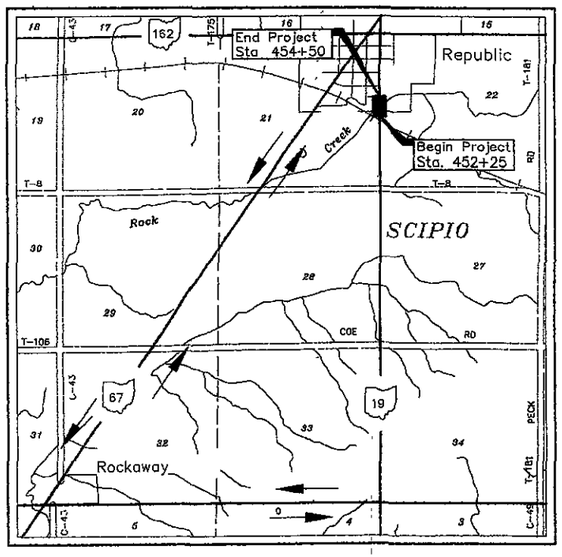
SEN - SR 19-8.56
050541 PID - 21375
Dist 2 11/2/2005

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
SEN-19-8.56
SCIPIO TOWNSHIP
SENECA COUNTY



LOCATION MAP
Latitude N41°07'02" Longitude W83°00'56"

SCALE IN MILES
0 1/2 1 2

N

PORTION TO BE IMPROVED
STATE AND FEDERAL ROUTES
OTHER ROADS
DETOUR ROUTE

DESIGN DESIGNATION

Current ADT (2003)	=	2100
Design Year ADT (2023)	=	2600
Design Hourly Volume (2023)	=	260
Directional Distribution	=	55%
Trucks (24 hour B&C)	=	9%
Design Speed	=	55 MPH
Legal Speed	=	55 MPH
Design Functional Classification	=	RURAL MAJOR COLLECTOR

DESIGN EXCEPTIONS

None Required

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
Call 800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

Plan Prepared By:

POGGEMEYER DESIGN GROUP, INC.
ARCHITECTS + ENGINEERS + PLANNERS
1168 NORTH MAIN STREET BOWLING GREEN, OHIO 43402

INDEX OF SHEETS

PROJECT DESCRIPTION

BRIDGE REPLACEMENT WITH MINIMAL APPROACH WORK.

PROJECT EARTH DISTRIBUTED AREA = 0 4 ACRES
ESTIMATED CONTRACTOR EARTH DISTRIBUTED AREA = 0.4 ACRES
NOTICE OF INLET EARTH DISTRIBUTED AREA = 4.9 ACRES

2005 SPECIFICATIONS

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

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 AS INDICATED ON THE TITLE SHEET.

ENGINEERS SEAL:
STATE OF OHIO
JEFFREY THOMAS YODER
E-61418
REGISTERED PROFESSIONAL ENGINEER
SIGNED Jeffrey T Yoder
DATE 1-7-03

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7-16-04	GR-1 1M	7-16-04		
BP-4 1	7-16-04	GR-2 1M	1-16-04		
		GR-4 2M	4-15-05	TC-65.10	1-21-05
DM-1.1	1-21-05			TC-65.11	1-21-05
DM-4 1	7-19-02			TC-73 10	1-19-01
DM-4 3	7-19-02				
DM-4 4	7-19-02				
				MT-101 60	10-18-02
HW-2 1	7-15-05			MT-105 10	10-18-02
				MT-105 11	10-18-02
CB-1 1	7-15-05				
				AS-1-81	7-19-02
				DS-1-92	7-18-03
				PSBD-93	7-19-02
				TST-1-99	10-17-03

SUPPLEMENTAL SPECIFICATIONS

800	7-15-05
832	4-17-04
833	2-12-03

SPECIAL PROVISIONS

NWP #3	8-18-04

Approved [signature] District Deputy Director
Date 1/29/03

Approved [signature] Director, Department of Transportation
Date 8-26-05

FEDERAL PROJECT NO E 032 (827)
PID NO. 21375
CONSTRUCTION PROJECT NO
RAILROAD INVOLVEMENT NONE
SEN-19-8.56
1 / 22

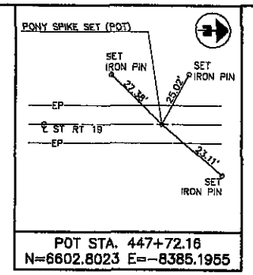
PLOTTED MAY 7, 2001 1 04 22 pm EST
J E F FILE NAME : \5032\022\TRANS\DWGS\2137SGTA.DWG 5-7-01
5032-022

SITE BENCH MARK No. 1

TOP 1st STEP SOUTHEAST CORNER RAILROAD BRIDGE OVER ST RT. 19 YELLOW PAINT MARK W/"X" (SURVEY POINT No 2489) STA 450+18.7, 9.2'± RT ELEV 859 95

SITE BENCH MARK No. 2

SOUTH BONNET BOLT FIRE HYDRANT WEST SIDE OF ST RT 19 BY RESIDENCE No. 610 (SURVEY POINT No 2298) STA 455+33.8, 29 6'± LT ELEV 863 54



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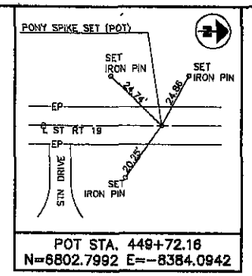

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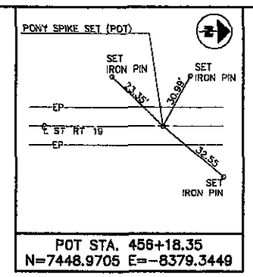

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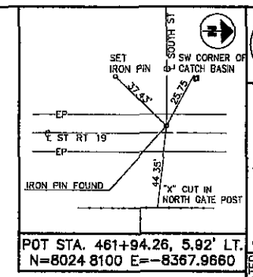

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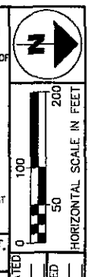
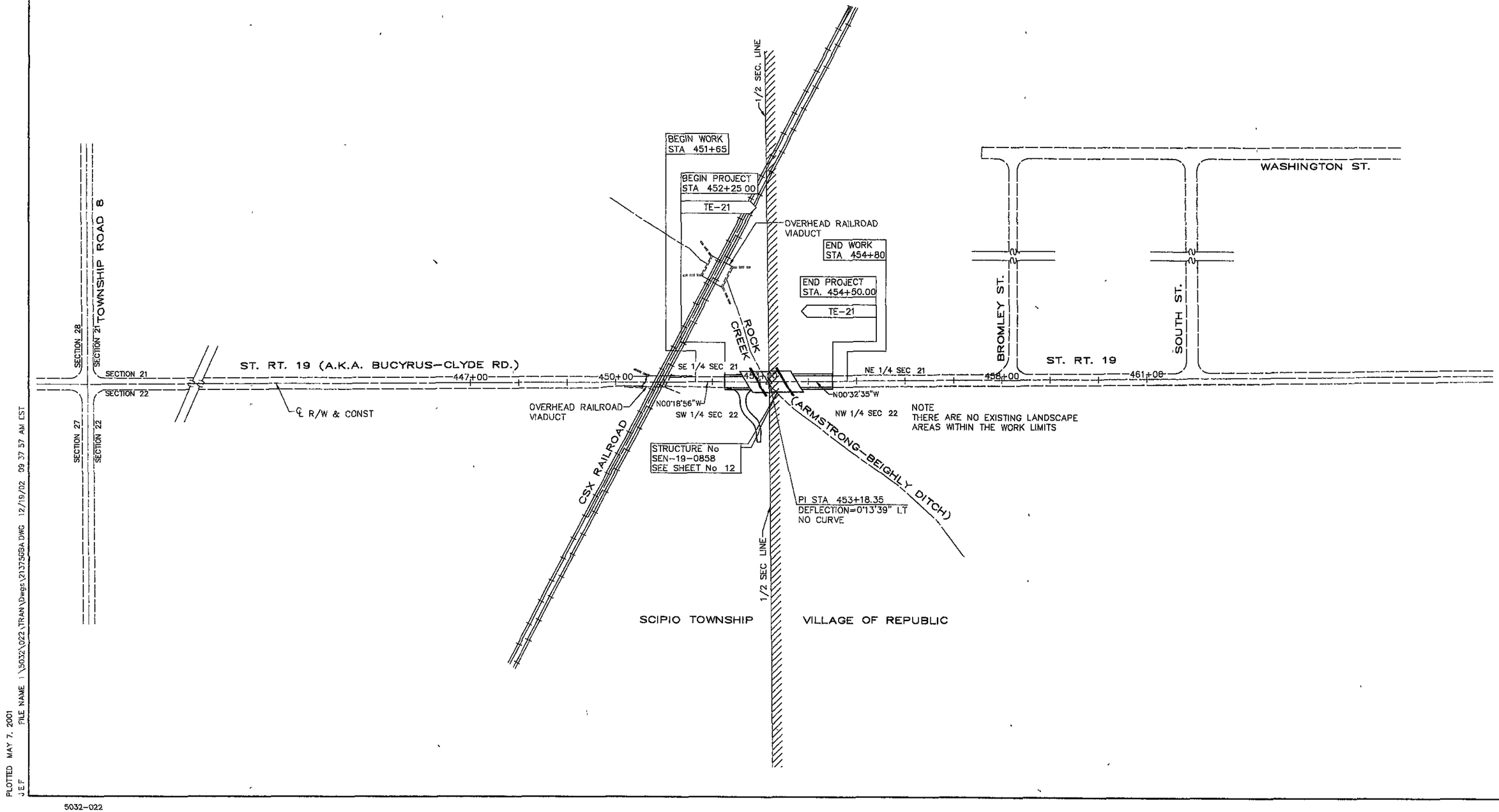


CALCULATED BY DATE
CHECKED BY DATE

SCHEMATIC PLAN



NOTE
THERE ARE NO EXISTING LANDSCAPE AREAS WITHIN THE WORK LIMITS

SEN-19-8.56

2
22

PLOTTED MAY 7, 2001
J.E.F.
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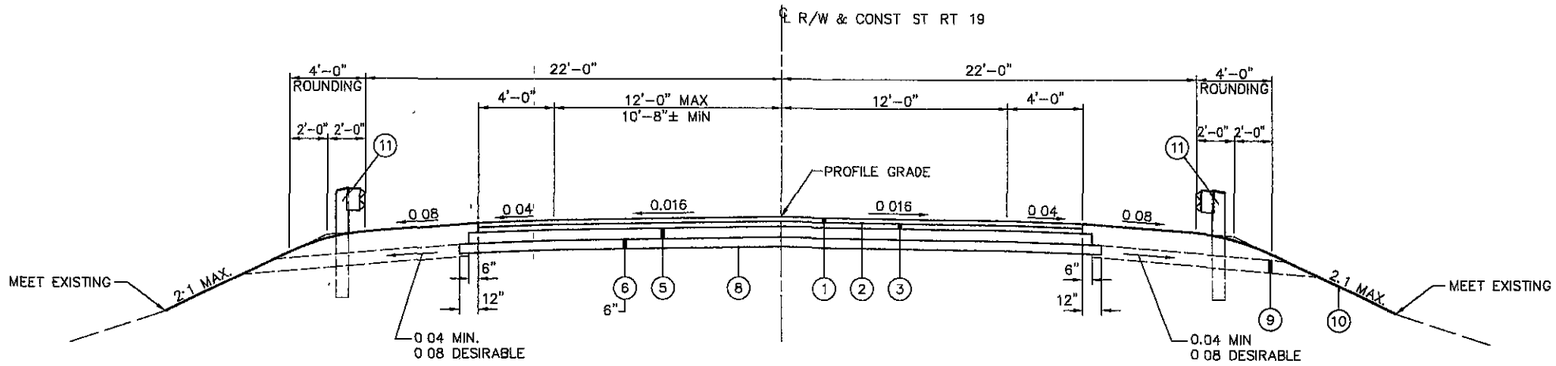
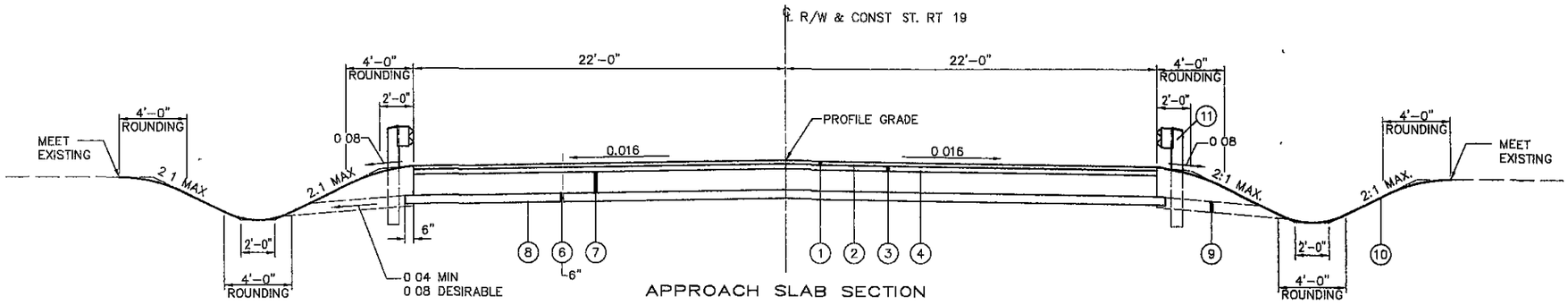


NORMAL SECTION

APPLIES STA 452+25 00 TO STA 452+69 33 = 44.33 LIN FT
STA 453+76 17 TO STA 454+50 00 = 73 83 LIN FT
TOTAL = 118 16 LIN FT

LEGEND

(1) ITEM 442 1 1/2" ASPHALT CONCRETE, SURFACE COURSE, 9 5mm, TYPE A (448)
(2) ITEM 407 TACK COAT FOR INTERMEDIATE COURSE, 0.04 GAL PER SQ YD
(3) ITEM 442 1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, TYPE A (448), AS PER PLAN
(4) ITEM 407 TACK COAT, 0.075 GAL. PER SQ. YD.
(5) ITEM 301 7" ASPHALT CONCRETE BASE, PG 64-22
(6) ITEM 304 AGGREGATE BASE
(7) ITEM 526 REINFORCED CONCRETE APPROACH SLAB (T=15")
(8) ITEM 204 SUBGRADE COMPACTION
(9) ITEM 605 AGGREGATE DRAIN (SEE GENERAL NOTE)
(10) ITEM 659 SEEDING AND MULCHING (SEE GENERAL NOTE)
(11) ITEM 606 GUARDRAIL TYPE 5, USING 9 FOOT POST



APPROACH SLAB SECTION

APPLIES: STA. 452+69 33 TO STA 452+94 33 = 25 00 LIN FT
STA 453+51 17 TO STA 453+76 17 = 25 00 LIN. FT
TOTAL = 50.00 LIN FT

CALCULATED BY ____ DATE ____
CHECKED BY ____ DATE ____

TYPICAL SECTIONS

SEN-19-8.56

3
22

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J.E.F.

5032-022

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

VERIZON 83 TOWNSEND STREET NORWALK, OHIO 44857 (419) 744-3617	VILLAGE OF REPUBLIC 219 WASHINGTON STREET REPUBLIC, OHIO 44867 (419) 585-5981

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 TREATMENT CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109 02 OF THE 2002 CONSTRUCTION AND MATERIAL SPECIFICATIONS CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE

ITEM 442–ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, TYPE A (448), AS PER PLAN SHALL FOLLOW THE SPECIFICATIONS FOR THE 442 ITEM EXCEPT FOR SECTION 442 04 ASPHALT BINDER, THE ASPHALT BINDER SHALL BE PG 70–22M FOR THE INTERMEDIATE COURSE

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	0 075 GAL. PER SQ YARD
407, TACK COAT FOR INTERMEDIATE COURSE	0 04 GAL PER SQ YARD

CLEARING AND GRUBBING ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING

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 WITHIN THE 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 1 FOOT 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 1, 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 ITEMS

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

603	8" CONDUIT, TYPE B	50 LINEAR FEET
603	8" CONDUIT, TYPE E	50 LINEAR FEET
603	6" CONDUIT, TYPE F	50 LINEAR FEET

ITEM 605, AGGREGATE DRAINS AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE

CROSSINGS AND CONNECTIONS TO 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 IN THE 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 OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEM.

GENERAL NOTES

SEEDING AND MULCHING THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS·

659,	SEEDING & MULCHING	739 SQ YD
659,	SOIL ANALYSIS TEST	2 EACH
659,	TOPSOIL	82 CU YD
659,	COMMERCIAL FERTILIZER	0 10 TON
659,	WATER	4 M GAL
659,	LIME	0 18 ACRE
659,	INTER–SEEDING	37 SQ YD

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 SEEDING AND MULCHING, ARE BASED ON THESE LIMITS

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE PLACED BY THE CONTRACTOR WITH THE ENGINEER'S CONCURRENCE FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

207, CONSTRUCTION SEEDING AND MULCHING	80 SQ YARD
207, PERIMETER FILTER FABRIC FENCE	400 FT
207, INLET PROTECTION	120 FT
659, COMMERCIAL FERTILIZER	0 01 TON
659, REPAIR SEEDING AND MULCHING	40 SQ YD

EROSION CONTROL ITEM 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.

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

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 TRINITY INDUSTRY, 1170 N STATE STREET, GIRARD, OH 44420 (TELEPHONE. 330–545–4373)

THE LENGTH OF THE ET–2000 (1997) SYSTEM IS CONSIDERED TO BE 50'–0" INCLUSIVE OF TWO 25'–0" 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 PRE–APPROVED SHOP DRAWINGS

DWG #	DRAWING NAME	DWG./REV DATE	ODOT APPROVAL DATE
SS265M	ET–2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98
SS142	ET2000 PLUS 50'–0" PLAN, ELEVATION & SECTION 25'–0" RAIL, SLEEVE W/PL POSTS 1–4	4/12/00	7/31/00
SS141	ET2000 PLUS PLAN, ELEVATION & SECTION 25–0" RAIL, HBA POSTS 1–4	2/29/00	7/31/00
SS158	ET2000 PLUS 50'–0" WITH 12'–6" PANELS & HBA POSTS 1–4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00

2) THE SKT–350 MANUFACTURED BY ROAD SYSTEMS, INC , 2516 MALLORY LANE, STOW, OH 44224 (TELEPHONE: 330–346–0721)

THE LENGTH OF THE SKT–350 SYSTEM IS CONSIDERED TO BE 50'–0", INCLUSIVE OF FOUR 12'–6" 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 PRE–APPROVED 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

THE FACE OF THE TYPE E–98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18"x18"

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4–INCHES ABOVE THE GROUND THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27–3/4–INCHES FROM THE EDGE OF THE SHOULDER

ON–SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR THE TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4–INCHES ABOVE THE GROUND LINE

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, REFLECTIVE SHEETING, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W–BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180 PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS

ITEM 614, MAINTAINING TRAFFIC
A MINIMUM OF ONE LANE TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 45 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON THE TITLE SHEET LIQUIDATED DAMAGES SHALL BE ASSESSED IN ACCORDANCE WITH 108.07 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT ACCESS TO THE SCIPIO TOWNSHIP CEMETARY MUST BE MAINTAINED AT ALL TIMES

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48"x30" "ROAD CLOSED" SIGNS, SIGN SUPPORTS, BARRICADES, GATES, AND LIGHTS, AS DETAILED IN STANDARD CONSTRUCTION DRAWING MT–101 60 AT THE PROJECT WORK LIMITS

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS FOLLOWS.

PORTABLE TYPE III BARRICADE WITH "ROAD CLOSED ___ MILES AHEAD LOCAL TRAFFIC ONLY" SIGN (R–76A) PER OMUTCD FIGURE C–5 AT

SR 18 & SR 19	TR–8 & SR 19
SOUTH STREET & SR 19	SR 224 & SR 19

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 SEPARATELY ITEMIZED IN THE PLAN

OVERNIGHT TRENCH CLOSING THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 3" BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORKING DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH, 25 FEET OR LESS, OF A WORK SECTION AT THE END OF THE TRENCH IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

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

ITEM 616, WATER 2 M GAL

WORK ZONE MARKINGS AND SIGNS THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE PAVEMENT MARKINGS PER THE REQUIREMENTS 614 04 AND 614.10.

ITEM 614, WORK ZONE CENTER LINE, CLASS II 0 05 MILE

CALCULATED BY JTT DATE 12-00 CHECKED BY KCD DATE 12-00

GENERAL NOTES

SEN–19–8.56

PLOTTED, MARCH 11, 2003 FILE NAME SHEET-1 I:\5032\022\TRAN\Dwgs\21375GNA.DWG 03/11/03 07:33:16 AM EST
JEF

GENERAL NOTES

STORM WATER POLLUTION PREVENTION PLAN THE CONDITION OF THE NPDES CONSTRUCTION STORM WATER GENERAL PERMIT (SEE PROPOSAL) SHALL BE MET DURING ALL STAGES OF CONSTRUCTION. THE LOCATION AND TIMING OF ALL EROSION AND SEDIMENT CONTROL ITEMS SHALL BE FIELD ADJUSTED TO PREVENT SIGNIFICANT IMPACTS ON RECEIVING WATERS. IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN SHALL CONTINUE THROUGHOUT THE DURATION OF THE PROJECT OR UNTIL SUCH TIME THAT THE UPSLOPE DISTURBED AREAS ARE STABILIZED.

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE AS PER CONSTRUCTION AND MATERIAL SPECIFICATION 207 03

ALL REASONABLE ATTEMPTS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND

AREAS TO REMAIN DORMANT FOR MORE THAN 45 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH CONSTRUCTION SEEDING AND MULCHING EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES

MISC.· MOWER STORAGE UNIT

THE CONTRACTOR SHALL PROVIDE A CLOSED CONTAINER THAT CAN BE LOCKED FOR MOWER STORAGE FOR THE TOWNSHIP THE CONTAINER SHALL BE PROVIDED DURING THE CLOSURE OF THE ROADWAY THE CONTRACTOR SHALL CONTACT HAROLD SCHANK AT 419-585-3931 OR JOHN POWELL 419-585-6631 OR GEORGE BENNER 419-585-3825 14 DAYS PRIOR TO THE CLOSURE OF THE ROADWAY. THE CONTRACTOR WILL CORDINATE THE LOCATION OF THE CONTAINER ON TOWNSHIP PROPERTY AND THE STORAGE OF THE MOWER WITH THE TOWNSHIP THE CONTAINER SHALL BE LARGE ENOUGH TO STORE A ZERO-TURN RADIUS MOWER APPROXAMIATELY 10'X12'. THE LUMP SUM PAY ITEM SHALL INCLUDE THE PLACEMENT BEFORE CLOSURE OF THE ROAD AND REMOVAL OF THE CONTAINER AFTER THE ROAD IS OPEN FOR TRAFFIC THE ITEM SHALL INCLUDE ALL MISCELLANCE WORK THAT MUST BE PREFORMED TO THE SITE FOR PLACEMENT AND RESTORATION OF THE SITE PER CMS 104 04

INDIANA BAT CONSIDERATIONS

ANY UNAVOIDABLE CUTTING OF TREES WITH SUITABLE ROOSTING AND BROOD-REARING HABITATE FOR THE INDIANA BAT (LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVITIES) MAY BE CONSIDERED TO BE PERFORMED ONLY BEFORE APRIL 15 OR AFTER SEPTEMBER 15 WHEN THE SPECIES WOULD NOT BE USING SUCH HABITAT.

