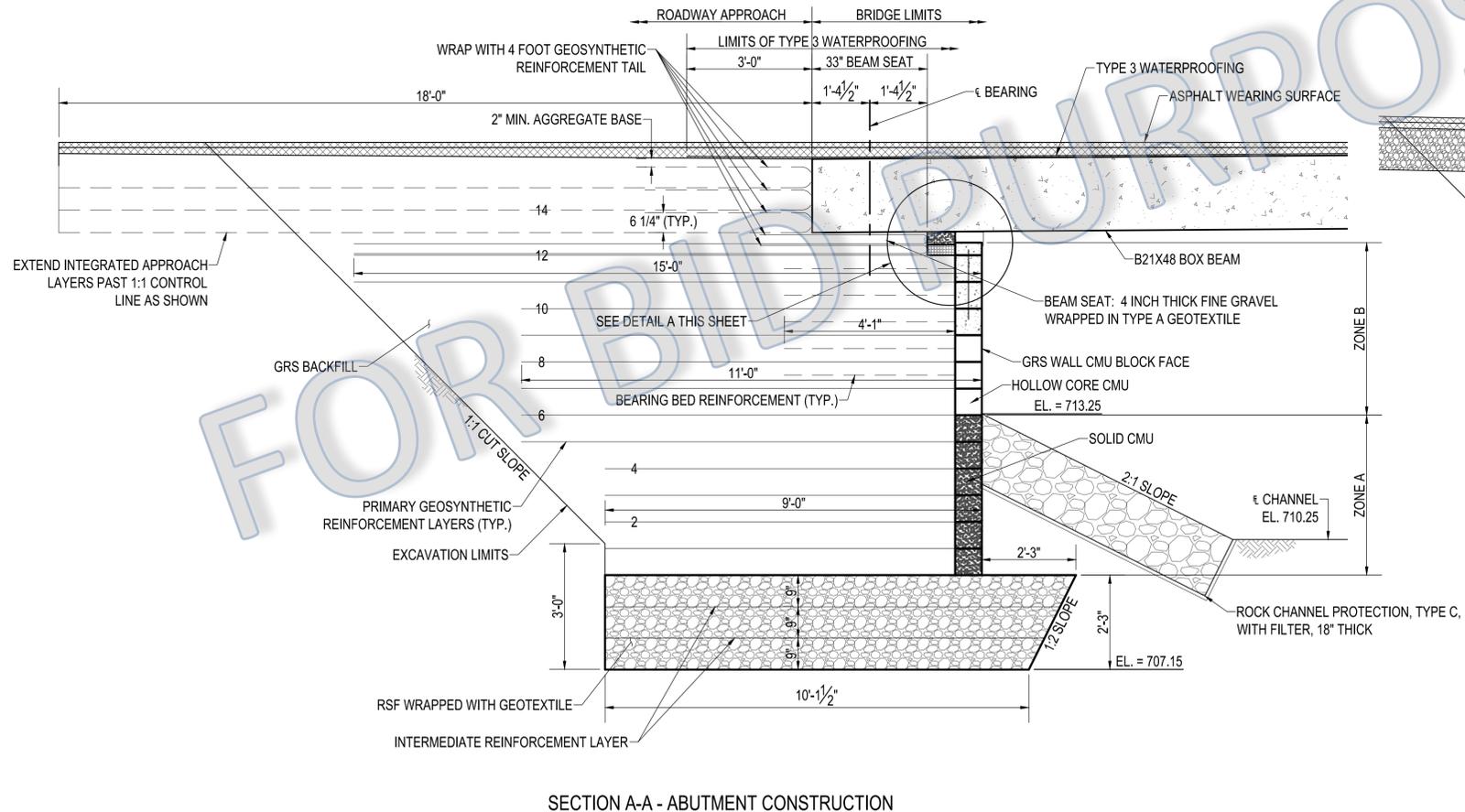
Drawn By: BCR	Date: 5/22/2014	Checked By: FTO
Revised:	N/A	N/A
GRS FORWARD ABUTMENT DETAILS		
FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK		
FULTON COUNTY ENGINEERING DEPT. FRANKI ONWELER, P.E., P.S. - COUNTY ENGINEER ROD CREAHER, P.E., P.S. - CHIEF DEPUTY ENGINEER 9120 Co Rd 14, WALUSEON, OHIO, 43087 PHONE (419) 335-3816 FAX (419) 335-1091		
12		
15		

