

DESIGN DESIGNATION

1985 ADT = 4970
2005 ADT = 7250
DHV = 600
D = 55 %
T = 17 %
V = 50 M.P.H.

MICROFILMED
NOV 20 1987

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
WAY - 250 - 17.40
VILLAGE OF APPLE CREEK
EAST UNION TOWNSHIP
WAYNE COUNTY

WAY-250-17.40

OHIO

FHWA
REGION 5

20

BRF-47(22)

FEDERAL
PROJECT

BRF-47(22)

MICROFILMED
DEC 5 1991

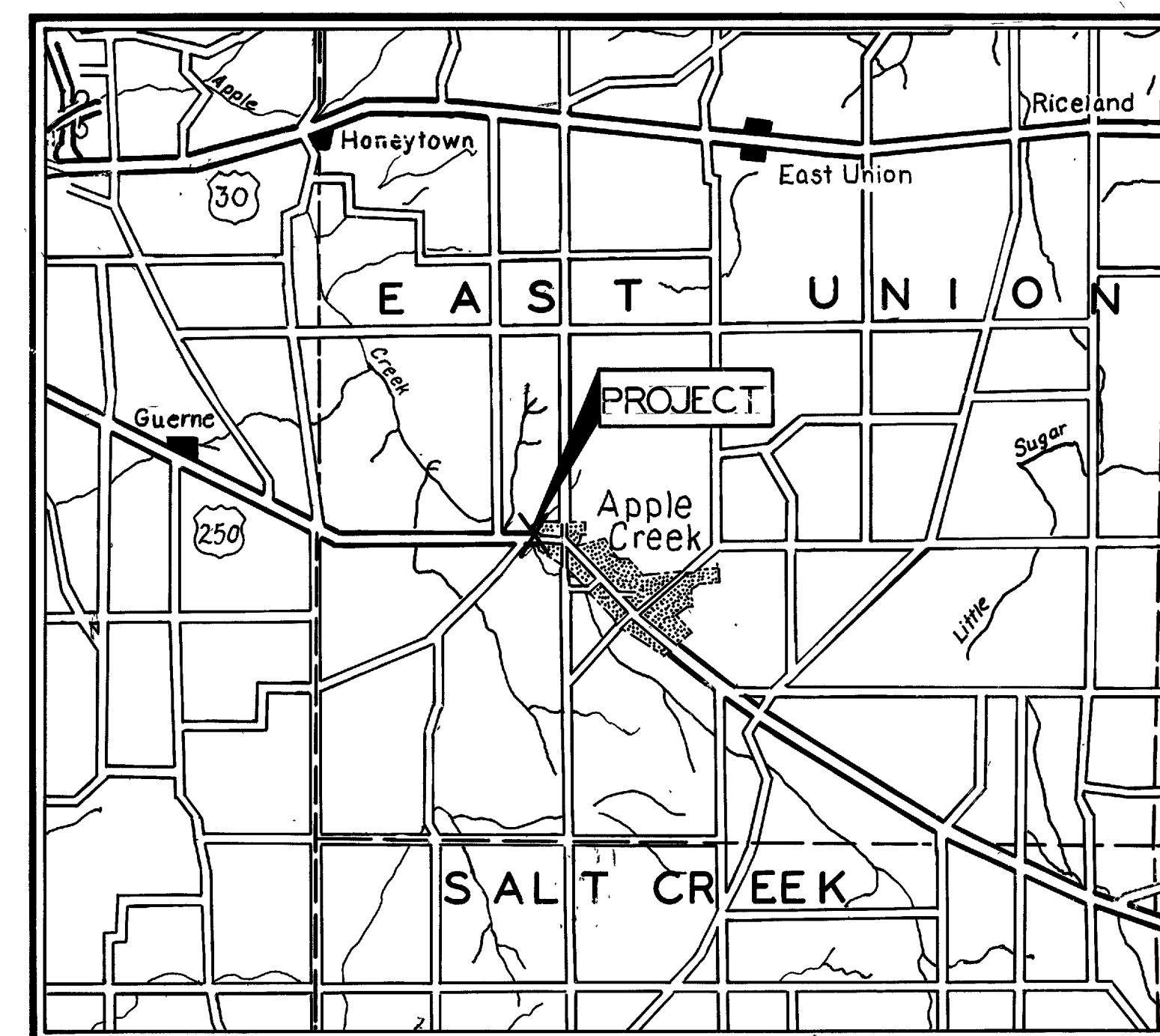
CONVENTIONAL SIGNS

County Line -----
Township Line -----
Section Line -----
Corporation Line ----- or -----
Fence Line (existing) -x-x- (proposed) -x-x-
Center Line -----
Trees (to be removed) (to be removed)
Utility Poles: Telephone ϕ , Power ϕ , Light ϕ .

Limited Access (only) ----- LA -----
Right of Way (only) ----- RW -----
Limited Access & Right of Way ----- LA & RW -----
Existing Right of Way -----
Property Line ----- (in existing fence) -x-x-
Railroad ----- or -----
Guardrail (existing) ----- (proposed) -----

INDEX OF SHEETS

TITLE SHEET	1
TYPICAL SECTIONS	2
GENERAL NOTES	3-4
GENERAL SUMMARY	5
PLAN AND PROFILE	6
CROSS SECTIONS	7-9
CHANNEL DETAILS	10-11
TRAFFIC MAINTENANCE DETAILS	12-13
STRUCTURE DETAILS	14-19, 15A-15D
RIGHT OF WAY	20



LOCATION MAP

SCALE IN MILES



BEGIN PROJECT STA. 918+97.35
END PROJECT STA. 919+99.66
NET PROJECT LENGTH 10231 LIN. FT.
OR 0.019 MILES

BEGIN WORK STA. 915+65
END WORK STA. 923+20
NET WORK LENGTH 755.00 LIN. FT.
OR 0.143 MILES

LINE DATA

UNDERGROUND UTILITIES
48 HOURS
BEFORE YOU DIG
Call 800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE

NON-MEMBERS
MUST BE CALLED DIRECTLY

Portion to be improved -----
State & Federal Routes -----
Other Roads -----

SCALES

Plan -----
Profile: ----- Horizontal -----, Vertical -----
Cross Section: Horizontal -----, Vertical -----

SUPPLEMENTAL SPECIFICATIONS			
814	1-1-69	847	10-17-83
824	10-8-82	947	10-17-83
836	3-12-75		
861	9-9-83		
961	9-9-83		

Approved Harry W. Pinn
Date 11/28/84 District Deputy Director of Transportation

Approved Walter J. Hastings, Jr.
Date 1-2-85 Engineer, Bureau of Bridges and
Structural Design

Approved Wayne H. Kauble
Date 5-6-85 Chief Engineer, Planning and Design

Approved Warren J. Smith
Date 5-6-85 Director, Department of Transportation

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR

DATE

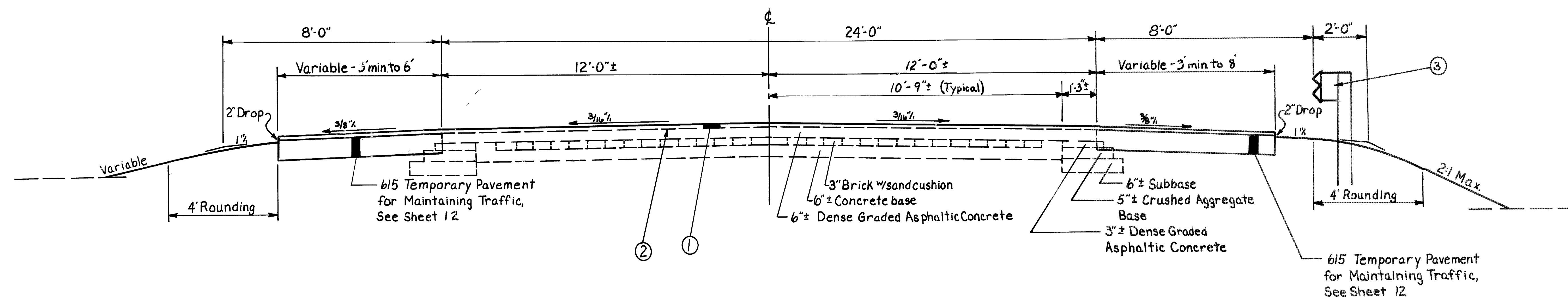
Project: WAY - 250 - 17.40 WAYNE COUNTY
Date of Letting 19 Contract No.

SEAL

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS			
BP-5	1-11-85	AS-1-81	11-27-81
		DBR-2-73	4-10-73
GR-1	1-11-85	ICD-1-82	Rev. 8-1-84
GR-2B	2-5-82		
GR-3	2-5-82	MH-3	6-18-84
GR-4	2-5-82	MH-1	6-18-84
GR-4A	1-30-84		
MC-4	7-26-76	LA-1	6-1-79
MC-9A	1-11-85		
CB-2-2A	5-1-79		

Plan Prepared By:
DISTRICT 3 DESIGN
(ROADWAY PLANS)
AND
HAMMONTREE & ASSOCIATES, LTD.
(STRUCTURE PLANS)

TYPICAL SECTIONS TYPE 404



STA. 918 + 60 TO STA. 918 + 97.35 = 37.35 LIN. FT.
STA. 919 + 99.66 TO STA. 920 + 35 = 35.34 LIN. FT.
72.69 LIN. FT.

NOTE: All angles at change of slope shall have 2' rounding unless otherwise shown

LEGEND

- ① Variable 404 Asphalt Concrete, AC-20 (Pavement Feathers to Approach Slab)
- ② 407 Tack Coat and Cover Aggregate, See General Note
- ③ 606 Guard Rail, Type 5

GENERAL NOTES

WAY - 250 - 17.40

FED. RD. DIVISION	STATE	PROJECT
5	OHIO	

3
20

CALC. BY: *POA 8/4*
CHK'D BY: *R.W. 5. 11/84*

FIELD OFFICE:

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 300 SQ. FT. OF FLOOR SPACE. PAYMENT SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS:

THE ROUNDED CORNERS SHOWN ON THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

ELEVATION DATUM:

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

CONTINGENCY QUANTITIES:

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

UNDERGROUND UTILITIES:

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 OF THE OHIO REVISED CODE.

UTILITY NOTIFICATION:

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ANY AREA WHICH MAY INVOLVE UNDERGROUND FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UNDERGROUND UTILITY PROTECTION SERVICES AND THE OWNERS OF ALL UNDERGROUND UTILITY FACILITIES SHOWN IN THE PLANS.

AFTER NOTICE IS RECEIVED, THE OWNER OF ANY UNDERGROUND UTILITY FACILITY SHALL WITHIN FORTY-EIGHT (48) HOURS, EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS, STAKE, MARK, OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

UTILITY OWNERSHIP: THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

TELEPHONE: UNITED TELEPHONE COMPANY
215 NORTH MARKET STREET
WCOSTER, OHIO 44691
PHONE: (216) 264-8611

GAS: THE EAST OHIO GAS COMPANY
332 SECOND STREET
CANTON, OHIO 44702
PHONE: (216) 438-6141

POWER: OHIO POWER COMPANY
P.O. BOX 400
301 CLEVELAND AVENUE S.W.
CANTON, OHIO 44701
PHONE: (216) 455-8931

WATER & SANITARY:
APPLE CREEK WATER & SEWER DEPARTMENT
MAIN STREET
APPLE CREEK, OHIO 44606
PHONE: (216) 698-5462

407 TACK COAT:

THE TACK COAT AND COVER AGGREGATE OPERATION SHALL BE DETERMINED AS PER SPECIFICATION 407.05. PLAN QUANTITIES INDICATE AVERAGE APPLICATION RATES OF 0.10 GALLONS PER SQUARE YARD OF TACK COAT AND 7 POUNDS PER SQUARE YARD OF COVER AGGREGATE FOR ESTIMATING PURPOSES ONLY.

LOCATION OF GUARDRAIL:

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

REMOVAL OF TREES AND STUMPS:

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZES	NO. TREES	NO. STUMPS
18"	1	0
30"	0	0
48"	0	0
60"	0	0

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING.

SEEDING:

QUANTITIES FOR SEEDING, WHERE REQUIRED BY PLAN, ARE CALCULATED FOR THE SOIL AREAS BETWEEN TEN (10) FEET OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS, OR TO THE RIGHT-OF-WAY OR TEMPORARY LINES, IF SUCH LINE IS LESS THAN TEN (10) FEET FROM THE WORK LIMITS.

WATERING PERMANENT SEEDED AREAS:

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

ITEM 659	WATER	4 M-GAL.
----------	-------	----------

EROSION CONTROL:

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

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

DUST CONTROL:

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED IN THE GENERAL SUMMARY TO BE USED FOR DUST CONTROL AS DIRECTED BY THE ENGINEER:

ITEM 616	WATER	50 M-GAL.
----------	-------	-----------

604 SANITARY MANHOLE RECONSTRUCTED TO GRADE WITH NEW FRAME AND COVER, AS PER PLAN:

THE SANITARY MANHOLE SHALL BE RECONSTRUCTED TO GRADE BY REMOVING THE EXISTING FRAME AND COVER, THE ECCENTRIC CONE TOP AND REMOVING AND REPLACING A RISER SECTION(S) WHICH WILL PLACE THE NEW COVER AT THE PROPER ELEVATION AFTER THE EXISTING CONE TOP AND NEW FRAME AND COVER ARE PLACED BACK IN POSITION.

THE EXISTING CASTINGS SHALL BE STORED WITHIN THE PROJECT RIGHT OF WAY FOR SALVAGE BY THE VILLAGE OF APPLE CREEK.

THE NEW FRAME AND COVER SHALL BE OF HEAVY DESIGN AS REQUIRED BY STANDARD DRAWING MH-1 BUT SHALL HAVE A SOLID COVER WITH THE WORD "SANITARY" WRITTEN ON THE TOP. THE RISER SECTION AND JOINT SEAL FOR THE SANITARY MANHOLE SHALL BE AS PER THE REQUIREMENT OF STANDARD DRAWING MH-3.

THE UNIT PRICE BID FOR THIS ITEM SHALL CONSTITUTE FULL COMPENSATION FOR ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK.

CONNECTIONS TO EXISTING PIPE:

WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS.

614 MAINTAINING TRAFFIC:

THROUGH TRAFFIC ON U.S.R.250 SHALL BE MAINTAINED AT ALL TIMES. A MINIMUM OF ONE-LANE OF TRAFFIC SHALL BE MAINTAINED WITH A TRAFFIC SIGNAL SYSTEM BY USE OF THE EXISTING PAVEMENT AND TEMPORARY PAVEMENTS AS DETAILED ON SHEET 12. THE LIMITS AND DURATION OF USE OF ONE-LANE TRAFFIC ZONES SHALL BE PER THE NOTE ON SHEET 12, AND IN ALL CASES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

FARM DRAINS:

ALL FARM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS UNDER THE DIRECTION OF THE ENGINEER.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE E CONDUIT. THE OPTIMUM ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL DRAINS WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603 TYPE E CONDUIT AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET.

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

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

ITEM 603	6" CONDUIT, TYPE E	LINE FT.
ITEM 603	8" CONDUIT, TYPE F	LINE FT.

NECESSARY BENDS AND BRANCHES SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEM. NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNTIL REQUESTED BY THE ENGINEER.

ITEM 601 - ROCK CHANNEL PROTECTION WITH FILTER:

WHERE THIS ITEM IS CALLED FOR IN THE PLANS, THE QUANTITIES SHOWN ARE BASED ON THE DIMENSIONS OF THE ROCK ONLY AND DO NOT INCLUDE THE VOLUME OF A SIX INCH (6") STONE FILTER BED. THE COST OF THE FILTER (EITHER FABRIC OR STONE) SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "ITEM 601 - ROCK CHANNEL PROTECTION WITH FILTER". WHERE THE FABRIC FILTER OPTION IS USED THE FABRIC SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPEC. 939 TYPE B.

THE SURFACE TO RECEIVE THE FABRIC SHALL BE PREPARED TO A RELATIVELY SMOOTH SURFACE FREE OF OBSTRUCTION AND DEBRIS. THE FABRIC SHALL BE PLACED WITH THE LONG DIMENSION PARALLEL TO THE DIRECTION OF FLOW AND SHALL BE LAID LOOSELY BUT WITHOUT WRINKLES AND BREASES. WHERE JOINTS ARE NECESSARY, STRIPS SHALL BE PLACED TO PROVIDE A TWELVE INCH (12") MINIMUM OVERLAP WITH THE UPSTREAM STRIP OVERLAPPING THE DOWNSTREAM STRIP. SECURING PINS WITH WASHERS SHALL BE PLACED AT TWO FOOT (2') MINIMUM INTERVALS ALONG JOINTS AND AT FIVE FOOT (5') INTERVALS ELSEWHERE TO PREVENT SLIPAGE OF THE FABRIC. THE SECURING PINS SHALL BE 3/16" DIAMETER OF STEEL POINTED AT ONE END AND FIBRICATED WITH A HEAD TO RETAIN A STEEL WASHER HAVING AN OUTSIDE DIAMETER NOT LESS THAN 1-1/2". PIN LENGTHS SHALL BE GREATER THAN OR EQUAL TO 18".

2.03 SUBGRADE COMPACTION

A QUANTITY OF 159 SQ.YD. OF SUBGRADE COMPACTION HAS BEEN ADDED TO THE GENERAL SUMMARY FOR THE COMPACTION OF THE SUBGRADE UNDER THE APPROACH SLABS, IN ACCORDANCE WITH ITEM 2.03.13 (A).

614 WORK ZONE PAVEMENT MARKINGS

GENERAL

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND WHEN NECESSARY, REMOVE WORK ZONE RETROREFLECTIVE PAVEMENT MARKINGS ON EXISTING, RECONSTRUCTED, RESURFACED OR TEMPORARY ROADS WITHIN THE WORK LIMITS, IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE MARKINGS SHALL BE MAINTAINED IN GOOD CONDITION TO PROVIDE DAY AND NIGHT VISIBILITY. THE MARKINGS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER TO MAINTAIN REQUIRED VISUAL EFFECTIVENESS AND NIGHT VISIBILITY AT NO ADDITIONAL COST TO THE STATE.

THE CONTRACTOR SHALL, IN ADVANCE OF ANY SECTION OF ROADWAY LACKING OMUTCD FULL PATTERN STANDARD DIMENSION EDGE LINE OR CENTER LINE MARKINGS, ERECT A "NO EDGE LINES" (OW-167) SIGN OR "UNMARKED NO PASSING ZONES" (OW-168) SIGN OR BOTH AS MAY BE APPROPRIATE. THESE SIGNS SHALL BE IN PLACE PRIOR TO EXPOSING THE ROADWAY TO TRAFFIC. THESE SIGNS SHALL BE REPEATED EVERY 1 TO 2 MILES AND AT OTHER LOCATIONS AS NECESSARY. THESE SIGNS SHALL BE REMOVED WHEN THEY NO LONGER APPLY. THE COST FOR FURNISHING AND ERECTING AND SUBSEQUENTLY REMOVING THESE SIGNS SHALL BE INCLUDED IN 614 MAINTAINING TRAFFIC, UNLESS SPECIFICALLY ITEMIZED.

TEMPORARY PAVEMENT MARKING MATERIALS

UNLESS OTHERWISE INDICATED ON THE PLANS, TEMPORARY PAVEMENT MARKINGS MAY BE EITHER 621.02 PAINT OR 947.03 TYPE B OR C PREFORMED MATERIAL. *WHERE PAVEMENT MARKINGS ARE NOT LIABLE TO BE TRACKED, EITHER CONVENTIONAL OR FAST-DRYING PAINT MAY BE USED FOR 621.02.*

PAINTED MARKINGS SHALL BE IN ACCORDANCE WITH 621 EXCEPT THAT THE INCREASE OF 25 PERCENT IN THE APPLICATION RATE FOR NEW BITUMINOUS PAVEMENT AND PARAGRAPH 621.14 SHALL NOT APPLY.

TYPE B AND TYPE C PREFORMED MATERIAL

PREFORMED MATERIAL SHALL COMPLY WITH 947.03 EXCEPT THAT NO PREFORMED MATERIAL CONTAINING METAL SHALL BE PLACED ON ANY SURFACE UNLESS IT WILL BE REMOVED LATER BY THE CONTRACTOR. TEMPORARY PAVEMENT MARKINGS OF 947.03 PREFORMED MATERIAL SHALL BE REMOVED PRIOR TO PLACEMENT OF 621 OR 847 SURFACE COURSE MARKINGS AT THAT LOCATION. PREFORMED MATERIAL SHALL BE APPLIED IN ACCORDANCE WITH 847 EXCEPT AS MODIFIED HEREIN.

PLACEMENT

TEMPORARY MARKINGS SHALL BE COMPLETE AND IN PLACE ON ALL PAVEMENT PRIOR TO EXPOSING IT TO TRAFFIC. WHEN TEMPORARY MARKINGS CONFLICT WITH THE TRAFFIC PATTERN, THEY SHALL BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH 621.134.

TEMPORARY MARKING CLASSES

CLASS I MARKINGS

CLASS I MARKINGS SHALL BE APPLIED TO THE FULL DIMENSIONS AS DEFINED IN 621 WITH THE FOLLOWING ADDITIONS OR EXCEPTIONS:

- 1) LANE LINES SHALL BE 4-INCHES IN WIDTH.
- 2) TRANSVERSE LINES SHALL BE 8-INCHES IN WIDTH.
- 3) STOP LINES SHALL BE 12-INCHES IN WIDTH.
- 4) CROSS WALK LINES SHALL BE 8-INCHES IN WIDTH.

CLASS II MARKINGS

CLASS II MARKINGS (ABBREVIATED) SHALL BE DEFINED AS FOLLOWS:

CENTER LINES SHALL CONSIST OF SINGLE, YELLOW 4-INCH WIDE BY A MINIMUM OF 48-INCH LONG DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

LANE LINES SHALL CONSIST OF WHITE 4-INCH WIDE BY A MINIMUM OF 48-INCH LONG DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

GORE MARKINGS SHALL BE TWO CONTINUOUS, WHITE 4-INCH LINES PLACED AT THE THEORETICAL GORE OF AN EXIT RAMP OR DIVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 1.6 GALLONS PER MILE FOR LANE LINE AND CENTER LINE AND 16 GALLONS PER MILE FOR GORE MARKINGS.

CONFLICTING EXISTING MARKINGS

THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL CONFLICTING EXISTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 621.134. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCLUDED IN 614 MAINTAINING TRAFFIC UNLESS SPECIFICALLY ITEMIZED.

THE CONTRACTOR SHALL ALSO REMOVE THE PRISMATIC RETRO-REFLECTOR WITHIN ANY RAISED PAVEMENT MARKER (RPM) WHICH IS IN CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS. WHEN THE TEMPORARY PAVEMENT MARKINGS ARE REMOVED AND THE RPM IS NO LONGER IN CONFLICT, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE RECESSED REFLECTOR ATTACHMENT AREA OF THE CASTING AND INSTALL A NEW PRISMATIC RETRO-REFLECTOR OF THE SAME KIND AND COLOR. THE COST FOR THIS WORK SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.

INTERIM MARKINGS

WITHIN 21 CALENDAR DAYS AFTER OPENING ANY LENGTH OF PAVEMENT TO TRAFFIC, THE 621 OR 847 PAVEMENT MARKINGS CALLED FOR IN THE PLANS OR EQUIVALENT 614 CLASS I, PAINT MARKINGS SHALL BE APPLIED. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO PLACE AND MAINTAIN 614 CLASS I PAINT MARKINGS AS PART OF THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC.

FOR EACH CALENDAR DAY BEYOND 21 DAYS THAT THIS WORK SHALL REMAIN UNCOMPLETED, THE PROVISIONS OF 108.07 WILL BE INVOKED, EXCEPT THAT BETWEEN NOVEMBER 15 AND APRIL 15 WEATHER CONDITIONS SHALL NOT BE AN ACCEPTABLE REASON FOR EXTENSION.