CALCULATED BY — J.T.Y. DATE 12-08
CHECKED BY — K.D.L. DATE 12-09

GENERAL NOTES

SEN-19-8.56

5
22

PLOTTED MARCH 11, 2003 07 28 33 AM EST
J.E.F
FILE NAME SHEET~2 I:\5032\022\TRAN\Dwgs\2137SGNA.DWG 03/11/03

5032-022

PAVEMENT, INCLUDING DRIVES

STATION FROM	STATION TO	SIDE	LENGTH "L" FEET	AVERAGE PAVEMENT WIDTH "W" FEET	AREA, (L x W)/9 SQ YD	204 SUBGRADE COMPACTION L x W/9 SQ YD	301 7" ASPHALT CONCRETE BASE, PG64-22 (L x W x 7/12)/27 CU YD	304 6" AGGREGATE BASE L x W x 6/12/27 CU YD	304 8" AGGREGATE BASE L x W x 8/12/27 CU YD	407 TACK COAT FOR INTERMEDIATE COURSE L x W x 0 04/9 GAL	407 TACK COAT L x W x 0 075/9 GAL	448 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS) (L x W x 1 1/4"/12)/27 CU YD	448 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE TYPE 2, PG64-22 (DRIVEWAYS) (L x W x 1 3/4"/12)/27 CU YD	442 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 9 5mm, TYPE A (448) (L x W x 1 5/12)/27 CU YD	442 1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE," 19mm TYPE A (448), AS PER PLAN (L x W x 1 5/12)/27 CU YD
452+25 00	452+62 74	LT & RT	37 74	31 05	130 2	142 8	26 1	23 1		5 2				5 4	5 4
452+62 74	452+69 33	LT & RT	6 59	31 4	23	25 2	4 6	4 1		0 9				1 0	1 0
452+69 33	452+94 33	LT & RT	25 00	44	122 2	130 6		20 8		4 9	9 2			5 1	5 1
453+51 17	453+76 17	LT & RT	25 00	44	122 2	130 6		20 8		4 9	9 2			5 1	5 1
453+76 17	454+50 00	LT & RT	73 83	32	262 5	287 1	52 6	46 5		10 5				10 9	10 9
DRIVE	452+50 00	RT			173 3*	173 3			38 5			6 0	8 4		
SUBTOTALS						889 6	83 3	115 4	38 5	26 4	18 4	8 0	8 4	27 5	27 5
TOTALS TO GENERAL SUMMARY						890	83	154		26	18	6	8	28	28

* – CADD AREA

GUARDRAIL, GR

FROM SHEET NUMBER	DESIGNATION	STATION FROM	STATION TO OR AT	SIDE	202 GUARDRAIL REMOVED FT	606 GUARDRAIL, TYPE 5, USING 9 FOOT POSTS FT	606 ANCHOR ASSEMBLY, TYPE T EACH	606 ANCHOR ASSEMBLY, TYPE E-98 EACH	606 BRIDGE TERMINAL ASSEMBLY, TYPE 3 (MODIFIED) EACH	626 BARRIER REFLECTOR, TYPE A2 EACH
8	GR1	451+71	452+76 57	LT	125	108 25			1	
8	GR2	452+64	453+03 43	RT	6	31 25	1		1	
8	GR3	453+42 16	454+69	LT	41	118 75	1		1	
8	GR4	453+68 84	454+54 09	RT	44	31 25		1	1	
8	–	451+71	454+69	LT						7
8	–	452+64	454+54	RT						5
TOTALS					216	287 50	2	1	4	12
TOTALS TO GENERAL SUMMARY					216	287 50	2	1	4	12

DRAINAGE, D

FROM SHEET NUMBER	DESIGNATION	STATION FROM	STATION TO OR AT	SIDE	202 CATCH BASIN REMOVED EACH	602 CONCRETE MASONRY CU YD	603 6" CONDUIT, TYPE C FT	603 5" CONDUIT, TYPE F FT	603 8" CONDUIT, TYPE F FT	603 12" CONDUIT, TYPE C (707 01) FT	604 CATCH BASIN NO 2-2B EACH
8	D1	453+16+/–	453+52+/–	LT				36			
8	D2	453+23	453+72+/–	LT		0 2				50	
8	D3	453+64+/–	453+90+/–	RT					30		
8	D4	452+46+/–	452+55+/–	RT	1		50				1
TOTALS					1	0 20	50	36	30	50	1
TOTALS TO GENERAL SUMMARY					1	0 2	50	36	30	50	1

REMOVALS, R

FROM SHEET NUMBER	DESIGNATION	STATION FROM	STATION TO OR AT	SIDE	202 WALK REMOVED SQ FT
8	R1	453+99	454+60	RT	243
TOTALS					243
TOTALS TO GENERAL SUMMARY					243

EROSION CONTROL, ER

FROM SHEET NUMBER	DESIGNATION	STATION FROM	STATION TO OR AT	SIDE	601 ROCK CHANNEL PROTECTION, TYPE C, WITH FILTER CY
8	ER1	452+96	453+09	L&R	68
8	ER2	453+37	453+54	L&R	79
TOTALS					147
TOTALS TO GENERAL SUMMARY					147

PAVEMENT MARKING

FROM SHEET NUMBER	STATION FROM	STATION TO OR AT	SIDE	621 RPM EACH	646 EDGE LINE, WHITE FT	646 CENTER LINE, (DASHED) FT	202 RAISED PAVEMENT MARKER REMOVED EACH
8	452+25 00	454+50 00	LT&RT		450		
8	452+25 00	454+50 00	CL	9		225	9
TOTALS				9	450	225	
TOTALS TO GENERAL SUMMARY				9	0 09 MI	0 04 MI	9

AGGREGATE DRAINS

FROM SHEET NUMBER	STATION FROM	STATION TO OR AT	SIDE	605 AGGREGATE DRAINS FT
8		452+85	RT	6
8		452+60	LT	6
8		453+50	LT	6
8		453+75	RT	6
TOTALS				24
TOTALS TO GENERAL SUMMARY				24

SIGNS, S

FROM SHEET NUMBER	DESIGNATION	STATION	SIDE	630 GROUND MOUNTED SUPPORT, NO 3 POST FT	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH
8	S1	453+43	LT	11		1	1
8	S2	453+78	LT	22		1	2
8	S3	453+75	RT	24		3	2
8	S4	452+85	RT	11		1	1
8	S5	453+05	RT		1		2
8	S6	453+48	LT		1		1
TOTALS				68	2	6	9
TOTALS TO GEN SUMMARY				68	2	6	9

CALCULATED BY ATY DATE 12-99
CHECKED BY KGD DATE 12-99

CALCULATIONS

SEN-19-8.56

6/22

LOTTED MARCH 11, 2003 03/11/03 07 35 30 AM EST
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FROM SHEET NUMBER							ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
4	5	6		10	11							
											ROADWAY	
LUMP							201	11000	LUMP		CLEARING AND GRUBBING	
		243					202	30000	243	SF	WALK REMOVED	
		216					202	38000	216	FT	GUARDRAIL REMOVED	
	9						202	54000	9	EACH	RAISED PAVEMENT MARKER REMOVED	
		1					202	58100	1	EACH	CATCH BASIN REMOVED	
				281	91		203	10000	372	CY	EXCAVATION	
				98	59		203	20000	157	CY	EMBANKMENT	
		890					204	10000	890	SY	SUBGRADE COMPACTION	
		287 50					606	13030	287 50	FT	GUARDRAIL, TYPE 5, USING 9 FOOT POSTS	
		1					606	22010	1	EACH	ANCHOR ASSEMBLY, TYPE E-98	4
		2					606	26500	2	EACH	ANCHOR ASSEMBLY, TYPE T	
		4					606	35120	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 3 (MODIFIED)	
							690	98400	LUMP		MISC MOWER STORAGE UNIT	5
											EROSION CONTROL	
		147					601	32200	147	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
2							659	00100	2	EACH	SOIL ANALYSIS TEST	
82							659	00300	82	CY	TOPSOIL	
739							659	10000	739	SY	SEEDING AND MULCHING	
40							659	14000	40	SY	REPAIR SEEDING AND MULCHING	
37							659	15000	37	SY	INTER-SEEDING	
0 11							659	20000	0 11	TON	COMMERCIAL FERTILIZER	
0.18							659	31000	0.18	ACRE	LIME	
4							659	35000	4	MGAL	WATER	
							832	10000	1	EACH	STORM WATER POLLUTION PREVENTION PLAN	
							832	30000	5000	EACH	EROSION CONTROL	
											DRAINAGE	
		0 2					602	20000	0 2	CY	CONCRETE MASONRY	
		54					603	01100	54	FT	6" CONDUIT TYPE C	
50		36					603	01500	86	FT	6" CONDUIT, TYPE F	
50							603	01800	50	FT	8" CONDUIT, TYPE B	
50							603	02500	50	FT	8" CONDUIT, TYPE E	
		30					603	02600	30	FT	8" CONDUIT, TYPE F	
		50					603	04600	50	FT	12" CONDUIT, TYPE C (707 01)	
		1					604	04500	1	EACH	CATCH BASIN, NO 2-2B	
		24					605	31100	24	FT	AGGREGATE DRAINS	
											PAVEMENT	
		83					301	46000	83	CY	ASPHALT CONCRETE BASE, PG64-22	
		154					304	20000	154	CY	AGGREGATE BASE	
		18					407	10000	18	GAL	TACK COAT	
		26					407	14000	26	GAL	TACK COAT FOR INTERMEDIATE COURSE	4
		28					442	10500	28	CY	ASPHALT CONCRETE SURFACE COURSE, 9 5mm, TYPE A (448)	
		28					442	20201	28	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, TYPE A (448), AS PER PLAN	
		8					448	46024	8	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (DRIVEWAYS)	
		6					448	48020	6	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)	
											TRAFFIC CONTROL	
		9					621	00100	9	EACH	RPM	
		12					626	00300	12	EACH	BARRIER REFLECTOR, TYPE A2	
		68					630	03100	68	FT	GROUND MOUNTED SUPPORT, NO 3 POST	
		2					630	84900	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
		6					630	85100	6	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
		9					630	86002	9	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
		0 09					646	10000	0 09	MILE	EDGE LINE	
		0 04					646	10200	0 04	MILE	CENTER LINE	
											STRUCTURES	
											SEE SHEET 13 FOR STRUCTURE SEN-19-0858	
											MAINTENANCE OF TRAFFIC	
0 05							614	21400	0 05	MILE	WORK ZONE CENTER LINE, CLASS II	
2							616	10000	2	M GAL	WATER	
							SPECIAL	10810000	LUMP		CPM PROGRESS SCHEDULE	
							614	11000	LUMP		MAINTAINING TRAFFIC	
							619	16010	3	MONTH	FIELD OFFICE, TYPE B	
							623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
							624	10000	LUMP		MOBILIZATION	

CALCULATED BY ALY DATE 12-08
CHECKED BY CDD DATE 12-08

GENERAL SUMMARY

SEN-19-8.56

7/22

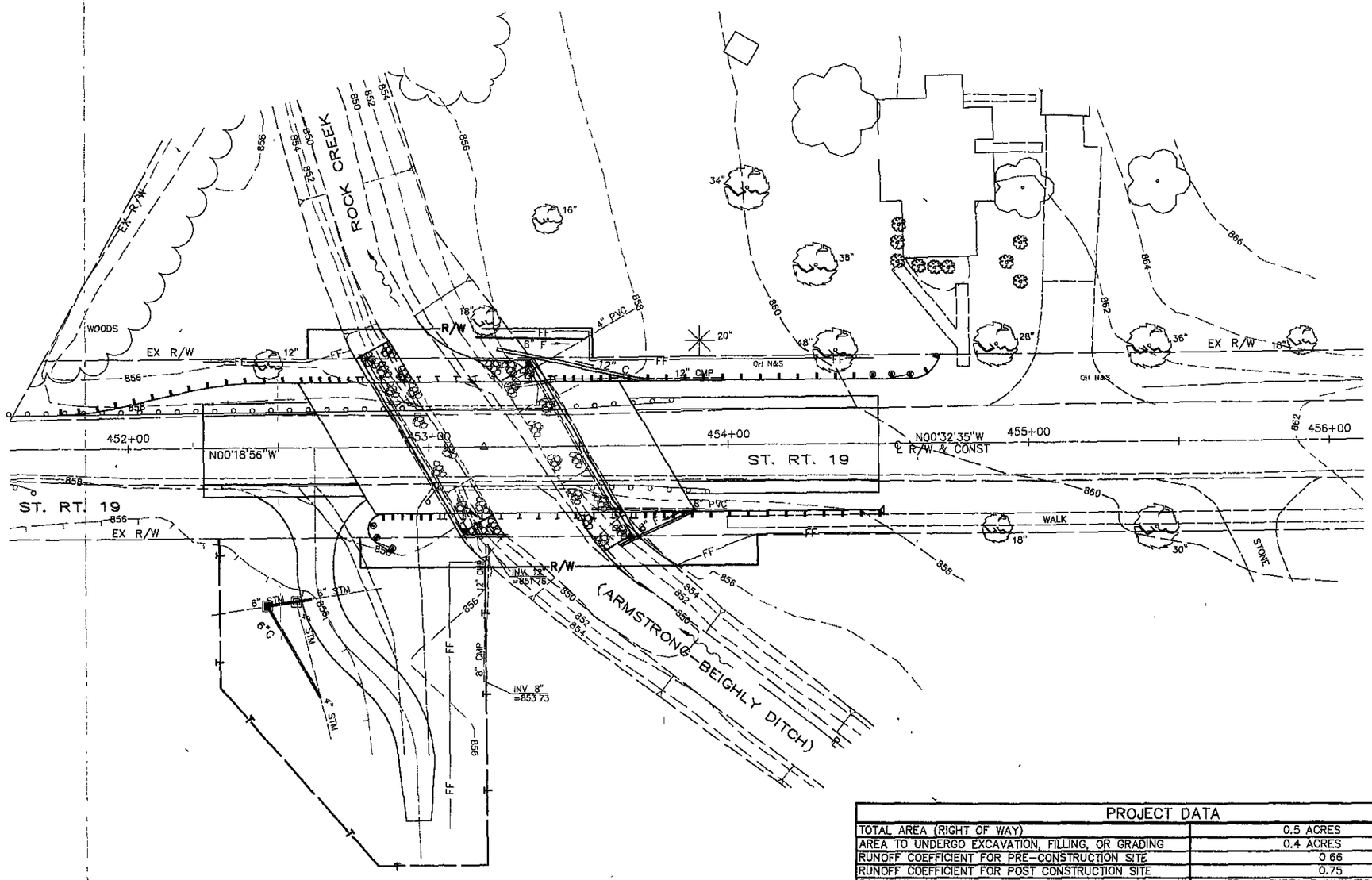
PLOTTED MARCH 11, 2003
FILE NAME I:\5032\022\TRAN\Dwgs\21375GSA.DWG 03/11/03 07 48 20 AM EST
J E F

PROJECT DESCRIPTION
BRIDGE REPLACEMENT WITH MINIMAL APPROACH WORK

LEGEND

FF — FILTER FABRIC FENCE

CATCH BASIN 2-2B



PROJECT DATA	
TOTAL AREA (RIGHT OF WAY)	0.5 ACRES
AREA TO UNDERGO EXCAVATION, FILLING, OR GRADING	0.4 ACRES
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.66
RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	0.75
SOIL DATA	SEE SUBSURFACE INVESTIGATION PLANS
IMMEDIATE RECEIVING WATERS	ROCK CREEK
SUBSEQUENT RECEIVING WATER	SANDUSKY RIVER

USGS QUADRANGLE MAP BLOOMVILLE, OHIO
Geodetic Location
Latitude * Longitude *
N 41°-07'-02" W 83°-00'-56"
* Latitude and Longitude to approx. Begin Project

CALCULATED BY — J.T.
DATE 12-08
CHECKED BY —

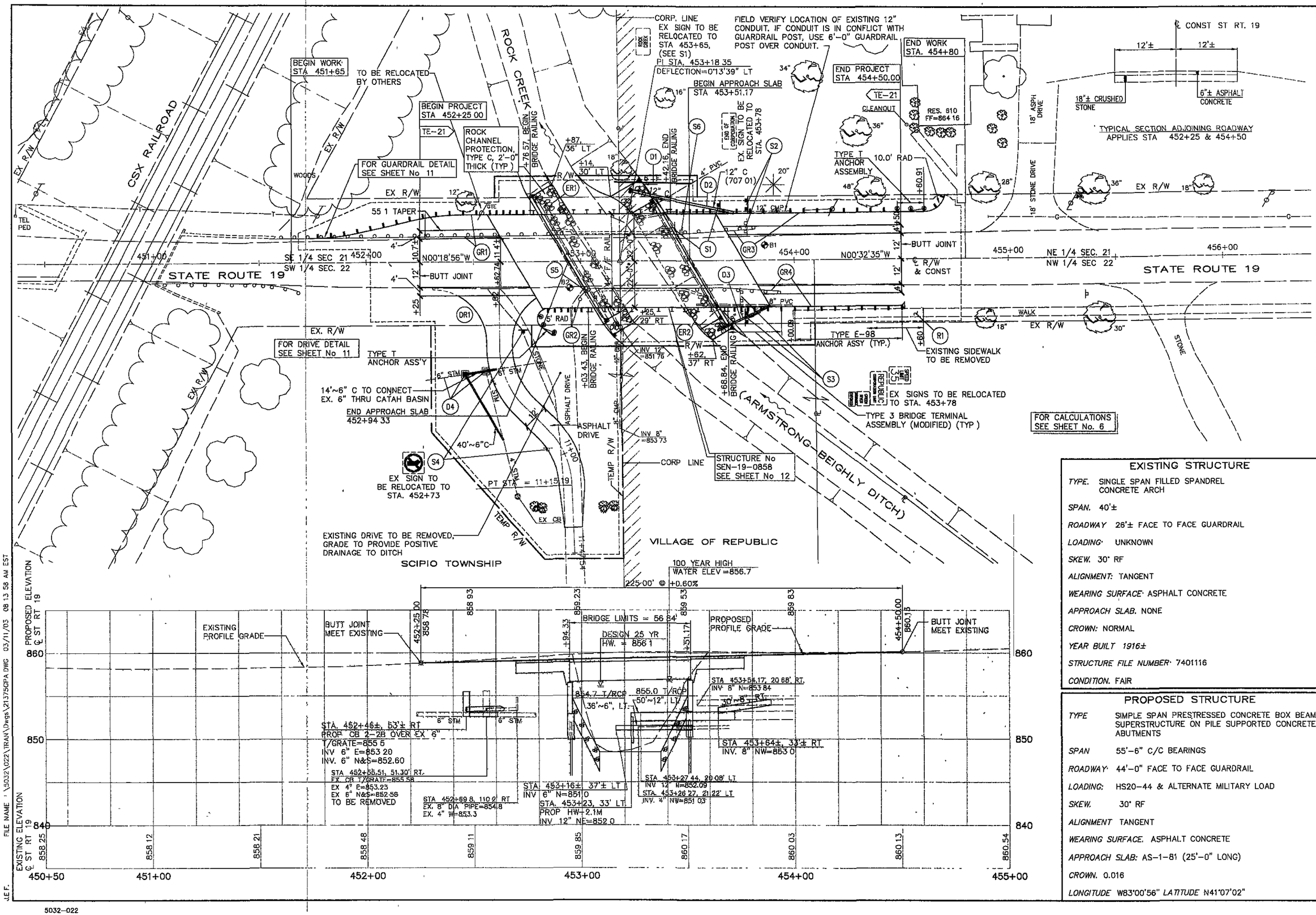
STORM WATER POLLUTION PREVENTION PLAN

SEN-19-8.56

7A
22

PLOTTED MARCH 11 2003
J.E.F
FILE NAME I \5032\022\TRAN\Dwgs\21375DEA.DWG 03/11/03 08 07 51 AM EST

5032-022



STATE ROUTE 19 PLAN AND PROFILE STA. 450+50 TO STA. 455+00

EXISTING STRUCTURE

TYPE. SINGLE SPAN FILLED SPANDREL CONCRETE ARCH

SPAN. 40'±

ROADWAY 26'± FACE TO FACE GUARDRAIL

LOADING· UNKNOWN

SKEW. 30° RF

ALIGNMENT: TANGENT

WEARING SURFACE· ASPHALT CONCRETE

APPROACH SLAB. NONE

CROWN: NORMAL

YEAR BUILT 1916±

STRUCTURE FILE NUMBER· 7401116

CONDITION. FAIR

PROPOSED STRUCTURE

TYPE SIMPLE SPAN PRESTRESSED CONCRETE BOX BEAM SUPERSTRUCTURE ON PILE SUPPORTED CONCRETE ABUTMENTS

SPAN 55'–6" C/C BEARINGS

ROADWAY· 44'–0" FACE TO FACE GUARDRAIL

LOADING: HS20–44 & ALTERNATE MILITARY LOAD

SKEW. 30° RF

ALIGNMENT TANGENT

WEARING SURFACE. ASPHALT CONCRETE

APPROACH SLAB: AS–1–81 (25'–0" LONG)

CROWN. 0.016

LONGITUDE W83°00'56" *LATITUDE* N41°07'02"