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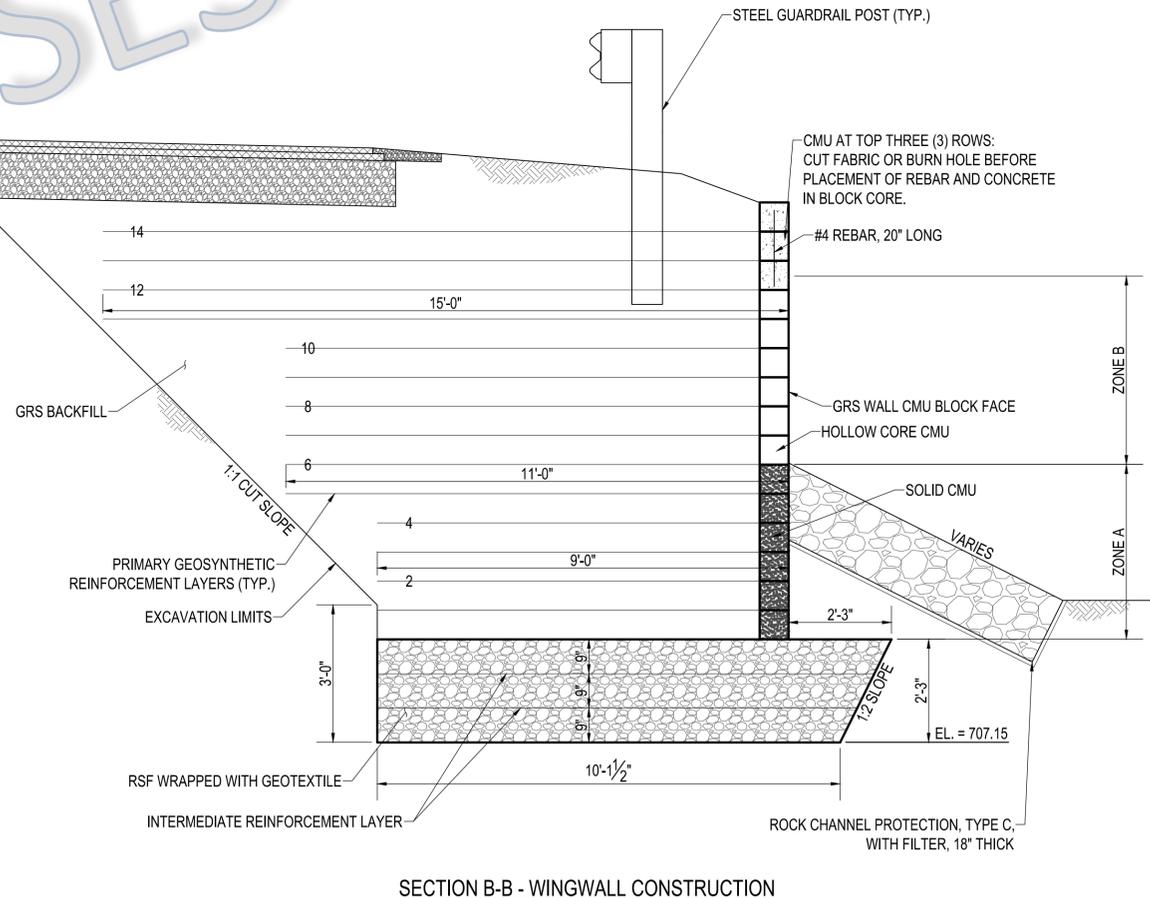


DETAIL A

NOTES:
 - LOADING INFORMATION:
 BEAM WEIGHT: 33,163 LB
 BEARING PRESSURE: 1.18 TSF ON A 2.75' X 4' AREA - DEAD LOAD
 BEARING PRESSURE: 0.77 TSF ON A 2.75' X 4' AREA - LIVE LOAD HL93
 - BACKFILL BETWEEN FABRIC SHALL BE #89 STONE.
 - FOR ADDITIONAL NOTES, SEE GENERAL NOTES ON SHEET 9 OF 15.