METHOD OF MEASUREMENT

TEMPORARY PAVEMENT MARKINGS WILL BE MEASURED COMPLETE IN PLACE, BY CLASS AND MATERIAL, IN THE UNITS DESIGNATED. LINE QUANTITIES WILL BE THE LENGTH OF THE COMPLETED STRIPE, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED, IN ACCORDANCE WITH 621.15.

TEMPORARY PAVEMENT MARKINGS WILL INCLUDE THE LAYOUT, APPLICATION AND REMOVAL OF THE MARKINGS, WHEN REQUIRED.

BASIS OF PAYMENT

PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR PLACEMENT, MAINTENANCE AND NECESSARY REMOVAL OF THE MARKINGS.

ITEM	UNIT	DESCRIPTION
614	MILES	TEMPORARY LANE LINES, CLASS _____, * _____
614	MILES	TEMPORARY CENTER LINES, CLASS _____, * _____
614	LIN. FT.	TEMPORARY CHANNELIZING LINES, CLASS I, * _____
614	MILES	TEMPORARY EDGE LINES, CLASS I, * _____
614	LIN. FT.	TEMPORARY GORE MARKINGS, CLASS II, * _____
614	LIN. FT.	TEMPORARY STOP LINES, CLASS I, * _____
614	LIN. FT.	TEMPORARY CROSSWALK LINES, CLASS I, * _____
614	EACH	TEMPORARY LANE ARROWS, CLASS I, * _____
614	EACH	TEMPORARY RAILROAD SYMBOL MARKINGS, CLASS I, * _____
614	EACH	TEMPORARY WORD "ONLY" ON PAVEMENT, 72-INCH, CLASS I, * _____
614	LIN. FT.	TEMPORARY TRANSVERSE LINES, CLASS I, * _____
614	LIN. FT.	TEMPORARY DOTTED LINES, CLASS I, * _____

*621 PAINT, 947.03 TYPE B OR 947.03 TYPE C

THE FOLLOWING QUANTITY IS PROVIDED FOR TEMPORARY PAVEMENT MARKINGS ON THE COMPLETED 404 SURFACE COURSE AND BRIDGE DECK SURFACE:

614 TEMPORARY CENTERLINES, CLASS II 0.03 MILES

SEE SHEET 12 FOR ADDITIONAL TEMPORARY PAVEMENT MARKING QUANTITIES.

WAY -250-17.40

CALCULATIONS

COMMERCIAL FERTILIZER

659 TOTAL FROM GEN. SUMMARY= 1985 SQ.YD.
FERTILIZER= 1985 S.Y.*9*20÷(1000*2000)=0.18 TONS

PERMANENT PAVEMENT MARKINGS

621 EDGE LINE, WHITE:
STA. 917+15 TO STA. 921+70 LT.=455 LIN. FT.
STA. 917+15 TO STA. 921+90 RT.=475 LIN. FT.
TOTAL EDGE LINE=(455+475)÷5280=0.18 MILES

621 CENTER LINES, SOLID DOUBLE:
STA. 917+15 TO STA. 921+70 C.=455 LIN. FT.
TOTAL CENTER LINES=455÷5280=0.09 MILES

GENERAL SUMMARY

CAL'C. BY: POB 8/84
CHK'D. BY: PW.S. 12/84

FROM SHEET NUMBER							ITEM	PLAN TOTAL	UNIT	DESCRIPTION
3	4	5	6	10	12					
LUMP										ROADWAY
			1				201	LUMP		CLEARING AND GRUBBING
			118				202	1	EACH	CATCH BASIN REMOVED
			532				202	118	SQ.YD.	PAVEMENT REMOVED
			90				203	532	CU.YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
							203	90	CU.YD.	EMBANKMENT
				25			606	25	LIN.FT.	GUARDRAIL, TYPE 6
			175				606	175	LIN.FT.	GUARDRAIL, TYPE 5
			2				606	2	EACH	ANCHOR ASSEMBLY, STANDARD TYPE A
			1				606	1	EACH	ANCHOR ASSEMBLY, STANDARD TYPE T
			4				606	4	EACH	BRIDGE TERMINAL ASSEMBLY, STANDARD TYPE B
159							203	159	SQ.YD.	SUBGRADE COMPACTION
				483			615	483	SQ.YD.	TEMPORARY PAVEMENT, CLASS A, AS PER PLAN
				LUMP			615	LUMP		TEMPORARY ROADS
50							616	50	M-GAL	WATER
				48			410	48	CU.YD.	TRAFFIC COMPACTED SURFACE, TYPE A OR B
				370			622	370	LIN.FT.	TEMPORARY PRECAST CONCRETE BARRIER, <i>MODIFIED AS PER PLAN</i>
										EROSION CONTROL
			1985				659	1985	SQ.YD.	SEEDING AND MULCHING
		0.18					659	0.18	TON	COMMERCIAL FERTILIZER
4							659	4	M-GAL	WATER
			3	109			601	112	CU.YD.	ROCK CHANNEL PROTECTION, TYPE C, WITH FILTER
										DRAINAGE
				15			603	15	LIN.FT.	8" CONDUIT, TYPE F
			42				603	42	LIN.FT.	12" CONDUIT, TYPE C, 707.13
			1				604	1	EACH	CATCH BASIN, STANDARD NO. 2-2-B
										TRAFFIC CONTROL
0.03							614	0.03	MILE	TEMPORARY CENTERLINES, CLASS II
				0.06			614	0.06	MILE	TEMPORARY CENTERLINES, CLASS I, 947.03 TYPE C
				24			614	24	LIN.FT.	TEMPORARY STOP LINES, CLASS I, 947.03 TYPE C
		0.09					621	0.09	MILE	CENTER LINES
		0.18					621	0.18	MILE	EDGE LINES
										PAVEMENT
			30				304	30	CU.YD.	AGGREGATE BASE
			15				404	15	CU.YD.	ASPHALT CONCRETE, AC-20
			31				407	31	GAL	TACK COAT
			1				407	1	TON	COVER AGGREGATE
			133				611	133	SQ.YD.	REINFORCED CONCRETE APPROACH SLAB (T=12")
										UTILITIES
			1				814	1	EACH	WATER VALVE BOX ADJUSTED TO GRADE
			1				604	1	EACH	SANITARY MANHOLE RECONSTRUCTED TO GRADE WITH NEW FRAME AND COVER, AS PER PLAN
										STRUCTURES OVER 20 FEET
										WAY-250-1741 SEE SHEET 19
LUMP							619	LUMP		FIELD OFFICE
							623	LUMP		CONSTRUCTION LAYOUT STAKES
							624	LUMP		MOBILIZATION
LUMP							614	LUMP		MAINTAINING TRAFFIC

Calc. by DDM 8/84
Chkd. by P.W.S. 11/84

WAY - 250 - 17.40

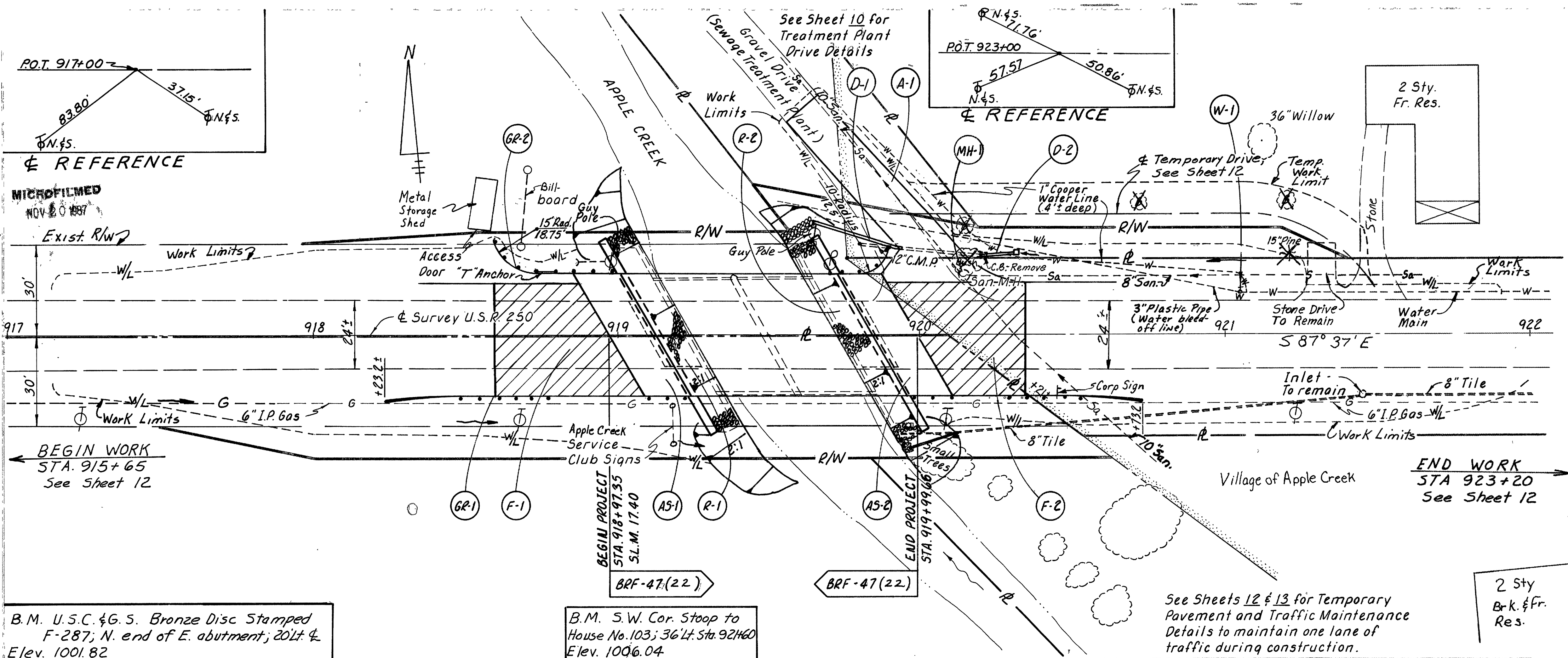
EXISTING BRIDGE DATA WAY-250-1741

TYPE: Concrete Slab
SPAN: 2 @ 24'-0" Clear
ROADWAY: 36.5' Face to Face of Concrete Railing
SKEW: 29° 48' R.F.
LOADING: H-15
WEARING SURFACE: 9"± Asphalt
SUB-STRUCTURE: Concrete Gravity
ALIGNMENT: Tangent
CONDITION: Poor BUILT: 1932

* A construction joint shall be provided at same location as in bridge. Provide steel lap as per Std. Drwg.

* Part of the existing drive may be salvaged as directed by the Engineer in lieu of complete replacement and non-perform a portion of the 304 Quantity

Ref. No.	Station	Quantity	Unit	Notes
814	Water Valve Box Adjusted to Grade	Each		
601	Rock Channel Protection, Type C with Filter	Cu. Yd.	3.3	
604	Standard No. 2-2-B Catch Basin	Each		
604	San. Manhole Reconstructed to Grade w/ New Frame and Cover, As Per Plan	Each		
603	12" Conduit, Type C, 707.13	Lin. Ft.	30.0	
611	Reinforced Concrete Approach Slab	Sq. Yd.	66.7	
404	Asphalt Concrete AC-20	Cu. Yd.	7.7	
	Cover Aggregate	Ton	0.6	
407	Tack Coat	Gal.	15.8	
304	Aggregate Base	Cu. Yd.	14.9	
606	Anchor Assembly	Each		
	Type T			
	Type A			
	Bridge Terminal Assembly Type B	Each		
	Guard Rail Type 5	Lin. Ft.	125.0	
202	Catch Basin Removed	Each		
202	Pavement Removed	Sq. Yd.		
	TOTALS			

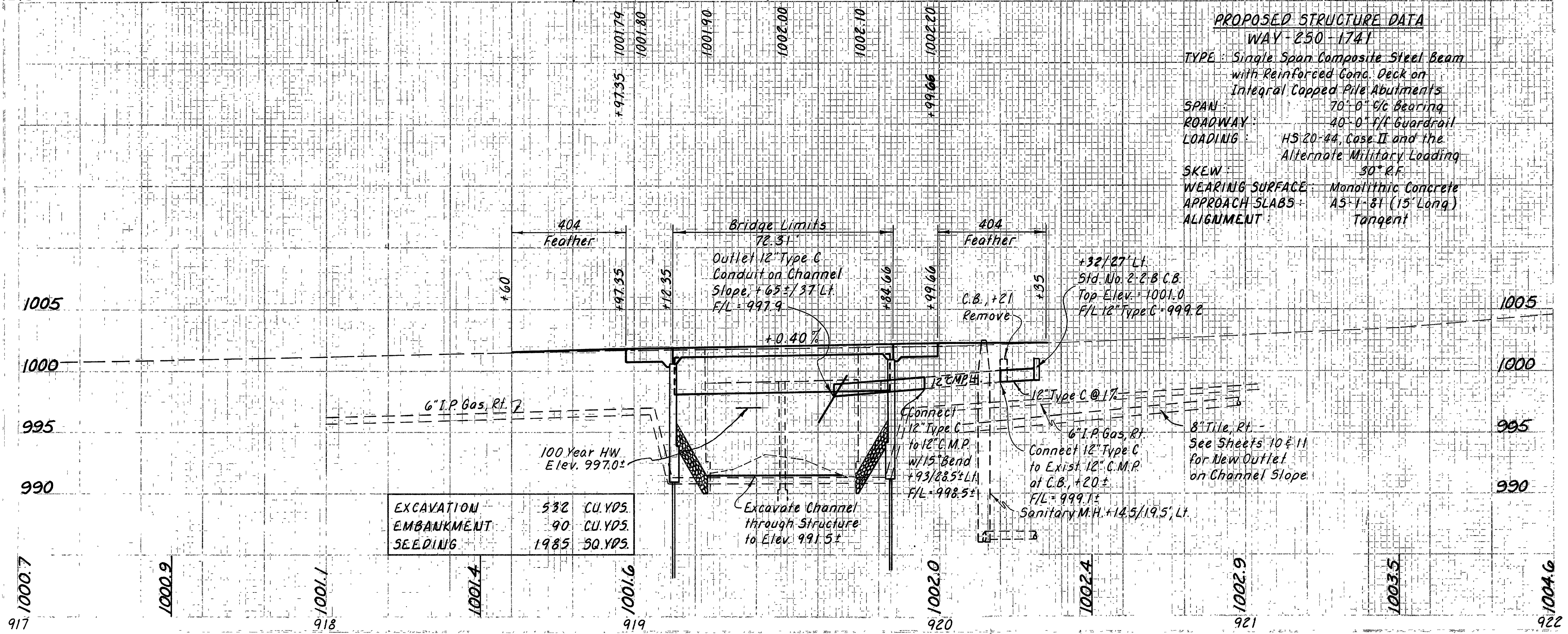


B.M. U.S.C. & G.S. Bronze Disc Stamped F-287; N. end of E. abutment; 201± & Elev. 1001.82

B.M. S.W. Cor. Stoop to House No. 103; 36'± Sta. 92460 Elev. 1006.04

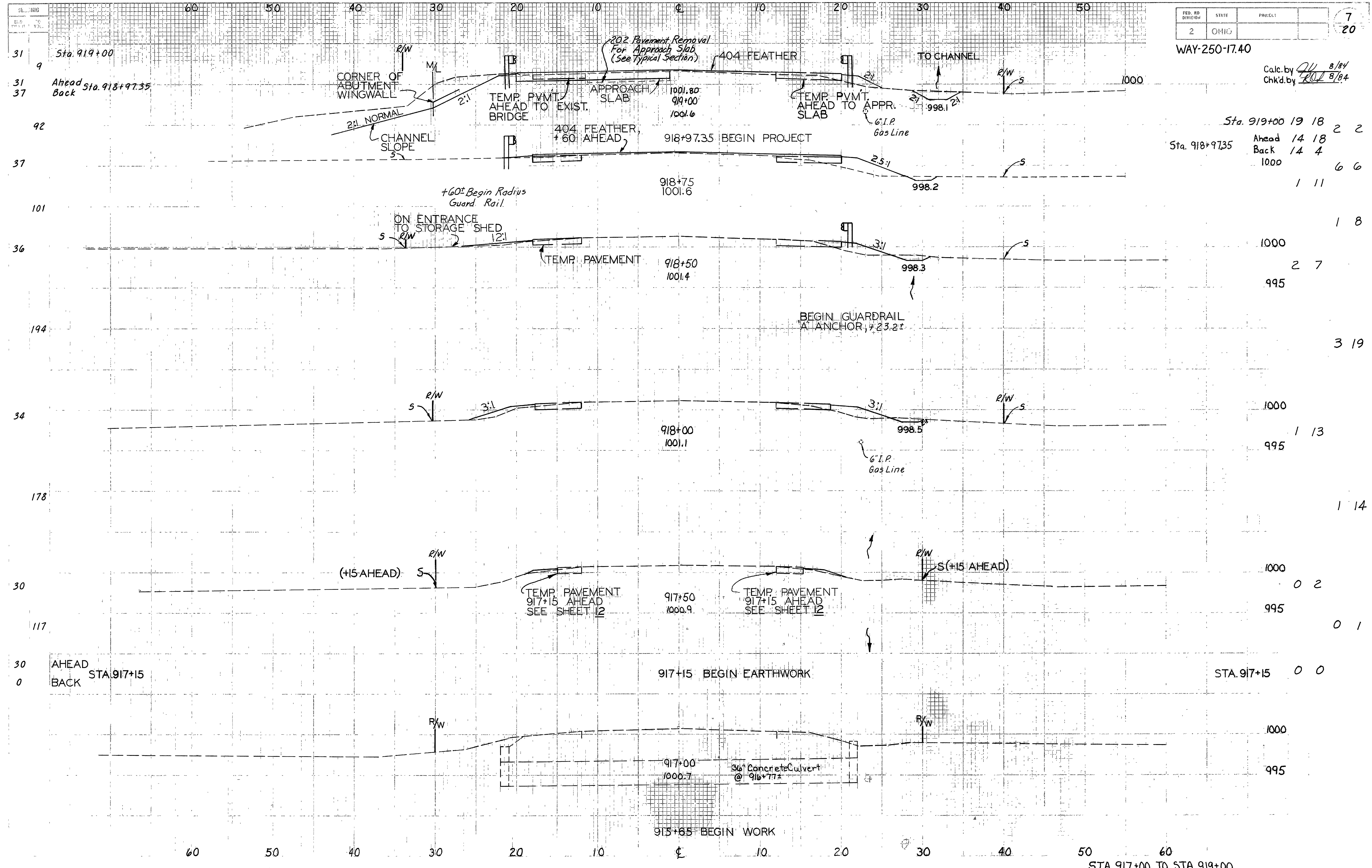
See Sheets 12 & 13 for Temporary Pavement and Traffic Maintenance Details to maintain one lane of traffic during construction.

2 Sty B-k. & Fr. Res.



EXCAVATION	532	CU. YDS.
EMBANKMENT	90	CU. YDS.
SEEDING	1985	SQ. YDS.