CALCULATED BY LTY DATE 4-01
CHECKED BY R.R.H. DATE 4-01

HORIZONTAL SCALE IN FEET 0 10 20 40

SEN-19-8.56

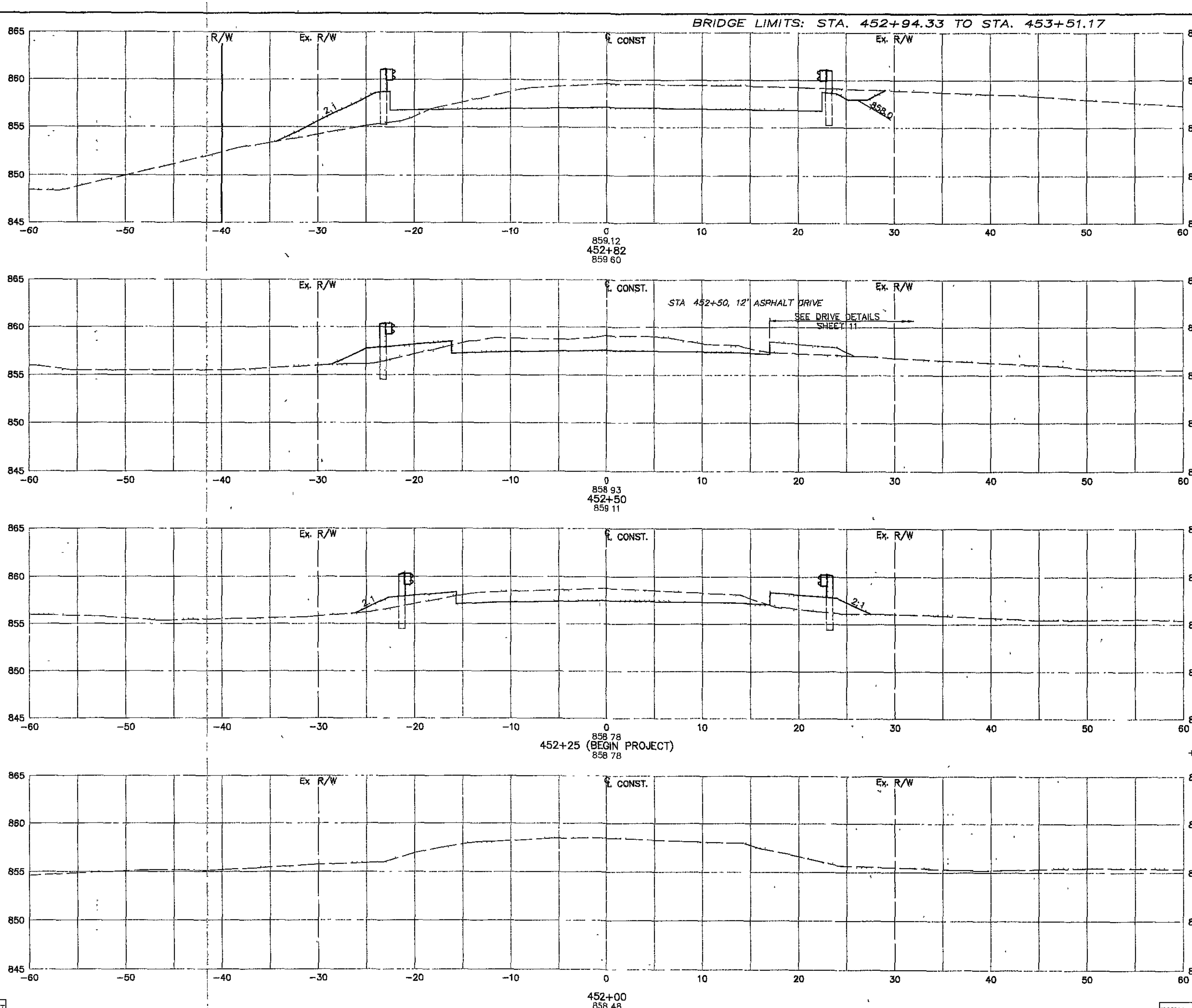
8/22

PLOTTED MARCH 11, 2003 08 13 58 AM EST
J.E.F. FILE NAME = \5032\022\TRAN\Dwgs\21375GPA.DWG 03/11/03

5032–022

CROSS SECTIONS - STATE ROUTE 19
STA. 452+00 TO STA. 452+82

BRIDGE LIMITS: STA. 452+94.33 TO STA. 453+51.17



Station	SEEDING END WIDTH	SEEDING SQ YDS
BACK (452+82)	25	
		98
452+50	30	
		83
452+25	30	
		25
+10 AHEAD	0	
TOTAL THIS SHEET		206

Station	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
452+82 BACK	91	25		
			77	21
452+50	39	10		
			36	16
452+25 AHEAD	38	24		
452+25 BACK	0	24		
			0	7
+10 AHEAD	0	0		
TOTAL THIS SHEET			113	44

CALCULATED BY KJB DATE 4-01
CHECKED BY JLT DATE 4-01

SEN-19-8.56

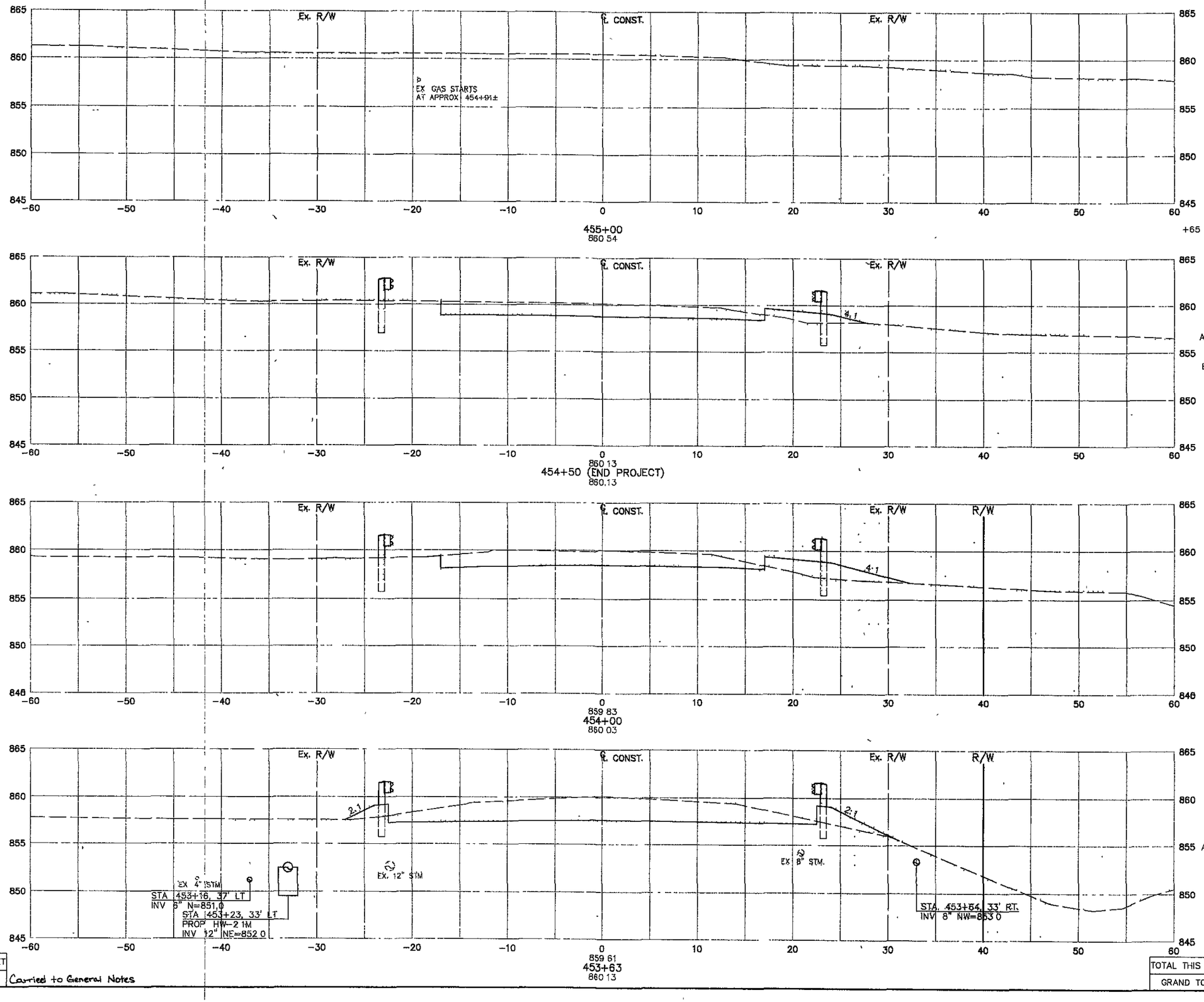
9/22

PLOTTED MAY 8, 2001 FILE NAME SHEET_1 I:\5032\022\TRAN\Dwgs\21375GXA.DWG 12/19/02 03 25 01 PM EST

JEF

5032-022

SEEDING				END AREA		VOLUME	
END WIDTH	SQ YDS			CUT	FILL	CUT	FILL
			455+00 860 54				
0		+65 BACK		+65 BACK	0	0		
	21					0	8
25				AHEAD	0	9	
				BACK	44	9	
	153		454+50 (END PROJECT) 860.13			86	25
30					49	18	
	113		454+00 860 03			82	21
25		AHEAD		AHEAD	70	12	
			453+63 860 13				
287	TOTAL THIS SHEET			TOTAL THIS SHEET		168	54
493	GRAND TOTAL	Carried to General Notes		GRAND TOTAL		281	98



CALCULATED BY KJH DATE 4-01
CHECKED BY JTY DATE 4-01

CROSS SECTIONS - STATE ROUTE 19
STA. 453+63 TO STA. 455+00

SEN-19-8.56

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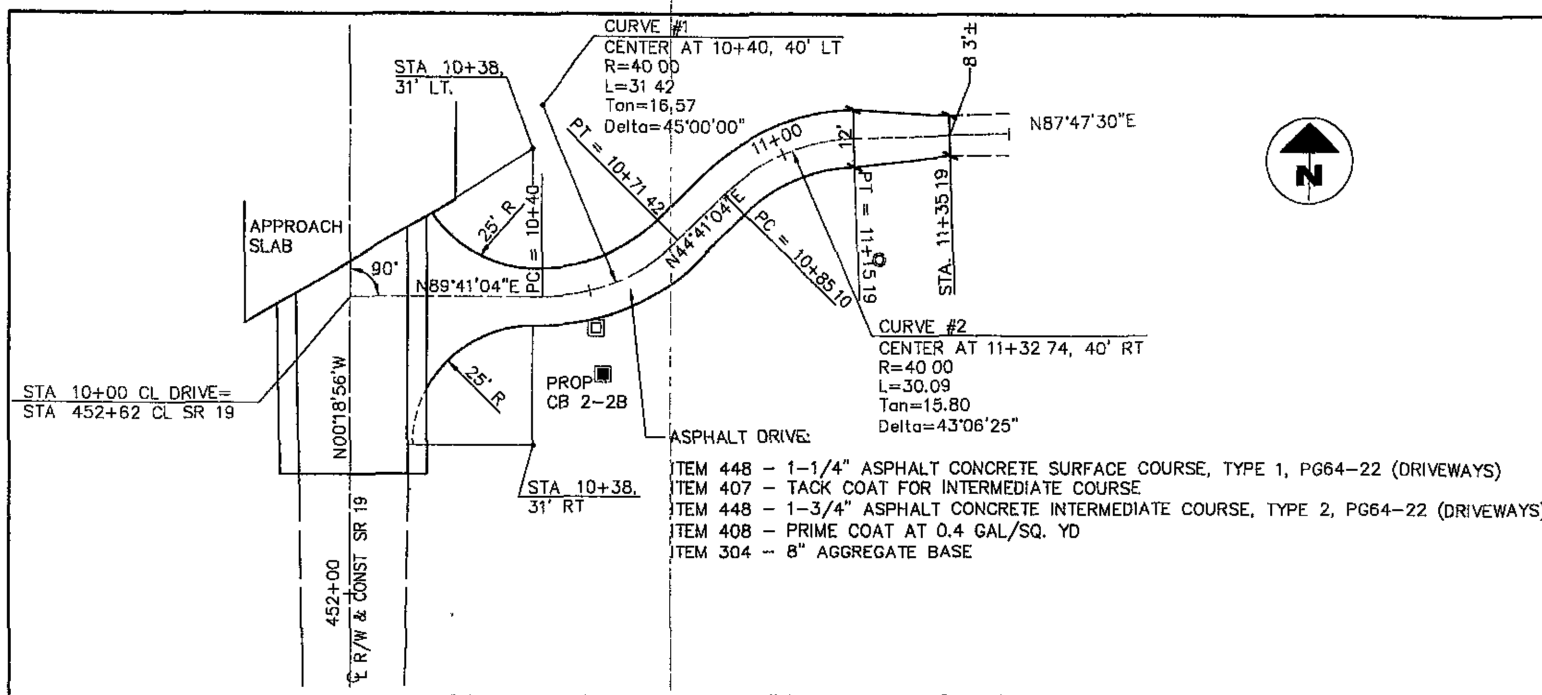
PLOTTED MAY 8, 2001
FILE NAME SHEET_2 \5032\022\TRAN\Dwgs\2-3750XA.DWG 12/13/02 03 25 01 PM EST
J E F

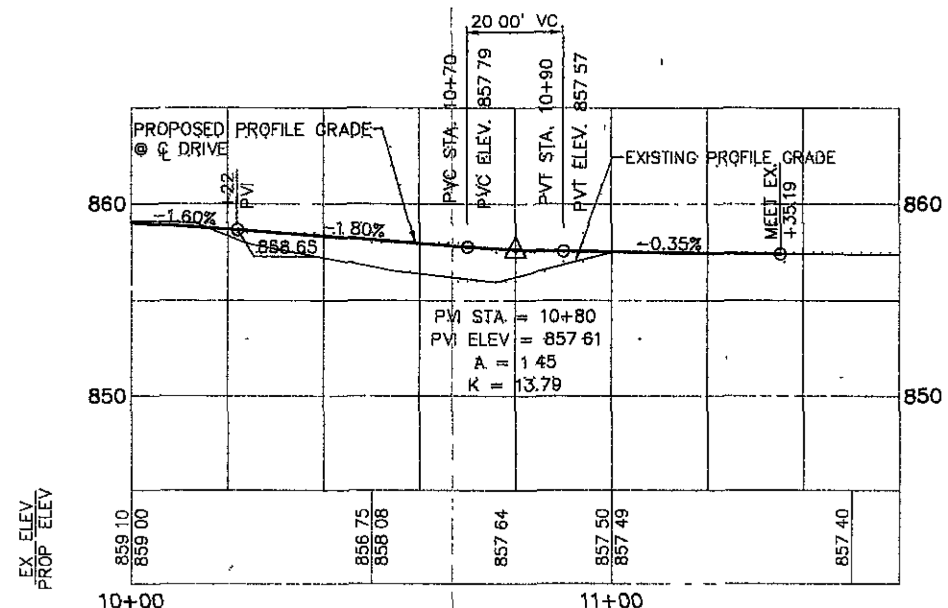
5032-022

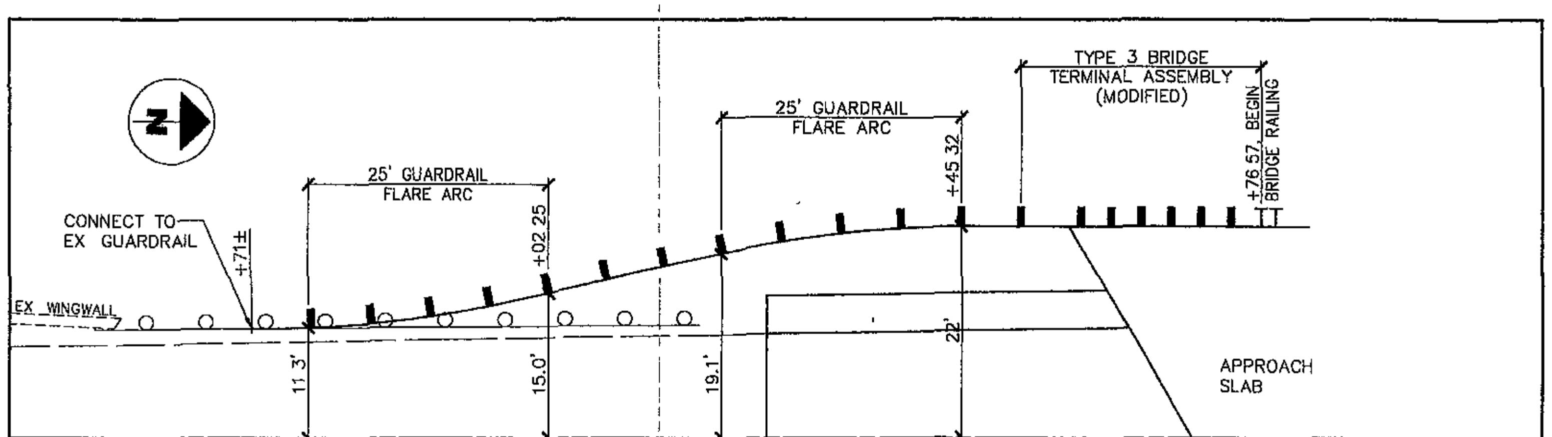
DRIVE AND GUARDRAIL DETAILS



PLAN & PROFILE OF PROPOSED DRIVE

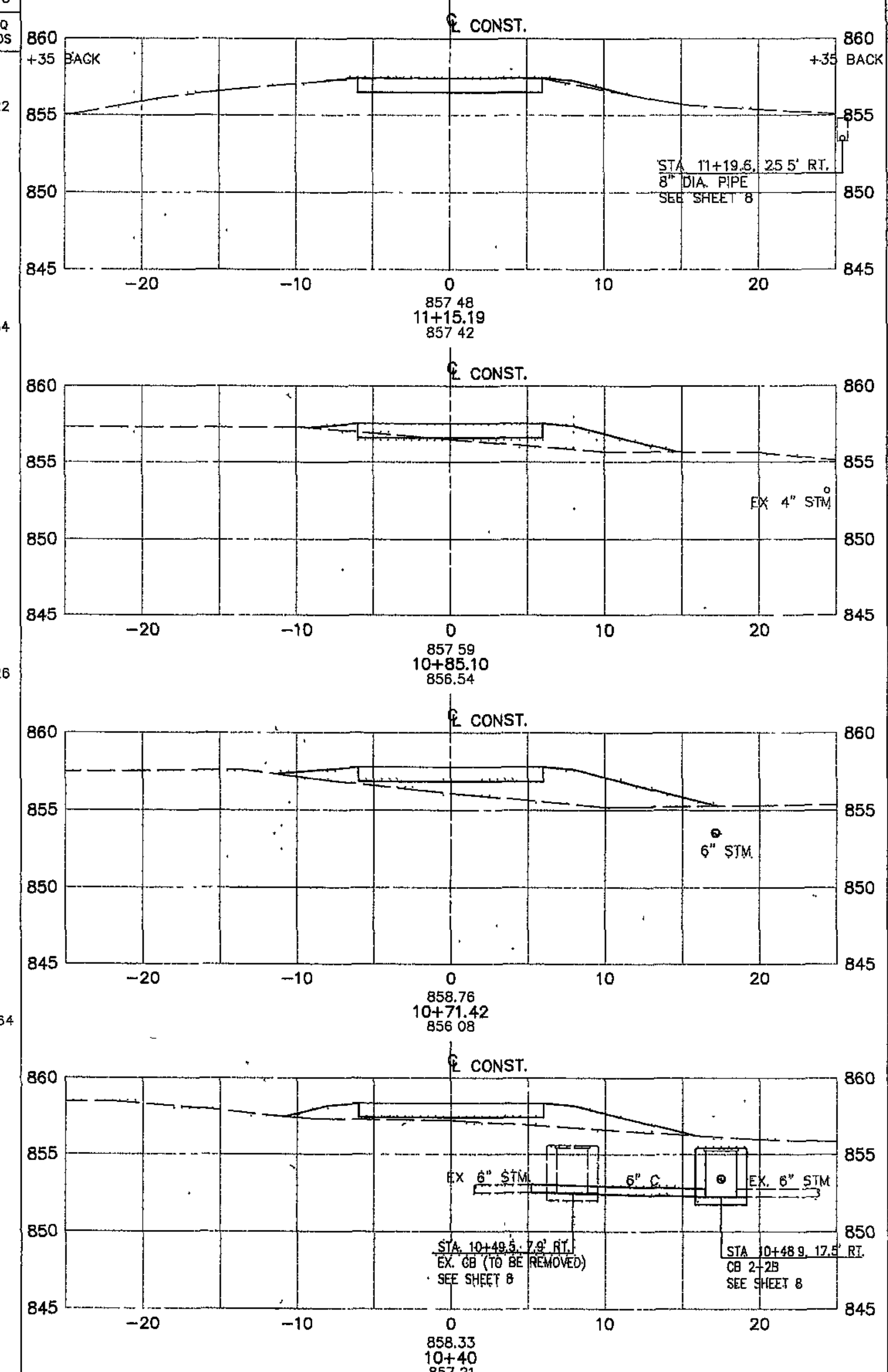
SCALES 1" = 20' (HORIZONTAL) and 1" = 5' (VERTICAL)





GUARDRAIL DETAIL

SCALE 1" = 10'



CROSS SECTIONS OF PROPOSED CEMETARY DRIVE

SCALES: 1" = 5' (HORIZONTAL & VERTICAL)

SEEDING END WIDTH	SEEDING SQ YDS
10	
	22
10	
	34
10	
	26
24	
	164
70	
	246 TOTAL THIS SHEET

Station	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
+35 BACK	10	0		
			8	1
11+15.19	11	1		
			7	7
10+85.10	1	12		
			1	10
10+71.42	0	27		
			0	25
10+40	0	15		
			0	16
+12 AHEAD	0	15		
ADD FOR DRIVE REMOVAL AND GRADING			75	0
TOTAL THIS SHEET			91	59

