CUY-90-14.90

PID 77332/85531

APPENDIX EX-79

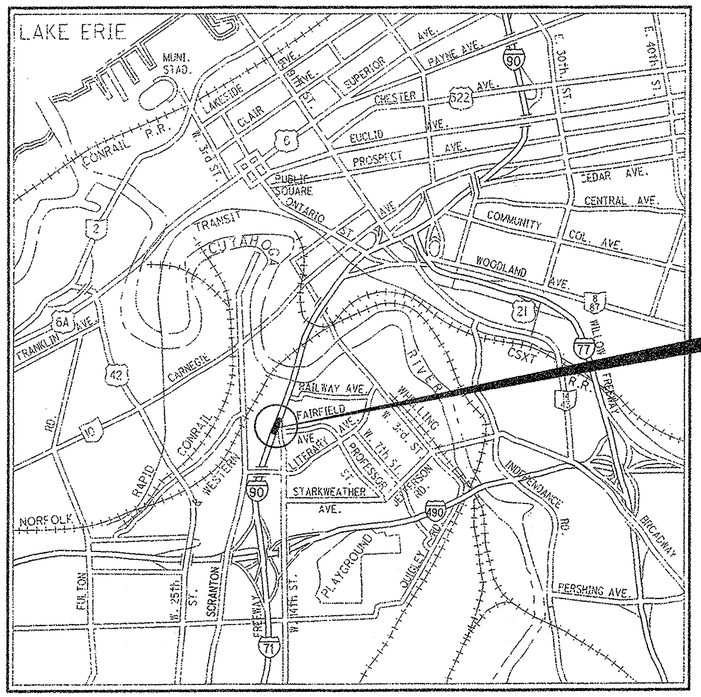
CUY-090-1524 PID 82072

(Reference Document)

State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

Innerbelt Bridge
Construction Contract Group 1 (CCG1)

Revision Date: 2009



PROJECT LOCATION

LOCATION MAP

LATITUDE: N 41°29'05" LONGITUDE: W 81°41'28"

SCALE IN MILES

0 ½ 1 2

N

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAY

U.S. HIGHWAYS

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-90-1524
RELOCATE TRUSS SPAN 1

CITY OF CLEVELAND
CUYAHOGA COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

THE PROPOSED PROJECT IS THE RELOCATION OF TRUSS SPAN 1 AND SUPPORTED SPAN 2 AND FINGER JOINT REPAIRS.

PROJECT LENGTH = 0.0 MILE.

2008 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 REQUIRE THE CLOSING TO TRAFFIC OF IR 90 AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS 5 & 6.

APPROVED _____
DATE 2/18/09 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 2-23-09 DIRECTOR, DEPARTMENT OF TRANSPORTATION

PROJECT EARTH DISTURBED AREA	= N/A (MAINTENANCE PROJECT)
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	= N/A (MAINTENANCE PROJECT)
NOTICE OF INTENT DISTURBED AREA	= N/A (MAINTENANCE PROJECT)

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

PREPARED AND RECOMMENDED BY:

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD OHIO 44902
PHONE: (419) 524-0074 FAX: (419) 524-1812

ENGINEERS SEAL:

STATE OF OHIO
DEAN A. PALMER
E-37475
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Dean Palmer
DATE: 2-12-09

STANDARD CONSTRUCTION DRAWINGS

						SUPPLEMENTAL SPECIFICATIONS
MT-35.10	4-20-01					SS 800 1-16-09
MT-95.30	9-5-06					
MT-97.10	9-5-06					
MT-98.29	10-19-07					
MT-99.50	1-16-09					
MT-105.10	1-16-09					
						SPECIAL PROVISIONS

FEDERAL PROJECT NO. E090 (389)
PID NO. 82072
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
CUY-90-15.24
1 / 38

CUY - 90 - 15.24
096000 82072
DIST 12 3/18/2009

108031/82072GT001.DGN 2/11/09 KH,TWH,JLS,SCB

UTILITIES

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

ELECTRIC:
CLEVELAND PUBLIC POWER
1300 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
ATTN: DALE TURKOVICH
PHONE: 216-664-4245 EXT. 115

GAS:
DOMINION EAST OHIO
320 SPRINGSIDE DRIVE
FAIRLAWN, OHIO 44333
ATTN: MIKE ANTONIUS
PHONE: 216-736-6675

CATV:
TIME WARNER
14300 SOUTH INDUSTRIAL PARKWAY
MAPLE HEIGHTS, OHIO 44137
ATTN: KIP EIGER
PHONE: 216-663-4003

SIGNALS:
CAVALIER NETWORKS
6777 ENGLE ROAD, SUITE E
MIDDLEBURG HEIGHTS, OHIO 44130
ATTN: RICH KOSOISKY
PHONE: 440-260-0102

STEAM:
DOMINION-CLEVELAND
THERMAL ENERGY CORP.
1921 HAMILTON AVENUE
CLEVELAND, OHIO 44114
ATTN: SCOTT TEMPLETON
PHONE: 216-241-4192

TELEPHONE:
LEVEL (3) COMMUNICATIONS, LLC
1025 EL DORADO BOULEVARD
BROOMFIELD, COLORADO 80021
ATTN: BILL O'DWYER NETWORK
PHONE: 720-888-3406

TELEPHONE:
BROADWING COMMUNICATIONS
INCORPORATED
1122 SOUTH CAPITAL OF TEXAS
HIGHWAY
AUSTIN, TEXAS 78746
ATTN: R&U PROJECT
MANAGER/INVESTIGATIONS
PHONE: 512-742-1439

TELEPHONE:
MCI - WORLDCOM
120 RAVINE STREET
AKRON, OHIO 44303
ATTN: AL GUEST
PHONE: 330-253-8267

ELECTRIC:
ILLUMINATING COMPANY
6896 MILLER ROAD (SUITE 110)
BRECKSVILLE, OHIO 44141
ATTN: JERRY ROGERS
PHONE: 440-717-6808

WATER:
DIVISION OF WATER
1201 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
ATTN: GUY SINGER
PHONE: 216-664-2444 EXT. 5555

SEWER:
NEORSD
3900 EUCLID AVENUE
CLEVELAND, OHIO 44115-2504
ATTN: RICHARD SWITALSKI
PHONE: 216-881-6600

LIGHTING:
ODOT-12
5500 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OHIO 44125
ATTN: LOU MINCEK
PHONE: 216-584-2221

TELEPHONE:
XO COMMUNICATIONS
3 SUMMIT DRIVE, SUITE 750
INDEPENDENCE, OHIO 44131
ATTN: ENGINEERING & CONSTRUCTION MANAGER
PHONE: 216-619-3200

TELEPHONE:
ATT
13630 LORAIN AVENUE, 4TH FLOOR
CLEVELAND, OHIO 44111
ATTN: ERIC WESTERBURG
PHONE: 216-476-6142

TELEPHONE:
ELANTIC TELECOM
6341 THOMPSON ROAD
SYRACUSE, NEW YORK 13206
ATTN: WILLIAM McBRIDE
PHONE: 315-414-0127

TELEPHONE:
ADESTA COMMUNICATIONS
254 WASHINGTON AVENUE EXT.
3 CORPORATE PLAZA, SUITE 302
ALBANY, NEW YORK 12203
ATTN: JOHN AIELLO
PHONE: 518-869-5053

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

CONTINGENCY QUANTITIES

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

SURVEY DATUM

HORIZONTAL: NASD 83 (95) OHIO NORTH ZONE - CLEVELAND INNERBELT PROJECT GROUND VALUES.

VERTICAL: NAVD 88

ELEVATION ADJUSTMENT: ORIGINAL DESIGN (1954) PLAN ELEVATION - 0.81 FEET = NAVD 88 ELEVATION.

EXISTING AERIAL EASEMENTS

THE DEPARTMENT IS UTILIZING THE EXISTING CENTRAL VIADUCT AERIAL EASEMENTS "RIGHT TO MAINTAIN" LANGUAGE TO ACCESS THE PROJECT SITE. COORDINATE WORK ACTIVITIES WITH EACH PROPERTY OWNER IN ORDER TO MINIMIZE IMPACTS TO PROPERTY AND EXISTING BUSINESS OPERATIONS.

DISTURBED AREAS SHALL BE RESTORED IN ACCORDANCE WITH CMS 107.10.

COAST GUARD COORDINATION

THE CONTRACTOR SHALL CONTACT THE U.S. COAST GUARD AT LEAST 30 DAYS IN ADVANCE OF WORK THAT MAY INHIBIT MARINE TRAFFIC ON THE RIVER, SUSPEND BELOW THE "LOW STEEL" OF THE EXISTING BRIDGE, OR ENCROACH ON THE ESTABLISHED NAVIGATIONAL VERTICAL OR HORIZONTAL CLEARANCES. ANY SUCH WORK MUST BE APPROVED BY AND COORDINATED WITH THE U.S. COAST GUARD PRIOR TO PERFORMANCE.

CONTACT INFORMATION FOR THE COAST GUARD IS AS FOLLOWS:

MR. ROBERT BLOOM
BRIDGE PROGRAM MANAGER
NINTH COAST GUARD DISTRICT
1240 EAST NINTH STREET
CLEVELAND, OHIO 44199-2060
PHONE: 216-902-6086

THE CITY OF CLEVELAND DEPARTMENT OF PORTS AND HARBORS SHALL ALSO BE NOTIFIED OF ANY MAJOR WORK BEING PERFORMED OVER OR ALONG THE RIVER.

ENVIRONMENTAL COMMITMENT

PEREGRINE FALCON NESTS

THE PROJECT IS WITHIN THE RANGE OF THE STATE ENDANGERED PEREGRINE FALCON (FALCO PEREGRINUS). ANY PROJECT RELATED IMPACT TO THE PEREGRINE FALCON OR ITS KNOWN NESTING SITES ARE RESTRICTED BY FEDERAL AND STATE LAW. NEST SITES IN THE PROJECT AREA ARE MONITORED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES AND THE U.S. FISH AND WILDLIFE SERVICE. THE FALCON HAS BEEN KNOWN TO NEST ON THE EXISTING CENTRAL VIADUCT BRIDGE, PARTICULARLY WITHIN SPANS 1, 2 & 3 OF THE BRIDGE. AS OF SPRING OF 2008, A KNOWN ACTIVE NEST WAS LOCATED IN THE VICINITY OF SPAN 2 OF THE PROPOSED PROJECT. EXTREME CAUTION IS REQUIRED DURING THE FALCON'S NESTING PERIOD, WHICH IS BETWEEN MARCH 15 AND JULY 15. NO WORK SHALL OCCUR IN OR ON THESE SPANS WHILE FALCON EGGS OR FALCON CHICKS ARE PRESENT. WORK MAY RESUME WHEN PERMITTED BY ODOT IN CONCURRENCE WITH ODNR.

