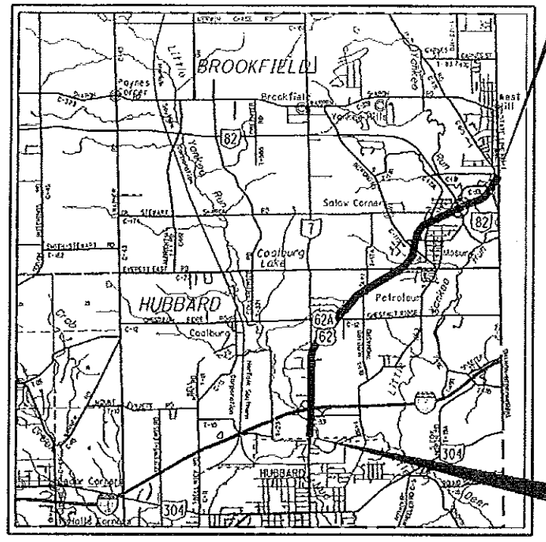


END PROJECT
U.S. 62 SLM: 9.24

BEGIN PROJECT
U.S. 62 SLM: 4.58

LOCATION MAP

LATITUDE: N41°12'11" LONGITUDE: W80°32'39"

SCALE IN MILES
0 2 4 6 8

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION

DESIGN FUNCTIONAL CLASSIFICATION: OTHER PRINCIPAL ARTERIAL

NHS PROJECT YES

DESIGN EXCEPTIONS

NONE

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

TRU-80/62-VAR/4.58 PART 1

HUBBARD & BROOKFIELD TOWNSHIPS
TRUMBULL COUNTY

FOR PART 2, SEE TRU-80-9.56

INDEX OF SHEETS:

PROJECT DESCRIPTION

MINOR REHABILITATION INCLUDING RESURFACING AND MISCELLANEOUS BRIDGE WORK TO FIVE STRUCTURES FROM HUBBARD NORTH CORPORATION TO PENNSYLVANIA STATE LINE.

PROJECT EARTH DISTURBED AREA:	3.89 ACRES
ESTIMATED CONTRACTOR EDA:	1.00 ACRES
NOTICE OF INTENT EDA:	N/A (NOI NOT REQUIRED)

2013 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS 10-13, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____ DISTRICT DEPUTY DIRECTOR
DATE 12-1-15

APPROVED _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION
DATE 12-16-15

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS UNDERGROUND
PROTECTION SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:
ODOT - DISTRICT 4 PLANNING & ENGINEERING
2088 SOUTH ARLINGTON RD.
AKRON, OHIO 44306

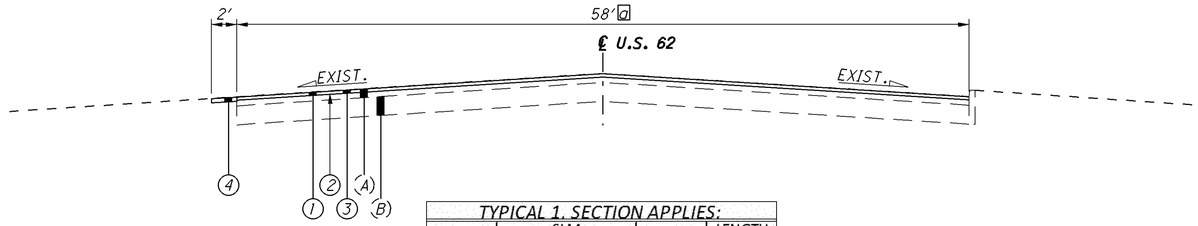
ENGINEERS SEAL:

STATE OF OHIO
MATTHEW A. CHANEY
E-78423
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Matthew A. Chaney
DATE: 12/1/15

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-3.1	7/18/14	DM-4.3	7/19/13	AS-1-15	7/17/15	MT-98.11	7/18/14	TC-22.10	10/18/13	800	1/15/16	WPC	11/13/15
BP-4.1	7/19/13	DM-4.4	7/20/12	AS-2-15	7/17/15	MT-98.20	7/18/14	TC-22.20	1/17/14	821	4/20/12		
BP-5.1	7/19/13			EXJ-4-87	7/19/02	MT-98.22	7/18/14	TC-41.20	10/18/13	832	1/17/14		
BP-7.1	7/18/14	MGS-1.1	7/19/13	GSD-1-96	7/19/02	MT-98.28	7/18/14	TC-42.10	10/18/13	843	4/18/03		
BP-9.1	7/19/13	MGS-2.1	7/19/13	PCB-91	1/18/13	MT-98.29	7/19/13	TC-42.20	10/18/13	921	4/20/12		
		MGS-3.1	7/18/14	SBR-1-13	1/17/14	MT-98.30	7/18/14	TC-51.12	1/17/14				
CB-2.2	1/17/14	MGS-3.2	1/18/13			MT-99.20	7/19/13	TC-52.10	10/18/13				
CB-3.3	1/18/13	MGS-4.2	7/19/13	HL-10.31	7/17/15	MT-101.60	7/19/13	TC-52.20	7/18/14				
		MGS-4.3	1/18/13	HL-20.21	1/17/14	MT-101.70	1/17/14	TC-65.10	1/17/14				
HW-2.1	7/17/15	MGS-5.2	7/19/13	HL-30.11	1/16/15	MT-101.90	7/17/15	TC-65.11	7/18/14				
		MGS-5.3	7/19/13	HL-30.21	1/17/14	MT-102.10	7/18/14	TC-71.10	1/17/14				
DM-1.1	1/18/13	MGS-6.1	7/19/13	HL-60.21	1/16/15	MT-102.20	7/18/14	TC-72.20	7/18/14				
DM-1.2	1/18/13	MGS-6.2	1/18/13			MT-105.10	7/19/13						
DM-2.1	1/18/13			MT-95.30	7/18/14								
DM-4.1	7/19/13	RM-4.1	7/19/13	MT-95.71	7/19/13	TC-12.30	10/18/13						
DM-4.2	7/20/12	RM-4.5	7/18/14	MT-98.10	7/18/14	TC-21.20	1/16/15						

FEDERAL PROJECT NO. E050(010)
PID NO. 77886
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
TRU-80/62-VAR/4.58
1/21



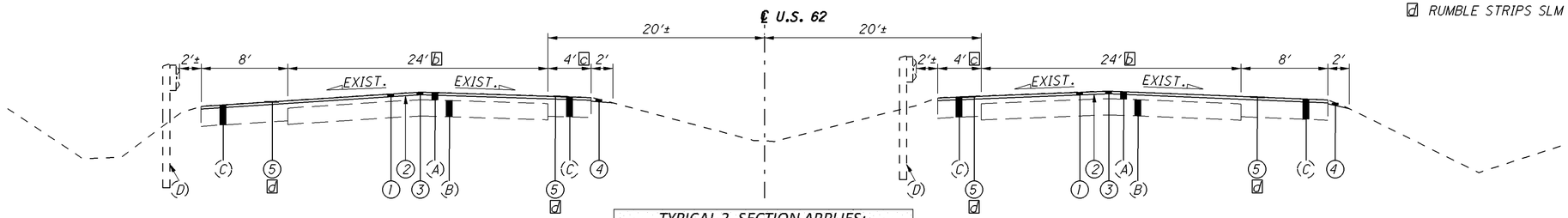
TYPICAL 1. SECTION APPLIES:				
ROUTE	SLM		AVG WIDTH	LENGTH
	FROM	TO	(FEET)	(MILES)
U.S. 62	4.58	4.62	65	0.04
U.S. 62	9.05	9.24	58	0.19
MASURY	U.S. 62 TO RAMP		50	0.14
			TOTAL =	0.37

a VARIES 58′ SLM 4.58 TO 72′ SLM 4.62
58′ AVG. SLM 9.05 TO SLM 9.24
50′ AVG. MASURY ROAD

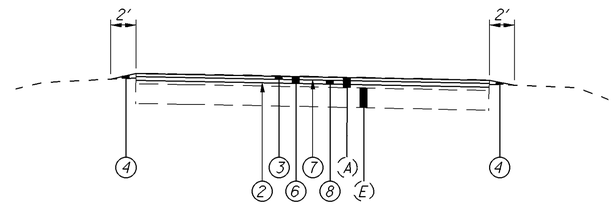
b 36′ AVG. SLM 4.96 TO SLM 5.19
36′ AVG. SLM 8.47 TO SLM 8.65

c 3′ AVG. SLM 5.19 TO SLM 8.47
3′ AVG. SLM 8.65 TO SLM 9.05

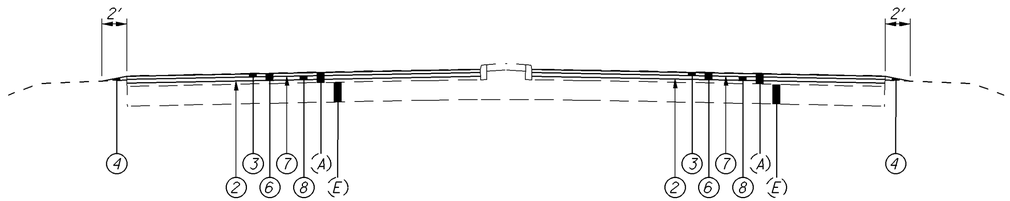
d RUMBLE STRIPS SLM 5.47 TO SLM 9.05



TYPICAL 2. SECTION APPLIES:					
ROUTE	SLM		AVG WIDTH	LENGTH	
	FROM	TO	(FEET)	(MILES)	
U.S. 62	4.62	4.81	72	0.19	
U.S. 62	4.84	4.96	72	0.12	
U.S. 62	4.96	5.19	96	0.23	b
U.S. 62	5.19	5.47	70	0.28	c
U.S. 62	5.47	8.47	70	3.00	c d
U.S. 62	8.47	8.65	96	0.18	b d
U.S. 62	8.65	8.72	70	0.07	c d
U.S. 62	8.75	9.05	70	0.30	c d
			TOTAL =	4.37	



TYPICAL 3. SECTION APPLIES:		
ROUTE	AVG WIDTH (FEET)	LENGTH (MILES)
RAMP A @ IR 80	27	0.13
RAMP B @ IR 80	24	0.21
RAMP C @ IR 80	24	0.26
RAMP D @ IR 80	28	0.36
RAMP E @ IR 80	24	0.17
TOTAL =		1.12



TYPICAL 4. SECTION APPLIES:		
ROUTE	AVG WIDTH (FEET)	LENGTH (MILES)
RAMP A/B @ IR 80	70	0.13

LEGEND

1. 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=1½″)
2. SPECIAL, TACK COAT, TRACKLESS TACK @ 0.10 GAL/SY
3. 442, ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN (T=1½″)
4. 617, COMPACTED AGGREGATE, AS PER PLAN (2″ AVG.)
5. 618, RUMBLE STRIPS, (ASPHALT CONCRETE) d
6. 254, PAVEMENT PLANING, ASPHALT CONCRETE (T=3¼″)
7. SPECIAL, TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE @ 0.04 GAL/SY
8. 442, ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448) (T=1¾″)

A. EXISTING 5″± ASPHALT CONCRETE SURFACE
B. EXISTING 9″ REINFORCED CONCRETE PAVEMENT
C. EXISTING 12″± ASPHALT CONCRETE SHOULDER
D. EXISTING GUARDRAIL
E. EXISTING 10″ REINFORCED CONCRETE PAVEMENT

TYPICAL SECTIONS

TRU-80/62-VAR/4.58

UTILITIES
THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS:

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OUPS), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEAD-QUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ALL AREAS.

OUPS 1-800-362-2764 (CONTACT LIMITED BASIS PARTICIPANTS DIRECTLY)
OGPUPS 1-800-925-0988
ODOT 330-786-3145 KEN GREENE

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.

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

(List all sanitary, telephone, electric, gas, water, cable TV, etc.)
(Name of Owner, Street or P.O. Box, City, State, Zip Code, and Emergency Telephone Number.)

*Denotes Limited Basis Member - must be contacted directly

PROFILE AND ALIGNMENT
PLACE THE PROPOSED PAVEMENT TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

WORK LIMITS
THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PAVEMENT MARKING LANE WIDTHS
THE NORMAL LANE WIDTH FOR THE PAVEMENT MARKINGS ON THIS PROJECT SHALL BE AS FOLLOWS [AT LEAST 3 DAYS PRIOR TO PERFORMING THE WORK CONTACT THE TRAFFIC OFFICE AT 330-786-3147 TO CONFIRM THE WIDTHS]:

ROUTE	S.L.M. TO	S.L.M.	LANE WIDTH
S.R. 62	4.58	9.24	12'

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN
703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

INTERSECTIONS
INTERSECTIONS WILL BE RESURFACED 2 FT. BEYOND THE EDGE LINE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR INDICATED IN THE PLAN. INTERSECTIONS SHALL BE PAVED AFTER COMPLETION OF THE SURFACE COURSE OR WITH THE MAINLINE PAVEMENT IF THIS CAN BE ACCOMPLISHED WITHOUT CHANGING THE VELOCITY AND DIRECTION OF THE PAVER. USE THE SAME ASPHALT CONCRETE AS THE MAINLINE PAVEMENT. PROVIDE A SMOOTH TRANSITION TO THE EXISTING PAVEMENT. ANY GRADING OR PRIME NECESSARY TO ACCOMPLISH THIS WORK SHALL BE INCLUDED IN THE COST OF THE PERTINENT BID ITEM.

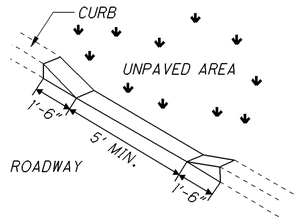
DRIVEWAYS
THE CONTRACTOR WILL NOT BE PERMITTED TO LEAVE A DIFFERENCE IN ELEVATION BETWEEN THE MAINLINE ASPHALT SURFACE COURSE AND THE EXISTING DRIVEWAYS. IF APPROVED BY THE ENGINEER, AN ASPHALT WEDGE WITH A WIDTH OF APPROX 2' MAY BE PLACED EITHER ON THE ROADWAY SHOULDER OR DRIVEWAY DEPENDENT UPON WHICH SIDE IS HIGH. A QUANTITY OF MAINLINE SURFACE COURSE ASPHALT HAS BEEN PROVIDED IN THE CALCULATIONS AND GENERAL SUMMARY TO PERFORM THIS ITEM OF WORK.

CURB RAMPS / DETECTABLE WARNINGS
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, INSTALLATION OF THE CURB RAMPS / DETECTABLE WARNINGS WILL BE PERFORMED PRIOR TO MAINLINE RESURFACING.

PEDESTRIAN CURB CUTS
THE CONTRACTOR WILL PROVIDE CURB CUTS, AS DETAILED BELOW WHERE CURB CURRENTLY EXISTS. THE FOLLOWING ITEMS WILL BE USED TO REMOVE THE EXISTING CURB AND INSTALL NEW PEDESTRIAN CURB CUTS (ALL ITEMS MAY NOT BE USED AT ALL LOCATIONS):

ITEM 202, CURB REMOVED
ITEM 203, EXCAVATION
ITEM 203, EMBANKMENT
ITEM 609, COMBINATION CURB AND GUTTER, TYPE 2
ITEM 609, CURB, TYPE 6
ITEM 659, SEEDING AND MULCHING

REFER TO THE CURB RAMP SUB-SUMMARY FOR LOCATIONS AND QUANTITIES.



PEDESTRIAN CURB CUT

PAVEMENT MARKING DETAILS
THE PAVEMENT MARKING DETAIL SHEETS WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN
IN LOW SHOULDER AREAS EXCEEDING 1", AND ADJACENT TO THE SAFETY EDGE, OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALLBE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRAD-ATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

CALCULATED RCB
CHECKED MAC

GENERAL NOTES

TRU-80/62-VAR/4.58

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING ITEM 448 ASPHALT CONCRETE, TYPE 2. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE I PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

251, PARTIAL DEPTH PAVEMENT REPAIR	300 SQ. YD.

ITEM 253 - PAVEMENT REPAIR

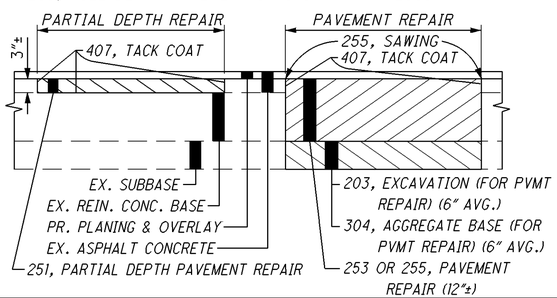
A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 12"± 301 ASPHALT CONCRETE BASE, PG64-22. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

253, PAVEMENT REPAIR	300 SQ YD
255, FULL DEPTH PAVEMENT SAWING	1350 FT

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RRCM (FOR RAMPS)

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER ON RAMPS. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 12"± CONCRETE, CLASS RRCM. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF RAMP PAVEMENT PLANING. ALSO, THIS ITEM SHALL BE PERFORMED IN CONCURRANCE WITH RAMP CLOSURES NOTED IN THE DETOUR PLAN FOR RAMPS AT IR-80/US 62/SR 7 INTERCHANGE. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

255, FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RRCM	500 SQ YD
255, FULL DEPTH PAVEMENT SAWING	2063 FT



ITEM 203 - EXCAVATION (FOR PAVEMENT REPAIR)

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

203, EXCAVATION (FOR PAVEMENT REPAIR)	133 CU YD

ITEM 304 - AGGREGATE BASE (FOR PAVEMENT REPAIR)

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR). THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

304, AGGREGATE BASE (FOR PAVEMENT REPAIR)	133 CU YD

LINEAR GRADING

SHOULDER WIDTH BEYOND THE LIMITS OF THE COMPACTED AGGREGATE WILL BE GRADED TO PROVIDE POSITIVE DRAINAGE AND WILL BE PERFORMED ONLY IN THE AREAS NECESSARY. THIS WORK WILL NOT BE PERFORMED ON THE ENTIRE PROJECT. THE AREAS FOR THE WORK WILL BE MARKED BY THE PROJECT ENGINEER. THESE ITEMS OF WORK WILL BE PERFORMED AFTER THE PLACEMENT OF ITEM 617 - COMPACTED AGGREGATE. UNDER NO CIRCUMSTANCES WILL THIS WORK BE PERFORMED CONCURRENTLY WITH ANY OTHER OPERATION.

GRADING WILL BE ACCOMPLISHED BY THE REMOVAL OF, OR ADDITION OF MATERIAL TO PROVIDE A 0.08 POSITIVE SLOPE. EXCESS MATERIAL WILL BE WINDROWED ON THE SHOULDER. THE GRADED AREAS WILL BE COMPACTED TO A SUFFICIENT DENSITY TO PREVENT EROSION UNTIL SEEDING AND MULCHING IS PERFORMED. ALL EXCESS MATERIAL WILL BE REMOVED FROM THE BERMS AND WILL BE DISPOSED OF OFF THE PROJECT BY THE CONTRACTOR.

SEEDING AND MUCHING, FERTILIZER AND LIME WILL BE PERFORMED WITHIN A PERIOD NOT TO EXCEED 10 DAYS AFTER THE LINEAR GRADING.

THE QUANTITY OF ITEM 209 IS NOT PERMITED TO BE INCREASED. REDUCTIONS IN QUANTITIES ARE PERMITTED AS DETERMINED BY THE PROJECT ENGINEER.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK WILL BE INCLUDED IN THE UNIT PRICE FOR THE PERTINENT BID ITEM. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

209, LINEAR GRADING	338 STA.
659, SEEDING AND MULCHING	18778 SQ YD
659, COMMERCIAL FERTILIZER	2.53 TON
659, LIME	3.88 ACRES
659, WATER	102 M. GAL.

BARRIER REFLECTORS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS DIRECTED BY THE ENGINEER FOR INSTALLING/REPLACING BARRIER REFLECTORS ON ALL EXISTING BARRIER RUNS WITHIN THE PROJECT LIMITS.

202, REMOVAL MISC.: BARRIER REFLECTOR	155 EACH
626, BARRIER REFLECTOR, TYPE A	159 EACH
626, BARRIER REFLECTOR, TYPE B	14 EACH

REPAIR PAVING UNDER GUARDRAIL

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF REPAIRING EXISTING PAVED GUARDRAIL LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING REPAIR PAVING UNDER GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

REPAIR PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO A DEPTH OF 2" USING THE FOLLOWING METHOD:

1. PLACE ITEM 441 AT EXISTING DETERIORATED PAVED GUARDRAIL LOCATIONS.
2. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER THE FOLLOWING ITEM:

441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN (2" THICK)	30 CU YD

CALCULATED RCB
CHECKED MAC

GENERAL NOTES

TRU-80/62-VAR/4.58

ITEM SPECIAL - TACK COAT, TRACKLESS TACK

ITEM SPECIAL - TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE

DESCRIPTION: THIS WORK CONSISTS OF PREPARING AND TREATING A PAVED SURFACE WITH A TRACKLESS TACK ASPHALT EMULSION.

FURNISH MATERIALS ACCORDING TO THE DEPARTMENT'S APPROVED LIST.

MEET ALL REQUIREMENTS OF ITEM 407 TACK COAT IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRED BY THE CONTRACT, EXCEPT AS NOTED BELOW.

MATERIAL: MEET ALL PROPERTIES OF THE APPROVED MANUFACTURER'S TRACKLESS TACK SPECIFICATION REQUIREMENTS ON FILE WITH THE LABORATORY AT TIME OF PLACEMENT.

ACCEPTANCE AND SAMPLING OF MATERIALS: SUPPLY CERTIFIED TEST DATA TO THE ENGINEER AND TO THE DISTRICT LABORATORY DEMONSTRATING THE TRACKLESS TACK SUPPLIED WAS TESTED FOR AND MEETS ALL MATERIAL PROPERTIES SHOWN ON THE DEPARTMENT'S APPROVED LIST.

DURING CONSTRUCTION, ODOT PERSONNEL WILL SAMPLE FROM THE DISTRIBUTOR AND SUPPLY TO THE DISTRICT TEST LAB A MINIMUM OF ONE QUART OF TRACKLESS TACK FOR EVERY 25,000 GALLONS USED ON THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE PROPER PLASTIC QUART SAMPLING CONTAINER. CLEARLY MARK ON THE SAMPLE WITH THE MANUFACTURER'S NAME, PROJECT NUMBER, AND THE WORDS "TRACKLESS TACK".

EQUIPMENT: FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR CORRECT DISTRIBUTOR SETTINGS. THOROUGHLY CLEAN ALL EQUIPMENT IF PREVIOUSLY USED MATERIAL CHARGE IS DIFFERENT THAN THE PROPOSED MATERIAL.

APPLICATION OF ASPHALT MATERIAL: UNIFORMLY APPLY THE TRACKLESS TACK WITH A DISTRIBUTOR ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. IF TRACKLESS TACK IS STORED FOR AN EXTENDED PERIOD OF TIME, PRIOR TO APPLICATION, AGITATE OR GENTLY CIRCULATE THE MATERIAL.

ENSURE ALL NOZZLES AND SPRAY PATTERNS ARE IDENTICAL TO ONE ANOTHER ALONG THE DISTRIBUTOR SPRAY BAR. PLACE THE ANGLE OF THE NOZZLE AT A 15 TO 30 DEGREE ANGLE TO THE SPRAY BAR AXIS TO MAXIMIZE OVERLAP OR AS RECOMMENDED BY THE NOZZLE MANUFACTURER. CONTACT THE MANUFACTURER'S REPRESENTATIVE FOR REQUIRED SPRAY NOZZLE SIZE AND DISTRIBUTOR AND NOZZLE SETTINGS.

APPLY AT A RATE OF 0.04 TO 0.1 GALLONS PER SQUARE YARD. DO NOT DILUTE TRACKLESS TACK. RECOMMENDED APPLICATION TEMPERATURE IS 160 □F TO 180 ¯F. DO NOT EXCEED 180 □F. THE ENGINEER WILL APPROVE THE QUANTITY, RATE OF APPLICATION, TEMPERATURE, DISTRIBUTOR SETTINGS, AND AREAS TO BE TREATED BEFORE APPLICATION OF THE TRACKLESS TACK COAT. THE ENGINEER WILL DETERMINE THE ACTUAL APPLICATION IN GALLONS PER SQUARE YARD BY A CHECK ON THE PROJECT.

PERFORMANCE OF TRACKLESS TACK: DETERMINE THE TIME TO SET FOR THE MATERIAL TO BECOME TRACKLESS. THE ENGINEER WILL REPORT ANY ISSUES WITH EXCESSIVE TIME TO SET, OR AFTER SET ISSUES WITH STICKINESS, OR PICKUP OF THE TACK TO THE DISTRICT TESTING ENGINEER AND NEW PRODUCT ENGINEER, BRAD YOUNG 614-351-2882.

IF THE CERTIFIED TEST DATA FAILS TO MEET THE LAB TESTING CRITERIA, OR FIELD SAMPLES FAIL TO MEET THE LAB TEST CRITERIA, OR THE TRACKLESS TACK FAILS TO PERFORM SATISFACTORILY IN THE FIELD, AS NOTED ABOVE, THE CONTRACTOR WILL BE REQUIRED TO REPLACE AND SUPPLY ANOTHER APPROVED TRACKLESS TACK PRODUCT FOR THE REMAINDER OF THE PROJECT AT NO ADDITIONAL COST TO THE DEPARTMENT.

ANY FAILING TRACKLESS TACK PRODUCT WILL BE REMOVED FROM THE DEPARTMENT'S APPROVED LIST.

COMMUNITY NOTIFICATION:
THE CONTRACTOR WILL ADVISE THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST ALSO PROVIDE NOTIFICATION TO THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO ANY LANE RESTRICTIONS. THE ODOT PROJECT ENGINEER WILL FORWARD THE INFORMATION TO THE ODOT, DISTRICT 4 OFFICE OF PUBLIC INFORMATION FOR USE TO NOTIFY EMERGENCY SERVICES AND COMMUNITY A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF PROJECT CONSTRUCTION. INCLUDED IN THIS NOTIFICATION WILL BE THE PROPOSED LANE RESTRICTIONS.

RIPARIAN HABITAT:
EXISTING RIPARIAN HABITAT ZONES ALONG THE STREAM CHANNEL(S) SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE DURING PROJECT CONSTRUCTION.

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

CONSTRUCTION AND DEMOLITION DEBRIS:
THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT CONSTRUCTION AND DEMOLITION DEBRIS FROM ENTERING WETLANDS AND STREAM(S). ANY DEBRIS THAT DOES FALL INTO WETLANDS AND/OR STREAM(S) SHALL BE REMOVED AS SOON AS POSSIBLE WITHIN 72 HOURS.

MECHANICAL EQUIPMENT OPERATION AT STREAM CHANNELS:
THE MECHANICAL EQUIPMENT USED TO EXECUTE THE WORK AUTHORIZED HEREIN SHALL BE OPERATED IN A MANNER TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

AREAS DISTURBED BY EQUIPMENT ACTIVITIES:
ANY AREAS DISTURBED BY EQUIPMENT ACTIVITIES MUST BE SEEDED WITH AN APPROPRIATE PRAIRE SEED MIX AND MULCHED DURING CONSTRUCTION TO ENCOURAGE ESTABLISHMENT OF BENEFICIAL VEGETATIVE COVER FOR POLLINATORS AND DECREASE OR PREVENT EROSION OF SEDIMENTS INTO WATERS OF THE UNITED STATES.

CONSTRUCTION EQUIPMENT AND MATERIALS STAGING AREAS:
CONSTRUCTION EQUIPMENT AND MATERIAL STAGING AREAS SHALL BE KEPT AWAY FROM STREAMS AND WETLANDS TO THE MAXIMUM EXTENT PRACTICABLE. ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION 107.10 (PROTECTION AND RESTORATION OF PROPERTY) PROHIBIT THE CONTRACTOR FROM CREATING STAGING AREAS NEAR STREAMS/WETLANDS.

MATERIALS REMOVED FROM DITCHES, STREAMS, AND/OR WETLANDS:
ALL MATERIALS REMOVED FROM THE DITCHES, STREAMS OR WETLANDS MUST BE IMMEDIATELY REMOVED TO AN UPLAND SITE AND STABILIZED (I.E., SEEDED) TO PREVENT REDISTRIBUTION INTO ANY WATERS OF THE UNITED STATES. IMMEDIATE REMOVAL IS DEFINED BY THE UNITED STATES ARMY CORPS OF ENGINEERS AS DEPOSITING THE REMOVED MATERIALS DIRECTLY INTO A TRUCK AND REMOVING THE MATERIAL FROM THE SITE; PLACEMENT OF REMOVED MATERIALS INTO A WETLAND OR ON THE BANKS OF A STREAM EVEN TEMPORARILY IS CONSIDERED A FILL AND REQUIRES A PERMIT ACTION.

STRUCTURE PAINTING/CONCRETE SEALING OPERATIONS:
THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT OR OTHER MATERIALS USED TO REPAIR, CLEAN, PAINT, SEAL OR TREAT ANY STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

TREE CUTTING RESTRICTIONS:
UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR CUT/REMOVE ANY TREES PRIOR TO OR DURING CONSTRUCTION OF THE PROJECT.

WETLANDS IMPACTS/AVOIDANCE:
UNDER THE DIRECTION OF THE PROJECT ENGINEER, THE CONTRACTOR MAY IMPACT/PLACE PERMANENT FILLS IN THE FOLLOWING WETLANDS:

WETLAND A (NORTH SIDE)-TRU-62-8.73: 0.0050 ACRE
WETLAND C (SOUTH SIDE)-TRU-62-8.73: 0.0148 ACRE
WETLAND D (SOUTH SIDE)-TRU-62-8.73: 0.0001 ACRE
WETLAND B (WEST SIDE)-TRU-62-4.82: 0.0045 ACRE

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR IMPACT THE REMAINING WETLANDS DELINEATED BEYOND THE PROJECT CONSTRUCTION LIMITS AND DEPICTED IN THE WETLAND LOCATION/IMPACT MAPPING AND THE PROJECT PLANS. THE WETLAND LOCATION/IMPACT MAPPING IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS WITHIN THESE WETLAND AREAS. TO PROTECT AND DELINEATE THE BOUNDARY OF THE EXISTING REMAINING WETLANDS, A FILTER FABRIC FENCE AND TEMPORARY CONSTRUCTION FENCE, PER SUPPLEMENTAL SPECIFICATION 832, SHALL BE INSTALLED AT THE PROPOSED CONSTRUCTION LIMITS WITHIN THE WETLANDS AREA BY THE CONTRACTOR PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES WITHIN THESE LIMITS AND ADJACENT AREA, INCLUDING ANY NECESSARY CLEARING AND GRUBBING ACTIVITIES, AND MAINTAINED BY THE CONTRACTOR THROUGHOUT PROJECT CONSTRUCTION AND SHALL BE REMOVED BY THE CONTRACTOR UPON PROJECT COMPLETION.

CALCULATED RCB CHECKED MAC

GENERAL NOTES

TRU-80/62-VAR/4.58

MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE ELEVEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT AND COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

4. ALL FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED OR PRO- TECTED AS PER STANDARD CONSTRUCTION DRAWING MT-101.90.

5. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS ONE (1) MILE.

6. ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

7. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.

8. A QUANTITY OF 40 CU. YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

9. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

10. A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGN HAS BEEN INCLUDED IN THE PLAN. THIS QUANTITY SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SIGNS: W8-1 [BUMP], W6-3 [TWO-WAY TRAFFIC], W8-H13 [NO EDGE LINES], R4-1 [DO NOT PASS], R4-2 [PASS WITH CARE], W8-11 [UNEVEN LANES], W8-15 [GROOVED PAVEMENT]. THESE QUANTITIES SHALL BE AS PER 614.04.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

PHASE I & II - PLANED & INTERMEDIATE SURFACE
614, WORK ZONE STOP LINE, CLASS I, 1016 FT
614, WORK ZONE LANE LINE, CLASS I, 19 MILE
614, WORK ZONE CENTER LINE, CLASS I, 0.28 MILE
614, WORK ZONE CHANNELIZING LINE, CLASS I, 18882 FT
614, WORK ZONE MARKING SIGN, 60 EACH

PHASE III - SURFACE COURSE
614, WORK ZONE LANE LINE, CLASS III, 642 PAINT 9.50 MILE
614, WORK ZONE STOP LINE, CLASS III, 642 PAINT 508 FT
614, WORK ZONE CENTER LINE, CLASS III, 642 PAINT 0.14 MILE
614, WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT 9441 FT

TO BE USED AS DIRECTED BY THE ENGINEER
614, WORK ZONE EDGE LINE, CLASS III, 22.04 MILE

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

MILLED SURFACE

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE PLACED ON A PLANED SURFACE WILL BE 7 CONSECUTIVE CALENDAR DAYS.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $2500 FOR EACH DAY THE ABOVE RESTRICTIONS ARE VIOLATED.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REP- RESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISS- ING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $3000 FOR EACH HOUR THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

ITEM 614, MAINTAINING TRAFFIC (LANE CLOSURE/REDUCTION REQUIRED)

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

INTERIM START DATE

NO WORK ON RAMPS AT I-80/ US 62 / SR 7 INTERCHANGE SHALL BEGIN PRIOR TO THE COMPLETION OF PART 2, PHASE 3 OF TRU-80/62-VAR/4.58 (PID 77886).

INTERIM COMPLETION DATE (US 62 WORK)

ALL WORK ON PART 1 OF TRU-80/62-VAR/4.58, EXCEPT FULL DEPTH REPAIRS AND PAVING OF RAMPS AT I-80 INTERCHANGE, SHALL BE COMPLETED BY 9/30/16.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE ABOVE REQUIREMENTS, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVES IN THE AMOUNT $2500 FOR EACH DAY THE ABOVE RESTRICTONS ARE VIOLATED.

ITEM 632 - DETECTOR LOOP, AS PER PLAN

THE CONTRACTOR SHALL CONTACT THE DISTRICT OFFICE (330-786-3146) THREE WORKING DAYS PRIOR TO ANY PLANING OR TRENCHING AT THE INTERSECTION OF:

US 62 AND I-80
US 62 AND FLYING J
US 62 AND LOVES

LOOP DETECTORS DISTURBED BY PAVEMENT PLANING OR TRENCHING SHALL BE ABANDONED IN PLACE. THE LOOP DETECTOR WIRE WILL BE CUT INTO THE PAVEMENT AFTER THE PROPOSED SURFACE COURSE HAS BEEN PLACED. ALL STOP LINE INDUCTANCE DETECTOR LOOPS SHALL BE THE POWERHEAD CONFIGURATION SHOWN ON TC-82.10. THE WIDTH SHALL BE AS SPECIFIED ON TC-82.10 AND THE LENGTH SHALL BE AS SPECIFIED BELOW. THE LOCATION OF THESE LOOPS SHALL BE SUCH THAT THE POWERHEAD IS LOCATED AT THE STOP LINE, NOT PAST IT. ALL DILEMMA ZONE INDUCTANCE DETECTOR LOOPS CALLED FOR IN THE PLANS SHALL BE THE ANGULAR DESIGN DETECTION (ADD) LOOP AS SHOWN ON TC-82.10. DIMENSIONS SHALL BE AS SPECIFIED ON TC-82.10 AND THE LOOP SHALL BE PLACED AT THE SAME LOCATION AS THE EXISTING LOOPS.

THE QUANTITIES LISTED BELOW HAVE BEEN CARRIED TO THE GENERAL SUMMARY. THE NEW LOOP DETECTOR WIRES SHALL BE RUN INTO THE EXISTING CONTROL BOX OR THE EXISTING PULLBOX. INCLUDED IN THIS ITEM IS THE POURED EPOXY TYPE CABLE SPLICE KIT (CONFORMING TO 725.15E) THAT MUST BE USED IN MAKING THESE CONNECTIONS. ALL NECESSARY MATERIAL, LABOR, SPLICE KITS AND EQUIPMENT SHALL BE INCIDENTAL TO PAYMENT OF THESE ITEMS.

632 DETECTOR LOOP, AS PER PLAN, 17 EACH

I-80 @ US 62

DECRIPTION	LOCATION	SIZE
EB PASSING LANE	262' FROM STOP LINE	A.D.D
EB DRIVING LANE	262' FROM STOP LINE	A.D.D
WB PASSING LANE	262' FROM STOP LINE	A.D.D
WB DRIVING LANE	262' FROM STOP LINE	A.D.D
EB LEFT TURN	5' BEHIND STOP LINE	RECT. (25')
WB LEFT TURN	5' BEHIND STOP LINE	RECT. (25')
RAMP A	5' AHEAD STOP LINE	POWERHEAD (25')
TRUCK WORLD	5' AHEAD STOP LINE	POWERHEAD (25')

US 62 @ FLYING J

DECRIPTION	LOCATION	SIZE
EB PASSING LANE	330' FROM STOP LINE	A.D.D
EB DRIVING LANE	330' FROM STOP LINE	A.D.D
EB LEFT TURN	5' FROM STOP LINE	RECT. (25')
WB PASSING LANE	330' FROM STOP LINE	A.D.D
WB DRIVING LANE	330' FRON STOP LINE	A.D.D

US 62 @ LOVE'S

DECRIPTION	LOCATION	SIZE
EB PASSING LANE	330' FROM STOP LINE	A.D.D
EB DRIVING LANE	330' FROM STOP LINE	A.D.D
WB PASSING LANE	330' FROM STOP LINE	A.D.D
WB DRIVING LANE	330' FRON STOP LINE	A.D.D

CALCULATED
CNC
CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

TRU-80/62-VAR/4.58

RAMPS C AND E AT I-80/US 62/ SR 7 INTERCHANGE

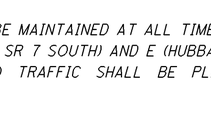
TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON RAMP C (I-80 EAST TO US 62/ SR 7 SOUTH) AND E (HUBBARD SHARON RD TO I-80 EAST). NO TRAFFIC SHALL BE PLACED ON A MILLED SURFACE.

DETOUR NOTIFICATION [ODOT / TRUMBULL COUNTY ENGINEERS / HUBBARD TOWNSHIP]

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-3148), HUBBARD TOWNSHIP (330-534-9798) AND TRUBULL COUNTY ENGINEERS (330-675-2640) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614, DETOUR SIGNING.

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS, AS DETAILED IN THESE PLANS, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.



W20-H14-60

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) [RAMP A, B, AND D AT I-80 AND US 62]

TRAFFIC ON RAMPS A (US 62 TO I-80 WEST), B (I-80 WEST TO US 62) AND RAMP D (I-80 EAST TO US 62/ SR 7 NORTH) SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 4 CONSECUTIVE CALENDAR DAYS (7PM THURSDAY -6AM MONDAY) FOR EACH RAMP.

THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEETS 9-11, A DISINCENTIVE SHALL BE ASSESSSED IN THE AMOUNT OF $2500 FOR EACH CALENDAR DAY THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SECIFIED LIMIT.

RAMPS B AND D CANNOT BE CLOSED SIMULTANEOUSLY. TRAFFIC SHALL NOT BE PALCED ON A MILLED SURFACE. NO WORK ON STRUCTURES TRU-62-4.92L/R SHALL BE PERFORED DURING THE CLOSURE OF RAMP D AND RAMP B.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) (RAMPS A AND E AT SR 82 INTERCHANGE)

TRAFFIC ON RAMP A (US 62 WEST TO SR 82 WEST) SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED ONE CALENDAR DAYS (7PM FRIDAY -7PM SATURDAY), WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 12.

TRAFFIC ON RAMP E (US 62 EAST TO SR 82 WEST) SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED TWO CONSECUTIVE CALENDAR DAYS (7PM FRIDAY - 7AM SUNDAY), WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 13.

RAMP A AND RAMP E SHALL NOT BE CLOSED CONCURRENTLY. RAMPS A AND E SHALL NOT BE CLOSED CONCURRENTLY WITH LOOP RAMPS C, B, F, AND G AT THE US 62 AND SR 82 INTERCHANGE.

A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $1000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR) (LOOP RAMPS AT US 62 AND SR 82 INTERCHANGE)

TRAFFIC ON RAMPS C (US 62 WEST TO HUBBARD MASURY RD), B (SR 82 WEST TO US 62 WEST), G (SR 82 EAST TO US 62 EAST), AND F (US 62 EAST TO SR 82 WEST) SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED ONE CONSECUTIVE CALENDAR DAY, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN IN THE TABLE TITLED "LOOP RAMP DETOURS." ALL ADDITIONAL RESTRICTIONS IN TABLE "LOOP RAMP DETOURS" SHALL BE FOLLOWED.

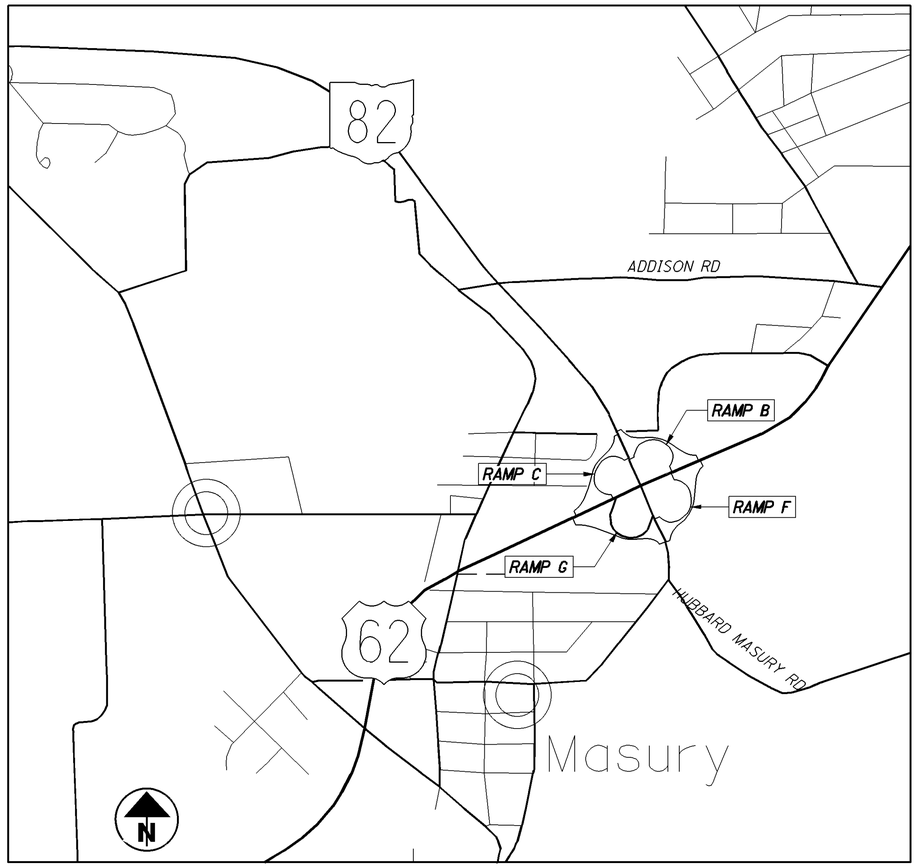
DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF $1000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

LOOP RAMP DETOURS

RAMP DESIGNATION	RAMP DESCRIPTION	DURATION	DETOUR ROUTE	APPROX. NUMBER OF PCMS	REFERENCE	ADDITIONAL RESTRICTIONS
RAMP C	US 62 WEST TO HUBBARD MASURY RD	1 CALENDAR DAY (7AM SATURDAY TO 7AM SUNDAY)	ADDISON RD	2	SEE DETAIL A	RAMP C SHALL BE CLOSED SIMULTANEOUSLY WITH RAMP B: RAMP C SHALL NOT BE CLOSED WITH RAMPS A, E, F AND G
RAMP B	SR 82 WEST TO US 62 WEST	1 CALENDAR DAY (7AM SATURDAY TO 7AM SUNDAY)	SR 82 WEST / ADDISON RD	2	SEE DETAIL A	RAMP B SHALL BE CLOSED SIMULTANEOUSLY WITH RAMP C: RAMP B SHALL NOT BE CLOSED WITH RAMPS A, E, F AND G
RAMP F	US 62 EAST TO SR 82 WEST	1 CALENDAR DAY (7AM SATURDAY TO 7AM SUNDAY)	ADDISON RD	2	SEE DETAIL A	RAMP F SHALL BE CLOSED SIMULTANEOUSLY WITH RAMP G: RAMP F SHALL NOT BE CLOSED WITH RAMPS A, E, C AND B
RAMP G	SR 82 EAST T OUS 62 EAST	1 CALENDAR DAY (7AM SATURDAY TO 7AM SUNDAY)	ADDISON RD	2	SEE DETAIL A	RAMP G SHALL BE CLOSED SIMULTANEOUSLY WITH RAMP F: RAMP G SHALL NOT BE CLOSED WITH RAMPS A, E, C AND B

USE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) TO POST DETOUR ROUTES.

DETAIL A



CALCULATED
CNC
CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

TRU-80/62-VAR/4.58

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCE- MENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACE- MENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RE- TURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINT- ENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 40 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A PORTABLE CHANGEABLE MESSAGE SIGN, THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCE OF 650 FEET AND 475 FEET RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. THE PCMS SHALL BE LOCATED. IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF. ADDITIONALLY WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE LINE PRESENTATION FORMATS WITH UP TO OF SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DE-ACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL [IN ACTIVE CELLULAR AREAS] ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614. THE CONTRACTOR SHALL PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND. THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

614 PORTABLE CHANGEABLE MESSAGE SIGN,
AS PER PLAN, 16 SIGN MONTH

CALCULATED
CNC
CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES

TRU-80/62-
VAR/4.58

DETOUR PLAN FOR RAMP A (US 62 / SR 7 TO I-80 WEST)

NOT TO SCALE

CLOSE RAMP A ONLY, USE MT-98.30

OFFICIAL DETOUR ROUTE: US 62 / SR 7 / SR 82 / SR 193

COVER SIGN

ON TYPE III BARRICADE WITH TYPE B FLASHERS MOUNTED PER SCD MT-98.30

A

DETOUR AHEAD

W20-2-36

B

DETOUR
M4-8-24
WEST
M3-4-24
INTERSTATE 76
M1-1-24-2
M5-1-21

C

DETOUR
M4-8-24
WEST
M3-4-24
INTERSTATE 76
M1-1-24-2
M6-1-21

D

DETOUR
M4-8-24
WEST
M3-4-24
INTERSTATE 76
M1-1-24-2
M5-1-21

E

DETOUR
M4-8-24
WEST
M3-4-24
INTERSTATE 76
M1-1-24-2
M6-1-21

F

DETOUR
M4-8-24
WEST
M3-4-24
INTERSTATE 80
M1-1-36-2

G #

ROAD CLOSED
R11-2-48

DETOUR
M4-10R-48

H

DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE 80
M1-1-36-2
M6-3-30

J

EAST KEEP LEFT — INTERSTATE 80 — WEST

K

DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE 80
M1-1-36-2
M6-2-30

193
Youngstown Airport

L

DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE 80
M1-1-36-2

193
Youngstown Airport
½ MILE

USAF RESERVE BASE

M

DETOUR
M4-8-30
WEST
M3-4-36
INTERSTATE 80
M1-1-36-2

193
Youngstown Airport
1 MILE

(1) PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES:

1) RAMP TO I-80W CLOSED

2) FOLLOW SR 82 WEST

(2) PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES:

1) RAMP TO I-80 W CLOSED

2) FOLLOW SR 7 NORTH

(3) PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES:

1) NO REENTRY I-80 W

CALCULATED
CNC
CHECKED

DETOUR PLAN - RAMP A (US 62 TO I-80 WEST)

TRU-80/62-VAR/4.58

9
21

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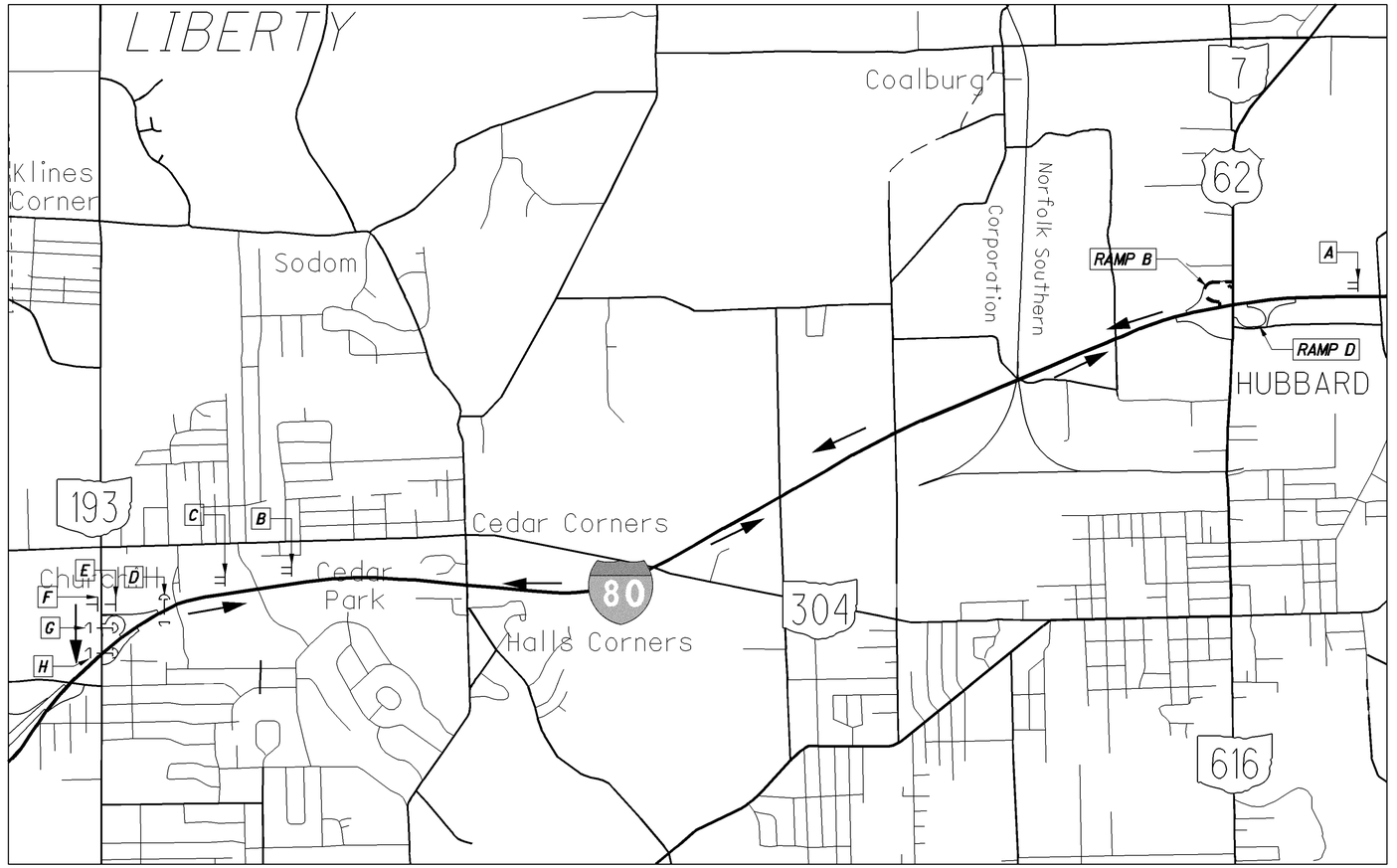

DETOUR PLAN FOR RAMP B (IR-80 WEST TO US 62 / SR 7)

CLOSE RAMP B ONLY, USE MT-98.29

OFFICIAL DETOUR ROUTE: I-80 WEST / SR 193 SOUTH / I-80 EAST

NOT TO SCALE

A

PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGES:

1 - EXIT TO US 62/7 CLOSED

2 - FOLLOW I-80

B

DETOUR M4-8-30 62 M1-4-36-2 | DETOUR M4-8-30 7 M1-5-36-2

EXIT 229
193
Belmont Ave
1 MILE

C

DETOUR M4-8-30 62 M1-4-36-2 | DETOUR M4-8-30 7 M1-5-36-2

EXIT 229
193
Belmont Ave
1/2 MILE
HOSPITAL

D

LEFT
EXIT 228 A
711 SOUTH
Youngstown
LEFT 1 MILE

EXIT 228A
11 NORTH
Warren
Ashtabula
3/4 MILE

DETOUR M4-8-30 62 M1-4-36-2 M6-2-30 | DETOUR M4-8-30 7 M1-5-36-2 M6-2-30

EXIT 229
193
Belmont Ave

E

DETOUR M4-8-24 62 M1-4-24-2 M5-1-21 | DETOUR M4-8-24 7 M1-5-24-2 M5-1-21

F

DETOUR M4-8-24 62 M1-4-24-2 M6-1-21 | DETOUR M4-8-24 7 M1-5-24-2 M6-1-21

G

INTERSTATE 80 East
New York

DETOUR M4-8-24 62 M1-4-24-2 M5-1-21 | DETOUR M4-8-24 7 M1-5-24-2 M5-1-21

H

INTERSTATE 80 East
New York

DETOUR M4-8-24 62 M1-4-24-2 M6-1-21 | DETOUR M4-8-24 7 M1-5-24-2 M6-1-21

CALCULATED CNC
CHECKED

DETOUR PLAN - RAMP B (I-80 WEST TO US 62)

TRU-80/62-VAR/4.58

10
21

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DETOUR PLAN FOR RAMP D (IR 80 EAST TO US62 EAST/SR 7 NORTH)

NOT TO SCALE

CLOSE RAMP D ONLY, USE MT-98.29

OFFICIAL DETOUR ROUTE: US 62 WEST/SR 7 SOUTH EXIT RAMP C TO US 62 EAST/SR 7 NORTH

Klines

PORTABLE CHANGEABLE MESSAGE SIGN

A

MESSAGES:

1) RAMP TO 62 EAST CLOSED

2) FOLLOW 62 WEST

B

DO NOT BLOCK INTERSECTION

R10-7-24

CALCULATED CNC CHECKED

DETOUR PLAN - RAMP D (I-80 EAST TO US 62)

TRU-80/62-VAR/4.58

11
21

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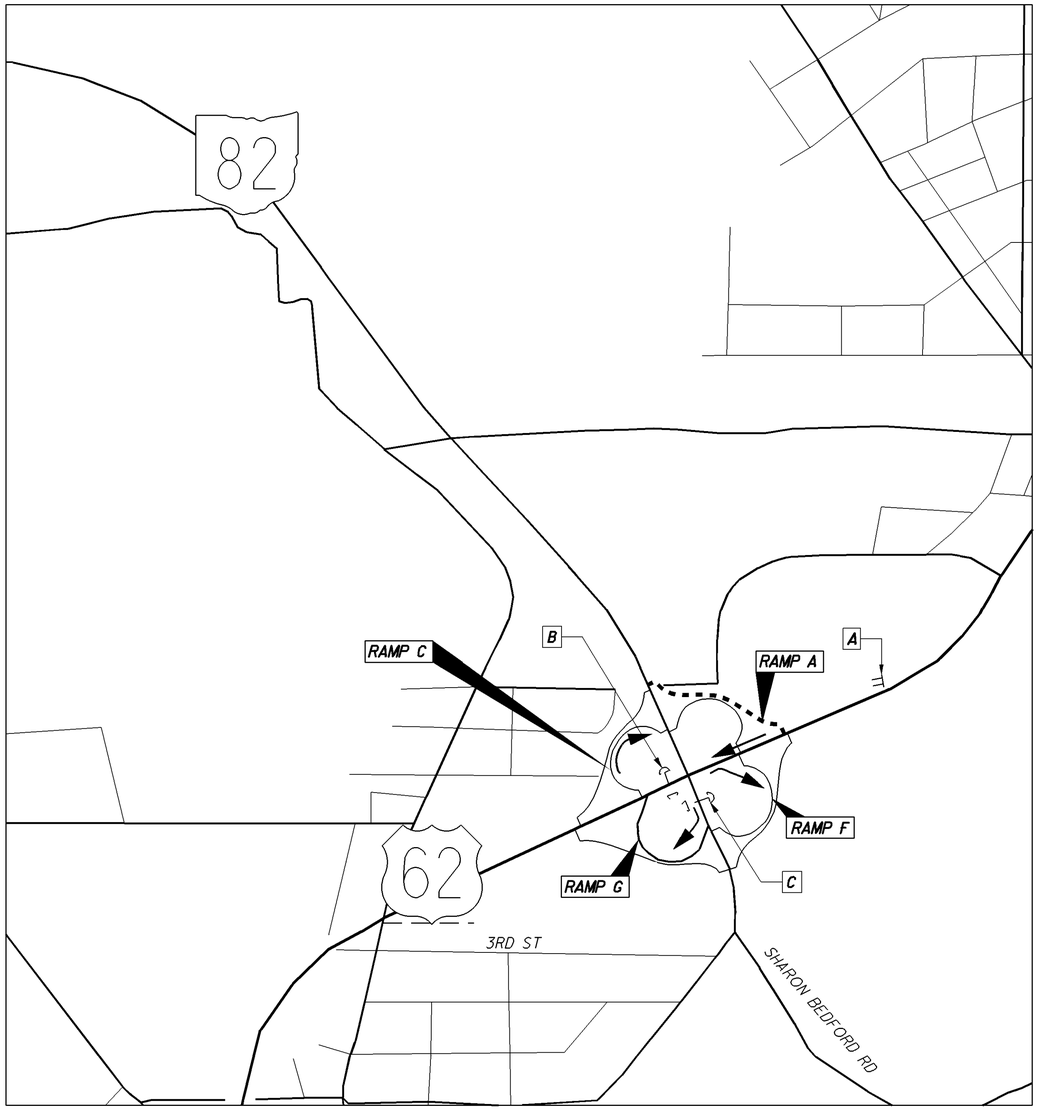


A

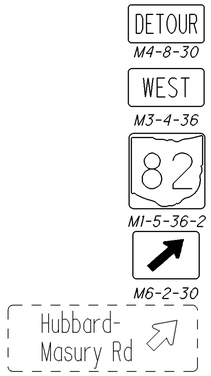
PORTABLE CHANGEABLE MESSAGE SIGN

MESSAGES:

1) *RAMP TO 82 WEST CLOSED*

2) *USE HUBBARD MSRY RD*

B



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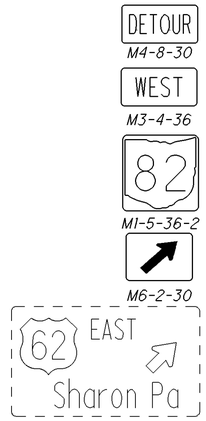

DETOUR PLAN FOR RAMP A (US 62 WEST TO SR 82 WEST)

▪▪▪▪ *CLOSE RAMP A ONLY, USE MT-98.29*

OFFICIAL DETOUR ROUTE: RAMP C / RAMP G / RAMP F

N

NOT TO SCALE

CALCULATED
CNC
CHECKED

DETOUR PLAN - RAMP A (US 62 WEST TO SR 82 WEST)

TRU-80/62-VAR/4.58

12
21

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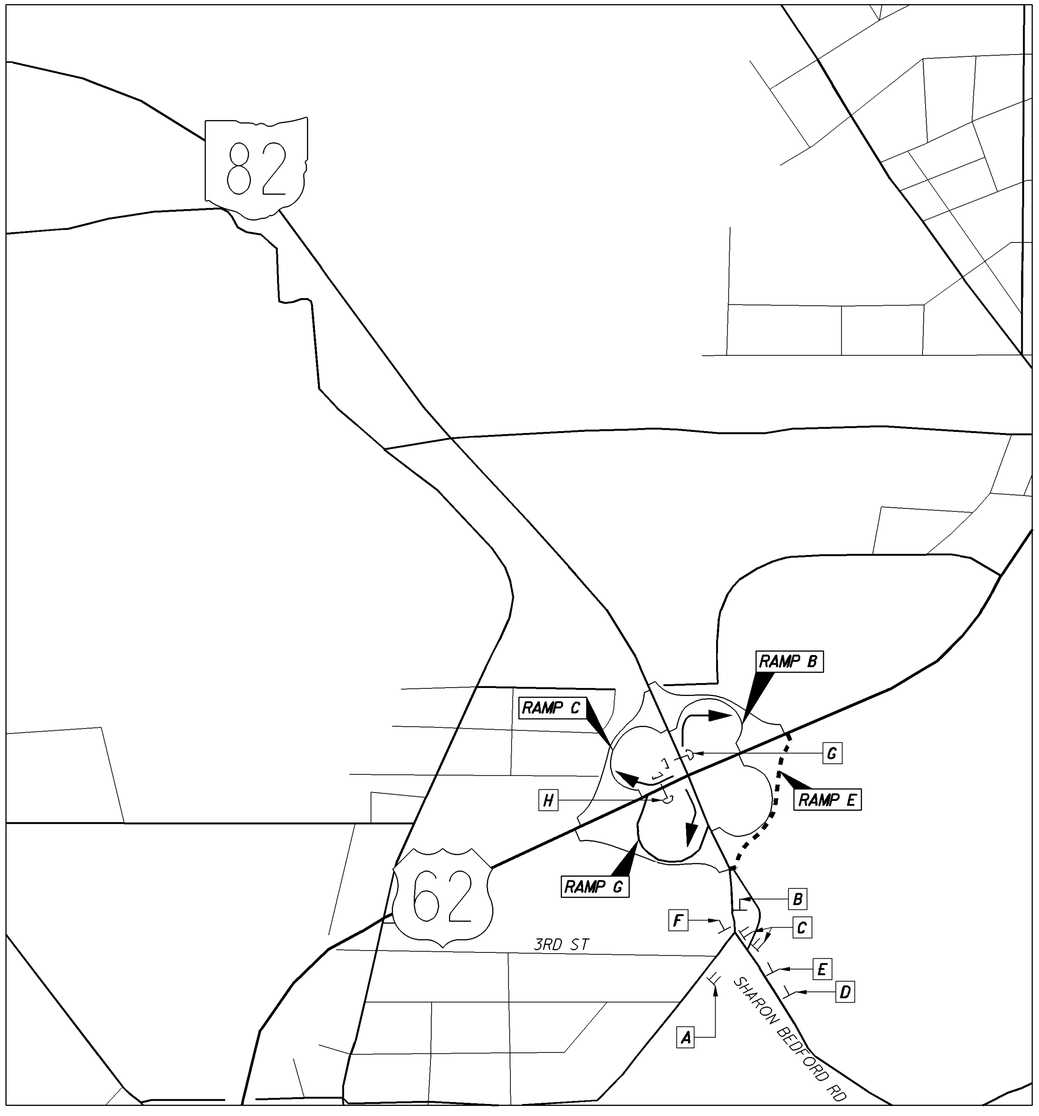


DETOUR PLAN FOR RAMP E (SR 82 WEST TO US 62 EAST)

CLOSE RAMP E ONLY, USE MT-98.29

NOT TO SCALE

OFFICIAL DETOUR ROUTE: RAMP B / RAMP C / RAMP G

COVER SIGN

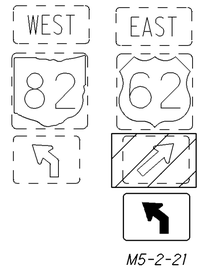
A

PORTABLE CHANGEABLE MESSAGE SIGN MESSAGES:

1) RAMP TO
62 EAST
CLOSED

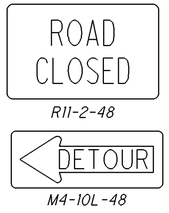
2) FOLLOW
82 WEST

B



M5-2-21

C #



R11-2-48

M4-10L-48

ON TYPE III BARRICADE WITH TYPE B FLASHERS MOUNTED PER SCD MT-98.30

D

W20-2-36

E

M4-8-24

M1-4-24-2

M5-1-21

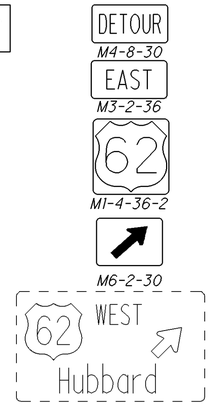
F

M4-8-24

M1-4-24-2

M6-1-21

G



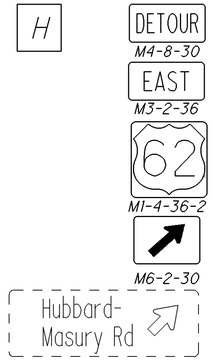
M4-8-30

M3-2-36

M1-4-36-2

M6-2-30

H



M4-8-30

M3-2-36

M1-4-36-2

M6-2-30

CALCULATED
CNC
CHECKED

DETOUR PLAN - RAMP E (US 82 WEST TO US 62 EAST)

TRU-80/62-VAR/4.58

13
21

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
							4	6	16	17	18	01/S>2/PV	02/NHS/PV						
																		ROADWAY	
										164			164	202	30000	164	SF	WALK REMOVED	
										34			34	202	32000	34	FT	CURB REMOVED	
							175					35	140	202	98100	175	EACH	REMOVAL MISC.: BARRIER REFLECTOR	4
							133					45	88	203	10000	133	CY	EXCAVATION (FOR PAVEMENT REPAIR)	
										3			3	203	10000	3	CY	EXCAVATION (FOR WALK OR CURB RAMP INSTALLATION)	
										1			1	203	20000	1	CY	EMBANKMENT	
							338					28	310	209	60200	338	STA	LINEAR GRADING	
										40			40	608	10000	40	SF	4" CONCRETE WALK	
										156			156	608	52000	156	SF	CURB RAMP	
										16			16	608	53020	16	SF	DETECTABLE WARNING	
																		EROSION CONTROL	
							18778			11		1531	17258	659	10000	18,789	SY	SEEDING AND MULCHING	
							2.53					0.21	2.32	659	20000	2.53	TON	COMMERCIAL FERTILIZER	
							3.88					0.32	3.56	659	31000	3.88	ACRE	LIME	
							102					8	94	659	35000	102	MGAL	WATER	
													1000	832	30000	1,000	EACH	EROSION CONTROL	
																		PAVEMENT	
							300					24	276	251	01000	300	SY	PARTIAL DEPTH PAVEMENT REPAIR	
							300					24	276	253	01000	300	SY	PAVEMENT REPAIR	
									241716			34193	207523	254	01000	241,716	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
							500					250	250	255	10500	500	SY	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS RRCM	
							3413					1139	2274	255	20000	3,413	FT	FULL DEPTH PAVEMENT SAWING	
							133					45	88	304	20000	133	CY	AGGREGATE BASE (FOR PAVEMENT REPAIR)	
									24172			3420	20752	SPECIAL	40720500	24,172	GAL	TACK COAT, TRACKLESS TACK	5
									898			477	421	SPECIAL	40720510	898	GAL	TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE	5
							34					5	29	441	50701	34	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	4
									10072			1425	8647	442	10051	10,072	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN	3
									1091			580	511	442	20250	1,091	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448)	
										6			6	609	26000	6	FT	CURB, TYPE 6	
									1353			208	1145	617	10101	1,353	CY	COMPACTED AGGREGATE, AS PER PLAN	3
									15				15	618	40600	15	MILE	RUMBLE STRIPS, (ASPHALT CONCRETE)	
																		TRAFFIC CONTROL	
										1383		212	1171	621	00100	1,383	EACH	RPM	
										1245		191	1054	621	54000	1,245	EACH	RAISED PAVEMENT MARKER REMOVED	
							194					35	159	626	00100	194	EACH	BARRIER REFLECTOR	
											22.04	3.9	18.14	644	00104	22.04	MILE	EDGE LINE, 6"	
											9.5	0.76	8.74	644	00204	9.50	MILE	LANE LINE, 6"	
											0.14	0.14		644	00300	.14	MILE	CENTER LINE	
											9441	3588	5853	644	00400	9,441	FT	CHANNELIZING LINE, 8"	
											508	146	362	644	00500	508	FT	STOP LINE	
											815	100	715	644	00700	815	FT	TRANSVERSE/DIAGONAL LINE	
											280		280	644	00900	280	SF	ISLAND MARKING	
											63	20	43	644	01300	63	EACH	LANE ARROW	
											700		700	644	01500	700	FT	DOTTED LINE, 4"	
																		TRAFFIC SIGNALS	
								16				2	14	632	26501	16	EACH	DETECTOR LOOP, AS PER PLAN	6
																		STRUCTURE REPAIRS	
																		FOR TRU-62-0482L ESTIMATED QUANTITIES	20
																		FOR TRU-62-0482R ESTIMATED QUANTITIES	20
																		FOR TRU-62-0873L ESTIMATED QUANTITIES	20
																		FOR TRU-62-0873R ESTIMATED QUANTITIES	20

CALCULATED RCB
CHECKED MAC

GENERAL SUMMARY

TRU-80/62-VAR/4.58

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
									6	7	8	01/S>2/PV	02/NHS/PV						
																		MAINTENANCE OF TRAFFIC	
											40	3	37	614	11110	40	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
										LS		LS	LS	614	12420	LS		DETOUR SIGNING	
									60			5	55	614	12460	60	EACH	WORK ZONE MARKING SIGN	
									40			4	36	614	13000	40	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
											17	2	15	614	18601	17	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	8
									19			2	17	614	20000	19	MILE	WORK ZONE LANE LINE, CLASS I	
									9.5			0.76	8.74	614	20550	9.50	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
									0.28			0.28		614	21000	.28	MILE	WORK ZONE CENTER LINE, CLASS I	
									0.14			0.14		614	21550	.14	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
									22.04			0.76	21.28	614	22350	22.04	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	
									18882			7176	11706	614	23000	18,882	FT	WORK ZONE CHANNELIZING LINE, CLASS I	
									9441			3588	5853	614	23680	9,441	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
									1016			292	724	614	26000	1,016	FT	WORK ZONE STOP LINE, CLASS I	
									508			146	362	614	26610	508	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
																		INCIDENTALS	
													LS	SPECIAL	10810000	LS		CPM PROGRESS SCHEDULE	
													LS	614	11000	LS		MAINTAINING TRAFFIC	
													18	619	16010	18	MNTH	FIELD OFFICE, TYPE B	
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS	624	10000	LS		MOBILIZATION	

CALCULATED RCB
CHECKED MAC

GENERAL SUMMARY

TRU-80/62-VAR/4.58

15
21

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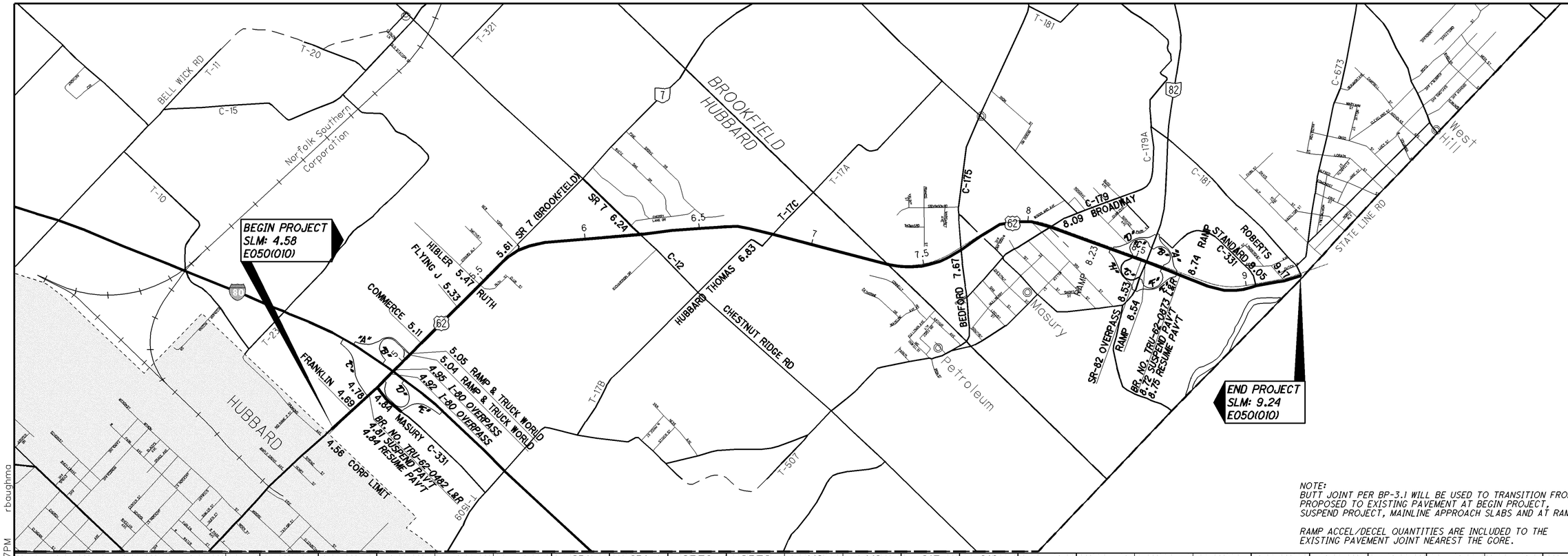

NOTE:
BUTT JOINT PER BP-3.1 WILL BE USED TO TRANSITION FROM PROPOSED TO EXISTING PAVEMENT AT BEGIN PROJECT, SUSPEND PROJECT, MAINLINE APPROACH SLABS AND AT RAMPS.

RAMP ACCEL/DECEL QUANTITIES ARE INCLUDED TO THE EXISTING PAVEMENT JOINT NEAREST THE CORE.

SLM RANGE			TYPICAL SECTION	SIDE	DISTANCE (D)	AVERAGE WIDTH (W)	SURFACE AREA (A) A=DxW/9	CADD GENERATED AREA (A)	254 PAVEMENT PLANING, ASPHALT CONCRETE, 1½" A	254 PAVEMENT PLANING, ASPHALT CONCRETE, 3¼" A	SPEC TACK COAT, TRACKLESS TACK Ax0.1	SPEC TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE Ax0.04	442 ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE B (446), AS PER PLAN, 1½" Ax1.5/36	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (448), 1¾" Ax1.75/36	617 COMPACTED AGGREGATE, AS PER PLAN (Dx2)/9x #sides x2/36	618 RUMBLE STRIPS, (ASPHALT CONCRETE) D/5280 x #sides
					FT	FT	SQ YD	SQ YD	SY	SY	GAL	GAL	CY	CY	CY	MILE
4.58	TO	4.62	1	LT/RT	211.20	65	1525.33		1525.33		152.53		63.56		5.21	
4.62	TO	4.81	2	LT/RT	1003.20	72	8025.60		8025.60		802.56		334.40		49.54	
4.84	TO	4.96	2	LT/RT	633.60	72	5068.80		5068.80		506.88		211.20		31.29	
4.96	TO	5.19	2	LT/RT	1214.40	96	12953.60		12953.60		1295.36		539.73		59.97	
5.19	TO	5.47	2	LT/RT	1478.40	70	11498.67		11498.67		1149.87		479.11		73.01	
5.47	TO	8.47	2	LT/RT	15840.00	70	123200.00		123200.00		12320.00		5133.33		782.22	12.00
8.47	TO	8.65	2	LT/RT	950.40	96	10137.60		10137.60		1013.76		422.40		46.93	0.72
8.65	TO	8.72	2	LT/RT	369.60	70	2874.67		2874.67		287.47		119.78		18.25	0.28
8.75	TO	9.05	2	LT/RT	1584.00	70	12320.00		12320.00		1232.00		513.33		78.22	1.20
9.05	TO	9.24	1	LT/RT	1003.20	58	6465.07		6465.07		646.51		269.38		24.77	
RAMP A @ IR 80			3	WB	689	27	2067.00			2067.00	206.70	82.68	86.13	100.48	17.01	
RAMP B @ IR 80			3	WB	1095	24	2920.00			2920.00	292.00	116.80	121.67	141.94	27.04	
RAMP A/B @ IR 80			4	WB	711	70	5530.00			5530.00	553.00	221.20	230.42	268.82	17.56	
RAMP C @ IR 80			3	EB	1380	24	3680.00			3680.00	368.00	147.20	153.33	178.89	34.07	
RAMP D @ IR 80			3	EB	1875	28	5833.33			5833.33	583.33	233.33	243.06	283.56	46.30	
RAMP E @ IR 80			3	EB	900	24	2400.00			2400.00	240.00	96.00	100.00	116.67	22.22	
INTERSECTION, TURN LANE & ACCEL/DECEL								3346	3346.00		334.60		139.42			
INTERSECTION, TURN LANE & ACCEL/DECEL								17299	17299.00		1729.90		720.79			
DRIVEWAYS								113	113.00		11.30		4.71			
DRIVEWAYS								257	257.00		25.70		10.71			
MASURY RD				LT/RT	756.00	50	4200.00		4200.00		420.00		175.00		18.67	
								SUBTOTALS	219284.33	22430.33	24171.47	897.21	10071.44	1090.36	1352.29	14.20
								TOTALS CARRIED TO GENERAL SUMMARY	219285	22431	24172	898	10072	1091	1353	15

HORIZONTAL SCALE IN FEET
0 600 1200 2400

CALCULATED RCB
CHECKED MAC

ASPHALT CONCRETE
U.S. 62 - SLM 4.58 TO SLM 9.24

TRU-80/62-VAR/4.58

16
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MAIN ROUTE	INTERSECTING ROUTE # - PEDESTRAIN CURB CUTS	QUADRANT RL=REAR LT, RR=REAR RT FL=FWD LT, FR=FWD RT (LOOKING UPSTATION)	CURB RAMP TYPE (SCD BP-7.1, SHEET 2/3)	202 PAVEMENT REMOVED SY	202 PAVEMENT REMOVED, ASPHALT SY	202 WALK REMOVED SF	202 CURB REMOVED FT	202 CURB AND GUTTER REMOVED FT		203 EXCAVATION (FOR WALK OR CURB RAMP INSTALLATION) CY	203 EMBANKMENT CY	301 ASPHALT CONCRETE BASE, PG64-22 CY	608 4" CONCRETE WALK SF	608 6" CONCRETE WALK SF	608 CURB RAMP SF	608 DETECTABLE WARNING SF		609 COMBINATION CURB AND GUTTER, TYPE 2 FT	609 CURB, TYPE 6 FT		659 SEEDING AND MULCHING SY
U.S. 62	STANDARD AVE. #	FL					8			1	1									6		3
U.S. 62	ROBERTS ST.	RL	A2			32	9			1					44							3
		FL	A2			32	9			1					44							1
U.S. 62	THOMAS AVE.	RR				20							20			8						
		FR				20							20			8						2
		FR	A2			60	8								68							2
			SUBTOTALS	0	0	164	34	0	0	3	1	0	40	0	156	16	0	0	6	0	11
			TOTALS CARRIED TO GENERAL SUMMARY	0	0	164	34	0	0	3	1	0	40	0	156	16	0	0	6	0	11

LOCATION							621	621	621	621		621	
COUNTY	ROUTE	SECTION (S.L.M.) FROM	SECTION (S.L.M.) TO				RPM, LOW PROFILE, YELLOW/YELLOW EACH	RPM, LOW PROFILE, WHITE EACH	RPM, LOW PROFILE WHITE/RED EACH	RPM, LOW PROFILE YELLOW/RED EACH		RAISED PAVEMENT MARKER REMOVED EACH	REMARKS
TRU	62	4.58	4.96				8		51				US 62 @ 80' SPACING
		4.96	9.24				19		577				US 62 @ 80' SPACING
								32	10				@ FRANKLIN
								32	11				@ MASURY
										19			IR 80 RAMP "C"
										13			IR 80 RAMP "E"
									11	25			IR 80 RAMP "D" & GORE
									10	15			IR 80 RAMP "B" & GORE
							16	64	56	10			IR 80 RAMP "A" & TRUCK WORLD/COMMERCE INTERSECTIONS
										18			IR 80 RAMP "A/B"
								16	30				@ FLYING J
								32					@ HIBLER/RUTH
								16	17				@ SR 7/BROOKFIELD
								32	30				@ CHESTNUT RIDGE
								32					@ HUBBARD THOMAS
								32					@ BEDFORD
								32					@ BROADWAY
									15				@ SR 82 RAMP "H" GORE
									6				@ SR 82 RAMP "D" GORE
									22				@ SR 82 RAMP "C" TO "B" GORES
									24				@ SR 82 RAMP "G" TO "F" GORES
									13				@ SR 82 RAMP "A"
									5				@ SR 82 RAMP "E"
								16					@ STANDARD
								16					@ ROBERTS
			SUBTOTALS	0	0	0	0	43	352	888	100		1245	
			TOTALS CARRIED TO GENERAL SUMMARY	0	0	0	0			1383			1245	

CALCULATED RCB
CHECKED MAC

CURB RAMP AND RPM SUBSUMMARY

TRU-80/62-VAR/4.58

GENERAL SPEC: 640
MATERIAL TYPE: 644

CALCULATED MW CHECKED

EDGE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	6" WHITE EDGE LINE TOTAL	6" WHITE EDGE LINE HIGHWAY	6" WHITE EDGE LINE RAMP	6" YELLOW EDGE LINE TOTAL	6" YELLOW EDGE LINE HIGHWAY	6" YELLOW EDGE LINE RAMP	COMMENTS
TRU	80	9.09	U.S. 62 - RAMP A		I.R. 80 WESTBOUND	0.27		0.27	0.27		0.27	
TRU	80	9.34	I.R. 80 EB - RAMP C		U.S. 62	0.32		0.32	0.32		0.32	
TRU	80	9.55	I.R. 80 WB - RAMP B		U.S. 62	0.32		0.32	0.32		0.32	
TRU	80	9.65	I.R. 80 EB - RAMP D		U.S. 62 NORTHBOUND	0.32		0.32	0.32		0.32	
TRU	80	9.99	HUBBARD - MASURY ROAD - RAMP E		I.R. 80 EASTBOUND	0.27		0.27	0.27		0.27	
TRU	62	4.58	HUBBARD CORP. LINE	4.96	I.R. 80	0.76	0.76		0.76	0.76		
TRU	62	4.96	I.R. 80	9.24	PENNSYLVANIA STATE LINE	8.48	8.48		8.48	8.48		
	HUB.-MAS.	0.00	U.S. 62	0.14	I.R. 80 EASTBOUND ON-RAMP	0.28	0.28		0.28	0.28		
TOTAL						11.02	9.52	1.50	11.02	9.52	1.50	

LANE LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	6" LANE LINE DASHED	6" LANE LINE SOLID	COMMENTS
TRU	62	4.58	HUBBARD CORP. LINE	4.96	I.R. 80	0.76	0.76		
TRU	62	4.96	I.R. 80	9.24	PENNSYLVANIA STATE LINE	8.74	8.74		
TOTAL						9.50	9.50		

CENTER LINE

CTY	ROUTE	TRUE LOG	FROM	TRUE LOG	TO	TOTAL MILES	EQUIVALENT SOLID LINE	COMMENTS
TRU	HUB.-MAS	0.00	U.S. 62	0.15	I.R. 80 EASTBOUND ON-RAMP	0.14	0.28	
TOTAL						0.14	0.28	

AUXILIARY

CTY	ROUTE LOCATION	TRUE LOG	CHANNEL LINE	STOP LINE	CROSS WALK LINES	TRANSVERSE DIAGONAL LINES WHITE	TRANSVERSE DIAGONAL LINES YELLOW	ISLAND MARKING	SYMBOL MARKINGS RxR	SYMBOL MARKINGS SCHOOL 72"	SYMBOL MARKINGS SCHOOL 96"	LANE ARROWS TURN LEFT	LANE ARROWS TURN RIGHT	LANE ARROWS THRU	LANE ARROWS COMB.	WORD ON PVMT ONLY 72"	WORD ON PVMT ONLY 96"	DOTTED LINES	COMMENTS
			FT	FT	FT	FT	FT	SQ FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	
TRU	I.R. 80 WB ON RAMP FROM U.S. 6	9.088	600																
TRU	I.R. 80 EB OFF RAMP TO U.S. 62	9.337	576	39															
TRU	I.R. 80 WB OFF RAMP TO U.S. 62	9.553	438	17															
TRU	I.R. 80 EB OFF RAMP TO U.S. 62 N	9.648	540																
TRU	I.R. 80 EB ON RAMP HUB.-MASUR	9.995	560																
TRU	U.S. 62 AT FRANKLIN AVE.	4.680	377									2	3						
TRU	U.S. 62 AT HUBBARD - MASURY R	4.830	1035	107		100						2	9						
TRU	U.S. 62 AT I.R. 80 WB RAMPS	5.027	1105	106		175		112				7	6						
TRU	U.S. 62 AT TWP. 796	5.099	480			75		112				4							
TRU	U.S. 62 AT FLYING J SOUTH	5.258	715	36		75		56				7							
TRU	U.S. 62 AT FLYING J NORTH	5.258	240	42									3						
TRU	U.S. 62 AT HIBLER LANE	5.600	185			90												700	
TRU	U.S. 62 AT S.R. 7	5.678	800	65								3							
TRU	U.S. 62 AT CHESTNUT RIDGE SOU	6.225	580	48		150						5							
TRU	U.S. 62 AT CHESTNUT RIDGE NOR	6.225	580	48		150						5							
TRU	U.S. 62 AT STATE LINE/ADDISON A	9.240	130									3							
TRU	HUBBARD-MASURY 62 TO 80 EB C	0.000	500									4							
TOTAL			9441	508		815		280				42	21					700	

PAVEMENT MARKING SUB SUMMARY

TRU-80/62-VAR/4.58

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLWOING SUPPLEMENTAL SPECIFICATION(S):

SS 843 DATED 4/18/2003

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION , INCLUDING THE 2002 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

PROPOSED WORK:

TRU-62-0482L (OVER LITTLE YANKEE CREEK)
- SEAL WEARING SURFACE AND APPROACH SLABS WITH SRS CONCRETE TREATMENT.
- INSTALL CURB ON APPROACH SLABS.
- PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE.
- SEAL ALL EXPOSED CONCRETE SURFACES OF SUBSTRUCTURE AND PARAPETS WITH EPOXY-URETHANE.
- REPAIR EROSION AT FORWARD WINGWALLS.
- CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION.
- NEW STRUCTURE IDENTIFICATION SIGNS.

TRU-62-0482R (OVER LITTLE YANKEE CREEK)
- SEAL WEARING SURFACE AND APPROACH SLABS WITH SRS CONCRETE TREATMENT.
- INSTALL CURB ON APPROACH SLABS.
- PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE.
- SEAL ALL EXPOSED CONCRETE SURFACES OF SUBSTRUCTURE AND PARAPETS WITH EPOXY-URETHANE.
- REPAIR EROSION AT FORWARD WINGWALLS.
- CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION.
- NEW STRUCTURE IDENTIFICATION SIGNS.

TRU-62-0873L (OVER YANKEE CREEK)
- PATCH ALL VISIBLY UNSOUND AREAS OF THE CONCRETE WEARING SURFACE AND APPROACH SLABS.
- SEAL PATCHED WEARING SURFACE AND APPROACH SLABS WITH GRAVITY FED RESIN TREATMENT.
- PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE.
- SEAL ALL EXPOSED CONCRETE SURFACES OF SUBSTRUCTURE, PIER CAPS, AND PARAPETS WITH EPOXY-URETHANE.
- REPAIR EROSION AT REAR LEFT WINGWALL.
- CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION.
- NEW STRUCTURE IDENTIFICATION SIGNS.

TRU-62-0873R (OVER YANKEE CREEK)
- PATCH ALL VISIBLY UNSOUND AREAS OF THE CONCRETE WEARING SURFACE AND APPROACH SLABS.
- SEAL PATCHED WEARING SURFACE AND APPROACH SLABS WITH GRAVITY FED RESIN TREATMENT.
- PATCH ALL UNSOUND AREAS OF THE SUBSTRUCTURE.
- SEAL ALL EXPOSED CONCRETE SURFACES OF SUBSTRUCTURE, PIER CAPS, AND PARAPETS WITH EPOXY-URETHANE.
- REPAIR EROSION AT REAR LEFT WINGWALL.
- CLEARING AND GRUBBING 15' AROUND STRUCTURE TO REMOVE ALL VEGETATION.
- NEW STRUCTURE IDENTIFICATION SIGNS.

CLEARING AND GRUBBING

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

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

EROSION REPAIR

THIS WORK WILL CONSIST OF REPAIRING EROISON AT THE LOCATIONS LISTED BELOW. REPAIR WORK WILL BE PAID FOR FOR BY THE FOLLOWING QUANTITIES.

TRU-62-0482L, FOWARD WINGWALL
ITEM 203 - BORROW, 2 CU. YD.
ITEM 601 - DUMPED ROCK, 2 CU. YD.

TRU-62-0482R, FOWARD WINGWALL
ITEM 203 - BORROW, 2 CU. YD.
ITEM 601 - DUMPED ROCK, 2 CU. YD.

TRU-62-0873L, REAR LEFT WINGWALL
ITEM 203 - BORROW, 2 CU. YD.
ITEM 601 - DUMPED ROCK, 2 CU. YD.

TRU-62-0873R, REAR RIGHT WINGWALL
ITEM 203 - BORROW, 2 CU. YD.
ITEM 601 - DUMPED ROCK, 2 CU. YD.

STRUCTURE IDENTIFICATION SIGNS

STRUCTURE IDENTIFICATION SIGNS (I-H25a) WILL BE PLACED ON EACH APPROACH OFF THE RIGHT SHOULDER, FACING TRAFFIC, AND BEHIND THE GUARDRAIL IF APPLICABLE. A QUANTITY OF ONE SIGN PER APPROACH WILL BE INSTALLED. THE SIGNS WILL HAVE A NON-REFLECTIVE WHITE SHEETING BACKGROUND.

THE SIGNS WILL BE MOUNTED ON NEW NO. 2 POSTS AND WILL BE INSTALLED AS PER STANDARD CONSTRUCTION DRAWING TC-41.20, MOST CURRENT REVISION. EACH POST WILL BE 7.5' IN LENGTH.

INSTALL SIGNS FOR THE FOLLOWING STRUCTURES:

TRU-62-0482L (1 APPROACH)
TRU-62-0482R (1 APPROACH)
TRU-62-0873L (1 APPROACH)
TRU-62-0873L (1 APPROACH)

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED FOR EACH APPROACH:
- ITEM 630 - SIGN, FLAT SHEET, 730.20, 1 SQ FT
- ITEM 630 - GROUND MOUNTED SUPPORT, NO. 2 POST, 7.5 FT
- ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, 1 EACH
- ITEM 630 - REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, 1 EACH

CORRECTING BRIDGE IDENTIFICATION SIGN NUMBERS:

SOME OF THE EXISTING BRIDGE NUMBER SIGNS HAVE INCORRECT BRIDGE NUMBERS ON THEM. THE FOLLOWING BRIDGE NUMBERS ARE THE CORRECT ONES AND WILL BE USED ON THE NEW BRIDGE IDENTIFICATION SIGNS.

STRUCTURE TRU-62-0482L (SFN:7803133) THE EXISTING SIGN SHOWS 0481. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0482.

STRUCTURE TRU-62-0482R (SFN:7803192) THE EXISTING SIGN SHOWS 0481. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0482.

STRUCTURE TRU-62-0873L (SFN:7803249) THE EXISTING SIGN SHOWS 0872. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0873.

STRUCTURE TRU-62-0873R (SFN:7803273) THE EXISTING SIGN SHOWS 0872. THE CORRECT BRIDGE IDENTIFICATION NUMBER IS 0873.

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MAC	MAC		
CHECKED	REVISED	STRUCTURE FILE NUMBER	

STRUCTURE GENERAL NOTES
TRU-62-0482L, TRU-62-0482R, TRU-62-0873L, & TRU-62-0873R

TRU-80/62-VAR/4.58
PID No. 77886

CALC:	MAC	DATE: 11/17/2015
CHECKED:		DATE:

ESTIMATED QUANTITIES

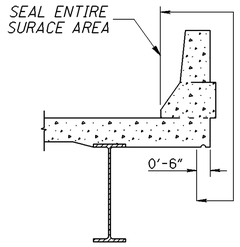
BRIDGE NO. / STRUCTURE FILE NO.								ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
TRU-62-0482L 7803133 04/S>2/BR	TRU-62-0482R 7803192 04/S>2/BR	TRU-62-0873L 7803249 03/NHS/BR	TRU-62-0873R 7803273 03/NHS/BR									
LUMP	LUMP	LUMP	LUMP					201	11000		CLEARING AND GRUBBING	
2	2	2	2					203	40000	CY	BORROW	
271	297	442	442					512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
644	828							512	10400	SY	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
		1047	1047					512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
271	297	442	442					512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
200	200	200	200					519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	1/3
		60	60					SPEC	51912304	SY	PATCHING CONCRETE BRIDGE DECK - TYPE C	
2	2	2	2					601	25000	CY	DUMPED ROCK FILL, TYPE A	
100	100							609	26000	FT	CURB, TYPE 6	
7.5	7.5	7.5	7.5					630	02100	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
1	1	1	1					630	80100	SF	SIGN, FLAT SHEET, 730.20	
1	1	1	1					630	84900	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
1	1	1	1					630	86002	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
100	100	100	100					843	50000	SF	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MAC	MAC		
CHECKED	REVISED	STRUCTURE FILE NUMBER	

STRUCTURE ESTIMATED QUANTITIES
TRU-62-0482L, TRU-62-0482R, TRU-62-0873L, & TRU-62-0873R

TRU-80/62-
VAR/4.58
PID No. 77886



DETAIL A
CONCRETE DECK WITH
DEFLECTOR PARAPET

BRIDGE NUMBER	STRUCTURE TYPE	PROPOSED SEALING	FEDERAL COLOR NUMBER	ESTIMATED QUANTITIES				
				ABUT (SQ YD)	PIER (SQ YD)	SUPER (SQ YD)	GENERAL (SQ YD)	TOTAL (SQ YD)
TRU-62-0458L	SINGLE SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS OER DETAIL A SEAL ALL EXPOSED CONCRETE AT ABUTMENTS	PER CMS	30		241		271
TRU-62-0458R	SINGLE SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS OER DETAIL A SEAL ALL EXPOSED CONCRETE AT ABUTMENTS	PER CMS	36		261		297
TRU-62-0873L	3 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS OER DETAIL A SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	74		368		442
TRU-62-0873R	3 SPAN CONTINUOUS STEEL BEAM	SEAL PARAPETS OER DETAIL A SEAL ALL EXPOSED CONCRETE AT ABUTMENTS SEAL ALL EXPOSED CONCRETE AT PIERS	PER CMS	74		368		442

BRIDGE NUMBER	BRIDGE DECK												APPROACH SLABS											
	LENGTH (BRIDGE LIMITS)	BRIDGE WIDTH	DECK AREA		512 TREATING OF CONCRETE BRIDGE DECK WITH SRS		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN						LENGTH (APPROACH SLABS)	APPROACH SLAB WIDTH	APPROACH SLAB AREA	APPROACH (FORWARD / REAR)		512 TREATING OF CONCRETE BRIDGE DECK WITH SRS		512 TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN		609 CURB, TYPE 6				
	FT	FT	SQ YD		SY		SY						FT	FT	SQ YD			SY		SY		FT				
TRU-62-0458L	88.00	42.00	410.67		410.67								25.00	42.00	116.67	FWD		116.67				50.00				
													25.00	42.00	116.67	REAR		116.67				50.00				
TRU-62-0458R	88.00	54.00	528.00		528.00								25.00	54.00	150.00	FWD		150.00				50.00				
													25.00	54.00	150.00	REAR		150.00				50.00				
TRU-62-0873L	134.44	54.00	806.64				806.64						20.00	54.00	120.00	FWD				120.00						
													20.00	54.00	120.00	REAR				120.00						
TRU-62-0873R	134.44	54.00	806.64				806.64						20.00	54.00	120.00	FWD				120.00						
													20.00	54.00	120.00	REAR				120.00						
TOTALS					939		1614									TOTALS		534		480		200				

DESIGN AGENCY
ODOT --- DISTRICT 4
PLANNING & ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MAC	MAC		
CHECKED	REVISED	STRUCTURE FILE NUMBER	

STRUCTURE DETAILS
TRU-62-0482L, TRU-62-0482R, TRU-62-0873L, & TRU-62-0873R

TRU-80/62-VAR/4.58
PID No. 77886

3 / 3

21 / 21

i:\Projects\TRU\77886_TRU-US62-4.58\77886\structures\TRU062_0482LR\sheets\62_0482LRSD001.dgn 30-NOV-2015 12:47PM rbaughma

STATE OF OHIO

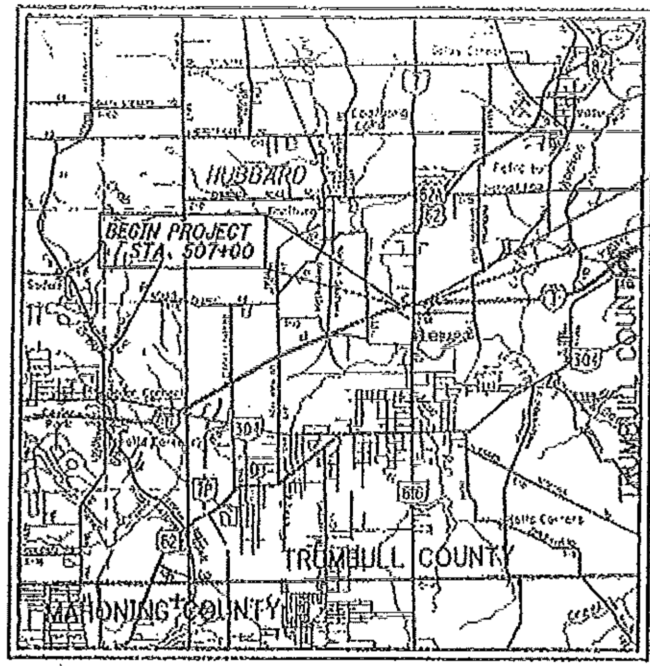
DEPARTMENT OF TRANSPORTATION

TRU-80-09.56, PART 2

HUBBARD TOWNSHIP

TRUMBULL COUNTY

FOR PART 1, SEE TRU-80/62-VAR/4.58



LOCATION MAP

LATITUDE: 41°10'34" LONGITUDE: 80°34'07"

SCALE IN MILES 0 1 2 3 4

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2016)	37,000
DESIGN YEAR ADT (2036)	43,000
DESIGN HOURLY VOLUME (2036)	3,900
DIRECTIONAL DISTRIBUTION	51%
TRUCKS (24 HOUR B&C)	36%
DESIGN SPEED	70
LEGAL SPEED	65
DESIGN FUNCTIONAL CLASSIFICATION: URBAN INTERSTATE	
NHS PROJECT	YES

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

Ohio Utilities Protection Service — Call Before You Dig 1-800-362-2764

(Non-members must be called directly)

OIL & GAS PRODUCERS UNDERGROUND PROTECTION SERVICE 1-800-925-0988

PLAN PREPARED BY:

EUTHENICS INC. CONSULTING ENGINEERS

8235 Mohawk Drive, Strongsville, Ohio (440) 260-1555

ENGINEERS SEAL: FOR STRUCTURES 20' & OVER

STATE OF OHIO — ALBERT J. MALNAR — REGISTERED PROFESSIONAL ENGINEER

SIGNED: Albert J. Malnar DATE: 11/20/15

ENGINEERS SEAL: FOR ENTIRE PLAN EXCEPT STRUCTURES 20' & OVER

STATE OF OHIO — JASON L. NEVILLE — REGISTERED PROFESSIONAL ENGINEER

SIGNED: Jason L. Neville DATE: 11/20/15

INDEX OF SHEETS:

SHEET 71 NOT USED

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
SEE PART 1					SEE PART 1	SEE PART 1

PROJECT DESCRIPTION

REHABILITATION AND WIDENING OF EXISTING EASTBOUND I-80 STRUCTURE OVER U.S. 62 AND REPLACEMENT/ WIDENING OF THE EXISTING WESTBOUND SUPERSTRUCTURE. NEW WESTBOUND I-80 STRUCTURE WILL BE A FOUR SPAN CONTINUOUS COMPOSITE STEEL BEAM STUCTURE ON A REHABILITATED AND EXTENDED SUBSTRUCTURE. PROJECT ALSO INCLUDES I-80 PAVEMENT WIDENING AND RESURFACING FOR APPROXIMATELY 1000 FEET, RAMP RECONSTRUCTIONS, DRAINAGE AND TOWER LIGHTING RELOCATION.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	10.63 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	10.88 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2013 SPECIFICATIONS

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

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

APPROVED [signature] DATE 12-1-15 DISTRICT DEPUTY DIRECTOR

APPROVED [signature] DATE 12-16-15 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E050 (010)

PID NO. 77886

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

TRU-80-09.56

℄ RAMP A

P.I. Sta. 15+12.23	P.I. Sta. 17+27.01	P.I. Sta. 22+01.88
Δ = 15° 08′ 34″ (LT)	Δ = 28° 59′ 39″ (LT)	Δ = 69° 27′ 17″ (RT)
Dc = 8° 11′ 07″	Dc = 12° 03′ 43″	Dc = 24° 10′ 34″
R = 699.98′	R = 475.01′	R = 236.99′
T = 93.04′	T = 122.82′	T = 164.27′
L = 185.00′	L = 240.38′	L = 287.29′
E = 6.16′	E = 15.62′	E = 51.36′
C = 184.46′	C = 237.82′	C = 270.02′
C.B. = N 55° 09′ 43″ E	C.B. = N 33° 05′ 36″ E	C.B. = N 53° 19′ 25″ E

℄ RAMP B

P.I. Sta. 12+48.07	P.I. Sta. 17+21.14	P.I. Sta. 18+61.22	P.I. Sta. 22+37.37	P.I. Sta. 27+37.77
Δ = 5° 56′ 12″ (RT)	Δ = 19° 00′ 53″ (RT)	Δ = 32° 45′ 00″ (RT)	Δ = 114° 57′ 15″ (RT)	Δ = 90° 38′ 45″ (RT)
Dc = 1° 30′ 00″	Dc = 12° 43′ 59″	Dc = 25° 28′ 00″	Dc = 28° 38′ 52″	Dc = 28° 38′ 52″
R = 3,819.72′	R = 449.98′	R = 224.98′	R = 200.00′	R = 200.00′
T = 198.07′	T = 75.36′	T = 66.11′	T = 313.66′	T = 202.27′
L = 395.78′	L = 149.33′	L = 128.60′	L = 401.27′	L = 316.41′
E = 5.13′	E = 6.27′	E = 9.51′	E = 172.00′	E = 84.45′
C = 395.60′	C = 148.65′	C = 126.86′	C = 337.27′	C = 284.43′
C.B. = S 84° 08′ 48″ W	C.B. = N 69° 08′ 40″ W	C.B. = N 43° 16′ 39″ W	C.B. = N 30° 34′ 29″ E	C.B. = S 46° 37′ 31″ E

℄ CONSTR. WESTBOUND LANES I-80

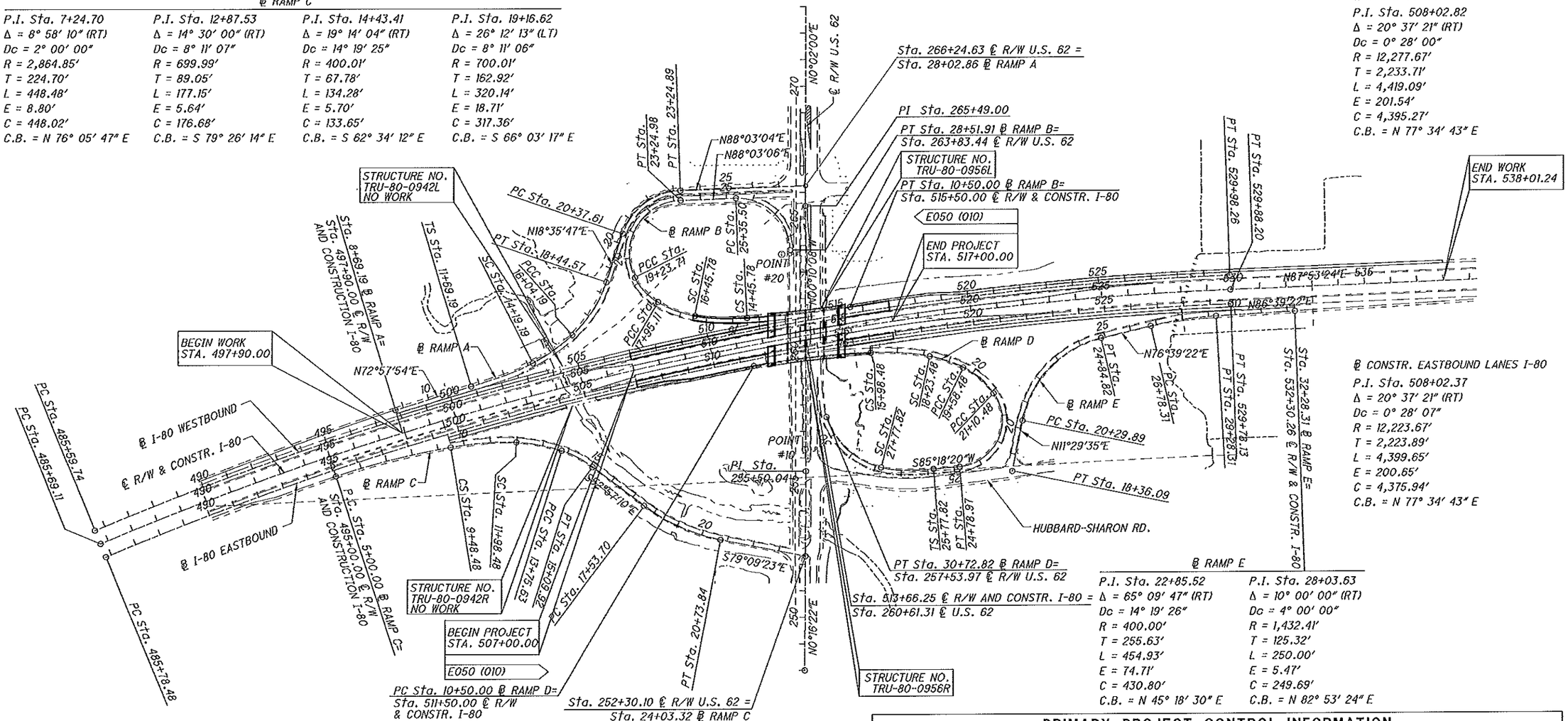
P.I. Sta. 508+03.27
Δ = 20° 37′ 21″ (RT)
Dc = 0° 27′ 53″
R = 12,331.67′
T = 2,243.53′
L = 4,438.52′
E = 202.42′
C = 4,414.60′
C.B. = N 77° 34′ 43″ E

℄ R/W & CONSTR. I-80

P.I. Sta. 508+02.82
Δ = 20° 37′ 21″ (RT)
Dc = 0° 28′ 00″
R = 12,277.67′
T = 2,233.71′
L = 4,419.09′
E = 201.54′
C = 4,395.27′
C.B. = N 77° 34′ 43″ E

℄ RAMP C

P.I. Sta. 7+24.70	P.I. Sta. 12+87.53	P.I. Sta. 14+43.41	P.I. Sta. 19+16.62
Δ = 8° 58′ 10″ (RT)	Δ = 14° 30′ 00″ (RT)	Δ = 19° 14′ 04″ (RT)	Δ = 26° 12′ 13″ (LT)
Dc = 2° 00′ 00″	Dc = 8° 11′ 07″	Dc = 14° 19′ 25″	Dc = 8° 11′ 06″
R = 2,864.85′	R = 699.99′	R = 400.01′	R = 700.01′
T = 224.70′	T = 89.05′	T = 67.78′	T = 162.92′
L = 448.48′	L = 177.15′	L = 134.28′	L = 320.14′
E = 8.80′	E = 5.64′	E = 5.70′	E = 18.71′
C = 448.02′	C = 176.68′	C = 133.65′	C = 317.36′
C.B. = N 76° 05′ 47″ E	C.B. = S 79° 26′ 14″ E	C.B. = S 62° 34′ 12″ E	C.B. = S 66° 03′ 17″ E



℄ RAMP D

P.I. Sta. 13+74.70	P.I. Sta. 18+91.30	P.I. Sta. 20+36.15	P.I. Sta. 24+17.56	P.I. Sta. 29+08.04
Δ = 8° 58′ 10″ (RT)	Δ = 13° 41′ 27″ (RT)	Δ = 29° 01′ 48″ (RT)	Δ = 120° 38′ 40″ (RT)	Δ = 75° 26′ 25″ (RT)
Dc = 2° 00′ 00″	Dc = 10° 08′ 29″	Dc = 19° 05′ 54″	Dc = 32° 44′ 27″	Dc = 19° 05′ 56″
R = 2,864.85′	R = 564.97′	R = 300.00′	R = 175.00′	R = 300.00′
T = 224.70′	T = 67.82′	T = 77.67′	T = 307.08′	Δc = 56° 20′ 30″ (RT)
L = 448.48′	L = 135.00′	L = 152.00′	L = 368.48′	Lc = 295.00′
E = 8.80′	E = 4.06′	E = 9.89′	E = 178.45′	Es = 82.79′
C = 448.02′	C = 134.68′	C = 150.38′	C = 304.08′	C = 283.26′
C.B. = N 83° 47′ 47″ E	C.B. = S 71° 12′ 52″ E	C.B. = S 49° 51′ 14″ E	C.B. = S 24° 59′ 00″ W	C.B. 1 = N 88° 20′ 03″ W C.B. = N 47° 25′ 30″ W

℄ RAMP E

P.I. Sta. 22+85.52	P.I. Sta. 28+03.63
Δ = 65° 09′ 47″ (RT)	Δ = 10° 00′ 00″ (RT)
Dc = 14° 19′ 26″	Dc = 4° 00′ 00″
R = 400.00′	R = 1,432.41′
T = 255.63′	T = 125.32′
L = 454.93′	L = 250.00′
E = 74.71′	E = 5.47′
C = 430.80′	C = 249.69′
C.B. = N 45° 18′ 30″ E	C.B. = N 82° 53′ 24″ E

℄ CONSTR. EASTBOUND LANES I-80

P.I. Sta. 508+02.37
Δ = 20° 37′ 21″ (RT)
Dc = 0° 28′ 07″
R = 12,223.67′
T = 2,223.89′
L = 4,399.65′
E = 200.65′
C = 4,375.94′
C.B. = N 77° 34′ 43″ E

PRIMARY PROJECT CONTROL INFORMATION

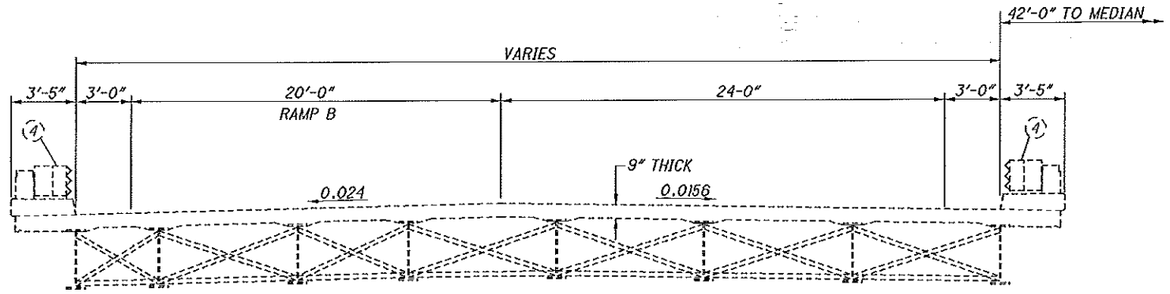
POINT NUMBER	GRID COORDINATES U.S. SURVEY FEET		SCALED COORDINATES U.S. SURVEY FEET		ORTHOMETRIC HEIGHT (ELEVATION)	DESCRIPTION
	NORTHING	EASTING	NORTHING	EASTING		
10	555426.4107	2500166.0182	555481.8270	2500415.4660	936.37	PROJECT CONTROL - IRON PIN FOUND
20	556161.6366	2500075.1067	556217.1262	2500324.5455	948.19	PROJECT CONTROL - IRON PIN FOUND

NOTE: THERE ARE NO EXISTING LANDSCAPED AREAS WITHIN THE WORK LIMITS.

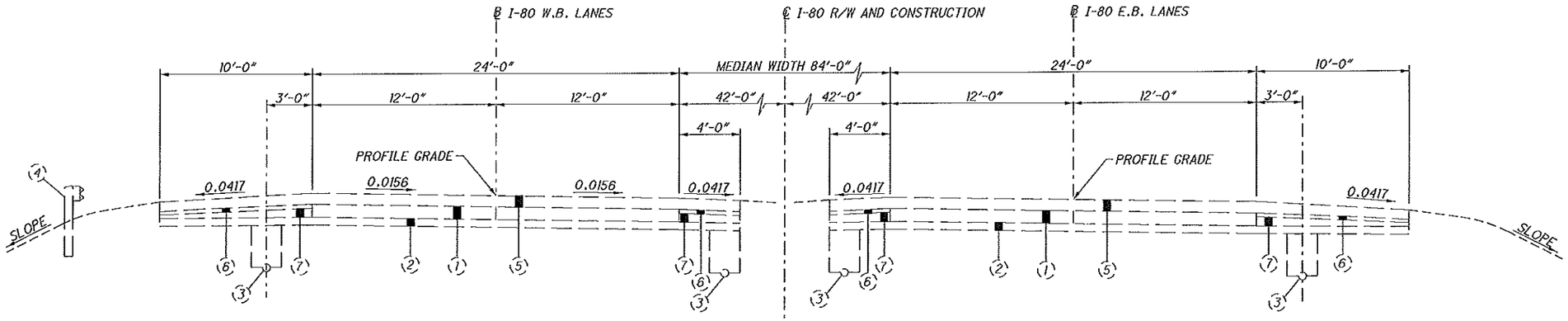
HORIZONTAL SCALE IN FEET
0 100 200 400

SCHEMATIC PLAN

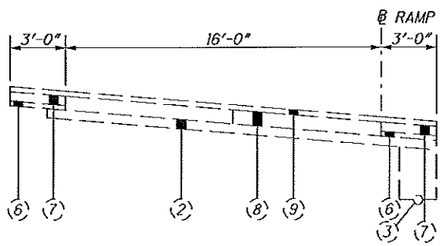
TRU-80-09.56



EXISTING TRANSVERSE SECTION
TRU-80-0956L



EXISTING SUPERELEVATED I-80 SECTION
STA. 486+86 TO STA. 530+83.03



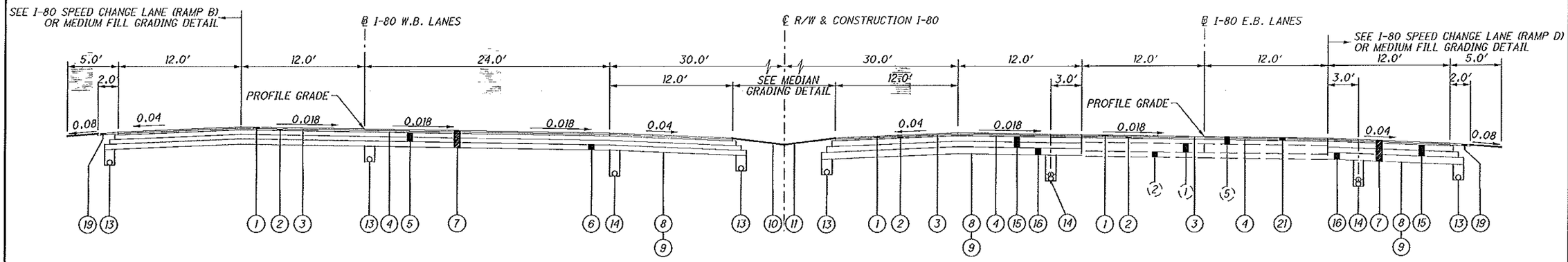
EXISTING SUPERELEVATED RAMP SECTION
RAMP B STA. 14+45.78 TO STA. 20+82.45
RAMP D STA. 15+98.47 TO STA. 31.62.40

EXISTING LEGEND

1. 10" REINFORCED CONCRETE
2. 6" SUB-BASE
3. 6" PIPE, CLASS I-3
4. GUARDRAIL
5. 8-1/2"± ASPHALT CONCRETE
6. 3" WATERPROOFED AGGREGATE BASE
7. POURUS BASE
8. 9" REINFORCED CONCRETE
9. 3-1/4" ASPHALT CONCRETE

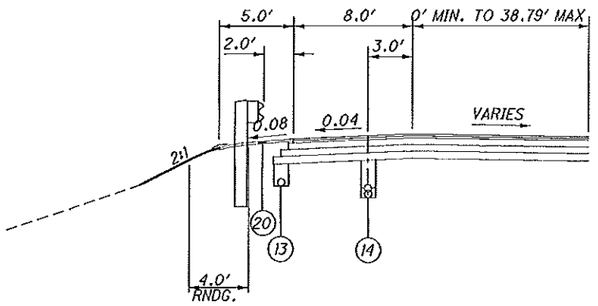
EXISTING TYPICAL SECTIONS

TRU-80-09.56



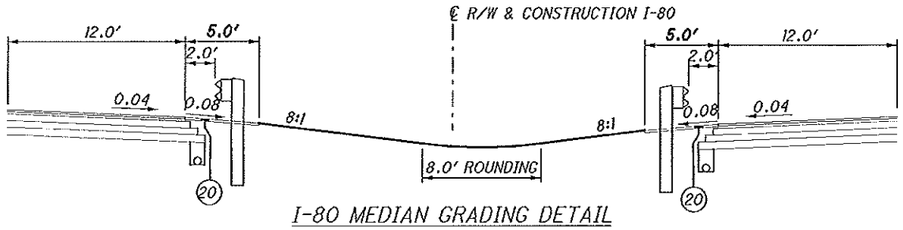
I-80 SUPERELEVATED SECTION

STA. 507+00.00 TO STA. 512+19.88 = 519.88 FT.
STA. 515+19.43 TO STA. 517+00.00 = 180.57 FT.
700.45 FT.