CALCULATED BY K.J.B. DATE 4-01
CHECKED BY J.T.Y. DATE 4-01

SEN-19-8.56

11/22

PLOTTED MARCH 11, 2003 FILE NAME I:\5032\022\TRAN\Dwgs\2t375drive.dwg 03/11/03 08:49:59 AM EST
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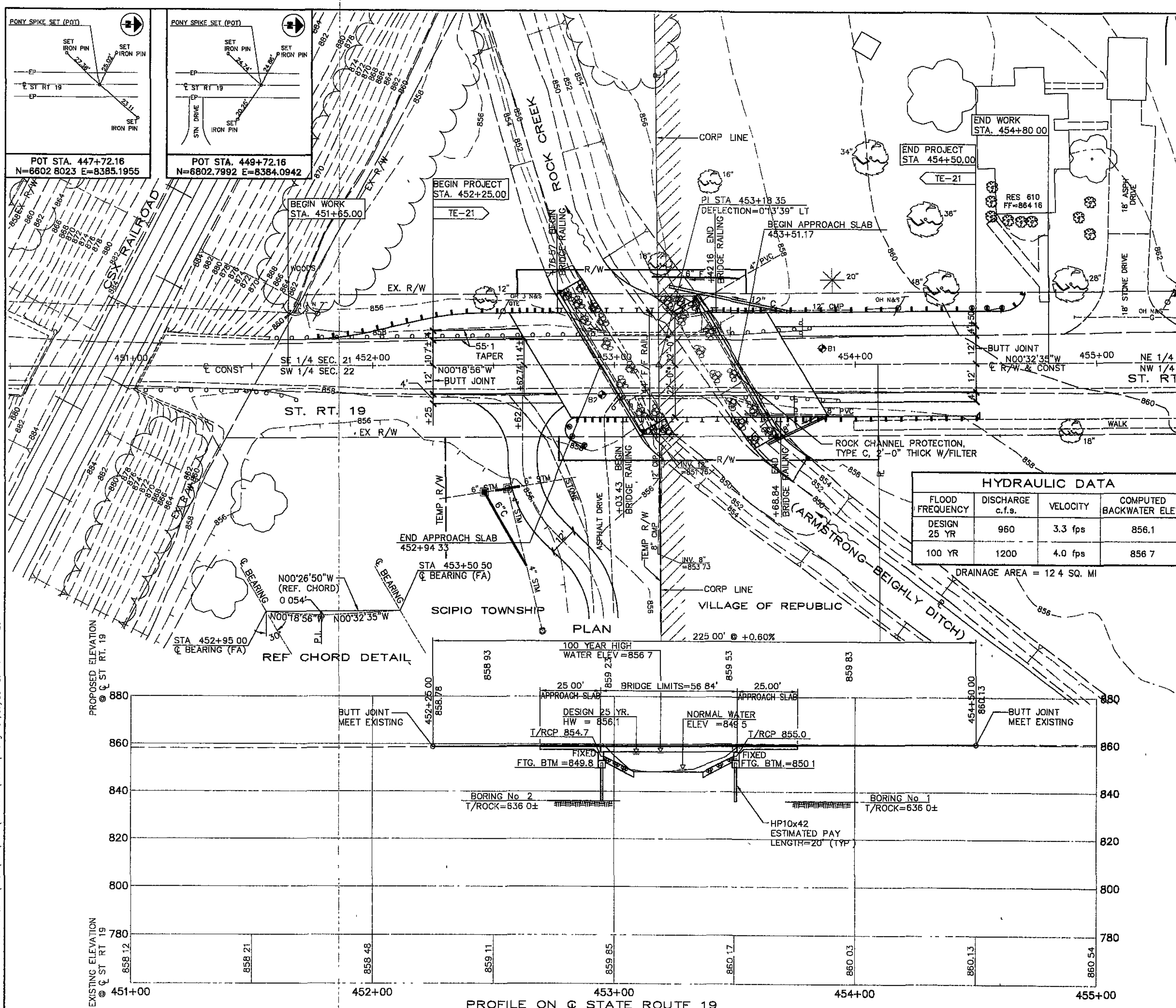
5032-022


PONY SPIKE SET (POT)
SET IRON PIN
POT STA. 447+72.16
N=6602 8023 E=8385.1955
POT STA. 449+72.16
N=6802.7992 E=8384.0942
CSX RAILROAD
ROCK CREEK
BEGIN WORK STA. 451+65.00
BEGIN PROJECT STA. 452+25.00
TE-21
CORP LINE
PI STA 453+18 35
DEFLECTION=0°13'39" LT
BEGIN APPROACH SLAB 453+51.17
END PROJECT STA 454+50.00
END WORK STA. 454+80 00
RES 610 FF=864 16
EX. R/W
ST. RT. 19
SE 1/4 SEC. 21
SW 1/4 SEC. 22
NE 1/4 SEC. 21
NW 1/4 SEC. 22
℄ CONST
℄ R/W & CONST
N00°18'56"W
N00°32'35"W
BUTT JOINT
55:1 TAPER
ROCK CHANNEL PROTECTION, TYPE C, 2'-0" THICK W/FILTER
(ARMSTRONG-BEIGHLY DITCH)
END APPROACH SLAB 452+94 33
STA 453+50 50 ℄ BEARING (FA)
STA 452+95 00 ℄ BEARING (FA)
N00°26'50"W (REF. CHORD) 0 054'
REF CHORD DETAIL
SCIPIO TOWNSHIP
VILLAGE OF REPUBLIC
PLAN
225 00' @ +0.60%
100 YEAR HIGH WATER ELEV=856 7
25 00' APPROACH SLAB
BRIDGE LIMITS=56 84'
DESIGN 25 YR. HW = 856.1
NORMAL WATER ELEV =849 5
T/RCP 854.7
T/RCP 855.0
FIXED FTG. BTM =849.8
FIXED FTG. BTM.=850 1
BORING No 2 T/ROCK=636 0±
BORING No 1 T/ROCK=636 0±
HP10x42 ESTIMATED PAY LENGTH=20' (TYP)
BUTT JOINT MEET EXISTING
PROPOSED ELEVATION @ ℄ ST RT. 19
EXISTING ELEVATION @ ℄ ST RT 19
451+00
452+00
453+00
454+00
455+00
PROFILE ON ℄ STATE ROUTE 19

HORIZONTAL SCALE IN FEET

EARTHWORK LIMITS SHOWN ARE APPROXIMATE ACTUAL SLOPES SHALL CONFORM TO THE PLAN CROSS SECTIONS

SITE BENCH MARK No. 1

TOP 1st STEP SOUTHEAST CORNER RAILROAD BRIDGE OVER ST RT 19 YELLOW PAINT MARK W/"x" (SURVEY POINT No 2469) STA 450+18 7, 9 2'± RT ELEV 859 95

SITE BENCH MARK No. 2

SOUTH BONNET BOLT FIRE HYDRANT WEST SIDE OF ST RT 19 BY RESIDENCE No 610 (SURVEY POINT No 2298) STA. 455+33 8, 29 6'± LT ELEV 863 54

HYDRAULIC DATA

FLOOD FREQUENCY	DISCHARGE c.f.s.	VELOCITY	COMPUTED BACKWATER ELEV
DESIGN 25 YR	960	3.3 fps	856.1
100 YR	1200	4.0 fps	856 7

DRAINAGE AREA = 12 4 SQ. MI

CURRENT YEAR ADT (2003) = 2100
DESIGN YEAR ADT (2023) = 2600

EXISTING STRUCTURE

TYPE: SINGLE SPAN FILLED SPANDREL CONCRETE ARCH
SPAN: 40'±
ROADWAY: 26'± FACE TO FACE GUARDRAIL
LOADING: UNKNOWN
SKEW: 30° RF
ALIGNMENT: TANGENT
WEARING SURFACE: ASPHALT CONCRETE
APPROACH SLAB: NONE
CROWN: NORMAL
YEAR BUILT: 1916±
STRUCTURE FILE NUMBER: 7401116
CONDITION: FAIR

PROPOSED STRUCTURE

TYPE: SIMPLE SPAN PRESTRESSED CONCRETE BOX BEAM SUPERSTRUCTURE ON PILE SUPPORTED CONCRETE ABUTMENTS
SPAN: 55'-6" C/C BEARINGS
ROADWAY: 44'-0" FACE TO FACE GUARDRAIL
LOADING: HS20-44 & ALTERNATE MILITARY LOAD
SKEW: 30° RF
ALIGNMENT: TANGENT
WEARING SURFACE: ASPHALT CONCRETE
APPROACH SLAB: AS-1-81 (25'-0" LONG)
CROWN: 0.016
LONGITUDE: W83°00'56" LATITUDE N41°07'02"

DESIGN AGENCY - POGGEMEYER DESIGN GROUP, INC. ARCHITECTS • ENGINEERS • PLANNERS, BOWLING GREEN, OHIO

DESIGNED J.T.Y	CHECKED M.E.M	DRAWN J.E.F	REVISED	REVIEWED R.R.H	DATE 4-19-01	STRUCTURE FILE NUMBER 7401124

SENECA COUNTY 452+94.33 453+51.17

SITE BRIDGE SEN-19-0858 OVER ROCK CREEK

SEN-19-8.56

1/8

12/22

PLOTTED JANUARY 7, 2003 JEF FILE NAME I:\5032\022\RAN\Structure\Se019sp1.dwg 01/07/03 08 53 15 AM EST

5032-022

ESTIMATED QUANTITIES

CALC BY: JTY DATE: DEC-02
CHKD. BY. MEM DATE. DEC-02

ITEM	ITEM EXT	TOTAL	UNIT	DESCRIPTION	AS PER PLAN SHEET NO.	ABUTMENTS REAR	ABUTMENTS FWD.	SUPER	GENERAL
202	11002	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN					LUMP
407	10000	21	GAL	TACK COAT				14	
407	14000	11	GAL	TACK COAT FOR INTERMEDIATE COAT				6	
442	10500	12	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, 9 5MM, TYPE A (448)				12	
442	20201	17	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (448), AS PER PLAN	4 OF 22			17	
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING					LUMP
503	21301	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN	2/8	LUMP	LUMP		
505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION					LUMP
507	00100	360	FT	STEEL PILE HP10X42, FURNISHED		180	180		
507	00150	360	FT	STEEL PILE HP10X42, DRIVEN		180	180		
507	93301	18	EACH	STEEL POINTS OR SHOES, AS PER PLAN	2/8	9	9		
509	10000	10035	POUND	EPOXY COATED REINFORCING STEEL					10035
510	10000	22	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALIC GROUT		11	11		
511	43500	86	CU YD	CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING		43	43		
512	55910	LUMP		TYPE 3 WATERPROOFING				LUMP	
515	10070	11	EACH	PRESTRESSED CONCRETE NON-COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, B27-48				11	
516	13600	264	SQ FT	1" PREFORMED EXPANSION JOINT FILLER		132	132		
SPECIAL	51631200	102	FT	SAWING AND SEALING BITUMINOUS CONCRETE JOINTS		51	51		
516	41100	22	EACH	1/8" PREFORMED BEARING PAD, 711 21				22	
516	43200	44	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), 2" x 6" x 12"				44	
517	70000	131	FT	RAILING (TWIN STEEL TUBE)				131	
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC		LUMP	LUMP		
SPECIAL	51822300	129	FT	STEEL DRIP STRIP				129	
518	40000	142	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		71	71		
518	40010	36	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		18	18		
518	42300	20	FT	8" NON-PERFORATED CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707 01		10	10		
526	25000	244	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15")		122	122		

STRUCTURE NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWING(S)

AS-1-81	DATED (REVISED)	7-19-02
DS-1-92	DATED (REVISED)	7-18-03
PSBD-1-93	DATED (REVISED)	7-19-02
TST-1-99	DATED (REVISED)	10-17-03

AND TO SUPPLEMENTAL SPECIFICATION(S)

DESIGN SPECIFICATIONS. THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE 1997, 1998, 1999 AND 2000 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL

DESIGN LOADING. HS20-44 AND THE ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE = 60 PSF

DESIGN DATA.

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615, A616, OR A617
GRADE 60 MINIMUM YIELD STRENGTH 60,000 P S I

CONCRETE FOR PRESTRESSED BEAMS - $f'c$ = 5500 P S I (28 DAY)
- $f'c_1$ = 4000 P S I (RELEASE)

UNIT STRESS - 2200 P S I COMPRESSION
- 444 P S I TENSION

PRESTRESSING STRAND - ASTM A416 GRADE 270, 1/2" DIA SEVEN-WIRE UNCOATED, LOW-RELAXATION STRANDS, NOMINAL STRAND AREA = 0 153 SQ IN
F's = 270,000 PSI
INITIAL STRESS = 0 75F's

UTILITY LINES. ALL EXPENSE INVOLVED IN RELOCATION OF THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITIES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM

REMOVAL OF EXISTING STRUCTURE: WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN: UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT ALL BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 304.02 MATERIAL PLACED IN 6" LIFTS AS PER 304 04.

PILE DESIGN LOAD (ULTIMATE BEARING VALUE)
THE ULTIMATE BEARING VALUE IS 78 TONS PER PILE FOR THE ABUTMENT PILES

ABUTMENT PILES:

18 PILES 20 FEET LONG, ESTIMATED LENGTH
18 PILES OF ORDER LENGTH 20 FEET LONG

ITEM 507, STEEL POINTS, AS PER PLAN: STEEL PILE POINTS SHALL BE USED TO PROTECT THE TIPS OF THE PROPOSED STEEL "H" PILING. THE STEEL POINTS SHALL BE FURNISHED BY ASSOCIATED PILE AND FITTING CORPORATION, 262 RUTHERFORD BLVD, CLIFTON, NEW JERSEY 07014, INTERNATIONAL CONSTRUCTION EQUIPMENT, INC, 301 WAREHOUSE DRIVE, MATTHEWS, NORTH CAROLINA 28015; DOUGHERTY FOUNDATION PRODUCTS, INC., P O. BOX 688, FRANKLIN LAKES, NEW JERSEY 07417, VERSA STEEL INC, 3601 N.W YEON AVENUE, P O BOX 10559, PORTLAND, OREGON 97210, PILING ASSESSORIES, INC, 3467 GRIBBLE ROAD, MATHEWS, NORTH CAROLINA, 28105 OR BY A MANUFACTURER THAT CAN FURNISH A STEEL POINT THAT IS ACCEPTABLE TO DIRECTOR. THE MATERIAL USED FOR THE MANUFACTURING OF PILE POINTS SHALL CONFORM TO ASTM A27/A27M 65/35 - CLASS 2 - HEAT TREATED OR AASHTO M103/M103M 65/35 - HEAT TREATED WELDING OF THE PILE POINTS TO THE PILE SHALL BE IN ACCORDANCE WITH AWS D1 5 OR THE MANUFACTURER'S WRITTEN WELDING PROCEDURE SUPPLIED THE ENGINEER BEFORE THE WELDING IS PERFORMED A NOTERIZED COPY OF THE MILL TEST REPORT SHALL BE SUBMITTED TO THE ENGINEER

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
SEALING OF CONCRETE SURFACES
WATERPROOFING AND ASPHALT CONCRETE OVERLAY
STEEL DRIP STRIP

DESIGN AGENCY
POGGEMEYER DESIGN GROUP, INC
ARCHITECTS + ENGINEERS + PLANNERS
1168 NORTH MAIN STREET
BOWLING GREEN, OHIO 43402

DESIGNED J.T.Y.
DRAWN J.E.F.
CHECKED M.E.M.
REVISED 4-01
REMEMED R.R.H.
DATE 4-19-01
STRUCTURE FILE NUMBER 7401116

ESTIMATED QUANTITIES AND STRUCTURAL NOTES
BRIDGE SEN-19-0858
OVER ROCK CREEK

SEN-19-8.56

2 | 8

13
22

PLOTTED MAY 8, 2001
J.E.F
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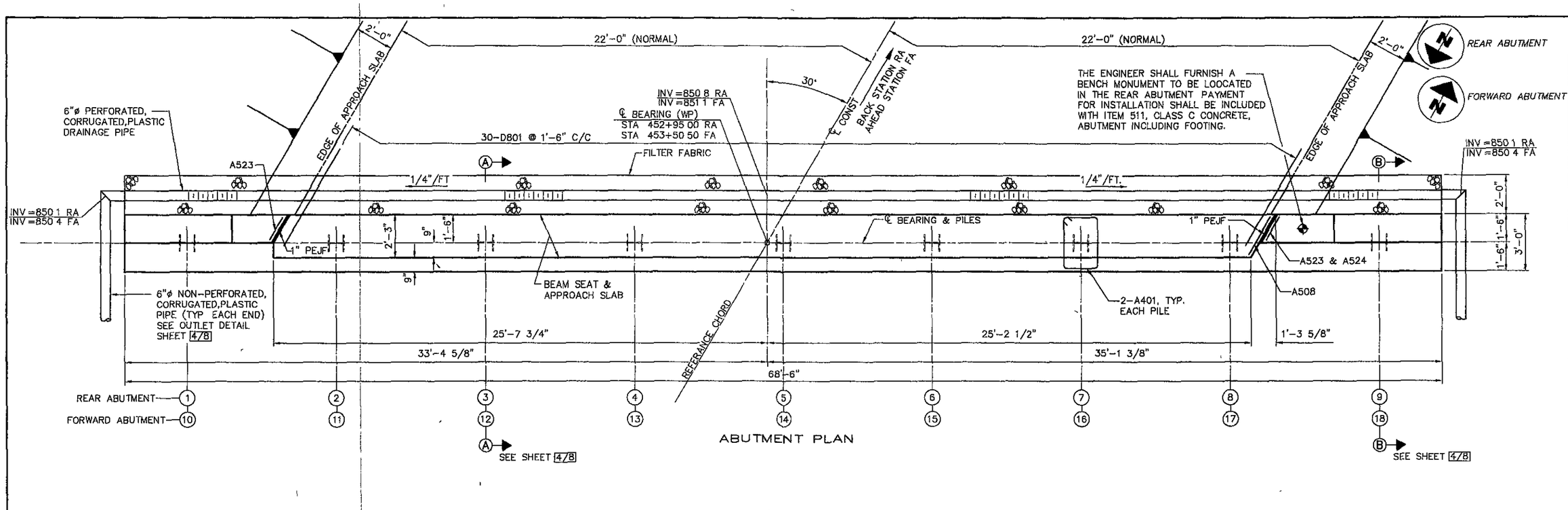
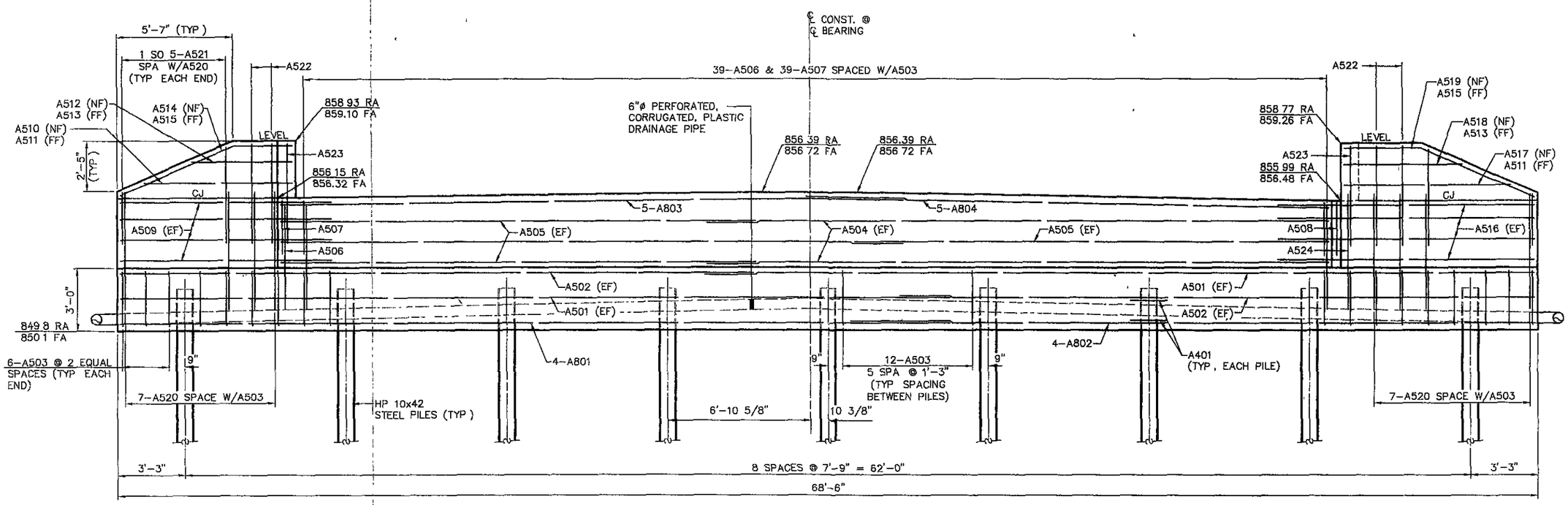


ABUTMENT PLAN



ABUTMENT ELEVATION

NOTE: LAP #5 BARS 2'-5"
LAP #8 BARS 4'-11"
UNLESS NOTED OTHERWISE

LEGEND

RA = REAR ABUTMENT
FA = FORWARD ABUTMENT
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
SO = SERIES OF
WP = WORK POINT
CJ = CONSTRUCTION JOINT
RCP = ROCK CHANNEL PROTECTION
UNO = UNLESS NOTED OTHERWISE
PEJF = PREFORMED EXPANSION JOINT FILLER

ALL BARS SHALL BE EPOXY COATED

DESIGN AGENCY
POGGEMEYER DESIGN GROUP, INC.
ARCHITECTS ENGINEERS PLANNERS
1168 NORTH MAIN STREET
BOWLING GREEN, OHIO 43402