IF THE CONTRACTOR DISCOVERS A PEREGRINE FALCON NEST, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND STOP WORK WITHIN 300 FEET OF THE FALCON NEST. ACCESS IN AND AROUND THE 300 FOOT ZONE WILL BE PERMITTED PROVIDED THAT THE CONTRACTOR SUBMITS AN ACCESS PLAN THAT IS APPROVED BY ODOT WITH ODNR CONCURRENCE. THE PROJECT ENGINEER WILL NOTIFY MR. DAMON GREER AT THE OHIO DEPARTMENT OF NATURAL RESOURCES - DIVISION OF WILDLIFE, AKRON DISTRICT 3 HQ AT (330) 245-3024 OR ON HIS CELL PHONE AT (330) 802-1677. THIS ISSUE HAS BEEN DISCUSSED WITH ODNR THAT IF THE FALCON NEST IMPACTS THE PROJECT SCHEDULE, ODNR WILL ATTEMPT TO RELOCATE THE FALCON NEST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ODNR, THE EQUIPMENT TO ACCESS THE NEST SITE(S). THE COST FOR PROVIDING THIS ODNR ACCESS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. FOR MORE INFORMATION ABOUT THE PEREGRINE FALCON GO TO: WWW.DNR.STATE.OH.US/WILDLIFE.

PEREGRINE FALCONS CAN EXHIBIT AGGRESSIVE BEHAVIOR. THE CONTRACTOR IS REQUIRED TO EXERCISE CAUTION WHEN WORKING IN THE AREAS NOTED ABOVE.

ANY DELAY COSTS RESULTING FROM SUSPENSION OF PROJECT WORK ON THE CRITICAL PATH, WHEN THE CONTRACTOR IS ORDERED TO SUSPEND WORK DUE TO THE PRESENCE OF AN ACTIVE PEREGRINE FALCON NEST, IS LIMITED TO THE FOLLOWING:

DELAY LESS THAN OR EQUAL TO 60 DAYS IS CONSIDERED TO BE AN EXCUSABLE, NON-COMPENSABLE DELAY PER 108.06B.8.

DELAY GREATER THAN 60 DAYS, IS CONSIDERED TO BE AN EXCUSABLE, COMPENSABLE DELAY PER 108.06D.4, AND ADDITIONAL COSTS ARE LIMITED TO 109.05.D.2.B & D.

CALCULATED | CHECKED

GENERAL NOTES

CUY-90-15.24

ITEM 614 - MAINTAINING TRAFFIC

A. GENERAL

THE CUY-90-1524 BRIDGE IS CURRENTLY RESTRICTED TO THREE LANES OF LIGHT VEHICLE TRAFFIC IN THE EASTBOUND AND WESTBOUND DIRECTIONS. THE OUTERMOST LANES ARE CLOSED AND TRUCK TRAFFIC IS DETOURED FROM THE STRUCTURE. THE ENTRANCE RAMP TO IR 90 WESTBOUND FROM ONTARIO STREET AND THE ENTRANCE RAMP TO IR 90 EASTBOUND FROM WEST 14th STREET ARE CLOSED.

THE CONTRACTOR MAY USE CLOSED OUTSIDE LANES FOR ACCESS AND MATERIAL DELIVERY TO THE WORK AREAS. ONE TRUCK, WEIGHING NO MORE THAN 40 TONS, IS PERMITTED ACCESS TO THE CLOSED LANES AT ANY ONE TIME.

THE CONTRACTOR MAY CLOSE ONE LANE ON CITY STREETS BENEATH THE BRIDGE FOR EQUIPMENT ACCESS USING FLAGGERS.

GENERALLY THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AS TO MAKE THE PROPOSED REPAIR WITH A MINIMUM OF HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY. FURTHERMORE, IN ADDITION TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

B. NOTIFICATION

SINCE FUNCTIONAL TRAFFIC CONTROL IS A MAJOR CONCERN ON THIS PROJECT, IT IS ESSENTIAL THAT THE MOTORING PUBLIC BE ADEQUATELY FOREWARNED OF FUTURE LANE CLOSURES AND TRAFFIC CONSTRICTIONS. THEREFORE, THE CONTRACTOR SHALL SUBMIT A SCHEDULE TO THE OHIO DEPARTMENT OF TRANSPORTATION PUBLIC INFORMATION OFFICER INDICATING THE LOCATIONS AND DATES OF THE LANE CLOSURES AND COMPLETE CLOSURES AT LEAST SEVEN (7) DAYS PRIOR TO THE IMPLEMENTATION OF ANY SUCH CLOSURES. THE CONTRACTOR SHALL ALSO NOTIFY THE LOCAL LAW ENFORCEMENT AGENCIES OF LANE CLOSURES AND COMPLETE CLOSURES AT LEAST THREE (3) DAYS PRIOR TO IMPLEMENTATION.

DISTRICT 12 PUBLIC INFORMATION OFFICER
5500 TRANSPORTATION BLVD.
GARFIELD HEIGHTS, OHIO 44125-5396
PHONE: (216) 584-2006

C. RESTRICTIONS AND EXCEPTIONS

1. LANE CLOSURES ARE PERMITTED FOR DECK EXPANSION JOINT FINGER REPAIRS, DELIVERY OF MATERIALS, AND EQUIPMENT. LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST, WHICH IS LOCATED ON THE ODOT WEB SITE: WWW.DOT.STATE.OH.US/DIST12/WORKZONE/LANECLO.HTM.

   THE LATEST REVISION, AT 14 DAYS PRIOR TO THE BID DATE, SHALL BE IN EFFECT FOR THIS PROJECT, WITH THE FOLLOWING EXCEPTIONS:

   ANY ROADWAY NOT LISTED IN THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" SHALL NOT HAVE ANY CLOSURES WEEKDAYS FROM 7AM TO 9AM AND 3PM TO 6PM.

   NO LANES SHALL BE CLOSED ON IR 90 DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

   CHRISTMAS — NEW YEARS — EASTER
   MEMORIAL DAY — FOURTH OF JULY
   LABOR DAY — THANKSGIVING

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

DAY OF THE WEEK	TIME ALL LANES ARE TO BE OPEN TO TRAFFIC
SUNDAY	12:00 N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00 N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00 N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00 N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00 N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00 N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00 N FRIDAY THROUGH 6:00 AM MONDAY

   DO NOT IMPLEMENT LANE CLOSURES ON IR 90 OR RAMPS IN THE EASTBOUND DIRECTION 2 HOURS BEFORE THE START OF, AND IN THE WESTBOUND DIRECTION 2 HOURS AFTER, ANY ENTERTAINMENT EVENT DOWNTOWN WITH A SEATING CAPACITY OF 20,000 OR GREATER.

2. COMPLETE NIGHTTIME CLOSURE OF ALL LANES ON THE BRIDGE AND ENTRANCE RAMPS LEADING TO THE BRIDGE ARE REQUIRED FOR VERTICAL JACKING OF THE BRIDGE AT PIER 1. THE CLOSURE IS REQUIRED TWO TIMES: (1) TO INSTALL THE LOW FRICTION SLIDING PLATE BELOW THE FIXED BEARING AT PIER 1 AND (2) TO REMOVE THE LOW FRICTION SLIDING PLATE BELOW THE FIXED BEARING AT PIER 1.

   ALL IR 90 EASTBOUND AND WESTBOUND TRAFFIC LANES SHALL BE CLOSED TO TRAFFIC AND TRAFFIC DETOURED FOR VERTICAL JACKING. THE COMPLETE CLOSURE AND DETOUR SHALL BE LIMITED TO TWO NIGHTTIME PERIODS DURING TWO SEPARATE WEEKENDS. THE CLOSURES SHALL BE LIMITED TO 12 AM SATURDAY TO 8 AM SATURDAY OR 12 AM SUNDAY TO 11 AM SUNDAY.

   HOLIDAY AND SPECIAL EVENT RESTRICTIONS LISTED WITH ITEM 1 SHALL APPLY TO THE NIGHTTIME CLOSURES.

3. COMPLETE WEEKEND (2 DAY) CLOSURE OF ALL LANES ON THE BRIDGE AND ENTRANCE RAMPS LEADING TO THE BRIDGE ARE REQUIRED FOR HORIZONTAL JACKING OF THE BRIDGE.

   ALL IR 90 EASTBOUND AND WESTBOUND TRAFFIC LANES SHALL BE CLOSED TO TRAFFIC AND TRAFFIC DETOURED FOR HORIZONTAL JACKING. THE COMPLETE CLOSURE AND DETOUR SHALL BE LIMITED TO A MAXIMUM OF TWO SEPARATE WEEKENDS. THE CLOSURES SHALL BE LIMITED TO A MAXIMUM DURATION OF 12 AM SATURDAY (MIDNIGHT FRIDAY) TO 5 AM MONDAY. WORK MUST BE CONTINUOUSLY PERFORMED WHILE THE BRIDGE IS CLOSED. IF THERE IS NO WORK BEING PERFORMED THE BRIDGE MUST BE OPENED TO TRAFFIC.