PLAN & PROFILE



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

WAY-250-17.40

Calc. by 24 8/84
Chkd. by 202 8/84

Sta. 919+00 19 18 2 2
Ahead 14 18
Back 14 4
1000 6 6
1 11

1000 2 7
995

3 19

1000 1 13
995

1 14

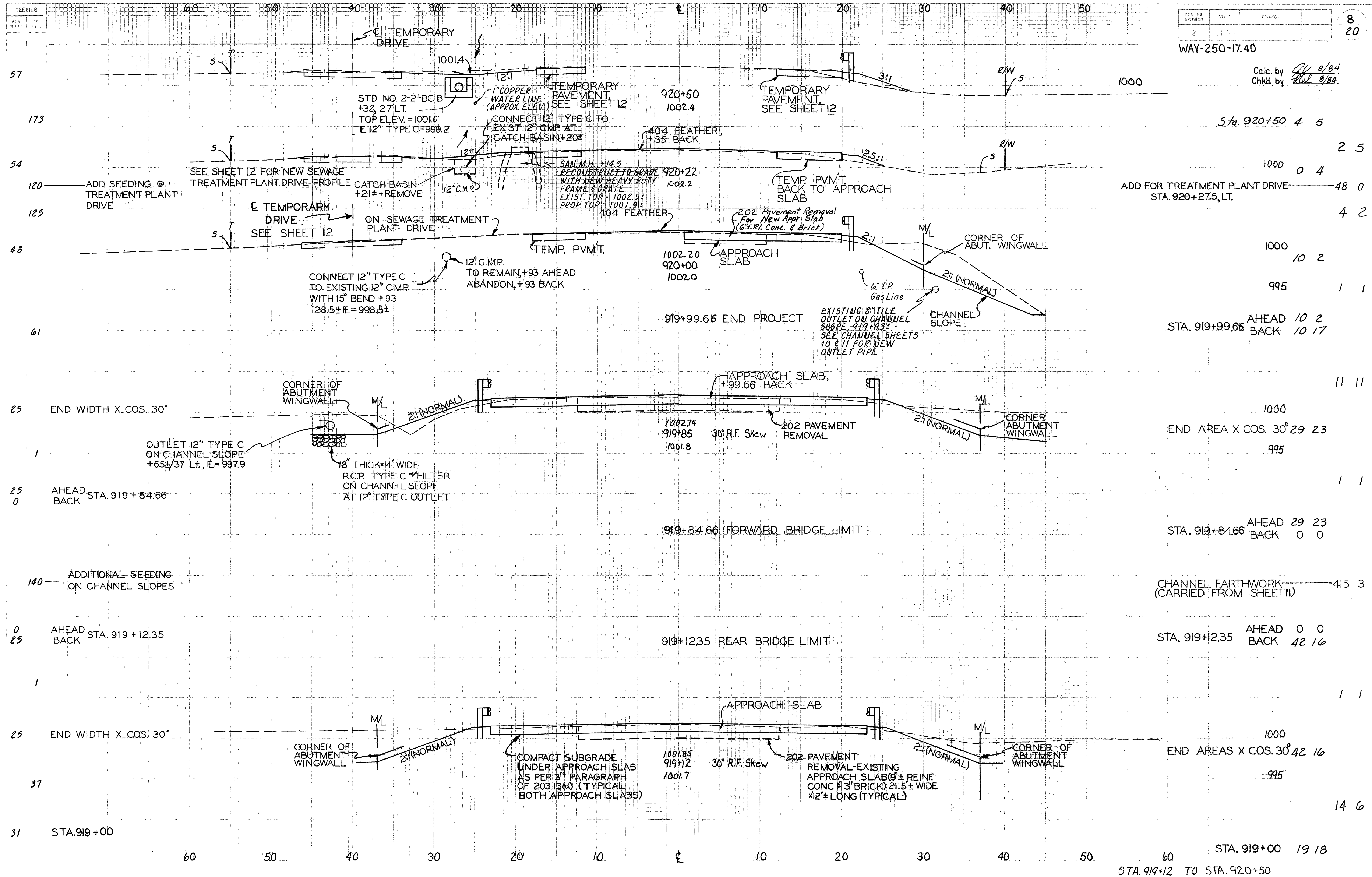
1000 0 2
995

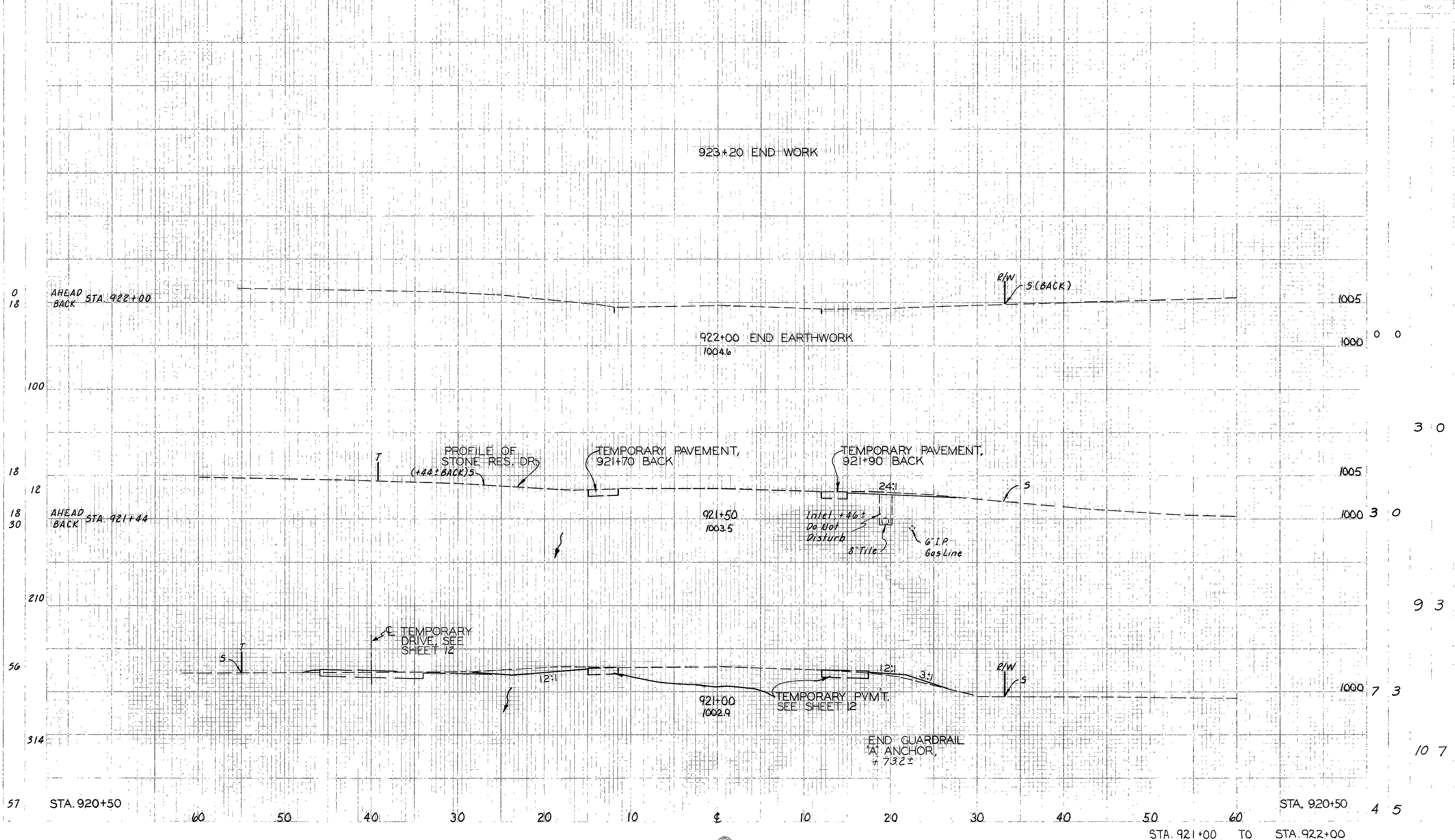
0 1

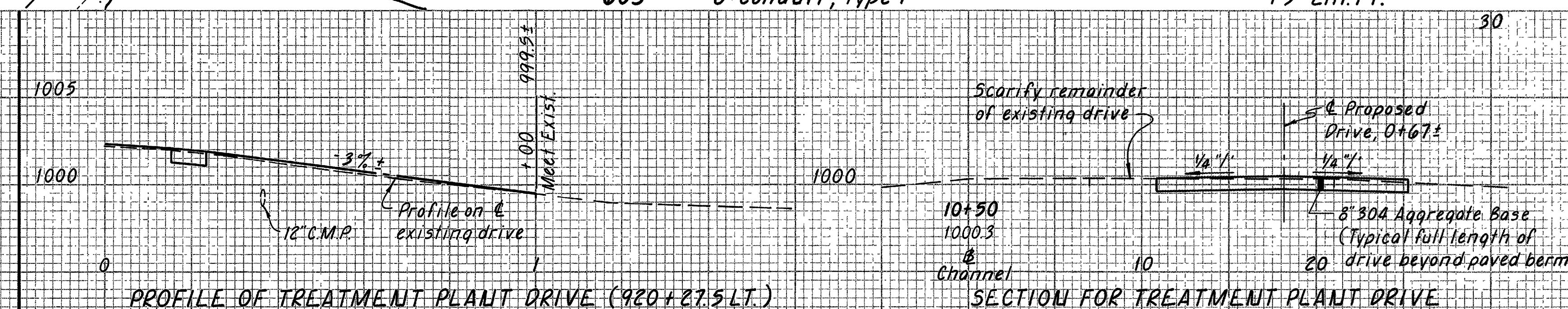
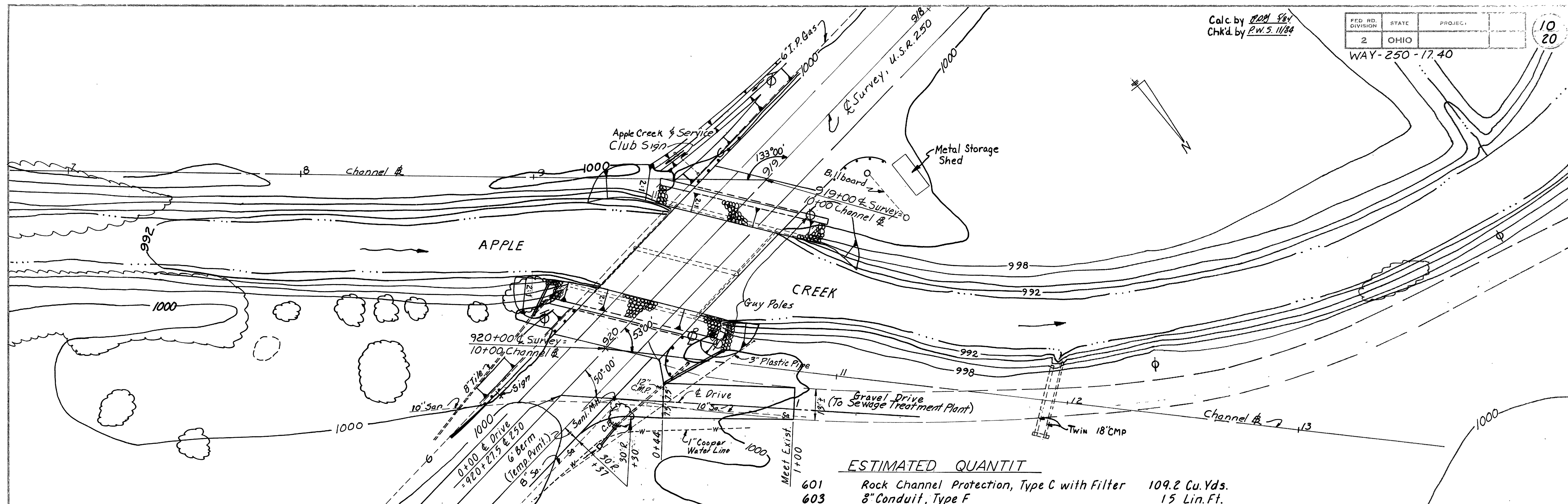
STA. 917+15 0 0

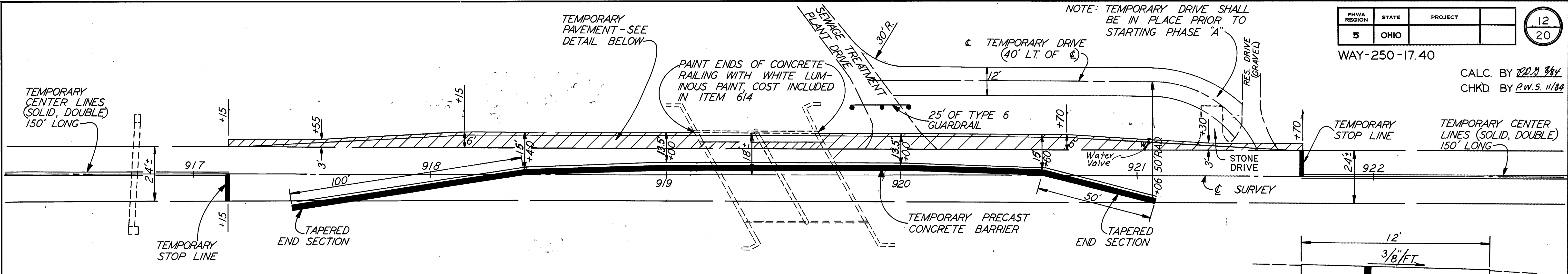
1000
995

STA. 917+00 TO STA. 919+00

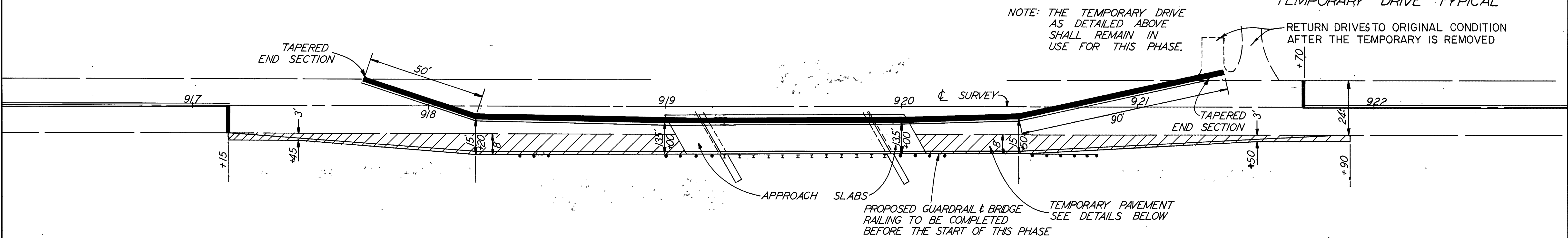




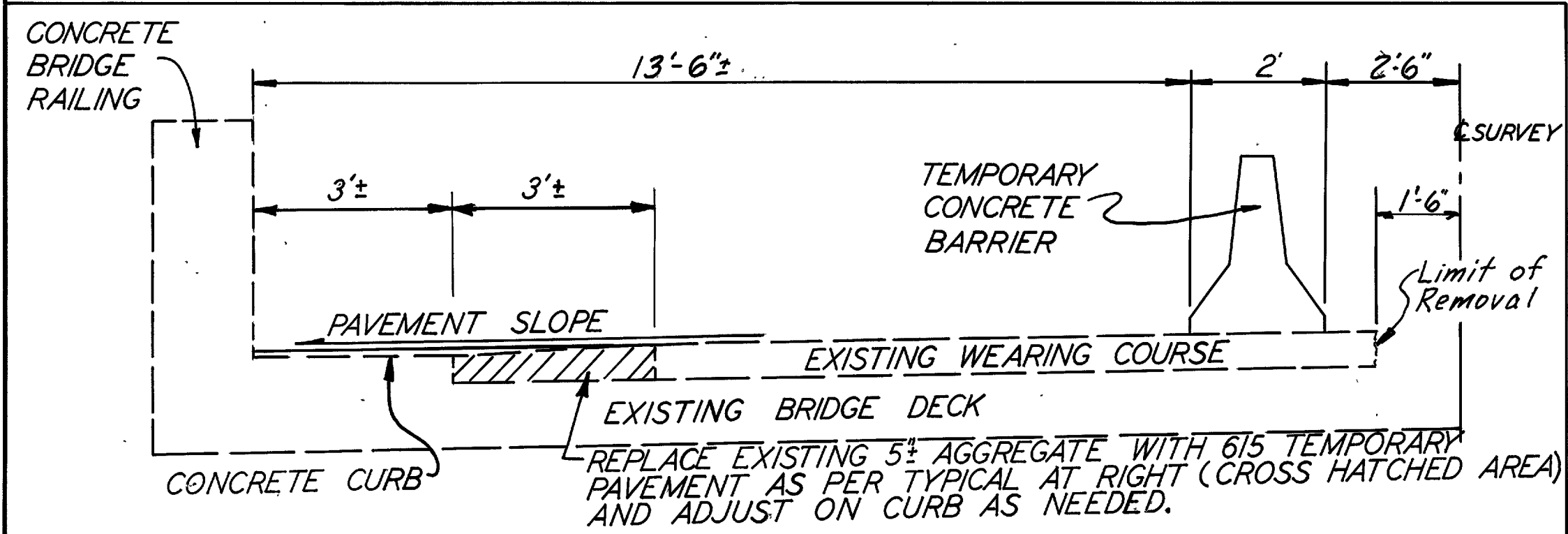




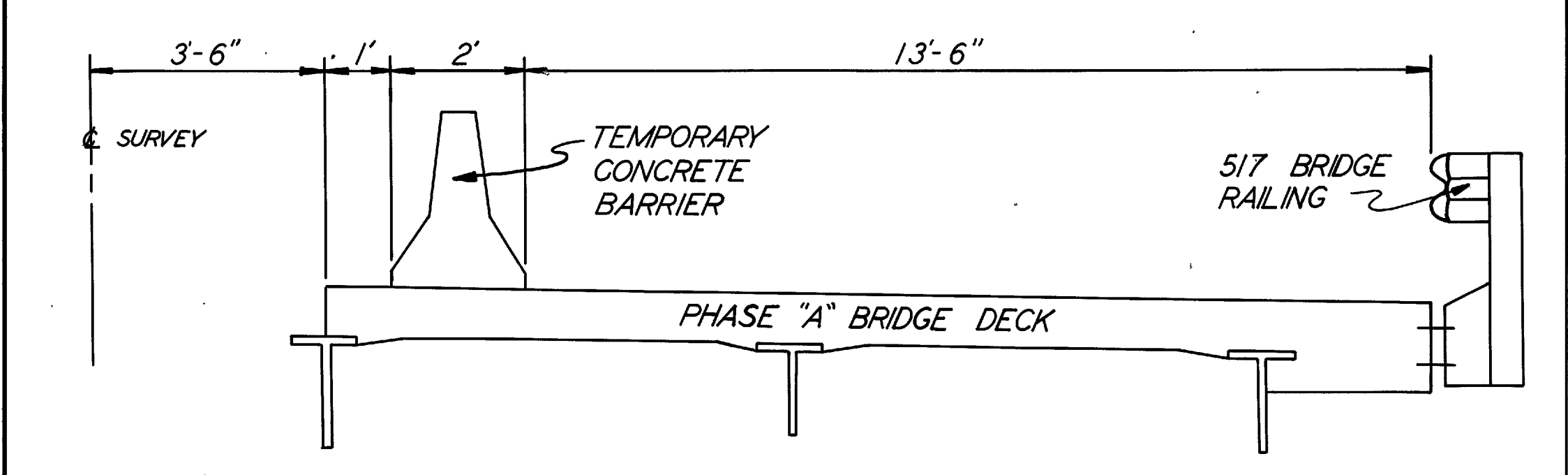
PHASE "A" - CONSTRUCTION OF THE RIGHT SIDE



PHASE "B" - CONSTRUCTION OF THE LEFT SIDE



BRIDGE DECK SECTION FOR PHASE "A"



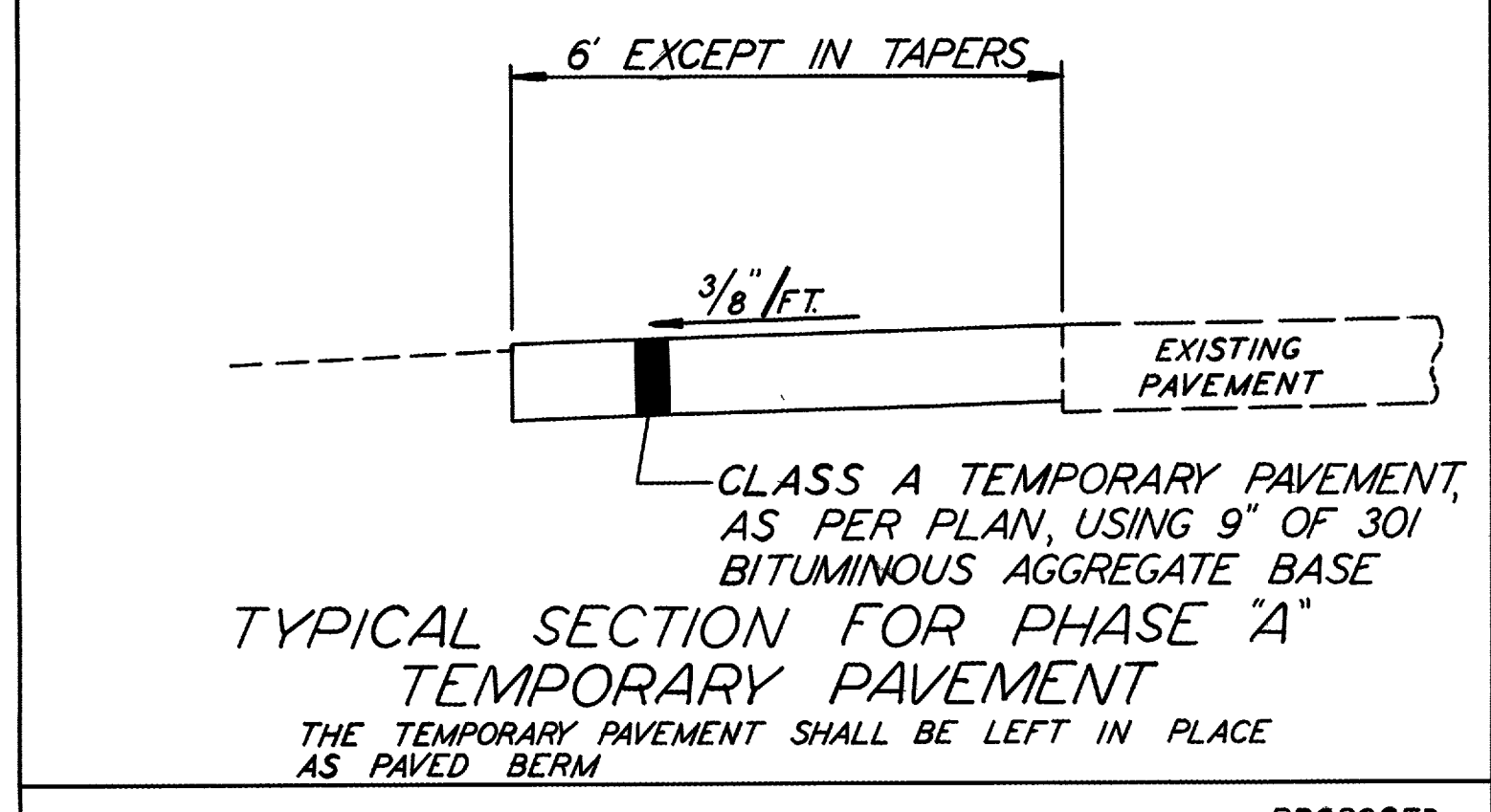
BRIDGE DECK SECTION FOR PHASE "B"

NOTES: SEE SHEET 13 FOR ADDITIONAL DETAILS AND NOTES.
EACH PHASE OF CONSTRUCTION SHALL BE LIMITED TO A MAXIMUM OF TEN (10) CONSECUTIVE WEEKS DURATION.

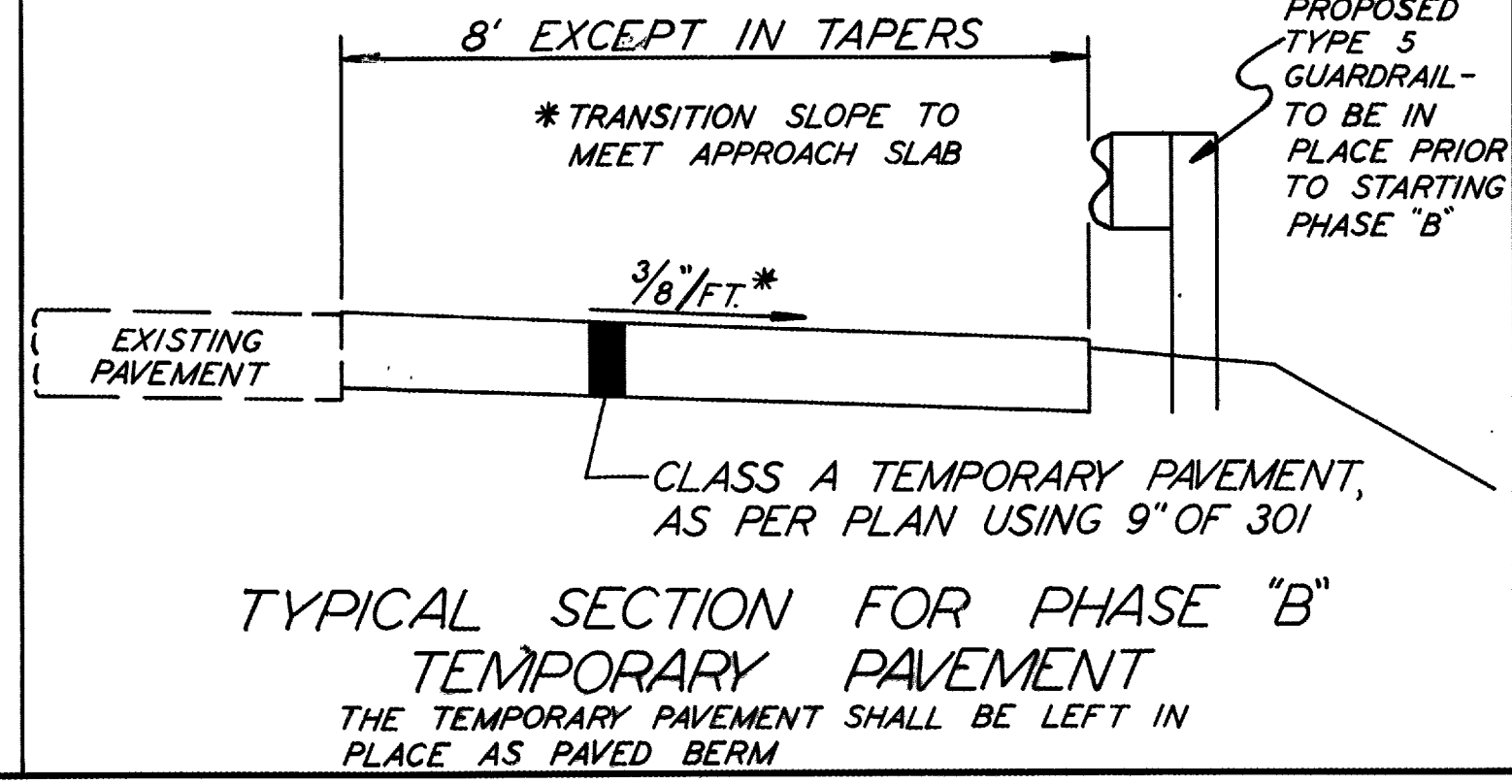
* INCLUDES EARTHWORK REQUIRED FOR THE TEMPORARY DRIVE

ESTIMATED QUANTITIES

	615		614		622		606	410	
	TEMPORARY PAVEMENT, CLASS A, AS PER PLAN	TEMPORARY ROADS *	TEMPORARY CENTER LINES, CLASS I, 5/16\"	TEMPORARY STOP LINES, CLASS I, 5/16\"	TEMPORARY PRECAST CON- CRETE BARRIER AS PER PLAN		GUARDRAIL, TYPE 6	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
	SQ. YD.	LUMP	MILES	LIN. FT.	LIN. FT.		LIN. FT.	CU. YD.	
PHASE A	239	LUMP	300 L.F.	24	370		25	48	
PHASE B	244	LUMP	0.06						
TOTALS	483	LUMP	0.06	24	370		25	48	