DESIGNED LTY
DRAWN J.E.F
CHECKED M.E.M
REVIEWED R.R.H
DATE 4-19-01
REVISED
STRUCTURE FILE NUMBER 7401124

ABUTMENT PLAN and ELEVATION
BRIDGE SEN-19-0858
OVER ROCK CREEK

SEN-19-8.56

3 | 8

14 / 22

PLOTTED MAY 8, 2001 FILE NAME I:\5032\022\TRAN\Structure\Se019ap1.dwg 12/20/02 10:35:08 AM EST
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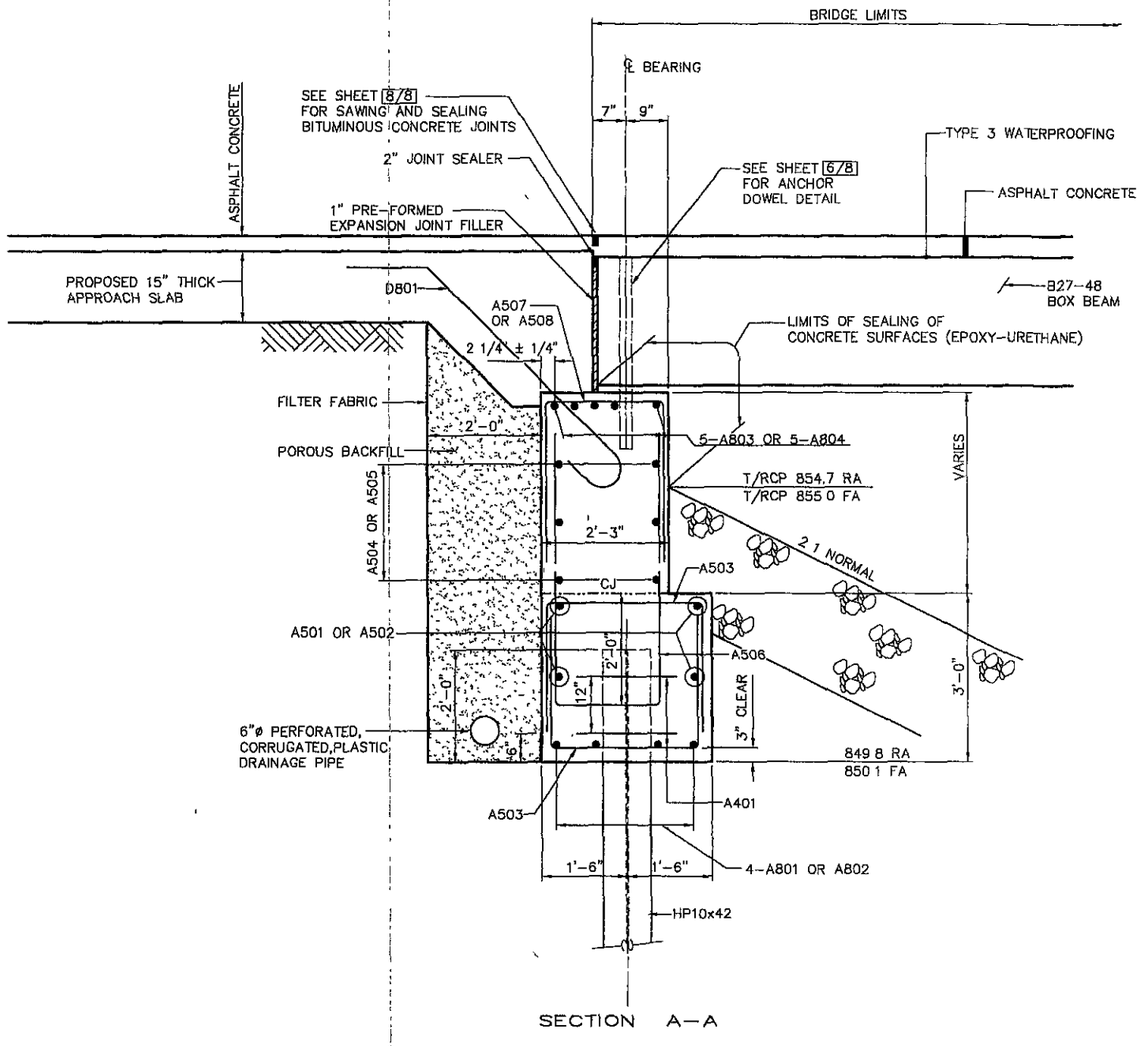

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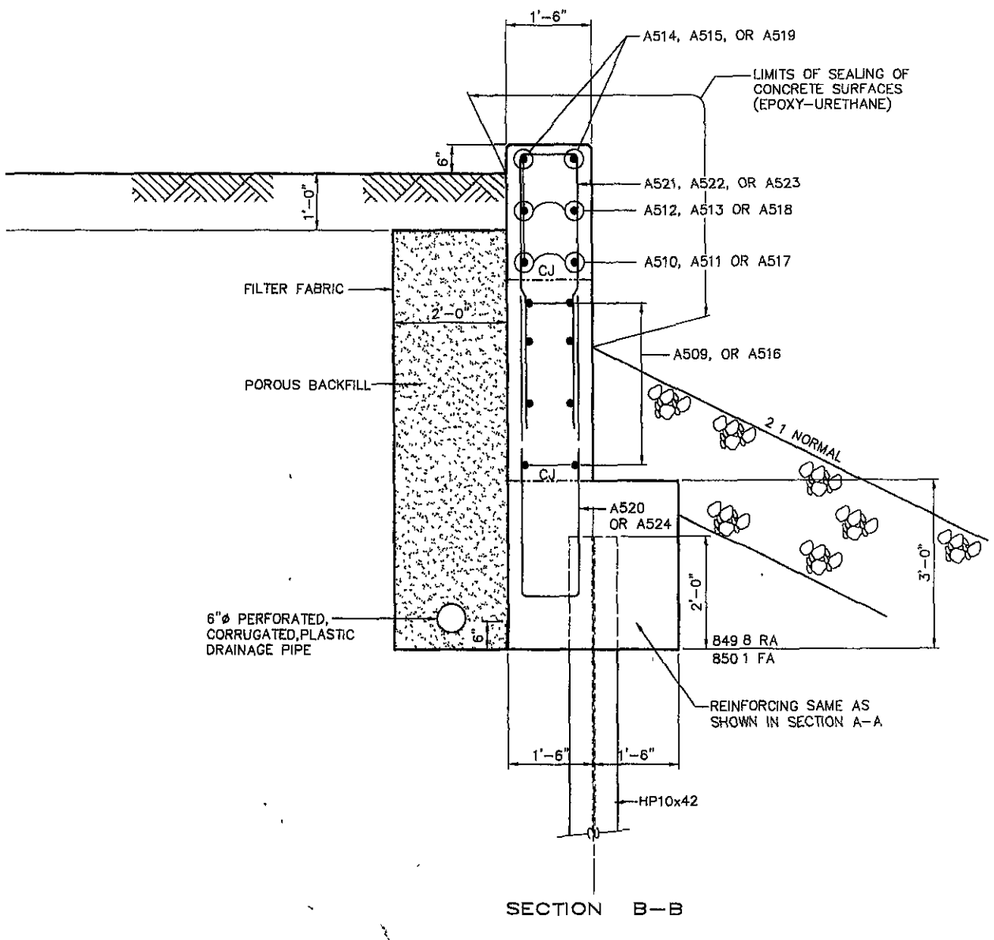

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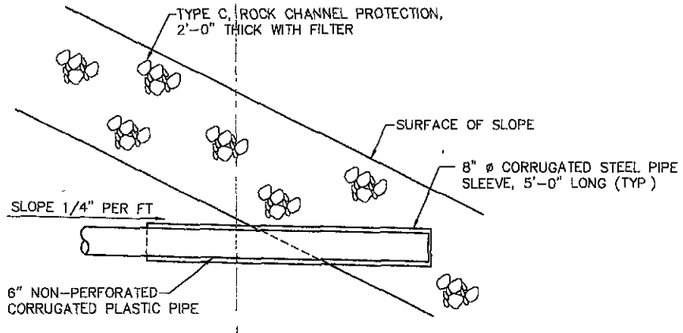

OUTLET DETAIL

LEGEND

RA = REAR ABUTMENT
FA = FORWARD ABUTMENT
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
CJ = CONSTRUCTION JOINT
RCP = ROCK CHANNEL PROTECTION
PEJF = PREFORMED EXPANSION JOINT FILLER

ALL BARS SHALL BE EPOXY COATED

POROUS BACKFILL WITH FILTER FABRIC, 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1'-0" BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS

BRIDGE SEAT REINFORCING: REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEAM ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS

ABUTMENT CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT SHALL NOT BE PLACED UNTIL THE PRESTRESSED CONCRETE BOX BEAMS HAVE BEEN ERECTED

DESIGN AGENCY
POGGEMEYER DESIGN GROUP, INC.
ARCHITECTS + ENGINEERS + PLANNERS
BOWLING GREEN, OHIO 43402

DESIGNED	DRAWN	REVIEWED	DATE
J.T.Y.	J.E.F.	R.R.H	4-19-01
CHECKED	REVISED	STRUCTURE FILE NUMBER	
M.E.M		7401124	

ABUTMENT SECTIONS
BRIDGE SEN-19-0858
OVER ROCK CREEK

SEN-19-8.56

4 | 8

15 / 22

PLOTTED MAY 8, 2001
J.E.F
FILE NAME: I:\5032\022\TRAN\Structure\Sa019ad1.dwg 12/20/02 11:14:35 AM EST

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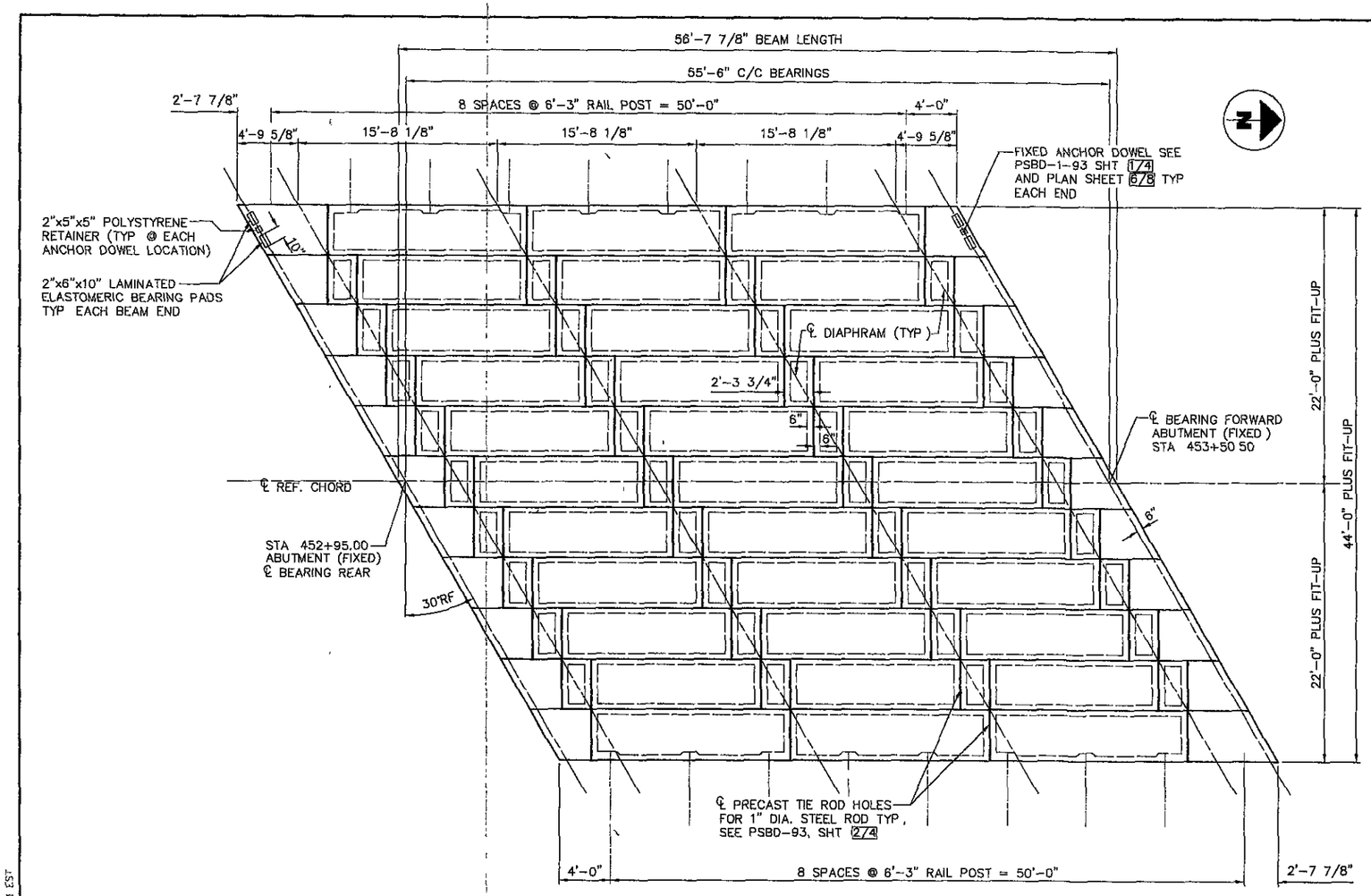
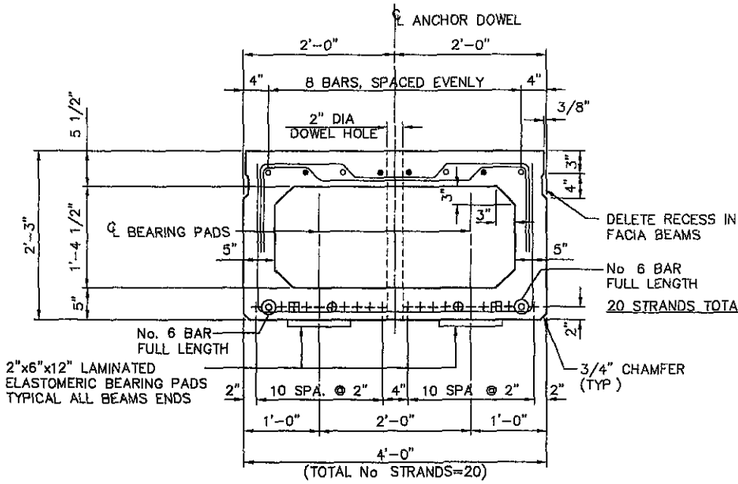


FRAMING PLAN



B27-48 BEAM 55'-6" SPAN

NOTE. FABRICATORS SHOP DRAWINGS SHALL SHOW COMPLETE DETAILS OF BEAM REINFORCING

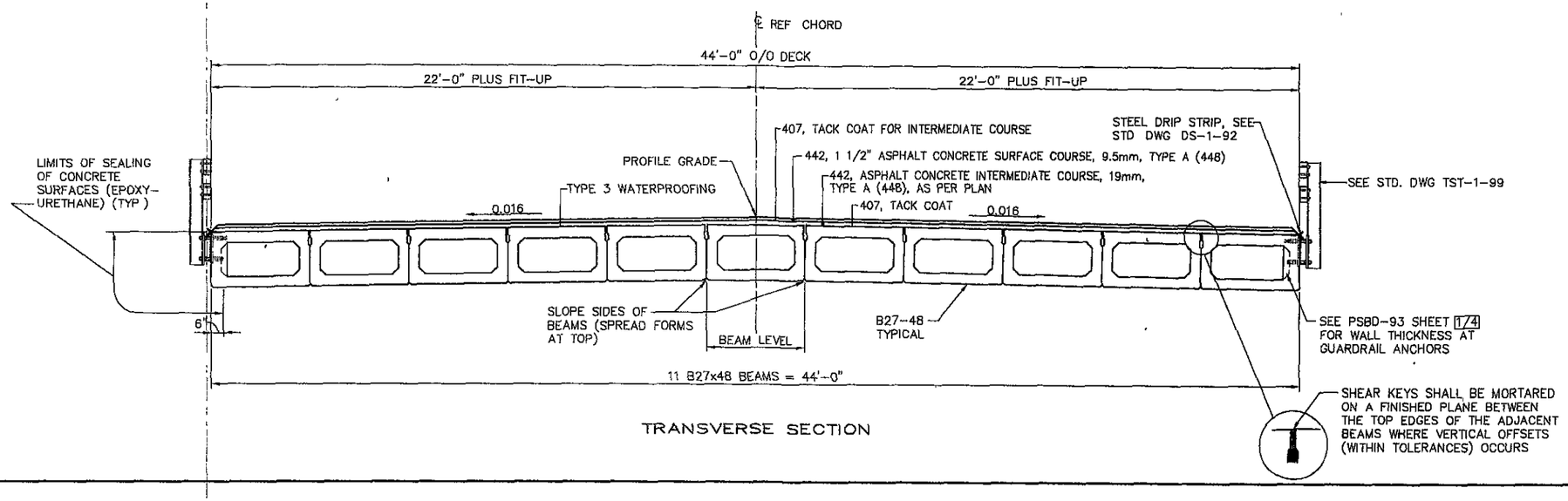
+ 1/2" DIA. SEVEN WIRE PRESTRESSING STRAND, UNCOATED, LOW RELAXATION

⊕ DEBOND STRAND 1'-6" FROM END

⊞ DEBOND STRAND 2'-6" FROM END

• NO 5 BAR FULL LENGTH

◦ NO 5 BAR 9'-3" LONG, AT EACH END



TRANSVERSE SECTION

DESIGN AGENCY
POGGEMEYER DESIGN GROUP, INC.
ARCHITECTS + ENGINEERS + PLANNERS
401 MAIN STREET, SUITE 1535
BOWLING GREEN, OHIO 43402

DESIGNED	DRAWN	REVIEWED	DATE
JTY	J.E.F	R R H	4-19-01
CHECKED	REVISED	STRUCTURE FILE NUMBER	
M.E.M		7401124	

TRANSVERSE SECTION
BRIDGE SEN-19-0858.
OVER ROCK CREEK

SEN-19-8.56

5 | 8

16 / 22

PLOTTED MAY 8, 2001
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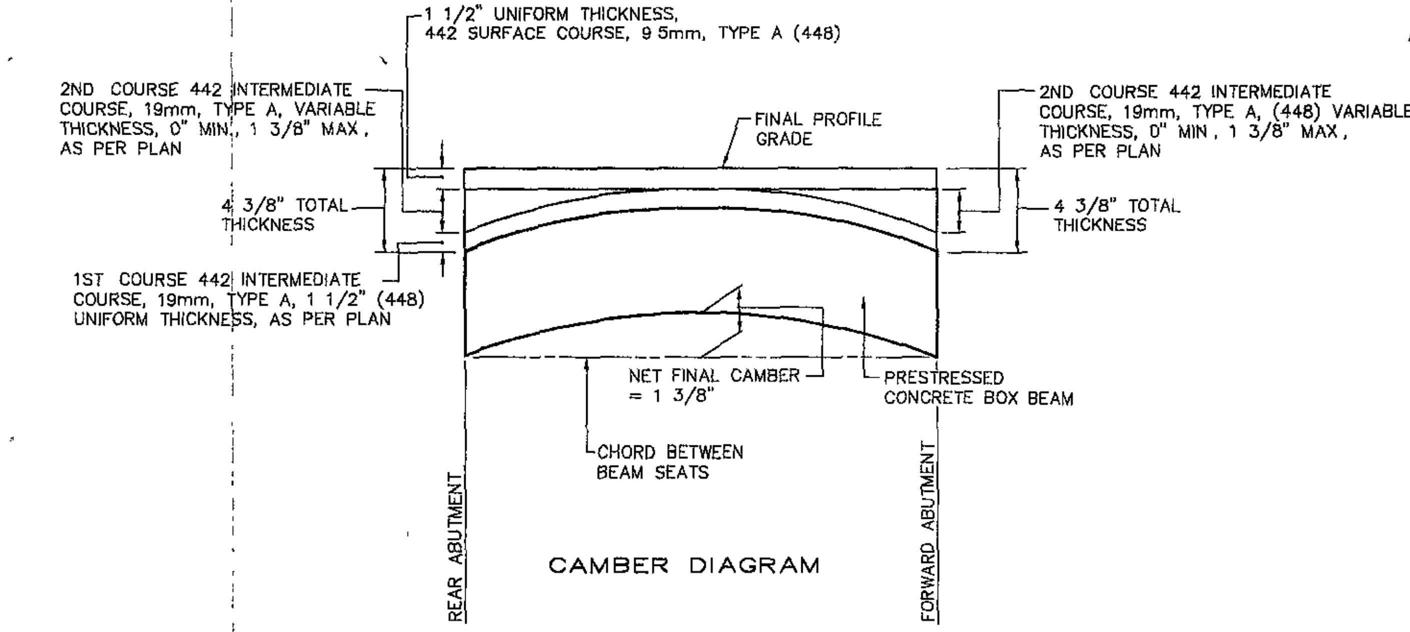
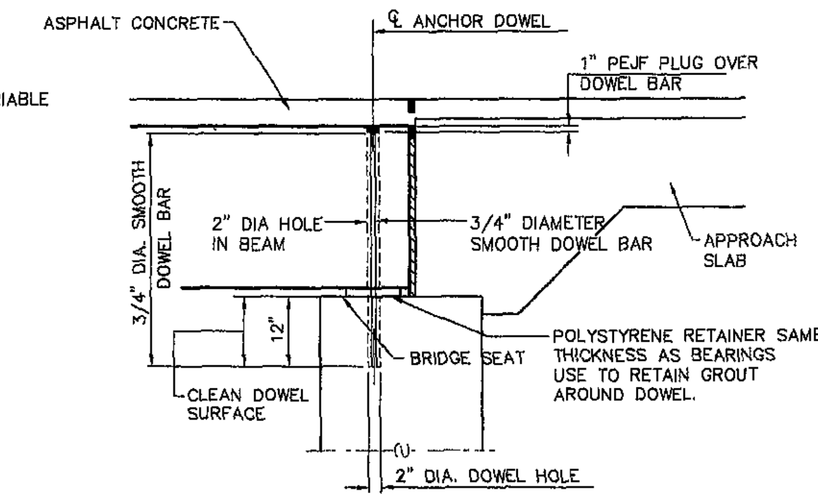


CAMBER DIAGRAM

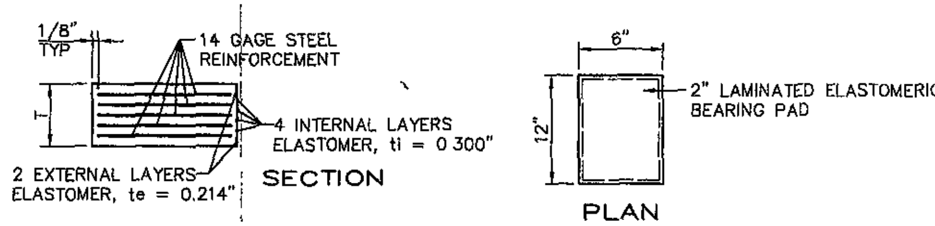


FIXED ANCHOR DOWEL

(COST INCLUDED WITH ITEM 515)

PROCEDURE. PLACE POLYSTRENE GROUT RETAINER DRILL AND CLEAN DOWEL HOLES THEN PLACE NON-SHRINKING GROUT, DOWEL AND 1 INCH MINIMUM THICKNESS PEJF PLUG

PEJF = PREFORMED EXPANSION JOINT FILLER



LAMINATED ELASTOMERIC BEARINGS

ELASTOMER						STEEL		
DUROMETER	L	W	T	ti	te	ns	GAGE	COMMENTS
50	6"	12"	2"	0.300	0.214	5	14	

MAXIMUM DESIGN LOAD PER PAD = 16.4 KIPS DL + 20 KIPS LL = 36.4 KIPS

TWO – 1/8" THICK PREFORMED BEARING PADS PER BEAM, PER 711.21, OF THE SAME PLAN DIMENSION AS THE ELASTOMERIC BEARING SHALL BE PROVIDED AS SHIMS TO ACCOMODATE ANY NON-PARALLELISM BETWEEN BOTTOM OF BEAM AND BRIDGE SEAT ANY REMAINING SHIMS SHALL BECOME THE PROPERTY OF THE STATE

NOTES

ASPHALT CONCRETE SURFACE COURSE SHALL CONSIST OF A VARIABLE THICKNESS OF 442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19mm, TYPE A AND 1 1/2" THICKNESS OF 442 ASPHALT CONCRETE SURFACE COURSE, 9.5mm, TYPE A. THE 442 INTERMEDIATE COURSE SHALL BE PLACED IN TWO OPERATIONS. THE FIRST PORTION OF THE COURSE SHALL BE OF 1 1/2" UNIFORM THICKNESS. THE SECOND PORTION OF THE COURSE SHALL BE FEATHERED TO PLACE THE SURFACE PARALLEL TO AND 1 1/2" BELOW THE FINAL PAVEMENT SURFACE ELEVATION

CALCULATED CAMBER AT THE TIME OF PAVING, INCLUDING ALLOWANCE FOR CAMBER GROWTH DUE TO CREEP IS 1 1/2"

CALCULATED DEFLECTION DUE TO WEIGHT OF SURFACE COURSE AND RAILING IS 1/8".