   HOLIDAY AND SPECIAL EVENT RESTRICTIONS LISTED WITH ITEM 1 SHALL APPLY TO THE WEEKEND CLOSURES. IF DURING THE COMPLETE CLOSURES THERE IS A SPECIAL EVENT THAT HAS A SEATING CAPACITY OF 20,000 OR GREATER THE FOLLOWING MUST BE FOLLOWED:

   a. OPEN IR 71 NORTH AND IR 90 EASTBOUND ACROSS THE BRIDGE 3 HOURS BEFORE THE EVENT IS TO START. IR 90 WESTBOUND MAY REMAIN CLOSED. JACKING SHALL STOP AND PRESSURE ON THE JACKS SHALL BE RELEASED WHILE THERE IS TRAFFIC ON THE BRIDGE.
   b. 15 MINUTES AFTER THE EVENT STARTS CLOSE IR 71 NORTHBOUND AND IR 90 EASTBOUND. JACKING MAY RESUME.
   c. AFTER THE EVENT ENDS OPEN THE EAST 9TH STREET AND EAST 14TH STREET RAMPS TO IR 90 WESTBOUND. THESE RAMPS ARE TO REMAIN OPEN FOR 1.5 HOURS AFTER THE EVENT ENDS. KEEP IR 90 WESTBOUND CLOSED AND DETOURED TO IR 77 SOUTH/IR 490 WEST. JACKING SHALL STOP AND PRESSURE ON THE JACKS SHALL BE RELEASED WHILE THERE IS TRAFFIC ON THE BRIDGE.
   d. IF THERE IS A SPECIAL EVENT WITH ATTENDANCE OVER 30,000 THEN OPEN IR 90 WESTBOUND AND THE EAST 9TH STREET AND EAST 14TH STREET RAMPS TO IR 90 WESTBOUND AFTER THE EVENT ENDS. IR 90 WESTBOUND AND THESE RAMPS ARE TO REMAIN OPEN FOR 1.5 HOURS AFTER THE EVENT ENDS. JACKING SHALL STOP AND PRESSURE ON THE JACKS SHALL BE RELEASED WHILE THERE IS TRAFFIC ON THE BRIDGE.

4. DURING NON-WORKING HOURS, ALL LANES SHALL BE IN FULL OPERATION, EXCEPT THE CLOSED OUTSIDE LANES ON THE CUY-90-1524 BRIDGE, WITH ALL TRAFFIC CONTROL SIGNS, EXCEPT W20-1 ROAD WORK AHEAD SIGNS, REMOVED OR COVERED AND ALL CHANNELIZING DEVICES REMOVED FROM THE PAVEMENT SURFACES. CHANNELIZING DEVICES MAY NOT BE STORED ON THE SHOULDER. CONSTRUCTION EQUIPMENT, PRIVATE VEHICLES AND MATERIALS SHALL NOT BE PARKED OR STORED ON THE ROADWAY OR WITHIN 30 FEET OF ANY TRAVELED LANES.

5. LIQUIDATED DAMAGES:
   IF LANE CLOSURES ARE IN PLACE OUTSIDE THE SPECIFIED TIME, LIQUIDATED DAMAGES IN THE AMOUNT OF $100.00 PER MINUTE, SHALL BE ASSESSED THE CONTRACTOR FOR EACH MINUTE THE LANES REMAIN CLOSED.

6. INTERIM COMPLETION DATE:
   THE RELOCATION OF SPAN 1 AND SUPPORTED SPAN 2 IS AN INTERIM COMPLETION DATE. THE WORK SHALL BE COMPLETED BY MAY 31, 2009. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM THE CONSTRUCTION WORK PRIOR TO THIS DATE. THE FAILURE OF THE CONTRACTOR TO MEET THE INTERIM COMPLETION DATE WILL CAUSE SEPARATE LIQUIDATED DAMAGES ASSESSED AS PER CMS 108.07 PER CALENDAR DAY OF OVERRUN OF THE INTERIM COMPLETION DATE. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION 108.07.

D. MAINTENANCE OF TRAFFIC SYSTEMS

1. WHEN REQUIRED

   WHENEVER ANY PART OF THE TRAVELED SURFACE IS BEING WORKED UPON OR IS OTHERWISE NOT SUITABLE FOR SAFE AND CONVENIENT USE BY VEHICLES, TRAFFIC CONTROL DEVICES SUFFICIENT TO PROTECT SUCH AREAS TO ASSURE THE SAFE AND CONVENIENT PASSAGE OF VEHICULAR TRAFFIC SHALL BE INSTALLED AND MAINTAINED. SUCH TRAFFIC CONTROL DEVICES AND THE MANNER IN WHICH THEY ARE USED SHALL BE CONSISTENT WITH THESE PLANS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS THERINAFTER REFERRED TO AS THE "MANUAL". THE TRAFFIC CONTROL DEVICE SYSTEM SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL FOR EACH PARTICULAR SITUATION. WHENEVER THE ENGINEER DEEMS IT NECESSARY, ESPECIALLY WHERE A GRADE, CURVE, OR MERGE CONDITION EXISTS, HE MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.

2. CONDITIONS

   DURING ALL PARTS OF THIS PROJECT, SIGNING, BARRICADES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE MANUAL, AS SHOWN ON THE MAINTENANCE OF TRAFFIC SHEETS OR AS SHOWN ON STANDARD DRAWING MT-97.10 AND MT-95.30.

3. ADVANCE WARNING SIGNS

   ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHENEVER THEY ARE NOT APPLICABLE.

4. FLASHING ARROW REQUIREMENT

   FLASHING ARROWS SHALL BE FURNISHED AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS OR ON STANDARD DRAWING MT-95.30.

5. PROTECTION OF PUBLIC

   WHENEVER ANY WORK IS BEING DONE OVER A TRAVELED LANE OR SHOULDER, THE CONTRACTOR SHALL SUPPLY SUFFICIENT SAFETY EQUIPMENT AS APPROVED BY THE DIRECTOR TO PROTECT THE TRAVELING PUBLIC FROM ANY CONSTRUCTION DEBRIS. IF TRAVELED LANES UNDER STRUCTURES ARE TO BE CLOSED FOR REASONS OF SAFETY, METHOD AND TIME OF CLOSURE, THEY MUST BE APPROVED PRIOR TO IMPLEMENTATION. PERSONAL CARS SHALL NOT BE PARKED WITHIN THE L/A.

6. FLAGGERS

   FLAGGERS SHALL BE IN ACCORDANCE WITH MT-97.10. THE MAINTENANCE OF TRAFFIC REQUIRES THE USE OF TWO (2) FLAGGERS. ADDITIONAL FLAGGERS SHALL BE USED AS DIRECTED BY THE ENGINEER.

7. LAW ENFORCEMENT OFFICER WITH PATROL CAR

   SEE NOTE, SHEET 4 .

8. FAILURE TO COMPLY

   IF THERE IS ANY FAILURE TO COMPLY WITH PROVISIONS FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, WITH THE PROVISIONS OF THE "MANUAL" OR FAILURE TO KEEP THE HIGHWAY IN THE VICINITY OF THE WORK AREA IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF THIS CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

E. TRAFFIC CONTROL MATERIALS

1. SIGNS

   SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES SHALL BE AS PROVIDED IN THE "MANUAL", OR IN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THIS PROJECT.

2. SIGN SUPPORTS

   SIGN SUPPORTS SHALL BE AS SHOWN ON THE STANDARD DRAWINGS MT- 105.10 AND MT-105.11.

3. FLASHING ARROW PANEL

   THE ELECTRIC FLASHING ARROW PANELS SHALL BE AS SHOWN ON STANDARD CONSTRUCTION DRAWING MT-35.10.

4. CONES

   CONES SHALL BE LOCATED AS SHOWN IN THE "MANUAL" AND THE TRAFFIC CONTROL PLANS.

5. DRUMS

   DRUMS SHALL BE LOCATED AS SHOWN ON THE TRAFFIC CONTROL PLANS AND ARE REQUIRED FOR NIGHTTIME CLOSURES.

6. FLOODLIGHTING

   FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND 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 MAINTAINING TRAFFIC.

7. ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

   THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., 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 CONTINUOS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

MAINTENANCE OF TRAFFIC GENERAL NOTES CONTINUED: SEE SHEET 4 OF 38 .

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES - 1

CUY-90-15.24

82072MN001.DGN 2/11/09 KH.SAM.TWH.SCB

7. ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN - CONTINUED

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEETS 5&6 OF THE PLAN. 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 CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IS USE, THE PCMS SHALL BE TURNED 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 RETROREFLECTIVE 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 ODOT 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 ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. 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 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, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. 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 DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

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.

THERE SHALL BE 7 CLASS A OR B PCMS AT 2 MONTH EACH

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 14 SIGN-MONTH

8. WORK VEHICLES

ALL WORK VEHICLES LICENSED TO OPERATE ON THE HIGHWAY, INCLUDING TRUCKS, SHALL BE EQUIPPED WITH A FLASHING, ROTATING OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF 1600 FEET IN BRIGHT SUNLIGHT AND SHALL BE OPERATED WITH LIGHTED HEAD AND TAIL LAMPS. THE AMBER LIGHT SHALL BE IN OPERATION AT ALL TIMES WITHIN THE WORK ZONE AND WHILE TRAVELING TO AND FROM THE WORK ZONE WHENEVER THE VEHICLE SPEED IS BELOW 55 MPH. VEHICLE HAZARD LAMPS DO NOT SATISFY THIS REQUIREMENT. ALL OTHER EQUIPMENT SHALL BE EQUIPPED WITH A FLASHING, ROTATING OR OSCILLATING AMBER LIGHT VISIBLE IN ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF 1600 FEET IN BRIGHT SUNLIGHT. THE AMBER LIGHT SHALL BE IN OPERATION WHILE THE EQUIPMENT IS WITHIN THE WORK ZONE.

F. PAYMENT

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 PROVIDING, ERECTING, MAINTAINING AND REMOVING TEMPORARY MAINTENANCE OF TRAFFIC CONTROL DEVICES SHALL BE MADE UNDER THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

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 MAY 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 1-614-599-7915.
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 AND CORRECTING 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. BE AWARE OF, AND COORDINATE IF NECESSARY, ALL TRAFFIC CONTROL OPERATIONS, INCLUDING THOSE OF SUBCONTRACTORS AND SUPPLIERS.
5. 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.
6. COORDINATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS WORK ZONE TRAFFIC CONTROL.
7. 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.
8. NOTIFY THE CONTRACTOR OF THE NEED FOR CLEANING AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES, INCLUDING THE COVERING AND REMOVAL OF INAPPLICABLE SIGNS.
9. 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.
10. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 9 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 DEPARTMENT OF TRANSPORTATION CONSTRUCTION INSPECTION FORMS MANUAL DATED 10/15/06 OR CURRENT REVISION.
11. VERIFY THAT ALL FLAGGING OPERATIONS ARE BEING CONDUCTED PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
12. 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.