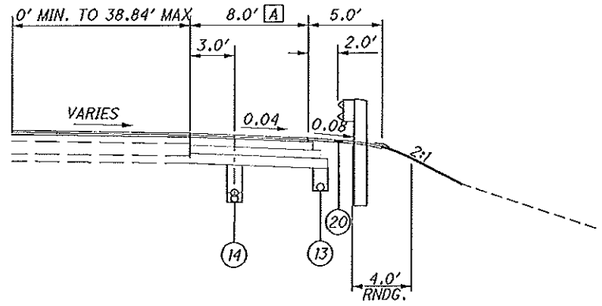


I-80 SPEED CHANGE LANE (RAMP B)

SEE I-80 SUPERELEVATED SECTION FOR PAVEMENT BUILDUP



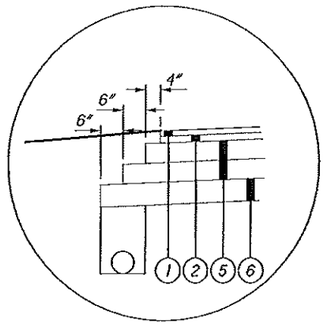
I-80 MEDIAN GRADING DETAIL



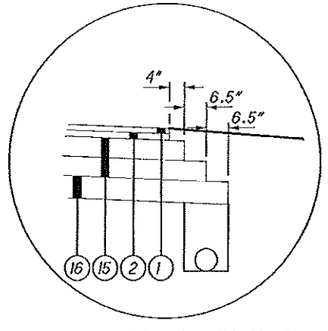
I-80 SPEED CHANGE LANE (RAMP D)

SEE I-80 SUPERELEVATED SECTION FOR PAVEMENT BUILDUP

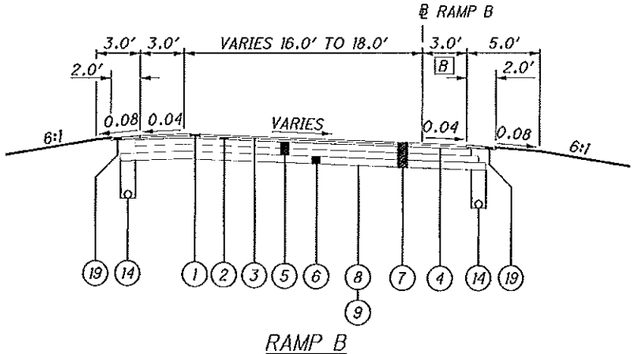
[A] VARIES FROM 12.0′ AT STA. 508+00 TO 8.0′ AT STA. 509+00
[B] VARIES FROM 8.0′ AT STA. 14+45.78 TO 3.0′ AT STA. 16+45.78



EDGE COURSE DETAIL 1

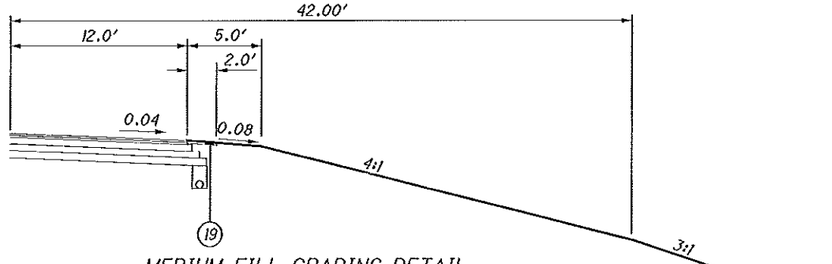


EDGE COURSE DETAIL 2



RAMP B

SEE I-80 SUPERELEVATED SECTION FOR PAVEMENT BUILDUP



MEDIUM FILL GRADING DETAIL

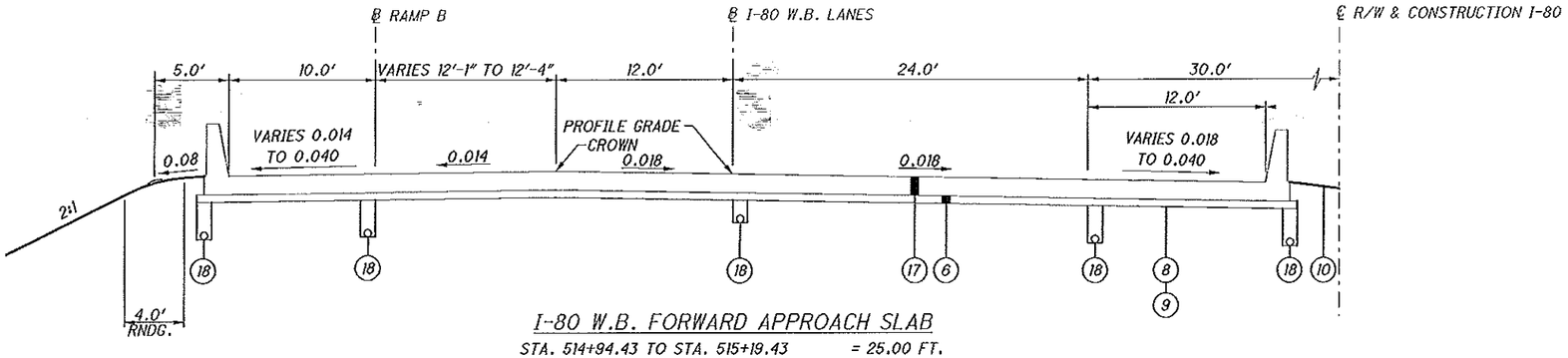
SEE SHEET 3 FOR EXISTING LEGEND
SEE SHEETS 106 & 135 FOR TRANSVERSE SECTION OF PROPOSED BRIDGE

LEGEND - PROPOSED

(1) ITEM 442, 1.50″ ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN
(2) ITEM 442, 1.75″ ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)
(3) ITEM SPECIAL, TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE (0.04 GAL./SY.)
(4) ITEM SPECIAL, TACK COAT, TRACKLESS TACK (0.10 GAL./SY.)
(5) ITEM 302, 10.50″ ASPHALT CONCRETE BASE, PG64-22
(6) ITEM 304, 6.00″ AGGREGATE BASE, AS PER PLAN
(7) ITEM 202, PAVEMENT REMOVED
(8) ITEM 204, SUBGRADE COMPACTION
(9) ITEM 204, PROOF ROLLING
(10) ITEM 203, EMBANKMENT
(11) ITEM 659, SEEDING AND MULCHING
(12) ITEM 606, GUARDRAIL TYPE MGS
(13) ITEM 605, 6″ BASE PIPE UNDERDRAIN (18″ DEEP)
(14) ITEM 605, 6″ SHALLOW PIPE UNDERDRAIN (30″ DEEP)
(15) ITEM 302, 13.00″ ASPHALT CONCRETE BASE, PG64-22
(16) ITEM 304, 8.00″ AGGREGATE BASE, AS PER PLAN
(17) ITEM 526, REINFORCED CONCRETE APPROACH SLAB (T=15″)
(18) ITEM 605, 6″ UNCLASSIFIED UNDERDRAIN
(19) ITEM 617, 2″ COMPACTED AGGREGATE, AS PER PLAN
(20) ITEM 441, 2″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN
(21) ITEM 254, PAVEMENT PLANING, ASPHALT CONCRETE

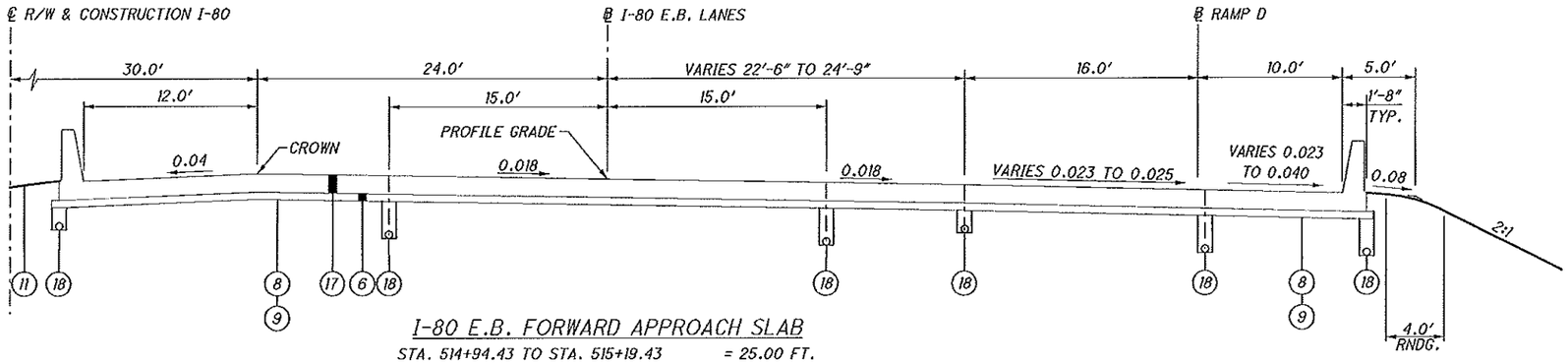
PROPOSED TYPICAL SECTIONS

TRU-80-09.56



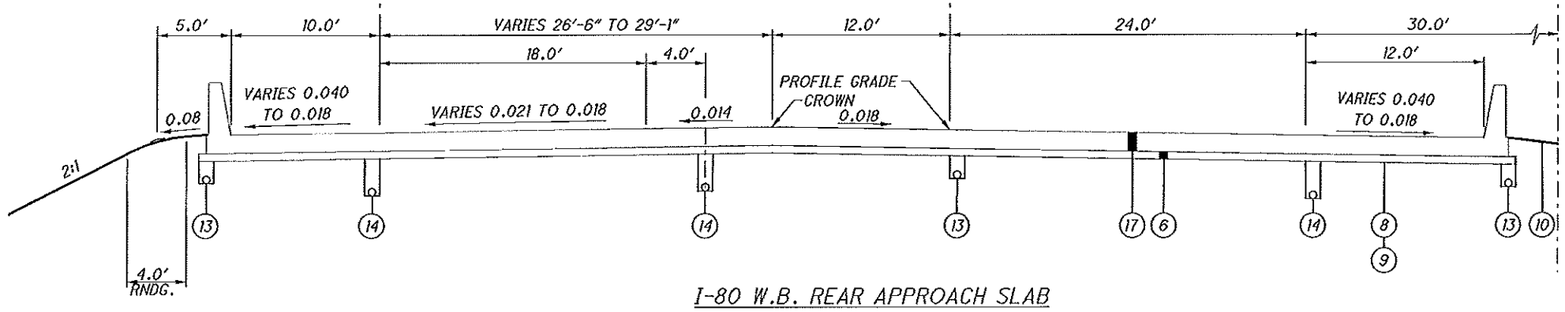
I-80 W.B. FORWARD APPROACH SLAB

STA. 514+94.43 TO STA. 515+19.43 = 25.00 FT.



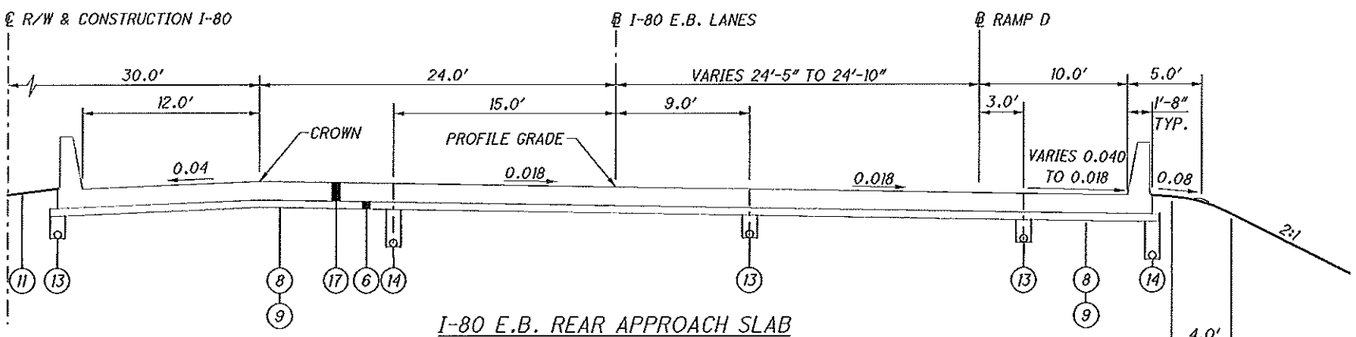
I-80 E.B. FORWARD APPROACH SLAB

STA. 514+94.43 TO STA. 515+19.43 = 25.00 FT.



I-80 W.B. REAR APPROACH SLAB

STA. 512+19.88 TO STA. 512+44.88 = 25.00 FT.



I-80 E.B. REAR APPROACH SLAB

STA. 512+19.88 TO STA. 512+44.88 = 25.00 FT.

STATIONING ALONG ℄ R/W & CONSTRUCTION I-80

PROPOSED TYPICAL SECTIONS

TRU-80-09.56

5
147

CALCULATED JLN | CHECKED EPS

GENERAL NOTES

ROUNDING

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

UTILITIES

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

CITY OF HUBBARD, OHIO-WATER UTILITIY BUILDING
ATTN: PATRICK CAMUSO,
820 NORTH MAIN STREET
P.O. BOX 307
HUBBARD, OHIO 44425
PHONE: (330) 534-3636
FAX: (330) 534-6280

CITY OF HUBBARD, OHIO -ELECTRIC
ATTN: EDWARD PALESTRO, JR.
820 NORTH MAIN STREET
HUBBARD, OHIO 44425
(330) 534-6281

TIME WARNER CABLE
ATTN: DOUG LAWRENTZ
4352 YOUNGSTOWN ROAD SE
WARREN, OHIO 44484
(330) 369-7107
EXT. (330)-555-7179

OHIO EDISON
ATTN: MIKE BECK
730 SOUTH AVENUE
YOUNGSTOWN, OHIO 44502
PHONE: (330) 740-7704
FAX: (330) 740-7655

AT&T
THE OHIO BELL TELEPHONE COMPANY
ATTN: HAROLD MAYNARD
50 W. BOWERY ST.
4TH FLOOR
AKRON, OH 44308
(330) 384-8557

DOMINION EAST OHIO
ATTN: BRYAN D. DAYTON
320 SPRINGSIDE DRIVE,
SUITE 320
AKRON, OH 44333
(330) 664-2409

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.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: TYPE A

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2012a

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011) (EPOCH:2010.0000)
ELLIPSOID: GRS 80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO NORTH ZONE (3401)
COMBINED SCALE FACTOR: 0.99990023745 (METRIC GRID TO PROJECT GROUND)
ORIGIN OF COORDINATE SYSTEM: (0,0)

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 823.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.28083333333 U.S. SURVEY FEET.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

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

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE OFFICE CALCULATIONS FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 7 HOURS.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

DOMINION EAST OHIO CLEARANCE NOTIFICATION

IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LATERAL AND SUBJACENT SUPPORT OF DOMINION'S PIPELINE(S), IN COMPLIANCE TO 29 CFR, PART 1926, SUBPART P, (SAFE EXCAVATION & SHORING). ONE-FOOT MINUMUM VERTICAL AND HORIZONTAL CLEARANCE MUST BE MAINTAINED BETWEEN DOMINION EAST OHIO'S (DEO) EXISTING PIPELINE(S) AND ALL OTHER IMPROVEMENTS. EXTREME CARE SHOULD BE TAKEN NOT TO HARM ANY DEO FACILITY (PIPELINES, ETC.) OR APPURTENANCE (PIPE COATING, TRACER WIRE, CATHODIC PROTECTION TEST STATION WIRES & DEVICES, VALVE BOXES, ETC.). DEO FACILITIES MUST BE PROTECTED WITH A TARP DURING BRIDGE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE AND LIABLE FOR ENSURING THAT ALL DEO EXISTING FACILITIES, ABOVE AND BELOW GROUND, REMAIN UNDAMAGED, ACCESSIBLE AND IN WORKING ORDER. THE CROSSING OF DEO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DEO FACILITY. PLEASE CONTACT DOMINION'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK McDONALD (330-266-2122), OR AL HUMRICHOUSER (330-478-3757).

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

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 611 CONDUIT ITEM.

ITEM 304 - AGGREGATE BASE, AS PER PLAN

GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE A (446), AS PER PLAN

THE REQUIREMENTS OF 442 AND 446 WILL APPLY; DEVIATIONS FROM THESE ARE AS FOLLOWS:

THE PERCENTAGE OF RECLAIMED MATERIAL PROPOSED FOR USE WILL BE INCLUDED IN THE MIX DESIGN PROCESS TO ESTABLISH THE JOB MIX FORMULA (JMF) IN ACCORDANCE WITH 401.04.

MATERIALS:	THE MATERIALS SHALL BE:
AGGREGATES	703.05*

*THE VIRGIN COARSE AGGREGATE PORTION OF THE MIXTURE WILL CONTAIN 50% AIR COOLED BLAST FURNACE SLAG (ACBFS) AND MEET THE REQUIREMENTS OF 703.05.

USE AN NDES OF 50, AN NMAX OF 75 AND THE COMBINATION OF NEW AGGREGATES, NEW ASPHALT BINDER, AND RECLAIMED MATERIAL SHALL BE AS REQUIRED TO PRODUCE A COMPOSITION CONTAINING A MINIMUM OF 6.0% NEW ASPHALT BINDER RESULTING IN A MINIMUM TOTAL BINDER OF 6.5%.

703.05 DO NOT USE ANY FINE OR COARSE AGGREGATE WITH A "SR" OR "SRH" DESIGNATION ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

AS SHOWN ON THE TYPICAL SECTIONS OR AS DIRECTED BY THE ENGINEER RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1-½"	100
¾"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

AN ESTIMATED QUANTITY OF 52 CU. YD. HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

ITEM 832 - EROSION CONTROL

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY PROVIDED FOR USE BY THE CONTRACTOR AND AS DIRECTED BY THE ENGINEER FOR EROSION CONTROL MEASURES DURING CONSTRUCTION AS PER SS 832.

ITEM 832, STORM WATER POLLUTION PREVENTION PLAN LUMP
ITEM 832, EROSION CONTROL 45,000 EA

TRU-80-09.56

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST 2 EACH

659, TOPSOIL 1,318 CU. YD.

659, SEEDING AND MULCHING 5,292 SQ. YD.

659, SEEDING AND MULCHING, CLASS 4A 6,580 SQ. YD.

659, REPAIR SEEDING AND MULCHING 594 SQ. YD

659, INTER-SEEDING 594 SQ. YD.

659, COMMERCIAL FERTILIZER 1.66 TON

659, LIME 2.45 ACRES

659, WATER 66 M. GAL.

659, MOWING 26 M. SQ. FT.

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.

SEEDING AND MULCHING, CLASS 4A SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL IN THE MEDIAN.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS 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 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR 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, MGS TYPE E, 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, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING 209, LINEAR GRADING AS PER PLAN, AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAI, AS PER PLAN.

ITEM 209, LINEAR GRADING AS PER PLAN, SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:
1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

METHOD B:
1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

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, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE B

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

REFER TO THE MANUFACTURER'S INSTRUCTIONS 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 31 INCHES FROM THE EDGE OF THE SHOULDER.

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

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

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

ITEM SPECIAL-TACK COAT, TRACKLESS TACK

ITEM SPECIAL-TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE

DESCRIPTION: THIS WORK CONSISTS OF PREPARING AND TREATING A PAVED SURFACE WITH A TRACKLESS TACK ASPHALT EMULSION.

FURNISH MATERIALS ACCORDING TO THE DEPARTMENT'S APPROVED LIST.

MEET ALL REQUIREMENTS OF ITEM 470 TACK COAT IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRED BY THE CONTRACT, EXCEPT AS NOTED BELOW.

MATERIAL: MEET ALL PROPERTIES OF THE APPROVED MANUFACTURER'S TRACKLESS TACK SPECIFICATION REQUIREMENTS ON FILE WITH THE LABORATORY AT THE TIME OF PLACEMENT.

ACCEPTANCE AND SAMPLING OF MATERIALS: SUPPLY CERTIFIED TEST DATA TO THE ENGINEER AND TO THE DISTRICT LABORATORY DEMONSTRATING THE TRACKLESS TACK SUPPLIED WAS TESTED FOR AND MEETS ALL MATERIAL PROPERTIES SHOWN ON THE DEPARTMENT'S APPROVED LIST.

DURING CONSTRUCTION, ODOT PERSONNEL WILL SAMPLE FROM THE DISTRIBUTOR AND SUPPLY TO THE DISTRICT TEST LAB A MINIMUM OF ONE QUART OF TRACKLESS TACK FOR EVERY 25,000 GALLONS USED ON THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE PROPER PLASTIC QUART SAMPLING CONTAINER. CLEARLY MARK ON THE SAMPLE WITH THE MANUFACTURER'S NAME, PROJECT NUMBER, AND THE WORDS "TRACKLESS TACK".

EQUIPMENT: FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR CORRECT DISTRIBUTOR SETTINGS. THOROUGHLY CLEAN ALL EQUIPMENT IF PREVIOUSLY USED MATERIAL CHARGE IS DIFFERENT THAN THE PROPOSED MATERIAL.

APPLICATION OF ASPHALT MATERIAL: UNIFORMLY APPLY THE TRACKLESS TACK WITH A DISTRIBUTOR ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. IF TRACKLESS TACK IS STORED FOR AN EXTENDED PERIOD OF TIME, PRIOR TO APPLICATION, AGITATE OR GENTLY CIRCULATE THE MATERIAL.

ENSURE ALL NOZZLES AND SPRAY PATTERNS ARE IDENTICAL TO ONE ANOTHER ALONG THE DISTRIBUTOR SPRAY BAR. PLACE THE ANGLE OF THE NOZZLE AT A 15 TO 30 DEGREE ANGLE TO THE SPRAY BAR AXIS TO MAXIMIZE OVERLAP OR AS RECOMMENDED BY THE NOZZLE MANUFACTURER. CONTACT THE MANUFACTURER'S REPRESENTATIVE FOR REQUIRED SPRAY NOZZLE SIZE AND DISTRIBUTOR AND NOZZLE SETTINGS.

APPLY AT A RATE OF 0.04 TO 0.1 GALLONS PER SQUARE YARD. DO NOT DILUTE TRACKLESS TACK. RECOMMENDED APPLICATION TEMPERATURE IS 160°F TO 180°F. DO NOT EXCEED 180°F. THE ENGINEER WILL APPROVE THE QUANTITY, RATE OF APPLICATION, TEMPERATURE, DISTRIBUTOR SETTINGS, AND AREAS TO BE TREATED BEFORE APPLICATION OF THE TRACKLESS TACK COAT. THE ENGINEER WILL DETERMINE THE ACTUAL APPLICATION IN GALLONS PER SQUARE YARD BY A CHECK ON THE PROJECT.

PERFORMANCE OF TRACKLESS TACK: DETERMINE THE TIME TO SET FOR THE MATERIAL TO BECOME TRACKLESS. THE ENGINEER WILL REPORT ANY ISSUES WITH EXCESSIVE TIME TO SET, OR AFTER SET ISSUES WITH STICKINESS, OR PICKUP OF THE TACK TO THE DISTRICT TESTING ENGINEER AND NEW PRODUCT ENGINEER, BRAD YOUNG (614) 351-2882.

IF THE CERTIFIED TEST DATA FAILS TO MEET THE LAB TESTING CRITERIA, OR FIELD SAMPLES FAIL TO MEET THE TEST CRITERIA, OR THE TRACKLESS TACK FAILS TO PERFORM SATISFACTORILY IN THE FIELD, AS NOTED ABOVE, THE CONTRACTOR WILL BE REQUIRED TO REPLACE AND SUPPLY ANOTHER APPROVED TRACKLESS TACK PRODUCT FOR THE REMAINDER OF THE PROJECT AT NO ADDITIONAL COST TO THE DEPARTMENT.

ANY FAILING TRACKLESS TACK PRODUCT WILL BE REMOVED FROM THE DEPARTMENT'S APPROVED LIST.

ITEM SPECIAL - MISC.: VERTICAL CLEARANCE

AFTER ALL CONSTRUCTION HAS BEEN COMPLETED, A REGISTERED SURVEYOR WILL TAKE VERTICAL CLEARANCE MEASUREMENTS AT LOCATIONS INDICATED ON THE APPROVED ODOT FORM (AVAILABLE IN THE DISTRICT 4 STRUCTURES AND PAVEMENT OFFICE). THE FINAL MEASUREMENTS SHALL BE RECORDED ON THE FORM AND SUBMITTED TO THE PROJECT ENGINEER AND THE DISTRICT 4 STRUCTURES AND PAVEMENT ENGINEER. THE RECORD SHALL BEAR THE SEAL OF THE LECENSED SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THIS WORK SHALL BE PERFORMED AT THE FOLLOWING STRUCTURES: TRU-80-0956L AND TRU-80-0956R

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

SPECIAL - MISC.: VERTICAL CLEARANCE, 2 EACH

CALCULATED JLN CHECKED EPS

GENERAL NOTES

TRU-80-09.56

ENVIRONMENTAL NOTES

COMMUNITY NOTIFICATION:

THE CONTRACTOR WILL ADVISE THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST ALSO PROVIDE NOTIFICATION TO THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO ANY LANE RESTRICTIONS. THE ODOT PROJECT ENGINEER WILL FORWARD THE INFORMATION TO THE ODOT, DISTRICT 4 OFFICE OF PUBLIC INFORMATION FOR USE TO NOTIFY EMERGENCY SERVICES AND COMMUNITY A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF PROJECT CONSTRUCTION. INCLUDED IN THIS NOTIFICATION WILL BE THE PROPOSED LANE RESTRICTIONS.

RIPARIAN HABITAT

EXISTING RIPARIAN HABITAT ZONES ALONG THE STREAM CHANNEL(S) SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE DURING PROJECT CONSTRUCTION.

STREAM CHANNEL EXCAVATION/IN STREAM WORK:

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

CONSTRUCTION AND DEMOLITION DEBRIS:

THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT CONSTRUCTION AND DEMOLITION DEBRIS FROM ENTERING WETLANDS AND STREAM(S). ANY DEBRIS THAT DOES FALL INTO WETLANDS AND/OR STREAM(S) SHALL BE REMOVED AS SOON AS POSSIBLE WITHIN 72 HOURS.

MECHANICAL EQUIPMENT OPERATION AT STREAM CHANNELS:

THE MECHANICAL EQUIPMENT USED TO EXECUTE THE WORK AUTHORIZED HEREIN SHALL BE OPERATED IN A MANNER TO MINIMIZE TURBIDITY THAT COULD DEGRADE WATER QUALITY AND ADVERSELY AFFECT AQUATIC PLANT AND ANIMAL LIFE.

CONSTRUCTION EQUIPMENT AND MATERIALS STAGING AREAS:

CONSTRUCTION EQUIPMENT AND MATERIAL STAGING AREAS SHALL BE KEPT AWAY FROM STREAMS AND WETLANDS TO THE MAXIMUM EXTENT PRACTICABLE. ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION 107.10 (PROTECTION AND RESTORATION OF PROPERTY) PROHIBIT THE CONTRACTOR FROM CREATING STAGING AREAS NEAR STREAMS/WETLANDS.

TREE CUTTING RESTRICTIONS:

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR CUT/REMOVE ANY TREES PRIOR TO OR DURING CONSTRUCTION OF THE PROJECT.

MATERIALS REMOVED FROM DITCHES, STREAMS, AND/OR WETLANDS:

ALL MATERIALS REMOVED FROM THE DITCHES, STREAMS OR WETLANDS MUST BE IMMEDIATELY REMOVED TO AN UPLAND SITE AND STABILIZED (I.E., SEEDED) TO PREVENT REDISTRIBUTION INTO ANY WATERS OF THE UNITED STATES. IMMEDIATE REMOVAL IS DEFINED BY THE UNITED STATES ARMY CORPS OF ENGINEERS AS DEPOSITING THE REMOVED MATERIALS DIRECTLY INTO A TRUCK AND REMOVING THE MATERIAL FROM THE SITE; PLACEMENT OF REMOVED MATERIALS INTO A WETLAND OR ON THE BANKS OF A STREAM EVEN TEMPORARILY IS CONSIDERED A FILL AND REQUIRES A PERMIT ACTION.

STRUCTURE PAINTING/CONCRETE SEALING OPERATIONS:

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT EPOXY-URETHANE SEALER, PAINT OR OTHER MATERIALS USED TO REPAIR, CLEAN, PAINT, SEAL OR TREAT ANY STRUCTURE FROM ENTERING ANY STREAMS, WETLANDS OR OTHER WATERS OF THE UNITED STATES AND TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE.

CO-PERMITTEE NOTICE OF INTENT FOR COVERAGE UNDER OHIO EPA STORMWATER CONSTRUCTION GENERAL PERMIT:

BECAUSE OVER 1.0 ACRE OF GROUND DISTURBANCE WILL OCCUR AS A RESULT OF THE PROJECT, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER CONSTRUCTION GENERAL PERMIT WILL BE REQUIRED FROM THE OHIO EPA. THE NOTICE OF INTENT (NOI), PREPARED BY ODOT, AND OHIO EPA NPDES CONSTRUCTION STORM WATER GENERAL PERMIT SHALL BE PROVIDED TO THE CONTRACTOR BY ODOT PERSONNEL AT THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE CO-PERMITTEE NOTICE OF INTENT FOR COVERAGE UNDER OHIO EPA STORMWATER CONSTRUCTION GENERAL PERMIT AND SUBMITTING TO THE OHIO EPA FOR THEIR APPROVAL, ALONG WITH THE DEVELOPMENT OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), BEFORE CONSTRUCTION ACTIVITY CAN TAKE PLACE.

SPECIFICATIONS SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S "CONSTRUCTION AND MATERIAL SPECIFICATIONS, LOCATION AND DESIGN MANUAL AND STANDARD DRAWINGS" SHALL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL, ALONG WITH ADDITIONAL PROTECTIVE MEASURES TO AVOID IMPACTS TO ADJACENT PROPERTIES AND WETLANDS FROM CONSTRUCTION ACTIVITIES. WATER COLUMN AND SEDIMENTATION IMPACTS SHALL BE KEPT TO A MINIMUM THROUGH THE USE OF BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER. THEY SHALL ALSO COMPLY WITH ODOT'S "HANDBOOK FOR SEDIMENT AND EROSION CONTROL".

ENDANGERED SPECIES HABITAT-INDIANA BAT/NORTHERN LONG-EARED BAT:

PRIOR TO ANY BRIDGE REMOVAL ACTIVITIES, THE UNDERSIDE OF THE EXISTING TRU-80-9.57L/R BRIDGES SHALL BE CAREFULLY EXAMINED FOR THE PRESENCE OF BATS, ESPECIALLY FROM APRIL 1 TO SEPTEMBER 30. IF ANY BATS ARE FOUND ROOSTING ON THE UNDERSIDE OF THE BRIDGES, THE UNITED STATES FISH AND WILDLIFE SERVICE, ECOLOGICAL SERVICE DIVISION (614-416-8993), THE ODOT OFFICE OF ENVIRONMENTAL SERVICES (614-466-7880) AND ODOT DISTRICT 4 ENVIRONMENTAL SECTION (330-786-4930) SHALL BE CONTACTED TO PROVIDE THIS INFORMATION.

CALCULATED JLN CHECKED EPS

GENERAL NOTES

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7A
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MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT OR COMPLETED PAVEMENT DURING CONSTRUCTION OF THE WORK.

2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. ALL FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED OR PROTECTED AS PER STANDARD CONSTRUCTION DRAWING MT-101.90.

4. TRUCK MOUNTED ATTENUATORS (TMA'S) SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.

5. ONLY DURING OFF-PEAK PERIODS (ie ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

6. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.

7. A QUANTITY OF 50 CU. YDS. OF ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER.

8. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

9. A QUANTITY OF 36 EACH FOR ITEM 614 WORK ZONE MARKING SIGN HAS BEEN INCLUDED IN THE PLAN. THIS QUANTITY SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SIGNS: W8-1 (BUMP), W8-H13 (NO EDGE LINES), W8-11 (UNEVEN LANES), W8-15 (GROOVED PAVEMENT). THESE QUANTITIES SHALL BE AS PER 614.04.

THE FOLLOWING QUANTITIES (TABULATED ON SHEET 14) SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

614, WORK ZONE LANE LINE, CLASS I, 740.06, TYPE I, AS PER PLAN	1.40 MILE
614, WORK ZONE EDGE LINE, CLASS I, 642 PAINT, AS PER PLAN	1.28 MILE
614, WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I, AS PER PLAN	6.38 MILE
614, WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT, AS PER PLAN	3,035 FT.
614, WORK ZONE CHANNELIZING LINE, CLASS I, 740.06,TYPE I, AS PER PLAN	18,539 FT.
614, WORK ZONE DOTTED LINE, CLASS I, 642 PAINT, AS PER PLAN	908 FT.
614, WORK ZONE DOTTED LINE, CLASS I, 740.06,TYPE I, AS PER PLAN	1,890 FT.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 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 ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ALTERNATE MAINTENANCE OF TRAFFIC PLANS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLANS SHALL BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE ODOT DISTRICT CONSTRUCTION ENGINEER.

LANE CLOSURES

I-80

DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AS PER THE PERMITTED LANE CLOSURE CHART. THE PERMITTED LANE CLOSURE CHART USED FOR THIS PROJECT SHALL BE THE MOST CURRENT CHART AVAILABLE ON THE DATE THIS PROJECT SELLS.

THE CHART CAN BE FOUND AT:
http://plcm.dot.state.oh.us

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THE REQUIREMENTS IN THE CHART, THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES IN THE AMOUNT OF $2500 PER HOUR OR PORTION THEREOF THAT THE LANE REDUCTION REMAINS BEYOND THE SPECIFIED LIMIT.

U.S. 62

ONE LANE IN EACH DIRECTION MAY BE CLOSED ON U.S. 62 WITH THE EXCEPTION OF 6AM TO 8AM AND 4PM TO 6PM DAILY. NO DECK OR PARAPET REMOVAL WILL BE PERMITTED OVER AN OPEN LANE OF TRAFFIC.

I-80 RAMPS

SHORT TERM CLOSURES WILL BE REQUIRED FOR THE TIE-IN AND REMOVAL OF THE TEMPORARY RAMPS. THE MAXIMUM CLOSURE PERMITTED IS 8 HOURS WITH THE EXCEPTION OF 6AM TO 8AM AND 4PM TO 6PM DAILY. A TOTAL OF ONE CLOSURE IS PERMITTED FOR THE TEMPORARY RAMP TIE-IN AND ONE CLOSURE IS PERMITTED FOR THE REMOVAL OF THE TEMPORARY RAMP AND RESTORATION OF THE EXISTING RAMP.

THE CONTRACTOR SHALL USE PCMS TO DETOUR TRAFFIC FOR THE SHORT TERM CLOSURES.

RAMP B DETOUR: I-80 WEST TO S.R. 193 TO I-80 EAST
RAMP D DETOUR: RAMP C

ITEM 614, MAINTAINING TRAFFIC (LANE CLOSURE/REDUCTION REQUIRED)

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

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH (6:00 AM) MONDAY
MONDAY	12:00N FRIDAY THROUGH (6:00 AM) TUESDAY
TUESDAY	12:00N MONDAY THROUGH (6:00 AM) WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH (6:00 AM) THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH (6:00 AM) FRIDAY
THURSDAY (THANKSGIVING ONLY)	12:00N WEDNESDAY THROUGH (6:00 AM) MONDAY
FRIDAY	12:00N THURSDAY THROUGH (6:00 AM) MONDAY
SATURDAY	12:00N FRIDAY THROUGH (6:00 AM) MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $3,000 FOR EACH HOUR THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

EARTHWORK FOR MAINTAINING TRAFFIC

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLAN FOR INFORMATION ONLY:

EXCAVATION FOR MAINTAINING TRAFFIC	1600 CU. YD.
EMBANKMENT FOR MAINTAINING TRAFFIC	4484 CU. YD.

WHEN UNDERCUTS ARE NECESSARY FOR MAINLINE PAVEMENT OR EMBANKMENT CONSTRUCTION, EVALUATE THE NEED FOR TEMPORARY ROAD UNDERCUTS IF WITHIN A CLOSE PROXIMITY TO THE MAINLINE UNDERCUTS. A GEOTECHNICAL EVALUATION SHOULD BE CONSIDERED TO DETERMINE IF THE EXISTING SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE TEMPORARY ROAD. ADDITIONAL SOIL BORINGS ALONG THE TEMPORARY ROAD ARE NOT NORMALLY REQUIRED.

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

TRENCH FOR WIDENING (SPEED LIMIT > 45MPH)

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES AS SHOWN ON STANDARD DRAWING MT-101.90. PLACEMENT OF PROPOSED BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND THE EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE BASE WIDENING ON THIS PROJECT WILL BE COMPLETED TO A DEPTH OF 3 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF THE WORK DAY. NO TRENCH WILL BE LEFT OPEN OVERNIGHT. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING WILL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

DUST CONTROL

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

ITEM 616, WATER 100 M. GAL

CALCULATED JLN
CHECKED JEN

MAINTENANCE OF TRAFFIC GENERAL NOTES

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SPECIAL - WORK ZONE GUARDRAIL

THIS WORK AND MATERIALS SHALL COMPLY WITH ITEM 606 FOR PERMANENT GUARDRAIL, EXCEPT THAT USED TYPE 5 RAILS AND POSTS MAY BE USED IF IN GOOD CONDITION AND APPROVED BY THE ENGINEER. FOR EXISTING GUARDRAIL RUNS WHICH REQUIRE AN EXTENSION, THE EXISTING END TERMINAL ASSEMBLY SHALL BE REMOVED AND RESET TO THE NEW LOCATIONS, AS SHOWN ON THE PLANS. NEW RUNS, FOR BRIDGE PARAPET PROTECTION SHALL HAVE THE APPROPRIATE BRIDGE TERMINAL ASSEMBLIES INSTALLED. UPON COMPLETION OF THE PHASE WHICH REQUIRES THE TEMPORARY GUARDRAIL, ALL WORK ZONE GUARDRAIL SHALL BE REMOVED AND THE POST HOLES BACKFILLED (UNLESS PERMANENT GRADING TO BE PERFORMED LATER WOULD REPAIR THE HOLES), ALL TERMINAL ASSEMBLIES REMOVED, AND END TERMINAL ASSEMBLIES RESET TO THEIR ORIGINAL LOCATION.

PAYMENT SHALL INCLUDE ALL WORK FOR PROVIDING AND/OR RESETTING ANCHOR ASSEMBLIES, TERMINAL ASSEMBLIES, NEW GUARDRAIL, GUARDRAIL EXTENSIONS, AND REMOVAL AND RESTORATION UPON COMPLETION OF THE PHASE WHICH REQUIRES THE TEMPORARY GUARDRAIL. THE LENGTH OF MEASUREMENT FOR PAYMENT SHALL BE PER ITEM 606 FOR PERMANENT GUARDRAIL, EXCLUDING THE LENGTH OF TERMINAL ASSEMBLIES AND END TREATMENTS. PAYMENT SHALL BE AT THE UNIT PRICE BID, PER FOOT FOR ITEM SPECIAL - WORK ZONE GUARDRAIL.

THE FOLLOWING QUANTITY (TABULATED ON SHEET 14) SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

614, SPECIAL - WORK ZONE GUARDRAIL 500 FT

FOR INFORMATION ONLY:
606, BRIDGE TERMINAL ASSEMBLY, TYPE 3 3 EACH
606, ANCHOR ASSEMBLY, MGS TYPE E 1 EACH

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARD-RAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

THE FOLLOWING ESTIMATED QUANITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE A 96 EACH
ITEM 614, OBJECT MARKER, 1 WAY 90 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISH-ING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL AND ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

[INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE ALONG TAPERS AND TRANSITION AREAS AND ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.]

[THE INCREASED BARRIER DELINEATION SHALL CONSIST OF TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.]

[TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.]

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR TYPE B 345 EACH
ITEM 614, OBJECT MARKER, 1-WAY 327 EACH
[ITEM 614, INCREASED BARRIER DELINEATION 220 FEET]

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

[ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.]

ITEM 614 - WORK ZONE PAVEMENT MARKINGS, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 614.11, ALL CLASS 1 EDGE LINES, LANE LINES, CENTER LINES AND DOTTED LINES ON I-80 SHALL BE 6 INCHES WIDE AND CHANNELIZING MARKINGS SHALL BE 12 INCHES WIDE. THE APPLICATION RATES FOR THE 6 INCH LINES SHALL BE 1.5 TIMES THE RATES SPECIFIED FOR 4 INCH LINES IN TABLE 614.11-1.

WORK ZONE MARKINGS ON U.S. 62 WILL BE NORMAL WIDTH.

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

THE PAVEMENT COMPOSITION SHALL MATCH THE ADJACENT SHOULDER RECONSTRUCTION BUILDUP.

THE EXISTING PAVEMENT/SHOULDER SHALL BE SAWCUT AS PER 203.04(E).

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED IN CONSTRUCTING THE PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN.

615, ROADS FOR MAINTAINING TRAFFIC, LUMP SUM
615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A 1502 S.Y.
615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN, 1427 S.Y.

UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE THE PAVEMENT FOR MAINTAINING TRAFFIC INCLUDING ANY TEMPORARY DRAINAGE FACILITIES. THE AFFECTED EXISTING GRASSED AREAS AND PAVED SHOULDERS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AS DIRECTED BY THE ENGINEER AND AS PER 615.08.

PAVEMENT FOR MAINTAINING TRAFFIC SHALL NOT BE OPENED TO TRAFFIC UNTIL ALL WORK ZONE TRAFFIC CONTROL DEVICES, SIGNS, PAVEMENT MARKINGS AND PORTABLE CONCRETE BARRIERS HAVE BEEN ERECTED AND APPROVED BY THE ENGINEER.

ALTHOUGH ESTIMATES FOR TEMPORARY EXCAVATION AND EMBANKMENT MAY BE SHOWN ON THE PLAN DETAILS, THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO, AND INCLUDED WITH PAYMENT FOR ITEM 615 ROADS FOR MAINTAINING TRAFFIC

THIS ITEM SHALL BE USED FOR TEMPORARY RAMPS B AND D AND I-80 W.B. (LEFT) FROM STA. 507+00 AND STA. 517+00.

ITEM 622 - PORTABLE BARRIER PLACEMENT
ITEM 622 - PORTABLE BARRIER PLACEMENT, BRIDGE MOUNTED

DURING THE PLACEMENT OF THE PORTABLE BARRIER, TRAFFIC WILL BE PROHIBITED FROM OCCUPYING THE TRAVEL LANE ADJACENT TO THE BARRIER. THE BARRIER WILL BE PLACED AT NIGHT PER THE LANE CLOSURE NOTE. THE CLOSURE OF THE ADJACENT LANE WILL BE PER THE STANDARD DRAWING MT-95.30.

THE CONTRACTOR WILL SUBMIT A PLAN TO THE ENGINEER FOR APPROVAL SEVEN (7) DAYS IN ADVANCE OF THE PLANNED LANE CLOSURE. WORK WILL NOT BEGIN UNTIL APPROVAL OF THE PLANS HAS BEEN GRANTED.

ALL COSTS INVOLVED IN PLACING THE PORTABLE CONCRETE BARRIER WILL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - PORTABLE BARRIER, 50" AND ITEM 622 - PORTABLE CONCRETE BARRIER, 50", BRIDGE MOUNTED.

THE FOLLOWING QUANTITIES (TABULATED ON SHEET 14) SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

622, PORTABLE BARRIER, 50" 16,530 FT
622, PORTABLE BARRIER, 50", BRIDGE MOUNTED 520 FT

CALCULATED JLN
CHECKED JEN

MAINTENANCE OF TRAFFIC GENERAL NOTES

TRU-80-09.56

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, 4 PORTABLE CHANGEABLE MESSAGE SIGNS, THE SIGNS SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCE OF 650 FEET AND 475 FEET RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. THE PCMS SHALL BE LOCATED. IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF. ADDITIONALLY WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE LINE PRESENTATION FORMATS WITH UP TO OF SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DE-ACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR AREAS) ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614. THE CONTRACTOR SHALL PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN,
AS PER PLAN 64 SIGN MONTH

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS WEB PAGE FOR ROADWAY STANDARDS APPROVED PRODUCTS.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

THE FOLLOWING QUANTITY (TABULATED ON SHEET 14) SHALL BE USED FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

614, WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) 16 EACH

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE.

- WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR
ASSISTANCE 300 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

CALCULATED JLN CHECKED JEN

OFFICE OF TRAFFIC GENERAL NOTES

MAINTENANCE

TRU-80-09.56

WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE CERTIFIED FROM ONE OF THE FOLLOWING ORGANIZATIONS:

1. AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA), PHONE NUMBER 1-800-272-8772, CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS).

2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703-235-0528.

3. THE OHIO CONTRACTORS ASSOCIATION, TRAFFIC CONTROL SUPERVISOR (OCA/TCS) WORK ZONE CLASS, ONLY IF TAKEN AFTER MAY 5, 2004, PHONE NUMBER 1-800-229-1388.

4. OHIO LABORERS TRAINING, TRAFFIC CONTROL SUPERVISORS CLASS, PHONE NUMBER 1-740-599-7915.

A COPY OF EACH WTSS CERTIFICATION AND 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7) THE CONTRACTOR MAY DESIGNATE AN ALTERNATE WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY. EACH WTS SHALL HAVE A CURRENT WTS CERTIFICATION (WITH AN EXPIRATION DATE NO MORE THAN 5 YEARS FROM THE DATE OF ISSUE) FROM ANY OF THE APPROVED ORGANIZATIONS.

THE WTS POSITION HAS THE RESPONSIBILITY OF MONITORING TRAFFIC CONTROL DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS, AND BE ABLE TO BE ON SITE FOR ALL EMERGENCY TRAFFIC CONTROL NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF AND BE PREPARED TO EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TRAFFIC CONTROL DEVICES.

2. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TRAFFIC CONTROL MANAGEMENT IS DISCUSSED.

3. BE AVAILABLE FOR MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST OR WITHIN 36 HOURS.

4. COORDINATE A TRAFFIC INCIDENT MANAGEMENT MEETING EACH YEAR BEFORE CONSTRUCTION WORK BEGINS WITH ODOT AND THE SAFETY FORCES THAT WILL RESPOND TO INCIDENTS ON THE PROJECT. ITEMS TO BE DISCUSSED WILL BE THE:

   A. TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP);

   B. EMERGENCY RESPONSE AND NOTIFICATION;

   C. PROJECT WORK/PHASING CONCERNS (E.G., RAMP CLOSURES); AND

   D. RESPONDERS CONCERNS.

5. BE AWARE OF, AND COORDINATE IF NECESSARY, ALL TRAFFIC CONTROL OPERATIONS, INCLUDING THOSE OF SUBCONTRACTORS AND SUPPLIERS.

6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). A WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE THEY ARE ON THE PROJECT.

7. COORDINATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS WORK ZONE TRAFFIC CONTROL.

8. ENSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS FOR SIGNS, BARRICADES, TEMPORARY CONCRETE BARRIER, PAVEMENT MARKINGS, PORTABLE MESSAGE SIGNS, AND OTHER TRAFFIC CONTROL DEVICES ON A DAILY BASIS; AND FACILITATE ANY CORRECTIVE ACTION NECESSARY.

9. NOTIFY THE CONTRACTOR OF THE NEED FOR CLEANING AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES, INCLUDING THE COVERING AND REMOVAL OF INAPPLICABLE SIGNS.

10. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TRAFFIC CONTROL DEVICES AND/OR TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, A WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:

    A. INITIAL TRAFFIC CONTROL SETUP (DAY AND NIGHT REVIEW).

    B. DAILY TRAFFIC CONTROL SETUP AND REMOVAL.

    C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TRAFFIC CONTROL SETUP.

    D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA.

    E. REMOVAL OF TRAFFIC CONTROL DEVICES AT THE END OF A PHASE OR PROJECT.

    F. ALL OTHER EMERGENCY TRAFFIC CONTROL NEEDS.

11. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 10 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TRAFFIC CONTROL MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THIS DOCUMENT CAN BE FOUND IN THE CURRENT REVISION OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION INSPECTION FORMS MANUAL.

12. VERIFY THAT ALL FLAGGING OPERATIONS ARE BEING CONDUCTED PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND APPLICABLE STANDARDS AND SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

14. IDENTIFY AND CONTACT ALL POSSIBLE RESPONSE PERSONNEL; PREPLAN AND KEEP AN UPDATED ROSTER WITH PHONE NUMBERS:

    A. FEDERAL, STATE, AND LOCAL TRANSPORTATION AGENCIES (TRAFFIC MANAGEMENT CENTER);

    B. REGIONAL, COUNTY OR LOCAL 911 DISPATCH; AND

    C. TOWING AND RECOVERY PROVIDERS.

15. COMPLY WITH THE PROVISIONS OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS.

16. PROPOSE A RESPONSE/ACTION PLAN TO:

    A. ESTABLISH ALTERNATE ROUTE PLANS PER THE PROVIDED ODOT PLAYBOOK;

    B. REMOVE TRAFFIC DEMAND FROM IMPACTED ROADWAY(S);

    C. DIVERT TRAFFIC TO ROUTES THAT CAN ACCOMMODATE DEMANDS;

    D. DETOUR TRAFFIC AWAY FROM SENSITIVE AREAS (SUCH AS SCHOOLS, HOSPITALS, ETC.);

    E. DISCUSS METHODS OF DETERMINING A STAGING AREA FOR RESPONDERS WITHIN OR NEAR THE CONSTRUCTION ZONE; AND

    F. DISCUSS METHODS OF DEVELOPING INGRESS AND EGRESS SITES WITHIN THE CONSTRUCTION ZONE.

    THE RESPONSE/ACTION PLAN SHALL BE SUBMITTED TO ODOT FOR ACCEPTANCE BEFORE THE CONTRACTOR'S FIRST DAY OF WORK.

17. PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS IN INCIDENT DETECTION AND VERIFICATION:

    A. CALL 911/ NOTIFY TRAFFIC MANAAGEMENT CENTER AND PROVIDE THE FOLLOWING:

       I. LOCATION INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL.
       II. NUMBER AND TYPE OF VEHICLES INVOLVED.
       III. ESTIMATED EXTENT OF DAMAGE OR INJURY.
       IV. ESTIMATED NUMBER OF PATIENTS INVOLVED.
       V. ANY POTENTIAL HAZARDOUS CONDITIONS.
       VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE.

    B. INITIATE TRAFFIC MANAGEMENT/PROVIDE TRAFFIC CONTROL.

    C. ASSIST MOTORIST WITH DISABLED VEHICLES.

    D. RECOMMEND ROADWAY REPAIR NEEDS.

    E. PROVIDE REPAIR RESOURCES.

18. ATTEND POST-INCIDENT DEBRIEFINGS IF REQUIRED.

THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT OF THE UNIT PRICE BID FOR THE WTS FOR ANY DAY ON WHICH THE CONTRACTOR FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. SHOULD THE CONTRACTOR'S FAILURE TO PERFORM ANY OF THE DUTIES DESCRIBED ABOVE RESULT IN A MAINTENANCE OF TRAFFIC SAFETY ISSUE, THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT FOR ITEM 614 MAINTENANCE OF TRAFFIC FROM THE CONTRACTOR'S NEXT SCHEDULED ESTIMATE.

IF THREE OR MORE FAILURES TO PERFORM THE DUTIES SET FORTH ABOVE OCCUR, THE WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR THE WORKSITE TRAFFIC SUPERVISOR:

ITEM 614 WORKSITE TRAFFIC SUPERVISOR 16 MONTHS

CALCULATED JLN
CHECKED JEN

MAINTENANCE OF TRAFFIC GENERAL NOTES

TRU-80-09.56

STATION FROM	STATION TO	SIDE			614																606		622	
				WORK ZONE LANE LINE, CLASS 1, 740.06, TYPE I, AS PER PLAN	(1) WORK ZONE EDGE LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN	(2) WORK ZONE EDGE LINE, CLASS 1, 642 PAINT, YELLOW, AS PER PLAN	(3) WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN	(4) WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1, WHITE, AS PER PLAN	(5) WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1, YELLOW, AS PER PLAN	(6) WORK ZONE, CHANNELIZING LINE, CLASS 1, 740.06,[11] TYPE 1, WHITE, AS PER PLAN	(7) WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN	(8) WORK ZONE DOTTED LINE, CLASS 1, 740.06, WHITE, AS PER PLAN	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	SPECIAL - WORK ZONE GUARDRAIL							BRIDGE TERMINAL ASSEMBLY, TYPE 3	ANCHOR ASSEMBLY, MGS TYPE E	PORTABLE BARRIER, 50'	PORTABLE BARRIER, 50', BRIDGE MOUNTED
				FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	FT							EACH	EACH	FT	FT
PHASE 1A (WESTBOUND)																								
497+90	541+00	LT		4080				4500	1040	1230		410	3										4930	
PHASE 1A (EASTBOUND)																								
489+00	532+30	RT		3315				3565	3820	1460		505	3										4430	
PHASE 1B (WESTBOUND)																								
490+78.5	502+66	LT								1187.5														
490+78.5	507+00	℄/LT								1621.5														
490+78.5	501+76	LT								1097.5														
502+66	507+00	LT						434																
495+03	497+86	LT						283																
527+96	534+29	RT								633														
529+38	534+29	RT								491														
493+78.5	507+00	RT							1321.5															
504+98	508+10.50	LT												231.25							1	1		
506+90	512+50	RT																					560	
507+00	512+00	LT			500																			
507+00	517+00	RT				1000																		
507+00	517+00	LT					1000																	
512+00	514+46	LT									246													
512+50	515+10	RT																						260
515+06	515+73.4	LT												37.5							1			
515+10	528+00	RT																					1290	
514+46	517+00	LT			254																			
517+00	538+01	LT						2101																
517+00	541+01	LT								2401														
517+00	538+01	RT							2101															
528+00	528+30	RT											1											
PHASE 1B (EASTBOUND)																								
491+61	497+56	RT										575												
492+38	507+00	℄/RT								1462														
495+38	507+00	LT							1162															
497+56	507+00	RT						944																
506+64.8	508+63.4	RT												200										
507+00	516+91	LT				991																		
507+00	516+91	RT					991																	
507+00	512+62	RT			562																			
511+64.1	512+23.20	RT												31.25							1			
512+62	515+18	RT									256													
515+18	516+91	RT			173																			
504+38.8	523+10	RT/LT											1										1580	260
516+91	534+29	RT/LT							1738															
516+91	537+29	RT								2038														
516+91	527+96	RT						1105																
† - FOR INFORMATION ONLY																								
SUB-TOTALS CARRIED TO SHEET 14				7395	1489	1991	1991	12,932	11,182.5	13,621.5	502	1490	8	500							3†	1†	12,790	520

CALCULATED DTB
CHECKED JLN

SUMMARY OF TRAFFIC MAINTENANCE

TRU-80-09.56

12
147

SUMMARY OF TRAFFIC MAINTENANCE

CALCULATED: DTB
CHECKED: JLN

STATION		SIDE		614																		606		622	
				WORK ZONE LANE LINE, CLASS 1, 740.06, TYPE 1, AS PER PLAN	WORK ZONE EDGE LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN (1)	WORK ZONE EDGE LINE, CLASS 1, 642 PAINT, YELLOW, AS PER PLAN (2)	WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN (3)	WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1, WHITE, AS PER PLAN (4)	WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1, YELLOW, AS PER PLAN (5)	WORK ZONE, CHANNELIZING LINE, CLASS 1, 740.06, TYPE 1, WHITE, AS PER PLAN (6)	WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN (7)	WORK ZONE DOTTED LINE, CLASS 1, 740.06, WHITE, AS PER PLAN (8)	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	SPECIAL - WORK ZONE GUARDRAIL							BRIDGE TERMINAL ASSEMBLY, TYPE 3	ANCHOR ASSEMBLY, MGS TYPE E	PORTABLE BARRIER, 50'	PORTABLE BARRIER, 50', BRIDGE MOUNTED
FROM	TO			FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	FT							EACH	EACH	FT	FT
PHASE 2B (WESTBOUND)																									
503+45	507+00	LT/RT						355																	
500+45	507+00	℄/RT								655															
503+45	507+00	RT/LT							355																
507+00	510+40	RT			340																				
507+00	512+28	RT					528																		
507+00	512+26	RT				526																			
510+40	512+43	RT									203														
512+43	527+04	RT						1461																	
512+28	529+95	RT								1767															
512+26	527+04	RT							1478																
505+09	508+28	RT																					320		
508+28	508+58	RT											1												
512+30	520+50	LT																					820		
520+50	520+80	LT											1												
0+00#	5+25#	℄			525																				
5+25#	6+60.87#	℄						136																	
2+01#	6+60.87#	LT				460																			
PHASE 2B (EASTBOUND)																									
501+06	507+00	℄/RT								594															
504+06	507+00	RT/LT						294																	
504+06	507+00	LT							294																
507+00	512+18	LT				518																			
507+00	512+16	LT					516																		
507+00	512+14	LT			514																				
512+18	523+04	LT							1086																
512+16	526+05	LT								1389															
512+14	514+84	RT						270																	
514+84	516+87	LT									203														
516+87	523+04	LT/RT						617																	
507+60	507+90	RT											1												
507+90	515+10	RT																					720		
514+84/0+00.0*	7+20*	℄						720																	
2+00.7*	3+46.6*	LT							150																
3+46.6*	7+20*	LT				389																			
# - ℄ TEMPORARY RAMP B																									
* - ℄ TEMPORARY RAMP D																									
SUB-TOTALS CARRIED TO SHEET 14				0	1379	1893	1044	3853	3363	4405	406	0	3	0							0	0	1860	0

MAINTENANCE

TRU-80-09.56

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STATION FROM	STATION TO	SIDE			614																606		622	
				WORK ZONE LANE LINE, CLASS 1, 740.06, TYPE 1, AS PER PLAN	(1) WORK ZONE EDGE LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN	(2) WORK ZONE EDGE LINE, CLASS 1, 642 PAINT, YELLOW, AS PER PLAN	(3) WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN	(4) WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1, WHITE, AS PER PLAN	(5) WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1, YELLOW, AS PER PLAN	(6) WORK ZONE, CHANNELIZING LINE, CLASS 1, 740.06, TYPE 1, WHITE, AS PER PLAN	(7) WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN	(8) WORK ZONE DOTTED LINE, CLASS 1, 740.06, WHITE, AS PER PLAN	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	SPECIAL - WORK ZONE GUARDRAIL							BRIDGE TERMINAL ASSEMBLY, TYPE 3	ANCHOR ASSEMBLY, MGS TYPE E	PORTABLE BARRIER, 50'	PORTABLE BARRIER, 50', BRIDGE MOUNTED
				FT	FT	FT	FT	FT	FT	FT	FT	FT	EACH	FT							EACH	EACH	FT	FT
PHASE 3 (WESTBOUND)																								
510+40	512+43	RT						203																
515+50	522+06.4	RT						656																
515+50	518+06	LT/RT								256														
515+50	518+06	RT								256														
518+06	522+06.4	RT										400												
506+80	512+30	RT																					550	
515+30	515+60	RT											1											
RAMP B																								
10+50	16+50	LT							600															
10+50	16+50	℄						600																
U.S. 62																								
30+82, RAMP D	258+21	RT							64															
30+82, RAMP D	258+82	RT						109																
258+82	261+82	RT						300																
258+14	258+44	RT											1											
258+44	261+82	RT																					340	
258+52	258+82	RT											1											
258+82	262+02	RT																					320	
259+32	262+42	LT																					310	
262+42	262+72	LT											1											
259+43	263+02	LT																					360	
263+02	263+32	LT											1											
259+43	28+00 (RAMP B)	LT						493																
263+97	28+00 (RAMP B)	LT							43															
# - ℄ TEMPORARY RAMP B																								
* - ℄ TEMPORARY RAMP D																								
SUB-TOTAL THIS SHEET				0	0	0	0	2361	707	512	0	400	5	0							0	0	1880	0
SUB-TOTAL (PHASE 1) FROM SHEET 12				7395	1489	1991	1991	12,932	11,182.5	13,621.5	502	1490	8	500							3	1	12,790	520
SUB-TOTAL (PHASE 2) FROM SHEET 13				0	1379	1893	1044	3853	3363	4405	406	0	3	0							0	0	1860	0
TOTALS CARRIED TO M.O.T NOTE SHEETS 8-10				7395	2868	3884	3035	19,146	14,546	18,539	908	1890	16	500							3	1	16,530	520

CALCULATED DTB CHECKED JLN

MAINTENANCE OF TRAFFIC SUBSUMMARY

TRU-80-09.56

SUGGESTED SEQUENCE OF CONSTRUCTION

PHASE 1A: RECONSTRUCT OUTSIDE SHOULDERS I-80 EB & WB
SHIFT TRAFFIC TO INSIDE USING 2-10'6" LANES AND PORTABLE BARRIER. FOLLOW SCD MT-102.10 USING 65 MPH WORK ZONE AND USE BUFFER ZONES.

BUILD TEMPORARY RAMPS.

PHASE 1B: SHIFT TRAFFIC TO RECONSTRUCTED OUTSIDE SHOULDER AND EX. LANES

BUILD INSIDE PAVEMENT WIDENING/RECONSTRUCTION AND PART WIDTH BRIDGE.

RESURFACE (℄ TO 12' LEFT) EB WITH PERMITTED LANE CLOSURE

PHASE 2A: SHIFT TRAFFIC TO INSIDE WIDENED PAVMENT AND NEW PART WIDTH BRIDGE. KEEP EXISTING RAMP B OPEN WHILE TIE-IN OF TEMPORARY RAMP B IS COMPLETED WITH RECONSTRUCTED/RAISED ROADWAY OF PHASE 1.

PHASE 2B: DIVERT RAMP B TO TEMPORARY RAMP B AND CONSTRUCT PART WIDTH BRIDGE AND WB ROADWAY

CONSTRUCT CLOSURE POURS

RESURFACE EB REMAINING PAVEMENT AND RAMP D

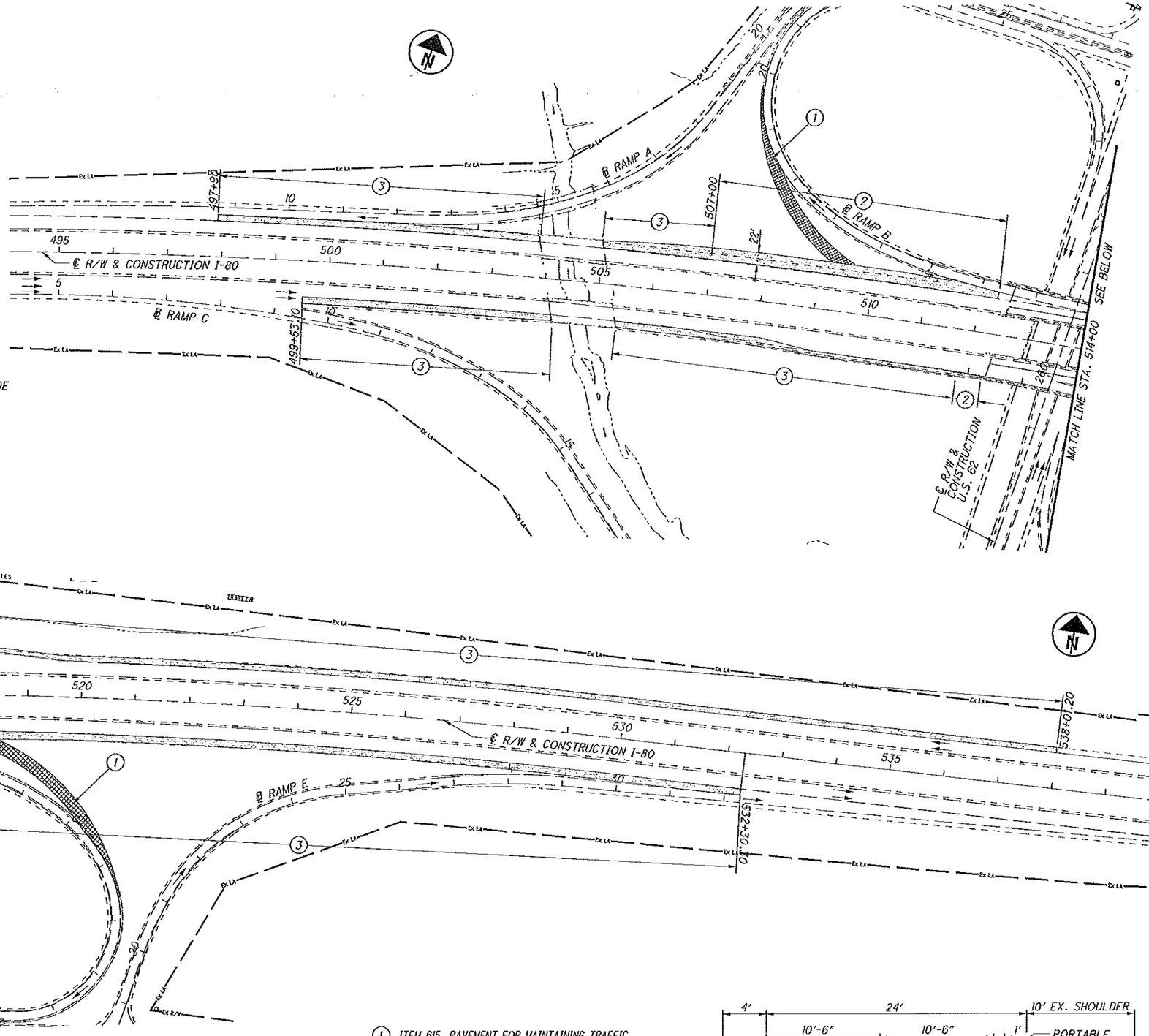
PAVE SURFACE COURSE FOR I-80 EB AND RAMP D PRIOR TO PHASE 3. COMPLETE TRAFFIC CONTROL MARKINGS AND SIGNS.

PHASE 3: FINISH REMAINING OUTSIDE PROFILE ADJUSTMENT/PAVING 24' WIDE FROM STA. 507+00 TO STA. 511+57 DUE TO TEMPORARY RAMP B AND 12' WIDE FROM STA. 511+57 TO APPROACH SLAB.

REMOVE TEMPORARY RAMPS

PAVE SURFACE COURSE FOR I-80 WB AND RAMP B.

FINALIZE TRAFFIC CONTROL MARKINGS AND SIGNS.



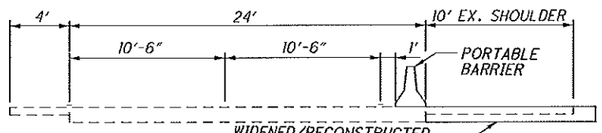
FOR DETAILED LAYOUT OF OUTSIDE SHOULDER WIDENING AND RECONSTRUCTION SEE SHEETS 33-41.

STATION CALLOUTS BASED OFF OF ℄ R/W & CONSTRUCTION I-80

(1) ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A (SEE SHEET 27 & 28 FOR LAYOUT)

(2) ITEM 615, PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

(3) PROPOSED SHOULDER BUILDUP SEE SHEET 4 FOR PROPOSED PAVEMENT LEGEND



I-80 SHOULDER RECONSTRUCTION

HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED DTB
CHECKED JLN

MAINTENANCE OF TRAFFIC - PHASE 1A
STA. 490+00 TO STA. 540+00

TRU-80-09.56

15
147

LEGEND

FULL DEPTH PAVEMENT
REPLACEMENT/WIDENING

RESURFACING

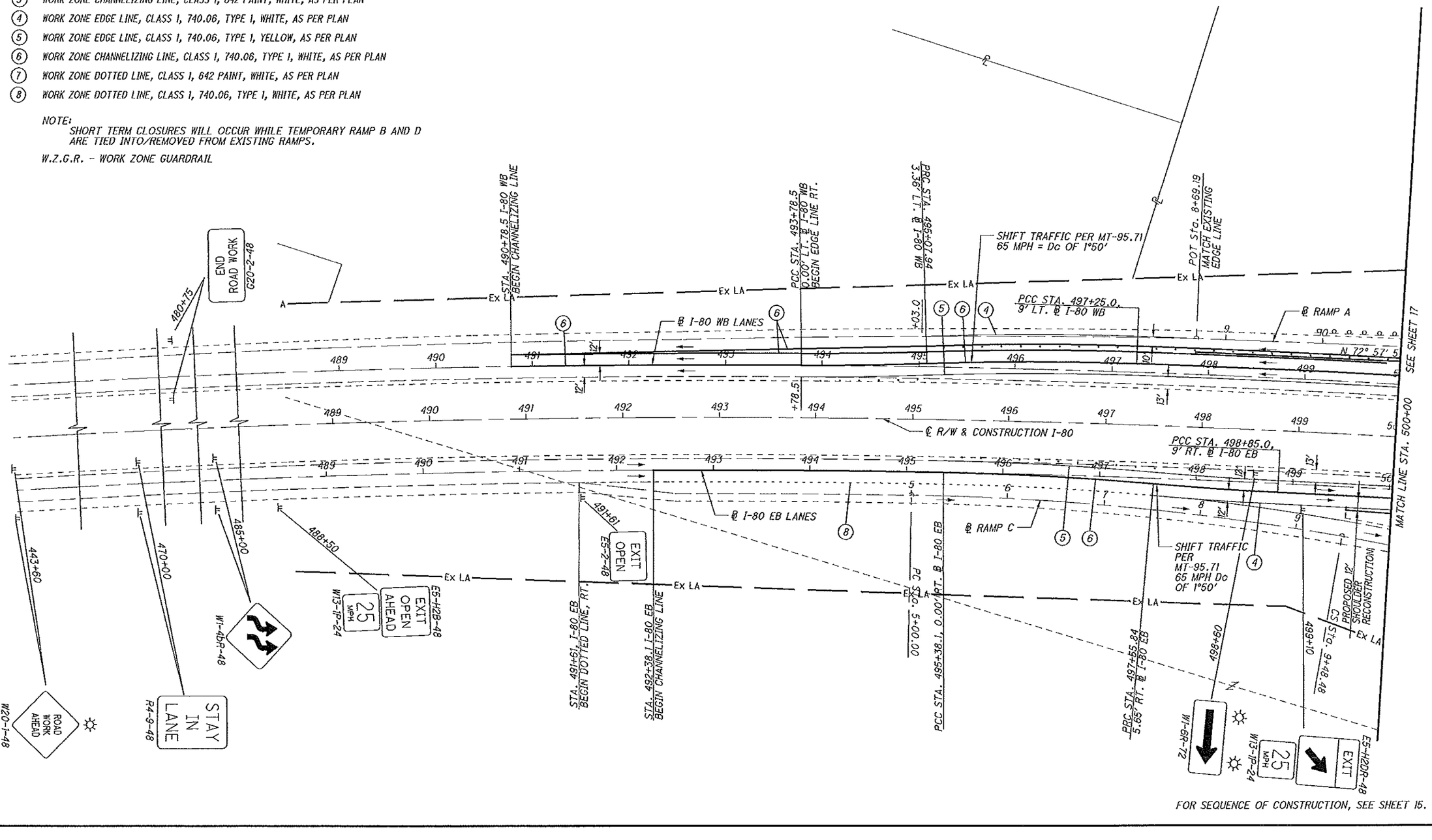
CONSTRUCT TEMPORARY RAMP
RELOCATION

FUTURE EDGE OF PAVEMENT

(1) WORK ZONE EDGE LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN
(2) WORK ZONE EDGE LINE, CLASS 1, 642 PAINT, YELLOW, AS PER PLAN
(3) WORK ZONE CHANNELIZING LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN
(4) WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1, WHITE, AS PER PLAN
(5) WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1, YELLOW, AS PER PLAN
(6) WORK ZONE CHANNELIZING LINE, CLASS 1, 740.06, TYPE 1, WHITE, AS PER PLAN
(7) WORK ZONE DOTTED LINE, CLASS 1, 642 PAINT, WHITE, AS PER PLAN
(8) WORK ZONE DOTTED LINE, CLASS 1, 740.06, TYPE 1, WHITE, AS PER PLAN

NOTE:
SHORT TERM CLOSURES WILL OCCUR WHILE TEMPORARY RAMP B AND D ARE TIED INTO/REMOVED FROM EXISTING RAMPS.

W.Z.G.R. - WORK ZONE GUARDRAIL



FOR SEQUENCE OF CONSTRUCTION, SEE SHEET 15.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JEN
CHECKED JLN

MAINTENANCE OF TRAFFIC - PHASE 1B
STA. 486+00 TO STA. 500+00

TRU-80-09.56

16
147

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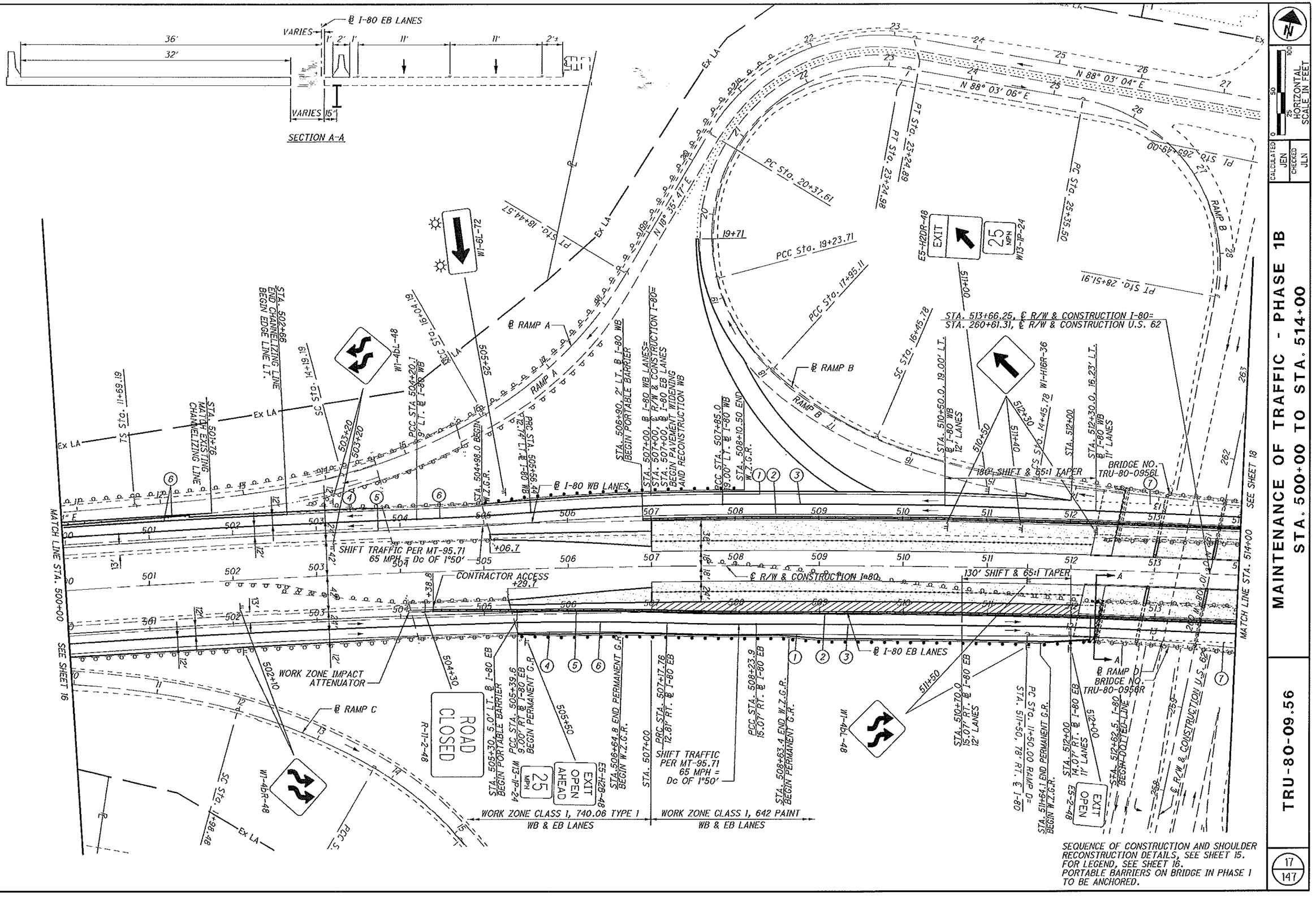

WORK ZONE CLASS 1, 642 PAINT WB & EB LANES

WORK ZONE CLASS 1, 740.06 TYPE 1 WB & EB LANES

℄ R/W & CONST. U.S. 62

264

Ex R/W

Ex LA

W1-4DL-48

W1-H16R-36

E5-H2B-48 EXIT OPEN AHEAD

25 MPH W13-1P-24

EXIT OPEN E5-2-48

STA. 515+06 BEGIN W.Z.G.R.

STA. 515+39.43, 15.62' LT. PC Sta. 10+50.00 RAMP B= STA. 515+50, 78' LT. I-80

STA. 515+50

STA. 515+73.4 END TEMPORARY G.R. BEGIN PERMANENT G.R.

STA. 517+00, ℄ I-80 WB LANES= END PAVEMENT WIDENING AND RECONSTRUCTION 15.62' LT., BEGIN SHIFT

STA. 520+70.0, ℄ I-80 10.00' LT., END SHIFT

STA. 522+00

PROPOSED 10' SHOULDER RECONSTRUCTION

515+22

517+70

518+70

519+70

520+10

BRIDGE NO. TRU-80-0956L

℄ RAMP B

℄ I-80 WB LANES

STA. 528+00, ℄ I-80 WB, 7.00' RT. END PORTABLE BARRIER

MATCH LINE STA. 514+00

SEE SHEET 17

65:1

FUTURE THIRD LANE EDGE OF PAVEMENT

℄ R/W & CONSTRUCTION I-80

STA. 523+10, ℄ I-80 EB, 3.00' LT. END PORTABLE BARRIER

CONTRACTOR ACCESS

SEE SHEET 19

℄ I-80 EB LANES

65:1 SHIFT & TAPER

STA. 523+85.0 9.00' RT. 12 LANES

STA. 523+20.0 10.00' RT. 11' LANES

MATCH LINE STA. 528+00

BRIDGE NO. TRU-80-0956R

℄ RAMP D

CS Sta. 15+98.48

STA. 515+10.1, 14.28' RT. ℄ I-80 EB

STA. 515+18, ℄ I-80 EB END DOTTED LINE, RT. MATCH EXISTING CHANNELIZING LINE (RAMP) BEGIN EDGE LINE, RT.

STA. 516+91.24, ℄ I-80 EB LANES END PROPOSED PAVEMENT WIDENING AND RESURFACING

SC Sta. 18+23.48

STA. 518+40.0 ℄ I-80 EB 14.28' RT., BEGIN SHIFT

PCC Sta. 19+58.48

PCC Sta. 21+10.48

PT Sta. 30+72.82

SC Sta. 27+77.82

TS Sta. 25+77.82

PT Sta. 24+78.97

519+50

520+60

518+50

19+50

ROAD WORK AHEAD W20-1-48

W13-1P-24 25 MPH E5-H2DB-48 EXIT

W1-H16L-36

PROPOSED 12' SHOULDER RECONSTRUCTION

STA. 521+20.0 ℄ I-80 EB 10.00' RT., END SHIFT

526+00

N 76° 39' 22" E

℄ RAMP E

PC Sta. 26+78.31

PT Sta. 24+84.82

W1-4DL-48

Ex LA

℄ I-80 WB LANES

VARIES

1' 11' 11' 1' 2' 36' 32'

15' VARIES

SECTION B-B

SEQUENCE OF CONSTRUCTION AND SHOULDER RECONSTRUCTION DETAILS, SEE SHEET 15.
FOR LEGEND, SEE SHEET 16.
PORTABLE BARRIERS ON BRIDGE IN PHASE 1 TO BE ANCHORED.

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED JEN CHECKED JLN

MAINTENANCE OF TRAFFIC - PHASE 1B
STA. 514+00 TO STA. 528+00

TRU-80-09.56

18 147

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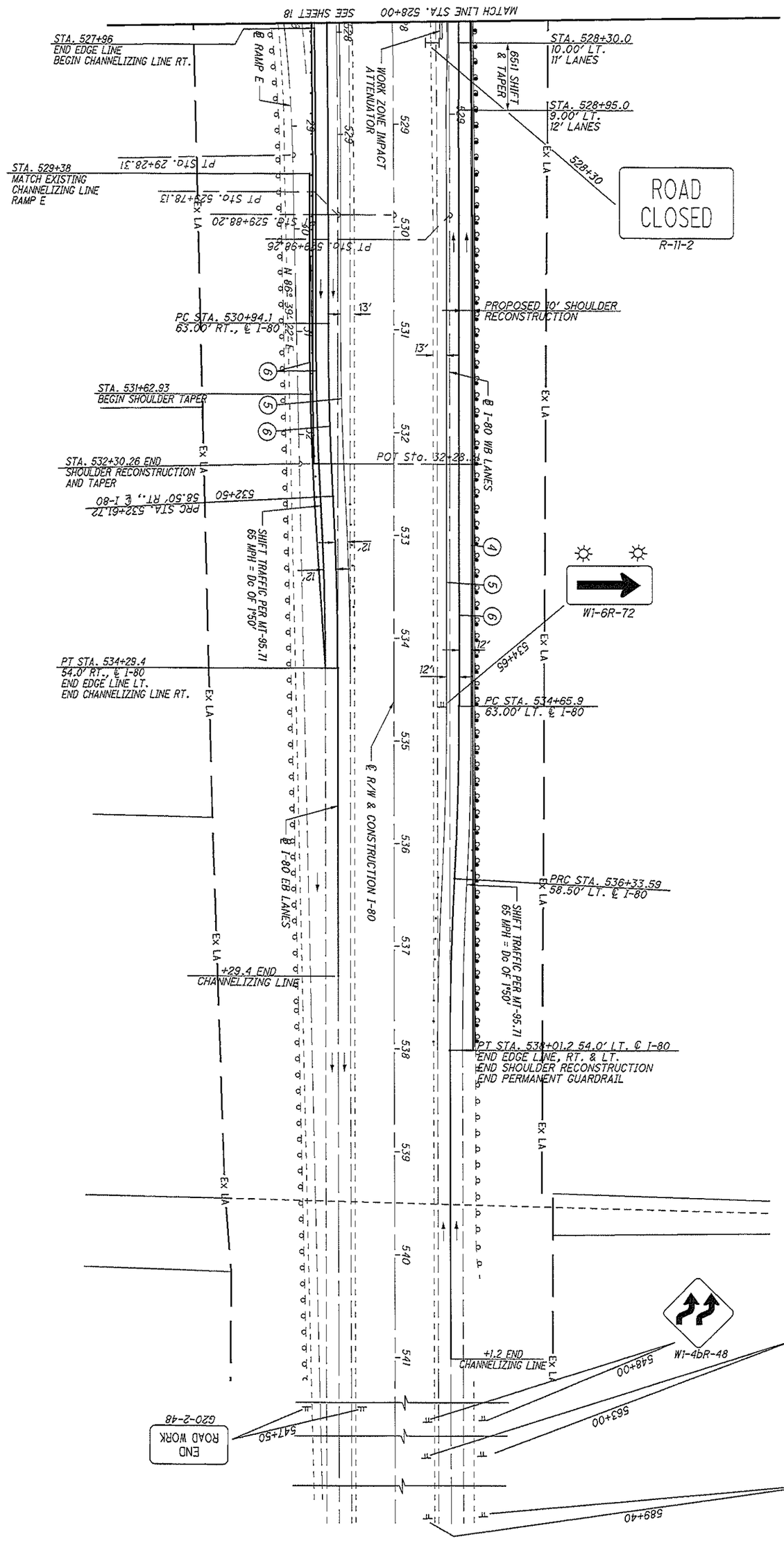

SEQUENCE OF CONSTRUCTION AND SHOULDER RECONSTRUCTION DETAILS, SEE SHEET 15.
FOR LEGEND, SEE SHEET 16.

19 / 147	TRU-80-09.56	MAINTENANCE OF TRAFFIC - PHASE 1B STA. 528+00 TO STA. 541+00	CALCULATED JEN CHECKED JLN 0 25 50 100 HORIZONTAL SCALE IN FEET

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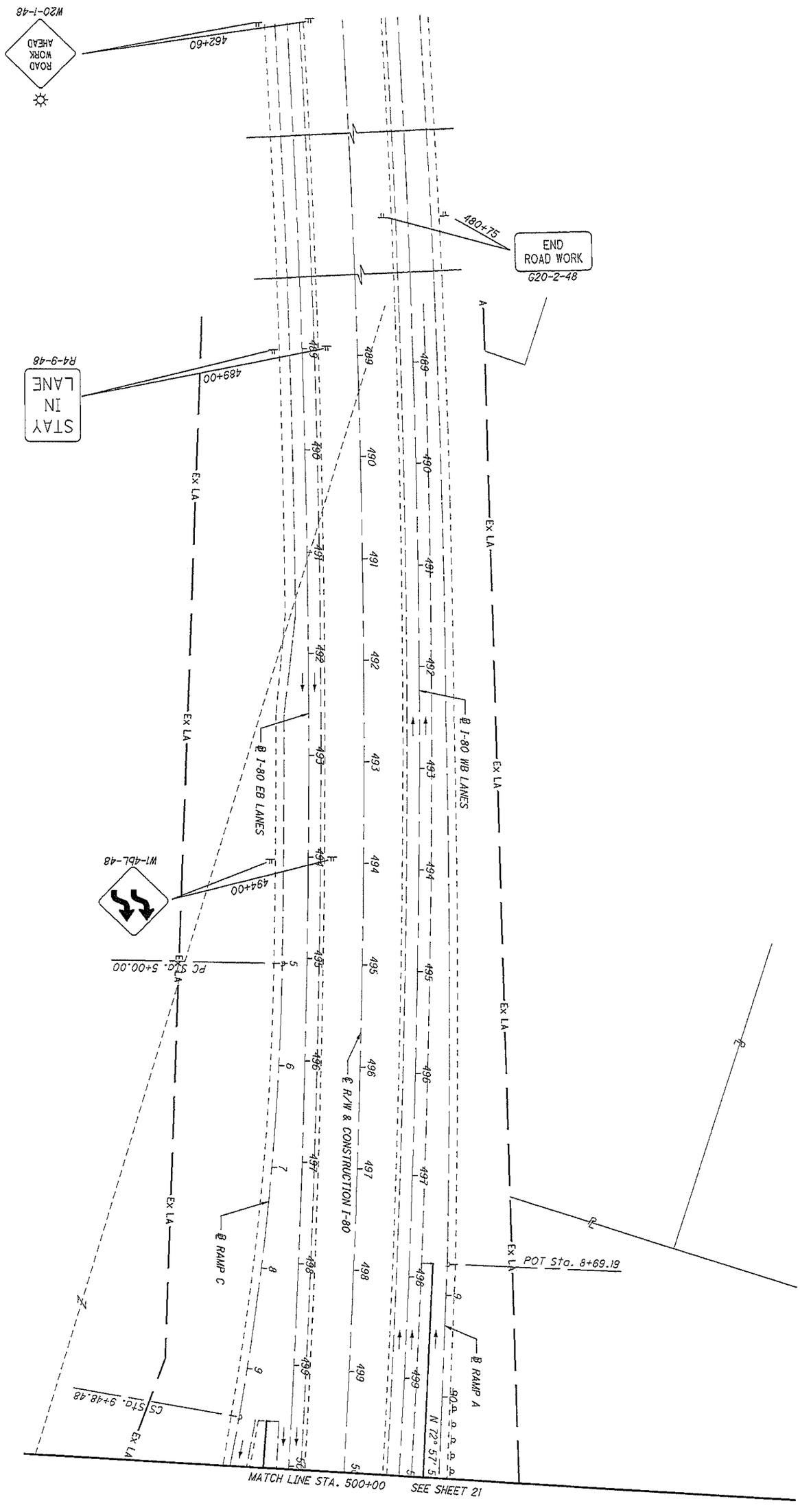
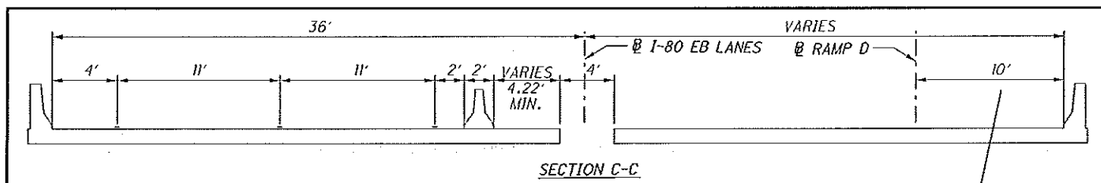


SEQUENCE OF CONSTRUCTION AND SHOULDER RECONSTRUCTION DETAILS, SEE SHEET 15. FOR LEGEND, SEE SHEET 16.

20 / 147	TRU-80-09.56	MAINTENANCE OF TRAFFIC - PHASE 2B STA. 488+50 TO STA. 500+00	CALCULATED JEN CHECKED JLN	0 50 25 100 HORIZONTAL SCALE IN FEET



SECTION C-C

NOTE:
SHORT TERM CLOSURES WILL OCCUR WHILE TEMPORARY RAMP B AND D ARE TIED INTO/REMOVED FROM EXISTING RAMPS.

WORK ZONE CLASS 1, 642 PAINT EXCEPT BRIDGES

WORK ZONE CLASS 1, 740.06 TYPE 1

PC Sta. 20+37.61

PT Sta. 23+24.89

PC Sta. 29+35.50

PT Sta. 28+51.91

N 88° 03' 04" E

N 88° 03' 06" E

N 18° 35' 47" E

PT Sta. 18+44.57

PT STA. 6+60.87, ℄ TEMP RAMP B=
STA. 19+71.33 ℄ RAMP B

PCC Sta. 17+95.11

PCC Sta. 16+04.19

PCC Sta. 14+18.19

TS Sta. 11+69.19

SC Sta. 9+98.48

EXIT 25 MPH
E5-H20R-48
W13-1P-24

EXIT OPEN
E5-2-48

EXIT OPEN AHEAD
E5-H28-48

W1-6R-72

W1-6L-72

ROAD CLOSED
R11-2

STA. 500+45.14 ℄ I-80 WB
BEGIN CHANNELIZING LINE

STA. 501+06.0 ℄ I-80 EB
BEGIN CHANNELIZING LINE

STA. 507+00, ℄ I-80 WB LANES=
STA. 507+00, ℄ R/W & CONSTRUCTION I-80=
STA. 507+00, ℄ I-80 EB LANES
BEGIN PAVEMENT RECONSTRUCTION

STA. 16+50, ℄ RAMP B
MATCH EXISTING PAVEMENT
END PAVEMENT RECONSTRUCTION
SC Sta. 16+45.78

STA. 510+40
END EDGE LINE, LT.
BEGIN DOTTED LINE=
STA. 24+00.55, ℄ TEMP RAMP B

STA. 511+55
BEGIN 65:1 TAPER, 12' LANES

STA. 512+20, 21.00' RT. ℄ I-80 WB
END 65:1 TAPER, 11' LANES

STA. 512+30, 7' RT. ℄ I-80 WB
BEGIN PORTABLE BARRIER

STA. 0+00.00 ℄ TEMPORARY RAMP B=
STA. 512+43.34,
10.00' LT. ℄ I-80 WB
END DOTTED LINE

BRIDGE NO.
TRU-80-0956L

℄ R/W & CONSTRUCTION U.S. 62

PCC STA. 508+75.00
21.00' RT. ℄ I-80 WB

℄ I-80 WB LANES

+18
END P.B.

PCC STA. 503+45.39 ℄ I-80 WB
BEGIN EDGE LINE RT./LT.

+09
BEGIN P.B.

+39

PRC STA. 506+77.14
13.16' RT. ℄ I-80 WB

PCC STA. 504+06.03 ℄ I-80 EB
BEGIN EDGE LINE, LT./RT.

℄ I-80 EB LANES

PRC STA. 506+06.03
7.82' LT. ℄ I-80 EB

FINAL EDGE OF SHOULDER

SHIFT TRAFFIC PER MT-95.71
65 MPH = Do OF 1°50'

506+40

506+90

WORK ZONE
IMPACT ATTENUATOR
CONTRACTOR ACCESS

STA. 507+90, 14.0' RT. ℄ I-80 E.B.
BEGIN PORTABLE BARRIER

WORK ZONE
IMPACT ATTENUATOR
℄ R/W & CONSTRUCTION I-80

PCC STA. 509+35.00
21.00 LT. ℄ I-80 EB

TEMPORARY PAVEMENT
WIDENING FROM PHASE 1

509+40

511+80

STA. 511+35, 21.00' LT. ℄ I-80 E.B.
BEGIN 65:1 TAPER, 12' LANES

STA. 511+50, 78' RT. ℄ I-80
PC STA. 511+50.00 RAMP D=

STA. 512+00, 21.00' LT. ℄ I-80 E.B.
END 65:1 TAPER, 11' LANES

STA. 512+00, 7' LT. ℄ I-80 E.B.
END PORTABLE BARRIER TAPER

PERM. G.R.

BRIDGE NO.
TRU-80-0956R

℄ RAMP B

STA. 513+66.25, ℄ R/W & CONSTRUCTION I-80=
STA. 260+61.31, ℄ R/W & CONSTRUCTION U.S. 62

SEE SHEET 20

SEE SHEET 22

MATCH LINE STA. 500+00

MATCH LINE STA. 514+00

SEQUENCE OF CONSTRUCTION AND SHOULDER RECONSTRUCTION DETAILS, SEE SHEET 15.
FOR LEGEND, SEE SHEET 16.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JEN
CHECKED JLN

MAINTENANCE OF TRAFFIC - PHASE 2B
STA. 500+00 TO STA. 514+00

TRU-80-09.56

21
147

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NOTE:
SHORT TERM CLOSURES WILL OCCUR WHILE TEMPORARY RAMP B AND D ARE TIED INTO/REMOVED FROM EXISTING RAMPS.

WORK ZONE CLASS 1, 642 PAINT EXCEPT BRIDGES

WORK ZONE CLASS 1, 740.06 TYPE 1

℄ R/W & CONST. U.S. 62

STA. 515+30, 21' RT. @ I-80 W.B. BEGIN 65:1 TAPER, 11' LANES

PC Sta. 10+50.00 RAMP B= STA. 515+50, 78' LT. I-80

STA. 515+95, 21' RT. @ I-80 W.B. END 65:1 TAPER, 12' LANES

W1-4bR-48

STA. 517+00, @ I-80 WB LANES= END PAVEMENT WIDENING AND RECONSTRUCTION

STA. 517+10, 5' RT. @ I-80 W.B. BEGIN PORTABLE BARRIER TAPER

E5-42B-48 EXIT OPEN AHEAD

25 MPH W13-1P-24

STA. 520+40, 12' LT. @ I-80 W.B. END PORTABLE BARRIER TAPER

+50 END P.B.

WORK ZONE IMPACT ATTENUATOR

CONTRACTOR ACCESS

ROAD CLOSED

R-11-2

PC STA. 521+74.7, 1.00' RT. @ I-80 WB

W1-6L-72

PRC STA. 523+72.65, 13.19' RT. @ I-80 WB

SHIFT TRAFFIC PER MT-95.71 65 MPH = Dc OF 1°50'

BRIDGE NO. TRU-80-0956L @ RAMP B

@ I-80 WB LANES

MATCH LINE STA. 514+00

SEE SHEET 21

+10 END P.B.

PCC STA. 517+74.91, 2' LT. @ I-80 EB

PRC STA. 521+06.83, 7.82' LT. @ I-80 EB

℄ R/W & CONSTRUCTION I-80

PCC STA. 527+04.3 @ I-80 WB END EDGE LINE, RT./LT.

SEE SHEET 23

@ I-80 EB LANES

TEMPORARY PAVEMENT WIDENING FROM PHASE 1 & FINAL EDGE OF SHOULDER

SHIFT TRAFFIC PER MT-95.71 65 MPH = 1°50'

W1-6R-72

PCC STA. 523+03.97 @ I-80 EB END EDGE LINE, LT./RT.

MATCH LINE STA. 528+00

@ RAMP D

@CS Sta. 15+98.48

PC Sta. 0+00.00 @ TEMPORARY RAMP D= STA. 514+84.25, 10.00' LT. @ I-80 EB

STA. 515+10, 21.00' LT. @ I-80 E.B. BEGIN 65:1 TAPER, 11' LANES

STA. 515+75, 21.00' RT. @ I-80 E.B. END 65:1 TAPER, 12' LANES

515+30

BRIDGE NO. TRU-80-0956R

PT Sta. 30+72.82

EXIT OPEN E5-2-48

25 MPH W13-1P-24

EXIT E5-42DR-48

STA. 516+91.24, @ I-80 EB LANES END PROPOSED PAVEMENT WIDENING

517+65

PCC Sta. 3+05.17

SC Sta. 18+23.48

PCC Sta. 19+58.48

PCC Sta. 21+10.48

PT Sta. 7+20.03, @ TEMPORARY RAMP D= STA. 21+61.04 @ RAMP D

SC Sta. 27+77.82

TS Sta. 25+77.82

PT Sta. 24+78.97

ROAD WORK AHEAD W20-1-48

19+50

@ RAMP E

N 76° 39' 22" E

PC Sta. 26+78.31

Ex LA

PT Sta. 24+84.82

STA. 526+05 END CHANNELIZING LINE

VARIES

36'

10'

@ RAMP B

@ I-80 WB LANES

4'

VARIES 3.64' MIN.

2'

2'

11'

11'

4'

SECTION D-D

SEQUENCE OF CONSTRUCTION AND SHOULDER RECONSTRUCTION DETAILS, SEE SHEET 15.
FOR LEGEND, SEE SHEET 16.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JEN
CHECKED JLN

MAINTENANCE OF TRAFFIC - PHASE 2B
STA. 514+00 TO STA. 528+00

TRU-80-09.56

22
147

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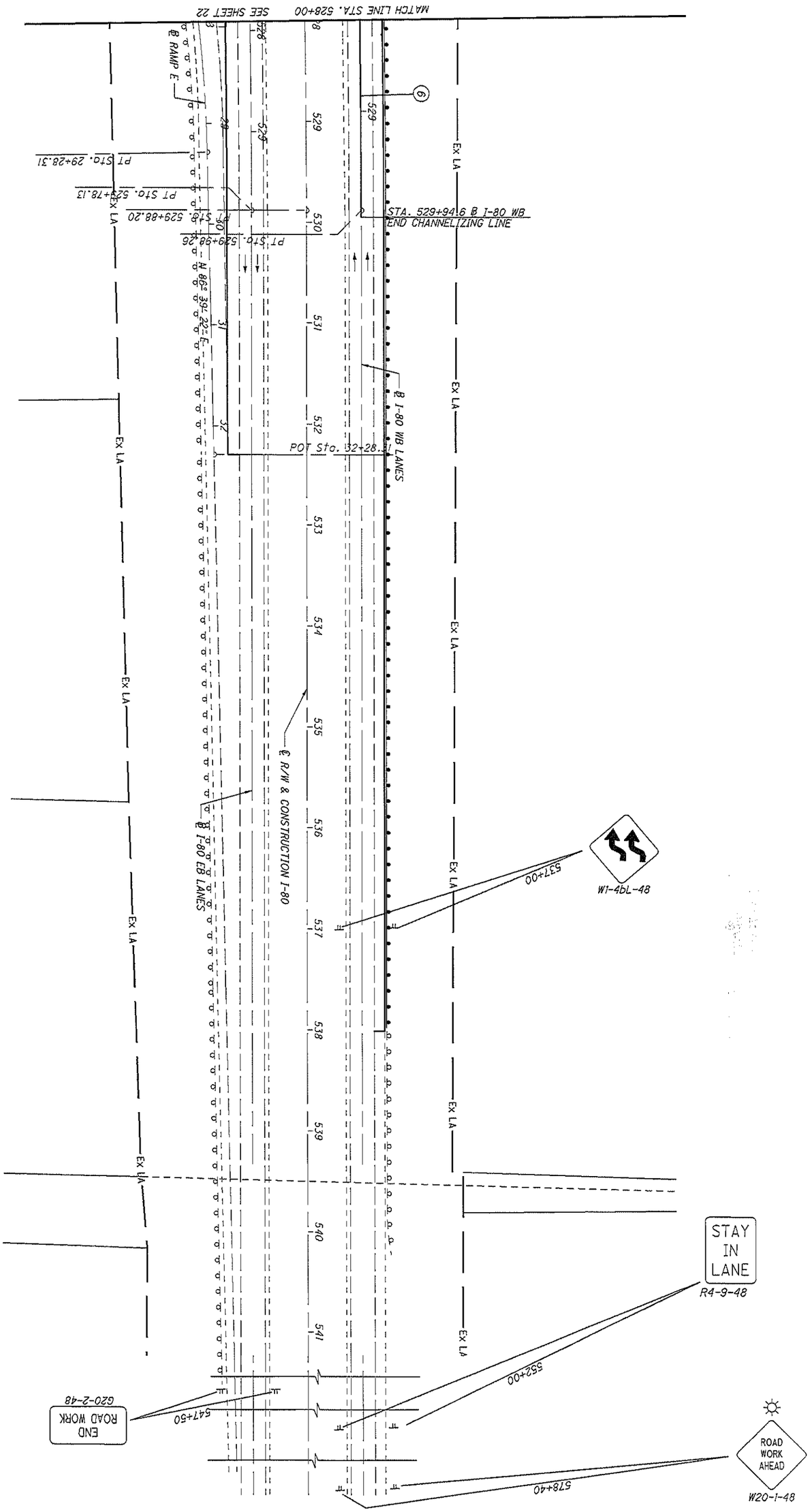

SEQUENCE OF CONSTRUCTION AND SHOULDER RECONSTRUCTION DETAILS, SEE SHEET 15.
FOR LEGEND, SEE SHEET 16.

23 / 147	TRU-80-09.56	MAINTENANCE OF TRAFFIC - PHASE 2B STA. 528+00 TO STA. 541+00	CALCULATED JEN CHECKED JLN 0 50 100 25 HORIZONTAL SCALE IN FEET N

NOTE:
END ROAD WORK SIGNS SHOWN ON SHEET 20 TO REMAIN FOR PHASE 3.

Ex LA
TS Sta. 11+69.19
SC Sta. 14+19.19
CS Sta. 16+04.19
PT Sta. 18+44.57
N 18° 35' 47" E
RAMP A
RAMP B
PC Sta. 20+37.61
PT Sta. 23+24.89
PT Sta. 23+24.98
PC Sta. 25+35.50
PT Sta. 265+49.00
PCC Sta. 19+23.71
PCC Sta. 17+95.11
SC Sta. 16+45.78
PT Sta. 28+51.91
N 88° 03' 04" E
N 88° 03' 06" E
℄ R/W & CONSTRUCTION U.S. 62
SEE SHEET 25
MATCH LINE STA. 514+00
BRIDGE NO. TRU-80-0956L
BRIDGE NO. TRU-80-0956R
℄ RAMP B
℄ RAMP D
W1-6R-72
STA. 505+91.05
STA. 506+80.40, 0.80' LT. ℄ I-80 WB LANES BEGIN PORTABLE BARRIER
STA. 507+00 ℄ I-80 WB LANES
TEMP. RAMP REMOVED DURING PHASE 3
TEMPORARY PAVEMENT REMOVED DURING PHASE 3
FINAL EDGE OF SHOULDER ℄ I-80 WB LANES
PCC STA. 508+75.00 21.00' RT. ℄ I-80 WB
STA. 511+57.00 WB LANES
SC Sta. 14+45.78
STA. 512+34.25 WB LANES
+43 END EDGE LINE
+40 BEGIN EDGE LINE
PCC STA. 503+45.39 ℄ I-80 WB
SHIFT TRAFFIC PER MT-95.71
65 MPH = Dc OF 1°50'
PRC STA. 506+77.14
13.16' RT. ℄ I-80 WB
WORK ZONE IMPACT ATTENUATOR
℄ R/W & CONSTRUCTION I-80
℄ I-80 EB LANES
PC Sta. 11+50.00 RAMP D=
STA. 511+50, 78' RT. ℄ I-80
STA. 513+66.25, ℄ R/W & CONSTRUCTION I-80=
STA. 260+61.31, ℄ R/W & CONSTRUCTION U.S. 62
SC Sta. 498.48
PCC Sta.
SEQUENCE OF CONSTRUCTION AND SHOULDER RECONSTRUCTION DETAILS, SEE SHEET 15.
FOR LEGEND, SEE SHEET 16.

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED JEN
CHECKED JLN

MAINTENANCE OF TRAFFIC - PHASE 3
STA. 500+00 TO STA. 514+00

TRU-80-09.56

24
147

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NOTE:
ADDITIONAL TEMPORARY PAVEMENT MARKING AND SIGNING FROM SHEET 23, FOR PHASE 2, TO REMAIN FOR PHASE 3 WESTBOUND.

MATCH LINE STA. 514+00
SEE SHEET 24

℄ R/W & CONST. U.S. 62
Ex R/W
Ex LA
E5-H20R-48 EXIT 25 MPH W13-1P-24
PC Sta. 10+50.00 RAMP B5
STA. 515+50, 78' LT. I-80
+50 END EDGE LINE
BEGIN CHANNELIZING LINE
516+30
WORK ZONE IMPACT ATTENUATOR
CONTRACTOR ACCESS
+06 END CHANNELIZING LINE
W1-6L-72
521+80
STA. 522+06.4 ℄ I-80 WB
END EDGE LINE TAPER, 8.8' RT.
522+10
E5-2-48 EXIT OPEN
523+80
W1-6L-72
E5-H2B-48 EXIT OPEN AHEAD 25 MPH W13-1P-24
532+00
BRIDGE NO. TRU-80-0956L
℄ RAMP B
SHIFT TRAFFIC PER MT-95.71
65 MPH = Dc OF 1°50'
℄ I-80 WB LANES
515+30 END P.B.
℄ R/W & CONSTRUCTION I-80
PCC STA. 527+04.3 ℄ I-80 WB
END EDGE LINE RT. AND LT.
℄ I-80 EB LANES
EL
LL
CH
BRIDGE NO. TRU-80-0956R
CS Sta. 15+98.48
℄ RAMP D
RAMP D
SC Sta. 18+23.48
PCC Sta. 19+58.48
PCC Sta. 21+10.48
TEMP. RAMP REMOVED DURING PHASE 3
PT Sta. 30+72.82
SC Sta. 27+77.82
TS Sta. 25+77.82
PT Sta. 24+78.97
℄ RAMP E
N 76° 39' 22" E
PC Sta. 26+78.31
PT Ex LA
Sta. 24+84.82
Ex LA

SEQUENCE OF CONSTRUCTION AND SHOULDER RECONSTRUCTION DETAILS, SEE SHEET 15.
FOR LEGEND, SEE SHEET 16.
FOR TRAFFIC CONTROL LEGEND SEE SHEET 71.