SECTION A-A - ABUTMENT CONSTRUCTION

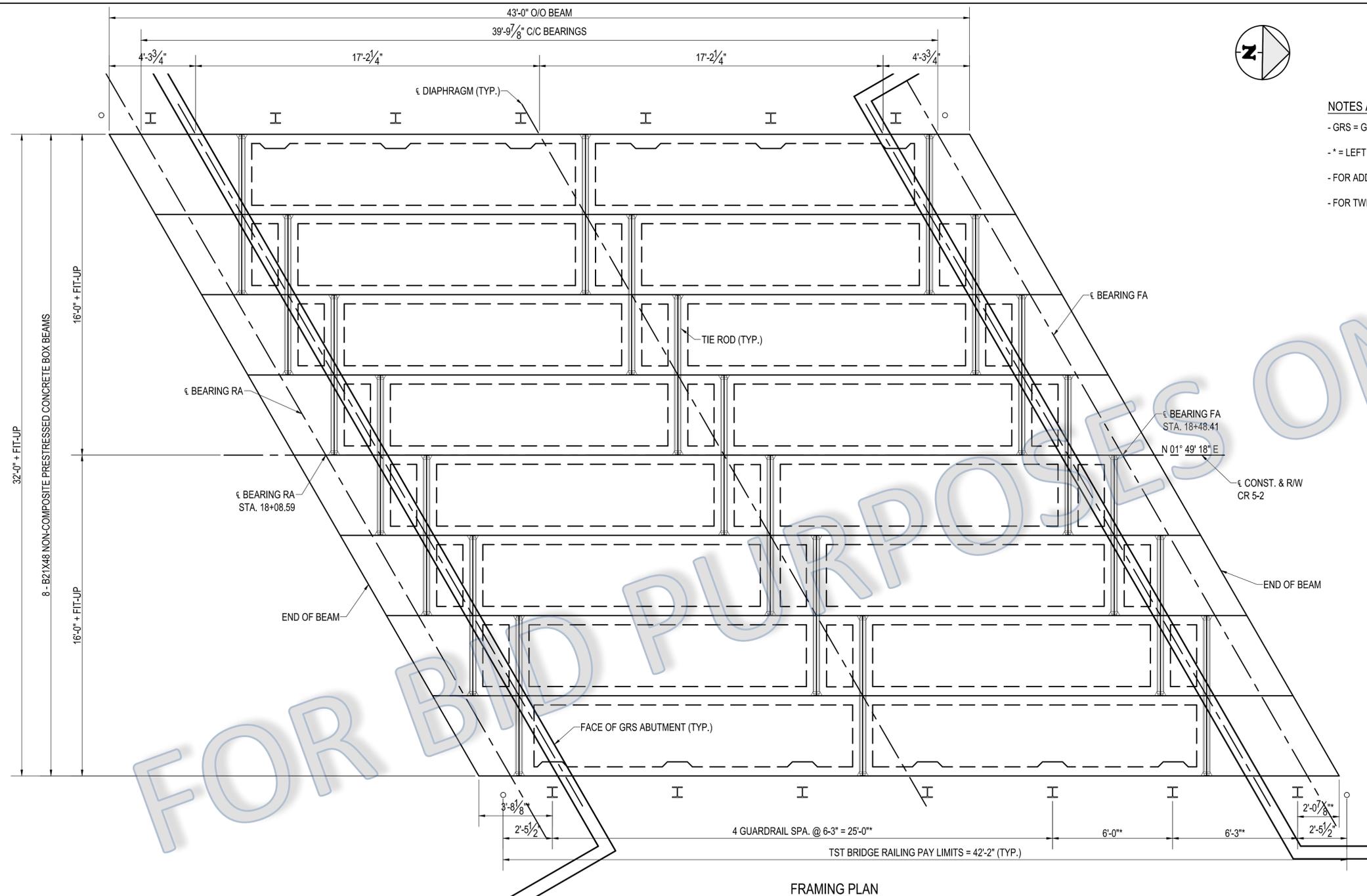


SECTION B-B - WINGWALL CONSTRUCTION

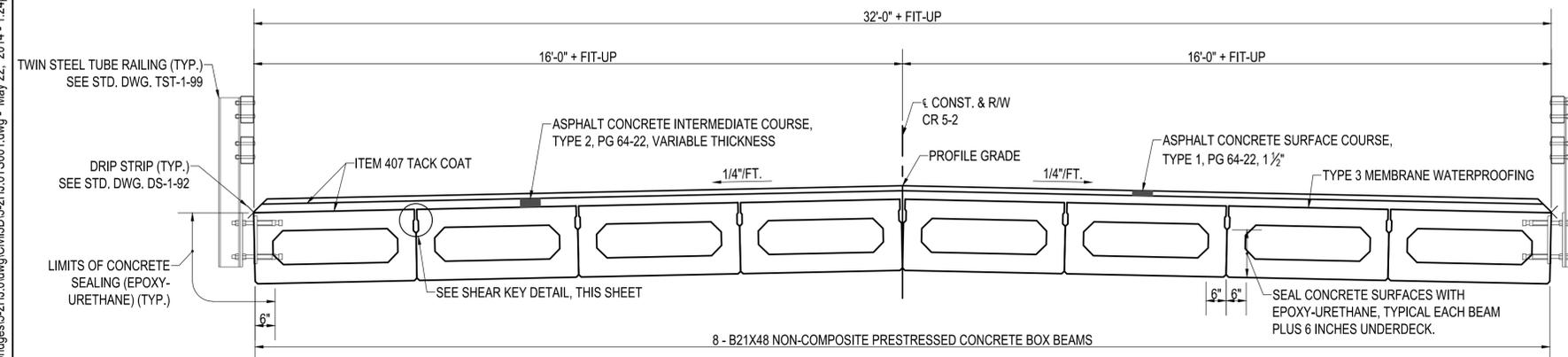
LEGEND:
 ——— TYPE A GEOTEXTILE (4800 LBS/FT) WIDE WIDTH TENSILE STRENGTH
 - - - TYPE B GEOTEXTILE (2400 LBS/FT) WIDE WIDTH TENSILE STRENGTH
 - GRS = GEOSYNTHETIC REINFORCED SOIL
 - CMU = CONCRETE MASONRY UNIT
 - RSF = REINFORCED SOIL FOUNDATION

Drawn By: BCR	Checked By: FTO
Date: 5/22/2014	Revised: N/A
GRS ABUTMENT SECTION DETAILS	
FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK	
FULTON COUNTY ENGINEERING DEPT. FRANK T. ONWELLER, P.E., P.S. - COUNTY ENGINEER ROD CREAHER, P.E., P.S. - CHIEF DEPUTY ENGINEER 9120 Co Rd 14, WALUSEON, OHIO, 43087 PHONE (419) 335-3816 FAX (419) 335-1091	
13	15

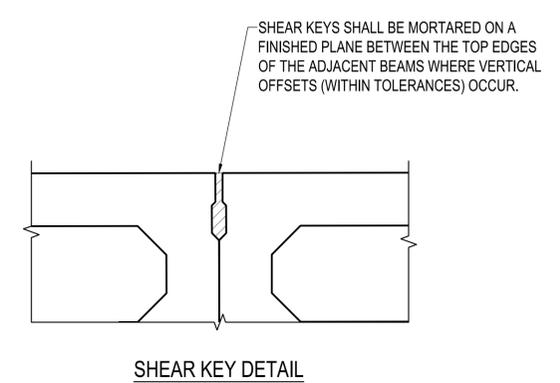
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FRAMING PLAN