THE DEPARTMENT WILL NOT PAY 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 CMS 108.05.

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

ITEM 614 WORKSITE TRAFFIC SUPERVISOR 4 MONTHS

COVERING OF SIGNS

WHERE THE PLANS CALL FOR A PERMANENT OR DETOUR SIGN TO BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE PERMANENT OR DETOUR SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO A SIGN FACE IS STRICTLY PROHIBITED.

TRUCK MOUNTED ATTENUATOR

WHEN THE CONTRACTOR IS SETTING SHORT-TERM WORK ZONES AND THE SHOULDERS (RIGHT OR LEFT SHOULDER) ARE LESS THAN 10 FEET IN WIDTH AND ARE ON A ROAD WITH SPEEDS 45 MPH OR HIGHER, A TRUCK MOUNTED ATTENUATOR (TMA) MUST TRAIL THE OPERATION OF SETTING THE ADVANCE WARNING SIGNS UP OR TAKING THEM DOWN. THIS SAME TRUCK MUST HAVE A TYPE B FLASHING ARROW PANEL MOUNTED ON IT FACING THE REAR TRUCK.

THE TMA MUST BRING A VEHICLE WEIGHING 1800 TO 4500 POUNDS TO A SAFE, CONTROLLED STOP PER NCHRP 350 TL-3 CRITERIA. THE MANUFACTURER'S SPECIFICATION MUST BE FOLLOWED CONCERNING THE SIZE OF THE TRUCK AND THE CONNECTIONS TO THE TMA.

ALL COSTS ASSOCIATED WITH THIS ITEM ARE TO BE INCLUDED IN ITEM 614, MAINTAINING TRAFFIC.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER AND OFFICIAL PATROL CAR WITH WORKING TOP-MOUNTED EMERGENCY FLASHING LIGHTS SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING 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.

LAW ENFORCEMENT OFFICERS (LEOS) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEOS ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

CITY OF CLEVELAND
POLICE DEPARTMENT, THIRD DISTRICT
10700 CHESTER AVENUE
CLEVELAND, OHIO 44134
PHONE: (216) 623-5300

LAW ENFORCEMENT OFFICERS 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. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR 600 HOURS

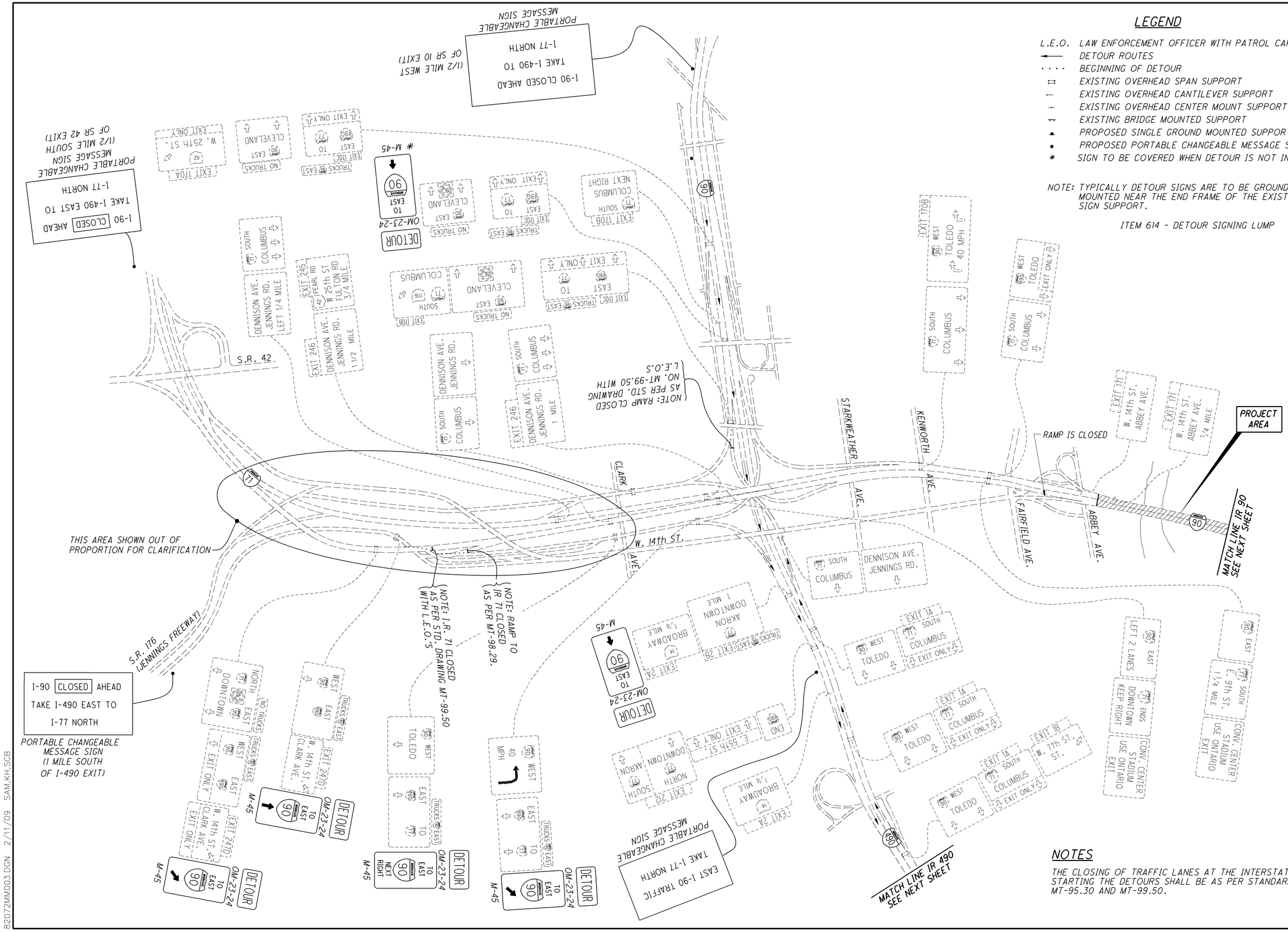
THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF CONTRACTORS WISH TO UTILIZE LEOS FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614, MAINTAINING TRAFFIC.

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC GENERAL NOTES - 2

CUY-90-15.24



LEGEND

L.E.O.	LAW ENFORCEMENT OFFICER WITH PATROL CAR
⟵	DETOUR ROUTES
. . . .	BEGINNING OF DETOUR
	EXISTING OVERHEAD SPAN SUPPORT
	EXISTING OVERHEAD CANTILEVER SUPPORT
	EXISTING OVERHEAD CENTER MOUNT SUPPORT
	EXISTING BRIDGE MOUNTED SUPPORT
	PROPOSED SINGLE GROUND MOUNTED SUPPORT
●	PROPOSED PORTABLE CHANGEABLE MESSAGE SIGN
*	SIGN TO BE COVERED WHEN DETOUR IS NOT IN EFFECT

NOTE: TYPICALLY DETOUR SIGNS ARE TO BE GROUND MOUNTED NEAR THE END FRAME OF THE EXISTING SIGN SUPPORT.

ITEM 614 - DETOUR SIGNING LUMP

NOTES

THE CLOSING OF TRAFFIC LANES AT THE INTERSTATE CLOSURE STARTING THE DETOURS SHALL BE AS PER STANDARD DRAWINGS MT-95.30 AND MT-99.50.

HORIZONTAL SCALE IN FEET
0 250 500 1000

CALCULATED | CHECKED

MAINTENANCE OF TRAFFIC
IR 90 DETOUR SIGNING PLAN

CUY-90-15.24

1 / 2

5 / 38

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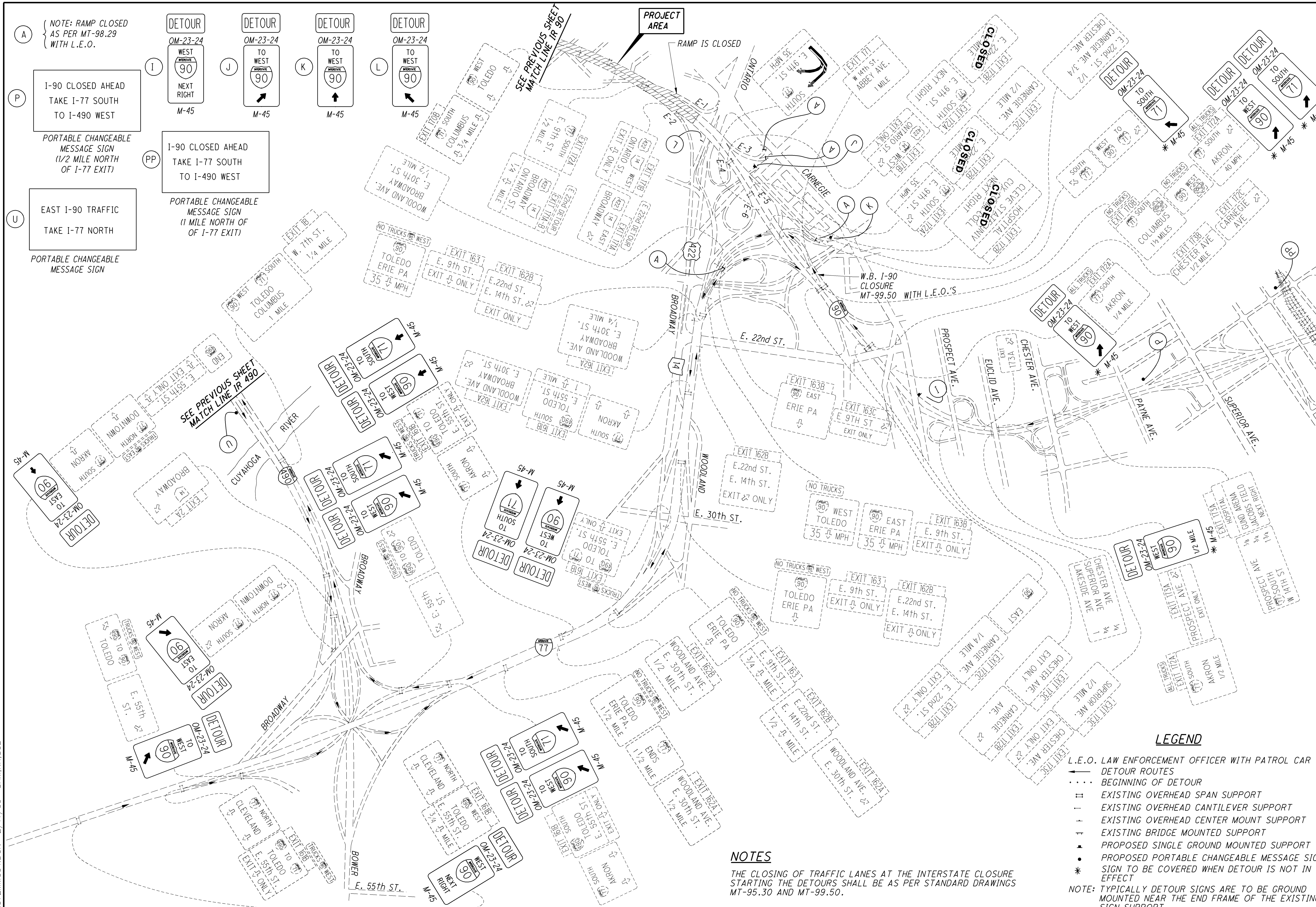