TYPICAL SECTION FOR PHASE "A" TEMPORARY PAVEMENT

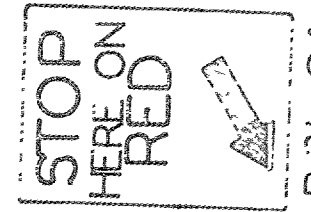


TYPICAL SECTION FOR PHASE "B" TEMPORARY PAVEMENT

WAY - 250 - 17.40

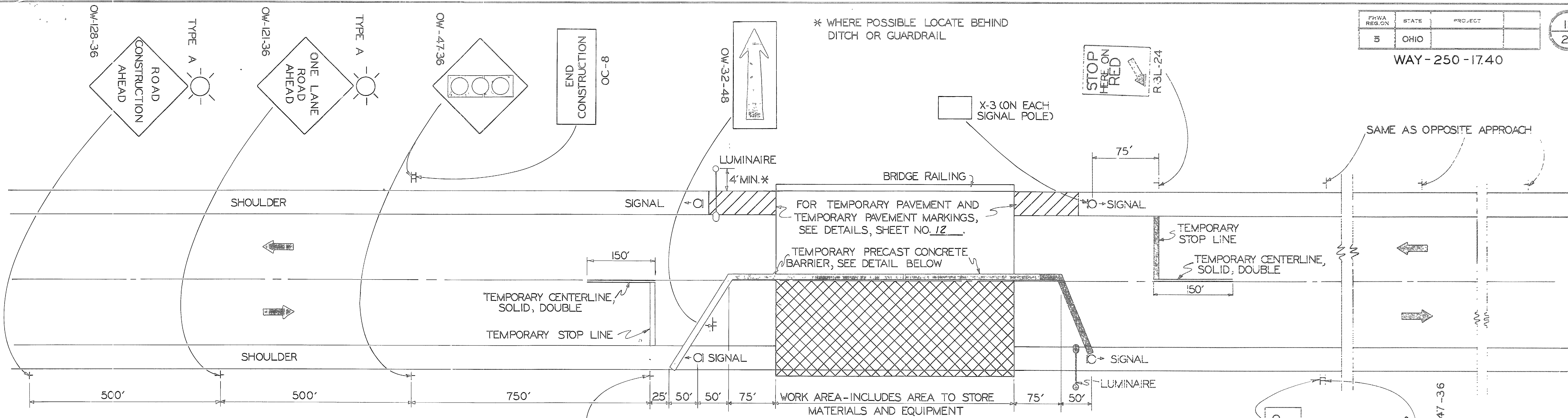
* WHERE POSSIBLE LOCATE BEHIND
DITCH OR GUARDRAIL

X-3 (ON EACH
SIGNAL POLE)

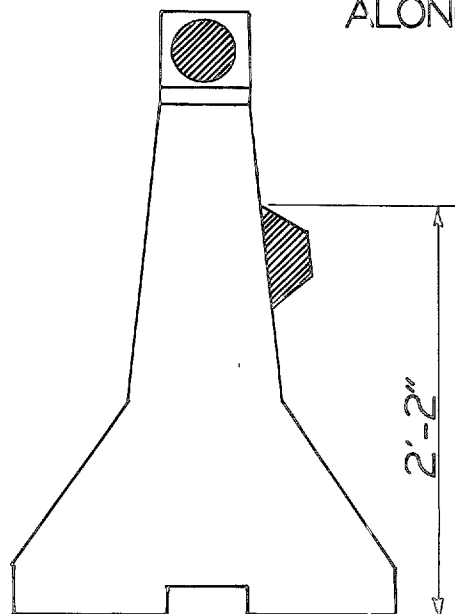


R-3L-24

SAME AS OPPOSITE APPROACH

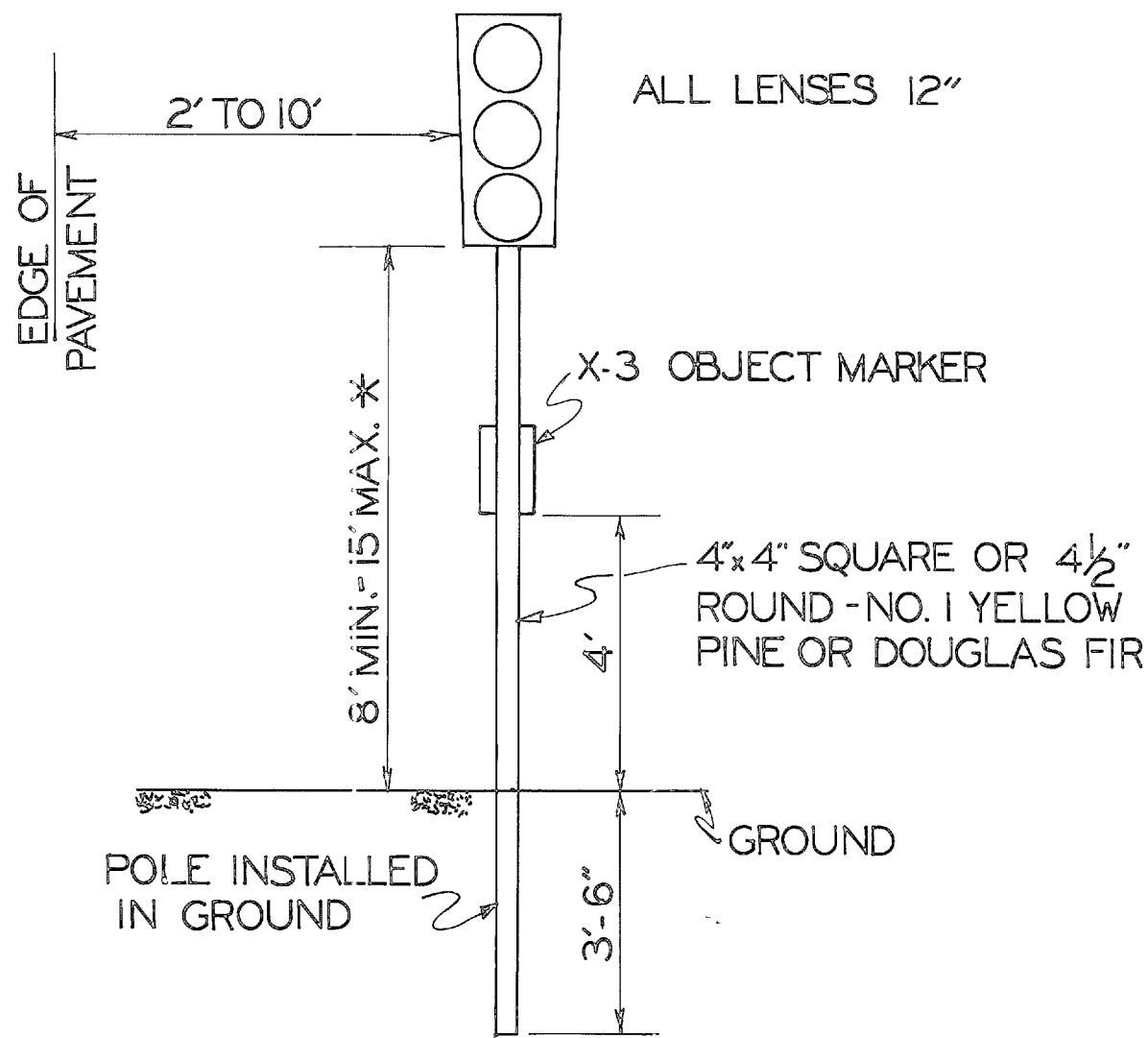


TYPE "C" STEADY BURNING BARRICADE WARN-
ING LIGHT. MOUNT AT 50' MAX. INTERVALS
ALONG FULL LENGTH OF BARRIER, SEE NOTE 7.



REFLECTORS MOUNTED AT 50' MAX.
INTERVALS ALONG LONGITUDINAL
SECTION AND AT 10' INTERVALS ON
THE TAPER IN THE APPROACH
LANE OF TRAFFIC - SEE NOTE 7.

TEMPORARY PRECAST
CONCRETE BARRIER WITH
REFLECTORS AND LIGHTS



TYPICAL POLE
SUPPORTED SIGNAL

* ABOVE GRADE OF ROADWAY CENTERLINE

- 1) THE MAXIMUM LENGTH OF WORK AREA FOR ONE WAY TRAFFIC SIGNAL CONTROL IS DETERMINED BY THE CAPACITY REQUIRED TO HANDLE THE PEAK HOUR DEMAND. PRACTICAL MAXIMUM LENGTH OF WORK AREA IS 400 FEET.
- 2) A TWO PHASE CONTROLLER WITH CABINET, CAPABLE OF BEING SET WITH THE FOLLOWING SPLITS SHALL BE FURNISHED.
CYCLE LENGTH 60 SECONDS.

	GREEN	AMBER	RED
PHASE A	17	4	9
PHASE B	17	4	9

THE ABOVE TIMING MAY BE CHANGED WITH APPROVAL OF THE ENGINEER. THE SIGNALS SHALL BE INSTALLED AND OPERATED IN ACCORDANCE WITH THE REQUIREMENTS OF PART 6 OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. IN ADDITION ALL TRAFFIC SIGNALS AND EQUIPMENT USED IN THIS TRAFFIC SIGNAL INSTALLATION, SUCH AS A SIGNAL CABLE AND SIGNAL HEADS, SHALL BE IN CONFORMANCE WITH SPECIFICATIONS 632 AND 732. HOWEVER, THE PERFORMANCE TEST PROVISION NOTED IN SPECIFICATION 632.27, PARAGRAPH 6 AND THE WORKING DRAWING REQUIREMENTS OF 632.03 ARE WAIVED. THE CONTROLLER, FLASHERS, LOAD SWITCHES, CONFLICT MONITOR AND OTHER CONTROLLER ACCESSORIES SHALL COMPLY WITH SUPPLEMENTAL SPECIFICATIONS 861 AND 961, EXCEPT THAT THE REQUIREMENTS OF 861.03 AND 861.05 ARE WAIVED. USED EQUIPMENT MEETING CURRENT ODOT SPECIFICATIONS IS ACCEPTABLE.

CONFLICT MONITORS SHALL BE FURNISHED AT ALL LOCATIONS UNLESS AN ELECTRO-MECHANICAL PRETIMED CONTROLLER WITH CAM SHAFT IS PROVIDED.

WHEN THE SIGNAL IS CHANGED TO A FLASH CONDITION EITHER MANUALLY OR AUTOMATICALLY, RED SHALL BE FLASHED TO BOTH APPROACHES.

- 3) THE TYPE A FLASHING BARRICADE WARNING LIGHTS SHOWN ON THE "ROAD CONSTRUCTION AHEAD" AND THE "ONE LANE ROAD AHEAD" SIGNS ARE REQUIRED WHENEVER A NIGHT LANE CLOSURE IS NECESSARY.

- 4) ADEQUATE AREA ILLUMINATION TO CLEARLY IDENTIFY BOTH ENDS OF THE WORK AREA AT NIGHT SHALL BE PROVIDED BY USING 150 WATT MINIMUM HIGH PRESSURE SODIUM LUMINAIRES OR 250 WATT MINIMUM MERCURY VAPOR LUMINAIRES. THE LUMINAIRES SHALL BE LOCATED ADJACENT TO ONE SIGNAL FOR EACH DIRECTION OF TRAFFIC AS SHOWN ABOVE. THE MOUNTING HEIGHT FOR THE LUMINAIRES SHALL BE A MINIMUM OF 27 FEET ABOVE THE PAVEMENT AND MOUNTED ON A SUPPORT OF ADEQUATE STRENGTH TO PROVIDE A SATISFACTORY INSTALLATION. THE OVERHEAD CONDUCTOR CLEARANCE SHALL BE A MINIMUM OF 20 FEET ABOVE THE PAVEMENT. THE LUMINAIRE ARMS SHALL BE OF SUFFICIENT LENGTH TO EXTEND TO THE EDGE OF THE PAVEMENT.

- 5) TEMPORARY CENTERLINE: SOLID, DOUBLE, AS SHOWN ABOVE, SHALL BE INSTALLED AND MAINTAINED WHERE NO-PASSING LINES ARE NOT ALREADY IN PLACE. 12" STOP LINES SHALL ALSO BE INSTALLED.

PAVEMENT

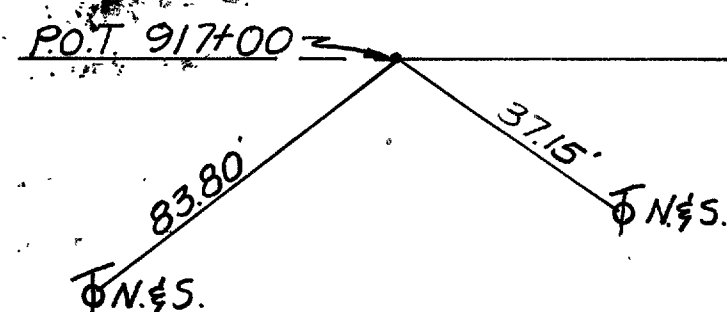
- MARKING TAPE MAY BE USED FOR THE TEMPORARY MARKING. EXISTING CONFLICTING PAVEMENT MARKINGS BETWEEN THE WORK AREA AND THE STOP LINE, AND ON THE EXISTING PAVEMENT ADJACENT TO THE WIDENING SHALL BE REMOVED. IF RAISED PAVEMENT MARKERS ARE EXISTING ALONG THE EDGE LINE, THE REFLECTORS SHALL BE REMOVED ALONG THE TEMPORARY PAVEMENT. AFTER COMPLETION OF THE WORK, TEMPORARY MARKINGS SHALL BE REMOVED IN ACCORDANCE WITH 621.134 AND THE ORIGINAL MARKINGS AND RAISED PAVEMENT MARKER REFLECTORS SHALL BE RESTORED.
- 6) THE HORIZONTAL OR VERTICAL ALIGNMENT OF THE ROADWAY MAY REQUIRE ADJUSTMENTS IN THE LOCATION OF THE ADVANCE WARNING SIGNS (THE DISTANCES SHOWN FOR ADVANCE WARNING SIGN SPACINGS ARE MINIMUMS). THE VERTICAL ALIGNMENT OF THE ROADWAY MAY REQUIRE ADJUSTMENTS IN THE HEIGHT OF THE SIGNAL HEADS WITHIN THE RANGE SPECIFIED IN THE TYPICAL POLE SUPPORTED SIGNAL DETAIL.

- 7) THE TEMPORARY PRECAST CONCRETE BARRIER SHALL BE PLACED AS SHOWN ABOVE AND ON SHEET NO. 12 BEFORE ANY BRIDGE WORK IS STARTED. THE PRECAST BARRIER SECTIONS SHALL BE TIED TOGETHER WITH CONNECTING PINS IN ACCORDANCE WITH STANDARD DRAWING MC-94. TONGUE AND GROOVE SECTIONS WILL NOT BE PERMITTED ON THIS PROJECT. TYPE "C" STEADY BURN BARRICADE WARNING LIGHTS SHALL BE MOUNTED ON THE TOP OF THE TEMPORARY AS SHOWN ON THIS SHEET. REFLECTORS SHALL ALSO BE MOUNTED ON THE FACE OF THE CONCRETE BARRIER AS SHOWN. THE REFLECTORS SHALL BE MODEL 965 BARRIER DELINEATORS AS MANUFACTURED BY THE AMERAGE CORPORATION, SIGNAL PRODUCTS DIVISION, 7542 NORTH MATCHED AVENUE, NILES, ILLINOIS 60648, OR AN APPROVED EQUAL. THE COLOR OF THE REFLECTORS SHALL MATCH THE RESPECTIVE EDGE LINE COLOR ALONG THE BARRIER.
- 8) PAYMENT FOR ALL OF THE ABOVE, EXCEPT THE TEMPORARY PRECAST CONCRETE BARRIER AND OTHER ITEMS ITEMIZED SEPARATELY SHALL BE INCLUDED IN ITEM 614 MAINTAINING TRAFFIC. PAYMENT FOR THE TEMPORARY PRECAST CONCRETE BARRIER, AS PER PLAN, SHALL BE THE NUMBER OF LINEAR FEET PROVIDED AS PER ITEM 622.08, WHICH SHALL INCLUDE ALL COSTS OF PROVIDING, MAINTAINING, REPOSITIONING THE BARRIER SECTIONS FOR ALL CONSTRUCTION PHASES, AND SUBSEQUENTLY REMOVING THE TEMPORARY BARRIER.

NOTE: IF CONFLICTS EXIST BETWEEN THIS TYPICAL LAYOUT SHEET AND SPECIFIC PLAN DETAILS, THE SPECIFIC PLAN DETAILS SHALL GOVERN.

MICROFILMED

NOV 20 1987



REFERENCE

+
998.5

CONSTRUCTION STAGING

- STAGE I**
 A. REMOVE EXISTING SOUTHERN PORTION OF BRIDGE.
 B. INSTALL SHEET PILING AT LOCATION SHOWN AND CONSTRUCT SOUTHERN PORTION OF PROPOSED BRIDGE.
- STAGE II**
 A. INSTALL SOUTHERN MOST SHEET PILING AND REMOVE SHEET PILING FROM STAGE I.
 B. REMOVE EXISTING NORTHERN PORTION OF BRIDGE AND CONSTRUCT NORTHERN PORTION OF PROPOSED BRIDGE TO MATCH NEW SOUTHERN PORTION.
 C. REMOVE SOUTHERN SHEET PILING AND COMPLETE BACKFILL.

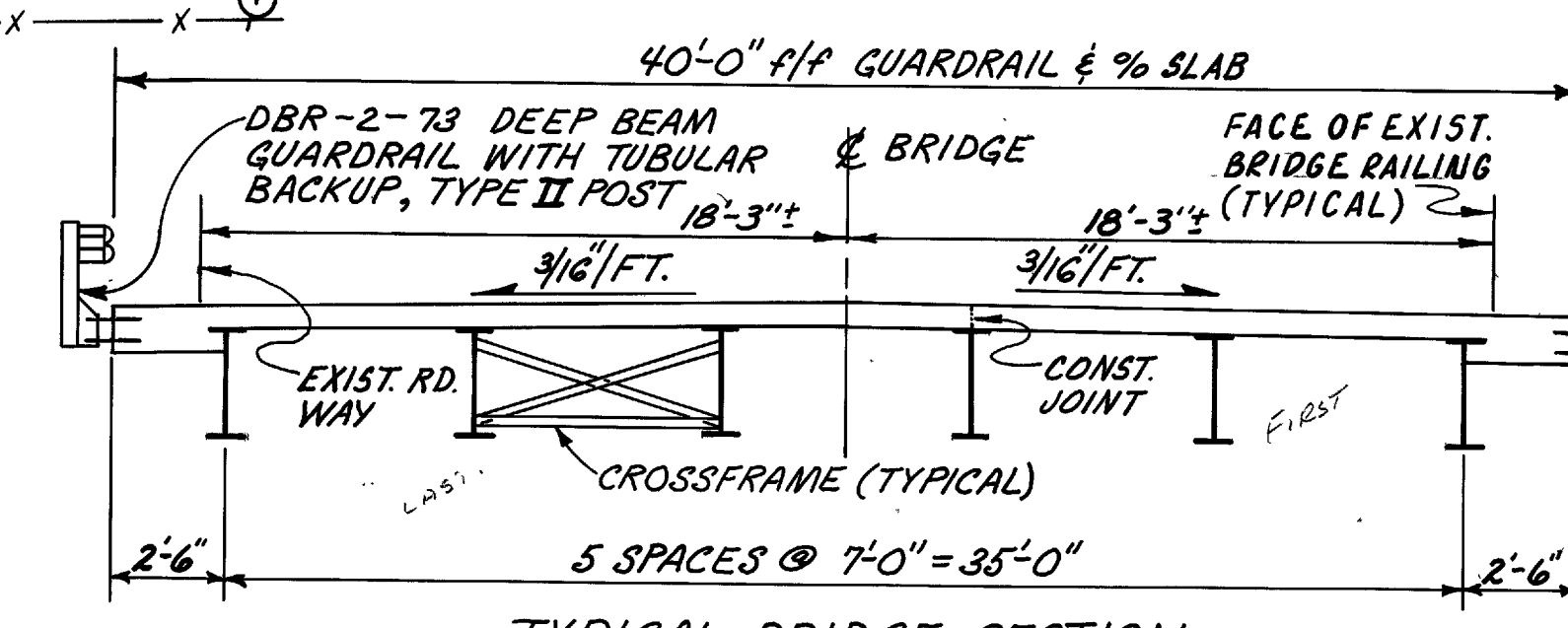
+
999.1
END APPROACH SLAB
STA. 919+12.35Metal
Storage
Shed

Survey U.S.R. 250

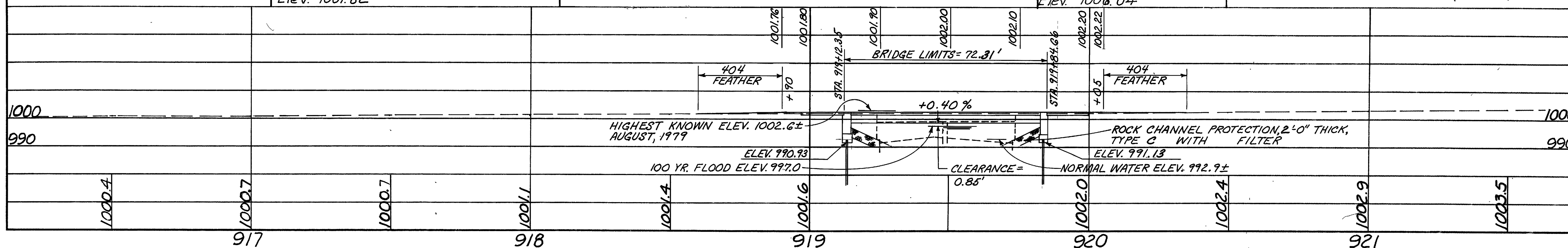
APPLE CREEK

STA. 919+05.04
STA. 919+05.04Traffic to be maintained
on bridge.Bill-
boardApple Creek
Service
Club SignsFIRST SHEET
PILING PLACED
SECOND SHEET
PILING PLACEDCurb Stop
c.b.

San. M.H.

BEGIN APPROACH SLAB
STA. 919+84.66TYPICAL BRIDGE SECTION
(LOOKING EAST)

NOTE: CONTACT U.S.C. & G.S. BEFORE BRIDGE IS REMOVED

B.M. U.S.C. & G.S. Bronze Disc Stamped
F-287, N. end of E. abutment, 201t. 4
Elev. 1001.82B.M. S.W. Corner Stoop to
House No. 10336 Lt. Sta. 921+60
Elev. 1006.04NOTE: CONSTRUCT RIGHT HALF
OF BRIDGE FIRSTFOUNDATION DATA:
ABUTMENT PILES SHALL BE 12" CAST-IN-PLACE
REINFORCED CONCRETE PILES HAVING
AN ESTIMATED AVERAGE PILE LENGTH
OF 40 FEET.

FHWA REGION	STATE	PROJECT
5	OHIO	

14
20WAY-250-1740
Located at West Corp. Line
of Apple Creek

DESIGN INFORMATION

1983 ADT = 4970
 2003 ADT = 7250
 2003 ADTT = 1230
 DESIGN SPEED = 55 MPH

EXISTING STRUCTURE

TYPE: CONCRETE SLAB

SPAN: 2 SPANS @ 24'-0" CLEAR
 ROADWAY: 36.5' f/f CONCRETE RAILING
 SKEW: 29° 48' RF
 LOADING: H-15
 TYPE OF FLOOR:
 TYPE OF SUBSTRUCTURE: CONCRETE GRAVITY

DATE BUILT: 1932
 STRUCTURAL FILE NUMBER:
 DRAINAGE AREA: 14.031 SQ. MI.
 WATERWAY AREA: 321 SQ. FT.
 CONDITION: POOR

PROPOSED STRUCTURE

TYPE: SINGLE SPAN COMPOSITE STEEL BEAM
WITH REINFORCED CONC. DECK ON
INTEGRAL CAPPED PILE ABUTMENTS.

SPAN: 70'-0" C/C BEARING

ROADWAY: 40'-0" f/f GUARDRAIL

SIDEWALKS: NONE

LOADING: HS 20-44, CASE II AND THE
ALTERNATE MILITARY LOADING

SKEW: 30° R.F.