NET FINAL CAMBER OF BEAMS IS 1 3/8". THIS IS 1 3/8" IN EXCESS OF THE AMOUNT REQUIRED TO PLACE THE TOP OF THE BEAM PARALLEL TO THE PROFILE GRADE THIS EXCESS AMOUNT SHALL BE COMPENSATED FOR BY THICKENING THE 442 LEVELING COURSE FROM 1 1/2" AT THE CENTER OF THE SPAN TO 2 7/8" AT THE ENDS OF SPANS

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 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.

DESIGN AGENCY: POGGEMEYER DESIGN GROUP, INC. ARCHITECTS • ENGINEERS • PLANNERS, 1168 NORTH MAIN STREET, BOWLING GREEN, OHIO 43402

DESIGNED J.T.Y. | DRAWN J.E.F. | REVIEWED R.R.H. | DATE 4-19-01 | CHECKED | REVISED | STRUCTURE FILE NUMBER

SUPERSTRUCTURE DETAILS
BRIDGE SEN-19-0858 OVER ROCK CREEK

SEN-19-8.56

PLOTTED MAY 8, 2003 J.E.F. FILE NAME I:\5032\022\TRAN\Structure\Se019sd1.dwg 01/03/03 08:56:55 AM EST

5032-022

MARK	TOTAL	ABUTMENTS		LENGTH	WEIGHT (POUNDS)	TYPE	A	B	C	D	E	INCR
		REAR	FWD.									
ABUTMENTS												
A401	36	18	18	9–4	224	3	2–8	1–9				
A501	8	4	4	40–0	334	S	40–0					
A502	8	4	4	30–7	255	S	30–7					
A503	216	108	108	7–2	1615	1	2–5	2–7	2–5			
A504	12	6	6	30–0	375	S	30–0					
A505	12	6	6	22–11	287	S	22–11					
A506	80	40	40	11–3	939	1	4–10	1–10	4–10			
A507	80	40	40	7–3	605	1	2–10	1–10	2–10			
A508	2	1	1	7–7	16	1	2–10	2–2	2–10			
A509	16	8	8	10–2	170	S	10–2					
A510	2	1	1	6–3	13	S	6–3					
A511	4	2	2	7–1	30	S	7–1					
A512	2	1	1	3–11	8	S	3–11					
A513	4	2	2	4–9	20	S	4–9					
A514	2	1	1	8–0	17	2	2–4	5–5	2–1			
A515	4	2	2	8–8	36	2	2–4	5–5	2–9			
A516	16	8	8	12–2	203	S	12–2					
A517	2	1	1	7–11	17	S	7–11					
A518	2	1	1	5–8	12	S	5–8					
A519	2	1	1	9–6	20	2	2–4	5–5	3–7			
A520	28	14	14	11–6	336	1	5–4	1–1	5–4			
A521	4 SO 5	2 SO 5	2 SO 5	5–10 TO 10–6	170	1	2–6 TO 4–10	1–1	2–6 TO 4–10			0–7
A522	8	4	4	10–6	88	1	4–10	1–1	4–10			
A523	4	2	2	10–8	45	1	4–10	1–3	4–10			
A524	2	1	1	11–8	24	1	5–4	1–3	5–4			
A801	8	4	4	40–0	854	S	40–0					
A802	8	4	4	33–1	707	S	33–1					
A803	10	5	5	30–0	801	S	30–0					
A804	10	5	5	25–5	679	S	25–5					
D801	60	30	30	7–1	1135	4	1–0	1–0	4–9			
					10035	= TOTAL, CARRIED TO ESTIMATED QUANTITIES						

BAR LEGEND

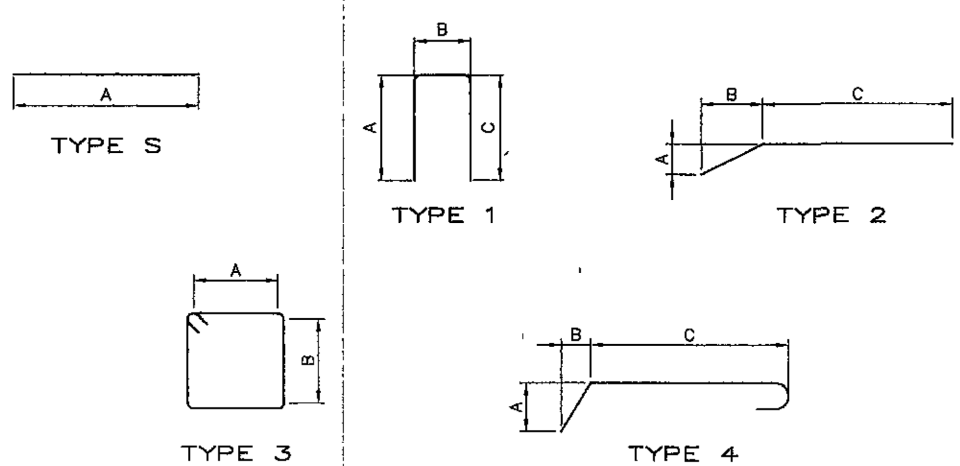
A 5 0 6

BAR LOCATION — A; BAR SIZE — 5; BAR NUMBER — 06

- – A – ABUTMENT
- –DS – DRILLED SHAFT
- – P – PIER
- – S – SUPERSTRUCTURE
- – D – APPROACH SLAB
- –SP – SPIRAL BAR

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR

ALL REINFORCING STEEL TO BE EPOXY COATED



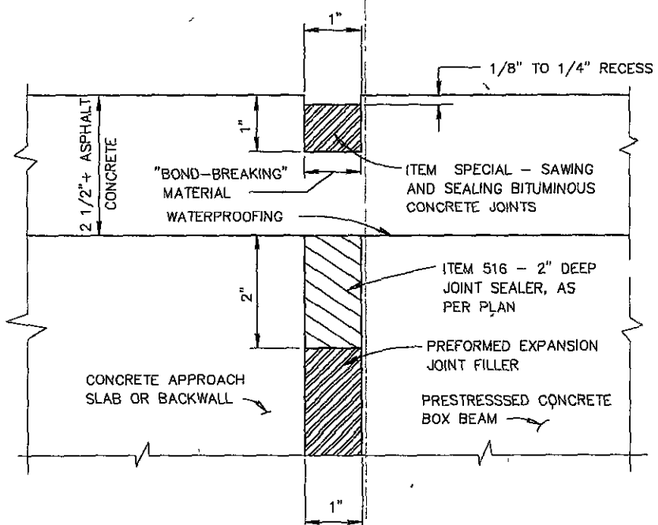
DESIGN AGENCY
POGGEMEYER DESIGN GROUP, INC.
ARCHITECTS + ENGINEERS + PLANNERS
1168 NORTH MAIN STREET
BOWLING GREEN, OHIO 43402

DESIGNED J T Y | CHECKED M.E.M | DRAWN J.E.F | REVISED | REVIEWED R R H | DATE 4–19–01 | STRUCTURE FILE NUMBER 7401124

REINFORCING STEEL LIST
BRIDGE SEN–19–0858
OVER ROCK CREEK

SEN–19–8.56

PLOTTED MAY 8, 2001
FILE NAME I:\5032\022\TRAV\Structure\Se019rl1.dwg 12/20/02 11 49 34 AM EST
J.E.F



SEALING OF JOINTS AT ABUTMENTS

ITEM SPECIAL-SAWING AND SEALING BITUMINOUS CONCRETE JOINTS

1) DESCRIPTION·

THIS WORK SHALL CONSIST OF CUTTING AND SEALING TRANSVERSE JOINTS IN THE NEW BITUMINOUS CONCRETE OVERLAY OF BOX BEAM BRIDGES BITUMINOUS CONCRETE JOINTS SHALL BE CONSTRUCTED DIRECTLY OVER, AND IN LINE WITH, THE EXISTING UNDERLYING TRANSVERSE ABUTMENT JOINT OF THE BOX BEAMS.

2) MATERIALS

THE JOINT SEALANT SHALL MEET THE REQUIREMENTS OF ITEM 705.04, JOINT SEALANTS, HOT-POURED, FOR CONCRETE AND ASPHALT PAVEMENTS. ACCEPTABLE ALTERNATE MATERIALS ARE:

A SILICONE SEALANT MEETING FEDERAL SPECIFICATIONS TT-S-001543A CLASS A (ONE--PART SILICONE SEALANTS) AND TT-S-00230C CLASS A (ONE-COMPONENT SEALANTS), SUCH AS THOSE MANUFACTURED BY GENERAL ELECTRIC, SILICONE PRODUCTS DIVISION, 4015 EXECUTIVE PARK DRIVE, CINCINNATI, OHIO 45242 (513-243-1953)OR DOW CORNING, 400 TECHNE CENTER, SUITE 103, MILFORD, OHIO 45150 (513-831-3586); OR SOF-SEAL,A COLD-APPLIED, LOW-MODULUS,TWO--COMPONENT POLY-MERIC COMPOUND HORIZONTAL SEALANT AS MANUFACTURED BY W.R.MEADOWS, INC , P O.BOX 543,ELGIN,ILLINOIS 60121 (800-342-5976).

3) CONSTRUCTION DETAILS

A) GENERAL THE CONTRACTOR SHALL CONDUCT HIS OPERATION SO THAT THE CUTTING, CLEANING AND SEALING OF TRANSVERSE JOINTS IS A CONTINUOUS OPERATION THAT WILL BE PERFORMED AS SOON AS PRACTICAL AFTER THE PAVING, BUT NO LATER THAN FOUR (4) DAYS AFTER PLACEMENT OF THE ASPHALT CONCRETE SURFACE COURSE TRAFFIC SHALL NOT BE ALLOWED TO KNEAD TOGETHER OR DAMAGE JOINT CUT PRIOR TO SEALING.

B) CUTTING OF TRANSVERSE JOINTS THE CONTRACTOR SHALL SAW OR ROUT TRANSVERSE JOINTS TO THE DIMENSIONS SHOWN IN THE DETAILS ON THIS SHEET THE CUT JOINTS SHALL LIE DIRECTLY ABOVE EACH BOX BEAM ABUTMENT JOINT

THE BLADE OR BLADES SHALL BE OF SUCH SIZE THAT THE FULL WIDTH AND DEPTH OF THE CUT CAN BE MADE WITH ONE PASS. DRY OR WET CUTTING WILL BE ALLOWED JOINTS SHALL EXTEND THE FULL WIDTH OF THE BRIDGE

C) CLEANING JOINTS DRY SAWED JOINTS SHALL BE THOROUGHLY CLEANED WITH A SUFFICIENT AMOUNT OF COMPRESSED AIR TO REMOVE ANY DIRT, DUST, OR DELETERIOUS MATTER WET SAWED JOINTS SHALL BE WASHED CLEAN OF ALL CUTTINGS BY FLUSHING WITH A JET OF WATER AND WITH OTHER TOOLS AS NECESSARY. AFTER FLUSHING, THE JOINT SHALL BE BLOWN OUT WITH COM-PRESSED AIR WHEN THE SURFACES ARE THOROUGHLY CLEAN AND DRY, AND JUST PRIOR TO PLACING THE JOINT SEALER, COMPRESSED AIR HAVING A PRESSURE OF AT LEAST 90 P S I SHALL BE USED TO BLOW OUT THE JOINT AND REMOVE ALL TRACES OF DUST IN THE EVENT FRESHLY CUT JOINTS BECOME CONTAMINATED BEFORE THEY ARE SEALED, THEY SHALL BE RECLEANED OF ALL FOREIGN MATERIAL BY HIGH PRESSURE WATER JET

D) SEALING JOINTS· THE JOINT SHALL BE THOROUGHLY DRY WHEN THE SEALANT IS PLACED. AFTER CLEANING AND DRYING, A BOND--BREAKER MATERIAL SHALL BE APPLIED TO THE BOTTOM OF THE GROOVE

HOT-POURED JOINT SEALANT MATERIAL SHALL BE HEATED IN A KETTLE OR MELTER CONSTRUCTED AS A DOUBLE BOILER, WITH THE SPACE BETWEEN THE INNER AND OUTER SHELLS FILLED WITH OIL OR OTHER HEAT TRANSFER MEDIUM POSITIVE TEMPERATURE,CONTROL AND MECHAN--ICAL AGITATION SHALL BE PROVIDED.HEATING MUST BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION JOINT SEALER MATERIAL SHALL NEVER BE KEPT HEATED AT THE POURING TEMPERATURE FOR MORE THAN FOUR (4) HOURS AND SHALL NEVER BE REHEATED. SEALER LEFT IN THE APPLICATOR AT THE END OF A DAY'S WORK SHALL NOT BE USED

HOT-POURED SEALANT SHALL BE APPLIED IMMEDIATELY THROUGH A NOZZLE, WHICH MUST PROJECT INTO THE SAWED JOINT, FILLING FROM THE BOTTOM UP THE SEALANT SHALL COMPLETELY FILL THE JOINT IN SUCH A MANNER THAT, AFTER COOLING, THE LEVEL OF THE SEALANT WILL NOT BE HIGHER THAN 1/8" BELOW THE PAVEMENT SURFACE ANY DEPRESSION IN THE COOLED SEAL GREATER THAN 3/16" SHALL BE BROUGHT UP TO THE SPECIFIED LIMIT BY FURTHER ADDITION OF HOT-POURED SEALANT CARE SHALL BE TAKEN IN THE SEALING OF THE JOINTS SO THAT THE FINAL APPEARANCE WILL PRESENT A NEAT FINE LINE.

THE COLD APPLIED SEALANT MATERIALS (POLYURETHANE, SILICONE, AND POLYMERIC COMPOUNDS) SHALL BE INSTALLED AS PER MANU-FACTURERS' RECOMMENDATIONS, EXCEPT AS MODIFIED BY THIS DRAWING THE SEALANT SHALL BE INSTALLED WHEN THE AMBIENT TEMPERATURE IS 40 DEGREES F OR HIGHER. TRAFFIC SHALL NOT BE ALLOWED ON THE JOINT FOR ONE HOUR AFTER APPLICATION OF THE SEALANT

4) METHOD OF MEASUREMENT.

THE QUANTITY TO BE PAID FOR UNDER THIS ITEM WILL BE THE NUMBER OF LINEAR FEET OF JOINTS SAWED AND SEALED AS PER THE ABOVE REQUIREMENTS

5) BASIS OF PAYMENT

THE UNIT PRICE PER LINEAR FOOT FOR ITEM SPECIAL-"SAWING AND SEALING BITUMINOUS CONCRETE JOINTS" SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK, INCLUDING THE FURNISHING AND PLACING OF THE JOINT SEALER MATERIAL

ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN

THIS ITEM SHALL MEET THE MATERIAL (SECTION 2) AND SEALING (SECTION 3D) SPECIFICATIONS OF ITEM SPECIAL-SAW-ING AND SEALING BITUMINOUS CONCRETE JOINTS.

DESIGN AGENCY
OFFICE OF STRUCTURAL ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
JEB/JFF	MJB/BDB	WJJ/LMW	
CHECKED	REVISED	STRUCTURE FILE NUMBER	
WTF/JAM		7401124	

PLAN INSERT SHEET
ABUTMENT JOINTS IN BITUMINOUS CONCRETE, BOX BEAM BRIDGES

SEN-19-8.56

8 | 8

19
22

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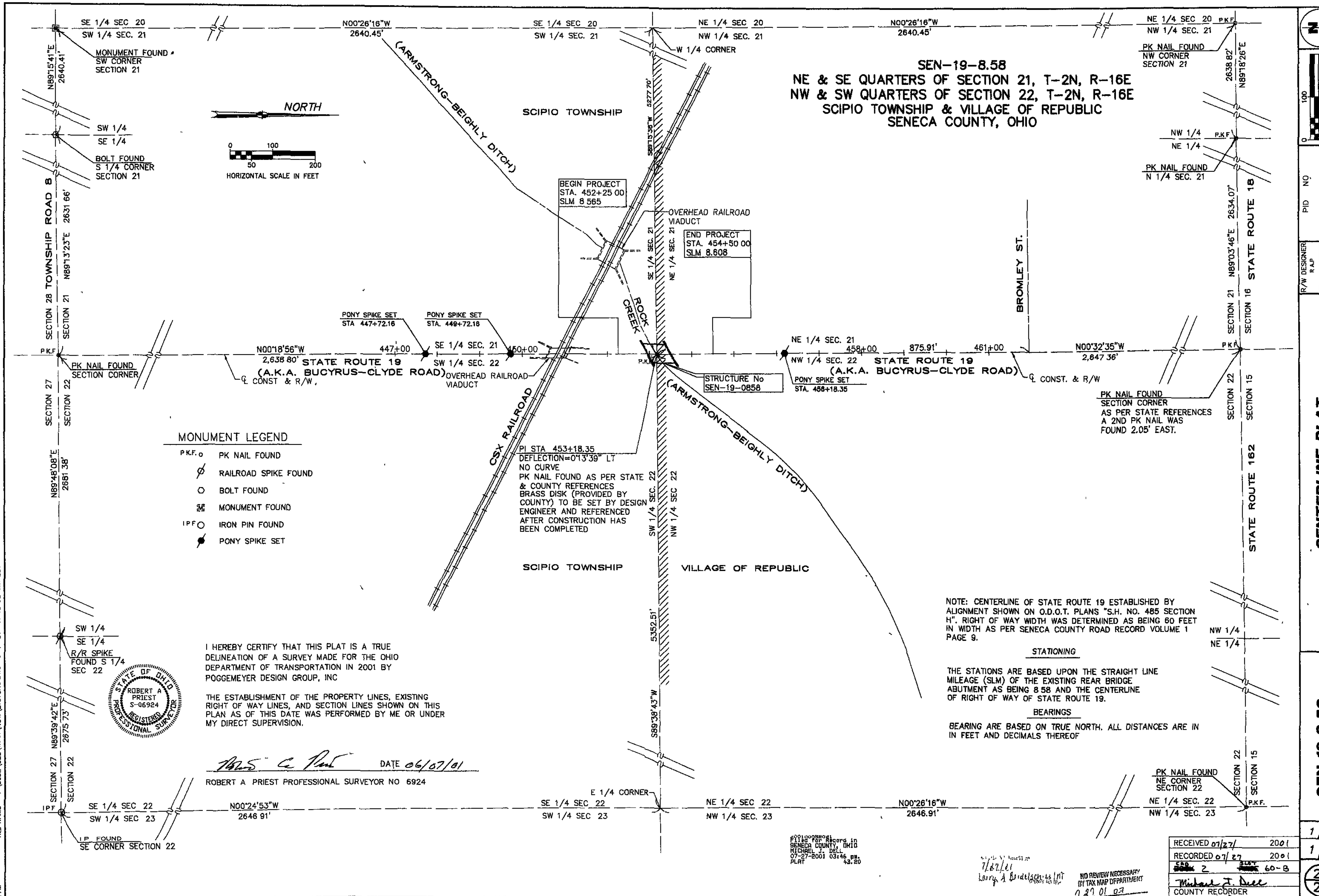
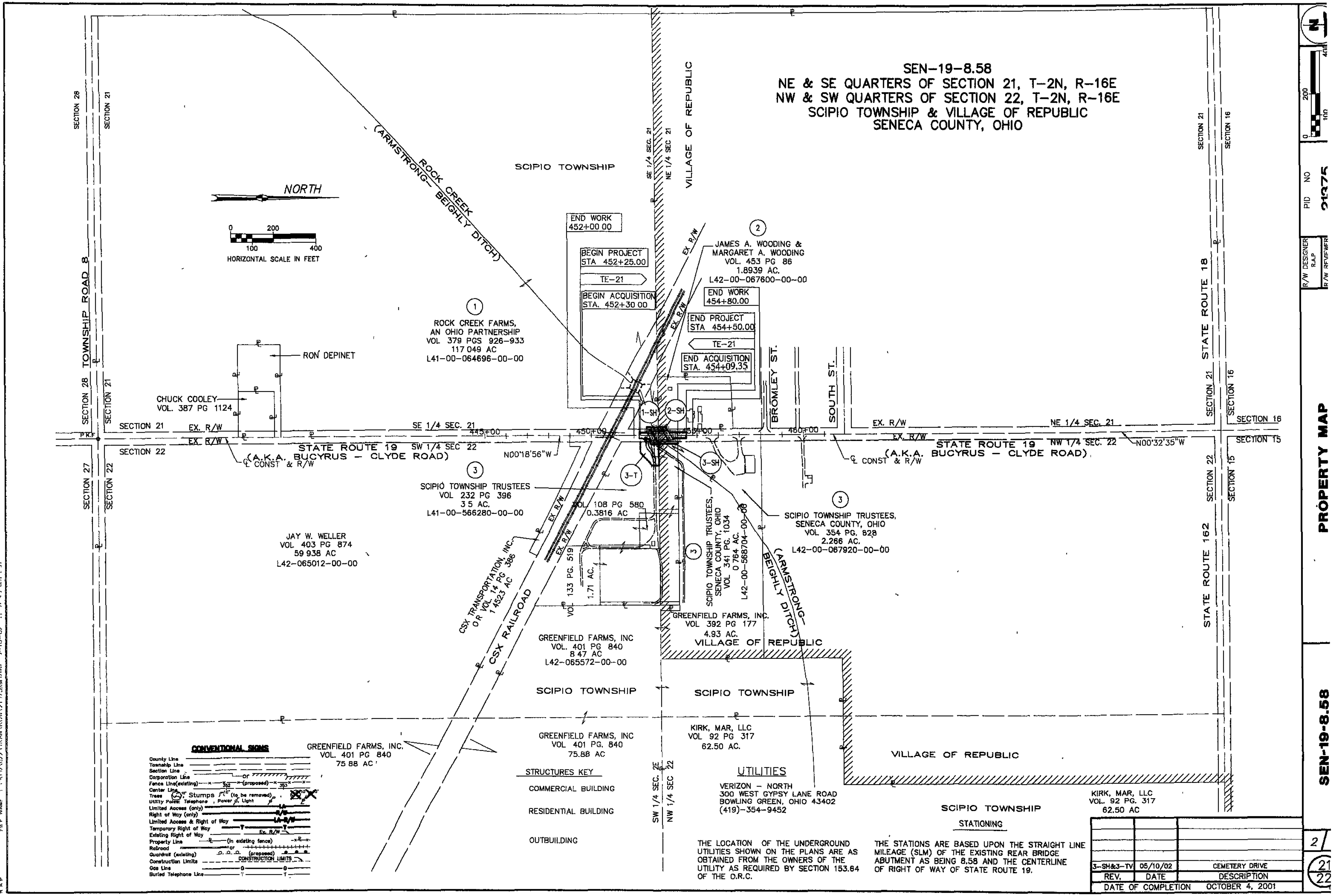
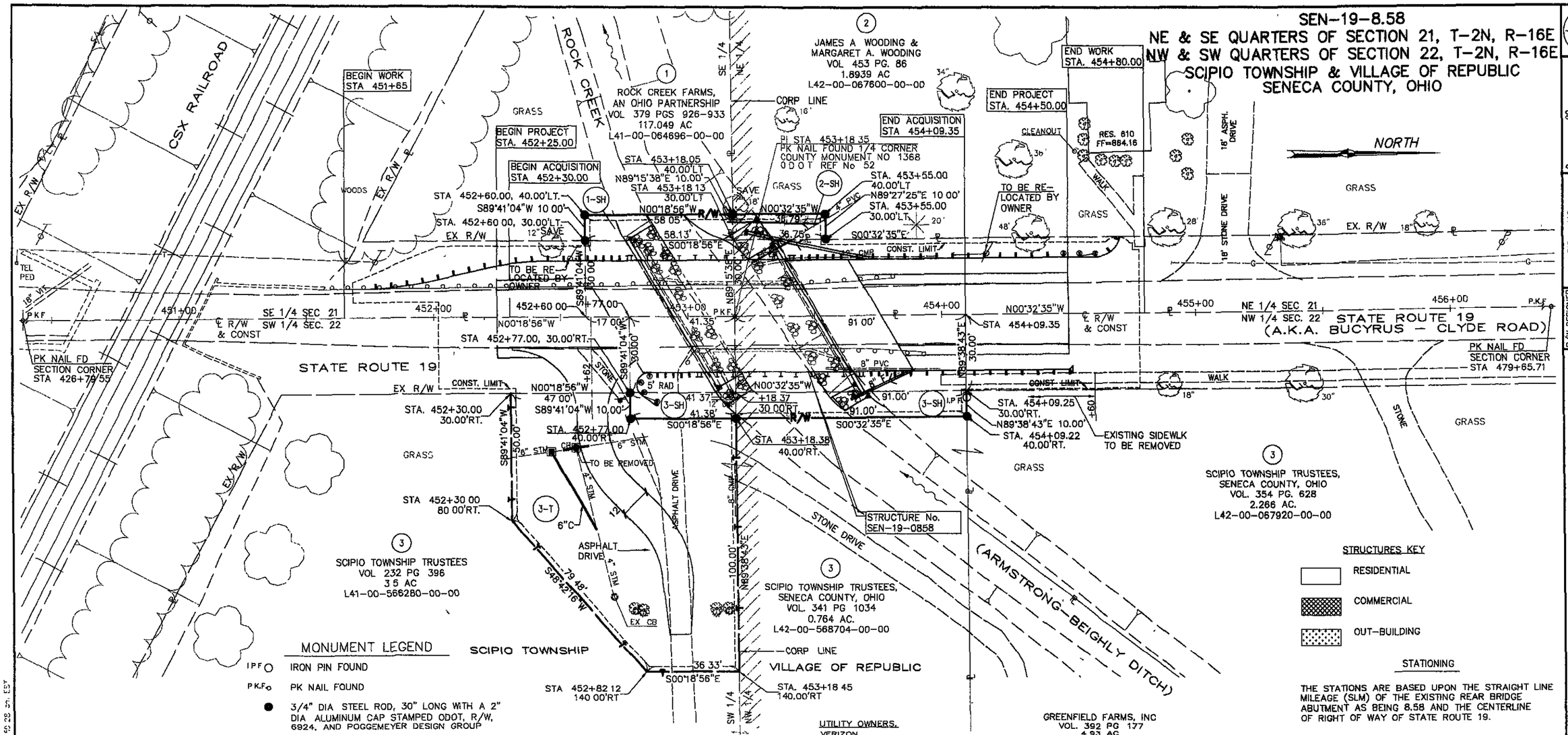