LEGEND

L.E.O. LAW ENFORCEMENT OFFICER WITH PATROL CAR
DETOUR ROUTES
BEGINNING OF DETOUR
EXISTING OVERHEAD SPAN SUPPORT
EXISTING OVERHEAD CANTILEVER SUPPORT
EXISTING OVERHEAD CENTER MOUNT SUPPORT
EXISTING BRIDGE MOUNTED SUPPORT
PROPOSED SINGLE GROUND MOUNTED SUPPORT
PROPOSED PORTABLE CHANGEABLE MESSAGE SIGN
* SIGN TO BE COVERED WHEN DETOUR IS NOT IN EFFECT

NOTE: TYPICALLY DETOUR SIGNS ARE TO BE GROUND MOUNTED NEAR THE END FRAME OF THE EXISTING SIGN SUPPORT.

NOTES

THE CLOSING OF TRAFFIC LANES AT THE INTERSTATE CLOSURE STARTING THE DETOURS SHALL BE AS PER STANDARD DRAWINGS MT-95.30 AND MT-99.50.

HORIZONTAL SCALE IN FEET 0 250 500 1000

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC IR 90 DETOUR SIGNING PLAN

CUY-90-15.24

2/2

6/38

82072MM004.DGN 2/11/09 SAM,KH,SCB

SHEET NUMBER										ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
		3	4	5											
														MAINTENANCE OF TRAFFIC	
			600							614	11100	600	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	4
			4							614	11500	4	MONTH	WORKSITE TRAFFIC SUPERVISOR	4
				LUMP						614	12420	LUMP		DETOUR SIGNING	5-6
			14							614	18601	14	SIGN MNTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	3-4
														FOR STRUCTURE QUANTITIES, SEE SHEET 13	
														MISCELLANEOUS	
		LUMP								614	11000	LUMP		MAINTAINING TRAFFIC	
										619	16020	4 MONTH		FIELD OFFICE, TYPE C	
										624	10000	LUMP		MOBILIZATION	

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GENERAL SUMMARY

CUY-90-15.24

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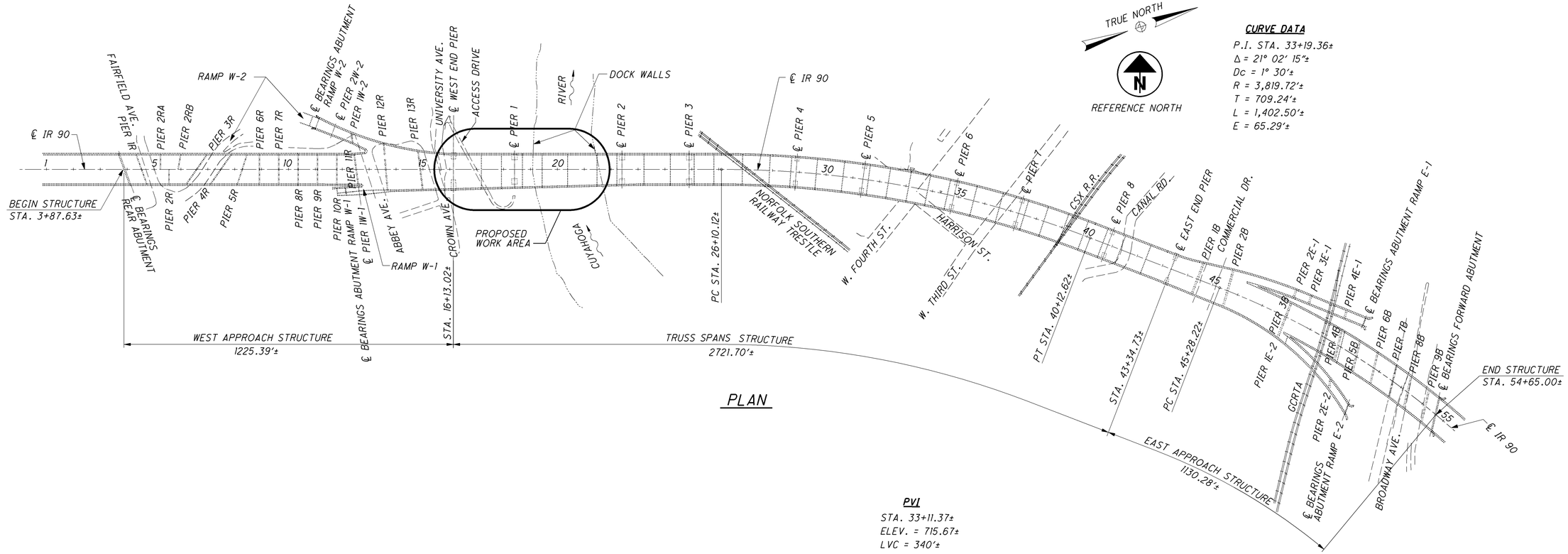
38



EXISTING STRUCTURE - WEST APPROACH SPANS	
TYPE:	CONTINUOUS STEEL BEAMS AND GIRDERS WITH CONCRETE DECK AND SUBSTRUCTURE.
SPANS:	WESTBOUND: 64'±, 70.5'±, 65.5'±, 69'±, 90'±, 79.5'±, 64'±, 5 @ 72'±, 109'±, 129'± AND 120'±. EASTBOUND: 64'±, 102'±, 103'±, 90'±, 79.5'±, 64'±, 5 @ 72'±, 109'±, 129'± AND 120'±.
ROADWAY:	2 @ 53'-9"± CURB TO CURB WITH TWO (2) 3'-6"± SAFETY CURBS AND 2'-6"± MEDIAN BARRIER.
LOADING:	CF2000
SKEW:	VARIES
WEARING SURFACE:	2½"± MICRO SILICA MODIFIED CONCRETE OVERLAY
APPROACH SLAB:	AS-1-54 (25'-0"± LONG)
ALIGNMENT:	TANGENT
YEAR BUILT:	1959 WITH MINOR REHABILITATIONS IN 1973, 1979, 1984, 1988, 2005, AND 2007.

EXISTING STRUCTURE - TRUSS SPANS	
TYPE:	STEEL DECK TRUSSES WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SPANS:	227'±, 400'±, 250'±, 400'±, 248'±, 348'±, 248'±, 349'± AND 251'±.
ROADWAY:	2 @ 52'-9"± CURB TO CURB WITH TWO (2) 3'-2"± SAFETY CURBS AND 2'-6"± MEDIAN BARRIER.
LOADING:	CF1200
SKEW:	VARIES
WEARING SURFACE:	2½"± LATEX MODIFIED CONCRETE OVERLAY
ALIGNMENT:	TANGENT, 1°30'± CURVE RIGHT, TANGENT
YEAR BUILT:	1959 WITH MINOR REHABILITATIONS IN 1973, 1984, 1988, 1999, 2002, 2007, 2008 AND 2009.

EXISTING STRUCTURE - EAST APPROACH SPANS	
TYPE:	CONTINUOUS STEEL BEAMS AND GIRDERS WITH CONCRETE DECK AND SUBSTRUCTURE.
SPANS:	103'±, 119'±, 239'±, 216'±, 81'±, 78'±, 78'±, 79'±, 83'± AND 50'±.
ROADWAY:	2 @ 52'-9"± CURB TO CURB WITH TWO (2) 3'-6"± SAFETY CURBS AND 2'-6"± MEDIAN BARRIER.
LOADING:	CF2000
SKEW:	VARIES
WEARING SURFACE:	MONOLITHIC CONCRETE OR 3½"± MICRO SILICA MODIFIED CONCRETE OVERLAY
APPROACH SLAB:	AS-1-54 (25'-0"± LONG)
ALIGNMENT:	2°± CURVE RIGHT
YEAR BUILT:	1959 WITH MINOR REHABILITATIONS IN 1973, 1979, 1988, 1999, 2002, AND 2007.

EXISTING STRUCTURE	
STRUCTURE FILE NUMBER:	1809393
AVERAGE DAILY TRAFFIC:	132,000 (2012)
AVERAGE DAILY TRUCK TRAFFIC:	11,880 (2012)

NOTES

STRUCTURE PLAN INDEX: SEE SHEET 6/38.