HORIZONTAL SCALE IN FEET
0 25 50 100
CALCULATED JEN
CHECKED JLN

MAINTENANCE OF TRAFFIC - PHASE 3
STA. 514+00 TO STA. 528+00

TRU-80-09.56

25
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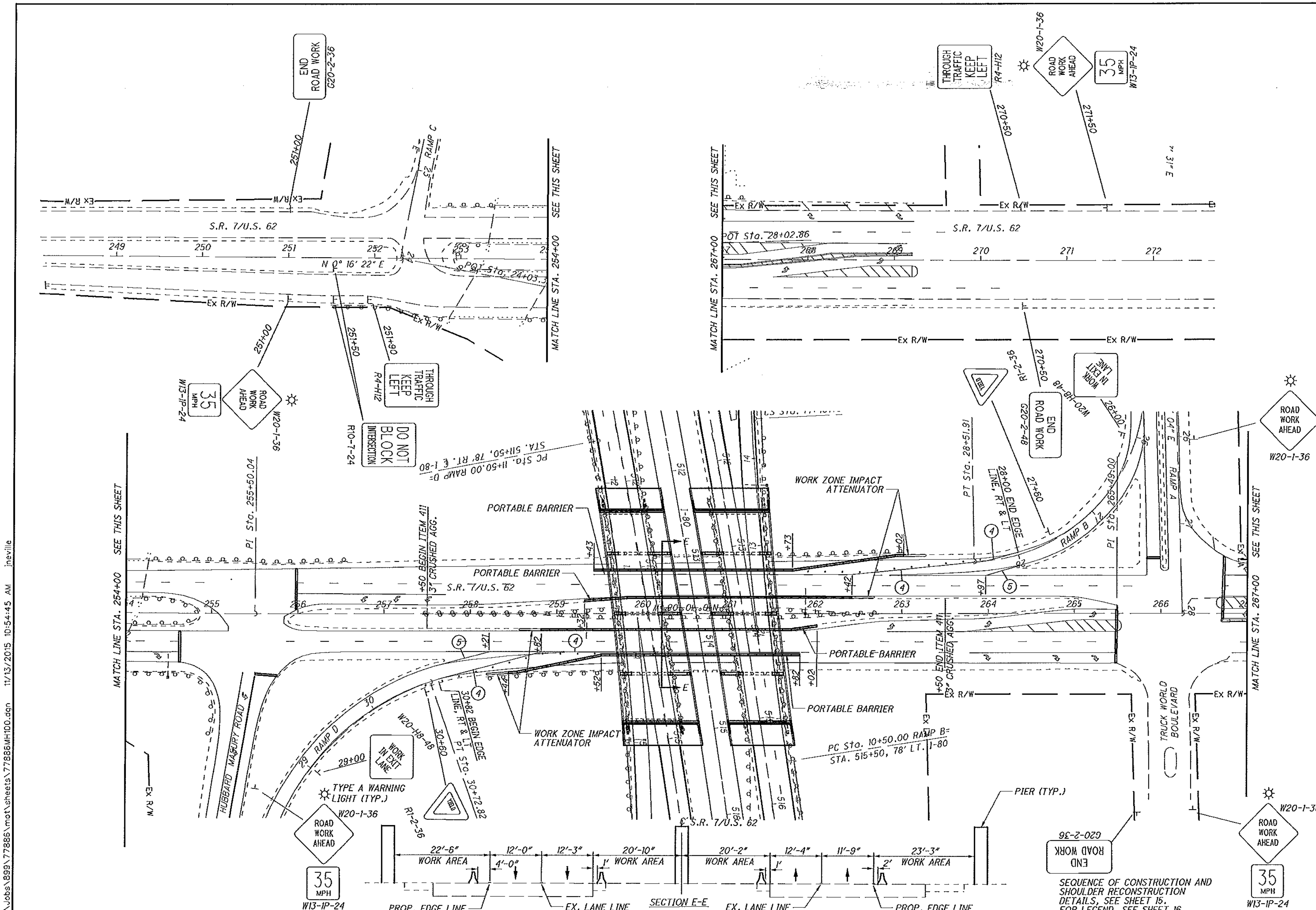
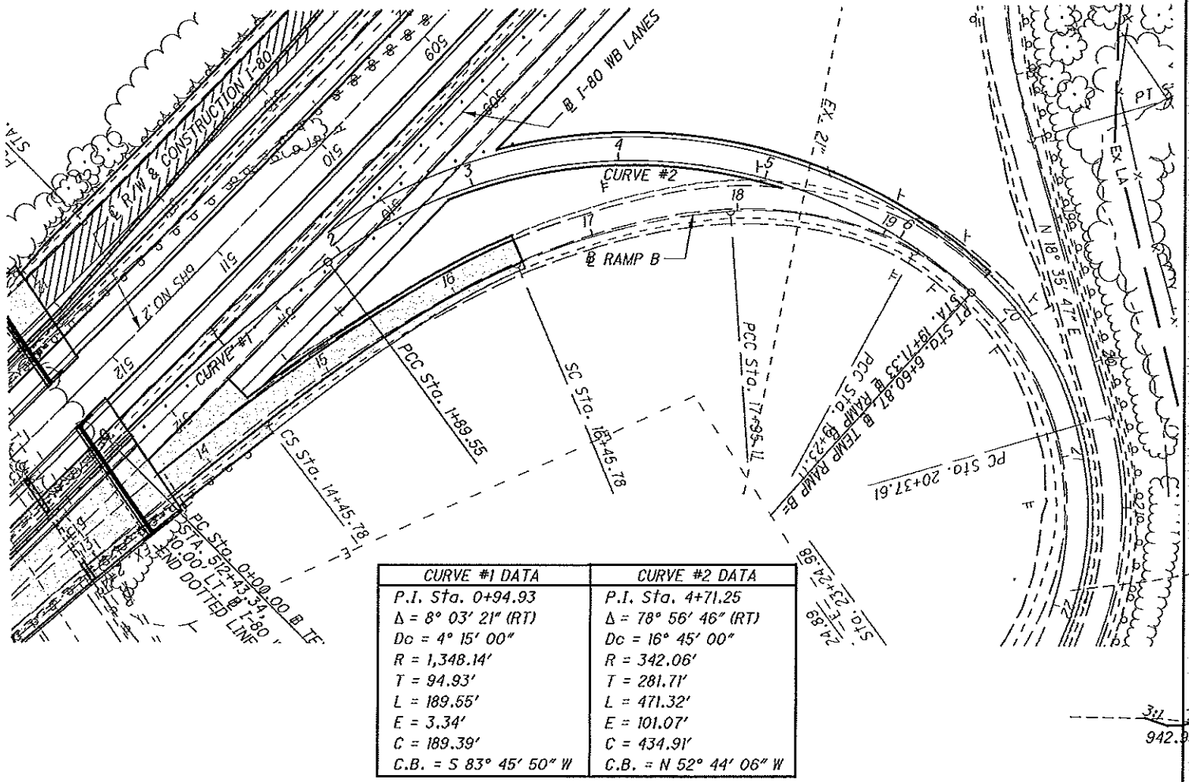

END ROAD WORK
G20-2-36
251+00
RAMP C
S.R. 7/U.S. 62
249
250
251
252
N 0° 16' 22" E
PQT Sta. 24+03.3
Ex R/W
251+50
251+90
THROUGH TRAFFIC KEEP LEFT
R4-H12
ROAD WORK AHEAD
35 MPH
W13-1P-24
W20-1-36
DO NOT BLOCK INTERSECTION
R10-7-24
MATCH LINE STA. 254+00
SEE THIS SHEET
PC Sta. 11+50.00 RAMP D=
STA. 511+50, 78' RT. ℄ I-80
MATCH LINE STA. 267+00
POT Sta. 28+02.86
270
271
272
270+50
271+50
WORK IN EXIT LANE
W20-H8-48
R1-2-36
PT Sta. 28+51.91
28+00 END EDGE LINE, RT & LT
27+60
WORK ZONE IMPACT ATTENUATOR
PORTABLE BARRIER
PI Sta. 255+50.04
+50 BEGIN ITEM 411 3" CRUSHED AGG.
255
256
257
258
259
260
262
263
264
265
266
I-80
RAMP B
RAMP A
PI Sta. 265+49.00
+50 END ITEM 411 3" CRUSHED AGG.
HUBBARD MASURY ROAD
RAMP D
29+00
30+60
30+82 BEGIN EDGE LINE, RT & LT
PT Sta. 30+72.82
TYPE A WARNING LIGHT (TYP.)
PC Sta. 10+50.00 RAMP B=
STA. 515+50, 78' LT. I-80
TRUCK WORLD BOULEVARD
PIER (TYP.)
℄ S.R. 7/U.S. 62
22'-6" WORK AREA
4'-0"
12'-0"
12'-3"
1'
20'-10" WORK AREA
20'-2" WORK AREA
12'-4"
11'-9"
2'
23'-3" WORK AREA
PROP. EDGE LINE
EX. LANE LINE
SECTION E-E
SEQUENCE OF CONSTRUCTION AND SHOULDER RECONSTRUCTION DETAILS, SEE SHEET 15.
FOR LEGEND, SEE SHEET 16.
HORIZONTAL SCALE IN FEET
0 25 50 100

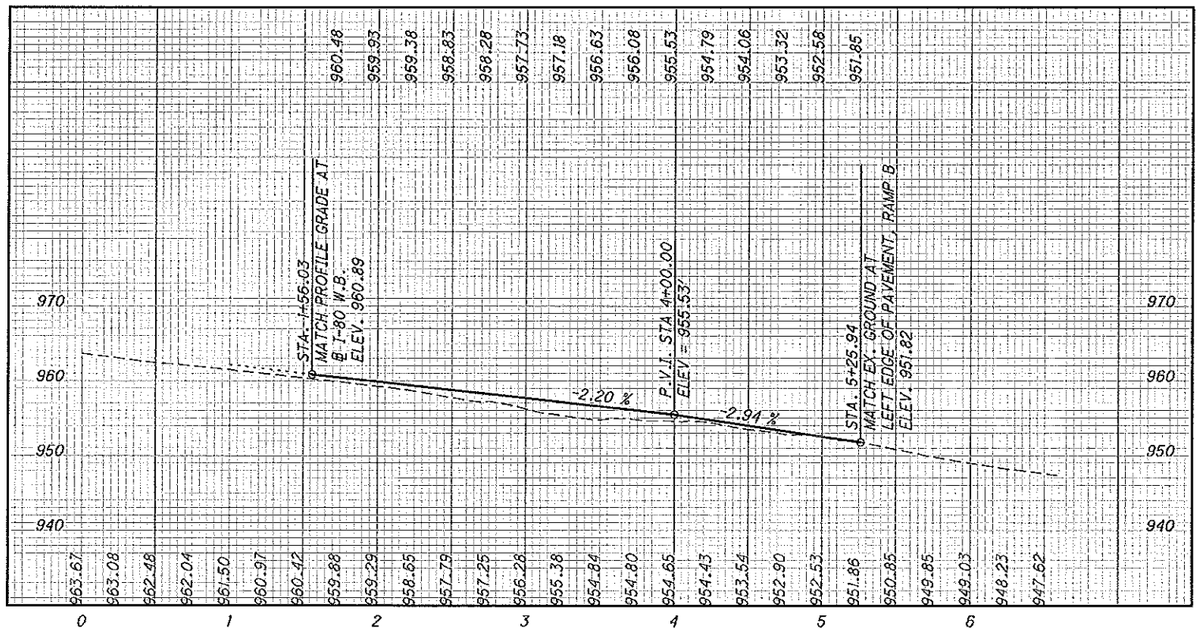
CALCULATED JEN
CHECKED JLN

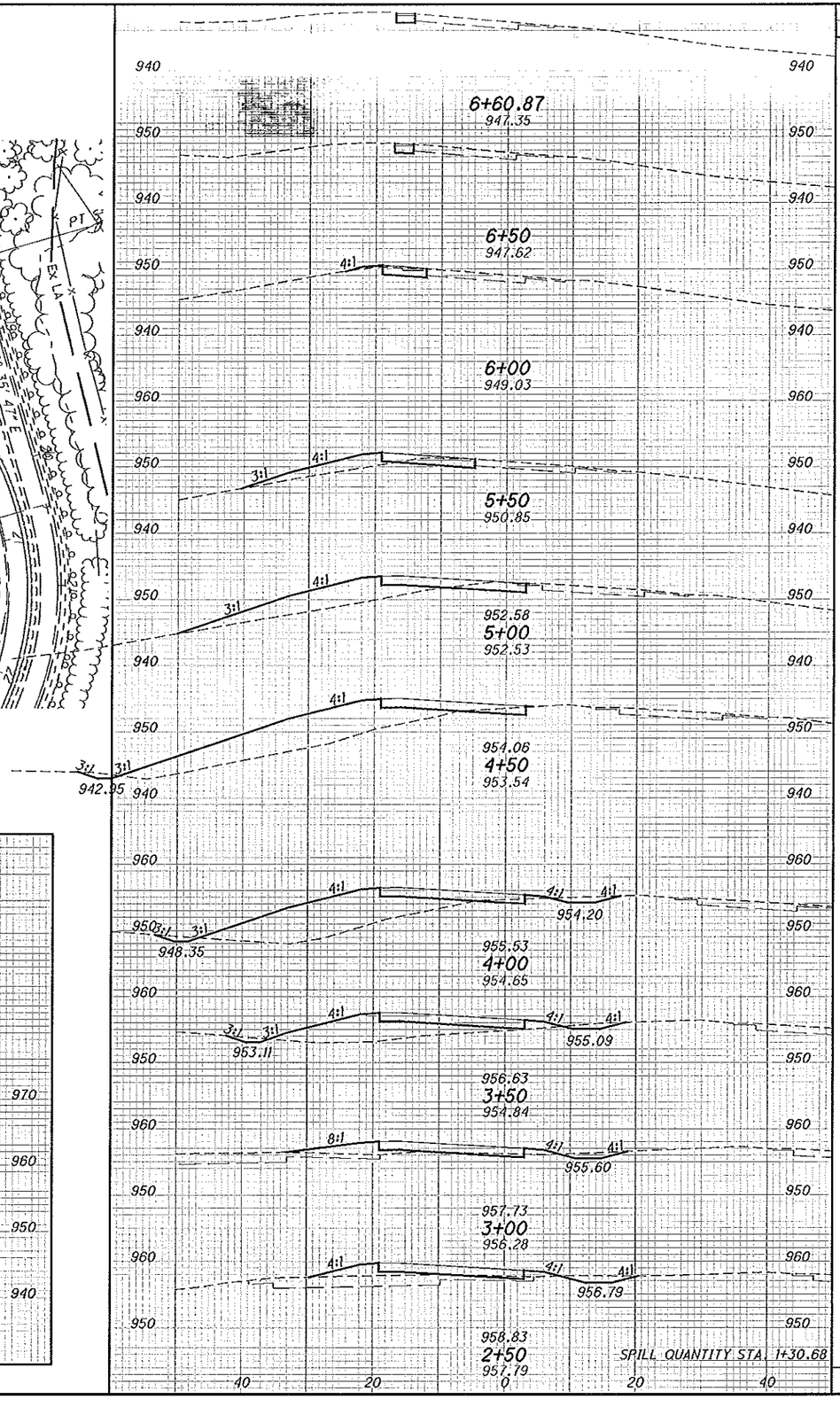
MAINTENANCE OF TRAFFIC - U.S. 62
STA. 248+50 TO STA. 272+50

TRU-80-09.56



CURVE #1 DATA	CURVE #2 DATA
P.I. Sta. 0+94.93	P.I. Sta. 4+71.25
Δ = 8° 03' 21" (RT)	Δ = 78° 56' 46" (RT)
Dc = 4° 15' 00"	Dc = 16° 45' 00"
R = 1,348.14'	R = 342.06'
T = 94.93'	T = 281.71'
L = 189.65'	L = 471.32'
E = 3.34'	E = 101.07'
C = 189.39'	C = 434.91'
C.B. = S 83° 45' 50" W	C.B. = N 52° 44' 06" W





END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
3		1	
3		9	1
7	1		
		16	28
10	29		
		20	102
11	81		
		19	232
9	170		
		20	293
12	147		
		19	212
8	82		
		24	105
18	31		
		60	82
47	58		
		104	128
0	0		
		292	1183

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED JLN
CHECKED EPS

TEMPORARY ROAD PLAN AND PROFILE
RAMP B

TRU-80-09.56

27/147

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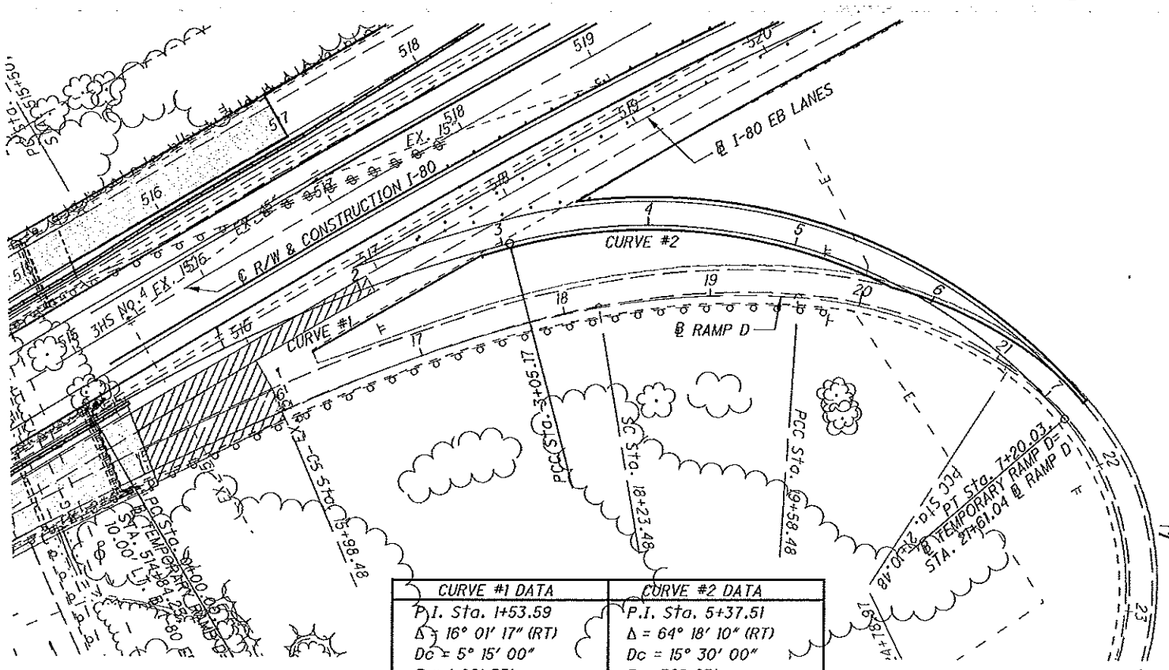
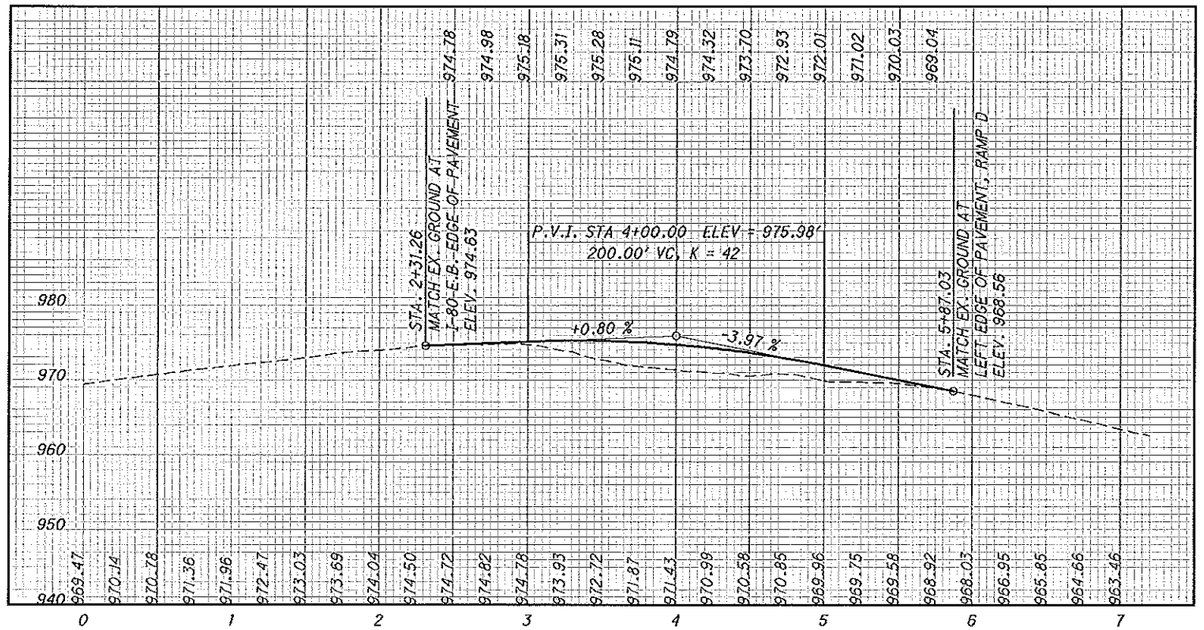
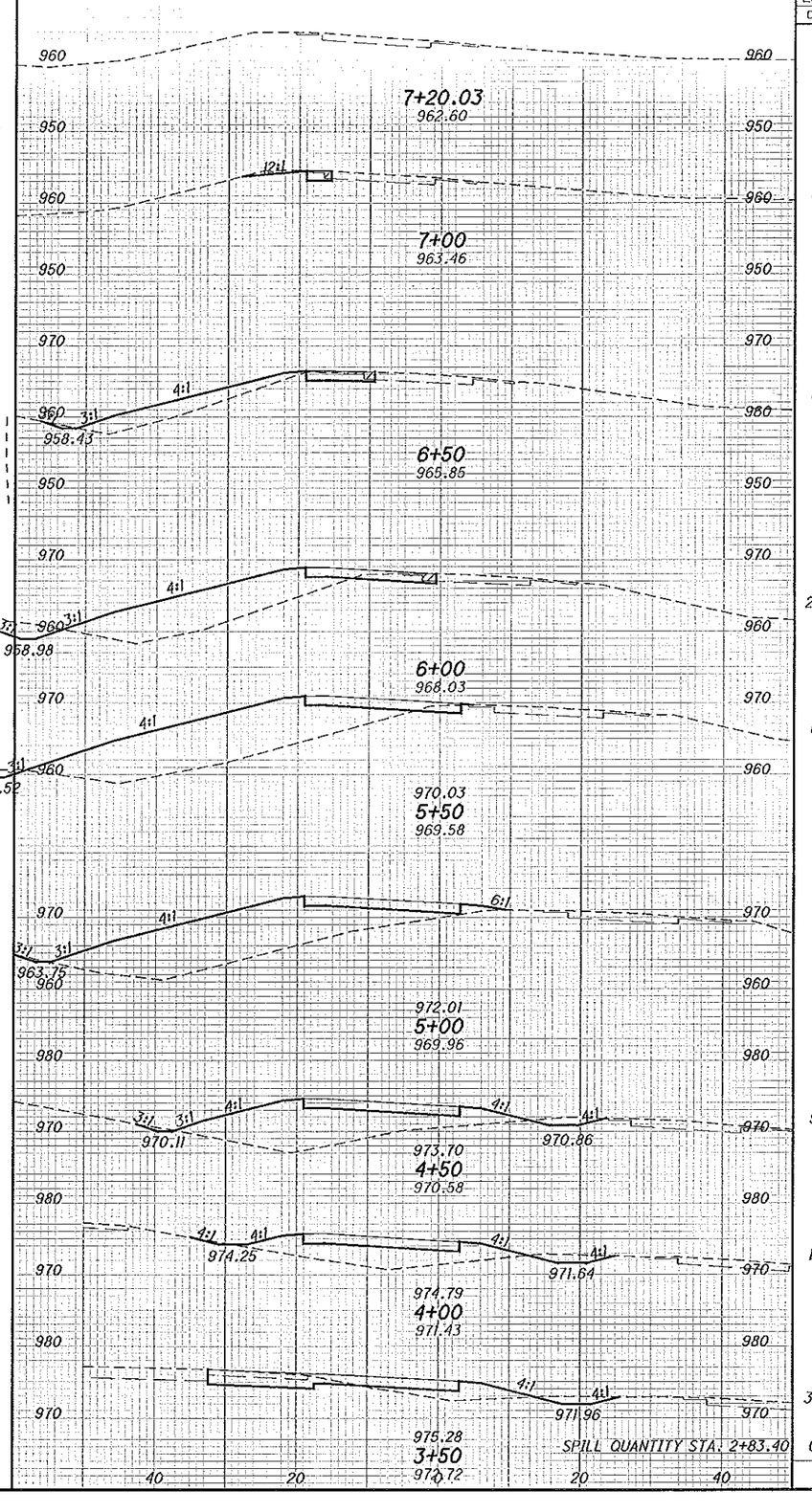


CURVE #1 DATA	CURVE #2 DATA
P.I. Sta. 1+53.59	P.I. Sta. 5+37.51
Δ = 16° 01′ 17″ (RT)	Δ = 64° 18′ 10″ (RT)
Dc = 5° 15′ 00″	Dc = 15° 30′ 00″
R = 1,091.35′	R = 369.65′
T = 153.59′	T = 232.34′
L = 305.17′	L = 414.86′
E = 10.75′	E = 66.96′
C = 304.18′	C = 393.42′
C.B. = N 88° 53′ 55″ E	C.B. = S 50° 56′ 22″ E





END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		2	
6			
		16	50
11	54		
		35	195
27	157		
		35	195
11	256		
		11	482
1	265		
		9	401
9	168		
		19	235
11	86		
		38	105
30	27		
		37	33
0	0		
		202	1696

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

CALCULATED JLN
CHECKED EPS

TEMPORARY ROAD PLAN AND PROFILE RAMP D

TRU-80-09.56

28
147

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
			6	7	32	42	43	60	64	65	OFFICE CALC'S	05/NHS/BR							
																		ROADWAY	
			LS									LS		201	11000	LS		CLEARING AND GRUBBING	
											13010	13010		202	23000	13,010	SY	PAVEMENT REMOVED	
								160				160		202	30700	160	FT	CONCRETE BARRIER REMOVED	
								50				50		202	32600	50	FT	GUTTER REMOVED	
							503					503		202	35100	503	FT	PIPE REMOVED, 24" AND UNDER	
							4144	720				4864		202	38000	4,864	FT	GUARDRAIL REMOVED	
							349	169				518		202	38300	518	FT	GUARDRAIL REMOVED, BARRIER DESIGN	
							4					4		202	58100	4	EACH	CATCH BASIN REMOVED	
					15066							15066		203	10000	15,066	CY	EXCAVATION	
					13710							13710		203	20000	13,710	CY	EMBANKMENT	
											21541	21541		204	10000	21,541	SY	SUBGRADE COMPACTION	
			7									7		204	45000	7	HOUR	PROOF ROLLING	
											49	49		209	60201	49	STA	LINEAR GRADING, AS PER PLAN	7
							3500	525				4025		606	15050	4,025	FT	GUARDRAIL, TYPE MGS	
							950					950		606	15100	950	FT	GUARDRAIL, TYPE MGS WITH LONG POSTS	
								100				100		606	15550	100	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
							2					2		606	26050	2	EACH	ANCHOR ASSEMBLY, MGS TYPE B	
							2					2		606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E	
							4	2				6		606	26550	6	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
							4					4		606	35002	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
							4					4		606	35102	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
							3					3		606	35120	3	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 3	
								2				2		606	60012	2	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	
								160				160		622	10160	160	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
				2								2		SPECIAL	69098000	2	EACH	MISC.:VERTICAL CLEARANCE	7
																		EROSION CONTROL	
							637					637		601	20000	637	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
									20	2		22		601	21050	22	SY	TIED CONCRETE BLOCK MAT, TYPE 1	
							123					123		601	21060	123	SY	TIED CONCRETE BLOCK MAT, TYPE 2	
							2					2		601	32200	2	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
								50				50		601	37501	50	FT	PAVED GUTTER, TYPE 1-2, AS PER PLAN	60
				2								2		659	00100	2	EACH	SOIL ANALYSIS TEST	
				1318								1318		659	00300	1,318	CY	TOPSOIL	
				6580								6580		659	00550	6,580	SY	SEEDING AND MULCHING, CLASS 4A	
				5292								5292		659	10000	5,292	SY	SEEDING AND MULCHING	
				594								594		659	14000	594	SY	REPAIR SEEDING AND MULCHING	
				594								594		659	15000	594	SY	INTER-SEEDING	
				1.66								1.66		659	20000	1.66	TON	COMMERCIAL FERTILIZER	
				2.45								2.45		659	31000	2.45	ACRE	LIME	
				66								66		659	35000	66	MGAL	WATER	
				26								26		659	40000	26	MSF	MOWING	
							2606					2606		670	00500	2,606	SY	SLOPE EROSION PROTECTION	
							1329					1329		670	00700	1,329	SY	DITCH EROSION PROTECTION	
			LS									LS		832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
			45000									45000		832	30000	45,000	EACH	EROSION CONTROL	
																		DRAINAGE	
							0.5					0.5		602	20000	.50	CY	CONCRETE MASONRY	
									8526	681		9207		605	11100	9,207	FT	6" SHALLOW PIPE UNDERDRAINS	
									772			772		605	13300	772	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
									10563	29		10592		605	14000	10,592	FT	6" BASE PIPE UNDERDRAINS	
									843	55		898		611	00510	898	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
							42					42		611	05900	42	FT	15" CONDUIT, TYPE B	
							907					907		611	06100	907	FT	15" CONDUIT, TYPE C	

CALCULATED JLN
CHECKED EPS

GENERAL SUMMARY

TRU-80-09.56

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
			6	8	9	10	11	42	64	65	OFFICE CALC'S	05/NHS/BR							
																		DRAINAGE	
								89				89		611	06700	89	FT	15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21	
								3				3		611	98180	3	EACH	CATCH BASIN, NO. 3A	
								5				5		611	98410	5	EACH	CATCH BASIN, NO. 8	
									10	1		11		611	99710	11	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																		PAVEMENT	
											2155	2155		254	01000	2,155	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
											6522	6522		301	46000	6,522	CY	ASPHALT CONCRETE BASE, PG64-22	
											4282	4282		304	20001	4,282	CY	AGGREGATE BASE, AS PER PLAN	6
											2092	2092		SPECIAL	40720500	2,092	GAL	TACK COAT, TRACKLESS TACK	7
											837	837		SPECIAL	40720510	837	GAL	TACK COAT, TRACKLESS TACK FOR INTERMEDIATE COURSE	7
											107	107		441	50701	107	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), (UNDER GUARDRAIL), AS PER PLAN	7
											872	872		442	10001	872	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN	6
											1017	1017		442	10100	1,017	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)	
											140	140		609	24510	140	FT	CURB, TYPE 4-C	
			52									52		617	10101	52	CY	COMPACTED AGGREGATE, AS PER PLAN	6
																		LIGHTING	77
																		TRAFFIC CONTROL	68
																		STRUCTURE 20 FOOT SPAN AND OVER (TRU-80-0956L)	89
																		STRUCTURE 20 FOOT SPAN AND OVER (TRU-80-0956R)	119
																		MAINTENANCE OF TRAFFIC	
						300						300		614	11110	300	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
							16					16		614	11500	16	MNTH	WORKSITE TRAFFIC SUPERVISOR	
					220							220		614	11630	220	FT	INCREASED BARRIER DELINEATION	
					500							500		SPECIAL	61412200	500	FT	WORK ZONE GUARDRAIL	9
						16						16		614	12336	16	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
				36								36		614	12460	36	EACH	WORK ZONE MARKING SIGN	
				50								50		614	13000	50	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
					96							96		614	13200	96	EACH	BARRIER REFLECTOR, TYPE A	
					345							345		614	13300	345	EACH	BARRIER REFLECTOR, TYPE B	
					417							417		614	13350	417	EACH	OBJECT MARKER, ONE WAY	
						64						64		614	18601	64	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	10
				1.4								1.4		614	20201	1.40	MILE	WORK ZONE LANE LINE, CLASS I, 740.06, TYPE I, AS PER PLAN	9
				1.28								1.28		614	22101	1.28	MILE	WORK ZONE EDGE LINE, CLASS I, 642 PAINT, AS PER PLAN	9
				6.38								6.38		614	22201	6.38	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I, AS PER PLAN	9
				3035								3035		614	23201	3,035	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT, AS PER PLAN	9
				18539								18539		614	23401	18,539	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE I, AS PER PLAN	9
				908								908		614	24201	908	FT	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT, AS PER PLAN	9
				1890								1890		614	24401	1,890	FT	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I, AS PER PLAN	9
					LS							LS		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
					1502							1502		615	20000	1,502	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
					1427							1427		615	20001	1,427	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN	9
				100	15							115		616	10000	115	MGAL	WATER	
					1							1		616	20000	1	TON	CALCIUM CHLORIDE	
					16530							16530		622	41010	16,530	FT	PORTABLE BARRIER, 50"	
					520							520		622	41030	520	FT	PORTABLE BARRIER, 50", BRIDGE MOUNTED	
																		INCIDENTALS	
				LS								LS		614	11000	LS		MAINTAINING TRAFFIC	
												18		619	16010	18	MNTH	FIELD OFFICE, TYPE B	
												LS		623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
												LS		624	10000	LS		MOBILIZATION	

CALCULATED DTB
CHECKED JLN

GENERAL SUMMARY

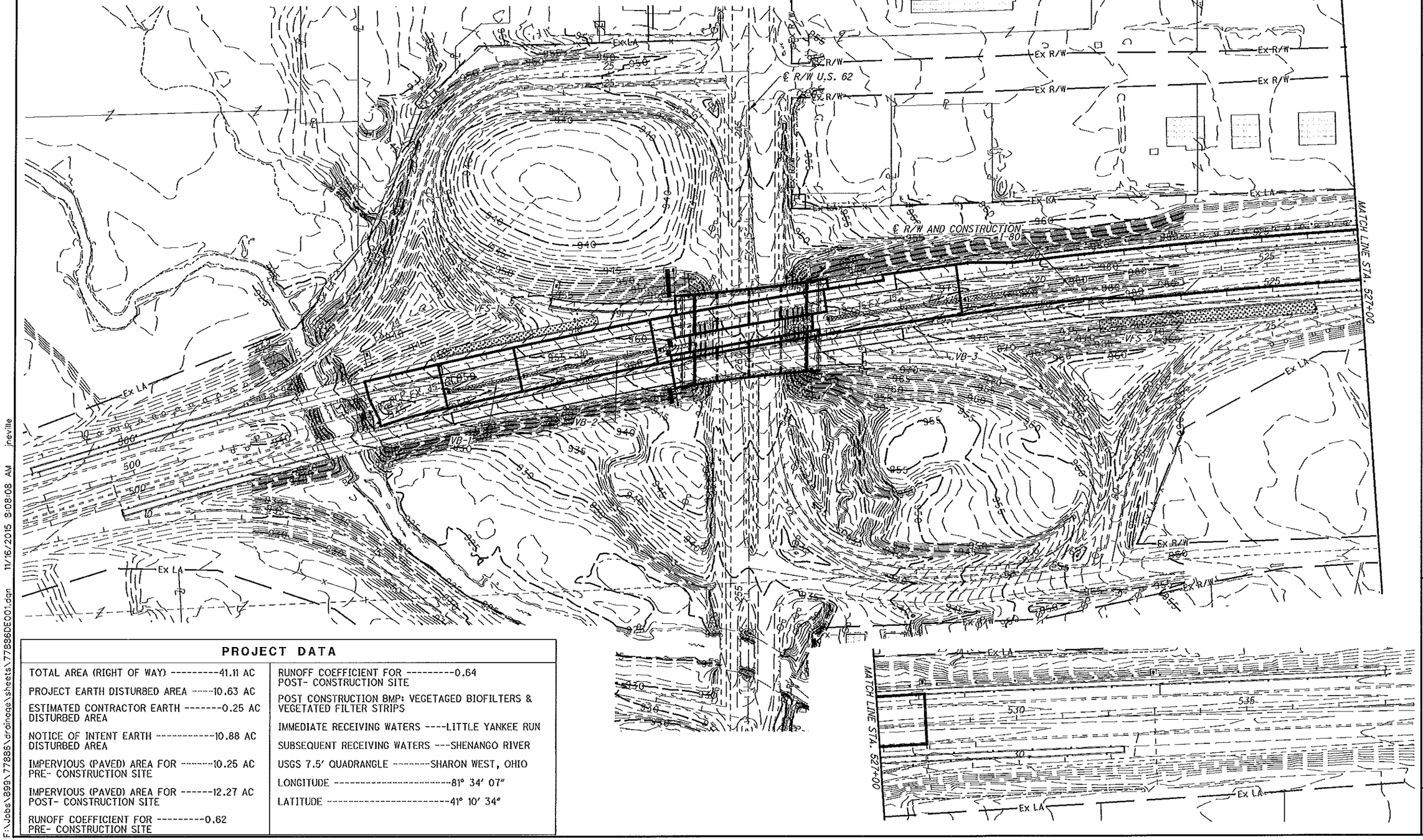
TRU-80-09.56

VEGETATED BIOFILTERS PROVIDED

REFERENCE NO.	BEGIN STATION	END STATION	WIDTH (FT.)	EDA TREATMENT	BEGIN LATITUDE	BEGIN LONGITUDE	END LATITUDE	END LONGITUDE
VB-1	507+11	508+58	4.0	0.329	41.175920	80.570821	41.175997	80.570290
VB-2	508+77	511+58	4.0	0.625	41.176005	80.570229	41.176134	80.569215
VB-3	515+48.5	518+30	4.0	0.662	41.176297	80.567821	41.176392	80.566806

VEGETATED FILTER STRIPS PROVIDED

REFERENCE NO.	BEGIN STATION	END STATION	WIDTH (FT.)	EDA TREATMENT	BEGIN LATITUDE	BEGIN LONGITUDE	END LATITUDE	END LONGITUDE
VFS-1	507+00	510+50	15.0	0.233	41.176144	80.570923	41.176324	80.569664
VFS-2	521+25	525+98	25.0	0.420	41.176213	80.565710	41.176297	80.564009



PROJECT DATA

TOTAL AREA (RIGHT OF WAY) ---------41.11 AC	RUNOFF COEFFICIENT FOR ---------0.64 POST- CONSTRUCTION SITE
PROJECT EARTH DISTURBED AREA -----10.63 AC	POST CONSTRUCTION BMP: VEGETAGED BIOFILTERS & VEGETATED FILTER STRIPS
ESTIMATED CONTRACTOR EARTH --------0.25 AC DISTURBED AREA	IMMEDIATE RECEIVING WATERS ----LITTLE YANKEE RUN
NOTICE OF INTENT EARTH ------------10.88 AC DISTURBED AREA	SUBSEQUENT RECEIVING WATERS ---SHENANGO RIVER
IMPERVIOUS (PAVED) AREA FOR --------10.25 AC PRE- CONSTRUCTION SITE	USGS 7.5' QUADRANGLE ---------SHARON WEST, OHIO
IMPERVIOUS (PAVED) AREA FOR ------12.27 AC POST- CONSTRUCTION SITE	LONGITUDE ----------81° 34' 07"
RUNOFF COEFFICIENT FOR ---------0.62 PRE- CONSTRUCTION SITE	LATITUDE ----------41° 10' 34"

HORIZONTAL SCALE IN FEET 0 50 100 200

CALCULATED JLN CHECKED MRC

PROJECT SITE PLAN
STA. 499+00 TO STA. 528+00

TRU-80-09.56

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I-80 AND RAMP B CROSS SECTIONS EARTHWORK AND SEEDING QUANTITIES					
STATION		SHEET NO.	ITEM 203 EMBANKMENT	ITEM 203 EXCAVATION	ITEM 659 SEEDING AND MULCHING
FROM	TO		C.Y.	C.Y.	S.Y.
I-80					
505+18.98	506+50	45	110	398	774
507+00	508+50	46	318	541	1267
509+00	510+50	47	1829	1536	2005
511+00	512+44.88	48	2355	1401	2112
514+94.43	515+50	49	2136	888	1389
516+00	517+50	50	1708	1725	1950
518+00	519+50	51	1233	1745	1905
520+00	521+50	52	980	1518	2206
522+00	523+00	53	1244	1572	2159
523+50	525+50	54	1147	1454	2156
526+00	528+00	55	412	1425	1666
RAMP B					
14+45.78	16+50	58	238	245	437
SUBTOTAL (I-80 & RAMP B)			13,472	14,448	20,026
DEDUCT FOR ITEM 601					830
DEDUCT FOR ITEM 617					942
DEDUCT FOR ITEM 670					3,935
DEDUCT FOR PAVING UNDER GUARDRAIL					2,447
ADD SHOULDER RECONSTRUCTED, I-80 WB STA. 497+90.0 TO STA. 503+83.9 (1.34 FT. X 6975 FT²)/27				346	
ADD SHOULDER RECONSTRUCTED, I-80 EB STA. 499+53.1 TO STA. 504+18.6 (1.34 FT X 5487 FT²)/27				272	
TOTAL USED FOR EROSION CONTROL CALCULATIONS					11,872
TOTAL CARRIED TO GENERAL SUMMARY			13,710	15,066	

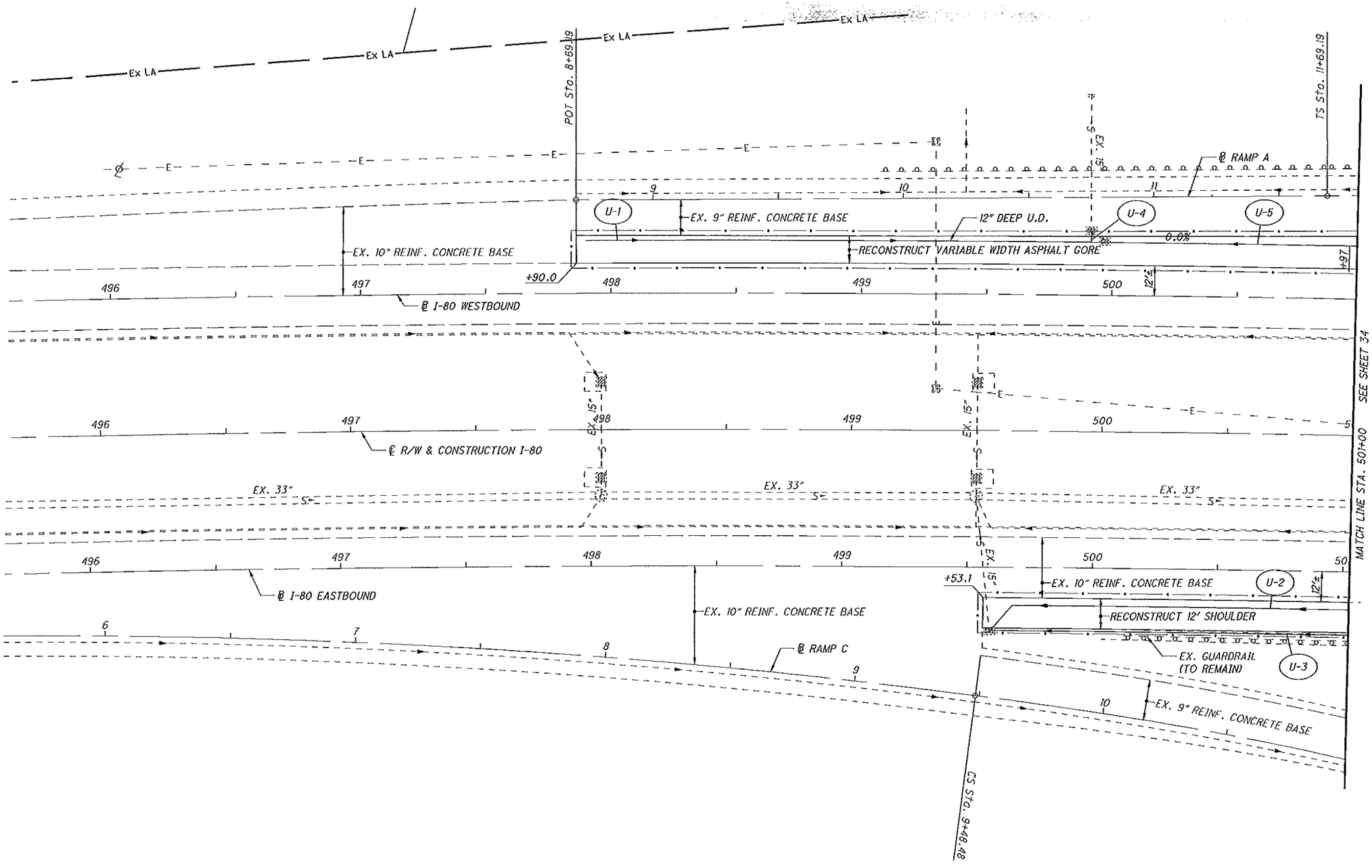
ITEM 659 - EROSION CONTROL QUANTITIES		
SOIL ANALYSIS TESTS	$\frac{1\ EA.}{10000\ C.Y.\ OF\ TOPSOIL}$ X 11,872 C.Y. = 1.19 EA., USE MIN OF 2 TESTS	2 EACH
TOPSOIL	$\frac{111\ C.Y.}{1000\ S.Y.\ OF\ SEEDING}$ X 11,872 S.Y.	1,318 C.Y.
COMMERCIAL FERTILIZER	$\frac{1\ TON}{7410\ S.Y.\ OF\ SEEDING}$ X 11,872 S.Y. + $\frac{1\ TON}{11,110\ S.Y.\ OF\ INTER\text{-}SEEDING}$ X 594 S.Y.	1.66 TON
LIME	$\frac{9}{43560}$ X 11,872 S.Y.	2.45 ACRE
REPAIR SEEDING AND MULCHING	$\frac{5}{100}$ X 11,872 S.Y.	594 S.Y.
INTER-SEEDING	$\frac{5}{100}$ X 11,872 S.Y.	594 S.Y.
WATER	$\frac{2\ X\ .0027\ M\ GAL}{1\ S.Y.OF\ SEEDING}$ X 11,872 S.Y.+ $\frac{.0027\ M\ GAL}{1\ S.Y.\ OF\ INTER\text{-}SEEDING}$ X 594 S.Y.	66 M GAL
MOWING	0.25 X 11,872 S.Y. X $\frac{9\ S.F.}{1\ S.Y.}$ X $\frac{1\ M\ S.F.}{1{,}000\ S.F.}$	26 M S.F.
QUANTITIES CARRIED TO GENERAL NOTES SHEET NO. 7		

CALCULATED ANC
CHECKED JLN

QUANTITY CALCULATIONS

TRU-80-09.56

32
147



FOR SIGNING AND STRIPING SEE SHEET 72

NOTE:

EXISTING REINFORCED CONCRETE BASE SHOWN IS FROM EXISTING PLAN INFORMATION ONLY. CONTRACTOR TO LOCATE ACTUAL EDGE AND SAW CUT TO RECONSTRUCT/WIDEN EXISTING I-80 SHOULDERS.

ALL STATION CALLOUTS ARE FROM ℄ R/W & CONSTRUCTION I-80.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN - I-80
STA 496+00.00 TO STA. 501+00.00

TRU-80-09.56

33
147

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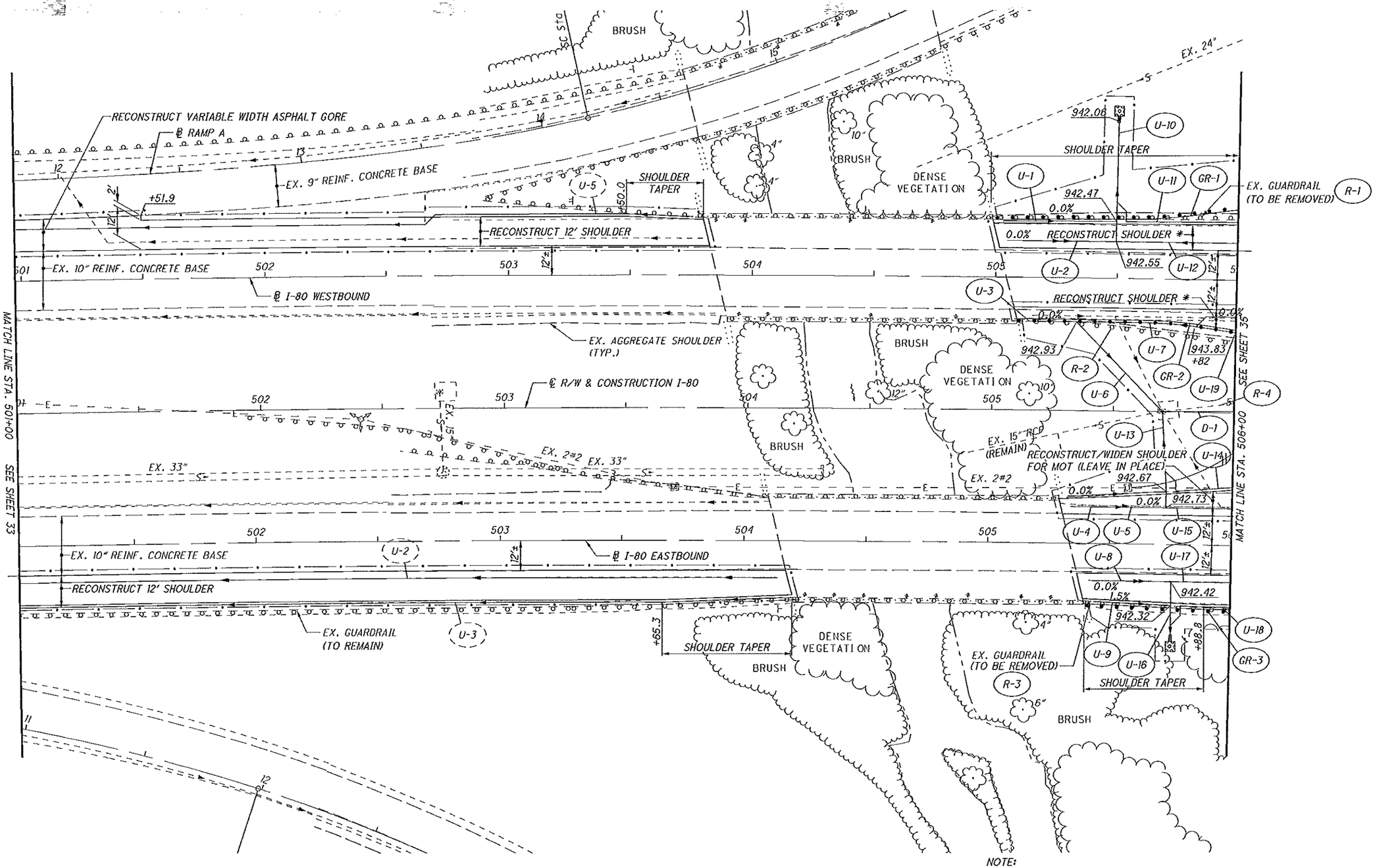
* PROPOSED SHOULDER RECONSTRUCTION TO BE WIDER AS SHOWN ON MOT PLAN SHEETS. SAW CUT TO DIMENSIONS SHOWN HERE.



FOR CROSS SECTIONS SEE SHEET 45
FOR SIGNING AND STRIPING SEE SHEET 73

NOTE:

EXISTING REINFORCED CONCRETE BASE SHOWN IS FROM EXISTING PLAN INFORMATION ONLY. CONTRACTOR TO LOCATE ACTUAL EDGE AND SAW CUT TO RECONSTRUCT/WIDEN EXISTING I-80 SHOULDERS.

ALL STATION CALLOUTS ARE FROM ℄ R/W & CONSTRUCTION I-80.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN - I-80
STA 501+00.00 TO STA. 506+00.00

TRU-80-09.56

34
147

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ITEM 670 - SLOPE EROSION PROTECTION

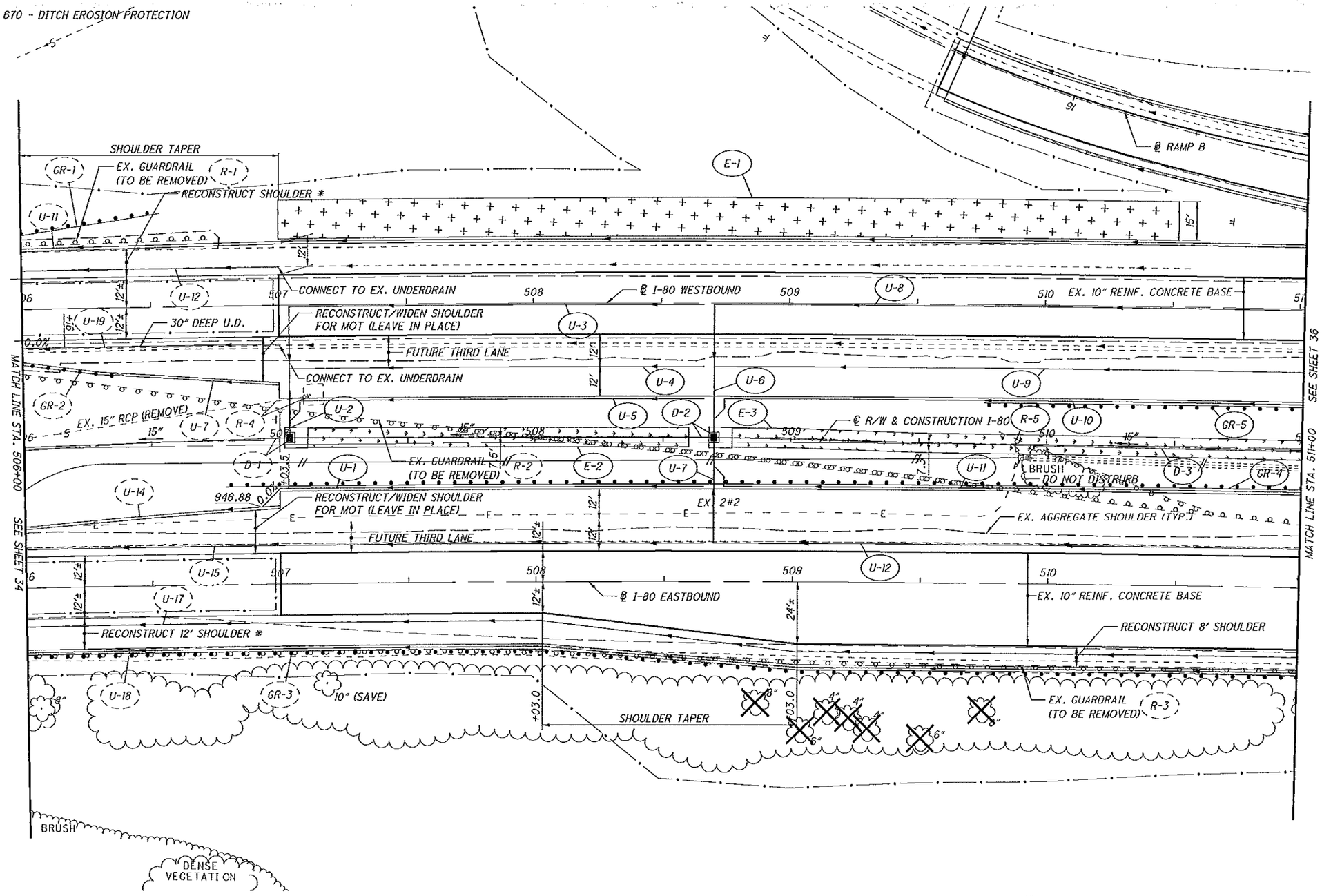
ITEM 670 - DITCH EROSION PROTECTION

E-1: (15' X 325.5')/9 = 588 SY

E-2: (7.5' X 147')/9 = 123 SY

E-3: (7.5' X 877')/9 = 731 SY

* PROPOSED SHOULDER RECONSTRUCTION TO BE WIDER AS SHOWN ON MOT PLAN SHEETS. SAW CUT TO DIMENSIONS SHOWN HERE.



FOR ROADWAY PROFILES SEE SHEET 44
FOR CROSS SECTIONS SEE SHEETS 45-48
FOR SIGNING AND STRIPING SEE SHEET 73
FOR RAMP TERMINAL DETAILS SEE SHEETS 62 & 63

NOTE:

EXISTING REINFORCED CONCRETE BASE SHOWN IS FROM EXISTING PLAN INFORMATION ONLY. CONTRACTOR TO LOCATE ACTUAL EDGE AND SAW CUT TO RECONSTRUCT/WIDEN EXISTING I-80 SHOULDERS.

ALL STATION CALLOUTS ARE FROM ℄ R/W & CONSTRUCTION I-80.

N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN - I-80
STA 506+00.00 TO STA. 511+00.00

TRU-80-09.56

35
147

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ITEM 670 - SLOPE EROSION PROTECTION

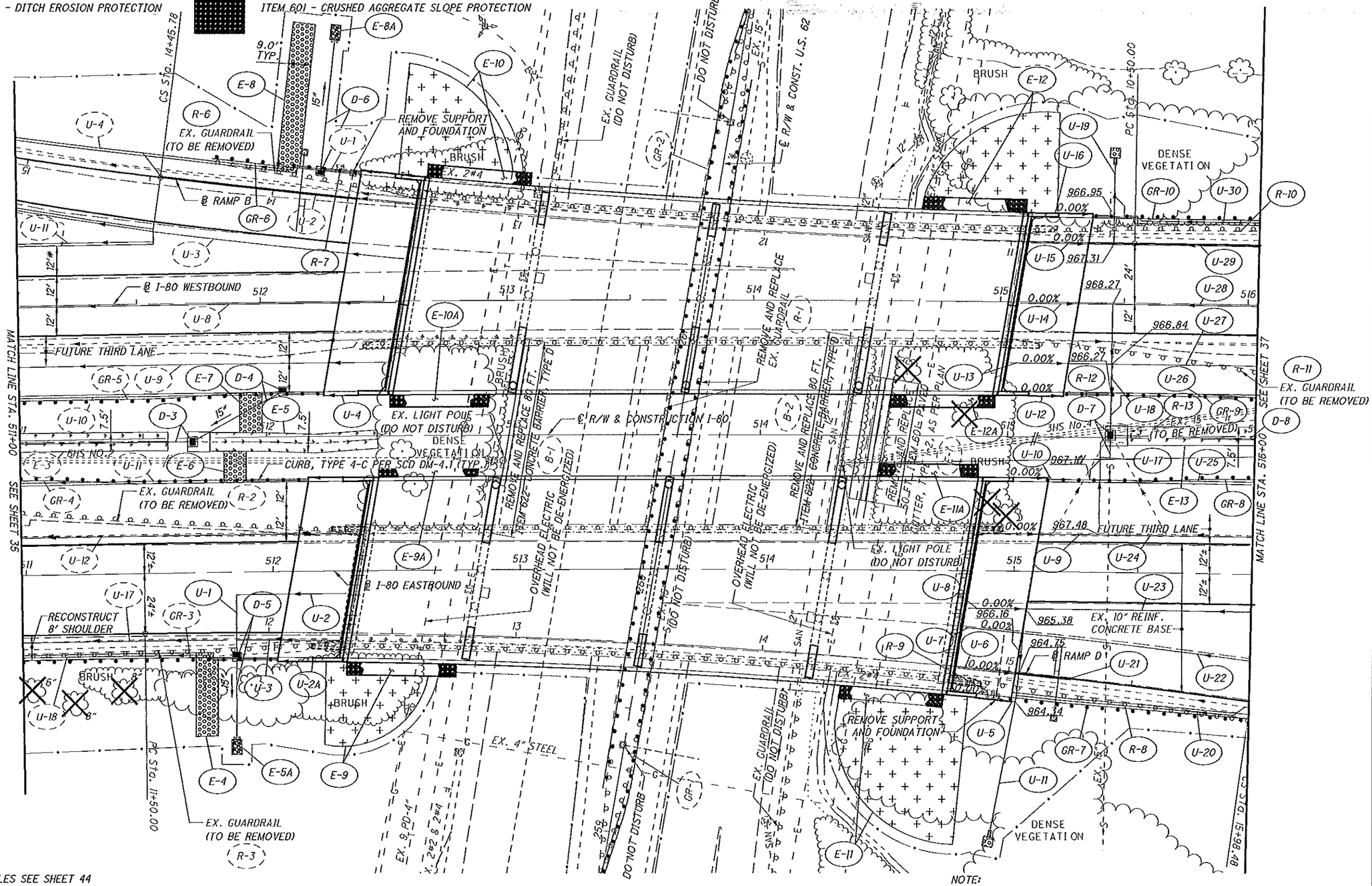
ITEM 670 - DITCH EROSION PROTECTION

ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2

ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION

E-4: (9' X 33.5')/9 = 34 SY
E-5: (7.5' X 68')/9 = 57 SY
E-5A: (4' X 6' X 1.5')/27 = 1 CY
E-6: (9' X 12.5')/9 = 13 SY
E-7: (9' X16')/9 = 16 SY
E-8: (9' X 60')/9 = 60 SY

E-8A: (4' X 6' X 1.5')/27 = 1 CY
E-13: (7.5' X 281.5')/9 = 235 SY



FOR ROADWAY PROFILES SEE SHEET 44
FOR CROSS SECTIONS SEE SHEETS 48-50
FOR STORM SEWER PROFILES SEE SHEET 66
FOR SIGNING AND STRIPING SEE SHEETS 73 & 74
FOR RAMP TERMINAL DETAILS SEE SHEETS 62 & 63

* PROPOSED SHOULDER RECONSTRUCTION TO BE WIDER AS SHOWN ON MOT PLAN SHEETS. SAW CUT TO DIMENSIONS SHOWN.

NOTE:

EXISTING REINFORCED CONCRETE BASE SHOWN IS FROM EXISTING PLAN INFORMATION ONLY. CONTRACTOR TO LOCATE ACTUAL EDGE AND SAW CUT TO RECONSTRUCT/WIDEN EXISTING I-80 SHOULDERS.

ALL STATION CALLOUTS ARE FROM ℄ R/W & CONSTRUCTION I-80.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN - I-80
STA 511+00.00 TO STA. 516+00.00

TRU-80-09.56

36
147

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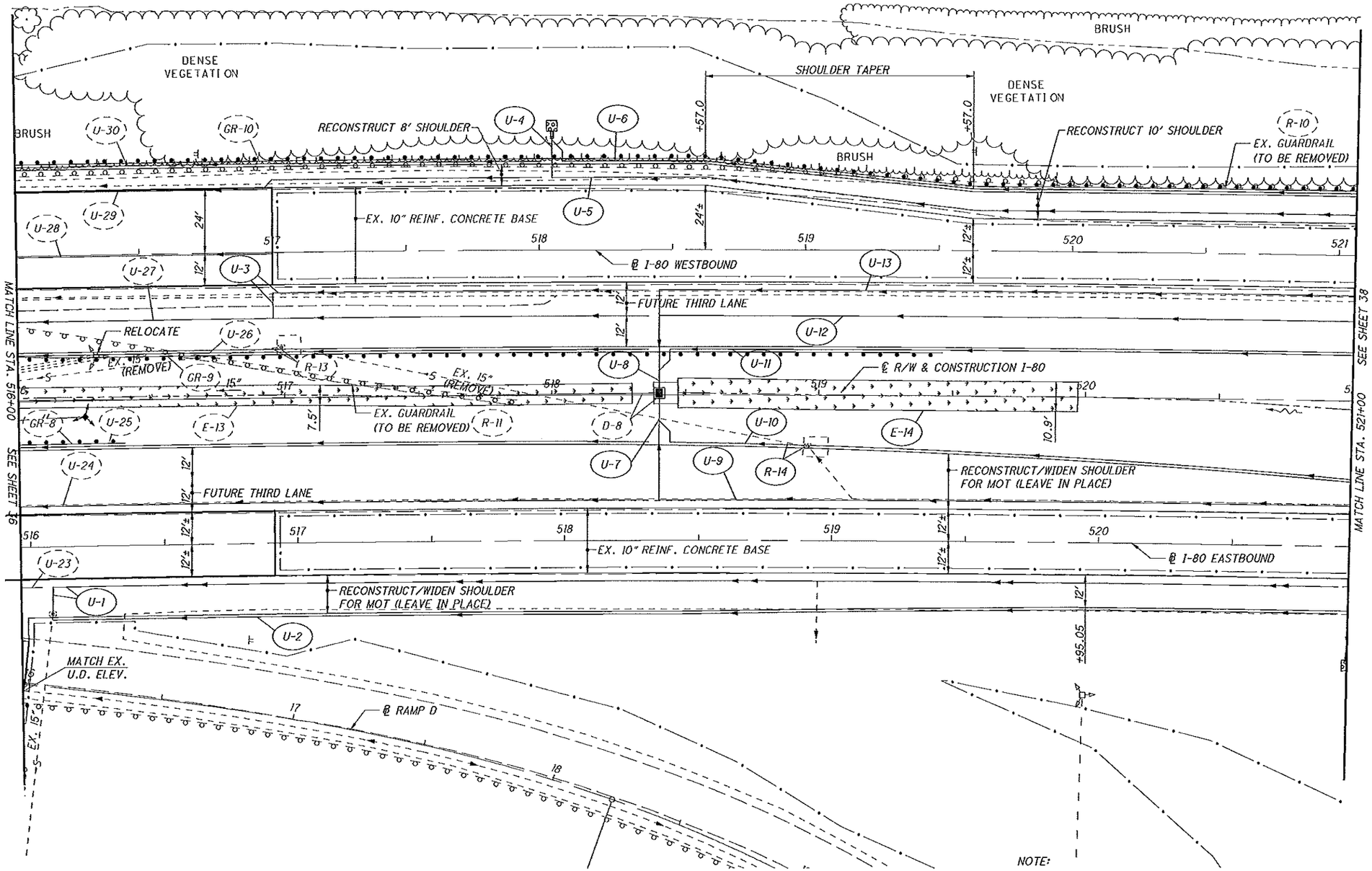
ITEM 670 - DITCH EROSION PROTECTION

E-14: (11' X 150')/9 = 183 SY



NOTE:

EXISTING REINFORCED CONCRETE BASE SHOWN IS FROM EXISTING PLAN INFORMATION ONLY. CONTRACTOR TO LOCATE ACTUAL EDGE AND SAW CUT TO RECONSTRUCT/WIDEN EXISTING I-80 SHOULDERS.

ALL STATION CALLOUTS ARE FROM ℄ R/W & CONSTRUCTION I-80.

FOR ROADWAY PROFILES SEE SHEET 44
FOR CROSS SECTIONS SEE SHEETS 50-52
FOR SIGNING AND STRIPING SEE SHEET 74
FOR RAMP TERMINAL DETAILS SEE SHEETS 62 & 63

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN - I-80
STA 516+00.00 TO STA. 521+00.00

TRU-80-09.56

37
147

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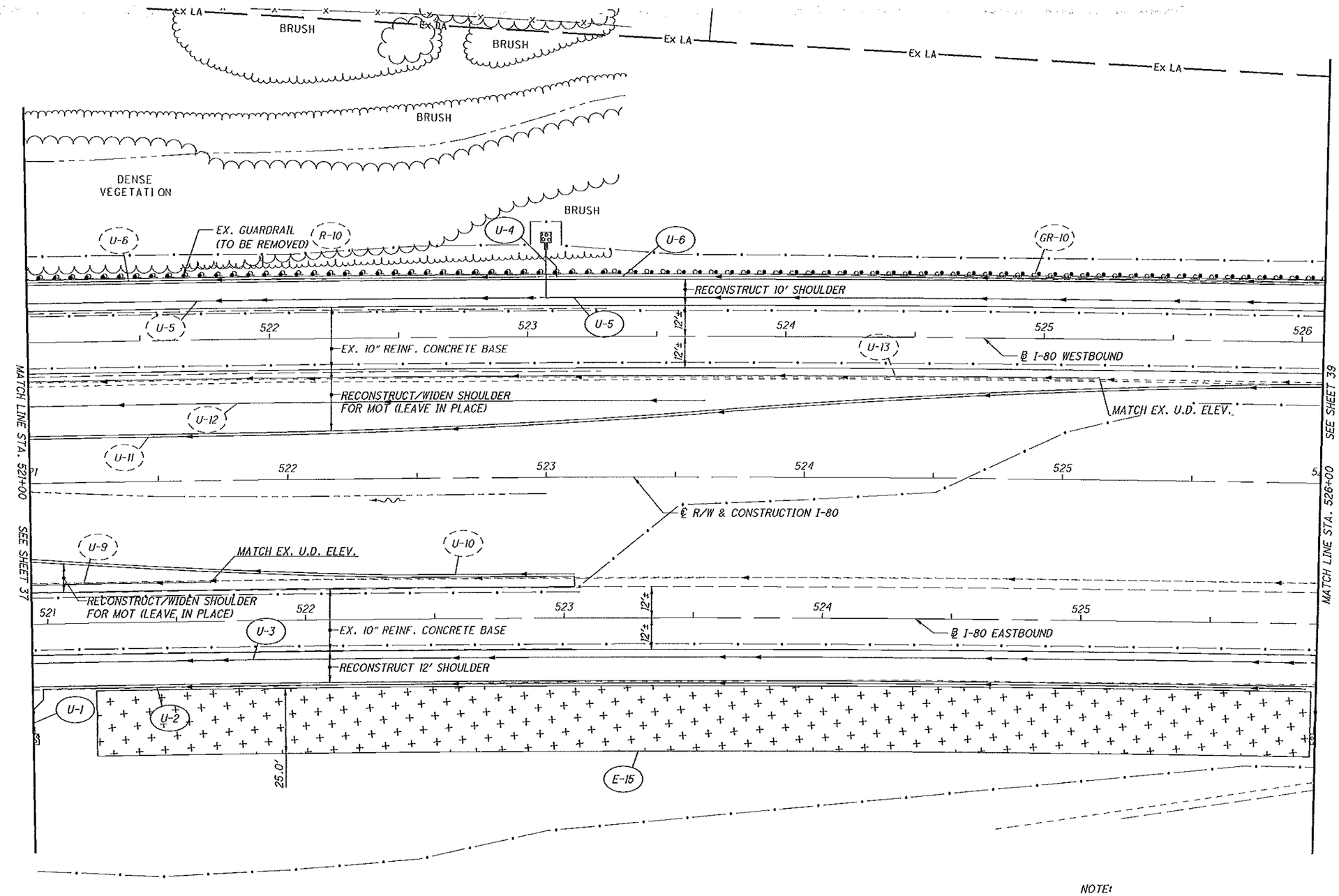
ITEM 670 - SLOPE EROSION PROTECTION

E-15: (25' X 473')/9 = 1314 SY



NOTE:

EXISTING REINFORCED CONCRETE BASE SHOWN IS FROM EXISTING PLAN INFORMATION ONLY. CONTRACTOR TO LOCATE ACTUAL EDGE AND SAW CUT TO RECONSTRUCT/WIDEN EXISTING I-80 SHOULDERS.

ALL STATION CALLOUTS ARE FROM ℄ R/W & CONSTRUCTION I-80.

FOR CROSS SECTIONS SEE SHEETS 52-55
FOR SIGNING AND STRIPING SEE SHEET 74

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN - I-80
STA 521+00.00 TO STA. 526+00.00

TRU-80-09.56

38
147

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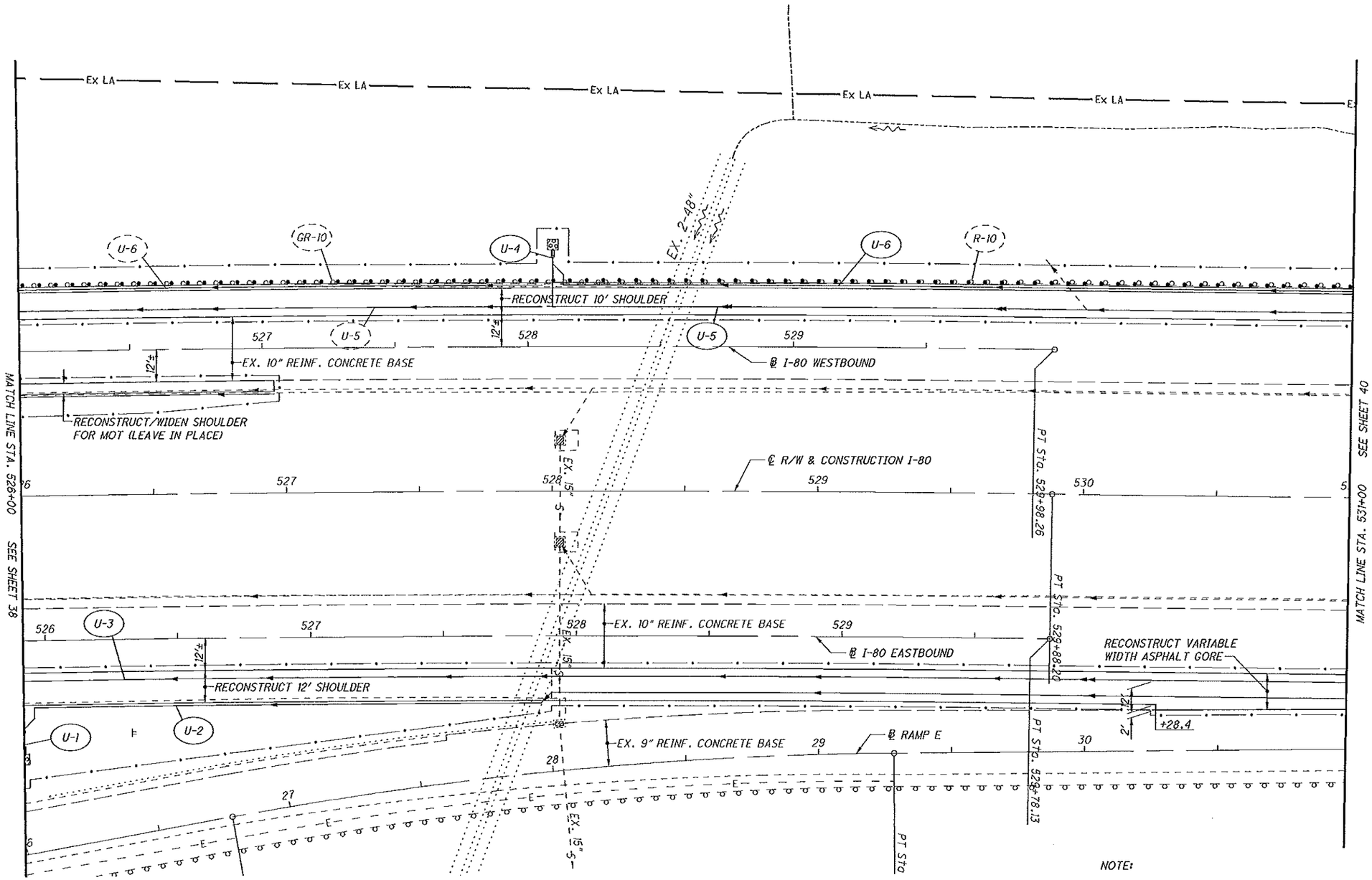

NOTE:

EXISTING REINFORCED CONCRETE BASE SHOWN IS FROM EXISTING PLAN INFORMATION ONLY. CONTRACTOR TO LOCATE ACTUAL EDGE AND SAW CUT TO RECONSTRUCT/WIDEN EXISTING I-80 SHOULDERS.

ALL STATION CALLOUTS ARE FROM ℄ R/W & CONSTRUCTION I-80.

FOR CROSS SECTIONS SEE SHEET 55
FOR SIGNING AND STRIPING SEE SHEETS 74 & 75

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN - I-80
STA 526+00.00 TO STA. 531+00.00

TRU-80-09.56

39
147

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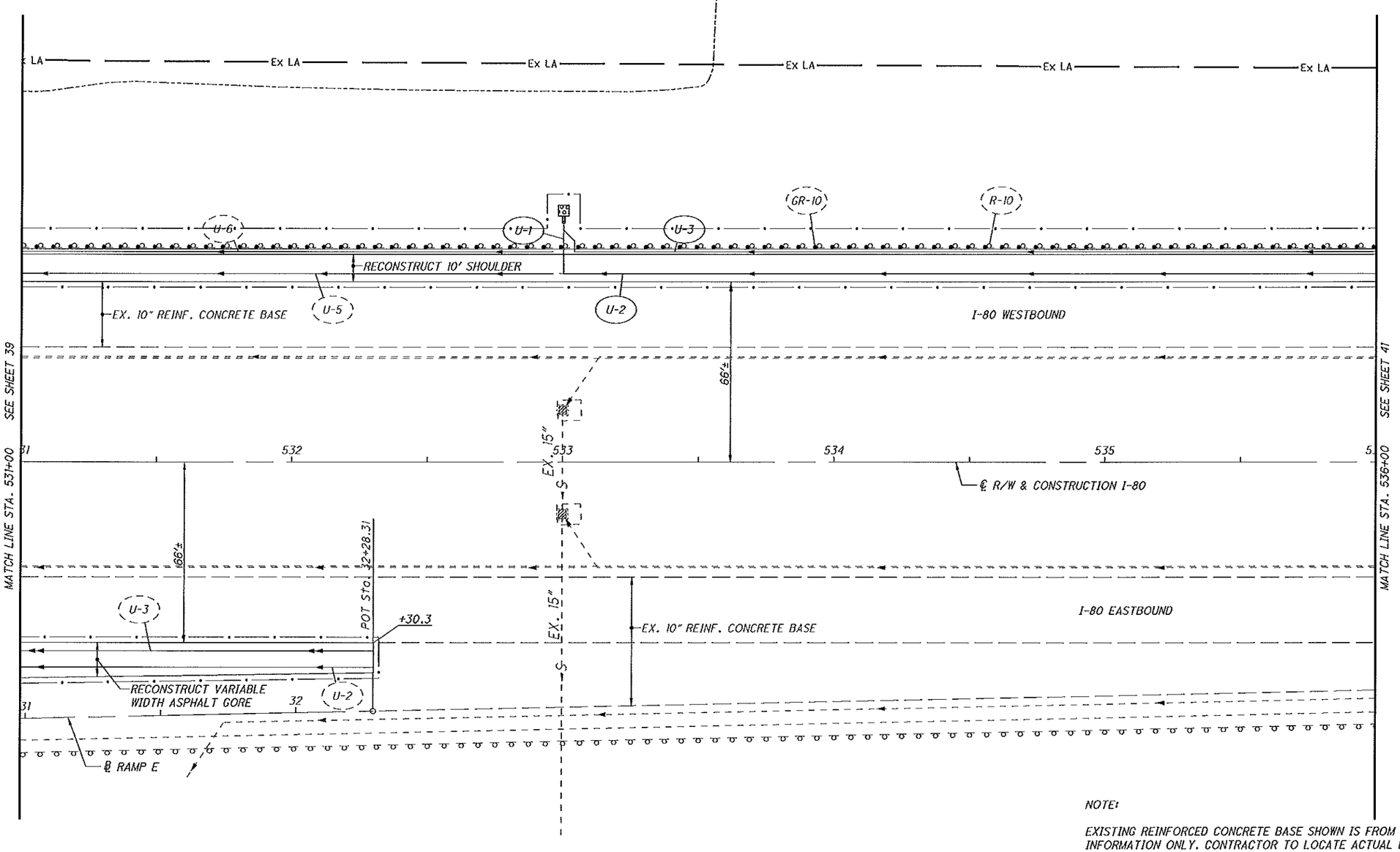

FOR SIGNING AND STRIPING SEE SHEET 75

NOTE:

EXISTING REINFORCED CONCRETE BASE SHOWN IS FROM EXISTING PLAN INFORMATION ONLY. CONTRACTOR TO LOCATE ACTUAL EDGE AND SAW CUT TO RECONSTRUCT/WIDEN EXISTING I-80 SHOULDERS.

ALL STATION CALLOUTS ARE FROM ℄ R/W & CONSTRUCTION I-80.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN - I-80
STA 531+00.00 TO STA. 536+00.00

TRU-80-09.56

40
147

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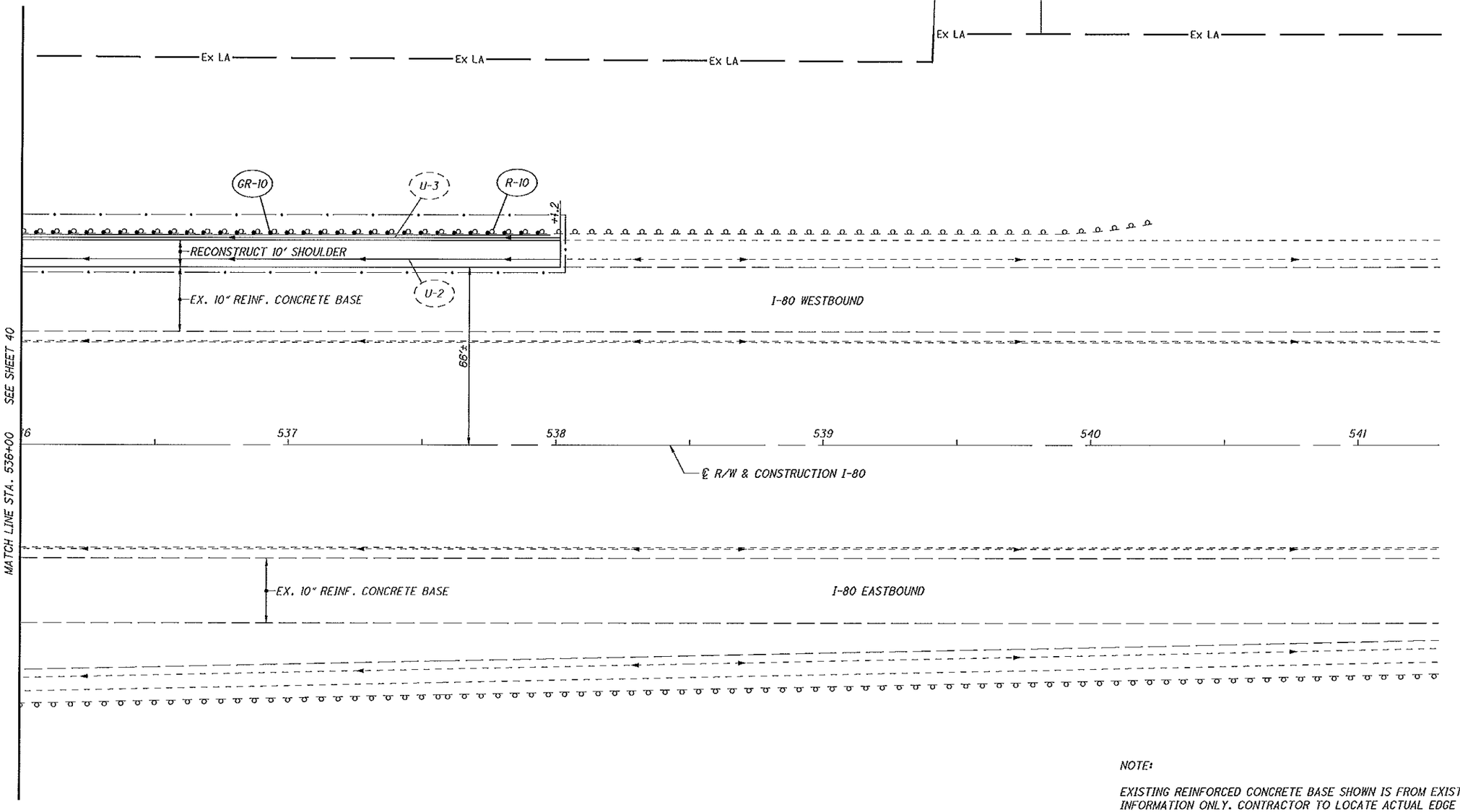

NOTE:

EXISTING REINFORCED CONCRETE BASE SHOWN IS FROM EXISTING PLAN INFORMATION ONLY. CONTRACTOR TO LOCATE ACTUAL EDGE AND SAW CUT TO RECONSTRUCT/WIDEN EXISTING I-80 SHOULDERS.

ALL STATION CALLOUTS ARE FROM ℄ R/W & CONSTRUCTION I-80.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN - I-80
STA 536+00.00 TO STA. 541+00.00

TRU-80-09.56

41
147

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REF NO.	SHEET NO.	STATION		SIDE	601			602		611						670	
					TIED CONCRETE BLOCK MAT, TYPE 2	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CRUSHED AGGREGATE SLOPE PROTECTION	CONCRETE MASONRY		15" CONDUIT, TYPE B	15" CONDUIT, TYPE C	15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 8		DITCH EROSION PROTECTION	SLOPE EROSION PROTECTION
		FROM	TO		SY	CY	SY	CY		FT	FT	FT	EA	EA		SY	SY
D-1	34	505+70.19	507+04.00	LT							134			1			
D-2	35	507+04.00	508+70.00	LT							166			1			
D-3	35	508+70.00	511+70.00	LT/RT							300			1			
D-4	36	511+70.00	512+06.69	LT/RT						42			1				
D-5	36	11+87.15*		RT				0.27				35	1				
D-6	36	13+81.69**		RT				0.27				54	1				
D-7	36	515+41.50		LT/RT							8			1			
D-8	36	515+41.50	518+40.00	LT							299			1			
E-1	35	507+00	510+50	LT													588
E-2	35	507+11	508+60	℄												123	
E-3	35	508+77	511+60	℄												731	
E-4	36	511+71	511+80	RT	34												
E-5	36	511+77	512+45	℄												57	
E-5A	36	511+85	511+89	RT		1											
E-6	36	511+83	511+92	RT	13												
E-7	36	511+89	511+98	LT	16												
E-8	36	512+05	512+21	LT	60												
E-8A	36	512+26	512+31	LT		1											
E-9	36	512+23	512+76	RT			51										110
E-9A	36	512+42	512+86	RT			110										
E-10	36	512+54	513+07	LT			50										157
E-10A	36	512+50	512+94	LT			106										
E-11	36	514+31	514+85	RT			47										268
E-11A	36	514+44	514+88	RT			113										
E-12	36	514+64	515+19	LT			49										169
E-12A	36	514+52	514+97	LT			111										
E-13	36	515+48.5	518+30	℄												235	
E-14	37	518+47	519+97	℄												183	
E-15	38	521+25	525+98	RT													1314
* STATIONED OFF RAMP D																	
** STATIONED OFF RAMP B																	
SUB TOTAL								0.54									
TOTALS CARRIED TO GENERAL SUMMARY					123	2	637	0.5		42	907	89	3	5		1329	2606

CALCULATED JLN
CHECKED MRC

ESTIMATED QUANTITIES-I-80

TRU-80-09.56

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REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	202 PIPE REMOVED, 24" AND UNDER	202 GUARDRAIL REMOVED	202 GUARDRAIL REMOVED, BARRIER DESIGN	202 CATCH BASIN REMOVED		606 GUARDRAIL, TYPE MGS	606 GUARDRAIL, TYPE MGS WITH LONG POSTS	606 ANCHOR ASSEMBLY, MGS, TYPE B	606 ANCHOR ASSEMBLY, MGS, TYPE E	606 ANCHOR ASSEMBLY, MGS, TYPE T	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	606 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	606 BRIDGE TERMINAL ASSEMBLY, TYPE 3		625 PULL BOX REMOVED			
					FT	FT	FT	EA		FT	FT	EA	EA	EA	EA	EA	EA		EA			
GR-1	34	504+99.34	506+53.74	LT						143.75		1					1					
GR-2	34	505+08.81	506+39.10	LT						118.75		1					1					
GR-3	34	505+38.55	512+04.48	RT						625.00					1		1					
GR-4	35	506+79.07	512+17.24	RT						462.50			1		1							
GR-5	35	509+75.47	512+25.11	LT						237.50				1		1						
GR-6	36	511+79.04	512+40.56	LT						50.00				1		1						
GR-7	36	515+01.11	516+01.70	RT						87.50				1		1						
GR-8	36	515+14.63	516+39.76	RT						112.50				1		1						
GR-9	36	515+21.60	519+46.00	LT						362.50			1		1							
GR-10	36	515+32.35	537+97.29	LT						1300.00	950.00				1							
R-1	34	504+99	506+73	LT		174																
R-2	35	505+09	512+40	LT		516	215															
R-3	35	505+39	512+32	RT/LT		693																
R-4	35	505+70	507+11	LT	140			1														
R-5	35	509+81	510+66	RT/LT		90																
R-6	36	511+79	512+62	LT		87																
R-7	36	512+30		LT																1		
R-8	36	514+79	516+02	RT		123																
R-9	36	514+95		RT																1		
R-10	36	515+05	537+97	LT		2302																
R-11	36	514+98	517+88	LT/RT		159	134															
R-12	36	515+42		LT/RT	8			1														
R-13	36	515+42	516+99	LT	156			1														
R-14	37	516+99	518+96	RT/LT	199			1														
TOTALS CARRIED TO GENERAL SUMMARY					503	4144	349	4		3500.00	950.00	2	2	4	4	4	3		2			

CALCULATED JLN
CHECKED MRC

ESTIMATED QUANTITIES-1-80

TRU-80-09.56

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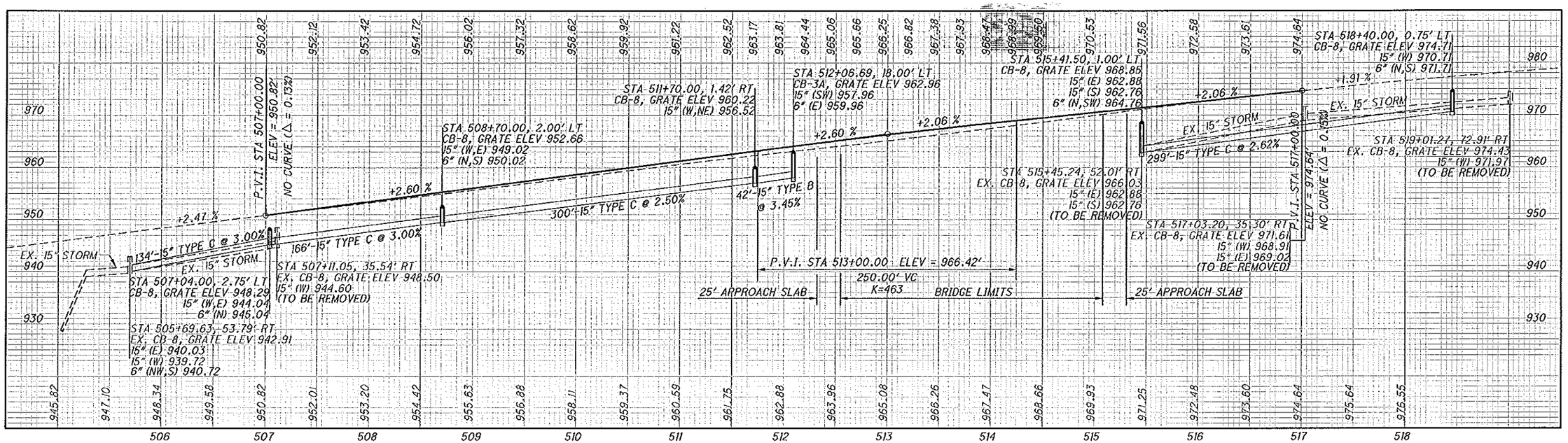

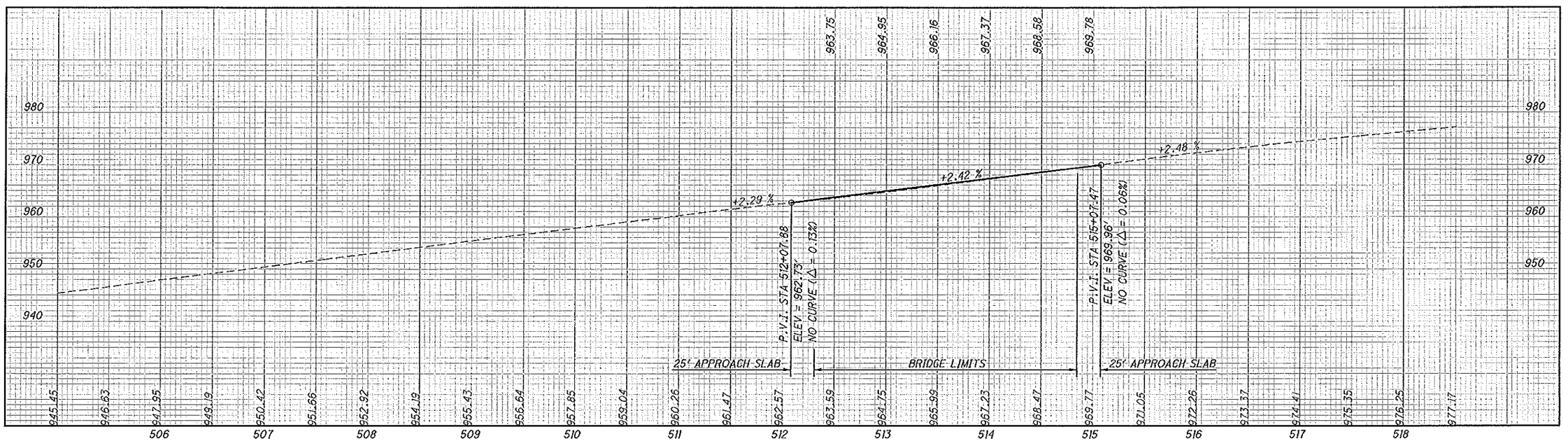

CALCULATED DTB
CHECKED JLN

BASELINE I-80 EASTBOUND & WESTBOUND PROFILES

TRU-80-09.56

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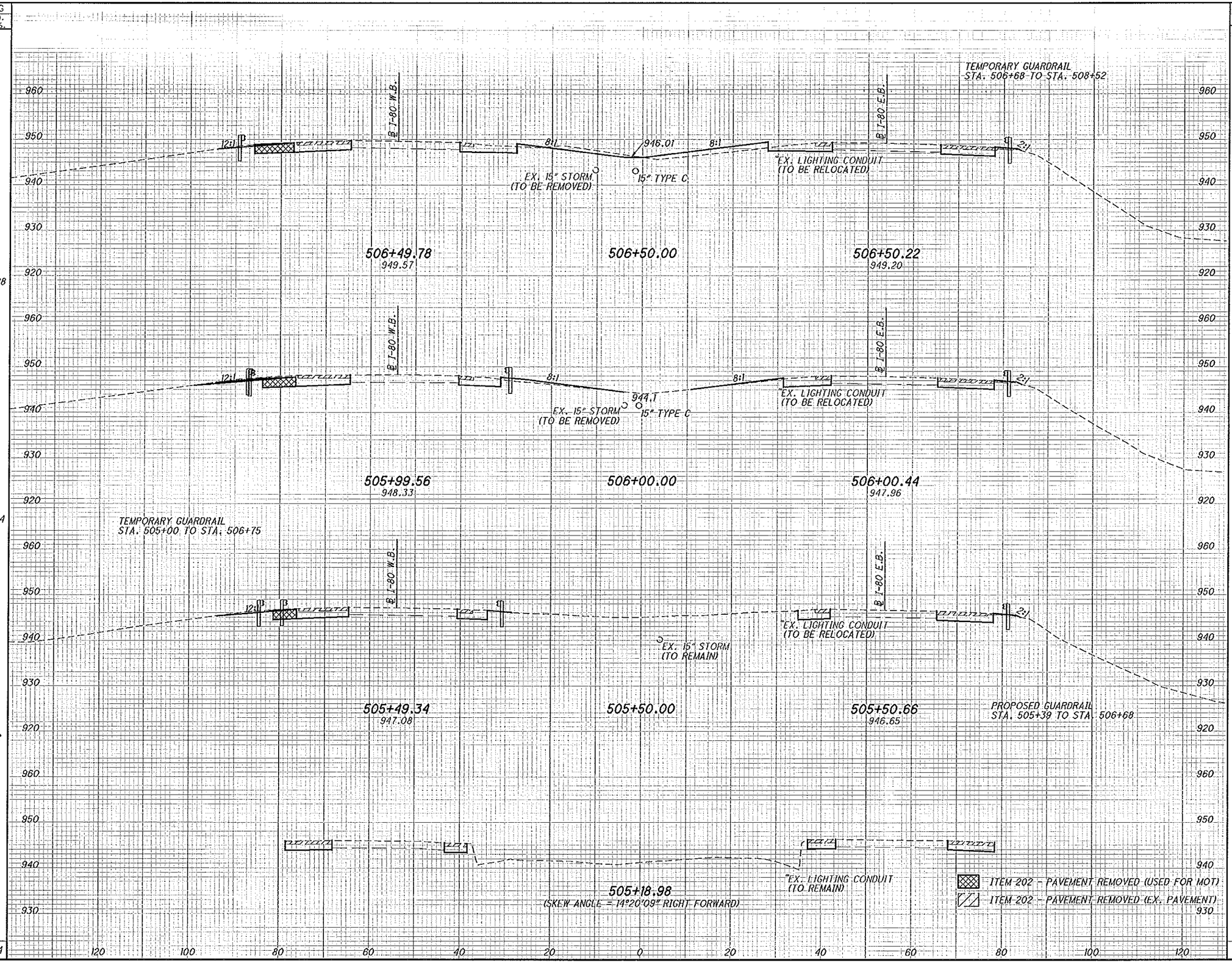
SEEDING END WIDTH	SEEDING SQ. YDS.
78	428
76	294
	30
	52
	0
	774



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
103	48		
		181	69
92	27		
		152	35
72	11		
		65	6
41	0		
		398	110

CALCULATED JLN
CHECKED EPS

CROSS SECTIONS I-80
STA. 505+18.98 TO STA. 506+50.00

TRU-80-09.56

45
147

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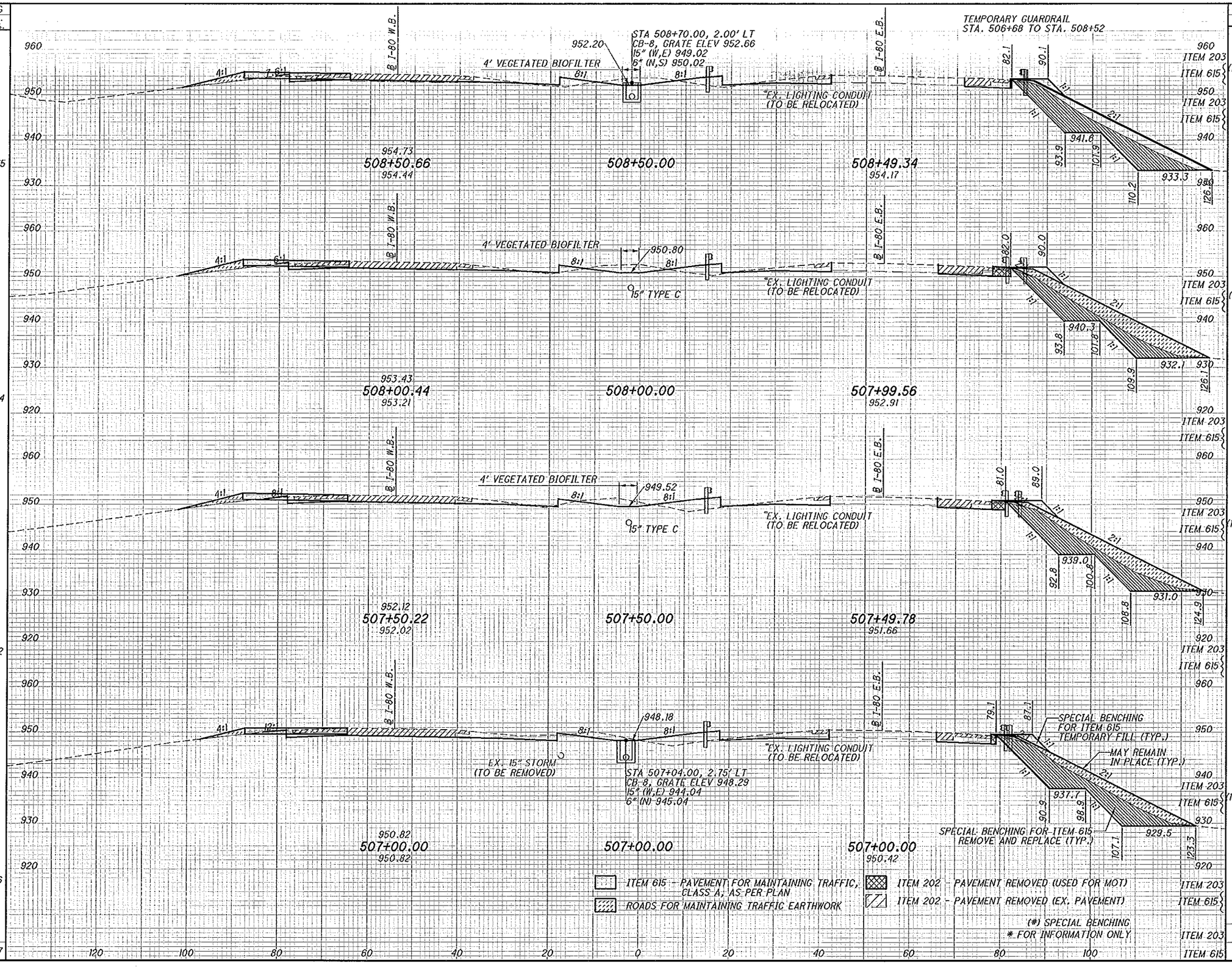
SEEDING	
END WIDTH	SQ. YDS.
88	375
47	264
48	272
50	356
	1267



END AREA		VOLUME		
CUT	FILL	CUT	FILL	
56	95			ITEM 203
(159)*	(159)*			
16*	22*			ITEM 615
		113	115	ITEM 203
		(254)*	(254)*	
		31*	136*	ITEM 615
66	29			ITEM 203
(115)*	(115)*			
17*	125*			ITEM 615
64	35			ITEM 203
(135)*	(135)*			
15*	102*			ITEM 615
		120	59	ITEM 203
		(231)*	(231)*	
		30*	211*	ITEM 615
83	36			ITEM 203
(155)*	(155)*			
11*	79*			ITEM 615
		136	66	ITEM 203
		(269)*	(269)*	
		24*	168*	ITEM 615
		172	78	ITEM 203
		(144)*	(144)*	
		10*	73*	ITEM 615
		541	318	ITEM 203
		993*	1487*	ITEM 615

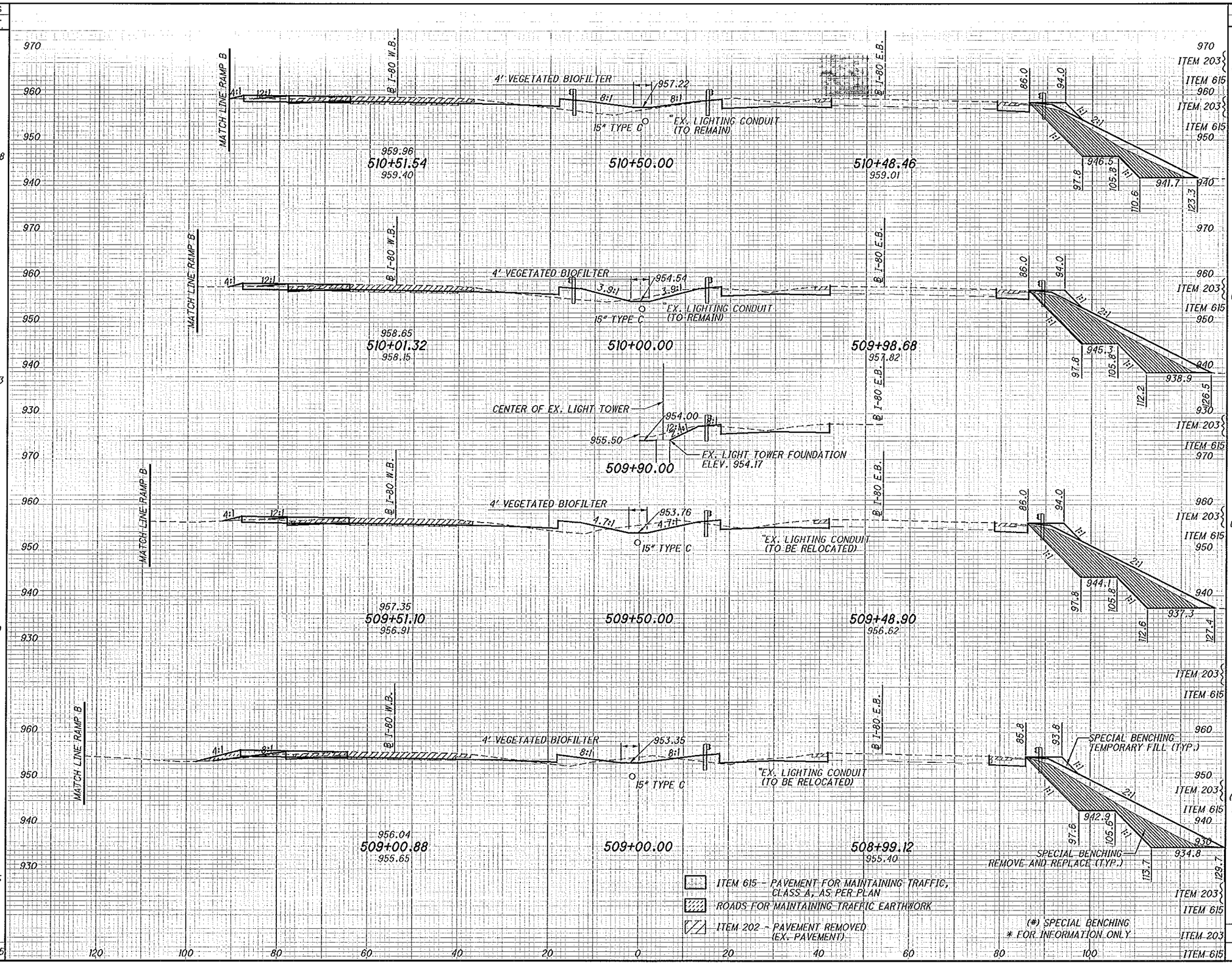
CALCULATED JLN
CHECKED EPS

CROSS SECTIONS I-80
STA. 507+00.00 TO STA. 508+50.00

TRU-80-09.56

46
147

SEEDING END WIDTH	SEEDING SQ. YDS.
84	478
88	483
86	519
101	525
	2005



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
53	100		
(132)	(132)		
8*	8*		
		99	174
		(265)	(265)
		15*	15*
54	88		
(154)	(154)		
8*	8*		
		109	150
		(295)	(295)
		16*	16*
64	74		
(165)	(165)		
9*	9*		
		106	181
		(284)	(284)
		20*	20*
51	122		
(142)	(142)		
13*	13*		
		99	201
		(279)	(279)
		27*	32*
		1536	1829
		78*	83*

CALCULATED JLN
CHECKED EPS

CROSS SECTIONS I-80
STA. 509+00.00 TO STA. 510+50.00

TRU-80-09.56

47
147

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SEEDING END WIDTH	SEEDING SQ. YDS.
33	358
	107
	268
	86
	179
	76
	425
	77
	436
	80
	456
	2122

STA. 512+96
970
960
950
940
-111.6
-103.6
2:1
1:1
1:1
-134.6
-125.9
-123.4
-115.4
952.9
950.5
*EX. LIGHTING CONDUIT (TO BE ABANDONED)
@ I-80 W.B.
8:1
8:1
962.21
@ I-80 E.B.
90.2
98.2
*EX. LIGHTING CONDUIT (TO BE RELOCATED)
948.8
946.2
125.0
103.7
111.7
114.4
965.22
512+56.87
964.11
END APPROACH SLAB
512+44.88
(SKEW ANGLE = 10°04'36" LEFT FORWARD)
963.33
512+32.88
963.24
-114.6
-106.6
2:1
1:1
1:1
-122.4
-113.3
957.4
*EX. LIGHTING CONDUIT (TO BE ABANDONED)
STA 13+81.69, 10.00' RT
CB-3A, GRATE ELEV 963.40
15" (N) 956.35
6" (E) 960.15
611, 15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21
@ I-80 W.B.
8:1
8:1
961.15
@ I-80 E.B.
89.8
97.8
*EX. LIGHTING CONDUIT (TO BE RELOCATED)
948.3
947.5
103.3
111.3
112.1
120.9
964.61
512+31.87
963.57
BEGIN APPROACH SLAB
512+19.88
(SKEW ANGLE = 10°11'23" LEFT FORWARD)
962.73
512+07.88
962.73
-115.4
107.4
2:1
1:1
1:1
-120.5
-111.8
958.5
@ I-80 W.B.
STA 512+06.69, 18.00' LT
CB-3A, GRATE ELEV 962.96
15" (SW) 957.96
6" (E) 959.96
8:1
8:1
960.94
42'-15" TYPE B @ 3.45%
*EX. LIGHTING CONDUIT (TO REMAIN)
@ I-80 E.B.
86.3
94.3
STA 11+87.15, 10.00' RT
CB-3A, GRATE ELEV 961.21
15" (S) 955.14
6" (N,E) 956.69
611, 15" CONDUIT, TYPE F, 707.05 TYPE C OR 707.21
949.9
98.1
106.1
MATCH LINE STA. 512+20.01
963.87
512+02.20
962.93
512+00.00
511+97.80
962.52
@ I-80 W.B.
STA 511+70.00, 1.42' RT
CB-8, GRATE ELEV 960.22
15" (W) 956.52
15" (NE) 956.52
4' VEGETATED BIOFILTER
959.75
8:1
8:1
42'-15" TYPE B @ 3.47%
*EX. LIGHTING CONDUIT (TO REMAIN)
@ I-80 E.B.
86.0
94.0
948.8
945.5
97.8
105.8
109.1
120.4
962.57
511+51.98
961.80
511+50.00
511+48.02
961.43
MATCH LINE RAMP B
@ I-80 W.B.
4' VEGETATED BIOFILTER
958.48
8:1
8:1
15" TYPE C
*EX. LIGHTING CONDUIT (TO REMAIN)
@ I-80 E.B.
86.0
94.0
SPECIAL BENCHING TEMPORARY FILL (TYP.)
947.7
944.0
97.8
105.8
109.5
121.2
961.29
511+01.76
960.66
511+00.00
510+98.24
960.21
SPECIAL BENCHING REMOVE AND REPLACE (TYP.)
MATCH LINE RAMP B

(#) SPECIAL BENCHING
ITEM 202 - PAVEMENT REMOVED (EX. PAVEMENT)
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN

120 100 80 60 40 20 0 20 40 60 80 100

	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
ITEM 203 SPILL QUANTITY STATION 512+96	0	0		
ITEM 203			20	300
			(73)	(73)
ITEM 203	24	352		
	(157)	(157)		
ITEM 203			48	214
			(144)	(144)
ITEM 203	80	111		
	(155)	(155)		
ITEM 203			47	99
			(105)	(105)
ITEM 203	47	158		
	(130)	(130)		
ITEM 203			83	272
			(236)	(236)
ITEM 615			6*	6*
ITEM 203	43	136		
	(125)	(125)		
ITEM 615	7*	7*		
ITEM 203			88	243
			(227)	(227)
ITEM 615			14*	14*
ITEM 203	52	126		
	(120)	(120)		
ITEM 615	8*	8*		
ITEM 203			97	209
			(233)	(233)
ITEM 615			15*	15*
ITEM 203			1401	2355
ITEM 615			35*	35*

CALCULATED JLN
CHECKED EPS

CROSS SECTIONS I-80
STA. 511+00.00 TO STA. 512+44.88

TRU-80-09.56

48
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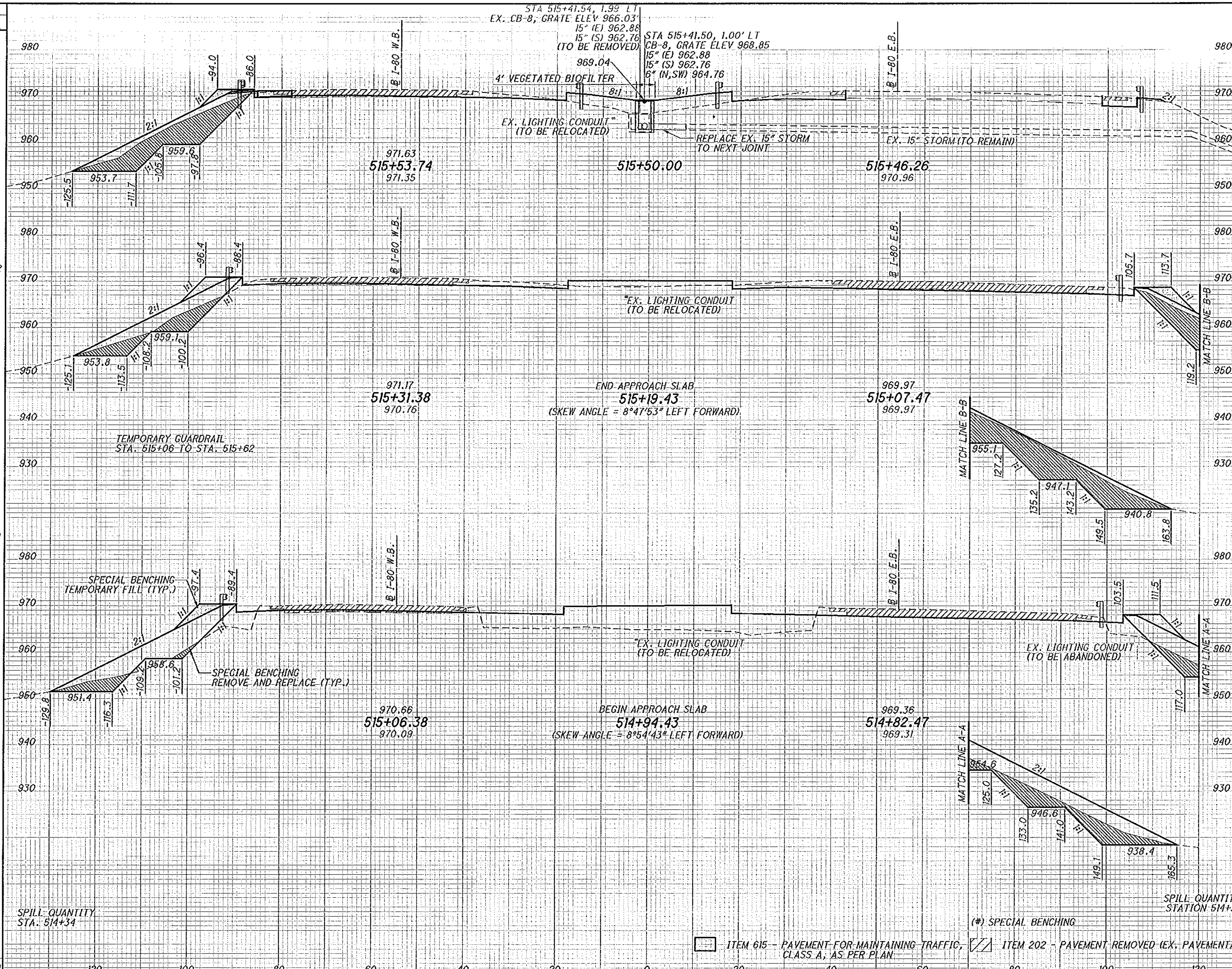

STA 515+41.54, 1.99' LT
EX. CB-8, GRATE ELEV 966.03'
15" (E) 962.88
15" (S) 962.76
(TO BE REMOVED)
STA 515+41.50, 1.00' LT
CB-8, GRATE ELEV 968.85
15" (E) 962.88
15" (S) 962.76
6" (N,SW) 964.76
969.04
4' VEGETATED BIOFILTER
EX. LIGHTING CONDUIT (TO BE RELOCATED)
REPLACE EX. 15" STORM TO NEXT JOINT
EX. 15" STORM (TO REMAIN)
971.63
515+53.74
971.35
515+50.00
515+46.26
970.96
EX. LIGHTING CONDUIT (TO BE RELOCATED)
971.17
515+31.38
970.76
END APPROACH SLAB
515+19.43
(SKEW ANGLE = 8°47'53" LEFT FORWARD)
969.97
515+07.47
969.97
TEMPORARY GUARDRAIL
STA. 515+06 TO STA. 515+62
MATCH LINE B-B
SPECIAL BENCHING
TEMPORARY FILL (TYP.)
SPECIAL BENCHING
REMOVE AND REPLACE (TYP.)
EX. LIGHTING CONDUIT (TO BE RELOCATED)
EX. LIGHTING CONDUIT (TO BE ABANDONED)
970.66
515+06.38
970.09
BEGIN APPROACH SLAB
514+94.43
(SKEW ANGLE = 8°54'43" LEFT FORWARD)
969.36
514+82.47
969.31
MATCH LINE A-A
SPILL QUANTITY
STA. 514+34
SPILL QUANTITY
STATION 514+34
(#) SPECIAL BENCHING
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN
ITEM 202 - PAVEMENT REMOVED (EX. PAVEMENT)

SEEDING

END WIDTH	SQ. YDS.
86	
	382
139	
	399
148	
	608
33	
	1389

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
56 (142)	149 (142)		
		76 (274)	187 (274)
78 (342)	181 (342)		
		48 (247)	414 (247)
25 (192)	714 (192)		
		28 (215)	799 (215)
0	0		
		888	2136

CALCULATED JLN
CHECKED EPS

CROSS SECTIONS I-80
STA. 514+94.43 TO STA. 515+50.00

TRU-80-09.56

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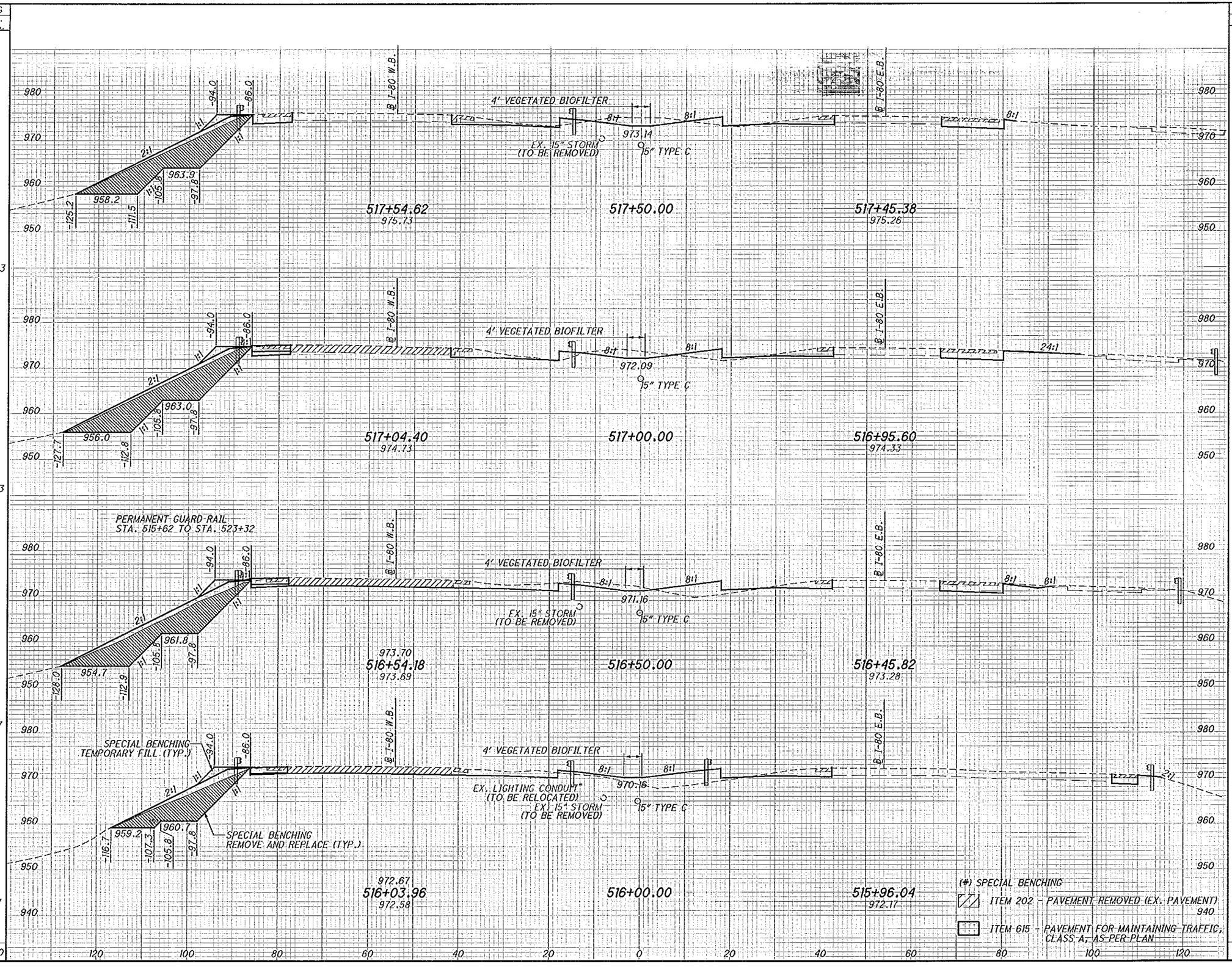
SEEDING END WIDTH	SEEDING SQ. YDS.
82	503
99	533
93	467
75	447
	1950



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
91 (165)	37 (165)		
		169 (318)	82 (318)
92 (178)	52 (178)		
		173 (321)	117 (321)
95 (169)	74 (169)		
		144 (259)	154 (259)
60 (111)	92 (111)		
		107 (234)	223 (234)
		1725	1708