SEN-19-8.58
NE & SE QUARTERS OF SECTION 21, T-2N, R-16E
NW & SW QUARTERS OF SECTION 22, T-2N, R-16E
SCIPIO TOWNSHIP & VILLAGE OF REPUBLIC
SENECA COUNTY, OHIO
NORTH
0 100 50 200
HORIZONTAL SCALE IN FEET
SE 1/4 SEC 20
SW 1/4 SEC. 21
N00°26'16"W
2640.45'
SE 1/4 SEC 20
SW 1/4 SEC. 21
NE 1/4 SEC 20
NW 1/4 SEC. 21
N00°26'16"W
2640.45'
NE 1/4 SEC 20 PKF
NW 1/4 SEC. 21
MONUMENT FOUND
SW CORNER
SECTION 21
W 1/4 CORNER
PK NAIL FOUND
NW CORNER
SECTION 21
N89°15'41"E
2640.41'
(ARMSTRONG-BEIGHLY DITCH)
SCIPIO TOWNSHIP
N89°13'36"W 5277.70'
2638.82'
N89°18'26"E
SW 1/4
SE 1/4
BOLT FOUND
S 1/4 CORNER
SECTION 21
NW 1/4 P.K.F.
NE 1/4
PK NAIL FOUND
N 1/4 SEC. 21
TOWNSHIP ROAD 8
N89°13'23"E
2631.66'
BEGIN PROJECT
STA. 452+25.00
SLM 8.565
OVERHEAD RAILROAD VIADUCT
END PROJECT
STA. 454+50.00
SLM 8.608
SE 1/4 SEC. 21
NE 1/4 SEC. 21
BROMLEY ST.
N89°03'46"E
2634.07'
STATE ROUTE 18
SECTION 28
SECTION 21
SECTION 21
SECTION 16
ROCK CREEK
PONY SPIKE SET
STA 447+72.16
PONY SPIKE SET
STA. 449+72.18
P.K.F.
N00°18'56"W
2,638.80'
447+00
SE 1/4 SEC. 21
SW 1/4 SEC. 22
450+00
NE 1/4 SEC. 21
NW 1/4 SEC. 22
458+00
875.91'
461+00
N00°32'35"W
2,647.36'
P.K.F.
STATE ROUTE 19
(A.K.A. BUCYRUS-CLYDE ROAD)
STATE ROUTE 19
(A.K.A. BUCYRUS-CLYDE ROAD)
PK NAIL FOUND
SECTION CORNER
℄ CONST. & R/W.
OVERHEAD RAILROAD VIADUCT
P.K.F.
STRUCTURE No
SEN-19-0858
PONY SPIKE SET
STA. 458+18.35
℄ CONST. & R/W
PK NAIL FOUND
SECTION CORNER
AS PER STATE REFERENCES
A 2ND PK NAIL WAS
FOUND 2.05' EAST.
SECTION 27
SECTION 22
SECTION 22
SECTION 15
CSX RAILROAD
(ARMSTRONG-BEIGHLY DITCH)
MONUMENT LEGEND
P.K.F. PK NAIL FOUND
RAILROAD SPIKE FOUND
BOLT FOUND
MONUMENT FOUND
IPF IRON PIN FOUND
PONY SPIKE SET
PI STA 453+18.35
DEFLECTION=0°13'39" LT
NO CURVE
PK NAIL FOUND AS PER STATE
& COUNTY REFERENCES
BRASS DISK (PROVIDED BY
COUNTY) TO BE SET BY DESIGN
ENGINEER AND REFERENCED
AFTER CONSTRUCTION HAS
BEEN COMPLETED
SW 1/4 SEC. 22
NW 1/4 SEC 22
N89°48'08"E
2681.38'
STATE ROUTE 162
SCIPIO TOWNSHIP
VILLAGE OF REPUBLIC
5352.51'
S89°38'43"W
SW 1/4
SE 1/4
R/R SPIKE
FOUND S 1/4
SEC 22
NW 1/4
NE 1/4
STATE OF OHIO
ROBERT A. PRIEST
S-06924
REGISTERED
PROFESSIONAL SURVEYOR
I HEREBY CERTIFY THAT THIS PLAT IS A TRUE
DELINEATION OF A SURVEY MADE FOR THE OHIO
DEPARTMENT OF TRANSPORTATION IN 2001 BY
POGGEMEYER DESIGN GROUP, INC
THE ESTABLISHMENT OF THE PROPERTY LINES, EXISTING
RIGHT OF WAY LINES, AND SECTION LINES SHOWN ON THIS
PLAN AS OF THIS DATE WAS PERFORMED BY ME OR UNDER
MY DIRECT SUPERVISION.
DATE 06/07/01
ROBERT A PRIEST PROFESSIONAL SURVEYOR NO 6924
NOTE: CENTERLINE OF STATE ROUTE 19 ESTABLISHED BY
ALIGNMENT SHOWN ON O.D.O.T. PLANS "S.H. NO. 485 SECTION
H". RIGHT OF WAY WIDTH WAS DETERMINED AS BEING 60 FEET
IN WIDTH AS PER SENECA COUNTY ROAD RECORD VOLUME 1
PAGE 9.
STATIONING
THE STATIONS ARE BASED UPON THE STRAIGHT LINE
MILEAGE (SLM) OF THE EXISTING REAR BRIDGE
ABUTMENT AS BEING 8.58 AND THE CENTERLINE
OF RIGHT OF WAY OF STATE ROUTE 19.
BEARINGS
BEARING ARE BASED ON TRUE NORTH. ALL DISTANCES ARE IN
IN FEET AND DECIMALS THEREOF
N89°39'42"E
2675.73'
SECTION 27
SECTION 22
SECTION 22
SECTION 15
PK NAIL FOUND
NE CORNER
SECTION 22
IPF
SE 1/4 SEC 22
SW 1/4 SEC 23
N00°24'53"W
2646.91'
E 1/4 CORNER
SE 1/4 SEC 22
SW 1/4 SEC 23
NE 1/4 SEC 22
NW 1/4 SEC. 23
N00°26'16"W
2646.91'
NE 1/4 SEC. 22
NW 1/4 SEC. 23
P.K.F.
I.P. FOUND
SE CORNER SECTION 22
Filed for Record in
SENECA COUNTY, OHIO
MICHAEL J. DELL
07-27-2001 03:46 pm.
PLAT 43.20
NO REVIEW NECESSARY
BY TAX MAP DEPARTMENT
RECEIVED 07/27/ 2001
RECORDED 07/27 2001
BOOK 2 PAGE 60-B
COUNTY RECORDER
MICHAEL J. DELL
CENTERLINE PLAT
SEN-19-8.58
PID NO
R/W DESIGNER R.A.P.
1/1
20 22
PLOTTED APRIL 24, 2001
R.A.P.
FILE NAME
6-7-01 11 42 52 am EST



PLOTTED MAY 10, 2002 R.A.P. 5-10-02

5032-022 SEN-19-8 58

SEN-19-8.58
NE & SE QUARTERS OF SECTION 21, T-2N, R-16E
NW & SW QUARTERS OF SECTION 22, T-2N, R-16E
SCIPIO TOWNSHIP & VILLAGE OF REPUBLIC
SENECA COUNTY, OHIO



MONUMENT LEGEND

IPF○ IRON PIN FOUND

PKF○ PK NAIL FOUND

● 3/4" DIA STEEL ROD, 30" LONG WITH A 2" DIA ALUMINUM CAP STAMPED ODOT, R/W, 6924, AND POGGEMEYER DESIGN GROUP

STRUCTURES KEY

RESIDENTIAL

COMMERCIAL

OUT-BUILDING

STATIONING

THE STATIONS ARE BASED UPON THE STRAIGHT LINE MILEAGE (SLM) OF THE EXISTING REAR BRIDGE ABUTMENT AS BEING 8.58 AND THE CENTERLINE OF RIGHT OF WAY OF STATE ROUTE 19.

BEARINGS

BEARINGS ARE BASED ON TRUE NORTH DISTANCES ARE IN FEET AND DECIMALS THEREOF.

CENTERLINE OF STATE ROUTE 19 ESTABLISHED BY ALIGNMENT SHOWN ON O D O.T. PLANS "S.H. NO 485 SECTION H." RIGHT OF WAY WIDTH WAS DETERMINED AS BEING 60 FEET AS PER SENECA COUNTY ROAD RECORD VOLUME 1 PAGE 9

TOTAL NUMBER OF:
- 3 OWNERSHIPS
- 4 PARCELS
- 0 TOTAL TAKES
- 0 OWNERSHIPS WITH STRUCTURES INVOLVED
- 0 OWNERSHIPS WITH "P" ITEMS

UNDERGROUND UTILITIES

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITIES AS REQUIRED BY SECTION 153 64 OF THE OHIO REVISED CODE

UTILITY OWNERS

VERIZON
300 WEST GYPSY LANE ROAD
BOWLING GREEN, OHIO 43402
(419) 354-9452

NET RESIDUE = RECORD AREA – TOTAL PRO – NET TAKE

NOTE: ALL TEMPORARY PARCELS TO BE OF 18 MONTHS DURATION

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

SUMMARY OF ADDITIONAL RIGHT OF WAY

STATE JOB NO. 42285(0)

PARCEL	OWNER	OWNERS RECORD VOLUME	OWNERS RECORD PAGE	AUDITORS I D NUMBER	RECORD AREA ACRES	TOTAL P R O ACRES	GROSS TAKE SQ FT	P R O IN TAKE SQ FT	NET TAKE LAND SQ FT	NET TAKE BLDG	NET RESIDUE LEFT ACRES	NET RESIDUE RIGHT ACRES	TYPE FUNDS	REMARKS AND PERSONALTY	AS ACQUIRED VOLUME	AS ACQUIRED PAGE
1-SH	ROCK CREEK FARMS,	379	926-933	L41-00-064696-00-00	117 0490	2 9288	2,328	1,747	581		114.1069		STATE		OR 182	243
	AN OHIO PARTNERSHIP															
2-SH	JAMES A. WOODING &	453	86	L42-00-067600-00-00	1 8939	0	368	0	368		1.8855				174	717
	MARGARET A WOODING															
3-SH	SCIPIO TOWNSHIP TRUSTEES,	232	396	L41-00-566280-00-00	3.5000	0 1174	1,655	1,241	441			3 3725			OR 202	775
	SENECA COUNTY, OHIO	341	1034	L42-00-568704-00-00	0 7640	0.0230	3,640	2,730	910			0 7201				
		354	628	L42-00-067920-00-00	2 2660	0.3082	0	0	0			1 9578				
	TOTAL 3-SH				6 5300	0 4486	5,295	3,971	1,351			6 0528				
3-T		232	396	L41-00-566280-00-00	3.5000		7,7748	0	7,748				STATE	FOR GRADING AND DRIVEWAY	Unrecorded	

REV.	DATE	DESCRIPTION
3-SH&3-T	05/10/02	DRIVE REVISION
2-SH	10/05/01	NAME CHANGE TO WOODING
1-SH	10/05/01	NAME CHANGE TO ROCK CREEK
FIELD REVIEWED BY		R.A.P 10/03/01
OWNERSHIP VERIFIED		R.A.P. 10/03/01
DATE OF COMPLETION		MAY 10, 2002

RIGHT OF WAY PLAN & R/W DESIGNER R.A.P PID NO 81375

SEN-19-8.58

3

22/22

PLOTTED MAY 10, 2002 R.A.P FILE NAME : 5032\022\TRANSROW\81375RP DWG 5 10 02 11 52 28 PM EST

5032-022 SEN-19-8.58

SITE GEOLOGY

THE SITE IS LOCATED WITHIN THE CENTRAL OHIO CLAYEY TILL PLAIN REGION OF OHIO. THE NEAR-SURFACE SOILS AT THE SITE ARE OF THE GLYNWOOD-PANDORA-BLOUNT ASSOCIATION FORMED IN END MORAINE GLACIAL TILL OF THE WISCONSINAN AGE GLACIATION. THE GLACIAL TILLS ARE UNDERLAIN BY COLUMBUS AND DELAWARE LIMESTONE BEDROCK OF THE DEVONIAN AGE.

INVESTIGATIVE PROCEDURES

TWO TEST BORINGS, DESIGNATED AS B-1 AND B-2, WERE PERFORMED DURING THIS INVESTIGATION. THE BORINGS WERE PERFORMED BY TOLTEST ON SEPTEMBER 20 AND 21, 2000. THE BORING LOCATIONS WERE ESTABLISHED BY TOLTEST BASED ON A SITE PLAN DEVELOPED BY POGGEMEYER DESIGN GROUP (PDG). THE TEST BORING LOCATION STATIONING, OFFSETS, AND SURFACE ELEVATIONS WERE DETERMINED BY PDG AFTER THE COMPLETION OF THE TEST BORINGS. THE GENERAL LOCATIONS OF THE TEST BORINGS ARE SHOWN ON THE ATTACHED PROFILE SHEETS.

THE TEST BORINGS PERFORMED DURING THIS INVESTIGATION WERE DRILLED WITH A TRUCK-MOUNTED ROTARY DRILLING RIG UTILIZING 3¼-INCH INSIDE DIAMETER HOLLOW-STEM AUGERS. THE BORINGS WERE ADVANCED TO A DEPTH OF 24 FEET BELOW THE SURFACE OF THE EXISTING PAVEMENT. SOIL SAMPLES WERE GENERALLY COLLECTED AT 2½-FOOT INTERVALS TO THE TOP OF ROCK IN BORING B-1. IN BORING B-2, THE SAMPLES WERE COLLECTED AT 2½-FOOT INTERVALS TO 10 FEET, CONTINUOUSLY FROM 10 TO 20 FEET, AND AT 2½-FOOT INTERVALS FROM 20 FEET TO THE TOP OF ROCK. THE TEST BORINGS WERE PERFORMED IN GENERAL ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATIVE PROCEDURES OUTLINED IN ASTM D 1452 AND ODOT SPECIFICATIONS FOR SUBSURFACE INVESTIGATIONS.

SPLIT-SPOON (SS) SAMPLES WERE OBTAINED BY THE STANDARD PENETRATION TEST (SPT) METHOD (ASTM D 1586), WHICH CONSISTS OF DRIVING A 2-INCH OUTSIDE DIAMETER SPLIT-SPOON SAMPLER INTO THE SOIL WITH A 140-POUND WEIGHT FALLING FREELY THROUGH A DISTANCE OF 30 INCHES. THE SAMPLER IS DRIVEN IN THREE SUCCESSIVE 6-INCH INCREMENTS (FOUR SUCCESSIVE 6-INCH INCREMENTS FOR CONTINUOUS SAMPLING), WITH THE NUMBER OF BLOWS PER INCREMENT BEING RECORDED. THE NUMBER OF BLOWS REQUIRED TO ADVANCE THE SAMPLER THE SECOND AND THIRD INCREMENTS IS TERMED THE STANDARD PENETRATION RESISTANCE (N-VALUE) AND IS PRESENTED ON THE LOGS OF TEST BORINGS. THE SPLIT-SPOON SAMPLES WERE SEALED IN JARS AND TRANSPORTED TO OUR LABORATORY FOR FURTHER CLASSIFICATION AND TESTING.

THREE SHELBY TUBE (ST) SAMPLES WERE COLLECTED (BORING B-1: ST-1 FROM 13 TO 13.3 FEET, AND ST-2 FROM 16 TO 18 FEET; AND BORING B-2: ST-1 FROM 8 TO 10 FEET) UTILIZING A 3-INCH DIAMETER THIN-WALLED SAMPLER. EACH SHELBY TUBE WAS HYDRAULICALLY ADVANCED APPROXIMATELY 24 INCHES OR TO REFUSAL BEYOND THE HOLLOW-STEM AUGER INTO RELATIVELY UNDISTURBED SOIL IN GENERAL ACCORDANCE WITH ASTM D 1587. ONCE THE SHELBY TUBE SAMPLES WERE EXTRACTED FROM THE SUBSOILS, THE ENDS WERE CAPPED AND SEALED, AND THE SAMPLES WERE TRANSPORTED TO OUR LABORATORY, WHERE THEY WERE EXTRUDED, CLASSIFIED, AND TESTED.

A SAMPLE OF THE SUBSURFACE ROCK WAS OBTAINED FROM EACH OF THE TEST BORING LOCATIONS USING AN NX DIAMOND-BIT CORE BARREL AND CORING TECHNIQUES IN GENERAL ACCORDANCE WITH ASTM D 2113. A 6½-FOOT ROCK CORE RUN WAS COMPLETED IMMEDIATELY FOLLOWING AUGER REFUSAL IN BORING B-1. A 6-FOOT ROCK CORE RUN WAS COMPLETED IMMEDIATELY FOLLOWING AUGER REFUSAL IN BORING B-2. RECOVERY OF THE CORE IS EXPRESSED AS THE PERCENTAGE RATIO OF THE RECOVERED ROCK LENGTH TO THE TOTAL LENGTH OF THE CORE RUN. THE ROCK QUALITY DESIGNATION (RQD) IS THE PERCENTAGE RATIO OF THE SUMMED LENGTH OF ROCK PIECES 4 INCHES LONG AND GREATER TO THE TOTAL LENGTH OF THE RUN. THE ROCK CORE SAMPLES ARE DESIGNATED AS "RC" ON THE LOGS OF TEST BORINGS.