PROPOSED STRUCTURE WORK:

1. FINGER JOINT REPAIRS.
2. MOVE TRUSS SPAN 1 AND SUPPORTED SPAN 2.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED ALP | DRAWN JLS | REVIEWED DAP | DATE 2/11/09
CHECKED BLN | REVISED | STRUCTURE FILE NUMBER 1809393

GENERAL PLAN
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

1/31

8/38

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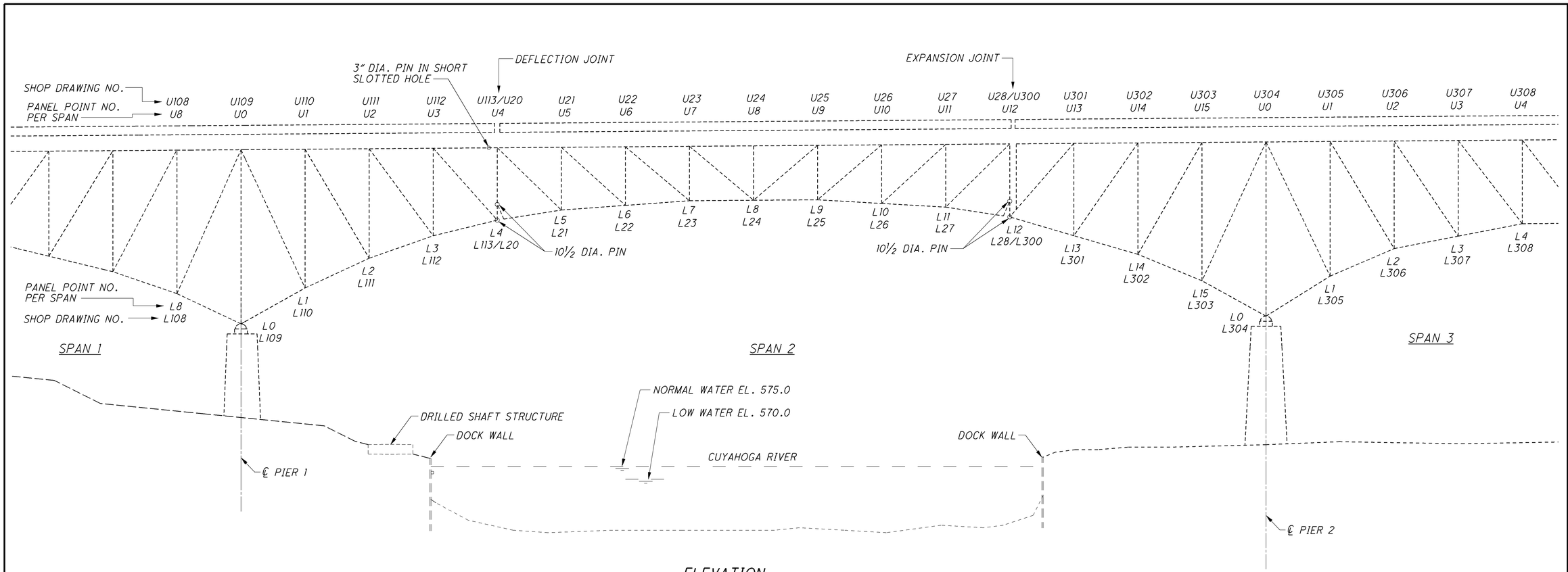

ELEVATION

BOTTOM ELEVATION OF LOWER TRUSS CHORD STRUCTURE OVER CUYAHOGA RIVER			
SHOP DRAWING NUMBER	TRUSS PANEL POINT NUMBER	NORTH TRUSS	SOUTH TRUSS
		BOTTOM OF STEEL ELEV.	BOTTOM OF STEEL ELEV.
L111	L2	656.3	656.5
L112	L3	655.3	655.1
L113/L20	L4	671.3	671.1
L21	L5	675.2	675.0
L22	L6	677.1	676.9
L23	L7	678.7	678.6
L24	L8	679.0	679.0
L25	L9	679.2	679.1
L26	L10	677.8	677.7
L27	L11	676.3	676.3
L28/L300	L12	672.2	672.2
L301	L13	665.3	665.1
L302	L14	657.8	657.9

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED ALP | DRAWN KH | CHECKED BLN | REVIEWED DAP | DATE 2/11/09 | REVISED | STRUCTURE FILE NUMBER 1809393

TRUSS SPANS - RIVER CLEARANCE
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

090_1524CGP001.DGN 2/1109 TWH,SCB,JLS,SCB

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING:

NONE

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

NONE

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, INCLUDING ALL INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL 2004.

DESIGN DATA:

STRUCTURAL STEEL- ASTM A709 GRADE 50W - UNIT STRESS 50 KSI.
HIGH STRENGTH THREAD BAR - ASTM A722, TYPE II, ULTIMATE STRENGTH 150,000 PSI.

EXISTING STRUCTURE PLANS INCLUDING DESIGN PLANS, SHOP DRAWINGS, AND RECONSTRUCTION PLANS ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OHIO.

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 C.M.S. SECTIONS 102.05 AND 105.02.

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 THAT HAVE BEEN VERIFIED IN THE FIELD.

ALIGNMENT AND PROFILE: THE WORK CONSTRUCTED WITH THE PROJECT WILL NOT CHANGE THE EXISTING ALIGNMENT OR PROFILE OF THE STRUCTURE.

CUYAHOGA RIVER TRAFFIC: THE CUYAHOGA RIVER UNDER TRUSS SPAN 2 IS NAVIGABLE AND IS USED BY LARGE SHIPS, WORK BOATS, AND PLEASURE BOATS. THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF SECTION 107.08 OF THE C.M.S. REGARDING WORK ON NAVIGABLE WATERS.

THE CONTRACTOR MUST MAINTAIN A VERTICAL CLEARANCE OF 96 FEET ABOVE THE CUYAHOGA RIVER LEVEL AT ALL TIMES FOR THE ENTIRE WIDTH BETWEEN DOCK WALLS. RIVER TRAFFIC SHALL NOT BE INTERRUPTED. THE CONTRACTOR SHALL NOT DROP MATERIALS OR DEBRIS IN THE RIVER.

THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ANY AND ALL NAVIGATION DEVICES REQUIRED BY THE UNITED STATES COAST GUARD.

SEE ROADWAY GENERAL NOTES ON SHEET 2 OF 38 FOR COAST GUARD COORDINATION.

IR 90 MAINTENANCE OF TRAFFIC: INTERSTATE 90 VEHICULAR TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS PROVIDED IN THE MAINTENANCE OF TRAFFIC PLAN SHEETS 3 THROUGH 6 OF 38 .

LEAD PAINT IS KNOWN TO EXIST ON THE BRIDGE.

DEFINITIONS: ITEMS DESIGNATED AS "NEW" WILL BE RETAINED FOR USE IN THE EXISTING STRUCTURE. ITEMS DESIGNATED AS "TEMPORARY" WILL BE REMOVED AFTER THE RELOCATION OF SPAN 1 AND SUPPORTED SPAN 2.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION, AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN INCORPORATED IN THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER.

SEQUENCE OF CONSTRUCTION

THE CONTRACTOR SHALL SCHEDULE THE VARIOUS ITEMS OF WORK IN SUCH A MANNER TO COMPLETE THE WORK WITHIN THE SCHEDULED ROADWAY LANE CLOSURE TIME FRAME AND INTERIM COMPLETION DATE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC NOTES.

THE CONTRACTOR SHALL SUBMIT A DETAILED SEQUENCE OF CONSTRUCTION AND PROCEDURES IN ACCORDANCE WITH CMS 501.05 B. THE DETAILED SUBMISSION SHALL INCLUDE THE FOLLOWING SEQUENCE OF CONSTRUCTION AND CONTRACTOR DESIGNED MATERIALS, SUPPORTS, AND SPECIFIC METHODS. THE SUBMISSION SHALL BE PREPARED BY AN OHIO REGISTERED ENGINEER. A CHECK BY A SECOND OHIO REGISTERED PROFESSIONAL ENGINEER IS NOT REQUIRED. SEE ITEM 516 - JACKING AND TEMPORARY SUPPORT OF THE SUPERSTRUCTURE, AS PER PLAN FOR ADDITIONAL DETAILS AND REQUIREMENTS FOR THE SUBMISSION.

THE FOLLOWING WORK ITEMS ARE RECOMMENDED TO BE COMPLETED IN THE SEQUENCE NOTED.

MOVE SPAN 1

THE PROCEDURE FOR RELOCATING TRUSS SPAN 1 AND SUPPORTED SPAN 2 SHALL BE AS FOLLOWS:

1. REPAIR OR REPLACE THE MISALIGNED, DAMAGED AND BENT FINGERS IN THE WEST END PIER DECK EXPANSION JOINT. THIS WORK IS NECESSARY TO ALLOW THE JOINT TO CLOSE WHEN SPAN 1 IS RELOCATED. FINGER JOINT REPAIR WORK SHALL BE PERFORMED WITH TEMPORARY LANE CLOSURES SUBJECT TO TIME LIMITATIONS.

2. REMOVE THE DRAINAGE HOPPERS AND PORTIONS OF DOWNSPOUTS AT PIER 1. CUT OFF EXISTING ANCHOR RODS PROTRUDING FROM THE PIER 1 CONCRETE SEAT OUTSIDE OF THE PIER 1 BEARINGS.

3. DISASSEMBLE RAILING, SIDEWALK, AND MEDIAN EXPANSION JOINTS AT THE WEST END PIER AND SPAN 2 TO ELIMINATE POSSIBLE BINDING WHEN SPAN 1 IS RELOCATED. NO GAPS SHALL BE LEFT IN THE SIDEWALK OR RAILING THAT COULD ENDANGER PEDESTRIAN OR VEHICULAR TRAFFIC.

4. CLEAN AND LUBRICATE WITH PENETRATING OIL THE ROCKERS AT THE WEST END PIER TRUSS AND GIRDER EXPANSION BEARINGS; AND THE PINS AND EYEBARS AT THE SPAN 2 EXPANSION JOINT LOWER CHORD L12 (L28/L300).

5. REMOVE SPAN 2 DECK EXPANSION JOINT FINGERS AT SPECIFIED LOCATIONS IN THE MEDIAN SHOULDERS, OUTSIDE SHOULDERS, AND CLOSED LANES FOR INSTALLATION OF JACKS.

6. PLACE HORIZONTAL JACKING FRAMES AND TIE RODS AT THE WEST END PIER NORTH TRUSS AND SOUTH TRUSS EXPANSION BEARINGS AND HORIZONTAL JACKING SUPPORT AT THE WEST END PIER WIDENING GIRDER. EXCAVATE WEST OF THE WEST END PIER SOUTH LEG TO INSTALL TIE RODS.