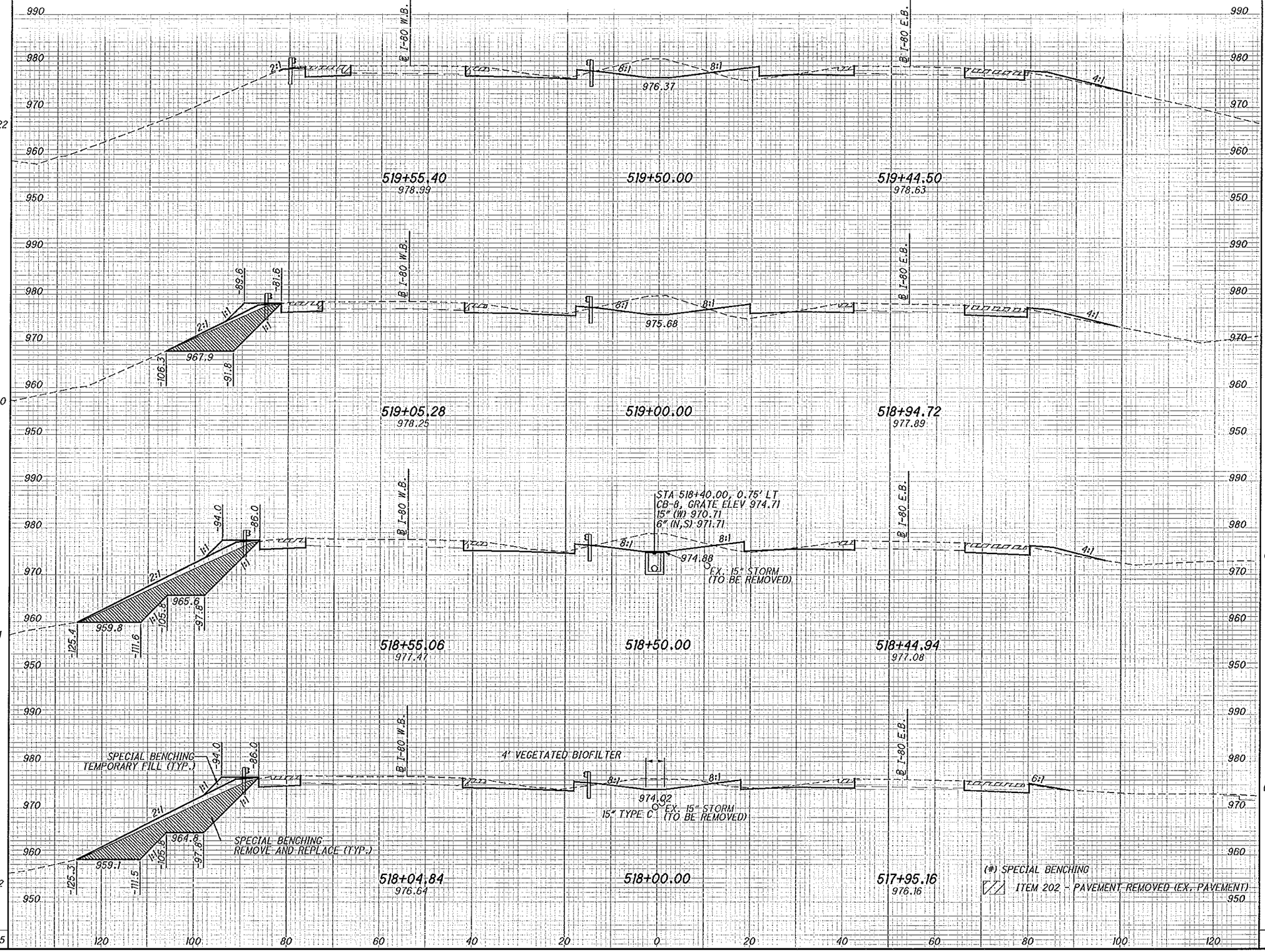
CALCULATED JLN
CHECKED EPS

CROSS SECTIONS I-80
STA. 516+00.00 TO STA. 517+50.00

TRU-80-09.56

50
147

SEEDING END WIDTH	SEEDING SQ. YDS.
68	422
84	500
96	511
88	472
	1905



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
122	32	224 (85)	70 (85)
120 (92)	44 (92)	228 (229)	91 (229)
126 (155)	54 (155)	213 (288)	99 (288)
104 (156)	43 (156)	181 (297)	74 (297)
		1745	1233

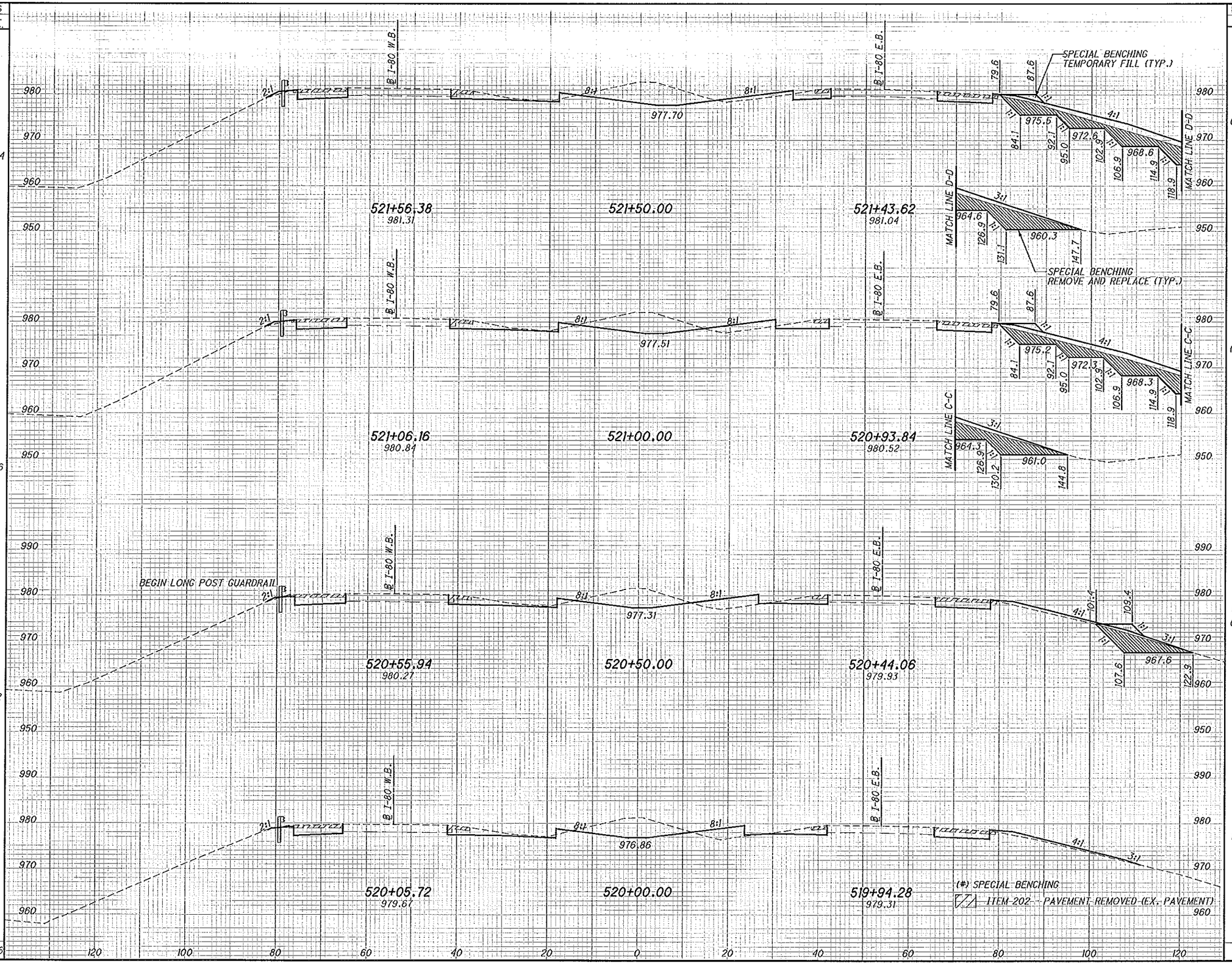
CALCULATED JLN
CHECKED EPS

CROSS SECTIONS I-80
STA. 518+00.00 TO STA. 519+50.00

TRU-80-09.56

51
147

SEEDING END WIDTH	SEEDING SQ. YDS.
128	
	694
122	
	606
96	
	492
81	
	414
	2206



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
145 (170)	80 (170)		
		259 (305)	152 (305)
135 (159)	84 (159)		
		242 (199)	125 (199)
126 (56)	51 (56)		
		232 (52)	82 (52)
125	38		
		229	65
		1518	980

CALCULATED JLN

CHECKED EPS

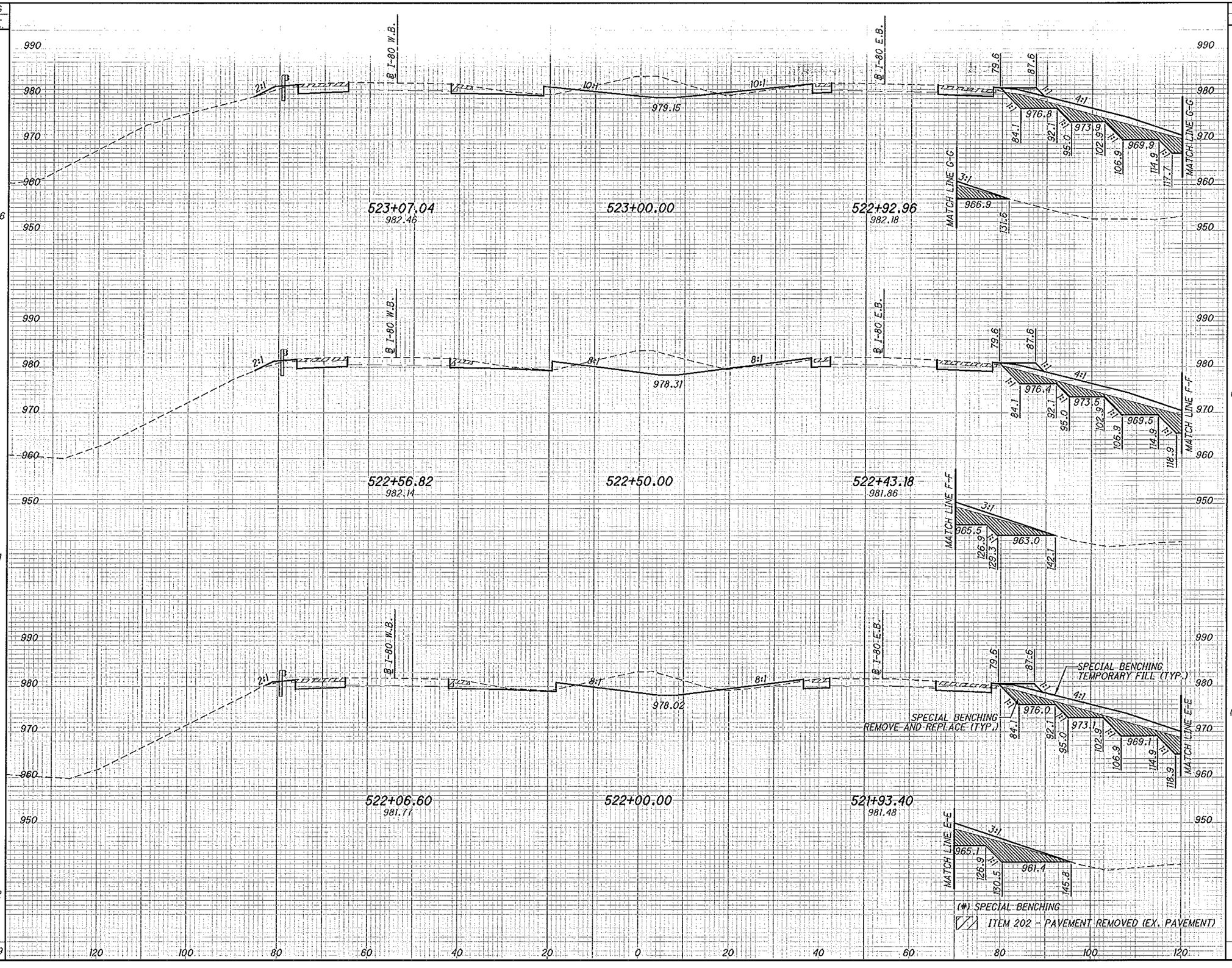
CROSS SECTIONS I-80

STA. 520+00.00 TO STA. 521+50.00

TRU-80-09.56

52
147

SEEDING	
END WIDTH	SQ. YDS.
123	
	706
131	
	731
132	
	722
	2159



END AREA		VOLUME	
CUT	FILL	CUT	FILL
134 (111)	72 (111)		
		257 (230)	143 (230)
144 (137)	82 (137)		
		263 (264)	157 (264)
140 (148)	88 (148)		
		264 (294)	156 (294)
		1572	1244

CALCULATED JLN
CHECKED EPS

CROSS SECTIONS I-80
STA. 522+00.00 TO STA. 523+00.00

TRU-80-09.56

53
147

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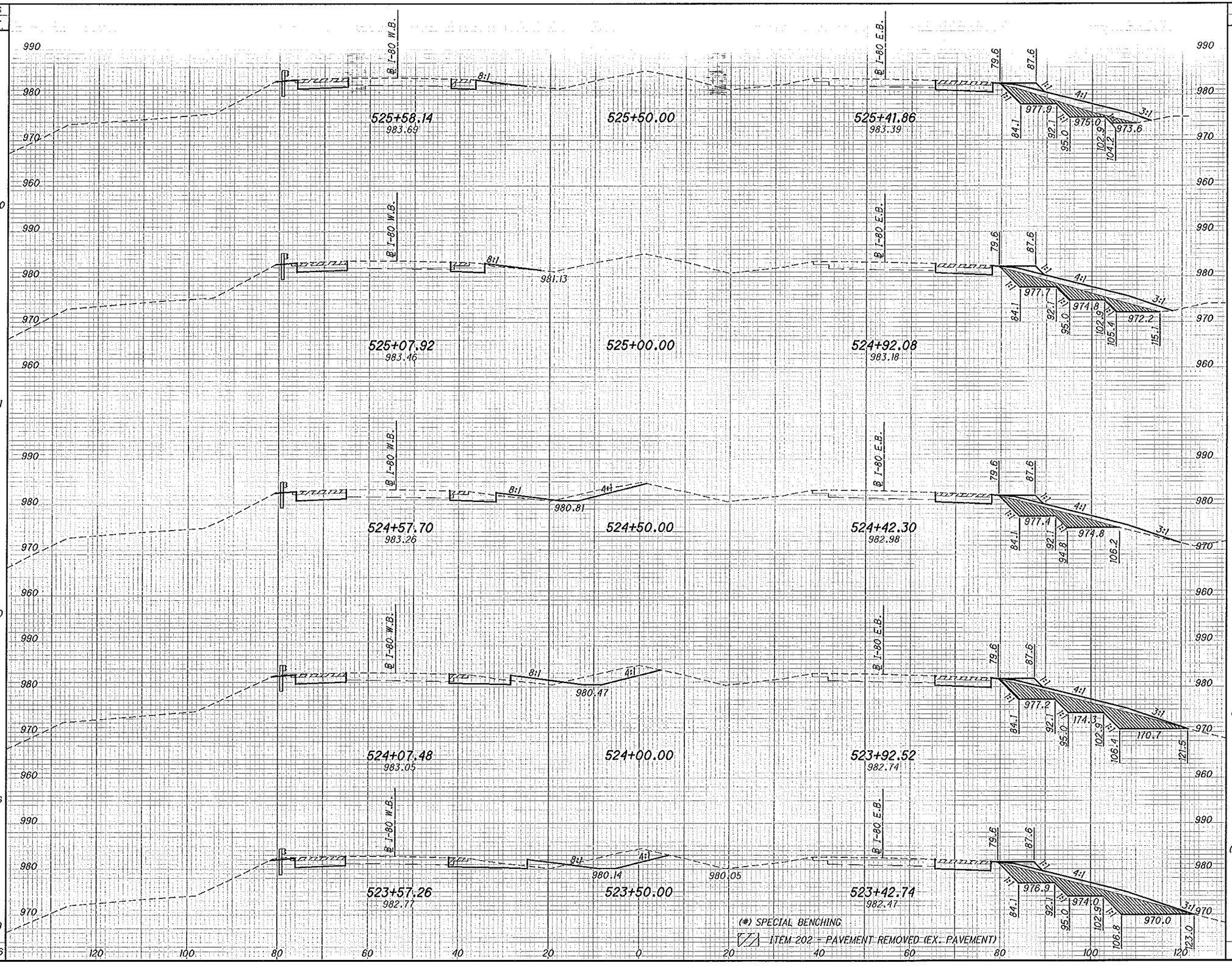
SEEDING	
END WIDTH	SQ. YDS.
51	300
57	
80	450
82	456
82	569
	2156



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (EX. PAVEMENT)

END AREA		VOLUME	
CUT	FILL	CUT	FILL
41	44		
(49)	(49)		
		79	85
		(106)	(106)
44	48		
(65)	(65)		
		102	77
		(111)	(111)
66	35		
(55)	(55)		
		143	68
		(142)	(142)
88	38		
(98)	(98)		
		173	72
		(185)	(185)
99	40		
(102)	(102)		
		216	104
		(197)	(197)
		1454	1147

CALCULATED JLN

CHECKED EPS

CROSS SECTIONS I-80
STA. 523+50.00 TO STA. 525+50.00

TRU-80-09.56

54
147

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SEEDING END WIDTH	SEEDING SQ. YDS.
5	317
5	
12	574
12	
	81
17	
	106
21	
	144
31	
	194
39	
	250
	1666

SPILL QUANTITY STA. 538+01.2

SPILL QUANTITY STATION 532+30.3 (AHEAD)
SPILL QUANTITY STATION 532+30.3 (BACK)

STA 528+03.00, 19.00' LT
EX. CB-8, GRATE ELEV 982.06'
(DO NOT DISTURB)
15" (S) 979.09

STA 528+03.00, 19.00' RT
EX. CB-8, GRATE ELEV 982.11'
(DO NOT DISTURB)
15" (N) 978.90
15" (S) 978.79

STA 528+03.07, 86.75' RT
EX. CB-6, GRATE ELEV 982.60'
(DO NOT DISTURB)
15" (S) 978.28
15" (N) 978.43

SPILL QUANTITY STATION 538+01.2

SPILL QUANTITY (AHEAD) STATION 532+30.3
(BACK) STATION 532+30.3

EX. 15" STORM (DO NOT DISTURB)
EX. 15" STORM (DO NOT DISTURB)
EX. 15" STORM (DO NOT DISTURB)

528+09.24 984.75 — **528+00.00** — **527+90.76** 984.51
527+59.02 984.51 — **527+50.00** — **527+40.98** 984.28
527+08.80 984.27 — **527+00.00** — **526+91.20** 984.06
526+58.58 984.08 — **526+50.00** — **526+41.42** 983.84
526+08.36 983.90 — **526+00.00** — **525+91.64** 983.62

℄ I-80 W.B. ℄ I-80 E.B. 8:1 1:1 4:1 5:1

80.9 88.9 982.3 81.6 83.0
80.1 88.1 980.2 82.5 87.6
78.0 86.0 979.4 81.5 88.5
78.0 86.0 977.6 83.2 94.6

(#) SPECIAL BENCHING
ITEM 202 - PAVEMENT REMOVED (EX. PAVEMENT)

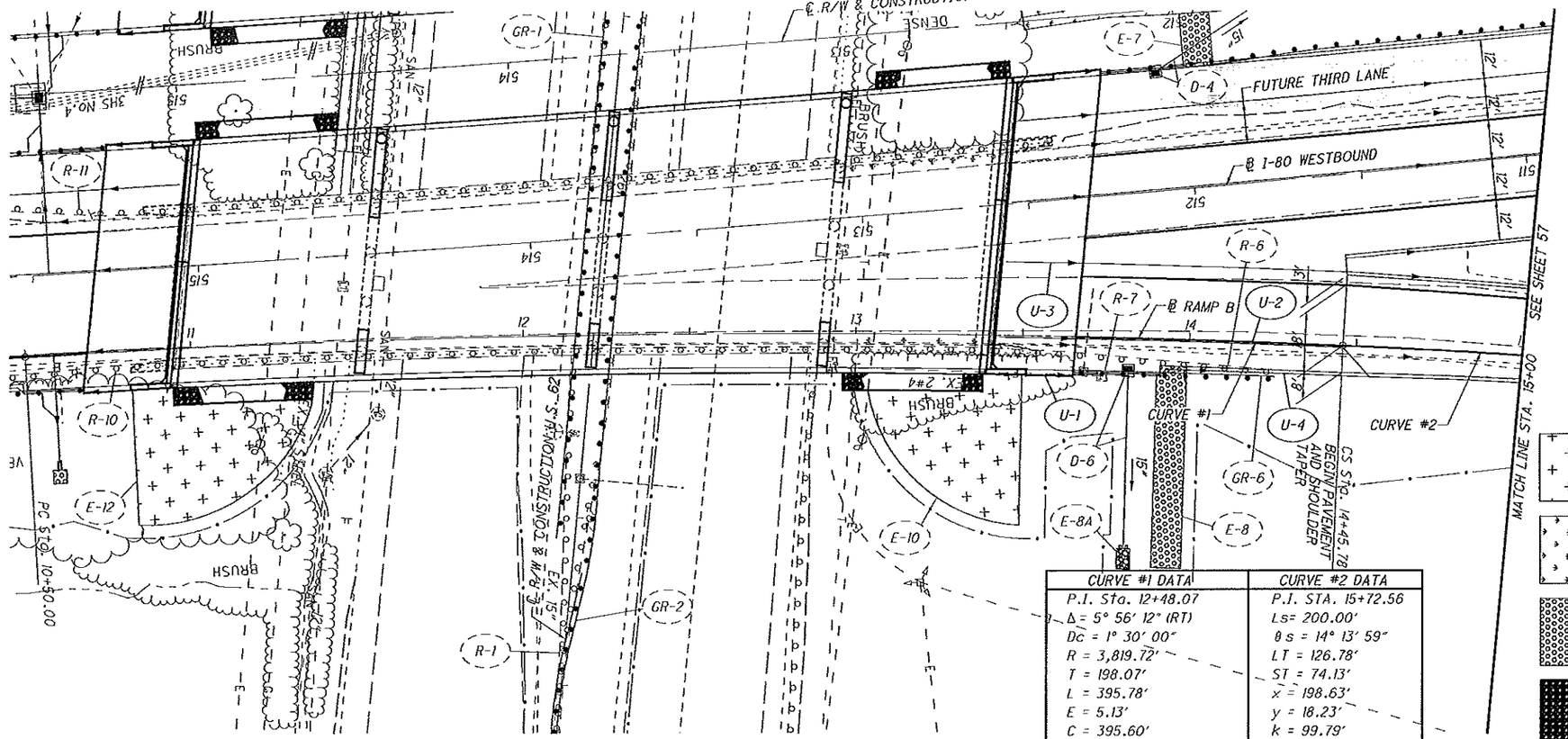
END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
17	1		
		359	21
17	1		
335	1		
		558	16
35	1		
		65	5
35	4		
(5)	(5)		
		64	18
		(13)	(13)
34	15		
(9)	(9)		
		66	42
		(25)	(25)
37	30		
(18)	(18)		
		70	64
		(51)	(51)
39	39		
(37)	(37)		
		74	77
		(80)	(80)
		1425	412

CALCULATED JLN
CHECKED EPS

CROSS SECTIONS I-80
STA. 526+00.00 TO STA. 528+00.00

TRU-80-09.56

55
147



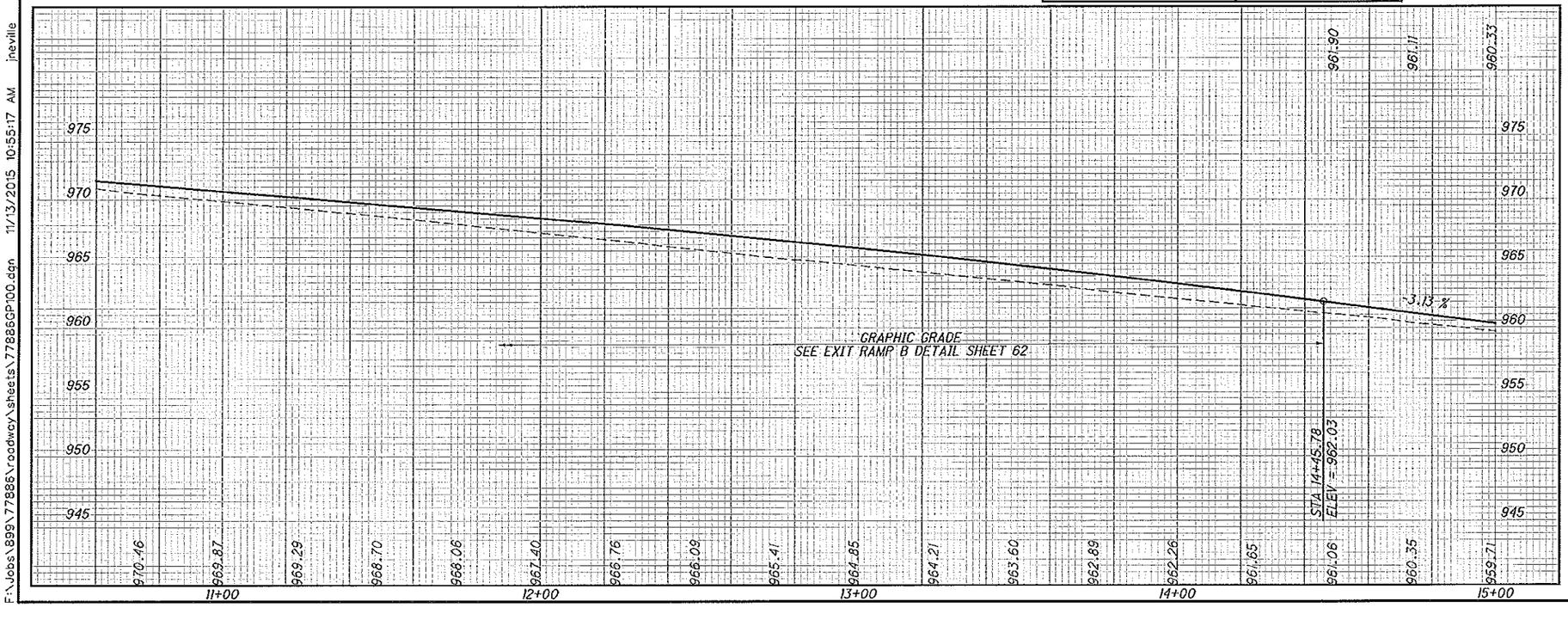
CURVE #1 DATA	CURVE #2 DATA
P.I. Sta. 12+48.07	P.I. STA. 15+72.56
Δ = 5° 56' 12" (RT)	Ls= 200.00'
Dc = 1° 30' 00"	θs = 14° 13' 59"
R = 3,819.72'	LT = 126.78'
T = 198.07'	ST = 74.13'
L = 395.78'	x = 198.63'
E = 5.13'	y = 18.23'
C = 395.60'	k = 99.79'
C.B. = S 84° 08' 48" W	p = 3.26'

ITEM 670 - SLOPE EROSION PROTECTION

ITEM 670 - DITCH EROSION PROTECTION

ITEM 601 - TIED CONCRETE BLOCK MAT, TYPE 2

ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN AND PROFILE - RAMP B
STA. 10+50.00 TO STA. 15+00.00

TRU-80-09.56

56
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CURVE #2 DATA	CURVE #3 DATA	CURVE #4 DATA
P.I. STA. 15+72.56	P.I. Sta. 17+21.14	P.I. Sta. 18+61.22
Ls= 200.00'	Δ = 19° 00' 53" (RT)	Δ = 32° 45' 00" (RT)
θs = 14° 13' 59"	Dc = 12° 43' 59"	Dc = 25° 28' 00"
LT = 126.78'	R = 449.98'	R = 224.98'
ST = 74.13'	T = 75.36'	T = 66.11'
x = 198.63'	L = 149.33'	L = 128.60'
y = 18.23'	E = 6.27'	E = 9.51'
k = 99.79'	C = 148.65'	C = 126.86'
p = 3.26'	C.B. = N 69° 08' 40" W	C.B. = N 43° 16' 39" W

▨ ITEM 670 - SLOPE EROSION PROTECTION

▨ ITEM 670 - DITCH EROSION PROTECTION

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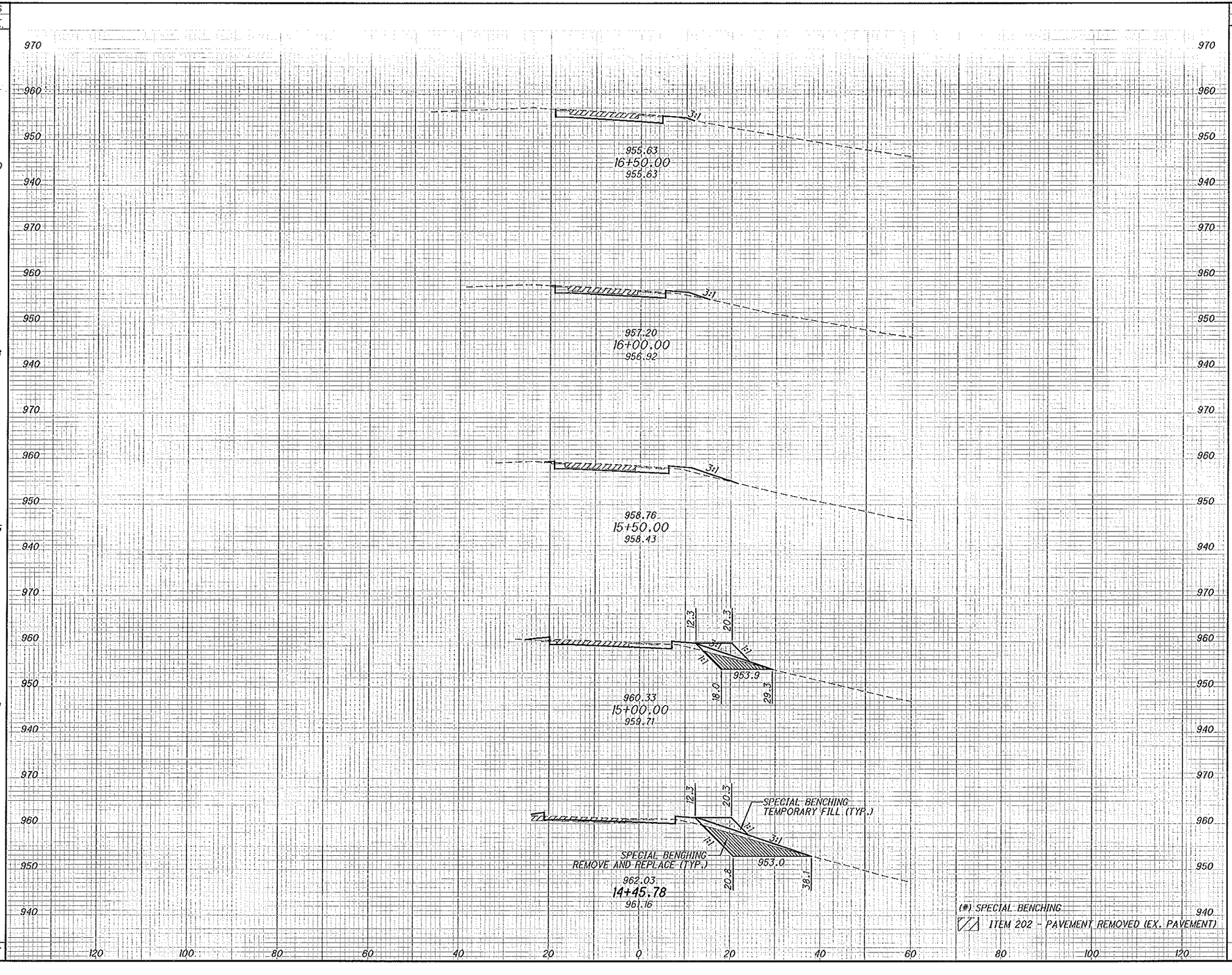
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

PLAN AND PROFILE - RAMP B
STA. 15+00.00 TO STA. 19+50.00

TRU-80-09.56

SEEDING	
END WIDTH	SQ. YDS.
7	50
11	78
17	125
28	184
33	
	437



(#) SPECIAL BENCHING

ITEM 202 - PAVEMENT REMOVED (EX. PAVEMENT)

END AREA	
CUT	FILL
21	1
16	4
14	8
9 (39)	18 (39)
7 (71)	34 (71)

VOLUME	
CUT	FILL
34	5
28	11
21 (36)	24 (36)
16 (110)	52 (110)
245	238

CALCULATED JLN
CHECKED EPS

CROSS SECTIONS RAMP B
STA. 14+45.78 TO STA. 16+50.00

TRU-80-09.56

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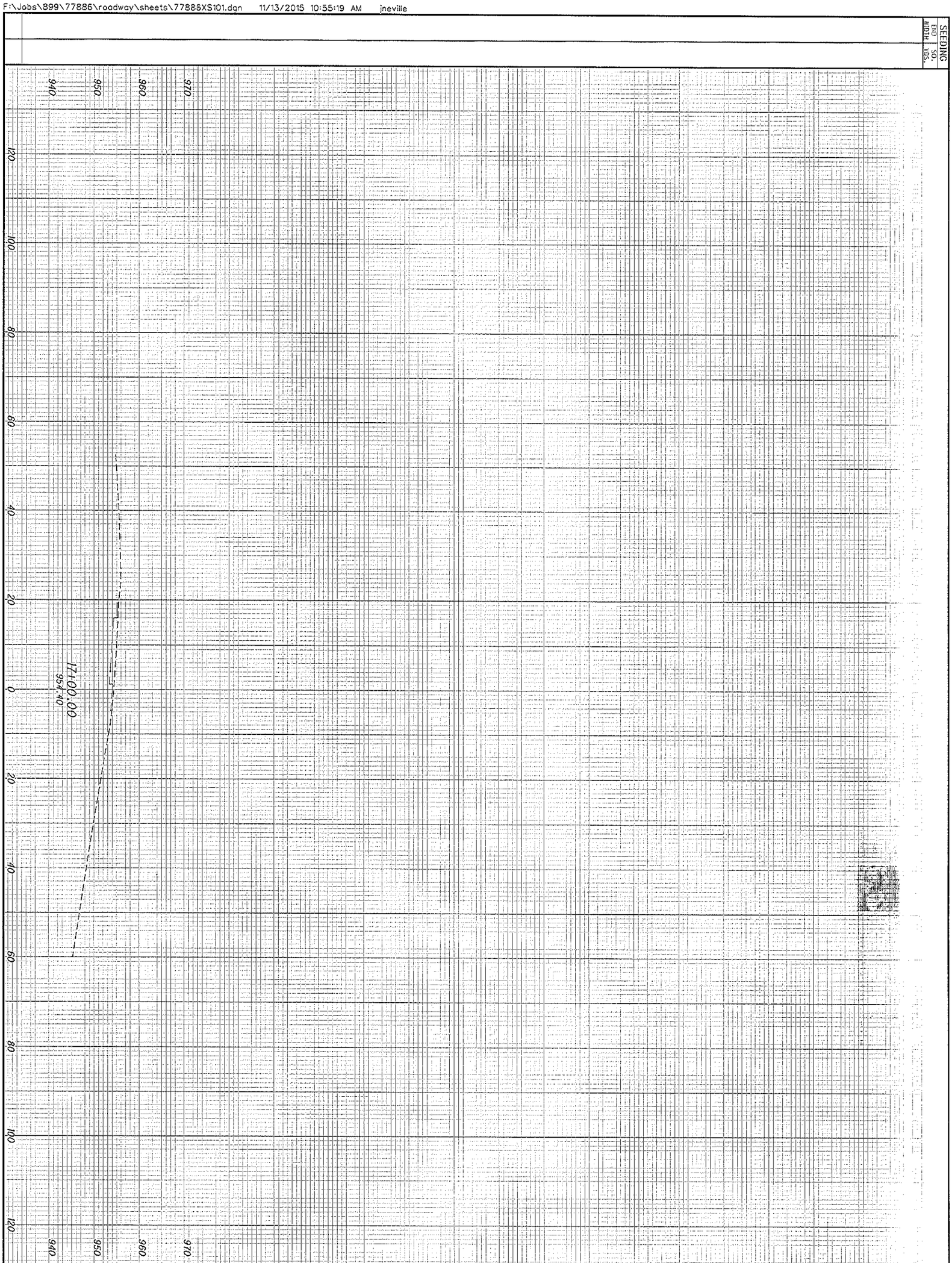
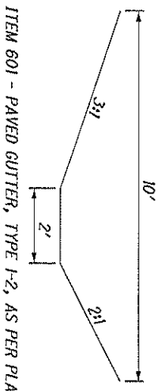
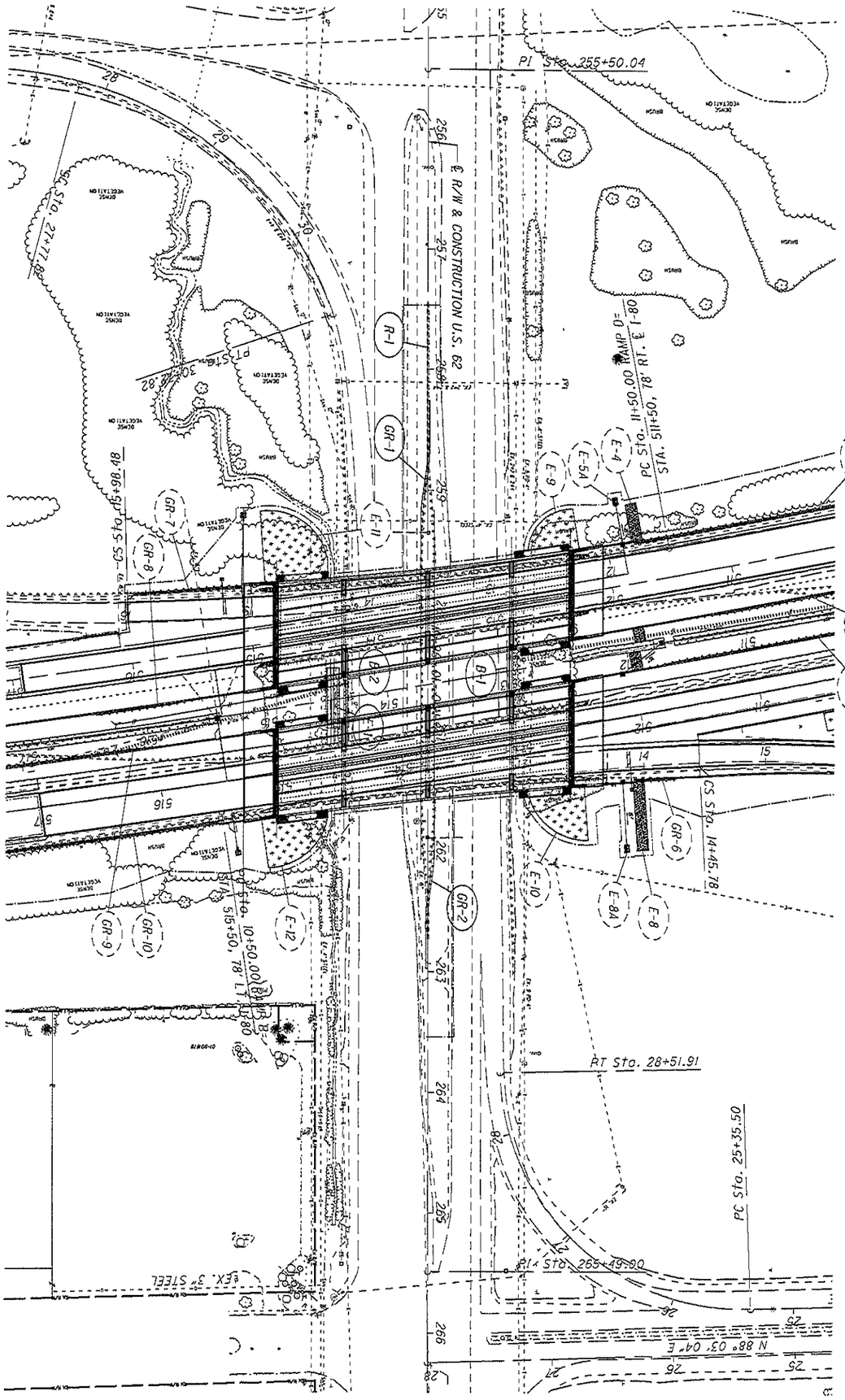


59 / 147	TRU-80-09.56	CROSS SECTIONS RAMP B STA. 17+00.00	CALCULATED JLN CHECKED EPS

ITEM 601 - PAVED GUTTER, TYPE I-2, AS PER PLAN DIMENSIONS





REF NO.	STATION		SIDE	202					601	606					622
	FROM	TO		CONCRETE BARRIER REMOVED	GUARDRAIL REMOVED	GUARDRAIL REMOVED BARRIER DESIGN	GUTTER REMOVED		PAVED GUTTER, TYPE I-2, AS PER PLAN	GUARDRAIL, TYPE MGS	GUARDRAIL BARRIER DESIGN, TYPE MGS	IMPACT ATTENUATOR, TYPE T (BI-DIRECTIONAL)	ANCHOR ASSEMBLY, MSG TYPE T		CONCRETE BARRIER, SINGLE SLOPE, TYPE D
				FT	FT	FT	FT		FT	FT	FT	EA	EA		FT
GR-1	258+26.00	262+06.50	RT							262.50	50	1	1		
GR-2	259+16.82	262+97.32	LT							262.50	50	1	1		
E-1	260+47.76	260+97.60	RT				50		50						
B-1	260+29.5	261+09.5	LT	80											80
B-2	260+32.5	261+12.5	RT	80											80
R-1	257+44	262+73	℄		720	169									
TOTALS CARRIED TO GENERAL SUMMARY				160	720	169	50		50	525.00	100	2	2		160

SUPERELEVATION TABLE

P.I. STA. 508+02.82 | Dc = 0°28'00"

REMARKS	WESTBOUND OUTSIDE EDGE - ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	WESTBOUND BASELINE OF LANES (PROFILE GRADE) ELEVATION	ELEVATION CORRECTION	CROSS SLOPE	TRANSITION RATE	WIDTH	WESTBOUND INSIDE EDGE ELEVATION	OFFSET	STATION
	950.96	+0.14	+0.0120	250:1	12.00	950.82	-0.50	-0.0210	250:1	24.00	950.31	30.00	507+00
	951.50	+0.22	+0.0180	250:1	12.00	951.28	-0.43	-0.0180	250:1	24.00	950.85	30.00	507+18
	951.68	+0.22	+0.0180	250:1	12.00	951.47	-0.43	-0.0180		24.00	951.03	30.00	507+25
	951.81	+0.22	+0.0180		12.00	951.60	-0.43	-0.0180		24.00	951.16	30.00	507+30
	952.12	+0.22	+0.0180		12.00	951.91	-0.43	-0.0180		24.00	951.48	30.00	507+42
	952.33	+0.22	+0.0180		12.00	952.12	-0.43	-0.0180		24.00	951.68	30.00	507+50
	952.98	+0.22	+0.0180		12.00	952.77	-0.43	-0.0180		24.00	952.33	30.00	507+75
	953.63	+0.22	+0.0180		12.00	953.42	-0.43	-0.0180		24.00	952.98	30.00	508+00
	954.28	+0.22	+0.0180		12.00	654.07	-0.43	-0.0180		24.00	953.63	30.00	508+25
	954.93	+0.22	+0.0180		12.00	954.72	-0.43	-0.0180		24.00	954.28	30.00	508+50
	955.58	+0.22	+0.0180		12.00	955.37	-0.43	-0.0180		24.00	954.93	30.00	508+75
	956.23	+0.22	+0.0180		12.00	956.02	-0.43	-0.0180		24.00	955.58	30.00	509+00
	956.88	+0.22	+0.0180		12.00	956.67	-0.43	-0.0180		24.00	956.23	30.00	509+25
	957.53	+0.22	+0.0180		12.00	957.32	-0.43	-0.0180		24.00	956.88	30.00	509+50
	958.18	+0.22	+0.0180		12.00	957.97	-0.43	-0.0180		24.00	957.53	30.00	509+75
	958.83	+0.22	+0.0180		12.00	958.62	-0.43	-0.0180		24.00	958.18	30.00	510+00
	959.48	+0.22	+0.0180		12.00	959.27	-0.43	-0.0180		24.00	958.83	30.00	510+25
	960.13	+0.22	+0.0180		12.00	959.92	-0.43	-0.0180		24.00	959.48	30.00	510+50
	960.78	+0.22	+0.0180		12.00	960.57	-0.43	-0.0180		24.00	960.13	30.00	510+75
	961.43	+0.22	+0.0180		12.00	961.22	-0.43	-0.0180		24.00	960.78	30.00	511+00
	962.08	+0.22	+0.0180		12.00	961.87	-0.43	-0.0180		24.00	961.43	30.00	511+25
	962.73	+0.22	+0.0180		12.00	962.52	-0.43	-0.0180		24.00	962.08	30.00	511+50
	963.38	+0.22	+0.0180		12.00	963.17	-0.43	-0.0180		24.00	962.73	30.00	511+75
	964.03	+0.22	+0.0180		12.00	963.81	-0.43	-0.0180		24.00	963.38	30.00	512+00
	964.66	+0.22	+0.0180		12.00	964.44	-0.43	-0.0180		24.00	964.01	30.00	512+25
	965.27	+0.22	+0.0180		12.00	965.06	-0.43	-0.0180		24.00	964.62	30.00	512+50
	965.87	+0.22	+0.0180		12.00	965.66	-0.43	-0.0180		24.00	965.23	30.00	512+75
	966.46	+0.22	+0.0180		12.00	966.25	-0.43	-0.0180		24.00	965.81	30.00	513+00
	967.04	+0.22	+0.0180		12.00	966.82	-0.43	-0.0180		24.00	966.39	30.00	513+25
	967.60	+0.22	+0.0180		12.00	967.38	-0.43	-0.0180		24.00	966.95	30.00	513+50
	968.15	+0.22	+0.0180		12.00	967.93	-0.43	-0.0180		24.00	967.50	30.00	513+75
	968.68	+0.22	+0.0180		12.00	968.47	-0.43	-0.0180		24.00	968.03	30.00	514+00
	969.20	+0.22	+0.0180		12.00	968.99	-0.43	-0.0180		24.00	968.55	30.00	514+25
	969.72	+0.22	+0.0180		12.00	969.50	-0.43	-0.0180		24.00	969.07	30.00	514+50
	970.23	+0.22	+0.0180		12.00	970.01	-0.43	-0.0180		24.00	969.58	30.00	514+75
	970.74	+0.22	+0.0180		12.00	970.53	-0.43	-0.0180		24.00	970.10	30.00	515+00
	971.26	+0.22	+0.0180		12.00	971.04	-0.43	-0.0180		24.00	970.61	30.00	515+25
	971.77	+0.22	+0.0180		12.00	971.56	-0.43	-0.0180		24.00	971.12	30.00	515+50
	972.29	+0.22	+0.0180		12.00	972.07	-0.43	-0.0180		24.00	971.64	30.00	515+75
	972.80	+0.22	+0.0180		12.00	972.59	-0.43	-0.0180		24.00	972.15	30.00	516+00
	973.32	+0.22	+0.0180		12.00	973.10	-0.43	-0.0180		24.00	972.67	30.00	516+25
	973.83	+0.22	+0.0180		12.00	973.61	-0.43	-0.0180		24.00	973.18	30.00	516+50
	973.87	+0.22	+0.0180		12.00	973.65	-0.43	-0.0180		24.00	973.22	30.00	516+52
	974.30	+0.22	+0.0180	250:1	12.00	974.09	-0.43	-0.0180		24.00	973.65	30.00	516+73
	974.35	+0.22	+0.0187	250:1	12.00	974.13	-0.43	-0.0180		24.00	973.70	30.00	516+75
	974.52	+0.25	+0.0210	250:1	12.00	974.27	-0.43	-0.0180	250:1	24.00	973.84	30.00	516+82
	974.60	+0.26	+0.0220	250:1	12.00	974.33	-0.44	-0.0185	250:1	24.00	973.89	30.00	516+85
	974.97	+0.32	+0.0270	250:1	12.00	974.64	-0.50	-0.0210	250:1	24.00	974.14	30.00	517+00

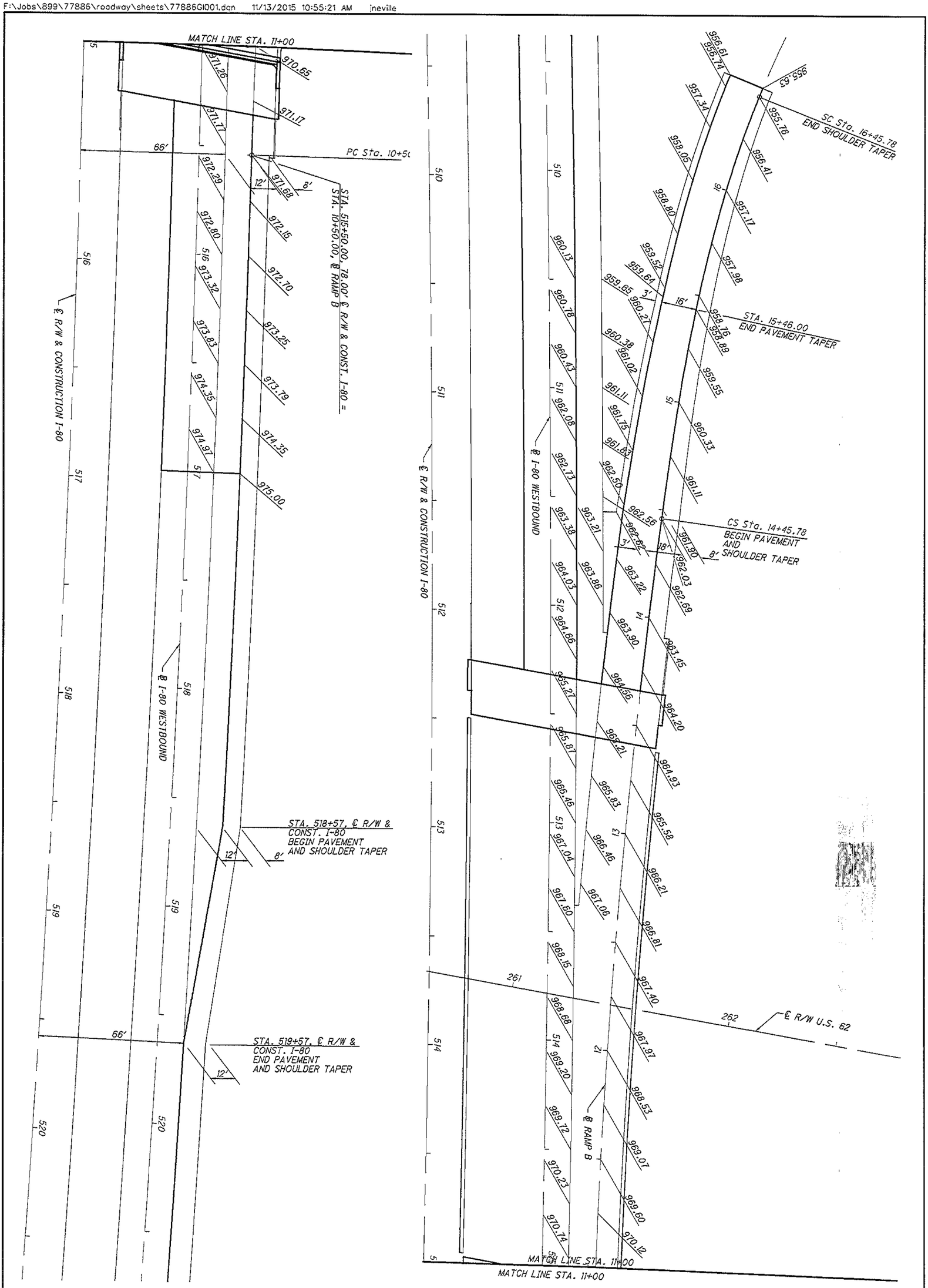
STATION	EASTBOUND INSIDE EDGE OFFSET	ELEVATION	EASTBOUND BASELINE OF LANES (PROFILE GRADE) WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	EASTBOUND OUTSIDE EDGE - WIDTH	TRANSITION RATE	CROSS SLOPE	ELEVATION CORRECTION	ELEVATION	REMARKS
507+00	30.00	950.73	24.00	250:1	+0.0130	+0.31	950.42	12.00	250:1	-0.0320	-0.38	950.04	
507+18	30.00	951.25	24.00	250:1	+0.0160	+0.38	950.87	12.00	250:1	-0.0260	-0.31	950.56	
507+25	30.00	951.45	24.00	250:1	+0.0172	+0.41	951.04	12.00	250:1	-0.0237	-0.28	950.76	
507+30	30.00	951.60	24.00	250:1	+0.0180	+0.43	951.17	12.00	250:1	-0.0220	-0.26	950.90	
507+42	30.00	951.90	24.00		+0.0180	+0.43	951.46	12.00	250:1	-0.0180	-0.22	951.25	
507+50	30.00	952.09	24.00		+0.0180	+0.43	951.66	12.00		-0.0180	-0.22	951.45	
507+75	30.00	952.72	24.00		+0.0180	+0.43	952.29	12.00		-0.0180	-0.22	952.07	
508+00	30.00	953.35	24.00		+0.0180	+0.43	952.92	12.00		-0.0180	-0.22	952.70	
508+25	30.00	953.98	24.00		+0.0180	+0.43	953.55	12.00		-0.0180	-0.22	953.34	
508+50	30.00	954.62	24.00		+0.0180	+0.43	954.19	12.00		-0.0180	-0.22	953.97	
508+75	30.00	955.25	24.00		+0.0180	+0.43	954.81	12.00		-0.0180	-0.22	954.60	
509+00	30.00	955.86	24.00		+0.0180	+0.43	955.43	12.00		-0.0180	-0.22	955.21	
509+25	30.00	956.47	24.00		+0.0180	+0.43	956.04	12.00		-0.0180	-0.22	955.82	
509+50	30.00	957.08	24.00		+0.0180	+0.43	956.64	12.00		-0.0180	-0.22	956.43	
509+75	30.00	957.68	24.00		+0.0180	+0.43	957.25	12.00		-0.0180	-0.22	957.04	
510+00	30.00	958.28	24.00		+0.0180	+0.43	957.85	12.00		-0.0180	-0.22	957.63	
510+25	30.00	958.88	24.00		+0.0180	+0.43	958.45	12.00		-0.0180	-0.22	958.23	
510+50	30.00	959.47	24.00		+0.0180	+0.43	959.04	12.00		-0.0180	-0.22	958.83	
510+75	30.00	960.07	24.00		+0.0180	+0.43	959.64	12.00		-0.0180	-0.22	959.42	
511+00	30.00	960.69	24.00		+0.0180	+0.43	960.26	12.00		-0.0180	-0.22	960.04	
511+25	30.00	961.26	24.00		+0.0180	+0.43	960.83	12.00		-0.0180	-0.22	960.61	
511+50	30.00	961.83	24.00		+0.0180	+0.43	961.40	12.00		-0.0180	-0.22	961.19	
511+75	30.00	962.41	24.00		+0.0180	+0.43	961.98	12.00		-0.0180	-0.22	961.76	
512+00	30.00	962.98	24.00		+0.0180	+0.43	962.55	12.00		-0.0180	-0.22	962.33	
512+25	30.00	963.57	24.00		+0.0180	+0.43	963.14	12.00		-0.0180	-0.22	962.93	
512+50	30.00	964.18	24.00		+0.0180	+0.43	963.75	12.00		-0.0180	-0.22	963.53	
512+75	30.00	964.78	24.00		+0.0180	+0.43	964.35	12.00		-0.0180	-0.22	964.13	
513+00	30.00	965.39	24.00		+0.0180	+0.43	964.95	12.00		-0.0180	-0.22	964.74	
513+25	30.00	965.99	24.00		+0.0180	+0.43	965.56	12.00		-0.0180	-0.22	965.34	
513+50	30.00	966.59	24.00		+0.0180	+0.43	966.16	12.00		-0.0180	-0.22	965.95	
513+75	30.00	967.20	24.00		+0.0180	+0.43	966.77	12.00		-0.0180	-0.22	966.55	
514+00	30.00	967.80	24.00		+0.0180	+0.43	967.37	12.00		-0.0180	-0.22	967.15	
514+25	30.00	968.40	24.00		+0.0180	+0.43	967.97	12.00		-0.0180	-0.22	967.76	
514+50	30.00	969.01	24.00		+0.0180	+0.43	968.58	12.00		-0.0180	-0.22	968.36	
514+75	30.00	969.61	24.00		+0.0180	+0.43	969.18	12.00		-0.0180	-0.22	968.96	
515+00	30.00	970.22	24.00		+0.0180	+0.43	969.78	12.00		-0.0180	-0.22	969.57	
515+25	30.00	970.83	24.00		+0.0180	+0.43	970.40	12.00		-0.0180	-0.22	970.18	
515+50	30.00	971.45	24.00		+0.0180	+0.43	971.02	12.00		-0.0180	-0.22	970.81	
515+75	30.00	972.07	24.00		+0.0180	+0.43	971.64	12.00		-0.0180	-0.22	971.43	
516+00	30.00	972.69	24.00		+0.0180	+0.43	972.26	12.00		-0.0180	-0.22	972.05	
516+25	30.00	973.26	24.00		+0.0180	+0.43	972.83	12.00		-0.0180	-0.22	972.61	
516+50	30.00	973.80	24.00		+0.0180	+0.43	973.37	12.00		-0.0180	-0.22	973.16	
516+52	30.00	973.85	24.00	250:1	+0.0180	+0.43	973.42	12.00		-0.0180	-0.22	973.20	
516+73	30.00	974.21	24.00	250:1	+0.0145	+0.35	973.86	12.00		-0.0180	-0.22	973.65	
516+75	30.00	974.24	24.00	250:1	+0.0142	+0.34	973.90	12.00		-0.0180	-0.22	973.69	
516+82	30.00	974.37	24.00	250:1	+0.0130	+0.31	974.05	12.00		-0.0180	-0.22	973.84	
516+85	30.00	974.42	24.00	250:1	+0.0125	+0.30	974.12	12.00	250:1	-0.0180	-0.22	973.90	
517+00	30.00	974.65	24.00	250:1	+0.0100	+0.24	974.41	12.00	250:1	-0.0130	-0.16	974.25	

CALCULATED JLN CHECKED EPS

SUPERELEVATION TABLE I-80

TRU-80-09.56

F:\Jobs\899\77886\roadway\sheets\77886GI001.dgn 11/13/2015 10:55:21 AM jneville



62/147	TRU-80-09.56	RAMP DETAILS EXIT RAMP B	CALCULATED JLN CHECKED EPS	0 20 10 40 HORIZONTAL SCALE IN FEET

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JLN
CHECKED EPS

RAMP DETAILS
EXIT RAMP D

TRU-80-09.56

63
147

UNDERDRAIN SUBSUMMARY

CALCULATED JLN | CHECKED EPS

REF. NO.	START PLAN SHEET NO.	STATION LIMITS "X" DENOTES OUTLET LOCATION FOR UNDERDRAINS ONLY			LOCATION	TYPE OF OUTLET	605			HORIZONTAL BENDS AND BRANCHES (FOR INFORMATION ONLY)						601	611	
			BEGIN	END			6" UNCLASSIFIED PIPE UNDERDRAIN	6" BASE PIPE UNDERDRAIN	6" SHALLOW PIPE UNDERDRAIN	6" WYE	6" X 45° BEND	6" X 90° BEND	6" CROSS	6" TEE	6" PLUG	TIED CONCRETE BLOCK MAT, TYPE 1	6" CONDUIT, TYPE F, FOR UNDERDRAIN OUTLETS	PRECAST REINFORCED CONCRETE OUTLET
			FT	FT			FT	FT	FT	EA	EA	EA	EA	EA	EA	SY	FT	EA
U-1	33		497+94	499+95	WB, L	U-4		191						1	1		10	
U-2	33	X	499+56	504+13	EB, R	C.B.			449		1				1		10	
U-3	33	X	499+56	504+15	EB, R	C.B.		446							1		10	
U-4	33		499+95		WB, L	C.B.											4	
U-5	33	X	499+95	503+77	WB, L	U-4	96	280			2				1		10	
U-1	34		505+04	505+50	WB, L	U-10	46							1	1			
U-2	34		505+05	505+50	WB, L	U-10	45							1	1			
U-3	34		505+14	505+34	WB, R	U-6	20			1					1			
U-4	34		505+32	505+72	EB, L	U-13	40							1	1			
U-5	34		505+33	505+72	EB, L	U-13	39							1	1			
U-6	34		505+34	505+70	WB, R	C.B.											51	
U-7	34		505+34	507+00	WB, R	U-6		166		1					1			
U-8	34		505+41	505+75	EB, R	U-16	34							1	1			
U-9	34		505+43	505+75	EB, R	U-16	32							1	1			
U-10	34	X	505+50		WB, L	SLOPE										2	48	1
U-11	34		505+50	511+55	WB, L	U-10		605		1	1	1			1			
U-12	34		505+50	507+00	WB, L	U-10			250									
U-13	34	X	505+70	505+72	EB, L	C.B.											39	
U-14	34		505+72	507+00	EB, L	U-13		128		1	1	1			1			
U-15	34		505+72	508+66	EB, L	U-13			294						1			
U-16	34		505+75		EB, R	SLOPE										2	22	1
U-17	34		505+75	511+73	EB, R	U-16			605						1			
U-18	34		505+75	511+73	EB, R	U-16		605		1	3	1			1			
U-19	34		505+82	507+00	WB, R	U-7	35		85		1							
U-1	35		506+93	508+66	EB, L	U-14	13	162		1	1				1			
U-2	35		507+04		WB, R	C.B.											54	
U-3	35		507+04	508+66	WB, R	U-2		162				1			1			
U-4	35		507+04	508+66	WB, R	U-2			162					1	1			
U-5	35		507+04	508+66	WB, R	U-2		162		1	1	1			1			
U-6	35		508+70		WB, R	C.B											52	
U-7	35	X	508+70		EB, L	C.B.											40	
U-8	35		508+70	512+52	WB, R	U-6		382				1			1			
U-9	35		508+70	512+48	WB, R	U-6			378					1	1			
U-10	35		508+70	512+03	WB, R	U-6		333		1	1	1			1			
U-11	35		508+70	512+40	EB, L	U-7		370		1	1	1			1			
U-12	35		508+70	512+36	EB, L	U-7			366					1	1			
U-1	36		511+87		EB, R	C.B.											25	
U-2	36		511+87	512+32	EB, R	U-1		44				1			1			
U-2A	36		511+87	512+28	EB, R	U-1			41					1	1			
U-3	36	X	511+87	512+27	EB, R	C.B.		29							1		10	
U-4	36	X	512+07	512+46	WB, R	C.B.		29							1		10	
U-5	36		514+80	515+05	EB, R	U-11	25							1	1			
U-6	36		514+82	515+06	EB, R	U-11	24						1		1			
U-7	36		514+84	515+07	EB, R	U-11	23			1	1	1			1			
U-8	36		514+85	515+08	EB, R	U-11	23							1	1			
U-9	36		514+90	515+38	EB, L	U-17	47							1	1			
U-10	36		514+94	515+38	EB, L	U-17	44			1	1			1	1			
U-11	36	X	514+95	515+08	EB, R	ON SLOPE										2	90	1
U-12	36		514+99	515+42	WB, R	U-18	43							1	1			
U-13	36		515+01	515+42	WB, R	U-18	41						1		1			
U-14	36		515+05	515+42	EB, R	U-18	37							1	1			
TOTALS CARRIED TO NEXT COLUMN							707	4094	2630	11	15	10	2	17	39	6	485	3

REF. NO.	START PLAN SHEET NO.	STATION LIMITS "X" DENOTES OUTLET LOCATION FOR UNDERDRAINS ONLY			LOCATION	TYPE OF OUTLET	605			HORIZONTAL BENDS AND BRANCHES (FOR INFORMATION ONLY)						601	611	
			BEGIN	END			6" UNCLASSIFIED PIPE UNDERDRAIN	6" BASE PIPE UNDERDRAIN	6" SHALLOW PIPE UNDERDRAIN	6" WYE	6" X 45° BEND	6" X 90° BEND	6" CROSS	6" TEE	6" PLUG	TIED CONCRETE BLOCK MAT, TYPE 1	6" CONDUIT, TYPE F, FOR UNDERDRAIN OUTLETS	PRECAST REINFORCED CONCRETE OUTLET
			FT	FT			FT	FT	FT	EA	EA	EA	EA	EA	EA	SY	FT	EA
U-15	36		515+08	515+42	WB, L	U-19	33							1	1			
U-16	36		515+10	515+42	WB, L	U-19	32							1	1			
U-17	36		515+38	515+42	X EB, L	C.B.					1						43	
U-18	36		515+42		X WB, R	C.B.											52	
U-19	36	X	515+42		WB, L	ON SLOPE										2	33	1
U-20	36		515+05	15+98*	EB, R	U-11			96		2			1				
U-21	36		515+06	515+27	EB, R	U-11			21						1			
U-22	36		515+07	15+98*	EB, R	U-11		95						1	1			
U-23	36		515+08	516+08	EB, R	U-11			99						1			
U-24	36		515+38	518+36	EB, L	U-17		298							1			
U-25	36		515+38	518+36	EB, L	U-17		298							1			
U-26	36		515+42	518+36	WB, R	U-18		294		1	1	1			1			
U-27	36		515+42	518+36	WB, R	U-18			294						1			
U-28	36		515+42	517+00	WB, R	U-18		158							1			
U-29	36		515+42	517+96	WB, L	U-19			254		2				1			
U-30	36		515+42	517+96	WB, L	U-19		254		1	3	1			1			
U-1	37	X	516+12	520+96	EB, R	C.B.			484			1			1		10	
U-2	37	X	516+12	520+96	EB, R	C.B.		484							1		10	
U-3	37		516+96	518+36	WB, R	U-27		140				1			1		10	
U-4	37	X	518+00		WB, L	ON SLOPE										2	15	1
U-5	37		518+00	522+96	WB, L	U-4			500									
U-6	37		518+00	522+96	WB, L	U-4		500		1	1	1			1			
U-7	37	X	518+40		EB, L	C.B.											41	
U-8	37		518+40		X WB, R	C.B.											37	
U-9	37		518+40	521+70	EB, L	U-7			330			1						
U-10	37		518+40	523+11	EB, L	U-7		471		1	1	1			1			
U-11	37		518+40	526+96	WB, R	U-8		858		1	1	1			1			
U-12	37		518+40	523+61	WB, R	U-8			523					1	1			
U-13	37		518+40	525+14	WB, R	U-8			676			1						
U-1	38		521+00		X EB, R	ON SLOPE										2	25	1
U-2	38		521+00	252+96	EB, R	U-1		496		1	1	1			1			
U-3	38		521+00	525+96	EB, R	U-1			496			1			1			
U-4	38	X	523+00		WB, L	ON SLOPE										2	19	1
U-5	38		523+00	527+96	WB, L	U-4			496			1			1			
U-6	38		523+00	527+96	WB, L	U-4		496		1	1	1			1			
U-1	39		526+00		X EB, R	ON SLOPE										2	25	1
U-2	39		526+00	532+30	EB, R	U-1		630		1	3	1			1			
U-3	39		526+00	532+30	EB, R	U-1			630			1			1			
U-4	39	X	528+00		WB, L	ON SLOPE										2	19	1
U-5	39		528+00	532+96	WB, L	U-4			496			1			1			
U-6	39		528+00	532+96	WB, L	U-4		496		1	1	1			1			
U-1	40	X	533+00		WB, L	ON SLOPE										2	19	1
U-2	40		533+00	538+01	WB, L	U-1			501			1			1			
U-3	40		533+00	538+01	WB, L	U-2		501		1	1	1			1			
* STATIONED OFF RAMP D																		
SUB TOTAL THIS COLUMN							65	6469	5896	10	19	19	0	5	28	14	358	7
SUB TOTAL FROM COLUMN 1							707	4094	2630	11	15	10	2	17	39	6	485	3
TOTALS FOR INFORMATION ONLY										21	34	19	2	22	67			
TOTALS CARRIED TO GENERAL SUMMARY							772	10563	8526							20	843	10

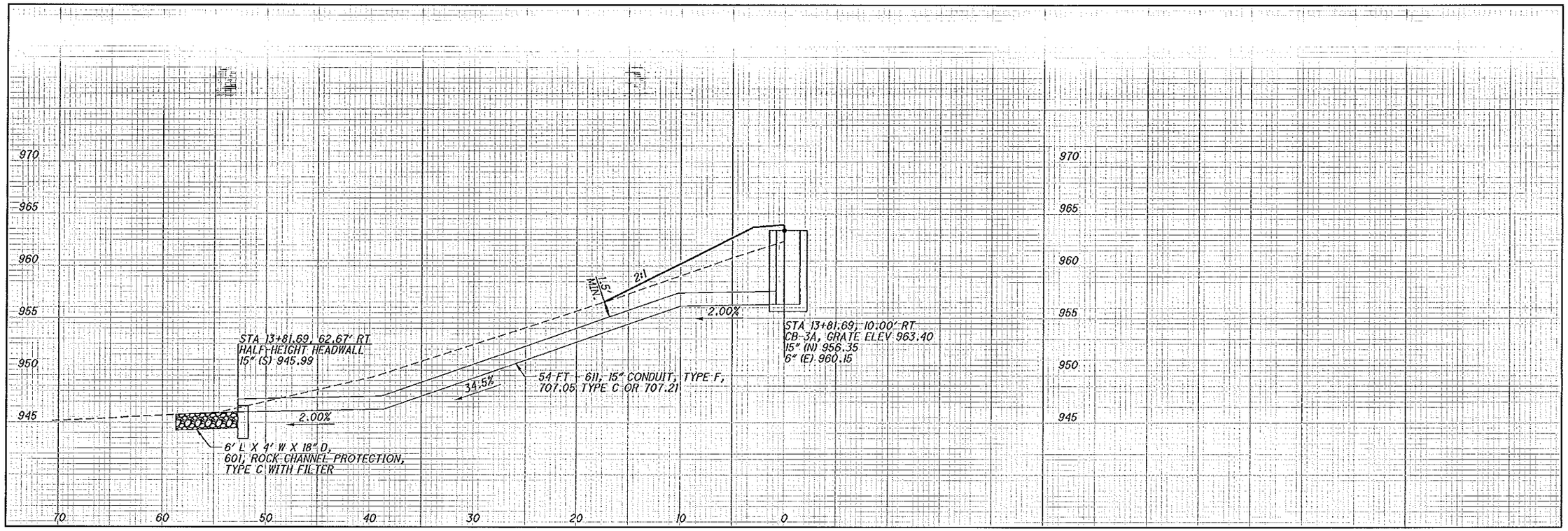
TRU-80-09.56

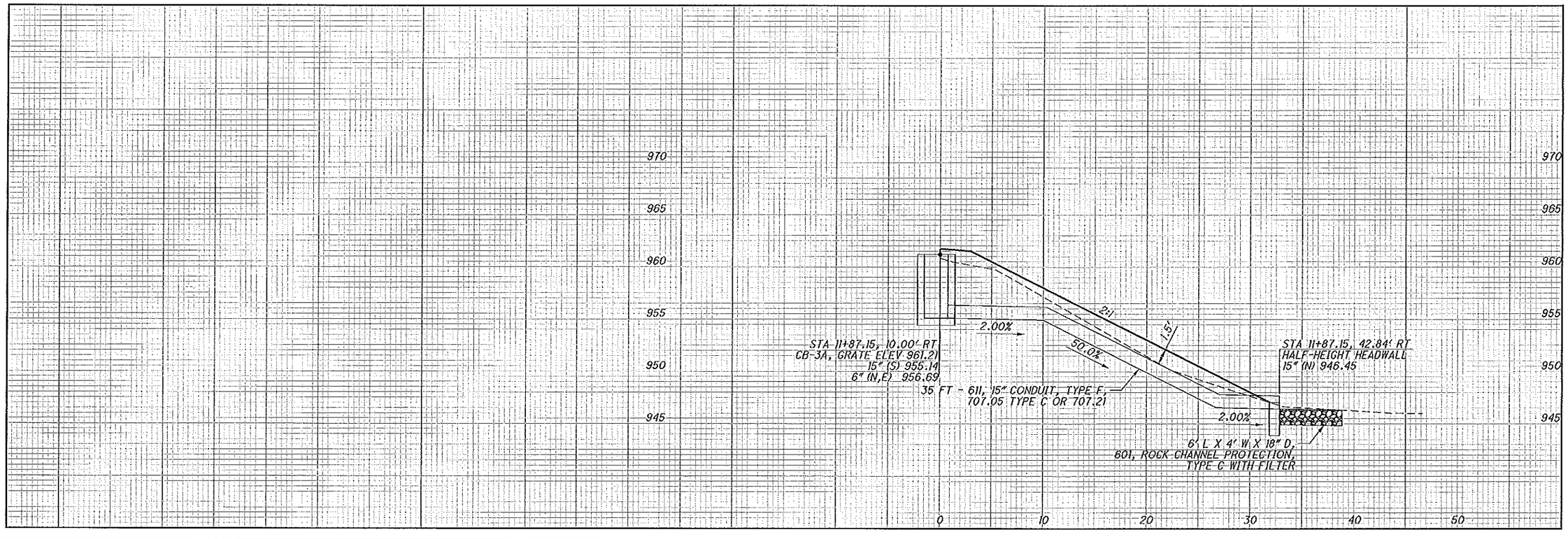
REF. NO.	START PLAN SHEET NO.	STATION LIMITS "X" DENOTES OUTLET LOCATION FOR UNDERDRAINS ONLY		LOCATION	TYPE OF OUTLET	605			HORIZONTAL BENDS AND BRANCHES (FOR INFORMATION ONLY)						601	611	
		BEGIN	END			6" UNCLASSIFIED PIPE UNDERDRAIN	6" BASE PIPE UNDERDRAIN	6" SHALLOW PIPE UNDERDRAIN	6" WYE	6" X 45° BEND	6" X 90° BEND	6" CROSS	6" TEE	6" PLUG	TIED CONCRETE BLOCK MAT, TYPE 1	6" CONDUIT, TYPE F, FOR UNDERDRAIN OUTLETS	PRECAST REINFORCED CONCRETE OUTLET
		FT	FT			FT	FT	FT	EA	EA	EA	EA	EA	EA	SY	FT	EA
RAMP B																	
U-1	56	13+42	13+81		RT CB		29							1		10	
U-2	56	13+43	14+54		BL U-5			115	1	1				1			
U-3	56	13+45	16+46		LT U-5			307			1			1			
U-4	56	13+86	16+46		RT U-5			259					1	1			
U-5	57	16+46		X	RT/LT ON SLOPE										2	45	1
TOTALS FOR INFORMATION ONLY									1	1	1		1	4			
TOTALS CARRIED TO GENERAL SUMMARY							29	681							2	55	1

CALCULATED JLN
CHECKED EPS

UNDERDRAIN SUBSUMMARY

TRU-80-09.56





CALCULATED JLN
CHECKED EPS

STORM SEWER PROFILES

TRU-80-09.56

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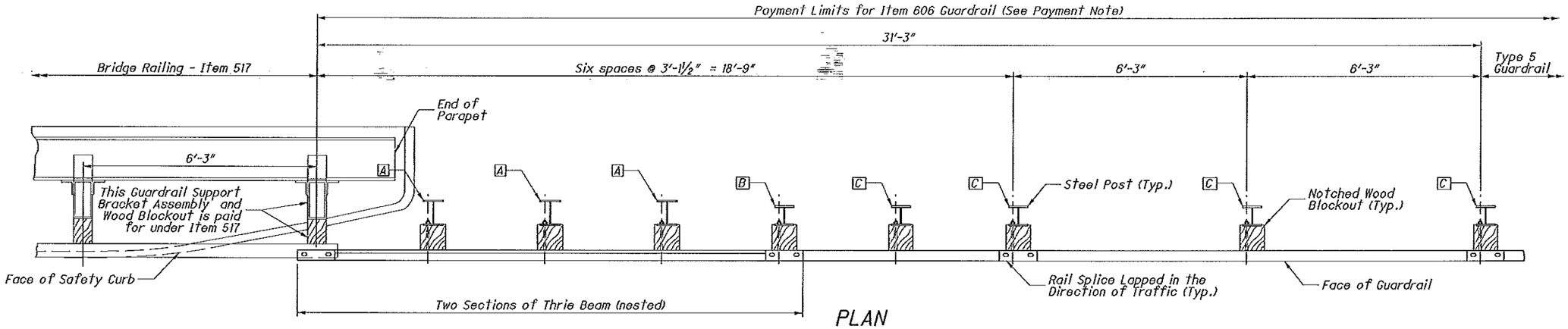
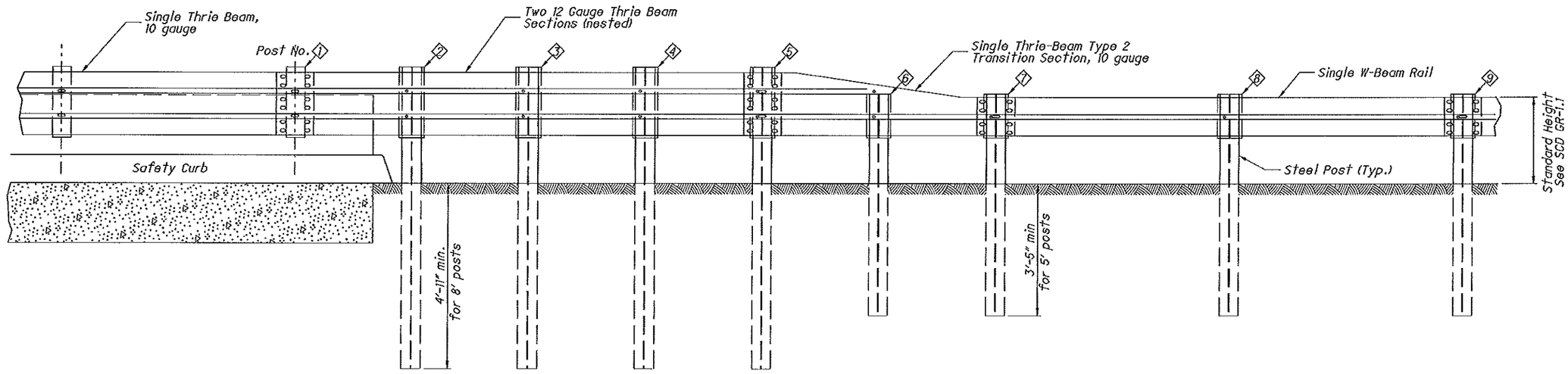


PLAN



ELEVATION

NOTES

GENERAL: *For additional rail and post details, see* ***SCD GR-1.1.***

APPLICATION: *Use Type 3 Bridge Terminal Assembly to connect guardrail runs for both the approach and trailing ends of Thrie Beam Bridge Railings. The design detailed on this sheet is approved to NCHRP 350 Test Level 3. See* ***Structural Engineering's SCD TBR-1-11*** *for the associated Bridge Railing.*

THRIE BEAM TRANSITION: *The asymmetrical W-Beam to Thrie Beam transition panel shall be 10 guage.*

FLARED GUARDRAIL: *Start Standard Guardrail Flares as shown on* ***SCD GR-5.1*** *at or beyond Post No. 9; However, where sight constraints exist, the flare may begin at Post No. 7.*

POSTS: *- Use steel posts only. Wood posts are not permitted in this design. Posts may be set in drilled holes or driven to grade. After placing posts in drilled holes, backfill and tamp disturbed soil. See* ***SCD GR-1.1*** *for additional post embedment details.*

BLOCKOUTS: *Steel posts in this design require the use of notched wood blockouts similar to those shown on* ***SCD GR-2.1.*** *The Blockout's notch shall be sized to accept the post's flange. Steel or plastic blockouts are not permitted.*

PAYMENT: ITEM 606 - Bridge Terminal Assembly, Type 3, Each, *includes the cost of extra components, in excess of normal guardrail, for additional and different types of posts and blockouts, nested Thrie-Beam, transition and connector sections, and other hardware.*

LEGEND

[A] *Posts 2, 3, & 4:*
W8x24x8'-0" Steel Post with 8"x8"x22½" Notched Wood Blockout

[B] *Post 5:*
W6x25x8'-0" Steel Post with 8"x8"x22½" Notched Wood Blockout

[C] *Post 6, 7, 8, & 9:*
W6x25x6'-0" Steel Post with 8"x8"x14" Notched Wood Blockout

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED
REVISION DATE | CHECKED
P.I.S. NUMBER

PLAN INSERT SHEET

BRIDGE TERMINAL ASSEMBLY, TYPE 3

TRU-80-09.56

1 / 1

67 / 147

SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
										69	70	05/NHS/BR					
																TRAFFIC CONTROL	
										132		132	621	00100	132	EACH	RPM	
										78		78	626	00100	78	EACH	BARRIER REFLECTOR	
											64	64	630	02100	64	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
											97.5	97.5	630	03100	97.50	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
											71.75	71.75	630	06500	71.75	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9	
											4	4	630	09000	4	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION	
											2	2	630	21000	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 10, 30' ARM	
											13	13	630	83000	13	SF	COVERING OF SIGN	
											4	4	630	84500	4	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION	
											2	2	630	84510	2	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION	
											15	15	630	85100	15	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
											2	2	630	85600	2	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION	
											13	13	630	86002	13	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
											4	4	630	86102	4	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL	
											4	4	630	87100	4	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
											2	2	630	87520	2	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
											2	2	630	88100	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND STORAGE, TYPE TC-12.30	
										315		315	644	00400	315	FT	CHANNELIZING LINE, 8"	
										2.91		2.91	646	10010	2.91	MILE	EDGE LINE, 6"	
										1.58		1.58	646	10110	1.58	MILE	LANE LINE, 6"	
										3653		3653	646	10310	3,653	FT	CHANNELIZING LINE, 12"	
										1920		1920	646	20504	1,920	FT	DOTTED LINE, 6"	

CALCULATED JEN
CHECKED JLN

GENERAL SUMMARY

TRU-80-09.56

SHEET NO.	REFERENCE NO.	LOCATION	STATION FROM	STATION TO	SIDE	621 RAISED PAVEMENT MARKER, 1 WAY (WHITE) EACH	621 RAISED PAVEMENT MARKER, 2 WAY (WHITE/RED) EACH	621 RAISED PAVEMENT MARKER, 2 WAY (YELLOW/RED) EACH		626 BARRIER REFLECTOR, TYPE A EACH	626 BARRIER REFLECTOR, TYPE B EACH		644 CHANNELIZING LINE, 8" FT		646 EDGE LINE, 6" YELLOW FT	646 EDGE LINE, 6" WHITE FT	646 LANE LINE, 6" FT	646 CHANNELIZING LINE, 12" FT	646 DOTTED LINE, 6" FT			
72	DL1	℄ I-80 WB	493+73	496+60	LT														287			
72	EL1	℄ I-80 WB	493+73	501+00	RT										727							
72	EL1A	℄ I-80 WB	495+03	497+86	LT											280						
72	EL2	℄ I-80 EB	499+56	501+00	RT											144						
72	EL3	℄ I-80 EB	495+38	501+00	LT										562							
72	DL2	℄ I-80 EB	491+61	496+79	RT														518			
72	LL1	℄ I-80 WB	493+73	501+00	℄	6											727					
72	LL2	℄ I-80 EB	495+38	501+00	℄	5											562					
72	CH1	℄ I-80 WB	496+60	501+00	LT													440				
72	CH2	℄ I-80 WB	496+60	501+00	LT		11											440				
72	CH3	℄ I-80 EB	496+79	499+56	RT		6											277				
72	CH4	℄ I-80 EB	496+79	499+56	RT		7											277				
73	DL3	℄ I-80 EB	508+03	513+22	RT														519			
73	DL4	℄ I-80 WB	513+67	514+00	LT														33			
73	EL5	℄ I-80 EB	501+00	514+00	LT										1300							
73	EL6	℄ I-80 EB	501+00	514+00	RT											1300						
73	EL7	℄ I-80 WB	502+66	511+57	LT											891						
73	EL8	℄ I-80 WB	501+00	514+00	RT										1300							
73	EL9	℄ RAMP B	12+00	16+50	℄											450						
73	EL10	℄ RAMP B	14+46	16+50	LT			2							204							
73	LL3	℄ I-80 WB	501+00	514+00	℄	11											1300					
73	LL4	℄ I-80 EB	501+00	514+00	℄	11											1300					
73	CH5	℄ I-80 WB	501+00	501+49	LT		2											49				
73	CH6	℄ I-80 WB	501+00	502+66	LT													166				
73	CH7	℄ I-80 WB	511+57	513+67	LT		5											210				
73	CH8	℄ I-80 WB	511+57	513+67	LT		6											210				
73	CH9	℄ I-80 EB	513+22	514+00	RT		1											78				
73	CH10	℄ I-80 EB	513+22	514+00	RT		2											78				
73	CH11	℄ US 62 SB	263+53	263+97	LT								44									
73	CH12	℄ US 62 SB	263+53	264+37	LT								84									
73	CH13	℄ US 62 NB	257+60	258+84	RT								124									
73	CH14	℄ US 62 NB	258+21	258+84	RT								63									
74	DL5	℄ I-80 WB	514+00	519+63	LT														563			
74	EL11	℄ I-80 EB	514+00	515+99	RT											199						
74	EL12	℄ I-80 EB	514+00	527+00	LT										1300							
74	EL13	℄ I-80 EB	515+99	527+00	RT											1101						
74	EL14	℄ I-80 WB	514+00	527+00	RT										1300							
74	EL15	℄ I-80 WB	514+00	527+00	LT											1300						
74	LL5	℄ I-80 WB	514+00	527+00	℄	11											1300					
74	LL6	℄ I-80 EB	514+00	527+00	℄	11											1300					
74	CH15	℄ I-80 EB	514+00	515+99	RT		5											199				
74	CH16	℄ I-80 EB	514+00	515+99	RT		5											199				
75	EL16	℄ I-80 EB	527+00	528+00	RT											100						
75	EL17	℄ I-80 EB	527+00	534+29	LT										729							
75	EL18	℄ I-80 WB	527+00	538+01	LT											1101						
75	EL19	℄ I-80 WB	527+00	538+01	RT										1101							
75	LL7	℄ I-80 WB	527+00	538+01	℄	9											1101					
75	LL8	℄ I-80 EB	527+00	534+29	℄	6											729					
75	CH17	℄ I-80 EB	528+00	534+29	RT													629				
75	CH18	℄ I-80 EB	530+28	534+29	RT		10											401				
73-74		℄ I-80 EB	505+38	516+02	RT					9	3											
73-74		℄ I-80 EB	506+79	516+40	LT					8	3											
73		℄ I-80 WB	505+09	506+39	RT					3												
73		℄ I-80 WB	504+99	506+54	LT					3												
73-74		℄ I-80 WB	509+75	519+46	RT					8	3											
73-75		℄ I-80 WB	511+79	537+97	LT					25	3											
73		℄ US 62 NB	258+26	262+06	RT					5												
73		℄ US 62 SB	259+17	262+97	LT					5												
		SUB-TOTAL				70	60	2		66	12		315		8523	6866	8319	3653	1920			
TOTALS CARRIED TO GENERAL SUMMARY						132				78			315		2.91 MI		1.58 MI	3653	1920			

CALCULATED JEN
CHECKED JLN

PAVEMENT MARKING SUBSUMMARY

TRU-80-09.56

69
147

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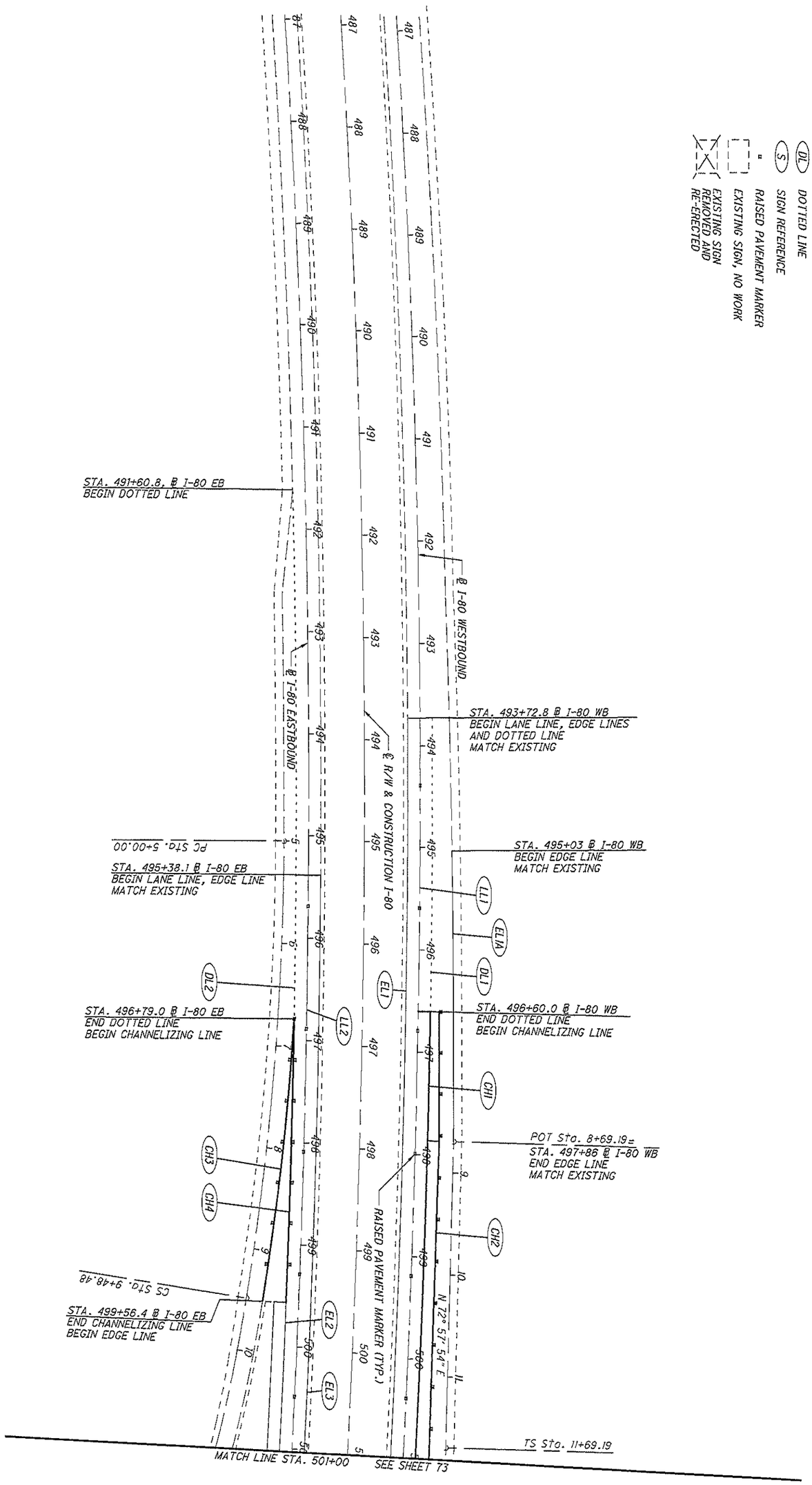
SHEET NO.	REFERENCE NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9 FT	630 BREAKAWAY STRUCTURAL BEAM CONNECTION EACH	630 GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL EACH	630 COVERING OF SIGN SF	630 OVERHEAD SIGN SUPPORT, TC-12.30, DESIGN 10, 30' ARMS EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND STORAGE, TYPE TC-12.30 EACH	630 REMOVAL OF POLE MOUNTED SIGN AND REERECTION EACH
73	S1	I-80 WB	505+12	LT			9.5					1		1							
73	S2	I-80 WB	506+90	MED			14.5					1		1							
73	S3	I-80 WB	510+60	LT					18.0-18.0	2	2		1		2						
73	S4	I-80 EB	512+00	RT			10.5					1		1							
73	S5	I-80 EB	512+00	RT								1									
73	S6	I-80 EB	512+05	MED			9.5					1		1							
73	S7	RAMP B	13+89	RT													1	1	1	1	
73	S8	RAMP B	13+89	RT															1		
73	S9	RAMP B	13+89	RT																	1
73	S10	RAMP B	18+14	LT				13.5				1		1							
73	S11	RAMP B	18+58	LT				13.5				1		1							
73	S12	RAMP B	19+01	LT				13.5				1		1							
74	S13	RAMP D	15+20	RT													1	1	1	1	
74	S14	RAMP D	15+20	RT															1		
74	S15	RAMP D	15+20	RT																	1
74	S16	I-80 WB	515+23	MED			9.5					1		1							
74	S17	I-80 WB	515+38	LT			10.5					1		1							
74	S18	I-80 WB	515+38	LT								1									
74	S19	I-80 WB	517+00	LT				15.0-16.0				1		2							
74	S20	I-80 WB	517+00	LT								1									
74	S21	I-80 EB	517+05	RT					17.75-18.0	2	2		1		2						
74	S22	RAMP D	19+73	LT				13.0-13.0				1		2							
74	S23	I-80 EB	517+05	RT								1									
73	S24	RAMP B	17+16	LT												13					
TOTALS CARRIED TO GENERAL SUMMARY							64.0	97.5	71.75	4	4	15	2	13	4	13	2	2	4	2	2

CALCULATED JEN
CHECKED JLN

SIGNING SUBSUMMARY

TRU-80-09.56



72/147	TRU-80-09.56	SIGNING AND PAVEMENT MARKING PLAN STA. 487+00 TO STA. 501+00	CALCULATED JEN CHECKED EPS	0 50 25 100 HORIZONTAL SCALE IN FEET

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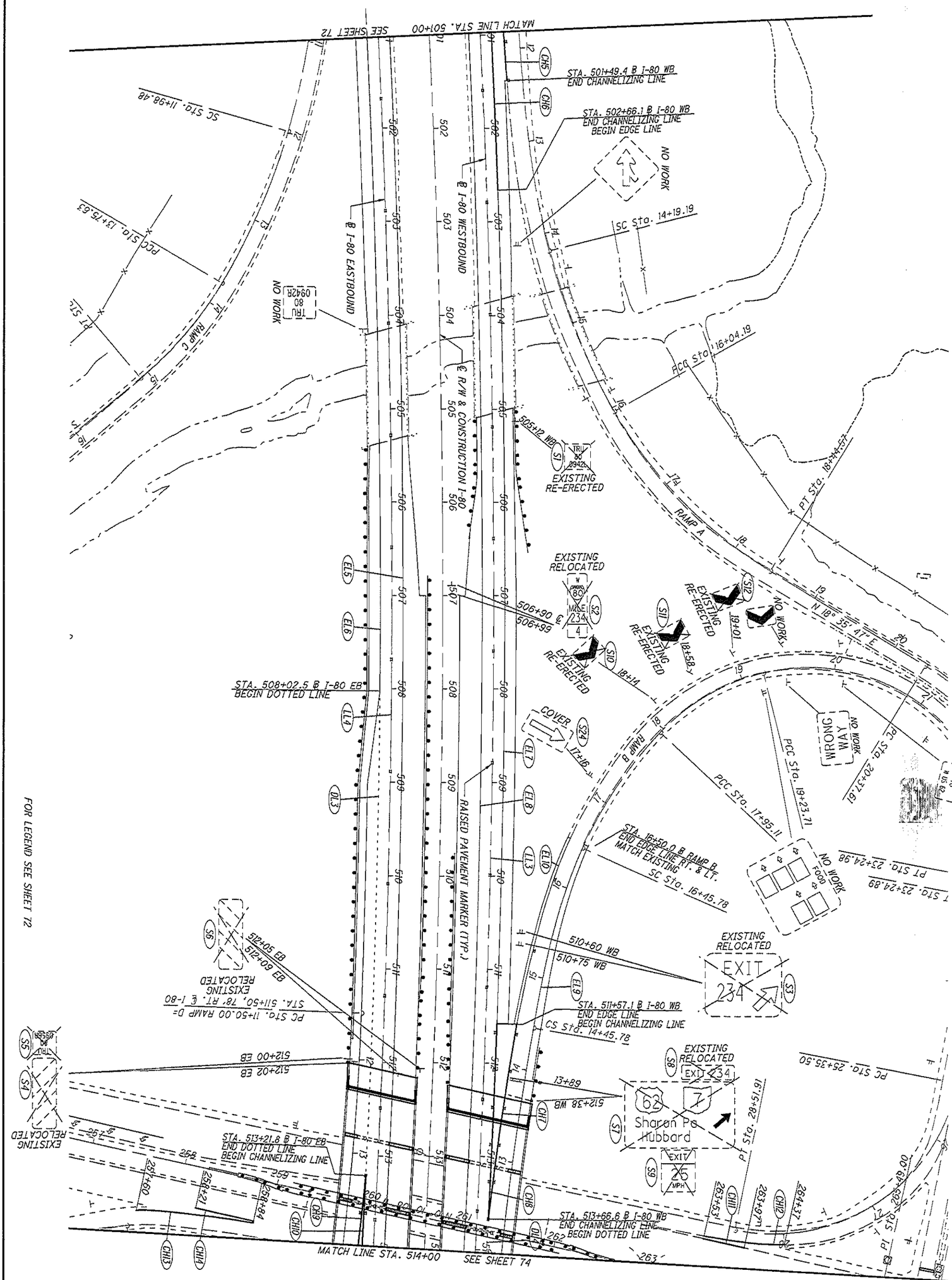

FOR LEGEND SEE SHEET 12

73 / 147	TRU-80-09.56	SIGNING AND PAVEMENT MARKING PLAN STA. 501+00 TO STA. 514+00	CALCULATED JEN CHECKED EPS	0 50 25 100 HORIZONTAL SCALE IN FEET

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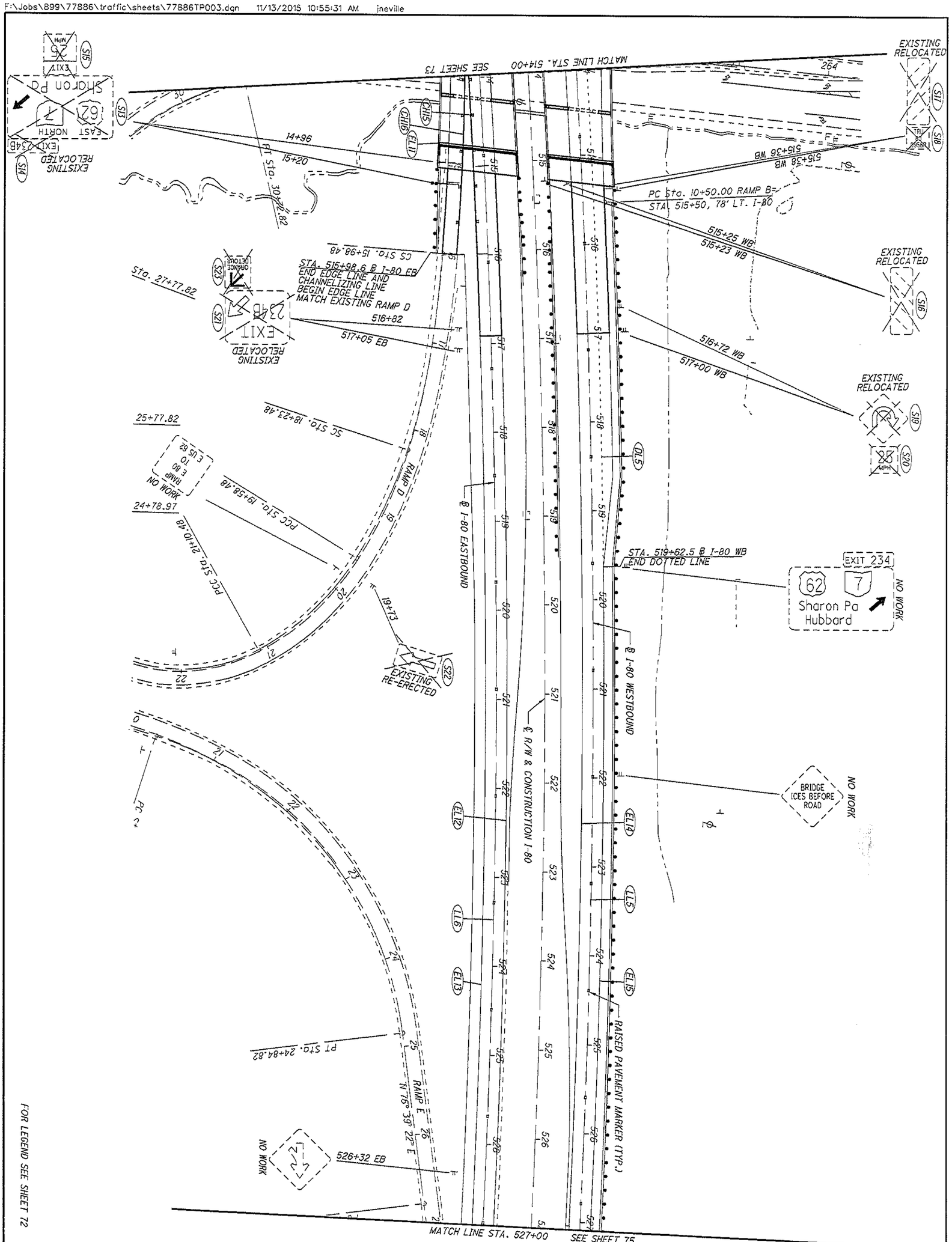
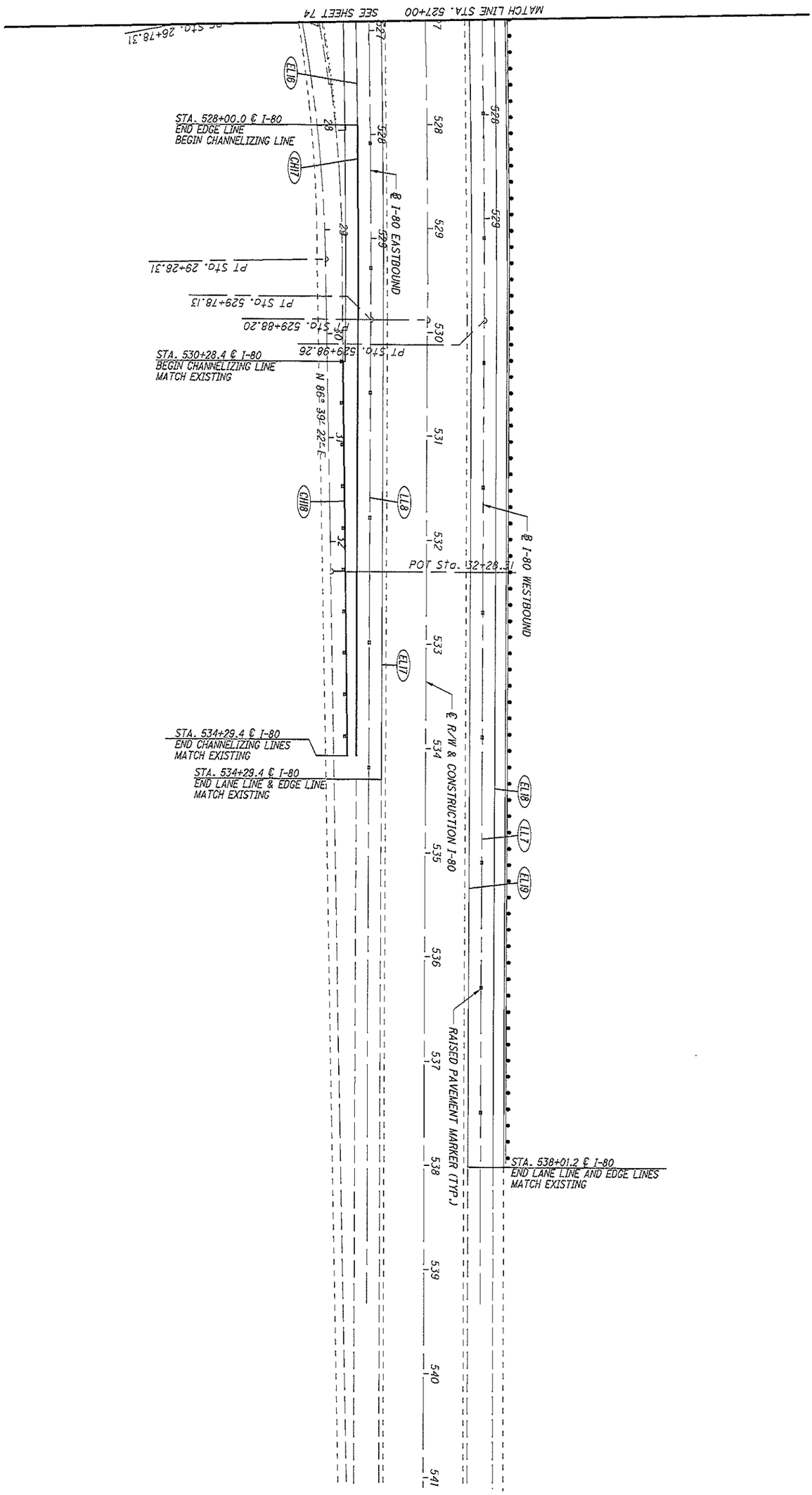
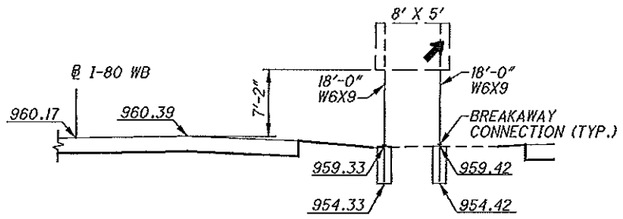


74 / 147	TRU-80-09.56	SIGNING AND PAVEMENT MARKING PLAN STA. 514+00 TO STA. 527+00	CALCULATED JEN / CHECKED EPS	0 50 25 100 HORIZONTAL SCALE IN FEET

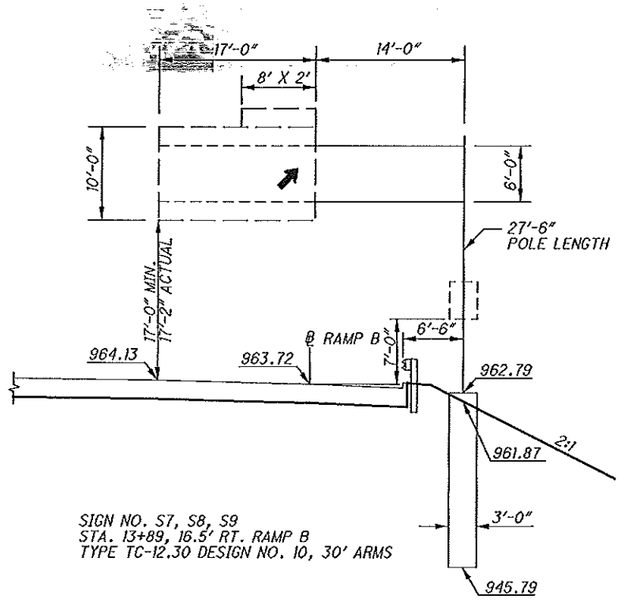


FOR LEGEND SEE SHEET 72

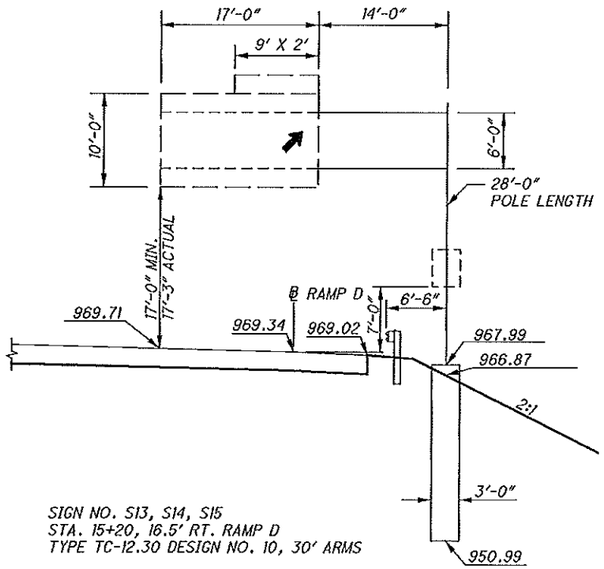
75 / 147	TRU-80-09.56	SIGNING AND PAVEMENT MARKING PLAN STA. 527+00 TO STA. 541+00	CALCULATED JEN CHECKED EPS 0 50 25 100 HORIZONTAL SCALE IN FEET N



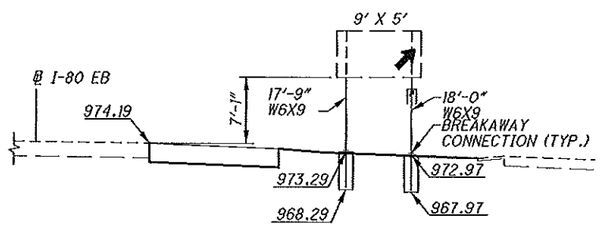
SIGN NO. S3
STA. 510+60, LT. I-80 WB
GROUND MOUNTED



SIGN NO. S7, S8, S9
STA. 13+89, 16.5' RT. RAMP B
TYPE TC-12.30 DESIGN NO. 10, 30' ARMS



SIGN NO. S13, S14, S15
STA. 15+20, 16.5' RT. RAMP D
TYPE TC-12.30 DESIGN NO. 10, 30' ARMS



SIGN NO. S21, S23
STA. 517+05, RT. I-80 EB
GROUND MOUNTED

HORIZONTAL SCALE IN FEET
0 4 8 16

CALCULATED JEN
CHECKED EPS

SIGN SUPPORT DETAILS

TRU-80-09.56

76
147

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
									43	78	81	05/MIS/BR							
																		LIGHTING	
										2		2		625	00480	2	EACH	CONNECTION, UNFUSED PERMANENT	
										2		2		625	01100	2	EACH	CONNECTOR KIT, TYPE VII C	
										1		1		625	15001	1	EACH	LIGHT TOWER FOUNDATION, 36" X 15' DEEP, AS PER PLAN	81, 82
										648		648		625	24200	648	FT	1-1/2" DUCT CABLE WITH TWO NO. 2 AWG 600 VOLT CABLES	
										628		628		625	29002	628	FT	TRENCH, 24" DEEP	
									2			2		625	31510	2	EACH	PULL BOX REMOVED	
										2		2		625	32000	2	EACH	GROUND ROD	
										1		1		625	35021	1	EACH	RE-ERECT EXISTING LIGHT TOWER, AS PER PLAN	81
										628		628		625	36000	628	FT	PLASTIC CAUTION TAPE	
										1		1		625	39520	1	EACH	PULL BOX CLEANED	81
											LS	LS		SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	81
										1		1		625	75361	1	EACH	LIGHT TOWER REMOVED FOR STORAGE, AS PER PLAN	81
										1		1		625	75540	1	EACH	LIGHT TOWER FOUNDATION REMOVED	
										4		4		625	75800	4	EACH	DISCONNECT CIRCUIT	

CALCULATED RSW
CHECKED DTB

GENERAL SUMMARY

TRU-80-09.56

77
147

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625

REFERENCE NUMBER	LOCATION	SIDE	CIRCUIT NODES	CONNECTION, UNFUSED PERMANENT	CONNECTOR KIT, TYPE VII C	LIGHT TOWER FOUNDATION, 36" X 15" DEEP, AS PER PLAN	1-1/4" DUCT CABLE WITH TWO NO. 2 AWG 600 VOLT CABLES	TRENCH, 24" DEEP	GROUND ROD	RE-ERECT EXISTING LIGHT TOWER, AS PER PLAN	PLASTIC CAUTION TAPE	LIGHT TOWER REMOVED FOR STORAGE, AS PER PLAN	LIGHT TOWER FOUNDATION REMOVED	DISCONNECT CIRCUIT	PULL BOX CLEANED
				EACH	EACH	EACH	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1	STA. 505+56.75	RT	PB-1	2										1	1
2	STA. 505+56.75 TO STA. 509+90.00	RT	PB-1 TO 6HS1				446	436			436				
3	STA. 509+90.00	RT	6HS1											1	
4	STA. 514+32.86	RT	3HS3		2									1	
5	STA. 514+32.86 TO STA. 516+25.00	RT	3HS3 TO 3HS5				202	192			192				
6	STA. 516+25.00	RT	3HS5			1			2	1					
7	STA. 516+29.45	LT	3HS5 (EXIST.)									1	1	1	
	TOTALS CARRIED TO GENERAL SUMMARY			2	2	1	648	628	2	1	628	1	1	4	1

CALCULATED RSW
CHECKED DTB

LIGHTING QUANTITIES SUB-SUMMARY

TRU-80-09.56

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EXISTING POLE LEGEND

STATION, OFFSET FROM ℄ OR ℄, REFERENCED ℄ OR ℄ —— POLE REF. NO.

POLE NUMBER	CIRCUIT NUMBER	TYPE OF LUMINAIRE	MOUNTING HEIGHT	NUMBER OF LUMINAIRES	WATTAGE OF LUMINAIRES

(3HS3) STA. 514+32.86, 11.21' RT.
EXISTING POST TOP LIGHT 3-3HS-1V-TON-15.4-1-100 TO REMAIN IN SERVICE, DISCONNECT EXISTING 2-#4 AWG CABLES TO EAST AND CONNECT NEW 2-#4 AWG CABLES TO EAST USING TWO CONNECTION KITS, TYPE VII C

EXISTING 2-#4 AWG CABLES IN 2" ϕ METAL CONDUIT TO BE ABANDONED

STA. 516+29.45, 16.10' LT.
EXISTING LIGHT TOWER (3HS5)
5-3HS-V(SYM.)-100-3-1000
REMOVE AND RELOCATE TOWER LIGHT TO STA. 516+25.00, 6.0' RT.
REMOVE EXIST. TOWER FOUNDATION

℄ I-80 WESTBOUND

℄ RAMP B

CS Sta. 14+45.78

EXISTING 2-#2 AWG CABLES IN 2" ϕ METAL CONDUIT TO REMAIN IN SERVICE

℄ R/W & CONSTR. I-80

INSTALL NEW DUCT CABLE

EX. 24"

EX. 15" RCP

6HS NO. 2

EX. 2#2, 4#4

EX. 4" STEEL

INSTALL NEW 1 ½" DUCT CABLE

℄ I-80 EASTBOUND

EXISTING 1-1/2" DUCT CABLE WITH 2 NO. 2 600V CABLES TO BE ABANDONED

PC Sta. 511+50.00 RAMP D=
STA. 511+50, 78' RT. ℄ I-80

STA. 516+25.00, 6.0' RT.
RE-ERECT LIGHT TOWER (3HS5) FROM STA. 516+29.45, 16.10' LT.
PROVIDE NEW FOUNDATION AND 2 GROUND RODS

PT Sta. 30+12.82

STA. 505+56.75, 31.21' RT.
EXISTING PULL BOX TO REMAIN IN SERVICE (PB-1)
CLEAN EXISTING PULL BOX AND DISCONNECT EXISTING 2-#2 AWG CABLES TO EAST AND RECONNECT NEW 2-#2 AWG CABLES FROM EAST TO EXISTING 2-#2 AWG CABLES TO WEST USING TWO CABLE SPLICING KITS

(6HS1) STA. 509+90.00, 5.12' RT.
1-6HS-V(Sym.)-100-3-1000
EXISTING TOWER LIGHT POLE TO REMAIN IN SERVICE, DISCONNECT EXISTING 2-#2 AWG CABLES TO WEST AND CONNECT NEW 2-#2 AWG CABLES TO EXISTING 2-#2 AWG CABLES TO EAST AND EXISTING TOWER LIGHTING CABLES

EXISTING 2-#2 AWG CABLES IN 1 ¼" STEEL CONDUIT TO REMAIN IN SERVICE

STA. 254+27.90, 88.59' RT.
EXISTING LIGHTING CONTROL CENTER "HS"

℄ R/W U.S. 62

℄ RAMP D

SC Sta. 27+77.82

PI Sta. 255+50.04

HUBBARD-SHARON ROAD

PT Sta. 20+73.84

LEGEND

- PROPOSED GUARDRAIL, TYPE MGS
- EXISTING GUARDRAIL
- REFERENCE TABLE NUMBER
- 15" PROPOSED CATCH BASIN, PIPE AND HEADWALL
- EXISTING OVERHEAD SIGN
- PROPOSED 1 ½" DUCT CABLE IN 24" DEEP TRENCH
- 6HS NO. 2 INDICATES CIRCUIT & NO. OF SINGLE CONDUCTORS IN CABLE OR CONDUIT
- PROPOSED CONDUIT, 725.04 (SIZE AS DIMENSIONED)
- EXISTING CONDUIT, 725.04 (SIZE AS DIMENSIONED)
- EXISTING CABLE TO BE ABANDONED OR REMOVED
- PROPOSED PULL BOX
- EXISTING PULL BOX
- EXISTING CHAIN LINK FENCE
- UP EXISTING UNDERPASS 100 WATT H.P.S. LUMINAIRE
- EXISTING CONTROL CENTER
- EXISTING POWER POLE
- PROPOSED TOWER LIGHT POLE WITH SYMMETRICAL DISTRIBUTION
- EXISTING TOWER LIGHT POLE WITH SYMMETRICAL DISTRIBUTION
- EXISTING TOWER LIGHT POLE WITH ASYMMETRICAL DISTRIBUTION

N

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED RSW CHECKED DTB

LIGHTING PLAN

TRU-80-09.56

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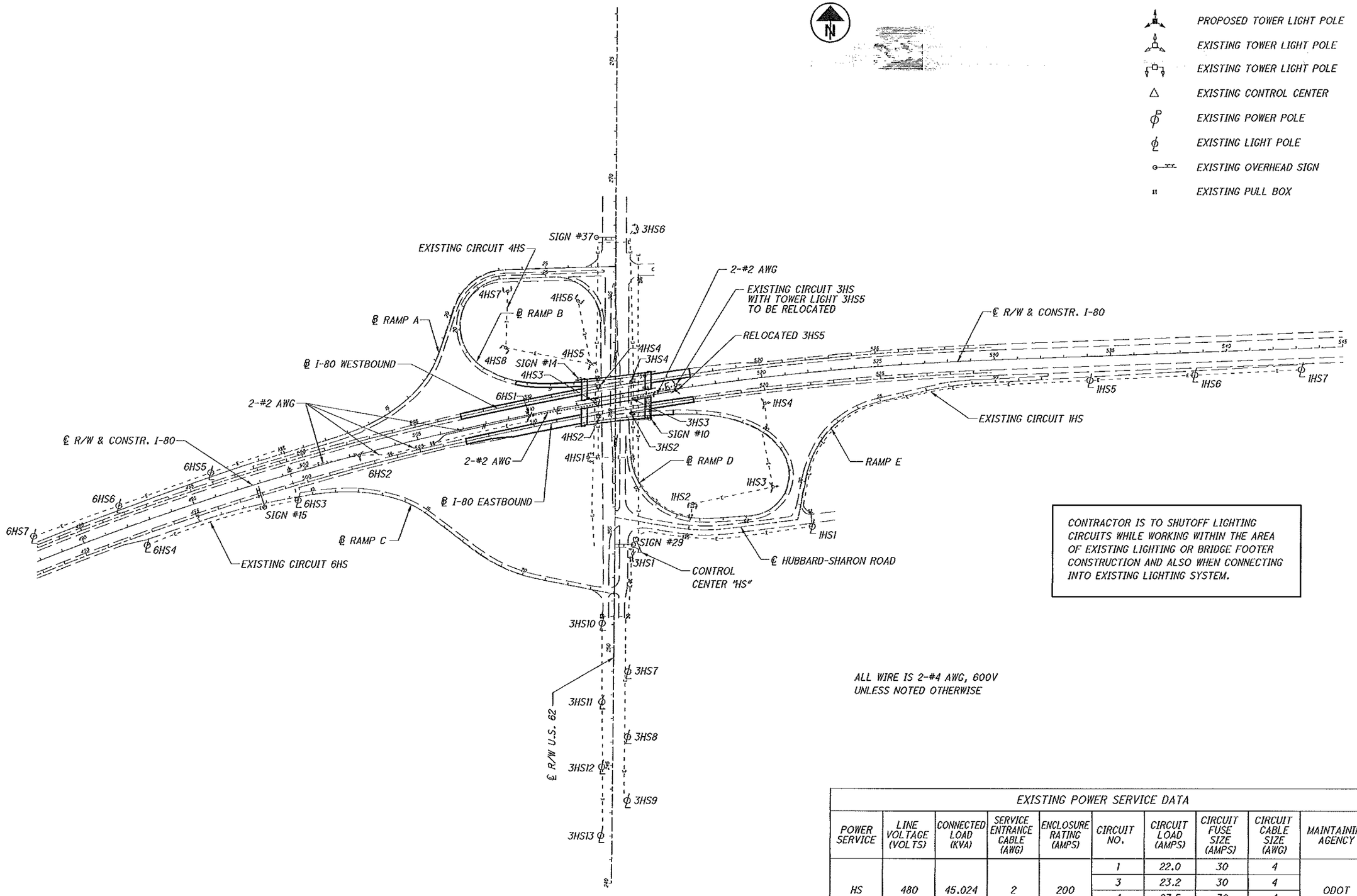

CONTRACTOR IS TO SHUTOFF LIGHTING CIRCUITS WHILE WORKING WITHIN THE AREA OF EXISTING LIGHTING OR BRIDGE FOOTER CONSTRUCTION AND ALSO WHEN CONNECTING INTO EXISTING LIGHTING SYSTEM.