SOIL AND ROCK CONDITIONS ENCOUNTERED IN THE TEST BORINGS ARE PRESENTED IN THE LOGS OF TEST BORINGS, ALONG WITH INFORMATION RELATED TO SAMPLE DATA, SPT RESULTS, ROCK CORING DATA, WATER CONDITIONS OBSERVED IN THE BORINGS, AND LABORATORY TEST DATA. IT SHOULD BE NOTED THAT THESE LOGS HAVE BEEN PREPARED ON THE BASIS OF LABORATORY CLASSIFICATION AND TESTING AS WELL AS FIELD LOGS OF THE SOIL AND ROCK ENCOUNTERED.

THE SUBSOIL SAMPLES WERE CLASSIFIED USING THE ODOT SOIL CLASSIFICATION SYSTEM. ALL SAMPLES OF THE SUBSOILS WERE TESTED IN OUR LABORATORY FOR NATURAL MOISTURE CONTENT (ASTM D 2216). IN ADDITION, INTACT COHESIVE SOIL SAMPLES WERE TESTED FOR IN-PLACE DRY DENSITY (ASTM D 2937) AND WERE EVALUATED FOR UNCONFINED COMPRESSIVE STRENGTH UTILIZING CONSTANT STRAIN METHODS (ASTM D 2166) OR A CALIBRATED HAND PENETROMETER. UNCONFINED COMPRESSIVE STRENGTH TESTS WERE ALSO PERFORMED ON SELECTED SPECIMENS OF ROCK CORE SAMPLES (ASTM D 2938). ADDITIONALLY, ATTERBERG LIMITS TESTS (ASTM D 4318) AND PARTICLE SIZE ANALYSES (ASTM D 422) WERE PERFORMED ON SELECTED SOIL SAMPLES.

LEGEND FOR PROJECT

DESCRIPTION	AASHTO CLASS	ODOT CLASS
GRAVEL WITH SOME SILT, LITTLE SAND, AND TRACE CLAY	A-2-4 (0)	A-2-4 (0)
SANDY SILT	A-4 (2)	A-4a (2)
SILT AND CLAY	A-6 (8)	A-6a (8)
SILTY CLAY	A-6 (11)	A-6b (11)
CLAY	A-7-6 (16)	A-7-6 (16)
ASPHALT	VISUAL CLASSIFICATION	
CRUSHED STONE	VISUAL CLASSIFICATION	
GRAVEL AND/OR STONE FRAGMENTS	VISUAL CLASSIFICATION	
FRACTURED ROCK	DRILLERS NOTES BASED ON DRILLING CONDITIONS	
LIMESTONE	VISUAL CLASSIFICATION	

AVERAGE GRADATION - 10 SAMPLES TESTED

DESCRIPTION	% AGG.	% C.SAND	% F.SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL WITH SOME SILT, LITTLE SAND, AND TRACE CLAY	53	7	14	23	3	NON-PLASTIC		15	1
SANDY SILT	26	16	17	25	16	23	7	15	2
SILT AND CLAY	7	6	8	32	47	31	13	21	4
SILTY CLAY	6	5	13	22	54	38	18	23	2
CLAY	10	4	7	19	60	50	29	31	1

NOTE:

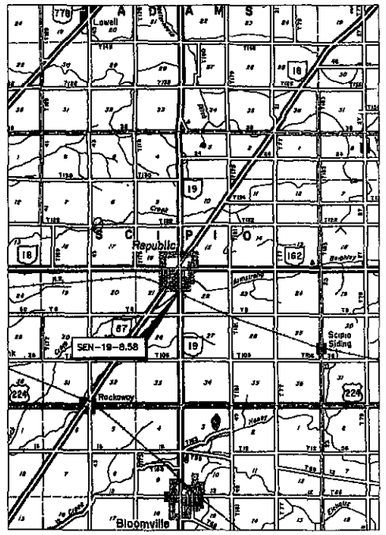
DRIVE SAMPLE AND/OR CORE BORING PLOTTED TO VERTICAL SCALE ONLY

W – FREE WATER
SS – SPLIT SPOON SAMPLE
RC – ROCK CORE

NUMBERS OF BLOWS FOR 'STANDARD PENETRATION' TEST.
W = NUMBERS OF BLOWS FOR FIRST 6 INCHES
X = NUMBER OF BLOWS FOR SECOND 6 INCHES
Y = NUMBER OF BLOWS FOR THIRD 6 INCHES
Z = NUMBER OF BLOWS FOR FOURTH 6 INCHES (WHEN APPLICABLE)

FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT (e.g. 15).

DRIVE SAMPLE AND/OR CORE BORING – PLAN VIEW



PROJECT INDEX

STATION FROM	STATION TO	PLAN VIEW SHEET	PROFILE SHEET
452+00	455+00	2	2
BORING LOGS			3

EXPERIENCE INDICATES THAT THE ACTUAL SUBSOIL CONDITIONS AT A SITE COULD VARY FROM THOSE GENERALIZED ON THE BASIS OF TEST BORINGS MADE AT SPECIFIC LOCATIONS. THEREFORE, IT IS ESSENTIAL THAT A GEOTECHNICAL ENGINEER BE RETAINED TO PROVIDE SOIL ENGINEERING SERVICES DURING THE SITE PREPARATION, EXCAVATION, AND FOUNDATION PHASES OF THE PROPOSED PROJECT. THIS IS TO OBSERVE COMPLIANCE WITH THE DESIGN CONCEPTS, SPECIFICATIONS, AND RECOMMENDATIONS, AND TO ALLOW DESIGN CHANGES IN THE EVENT SUBSURFACE CONDITIONS DIFFER FROM THOSE ANTICIPATED PRIOR TO THE START OF CONSTRUCTION.

INVESTIGATION AND FINDINGS

AT THE TIME OF THIS INVESTIGATION, THE BORINGS WERE COMPLETED THROUGH THE APPROACH SLABS OF THE EXISTING BRIDGE. THE SURFACE MATERIALS ENCOUNTERED IN BORINGS B-1 AND B-2 CONSISTED OF 12 AND 6 INCHES OF ASPHALT, RESPECTIVELY, UNDERLAIN BY 18 INCHES OF CRUSHED STONE.

UNDERLYING THE PAVEMENT MATERIALS IN BORINGS B-1 AND B-2, GENERALLY MEDIUM STIFF TO STIFF SILT AND CLAY (A-6A), SILTY CLAY (A-6B), OR CLAY (A-7-6) WITH INTERMEDIATE STRATA OF SANDY SILT WAS ENCOUNTERED TO DEPTHS OF 13½ AND 15 FEET (ELEV. 846.5 AND 844.7), RESPECTIVELY.

WITHIN THE GENERALLY MEDIUM STIFF TO STIFF COHESIVE STRATUM, SANDY SILT (A-4A) WAS ENCOUNTERED FROM 13 TO 13½ FEET (ELEV. 847.0 TO 846.5) IN BORING B-1, AND FROM 3½ TO 6 FEET (ELEV. 856.2 TO 853.7) IN BORING B-2.

UNDERLYING THE MEDIUM STIFF TO STIFF COHESIVE STRATUM, GENERALLY MEDIUM DENSE TO VERY DENSE GRAVEL AND/OR STONE FRAGMENTS (A-1-A) OR GRAVEL WITH SOME SILT AND TRACE CLAY (A-2-4) WAS ENCOUNTERED TO 23 FEET (ELEV. 837.0) IN BORING B-1 AND TO AUGER REFUSAL AT 24 FEET (ELEV. 835.7) IN BORING B-2.

A STRATUM OF LOOSE GRAVEL AND/OR STONE FRAGMENTS (A-1-A) WAS ENCOUNTERED FROM 15 TO 16 FEET (ELEV. 844.7 TO 843.7) IN BORING B-2. UNDERLYING THE VERY DENSE GRAVEL IN BORING B-1, FRACTURED ROCK WAS ENCOUNTERED FROM 23 TO 24 FEET (ELEV. 837 TO 836).

THE FRACTURED ROCK IN BORING B-1 AND THE GRAVEL AND/OR STONE FRAGMENTS IN BORING B-2 WERE UNDERLAIN BY BEDROCK. THE BEDROCK WAS CORED FOR DEPTHS OF 6½ AND 6 FEET IN BORINGS B-1 AND B-2, RESPECTIVELY. IN BORINGS B-1 AND B-2, THE CORING WAS STARTED FROM THE TOP OF ROCK WHERE AUGER REFUSAL WAS ENCOUNTERED AT 24 FEET (ELEV. 836.0 AND 835.7, RESPECTIVELY). THE BEDROCK AT BOTH BORINGS CONSISTED OF LITTLE FRACTURED, GREY/BROWN LIMESTONE.

GROUNDWATER WAS ENCOUNTERED DURING DRILLING IN BORINGS B-1 AND B-2 AT DEPTHS OF 16 AND 13 FEET (ELEV. 844.0 AND 846.7), RESPECTIVELY. WATER WAS USED IN THE ROCK CORING OPERATIONS IN THESE BORINGS, THEREFORE, COMPLETION WATER LEVELS WERE NOT RECORDED.

IT SHOULD BE NOTED THAT THE BORINGS WERE DRILLED AND BACKFILLED WITHIN THE SAME DAY, AND STABILIZED WATER LEVELS MAY NOT HAVE OCCURRED OVER THIS LIMITED TIME PERIOD. BASED ON SOIL COLOR AND GROUNDWATER CONDITIONS ENCOUNTERED IN THE BORINGS, IT IS OUR OPINION THAT THE "NORMAL" GROUNDWATER TABLE AT THE SITE CAN GENERALLY BE EXPECTED AT A DEPTH OF GREATER THAN 15 FEET BELOW EXISTING GRADE (ELEV. 836).

HOWEVER, GROUNDWATER ELEVATIONS TEND TO FLUCTUATE WITH SEASONAL INFLUENCES, AND THE POTENTIAL EXISTS FOR SEASONALLY HIGH AND/OR "PERCHED" GROUNDWATER CONDITIONS TO OCCUR DURING PERIODS OF ABOVE-NORMAL PRECIPITATION. ADDITIONALLY, THE GROUNDWATER TABLE WILL BE INFLUENCED BY STREAM LEVELS ASSOCIATED WITH ROCK CREEK. THEREFORE, THE GROUNDWATER CONDITIONS MAY VARY AT DIFFERENT TIMES OF THE YEAR FROM THOSE ENCOUNTERED DURING THIS INVESTIGATION.

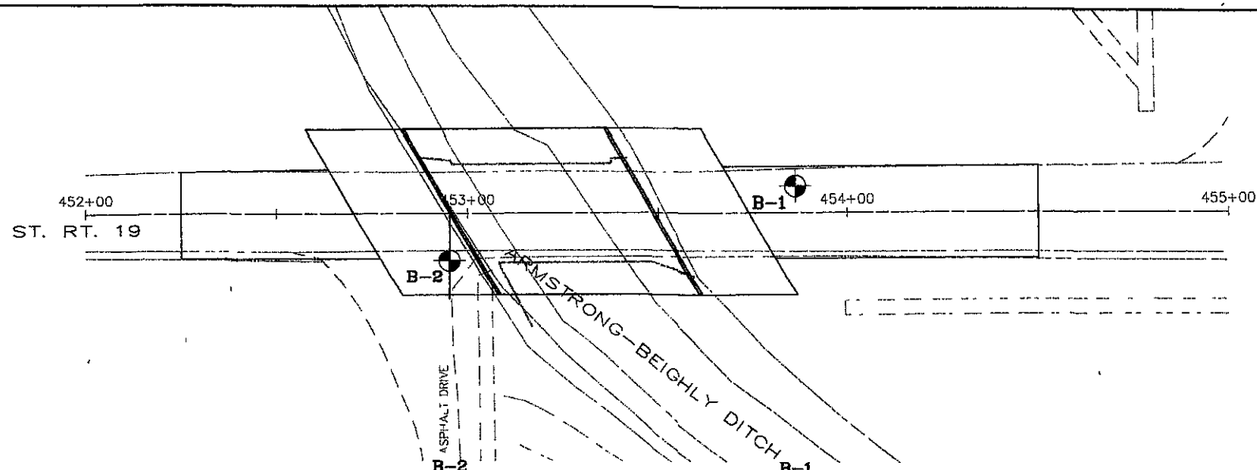
TOLTEST INC
1915 N. 12th STREET
TOLEDO, OHIO 43624

DRAWN BY: B GALLAGHER
DATE: 8-19-02
DRAWING NO 40208-GP1
PROJECT NO. 40208.01

STRUCTURE FOUNDATION INVESTIGATION

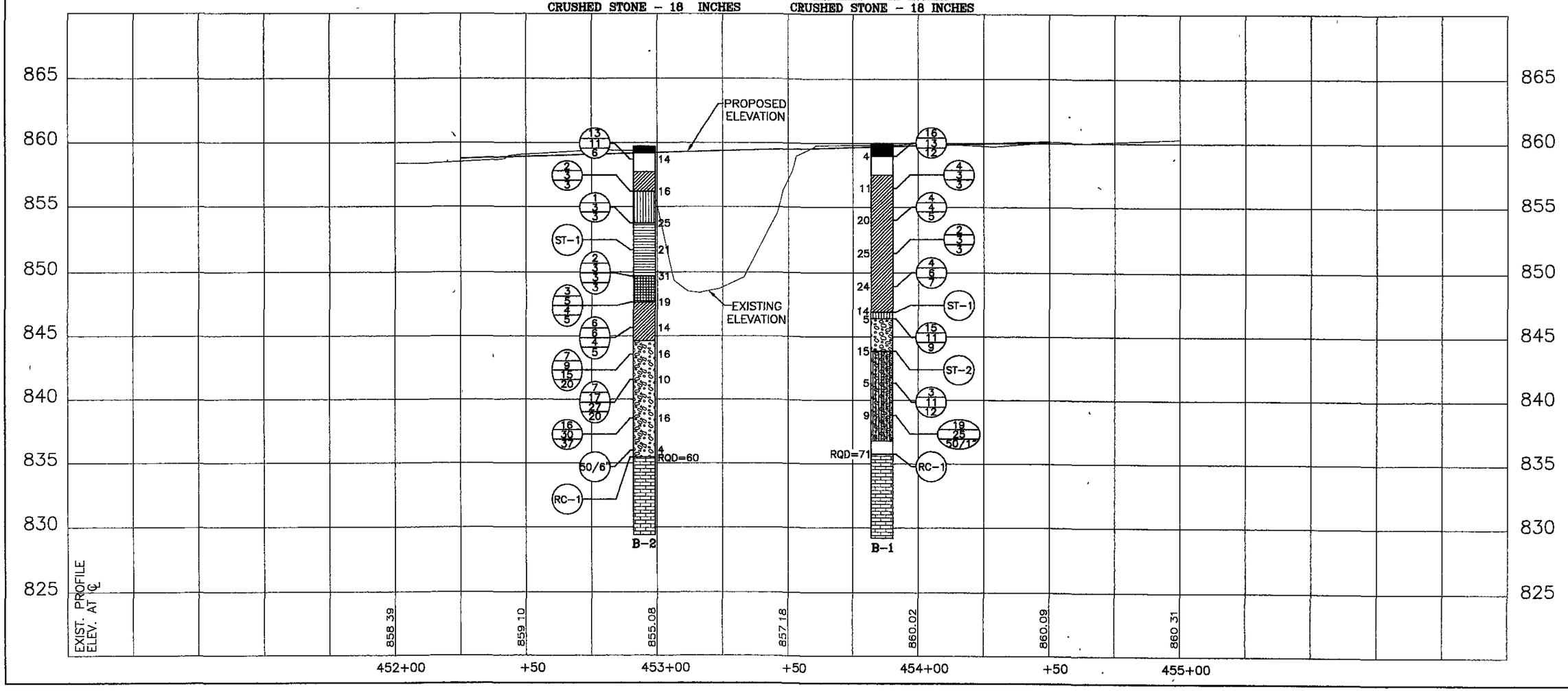
SEN-19-8.58
SENECA COUNTY, OHIO

1/3



B-2
STA. 452+95; 12.5' RT
ELEVATION 859.7 FEET
ASPHALT – 6 INCHES
CRUSHED STONE – 18 INCHES

B-1
STA. 453+86; 7' LT
ELEVATION 860.0 FEET
ASPHALT – 12 INCHES
CRUSHED STONE – 18 INCHES



TMS, INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624

HORIZONTAL SCALE IN FEET

DRAWN BY: B GALLAGHER
DATE: 5-19-02
DRAWING NO 40208-1PP2
PROJECT NO 40208.01

STRUCTURE FOUNDATION INVESTIGATION

SEN-19-8.58
SENECA COUNTY, OHIO

LOG OF TEST BORING

Boring No B-1

Project SEN-19-8.58 Bridge Replacement — Sta 453+86
Project Location Seneca County OH — Offset 7 Feet Lt
TolTest Project No 40208 01 — Ground Surface Elev 860 0 Feet
Drill Date 9/21/00

Elevation	Depth	Material Description	Strata	Sample Type	Sample Number	Blows per 6"	N-Value	Recovery (inches)	Dry Density (pcf)	Water Content (%)	Gravel (%)	Coarse Sand (%)	Fine Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index
859	1	ASPHALT – 12 Inches																
857.5	2	CRUSHED STONE – 18 Inches			SS-1	16-13-12	25	10		3 6								
	3	Very Damp Medium Stiff Brown SILT and CLAY (A-6a) w/ Some Sand and Trace Gravel																
	4				SS-2	4-3-3	6	18		10 8								
854	5																	
	6	–Moist Stiff			SS-3	4-4-5	9	18		19 7								
851 5	7																	
	8	–Very Moist Medium Stiff A-6a (9)			SS-4	2-3-3	6	18	100.8	25 2	0	1	4	42	53	32	19	13
849	9																	
	10	–Moist Stiff A-6a (10)			SS-5	4-6-7	13	18	104 9	24 3	0	0	2	46	52	34	19	15
847	11																	
	12	Moist Medium Dense Brown SANDY SILT w/Gravel and Little Clay A-4a (1)			ST-1			3		13 9	43	7	10	20	20	24	15	9
	13				SS-6	15-11-9	20	6		5 3								
844	14																	
	15	Damp Medium Dense Tan GRAVEL and/or STONE FRAGMENTS (A-1-a) w/Trace Sand			ST-2			8		14 7	53	7	14	23	3	Non Plas	tic	
	16																	
	17	Moist Medium Dense Tan GRAVEL w/Some Silt, Little Sand and Trace Clay A-2-4 (0)			SS-7	3-11-12	23	18		5 4								
839	18																	
	19	–Very Damp Very Dense			SS-8	19-25-50/1"	SSR	13		8.7								
837	20																	
836	21	FRACTURED ROCK																
	22	Little Fractured Grey/Brown LIMESTONE 7ft Run 100% Recovery 71% RQD			RC-1			78										
	23																	
	24																	
829.5	25																	
	26																	
	27																	
	28																	
	29																	
	30																	
	31	Bottom of Boring																

WATER LEVEL OBSERVATIONS
Initial 16 0 Feet
At Completion N/A
After Completion N/A
Water Used in Drilling: Induced water at 24.0 Feet

NOTES: Auger refusal was encountered at the – depth of 24 0 feet and 6 5 feet of rock – was cored "SSR" – Split Spoon Refusal –

Rig No 111
Drillers NW/JW
Drill Method 3 1/4" HSA
Sampling Method SS/ST/RC
Figure No 1

LOG OF TEST BORING

Boring No B-2

Project SEN-19-8 58 Bridge Replacement — Sta 452+95
Project Location Seneca County OH — Offset 12 5 Feet Rt
TolTest Project No 40208 01 — Ground Surface Elev 859 7 Feet
Drill Date 9/20/00

Elevation	Depth	Material Description	Strata	Sample Type	Sample Number	Blows per 6"	N-Value	Recovery (inches)	Dry Density (pcf)	Water Content (%)	Gravel (%)	Coarse Sand (%)	Fine Sand (%)	Silt (%)	Clay (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index
	1	ASPHALT – 6 Inches																
857 7	2	CRUSHED STONE – 15 Inches			SS-1	13-11-6	17	18		14 1	15	12	12	20	41	29	16	13
856 2	3	Very Damp Very Stiff Brown SILT and CLAY w/Some Sand and Little Gravel A-6a (6)																
	4				SS-2	2-3-3	6	18		16 3	6	25	24	30	13	21	17	4
853.7	5																	
	6	Very Moist Loose Brown SANDY SILT w/Little Clay and Trace Gravel A-4a (2)			SS-3	1-3-3	6	18	103.0	24 7	0	3	13	26	58	37	19	18
851 7	7																	
	8				ST-1			18	109 0	21 1	11	7	13	19	50	38	20	18
849 7	9	Moist Medium Stiff Brown SILTY CLAY w/Little Sand A-6a (11)																
	10	–w/Trace Gravel A-6b (10)			SS-4	2-3-3-3	6	24	91 3	30 8	10	4	7	19	60	50	21	29
847 7	11																	
	12	Wet Medium Stiff Brown CLAY w/Little Silt,Trace Sand,and Gravel A-7-6 (18)			SS-5	3-5-4-5	9	24	116.3	18.8	13	11	12	22	42	28	17	11
844 7	13																	
	14	Moist Stiff Brown SILT and CLAY w/Little Sand and Gravel A-6a (8)			SS-6	6-6-4-5	10	24		14 0								
843.7	15																	
	16	Moist Loose Tan GRAVEL and/or STONE FRAGMENTS (A-1-a) w/Little Silt			SS-7	7-9-15-20	24	24		16 3								
841 7	17																	
	18	–Very Moist Medium Dense w/Trace Silt			SS-8	7-17-27-20	44	24		10 2								
	19	–Moist Dense																
838.7	20																	
	21	–Very Moist Very Dense w/Little Silt			SS-9	16-30-37	67	15		15 8								
835 2	22																	
	23	–Dry Tan/Grey			SS-10	50/6"	SSR	1		3.8								
	24																	
	25	Little Fractured Grey/Brown LIMESTONE 22' Run 97% Recovery 60% RQD			RC-1			72										
	26																	
	27																	
	28																	
829 7	29																	
	30																	
	31	Bottom of Boring																

WATER LEVEL OBSERVATIONS
Initial 13 0 Feet
At Completion N/A
After Completion N/A
Water Used in Drilling: Induced water at 24 0 Feet

NOTES: Auger refusal was encountered at the – depth of 24 0 feet and 8 0 feet of rock – was cored "SSR" – Split Spoon Refusal –

Rig No 111
Drillers NW/JW
Drill Method 3 1/4" HSA
Sampling Method SS/ST/RC
Figure No. 2

TOLTEST INC.
1915 N. 12th STREET
TOLEDO, OHIO 43624