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81 (15' LONG)

ALIGNMENT: TANGENT

SUPERELEVATION: NONE

DESIGN FREQUENCY:

Q₂₅ DISCHARGE = Q₁₀₀ DISCHARGE = 4,305 CFS
 Q₂₅ VELOCITY = Q₁₀₀ VELOCITY = 13.4 FPS
 Q₂₅ HIGH WATER = Q₁₀₀ HIGH WATER = 997.0

DESCRIPTION	DATE	BY
REVISIONS		

SITE PLAN

BRIDGE NO. WAY-250-1741
OVER APPLE CREEKHAMMONTREE & ASSOCIATES, LTD.
ENGINEERS, PLANNERS, SURVEYORS
CANTON - ORLANDO - PITTSBURGH - AKRONDESIGNED
CHECKED
DRAWN
DATE
BY

The diagram is a plan view of a bridge structure. It shows a central bridge section flanked by approach slabs. Key features include:

- Approach Slabs:** The left approach slab ends at STA 919+12.35, and the right approach slab begins at STA 919+84.66. Both are 11'-0" wide.
- Bridge Section:** The bridge is 72.31' long, with bearings at STA 919+13.50 and STA 919+83.50. It has a 30° skew.
- Guardrails:** There are 10 guardrail panels on each side, each 6'-3" long with 9/8" posts, totaling 62'-6".
- Abutments:** The left abutment is at STA 919+14.66, and the right abutment is at STA 919+82.95.
- Construction:** A 40'-0" wide construction area is shown for the bridge and approach slabs.
- Flow:** The flow direction is indicated by an arrow pointing towards the right.
- Other Details:** The diagram shows berms, a rock channel protection, and a DBR-2-73 deep beam guard rail with tubular backup.

GENERAL PLAN

CONSTRUCTION STAGING

STAGE I

- A. REMOVE EXISTING SOUTHERN PORTION OF BRIDGE.
B. INSTALL SHEET PILING ~~WHERE SHOWN~~ AND CONSTRUCT SOUTHERN PORTION OF PROPOSED BRIDGE.

STAGE II

- A. INSTALL SOUTHERN MOST SHEET PILING AND REMOVE SHEET PILING *FOR STAGE 1.*
- B. REMOVE EXISTING NORTHERN PORTION OF BRIDGE AND CONSTRUCT NORTHERN PORTION OF PROPOSED BRIDGE TO MATCH NEW SOUTHERN PORTION.
- C. REMOVE SOUTHERN SHEET PILING AND COMPLETE BACKFILL.

GENERAL NOTES

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS
REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81 DATED 11-27-81
DBR-2-73 DATED 4-10-73
ICD-1-82 REVISED 8-1-84 SHEETS 3, 4 AND 5

AND TO SUPPLEMENTAL SPECIFICATIONS:

836	DATED	3-12-75
824	DATED	10-8-82

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1983.

AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA

DESIGN LOADING HS20-44 CASE II AND THE ALTERNATE
MILITARY LOADING

CONCRETE CLASS S COMPRESSIVE STRENGTH 4500 P.S.I.

CONCRETE CLASS C COMPRESSIVE STRENGTH 4000 P.S.I.

* STRUCTURAL STEEL	ASTM A588 - YIELD STRENGTH 50,000 P.S.I.
	<i>ASTM A572 - YIELD STRENGTH 50,000 P.S.I.</i>
REINFORCING STEEL	ASTM A615, A616, A617 - GRADE 60
	MINIMUM YIELD STRENGTH 60,000 P.S.I.

DECK PROTECTION METHOD	EPOXY COATED REINFORCING STEEL TOP MAT ONLY
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

REMOVAL OF EXISTING STRUCTURE

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC THE EXISTING STRUCTURE
SHALL BE REMOVED. ABUTMENTS AND PIERS SHALL BE REMOVED
AS PER 202.03.

PILE DESIGN LOADS (BEARING CAPACITY)

THE DESIGN LOAD FOR THE ABUTMENT PILES IS 36 TONS PER PILE.

UTILITY LINES

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

MONOLITHIC WEARING SURFACE

IS ASSUMED, FOR DESIGN PURPOSES TO BE 1" THICK.

PILE HAMMER

THE PILE HAMMER USED TO INSTALL THE CAST-IN-PLACE REINFORCED CONCRETE PILES SHALL HAVE A STATE'S ENERGY RATING OF NOT LESS THAN 12,000 FOOT-POUNDS. THIS REQUIREMENT DOES NOT RELIEVE THE CONTRACTOR FROM 108.05 WHICH STATES THAT THE CONTRACTOR IS TO PROVIDE SUFFICIENT EQUIPMENT FOR PROSECUTING THE REQUIRED WORK.

NOTE: SEE SHEET 4/G FOR TEMPORARY BARRIER, FOR MAINTAINING ONE LANE TRAFFIC ON BRIDGE DURING CONSTRUCTION.

* EITHER A588 OR A572
STEEL MAY BE FURN-
ISHED AT CONTRACTOR'S
OPTION.

GENERAL PLAN

ELEVATION

"ITEM SPECIAL, SEALING OF CONCRETE SURFACES

A CONCRETE SEALER EITHER SILANE OR AN EPOXY SEALER, SHALL BE APPLIED TO THE CONCRETE SURFACE SHOWN ON SHEET 5/6 SEE THE PROPOSAL FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIALS REQUIREMENTS AND APPLICATION PROCEDURES."

SEE ADDITIONAL NOTES ON SHEETS 2A TO 2D

FHWA REGION	STATE	PROJECT	
5	OHIO		

DESCRIPTION		DATE	BY
REVISIONS			
GENERAL PLAN, ELEVATION & GENERAL NOTES			
BRIDGE NO. WAY-250-1741 OVER APPLE CREEK			
HAMMONTREE & ASSOCIATES, LTD.			
ENGINEERS, PLANNERS, SURVEYORS CANTON - ORLANDO - PITTSBURGH - AKRON			
DESIGNED C.F.H.	DRAWN C.K.C.	CHECKED J.W.W.	
REVIEWED	DRAWING NO.		

ITEM 511, CLASS S CONCRETE, AS PER PLAN

IN LIEU OF THE PROPORTIONING SPECIFIED IN 499.03 AND 511.02, THE FOLLOWING TABLE SHALL BE USED TO ESTABLISH THE QUANTITIES PER CUBIC YARD FOR CONCRETE, THE COARSE AGGREGATE SHALL BE LIMESTONE.

QUANTITIES PER CUBIC YARD (USING NO. 8 LIMESTONE)

AGGREGATE			CEMENT CONTENT (LB)	WATER/ CEMENT RATIO
FINE (LB)	COARSE (LB)	TOTAL (LB)		
1591	1127	2718	715	0.40

AIR CONTENT- 8% PLUS OR MINUS 2%

HIGH RANGE WATER REDUCER (SUPERPLASTICIZER) MAY BE USED AT THE OPTION OF THE CONTRACTOR IF REQUIRED FOR PLACEMENT. THE DOSAGE RATE WILL BE DETERMINED BY THE CONTRACTOR BASED ON THE MANUFACTURER'S RECOMMENDATION TO ACHIEVE THE DESIRED WORKABILITY LEVEL.

HIGH RANGE WATER REDUCER SHALL CONFORM TO 705.12, ASTM-C494 TYPE F AND SHALL NOT CONTAIN CALCIUM CHLORIDE.

TYPE A OR D CHEMICAL ADMIXTURE CONFORMING TO 705.12 ASTM TYPE F AND NOT CONTAINING CALCIUM CHLORIDE SHALL BE ADDED TO THE CONCRETE AT THE PLANT.

ALL ADDITIVES INCLUDING AIR ENTRAINMENT SHALL BE MANUFACTURED BY THE SAME COMPANY AND CERTIFIED AS COMPATIBLE BY THE MANUFACTURING COMPANY.

THE CEMENT CONTENT SHALL BE MAINTAINED AND A MAXIMUM WATER-CEMENT RATIO OF 0.40 SHALL NOT BE EXCEEDED. THE SLUMP OF THE UNPLASTIZED CONCRETE DELIVERED TO THE JOB SITE SHALL BE 1 1/2" PLUS OR MINUS 1/2". THE SUPERPLASTICIZING ADMIXTURE SHALL BE ADDED AT THE JOB SITE AND MIXED A MINIMUM OF FIVE (5) MINUTES. AFTER THE SUPERPLASTICIZER HAS BEEN ADDED, THE SLUMP SHALL BE 6" PLUS OR MINUS 1". THE CONTRACTOR SHALL FURNISH A VOLUMERIC DISPENSER FOR THE SUPERPLASTICIZER.

CONCRETE MIXTURES CONTAINING A HIGH RANGE WATER REDUCER SHALL MEET THE SAME REQUIREMENTS FOR ENTRAINED AIR CONTENT, MINIMUM STRENGTH, AND MAXIMUM WATER-CEMENT RATIO AS REQUIRED FOR THE RESPECTIVE GRADE OF CONCRETE WITHOUT A HIGH RANGE WATER REDUCER.

SAMPLING AND TESTING FOR ENTRAINED AIR CONTENT AND MINIMUM STRENGTH SHOULD BE TAKEN FROM THE CONCRETE THAT HAS BEEN TREATED WITH A HIGH RANGE WATER REDUCER.

ALL INITIAL TESTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THESE TESTS SHALL BE PERFORMED BY A COMPETENT CONCRETE TECHNICIAN. THIS INFORMATION SHALL BE PROVIDED TO THE PROJECT ENGINEER. THE PROJECT ENGINEER SHALL MAKE ONLY THE FINAL TESTS AS THE CONCRETE IS PLACED ON THE DECK.

CURING SHALL BE IN ACCORDANCE WITH 511.14 TYPE A WATER CURING.

THE CONTRACTOR SHALL MAKE ONE OR MORE TRIAL BATCHES OF THE SUPERPLASTICIZED DENSE CONCRETE OF THE SIZE TO BE HAULED AT LEAST FOUR DAYS BEFORE THE DECK IS TO BE PLACED. HE SHALL CAST ONE OR MORE TEST SLABS, E.G. 8 FT. LONG X A WIDTH WHICH IS WIDE ENOUGH TO ACCOMMODATE HIS TINING EQUIPMENT X 4 IN. THICK, FOR TEXTURING ACCORDING TO 511.16 AND SHALL PREPARE OTHER SAMPLES AND SPECIMENS AS DIRECTED BY THE PROJECT ENGINEER. THE CONTRACTOR SHALL FURNISH THE REQUIRED MATERIALS AND SAMPLES WITHOUT CHARGE TO THE STATE AS PER 106.03. THE PROJECT ENGINEER SHALL BE NOTIFIED SEVEN (7) DAYS IN ADVANCE OF THE TEST BATCH PREPARATION AND HE WILL CONDUCT ALL THE REQUIRED TESTS.

PLACEMENT:

PLACEMENT OF CONCRETE SHALL BE COMPLETED UNDER FAVORABLE ATMOSPHERIC CONDITIONS. FAVORABLE ATMOSPHERIC CONDITIONS EXIST WHEN THE SURFACE EVAPORATION RATE AS AFFECTED BY AMBIENT AIR TEMPERATURE, CONCRETE TEMPERATURE, RELATIVE HUMIDITY AND WIND VELOCITY IS 0.1 POUNDS PER SQUARE FOOT PER HOUR OR LESS. FIGURE (1) SHALL BE USED TO DETERMINE GRAPHICALLY THE SURFACE EVAPORATION RATE. FAVORABLE ATMOSPHERIC CONDITIONS MAY REQUIRE PLACEMENT DURING LATE EVENINGS (6:00 P.M. TO OFFICIAL SUNSET), NIGHT (OFFICIAL SUNSET TO OFFICIAL SUNRISE) OR EARLY MORNING (SUNRISE TO 8:00 A.M.).

IF PLACEMENT OF THE CLASS S CONCRETE IS TO BE MADE AT NIGHT, THE CONTRACTOR SHALL SUBMIT A PLAN WHICH PROVIDES ADEQUATE LIGHTING FOR THE WORK AREA AT LEAST FIFTEEN (15) CALENDAR DAYS IN ADVANCE AND RECEIVE WRITTEN APPROVAL FROM THE ENGINEER BEFORE PLACING THE CONCRETE. THE LIGHTS SHALL BE SO DIRECTED THAT THEY DO NOT AFFECT OR DISTRACT APPROACHING TRAFFIC.

ALL OTHER PROVISIONS OF ITEM 511 SHALL REMAIN IN EFFECT.

PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNIT	DESCRIPTION
511	CU. YD.	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN

ITEM 511, CLASS C CONCRETE, AS PER PLAN :

ALL CLASS C CONCRETE SHALL USE LIMESTONE OR SLAG AS THE COARSE AGGREGATE.

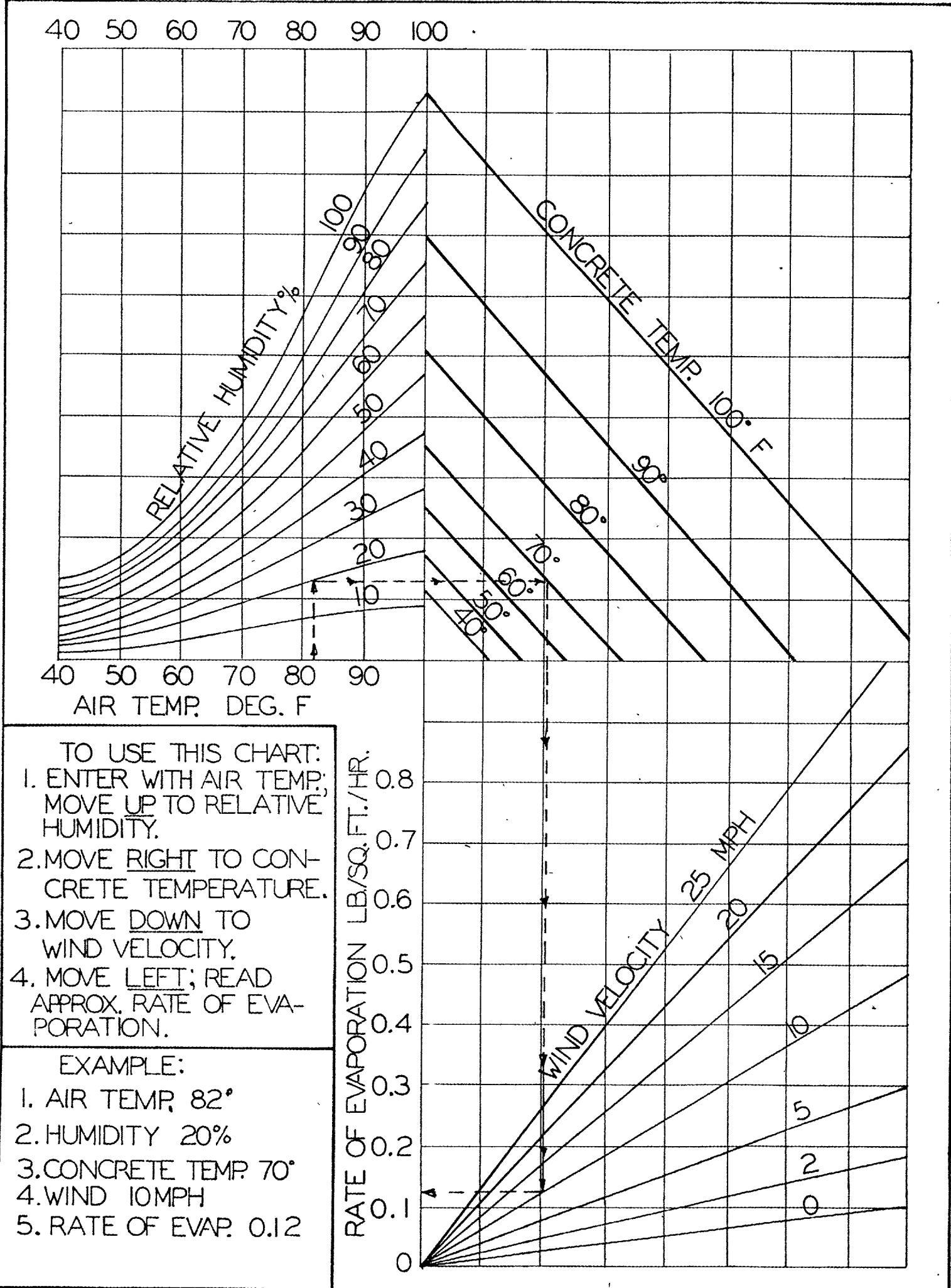


FIGURE 1

SURFACE PREPARATION:

ALL STEEL TO BE PAINTED SHALL BE BLAST CLEANED TO GRADE SA 2½ ACCORDING TO SSPC-SP5 (SSPC VIS 1). THE MINIMUM SURFACE PROFILE SHALL BE TWO (2) MILS. SILICA SAND OF A SIZE SUITABLE TO DEVELOP THE REQUIRED SURFACE PROFILE SHALL BE USED. BLASTING SHALL NOT PROCEED WHEN THE STEEL TEMPERATURE IS WITHIN FIVE (5) DEGREES OF THE DEW POINT TO PREVENT RUST BACK. ALL FINS, TEARS, SLIVERS, AND BURRED OR SHARP EDGES THAT ARE PRESENT ON ANY STEEL MEMBER AFTER BLASTING SHALL BE REMOVED BY GRINDING AND THE AREA REBLASTED.

THE FOLLOWING TESTS SHALL BE DONE TO INSURE THAT THE AIR AND ABRASIVES ARE NOT CONTAMINATED. OPEN THE AIR VALVE FOR THIRTY (30) SECONDS AND TEST THE AIR CLEANLINESS WITH A WHITE BLOTTER. ANY OIL OR CONTAMINANTS ON THE BLOTTER REQUIRES CORRECTIVE ACTION. THIS TEST SHALL BE DONE AT THE START OF THE SHIFT AND AT FOUR (4) HOUR INTERVALS. WHEN USING BLACK ABRASIVES, PLACE A QUANTITY OF ABRASIVE IN A CONTAINER OF CLEAN FRESH WATER WITH A PH OF SEVEN (7). TEST THE SOLUTION WITH STANDARD LITMUS PAPER. STOP SANDBLASTING IF AN OIL FILM OR A PH OTHER THAN SEVEN (7) IS RECORDED. CONDUCT THE TEST ON EACH BATCH OR LOAD DELIVERED.

PAYMENT FOR ALL OF THE ABOVE WILL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNIT	DESCRIPTION
SPECIAL	LUMP SUM	SURFACE PREPARATION

BRIDGE PAINTING, COMPLETE SYSTEM (SHOP):

THIS ITEM SHALL CONSIST OF FURNISHING ALL PAINT AND INCIDENTAL MATERIAL, AND APPLYING THE PAINT AS SPECIFIED. ALL STRUCTURAL STEEL SHALL BE PAINTED.

THE FOLLOWING MANUFACTURERS AND PAINT SYSTEMS WILL BE USED ON THIS PROJECT. ALL MIL THICKNESSES ARE DRY.

SYSTEM I

MAUFACTURER: KOPPERS COMPANY, INC.
ORGANIC MATERIALS GROUP
ELMHURST, ILLINOIS 60126
TELEPHONE: (312)-530-6300

MATERIAL:
PRIME COAT: KOPPERS ORGANIC ZINC 3.0 MILS
INTERMEDIATE COAT: KOPPERS 200 HB EPOXY 5.0 MILS
COLOR: DIFFERENT THAN PRIME AND FINISH COAT
FINISH COAT: KOPPERS 1122BRS LINEAR POLYURETHANE 2.0 MILS
COLOR: LIGHT GREY 306

THE FOLLOWING DATA SHALL BE STENCILED IN A CONTRASTING COLOR ON THE BRIDGE AS DIRECTED BY THE ENGINEER:

KOPPERS
OZ/HBEP/U
3/5/2 MILS
MONTH/YEAR

SYSTEM II

MANUFACTURER: AMERON
PROTECTIVE COATING DIVISION
P.O. BOX 349
AKRON, OHIO 44809
TELEPHONE: (216)-896-3602

MATERIAL:

PRIME COAT: AMERCOAT 68A ZINC RICH EPOXY PRIMER 3.0 MILS
INTERMEDIATE COAT: AMERCOAT 383HS POLYAMIDE EPOXY 5.0 MILS
COLOR: DIFFERENT THAN PRIME AND FINISH COAT
FINISH COAT: AMERCOAT 450GL ALIPHATIC POLYURETHANE 2.0 MILS
COLOR: BR-3 BUFF BROWN

THE FOLLOWING DATA SHALL BE STENCILED IN A CONTRASTING COLOR ON THE BRIDGE AS DIRECTED BY THE ENGINEER:

AMERON
OZ/HBEP/U
3/5/2 MILS
MONTH/YEAR

SYSTEM III

MANUFACTURER: VALSPAR CORPORATION
MAINTENANCE, TRANSPORTATION, AND STEEL CONTAINER
COATINGS DEPARTMENT
901 NORTH GREENWOOD AVENUE
KANKAKEE, ILLINOIS 60901
TELEPHONE: (815)-933-5561

MATERIAL:

PRIME COAT: MOBILZINC 4 EPOXY ZINC RICH 3.0 MILS
INTERMEDIATE COAT: VAL-CHEM HI-BUILD EPOXY 89 SERIES 5.0 MILS
COLOR: DIFFERENT THAN PRIME AND FINISH COAT
FINISH COAT: MOBILTHANE ENAMEL 40 SERIES 2.0 MILS
COLOR: G-3 BRILLIANT GREEN

THE FOLLOWING DATA SHALL BE STENCILED IN A CONTRASTING COLOR ON THE BRIDGE AS DIRECTED BY THE ENGINEER:

MOBIL
OZ/HBEP/U
3/5/2 MILS
MONTH/YEAR

MANUFACTURER

SUFFICIENT IDENTIFIABLE CHARACTERISTICS OTHER THAN TRADE OR BRAND NAME OR DESIGNATED NUMBER OR SYMBOL SHALL BE PROVIDED TO PERMIT LABORATORY TEST VERIFICATION OF COATING IDENTITY. THESE CHARACTERISTICS SHALL INCLUDE FORMULATION INFORMATION READILY DERIVABLE IN A LABORATORY, INCLUDING THE GENERAL NATURE OF THE VEHICLE, PIGMENT AND VOLATILE PORTIONS, THE WEIGHT PER GALLON, THE PERCENT SOLIDS BY VOLUME, THE ZINC CONTENT AND OTHER PROCEDURES USED FOR QUALITY CONTROL DURING MANUFACTURE OF THE COATING.

MATERIALS HANDLING AND USE

ALL PAINT AND THINNER SHALL BE DELIVERED TO THE SHOP OR JOB SITE IN ORIGINAL, UNOPENED CONTAINERS WITH LABELS INTACT. MINOR DAMAGE TO CONTAINERS IS ACCEPTABLE PROVIDED THE CONTAINER HAS NOT BEEN PUNCTURED OR THE LID SEAL BROKEN.

EACH CONTAINER OF PAINT AND THINNER SHALL BE CLEARLY MARKED OR LABELLED TO SHOW PAINT IDENTIFICATION, DATE OF MANUFACTURE, BATCH NUMBER, ANALYSIS OF CONTENTS, IDENTIFICATION OF ALL TOXIC SUBSTANCES AND SPECIAL INSTRUCTIONS.

ALL CONTAINERS OF PAINT AND THINNER SHALL REMAIN UNOPENED UNTIL REQUIRED FOR USE. THOSE CONTAINERS WHICH HAVE BEEN PREVIOUSLY OPENED SHALL BE USED FIRST. THE LABEL INFORMATION SHALL BE LEGIBLE AND SHALL BE CHECKED AT THE TIME OF USE.

PAINT WHICH HAS LIVERED, GELLED OR OTHERWISE DETERIORATED DURING STORAGE SHALL NOT BE USED. HOWEVER, THIXOTROPIC MATERIALS WHICH CAN BE STIRRED TO ATTAIN NORMAL CONSISTENCY MAY BE USED.

THE OLDEST PAINT OF EACH KIND SHALL BE USED FIRST. IN EVERY CASE, PAINT IS TO BE USED BEFORE ITS SHELF LIFE HAS EXPIRED. IN ORDER TO USE PAINTS WHICH HAVE EXCEEDED THEIR SHELF LIFE OR HAVE NO STATED SHELF LIFE AND ARE MORE THAN ONE YEAR OLD, THE SPECIFIER OR MANUFACTURER MUST CERTIFY THAT THE PAINT IS STILL SUITABLE FOR USE.