ALL WIRE IS 2-#4 AWG, 600V UNLESS NOTED OTHERWISE

EXISTING POWER SERVICE DATA

POWER SERVICE	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CABLE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
HS	480	45.024	2	200	1	22.0	30	4	ODOT
					3	23.2	30	4	
					4	27.5	30	4	
					6	21.1	30	2	

CALCULATED RSW CHECKED DTB

0 100 200 400 HORIZONTAL SCALE IN FEET

LIGHTING PLAN
LIGHTING CIRCUIT DIAGRAM

TRU-80-09.56

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SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 725 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

GENERAL

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

OHIO EDISON COMPANY
730 SOUTH AVE
YOUNGSTOWN, OHIO 44502
330-740-7617

THE PROJECT INCLUDES MODIFICATIONS TO THE EXISTING LIGHTING THAT ARE NECESSARY DUE TO THE 3RD LANE ADDITION AND RAISING OF STRUCTURE TRU-80-09.56.

THE EXISTING LIGHTING CIRCUITS ARE 480 VOLT, 2 WIRE ONE SIDE GROUNDED.

THE EXISTING LIGHTING WAS DESIGNED ON THE BASIS OF 5% MAXIMUM VOLTAGE DROP PERMISSIBLE ON BRANCH CIRCUITS. THE PROJECT RECEIVES 480-VOLT CONTROLLED SECONDARY SERVICE FROM THE OHIO EDISON COMPANY.

THE EXISTING LIGHTING WAS DESIGNED ON THE BASIS OF 1.2 FOOTCANDLES AVERAGE INITIAL WITH A MAXIMUM UNIFORMITY RATIO OF 3:1 FOR TOWER UNITS.

625, PULL BOX CLEANED

THIS ITEM OF WORK SHALL CONSIST OF CLEANING AN EXISTING PULL BOX BY REMOVING ANY EXISTING CABLES NOT BEING RECONNECTED, AND DEBRIS SO THAT NEW CABLES CAN BE INSTALLED. ANY UNUSED OPENINGS SHALL BE CLOSED. DISTURBED AREAS NEAR THE PULL BOX SHALL BE CLEARED OF WEEDS OR DEBRIS AND SHALL BE FULLY RESTORED. MATERIAL REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF OF THE PROJECT SITE.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "PULL BOX CLEANED" FOR EACH PULL BOX CLEANED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

625, RE-ERECT EXISTING LIGHT TOWER, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF INSTALLING AN EXISTING LIGHT TOWER REMOVED FROM A PREVIOUS LOCATION ON THE PROJECT SITE OR SUPPLIED TO THE PROJECT BY OTHERS. EXISTING LUMINAIRES SHALL BE REINSTALLED ON THE EXISTING LIGHT TOWER.

WHERE THE TOWER WILL BE INSTALLED ON A NEW FOUNDATION, NEW ANCHOR BOLTS SHALL BE FURNISHED.

THE TOWER AND LOWERING MECHANISM SHALL BE CLEANED AND LUBRICATED.

ANY REPAIRS AND ADJUSTMENTS NECESSARY TO RETURN THE TOWER AND MECHANISM TO GOOD OPERATING CONDITION SHALL BE MADE.

THE EXISTING LIGHT TOWER IDENTIFICATION DECAL SHALL BE REMOVED, AND A NEW DECAL FOR THE NEW IDENTIFICATION NUMBER FURNISHED AND INSTALLED.

PAYMENT SHALL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625, "RE-ERECT EXISTING LIGHT TOWER, AS PER PLAN", FOR EACH TOWER RE-ERECTED WITH EXISTING LUMINAIRES REINSTALLED, SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

HIGH VOLTAGE TEST WAIVED

THE HIGH VOLTAGE TEST SHALL NOT BE PERFORMED ON THE CIRCUITS CONSTRUCTED BY THIS PROJECT, SINCE THE TEST COULD DAMAGE THE PORTION OF THE COMPLETED CIRCUIT WHICH HAS BEEN IN SERVICE PRIOR TO THIS PROJECT.

625, LIGHT TOWER REMOVED FOR STORAGE, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AN EXISTING LIGHT TOWER INCLUDING THE LIGHT TOWER LUMINAIRES AND PROPERLY STORING THE COMPLETE ASSEMBLY ON THE PROJECT UNTIL RE-ERECTED.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID UNDER CMS ITEM 625, "LIGHT TOWER REMOVED FOR STORAGE, AS PER PLAN" FOR EACH LIGHT TOWER INCLUDING LUMINAIRE REMOVED AND STORED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIAL AND INCIDENTALS TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

625, LIGHT TOWER FOUNDATION, 36" X 15', AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF CONSTRUCTING A TOWER LIGHT FOUNDATION AT THE LOCATION SHOWN IN THE PLANS.

THIS ITEM SHALL CONFORM TO ODOT CMS ITEM NO. 625, STANDARD CONSTRUCTION DRAWING HL-20.21 AND AS PER DETAILS SHOWN ON THE LIGHTING DETAIL SHEET. THE EXISTING LIGHT TOWER POLE AT STA. 516+29.45, 16.10' LT. IS TO BE REMOVED AND RE-ERECTED AT STA. 516+25, 6.0' RT. THE CONTRACTOR SHALL FIELD VERIFY AND MEASURE THE BASE PLATE AND ANCHOR BOLTS SIZE AND CONFIGURATION PRIOR TO ORDERING AND INSTALLING THE ANCHOR BOLTS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID UNDER CMS ITEM 625, "LIGHT TOWER FOUNDATION, 36" X 15', AS PER PLAN" FOR EACH LIGHT TOWER FOUNDATION INSTALLED. PAYMENT SHALL INCLUDE FULL COMPENSATION FOR ALL LABOR, MATERIAL AND INCIDENTALS INCLUDING EXCAVATION, REINFORCING STEEL, RACEWAYS, CONCRETE, BACKFILLING, ANCHOR BOLTS, CONDUIT ELLS, SURFACE RESTORATION, DISPOSAL OF SURPLUS EXCAVATION, MEASURING AND VERIFYING THE ANCHOR BOLT SIZE AND CONFIGURATION AND PROVIDING AN ANCHOR BOLT SETTING TEMPLATE.

SPECIAL, MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

SPECIAL, MAINTAIN EXISTING LIGHTING (CONTINUED)

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWNED UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

SPECIAL, MAINTAIN EXISTING LIGHTING (CONTINUED)

THE LUMP SUM PRICE BID FOR ITEM SPECIAL "MAINTAIN EXISTING LIGHTING" SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

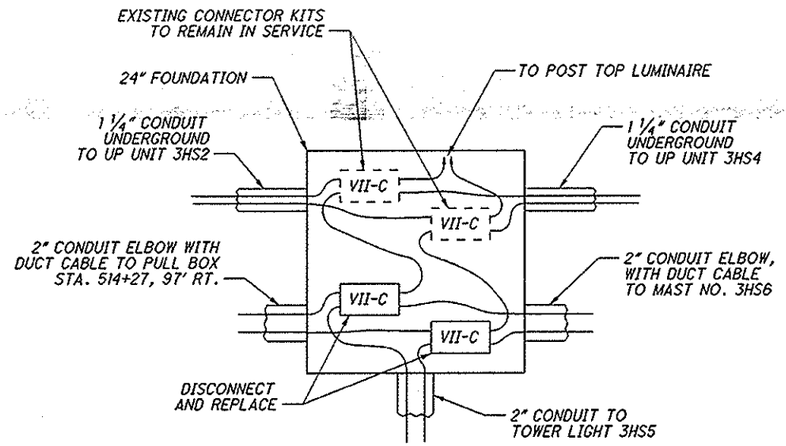
THE UNIT PRICE BID FOR ITEM SPECIAL "REPLACEMENT OF EXISTING LIGHTING UNIT" SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

CONTRACTOR IS TO SHUTOFF LIGHTING CIRCUITS WHILE WORKING WITHIN THE AREA OF EXISTING LIGHTING OR BRIDGE FOOTER CONSTRUCTION AND ALSO WHEN CONNECTING INTO EXISTING LIGHTING SYSTEM.

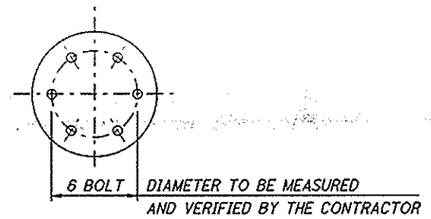
CALCULATED RSW
CHECKED DTB

GENERAL NOTES

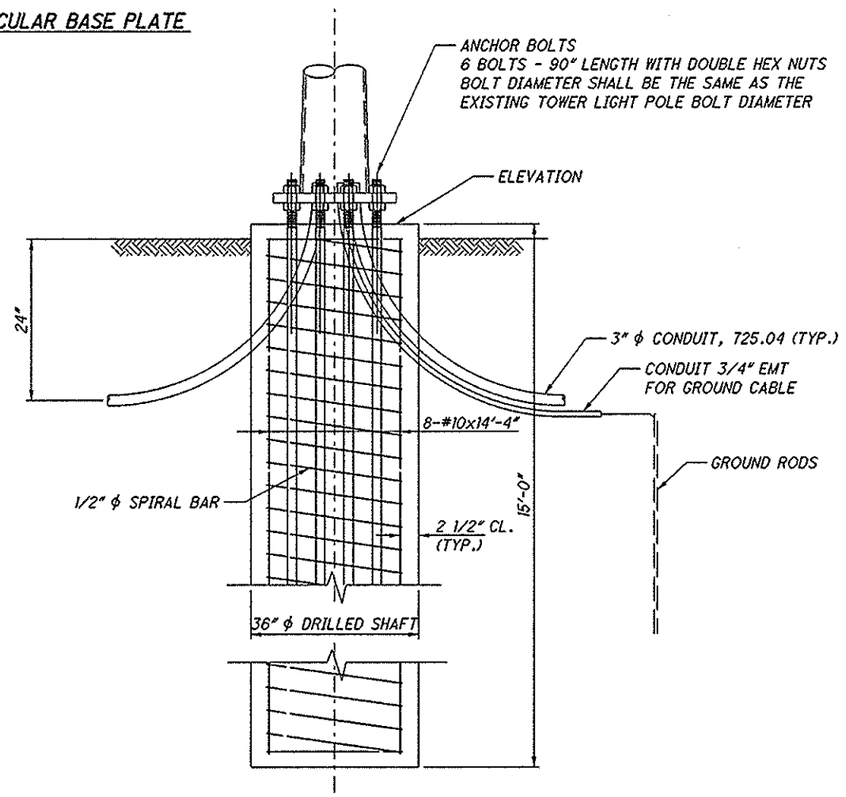
TRU-80-09.56



WIRING DETAIL FOR EXISTING POST TOP UNDERPASS UNIT
EAST SIDE OF U.S. 62
@ STA. 514+32.86, 11.21' RT.



CIRCULAR BASE PLATE



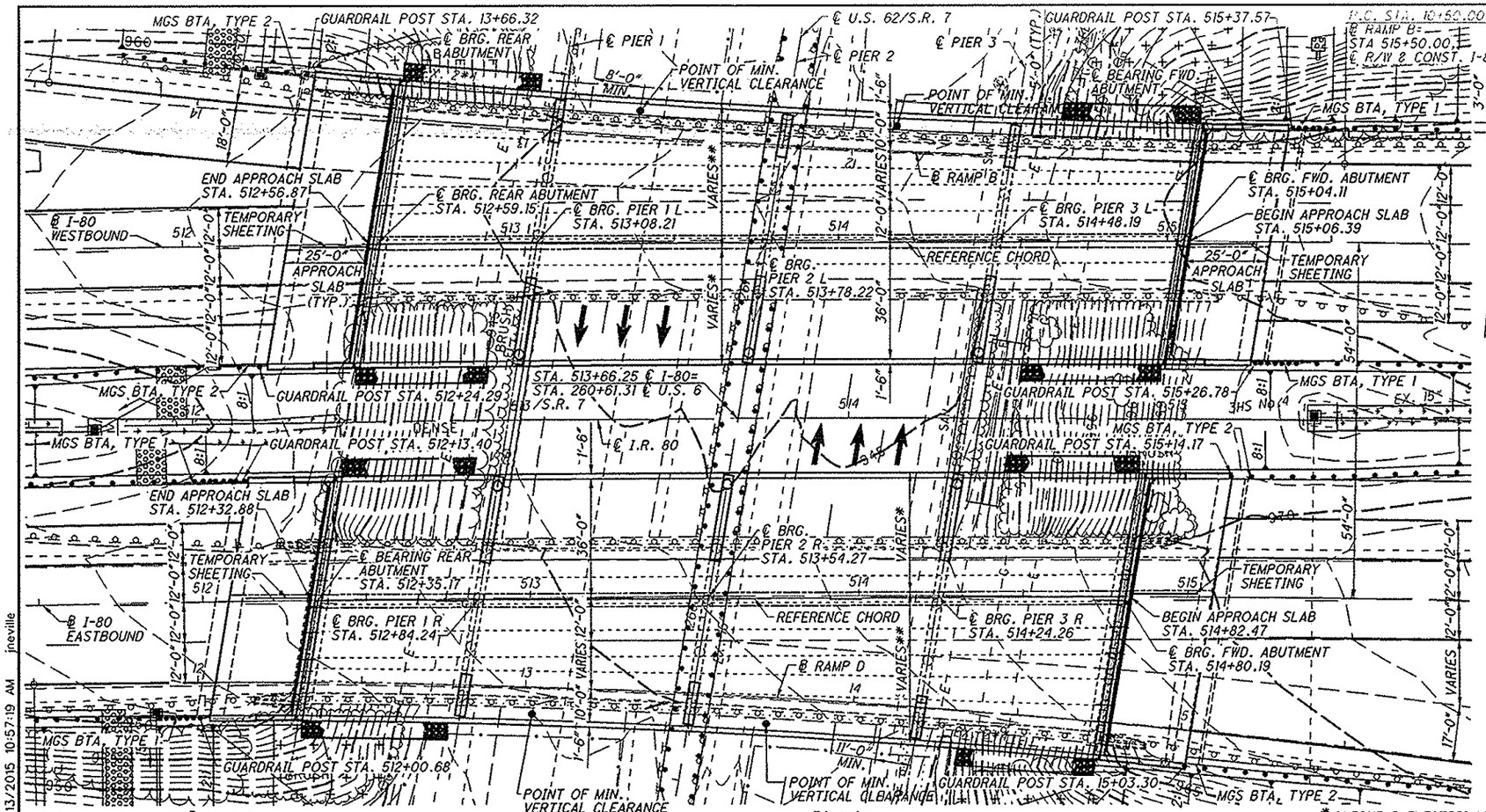
LIGHT TOWER FOUNDATION, 36"X15', AS PER PLAN
NO SCALE

NOTES:
THIS ITEM SHALL CONFORM TO ODOT CMS ITEM NO. 625, STANDARD CONSTRUCTION DRAWING HL-20.21 AND AS PER DETAILS SHOWN HEREIN.
THE EXISTING LIGHT TOWER POLE AND LUMINAIRES AT STA. 516+29.45, 16.10' LT. IS TO BE REMOVED AND RE-ERECTED AT STA. 516+25, 6.0' RT.
THE CONTRACTOR SHALL FIELD VERIFY AND MEASURE THE BASE PLATE AND ANCHOR BOLTS SIZE AND CONFIGURATION PRIOR TO ORDERING AND INSTALLING THE ANCHOR BOLTS

CALCULATED RSW
CHECKED DTB

LIGHTING DETAILS

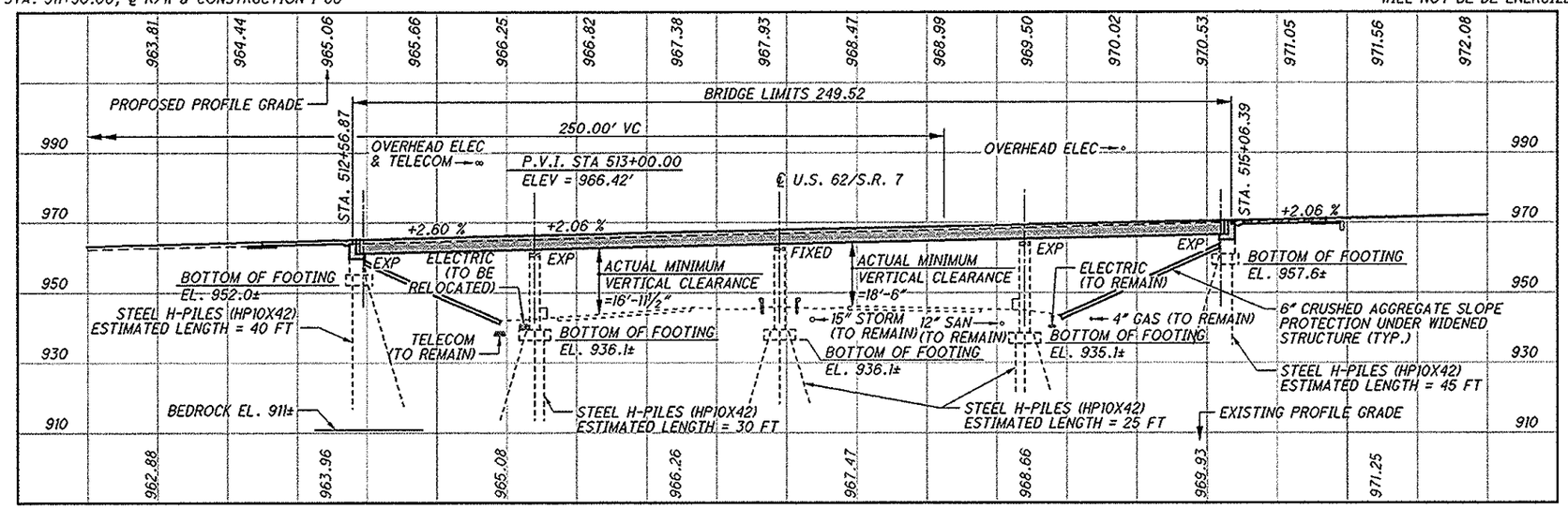
TRU-80-09.56



P.C. STA. 10+50.00, ℄ RAMP D= STA. 511+50.00, ℄ R/W & CONSTRUCTION I-80

* OVERHEAD ELECTRIC LINES WILL NOT BE DE-ENERGIZED

PLAN



SECTION ON PROFILE GRADE WESTBOUND LANES

FOR UTILITY DISPOSITION, SEE SHEETS 6/65 & 38/65.

BENCHMARK DATA

BM #1 STA. 256+31.71, ELEV. 936.37 OFFSET 3.20, LT
BM #2 STA. 263+67.28, ELEV. 948.19, OFFSET 91.95, LT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 2/65

NOTES

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

DESIGN TRAFFIC:
2016 ADT = 37,000 2016 ADTT = 13,320
2036 ADT = 43,000 2036 ADTT = 15,480
DIRECTIONAL DISTRIBUTION = 51%

LEGEND

* - PHASE 1 CONSTRUCTION
** - PHASE 2 CONSTRUCTION
● 16'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
16'-11 ½" ACT. MIN. VERTICAL CLEARANCE, TRU-80-0956 L (SB US 62)
18'-0 ½" ACT. MIN. VERTICAL CLEARANCE, TRU-80-0956 R (SB US 62)
18'-6" ACT. MIN. VERTICAL CLEARANCE, TRU-80-0956 L (NB US 62)
19'-5" ACT. MIN. VERTICAL CLEARANCE, TRU-80-0956 R (NB US 62)

CURVE DATA (℄ I.R. 80)M

P.I. STA. 508+02.82± T = 2,233.54'
Δ = 20°37'15" RT. L = 4,418.75'
D = 0°28'00" E = 201.51
R = 12,277.67'

TRU-80-0956 L EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURES

SPANS: 49'-0"±, 70'-0"±, 70'-0"±, 56'-0"±
ROADWAY: VARIES F/F SAFETY CURB
LOADING: CF 2000 (57)
SKEW: 9° 28' 08"± L.F.
APPROACH SLABS: 25'-0"±
ALIGNMENT: 0°28' CURVE RT.
SUPERELEVATION: 3/16"/FT.±
STRUCTURAL FILE NUMBER: 7804326
DATE BUILT: 1965
DISPOSITION: REMOVE EXISTING SUPERSTRUCTURE REHABILITATE AND EXTEND SUBSTRUCTURE

PROPOSED STRUCTURE

PROPOSED WORK: REMOVE EXISTING DECK SLAB AND STEEL BEAM SUPERSTRUCTURE UTILIZING PART WIDTH CONSTRUCTION. REMOVE PORTIONS OF EXISTING ABUTMENTS AND PIERS. EXTEND ABUTMENTS AND PIERS SUPPORTED ON PILE FOUNDATIONS RAISE BEAM SEATS OF SUBSTRUCTURE UNITS. CONSTRUCT NEW WIDENED SUPERSTRUCTURE AND REINFORCED CONCRETE DECK SLAB TO CONFORM TO THE MODIFIED PROFILE GRADE.

TYPE: NEW CONTINUOUS COMPOSITE GALVANIZED STEEL BEAM WITH REINFORCED CONCRETE DECK ON REHABILITATED AND EXTENDED SUBSTRUCTURE

SPANS: 49'-0", 70'-0" 70'-0" & 56'-0"
ROADWAY: VARIES 84'-7" TO 70'-5" TOE/TOE PARAPET
LOADING: HS-25 AND FUTURE WEARING SURFACE (FWS) OF 0.060 KSF-SUPERSTRUCTURE, HS20 & ALT. MILITARY-SUBSTRUCTURE
SKEW: 9° 27' 08" L.F.
APPROACH SLABS: 25'-0" LONG (AS-1-15), (AS-2-15)
ALIGNMENT: 0°28' RIGHT
SUPERELEVATION: 0.018 FT/FT
COORDINATES: LATITUDE 41°10'35.1"
LONGITUDE 80°34'08.2"

DESIGN AGENCY: EUTHENICS INC. CONSULTING ENGINEERS CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326/7804350	

TRUMBULL COUNTY
STA. 512+56.87
STA. 515+06.39

SITE PLAN
TRU-80-0956 L/R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

1/65

83/147

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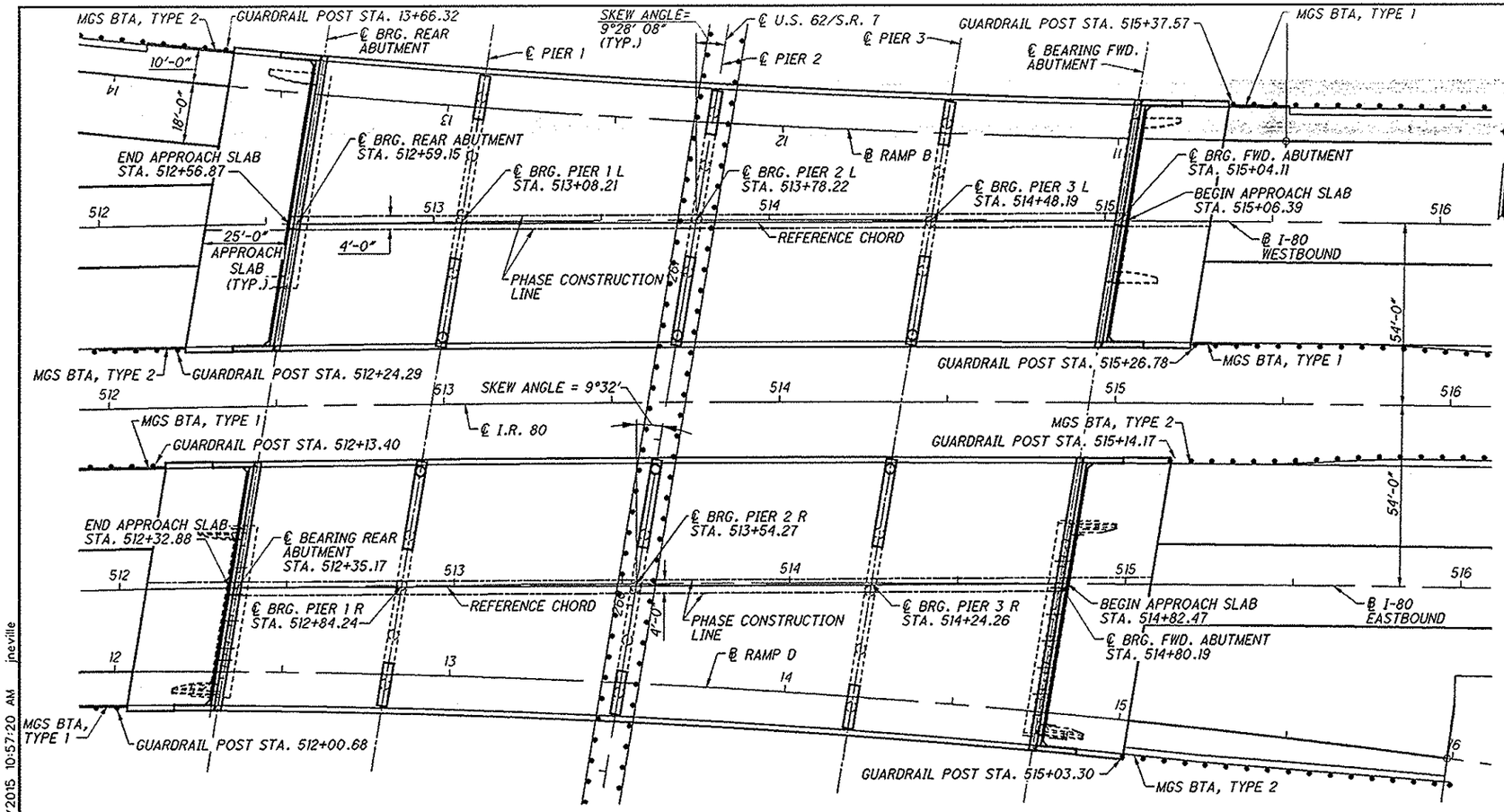
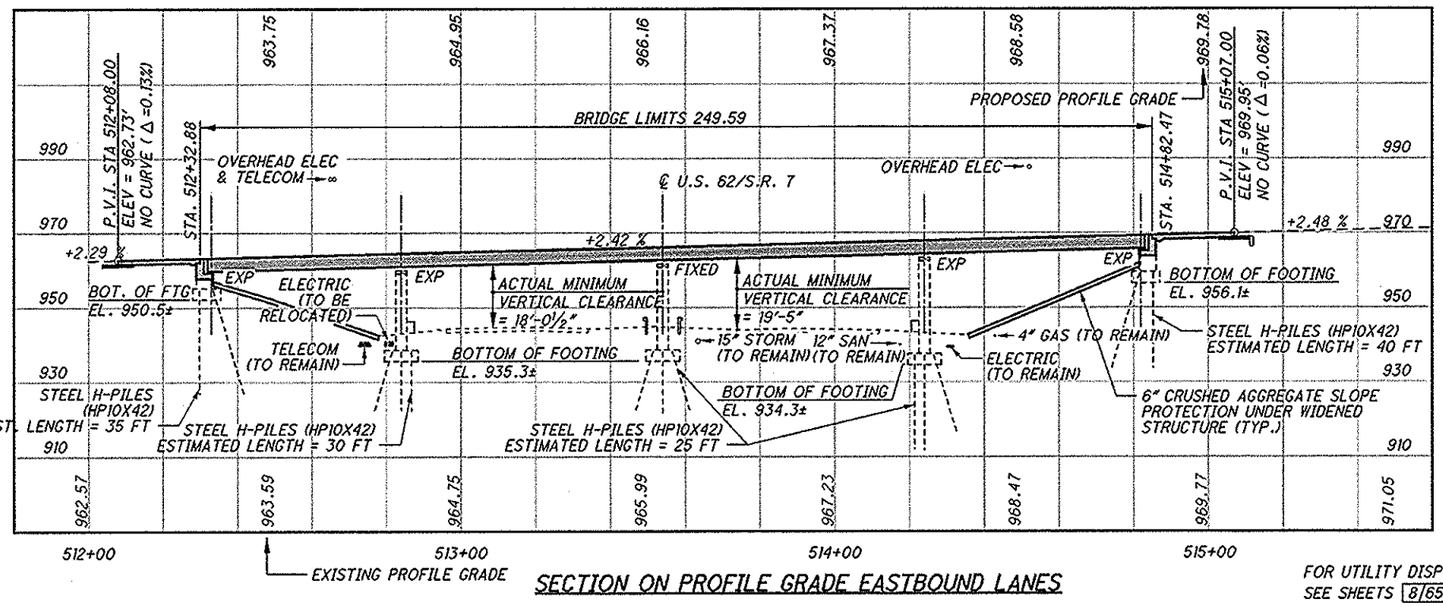
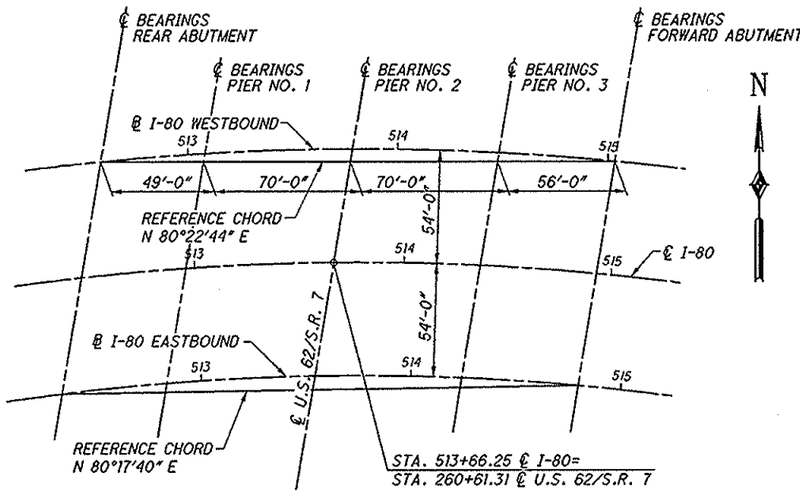


GENERAL PLAN



SECTION ON PROFILE GRADE EASTBOUND LANES



GEOMETRIC LAYOUT PLAN

FOR UTILITY DISPOSITION, SEE SHEETS 8/65 & 38/65.

TRU-80-0956 R EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURES

SPANS: 49'-0"±, 70'-0"±, 70'-0"±, 56'-0"±

ROADWAY: VARIES F/F SAFETY CURB

LOADING: CF 2000 (57)

SKEW: 9° 28' 08"± L.F.

APPROACH SLABS: 25'-0"±

ALIGNMENT: 0°28' CURVE RT.

SUPERELEVATION: 3/16"/FT.±

STRUCTURAL FILE NUMBER: 7804350

DATE BUILT: 1965

DISPOSITION: REMOVE EXISTING SUPERSTRUCTURE REHABILITATE AND EXTEND SUBSTRUCTURE

PROPOSED STRUCTURE

PROPOSED WORK: REMOVE EXISTING DECK SLAB AND STEEL BEAM SUPERSTRUCTURE UTILIZING PART WIDTH CONSTRUCTION. REMOVE PORTIONS OF EXISTING ABUTMENTS AND PIERS. EXTEND ABUTMENTS AND PIERS SUPPORTED ON PILE FOUNDATIONS RAISE BEAM SEATS OF SUBSTRUCTURE UNITS. CONSTRUCT NEW WIDENED SUPERSTRUCTURE AND REINFORCED CONCRETE DECK SLAB TO CONFORM TO THE MODIFIED PROFILE GRADE.

TYPE: NEW CONTINUOUS COMPOSITE GALVANIZED STEEL BEAM WITH REINFORCED CONCRETE DECK ON REHABILITATED AND EXTENDED SUBSTRUCTURE

SPANS: 49'-0", 70'-0" 70'-0" & 56'-0"

ROADWAY: VARIES 70'-11" TO 84'-1" TOE/TOE PARAPET

LOADING: HS-25 AND FUTURE WEARING SURFACE (FWS) OF 0.060 KSF-SUPERSTRUCTURE, HS20 & ALT. MILITARY-SUBSTRUCTURE

SKEW: 9° 32' 12" L.F.

APPROACH SLABS: 25'-0" LONG (AS-1-15), (AS-2-15)

ALIGNMENT: 0°28' RIGHT

SUPERELEVATION: 0.018 FT/FT AND VARIES

COORDINATES: LATITUDE 41°10'35.1"
LONGITUDE 80°34'08.2"

DESIGN AGENCY: EUTHENICS INC, CONSULTING ENGINEERS, CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326/7804350	

TRUMBULL COUNTY
STA. 512+32.88
STA. 514+82.47

TRUMBULL COUNTY
STA. 512+56.87
STA. 515+06.39

GENERAL PLAN
TRU-80-0956 L/R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

2 / 65

84 / 147

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GENERAL NOTES - STRUCTURES

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002, AND THE ODOT BRIDGE DESIGN MANUAL, 2004.

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD DRAWINGS:

AS-1-15	DATED: 01-16-15
AS-2-15	DATED: 01-16-15
EXJ-4-87	REVISED: 07-19-02
GSD-1-96	REVISED: 07-19-02
PCB-91	REVISED: 01-18-13
SBR-1-13	REVISED: 01-17-14

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

SS-800 DATED 01-15-16

DESIGN LOADING:

DESIGN LOADING: HS25-44 CASE I LOADING (SUPERSTRUCTURE)

DESIGN LOADING: HS20-44 (SUBSTRUCTURE)

FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT

DESIGN STRESSES:

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60, MINIMUM YIELD STRENGTH 60 KSI, SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

STRUCTURAL STEEL - ASTM A709 GRADE 50, MINIMUM YIELD STRENGTH 50 KSI

STEEL H-PILES - ASTM A572, YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL

2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

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

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UN-CERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBARKMENT BEHIND THE WIDENED PORTIONS OF THE ABUTMENTS UP TO THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

PILES TO BEDROCK:

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 119.0 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES. THE TOTAL FACTORED LOAD IS 122.0 KIPS PER PILE FOR THE NO. 2 PIER PILES.

ABUTMENT PILES:

LEFT
REAR HP10X42 PILES, 45 FOOT ORDER LENGTH
FORWARD HP10X42 PILES, 50 FOOT ORDER LENGTH
RIGHT
REAR HP10X42 PILES, 40 FOOT ORDER LENGTH
FORWARD HP10X42 PILES, 45 FOOT ORDER LENGTH

PIER PILES:

LEFT
PIER 1 - HP10X42 PILES, 35 FOOT ORDER LENGTH
PIER 2 & 3 - HP10X42 PILES, 30 FOOT ORDER LENGTH
RIGHT
PIER 1 - HP10X42 PILES, 35 FOOT ORDER LENGTH
PIER 2 & 3 - HP10X42 PILES, 30 FOOT ORDER LENGTH

PROPOSED WORK:

ALL PROPOSED WORK IS TO FOLLOW THE SAME METHODOLOGY FOR BOTH THE LEFT AND RIGHT STRUCTURE.

1. ALL WORK SHALL BE PERFORMED WITHIN RESPECTIVE PHASES OF CONSTRUCTION.
2. REMOVE PORTIONS OF THE EXISTING SUPERSTRUCTURE, INCLUDING WEARING COURSE, CONCRETE DECK, EXPANSION JOINTS, SCUPPERS, PORTIONS OF THE STRUCTURAL STEEL AND BEARINGS, AS DETAILED IN THE PLANS.
3. REMOVE PORTIONS OF EXISTING ABUTMENTS AND PIERS AS DETAILED IN THE PLANS.
4. REMOVE EXISTING APPROACH SLABS.
5. INSTALL PILING FOR WIDENED PIER AND ABUTMENT FOOTINGS.
6. CONSTRUCT NEW CONCRETE ABUTMENT AND PIER FOOTINGS.
7. RECONSTRUCT ABUTMENT BEAM SEATS AND PIERS AS DETAILED IN THE PLANS.
8. SET NEW BEARINGS AT THE ABUTMENTS AND PIERS AND ERECT NEW BEAMS INCLUDING INTERMEDIATE CROSSFRAMES.
9. INSTALL WELDED STUD SHEAR CONNECTORS.
10. INSTALL NEW EXPANSION JOINTS AND POUR NEW DECK.
11. CONSTRUCT NEW ABUTMENT DRAINAGE SYSTEM, POROUS BACKFILL AND CONSTRUCT APPROACH SLABS.
12. PATCH EXISTING CONCRETE SUBSTRUCTURES.
13. INSTALL WIDENED AGGREGATE SLOPE PROTECTION ACCORDING TO THE ROADWAY PLANS.
14. SEAL CONCRETE SURFACES AS INDICATED IN THE PLANS.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESCRIPTION: THIS WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING CONCRETE DECK, PARAPETS, RAILINGS, DECK JOISTS, END CROSSFRAMES, EXISTING BEAMS, INTERMEDIATE CROSSFRAMES AND BEAM BEARINGS.

ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN - CONTINUED

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OFF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF THE DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF THE FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB MAY AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE USED TO SUPPORT THE EXISTING DECK SLAB DURING PHASE CONSTRUCTION. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING REPAIR.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN

REPLACE ALL EXISITNG REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. A CONTINGENCY QUANTITY OF 100 LBS LEFT BRIDGE & 100 LBS. RIGHT BRIDGE SHALL BE USED.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH-PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

DESIGN AGENCY
EUTHENIES INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	VMB	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MMP		7804326/7804350	

GENERAL NOTES
TRU-80-0956 L/R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

3 / 65

85
147

GENERAL NOTES - STRUCTURES

DECK PLACEMENT DESIGN ASSUMPTIONS

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 3.16 KIPS FOR A TOTAL MACHINE LOAD OF 25.28 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48".

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF BRIDGE STRUCTURE NO. TRU-80-9.56I (SFN 7804326) AND FOR BRIDGE STRUCTURE NO. TRU-80-9.56R (SFN 7804350), BOTH SCHEDULED FOR REHABILITATION, WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

MAHONING-TRUMBULL AIR POLLUTION CONTROL
345 OAK HILL AVE., SUITE 200
YOUNGSTOWN, OH 44502
ATTN: TARA CIOFFI
(330) 743-3333
FAX: (330) 743-1928

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306

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

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL

1.1.1 DESCRIPTION
IN ADDITION TO THE REQUIREMENTS OF CMS ITEM 513, THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO CLEAN AND GALVANIZE ALL STRUCTURAL STEEL SURFACES, AS SPECIFIED HEREIN. THE GALVANIZED COATING SYSTEM MAY BE APPLIED BY A GALVANIZER NOT QUALIFIED AS A FABRICATION SHOP UNDER CMS ITEM 513, BUT THE APPROVED FABRICATOR OF THE STRUCTURAL STEEL SHALL BE RESPONSIBLE FOR THE QUALITY OF THE APPLIED GALVANIZED COATING SYSTEM AND ANY REPAIRS, RE-FABRICATING, ADDITIONAL LAYDOWNS REQUIRED TO ASSURE THE FABRICATED STEEL MEETS ALL REQUIREMENTS OF THIS SPECIFICATION. CMS SECTIONS 513.27 AND 513.28 SHALL NOT APPLY.

THIS ITEM SHALL ALSO INCLUDE GALVANIZING, PER 711.02, OF ALL NUTS, WASHERS, BOLTS, ANCHOR BOLTS.

GRIND THE GALVANIZED COATING OFF THE TOP FLANGE AT EACH SHEAR STUD PRIOR TO FIELD WELDING IT.

1.1.2 PRE-FABRICATION MEETING
IN ADDITION TO THE PRE-FABRICATION MEETING REQUIREMENTS UNDER CMS SECTION 513.07, BOTH THE FABRICATOR S QUALITY CONTROL SPECIALIST, (QCPS) AND GALVANIZED COATING APPLICATOR SHALL BE PRESENT AND DISCUSS METHODS OF OPERATION, QUALITY CONTROL, INCLUDING REPAIRS, TRANSPORTATION, ERECTION METHODS TO ACCOMPLISH ALL PHASES OF THE PREPARATION AND COATING WORK REQUIRED BY THIS SPECIFICATION.

1.1.3 QUALITY CONTROL
1.1.3.1 QUALITY CONTROL SPECIALIST
THE QCPS (QUALITY CONTROL PAINT SPECIALIST) REQUIRED UNDER CMS SECTION 514.04A, IS RESPONSIBLE FOR ALL QUALITY CONTROL REQUIREMENTS OF THIS SPECIFICATION. THE QCPS SHALL HAVE THE TESTING EQUIPMENT SPECIFIED IN CMS SECTION 514.05.

1.1.3.2 QUALITY CONTROL POINTS (QCP)
QUALITY CONTROL POINTS (QCP) ARE POINTS IN TIME WHEN ONE PHASE OF THE WORK IS COMPLETE AND READY FOR INSPECTION BY THE FABRICATOR S QCPS AND THE DEPARTMENT S QA REPRESENTATIVE. THE NEXT OPERATIONAL STEP MUST NOT PROCEED UNLESS THE QCP HAS BEEN ACCEPTED OR QA INSPECTION WAIVED BY THE DEPARTMENT S QA REPRESENTATIVE. AT THESE POINTS THE FABRICATOR MUST AFFORD ACCESS TO INSPECT ALL AFFECTED SURFACES. IF INSPECTION INDICATES A DEFICIENCY, THAT PHASE OF THE WORK MUST BE CORRECTED IN ACCORDANCE WITH THESE SPECIFICATIONS PRIOR TO BEGINNING THE NEXT PHASE OF WORK. DISCOVERY OF DEFECTIVE WORK OR MATERIAL AFTER A QUALITY CONTROL POINT IS PAST OR FAILURE OF THE FINAL PRODUCT BEFORE FINAL ACCEPTANCE, MUST NOT IN ANY WAY PREVENT REJECTION OR OBLIGATE THE DEPARTMENT TO FINAL ACCEPTANCE.

QUALITY CONTROL POINTS (QCP)	PURPOSE
SOLVENT CLEANING	REMOVE ASPHALTIC CEMENT, OIL, GREASE, SALT, DIRT, ETC.
GRINDING EDGES	REMOVE SHARP CORNERS PER AWS.
ABRASIVE BLASTING	BLAST SURFACE, INCLUDING REPAIR FINS, TEARS, SLIVERS OR SHARP EDGES
GALVANIZING	CHECK COATING THICKNES
FAYING SURFACE CLEANING	CHECK FAYING SURFACE ROUGHNESS. CHECK BOLT HOLE CLEARANCE. CHECK FOR OTHER FIELD CONNECTIONS UNIFORM COATING THICKNESS.
SECOND LAY DOWN	CHECK SWEEP AND CAMBER TOLERANCES OF EACH STRUCTURAL MEMBER
FIELD REPAIR OR DAMAGE AREAS	CHECK FOR DAMAGE AREAS AFTER ERECTION OF STRUCTURE. PERFORM DAMAGE REPAIRS.
FINAL REVIEW	CLEAN STRUCTURE AS PER QCP#1. VISUALLY INSPECT SYSTEM FOR ACCEPTANCE.

1.1.3.2.1 SOLVENT CLEANING (QCP #1)
THE STEEL MUST BE SOLVENT CLEANED WERE NECESSARY TO REMOVE ALL TRACES OF ASPHALTIC CEMENT, OIL, GREASE, DIESEL FUEL DEPOSITS, AND OTHER SOLUBLE CONTAMINANTS PER SSPC-SP 1 SOLVENT CLEANING. UNDER NO CIRCUMSTANCES MUST ANY ABRASIVE BLASTING BE DONE TO AREAS WITH ASPHALTIC CEMENT, OIL, GREASE, OR DIESEL FUEL DEPOSITS. STEEL MUST BE ALLOWED TO DRY BEFORE BLAST CLEANING BEGINS. THE QCPS SHALL INSPECT AND DOCUMENT THAT THE CLEANING CONFORMS TO SSPC-SPIAND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.3.2.2 GRINDING EDGES (QCP #2)
ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES MUST HAVE A 1/16 INCH [1.6 MM] RADIUS OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE. THERMALLY CUT MATERIAL THICKER THAN 1 *INCH [40 MM] MUST HAVE THE SIDES GROUND TO REMOVE THE HEAT EFFECTED ZONE, AS NECESSARY TO ACHIEVE THE SPECIFIED SURFACE CLEANING. THE QCPS MUST VISUALLY INSPECT AND DOCUMENT THAT THE GRINDING CONFORMS TO THIS SPECIFICATION AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.3.2.3 ABRASIVE BLASTING (QCP #3)
BEAMS AND GIRDERS MUST BE PREPARED BY THE FABRICATOR TO STEEL STRUCTURES PAINTING COUNCIL (SSPC) GRADE SIX (6) COMMERCIAL BLAST CLEANING PRIOR TO GALVANIZING. ALL MATERIAL MUST BE FREE OF PAINT MARKS. SECONDARY ANGLE, PLATES, BARS AND SHAPES NEED NOT BE BLAST CLEANED.

ABRASIVES MUST ALSO BE CHECKED FOR OIL CONTAMINATION BEFORE USE. A SMALL SAMPLE OF ABRASIVES MUST BE ADDED TO ORDINARY TAP WATER. ANY DETECTION OF AN OIL FILM ON THE SURFACE OF THE WATER MUST BE CAUSE FOR REJECTION. THE QCPS MUST PERFORM AND RECORD THIS TEST AT THE START OF EACH SHIFT.

ALL FINS, TEARS, SLIVERS AND BURRED OR SHARP EDGES THAT ARE PRESENT ON ANY STEEL MEMBER OR THAT APPEAR AFTER THE BLASTING OPERATION MUST BE CONDITIONED PER ASTM A6. WELDING REPAIRS MUST ONLY BE PERFORMED BY THE ITEM 513 FABRICATOR

THE QCPS MUST VISUALLY INSPECT AND DOCUMENT THAT THE BLAST CONFORMS TO SSPC-SP6, THAT ALL CONDITIONING IS PERFORMED PER ASTM A6, AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.3.2.4 GALVANIZING (QCP #4)
GALVANIZED PER 711.02 AND THIS SPECIFICATION. COATING THICKNESS MUST BE A MINIMUM OF 4 MILS [100M] MEASURED AS SPECIFIED.

MATERIAL MUST BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE FABRICATOR, GALVANIZER AND ERECTOR MUST USE LIFTING CLAMPS OR SOFTENERS FOR HANDLING. PRIOR TO GALVANIZING, SURFACE IMPERFECTIONS MAY BE REPAIRED BY THE FABRICATOR IN CONFORMANCE WITH ASTM A6. IMPERFECTIONS GREATER THAN THE LIMITS ALLOWED BY ASTM A6 MUST BE DOCUMENTED. REPAIR OR REPLACEMENT OF THIS MEMBER WILL BE AT THE DISCRETION OF THE DEPARTMENT.

ALL DAMAGED GALVANIZING MUST BE REPAIRED IN ACCORDANCE WITH ASTM A780, METHOD A1 OR A3.

DOCUMENTATION OF COATING THICKNESS MUST BE PERFORMED BY THE QCPS. THE QCPS MUST RECORD THE GAGE READINGS AND PROVIDE A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.3.2.5 FAYING SURFACE CLEANING (QCP #5)
AREAS OF FIELD CONNECTIONS MUST HAVE A UNIFORM GALVANIZED COATING THICKNESS FREE OF LOCAL EXCESSIVE ROUGHNESS WHICH WOULD PREVENT SPLICE PLATES, BEARINGS OR OTHER FIELD CONNECTIONS FROM MAKING INTIMATE CONTACT.

FAYING SURFACES OF THE BOLTED SPLICES MUST BE ROUGHENED IN THE SHOP AFTER GALVANIZING BY HAND WIRE BRUSHING. POWER WIRE BRUSHING IS NOT PERMITTED. ALL FIELD SPLICE BOLT HOLES MUST BE FREE OF ZINC BUILD UP. AFTER GALVANIZING, EACH HOLE MUST BE CHECKED IN THE SHOP BY USING A DRIFT PIN WITH A DIAMETER 1/16 INCH [1.6 MM] GREATER THAN THE DIAMETER OF THE BOLT TO BE USED IN THAT HOLE. CONSIDERATION WILL BE GIVEN TO OTHER METHODS OF TREATING THE FAYING SURFACES IF A WRITTEN REQUEST IS SUBMITTED TO THE OFFICE OF STRUCTURAL ENGINEERING (OSE) IN ACCORDANCE WITH CMS 108.05.

INSPECTION OF THE ROUGHENING OF THE FAYING SURFACES AND CHECKING OF HOLES WITH DRIFT PINS MUST BE PERFORMED BY THE QCPS. ACCEPTANCE OF THE FAYING SURFACES AND HOLES SHALL BE DOCUMENTED BY THE QCPS.

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DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN VMB | REVIEWED RAB | DATE 11-15
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GENERAL NOTES
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GENERAL NOTES - STRUCTURES

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL - CONTINUED

1.1.3.2.6 SECOND LAY DOWN (QCP # 6)
AFTER GALVANIZING, MATERIALS MUST BE PLACED IN A SECOND SHOP ASSEMBLY PER CMS SECTION 513.24 TO CHECK ALIGNMENT OF HOLES, SWEEP AND CAMBER AGAINST THE FABRICATORS ORIGINAL RECORDED LAY DOWN DIMENSIONS. THIS SHOP ASSEMBLY MAY BE PERFORMED AT THE GALVANIZERS FACILITY, BY THE FABRICATORS PERSONNEL, IF APPROVED BY THE OSE. THE SECOND LAY DOWN MAY BE WAIVED BY THE OSE IF THE FABRICATOR RECORDS INDIVIDUAL BEAM CAMBERS AND SWEEPS DURING THE FIRST LAY DOWN, AND THE NEW INDIVIDUAL BEAM CAMBERS AND SWEEPS, AFTER GALVANIZING, COMPARED TO THE FIRST LAY DOWN ARE WITHIN THE FOLLOWING TOLERANCES:

BEARING POINTS AFTER GALVANIZING MUST BE WITHIN +/- 1/8 INCH [3.2 MM] OF THE APPROVED SHOP DRAWING LAY DOWN.

CAMBER POINTS AFTER GALVANIZING MUST BE + 1/4 INCH [6 MM] OR - 0 INCHES FROM THE FIRST LAY DOWN.

SWEEP POINTS AFTER GALVANIZING MUST BE +/- 3/8 INCH [9 MM] FROM THE FIRST LAY DOWN.

INDIVIDUAL BEAMS THAT EXCEED THE LISTED TOLERANCES MUST BE PLACED WITH AT LEAST TWO ADJACENT BEAMS IN LAY DOWN FOR CHECKING AGAINST THE RECORDED SHOP ASSEMBLY RECORDS PER CMS SECTION 513.04. DOCUMENTATION OF THE SECOND LAY DOWN OR INDIVIDUAL MEMBER CAMBERS MUST BE RECORDED BY THE QCPS PER CMS SECTION 513.24.

1.1.3.2.7 FIELD REPAIR OF DAMAGED AREAS (QCP #7)
MATERIAL MUST BE FREE OF IMPERFECTIONS OR DEPRESSIONS CAUSED BY MATERIAL HANDLING. THE CONTRACTOR MUST USE LIFTING CLAMPS OR SOFTENERS FOR HANDLING. IMPERFECTIONS MAY BE REPAIRED BY GRINDING AS ALLOWED BY ASTM A6 BY THE.CONTRACTOR. IMPERFECTIONS THAT ARE GREATER THAN THE GRINDING LIMITS ALLOWED BY ASTM A6, MUST BE DOCUMENTED. REPAIR OR REPLACEMENT OF THIS MEMBER WILL BE AT THE DISCRETION OF THE OSE.

ALL DAMAGED GALVANIZING MUST BE REPAIRED IN ACCORDANCE WITH ASTM A780, METHOD A1 OR A3.

DAMAGED GALVANIZING WHICH WILL BE INACCESSIBLE FOR REPAIR AFTER ERECTION MUST BE REPAIRED PRIOR TO ERECTION.

IN ORDER TO MINIMIZE DAMAGE TO THE GALVANIZED STEEL, CONCRETE SPLATTER AND FORM LEAKAGE MUST BE WASHED FROM THE SURFACE OF THE STEEL SHORTLY AFTER THE CONCRETE IS PLACED AND BEFORE IT IS DRY. IF THE CONCRETE DRIES, IT MUST BE REMOVED.

TEMPORARY ATTACHMENTS, SUPPORTS FOR SCAFFOLDING AND FINISHING MACHINE OR FORMS MUST NOT DAMAGE THE COATING SYSTEM. IN PARTICULAR, SUFFICIENT SIZE SUPPORT PADS MUST BE USED ON THE FASCIAS WHERE BRACING IS USED.

DOCUMENTATION OF GALVANIZING REPAIRS MUST BE PERFORMED BY THE QCPS BY A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.3.2.8 FINAL REVIEW (QCP # 8)
AFTER THE ERECTION WORK HAS BEEN COMPLETED, INCLUDING ALL CONNECTIONS AND THE APPROVED REPAIR OF ANY DAMAGED BEAMS, GIRDERS OR OTHER STEEL MEMBERS, AND THE DECK HAS BEEN PLACED, THE CONTRACTOR AND ENGINEER MUST INSPECT THE STRUCTURE FOR DAMAGED COATING. (QCP #8). DAMAGED AREAS MUST BE REPAIRED BY QCPS #7. AT THE COMPLETION OF CONSTRUCTION, THE GALVANIZING MUST BE UNDAMAGED AND THE SURFACES FREE FROM GREASE, OIL, CHALK MARKS, PAINT, CONCRETE SPLATTER OR OTHER SILAGE. SUCH SILAGE WILL BE REMOVED BY SOLVENT CLEANING PER SSPC-SP1 (QCP #1) DOCUMENTATION OF FINAL REVIEW MUST BE PERFORMED BY THE QCPS BY A COVER LETTER LISTING EACH MAIN MEMBER INSPECTED.

1.1.4 TESTING EQUIPMENT
THE FABRICATOR MUST PROVIDE THE QCPS INSPECTOR THE FOLLOWING TESTING EQUIPMENT IN GOOD WORKING ORDER FOR THE DURATION OF THE PROJECT.

ONE (POSITECTOR 2000 OR 6000, QUANIX 2200, OR ELCOMETER A345FBI1) AND THE CALIBRATION PLATES, 38-200 MM AND 250-625 MM (1.5 -8 MILS AND 10-25 MILS) AS PER THE NBS CALIBRATION STANDARDS IN ACCORDANCE WITH ASTM D-1186.

1.1.5 COATING THICKNESS
GALVANIZED THICKNESS MUST BE DETERMINED BY USE OF TYPE 2 MAGNETIC GAGE IN ACCORDANCE WITH THE FOLLOWING:

FIVE SEPARATE SPOT MEASUREMENTS MUST BE MADE, SPACED EVENLY OVER ONE (1) RANDOMLY SELECTED, 100 SQUARE FEET [9 SQUARE METERS] OF SURFACE AREA ON EACH STRUCTURAL MEMBER. THREE GAGE READINGS MUST BE MADE FOR EACH SPOT MEASUREMENT. THE PROBE MUST BE MOVED A DISTANCE OF 1 TO 3 INCHES [25 TO 75 MM] FOR EACH NEW GAGE READING. ANY UNUSUALLY HIGH OR LOW GAGE READING THAT CANNOT BE REPEATED CONSISTENTLY MUST BE DISCARDED. THE AVERAGE (MEAN) OF THE 3 GAGE READINGS MUST BE USED AS THE SPOT MEASUREMENT. THE AVERAGE OF FIVE SPOT MEASUREMENTS FOR EACH SUCH 100 SQUARE FOOT [9 SQUARE METERS] AREA MUST NOT BE LESS THAT THE SPECIFIED THICKNESS. NO SINGLE SPOT MEASUREMENT IN ANY 100 SQUARE FOOT [9 SQUARE METERS] AREA MUST BE LESS THAN 80% OF THE SPECIFIED MINIMUM THICKNESS. ANY ONE OF 3 READINGS WHICH ARE AVERAGED TO PRODUCE EACH SPOT MEASUREMENT, MAY UNDER-RUN OR OVER-RUN BY A GREATER AMOUNT. THE 5 SPOT MEASUREMENTS MUST BE MADE FOR ONE(1) RANDOMLY SELECTED, 100 SQUARE FEET [9 SQUARE METER] OF AREA ON EACH STRUCTURAL MEMBER. ALL SPLICE MATERIAL AND SECONDARY MEMBERS MUST HAVE AT LEAST ONE SPOT MEASURED ON EACH PIECE. THE PROBE MUST BE MOVED SO THAT ONE READING IS TAKEN AT EACH END AND MIDDLE OF THE PIECE FOR A TOTAL OF THREE READINGS.

THE QCPS MUST INSPECT AND PROVIDE DOCUMENTATION OF ACTUAL DATA, THE GALVANIZED THICKNESS CHECKS WERE PERFORMED PER SPECIFICATION, AND THE COATING THICKNESS MEETS SPECIFICATION REQUIREMENTS..

1.1.6 HANDLING AND SHIPPING
REASONABLE CARE MUST BE EXERCISED IN HANDLING THE GALVANIZED STEEL DURING SHIPPING, ERECTION, AND SUBSEQUENT CONSTRUCTION OF THE BRIDGE. THE STEEL MUST BE INSULATED FROM THE BINDING CHAINS BY SOFTENERS. HOOKS AND SLINGS USED TO HOIST STEEL MUST BE PADDED. DIAPHRAGMS AND SIMILAR PIECES MUST BE SPACED IN SUCH A WAY THAT NO RUBBING WILL OCCUR DURING SHIPMENT THAT MAY DAMAGE THE GALVANIZING. THE STEEL MUST BE STORED ON PALLETS AT THE JOB SITE, OR BY OTHER MEANS, SO THAT IT DOES NOT REST ON THE GROUND OR SO THAT COMPONENTS DO NOT FALL OR REST ON EACH OTHER.

1.1.7 SAFETY REQUIREMENTS AND PRECAUTIONS
THE CONTRACTOR MUST MEET THE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), IN ADDITION TO THE SCAFFOLDING REQUIREMENTS BELOW.

THE CONTRACTOR IS REQUIRED TO MEET THE APPLICABLE SAFETY REQUIREMENTS OF THE OHIO INDUSTRIAL COMMISSION IN ADDITION TO THE SCAFFOLDING REQUIREMENTS SPECIFIED BELOW.

1.1.8 SCAFFOLDING
RUBBER ROLLERS, OR OTHER PROTECTIVE DEVICES MEETING THE APPROVAL OF THE ENGINEER, MUST BE USED ON SCAFFOLD FASTENINGS. METAL ROLLERS OR CLAMPS AND OTHER TYPES OF FASTENINGS WHICH WILL MAR OR DAMAGE COATED SURFACES MUST NOT BE USED.

1.1.9 INSPECTION ACCESS FOR FIELD REPAIR
IN ADDITION TO THE REQUIREMENT OF 105.11, THE CONTRACTOR MUST FURNISH, ERECT, AND MOVE SCAFFOLDING AND OTHER APPROPRIATE EQUIPMENT, TO PERMIT THE INSPECTOR THE OPPORTUNITY TO INSPECT CLOSELY OBSERVE), ALL AFFECTED SURFACES. THIS OPPORTUNITY MUST BE PROVIDED TO THE INSPECTOR DURING ALL PHASES OF THE WORK AND CONTINUE FOR A PERIOD OF AT LEAST TEN (10) WORKING DAYS AFTER THE TOUCH-UP WORK HAS BEEN COMPLETED. WHEN SCAFFOLDING IS USED, IT MUST BE PROVIDED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS. WHEN SCAFFOLDING, OR THE HANGERS ATTACHED TO THE SCAFFOLDING ARE SUPPORTED BY HORIZONTAL WIRE ROPES, OR WHEN SCAFFOLDING IS PLACED DIRECTLY UNDER THE SURFACE TO BE PAINTED, THE FOLLOWING REQUIREMENTS MUST BE COMPLIED WITH:

WHEN SCAFFOLDING IS SUSPENDED 43" [1100 MM] OR MORE BELOW THE COATED SURFACE TO BE REPAIRED, TWO ROWS OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF THE SCAFFOLDING. ONE ROW OF GUARDRAIL MUST BE PLACED AT 42" [1050 MM] ABOVE THE SCAFFOLDING AND THE OTHER ROW AT 20" [500 MM] ABOVE THE SCAFFOLDING.

WHEN THE SCAFFOLDING IS SUSPENDED AT LEAST 21" [530 MM], BUT LESS THAN 43" [1100 MM] BELOW THE COATED SURFACE TO BE REPAIRED, A ROW OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF THE SCAFFOLDING AT 20" [500 MM] ABOVE THE SCAFFOLDING.

TWO ROWS OF GUARDRAIL MUST BE PLACED ON ALL SIDES OF SCAFFOLDING NOT PREVIOUSLY MENTIONED. THE ROWS OF GUARDRAIL MUST BE PLACED AT 42" [1050 MM] AND 20" [500 MM] ABOVE SCAFFOLDING, AS PREVIOUSLY MENTIONED.

ALL SCAFFOLDING MUST BE AT LEAST 24" [610 MM] WIDE WHEN GUARDRAIL IS USED AND 28" [710 MM] WIDE WHEN THE SCAFFOLDING IS SUSPENDED LESS THAN 21" [530 MM] BELOW THE COATED SURFACE TO BE REPAIRED AND GUARDRAIL IS NOT USED. IF TWO OR MORE SCAFFOLDING ARE LAID PARALLEL TO ACHIEVE THE PROPER WIDTH, THEY MUST BE RIGIDLY ATTACHED TO EACH OTHER TO PRECLUDE ANY DIFFERENTIAL MOVEMENT.

ALL GUARDRAIL MUST BE CONSTRUCTED AS A SUBSTANTIAL BARRIER WHICH IS SECURELY FASTENED IN PLACE AND IS FREE FROM PROTRUDING OBJECTS SUCH AS NAILS, SCREWS AND BOLTS. THERE MUST BE AN OPENING IN THE GUARDRAIL, PROPERLY LOCATED, TO ALLOW THE INSPECTOR ACCESS ONTO THE SCAFFOLDING.

THE RAILS AND UPRIGHTS MUST BE EITHER METAL OR WOOD. IF PIPE RAILING IS USED, THE RAILING MUST HAVE A NOMINAL DIAMETER OF NO LESS THAN ONE AND ONE HALF INCHES. IF STRUCTURAL STEEL RAILING IS USE, THE RAILS MUST BE 2 X 2 X 3/8 INCH [50 X 50 X 10 MM] STEEL ANGLES OR OTHER METAL SHAPES OF EQUAL OR GREATER STRENGTH. IF WOOD RAILING IS USED, THE RAILING MUST BE 2 X 4 INCH [50 X 100 MM] (NOMINAL) STOCK. ALL UPRIGHTS MUST BE SPACED AT NO MORE THAN 8 FEET [2.4 M] ON CENTER. IF WOOD UPRIGHTS ARE USED, THE UPRIGHTS MUST BE 2 X 4 INCHES [50 X 100 MM] (NOMINAL) STOCK.

WHEN THE SURFACE TO BE INSPECTED IS MORE THAN 15 FEET [4.6 M] ABOVE THE GROUND OR WATER, AND THE SCAFFOLDING IS SUPPORTED FROM THE STRUCTURE BEING PAINTED, THE CONTRACTOR MUST PROVIDE THE INSPECTOR WITH A SAFETY BELT AND LIFELINE. THE LIFELINE MUST NOT ALLOW A FALL GREATER THAN 6 FEET [2 M]. THE CONTRACTOR MUST PROVIDE A METHOD OF ATTACHING THE LIFELINE TO THE STRUCTURE INDEPENDENT OF THE SCAFFOLDING, CABLES, OR BRACKETS SUPPORTING THE SCAFFOLDING.

WHEN SCAFFOLDING IS MORE THAN TWO AND ONE HALF FEET [0.75 M] ABOVE THE GROUND, THE CONTRACTOR MUST PROVIDE A LADDER FOR ACCESS ONTO THE SCAFFOLDING. THE LADDER AND ANY EQUIPMENT USED TO ATTACH THE LADDER TO THE STRUCTURE MUST BE CAPABLE OF SUPPORTING 250 POUNDS [115 KG] WITH A SAFETY FACTOR OF AT LEAST FOUR (4). ALL RUNGS, STEPS, CLEATS, OR TREADS MUST HAVE UNIFORM SPACING AND MUST NOT EXCEED 12" [305 MM] ON CENTER. AT LEAST ONE SIDE RAIL MUST EXTEND AT LEAST 36" [915 MM] ABOVE THE LANDING NEAR THE TOP OF THE LADDER.

AN ADDITIONAL LANDING MUST BE REQUIRED WHEN THE DISTANCE FROM THE LADDER TO THE POINT WHERE THE SCAFFOLDING MAY BE ACCESSED, EXCEEDS 12" [305 MM]. THE LANDING MUST BE A MINIMUM OF AT LEAST 24" [610 MM] WIDE AND 24" [610 MM] LONG. IT MUST ALSO BE OF ADEQUATE SIZE AND SHAPE SO THAT THE DISTANCE FROM THE LANDING TO THE POINT WHERE THE SCAFFOLDING IS ACCESSED DOES NOT EXCEED 12" [305 MM]. THE LANDING MUST BE RIGID AND FIRMLY ATTACHED TO THE LADDER; HOWEVER, IT MUST NOT BE SUPPORTED BY THE LADDER. THE SCAFFOLDING MUST BE CAPABLE OF SUPPORTING A MINIMUM OF 1000 LBS [455 KG].

IN ADDITION TO THE AFOREMENTIONED REQUIREMENTS, THE CONTRACTOR IS STILL RESPONSIBLE TO OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS, ORDINANCES, REGULATIONS, ORDERS AND DECREES.

THE CONTRACTOR MUST FURNISH ALL NECESSARY TRAFFIC CONTROL TO PERMIT INSPECTION DURING AND AFTER ALL PHASES OF THE PROJECT.

1.1.10 PROTECTION OF PERSONS AND PROPERTY
THE CONTRACTOR MUST INSTALL AND MAINTAIN SUITABLE SHIELDS OR ENCLOSURES TO PREVENT DAMAGE TO ADJACENT BUILDINGS, PARKED CARS, TRUCKS, BOATS, OR VEHICLES TRAVELING ON, OVER, OR UNDER STRUCTURES HAVING GALVANIZED REPAIRS. THEY MUST BE SUITABLY ANCHORED AND REINFORCED TO PREVENT INTERFERING WITH NORMAL TRAFFIC OPERATIONS IN THE OPEN LANES. PAYMENT FOR THE SHIELDS MUST BE INCLUDED AS INCIDENTAL TO THE APPLICABLE FIELD COATING OPERATION. WORK MUST BE SUSPENDED WHEN DAMAGE TO ADJACENT BUILDINGS, MOTOR VEHICLES, BOATS, OR OTHER PROPERTY IS OCCURRING.

WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR MUST RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY, TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE.

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

DESIGN AGENCY
EUTHENICS INC.
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CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	VMB	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
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GENERAL NOTES
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GENERAL NOTES - STRUCTURES

GALVANIZED COATING SYSTEM FOR STRUCTURAL STEEL - CONTINUED

1.1.12 METHOD OF MEASUREMENT
THE COST OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO GALVANIZE AND TO FABRICATE THE STRUCTURAL STEEL IN ACCORDANCE WITH 513 AND PERFORM ANY NECESSARY FIELD REPAIR SHALL BE INCLUDED IN THIS 513 STRUCTURAL STEEL, AS PER PLAN ITEM.

1.1.13 BASIS OF PAYMENT
PAYMENT WILL BE INCLUDED WITH CONTRACT PRICES FOR THE APPLICABLE PLAN ITEM: ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN.

MECHANICAL CONNECTORS

AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES. IF A DOWEL BAR SPLICE TYPE CONNECTOR IS FURNISHED, THE MINIMUM DOWEL BAR LENGTH TO BE INCLUDED WITH THE CONNECTOR SHALL BE AS GIVEN BY THE DIMENSION "L" AS SHOWN IN THE PLAN. MECHANICAL CONNECTORS SHALL DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR. CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY, AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS. CONNECTOR AND DOWEL BAR EXTENSIONS SHALL CONFORM WITH 509 AND BE INCLUDED IN THE PRICE BID WITH 509.

SEQUENCE OF CONSTRUCTION

1. CLOSE INSIDE LANE TO TRAFFIC ACCORDING TO MAINTENANCE OF TRAFFIC PHASE 1 PLANS AND INSTALL ANCHORED PORTABLE CONCRETE BARRIERS ON BRIDGE DECK.
2. REMOVE THE INSIDE PORTION OF THE ASPHALT CONCRETE WEARING SURFACE, CONCRETE DECK, STEEL SUPERSTRUCTURE AND ABUTMENTS AS DETAILED IN THE PLANS. INSTALL TEMPORARY SHORING AT EXISTING ABUTMENTS
3. DRIVE PHASE 1 STEEL PILES FOR ABUTMENT EXTENSIONS AND NEW PIER FOOTINGS.
4. CONSTRUCT REINFORCED CONCRETE FOOTINGS FOR PHASE 1 ABUTMENT EXTENSIONS AND NEW PIER FOOTINGS.
5. CONSTRUCT PHASE 1 ABUTMENTS TO SEAT LEVEL. CONSTRUCT PHASE 1 PIER COLUMNS AND CAP BEAMS.
6. CONSTRUCT PHASE 1 ABUTMENT BACKWALLS.
7. INSTALL PHASE 1 ELASTOMERIC BEARINGS. ERECT PHASE 1 GALVANIZED STEEL BEAMS AND CROSS FRAMES. INSTALL HEADED STUDS ON BEAMS.
8. CONSTRUCT PHASE 1 REINFORCED CONCRETE DECK SLABS AND APPROACH SLABS TO THE LIMITS SHOWN IN THE PLANS.
9. CONSTRUCT SINGLE SLOPE CONCRETE BARRIERS ON INSIDE EDGE OF DECK SLABS.
10. SHIFT TRAFFIC TO NEWLY CONSTRUCTED PORTIONS OF THE BRIDGES ACCORDING TO MAINTENANCE OF TRAFFIC PHASE 2 PLANS. UNANCHORED PORTABLE CONCRETE BARRIER IS USED ON THE NEW BRIDGE DECK.
11. REMOVE THE REMAINING OUTSIDE PORTIONS OF THE EXISTING BRIDGES.
12. DRIVE PHASE 2 STEEL PILES FOR THE ABUTMENT EXTENSIONS.
13. CONSTRUCT REINFORCED CONCRETE FOOTINGS FOR PHASE 2 ABUTMENT EXTENSIONS.
14. CONSTRUCT PHASE 2 ABUTMENTS TO SEAT LEVEL. CONSTRUCT PHASE 2 SEATS ON EXISTING CAP BEAMS AND EXTEND CAP BEAMS AS DETAILED IN THE PLANS.
15. CONSTRUCT PHASE 2 ABUTMENT BACKWALLS.
16. INSTALL PHASE 2 ELASTOMERIC BEARINGS. ERECT NEW GALVANIZED STEEL BEAMS AND CROSS FRAMES. INSTALL HEADED STUDS ON BEAMS.
17. CONSTRUCT PHASE 2 REINFORCED CONCRETE DECK SLABS AND APPROACH SLABS TO THE LIMITS SHOWN IN THE PLANS.
18. CONSTRUCT SINGLE SLOPE CONCRETE BARRIERS ON INSIDE EDGE OF DECK SLABS.
19. INSTALL GALVANIZED CROSS FRAMES BENEATH THE CLOSURE POUR.
20. CONSTRUCT CLOSURE POUR.
21. APPLY CONCRETE SEALER TO PARAPETS AND DECK EDGES AND HMWM TO CLOSURE POUR JOINTS AS DETAILED IN THE PLANS.
22. OPEN NEW BRIDGES TO TRAFFIC.

THE FOLLOWING ABBREVIATIONS ARE USED:

℄	= CENTERLINE
ABUT.	= ABUTMENT
ADDIT.	= ADDITIONAL
BOT.	= BOTTOM
BRG.	= BEARING
B.S.	= BOTH SIDES
BTWN.	= BETWEEN
CLR.	= CLEAR
CONST. JT.	= CONSTRUCTION JOINT
DIM.	= DIMENSION
DWG.	= DRAWING
EA.	= EACH
EQ.	= EQUAL OR EQUALLY
FRWD.	= FORWARD
F.S.	= FAR SIDE
MIN.	= MINIMUM
NO.	= NUMBER
N.P.C.P.P.	= NON-PERFORATED CORRUGATED PLASTIC PIPE
N.S.	= NEAR SIDE
P.C.P.P.	= PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F.	= PREFORMED EXPANSION JOINT FILLER
SER.	= SERIES
SHT.	= SHEET
SPA.	= SPACES OR SPACED
SPL.	= SPLICE
SR	= SERIES (REINFORCING STEEL LIST SHEETS)
STD.	= STANDARD
TYP.	= TYPICAL

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GENERAL NOTES
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ESTIMATED QUANTITIES

CALC BY: AJM CHK'D BY: MMP

ITEM	ITEM EXT.	PARTICIPATION (05/NHS/BR)	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL	AS PER PLAN SHEET NUMBERS
202	11203	LUMP	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	3/65
202	22900	243	243	SY	APPROACH SLAB REMOVED				243	
202	23500	1,722	1,722	SY	WEARING COURSE REMOVED				1,722	
503	11100	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING				LUMP	
503	21300	LUMP	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
505	11100	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00100	1,710	1,710	FT	STEEL PILES HP10x42, FURNISHED	950	760			
507	00150	1,490	1,490	FT	STEEL PILES HP10x42, DRIVEN	850	640			
509	10000	209,665	209,665	LB	EPOXY COATED REINFORCING STEEL	16,182	19,060	174,423		
509	20001	100	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	3/65
510	10000	498	498	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	238	260			
511	34446	600	600	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			600		
511	34450	75	75	CY	CLASS QC2 CONCRETE, WITH QC/QA, BRIDGE DECK (PARAPET)			75		
511	41012	91	91	CY	CLASS QC1 CONCRETE WTH QC/QA, PIER ABOVE FOOTINGS		91			
511	43512	176	176	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	176				
511	46512	27	27	CY	CLASS QC1 CONCRETE WTH QC/QA, FOOTING		27			
512	10100	1,103	1,103	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	202	384	517		
512	10300	120	120	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			120		
512	74000	173	173	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	25	148			
513	10261	570,500	570,500	LB	STRUCTURAL STEEL MEMBERS, GALVANIZED, LEVEL 3, AS PER PLAN			570,500		4/65 5/65
513	20000	12,399	12,399	EACH	WELDED STUD SHEAR CONNECTORS			12,399		
516	11210	157	157	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	157				
516	13600	78	78	SF	1" PREFORMED EXPANSION JOINT FILLER				78	
516	44100	17	17	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2.67 X 12 X 16)	17				
516	44200	18	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (3.34 X 15 X 22)		18			
516	44200	9	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (3.34 X 14 X 24)		9			
518	21200	65	65	CY	POROUS BACKFILL WITH FILTER FABRIC	65				
518	40000	185	185	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	185				
518	40010	20	20	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	20				
526	25011	443	443	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				443	31/65 32/65 33/65
526	90010	159	159	FT	TYPE A INSTALLATION				159	

DESIGN AGENCY
EUTHENICS INC
CONSULTING ENGINEERS
CLEVELAND, OHIO

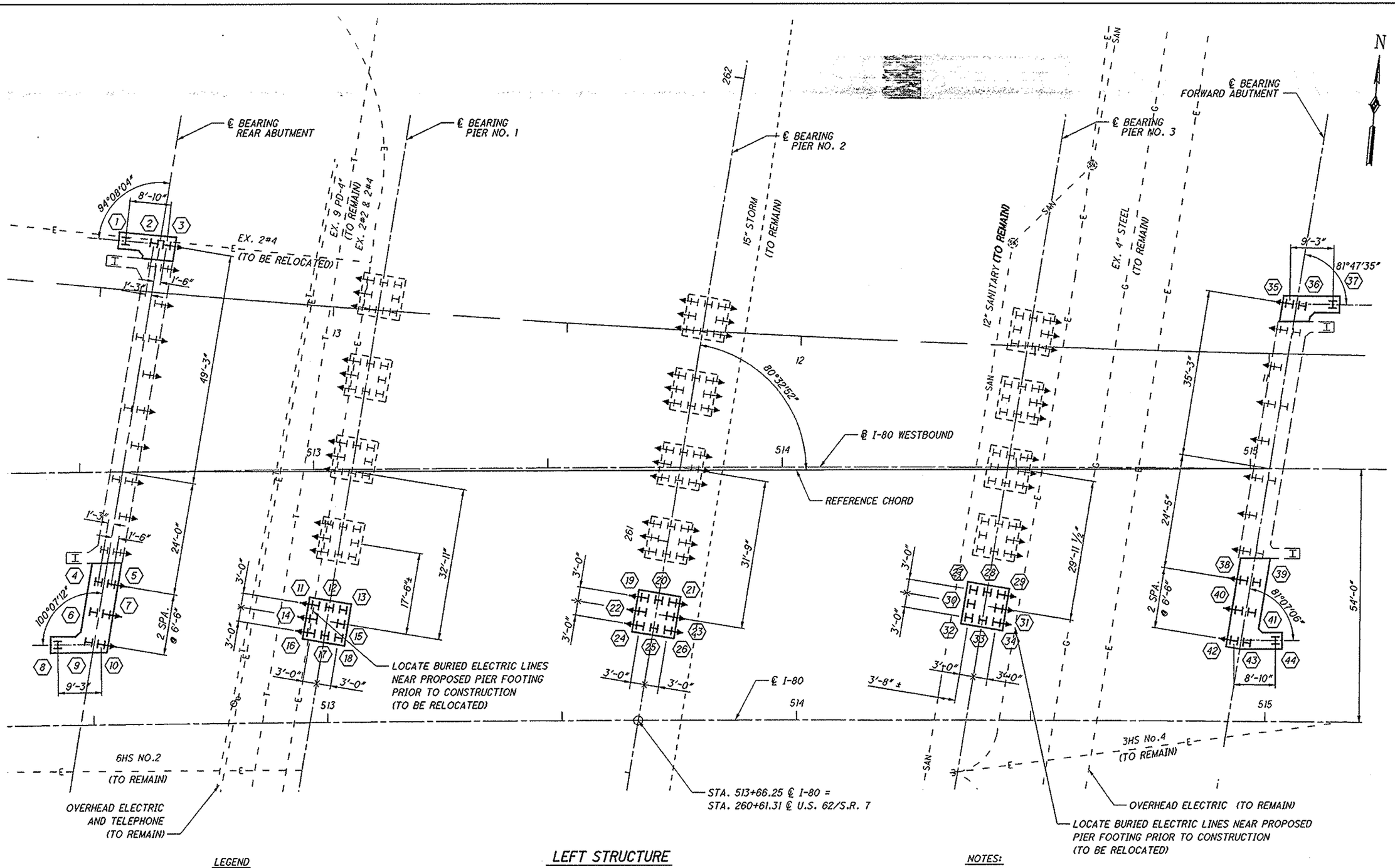
DESIGNED AJM
DRAWN PJK
CHECKED MMP
REVIEWED RAB
DATE 11-15
REVISED
STRUCTURE FILE NUMBER 7804326

ESTIMATED QUANTITIES
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

7/65

89
147



LEFT STRUCTURE

LEGEND

- ⟨1⟩ INDICATES PILE NUMBER
- I INDICATES VERTICAL PILES
- I INDICATES BATTERED PILES. BATTER 1:4 IN DIRECTION INDICATED BY ARROW.

NOTES:

1. FOR DETAIL OF ABUTMENT FOOTINGS, SEE SHEET 13/65 .
2. FOR DETAILS OF PIER FOOTINGS, SEE SHEET 20/65 .
3. ALL EXISTING PILES ARE 10BP42.
4. ALL PROPOSED PILES ARE HP10x42.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

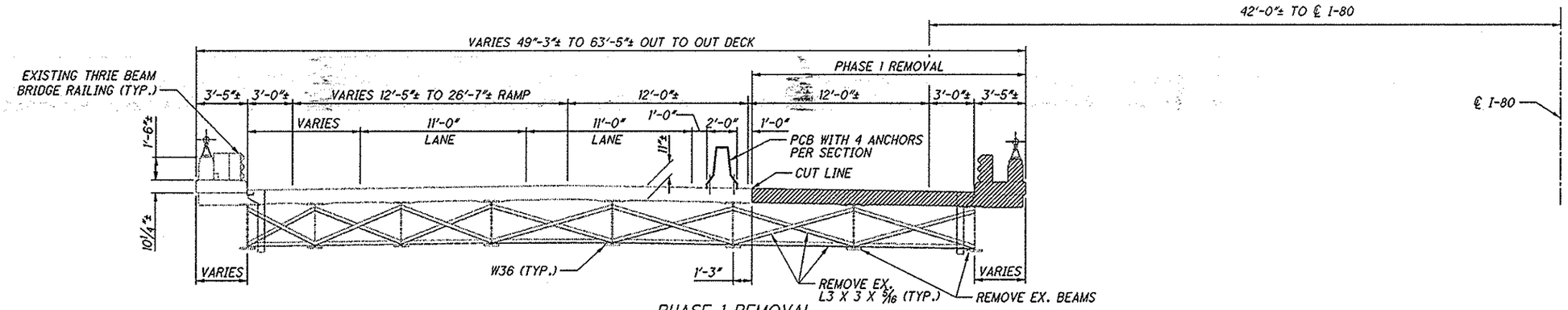
DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

PILE LOCATION PLAN
TRU-80-0956 L
OVER U.S. 62/S.R. 7

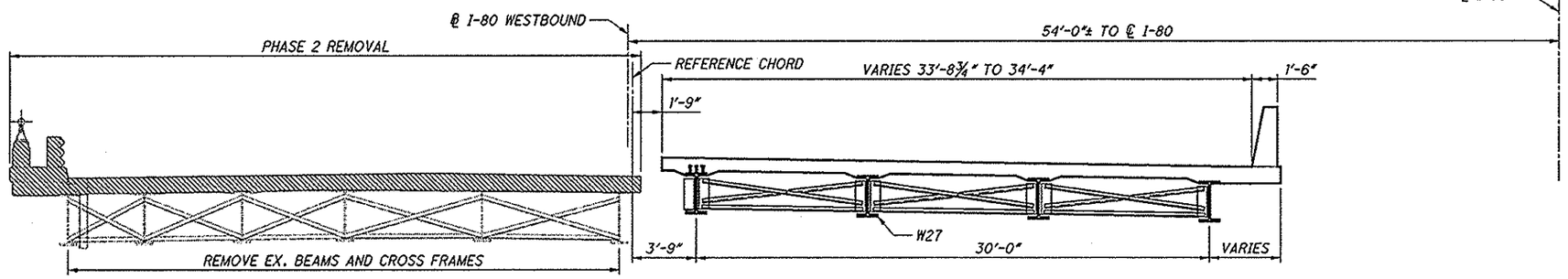
TRU-80-09.56
PID No. 77886

8 / 65

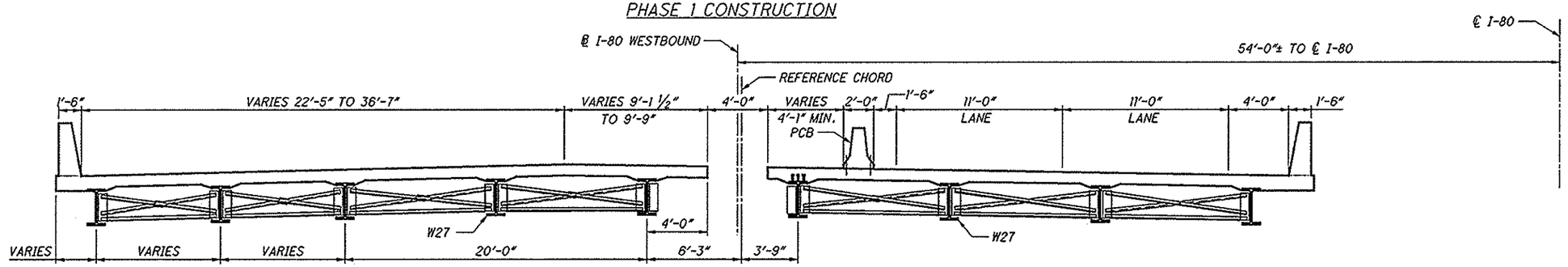
90
147



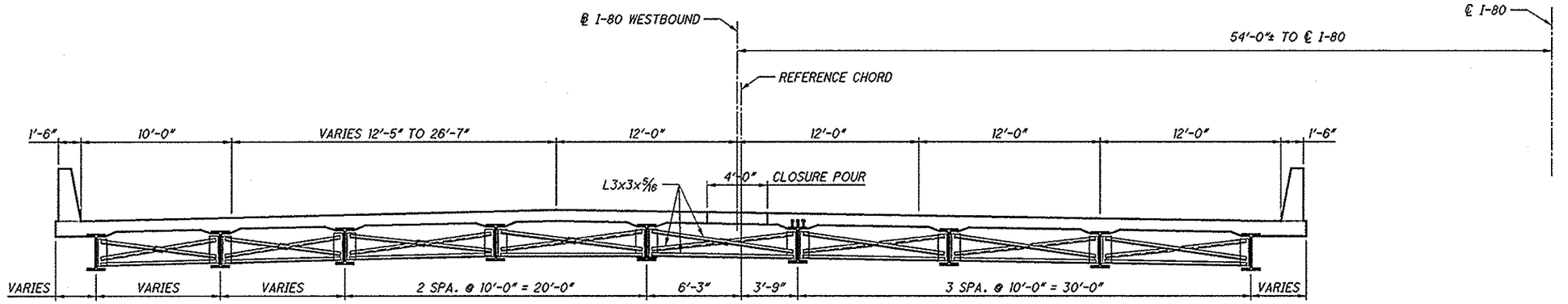
PHASE 1 REMOVAL



PHASE 1 CONSTRUCTION



PHASE 2 CONSTRUCTION



FINAL TRANSVERSE SECTION

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	VMB	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

STAGED CONSTRUCTION DETAILS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

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91
147

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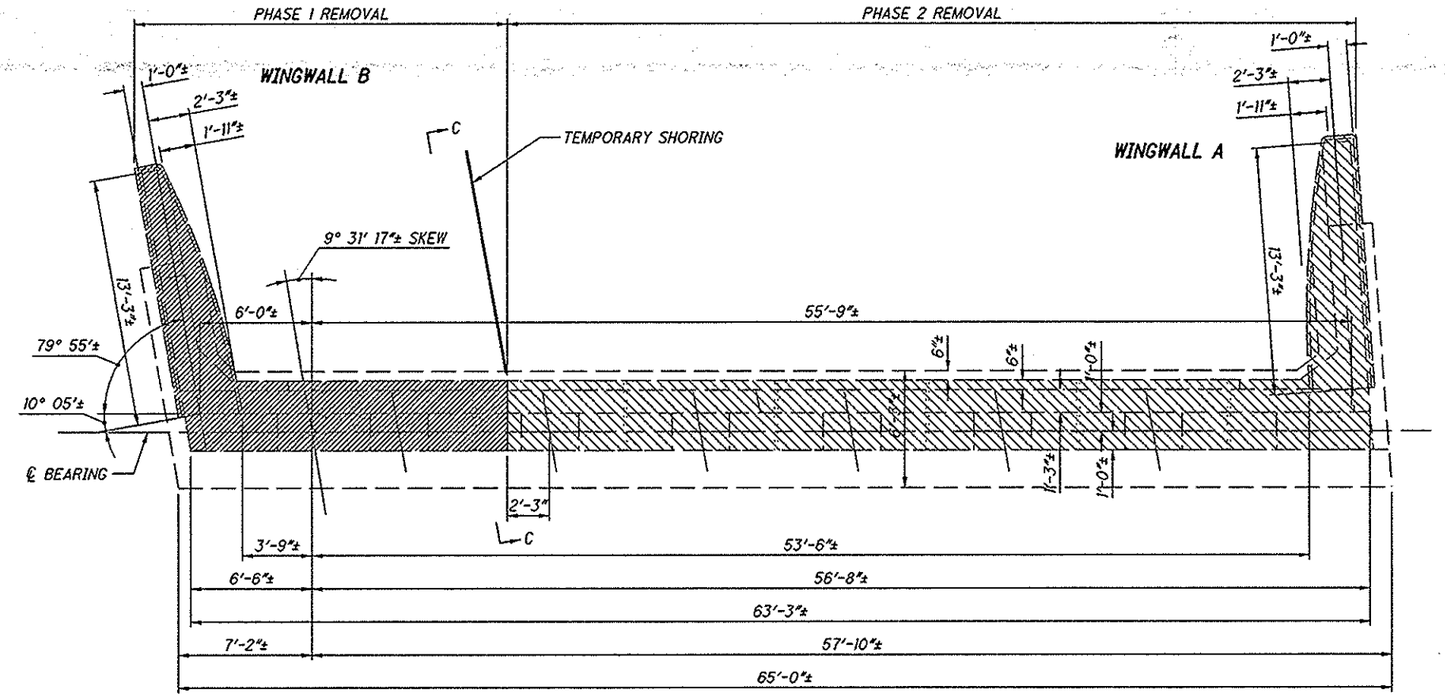
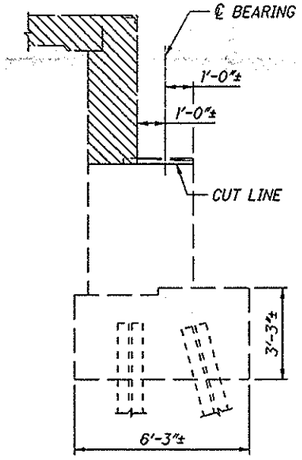
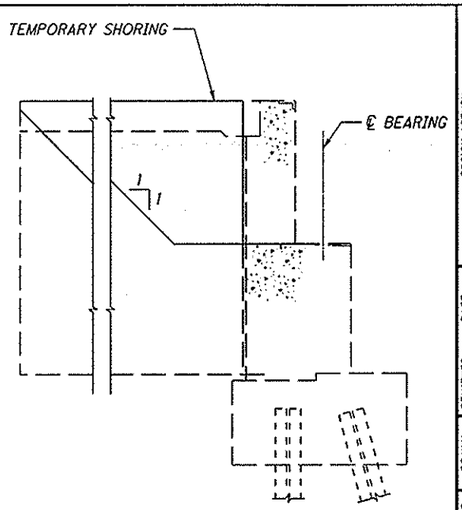


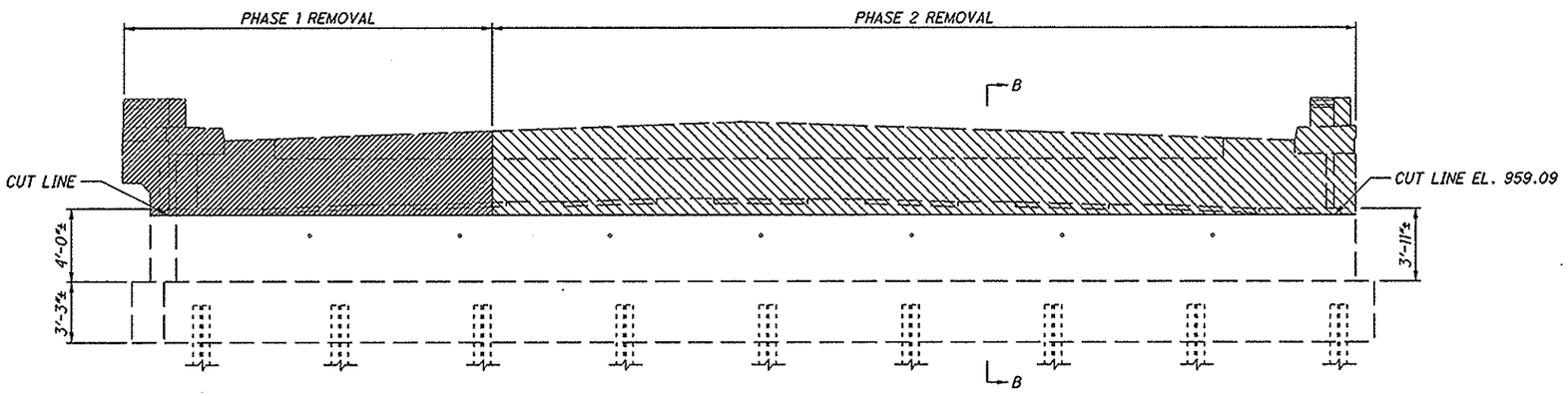
PLAN



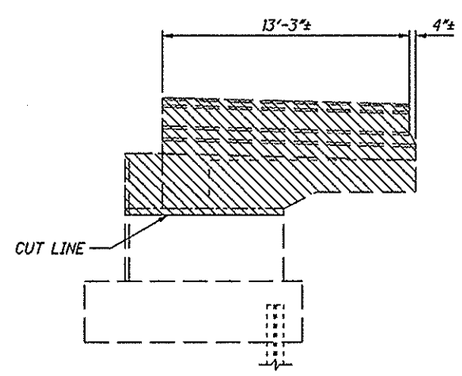
SECTION B-B



SECTION C-C



ELEVATION



ELEVATION
WINGWALL "A"
WINGWALL "B" SIMILAR

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	VMB	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

REMOVAL PLAN - REAR ABUTMENT
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

10 / 65

92 / 147

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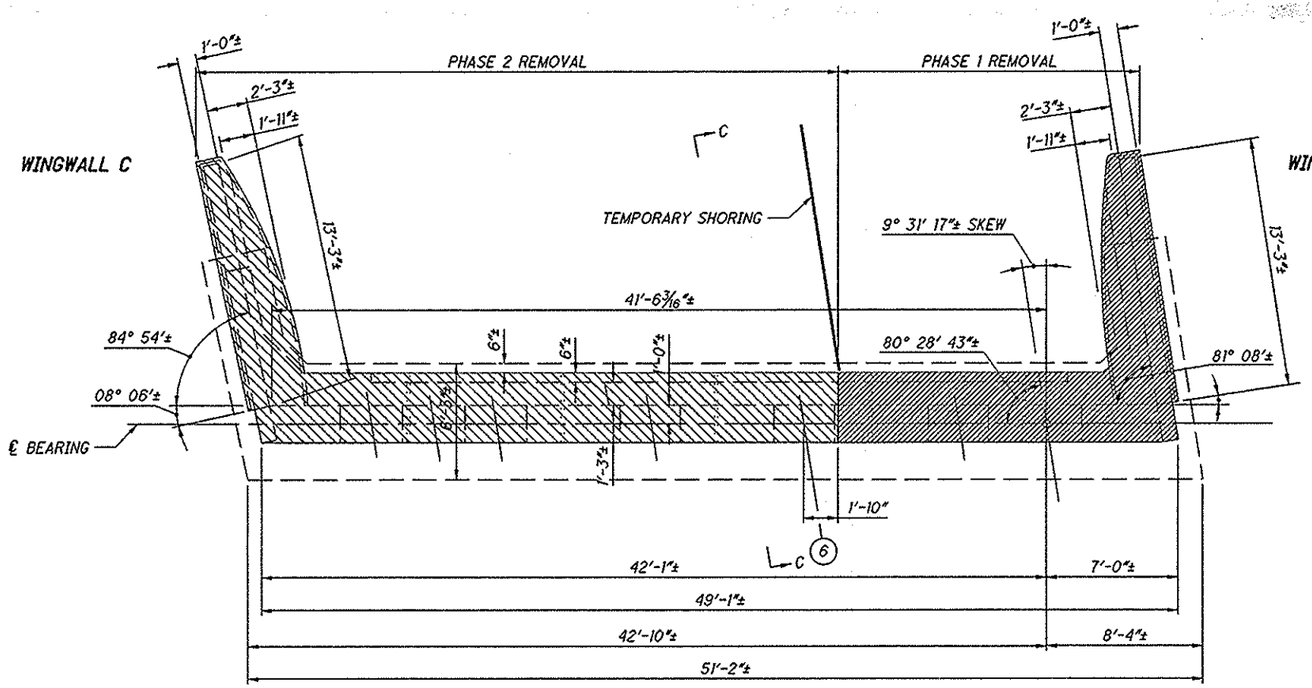
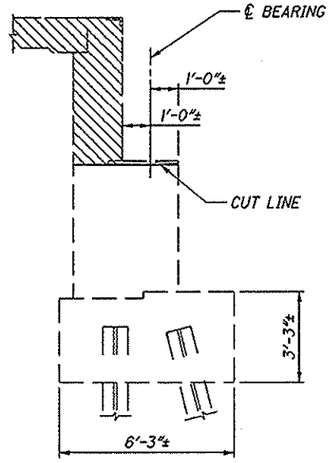
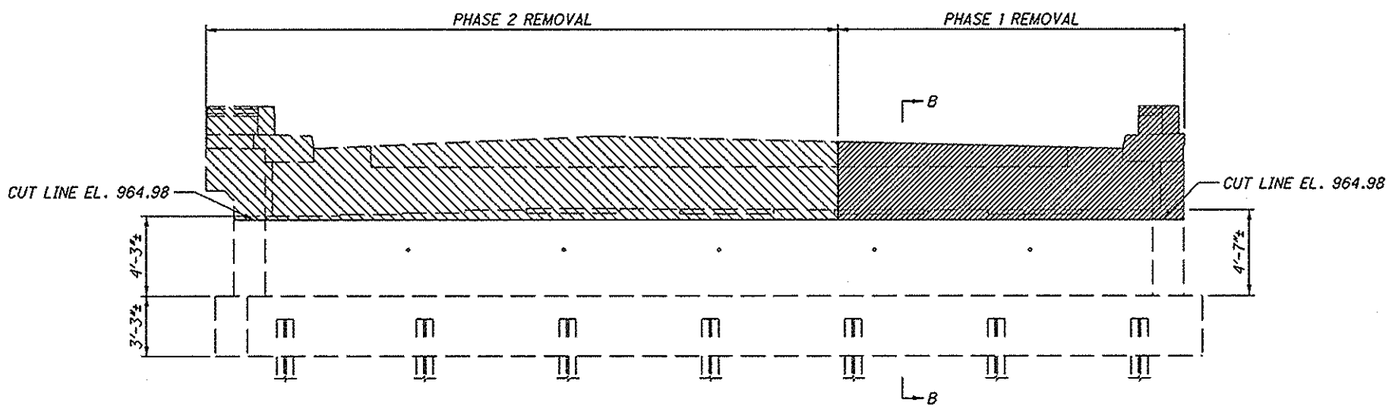


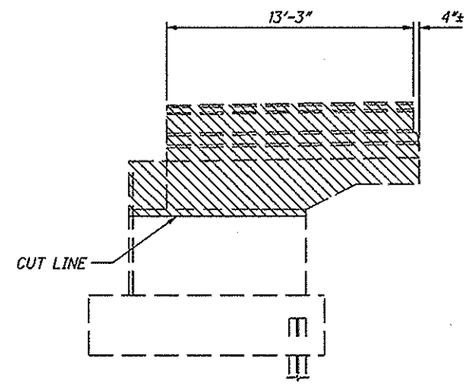
PLAN



SECTION B-B



ELEVATION



ELEVATION
WINGWALL "D" - WINGWALL "C" SIMILAR

NOTES:

1. FOR SECTION C-C, SEE SHEET 10/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

REMOVAL PLAN - FORWARD ABUTMENT
TRU-80-0956 L
OVER U.S. 62/ S.R. 7

TRU-80-09.56
PID No. 77886

11/65

93/147

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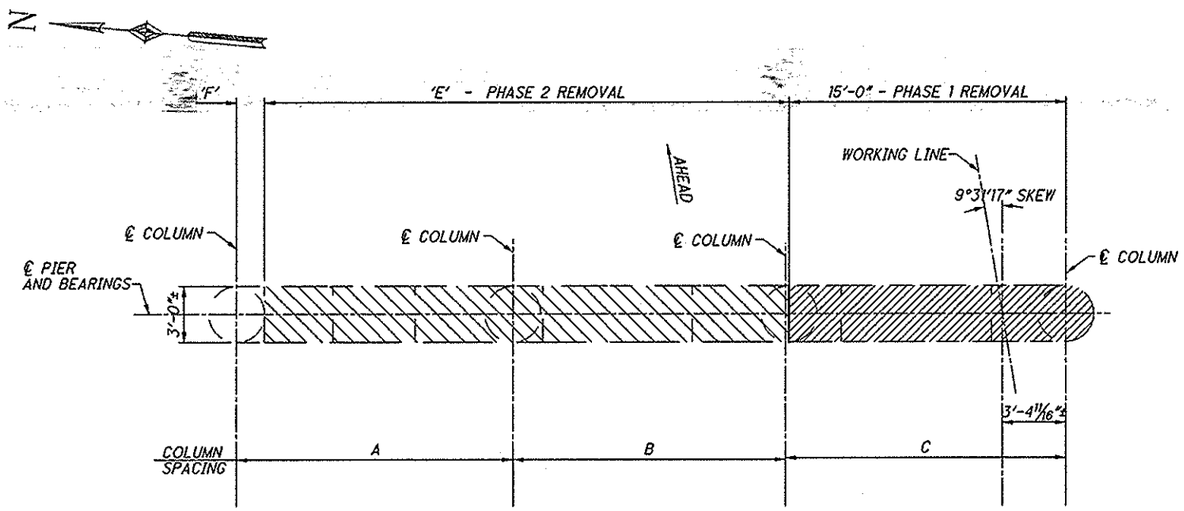
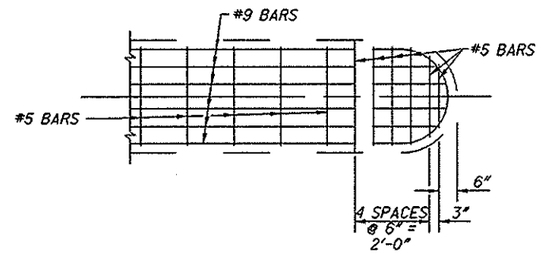
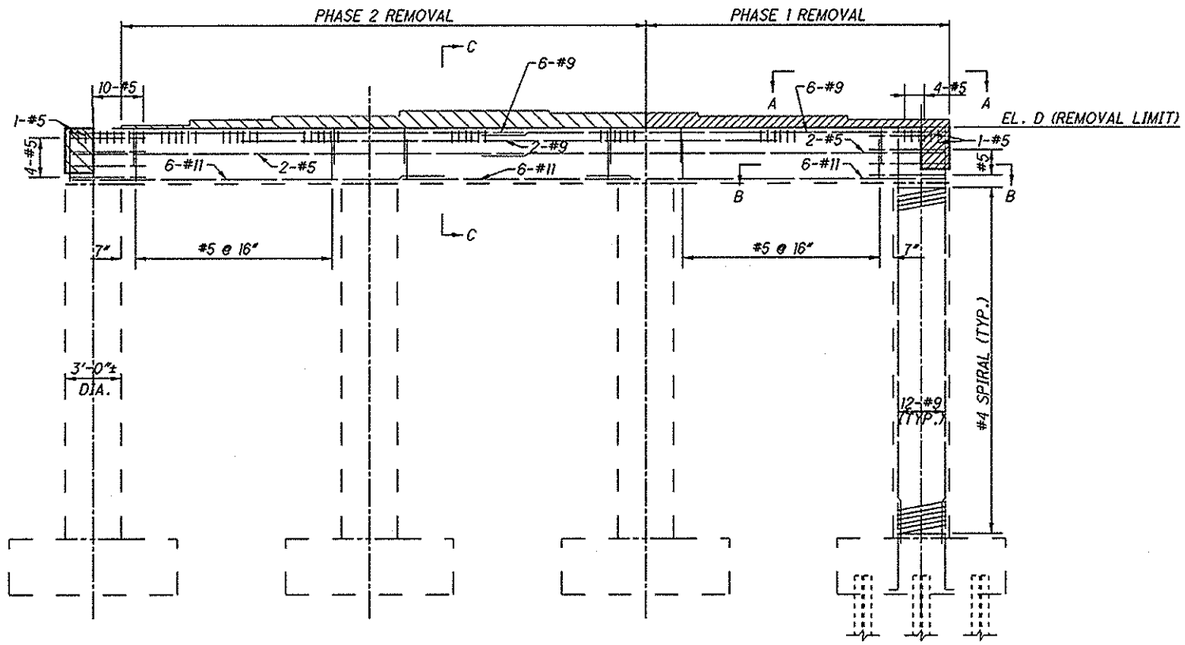
PIER NO.	A	B	C	EL. D	E	F
1	17'-8"±	17'-7¼"±	17'-7¼"±	960.24	34'-7"±	3'-3½"±
2	15'-11⅞"±	16'-0¼"±	16'-0"±	961.65	31'-1"±	1'-11¼"±
3	14'-9¾"±	14'-9"±	14'-10"±	963.57	27'-10¾"±	1'-6"±



PLAN

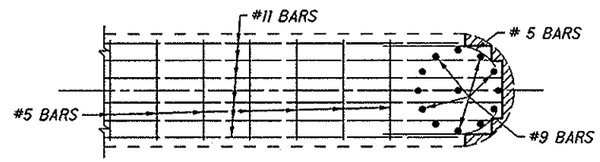


SECTION A-A

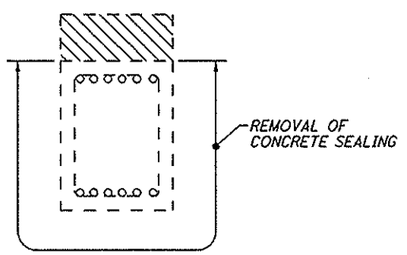


ELEVATION

ELEVATION D IS THE CONCRETE REMOVAL LIMIT FOR THE CAP BEAM



SECTION B-B



SECTION C-C

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM
DRAWN PJK
CHECKED LAB
REVISED
REVIEWED RAB
DATE 11-15
STRUCTURE FILE NUMBER 7804326

REMOVAL PLAN-PIERS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

12 / 65

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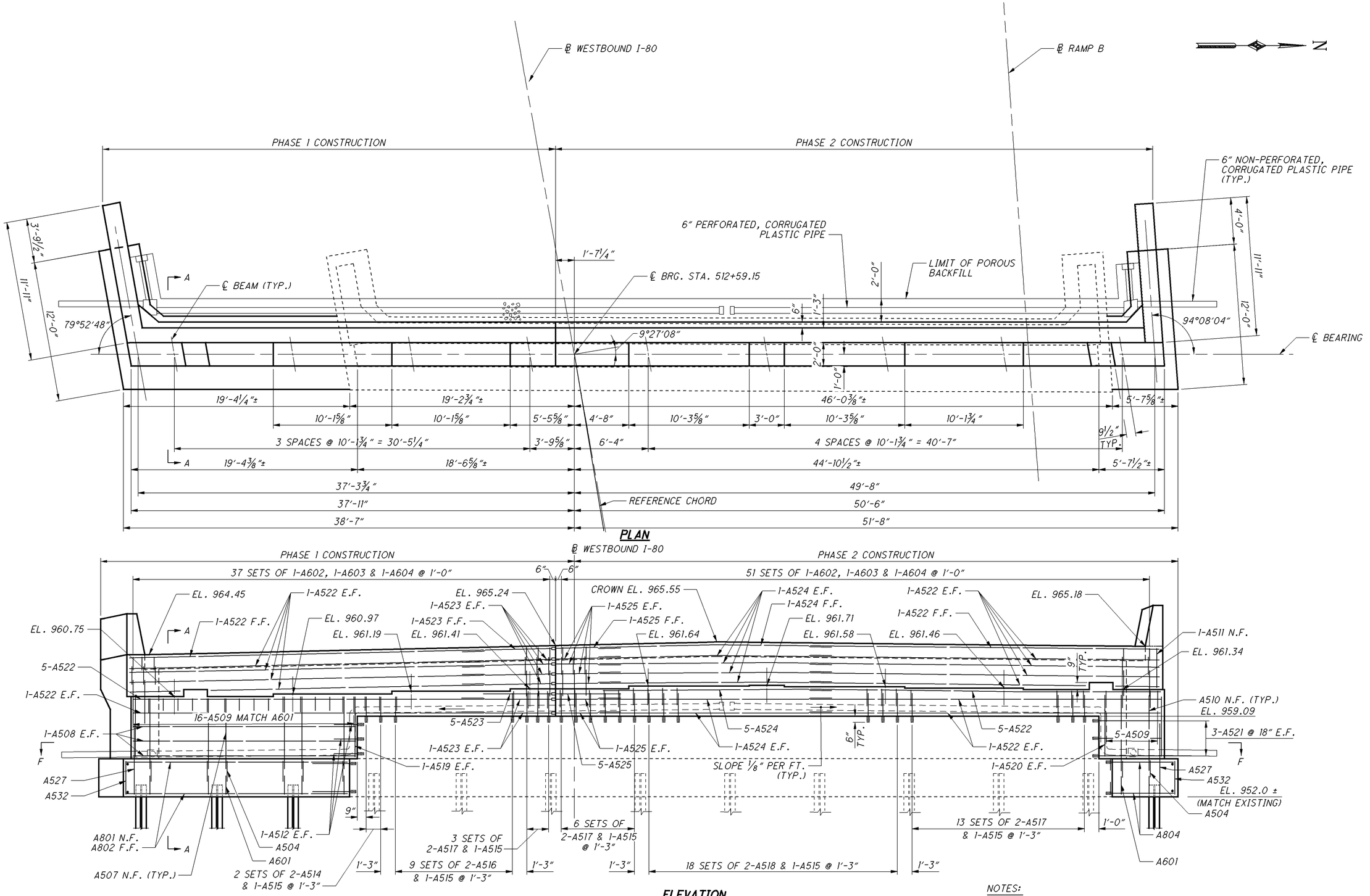

PLAN

ELEVATION

NOTES:

1. FOR SECTIONS A-A & F-F, SEE SHEET 16/65 .
2. FOR BARS AT CORNERS OF WINGWALLS, SEE SHEETS 16/65 .

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	VMB	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

REAR ABUTMENT
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

13/65

95/147

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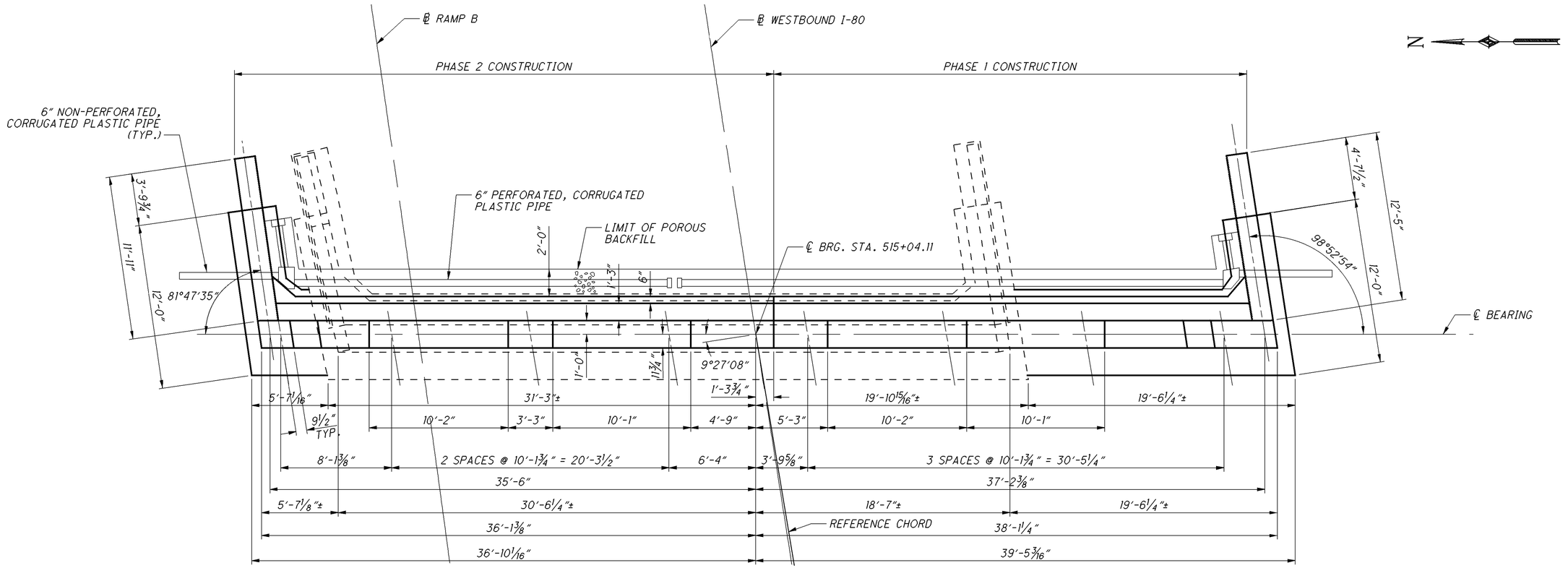
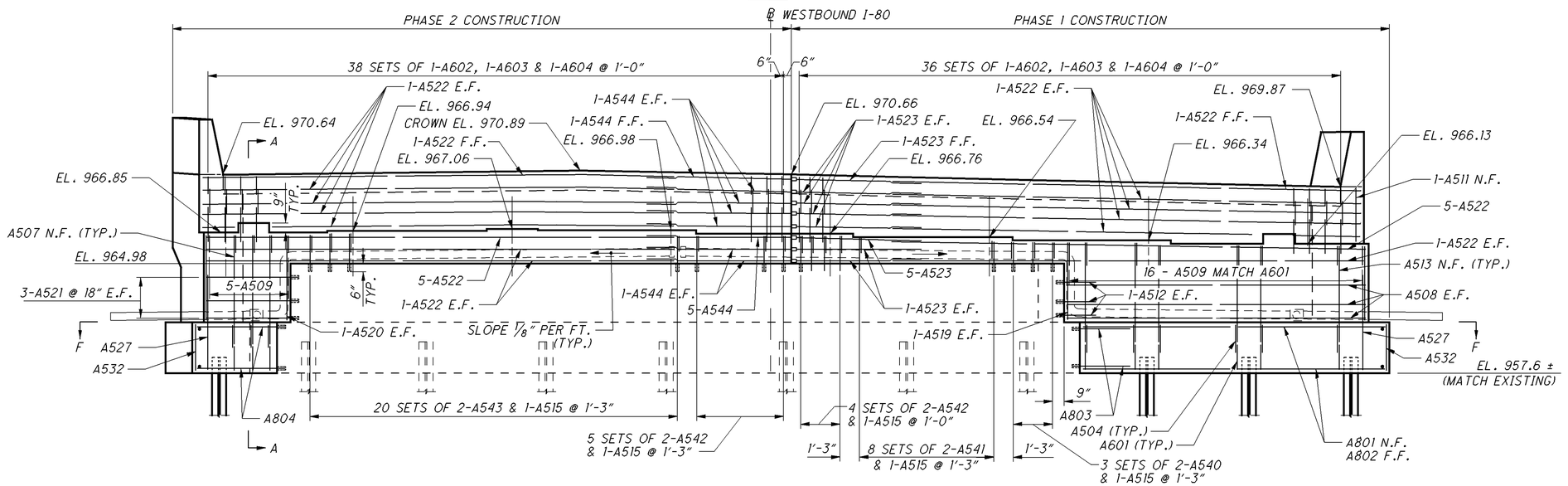


PLAN



ELEVATION

NOTE

1. FOR SECTIONS A-A & F-F, SEE SHEET 16/65 .

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN VMB | REVIEWED RAB | DATE 11-15
CHECKED LAB | REVISED | STRUCTURE FILE NUMBER 7804326

FORWARD ABUTMENT
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

14/65

96
147

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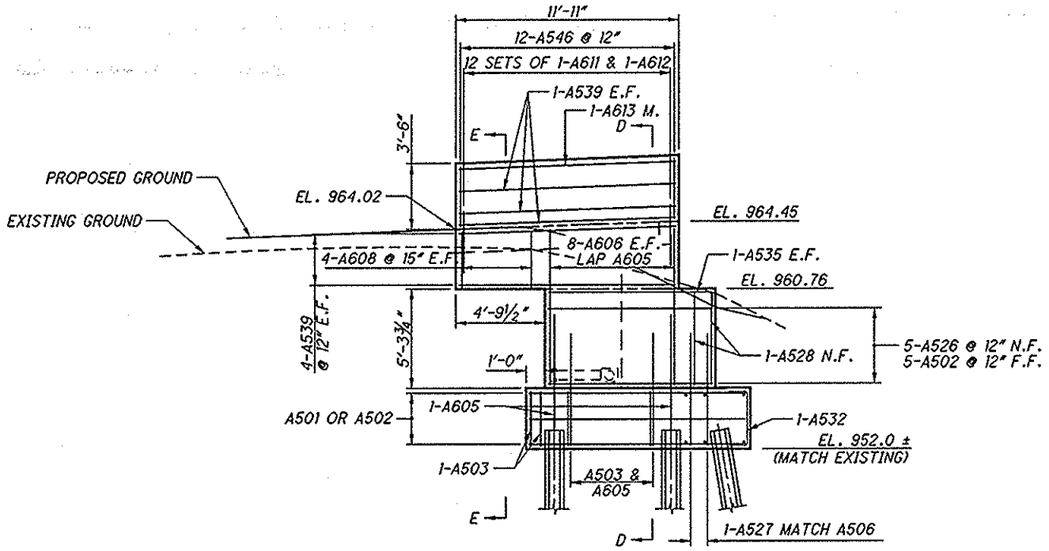
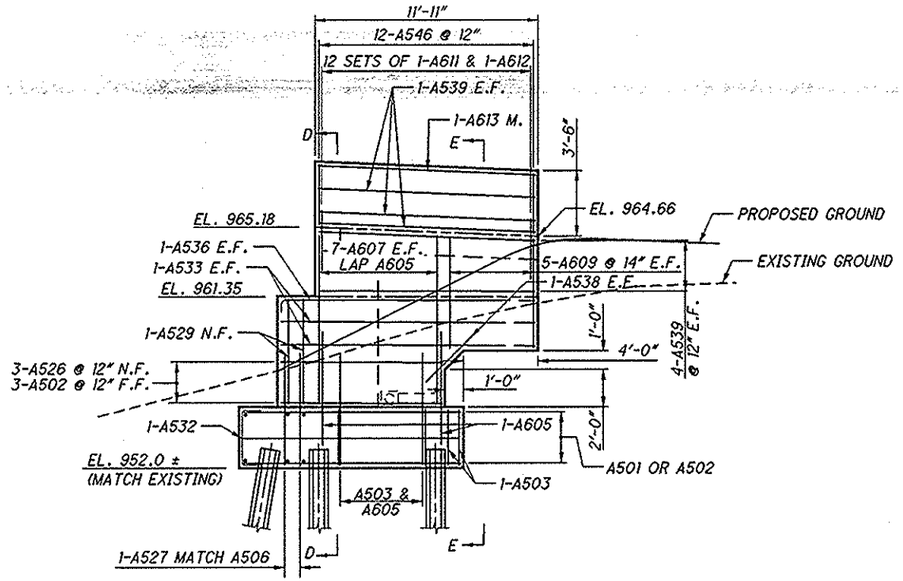
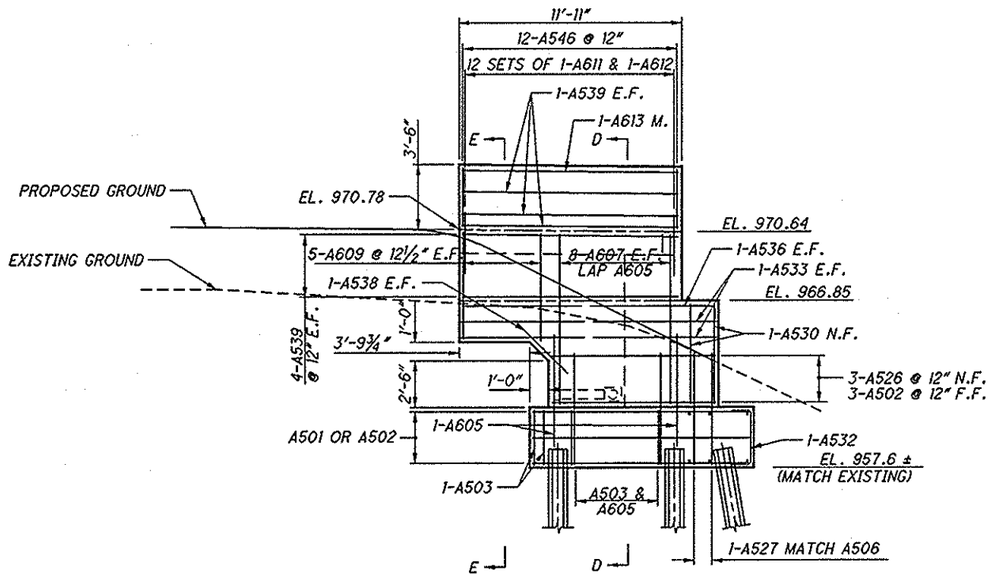


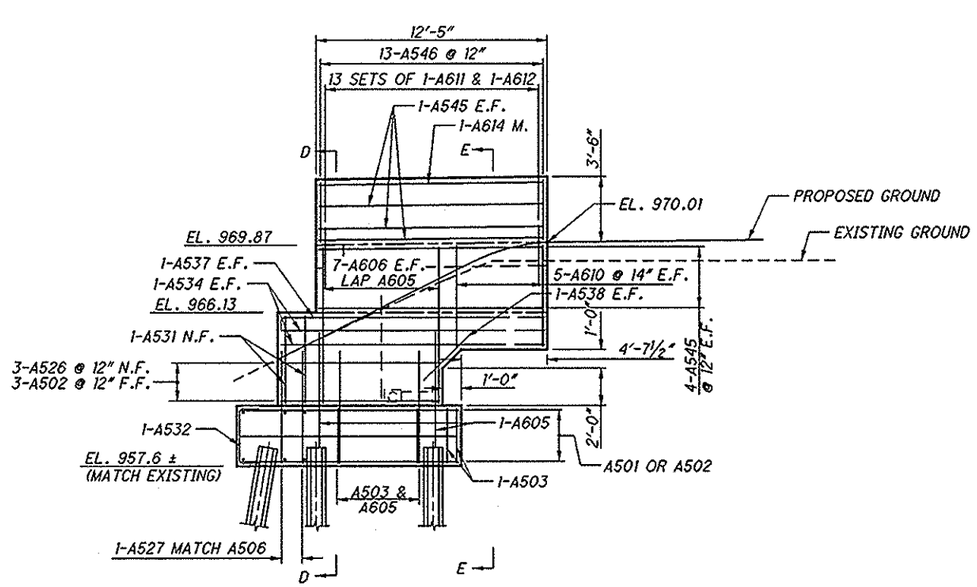
RIGHT REAR WINGWALL



LEFT REAR WINGWALL



LEFT FORWARD WINGWALL



RIGHT FORWARD WINGWALL

NOTES:

1. FOR SECTIONS D-D & E-E, SEE SHEET 16/65 .
2. FOR LOCATIONS OF BARS IN RELATION TO THE FRONT FACE OF THE ABUTMENT ABOVE THE FOOTING, SEE SHEET 16/65 .