7. PREPARE EXISTING JACKING SUPPORTS, AND NEW STRUTS, ATTACHMENTS, AND BLOCKING AT THE SPAN 2 EXPANSION JOINT UPPER AND LOWER TRUSS CHORDS AND WIND SHEAR KEY TO RECEIVE HYDRAULIC JACKS.

8. COMPLETE INSTALLATION AND TESTING OF THE STRAIN GAGE AND DISPLACEMENT MONITORING SYSTEM. THE INSTRUMENT INSTALLATION AND MONITORING WORK WILL BE PERFORMED BY OTHERS UNDER A SEPARATE CONTRACT WITH ODOT. THE CONTRACTOR SHALL FURNISH EQUIPMENT FOR ACCESS TO THE INSTRUMENT LOCATIONS FOR INSTALLATION AND REMOVAL OF GAGES.

9. PLACE PLATES, JACKS, BLOCKING, AND FRAMES FOR VERTICAL JACKING AT PIER 1. CORE OUT GROUT FROM AROUND EXISTING ANCHOR BOLTS AT PIER 1 BEARINGS. CENTER ALL JACKING MATERIAL UNDER THE CENTER OF THE EXISTING PERMANENT JACKING BRACKETS.

10. CLOSE BRIDGE TO ALL VEHICULAR TRAFFIC.

11. PLACE HORIZONTAL BLOCKING AT THE WEST END PIER NORTH TRUSS AND SOUTH TRUSS EXPANSION BEARINGS AND BLOCK THE BACK SIDE OF THE BEARINGS AGAINST THE CURTAIN WALL. THIS WORK IS TO RESTRAIN THE BRIDGE FROM MOVING IN EITHER DIRECTION LONGITUDINALLY WHILE THE BEARING ANCHOR BOLTS ARE CUT AT THE PIER 1 BEARINGS. THE SOLID BLOCKING SHALL BE IN PLACE ONLY WHILE THE TRUSSES ARE BEING RAISED VERTICALLY AT PIER 1. THE BLOCKING SHALL BE REMOVED WHEN THE PIER 1 BEARINGS ARE RESTRAINED FROM MOVING LONGITUDINALLY.

12. RAISE BOTH THE NORTH TRUSS AND SOUTH TRUSS AND BEARINGS SIMULTANEOUSLY AT PIER 1 ABOUT 3 INCHES. PLACE SHIMS AT 1" INCREMENTS TO PREVENT JACKS FROM LOWERING. CUT THE EXISTING WEST SIDE BEARING ANCHOR BOLTS, AND INSTALL TEMPORARY SLIDERS. LOWER THE TRUSSES AND BEARINGS DOWN, REMOVING SHIMS AT 1" INCREMENTS, TO BEAR ON THE TEMPORARY SLIDERS. INSTALL LATERAL RESTRAINT ANGLES 6x6x1" AND LONGITUDINAL SUPPORTS. THE TEMPORARY SUPPORT SYSTEM MUST ENSURE THAT THE TRUSS IS RESTRAINED FROM UNCONTROLLED MOVEMENT WHEN THE PIER 1 BEARING ANCHOR BOLTS ARE CUT AND AT ALL OTHER TIMES. VERTICAL JACKING WORK SHALL BE PERFORMED WHILE THE BRIDGE IS CLOSED TO VEHICULAR TRAFFIC.

13. REMOVE SOLID BLOCKING AT THE WEST END PIER EXPANSION BEARINGS.

NOTE: STEPS 11, 12, AND 13 ARE TO BE COMPLETED IN THE SAME OVERNIGHT WORK SHIFT AND THIS WORK IS SUBJECT TO DETOUR LIMITATIONS.

14. OPEN BRIDGE TO ALL VEHICULAR TRAFFIC.

15. REMOVE THE VERTICAL JACKING EQUIPMENT AND SUPPORTS AS NEEDED AND INSTALL TEMPORARY HORIZONTAL JACKING SUPPORTS AT THE NORTH TRUSS AND SOUTH TRUSS PIER 1 BEARINGS. MOVE THE WEST SIDE TEMPORARY VERTICAL JACKING BASE PLATES TO THEIR FINAL POSITION AND ANCHOR IN PLACE.

16. PLACE HYDRAULIC JACKS, BLOCKING, MANIFOLDS, AND PUMPS FOR HORIZONTAL JACKING AT:
    a. WEST END PIER NORTH AND SOUTH TRUSS BEARINGS
    b. WEST END PIER WIDENING GIRDER BEARING
    c. PIER 1 NORTH AND SOUTH TRUSS BEARINGS
    d. SPAN 2 EXPANSION JOINT NORTH AND SOUTH TRUSS UPPER CHORDS
    e. SPAN 2 EXPANSION JOINT WIND SHEAR KEY
    f. SPAN 2 EXPANSION JOINT NORTH AND SOUTH TRUSS LOWER CHORDS.

17. TEST JACKING SYSTEMS FOR OPERATION.

18. INSTALL TEMPORARY BOLTS AND PLATES ACROSS THE SPAN 2 DEFLECTION JOINT AT THE NORTH AND SOUTH UPPER AND LOWER TRUSS CHORDS.

NOTE: LOCKING THE DEFLECTION JOINTS WITH BOLTED CONNECTIONS SHALL BE THE LAST WORK PRIOR TO BEGINNING THE HORIZONTAL JACKING OPERATION.

19. CLOSE BRIDGE TO ALL VEHICULAR TRAFFIC.

20. PLACE HYDRAULIC JACKS, BLOCKING, MANIFOLDS, AND PUMPS FOR HORIZONTAL JACKING AT SPAN 2 DECK EXPANSION JOINT FINGERS AT SPECIFIED LOCATIONS IN THE MEDIAN SHOULDERS, OUTSIDE SHOULDERS, AND CLOSED LANES.

21. CUT THE REMAINING BEARING ANCHOR BOLTS AT THE PIER 1 BEARINGS. BE CAREFUL NOT TO DAMAGE THE SLIDING PLATE SURFACES. LIMIT THE LONGITUDINAL WESTWARD MOVEMENT OF TRUSS SPAN 1 BY PLACING SHIMS BETWEEN THE BASE OF THE PIER 1 BEARINGS AND THE VERTICAL JACKING BASE PLATES ANCHORED WEST OF THE PIER 1 BEARINGS.

22. RELOCATE SPAN 1 AND SUPPORTED SPAN 2 WESTWARD TOWARD THE WEST END PIER. HORIZONTAL MOVEMENT SHALL BE ACCOMPLISHED BY HORIZONTAL JACKING AT THE WEST END PIER, PIER 1, SPAN 2 DECK EXPANSION JOINT, AND THE UPPER LEVEL SUPERSTRUCTURE FRAMING AT THE SPAN 2 EXPANSION JOINT. THE PRIMARY FORCES FOR MOVING THE STRUCTURE SHALL BE APPLIED AT PIER 1, THE WEST END PIER, AND THE SPAN 2 DECK EXPANSION JOINT. JACKING AT THE UPPER LEVEL SUPERSTRUCTURE FRAMING AT THE SPAN 2 EXPANSION JOINT SHALL ALSO BE USED TO OVERCOME THE RESISTANCE OF OPENING THE EXPANSION JOINT. HORIZONTAL JACKING AT ALL LOCATIONS SHALL BE PERFORMED WITH NO VEHICULAR TRAFFIC ON THE BRIDGE. HORIZONTAL JACKING MAY REQUIRE AN ESTIMATED THREE CYCLES OF APPLYING INCREMENTAL PRESSURE OVER THREE DAYS. STRAIN GAGE AND DISPLACEMENT MONITORING DATA COLLECTED AND REPORTED BY OTHERS WILL BE REVIEWED BY THE ENGINEER CONTINUOUSLY WHILE JACKING PROCEEDS. THE HORIZONTAL JACKING SHALL BE STOPPED IF PREDETERMINED STRAIN LIMITING VALUES IN MEMBERS ARE REACHED. THE ODOT MONITORING CONSULTANT MAY REQUEST AN IMMEDIATE STOP OF THE JACKING OPERATION AND REDUCTION IN JACKING LOADS BASED ON THE MONITORING DATA. JACKING FORCES SHALL BE APPLIED IN EACH CYCLE AS DIRECTED BY THE ENGINEER. A FINAL LIST OF JACKING FORCE INCREMENTS WILL BE FURNISHED TO THE CONTRACTOR BY THE ENGINEER PRIOR TO BEGINNING WORK. JACKING FORCES SHALL BE APPLIED IN EACH CYCLE IN THE FOLLOWING APPROXIMATE STEPS (THE FINAL PROCEDURE MAY INCLUDE MORE STEPS THAN LISTED):

JACK LOCATION	AVAILABLE JACKS (TONS)	APPLIED JACKING FORCE (TONS)			
		STEP 1	STEP 2	STEP 3	STEP 4
NORTH TRUSS WEST END PIER	200	40	80	120	160
SOUTH TRUSS WEST END PIER	200	45	90	135	180
WIDENING GIRDER WEST END PIER	50	15	30	45	50
NORTH TRUSS PIER 1	800	225	450	545	640
SOUTH TRUSS PIER 1	800	280	560	680	800
SPAN 2 DECK EXPANSION JOINT	450	150	240	330	450
NORTH TRUSS UPPER CHORD	200	50	100	150	200
WIND SHEAR KEY	60	15	30	45	60
SOUTH TRUSS UPPER CHORD	200	50	100	150	200
NORTH TRUSS LOWER CHORD	200	0	0	50	100
SOUTH TRUSS LOWER CHORD	200	0	0	50	100

GENERAL NOTES CONTINUED: SEE SHEET 4/31.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
ALP	KH	DAP	2/11/09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BLN		1809393	

GENERAL NOTES - 1
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

090_1524CGN001.DGN 02/12/09 KH,SCB,JLS,SCB

SEQUENCE OF CONSTRUCTION (CONT'D.)