TRANSVERSE SECTION



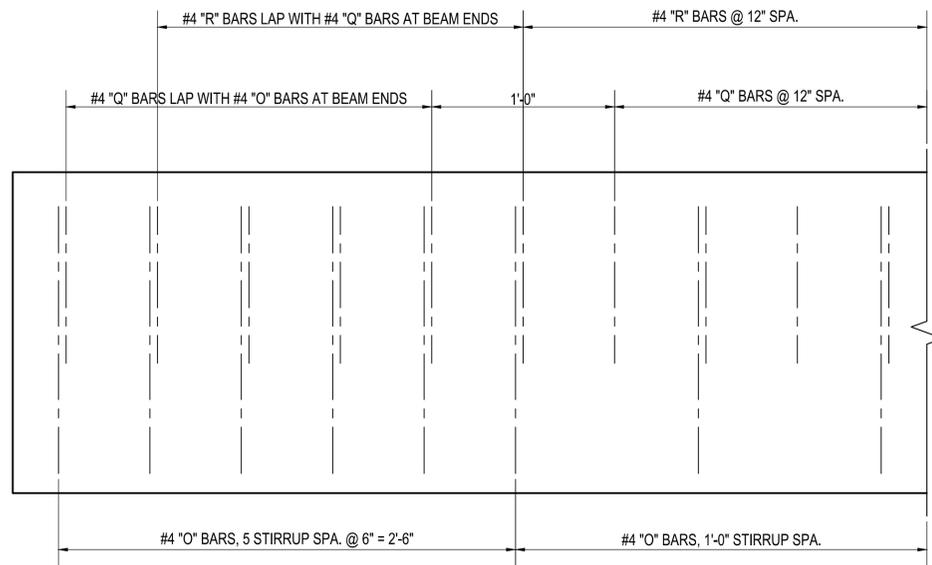
SHEAR KEY DETAIL

- NOTES AND LEGEND:
- GRS = GEOSYNTHETIC REINFORCED SOIL
 - * = LEFT FASCIA BEAM GUARDRAIL SPACING IS SIMILAR, OPPOSITE HAND.
 - FOR ADDITIONAL PRESTRESSED BOX BEAM DETAILS, SEE ODOT STD. DWG. PSBD-2-07.
 - FOR TWIN STEEL TUBE BRIDGE RAILING DETAILS, SEE ODOT STD. DWG. TST-1-99.

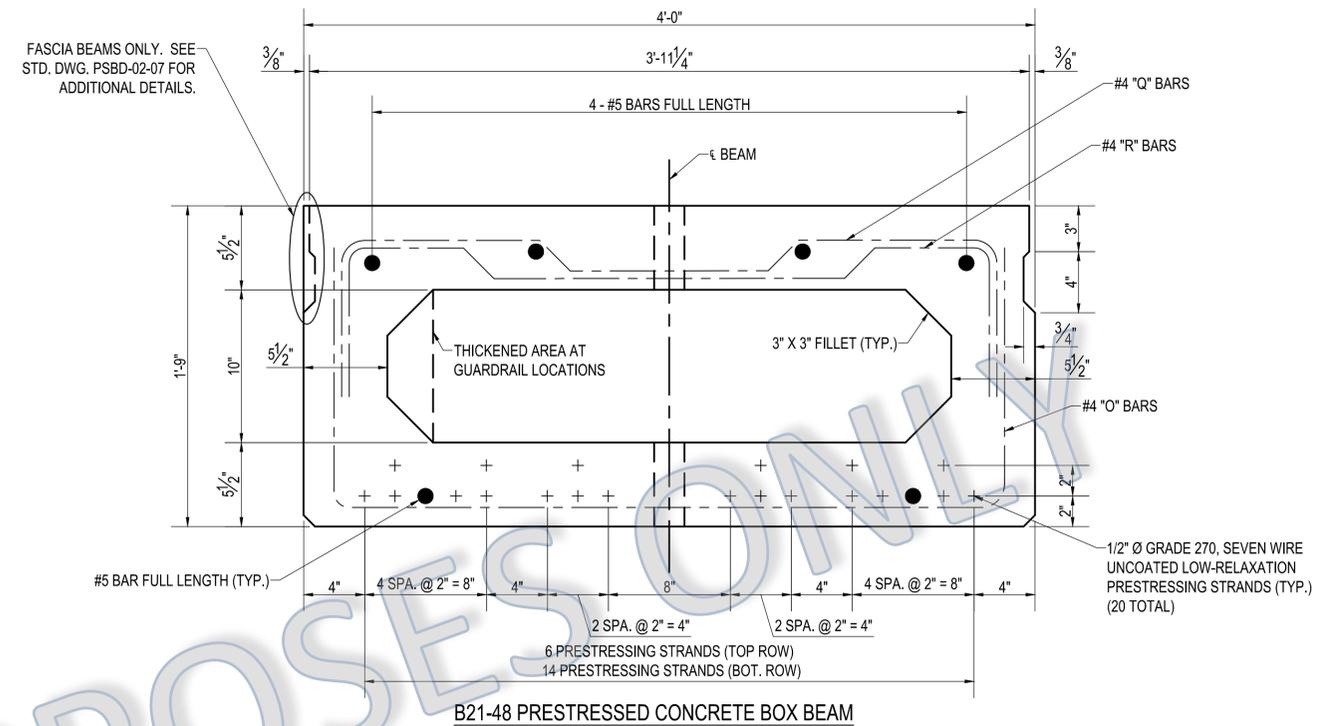
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Date:	5/22/2014
Checked By:	FTO
Revised:	N/A

FRAMING PLAN AND TRANSVERSE SECTION
 FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK

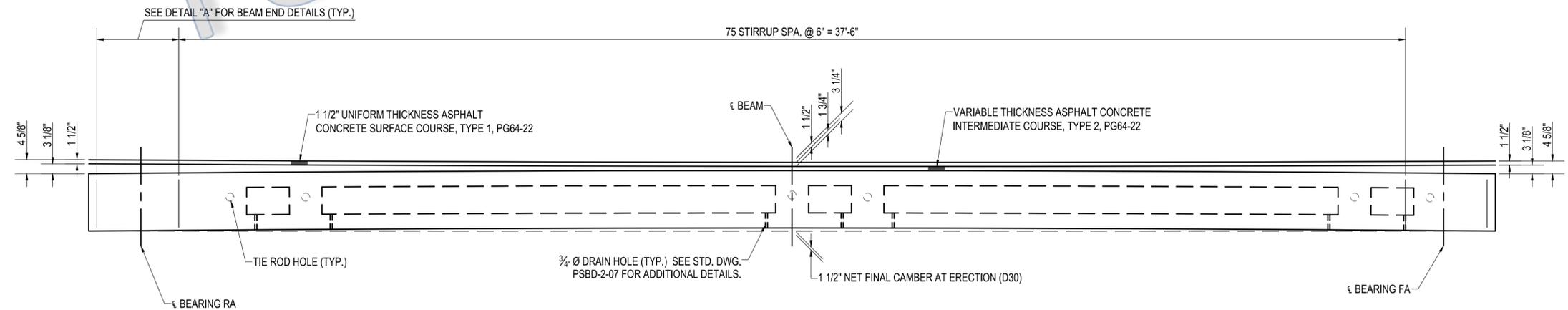
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DETAIL "A"
NOTE: STIRRUP SPACING SYMMETRICAL ABOUT BRIDGE CENTERLINE



B21-48 PRESTRESSED CONCRETE BOX BEAM



B21-48 CAMBER AND DEFLECTION
(INTERIOR BEAM SHOWN, EXTERIOR BEAM SIMILAR)

- NOTES:**
- PRESTRESSING STRAND:
STRAND DESCRIPTION = 1/2" Ø (A = 0.167 IN²), GRADE 270
7 WIRE, UNCOATED LOW RELAXATION PRESTRESSING STRAND
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202,500 PSI (LOW RELAXATION STRANDS)
INITIAL TENSION LOAD = 33.82 KIPS PER STRAND
 - ASPHALT CONCRETE WEARING SURFACE:
ASPHALT CONCRETE WEARING SURFACE SHALL CONSIST OF A VARIABLE THICKNESS OF 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 AND 1 1/2" UNIFORM THICKNESS OF 448 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22. PLACE THE 448 INTERMEDIATE COURSE IN TWO OPERATIONS. THE FIRST PORTION OF THE COURSE SHALL BE OF 1 3/4" UNIFORM THICKNESS. FEATHER THE SECOND PORTION OF THE COURSE TO PLACE THE SURFACE PARALLEL TO AND 1 1/2" BELOW THE FINAL PAVEMENT SURFACE ELEVATION.
 - THE FABRICATOR'S SHOP DRAWINGS SHALL SHOW COMPLETE DETAILS OF THE BEAM REINFORCING. SEE STD. DWG. PSBD-2-07 FOR ADDITIONAL BOX BEAM DETAILS.
 - CAMBER FOR B21-48 BOX BEAM:
ESTIMATED CAMBER AT DAY 0 (D0) IS 0.612 INCHES.
ESTIMATED CAMBER AT DAY 30 (D30) IS 1.527 INCHES.
DEFLECTION DUE TO REMAINING DEAD LOAD IS 0.146 INCHES.
- THE BEAM SEAT ELEVATIONS ASSUME ESTIMATED CAMBER D30. INCREASE THE THICKNESS OF THE INTERMEDIATE COURSE AT EACH CENTERLINE OF BEARING BY THE SAME DISTANCE EACH SEAT ELEVATION WAS LOWERED PER CMS 511.07. NO ADJUSTMENTS SHALL BE MADE TO THE OVERLAY THICKNESS AT MIDSPAN.

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Date:	5/22/2014
Revised:	N/A

SUPERSTRUCTURE DETAILS
FULTON COUNTY BRIDGE 5-2HJ.0 REPLACEMENT OVER SWAN CREEK

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