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	VMB	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

WINGWALLS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

15/65

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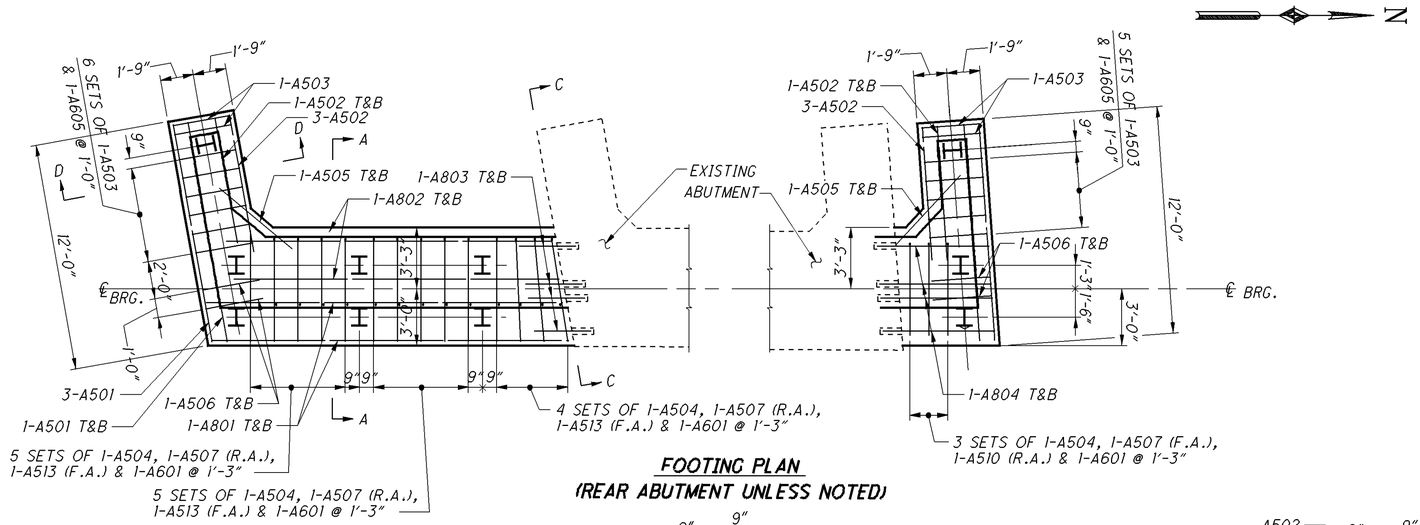
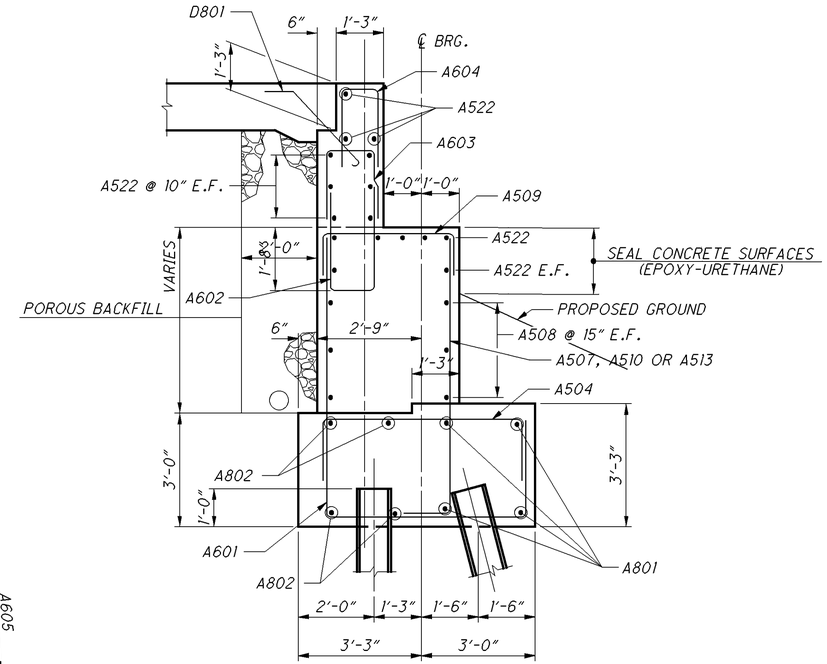
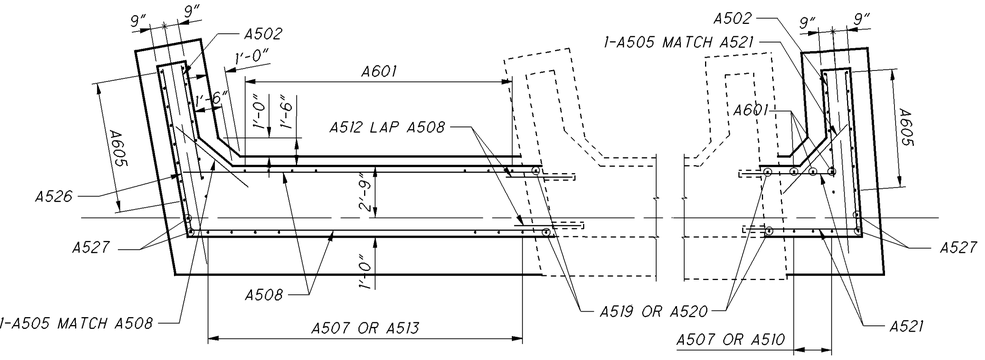


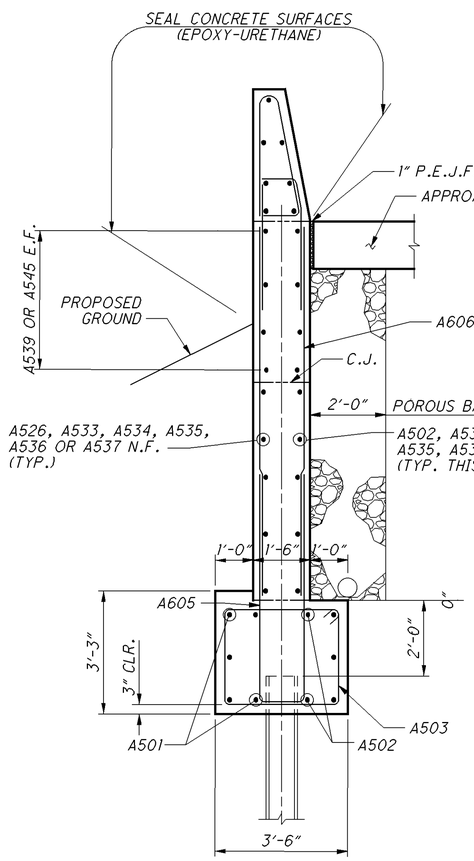
FOOTING PLAN
(REAR ABUTMENT UNLESS NOTED)



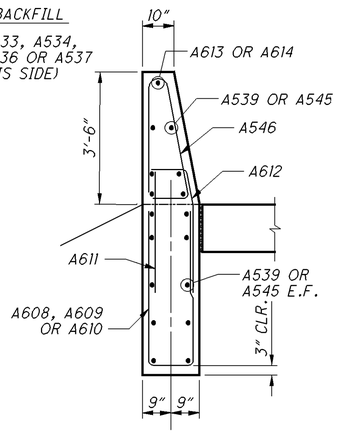
SECTION A-A



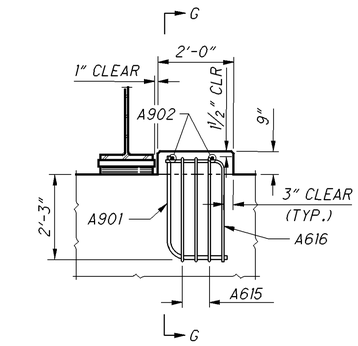
SECTION F-F



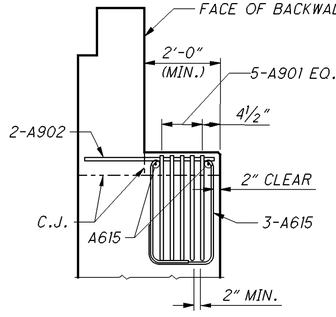
SECTION D-D



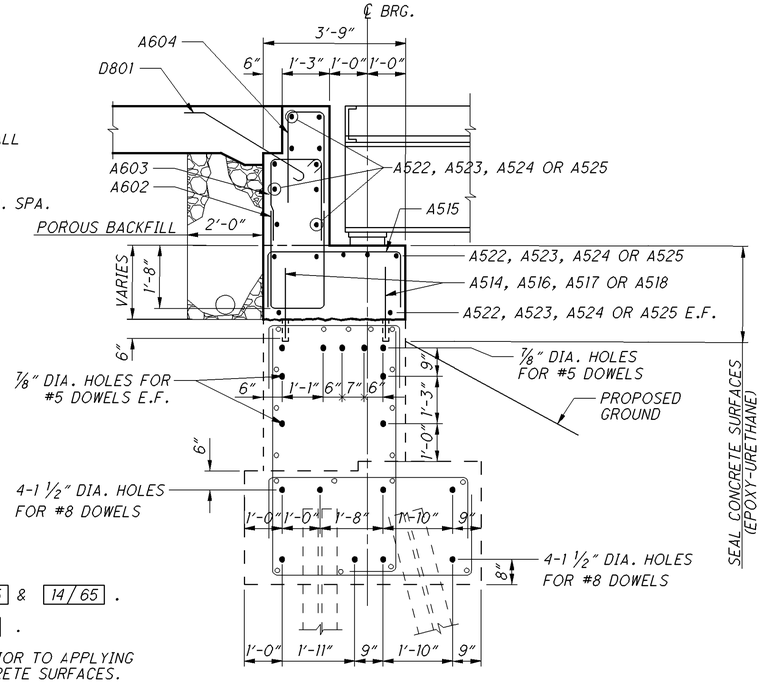
SECTION E-E



FRONT VIEW OF SEISMIC PEDESTAL



SECTION G-G



SECTION C-C

NOTES:

1. FOR THE LOCATION OF SECTIONS A-A & F-F, SEE SHEETS 13/65 & 14/65 .
2. FOR THE LOCATION OF SECTIONS D-D & E-E, SEE SHEET 15/65 .
3. CONTRACTOR SHALL REMOVE THE EXISTING CONCRETE SEALER PRIOR TO APPLYING THE EPOXY-URETHANE CONCRETE SEALER TO THE EXISTING CONCRETE SURFACES.
4. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STANDARD DRAWING A-1-69.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN VMB | CHECKED LAB | REVIEWED RAB | DATE 11-15
STRUCTURE FILE NUMBER 7804326
REVISED

ABUTMENT SECTIONS AND DETAILS

TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

16/65

98/147

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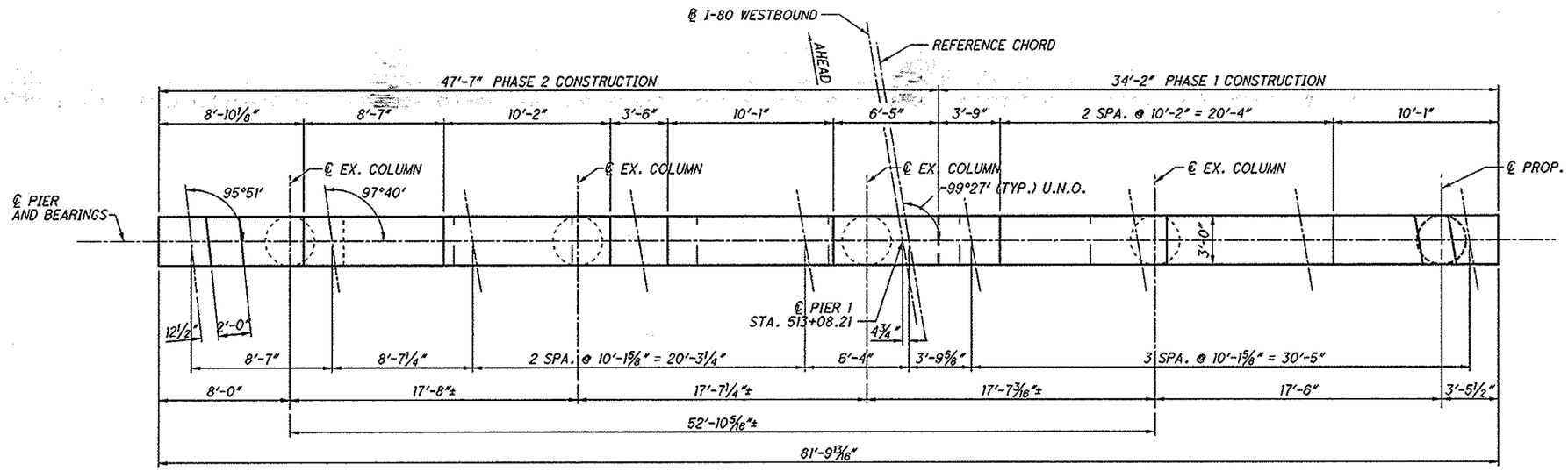
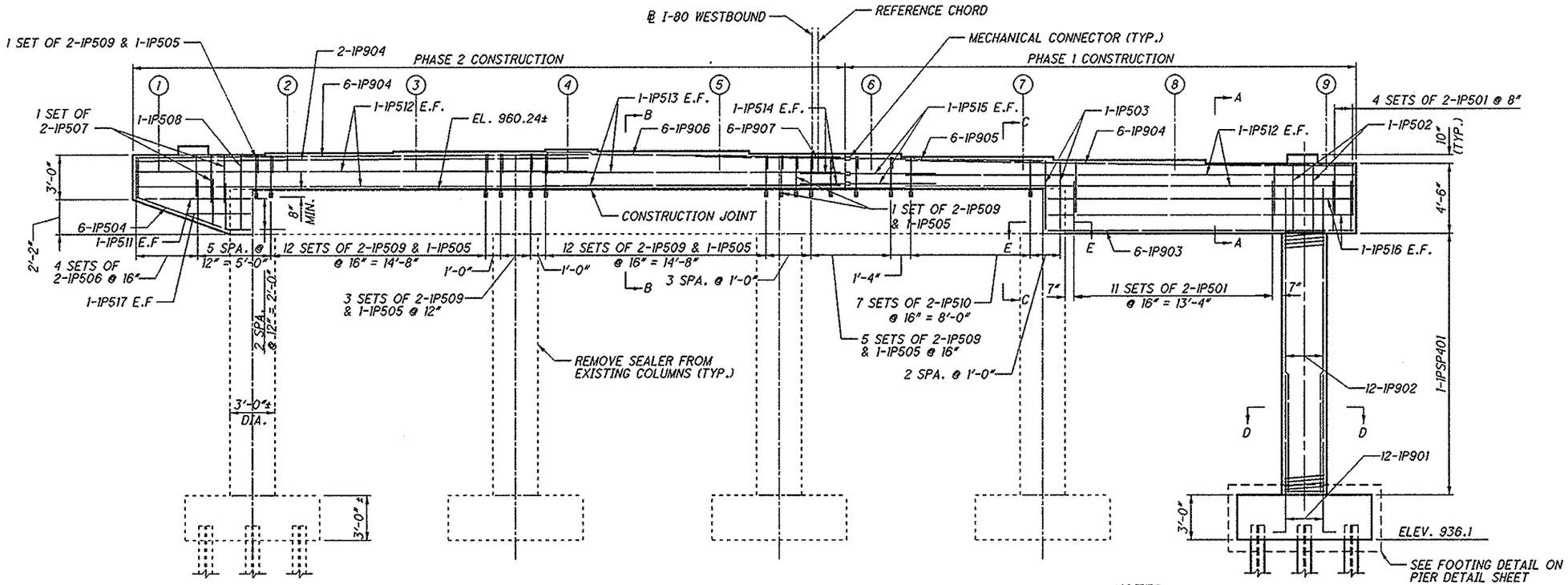


MINIMUM LAP LENGTH
NO. 5 BAR = 2'-0"
NO. 9 BAR (TOP) = 9'-2"
NO. 9 BAR (OTHER) = 8'-1"

PLAN

	1	2	3	4	5	6	7	8	9
EL.	962.42	962.52	962.63	962.75	962.66	962.44	962.22	962.00	961.78



ELEVATION

NOTES:

1. FOR SECTIONS A-A, B-B, C-C, D-D, & E-E, SEE SHEET 20/65.
2. FOR FOOTING DETAIL, SEE SHEET 20/65.
3. REMOVE SEALER FROM EXISTING COLUMNS AND APPLY NEW SEALER, SEE SECTION D-D, SHEET 20/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

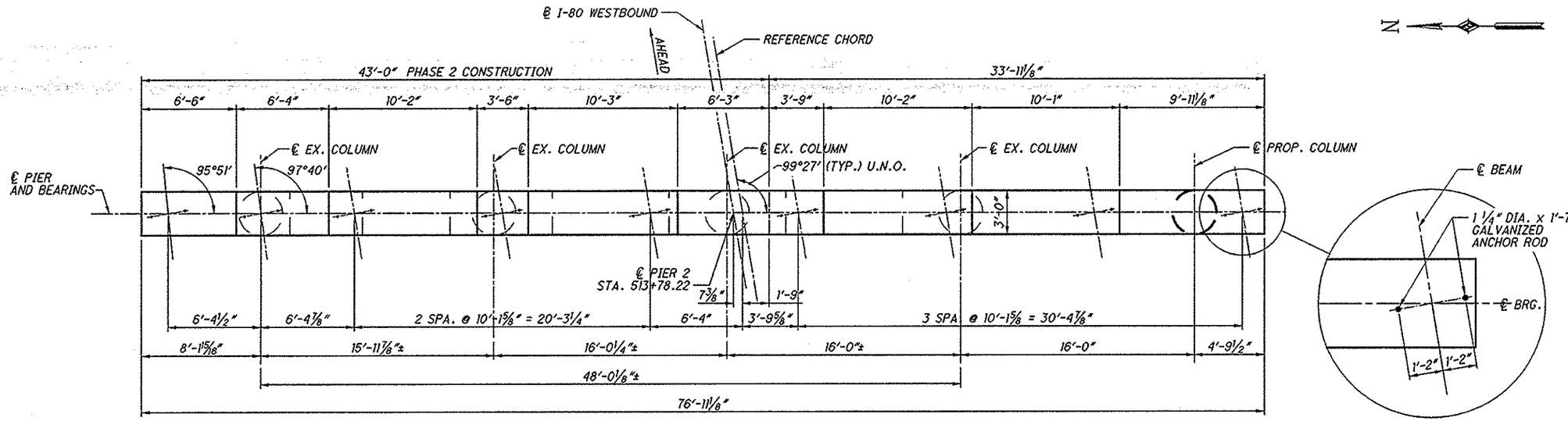
DESIGNED AJM | DRAWN PJK | CHECKED LAB | REVIEWED RAB | DATE 11-15 | REVISED | STRUCTURE FILE NUMBER 780326

PIER NO. 1
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

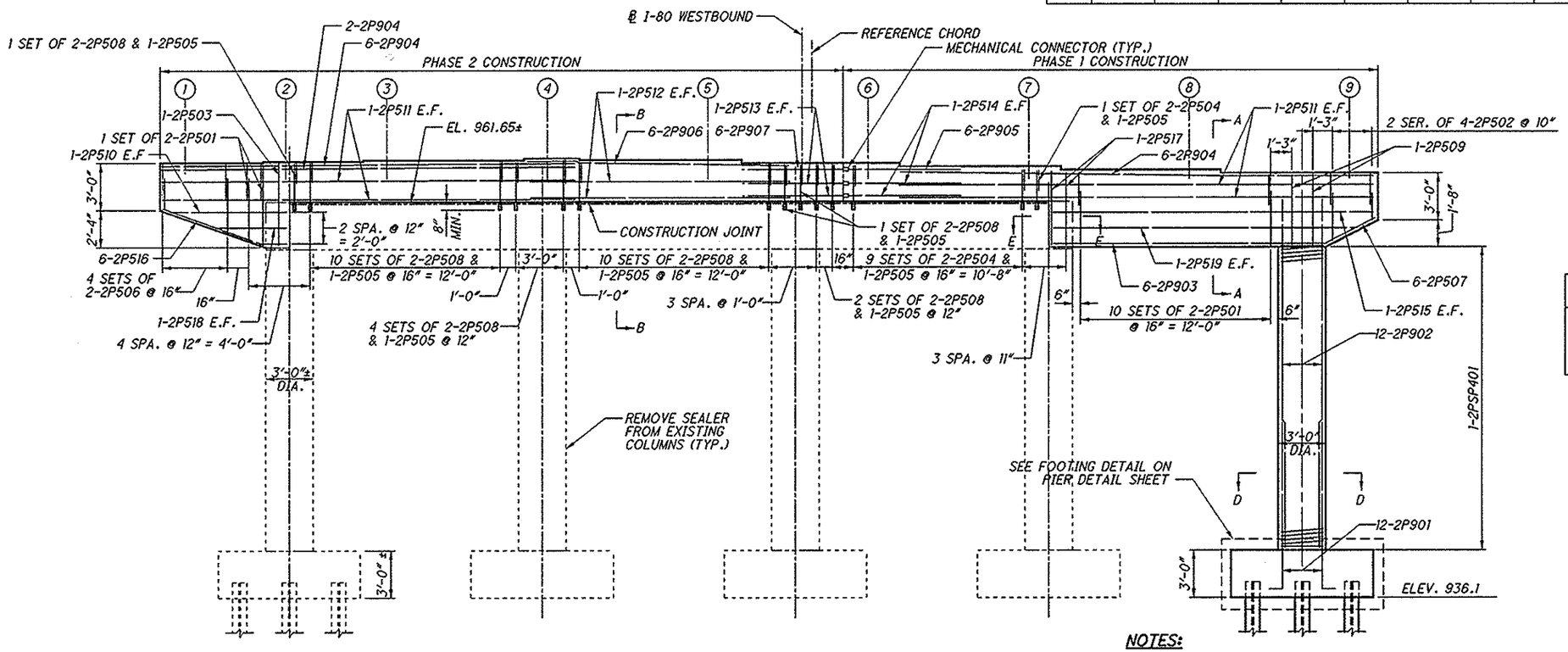
17/65

99/147



PLAN

	1	2	3	4	5	6	7	8	9
EL.	964.00	964.07	964.15	964.26	964.17	963.96	963.74	963.53	963.31



MINIMUM LAP LENGTH
NO. 5 BAR = 2'-0"
NO. 9 BAR (TOP) = 9'-2"
NO. 9 BAR (OTHER) = 8'-1"

ELEVATION

NOTES:

1. FOR SECTIONS A-A, B-B, D-D & E-E, SEE SHEET 20/65.
2. FOR FOOTING DETAIL, SEE SHEET 20/65.
3. BRIDGE SEAT REINFORCING, SETTING ANCHORS: ACCURATELY REINFORCINGSTEEL IN HE VICINITY OF THE BRIDGE SEAT TO AVOID INTERENCE WITH THE DRILLING OF ANCHOR BARS.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM
DRAWN PJK
CHECKED LAB
REVIEWED RAB
DATE 11-15
REVISED
STRUCTURE FILE NUMBER 7804326

PIER NO. 2
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

18/65
100/147

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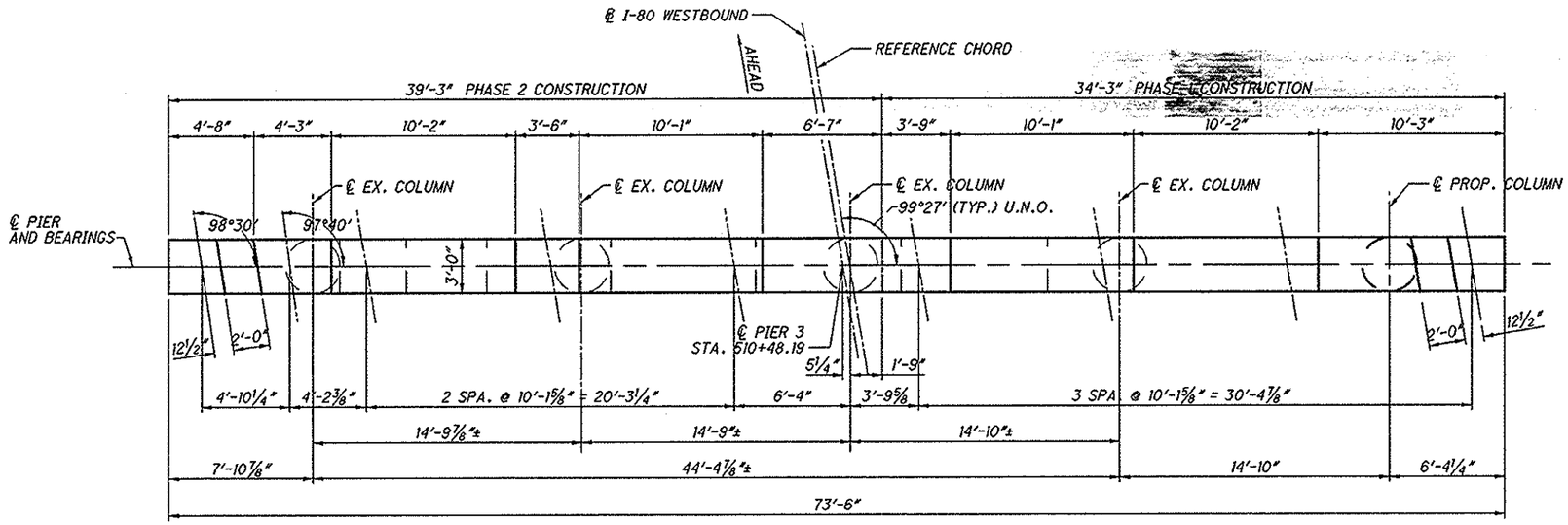
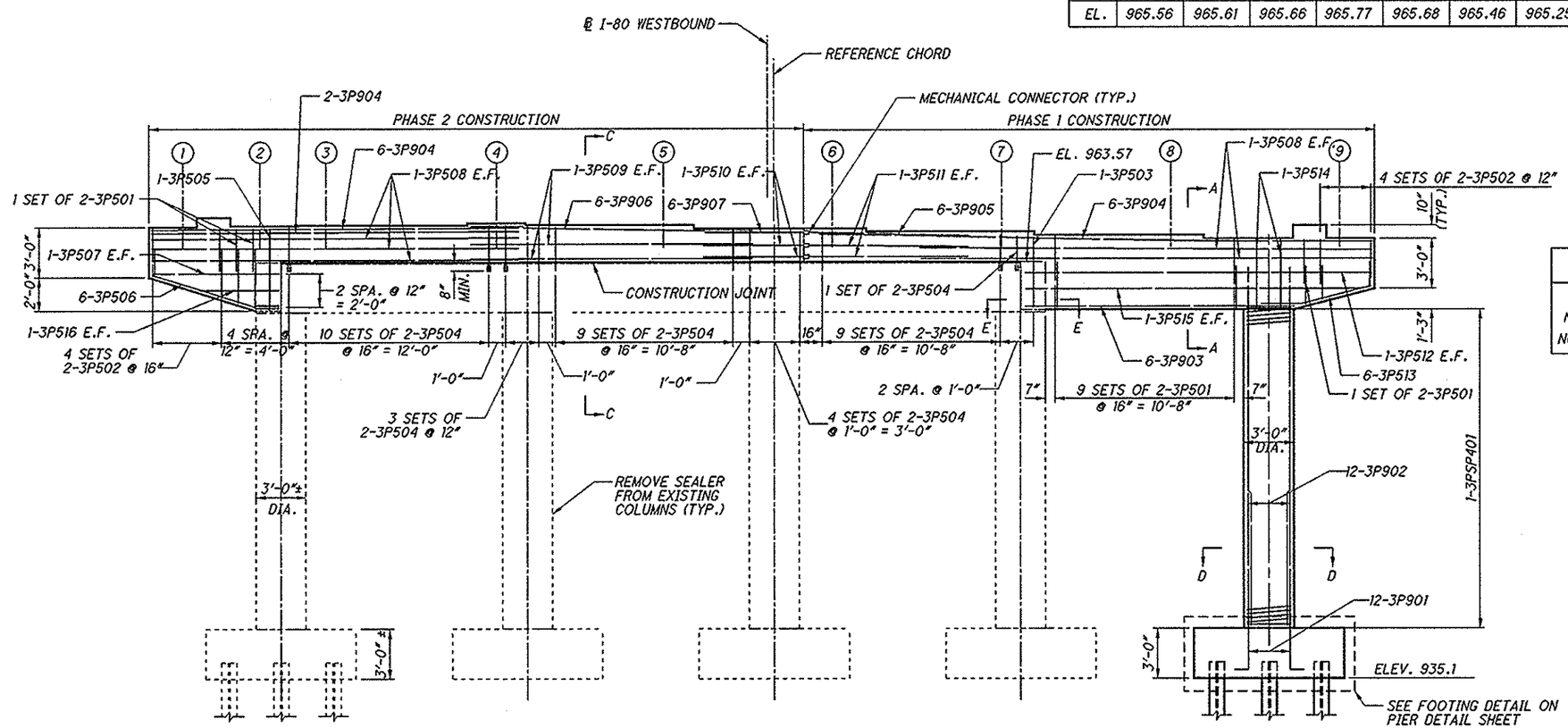


PLAN

	1	2	3	4	5	6	7	8	9
EL.	965.56	965.61	965.66	965.77	965.68	965.46	965.25	965.04	964.82



MINIMUM LAP LENGTH
NO. 5 BAR = 2'-0"
NO. 9 BAR (TOP) = 9'-2"
NO. 9 BAR (OTHER) = 8'-1"

ELEVATION

NOTES:

1. FOR SECTIONS A-A, C-C, D-D & E-E, SEE SHEET 20/65.
2. FOR FOOTING DETAIL, SEE SHEET 20/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN PJK | REVIEWED RAB | DATE 11-15
CHECKED LAB | REVISED | STRUCTURE FILE NUMBER 7804326

PIER NO. 3
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

19/65

101/147

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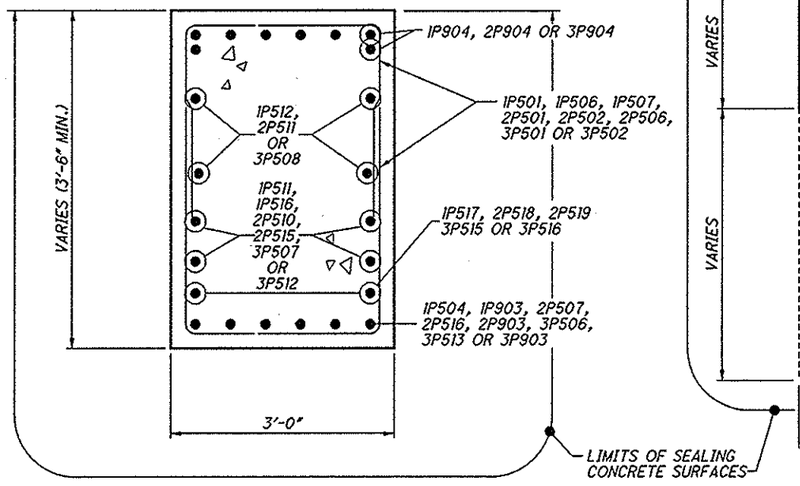
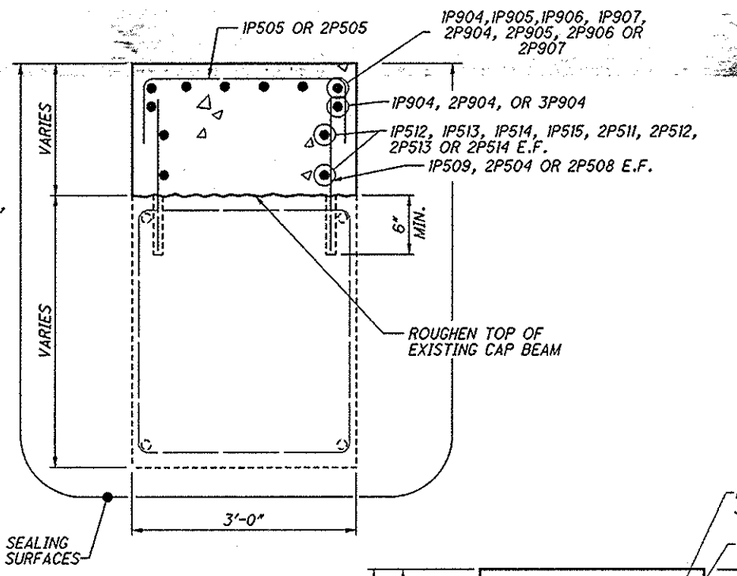
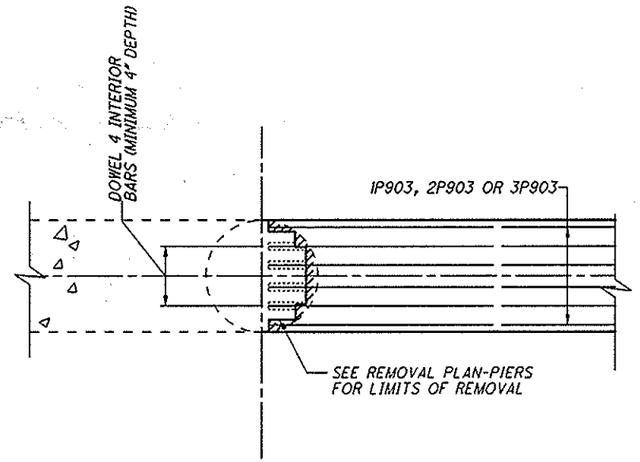


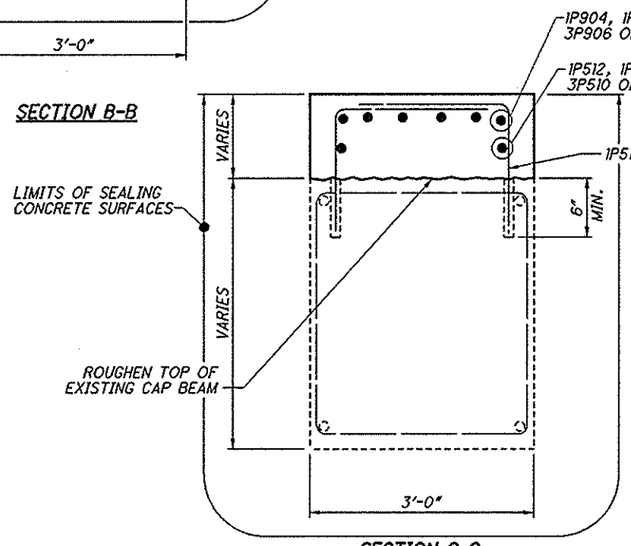
SECTION A-A



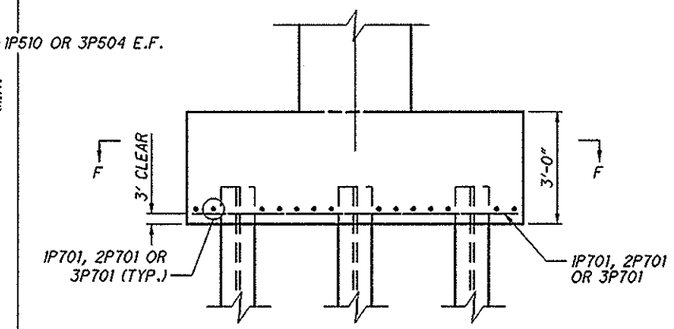
SECTION B-B



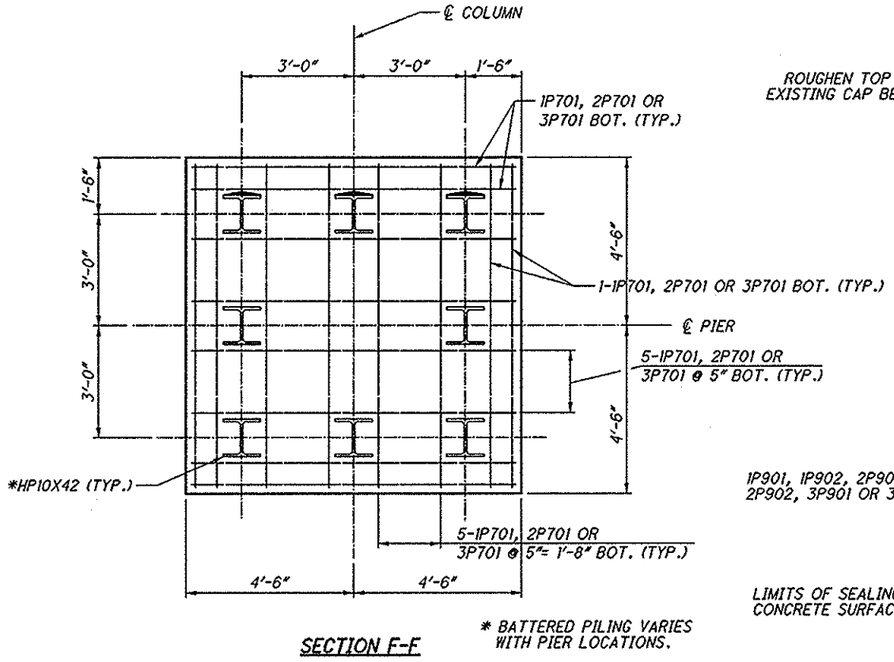
SECTION E-E



SECTION C-C

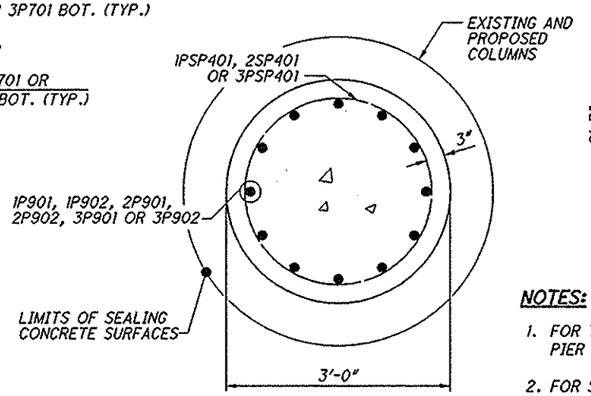


FOOTING DETAIL

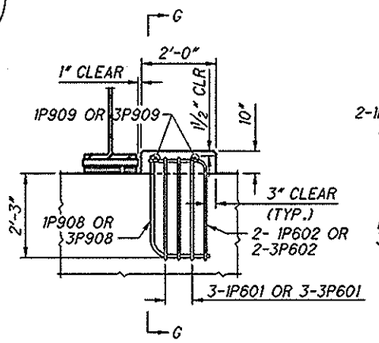


SECTION F-F

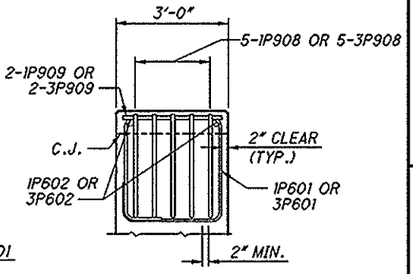
* BATTERED PILING VARIES WITH PIER LOCATIONS.



SECTION D-D



FRONT VIEW OF SEISMIC PEDESTAL



SECTION G-G

NOTES:

1. FOR THE LOCATIONS OF SECTIONS A-A, B-B, C-C, D-D, & E-E, SEE SHEETS 17/65 FOR PIER 1, 18/65 FOR PIER 2 AND 19/65 FOR PIER 3.
2. FOR SEISMIC PEDESTAL ADDITIONAL NOTES AND DETAILS, SEE ODOT STANDARD DRAWING A-1-69.
3. FOR FOUNDATION PLAN SEE SHEET 8/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

PIER DETAILS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

20/65

102/147

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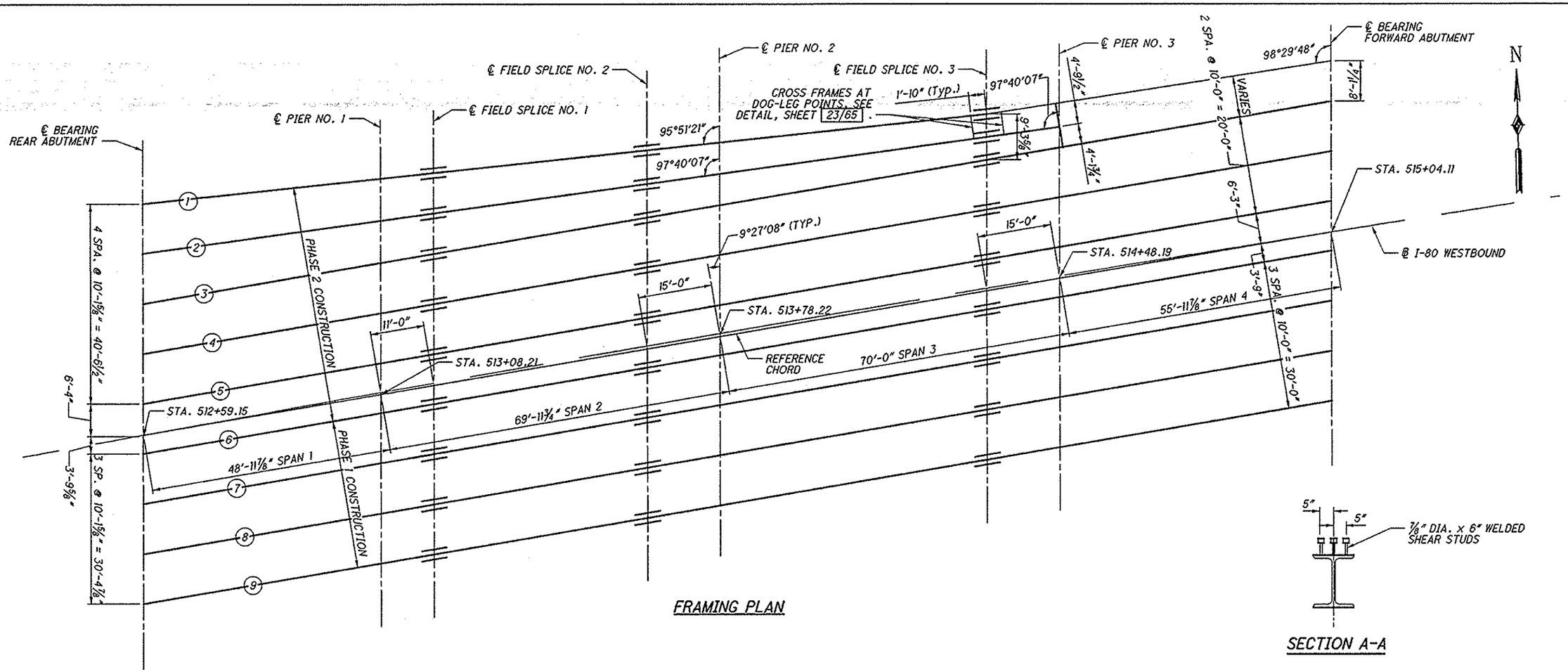
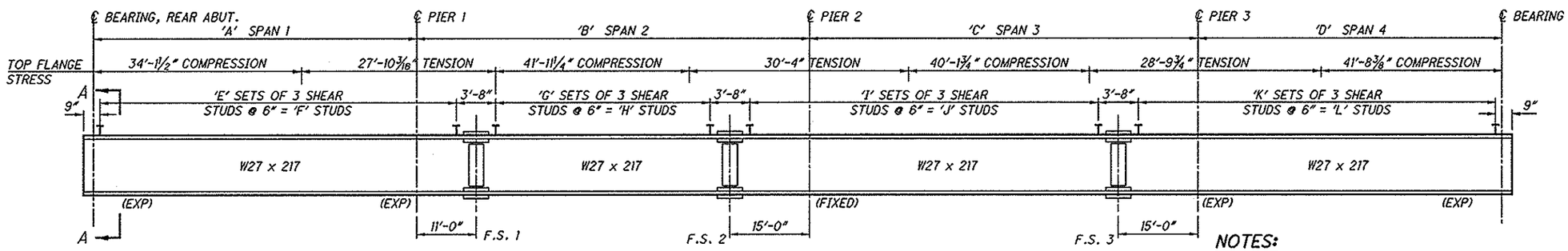


FRAMING PLAN

SECTION A-A



BEAM ELEVATION

BEAM ELEVATION DIMENSIONS

BEAM	A	B	C	D	E	F	G	H	I	J	K	L
1	48'-6¹⁵⁄₁₆"	69'-4⅝"	69'-5¹⁵⁄₁₆"	55'-10⅛"	116	348	81	243	133	399	140	420
2	48'-9⅛"	69'-7¾"	69'-8"	-	117	351	82	246	133	399	27	81
3	48'-11⅞"	69'-11¾"	69'-11⅞"	56'-0"	117	351	82	246	134	402	140	420
4												
THRU	48'-11⅞"	69'-11¾"	70'-0"	55'-11⅞"	117	351	82	246	134	402	140	420
9												

NOTES:

1. MAXIMUM CROSS FRAME SPACING SHALL BE 15'-0" IN ALL SPANS.
2. FOR BOLTED CROSS FRAME DETAILS SEE ODOT STD. DWG. GSD-1-96, TYPE 2 EXCEPT FOR CROSS FRAMES AT DOG-LEG POINTS.
3. FOR BEARING DETAILS, SEE SHEET 29/65 .
4. FOR EXPANSION JOINT DETAILS SEE STD. DWG. EXJ-4-87 AND SHEET 30/65 .
5. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED MMP
DRAWN MMP
CHECKED AJM
REVISED
REVIEWED RAB
DATE 11-15
STRUCTURE FILE NUMBER 7804326

FRAMING PLAN
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

21/65

103/147

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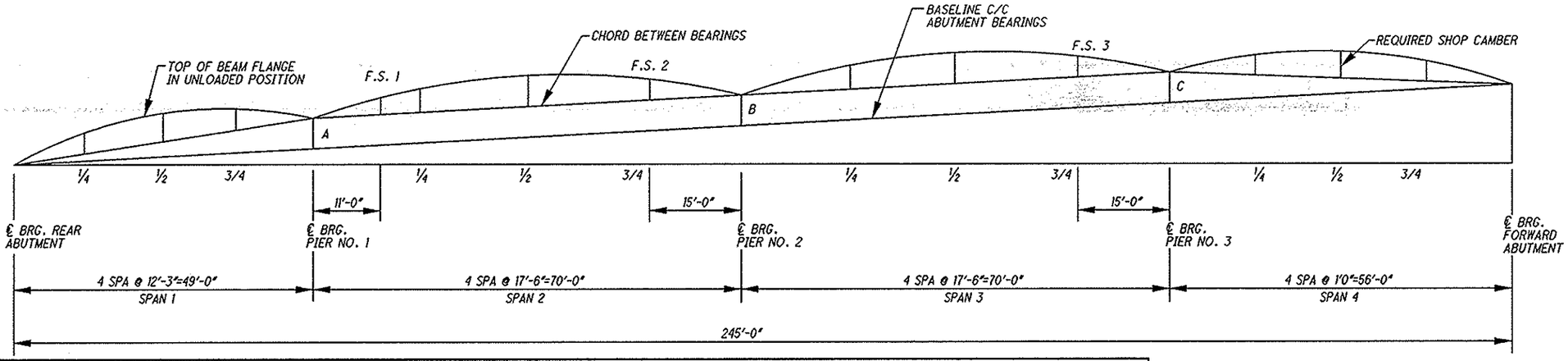


DEFLECTION AND CAMBER (IN INCHES)

	SPAN 1				SPAN 2					SPAN 3					SPAN 4			
BEAM 1	℄ BRG. R.A.	1/4	1/2	3/4	℄ BRG. PIER 1	F.S. 1	1/4	1/2	F.S. 2	℄ BRG. PIER 2	1/4	1/2	F.S. 3	℄ BRG. PIER 3	1/4	1/2	3/4	℄ BRG. F.A.
DEFLECTION DUE TO STEEL WT.	0	0	1/16	0	0	1/16	1/16	1/8	1/16	0	1/16	1/8	1/16	0	0	1/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8	3/16	1/16	0	3/16	1/4	7/16	1/4	0	3/16	3/8	3/16	0	1/8	5/16	1/4	0
VERTICAL CURVE ADJUSTMENT	0	1/16	3/16	1/8	0	1/16	3/16	1/8	1/8	0	1/8	1/8	1/8	0	-1/16	-1/16	0	0
TOTAL CAMBER	0	1/4	5/8	1/4	0	1/4	9/16	11/16	3/8	0	3/8	5/8	5/16	0	1/16	5/16	1/4	0
BEAM 2	℄ BRG. R.A.	1/4	1/2	3/4	℄ BRG. PIER 1	F.S. 1	1/4	1/2	F.S. 2	℄ BRG. PIER 2	1/4	1/2	F.S. 3	℄ BRG. PIER 3	1/4	1/2	3/4	℄ BRG. F.A.
DEFLECTION DUE TO STEEL WT.	0	0	0	0	0	1/16	1/16	1/8	1/16	0	1/16	1/8	1/8	0	-	-	-	-
DEFLECTION DUE TO REMAINING DEAD LOAD	0	3/16	3/16	1/16	0	3/16	5/16	1/2	1/4	0	3/16	7/16	1/4	0	-	-	-	-
VERTICAL CURVE ADJUSTMENT	0	1/8	3/16	3/16	0	1/8	3/16	3/16	1/8	0	3/16	1/8	0	0	-	-	-	-
TOTAL CAMBER	0	5/16	3/8	1/4	0	5/16	9/16	13/16	7/16	0	7/16	5/8	3/8	0	-	-	-	-
BEAM 3	℄ BRG. R.A.	1/4	1/2	3/4	℄ BRG. PIER 1	F.S. 1	1/4	1/2	F.S. 2	℄ BRG. PIER 2	1/4	1/2	F.S. 3	℄ BRG. PIER 3	1/4	1/2	3/4	℄ BRG. F.A.
DEFLECTION DUE TO STEEL WT.	0	1/16	1/16	1/8	0	1/16	1/16	1/8	1/16	0	1/16	1/8	1/16	0	0	1/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	3/16	3/16	1/16	0	3/16	3/8	9/16	1/4	0	1/4	7/16	1/4	0	3/16	3/8	5/16	0
VERTICAL CURVE ADJUSTMENT	0	3/16	1/8	-1/16	0	1/16	0	1/8	1/16	0	0	1/16	1/16	0	-1/16	-1/8	-1/16	0
TOTAL CAMBER	0	3/8	5/16	1/8	0	3/8	3/8	13/16	3/8	0	5/16	5/8	3/8	0	1/8	5/16	5/16	0
BEAM 4 THRU 8	℄ BRG. R.A.	1/4	1/2	3/4	℄ BRG. PIER 1	F.S. 1	1/4	1/2	F.S. 2	℄ BRG. PIER 2	1/4	1/2	F.S. 3	℄ BRG. PIER 3	1/4	1/2	3/4	℄ BRG. F.A.
DEFLECTION DUE TO STEEL WT.	0	0	0	0	0	1/16	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	1/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	3/16	3/16	1/16	0	3/16	3/8	5/8	1/4	0	5/16	1/2	1/4	0	3/16	3/8	1/4	0
VERTICAL CURVE ADJUSTMENT	0	0	1/16	0	0	1/16	0	3/16	1/8	0	1/8	1/16	1/16	0	0	0	0	0
TOTAL CAMBER	0	3/16	1/4	1/16	0	5/16	1/2	15/16	1/2	0	1/2	11/16	3/8	0	1/4	1/2	5/16	0
BEAM 9	℄ BRG. R.A.	1/4	1/2	3/4	℄ BRG. PIER 1	F.S. 1	1/4	1/2	F.S. 2	℄ BRG. PIER 2	1/4	1/2	F.S. 3	℄ BRG. PIER 3	1/4	1/2	3/4	℄ BRG. F.A.
DEFLECTION DUE TO STEEL WT.	0	1/16	0	0	0	1/16	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	1/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8	1/8	1/16	0	3/16	5/16	1/2	1/4	0	1/4	7/16	3/16	0	3/16	3/8	5/16	0
VERTICAL CURVE ADJUSTMENT	0	0	0	0	0	1/16	1/16	3/16	1/16	0	1/8	3/16	1/16	0	0	1/16	0	0
TOTAL CAMBER	0	3/16	3/16	1/16	0	1/4	1/2	13/16	3/8	0	7/16	5/8	5/16	0	3/16	1/2	3/8	0

CAMBER DIAGRAM

(FOR BEAMS 1,3,4,5,6,7,8 & 9)

BLOCKING DIMENSIONS (IN INCHES)			
BEAM	A	B	C
1	1 7/16	2 1/16	1 1/4
2	1	1	
3	1 1/16	1 9/16	13/16
4	1 1/16	1 7/16	13/16
5	1 1/16	1 7/16	13/16
6	1 1/16	1 7/16	13/16
7	1 1/16	1 7/16	3/4
8	1 1/16	1 7/16	3/4
9	1 1/16	1 7/16	3/4

NOTES:

1. ALL STEEL FOR SPLICE SHALL BE ASTM A709 GRADE 50 (PAINTED). YIELD STRESS 50 ksi)
2. ALL STEEL FOR SPLICE PLATES SHALL HAVE CVN DESIGNATION AND MEET SPECIFIED MINIMUM (CVN) NOTCH TOUGHNESS AS SPECIFIED IN 711.01.
3. ALL SPLICE BOLTS SHALL BE HIGH-STRENGTH, 1" DIAMETER GALVANIZED A325 TYPE I BOLTS.
4. THE BOLT HEADS SHALL BE PLACED ON THE EXPOSED SIDES OF THE FASCIA BEAMS AND BENEATH THE BOTTOM PLATE OF THE LOWER FLANGE SPLICE. WASHERS SHALL BE PLACED UNDER ALL ELEMENTS TURNED IN TIGHTENING.
5. SEE SHEET 23/65, FOR CAMBER DIAGRAM FOR BEAM 2.

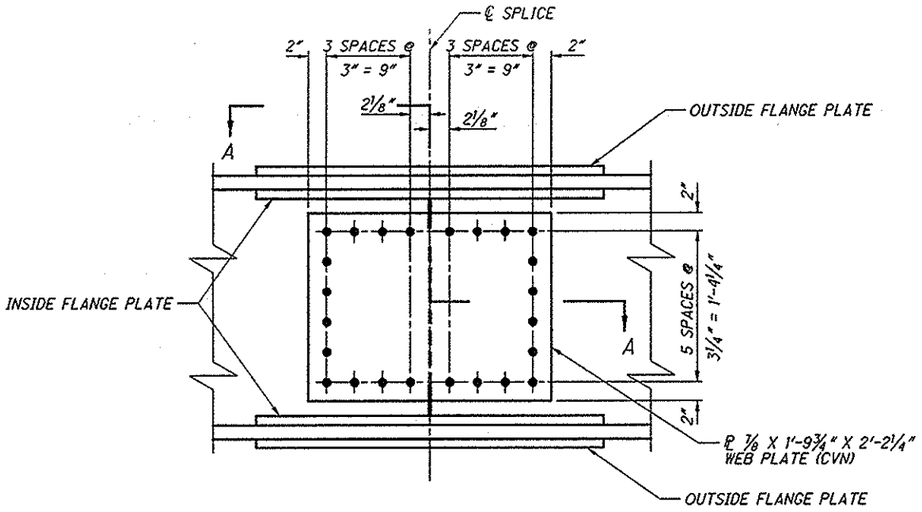
DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED MMP | DRAWN JEN | REVIEWED RAB | DATE 11-15
CHECKED AJM | REVISED - | STRUCTURE FILE NUMBER 7804326

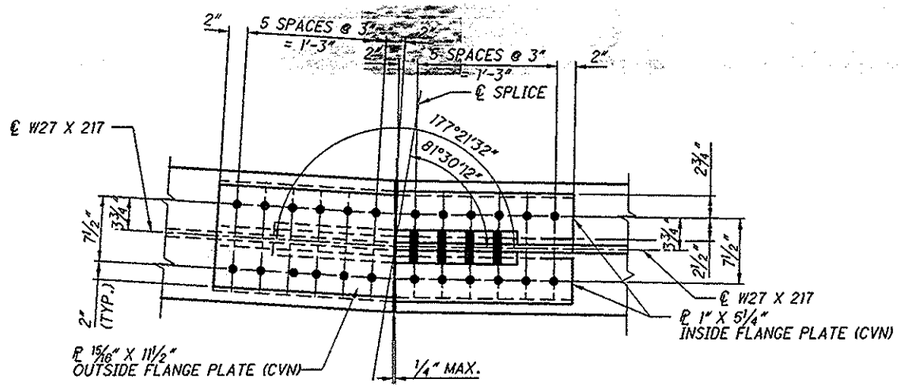
CAMBER AND SUPERSTRUCTURE DETAILS
TRU-80-0956 L
OVER U.S. 62/ S.R. 7

TRU-80-09.56
PID No. 77886

22/65
104/147

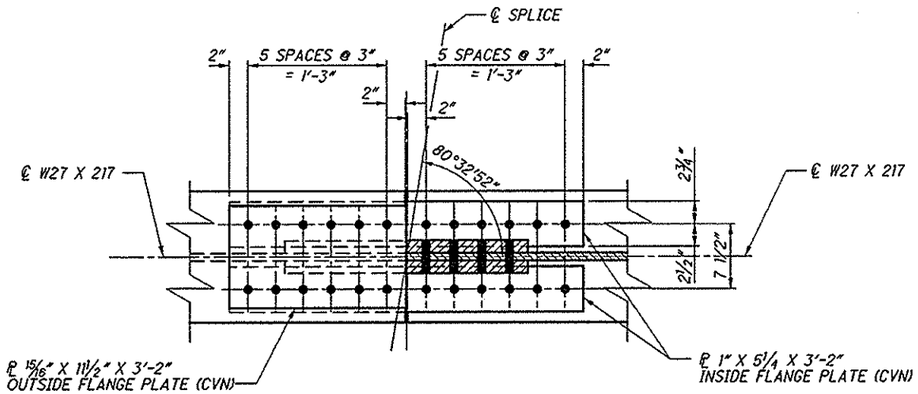


BEAM SPLICE DETAIL

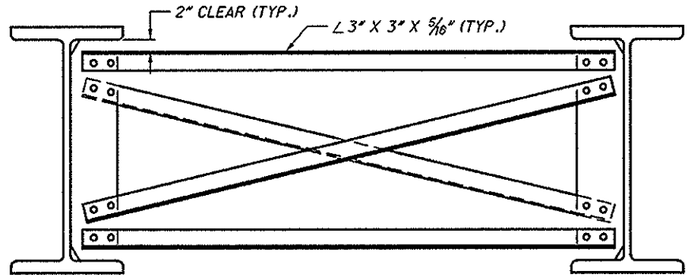


SECTION A-A

(AT BEND POINT AT BEAM 1)

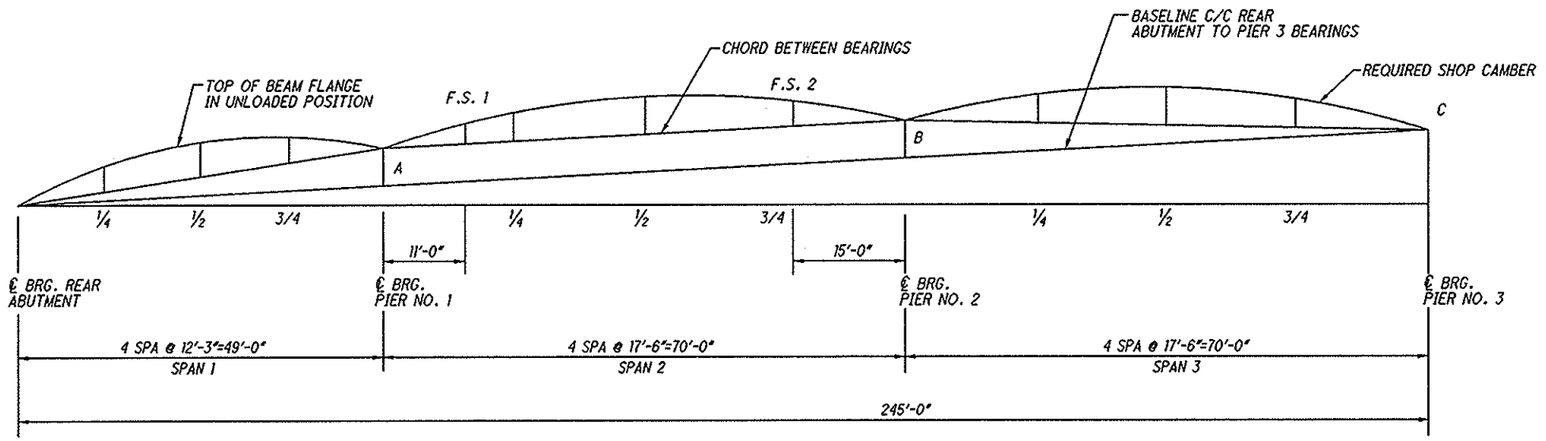


SECTION A-A



INTERMEDIATE CROSSFRAME AT DOG-LEG POINTS

(REFER TO GSD-1-96 FOR ALL ITEMS NOT DIMENSIONED)



CAMBER DIAGRAM - BEAM 2

NOTES:

1. ALL STEEL FOR SPLICES SHALL BE ASTM A709 GRADE 50 (GALVANIZED), YEILD STRESS 50 KSI.
2. ALL STEEL FOR SPLICE PLATES SHALL HAVE CVN DESIGNATION AND MEET SPECIFIED MINIMIM (CVN) NOTCH TOUGHNESS AS SPECIFIED IN 711.01.
3. ALL SPLICE BOLTS SHALL BE HIGH-STRENGTH, 1" DIAMETER, GALVANIZED, A325 TYPE 1 BOLTS.
4. THE BOLT HEADS SHALL BE PLACED ON THE EXPOSED SIDES OF THE FASCIA BEAMS AND BENEATH THE BOTTOM PLATE OF THE LOWER FLANGE SPLICE. WASHERS SHALL BE PLACED UNDER ALL ELEMENTS TURNED IN TIGHTENING.
5. FOR CAMBER DIAGRAMS FOR BEAMS 1 & 3-9, SEE SHEET 22/65 .
6. FOR LOCATIONS OF CROSSFRAMES AT DOG-LEG POINTS, SEE SHEET 23/65 .

DESIGN AGENCY
EUTHENICS INC
CONSULTING ENGINEERS
CLEVELAND, OHIO

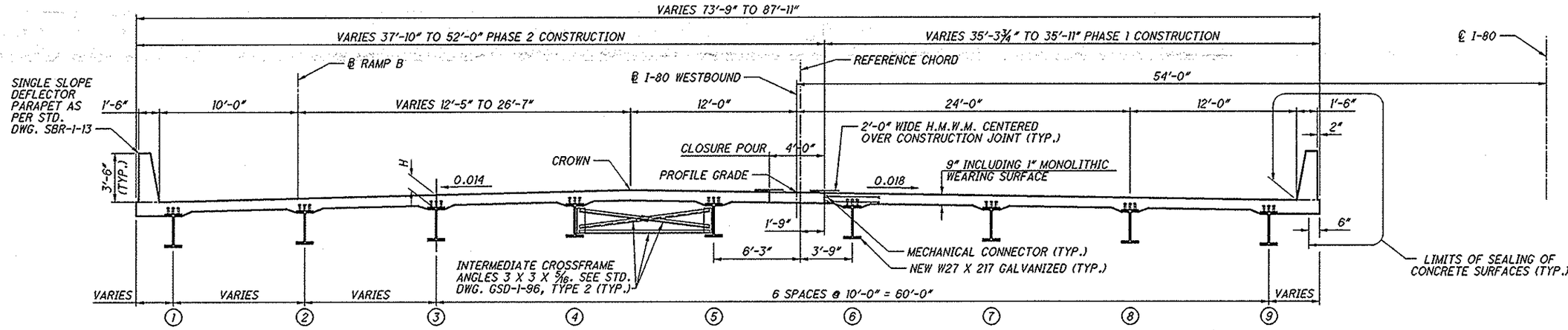
DESIGNED	DRAWN	REVIEWED	DATE
MMP	RCK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AJM		7804326	

SUPERSTRUCTURE DETAILS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

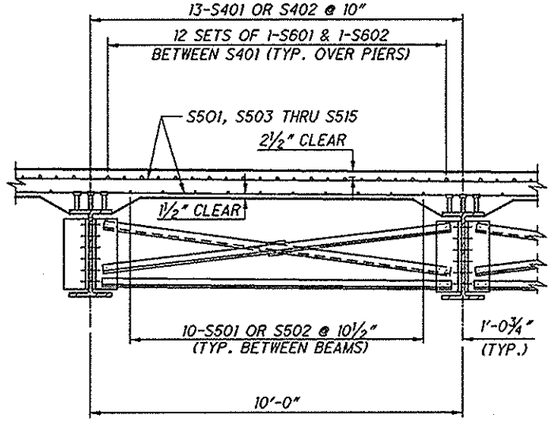
23/65

105/147

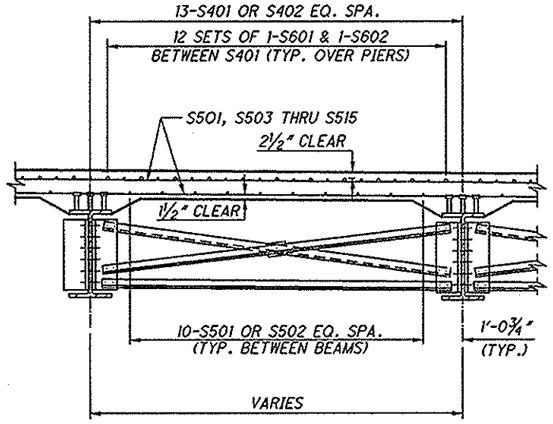


TRANSVERSE SECTION

BEAM	HAUNCH (H)
1	VARIES
2	VARIES
3-4	11⅛"
5-9	11⅛"



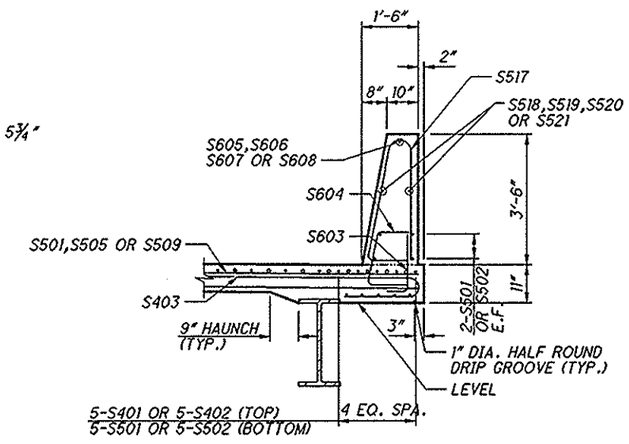
DECK REINFORCING DETAIL



DECK REINFORCING DETAIL - BEAM SPACING VARIES

(BEAMS 1 TO 2 - BEAMS 2 TO 3 - BEAMS 1 TO 3)

CLOSURE POUR REINFORCING DETAIL



PARAPET REINFORCING DETAIL

NOTE:

1. FOR PARAPET ELEVATIONS, SEE SHEET 26/65

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
MMP	VMB	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AJM		7804326	

TRANSVERSE SECTION
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

24/65

106/147

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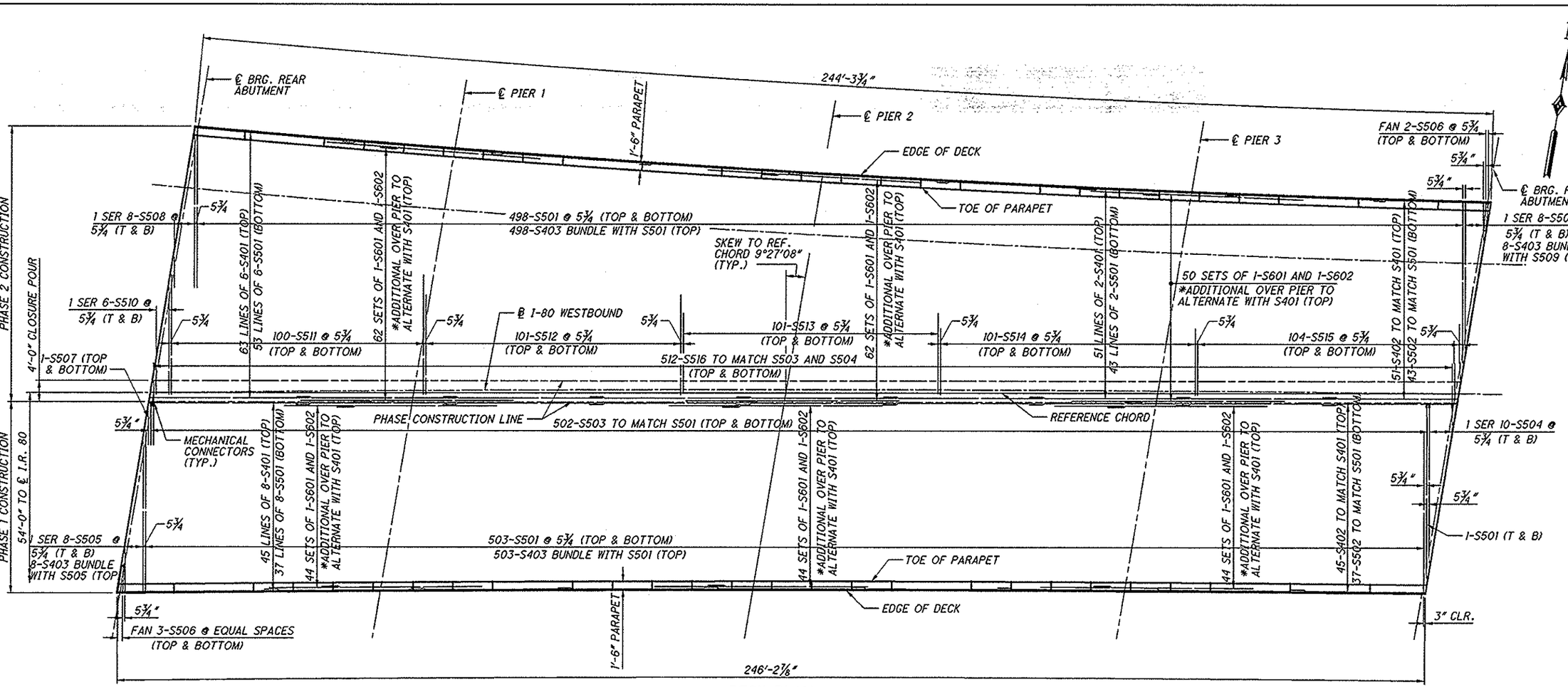
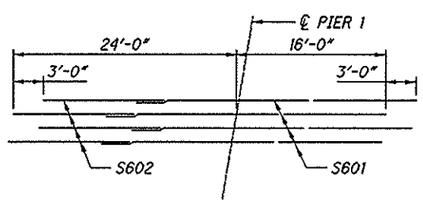
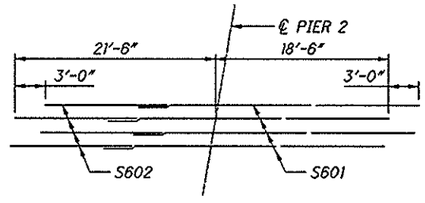


DECK PLAN

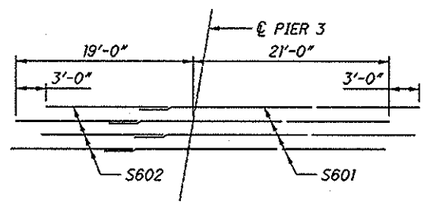
* SEE ADDITIONAL REINFORCEMENT OVER PIER DIAGRAM FOR PLACEMENT



ADDITIONAL REINFORCEMENT OVER PIER 1



ADDITIONAL REINFORCEMENT OVER PIER 2



ADDITIONAL REINFORCEMENT OVER PIER 3

MINIMUM LAP LENGTH (UNLESS OTHERWISE NOTED)
NO. 4 BAR = 2'-0"
NO. 5 BAR = 2'-5"
NO. 6 BAR = 3'-0"

Slab Offsets (ft.)

Location	C.L. Rear Abutment	Span 1			Pier 1	Span 2				Pier 2	Span 3			Pier 3	Span 1			C.L. Rear Abutment
		1/4 Pt	1/2 Pt	3/4 Pt		F.S. 1	1/4 Pt	1/2 Pt	F.S. 2		1/4 Pt	1/2 Pt	F.S. 3		1/4 Pt	1/2 Pt	3/4 Pt	
Left Offset	3.69	3.38	3.12	2.89	2.70	2.56	2.50	2.38	2.33	2.37	2.48	2.67	2.99	2.61	2.30	2.05	1.85	1.70
Right Offset	3.98	3.85	3.75	3.65	3.56	3.50	3.46	3.39	3.29	3.31	3.31	3.34	3.35	3.46	3.54	3.63	3.74	3.86

NOTES:

1. FOR REINFORCING STEEL LIST, SEE SHEET 36/65 .
2. FOR PARAPET ELEVATION AND DETAILS, SEE SHEET 26/65 .
3. FOR SPACING OF LONGITUDINAL REINFORCING STEEL IN THE SLAB AND FOR TRANSVERSE SECTION, SEE SHEET 24/65 .

DESIGN AGENCY: EUTHENICS INC. CONSULTING ENGINEERS CLEVELAND, OHIO
DESIGNED AJM | DRAWN RCK | REVIEWED RAB | DATE 11-15
CHECKED LAB | REVISED | STRUCTURE FILE NUMBER 7804326

DECK PLAN
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

25/65

107/147

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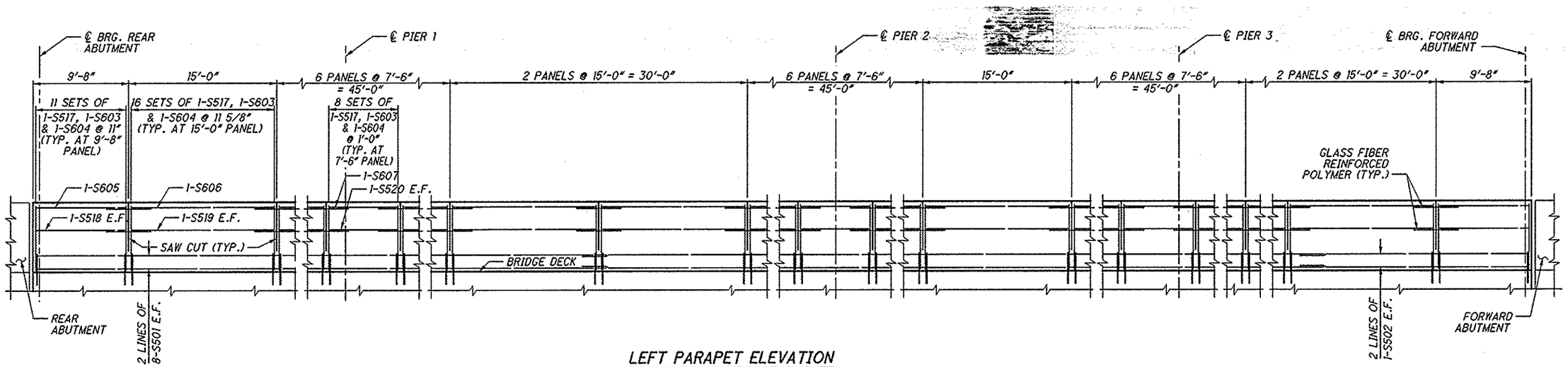
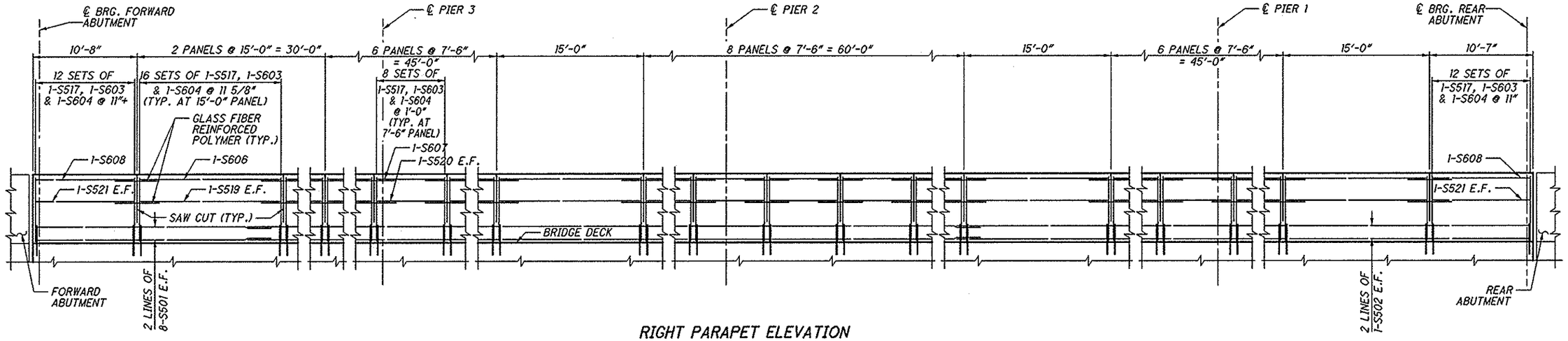


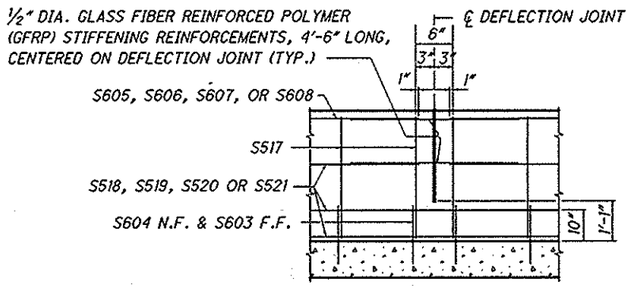
LEFT PARAPET ELEVATION

(LOOKING NORTH)



RIGHT PARAPET ELEVATION

(LOOKING SOUTH)



GFRP REBAR STIFFENING DETAIL AT DEFLECTION JOINTS

MINIMUM LAP LENGTH (UNLESS OTHERWISE NOTED)
NO. 5 BAR = 2'-5"

NOTES:

1. FOR RAILING PLAN VIEW, SEE SHEET 25/65 .
2. FOR PARAPET REINFORCING DETAIL, SEE SHEET 24/65 .
3. FOR REINFORCING STEEL LIST, SEE SHEET 36/65 .
4. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD DWG SBR-1-13.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM
DRAWN RCK
CHECKED LAB
REVIEWED RAB
DATE 11-15
REVISED
STRUCTURE FILE NUMBER 7804326

PARAPET ELEVATIONS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

26/65

108
147

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FINAL DECK SURFACE ELEVATIONS

	SPAN 1												Pier			SPAN 2													
	R.A.			1/4 Span			1/2 Span			3/4 Span						Splice			1/4 Span			1/2 Span			3/4 Span			Splice		
	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.
Location																													
Left Edge of Deck	512+67.63	-48.17	965.10	512+79.65	-47.00	965.41	512+91.67	-45.89	965.72	513+03.70	-44.82	966.03	513+15.74	-43.80	966.32	513+26.56	-42.93	966.58	513+32.96	-42.43	966.74	513+50.19	-41.16	967.15	513+67.43	-40.00	967.55	513+69.89	-39.84	967.60
Beam 1	512+67.28	-46.18	965.12	512+79.35	-45.31	965.43	512+91.42	-44.45	965.74	513+03.49	-43.61	966.04	513+15.57	-42.77	966.33	513+26.41	-42.04	966.59	513+32.82	-41.61	966.75	513+50.07	-40.46	967.15	513+67.32	-39.34	967.55	513+69.78	-39.18	967.61
Beam 2	512+65.53	-36.19	965.24	512+77.67	-35.70	965.55	512+89.82	-35.23	965.85	513+01.97	-34.76	966.15	513+14.11	-34.31	966.43	513+25.03	-33.91	966.69	513+31.47	-33.69	966.84	513+48.82	-33.08	967.24	513+66.18	-32.51	967.63	513+68.65	-32.43	967.69
Beam 3	512+63.77	-26.21	965.36	512+75.99	-26.10	965.67	512+88.22	-26.00	965.96	513+00.44	-25.91	966.25	513+12.66	-25.84	966.54	513+23.64	-25.78	966.79	513+30.12	-25.75	966.93	513+47.57	-25.69	967.33	513+65.03	-25.65	967.72	513+67.52	-25.65	967.77
Beam 4	512+62.01	-16.22	965.49	512+74.25	-16.11	965.79	512+86.48	-16.01	966.08	512+98.71	-15.92	966.37	513+10.94	-15.84	966.66	513+21.93	-15.79	966.91	513+28.41	-15.76	967.05	513+45.88	-15.69	967.45	513+63.36	-15.66	967.83	513+65.85	-15.65	967.89
Crown	512+61.27	-12.00	965.54	512+73.53	-12.00	965.84	512+85.78	-12.00	966.13	512+98.03	-12.00	966.42	513+10.28	-12.00	966.70	513+21.28	-12.00	966.95	513+27.77	-12.00	967.10	513+45.26	-12.00	967.49	513+62.74	-12.00	967.88	513+65.23	-12.00	967.94
Beam 5	512+60.25	-6.24	965.42	512+72.49	-6.12	965.71	512+84.74	-6.02	966.00	512+96.98	-5.93	966.28	513+09.22	-5.85	966.57	513+20.21	-5.79	966.82	513+26.71	-5.76	966.96	513+44.19	-5.70	967.36	513+61.68	-5.66	967.74	513+64.17	-5.65	967.80
Phase 1 Construction Joint	512+59.55	-2.25	965.33	512+71.79	-2.13	965.62	512+84.04	-2.03	965.91	512+96.28	-1.94	966.20	513+08.53	-1.86	966.48	513+19.53	-1.80	966.73	513+26.02	-1.77	966.88	513+43.51	-1.70	967.27	513+61.01	-1.66	967.66	513+63.50	-1.66	967.71
Profile Grade	512+59.15	0.00	965.28	512+71.42	0.00	965.57	512+83.68	0.00	965.86	512+95.95	0.00	966.15	513+08.21	0.00	966.44	513+19.22	0.00	966.69	513+25.72	0.00	966.84	513+43.22	0.00	967.23	513+60.73	0.00	967.62	513+63.22	0.00	967.68
Phase 2 Construction Joint	512+58.84	1.75	965.24	512+71.09	1.86	965.53	512+83.34	1.97	965.82	512+95.59	2.06	966.11	513+07.84	2.14	966.39	513+18.84	2.20	966.64	513+25.34	2.23	966.79	513+42.83	2.30	967.18	513+60.33	2.34	967.57	513+62.83	2.34	967.62
Beam 6	512+58.49	3.74	965.19	512+70.74	3.86	965.49	512+82.99	3.96	965.78	512+95.24	4.05	966.06	513+07.49	4.14	966.35	513+18.50	4.20	966.60	513+25.00	4.23	966.75	513+42.50	4.30	967.14	513+60.00	4.34	967.53	513+62.49	4.34	967.58
Beam 7	512+56.72	13.73	964.97	512+68.98	13.84	965.27	512+81.25	13.95	965.56	512+93.51	14.04	965.84	513+05.77	14.13	966.13	513+16.78	14.19	966.38	513+23.28	14.22	966.53	513+40.80	14.29	966.92	513+58.31	14.34	967.31	513+60.81	14.34	967.36
Beam 8	512+54.95	23.71	964.75	512+67.22	23.83	965.04	512+79.50	23.94	965.33	512+91.77	24.03	965.62	513+04.04	24.11	965.91	513+15.06	24.18	966.16	513+21.57	24.21	966.31	513+39.10	24.29	966.70	513+56.62	24.33	967.09	513+59.12	24.34	967.15
Beam 9	512+53.18	33.69	964.53	512+65.46	33.81	964.82	512+77.74	33.92	965.11	512+90.02	34.02	965.40	513+02.31	34.10	965.69	513+13.34	34.17	965.94	513+19.85	34.20	966.09	513+37.39	34.28	966.49	513+54.93	34.33	966.88	513+57.43	34.33	966.93
Right Edge of Deck	512+52.77	36.00	964.48	512+65.08	36.00	964.77	512+77.38	36.00	965.07	512+89.68	36.00	965.36	513+01.98	36.00	965.64	513+13.02	36.00	965.90	513+19.54	36.00	966.05	513+37.10	36.00	966.45	513+54.65	36.00	966.84	513+57.15	36.00	966.89

	SPAN 3												Pier			SPAN 4													
	Pier			1/4 Span			1/2 Span			3/4 Span			Splice			Pier			1/4 Span			1/2 Span			3/4 Span			F.A.		
	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.
Location																														
Left Edge of Deck	513+84.70	-38.94	967.94	514+01.98	-37.98	968.33	514+19.28	-37.12	968.71	514+36.59	-36.37	969.08	514+39.07	-36.27	969.14	514+53.92	-35.72	969.45	514+67.80	-35.28	969.74	514+81.68	-34.90	970.03	514+95.57	-34.58	970.33	515+09.46	-34.34	970.62
Beam 1	513+84.58	-38.24	967.95	514+01.85	-37.17	968.34	514+19.12	-36.12	968.72	514+36.39	-35.10	969.10	514+38.86	-34.96	969.15	514+53.70	-34.32	969.47	514+67.64	-34.29	969.75	514+81.58	-34.28	970.04	514+95.52	-34.29	970.33	515+09.46	-34.31	970.62
Beam 2	513+83.54	-31.96	968.02	514+00.90	-31.43	968.41	514+18.27	-30.93	968.78	514+35.64	-30.45	969.15	514+38.12	-30.38	969.20															
Beam 3	513+82.49	-25.64	968.10	513+99.95	-25.66	968.47	514+17.42	-25.69	968.84	514+34.88	-25.76	969.21	514+37.37	-25.77	969.26	514+52.34	-25.84	969.57	514+66.31	-25.93	969.85	514+80.28	-26.04	970.13	514+94.25	-26.16	970.42	515+08.21	-26.29	970.71
Beam 4	513+80.83	-15.64	968.21	513+98.31	-15.65	968.59	514+15.78	-15.69	968.96	514+33.26	-15.75	969.32	514+35.76	-15.76	969.37	514+50.74	-15.84	969.68	514+64.72	-15.92	969.96	514+78.70	-16.02	970.25	514+92.67	-16.14	970.54	515+06.65	-16.28	970.83
Crown	513+80.22	-12.00	968.26	513+97.70	-12.00	968.63	514+15.18	-12.00	969.00	514+32.65	-12.00	969.36	514+35.15	-12.00	969.41	514+50.12	-12.00	969.72	514+64.09	-12.00	970.01	514+78.06	-12.00	970.29	514+92.02	-12.00	970.58	515+05.99	-12.00	970.87
Beam 5	513+79.16	-5.64	968.12	513+96.66	-5.65	968.50	514+14.15	-5.68	968.86	514+31.64	-5.74	969.23	514+34.14	-5.75	969.28	514+49.13	-5.83	969.59	514+63.12	-5.91	969.88	514+77.11	-6.01	970.17	514+91.10	-6.13	970.46	515+05.09	-6.26	970.75
Phase 1 Construction Joint	513+78.50	-1.64	968.04	513+95.99	-1.65	968.41	514+13.49	-1.68	968.78	514+30.99	-1.74	969.14	514+33.49	-1.75	969.19	514+48.49	-1.82	969.50	514+62.48	-1.91	969.79	514+76.47	-2.01	970.08	514+90.47	-2.12	970.37	515+04.46	-2.25	970.66
Profile Grade	513+78.22	0.00	968.00	513+95.72	0.00	968.38	514+13.22	0.00	968.74	514+30.71	0.00	969.10	514+33.20	0.00	969.16	514+48.19	0.00	969.46	514+62.18	0.00	969.75	514+76.16	0.00	970.04	514+90.14	0.00	970.33	515+04.11	0.00	970.61
Phase 2 Construction Joint	513+77.83	2.36	967.95	513+95.33	2.35	968.33	514+12.84	2.32	968.69	514+30.34	2.26	969.06	514+32.84	2.25	969.11	514+47.84	2.18	969.42	514+61.84	2.10	969.71	514+75.84	2.00	970.00	514+89.84	1.88	970.29	515+03.84	1.75	970.58
Beam 6	513+77.50	4.36	967.91	513+95.00	4.35	968.28	514+12.51	4.32	968.65	514+30.01	4.26	969.01	514+32.51	4.25	969.07	514+47.52	4.18	969.37	514+61.52	4.10	969.66	514+75.52	4.00	969.95	514+89.52	3.89	970.24	515+03.52	3.76	970.53
Beam 7	513+75.83	14.36	967.69	513+93.35	14.35	968.07	514+10.87	14.32	968.44	514+28.39	14.27	968.80	514+30.89	14.26	968.85	514+45.91	14.19	969.16	514+59.92	14.11	969.45	514+73.93	14.01	969.74	514+87.94	13.90	970.03	515+01.96	13.77	970.32
Beam 8	513+74.15	24.36	967.48	513+91.69	24.35	967.85	514+09.22	24.33	968.22	514+26.76	24.28	968.59	514+29.26	24.27	968.64	514+44.29	24.20	968.95	514+58.31	24.12	969.24	514+72.34	24.03	969.53	514+86.36	23.91	969.82	515+00.39	23.79	970.11
Beam 9	513+72.48	34.35	967.26	513+90.03	34.36	967.64	514+07.57	34.33	968.01	514+25.12	34.28	968.37	514+27.63	34.27	968.42	514+42.67	34.21	968.73	514+56.71	34.13	969.02	514+70.74	34.04	969.32	514+84.78	33.93	969.61	514+98.81	33.80	969.90
Right Edge of Deck	513+72.20	36.00	967.22	513+89.75	36.00	967.60	514+07.30	36.00	967.97	514+24.84	36.00	968.34	514+27.35	36.00	968.39	514+42.38	36.00	968.70	514+56.41	36.00	968.98	514+70.43	36.00	969.27	514+84.45	36.00	969.56	514+98.47	36.00	969.85

NOTES:

1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED.
2. FOR DECK SLAB PLAN, SEE SHEET 25/65.
3. FOR TRANSVERSE SECTION, SEE SHEET 24/65.
4. FOR STRUCTURAL STEEL FRAMING PLAN, SEE SHEET 21/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED JLN | DRAWN MMP | CHECKED AJM | REVIEWED RAB | DATE 11-15 | REVISED - | STRUCTURE FILE NUMBER 7804326

FINAL DECK SURFACE ELEVATIONS TABLE
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

27/65

(109/147)

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SCREED ELEVATIONS

Location	Rear Abutment		1/4 span		1/2 Span		3/4 Span		Pier 1		F.S. 1		1/4 span		1/2 Span		F.S. 2	
	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
Toe of Parapet (left)	512+67.28	965.11	512+79.38	965.44	512+91.40	965.76	513+03.14	966.06	513+15.50	966.34	513+26.31	966.62	513+32.70	966.78	513+49.92	967.20	513+69.64	967.64
Crown	512+61.278	965.54	512+73.53	965.85	512+85.78	966.14	512+98.03	966.42	513+10.28	966.70	513+21.28	966.87	513+27.77	967.13	513+45.26	967.54	513+65.23	967.90
Phase Construction Line 2	512+59.55	965.33	512+71.79	965.63	512+84.04	965.92	512+96.28	966.20	513+08.53	966.48	513+19.53	966.75	513+26.02	966.91	513+43.51	967.32	513+63.50	967.73
Phase Construction Line 1	512+58.84	965.24	512+71.09	965.54	512+83.34	965.83	512+95.59	966.11	513+07.84	966.39	513+18.84	966.66	513+25.34	966.82	513+42.83	967.23	513+62.83	967.64
Toe of parapet (right)	512+52.99	964.50	512+65.34	964.81	512+52.91	964.52	512+77.47	965.39	513+02.24	965.68	513+13.28	965.95	513+19.80	966.11	513+37.35	966.52	513+57.40	966.94

Location	Pier 2		1/4 span		1/2 Span		F.S. 3		Pier 3		1/4 span		1/2 Span		3/4 Span		Forward Abutment	
	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
Toe of Parapet (left)	513+84.47	967.96	514+01.74	964.36	514+19.04	968.75	514+38.82	969.17	514+53.69	969.47	514+67.56	969.77	514+81.44	970.07	514+95.50	970.36	515+09.46	970.62
Crown	513+80.22	968.26	513+97.70	968.65	514+15.18	969.04	514+35.15	969.43	514+50.12	969.72	514+64.09	970.03	514+78.06	970.32	514+92.02	970.60	515+05.99	970.87
Phase Construction Line 2	513+78.50	968.04	513+95.99	968.43	514+13.49	968.82	514+33.49	969.21	514+48.49	969.50	514+62.48	969.81	514+76.47	970.11	514+90.47	970.39	515+04.46	970.66
Phase Construction Line 1	513+77.83	967.95	513+95.33	968.35	514+12.84	968.73	514+32.84	969.13	514+47.84	969.42	514+61.84	969.73	514+75.84	970.03	514+89.84	970.31	515+03.84	970.58
Toe of parapet (right)	513+72.45	967.26	513+90.00	967.66	514+07.54	968.04	514+27.59	968.43	514+42.62	968.72	514+56.65	969.02	514+70.67	969.34	514+84.69	969.63	514+98.70	969.89

TOP OF HAUNCH ELEVATIONS

Beam	Rear Abutment		1/4 span		1/2 Span		3/4 Span		Pier 1		F.S. 1		1/4 span		1/2 Span		F.S. 2	
	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
1	512+67.28	964.37	512+79.35	964.69	512+91.42	965.00	513+03.49	965.30	513+15.57	965.58	513+26.41	965.85	513+32.82	966.02	513+50.07	966.44	513+69.78	966.88
2	512+65.53	964.49	512+77.67	964.81	512+89.82	965.11	513+01.97	965.41	513+14.11	965.68	513+25.03	965.95	513+31.47	966.12	513+48.82	966.53	513+68.65	966.96
3	512+63.77	964.61	512+75.99	964.93	512+88.22	965.22	513+00.44	965.51	513+12.66	965.79	513+23.64	966.06	513+30.12	966.21	513+47.57	966.63	513+67.52	967.04
4	512+62.01	964.74	512+74.25	965.05	512+86.48	965.34	512+98.71	965.62	513+10.94	965.91	513+21.93	966.18	513+28.41	966.33	513+45.88	966.75	513+65.85	967.16
5	512+60.25	964.67	512+72.49	964.97	512+84.74	965.26	512+96.98	965.53	513+09.22	965.82	513+20.21	966.09	513+26.71	966.24	513+44.19	966.66	513+64.17	967.07
6	512+58.49	964.44	512+70.74	964.75	512+82.99	965.04	512+95.24	965.31	513+07.49	965.60	513+18.50	965.87	513+25.00	966.03	513+42.50	966.44	513+62.49	966.85
7	512+56.72	964.18	512+68.98	964.53	512+81.25	964.82	512+93.51	965.09	513+05.77	965.38	513+16.78	965.65	513+23.28	965.81	513+40.80	966.22	513+60.81	966.63
8	512+54.95	964.00	512+67.22	964.30	512+79.50	964.59	512+91.77	964.87	513+04.04	965.16	513+15.06	965.43	513+21.57	965.59	513+39.10	966.00	513+59.12	966.42
9	512+53.18	963.78	512+65.46	964.08	512+77.74	964.37	512+90.02	964.65	513+02.31	964.94	513+13.34	965.21	513+19.85	965.37	513+37.39	965.78	513+57.43	966.20

Beam	Pier 2		1/4 span		1/2 Span		F.S. 3		Pier 3		1/4 span		1/2 Span		3/4 Span		Forward Abutment	
	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
1	513+84.58	967.20	514+01.85	967.60	514+19.12	968.00	514+38.86	968.42	514+53.7	968.72	514+67.64	969.01	514+81.58	969.31	514+95.52	969.60	515+09.46	969.87
2	513+83.54	967.27	514+00.90	967.68	514+18.27	968.06	514+38.12	968.47	514+53.01	968.77	-	-	-	-	-	-	-	-
3	513+82.49	967.35	513+99.95	967.74	514+17.42	968.13	514+37.37	968.53	514+52.34	968.82	514+66.31	969.11	514+80.28	969.41	514+94.25	969.70	515+08.21	969.96
4	513+80.83	967.46	513+98.31	967.86	514+15.78	968.25	514+35.76	968.64	514+50.74	968.93	514+64.72	969.23	514+78.70	969.53	514+92.67	969.81	515+06.65	970.08
5	513+79.16	967.37	513+96.66	967.77	514+14.15	968.15	514+34.14	968.55	514+49.13	968.84	514+63.12	969.15	514+77.11	969.45	514+91.10	969.73	515+05.09	970.00
6	513+77.50	967.16	513+95.00	967.55	514+12.51	967.94	514+32.51	968.34	514+47.52	968.62	514+61.52	968.93	514+75.52	969.23	514+89.52	969.51	515+03.52	969.78
7	513+75.83	966.94	513+93.35	967.34	514+10.87	967.73	514+30.89	968.12	514+45.91	968.41	514+59.92	968.72	514+73.93	969.02	514+87.94	969.30	515+01.96	969.57
8	513+74.15	966.73	513+91.69	967.12	514+09.22	967.51	514+29.26	967.91	514+44.29	968.20	514+58.31	968.51	514+72.34	968.81	514+86.36	969.09	515+00.39	969.36
9	513+72.48	966.51	513+90.03	968.91	514+07.57	967.30	514+27.63	967.69	514+42.67	967.98	514+56.71	968.28	514+70.74	968.60	514+84.78	968.89	514+98.81	969.15

NOTES:

1. SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED DEAD LOAD DEFLECTIONS.
2. TOP HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. FOR DECK SLAB PLAN, SEE SHEET 25/65.
4. FOR TRANSVERSE SECTION, SEE SHEET 24/65.
5. FOR STRUCTURAL STEEL FRAMING PLAN, SEE SHEET 21/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN MMP | REVIEWED RAB | DATE 11-15
CHECKED MMP | REVISED - | STRUCTURE FILE NUMBER 7804326

SCREED AND TOP OF HAUNCH ELEVATION TABLES

TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

28/65

110/147

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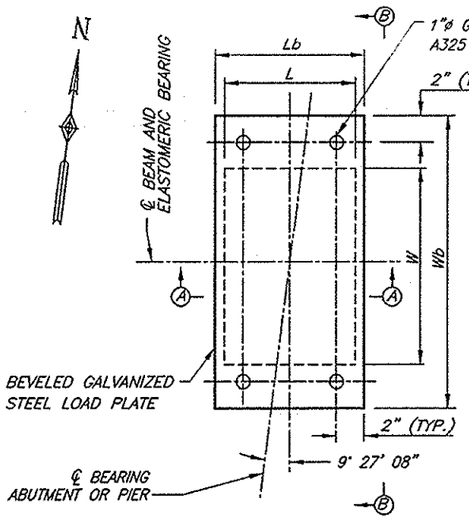
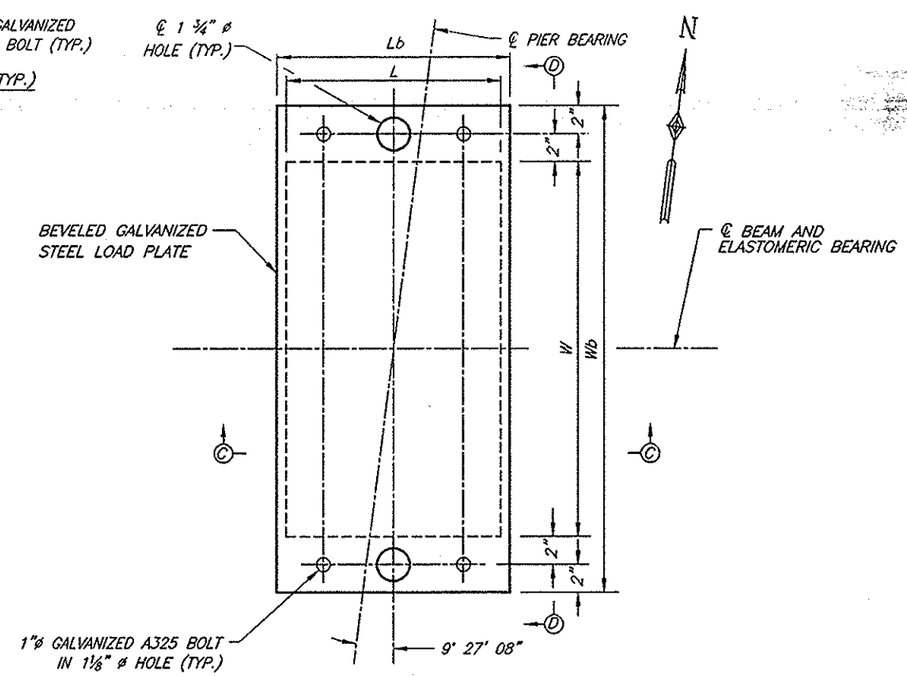


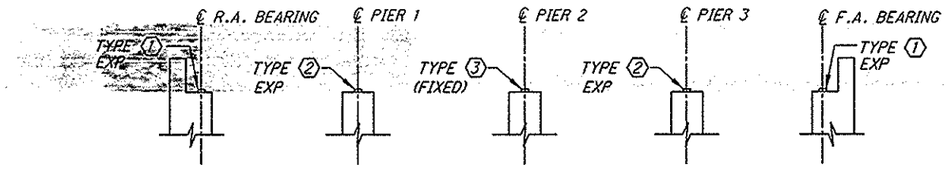
EXPANSION BEARING

REAR ABUTMENT
FWD ABUTMENT
PIER NO. 1
PIER NO. 3



FIXED BEARING

PIER NO. 2



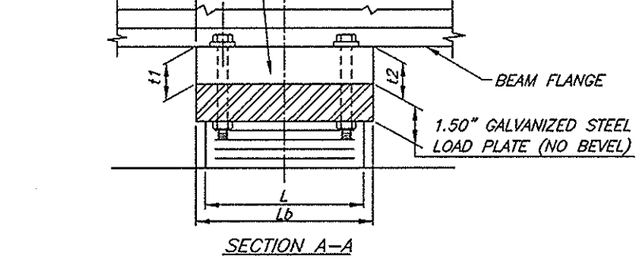
BEARING LOCATIONS

LAMINATED ELASTOMERIC BEARINGS								STEEL LOAD PLATE			
TYPE	NO. REQ'D	L (in)	W (in)	t_i (in)	n	t_e (in)	T (in)	Lb (in)	Wb (in)	t_1 (in)	t_2 (in)
1	17	12	16	0.39	5	0.27	2.67	13	24	1.50	1.75
2	18	15	22	0.42	6	0.29	3.34	16	30	2.25	2.625
3	9	14	24	0.42	6	0.29	3.34	15	32	1.25	1.56

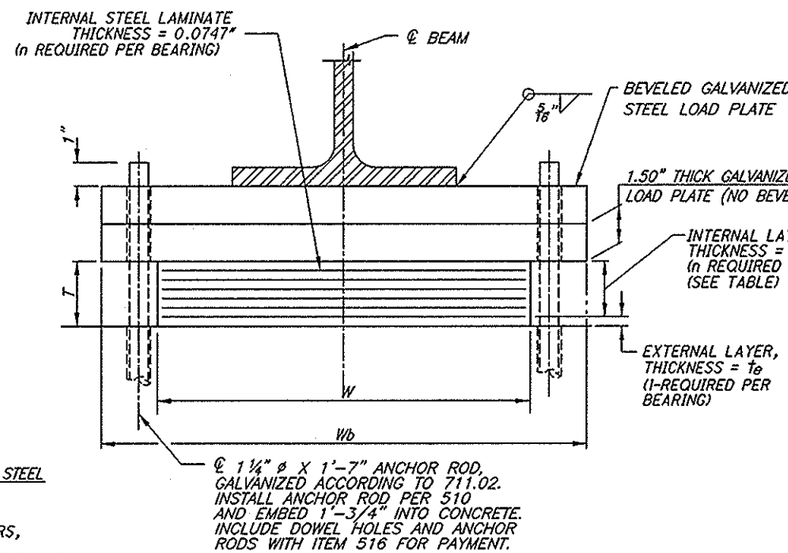
Lb = LENGTH OF STEEL LOAD PLATE (BOTH BEVELED AND NON-BEVELED PLATES)
Wb = WIDTH OF STEEL LOAD PLATE (BOTH BEVELED AND NON-BEVELED PLATES)

DESIGN LOADING: SERVICE LOAD REACTIONS - KIPS

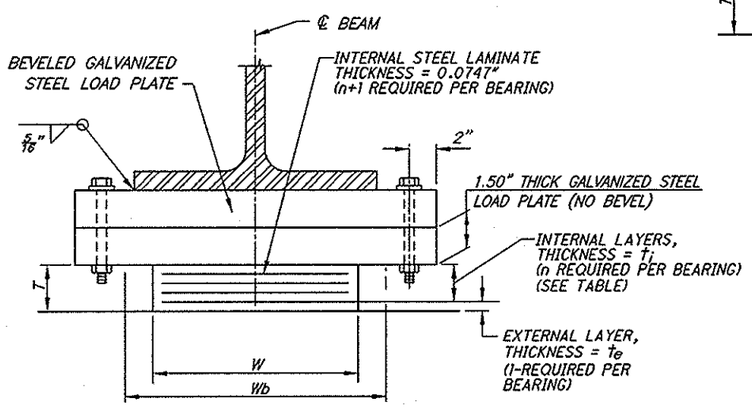
	DEAD LOAD	LIVE LOAD (NO IMPACT)	TOTAL LOAD
TYPE 1	26.7	119.6	146.4
TYPE 2	118.1	203.6	321.7
TYPE 3	105.8	199.5	305.3



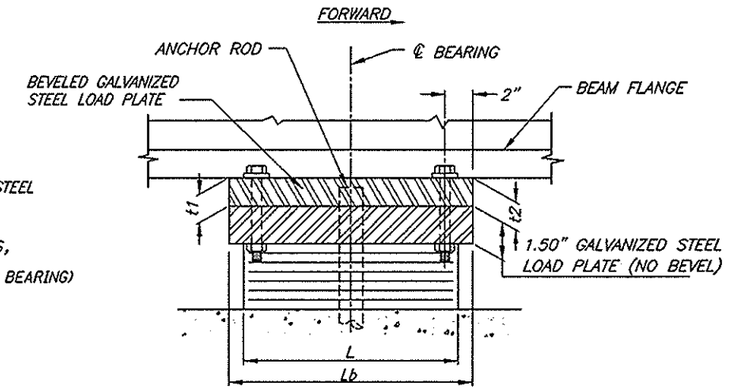
SECTION A-A



VIEW D-D



VIEW B-B



SECTION C-C

NOTES:

1. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONGTERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
2. STEEL PLATE USED FOR BEARINGS SHALL BE ASTM A709, GRADE 50 GALVANIZED IN ACCORDANCE WITH AND AS PART OF THE STEEL ITEMS INCLUDED IN THE PLANS.
3. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER THE BEARING IS INSTALLED.
4. 1.5" STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

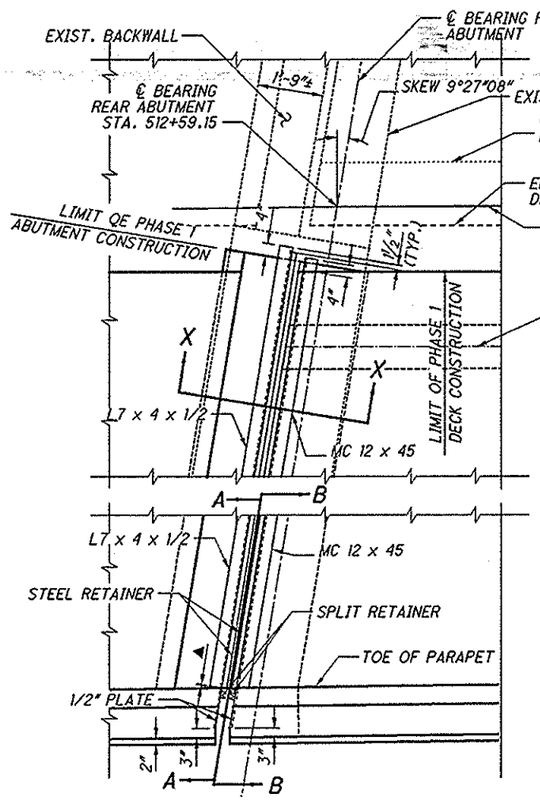
DESIGNED AJM | DRAWN MMP | CHECKED MMP | REVIEWED RAB | DATE 11-15 | REVISED | STRUCTURE FILE NUMBER 7804326

ELASTOMERIC BEARINGS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

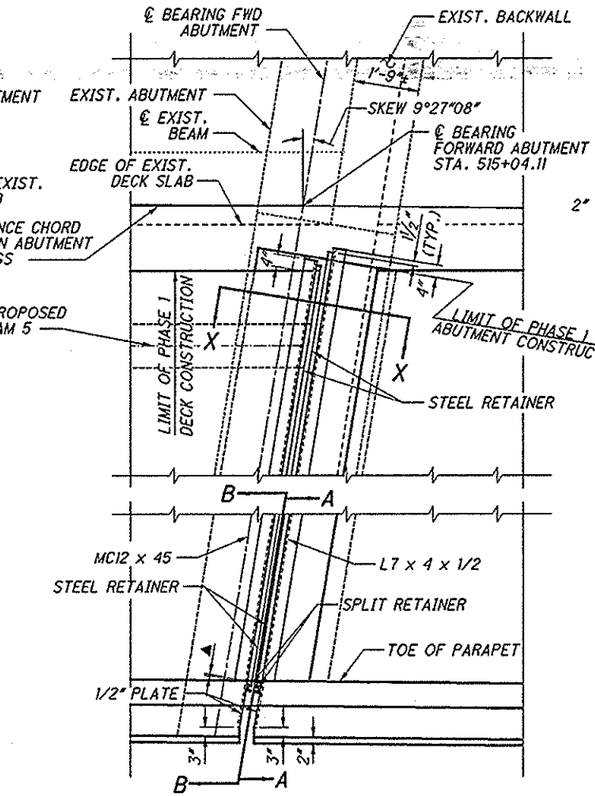
TRU-80-09.56
PID No. 77886

29/65

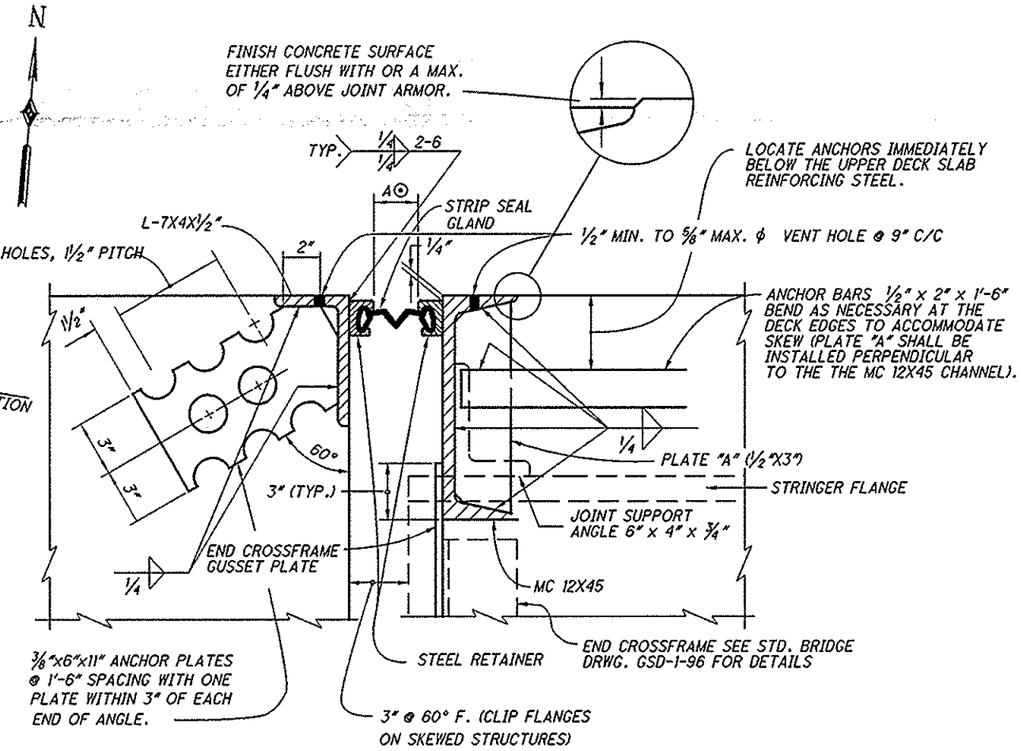
111/147



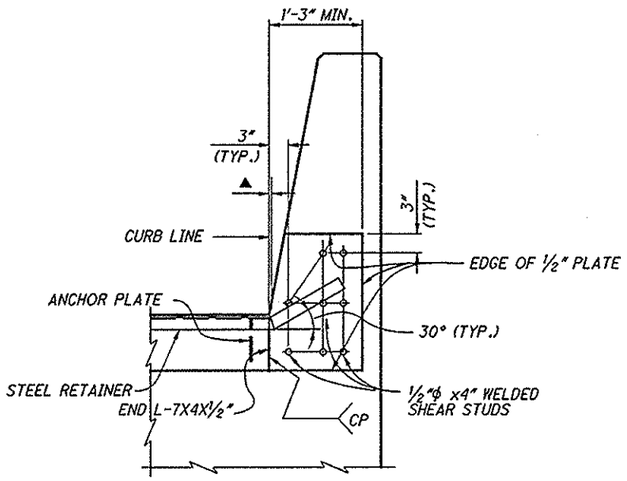
REAR ABUTMENT EXPANSION JOINT - PHASE 1



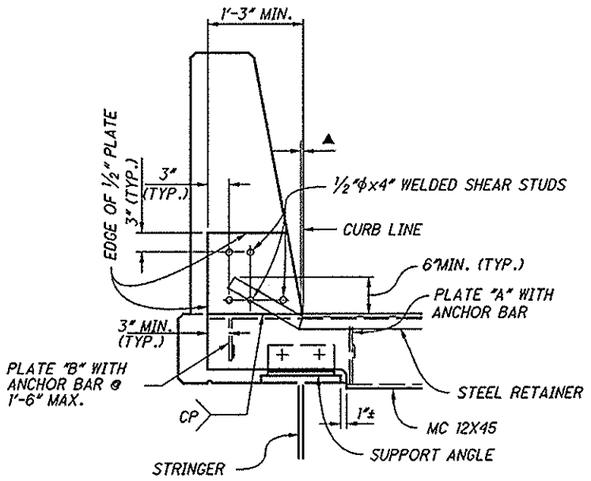
FORWARD ABUTMENT EXPANSION JOINT - PHASE 1



SECTION X-X



SECTION A-A
(SHOWN FOR FORWARD ABUTMENT)



SECTION B-B
(SHOWN FOR FORWARD ABUTMENT)

▲ - 0" MIN. TO ½" MAX. AT BREAKPOINT IN RETAINER ON THE SIDE OF THE JOINT ASSEMBLY WHICH IS NEAREST TO THE CURB LINE.