MIXING AND THINNING

ALL INGREDIENTS IN ANY CONTAINER OF PAINT SHALL BE THOROUGHLY MIXED BEFORE USE AND SHALL BE AGITATED OFTEN ENOUGH DURING APPLICATION TO KEEP THE PAINT UNIFORM. THE PAINT SHALL BE MIXED IN A MANNER WHICH WILL INSURE THE BREAK-UP OF ALL LUMPS, COMPLETE DISPERSION OF PIGMENT AND A UNIFORM COMPOSITION. PAINT SHALL BE CAREFULLY EXAMINED AFTER MIXING FOR UNIFORMITY AND TO VERIFY THAT NO UNMIXED PIGMENT REMAINS ON THE BOTTOM OF THE CONTAINER. THE PAINT SHALL BE MIXED WITH A HIGH SHEAR MIXER (SUCH AS JIFFY MIXER). PADDLE MIXERS OR PAINT SHAKERS ARE NOT ALLOWED.

ALL PIGMENTED PAINT SHALL BE STRAINED AFTER MIXING EXCEPT WHERE APPLICATION EQUIPMENT IS PROVIDED WITH STRAINERS. STRAINERS SHALL BE OF A TYPE TO REMOVE ONLY SKINS AND UNDESIRABLE MATTER BUT NOT TO REMOVE THE PIGMENT.

WHERE A SKIN HAS FORMED IN THE CONTAINER, THE SKIN SHALL BE CUT LOOSE FROM THE SIDES OF THE CONTAINER, REMOVED AND DISCARDED. IF THE VOLUME OF SUCH SKINS ARE MORE THAN 2% OF THE REMAINING PAINT, THE PAINT SHALL NOT BE USED.

MIXING IN OPEN CONTAINERS SHALL BE DONE IN A WELL VENTILATED AREA AWAY FROM SPARKS OR FLAMES.

PAINT SHALL NOT BE MIXED OR KEPT IN SUSPENSION BY MEANS OF AN AIR STREAM BUBBLING UNDER THE PAINT SURFACE.

PAINT WHICH DOES NOT HAVE A LIMITED POT LIFE (TIME INTERVAL) OR DOES NOT DETERIORATE ON STANDING MAY BE MIXED AT ANY TIME BEFORE USING. BUT IF SETTLING HAS OCCURRED IT MUST BE REMIXED IMMEDIATELY BEFORE USE.

PAINT SHALL NOT REMAIN IN SPRAY POTS, PAINTERS BUCKETS, ETC. OVERNIGHT, BUT SHALL BE STORED IN A COVERED CONTAINER AND REMIXED BEFORE USE.

NO THINNER SHALL BE ADDED TO THE PAINT WITHOUT THE ENGINEER'S APPROVAL, AND ONLY IF NECESSARY FOR PROPER SPRAY APPLICATION AS RECOMMENDED BY THE MANUFACTURER. PAINTS TO BE APPLIED BY BRUSH WILL USUALLY REQUIRE NO THINNING. WHEN THE USE OF THINNER IS PERMISSIBLE, THINNER SHALL BE ADDED SLOWLY TO PAINT DURING THE MIXING PROCESS. THE TYPE OF THINNER SHALL COMPLY WITH THE MANUFACTURER'S INSTRUCTIONS. ALL THINNING SHALL BE DONE UNDER SUPERVISION OF THE ENGINEER. IN NO CASE SHALL MORE THINNER BE ADDED THAN THAT RECOMMENDED BY THE MANUFACTURER'S INSTRUCTIONS. ONLY THINNERS SUPPLIED BY THE PAINT MANUFACTURER MAY BE ADDED TO THE PAINT.

GENERAL NOTES

FED RD DIVISION	STATE	PROJECT	
5	OHIO		

WAY - 250 -17.40

APPLICATION

IF THE SURFACE IS DEGRADED OR CONTAMINATED SUBSEQUENT TO SURFACE PREPARATION AND PRIOR TO PAINTING, THE SURFACE SHALL BE RESTORED BEFORE PAINT APPLICATION. ALL SURFACE CLEANING SHALL BE APPROVED BY THE ENGINEER PRIOR TO PAINTING. IN ORDER TO PREVENT THE DEGRADATION OR CONTAMINATION OF CLEANED SURFACES, THE PRIME COAT OF PAINT SHALL BE APPLIED THE SAME DAY THE SURFACE HAS BEEN CLEANED. SUCCEEDING COATS SHALL BE APPLIED BEFORE CONTAMINATION OF THE UNDER SURFACE OCCURS.

CLEANING AND PAINTING SHALL BE SO PROGRAMMED THAT DETRIMENTAL AMOUNTS OF DUST OR OTHER CONTAMINANTS DO NOT FALL ON WET, NEWLY-PAINTED SURFACES. SURFACES NOT INTENDED TO BE PAINTED SHALL BE SUITABLY PROTECTED FROM THE EFFECTS OF CLEANING AND PAINTING OPERATIONS. OVERSPRAY OF THE ZINC RICH PRIMER WILL RESULT IN IMPROPER ADHESION OF THE TOPCOAT. OVERSPRAY SHALL BE REMOVED WITH A STIFF BRISTLE BRUSH OR WIRE SCREEN.

TEMPERATURE

PAINT SHALL NOT BE APPLIED WHEN THE TEMPERATURE OF THE STEEL, OR PAINT IS BELOW 45 DEGREES F (7 DEGREES C) OR WHEN THE AIR TEMPERATURE IS BELOW 45 DEGREES F (7 DEGREES C). PAINT SHALL NOT BE APPLIED WHEN THE SURFACE TEMPERATURE IS EXPECTED TO DROP TO 45 DEGREES F (7 DEGREES C) BEFORE THE PAINT HAS DRIED. PAINT SHALL NOT BE APPLIED TO STEEL WHICH IS AT A TEMPERATURE THAT WILL CAUSE BLISTERING OR POROSITY OR OTHERWISE WILL BE DETRIMENTAL TO THE LIFE OF THE PAINT. WHEN PAINT IS APPLIED IN HOT WEATHER, OR THINNED IN COLD WEATHER, PRECAUTIONS MUST BE TAKEN TO INSURE THAT THE SPECIFIED THICKNESS OF PAINT IS OBTAINED.

MOISTURE

PAINT SHALL NOT BE APPLIED IN RAIN, WIND, SNOW, FOG OR MIST, OR WHEN THE STEEL SURFACE TEMPERATURE IS LESS THAN 5 DEGREES F (3 DEGREES C) ABOVE THE DEW POINT. PAINT SHALL NOT BE APPLIED TO WET OR DAMP SURFACES UNLESS THE PAINT IS OF THE WATER-THINNED TYPE. PAINT SHALL NOT BE APPLIED ON FROSTED OR ICE-COATED SURFACES. PAINT SHALL NOT BE APPLIED WHEN THE RELATIVE HUMIDITY IS GREATER THAN 85%.

DAMAGE

DAMAGED AREAS OF PAINT WHICH ARE DETRIMENTAL TO THE SERVICE LIFE SHALL BE REMOVED, THE SURFACE SHALL AGAIN BE PREPARED TO THE ORIGINAL SPECIFICATIONS AND REPAINTED WITH THE SAME NUMBER OF COATS OF PAINT OF THE SAME KIND AS THE UNDAMAGED AREAS.

CONTINUITY

TO THE MAXIMUM EXTENT PRACTICAL, EACH COAT OF PAINT SHALL BE APPLIED AS A CONTINUOUS FILM OF UNIFORM THICKNESS FREE OF PORES. ALL THIN SPOTS OR AREAS MISSED IN THE APPLICATION SHALL BE REPAINTED AND PERMITTED TO DRY BEFORE THE NEXT COAT OF PAINT IS APPLIED.

THICKNESS

EACH COAT OF PAINT MUST HAVE THE REQUIRED MIL THICKNESS AS REQUIRED BY THE NOTES.

WHEN THE AVERAGE TOTAL DRY FILM THICKNESS OF ANY COAT IS LESS THAN PLAN REQUIREMENTS, THE WORK SHALL BE CONSIDERED UNSATISFACTORY AND SHALL BE RECOATED AT THE FULL EXPENSE OF THE CONTRACTOR INCLUDING ALL LABOR, EQUIPMENT, AND MATERIALS TO OBTAIN THE DESIRED MIL THICKNESS. THE AVERAGE TOTAL DRY FILM THICKNESS SHALL BE CONSIDERED THE AVERAGE OF THREE (3) SEPARATE READINGS IN 2000 SQ. FT.

RECOATING

EACH COAT OF PAINT SHALL BE IN A PROPER STATE OF CURE OR DRYNESS BEFORE THE APPLICATION OF THE SUCCEEDING COAT. PAINT SHALL BE CONSIDERED DRY FOR RECOATING WHEN AN ADDITIONAL COAT CAN BE APPLIED WITHOUT THE DEVELOPMENT OF ANY DETRIMENTAL FILM IRREGULARITIES, SUCH AS LIFTING, WRINKLING OR LOSS OF ADHESION OF THE UNDERCOAT. THE TIME INTERVAL BETWEEN COATING APPLICATIONS SHALL BE IN COMPLIANCE WITH MANUFACTURER'S INSTRUCTIONS AND IN NO CASE MORE THAN FORTY-EIGHT (48) HOURS.

ALTERNATE COATS OF PAINT SHALL BE DIFFERENT COLORS TO PROVIDE ENOUGH CONTRAST TO INDICATE COMPLETE COVERAGE OF THE SURFACE. TINTING PASTES SHALL NOT BE ALLOWED.

THE MAXIMUM PRACTICAL TIME SHALL BE ALLOWED FOR PAINT TO DRY BEFORE RECOATING. SOME PAINTS MAY DRY TOO HARD FOR GOOD ADHESION OF SUBSEQUENT COATS. THESE SHALL BE RECOATED WITHIN THE TIME PERIOD IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. IF NOT RECOATED WITHIN THE SPECIFIED TIME THEN THE PREVIOUSLY APPLIED COATINGS SHALL BE ROUGHENED PRIOR TO RECOATING.

NO DRIER SHALL BE ADDED TO PAINT ON THE JOB UNLESS SPECIFICALLY CALLED FOR IN THE MANUFACTURER'S INSTRUCTIONS.

PAINT SHALL BE PROTECTED FROM RAIN, CONDENSATION, CONTAMINATION, SNOW AND FREEZING UNTIL DRY TO THE FULLEST EXTENT PRACTICAL.

SPRAY APPLICATION (GENERAL)

ALL SPRAY APPLICATION OF PAINT, WHETHER AIR SPRAY, AIRLESS SPRAY, HOT AIR SPRAY OR HOT AIRLESS SPRAY, SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

THE EQUIPMENT USED SHALL BE SUITABLE FOR THE INTENDED PURPOSES. SHALL BE CAPABLE OF PROPERLY ATOMIZING THE PAINT TO BE APPLIED AND SHALL BE EQUIPPED WITH SUITABLE PRESSURE REGULATORS AND GAGES. THE EQUIPMENT SHALL BE MAINTAINED IN PROPER WORKING CONDITION.

PAINT INGREDIENTS SHALL BE KEPT UNIFORMLY MIXED IN THE SPRAY POTS OR CONTAINERS DURING PAINT APPLICATION EITHER BY CONTINUOUS MECHANICAL AGITATION OR BY INTERMITTENT AGITATION AS FREQUENTLY AS NECESSARY.

SPRAY EQUIPMENT SHALL BE KEPT SUFFICIENTLY CLEAN SO THAT DIRT, DRIED PAINT AND OTHER FOREIGN MATERIALS ARE NOT DEPOSITED IN THE PAINT FILM. ANY SOLVENTS LEFT IN THE EQUIPMENT SHALL BE COMPLETELY REMOVED BEFORE USING.

PAINT SHALL BE APPLIED IN A UNIFORM LAYER WITH OVERLAPPING AT THE EDGES OF THE SPRAY PATTERN. DURING APPLICATION, THE GUN SHALL BE HELD PERPENDICULAR TO THE SURFACE AND AT A DISTANCE WHICH WILL ENSURE THAT A WET LAYER OF PAINT IS DEPOSITED ON THE SURFACE. THE TRIGGER OF THE GUN SHOULD BE RELEASED AT THE END OF EACH STROKE. ALL BOLTS AND RIVET HEADS SHALL BE SPRAYED FROM AT LEAST TWO (2) DIRECTIONS.

EACH SPRAY OPERATOR SHALL DEMONSTRATE TO THE ENGINEER HIS ABILITY TO APPLY THE PAINT AS SPECIFIED. ANY OPERATOR WHO DOES NOT DEMONSTRATE THIS ABILITY SHALL NOT SPRAY.

ALL RUNS AND SAGS SHALL BE BRUSHED OUT IMMEDIATELY OR THE COATING SHALL BE REMOVED AND THE SURFACE REPAINTED.

IF MUD CRACKING OCCURS, THE AFFECTED AREA SHALL BE CLEANED TO BARE METAL AND REPAINTED.

CRACKS, CREVICES, BLIND AREAS OF ALL RIVETS, BOLTS AND ALL OTHER INACCESSIBLE AREAS SHALL BE PAINTED BY BRUSH, DAUBERS OR SHEEPSKINS.

PAINT SHALL BE SUITABLE FOR THE PARTICULAR SPRAY APPLICATION METHOD USED.

CAUTION MUST BE EXERCISED SO THAT HOT COATINGS ARE NOT APPLIED TO COLD SURFACES AND CONVERSELY, THAT COLD COATINGS ARE NOT APPLIED TO HOT SURFACES.

ALL CRACKS AND CREVICES SHALL BE FILLED WITH PAINT IF PRACTICAL.

WET PAINT SHALL BE PROTECTED AGAINST DAMAGE FROM DUST OR OTHER DETRIMENTAL FOREIGN MATTER.

AIRLESS SPRAY APPLICATIONS

AIRLESS OR HIGH PRESSURE SPRAY APPLICATION OF PAINT SHALL BE IN ACCORDANCE WITH THE ABOVE PROVISIONS AND IN ADDITION SHALL COMPLY WITH THE FOLLOWING.

FLUID TIPS SHALL BE OF PROPER ORIFICE SIZE AND FAN ANGLE, AND THE FLUID CONTROL GUN OF PROPER CONSTRUCTION, AS RECOMMENDED BY THE MANUFACTURER OF THE MATERIAL BEING SPRAYED AND THE EQUIPMENT BEING USED. FLUID TIPS SHALL BE OF THE SAFETY TYPE WITH SHIELDS TO PREVENT PENETRATION OF THE SKINS BY THE HIGH PRESSURE STREAM OF PAINT.

THE AIR PRESSURE TO THE PAINT PUMP SHALL BE ADJUSTED SO THAT THE PAINT PRESSURE TO THE GUN IS PROPER FOR OPTIMUM SPRAYING EFFECTIVENESS. THIS PRESSURE SHALL BE SUFFICIENTLY HIGH TO PROPERLY ATOMIZE THE PAINT. PRESSURES CONSIDERABLY HIGHER THAN THOSE NECESSARY TO PROPERLY ATOMIZE THE PAINT SHOULD NOT BE USED. THIS WILL CAUSE DRY SPRAY TO BE APPLIED.

SPRAYING EQUIPMENT SHALL BE KEPT CLEAN AND SHALL UTILIZE PROPER FILTERS IN THE HIGH PRESSURE LINE SO THAT DIRT, DRY PAINT AND OTHER FOREIGN MATERIALS ARE NOT DEPOSITED IN THE PAINT FILM. ANY SOLVENTS LEFT IN THE EQUIPMENT SHALL BE COMPLETELY REMOVED BEFORE APPLYING PAINT.

THE TRIGGER OF THE GUN SHOULD BE PULLED FULLY OPEN AND HELD FULLY OPEN DURING ALL SPRAYING TO INSURE PROPER APPLICATION OF PAINT.

AIRLESS PAINT SPRAY EQUIPMENT SHALL ALWAYS BE PROVIDED WITH AN ELECTRIC GROUND WIRE IN THE HIGH PRESSURE LINE BETWEEN THE GUN AND THE PUMPING EQUIPMENT. FURTHER, THE PUMPING EQUIPMENT SHALL BE SUITABLY GROUNDED TO AVOID THE BUILD-UP OF ANY ELECTROSTATIC CHARGE ON THE GUN. THE MANUFACTURER'S INSTRUCTIONS ARE TO BE FOLLOWED REGARDING THE PROPER USE OF EQUIPMENT.

INSPECTION

ALL WORK AND MATERIALS SUPPLIED UNDER THIS SPECIFICATION SHALL BE SUBJECT TO TIMELY INSPECTION BY THE ENGINEER. THE CONTRACTOR SHALL CORRECT SUCH WORK OR REPLACE SUCH MATERIAL THAT IS FOUND DEFECTIVE UNDER THE SPECIFICATION.

SAMPLES OF PAINTS USED UNDER THIS SPECIFICATION SHALL BE SUPPLIED UPON REQUEST ALONG WITH THE SUPPLIER'S NAME AND IDENTIFICATION FOR THE MATERIALS.

THE CONTRACTOR SHALL FURNISH AND ERECT SCAFFOLDING MEETING THE APPROVAL OF THE ENGINEER TO PERMIT INSPECTION OF THE STEEL PRIOR TO AND AFTER PAINTING.

BRIDGE PAINTING
NOTES
BRIDGE NO. WAY-250-1741
OVER APPLE CREEK

GENERAL NOTES

FED RD DIVISION	STATE	PROJECT	
5	OHIO		

15D
20

WAY - 250 -17.40

SAFETY REQUIREMENTS AND PRECAUTIONS

THE CONTRACTOR IS REQUIRED TO MEET THE APPLICABLE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION.

THE PAINT MATERIALS SPECIFIED ON THIS PROJECT CAN BE HAZARDOUS TO THE HEALTH OF THE APPLICATOR IF NOT APPLIED AS PER MANUFACTURERS INSTRUCTIONS. THE CONTRACTOR SHALL FOLLOW THE RECOMMENDATIONS CONTAINED ON THE MATERIAL SAFETY DATA SHEET, PRODUCT DATA SHEET AND THE LABEL ON THE PAINT CONTAINERS. THESE PRECAUTIONS SHALL INCLUDE THE USE OF RESPIRATORS AND EYE AND SKIN PROTECTION AS SPECIFIED.

THE MATERIAL SAFETY DATA SHEET SHALL BE PROVIDED AT THE PRECONSTRUCTION MEETING FOR ALL PAINTS AND THINNERS USED ON THIS PROJECT. NO WORK SHALL START UNTIL THE MATERIAL SAFETY DATA SHEET HAS BEEN SUBMITTED.

PROTECTION OF PERSONS AND PROPERTY

THE CONTRACTOR SHALL COLLECT, REMOVE AND DISPOSE OF ALL BUCKETS, RAGS OR OTHER DISCARDED MATERIALS AND HE SHALL LEAVE THE JOB SITE IN A CLEAN CONDITION.

THE CONTRACTOR SHALL PROTECT ALL PORTIONS OF THE STRUCTURE WHICH ARE NOT TO BE PAINTED, AGAINST DAMAGE OR DISFIGUREMENT BY SPLASHES, SPATTERS, AND SMIRCHES OF PAINT.

TO PREVENT DAMAGE TO ADJACENT BUILDINGS, PARKED CARS OR BOATS, OR TO VEHICLES TRAVELING UNDER SPANS WHICH ARE BEING PAINTED, THE CONTRACTOR SHALL INSTALL AND MAINTAIN SUITABLE SHIELDS BETWEEN HIS OPERATIONS AND THE ABOVE. THE SHIELDS SHALL BE OF A TYPE AND CONSTRUCTION, APPROVED BY THE ENGINEER, THAT WILL PREVENT PAINT FROM DROPPING ONTO OR BEING BLOWN INTO PAVEMENT LANES OPEN TO TRAFFIC. THEY SHALL BE SUITABLY ANCHORED AND REINFORCED TO PREVENT INTERFERING WITH NORMAL TRAFFIC OPERATIONS IN THE OPEN LANES. PAYMENT FOR THE SHIELDS SHALL BE INCLUDED AS INCIDENTAL TO THE APPLICABLE FIELD COATING ITEM. WORK SHALL BE SUSPENDED WHEN DAMAGE TO ADJACENT BUILDINGS, PARKED CARS OR BOATS, OR TRAVELING VEHICLES IS OCCURRING.

WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO PUBLIC OR PRIVATE PROPERTY BY OR ON ACCOUNT OF ANY ACT, OMISSION, NEGLIGENCE OR MISCONDUCT IN THE EXECUTION OF THE WORK, HE SHALL RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE, BY REPAIRING, REBUILDING OR OTHERWISE RESTORING AS MAY BE DIRECTED, OR HE SHALL MAKE GOOD SUCH DAMAGE OR INJURY IN AN ACCEPTABLE MANNER.

POLLUTION CONTROL

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION CONTROL LAWS, RULES OR REGULATIONS OR FEDERAL, STATE OR LOCAL AGENCIES.

TOUCH-UP

AFTER ALL THE BRIDGE WORK IS DONE THE CONTRACTOR SHALL TOUCH-UP ALL DAMAGED AREAS USING THE SAME SURFACE PREPARATION, PAINT SYSTEM AND APPLYING THE PAINT ACCORDING TO THESE NOTES. THE CONTRACTOR SHALL TAKE CARE TO DAMAGE AS FEW AREAS AS POSSIBLE.