DIMENSION "A"	
F (DEG)	REAR & FORWARD ABUTMENT
90	1 3/8"
80	1 3/8"
70	1 1/2"
60	1 5/8"
50	1 3/4"
40	1 3/4"
30	1 7/8"

NOTES:

1. FOR ADDITIONAL DETAILS AND NOTES, SEE STANDARD DRAWING EXJ-4-87.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	RCK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

EXPANSION JOINT DETAILS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

30/65

112/147

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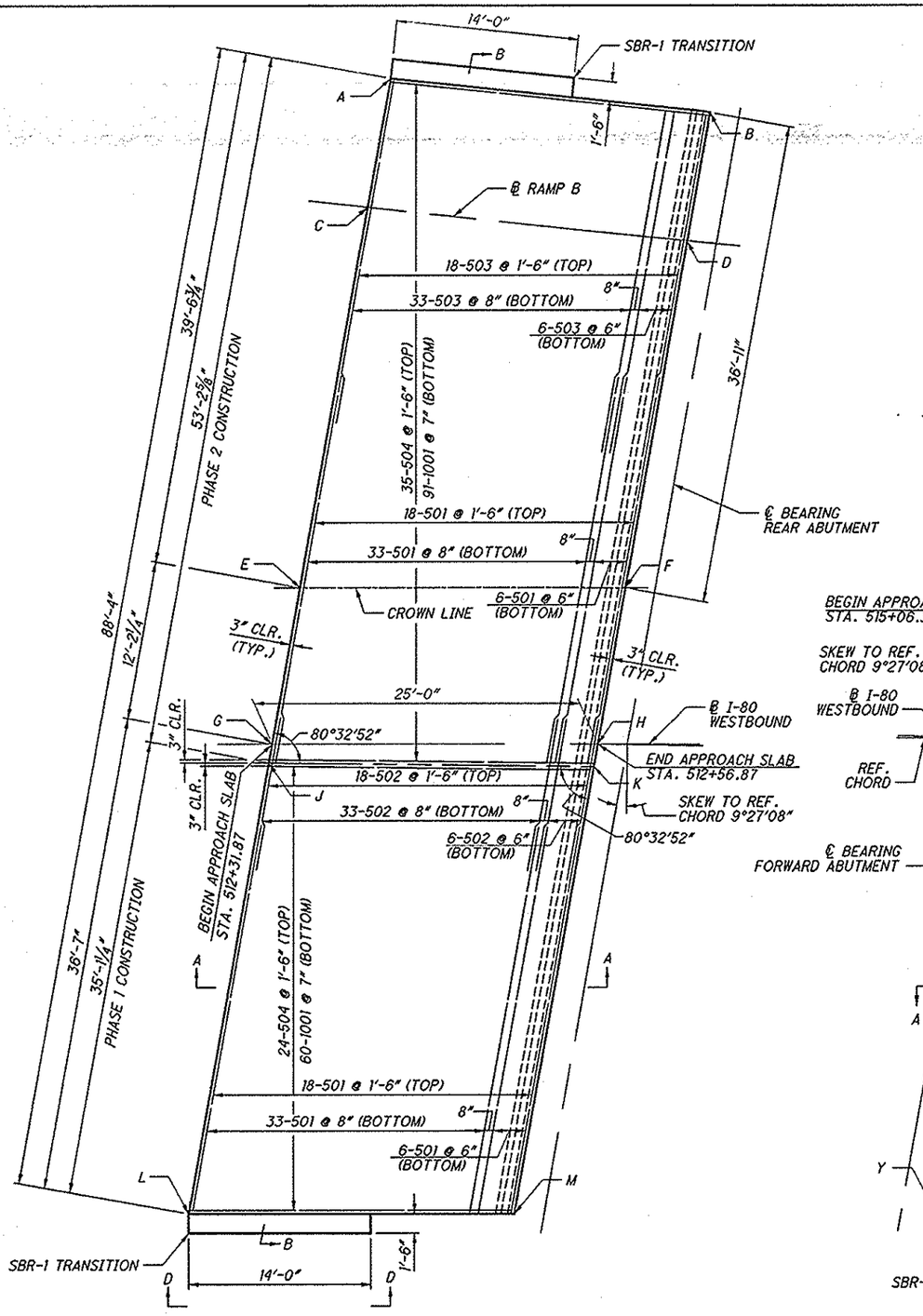
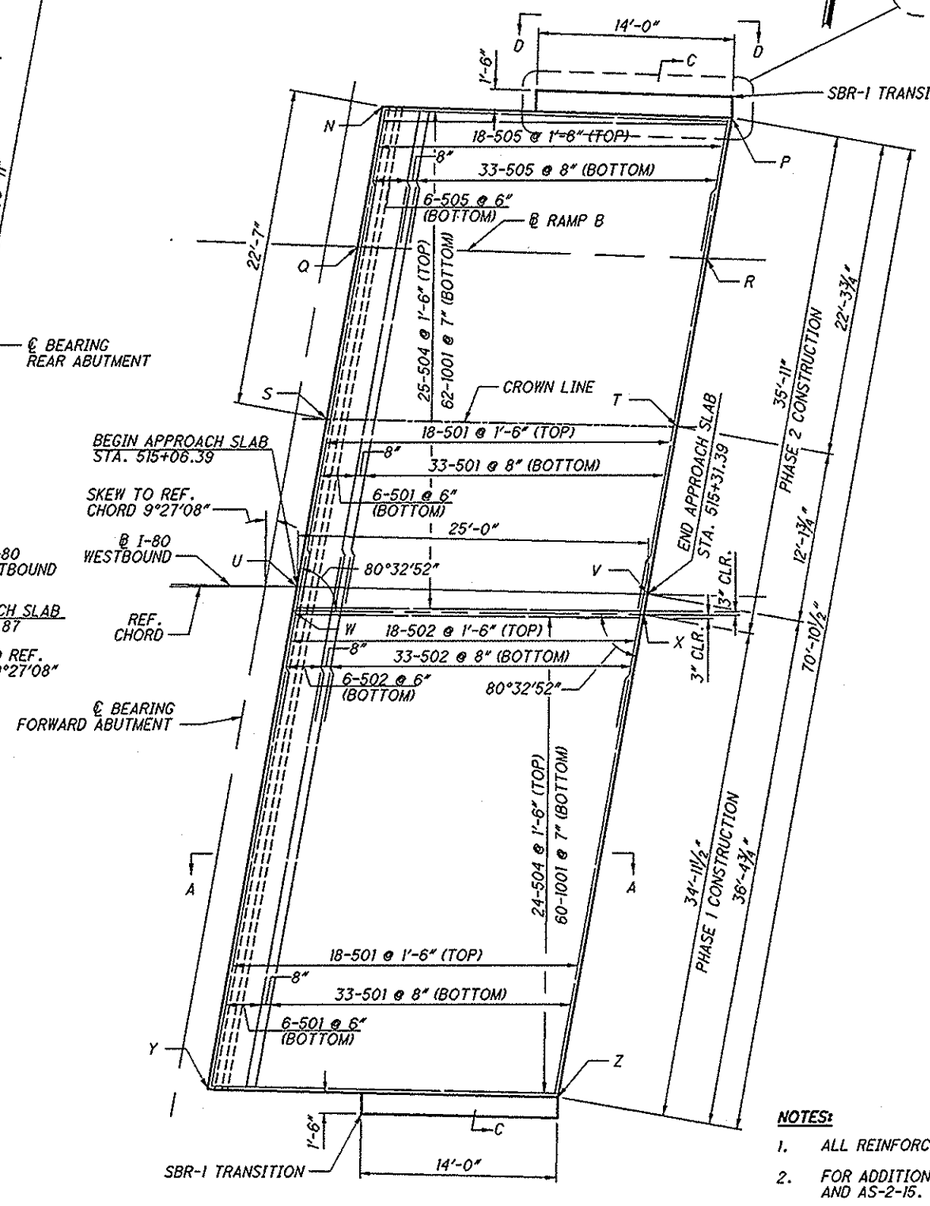


REAR APPROACH SLAB PLAN



FORWARD APPROACH SLAB PLAN

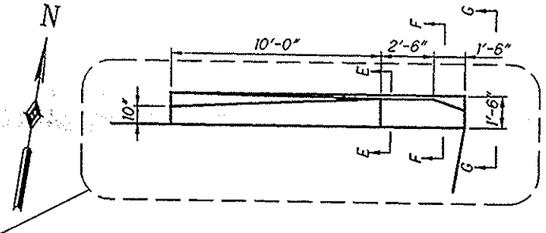


TABLE OF ELEVATIONS	
A	964.09
B	965.04
C	964.47
D	965.16
E	964.88
F	965.49
G	964.61
H	965.22
J	964.58
K	965.18
L	963.54
M	964.42
N	970.67
P	970.93
Q	970.78
R	971.30
S	970.92
T	971.43
U	970.66
V	971.17
W	970.62
X	971.14
Y	969.90
Z	970.15

NOTES:

1. ALL REINFORCING STEEL BAR MARKS SHALL BE PREFIXED "AS".
2. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STANDARD DRAWINGS AS-1-15 AND AS-2-15.
3. ELEVATIONS GIVEN AT ℄ I-80 WESTBOUND, ℄ RAMP B, CURBLINES, PHASE LINE AND CROWN LINE.
4. FOR REINFORCING LIST, SEE SHEET 33/65.
5. FOR SECTIONS A-A, B-B, C-C, D-D, E-E, F-F AND G-G, SEE SHEET 32/65.
6. FOR SBR-1 TRANSITION, SEE STD. CONST. DWG. SBR-1-13.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

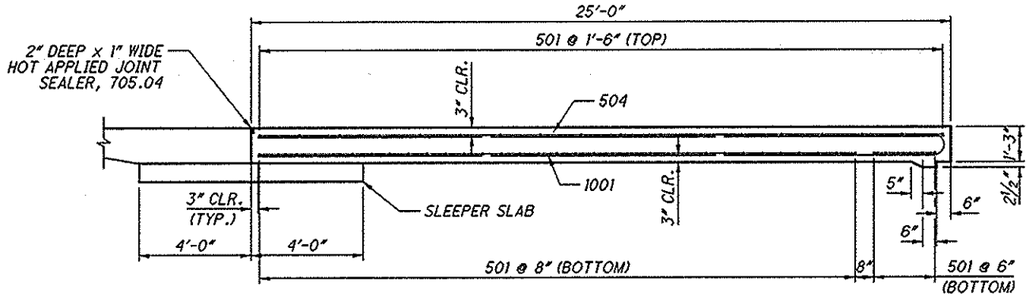
DESIGNED AJM | DRAWN RCK | REVIEWED RAB | DATE 11-15
CHECKED LAB | REVISED | STRUCTURE FILE NUMBER 7804326

APPROACH SLAB DETAILS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

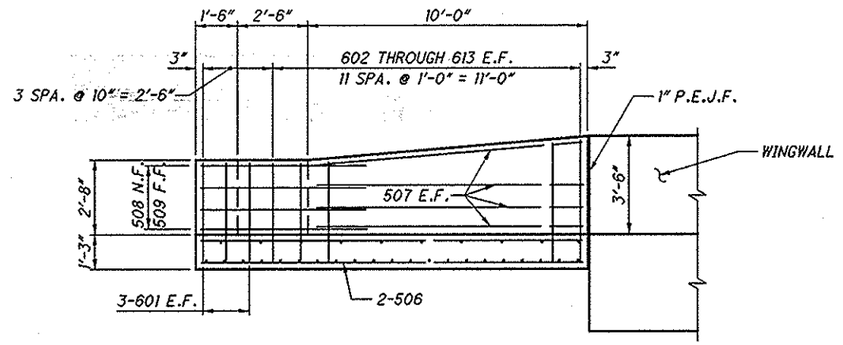
TRU-80-09.56
PID No. 77886

31 / 65

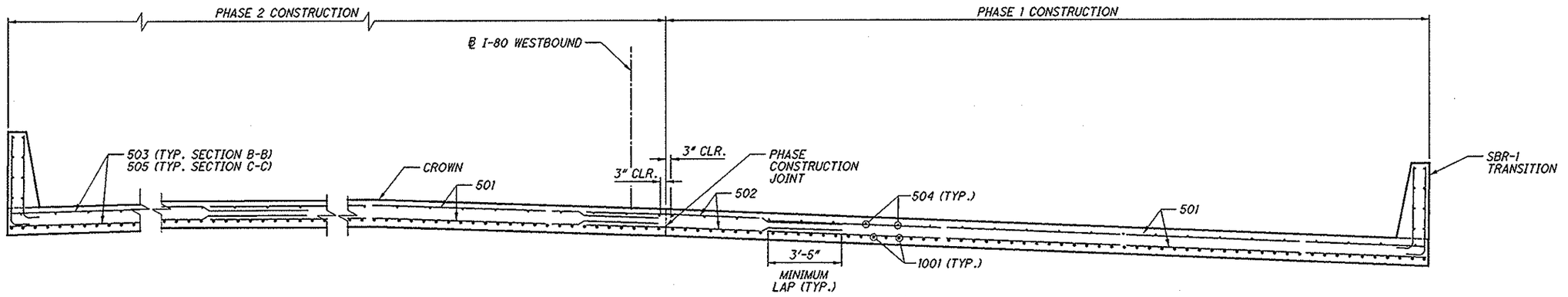
113 / 147



SECTION A-A

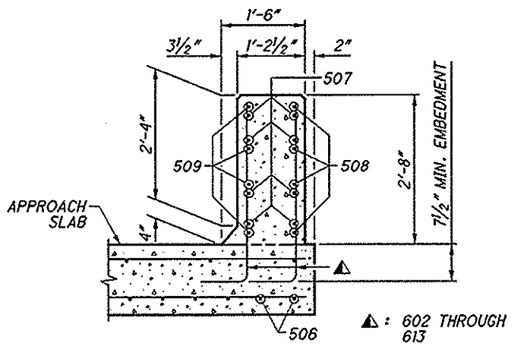


SECTION D-D

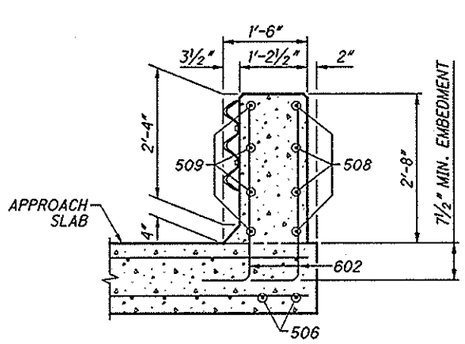


SECTION B-B

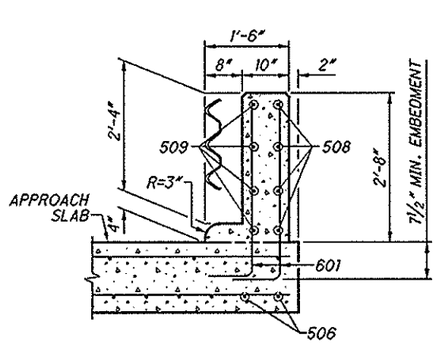
SECTION B-B SHOWN SECTION C-C SIMILAR EXCEPT AS NOTED



SECTION E-E



SECTION F-F



SECTION G-G

NOTES:

1. FOR REINFORCING LIST SEE SHEET 33/65 .
2. ALL REINFORCING STEEL BAR MARKS SHALL BE PREFIXED "AS".
3. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STANDARD DRAWINGS AS-1-15 AND AS-2-15.
4. FOR SBR-1 TRANSITION SEE STD. CONST. DWG. SBR-1-13
5. FOR LOCATION OF SECTIONS A-A, B-B, C-C, D-D, E-E, F-F & G-G, SEE SHEET 31/64 .

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	RCK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

APPROACH SLAB DETAILS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

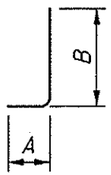
TRU-80-09.56
PID No. 77886

32/65

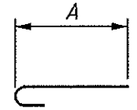
114/147

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
APPROACH SLABS													
AS1001	151	122	273	25'-11"	30,424	16	24'-6"						
AS501	114	114	228	30'-0"	7,134	STR							
AS502	57	57	114	13'-4"	1,581	STR							
AS503	57		57	27'-9"	1,645	STR							
AS504	59	59	118	24'-6"	3,016	STR							
AS505		57	57	11'-0"	652	STR							
AS506	4	4	8	13'-6"	113	STR							
AS507	16	16	32	10'-0"	331	STR							
AS508	8	8	16	5'-8"	95	STR							
AS509	8	8	16	5'-8"	95	23	1'-10"	2'-5"	1'-5"	5"	1 1/2"		
AS601	12	12	24	4'-4"	156	3	1'-0"	3'-6"					
AS602	8	8	16	4'-4"	104	3	1'-0"	3'-6"					
AS603	4	4	8	4'-5"	53	3	1'-0"	3'-7"					
AS604	4	4	8	4'-6"	54	3	1'-0"	3'-8"					
AS605	4	4	8	4'-7"	55	3	1'-0"	3'-9"					
AS606	4	4	8	4'-8"	56	3	1'-0"	3'-10"					
AS607	4	4	8	4'-9"	57	3	1'-0"	3'-11"					
AS608	4	4	8	4'-10"	58	3	1'-0"	4'-0"					
AS609	4	4	8	4'-11"	59	3	1'-0"	4'-1"					
AS610	4	4	8	5'-0"	60	3	1'-0"	4'-2"					
AS611	4	4	8	5'-1"	61	3	1'-0"	4'-3"					
AS612	4	4	8	5'-2"	62	3	1'-0"	4'-4"					
AS613	4	4	8	5'-3"	63	3	1'-0"	4'-5"					
				TOTAL	45,984								

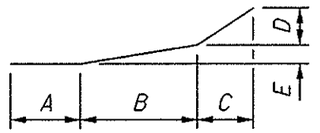
BENDING DIAGRAMS



TYPE-3



TYPE-16



TYPE-23

NOTES:

1. REINFORCING STEEL WEIGHTS GIVEN ARE FOR INFORMATIONAL PURPOSES ONLY.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN RCK | CHECKED LAB | REVIEWED RAB | DATE 11-15 | REVISED | STRUCTURE FILE NUMBER 7804326

APPROACH SLAB DETAILS
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

33/65

115/147

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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
							ABUTMENTS						
A501	10	10	20	11'-8"	243	STR							
A502	18	16	34	7'-4"	260	STR							
A503	15	15	30	11'-11"	373	3	3'-2"	2'-6"					
A504	17	17	34	9'-6"	337	2	2'-3"	5'-3"	2'-3"				
A505	10	10	20	5'-0"	104	STR							
A506	8	8	16	3'-3"	54	STR							
A507	14	3	17	9'-8"	171	1	1'-3"	8'-6"					
A508	6	6	12	19-0"	238	STR							
A509	21	21	42	7'-2"	314	2	2'-0"	3'-5"	2'-0"				
A510	3		3	10'-0"	31	1	1'-3"	8'-10"					
A511	1	1	2	3'-4"	7	STR							
A512	6	6	12	3'-0"	38	STR							
A513		14	14	9'-1"	133	1	1'-3"	7'-11"					
A514	4		4	1'-9"	7	STR							
A515	51	40	91	5'-10"	554	2	1'-4"	3'-5"	1'-4"				
A516	18		18	1'-11"	36	STR							
A517	44		44	2'-2"	99	STR							
A518	36		36	2'-5"	91	STR							
A519	2	2	4	5'-1"	21	STR							
A520	2	2	4	5'-6"	23	STR							
A521	6	6	12	5'-11"	74	STR							
A522	34	34	68	30'-0"	2,128	STR							
A523	18	18	36	8'-6"	319	32	8'-6"						
A524	18		18	20'-0"	375	STR							
A525	18		18	6'-0"	113	33	6'-0"						
A526	8	6	14	8'-8"	127	STR							
A527	4	4	8	6'-0"	50	STR							
A528	2		2	5'-0"	10	STR							
A529	2		2	5'-8"	12	STR							
A530		2	2	5'-4"	11	STR							
A531		2	2	4'-8"	10	STR							
A532	2	2	4	4'-3"	18	2	1'-0"	2'-6"	1'-0"				
A533	4	4	8	13'-8"	114	STR							
A534		4	4	14'-1"	59	STR							
A535	2		2	9'-9"	20	1	1'-0"	8'-10"					
A536	2	2	4	14'-7"	61	1	1'-0"	13'-8"					
A537		2	2	15'-0"	31	1	1'-0"	14'-1"					
A538	2	4	6	3'-9"	23	STR							
A539	28	14	42	11'-7"	507	STR							
A540		6	6	1'-4"	8	STR							
A541		16	16	1'-6"	25	STR							
A542		18	18	1'-9"	33	STR							
A543		40	40	1'-11"	80	STR							
A544		18	18	9'-3"	174	33	9'-3"						
A545		14	14	12'-1"	176	STR							
A546	24	25	49	7'-4"	375	23	11"	3'-3"	3'-0"			2¾"	
A601	17	17	34	16'-3"	830	2	8'-9"	5'-3"	2'-7"				
A602	88	74	162	7'-11"	644	2	3'-5"	1'-5"	3'-5"				
A603	88	74	162	5'-9"	1,399	2	2'-4"	1'-5"	2'-4"				
A604	88	74	162	6'-3"	1,521	2	2'-10"	11"	2'-10"				
A605	15	15	30	12'-10"	578	2	6'-0"	1'-2"	6'-0"				
A606	16	14	30	8'-4"	375	STR							
A607	14	16	30	9'-0"	406	STR							

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
							ABUTMENTS						
A608	8		8	6'-10"	82	2	3'-0"	1'-2"	3'-0"				
A609	10	10	20	12'-4"	370	2	5'-9"	1'-2"	5'-9"				
A610		10	10	11'-8"	175	2	5'-5"	1'-2"	5'-5"				
A611	24	25	49	3'-3"	239	STR							
A612	24	25	49	4'-0"	294	22	2'-3"	11"	11"				
A613	2	1	3	11'-7"	52	STR							
A614		1	1	12'-1"	18	STR							
A801	4	4	8	18'-10"	402	STR							
A802	4	4	8	17'-2"	367	STR							
A803	8	8	16	3'-0"	128	STR							
A804	8	8	16	5'-6"	235	STR							
				TOTAL	16,182								

NOTES:

1. FOR BENDING DIAGRAMS AND ADDITIONAL NOTES, SEE SHEET 36/65 .

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DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

REINFORCING SCHEDULE
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

PIER 1

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
1P501	30	8'-11"	279	2	3'-3"	2'-8"	3'-3"	
1P502	2	10'-9"	22	2	4'-2"	2'-8"	4'-2"	
1P503	2	9'-1"	19	2	3'-4"	2'-8"	3'-4"	
1P504	6	7'-11"	50	19	6'-7"	1'-4"	5"	
1P505	35	6'-5"	234	2	2'-0"	2'-8"	2'-0"	
1P506	8	7'-9"	65	2	2'-8"	2'-8"	2'-8"	
1P507	4	8'-7"	36	2	3'-1"	2'-8"	3'-1"	
1P508	1	12'-1"	13	2	4'-10"	2'-8"	4'-10"	
1P509	70	2'-8"	195	STR				
1P510	14	5'-0"	73	1	2'-8"	2'-5"		
1P511	2	7'-2"	15	STR				
1P512	8	30'-0"	250	STR				
1P513	4	19'-2"	80	STR				
1P514	4	3'-0"	13	33	3'-0"			
1P515	4	6'-3"	26	32	6'-3"			
1P516	4	20'-7"	86	STR				
1P517	2	4'-0"	9	STR				
1P701	28	8'-8"	496	STR				
1P901	12	14'-2"	578	1	1'-2"	11'-8"		
1P902	12	20'-5"	833	STR				
1P903	6	20'-7"	420	STR				
1P904	14	30'-0"	1428	STR				
1P905	6	13'-2"	269	32	13'-2"			
1P906	6	26'-4"	537	STR				
1P907	6	9'-8"	197	33	9'-8"			
1PSP401	1		290	27	4 ½"	2'-6"	19'-6"	
TOTAL			6513					

PIER 2

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
2P501	24	8'-9"	219	2	3'-2"	2'-8"	3'-2"	
	2	6'-9"			2'-2"		2'-2"	
2P502	SERIES OF	TO	64	2	TO	2'-8"	TO	6"
	4	8'-6"			2'-11"		2'-11"	
2P503	1	12'-5"	13	2	5'-0"	2'-8"	5'-0"	
2P504	20	2'-6"	52	STR				
2P505	39	6'-5"	261	2	2'-0"	2'-8"	2'-0"	
2P506	8	7'-9"	65	2	2'-8"	2'-8"	2'-8"	
2P507	6	5'-8"	36	19	3'-8"	1'-9"	11"	
2P508	58	2'-9"	166	STR				
2P509	2	9'-1"	19	2	3'-4"	2'-8"	3'-4"	
2P510	2	7'-9"	16	STR				
2P511	8	30'-0"	250	STR				
2P512	4	14'-7"	61	STR				
2P513	4	3'-0"	13	33	3'-0"			
2P514	4	5'-9"	24	32	5'-9"			
2P515	2	20'-5"	43	STR				
2P516	6	8'-8"	73	19	7'-1"	1'-7"	3"	
2P517	2	11'-5"	24	2	4'-6"	2'-8"	4'-6"	
2P518	2	4'-4"	9	STR				
2P519	2	19'-0"	40	STR				
2P701	28	8'-8"	496	STR				
2P901	12	11'-7"	473	1	1'-2"	10'-8"		
2P902	12	21'-6"	878	STR				
2P903	6	17'-4"	354	STR				
2P904	14	30'-0"	1428	STR				
2P905	6	12'-11"	264	32	12'-11"			
2P906	6	21'-9"	444	STR				
2P907	6	9'-8"	197	33	9'-8"			
2PSP401	1		300	27	4 ½"	2'-6"	20'-5"	
TOTAL			6282					

PIER 3

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
3P501	24	8'-5"	211	2	3'-0"	2'-8"	3'-0"	
3P502	16	7'-9"	130	2	2'-8"	2'-8"	2'-8"	
3P503	1	10'-9"	12	2	4'-2"	2'-8"	4'-2"	
3P504	72	5'-3"	394	1	2'-8"	2'-8"		
3P505	1	11'-9"	17	2	4'-8"	2'-8"	4'-8"	
3P506	6	7'-7"	47	19	6'-3"	1'-4"	3"	
3P507	2	7'-6"	16	STR				
3P508	10	30'-0"	313	STR				
3P509	4	10'-10"	45	STR				
3P510	4	3'-0"	13	33	3'-0"			
3P511	4	6'-1"	25	32	6'-1"			
3P512	2	20'-10"	43	STR				
3P513	6	6'-10"	43	19	4'-6"	2'-4"	6"	
3P514	2	10'-5"	22	2	4'-0"	2'-8"	4'-0"	
3P515	2	19'-4"	41	STR				
3P516	2	4'-4"	9	STR				
3P701	28	8'-8"	496	STR				
3P901	12	11'-7"	473	1	1'-2"	10'-8"		
3P902	12	24'-0"	979	STR				
3P903	6	16'-4"	333	STR				
3P904	14	30'-0"	1428	STR				
3P905	6	13'-3"	270	32	13'-3"			
3P906	6	18'-0"	367	STR				
3P907	6	9'-8"	197	33	9'-8"			
3PSP401	1		341	27	4 ½"	2'-6"	23'-7"	
TOTAL			6265					

NOTES:

1. FOR BENDING DIAGRAMS AND ADDITIONAL NOTES, SEE SHEET 36/65 .

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN PJK | CHECKED LAB | REVIEWED RAB | DATE 11-15 | REVISED | STRUCTURE FILE NUMBER 7804350

REINFORCING SCHEDULE
TRU-80-0956 L
OVER U.S. 62/S.R. 7

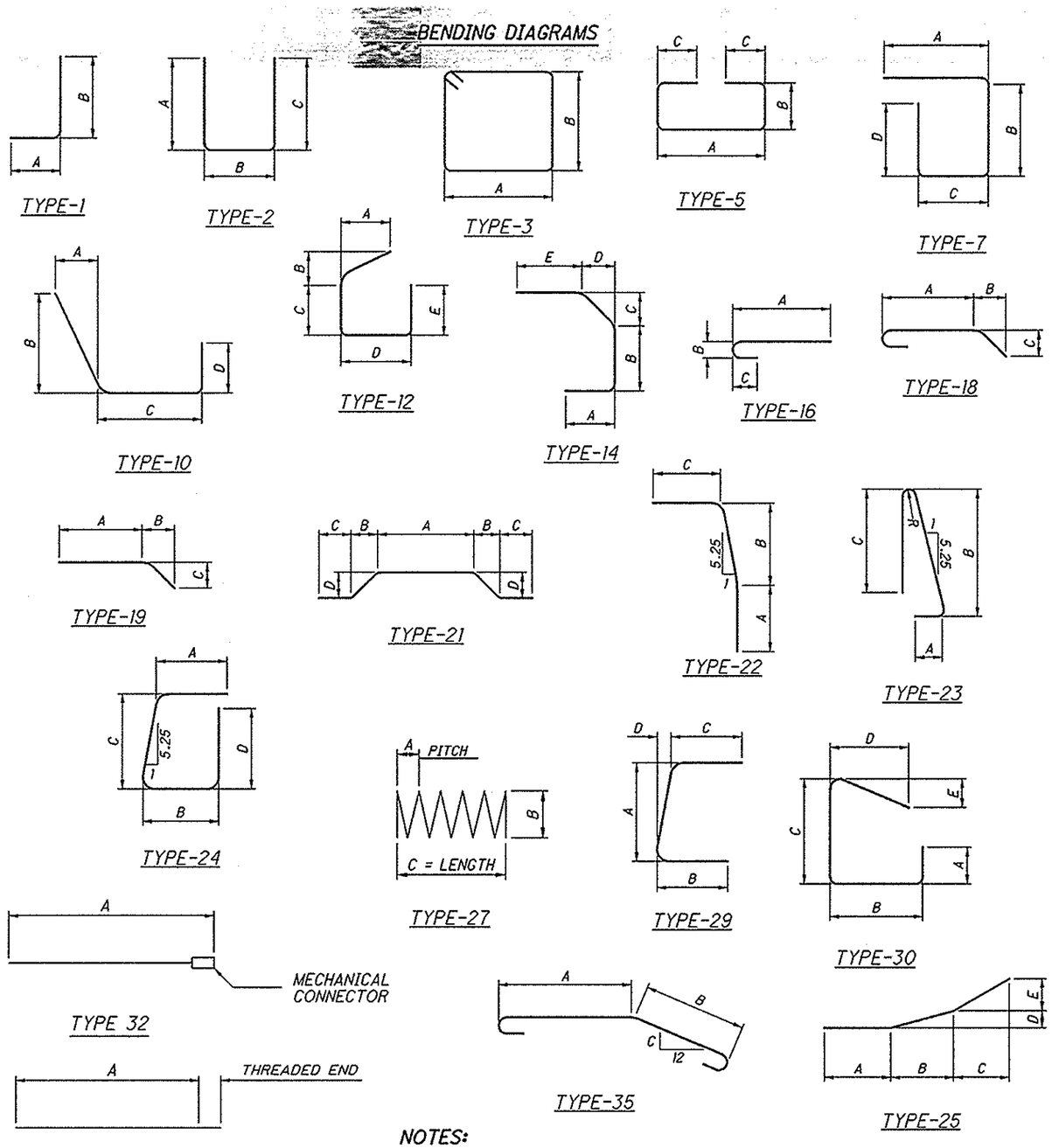
TRU-80-09.56
PID No. 77886

35/65

117/147

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE											
S401	840	30'-0"	16,834	STR							
S402	96	22'-3"	1,427	STR							
S403	1,017	9'-10"	6,680	16	9'-4"	6"	X'-X"				
S501	2,768	30'-0"	86,611	STR							
S502	88	25'-6"	2,340	STR							
S503	1,004	8'-1"	8,465	32	8'-1"						
	2	4'-0"			4'-0"						
S504	SERIES OF	TO	354	32	TO						2'-10½"
	10	29'-11"			29'-11"						
	2	8'-0"									
S505	SERIES OF	TO	300	STR							2'-10¼"
	8	28'-0"									
S506	10	5'-3"	55	STR							
S507	2	6'-3"	13	STR							
	2	5'-8"									
S508	SERIES OF	TO	286	STR							3'-3½"
	8	28'-8"									
	2	7'-0"									
S509	SERIES OF	TO	285	STR							2'-10½"
	8	27'-2"									
	2	5'-6"									
S510	SERIES OF	TO	159	STR							2'-10½"
	6	19'-10"									
S511	202	22'-4"	4,659	STR							
S512	200	18'-8"	3,933	STR							
S513	202	15'-3"	3,213	STR							
S514	202	12'-5"	2,616	STR							
S515	208	10'-2"	2,205	STR							
S516	1,024	3'-10"	4,094	33	3'-10"						
S517	526	7'-4"	4,023	23	11"	3'-3"	3'-0"				
S518	4	9'-4"	39	STR							
S519	22	14'-8"	337	STR							
S520	76	7'-2"	568	STR							
S521	4	10'-3"	43	STR							
S601	306	30'-0"	13,788	STR							
S602	306	13'-0"	5,975	STR							
S603	526	2'-5"	1,909	1	1'-0"	1'-7"					
S604	526	3'-2"	2,502	29	1'-7"	1'-0"	11"	3⅝"			
S605	2	9'-4"	28	STR							
S606	11	14'-8"	242	STR							
S607	38	7'-2"	409	STR							
S608	2	10'-3"	31	STR							
TOTAL			174,423								

BENDING DIAGRAMS



NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED IN THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE S601 IS A NO. 6 BAR. BAR DIMENSIONS ARE SHOWN 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 A BAR.
2. ALL REINFORCING STEEL TO BE EPOXY COATED.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804326	

REINFORCING SCHEDULE
TRU-80-0956 L
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

ESTIMATED QUANTITIES

CALC BY: AJM CHK'D BY: MMP

ITEM	ITEM EXT.	PARTICIPATION (05/NHS/BR)	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL	AS PER PLAN SHEET NUMBERS
202	11203	LUMP	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	3/65
202	22900	245	245	SY	APPROACH SLAB REMOVED				245	
202	23500	1,706	1,706	SY	WEARING COURSE REMOVED				1,706	
503	11100	LUMP	LUMP		COFFERDAMS AND EXCAVATION BRACING				LUMP	
503	21300	LUMP	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
505	11100	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00100	1,610	1,610	FT	STEEL PILES HP10X42, FURNISHED	850	760			
507	00150	1,390	1,390	FT	STEEL PILES HP10X42, DRIVEN	750	640			
509	10000	207,745	207,745	LB	EPOXY COATED REINFORCING STEEL	17,154	16,971	173,620		
509	20001	100	100	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	3/65
510	10000	516	516	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	250	266			
511	34446	590	590	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			590		
511	34450	75	75	CY	CLASS QC2 CONCRETE, WITH QC/QA, BRIDGE DECK (PARAPET)			75		
511	41012	75	75	CY	CLASS QC1 CONCRETE, WITH QC/QA, PIER ABOVE FOOTINGS		75			
511	43512	163	163	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING	163				
511	46512	27	27	CY	CLASS QC1 CONCRETE, WITH QC/QA, FOOTING		27			
512	10100	1,080	1,080	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	191	372	517		
512	10300	120	120	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN			120		
512	74000	198	198	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	29	169			
513	10261	551,000	551,000	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN			551,000		4/65 5/65
513	20000	12,174	12,174	EACH	WELDED STUD SHEAR CONNECTORS			12,174		
516	11210	157	157	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL				157	
516	13600	79	79	SF	1" PREFORMED EXPANSION JOINT FILLER				79	
516	44100	17	17	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2.67 X 12 X 16)	17				
516	44200	17	17	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (3.34 X 15 X 22)		17			
516	44200	9	9	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (3.34 X 14 X 24)		9			
518	21200	63	63	CY	POROUS BACKFILL WITH FILTER FABRIC	63				
518	40000	180	180	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	180				
518	40010	20	20	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	20				
526	25011	443	443	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=15"), AS PER PLAN				443	60/65 61/65 62/65
526	90010	159	159	FT	TYPE A INSTALLATION				159	

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN PJK | CHECKED MMP | REVIEWED RAB | DATE 11-15 | REVISED

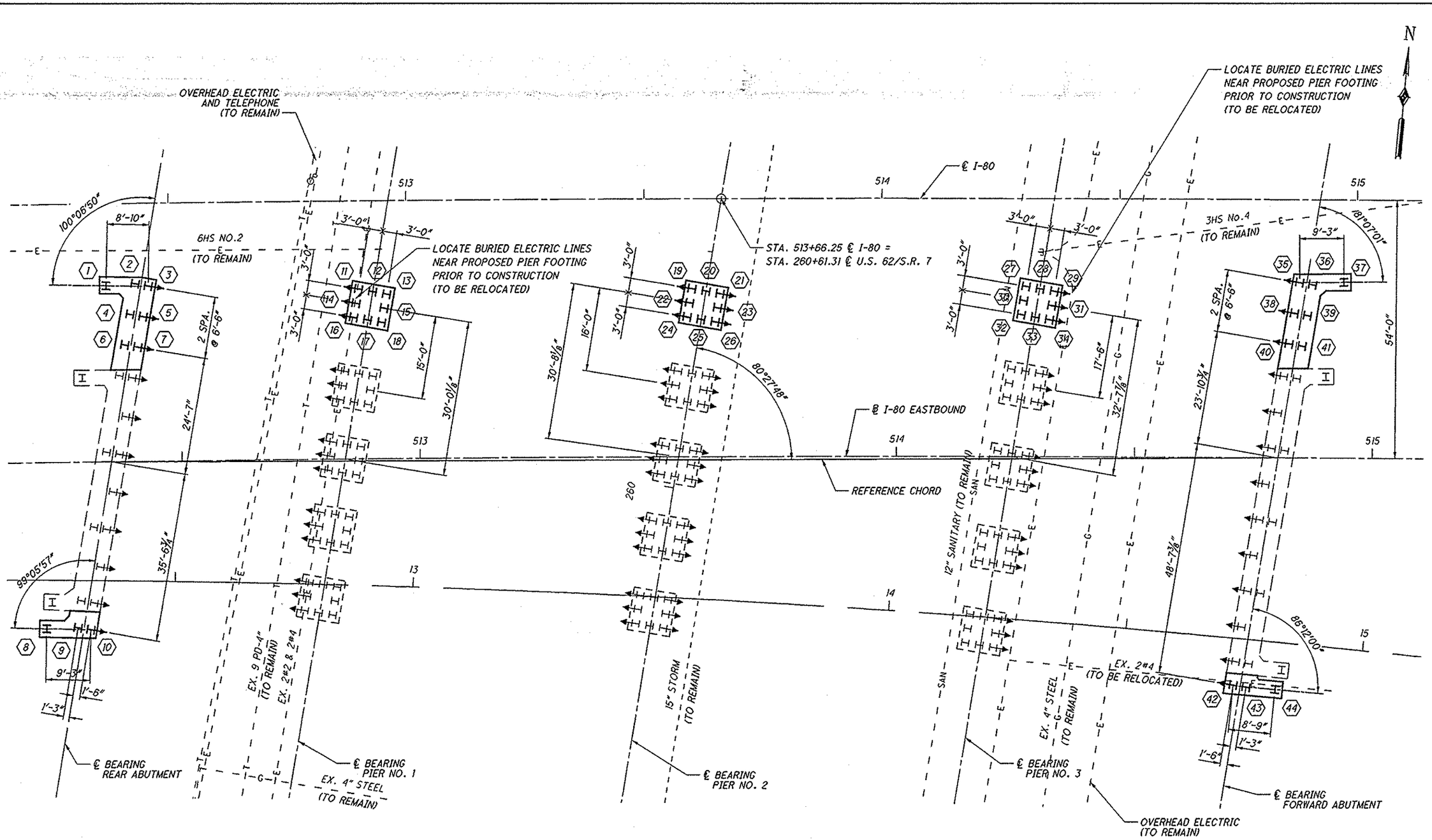
STRUCTURE FILE NUMBER 7804350

ESTIMATED QUANTITIES
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

37/65

119
147



LEGEND

- (1) INDICATES PILE NUMBER
- I INDICATES VERTICAL PILES
- I INDICATES BATTERED PILES. BATTER 1:4 IN DIRECTION INDICATED BY ARROW.

RIGHT STRUCTURE

NOTES:

1. FOR DETAIL OF ABUTMENT FOOTINGS, SEE SHEET 42/65 AND 45/65.
2. FOR DETAILS OF PIER FOOTINGS, SEE SHEET 49/65 .
3. ALL EXISTING PILES ARE 10BP42.
4. ALL PROPOSED PILES ARE HP10x42.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804350	

PILE LOCATION PLAN
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

38/65

120/147

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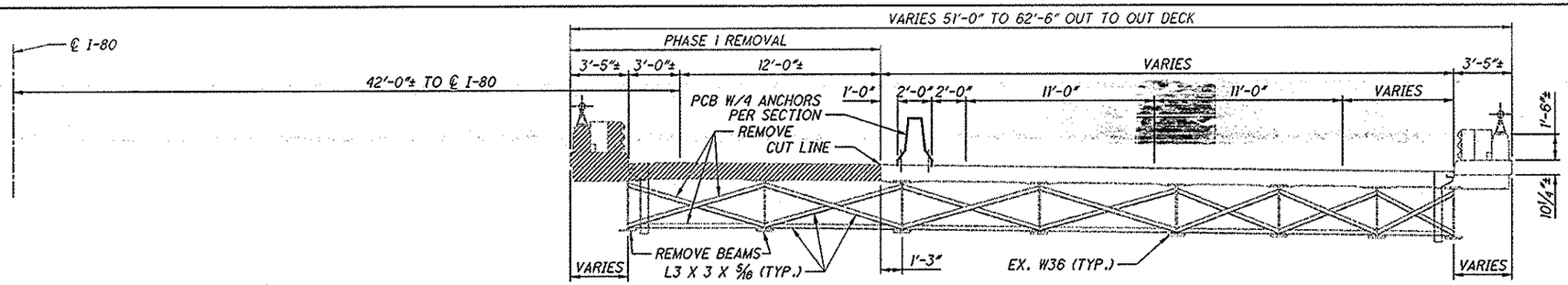
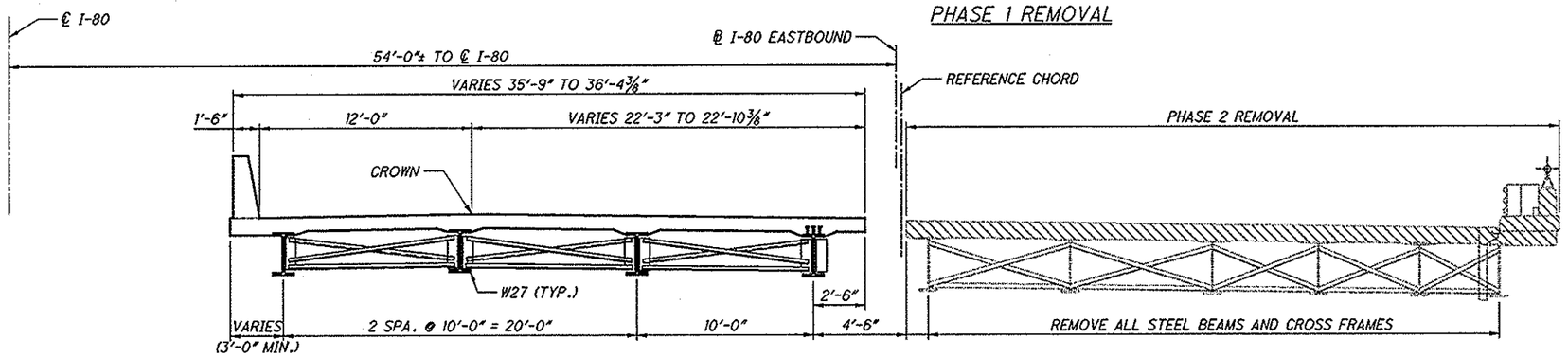
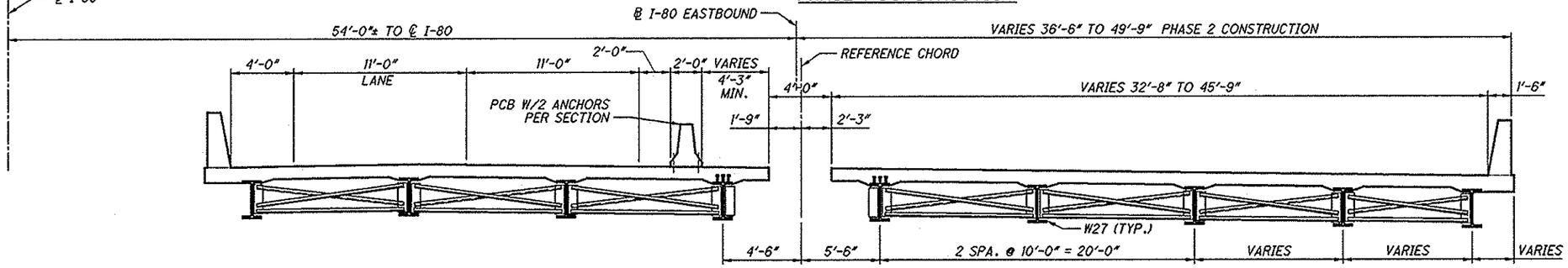


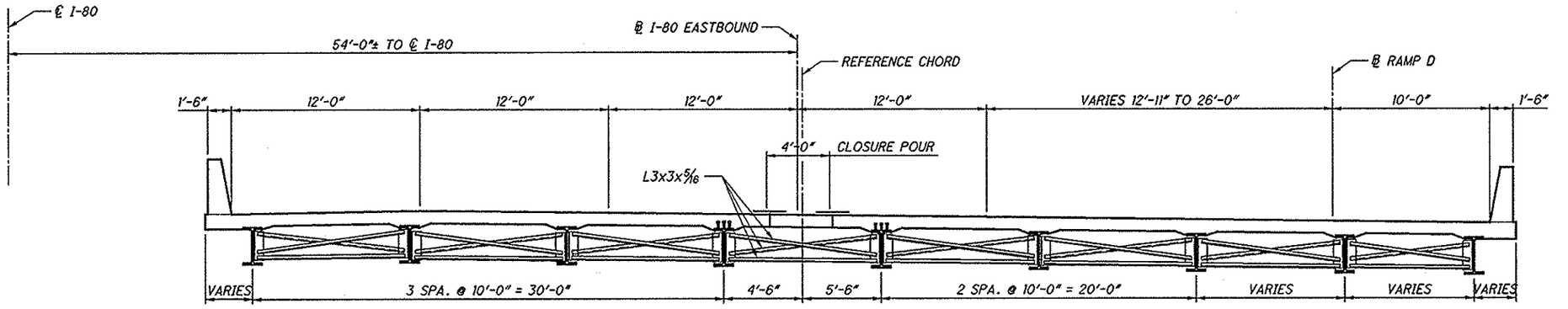
PHASE 1 REMOVAL



PHASE 1 CONSTRUCTION



PHASE 2 CONSTRUCTION



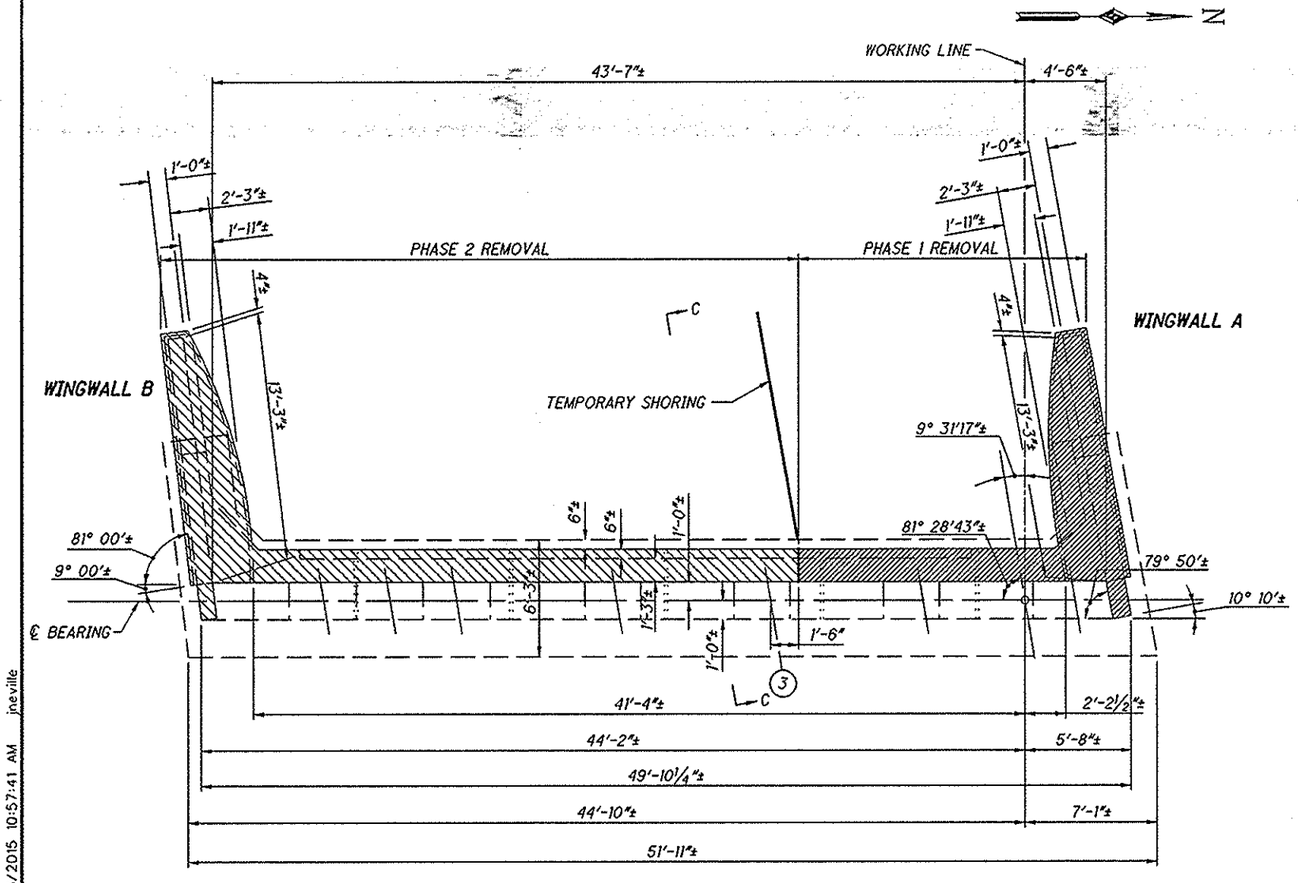
FINAL TRANSVERSE SECTION

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

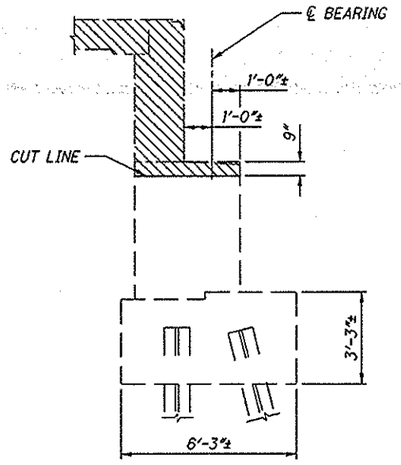
DESIGNED	DRAWN	REVIEWED	DATE
AJM	VMB	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804350	

STAGED CONSTRUCTION DETAILS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

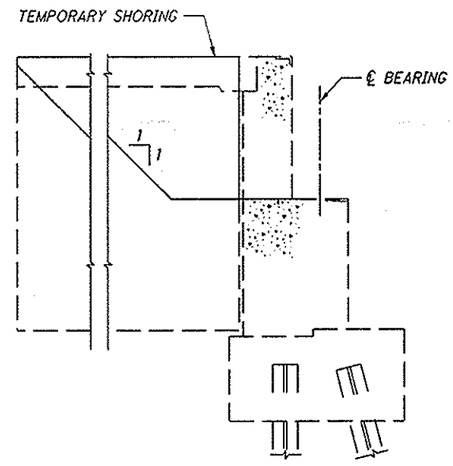
TRU-80-09.56
PID No. 77886



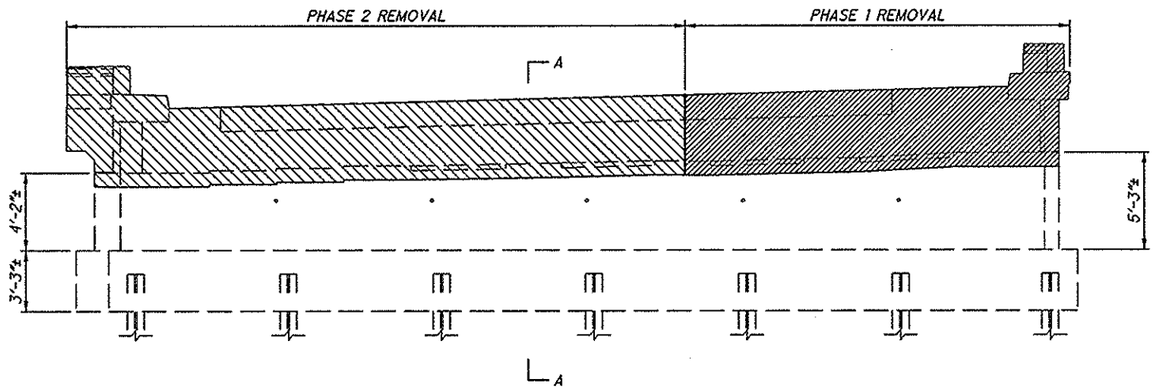
PLAN



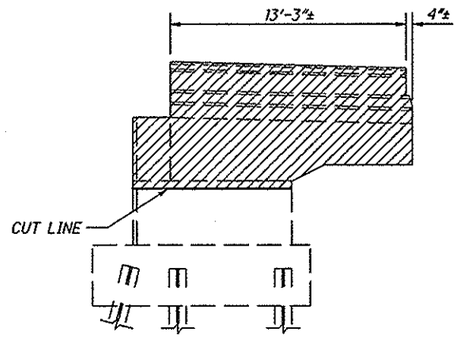
SECTION A-A



SECTION C-C



ELEVATION



ELEVATION
WINGWALL "A"
WINGWALL "B" SIMILAR

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804350	

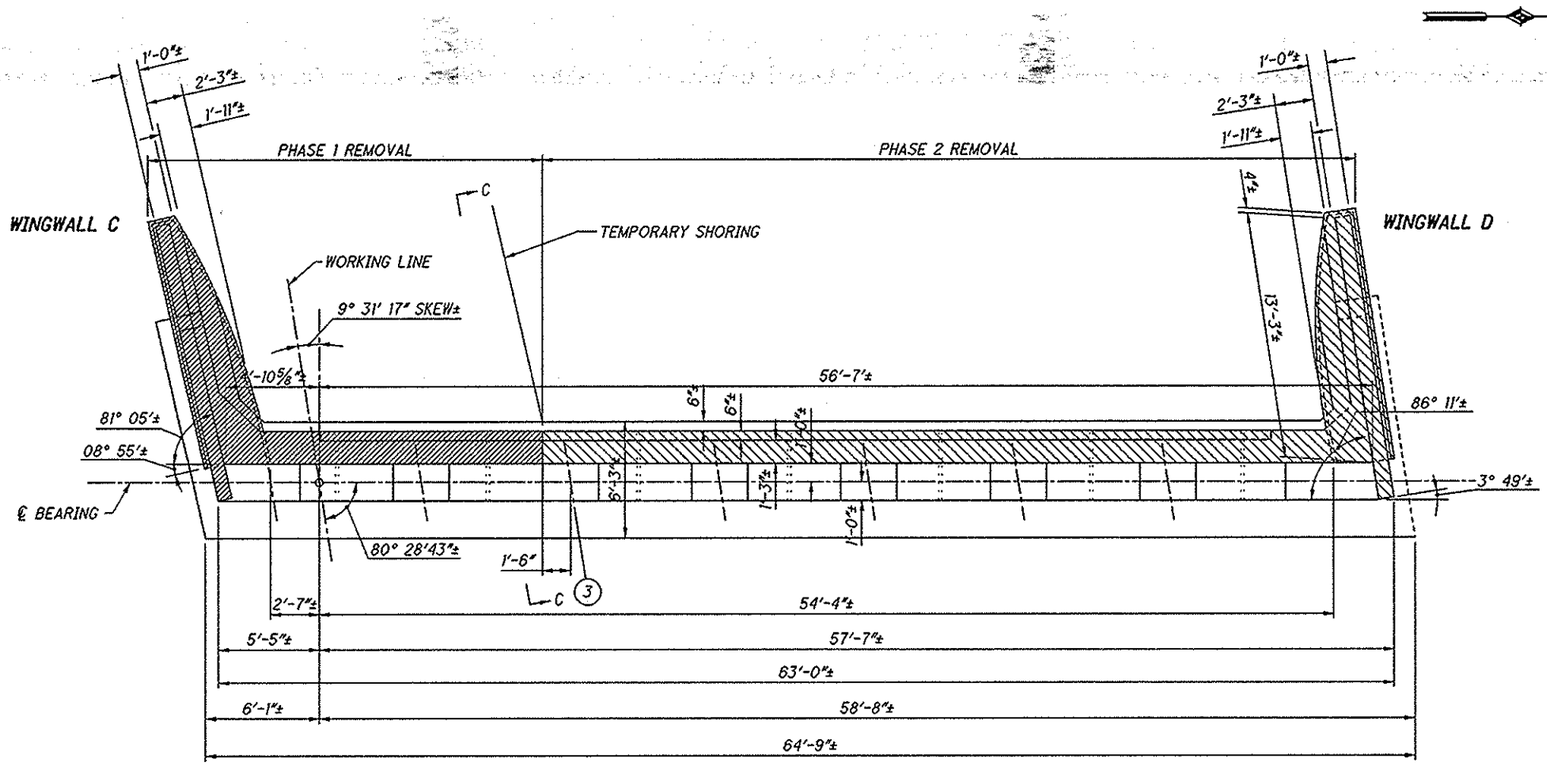
REMOVAL PLAN - REAR ABUTMENT

TRU-80-0956 R
OVER U.S. 62/S.R. 7

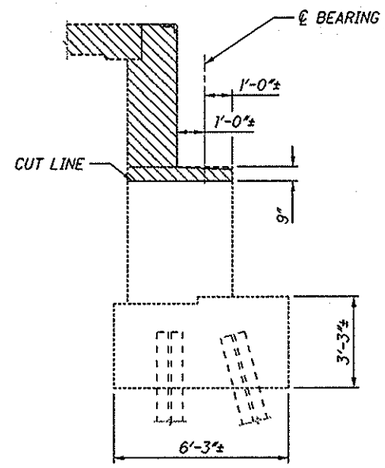
TRU-80-09.56
PID No. 77886

40/65

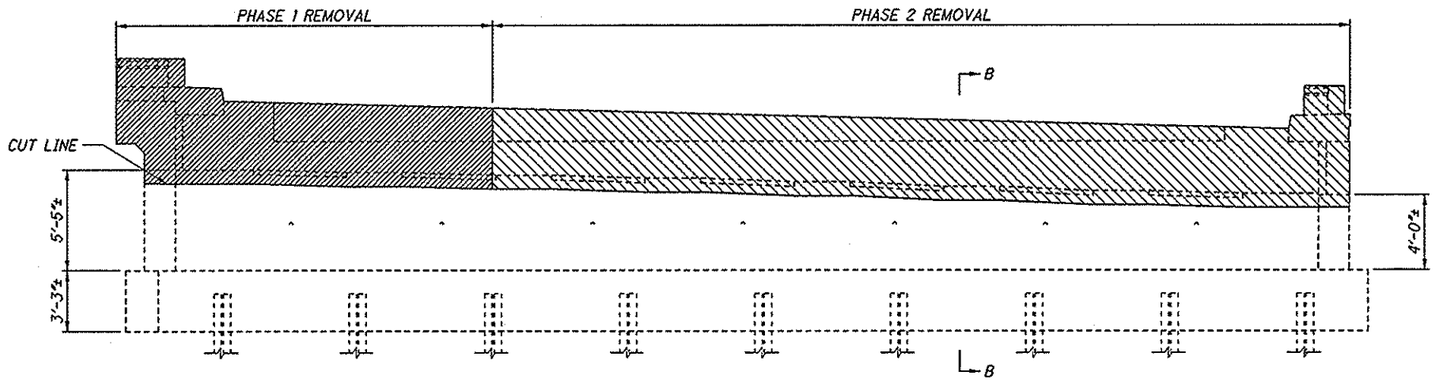
122/147



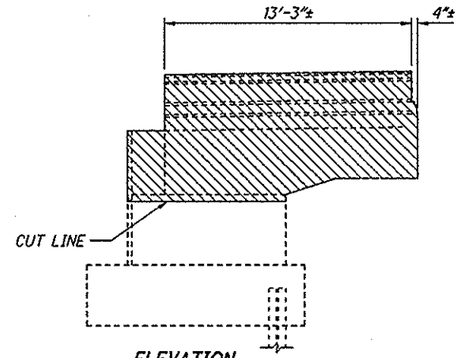
PLAN



SECTION B-B



ELEVATION



ELEVATION
WINGWALL "D" - WINGWALL "C" SIMILAR

NOTES:

1. FOR SECTION C-C, SEE SHEET 40/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE
AJM	PJK	LAB	RAB	11-15

REVISED

STRUCTURE FILE NUMBER
7804350

REMOVAL PLAN - FORWARD ABUTMENT
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

41/65

123/147

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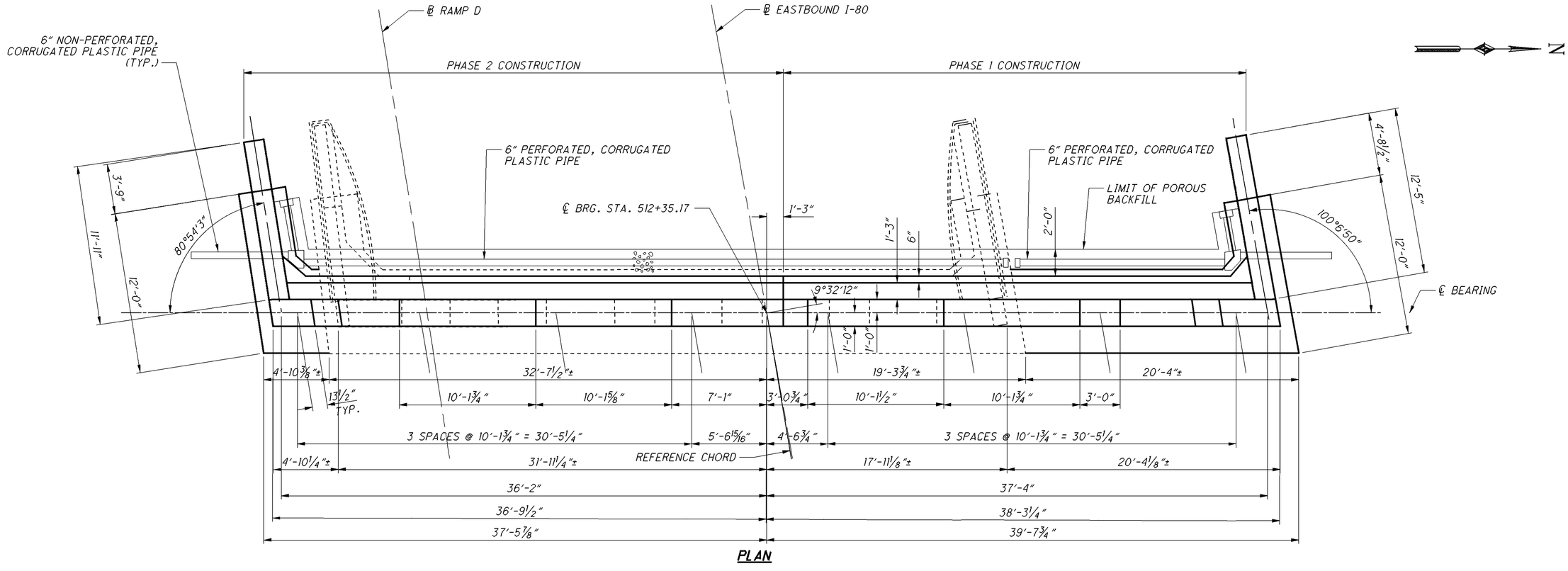
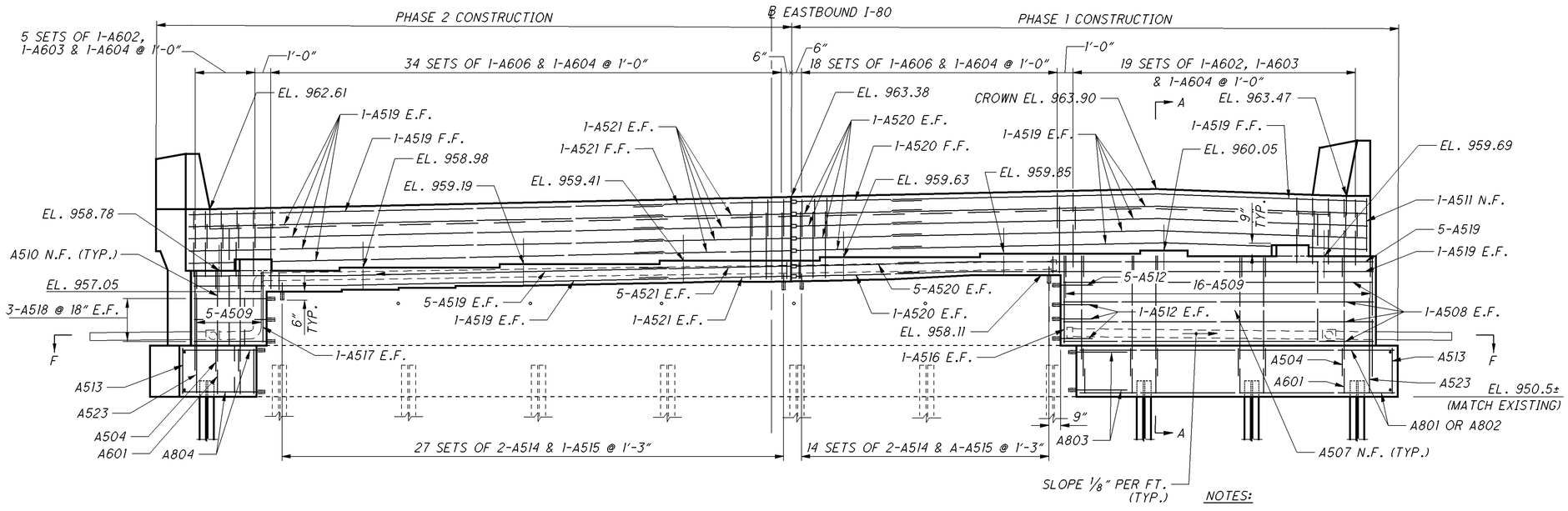


PLAN



ELEVATION

NOTES:

1. FOR SECTIONS A-A & F-F, SEE SHEET 45/65 .
2. FOR FOOTING PLAN, SEE SHEET 45/65 .
3. FOR SEISMIC PEDESTAL DETAILS, SEE ODOT STANDARD DRAWING

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | CHECKED LAB
DRAWN VMB | REVISED
REVIEWED RAB | DATE 11-15 | STRUCTURE FILE NUMBER 7804350

REAR ABUTMENT
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

42/65

124/147

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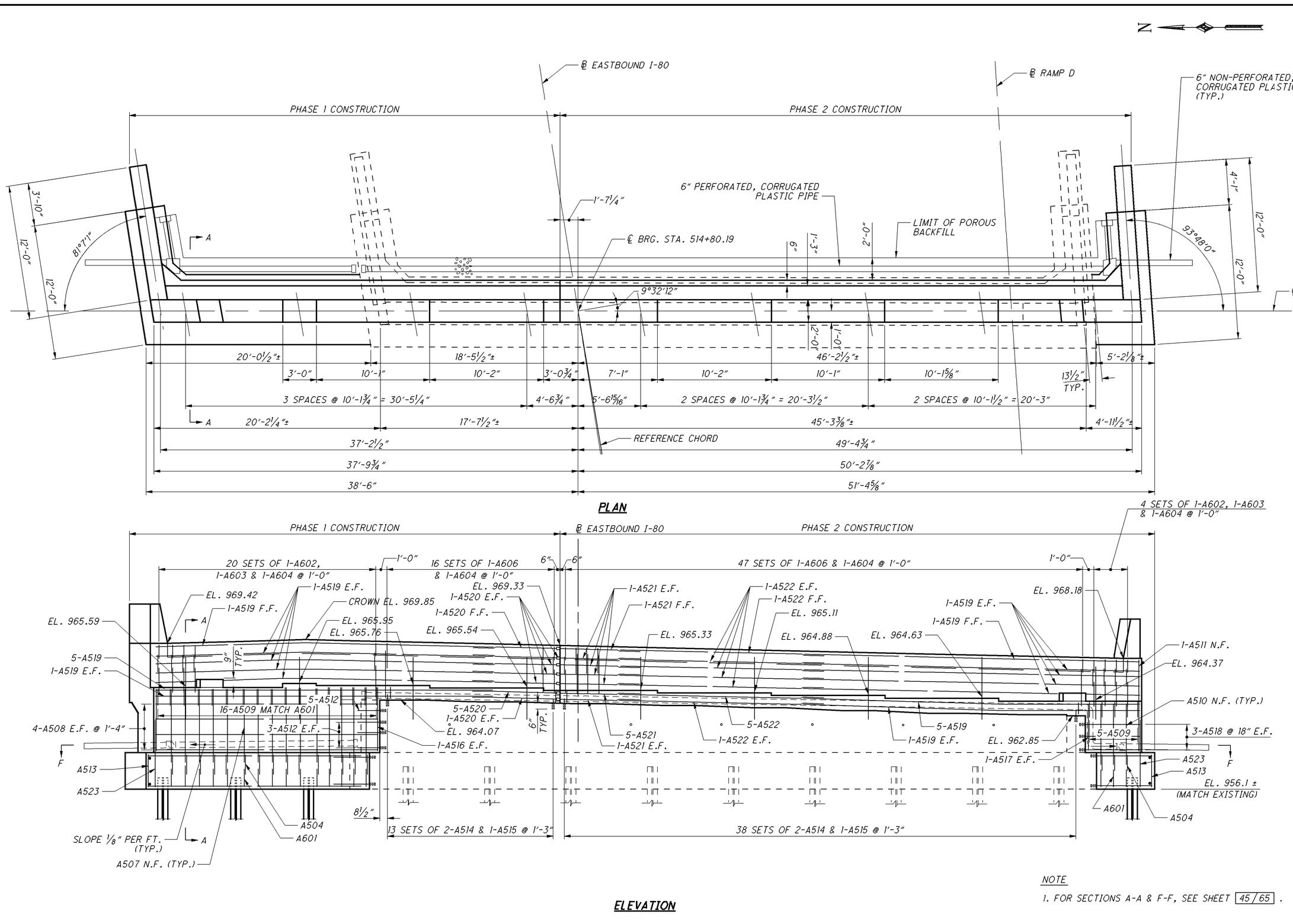

NOTE

1. FOR SECTIONS A-A & F-F, SEE SHEET 45/65 .

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DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	VMB	RAB	11-15

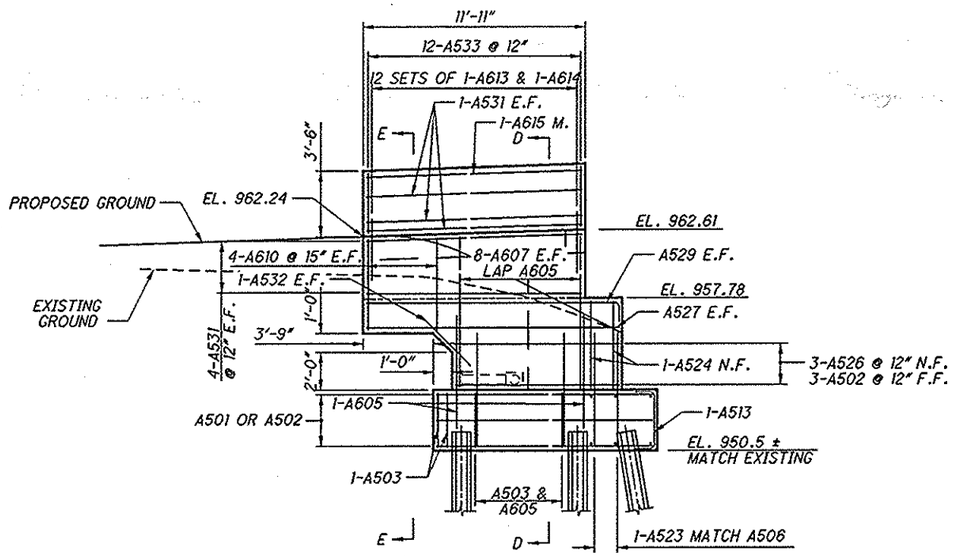
CHECKED	REVISED	STRUCTURE FILE NUMBER
LAB		7804350

FORWARD ABUTMENT
TRU-80-0956 R
OVER U.S. 62/S.R. 7

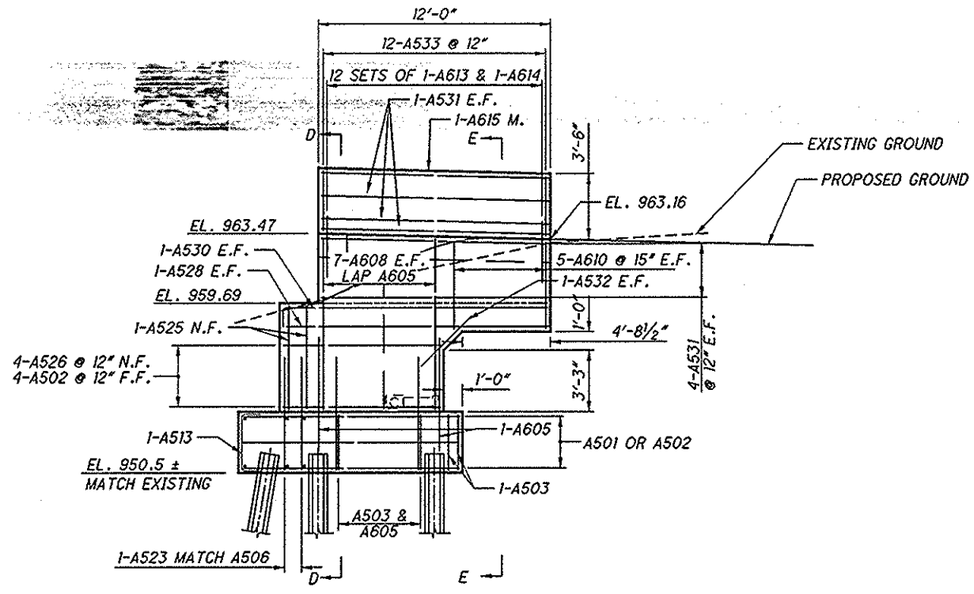
TRU-80-09.56
PID No. 77886

43/65

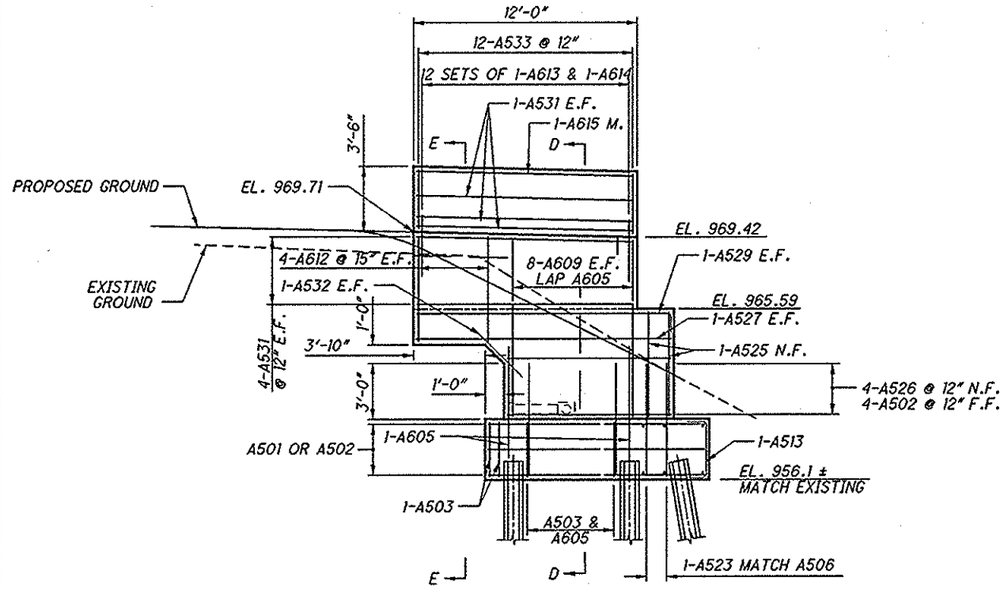
125/147



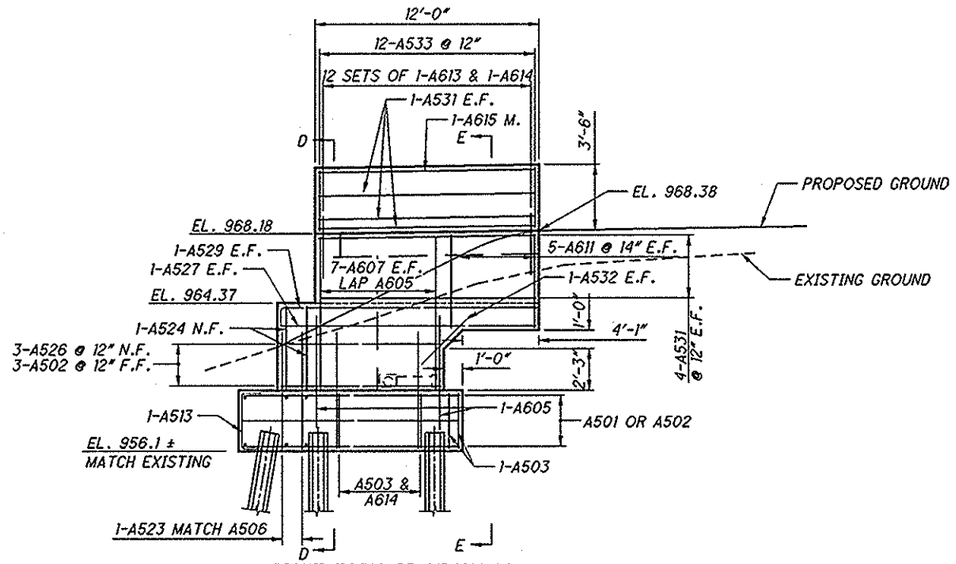
RIGHT REAR WINGWALL



LEFT REAR WINGWALL



LEFT FORWARD WINGWALL



RIGHT FORWARD WINGWALL

NOTES:

1. FOR SECTIONS D-D & E-E, SEE SHEET 45/65 .
2. FOR LOCATIONS OF BARS IN RELATION TO THE FRONT FACE OF THE ABUTMENT ABOVE THE FOOTING, SEE SHEET 45/65 .

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM
DRAWN VMB
CHECKED LAB
REVIEWED RAB
DATE 11-15
REVISED
STRUCTURE FILE NUMBER 7804350

WINGWALLS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

44/65

126/147

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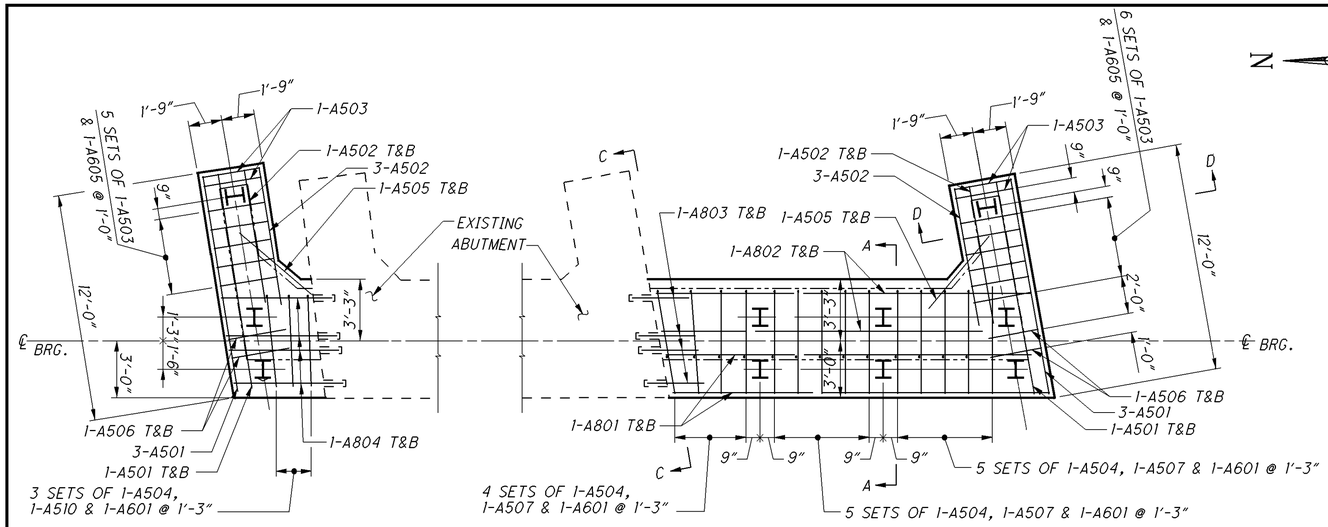
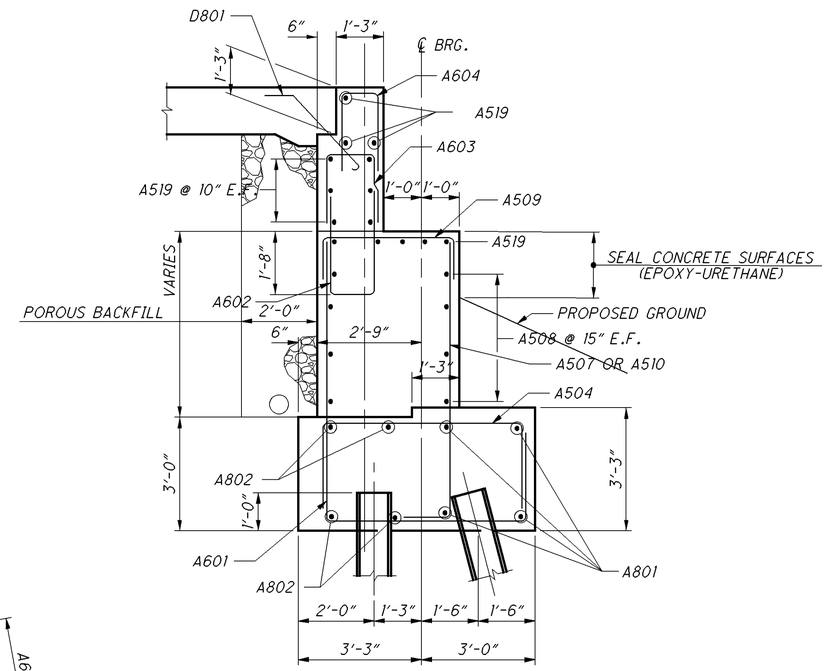
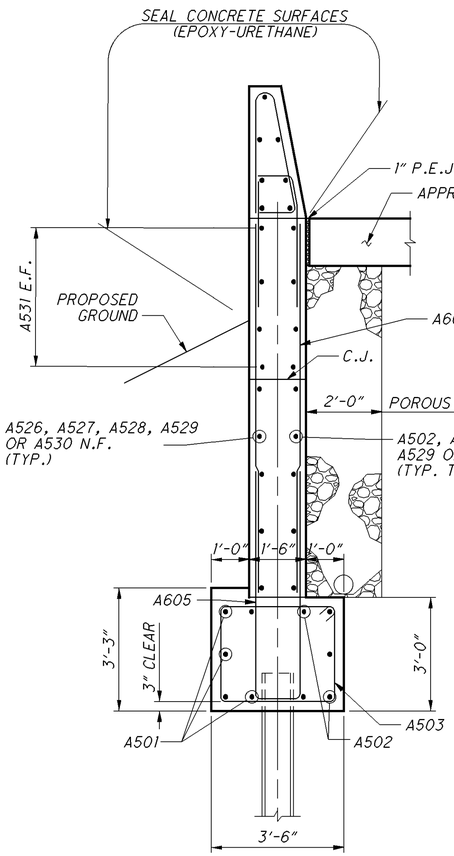


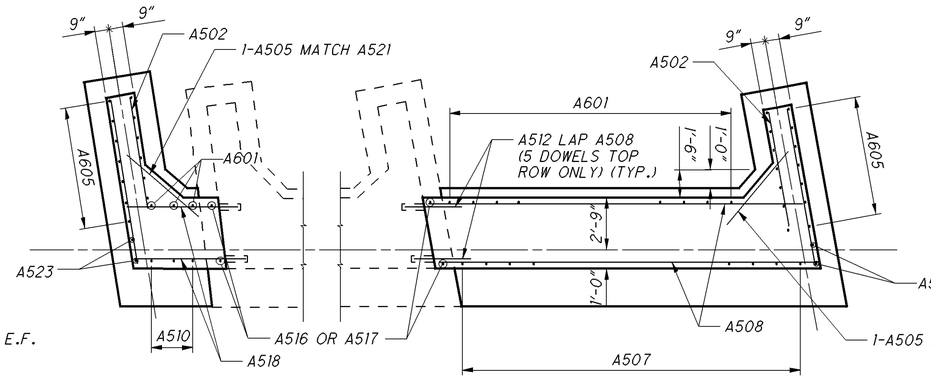
FOOTING PLAN (REAR ABUTMENT)



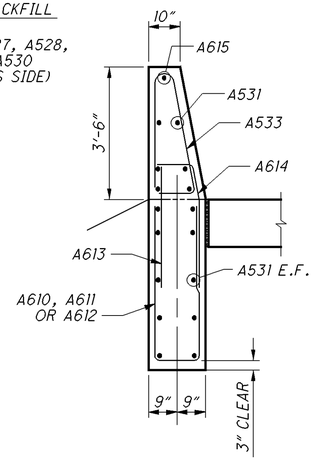
SECTION A-A



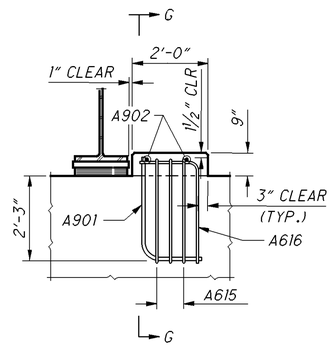
SECTION D-D



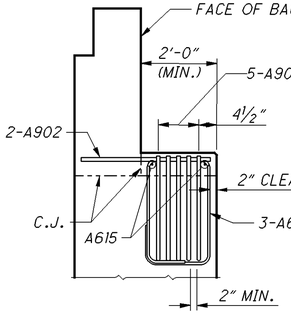
SECTION F-F



SECTION E-E



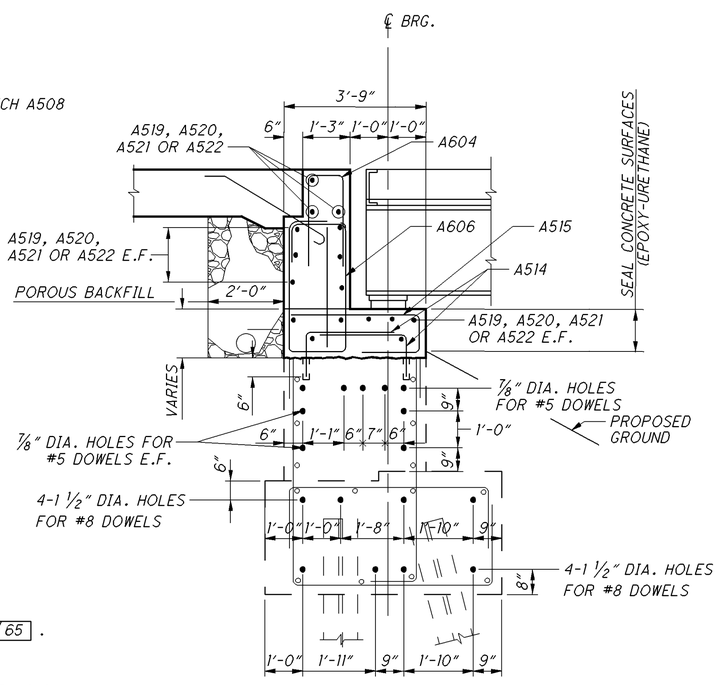
FRONT VIEW OF SEISMIC PEDESTAL



SECTION G-G

NOTES:

1. FOR THE LOCATION OF SECTIONS A-A & F-F, SEE SHEETS 42/65 & 43/65 .
2. FOR THE LOCATION OF SECTIONS D-D & E-E, SEE SHEET 44/65 .
3. CONTRACTOR SHALL REMOVE THE EXISTING CONCRETE SEALER PRIOR TO APPLYING THE EPOXY-URETHANE CONCRETE SEALER TO THE EXISTING CONCRETE SURFACES.
4. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STANDARD DRAWING A-1-69.



SECTION C-C

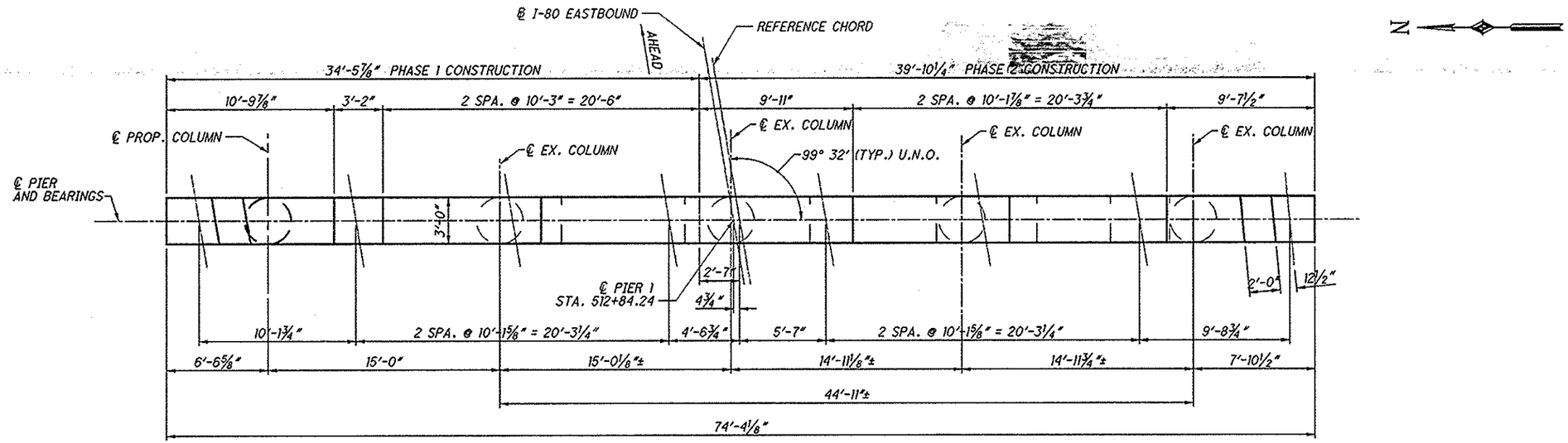
DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN VMB | REVIEWED RAB | DATE 11-15
CHECKED LAB | REVISED | STRUCTURE FILE NUMBER 7804350

ABUTMENT SECTIONS AND DETAILS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

45/65
127/147

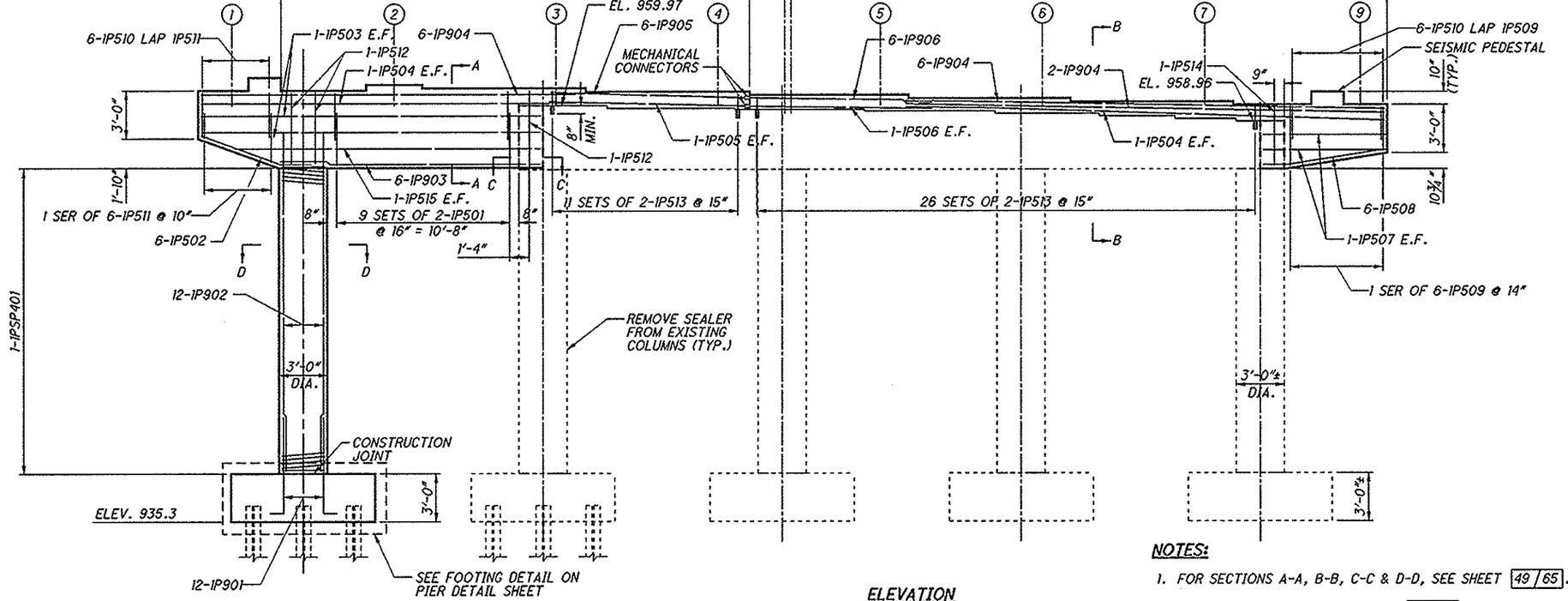


N

	1	2	3	4	5	6	7	9
EL.	960.79	961.15	960.93	960.70	960.48	960.27	960.05	959.85

MINIMUM LAP LENGTH
NO. 5 BAR = 2'-0"
NO. 9 BAR (TOP) = 9'-2"
NO. 9 BAR (OTHER) = 8'-1"

PLAN



ELEVATION

NOTES:

1. FOR SECTIONS A-A, B-B, C-C & D-D, SEE SHEET 49/65.
2. FOR FOOTING DETAIL, SEE SHEET 49/65.
3. FOR CONCRETE REMOVAL AT EXISTING CAP BEAM ENDS, SEE SECTION C-C, SHEET 49/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804350	

PIER NO. 1
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

46/65

128
147

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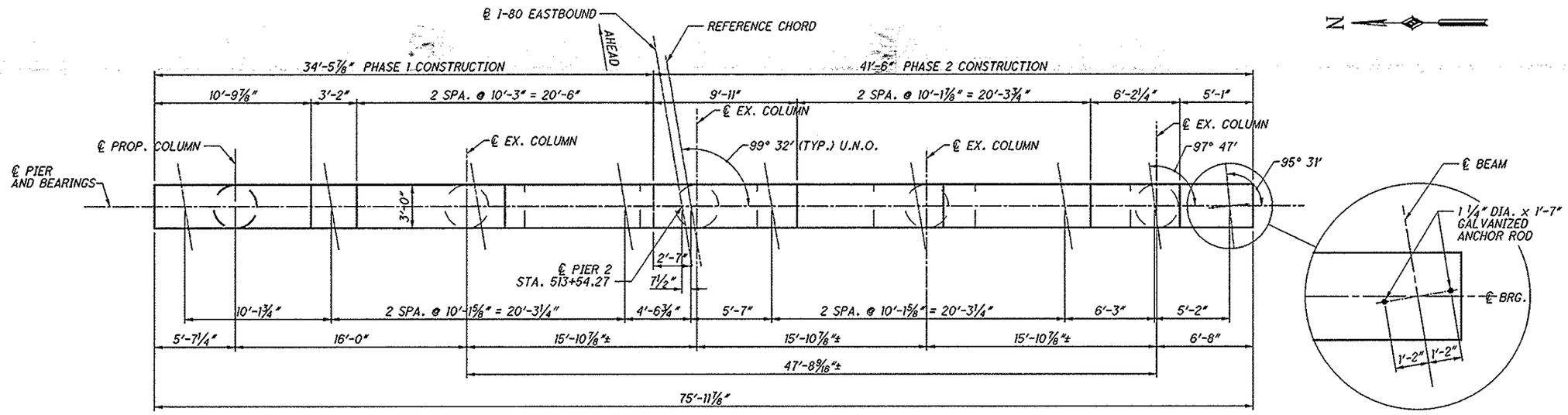
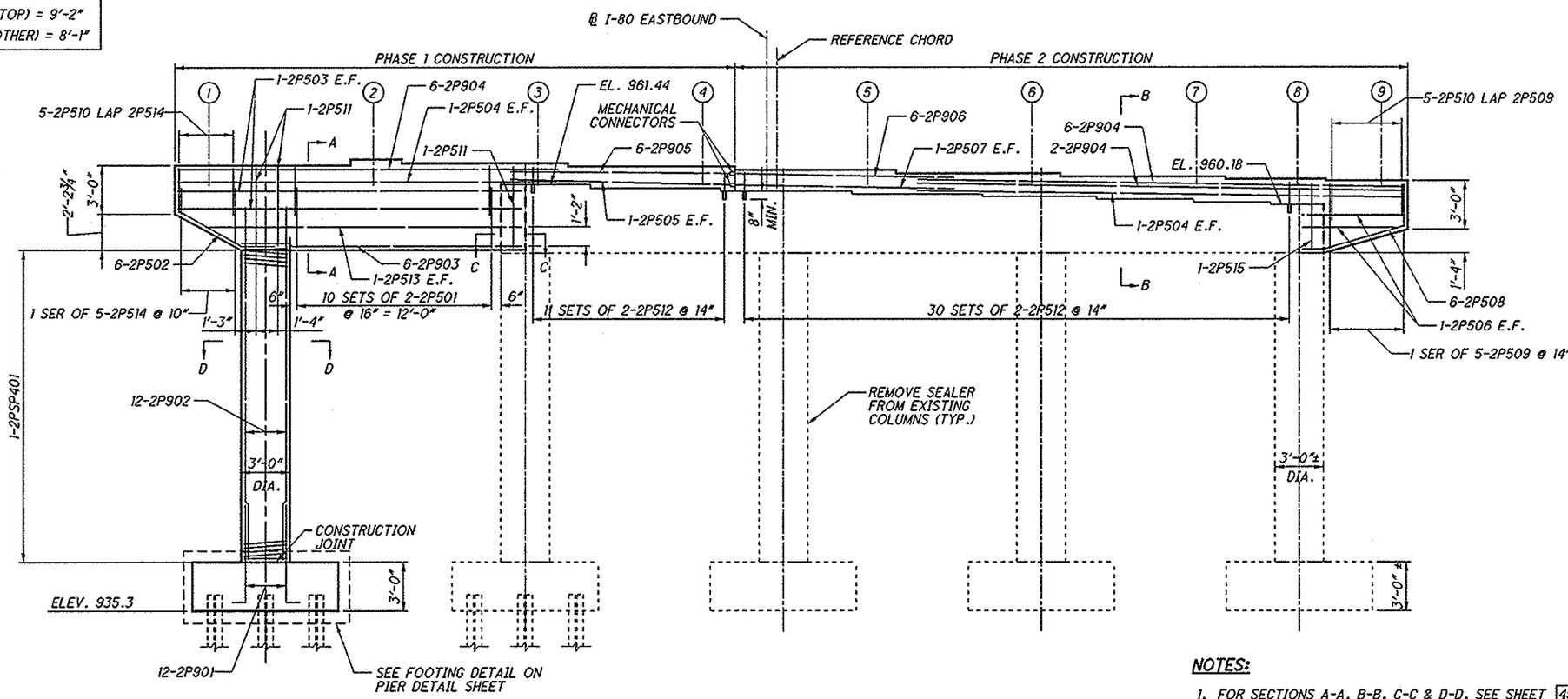


PLAN

	1	2	3	4	5	6	7	8	9
EL.	962.49	962.84	962.62	962.40	962.18	961.97	961.76	961.63	961.53

MINIMUM LAP LENGTH
NO. 5 BAR = 2'-0"
NO. 9 BAR (TOP) = 9'-2"
NO. 9 BAR (OTHER) = 8'-1"



ELEVATION

NOTES:

1. FOR SECTIONS A-A, B-B, C-C & D-D, SEE SHEET 49/65.
2. FOR FOOTING DETAIL, SEE SHEET 49/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804350	

PIER NO. 2
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

47/65

129/147

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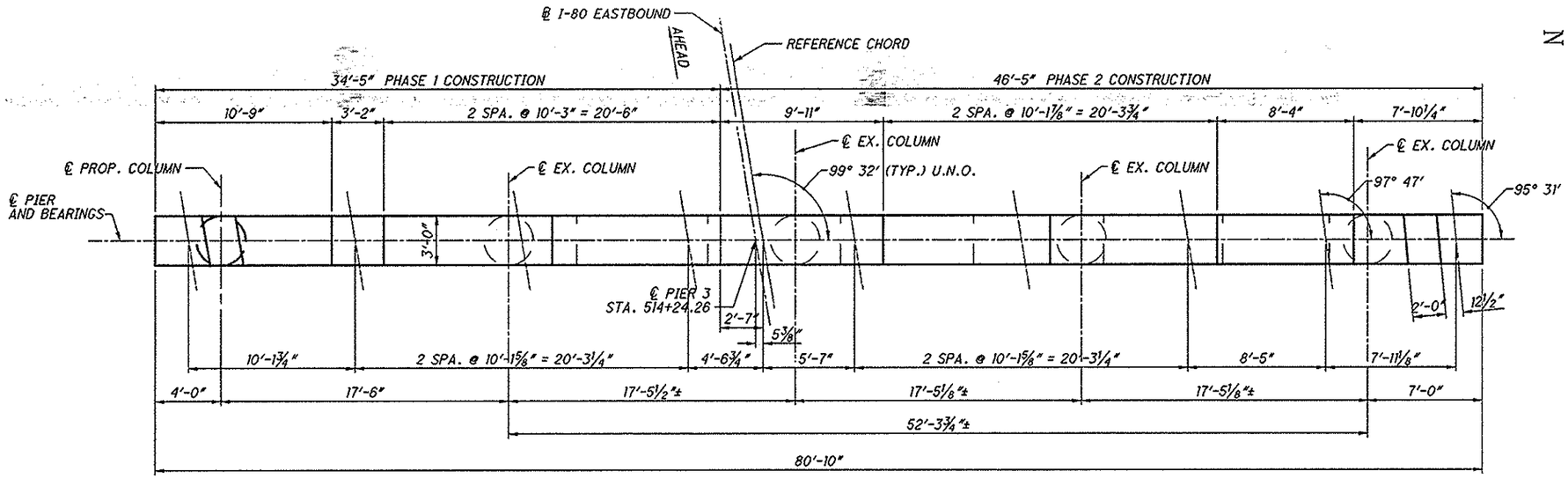
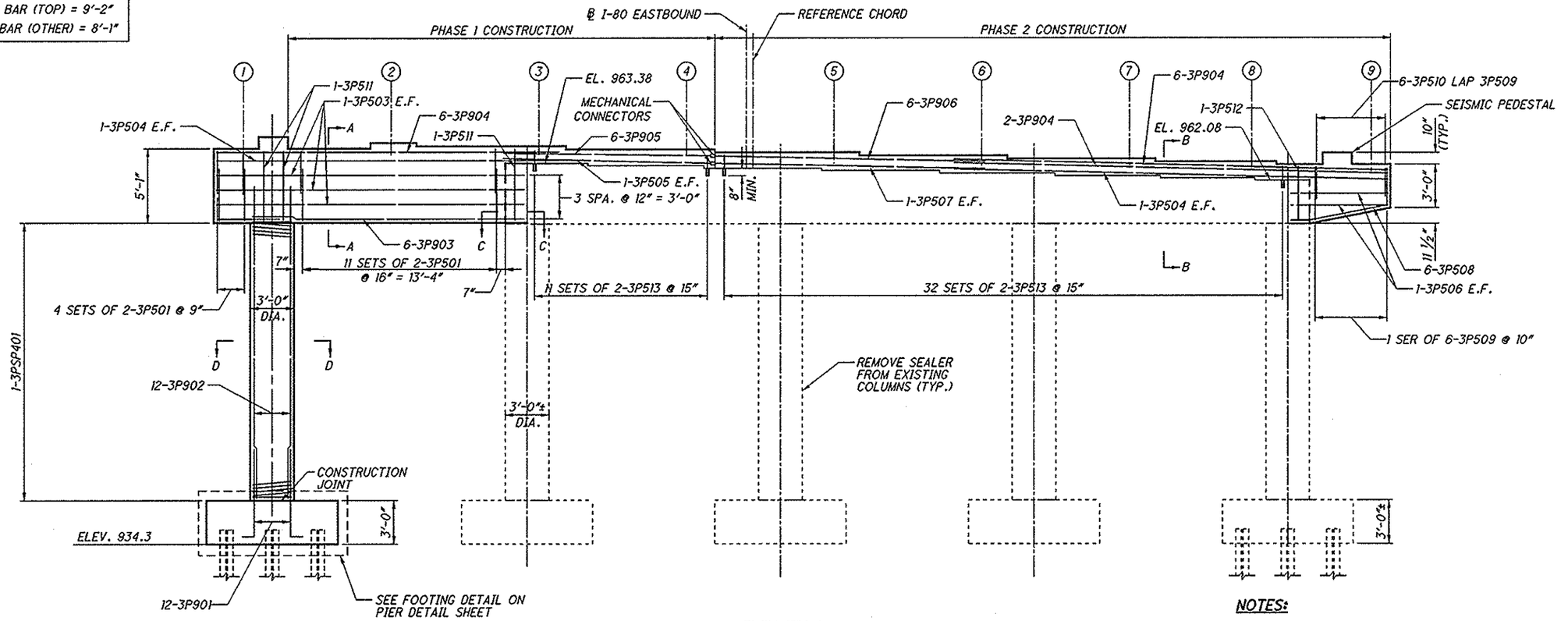


PLAN

	1	2	3	4	5	6	7	8	9
EL.	964.16	964.52	964.30	964.08	963.87	963.65	963.42	963.23	963.04

MINIMUM LAP LENGTH
NO. 5 BAR = 2'-0"
NO. 9 BAR (TOP) = 9'-2"
NO. 9 BAR (OTHER) = 8'-1"



ELEVATION

NOTES:

1. FOR SECTIONS A-A, B-B, C-C & D-D, SEE SHEET 49/65.
2. FOR FOOTING DETAIL, SEE SHEET 49/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM
DRAWN PJK
CHECKED LAB
REVISED
REVIEWED RAB
DATE 11-15
STRUCTURE FILE NUMBER 7804350

PIER NO. 3
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

48/65

130/147

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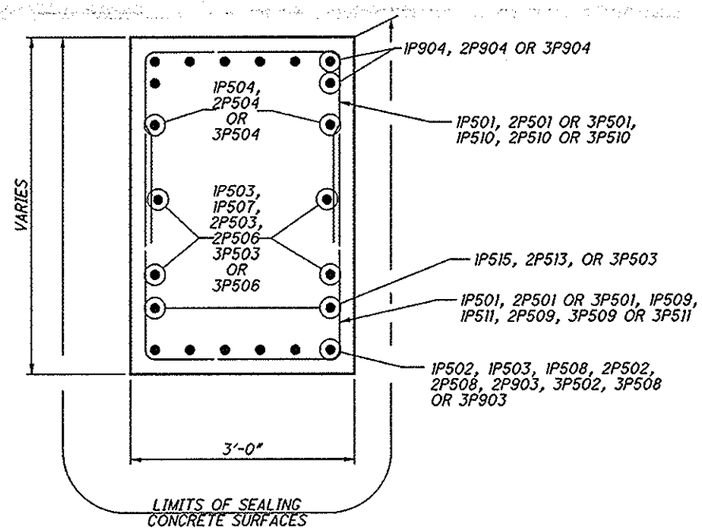
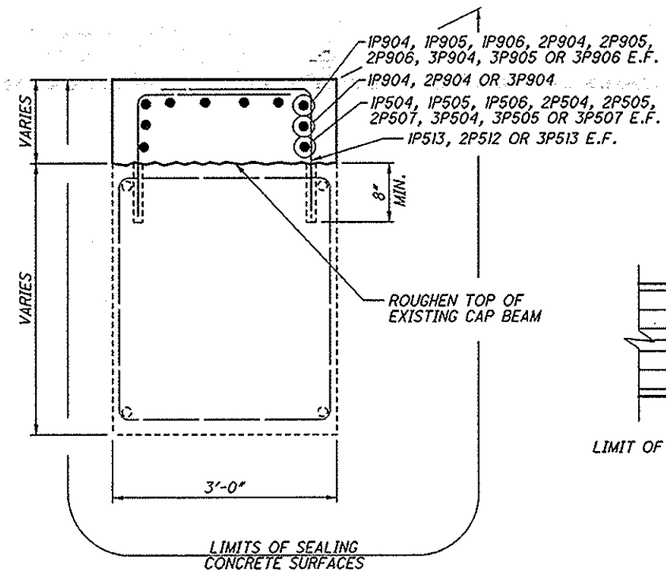
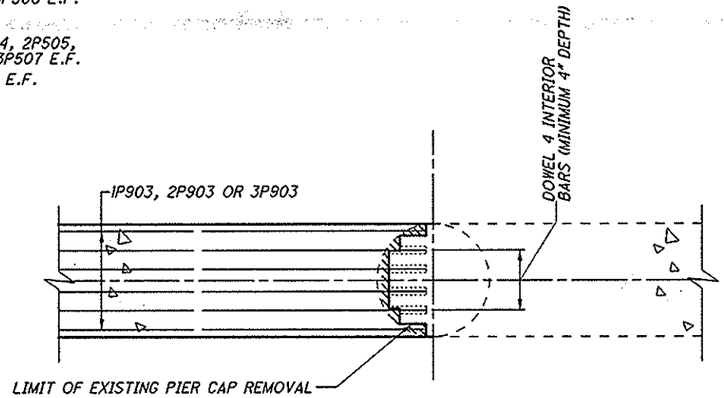


SECTION A-A



SECTION B-B



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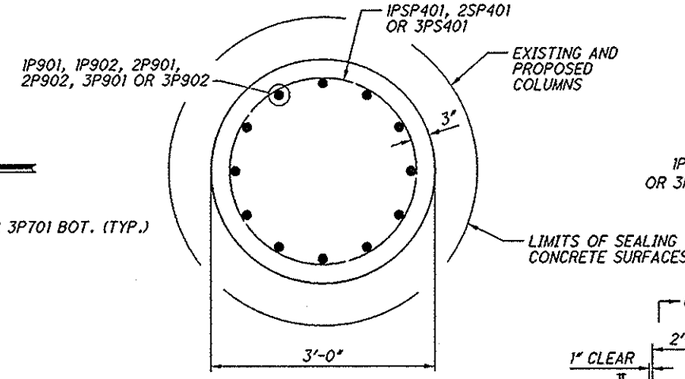
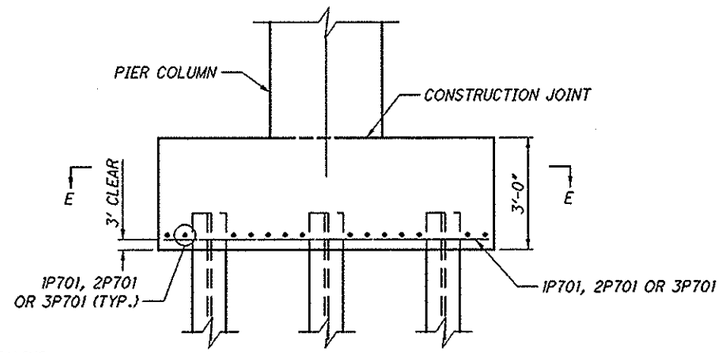
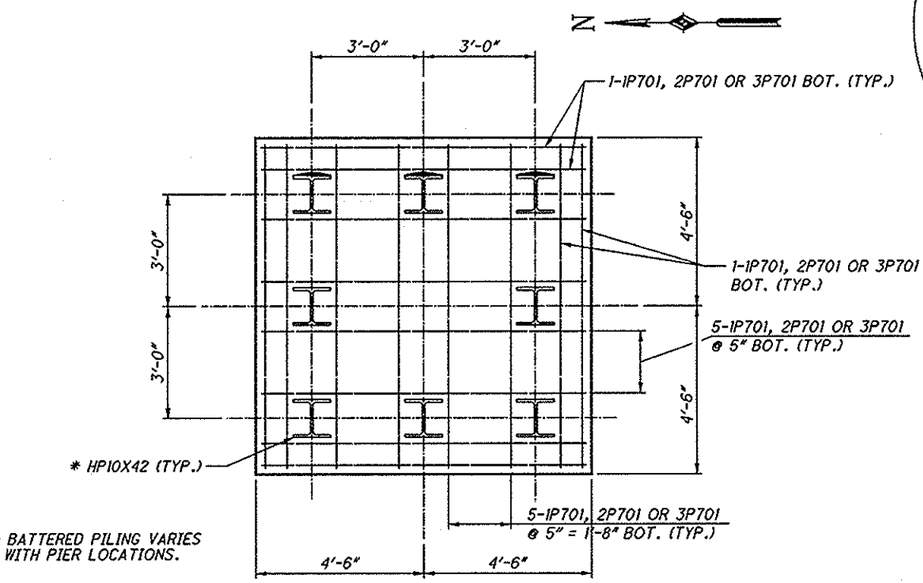


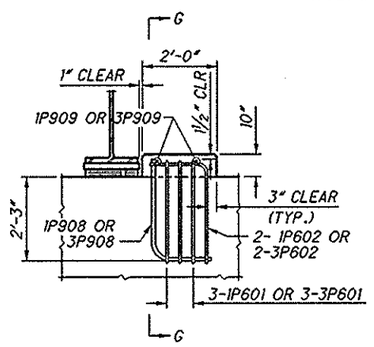
SECTION D-D



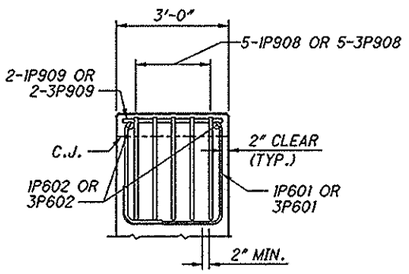
FOOTING DETAIL
(COLUMN REINFORCING NOT SHOWN)



SECTION E-E



FRONT VIEW OF SEISMIC PEDESTAL



SECTION G-G

NOTES:

1. FOR THE LOCATION OF SECTIONS A-A, B-B, C-C & D-D, SEE SHEETS 46/65 FOR PIER 1, 47/65 FOR PIER 2 AND 48/65 FOR PIER 3.
2. FOR SEISMIC PEDESTAL ADDITIONAL NOTES AND DETAILS, SEE ODOT STANDARD DRAWING A-1-69.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	PJK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804350	

PIER DETAILS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

49/65

131/147

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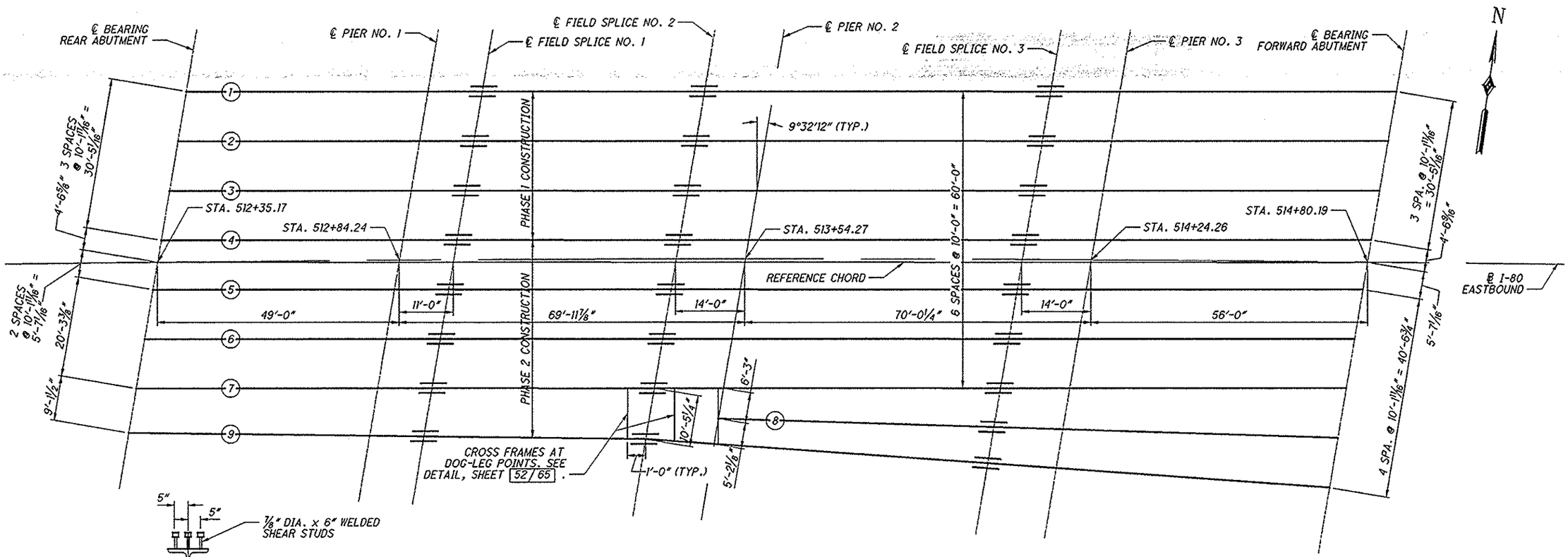
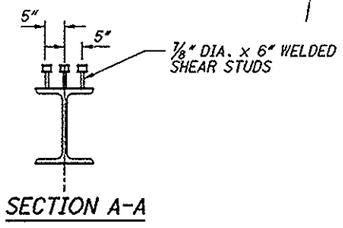
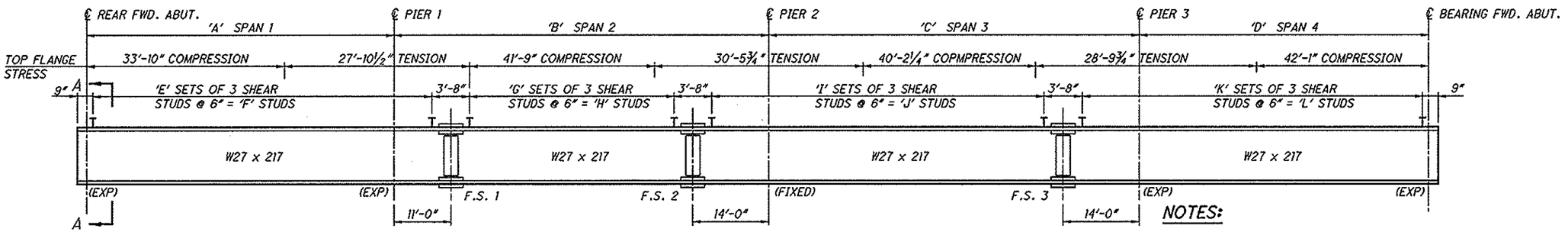


FRAMING PLAN



SECTION A-A



BEAM ELEVATION

BEAM ELEVATION DIMENSIONS

BEAM	A	B	C	D	E	F	G	H	I	J	K	L
1												
THRU	49'-0"	69'-11⅞"	70'-0¼"	56'-0"	117	351	81	246	133	402	140	420
7												
8	-	-	69'-8¼"	55'-8⅛"	-	-	-	-	133	402	140	420
9	48'-10⅞"	69'-9"	69'-4⅞"	55'-5⅛"	117	351	81	246	133	402	140	420

NOTES:

1. MAXIMUM CROSS FRAME SPACING SHALL BE 15'-0" IN ALL SPANS.
2. FOR BOLTED CROSS FRAME DETAILS SEE ODOT STD. DWG. GSD-1-96, TYPE 2, EXCEPT FOR CROSS FRAMES AT DOG-LEG POINTS.
3. FOR BEARING DETAILS, SEE SHEET 58/65 .
4. FOR EXPANSION JOINT DETAILS SEE STD. DWG. EXJ-4-87 AND SHEET 59/65 .
5. WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
MMP	MMP	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AJM		7804350	

FRAMING PLAN
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

50/65

132/147

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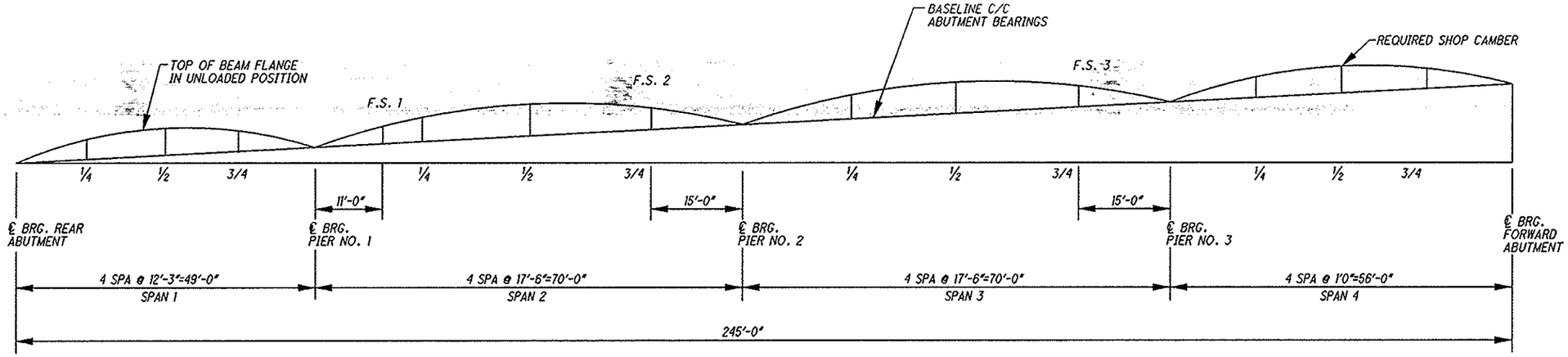


CAMBER DIAGRAM

DEFLECTION AND CAMBER (IN INCHES)

	SPAN 1				SPAN 2					SPAN 3					SPAN 4				
BEAM 1	℄ BRG. R.A.	1/4	1/2	3/4	℄ BRG. PIER 1	F.S. 1	1/4	1/2	F.S. 2	℄ BRG. PIER 2	1/4	1/2	F.S. 3	℄ BRG. PIER 3	1/4	1/2	3/4	℄ BRG. F.A.
DEFLECTION DUE TO STEEL WT.	0	1/16	1/16	0	0	1/16	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	1/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8	1/8	1/16	0	3/16	3/8	1/2	1/4	0	1/4	7/16	3/16	0	3/16	3/8	5/16	0
TOTAL CAMBER	0	3/16	3/16	1/16	0	1/4	7/16	9/16	5/16	0	5/16	9/16	1/4	0	1/4	7/16	3/8	0
BEAM 2 THRU 6	℄ BRG. R.A.	1/4	1/2	3/4	℄ BRG. PIER 1	F.S. 1	1/4	1/2	F.S. 2	℄ BRG. PIER 2	1/4	1/2	F.S. 3	℄ BRG. PIER 3	1/4	1/2	3/4	℄ BRG. F.A.
DEFLECTION DUE TO STEEL WT.	0	0	1/16	0	0	1/16	1/16	1/8	1/16	0	1/16	1/16	1/16	0	1/16	1/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8	1/8	1/16	0	3/16	3/8	9/16	1/4	0	1/4	1/2	1/4	0	3/16	3/8	5/16	0
TOTAL CAMBER	0	3/16	3/16	1/16	0	1/4	7/16	11/16	5/16	0	5/16	9/16	5/16	0	1/4	1/2	7/16	0
BEAM 7	℄ BRG. R.A.	1/4	1/2	3/4	℄ BRG. PIER 1	F.S. 1	1/4	1/2	F.S. 2	℄ BRG. PIER 2	1/4	1/2	F.S. 3	℄ BRG. PIER 3	1/4	1/2	3/4	℄ BRG. F.A.
DEFLECTION DUE TO STEEL WT.	0	1/16	1/16	0	0	1/16	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	1/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/8	1/8	1/16	0	1/4	7/16	11/16	5/16	0	1/4	7/16	3/16	0	3/16	3/8	5/16	0
TOTAL CAMBER	0	3/16	3/16	1/16	0	5/16	1/2	3/4	3/8	0	5/16	5/8	1/4	0	1/4	7/16	3/8	0
BEAM 8	℄ BRG. R.A.	1/4	1/2	3/4	℄ BRG. PIER 1	F.S. 1	1/4	1/2	F.S. 2	℄ BRG. PIER 2	1/4	1/2	F.S. 3	℄ BRG. PIER 3	1/4	1/2	3/4	℄ BRG. F.A.
DEFLECTION DUE TO STEEL WT.	-	-	-	-	-	-	-	-	-	0	1/8	3/16	1/16	0	0	1/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	-	-	-	-	-	-	-	-	-	0	5/16	7/16	3/16	0	3/16	3/8	1/4	0
TOTAL CAMBER	-	-	-	-	-	-	-	-	-	0	7/16	5/8	1/4	0	1/4	7/16	5/16	0
BEAM 9	℄ BRG. R.A.	1/4	1/2	3/4	℄ BRG. PIER 1	F.S. 1	1/4	1/2	F.S. 2	℄ BRG. PIER 2	1/4	1/2	F.S. 3	℄ BRG. PIER 3	1/4	1/2	3/4	℄ BRG. F.A.
DEFLECTION DUE TO STEEL WT.	0	0	0	0	0	1/16	1/16	1/8	1/16	0	1/16	1/8	1/16	0	1/16	1/16	1/16	0
DEFLECTION DUE TO REMAINING DEAD LOAD	0	1/16	1/16	0	0	1/4	3/8	9/16	1/4	0	1/4	3/8	1/8	0	3/16	5/16	1/4	0
TOTAL CAMBER	0	1/8	1/8	0	0	1/4	7/16	11/16	5/16	0	1/4	7/16	3/16	0	1/4	3/8	5/16	0

NOTES:

1. ALL STEEL FOR SPLICE SHALL BE ASTM A709 GRADE 50 (PAINTED). YIELD STRESS 50 ksi)
2. ALL STEEL FOR SPLICE PLATES SHALL HAVE CVN DESIGNATION AND MEET SPECIFIED MINIMUM (CVN) NOTCH TOUGHNESS AS SPECIFIED IN 711.01.
3. ALL SPLICE BOLTS SHALL BE HIGH-STRENGTH, 1" DIAMETER GALVANIZED A325 TYPE 1 BOLTS.
4. THE BOLT HEADS SHALL BE PLACED ON THE EXPOSED SIDES OF THE FASCIA BEAMS AND BENEATH THE BOTTOM PLATE OF THE LOWER FLANGE SPLICE. WASHERS SHALL BE PLACED UNDER ALL ELEMENTS TURNED IN TIGHTENING.

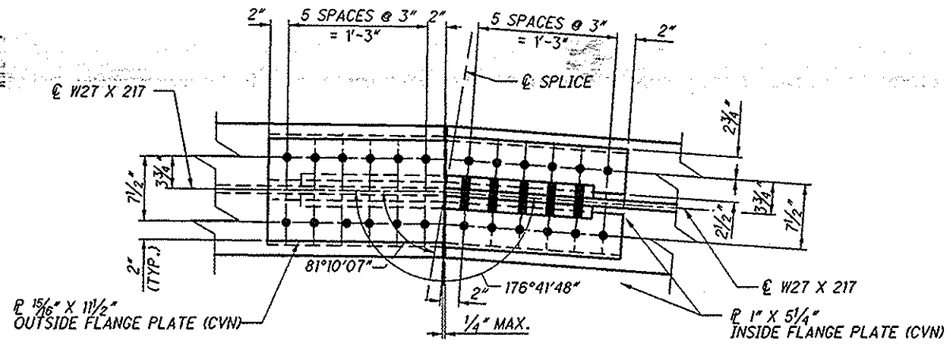
DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED MMP
DRAWN JEN
CHECKED AJM
REVIEWED RAB
DATE 11-15
REVISED -
STRUCTURE FILE NUMBER 7804350

CAMBER AND SUPERSTRUCTURE DETAILS
TRU-80-0956 R
OVER US 62/S.R. 7

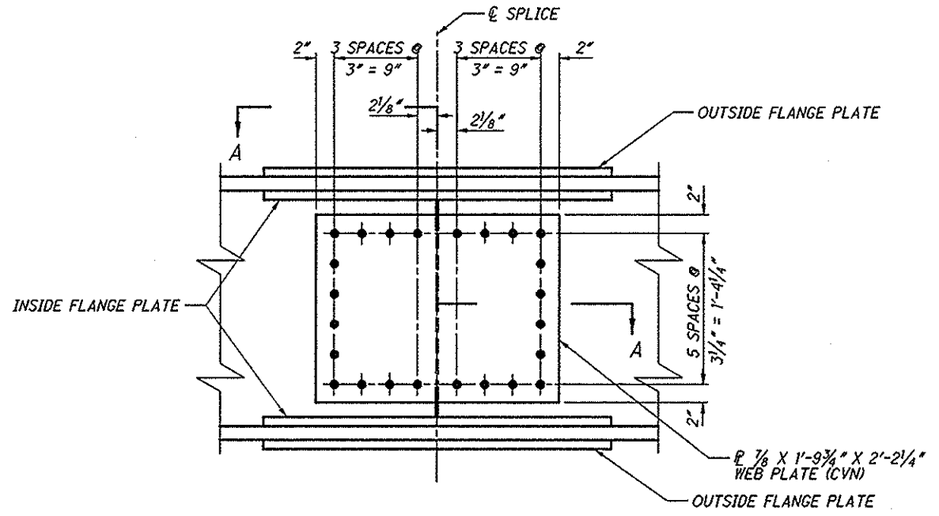
TRU-80-09.56
PID No. 77886

51/65
133/147

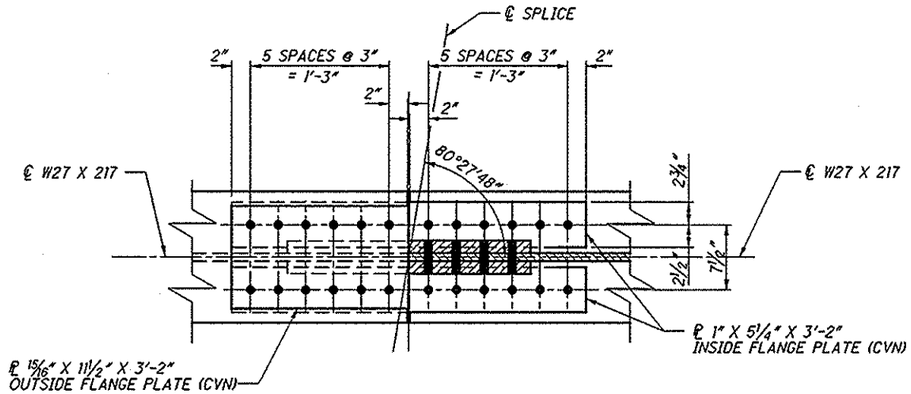


SECTION A-A

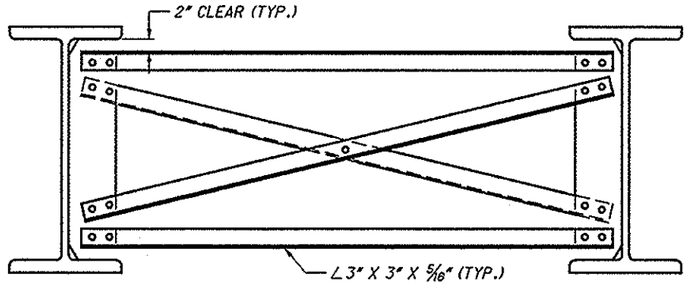
(AT BEND POINT OF BEAM 9)



BEAM SPLICE DETAIL



SECTION A-A



INTERMEDIATE CROSSFRAME AT DOG-LEG POINTS

(REFER TO GSD-1-96 FOR ALL ITEMS NOT DIMENSIONED)

NOTES:

1. ALL STEEL FOR SPLICES SHALL BE ASTM A709 GRADE 50 (GALVANIZED), YEILD STRESS 50 KSI.
2. ALL STEEL FOR SPLICE PLATES SHALL HAVE CVN DESIGNATION AND MEET SPECIFIED MINIMIM (CVN) NOTCH TOUGHNESS AS SPECIFIED IN 711.01.
3. ALL SPLICE BOLTS SHALL BE HIGH-STRENGTH, 1" DIAMETER, GALVANIZED, A325 TYPE I BOLTS.
4. THE BOLT HEADS SHALL BE PLACED ON THE EXPOSED SIDES OF THE FASCIA BEAMS AND BENEATH THE BOTTOM PLATE OF THE LOWER FLANGE SPLICE. WASHERS SHALL BE PLACED UNDER ALL ELEMENTS TURNED IN TIGHTENING.
5. BOLT HOLE SIZE SHALL BE 1 ⅛" DIAMETER FOR ALL SPLICES.

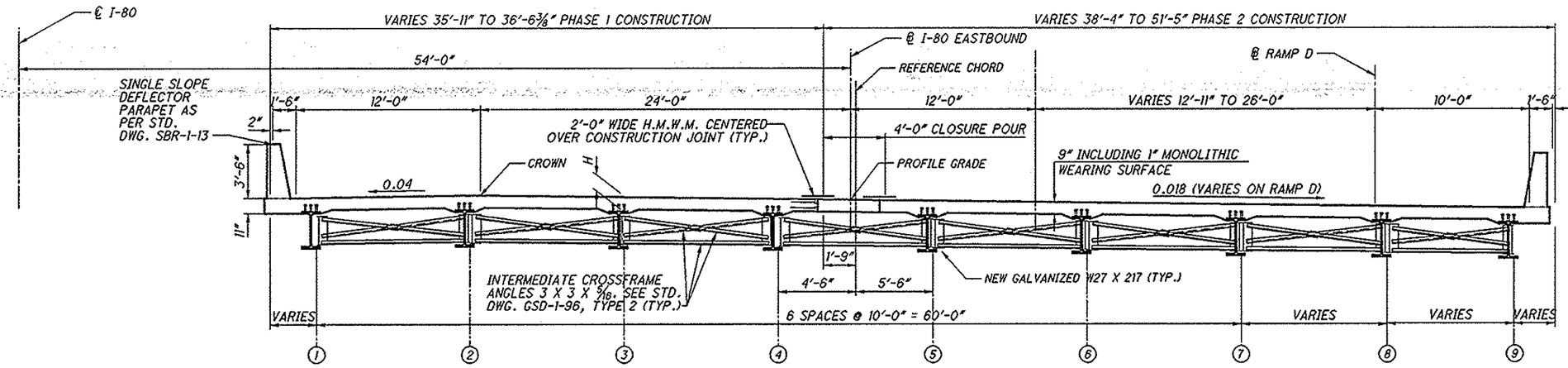
DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED MMP | DRAWN RCK | REVIEWED RAB | DATE 11-15
CHECKED AJM | REVISED — | STRUCTURE FILE NUMBER 7804350

SUPERSTRUCTURE DETAILS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

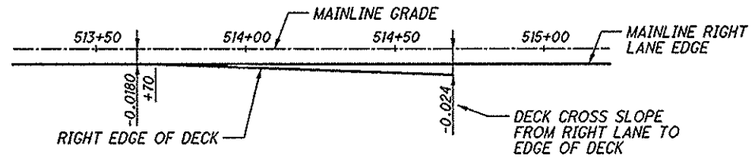
TRU-80-09.56
PID No. 77886

52/65
134/147

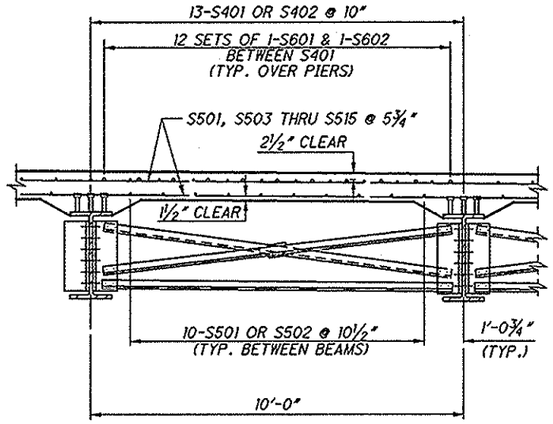


TRANSVERSE SECTION

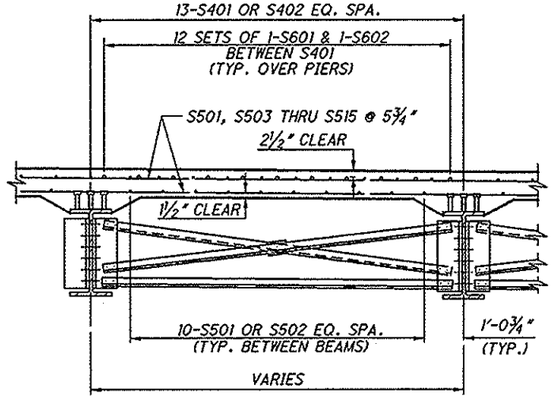
BEAM	H
1	11¼
2	11¼
3-4	11⅛
5-9	11³⁄₁₆



SUPERELEVATION TRANSITION

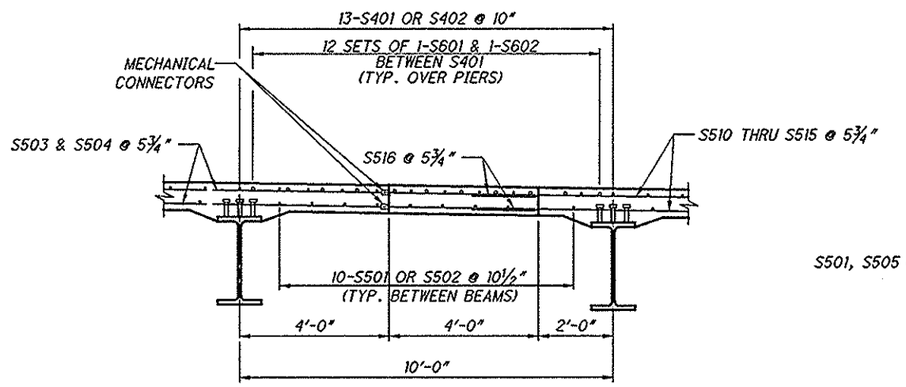


DECK REINFORCING DETAIL

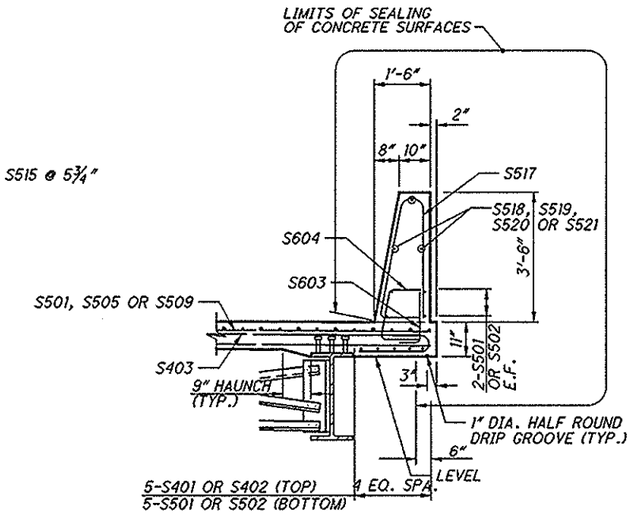


DECK REINFORCING DETAIL - BEAM SPACING VARIES

(BEAMS 7 TO 8 - BEAMS 8 TO 9 - BEAMS 7 TO 9)



CLOSURE POUR REINFORCING DETAIL



PARAPET REINFORCING DETAIL

NOTE:

1. FOR PARAPET ELEVATIONS, SEE SHEET 55/65

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
Cleveland, Ohio

DESIGNED	DRAWN	REVIEWED	DATE
MMP	VMB	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
AJM		7804350	

TRANSVERSE SECTION
TRU-80-0956R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

53/65

135
147

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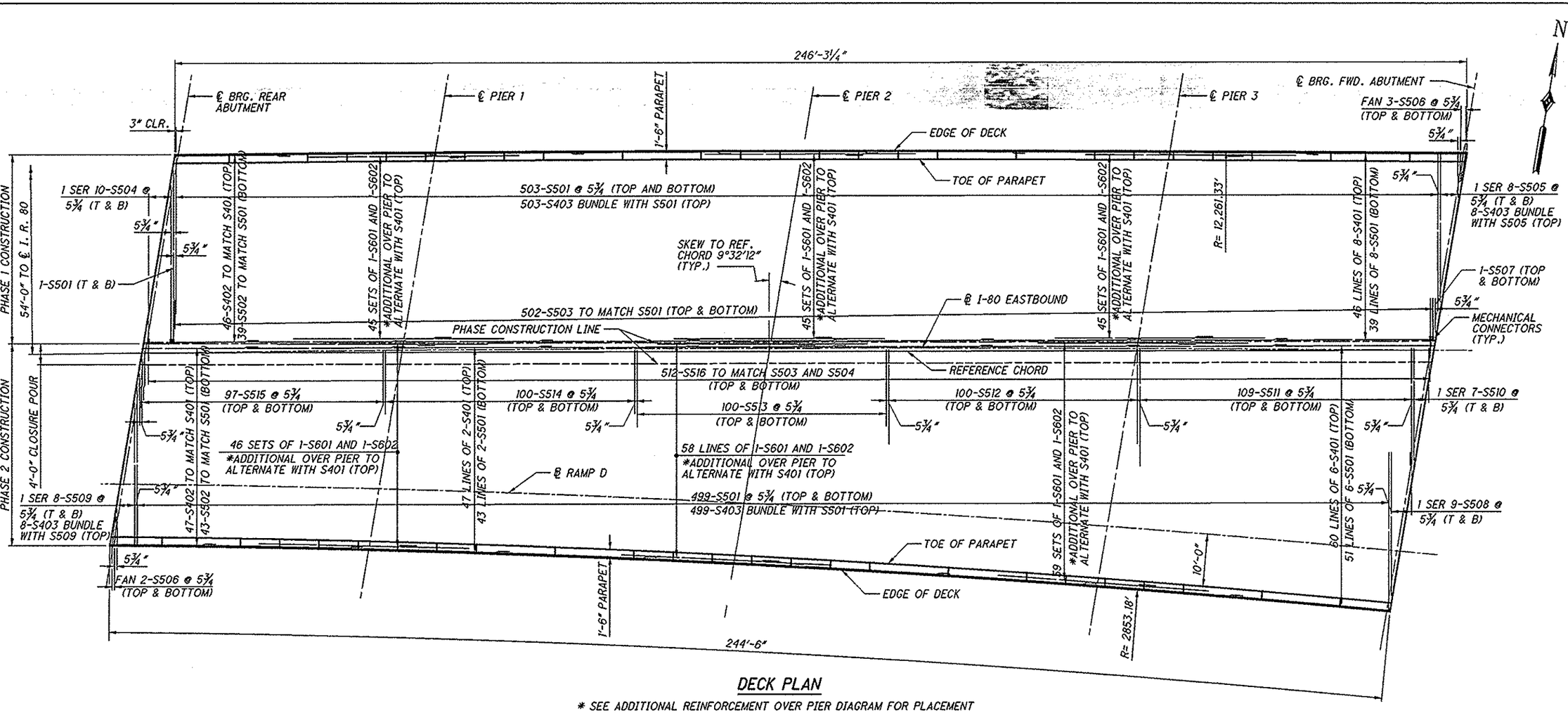
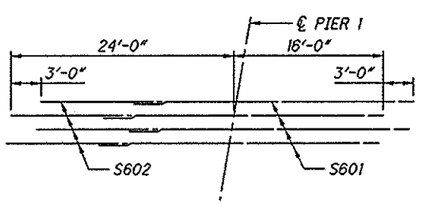
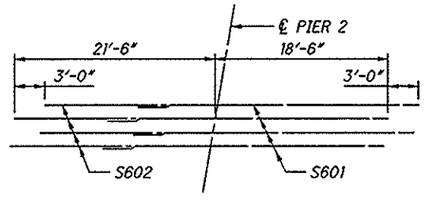


DECK PLAN

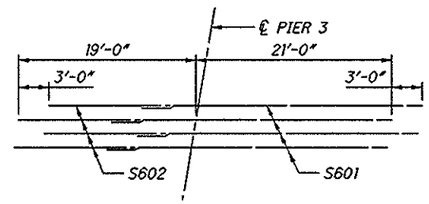
* SEE ADDITIONAL REINFORCEMENT OVER PIER DIAGRAM FOR PLACEMENT



ADDITIONAL REINFORCEMENT OVER PIER 1



ADDITIONAL REINFORCEMENT OVER PIER 2



ADDITIONAL REINFORCEMENT OVER PIER 3

MINIMUM LAP LENGTH (UNLESS OTHERWISE NOTED)
NO. 4 BAR = 2'-0"
NO. 5 BAR = 2'-5"
NO. 6 BAR = 3'-0"

Slab Offsets (ft.)

Location	C.L. Rear Abutment	Span 1			Pier 1	Span 2				Pier 2	Span 3			Pier 3	Span 1			C.L. Fwd. Abutment
		1/4 Pt	1/2 Pt	3/4 Pt		F.S. 1	1/4 Pt	1/2 Pt	F.S. 2		1/4 Pt	1/2 Pt	F.S. 3		1/4 Pt	1/2 Pt	3/4 Pt	
Left Offset	3.57	3.64	3.70	3.75	3.79	3.82	3.83	3.83	3.81	3.78	3.71	3.62	3.48	3.36	3.23	3.08	2.92	2.74
Right Offset	2.74	1.78	1.88	2.03	2.24	2.47	2.62	3.11	3.84	3.60	3.40	3.31	3.34	3.45	3.62	3.86	4.15	4.52

NOTES:

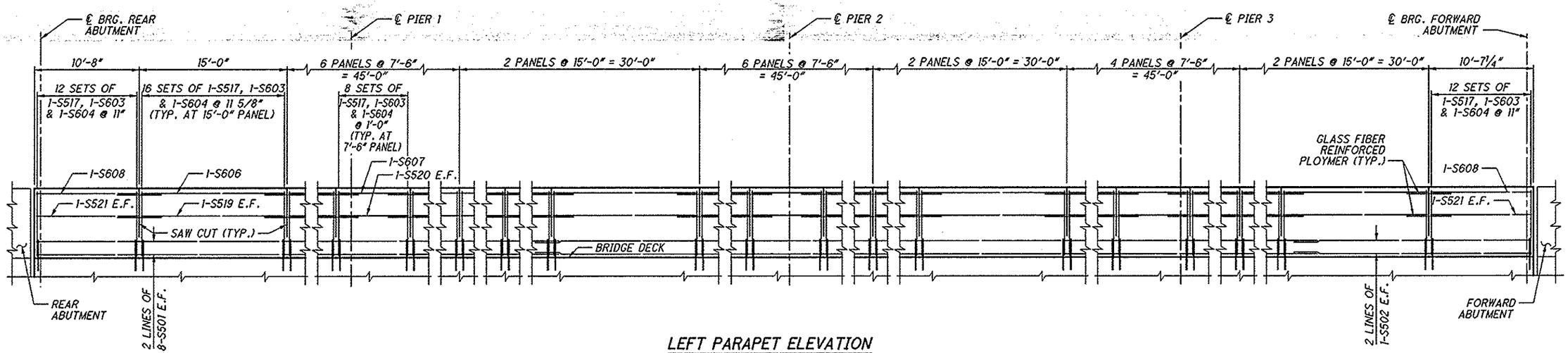
1. FOR REINFORCING STEEL LIST SEE SHEET 65/65 .
2. FOR PARAPET ELEVATION AND DETAILS, SEE SHEET 55/65 .
3. FOR SPACING OF LONGITUDINAL REINFORCING STEEL IN THE SLAB AND FOR TRANSVERSE SECTION, SEE SHEET 53/65 .

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN RCK | REVIEWED RAB | DATE 11-15
CHECKED LAB | REVISED | STRUCTURE FILE NUMBER 7804350

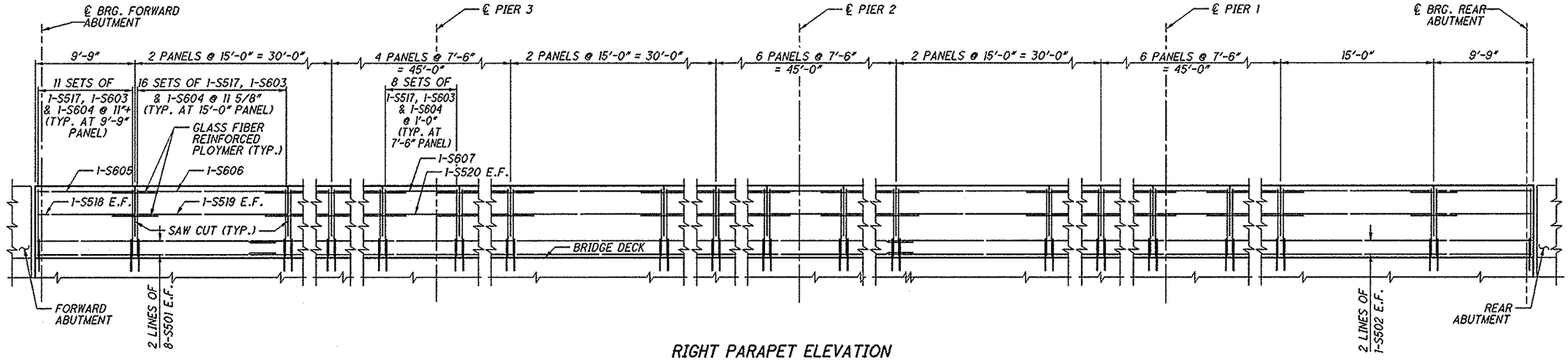
DECK PLAN
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886



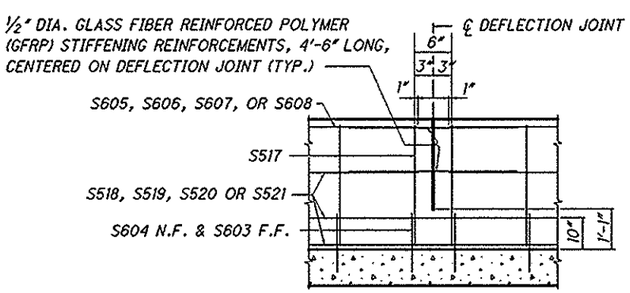
LEFT PARAPET ELEVATION

(LOOKING NORTH)



RIGHT PARAPET ELEVATION

(LOOKING SOUTH)



GFRP REBAR STIFFENING DETAIL AT DEFLECTION JOINTS

MINIMUM LAP LENGTH (UNLESS OTHERWISE NOTED)
NO. 5 BAR = 2'-5"

NOTES:

1. FOR RAILING PLAN VIEW, SEE SHEET 54/65 .
2. FOR PARAPET REINFORCING DETAIL, SEE SHEET 53/65 .
3. FOR REINFORCING STEEL LIST, SEE SHEET 65/65 .
4. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD DWG SBR-1-13.

DESIGN AGENCY
EUTHENICS INC. CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	RCK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804350	

PARAPET ELEVATIONS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

55/65

137/147

FINAL DECK SURFACE ELEVATIONS

	SPAN 1															SPAN 2													
	R.A.			1/4 Span			1/2 Span			3/4 Span			Pier			Splice			1/4 Span			1/2 Span			3/4 Span			Splice		
	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.
Location																													
Left Edge of Deck	512+41.57	-36.00	963.49	512+53.80	-36.00	963.79	512+66.03	-36.00	964.09	512+78.26	-36.00	964.38	512+90.49	-36.00	964.68	513+01.47	-36.00	964.94	513+07.95	-36.00	965.10	513+25.41	-36.00	965.52	513+42.86	-36.00	965.94	513+46.35	-36.00	966.03
Beam 1	512+41.29	-34.44	963.55	512+53.51	-34.33	963.85	512+65.72	-34.23	964.15	512+77.94	-34.16	964.45	512+90.16	-34.07	964.75	513+01.13	-34.02	965.01	513+07.61	-33.99	965.17	513+25.08	-33.93	965.59	513+42.51	-33.90	966.02	513+46.00	-33.89	966.10
Beam 2	512+39.52	-24.46	963.91	512+51.75	-24.35	964.21	512+63.97	-24.25	964.51	512+76.20	-24.16	964.80	512+88.43	-24.08	965.11	512+99.40	-24.03	965.37	513+05.89	-24.00	965.53	513+23.35	-23.93	965.95	513+40.82	-23.90	966.37	513+44.31	-23.89	966.45
Crown	512+39.44	-24.00	963.92	512+51.68	-24.00	964.22	512+63.93	-24.00	964.51	512+76.17	-24.00	964.81	512+88.41	-24.00	965.11	512+99.40	-24.00	965.37	513+05.89	-24.00	965.53	513+23.36	-24.00	965.95	513+40.83	-24.00	966.37	513+44.33	-24.00	966.46
Beam 3	512+37.75	-14.48	963.71	512+49.98	-14.36	964.00	512+62.22	-14.26	964.30	512+74.45	-14.17	964.59	512+86.69	-14.09	964.89	512+97.68	-14.03	965.15	513+04.17	-14.00	965.31	513+21.65	-13.94	965.73	513+39.13	-13.90	966.15	513+42.62	-13.90	966.23
Beam 4	512+35.97	-4.49	963.49	512+48.21	-4.38	963.78	512+60.46	-4.27	964.08	512+72.71	-4.18	964.37	512+84.95	-4.10	964.66	512+95.95	-4.04	964.93	513+02.45	-4.01	965.09	513+19.94	-3.94	965.51	513+37.43	-3.90	965.93	513+40.93	-3.90	966.01
Phase 1 Construction Joint	512+35.48	-1.75	963.43	512+47.73	-1.63	963.72	512+59.98	-1.53	964.01	512+72.23	-1.43	964.31	512+84.47	-1.36	964.60	512+95.47	-1.29	964.87	513+01.97	-1.26	965.02	513+19.47	-1.20	965.45	513+36.96	-1.15	965.87	513+40.46	-1.15	965.95
Profile Grade	512+35.17	0.00	963.39	512+47.44	0.00	963.68	512+59.71	0.00	963.98	512+71.97	0.00	964.28	512+84.24	0.00	964.57	512+95.25	0.00	964.84	513+01.75	0.00	965.00	513+19.26	0.00	965.42	513+36.77	0.00	965.84	513+40.27	0.00	965.93
Phase 2 Construction Joint	512+34.77	2.25	963.34	512+47.02	2.36	963.63	512+59.27	2.47	963.93	512+71.53	2.56	964.22	512+83.78	2.64	964.51	512+94.78	2.70	964.78	513+01.28	2.73	964.94	513+18.78	2.80	965.36	513+36.29	2.85	965.78	513+39.78	2.85	965.86
Beam 5	512+34.19	5.49	963.27	512+46.44	5.61	963.56	512+58.70	5.71	963.85	512+70.96	5.81	964.15	512+83.21	5.89	964.44	512+94.22	5.95	964.71	513+00.72	5.98	964.86	513+18.23	6.05	965.29	513+35.73	6.09	965.71	513+39.23	6.10	965.79
Beam 6	512+34.20	15.47	963.05	512+44.67	15.59	963.34	512+56.94	15.70	963.64	512+69.20	15.79	963.93	512+81.47	15.88	964.23	512+92.48	15.94	964.50	512+98.99	15.97	964.66	513+16.51	16.04	965.07	513+34.03	16.09	965.49	513+37.54	16.10	965.58
Beam 7	512+30.62	25.45	962.84	512+42.89	25.58	963.13	512+55.17	25.69	963.42	512+67.45	25.78	963.72	512+79.72	25.87	964.01	512+90.75	25.93	964.28	512+97.26	25.96	964.44	513+14.79	26.04	964.86	513+32.33	26.09	965.28	513+35.84	26.09	965.37
Beam 8																													
Beam 9	512+29.01	34.43	962.64	512+41.27	34.70	962.93	512+53.53	34.96	963.22	512+65.79	35.21	963.51	512+78.05	35.44	963.81	512+89.05	35.65	964.08	512+95.56	35.76	964.23	513+13.07	36.05	964.65	513+30.58	36.32	965.07	513+34.08	36.38	965.15
Right Edge of Deck	512+28.93	34.87	962.63	512+41.19	35.16	962.92	512+53.43	35.48	963.21	512+65.67	35.85	963.50	512+77.91	36.25	963.79	512+88.88	36.65	964.05	512+95.36	36.90	964.21	513+12.80	37.62	964.62	513+30.22	38.43	965.02	513+33.71	38.60	965.11

	SPAN 3															SPAN 4													
	Pier			1/4 Span			1/2 Span			3/4 Span			Splice			Pier			1/4 Span			1/2 Span			3/4 Span			F.A.		
	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.	Sta.	Offset	Elev.
Location																													
Left Edge of Deck	513+60.31	-36.00	966.36	513+77.76	-36.00	966.78	513+95.21	-36.00	967.21	514+12.65	-36.00	967.63	514+16.14	-36.00	967.71	514+30.09	-36.00	968.05	514+44.03	-36.00	968.38	514+57.97	-36.00	968.72	514+71.91	-36.00	969.06	514+85.85	-36.00	969.40
Beam 1	513+59.96	-33.89	966.44	513+77.41	-33.90	966.86	513+94.87	-33.94	967.28	514+12.32	-34.01	967.70	514+15.82	-34.02	967.78	514+29.78	-34.10	968.12	514+43.74	-34.19	968.45	514+57.70	-34.30	968.78	514+71.66	-34.42	969.12	514+85.62	-34.56	969.45
Beam 2	513+58.28	-23.89	966.79	513+75.75	-23.90	967.21	513+93.22	-23.94	967.64	514+10.69	-24.00	968.06	514+14.19	-24.02	968.14	514+28.16	-24.09	968.48	514+42.13	-24.18	968.81	514+56.11	-24.28	969.15	514+70.08	-24.40	969.48	514+84.05	-24.54	969.81
Crown	513+58.30	-24.00	966.79	513+75.77	-24.00	967.22	513+93.23	-24.00	967.64	514+10.69	-24.00	968.05	514+14.19	-24.00	968.14	514+28.15	-24.00	968.48	514+42.10	-24.00	968.82	514+56.06	-24.00	969.16	514+70.01	-24.00	969.49	514+83.97	-24.00	969.83
Beam 3	513+56.60	-13.89	966.57	513+74.09	-13.90	966.99	513+91.57	-13.93	967.42	514+09.06	-13.99	967.84	514+12.56	-14.01	967.92	514+26.54	-14.08	968.26	514+40.52	-14.17	968.60	514+54.51	-14.27	968.94	514+68.49	-14.39	969.28	514+82.48	-14.52	969.62
Beam 4	513+54.92	-3.89	966.35	513+72.42	-3.90	966.77	513+89.92	-3.93	967.20	514+07.42	-3.99	967.62	514+10.92	-4.00	967.71	514+24.92	-4.07	968.04	514+38.91	-4.16	968.38	514+52.91	-4.26	968.72	514+66.90	-4.37	969.06	514+80.90	-4.51	969.40
Phase 1 Construction Joint	513+54.46	-1.14	966.29	513+71.96	-1.14	966.71	513+89.47	-1.18	967.14	514+06.97	-1.24	967.56	514+10.47	-1.25	967.64	514+24.47	-1.32	967.98	514+38.47	-1.40	968.32	514+52.47	-1.50	968.66	514+66.47	-1.62	969.00	514+80.46	-1.75	969.34
Profile Grade	513+54.27	0.00	966.26	513+71.77	0.00	966.69	513+89.27	0.00	967.11	514+06.77	0.00	967.53	514+10.27	0.00	967.62	514+24.26	0.00	967.96	514+38.24	0.00	968.29	514+52.23	0.00	968.63	514+66.21	0.00	968.97	514+80.19	0.00	969.31
Phase 2 Construction Joint	513+53.79	2.86	966.20	513+71.30	2.86	966.62	513+88.80	2.82	967.05	514+06.31	2.77	967.47	514+09.82	2.75	967.56	514+23.82	2.69	967.90	514+37.82	2.60	968.24	514+51.83	2.50	968.58	514+65.83	2.39	968.92	514+79.83	2.25	969.26
Beam 5	513+53.24	6.11	966.13	513+70.75	6.11	966.55	513+88.27	6.08	966.98	514+05.78	6.02	967.40	514+09.28	6.01	967.49	514+23.29	5.94	967.83	514+37.30	5.85	968.16	514+51.31	5.76	968.51	514+65.31	5.64	968.85	514+79.32	5.51	969.19
Beam 6	513+51.56	16.11	965.92	513+69.08	16.11	966.33	513+86.61	16.08	966.75	514+04.14	16.03	967.18	514+07.64	16.01	967.27	514+21.66	15.95	967.61	514+35.68	15.87	967.95	514+49.70	15.77	968.29	514+63.72	15.65	968.63	514+77.74	15.53	968.97
Beam 7	513+49.87	26.11	965.71	513+67.41	26.11	966.12	513+84.95	26.08	966.54	514+02.49	26.03	966.96	514+06.00	26.02	967.04	514+20.03	25.96	967.38	514+34.06	25.88	967.72	514+48.09	25.78	968.06	514+62.12	25.67	968.40	514+76.15	25.54	968.74
Beam 8	513+48.83	32.26	965.58	513+66.29	32.80	965.98	513+83.75	33.31	966.38	514+01.21	33.79	966.78	514+04.71	33.88	966.86	514+18.68	34.25	967.19	514+32.65	34.60	967.51	514+46.62	34.93	967.83	514+60.59	35.25	968.16	514+74.57	35.55	968.49
Beam 9	513+47.96	37.37	965.48	513+65.32	38.58	965.86	513+82.67	39.77	966.24	514+00.03	40.94	966.62	514+03.51	41.17	966.70	514+17.40	42.08	967.00	514+31.29	42.97	967.31	514+45.18	43.85	967.61	514+59.08	44.71	967.92	514+72.98	45.56	968.23
Right Edge of Deck	513+47.63	39.32	965.44	513+65.03	40.28	965.82	513+82.41	41.33	966.20	513+99.78	42.46	966.59	514+03.26	42.70	966.66	514+17.14	43.67	966.97	514+31.01	44.69	967.27	514+44.87	45.77	967.56	514+58.73	46.89	967.86	514+72.58	48.07	968.16

NOTES:

1. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURED.
2. FOR DECK SLAB PLAN, SEE SHEET 54/65.
3. FOR TRANSVERSE SECTION, SEE SHEET 53/65.
4. FOR STRUCTURAL STEEL FRAMING PLAN, SEE SHEET 50/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED JLN | DRAWN MMP | CHECKED AJM | REVIEWED RAB | DATE 11-15 | REVISED - | STRUCTURE FILE NUMBER 7804350

FINAL DECK SURFACE ELEVATIONS TABLE
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

56/65

138/147

F:\Jobs\899\77886\structures\0956R_SFN7804350\sheets\080_0956RSD004.dgn 11/13/2015 10:57:50 AM jneville

SCREED ELEVATIONS

Location	Rear Abutment		1/4 span		1/2 Span		3/4 Span		Pier 1		F.S. 1		1/4 span		1/2 Span		F.S. 2	
	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
Toe of Parapet (left)		965.11	512+79.38	965.44	512+91.40	965.76	513+03.14	966.06	513+15.50	966.34	513+26.31	966.62	513+32.70	966.78	513+49.92	967.20	513+69.64	967.64
Crown	512+67.28	965.54	512+73.53	965.85	512+85.78	966.14	512+98.03	966.42	513+10.28	966.70	513+21.28	966.87	513+27.77	967.13	513+45.26	967.54	513+65.23	967.90
Phase Construction Line 2	512+59.55	965.33	512+71.79	965.63	512+84.04	965.92	512+96.28	966.20	513+08.53	966.48	513+19.53	966.75	513+26.02	966.91	513+43.51	967.32	513+63.50	967.73
Phase Construction Line 1	512+58.84	965.24	512+71.09	965.54	512+83.34	965.83	512+95.59	966.11	513+07.84	966.39	513+18.84	966.66	513+25.34	966.82	513+42.83	967.23	513+62.83	967.64
Toe of parapet (right)	512+52.99	964.50	512+65.34	964.81	512+52.91	964.52	512+77.47	965.39	513+02.24	965.68	513+13.28	965.95	513+19.80	966.11	513+37.35	966.52	513+57.40	966.94

Location	Pier 2		1/4 span		1/2 Span		F.S. 3		Pier 3		1/4 span		1/2 Span		3/4 Span		Forward Abutment	
	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
Toe of Parapet (left)	513+84.47	967.96	514+01.74	964.36	514+19.04	968.75	514+38.82	969.17	514+53.69	969.47	514+67.56	969.77	514+81.44	970.07	514+95.50	970.36	515+09.46	970.62
Crown	513+80.22	968.26	513+97.70	968.65	514+15.18	969.04	514+35.15	969.43	514+50.12	969.72	514+64.09	970.03	514+78.06	970.32	514+92.02	970.60	515+05.99	970.87
Phase Construction Line 2	513+78.50	968.04	513+95.99	968.43	514+13.49	968.82	514+33.49	969.21	514+48.49	969.50	514+62.48	969.81	514+76.47	970.11	514+90.47	970.39	515+04.46	970.66
Phase Construction Line 1	513+77.83	967.95	513+95.33	968.35	514+12.84	968.73	514+32.84	969.13	514+47.84	969.42	514+61.84	969.73	514+75.84	970.03	514+89.84	970.31	515+03.84	970.58
Toe of parapet (right)	513+72.45	967.26	513+90.00	967.66	514+07.54	968.04	514+27.59	968.43	514+42.62	968.72	514+56.65	969.02	514+70.67	969.34	514+84.69	969.63	514+98.70	969.89

TOP OF HAUNCH ELEVATIONS

Beam	Rear Abutment		1/4 span		1/2 Span		3/4 Span		Pier 1		F.S. 1		1/4 span		1/2 Span		F.S. 2	
	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
1	512+67.28	964.37	512+79.35	964.69	512+91.42	965.00	513+03.49	965.30	513+15.57	965.58	513+26.41	965.85	513+32.82	966.02	513+50.07	966.44	513+69.78	966.88
2	512+65.53	964.49	512+77.67	964.81	512+89.82	965.11	513+01.97	965.41	513+14.11	965.68	513+25.03	965.95	513+31.47	966.12	513+48.82	966.53	513+68.65	966.96
3	512+63.77	964.61	512+75.99	964.93	512+88.22	965.22	513+00.44	965.51	513+12.66	965.79	513+23.64	966.06	513+30.12	966.21	513+47.57	966.63	513+67.52	967.04
4	512+62.01	964.74	512+74.25	965.05	512+86.48	965.34	512+98.71	965.62	513+10.94	965.91	513+21.93	966.18	513+28.41	966.33	513+45.88	966.75	513+65.85	967.16
5	512+60.25	964.67	512+72.49	964.97	512+84.74	965.26	512+96.98	965.53	513+09.22	965.82	513+20.21	966.09	513+26.71	966.24	513+44.19	966.66	513+64.17	967.07
6	512+58.49	964.44	512+70.74	964.75	512+82.99	965.04	512+95.24	965.31	513+07.49	965.60	513+18.50	965.87	513+25.00	966.03	513+42.50	966.44	513+62.49	966.85
7	512+56.72	964.18	512+68.98	964.53	512+81.25	964.82	512+93.51	965.09	513+05.77	965.38	513+16.78	965.65	513+23.26	965.81	513+40.80	966.22	513+60.81	966.63
8	512+54.95	964.00	512+67.22	964.30	512+79.50	964.59	512+91.77	964.87	513+04.04	965.16	513+15.06	965.43	513+21.57	965.59	513+39.10	966.00	513+59.12	966.42
9	512+53.18	963.78	512+65.46	964.08	512+77.74	964.37	512+90.02	964.65	513+02.31	964.94	513+13.34	965.21	513+19.85	965.37	513+37.39	965.78	513+57.43	966.20

Beam	Pier 2		1/4 span		1/2 Span		F.S. 3		Pier 3		1/4 span		1/2 Span		3/4 Span		Forward Abutment	
	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.	Sta.	Elev.
1	513+84.58	967.20	514+01.85	967.60	514+19.12	968.00	514+38.86	968.42	514+53.7	968.72	514+67.64	969.01	514+81.58	969.31	514+95.52	969.60	515+09.46	969.87
2	513+83.54	967.27	514+00.90	967.68	514+18.27	968.06	514+38.12	968.47	514+53.01	968.77	-	-	-	-	-	-	-	-
3	513+82.49	967.35	513+99.95	967.74	514+17.42	968.13	514+37.37	968.53	514+52.34	968.82	514+66.31	969.11	514+80.28	969.41	514+94.25	969.70	515+08.21	969.96
4	513+80.83	967.46	513+98.31	967.86	514+15.78	968.25	514+35.76	968.64	514+50.74	968.93	514+64.72	969.23	514+78.70	969.53	514+92.67	969.81	515+06.65	970.08
5	513+79.16	967.37	513+96.66	967.77	514+14.15	968.15	514+34.14	968.55	514+49.13	968.84	514+63.12	969.15	514+77.11	969.45	514+91.10	969.73	515+05.09	970.00
6	513+77.50	967.16	513+95.00	967.55	514+12.51	967.94	514+32.51	968.34	514+47.52	968.62	514+61.52	968.93	514+75.52	969.23	514+89.52	969.51	515+03.52	969.78
7	513+75.83	966.94	513+93.35	967.34	514+10.87	967.73	514+30.89	968.12	514+45.91	968.41	514+59.92	968.72	514+73.93	969.02	514+87.94	969.30	515+01.96	969.57
8	513+74.15	966.73	513+91.69	967.12	514+09.22	967.51	514+29.26	967.91	514+44.29	968.20	514+58.31	968.51	514+72.34	968.81	514+86.36	969.09	515+00.39	969.36
9	513+72.48	966.51	513+90.03	966.91	514+07.57	967.30	514+27.63	967.69	514+42.67	967.98	514+56.71	968.28	514+70.74	968.60	514+84.78	968.89	514+98.81	969.15

Slab Offsets

Location		Left Offset	Right Offset
CL Rear Abt.		3.2381	2.0904
Span 1	1/4 Pt	3.3492	2.1023
	1/2 Pt	3.4481	2.1665
	3/4 Pt	3.5347	2.2832
Pier 1		3.6091	2.4522
Span 2	F.S. 1	3.6662	2.6517
	1/4 Pt	3.6941	2.7846
	1/2 Pt	3.7542	3.2239
	F.S. 2	3.7931	3.8847
Pier 2		3.7994	3.6057
Span 3	1/4 Pt	3.7846	3.3582
	1/2 Pt	3.7447	3.2161
	F.S. 3	3.6648	3.1844
Pier 3		3.5901	3.2482
Span 4	1/4 Pt	3.5002	3.3791
	1/2 Pt	3.3944	3.5775
	3/4 Pt	3.2726	3.8433
CL Fwd. Abt.		3.1348	4.1766

NOTES:

1. SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED DEAD LOAD DEFLECTIONS.
2. TOP HAUNCH ELEVATIONS SHOWN REPRESENT THE THEORETICAL LOCATION OF THE BOTTOM OF THE DECK ABOVE THE BEAM HAUNCH PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.
3. FOR DECK SLAB PLAN, SEE SHEET 54/65.
4. FOR TRANSVERSE SECTION, SEE SHEET 53/65.
5. FOR STRUCTURAL STEEL FRAMING PLAN, SEE SHEET 50/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

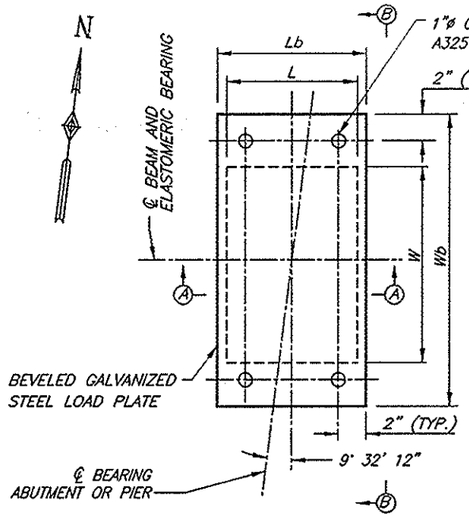
DESIGNED AJM | DRAWN MMP | REVIEWED RAB 11-15 | DATE | STRUCTURE FILE NUMBER 7804350
CHECKED -- | REVISED -- |

SCREED AND TOP OF HAUNCH ELEVATION TABLES
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

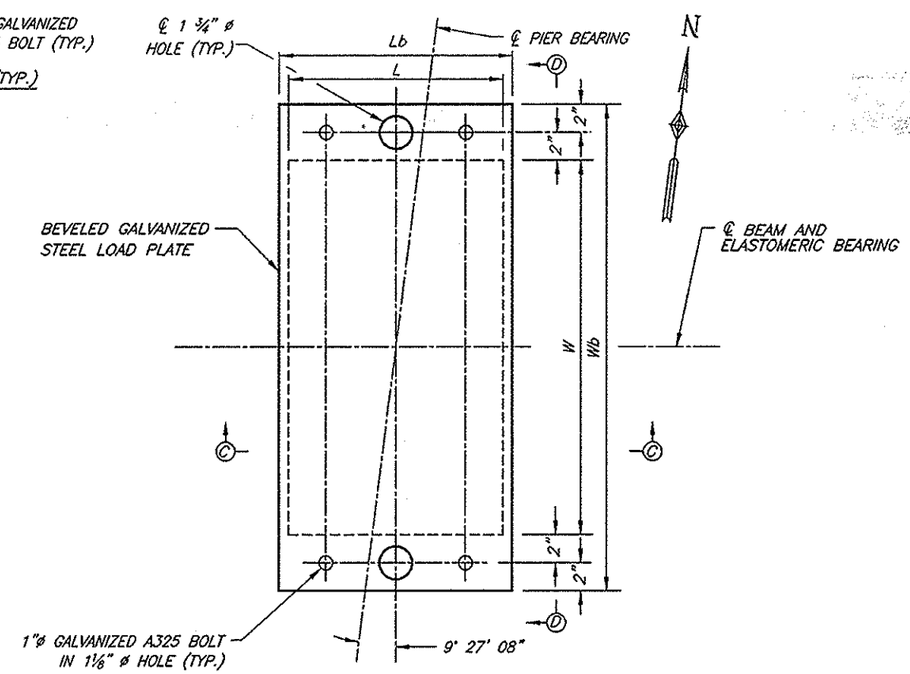
57/65

139/147



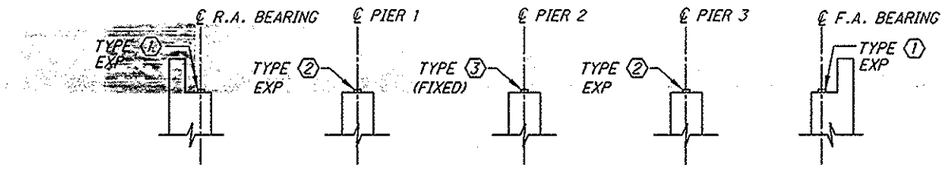
EXPANSION BEARING

REAR ABUTMENT
FWD ABUTMENT
PIER NO. 1
PIER NO. 3



FIXED BEARING

PIER NO. 2



BEARING LOCATIONS

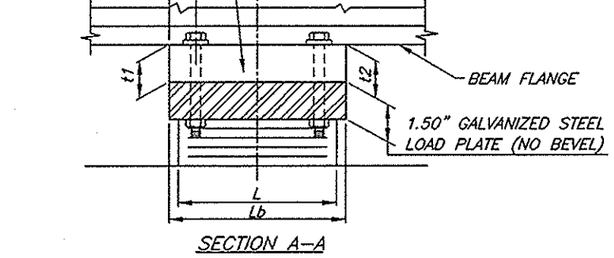
LAMINATED ELASTOMERIC BEARINGS								STEEL LOAD PLATE			
TYPE	NO. REQ'D	L (in)	W (in)	t_i (in)	n	t_e (in)	T (in)	Lb (in)	Wb (in)	t_1 (in)	t_2 (in)
1	17	12	16	0.39	5	0.27	2.67	13	24	2.38	2.63
2	18	15	22	0.42	6	0.29	3.34	16	30	2.56	2.94
3	9	14	24	0.42	6	0.29	3.34	15	32	1.31	1.69

Lb = LENGTH OF STEEL LOAD PLATE (BOTH BEVELED AND NON-BEVELED PLATES)
Wb = WIDTH OF STEEL LOAD PLATE (BOTH BEVELED AND NON-BEVELED PLATES)

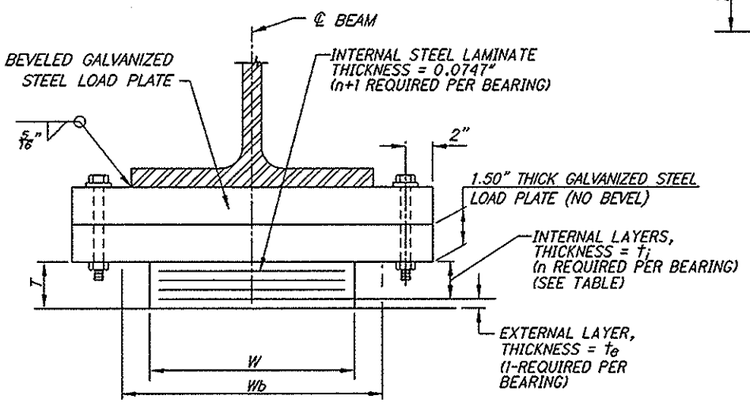
DESIGN LOADING: SERVICE LOAD REACTIONS – KIPS

	DEAD LOAD	LIVE LOAD (NO IMPACT)	TOTAL LOAD
TYPE 1	44.4	136.2	180.6
TYPE 2	143.9	209.3	353.2
TYPE 3	169.9	211.7	381.6

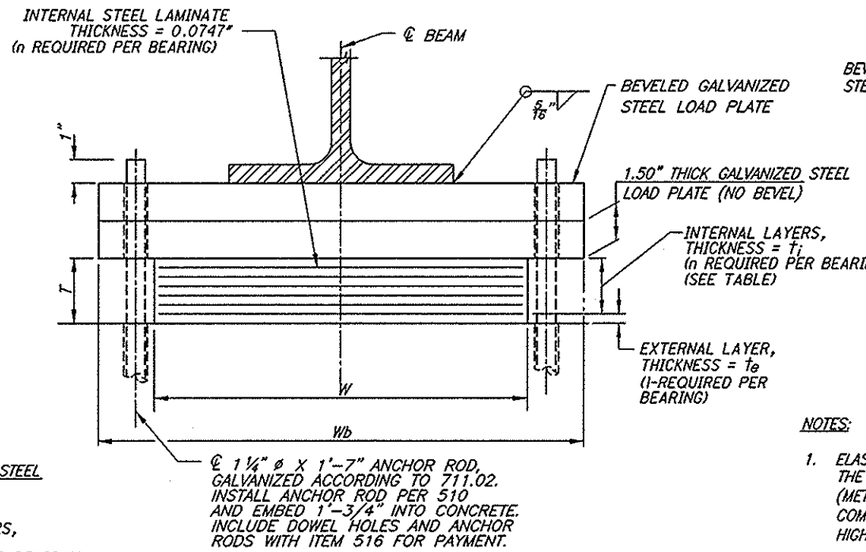
FORWARD



SECTION A–A

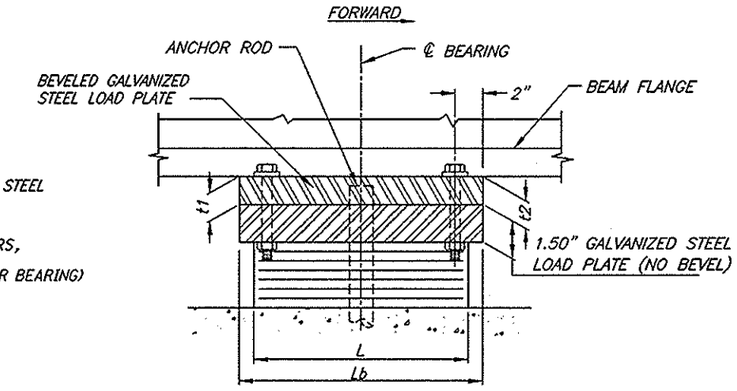


VIEW B–B



VIEW D–D

FORWARD



SECTION C–C

NOTES:

1. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONGTERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.
2. STEEL PLATE USED FOR BEARINGS SHALL BE ASTM A709, GRADE 50 GALVANIZED IN ACCORDANCE WITH AND AS PART OF THE STEEL ITEMS INCLUDED IN THE PLANS.
3. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER THE BEARING IS INSTALLED.
4. 1.5" STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

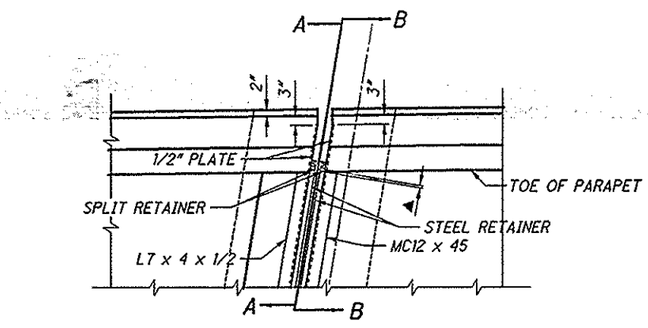
DESIGNED AJM | DRAWN MMP | CHECKED MMP | REVIEWED RAB | DATE 11-15 | REVISED | STRUCTURE FILE NUMBER 7804350

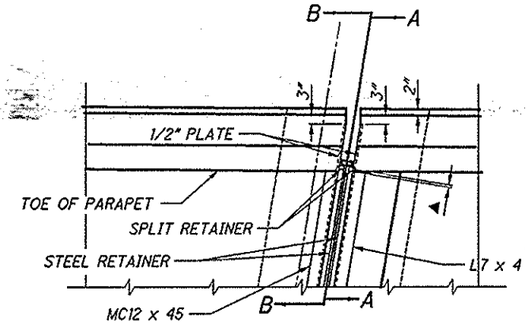
ELASTOMERIC BEARINGS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

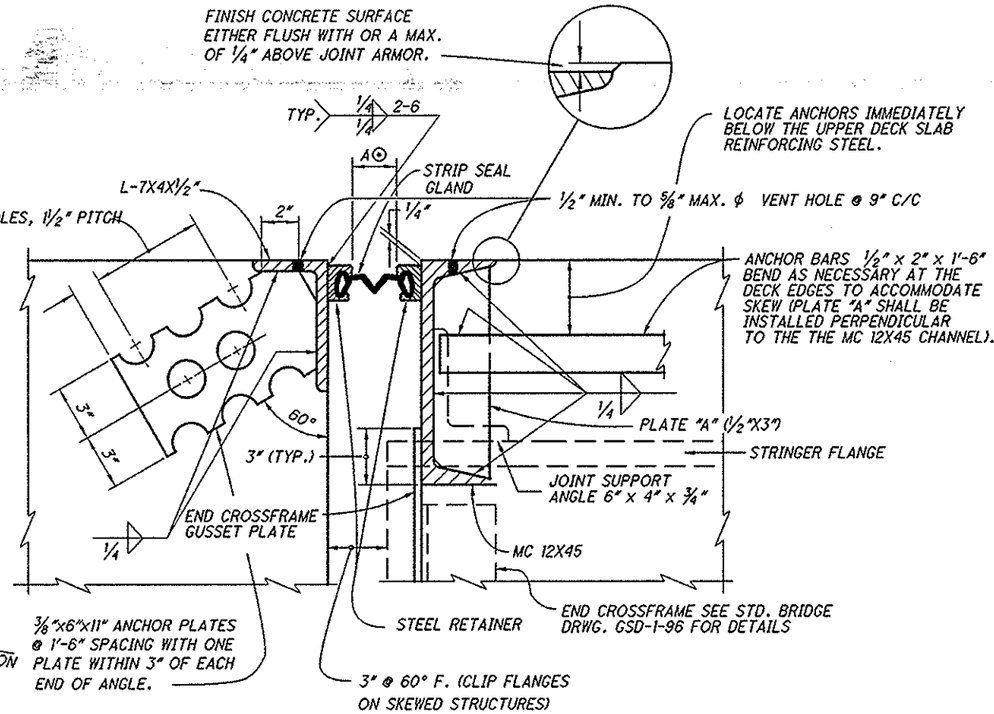
TRU-80-09.56
PID No. 77886

58/65

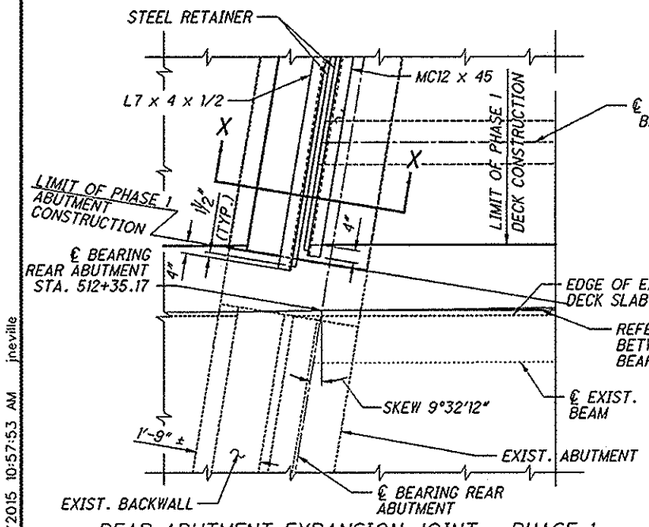
140/147



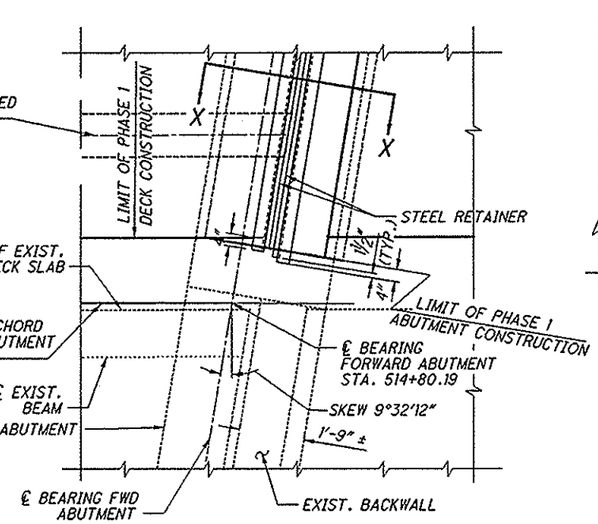




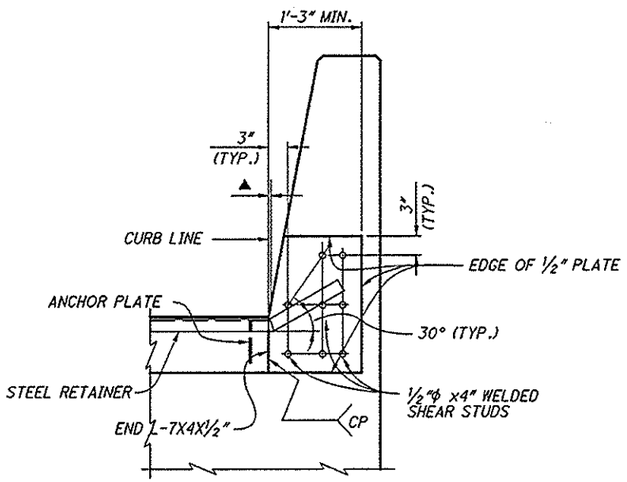
SECTION X-X



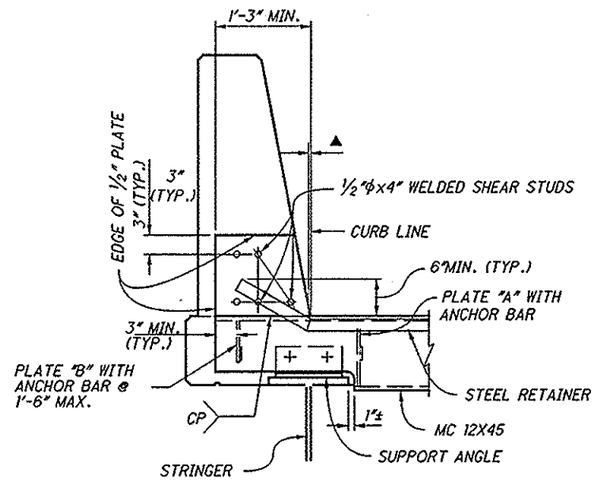
REAR ABUTMENT EXPANSION JOINT - PHASE 1



FORWARD ABUTMENT EXPANSION JOINT - PHASE 1



SECTION A-A



SECTION B-B

DIMENSION "A"	
F (DEG)	REAR & FORWARD ABUTMENT
90	1 3/8"
80	1 3/8"
70	1 1/2"
60	1 5/8"
50	1 3/4"
40	1 3/4"
30	1 7/8"

NOTES:

1. FOR ADDITIONAL DETAILS AND NOTES, SEE STANDARD DRAWING EXJ-4-87.

▲ - 0" MIN. TO 1/2" MAX. AT BREAKPOINT IN RETAINER ON THE SIDE OF THE JOINT ASSEMBLY WHICH IS NEAREST TO THE CURB LINE.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN RCK | REVIEWED RAB | DATE 11-15
CHECKED LAB | REVISED | STRUCTURE FILE NUMBER 7804350

EXPANSION JOINT DETAILS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

59/65
141/147

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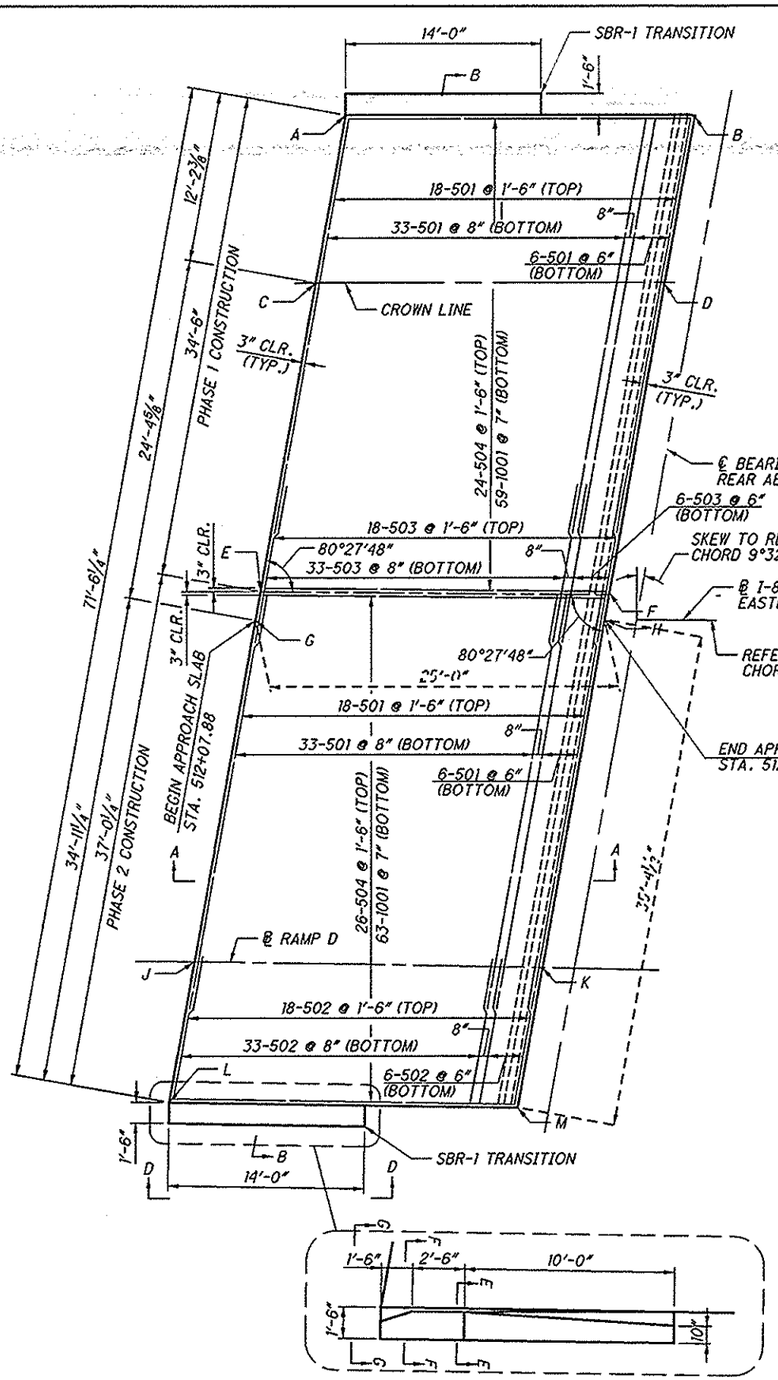
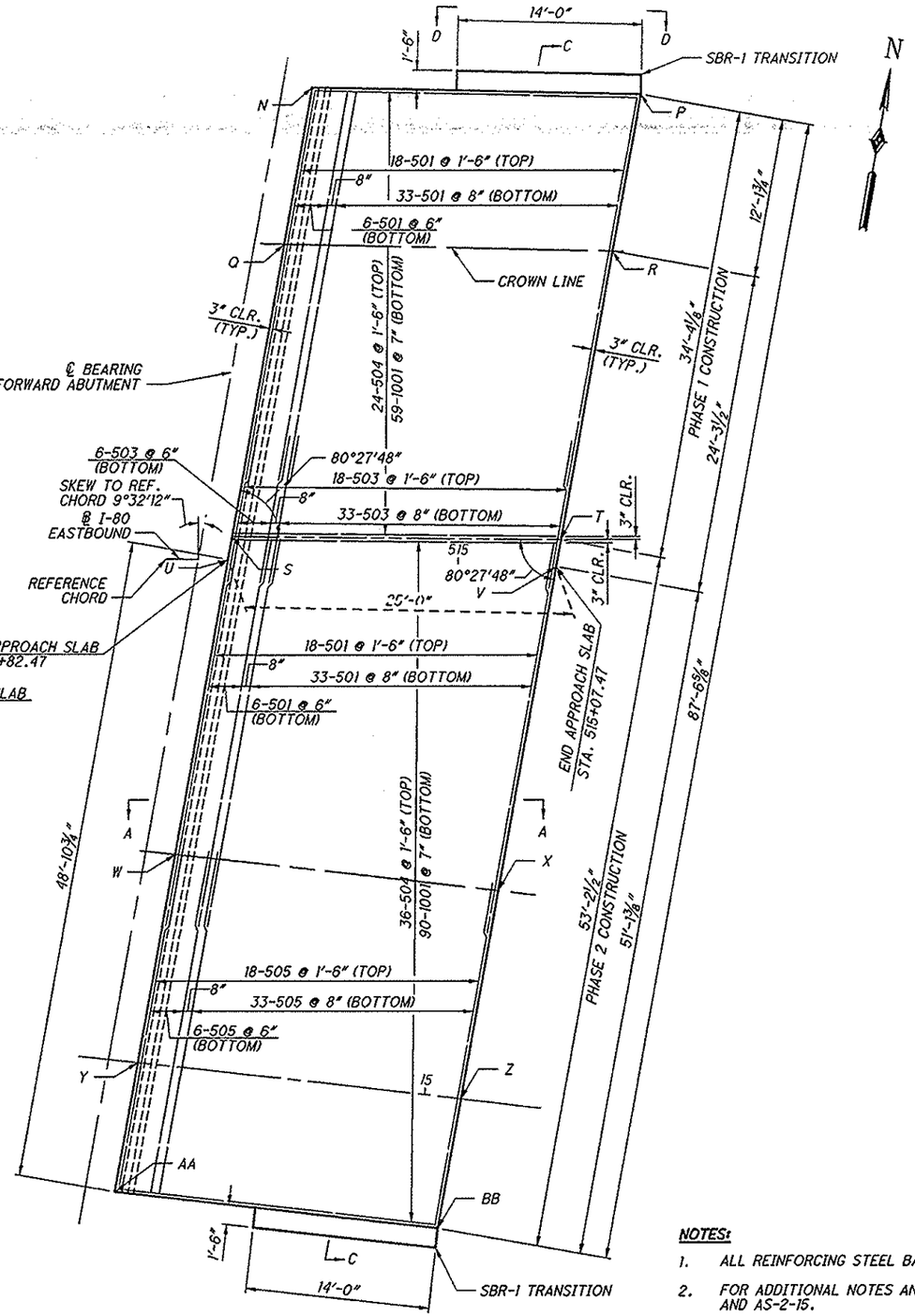


REAR APPROACH SLAB PLAN



FORWARD APPROACH SLAB PLAN

TABLE OF ELEVATIONS	
A	962.84
B	963.44
C	963.27
D	963.87
E	962.77
F	963.37
G	962.73
H	963.33
J	962.20
K	962.79
L	961.76
M	962.58
N	969.45
P	970.06
Q	969.88
R	970.49
S	969.40
T	970.01
U	969.36
V	969.97
W	968.87
X	969.43
Y	968.47
Z	968.99
AA	968.21
BB	968.59

NOTES:

1. ALL REINFORCING STEEL BAR MARKS SHALL BE PREFIXED "AS".
2. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STANDARD DRAWINGS AS-1-15 AND AS-2-15.
3. ELEVATIONS GIVEN AT ℄ I-80 WESTBOUND, ℄ RAMP B, CURBLINES, PHASE LINE AND CROWN LINE.
4. FOR REINFORCING LIST, SEE SHEET 62/65.
5. FOR SECTIONS A-A, B-B, C-C, D-D, E-E, F-F AND G-G, SEE SHEET 61/65.
6. FOR SBR-1 TRANSITION, SEE STD. CONST. DWG. SBR-1-13.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	RCK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LAB		7804350	

APPROACH SLAB DETAILS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

60/65

142/147

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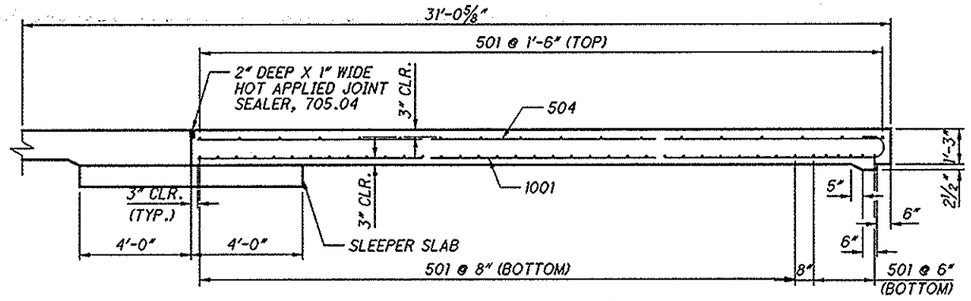
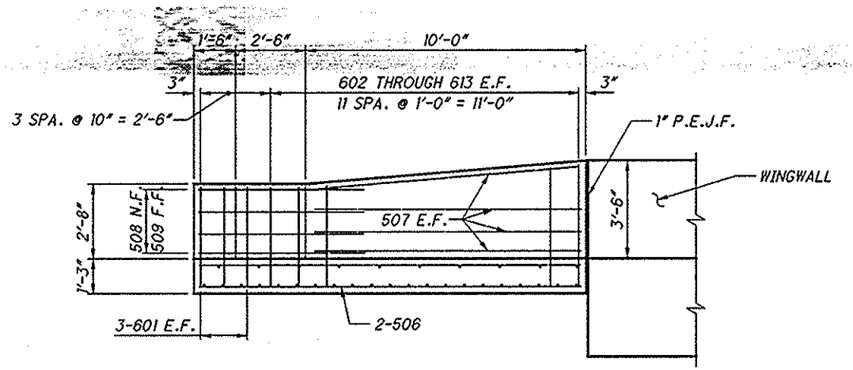
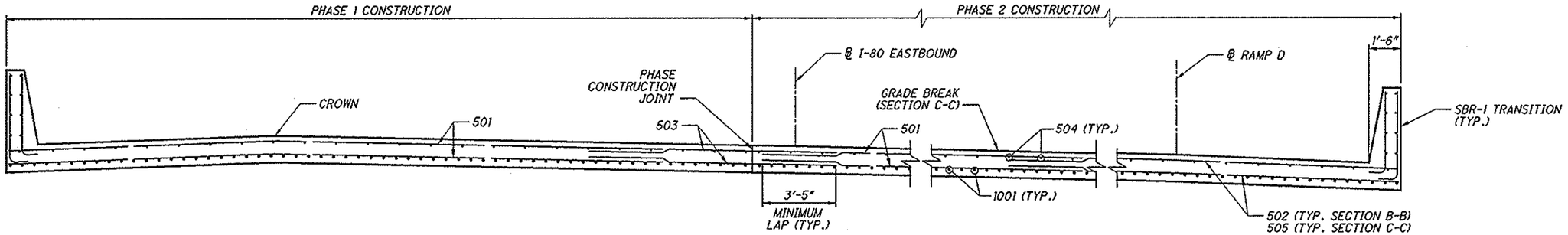


SECTION A-A

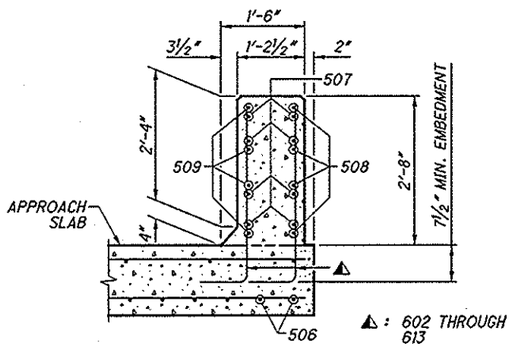


SECTION D-D

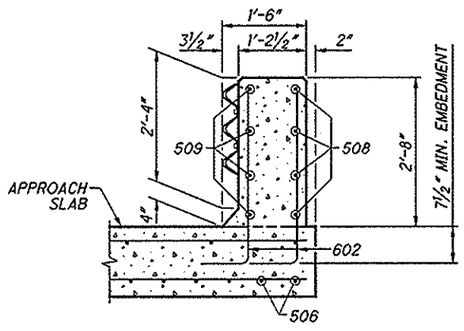


SECTION B-B

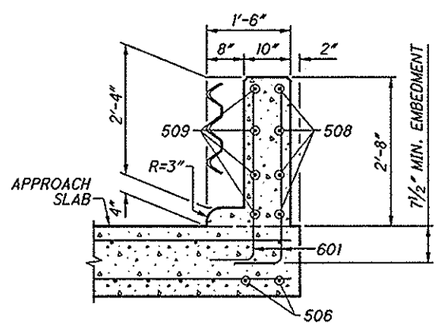
SECTION B-B SHOWN SECTION C-C SIMILAR EXCEPT AS NOTED



SECTION E-E



SECTION F-F



SECTION G-G

NOTES:

1. FOR REINFORCING LIST, SEE SHEET 62/65 .
2. ALL REINFORCING STEEL BAR MARKS SHALL BE PREFIXED "AS".
3. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STANDARD DRAWING AS-1-15 AND AS-2-15.
4. FOR SBR-1 TRANSITION SEE STD. CONST. DWG. SBR-1-13
5. FOR LOCATION OF SECTIONS A-A, B-B, C-C & D-D, SEE SHEET 60/65 .

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
AJM	RCK	RAB	11-15
CHECKED	REVISED	STRUCTURE FILE NUMBER	7804350

APPROACH SLAB DETAILS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

61/65

143/147

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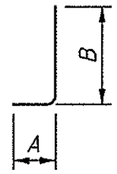
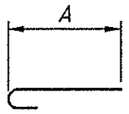
MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
APPROACH SLABS													
AS1001	122	149	271	25'-11"	30,222	16	24'-6"						
AS501	114	114	228	30'-0"	7,134	STR							
AS502	57		57	11'-9"	697	STR							
AS503	57	57	114	12'-7"	1,491	STR							
AS504	50	60	110	24'-6"	2,803	STR							
AS505		57	57	27'-10"	1,650	STR							
AS506	4	4	8	13'-6"	113	STR							
AS507	16	16	32	10'-0"	331	STR							
AS508	8	8	16	5'-8"	95	STR							
AS509	8	8	16	5'-8"	95	23	1'-10"	2'-5"	1'-5"	5"	1 1/2"		
AS601	12	12	24	4'-4"	156	3	1'-0"	3'-6"					
AS602	8	8	16	4'-4"	104	3	1'-0"	3'-6"					
AS603	4	4	8	4'-5"	53	3	1'-0"	3'-7"					
AS604	4	4	8	4'-6"	54	3	1'-0"	3'-8"					
AS605	4	4	8	4'-7"	55	3	1'-0"	3'-9"					
AS606	4	4	8	4'-8"	56	3	1'-0"	3'-10"					
AS607	4	4	8	4'-9"	57	3	1'-0"	3'-11"					
AS608	4	4	8	4'-10"	58	3	1'-0"	4'-0"					
AS609	4	4	8	4'-11"	59	3	1'-0"	4'-1"					
AS610	4	4	8	5'-0"	60	3	1'-0"	4'-2"					
AS611	4	4	8	5'-1"	61	3	1'-0"	4'-3"					
AS612	4	4	8	5'-2"	62	3	1'-0"	4'-4"					
AS613	4	4	8	5'-3"	63	3	1'-0"	4'-5"					
				TOTAL	45,529								

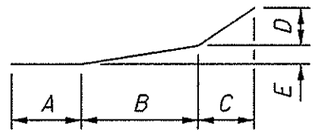
BENDING DIAGRAMS



TYPE-3



TYPE-16



TYPE-23

NOTES:

1. REINFORCING STEEL WEIGHTS GIVEN ARE FOR INFORMATIONAL PURPOSES ONLY.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN RCK | REVIEWED RAB | DATE 11-15
CHECKED | REVISED | STRUCTURE FILE NUMBER 7804350

APPROACH SLAB DETAILS
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

62/65

144/147

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS													
A501	10	10	20	11'-8"	243	STR							
A502	17	17	34	7'-4"	260	STR							
A503	15	15	30	11'-11"	373	3	3'-2"	2'-6"					
A504	17	17	34	9'-6"	337	2	2'-3"	5'-3"	2'-3"				
A505	11	11	22	5'-0"	115	STR							
A506	8	8	16	3'-3"	54	STR							
A507	14	14	28	9'-8"	282	1	1'-3"	8'-6"					
A508	8	8	16	19'-8"	328	STR							
A509	21	21	42	7'-2"	314	2	2'-0"	3'-5"	2'-0"				
A510	3	3	6	8'-8"	145	1	1'-3"	7'-6"					
A511	1	1	2	3'-4"	7	STR							
A512	11	11	22	3'-0"	69	STR							
A513	2	2	4	4'-3"	18	2	1'-0"	2'-6"	1'-0"				
A514	82	102	184	3'-5"	656	1	1'-2"	2'-4"					
A515	41	51	92	5'-4"	512	2	3'-4"	9"	1'-6"				
A516	2	2	4	5'-3"	22	STR							
A517	2	2	4	4'-6"	19	STR							
A518	6	6	12	5'-2"	65	STR							
A519	32	32	64	30'-0"	2,003	STR							
A520	16	16	32	8'-0"	267	32	8'-0"						
A521	16	16	32	9'-10"	328	33	9'-10"						
A522		16	16	16'-0"	267	STR							
A523	4	4	8	6'-0"	50	STR							
A524	2	2	4	4'-6"	19	STR							
A525	2	2	4	5'-6"	23	STR							
A526	7	7	14	8'-8"	127	STR							
A527	2	4	6	13'-8"	86	STR							
A528	2		2	14'-0"	29	STR							
A529	2	4	6	14'-7"	91	1	1'-0"	13'-8"					
A530	2		2	14'-11"	31	1	1'-0"	14'-0"					
A531	28	28	56	11'-8"	681	STR							
A532	4	4	8	3'-9"	31	STR							
A533	24	24	48	7'-4"	367	23	11"	3'-3"	3'-0"			2 3/4"	
A601	17	17	34	16'-3"	830	2	8'-9"	5'-3"	2'-7"				
A602	24	24	48	7'-11"	571	2	3'-5"	1'-5"	3'-5"				
A603	24	24	48	5'-9"	415	2	2'-4"	1'-5"	2'-4"				
A604	76	87	163	6'-3"	1,530	2	2'-10"	11"	2'-10"				
A605	15	15	30	12'-10"	578	2	6'-0"	1'-2"	6'-0"				
A606	52	63	115	10'-8"	1,842	3	1'-5"	3'-2"					
A607	16	14	30	8'-1"	364	STR							
A608	14		14	9'-1"	191	STR							
A609		16	16	9'-6"	228	STR							
A610	18		18	10'-7"	286	2	4'-9"	1'-5"	4'-9"				
A611		10	10	11'-1"	166	2	5'-0"	1'-5"	5'-0"				
A612		8	8	12'-3"	147	2	5'-7"	1'-5"	5'-7"				
A613	24	24	48	3'-3"	234	STR							
A614	24	24	48	4'-0"	288	22	2'-3"	11"	11"				
A615	2	2	4	11'-8"	70	STR							

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL				A	B	C	D	E	R	INC
ABUTMENTS													
A801	4	4	8	19'-9"	422	STR							
A802	4	4	8	19'-6"	417	STR							
A803	8	8	16	3'-0"	128	STR							
A804	8	8	16	5'-4"	228	STR							
TOTAL					17,154								

NOTES:

1. FOR BENDING DIAGRAMS AND ADDITIONAL NOTES, SEE SHEET 65/65.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM
DRAWN PJK
CHECKED LAB
REVIEWED RAB
DATE 11-15
REVISED
STRUCTURE FILE NUMBER 7804350

REINFORCING SCHEDULE
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

63/65

145
147

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
PIER 1								
1P501	18	8'-11"	167	2	3'-3"	2'-8"	3'-3"	
1P502	6	7'-3"	46	19	5'-4"	1'-11"	8"	
1P503	4	21'-3"	89	STR				
1P504	4	30'-0"	125	STR				
1P505	2	6'-4"	13	32	6'-4"			
1P506	2	11'-8"	24	33	11'-8"			
1P507	4	7'-8"	32	STR				
1P508	6	7'-2"	45	19	5'-8"	1'-6"	3"	
	1	7'-1"			2'-4"		2'-4"	
1P509	SERIES OF	TO	51	2	TO	2'-8"	TO	4¾"
	6	9'-1"			3'-4"		3'-4"	
1P510	12	7'-1"	89	2	2'-4"	2'-8"	2'-4"	
	1	7'-1"			2'-4"		2'-4"	
1P511	SERIES OF	TO	51	2	TO	2'-8"	TO	4½"
	6	8'-11"			3'-3"		3'-3"	
1P512	3	11'-5"	36	2	4'-6"	2'-8"	4'-6"	
1P513	74	4'-1"	315	1	1'-6"	2'-8"		
1P514	1	10'-1"	11	2	3'-10"	2'-8"	3'-10"	
1P515	2	19'-0"	40	STR				
1P701	28	8'-8"	496	STR				
1P901	12	11'-7"	473	1	1'-2"	10'-8"		
1P902	12	19'-8"	803	STR				
1P903	6	16'-4"	333	STR				
1P904	12	30'-0"	1224	STR				
1P905	6	13'-6"	275	32	13'-6"			
1P906	6	18'-11"	386	33	18'-11"			
1PSP401	1		274	27	4 ½"	2'-6"	18'-11"	
TOTAL			5,398					

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
PIER 2								
2P501	20	9'-6"	199	2	3'-5"	2'-8"	3'-5"	
2P502	6	6'-5"	41	19	4'-8"	1'-9"	11¾"	
2P503	4	21'-5"	89	STR				
2P504	4	30'-0"	125	STR				
2P505	2	6'-4"	13	32				
2P506	4	6'-2"	26	STR				
2P507	2	13'-4"	28	33				
2P508	6	6'-5"	40	19	5'-2"	1'-3"	4"	
	1	7'-1"			2'-4"		2'-4"	
2P509	SERIES OF	TO	44	2	TO	2'-8"	TO	8"
	5	9'-9"			3'-8"		3'-8"	
2P510	10	7'-1"	74	2	2'-4"	2'-8"	2'-4"	
2P511	3	12'-3"	39	2	4'-11"	2'-8"	4'-11"	
2P512	82	4'-6"	385	1	1'-11"	2'-8"		
2P513	2	19'-3"	41	STR				
	1	7'-1"			2'-4"		2'-4"	
2P514	SERIES OF	TO	49	2	TO	2'-8"	TO	13"
	5	11'-5"			4'-6"		4'-6"	
2P515	1	10'-5"	11	2	4'-0"	2'-8"	4'-0"	
2P701	28	8'-8"	496	STR				
2P901	12	11'-7"	473	1	1'-2"	10'-8"		
2P902	12	22'-0"	898	STR				
2P903	6	17'-4"	354	STR				
2P904	12	30'-0"	1224	STR				
2P905	6	13'-6"	275	32				
2P906	6	20'-6"	418	33				
2PSP401	1		296	27	4 ½"	2'-6"	19'-9"	
TOTAL			5,638					

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
PIER 3								
3P501	30	9'-3"	290	2	3'-5"	2'-8"	3'-5"	
3P502	NOT USED							
3P503	6	21'-2"	133	STR				
3P504	4	30'-0"	125	STR				
3P505	2	6'-3"	13	32	6'-3"			
3P506	4	6'-8"	28	STR				
3P507	2	18'-3"	38	33	18'-3"			
3P508	6	6'-9"	42	19	5'-6"	1'-3"	3"	
	1	7'-1"			2'-4"		2'-4"	
3P509	SERIES OF	TO	51	2	TO	2'-8"	TO	5 ¼"
	6	9'-3"			3'-5"		3'-5"	
3P510	10	7'-1"	74	2	2'-4"	2'-8"	2'-4"	
3P511	3	12'-1"	38	2	4'-10"	2'-8"	4'-10"	
3P512	1	10'-1"	11	2	3'-9"	2'-8"	3'-9"	
3P513	84	4'-3"	372	1	1'-8"	2'-8"		
3P701	28	8'-8"	496	STR				
3P901	12	11'-7"	473	1	1'-2"	10'-8"		
3P902	12	24'-0"	979	STR				
3P903	6	21'-2"	432	STR				
3P904	12	30'-0"	1224	STR				
3P905	6	13'-5"	274	32	13'-5"			
3P906	6	25'-5"	518	33	25'-5"			
3PSP401	1		324	27	4 ½"	2'-6"	22'-6"	
TOTAL			5,935					

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED IN THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE S601 IS A NO. 6 BAR. BAR DIMENSIONS ARE SHOWN 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 A BAR.
2. ALL REINFORCING STEEL TO BE EPOXY COATED.
3. FOR BENDING DIAGRAMS AND ADDITIONAL NOTES, SEE SHEET 65/65.

DESIGN AGENCY
EUTHENIES INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

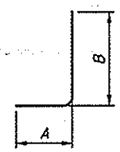
DESIGNED AJM | DRAWN PJK | REVIEWED RAB | DATE 11-15
CHECKED LAB | REVISED | STRUCTURE FILE NUMBER 7804350

REINFORCING SCHEDULE
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
SUPERSTRUCTURE											
S401	822	30'-0"	16,473	STR							
S402	93	22'-3"	1,382	STR							
S403	1,018	9'-10"	6,687	16	9'-4"						
S501	2,774	30'-0"	86,798	STR							
S502	90	25'-7"	2,402	STR							
S503	1,004	8'-1"	8,465	32	8'-1"						
	2	4'-4"			4'-4"						
S504	SERIES OF	TO	358	32	TO						2'-10¼"
	10	30'-0"			30'-0"						
	2	8'-3"									
S505	SERIES OF	TO	305	STR							2'-10¼"
	8	28'-3"									
S506	10	5'-3"	55	STR							
S507	2	6'-4"	13	STR							
	2	4'-2"									
S508	SERIES OF	TO	294	STR							2'-10½"
	9	27'-2"									
	2	6'-8"									
S509	SERIES OF	TO	315	STR							2'-10½"
	8	26'-10"									
	2	4'-2"									
S510	SERIES OF	TO	185	STR							2'-10"
	7	21'-2"									
S511	218	22'-2"	5,040	STR							
S512	200	18'-0"	3,755	STR							
S513	200	14'-7"	3,042	STR							
S514	200	12'-0"	2,503	STR							
S515	194	10'-3"	2,074	STR							
S516	1,024	3'-10"	4,094	33	3'-10"						
S517	526	7'-4"	4,023	23	11"	3'-3"	3'-0"				
S518	4	9'-5"	39	STR							
S519	28	14'-8"	428	STR							
S520	64	7'-2"	478	STR							
S521	4	10'-3"	43	STR							
S601	298	30'-0"	13,428	STR							
S602	298	13'-0"	5,819	STR							
S603	526	2'-5"	1,909	1	1'-0"	1'-7"					
S604	526	3'-2"	2,502	29	1'-7"	1'-0"	11"	3 5/8"			
S605	2	9'-5"	28	STR							
S606	14	14'-8"	308	STR							
S607	32	7'-2"	344	STR							
S608	2	10'-3"	31	STR							
	TOTAL		173,620								

BENDING DIAGRAMS



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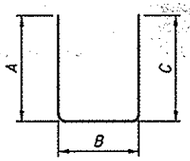

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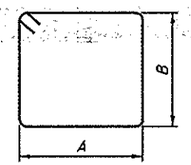

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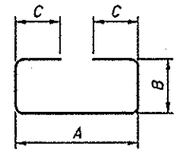

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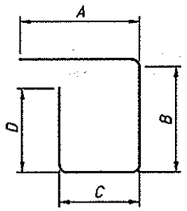
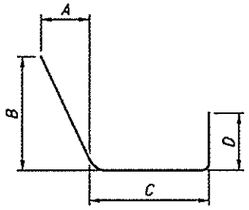


TYPE-7



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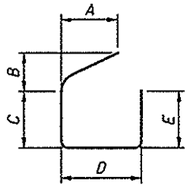
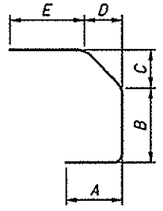
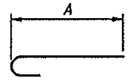


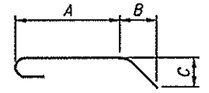
TYPE-12



TYPE-14



TYPE-16



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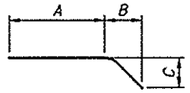
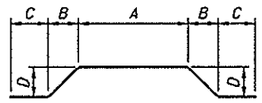
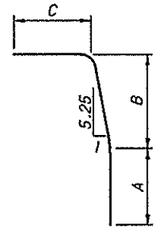


TYPE-19



TYPE-21



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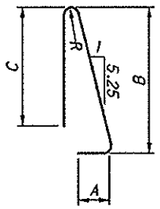

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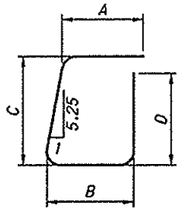

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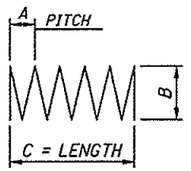

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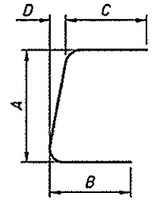
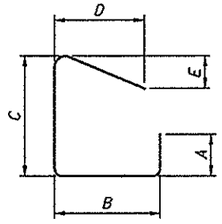


TYPE-29



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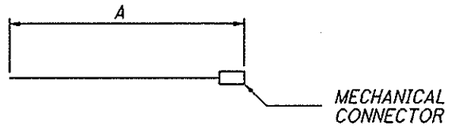
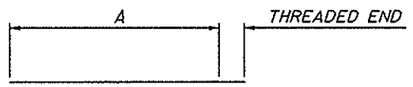
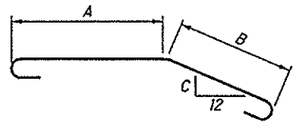


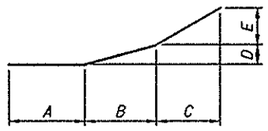
TYPE 32



TYPE 33



TYPE-35



TYPE-25

NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED IN THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE S601 IS A NO. 6 BAR. BAR DIMENSIONS ARE SHOWN 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 A BAR.
2. ALL REINFORCING STEEL TO BE EPOXY COATED.

DESIGN AGENCY
EUTHENICS INC.
CONSULTING ENGINEERS
CLEVELAND, OHIO

DESIGNED AJM | DRAWN PJK | CHECKED LAB | REVIEWED RAB | DATE 11-15
REVISED | STRUCTURE FILE NUMBER 7804350

REINFORCING SCHEDULE
TRU-80-0956 R
OVER U.S. 62/S.R. 7

TRU-80-09.56
PID No. 77886

65/65

147/147