PAYMENT

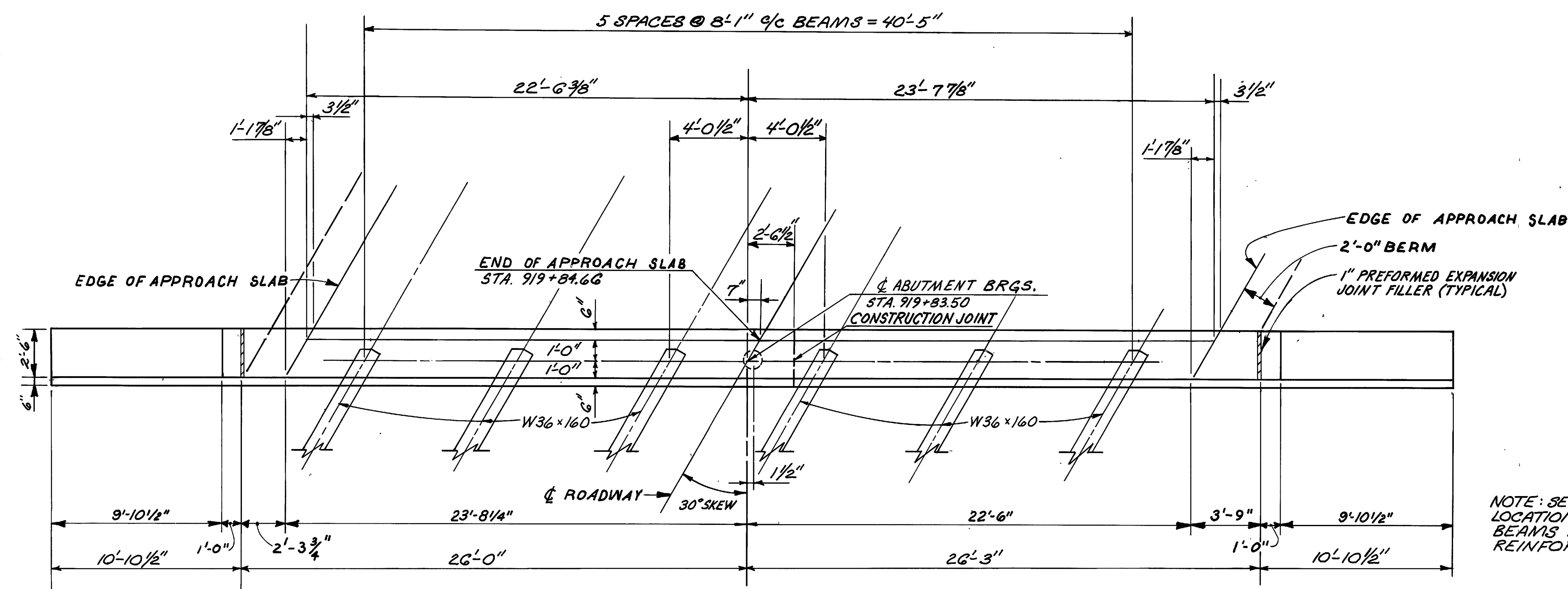
PAYMENT FOR ALL OF THE ABOVE WILL BE MADE AT THE CONTRACT BID PRICE FOR:

SPECIAL	LUMP SUM	PRIME COAT
SPECIAL	LUMP SUM	INTERMEDIATE COAT
SPECIAL	LUMP SUM	FINISH COAT

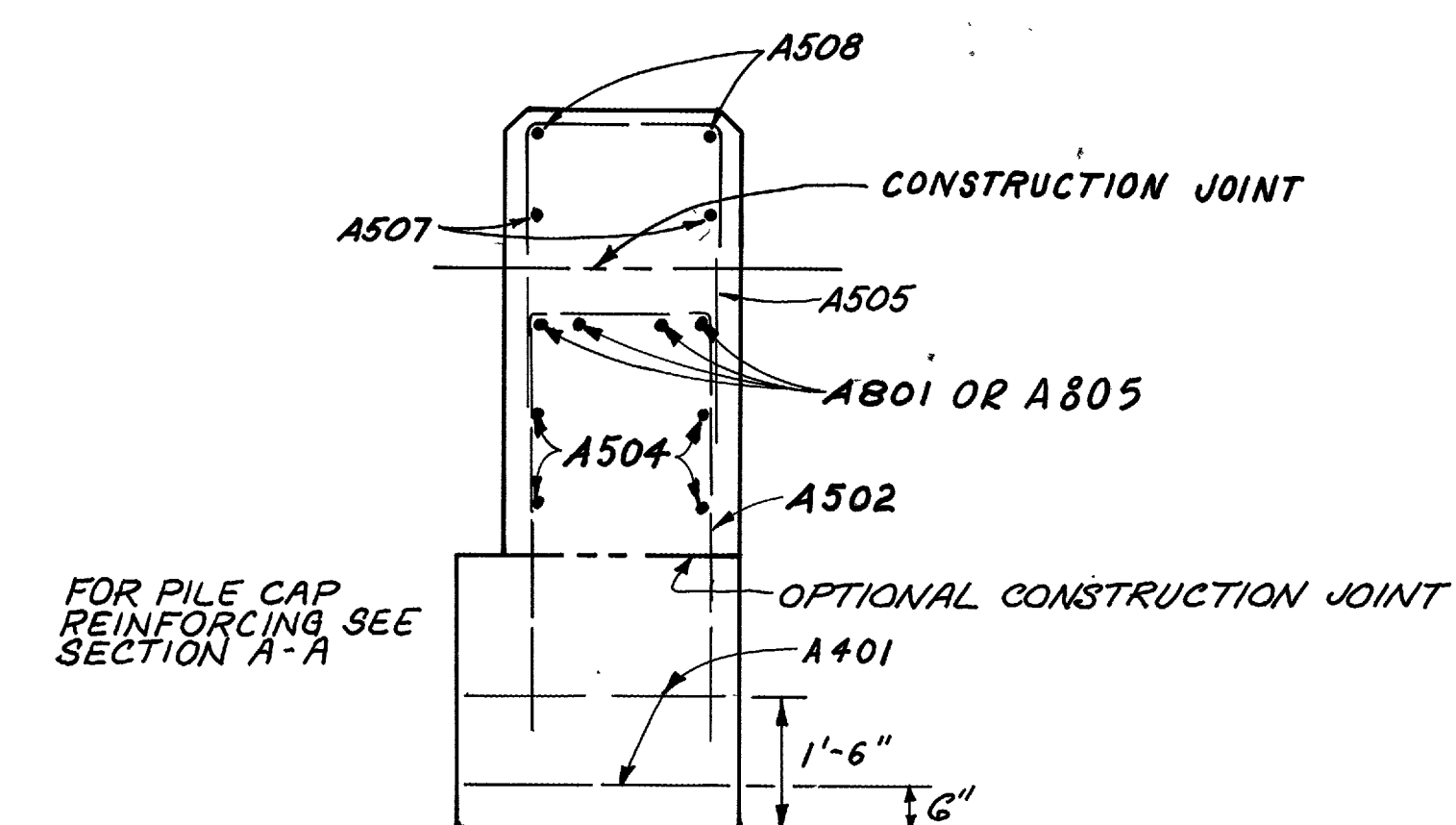
BRIDGE PAINTING
NOTES
BRIDGE NO. WAY-250-1741
OVER APPLE CREEK

20/6

WAY - 250 - 17.40

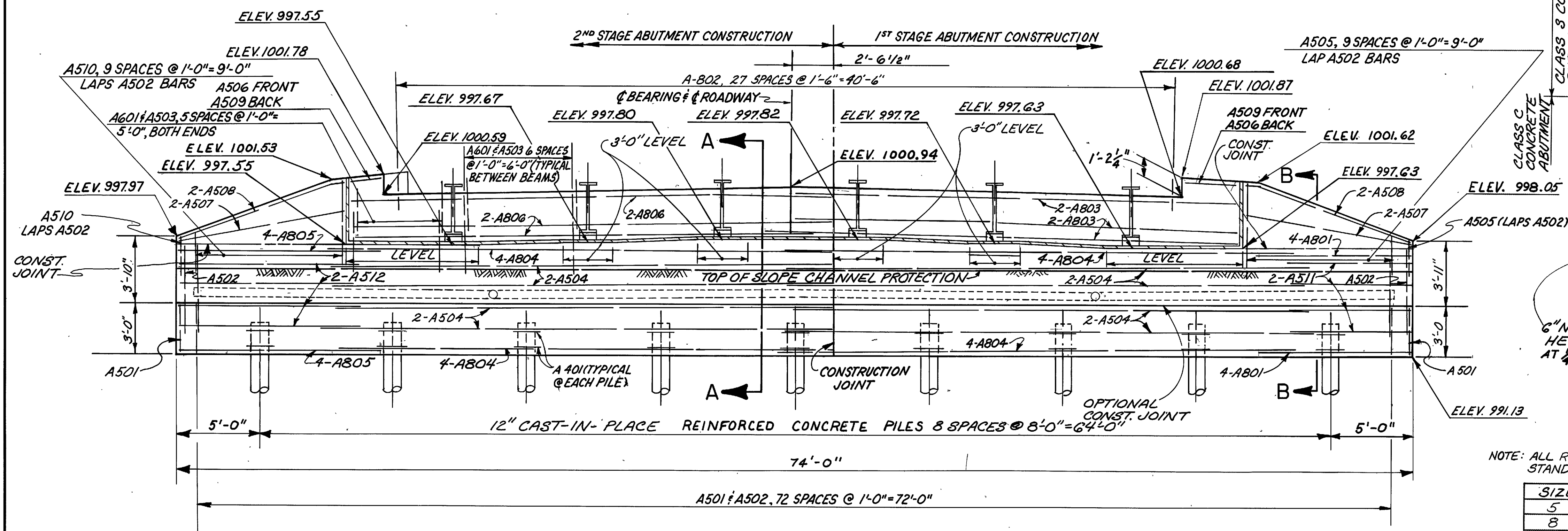


EAST ABUTMENT (FORWARD)

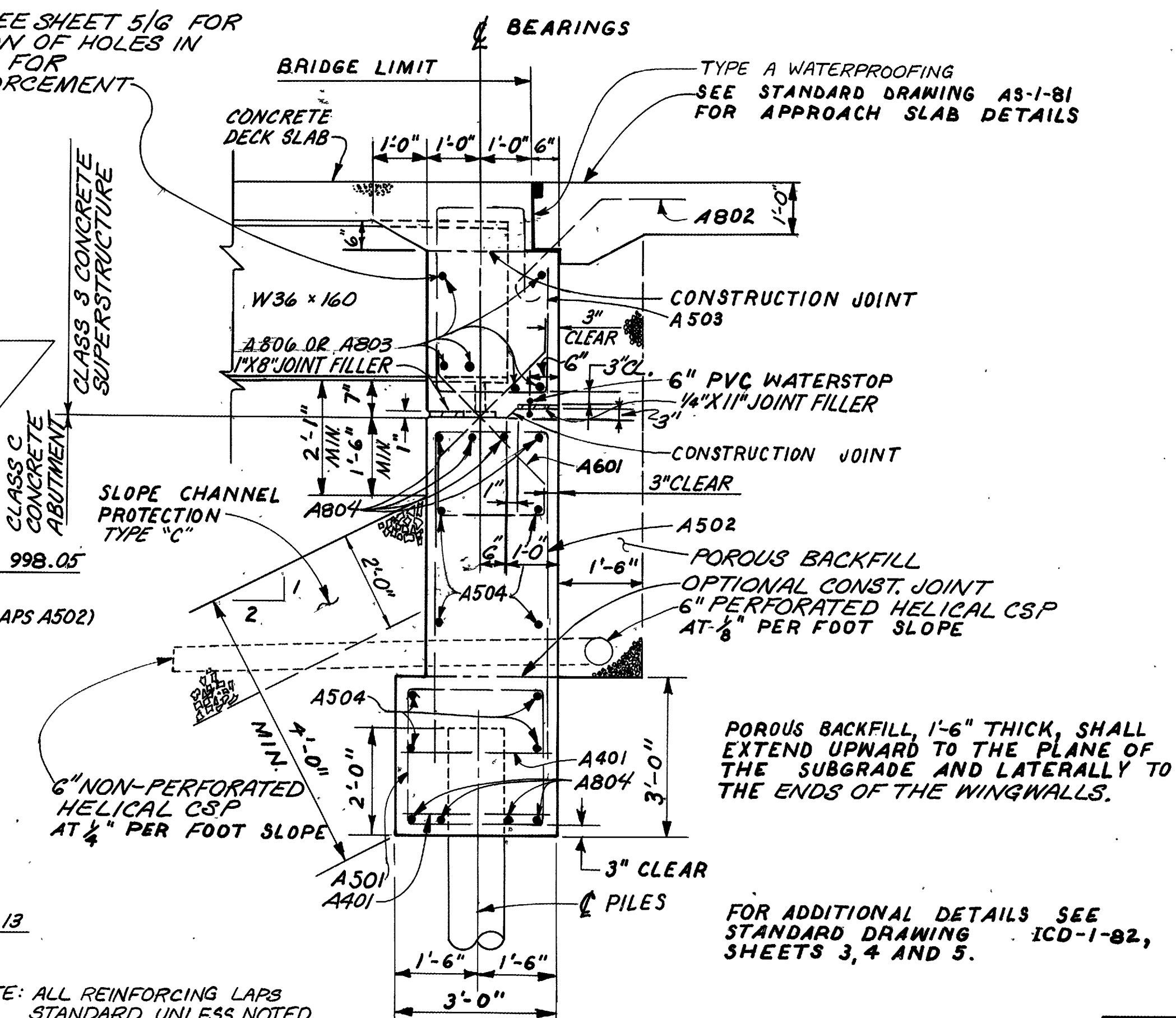


SECTION B - B

NOTE: SEE SHEET 5/6 FOR
LOCATION OF HOLES IN
BEAMS FOR
REINFORCEMENT.



ELEVATION

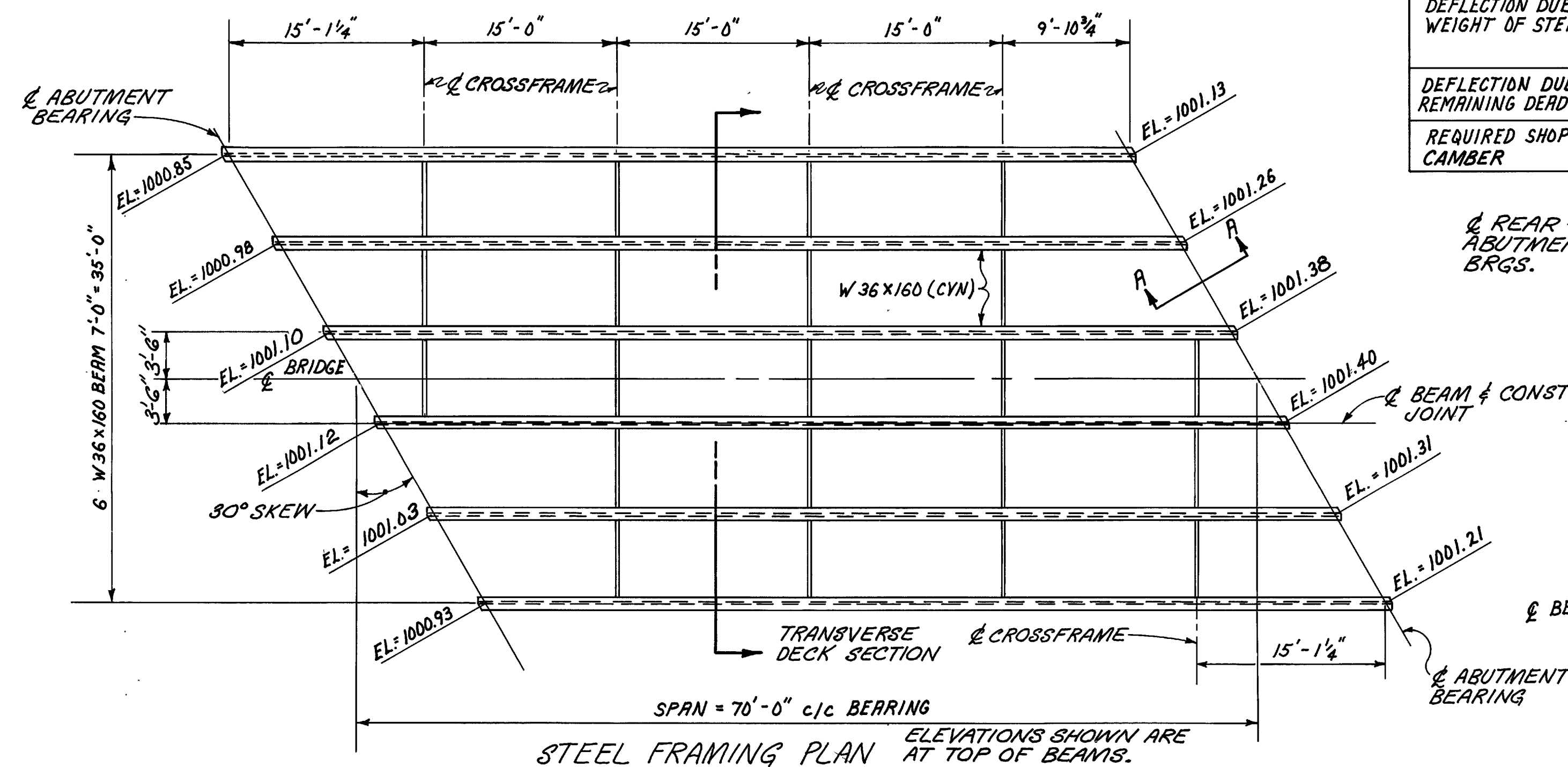


SECTION A-A

SIZE	LAP
5	19"
8	30"

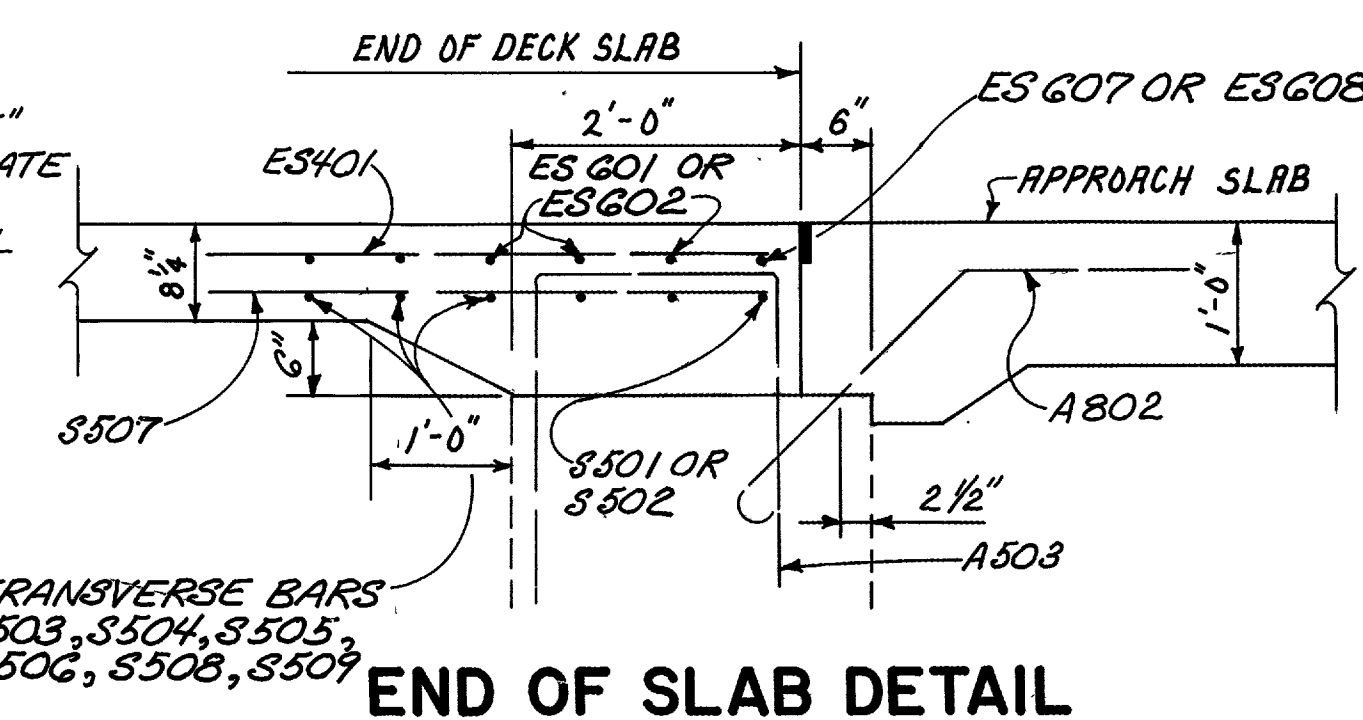
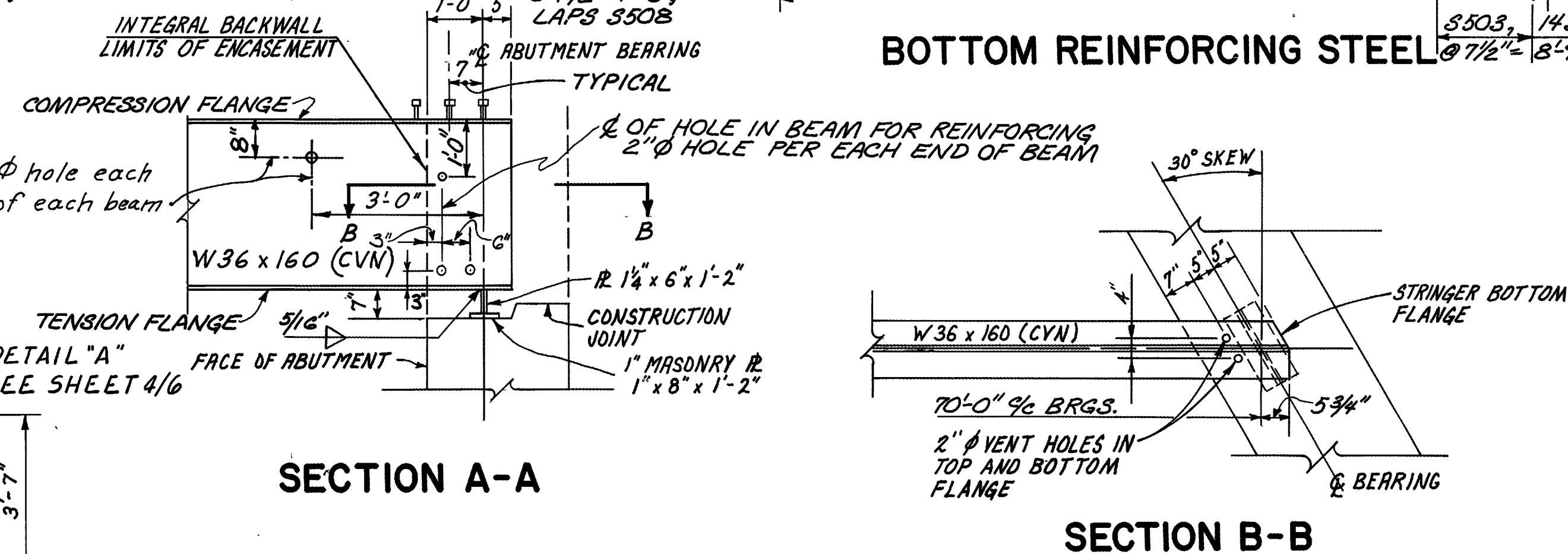
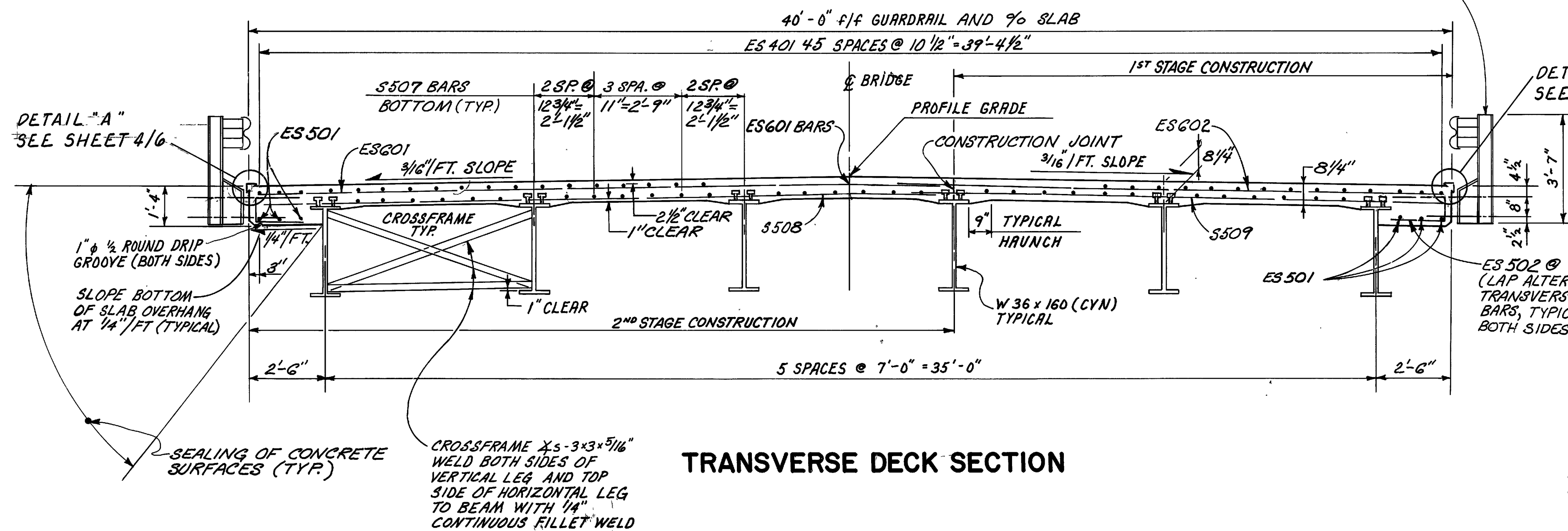
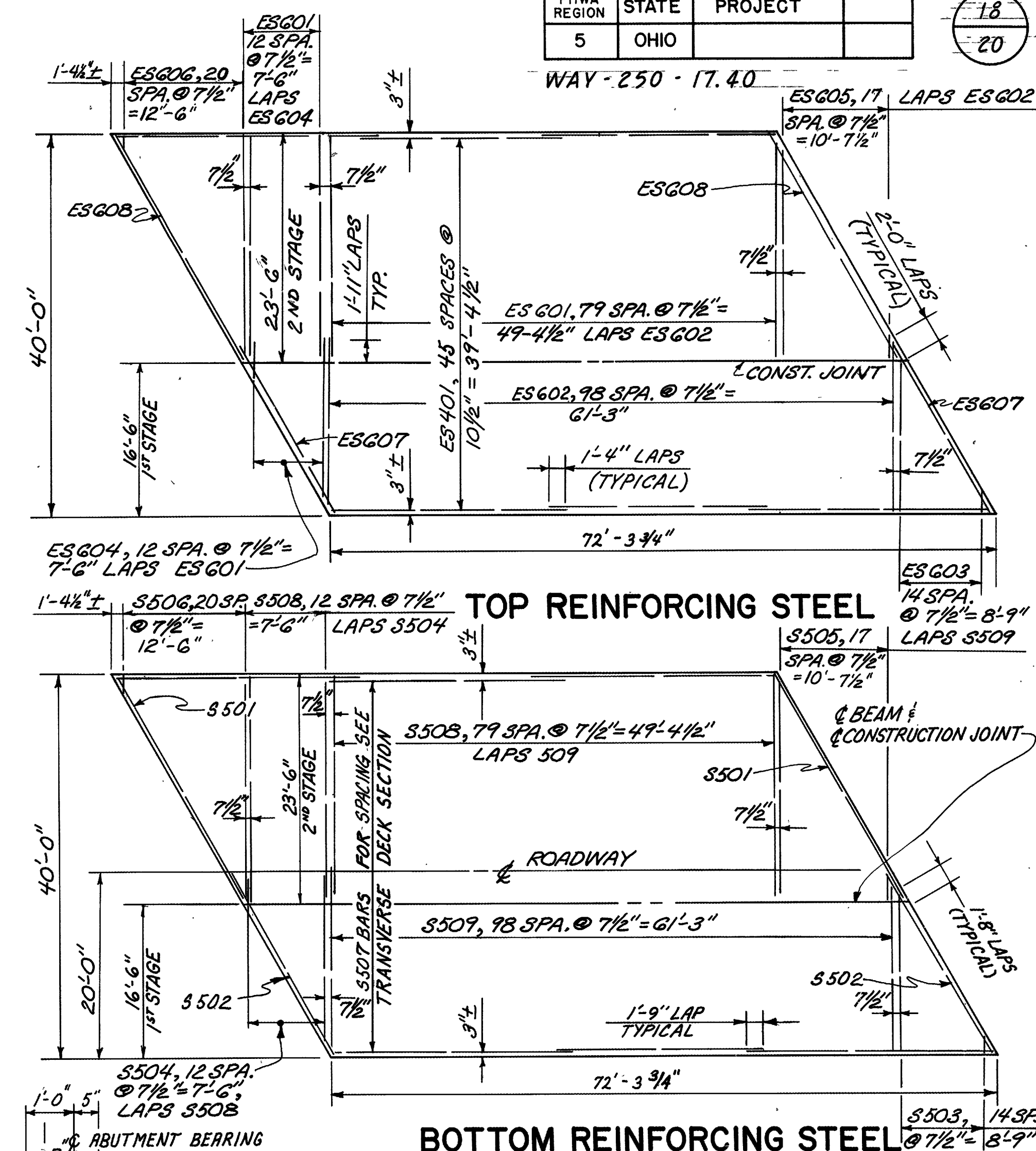
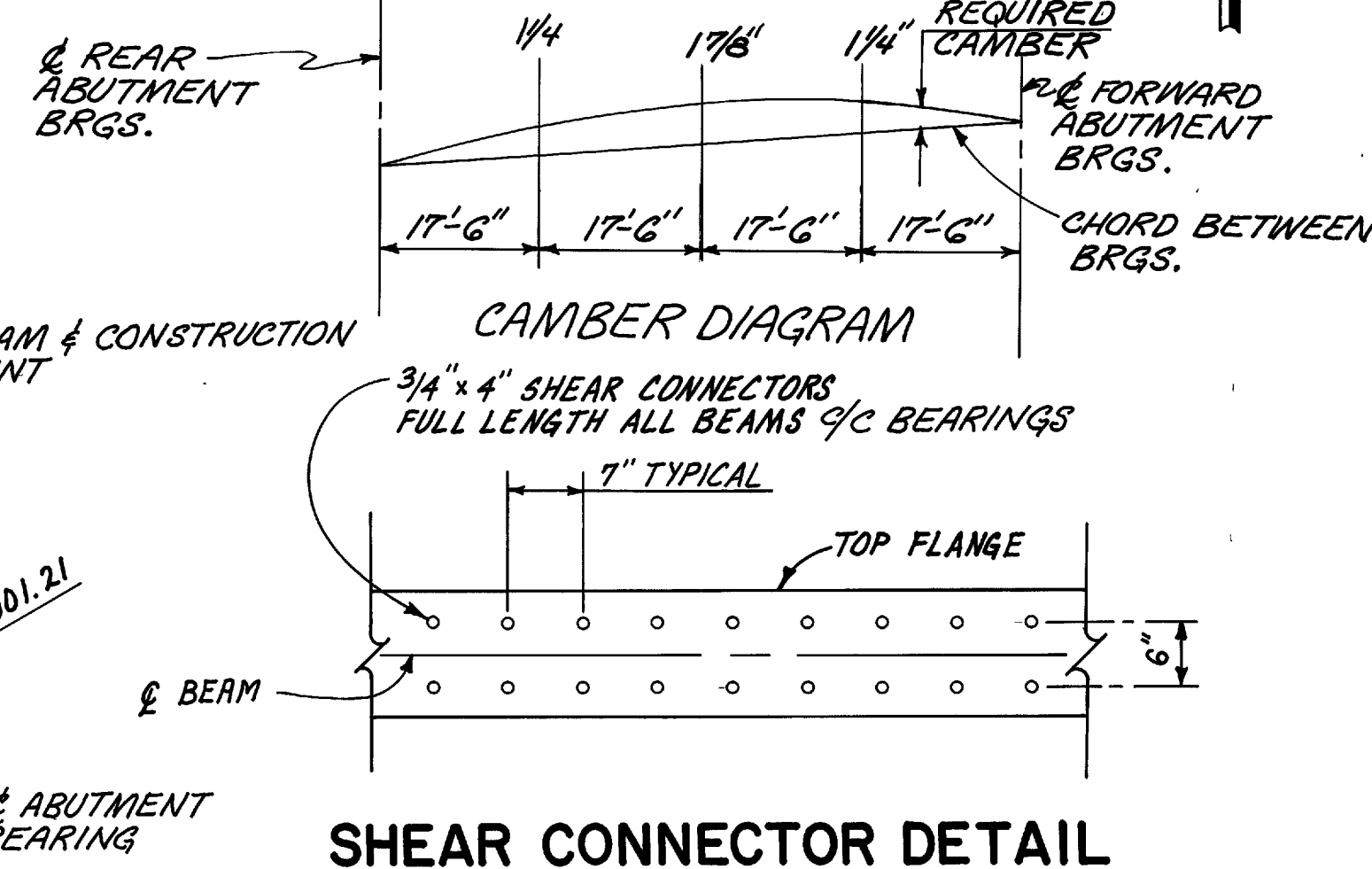
			3
DESCRIPTION	DATE	BY	
REVISIONS			
EAST ABUTMENT DETAIL BRIDGE NO. WAY-250-17 41 OVER APPLE CREEK			
HAMMONTREE & ASSOCIATES, LTD. ENGINEERS, PLANNERS, SURVEYORS CANTON - ORLANDO - PITTSBURGH - AKRON			
		DESIGNED C.F.H. REVIEWED C.F.H.	DRAWN TJB DRAWING NO. J.W.
		CHECKED	

DESCRIPTION	DATE	BY	
REVISIONS			
WEST ABUTMENT DETAIL BRIDGE NO. WAY-250-17 4I OVER APPLE CREEK			
HAMMONTREE & ASSOCIATES, LTD. ENGINEERS, PLANNERS, SURVEYORS CANTON • ORLANDO • PITTSBURGH • AKRON			
DESIGNED <i>C.F.H.</i>		DRAWN <i>TJB</i>	CHECKED <i>J.W.</i>
REVIEWED <i>RR</i>		DRAWING NO.	



- NOTES:
1. WHERE A SHAPE OR PLATE IS DESIGNATED (CYN) THE MATERIAL SHALL MEET SPECIFIED MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01 CMS.
 2. SEE SHEET 676 FOR DECK SCREED ELEVATIONS.
 3. DECK SLAB DEPTH: THE DISTANCE SHOWN FROM TOP OF DECK SLAB TO TOP OF STEEL BEAM IS THE DESIGN DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE.
 4. A HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" (PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" WIDE).
 5. BAR MARKS FOR REINFORCING BARS WHICH ARE TO BE EPOXY COATED INCLUDE A LETTER PREFIX "E".

DEFLECTION AND CAMBER			
DEFLECTION DUE TO WEIGHT OF STEEL	$\frac{1}{4}$ POINT	$\frac{1}{2}$ POINT	$\frac{3}{4}$ POINT
	$\frac{1}{4}$ "	$\frac{3}{8}$ "	$\frac{1}{4}$ "
DEFLECTION DUE TO REMAINING DEAD LOAD	1"	$1\frac{1}{2}$ "	1"
REQUIRED SHOP CAMBER	$1\frac{1}{4}$ "	$1\frac{7}{8}$ "	$1\frac{1}{4}$ "

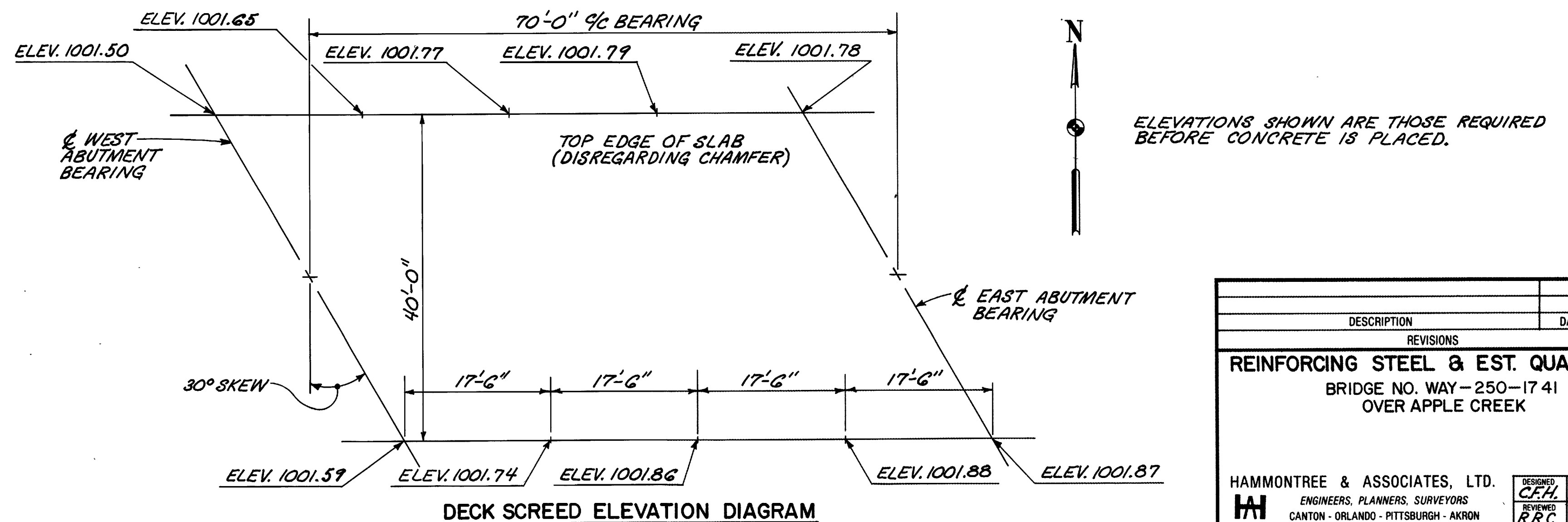


REINFORCING STEEL LIST

BENDING DIAGRAMS		MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E
SUPERSTRUCTURE											
TYPE 1	TYPE 2	3501	2	26'-11"	56	S					
		3502	2	20'-7"	43	S					
TYPE 3	TYPE 4	3503	15	1'-6" TO 16'-7"	141	S	SERIES OF 15 VARY AT 1'-1" INC.				
		3504	13	4'-1" TO 17'-1"	143	S	SERIES OF 13 VARY AT 1'-1" INC.				
TYPE 5	TYPE 6	3505	18	1'-8" TO 20'-1"	204	S	SERIES OF 18 VARY AT 1'-1" INC.				
		3506	21	1'-6" TO 23'-2"	270	S	SERIES OF 21, VARY AT 1'-1" INC.				
TYPE 7	TYPE 8	3507	90	25'-1"	2335	S					
		3508	93	23'-3"	2255	S					
TYPE 9	TYPE 10	3509	99	18'-0"	1859	S					
		EPOXY COATED REINFORCING STEEL									
TYPE 11	TYPE 12	ES601	93	23'-3"	3248	S					
		ES602	99	18'-4"	2726	S					
TYPE 13	TYPE 14	ES603	15	1'-6" TO 16'-7"	205	S	SERIES OF 15, VARY AT 1'-1" INC.				
		ES604	13	4'-3" TO 17'-3"	210	S	SERIES OF 13, VARY AT 1'-1" INC.				
TYPE 15	TYPE 16	ES605	18	1'-8" TO 20'-1"	294	S	SERIES OF 18, VARY AT 1'-1" INC.				
		ES606	21	1'-6" TO 23'-2"	389	S	SERIES OF 21, VARY AT 1'-1" INC.				
TYPE 17	TYPE 18	ES607	2	20'-10"	63	S					
		ES608	2	26'-11"	81	S					
TYPE 19	TYPE 20	ES501	18	25'-9"	483	S					
		ES502	108	4'-9"	535	S	0'-11"	2'-1"	2'-0"		
TYPE 21	TYPE 22	ES401	138	24'-10"	2289	S					
		ABUTMENTS									
TYPE 23	TYPE 24	AB01	16	9'-6"	408	S					
		AB02	56	4'-5"	660	14	2'-6"	1'-0"	1'-0"		
TYPE 25	TYPE 26	AB03	12	26'-0"	833	S					
		AB04	32	30'-0"	2563	S					
TYPE 27	TYPE 28	AB05	16	12'-0"	513	S					
		AB06	12	28'-6"	913	S					
TYPE 29	TYPE 30	AG01	94	10'-0"	1412	15	SEE BENDING DIAGRAM				
		AS01	150	11'-0"	1721	7	2'-8"	2'-7"			
TYPE 31	TYPE 32	AS02	150	11'-9"	1838	5	2'-1"	5'-0"	5'-0"		
		AS03	94	11'-3"	1103	13	2'-1"	1'-8"	2'-7"	1'-11"	3'-6"
TYPE 33	TYPE 34	AS04	32	30'-0"	1001	S					
		AS05	22	6'-5" TO 13'-1"	224	5	2'-2"	2 SERIES OF 11, VARY "B" AND "C" BY 4" INC. FROM 2'-3" TO 5'-7"			
TYPE 35	TYPE 36	AS06	4	1'-11"	8	S					
		AS07	8	10'-8"	89	S					
TYPE 37	TYPE 38	AS08	8	11'-4"	95	11	10'-4"	0'-9 1/2"	0'-3 1/2"		
		AS09	4	3'-3"	14	S					
TYPE 39	TYPE 40	AS10	22	5'-7" TO 13'-1"	214	5	2'-2"	2 SERIES OF 11, VARY "B" & "C" AT 4 1/2" INC. FROM 1'-10" TO 5'-7"			
		AS11	16	7'-6"	125	S					
TYPE 41	TYPE 42	AS12	16	11'-0"	184	S					
		A401	36	9'-0"	216	7	1'-9"	2'-6 1/2"			

*Either A588 or A572 steel may be furnished at Contractor's option.

ITEM		TOTAL	UNIT	ESTIMATED QUANTITIES		DESCRIPTION	ABUT.	PIERS	SUPER	GEN.
202	LUMP					STRUCTURE REMOVED				LUMP
503	LUMP					COFFERDAMS, CRIBS AND SHEETING				LUMP
503	LUMP					UNCLASSIFIED EXCAVATION	LUMP			LUMP
505	LUMP					PILE DRIVING EQUIPMENT MOBILIZATION				LUMP
507	720	LIN. FT.				12" CAST-IN-PLACE REINFORCED CONCRETE PILES, AS PER PLAN	720			
509	21,458	LB.				REINFORCING STEEL, GRADE 60	14,132		7326	
511	107	CU. YD.				CLASS "C" CONCRETE, ABUTMENT, AS PER PLAN	107			
511	118	CU. YD.				CLASS "S" CONCRETE, SUPERSTRUCTURE, AS PER PLAN			118	
513	70,934	LB.				STRUCTURAL STEEL (AISC CATEGORY 1) ASTM A588 OR A572			70,934	
513	1,452	EACH				WELDED STUD SHEAR CONNECTOR			1,452	
516	111	SQ. FT.				1" PREFORMED EXPANSION JOINT FILLER	111			
516	96	SQ. FT.				1/4" PREFORMED EXPANSION JOINT FILLER	96			
516	116	LIN. FT.				PVC WATERSTOP, AS PER PLAN	116			
517	150	LIN. FT.				RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS AND BOLTS)			150	
518	53	CU. YD.				POROUS BACKFILL	53			
518	144	LIN. FT.				6" PERFORATED, HELICAL CORRUGATED STEEL PIPE, 707.01	144			
518	32	LIN. FT.				6" NON-PERFORATED, HELICAL CORRUGATED STEEL PIPE INCLUDING SPECIALS 70701	32			
824	10,523	LB.				EPOXY COATED REINFORCING STEEL GRADE 60			10,523	
SPECIAL	58	SQ. YD.				SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTE)			58	
SPECIAL	LUMP					SURFACE PREPARATION			LUMP	
SPECIAL	LUMP					PRIME COAT			LUMP	
SPECIAL	LUMP					INTERMEDIATE COAT			LUMP	
SPECIAL	LUMP					FINISH COAT			LUMP	



SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

NO. OF STRUCTURES 0 NO. OF PROPERTY OWNERS 5 NO. OF TOTAL TAKES 0

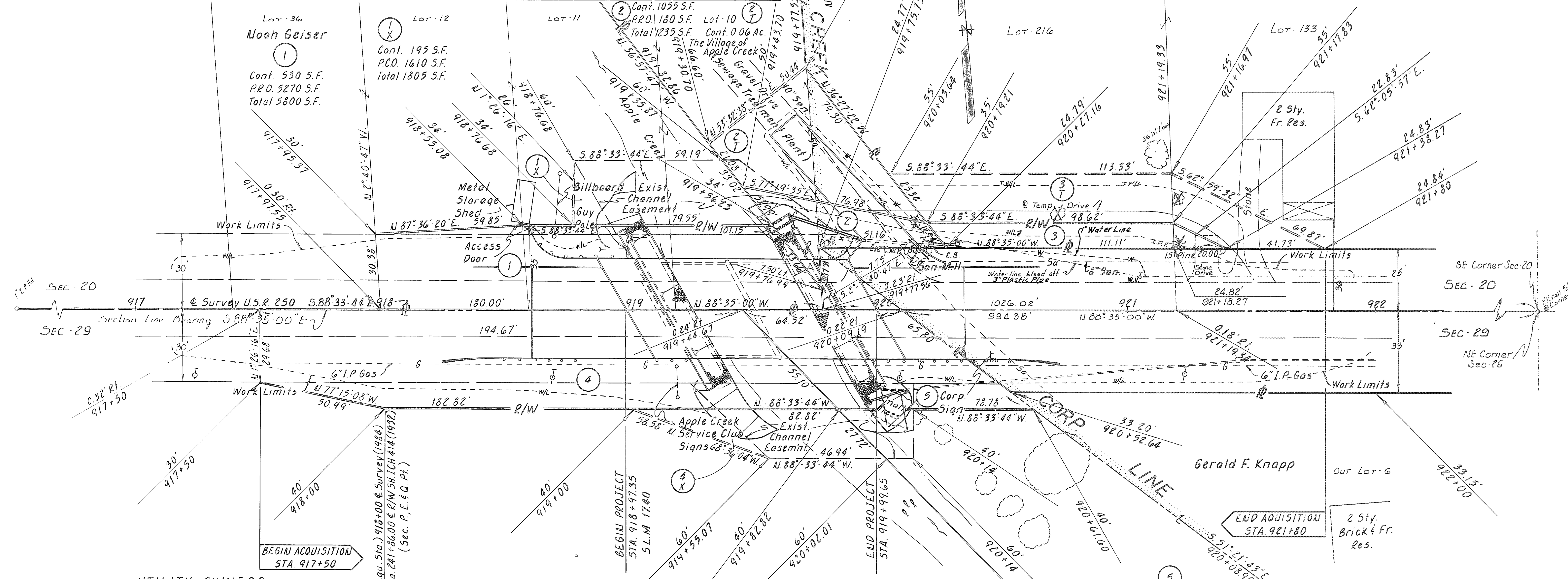
PARCEL NO.	TYPE FUNDS	PROPERTY OWNER	RECORDED VOL.	PAGE	DEED AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. INTAKE	NET TAKE	NET RESIDUE LEFT	RIGHT	BLDG.	SHEET NO.	REMARKS
1	State	Noah Geiser	382	269	0.77	0.20	5800 S.F.	5270 S.F.	530 S.F.	0.56	—	P	1	Billboard
1X		"					1805 S.F.		195 S.F.				1	Channel Work
2		The Village of Apple Creek	423/454	132/364	5.92	0.01	1235 S.F.	180 S.F.	1055 S.F.	5.89	—	No	1	
2T		"					0.06	-0	0.06				1	Drive Construction
3		James F. & Sharon F. Ritchie	508	346	30792 S.F.	-0-	1070 S.F.	-0-	1070 S.F.	29722 S.F.	—	No	1	Lot 216, 133 & Pt 132
3T		"					2950 S.F.	-0-	2950 S.F.				1	Temp. Drive Constr.
4		Atlee W. & Vera Weaver	274/320	649/42	6.720	1.21	0.19	0.14	0.05	—	65.94	No	1	
4X		"					0.03	0.02	0.01				1	Channel Work
5	State	Gerald F. Knapp	429/585	92/446	0.906	0.05	0.06	0.05	0.01	—	0.846	No	1	

Scale in Feet

STATE JOB NUMBER	FHWA REGION	STATE	PROJECT
03930(0)	5	OHIO	BRF-47(22)

WAY - 250 - 17.40
RIGHT OF WAY PLAN

NOTE: For Existing Right of Way, See Plan Wayne County S.H. 414 Sec. P, "Q" & "E" and Apple Creek Plats



UTILITY OWNERS

TELEPHONE:

United Telephone Company
215 North Market Street
Wooster, Ohio 44691
Phone: (216) 264-8611

POWER:

Ohio Power Company
P.O. Box 400
301 Cleveland Avenue S.W.
Canton, Ohio 44701

GAS:

The East Ohio Gas Company
332 Second Street
Canton, Ohio 44702
Phone: (216) 438-6141

WATER & SANITARY:

Apple Creek Water & Sewer Department
Main Street
Apple Creek, Ohio 44606
Phone: (216) 698-5462

Atlee W. & Vera Weaver

Cont. 0.05 Ac. Cont. 0.01 Ac.
P.R.O. 0.14 Ac. P.R.O. 0.02 Ac.
Total 0.19 Ac. Total 0.03 Ac.

3.30 AC TRACT { CONT. 0.016 AC
P.R.O. 0.034 AC
TOTAL 0.05 AC
63.9 AC TRACT { CONT. 0.034 AC
P.R.O. 0.106 AC
TOTAL 0.14 AC

Cont. 0.01 Ac.
P.R.O. 0.05 Ac.
Total 0.06 Ac.

WAYNE COUNTY EAST UNION TWP. SEC-20, 29 T-16N R-12W

TYPE FUNDS: STATE

REV. DATE	PLAN COMPLETED: 9-27-84	DESCRIPTION
12-5-84		Revised Water Line Par. 2T, 3; Added 8" Tile Par. 5; Added Work Limits Par. 2T