23. THE DISTANCE THAT SPAN 1 IS TO BE RELOCATED IS ESTIMATED IN THE PLANS. THE ACTUAL DISTANCE WILL BE DETERMINED BY THE ENGINEER. THE DISTANCE TO MOVE SPAN 1 WILL BE DETERMINED BY SEVERAL FACTORS INCLUDING: THE DISTANCE REQUIRED TO CLOSE THE WEST END PIER DECK EXPANSION JOINT; THE DISTANCE REQUIRED TO OPEN THE SPAN 2 EXPANSION JOINT; AND THE DISTANCE THE TRUSS BEARINGS CAN BE MOVED RELATIVE TO THE CONCRETE PIER 1 BRIDGE SEAT. THE NORTH TRUSS AND THE SOUTH TRUSS MAY BE RELOCATED DIFFERENT DISTANCES. HOWEVER, THE NORTH AND SOUTH TRUSSES SHALL BE MOVED CONCURRENTLY UNTIL ONE TRUSS HAS BEEN RELOCATED, THEN THE RELOCATION OF THE OTHER TRUSS SHALL BE COMPLETED. THE FINAL POSITION WILL BE FIXED WITH NEW BEARING ANCHOR BOLTS AT PIER 1.

24. WHEN DIRECTED BY THE ENGINEER, BLOCK THE BEARINGS AT PIER 1 IN THE RELOCATED POSITION.

NOTE: THE RELOCATION OF SPAN 1 AND SUPPORTED SPAN 2 IS AN INTERIM COMPLETION DATE. SEE THE MAINTENANCE OF TRAFFIC NOTES SHEET 3 OF 38.

25. OPEN BRIDGE TO ALL VEHICULAR TRAFFIC.

26. REMOVE THE HYDRAULIC JACKS FOR HORIZONTAL JACKING AT PIER 1.

27. REMOVE THE TEMPORARY BOLTS AND PLATES ACROSS THE SPAN 2 DEFLECTION JOINT AT THE NORTH AND SOUTH UPPER AND LOWER TRUSS CHORDS THE NEXT WORK SHIFT AFTER BLOCKING THE PIER 1 BEARINGS IN THEIR RELOCATED POSITION.

28. PLACE PLATES, JACKS, AND FRAMES FOR VERTICAL JACKING AT PIER 1.

29. CLOSE BRIDGE TO ALL VEHICULAR TRAFFIC.

30. PLACE HORIZONTAL BLOCKING AT THE WEST END PIER NORTH TRUSS AND SOUTH TRUSS EXPANSION BEARINGS AND BLOCK THE BACK SIDE OF THE BEARINGS AGAINST THE CURTAIN WALL. THIS WORK IS TO RESTRAIN THE BRIDGE FROM MOVING IN EITHER DIRECTION LONGITUDINALLY WHILE THE BEARINGS ARE RAISED AT PIER 1. THE SOLID BLOCKING SHALL BE IN PLACE ONLY WHILE THE TRUSSES ARE BEING RAISED VERTICALLY AT PIER 1. THE BLOCKING SHALL BE REMOVED WHEN THE PIER 1 BEARINGS ARE RESTRAINED FROM MOVING LONGITUDINALLY.

31. RAISE BOTH THE NORTH TRUSS AND SOUTH TRUSS BEARINGS SIMULTANEOUSLY AT PIER 1 ABOUT 3 INCHES. PLACE SHIMS AT 1" INCREMENTS TO PREVENT JACKS FROM LOWERING. REMOVE THE TEMPORARY SLIDERS. LOWER THE TRUSSES AND BEARINGS DOWN, REMOVING SHIMS AT 1" INCREMENTS, TO BEAR ON A NEW PREFORMED BEARING PAD AND CONCRETE BRIDGE SEAT. THE TEMPORARY SUPPORT SYSTEM MUST ENSURE THAT THE TRUSS IS RESTRAINED FROM UNCONTROLLED MOVEMENT. VERTICAL JACKING WORK SHALL BE PERFORMED WHILE THE BRIDGE IS CLOSED TO VEHICULAR TRAFFIC.

32. REMOVE SOLID BLOCKING AT THE WEST END PIER EXPANSION BEARINGS.

NOTE: STEPS 30, 31, AND 32 ARE TO BE COMPLETED IN THE SAME OVERNIGHT WORK SHIFT AND THIS WORK IS SUBJECT TO DETOUR LIMITATIONS.

33. OPEN BRIDGE TO ALL VEHICULAR TRAFFIC.

34. INSTALL NEW PIER 1 BEARING ANCHOR BOLTS.

35. REPLACE SPAN 2 DECK EXPANSION JOINT FINGERS AT SPECIFIED LOCATIONS IN THE MEDIAN SHOULDERS, OUTSIDE SHOULDERS, AND CLOSED LANES FOR INSTALLATION OF JACKS.

36. REASSEMBLE RAILING AND SIDEWALK EXPANSION JOINTS AT THE WEST END PIER AND SPAN 2.

37. REMOVE ALL HYDRAULIC JACKS, JACKING EQUIPMENT, TEMPORARY SUPPORTS AND JACKING FRAMES FROM PIER 1, THE WEST END PIER, AND SPAN 2 EXPANSION JOINT.

38. INSTALL THE DRAINAGE HOPPERS AND PORTIONS OF DOWNSPOUTS AT PIER 1.

39. COMPLETE ALL REMAINING WORK.

SHOP DRAWINGS

STRUCTURAL STEEL WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE THE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLES, ETC. THE ENGINEER SHALL HAVE THE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED ON REQUEST BY THE OFFICE OF STRUCTURAL ENGINEERING. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING THE STEEL ITEMS INTO THE WORK, AS REQUIRED BY C.M.S. 501.06. AFTER FABRICATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET OF SHOP DRAWINGS TO THE OFFICE OF STRUCTURAL ENGINEERING FOR INFORMATION. THE FABRICATOR SHALL FURNISH THE DIRECTOR A DIGITAL MEDIA COPY OF EACH APPROVED SHOP DRAWING. THE DIGITAL MEDIA SHALL BE AS SPECIFIED IN C.M.S. 501.04.

ITEM 203 - EXCAVATION, AS PER PLAN

THIS ITEM SHALL INCLUDE THE EXCAVATION AT THE WEST END PIER OF THE SOUTH TRUSS REQUIRED TO INSTALL THE 1¾" DIAMETER RODS OF THE BEARING JACKING AND TEMPORARY SUPPORT. EXCAVATION LIMITS ARE SHOWN IN THE PLANS. REFER TO GENERAL NOTE ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN FOR CONCRETE SLOPE PROTECTION REMOVAL.

ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO PERFORM THIS EXCAVATION SHALL BE INCLUDED UNDER ITEM 203 - EXCAVATION, AS PER PLAN.

ITEM 513 - STRUCTURAL STEEL, MISC.: SWEDGE ANCHOR BOLTS (2½" DIAMETER X 4'-8") WITH NUT AND WASHER

SWEDGE ANCHOR BOLTS SHALL BE 2½" DIAMETER X 4'-8" LONG AND SHALL BE INSTALLED AT THE PIER 1 BEARINGS AFTER THE RELOCATION OF SPAN 1 AND SUPPORTED SPAN 2.

DOWEL HOLES SHALL BE PER CMS 510 WITH NON-SHRINK, NON-METALLIC GROUT, USING EPOXY RESIN. THE HOLES MAY BE DRILLED THROUGH THE EXISTING BEARING IN THE FINAL POSITION.

ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO PERFORM THIS WORK SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL, MISC.: SWEDGE ANCHOR BOLTS (2½" DIAMETER X 4'-8") WITH NUT AND WASHER.

ITEM 513 - STRUCTURAL STEEL, MISC.: CUT EXISTING ANCHOR RODS

CUT EXISTING ANCHOR RODS, OUTSIDE OF THE BEARINGS, FLUSH WITH THE CONCRETE ON THE NORTH TRUSS AND SOUTH TRUSS PIER 1 CAP. ALL EXISTING ANCHOR RODS EXTRUDING FROM THE PIER CAPS, OUTSIDE OF THE BEARINGS, SHALL BE CUT. THE LOCATIONS OF ANCHOR RODS TO BE CUT ARE DETAILED IN THE PLANS. THIS WORK SHALL BE DONE BEFORE THE VERTICAL JACKS ARE PLACED AT PIER 1.

ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO PERFORM THIS WORK SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL, MISC.: CUT EXISTING ANCHOR RODS.

ITEM 513 - STRUCTURAL STEEL, MISC.: ⅞" DIAMETER BOLTS:

AFTER RELOCATING SPAN 1 AND SUPPORTED SPAN 2, THE REMAINING HOLES IN THE LOWER CHORD OF SPAN 2 PANEL POINT 4 ARE TO BE FILLED WITH ⅞" DIAMETER BOLTS. ⅞" DIAMETER BOLTS SHALL BE GALVANIZED ASTM A325 HIGH STRENGTH STEEL BOLTS.

ITEM 513 - STRUCTURAL STEEL, MISC.: ⅜" BENT PLATE FLASHING

AFTER RELOCATING SPAN 1 AND SUPPORTED SPAN 2 AND REPLACING THE FINGERS AT THE SPAN 2 EXPANSION JOINT, INSTALL THE ⅜" BENT PLATE FLASHING BETWEEN THE NEW FINGERS.

ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO PERFORM THIS WORK SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL, MISC.: ⅜" BENT PLATE FLASHING.

WELDING TO EXISTING STEEL: THE ORIGINAL DESIGN PLANS AND SHOP DRAWING FOR CUY-90-1524 INDICATE THAT COPPER-BEARING CARBON STRUCTURAL STEEL WAS USED FOR MOST OF THE STRUCTURE AND THAT MANGANESE STRUCTURAL STEEL WAS USED IN SOME AREAS. FINGER EXPANSION JOINTS AND TRUSS BEARINGS ARE STEEL CASTINGS. WELDING TO THE EXISTING STEEL SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE DIRECTOR, EXCEPT WHERE DETAILED IN THE PLANS.

BOLTED CONNECTION TO EXISTING STEEL: AT LOCATIONS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER, TEMPORARY STRUCTURAL STEEL SHALL BE CONNECTED TO EXISTING STRUCTURAL STEEL USING EXISTING RIVET OR BOLT HOLES AND TEMPORARY BOLTS. BOLT REMOVAL PROCEDURES ARE DESCRIBED IN THE GENERAL NOTES.

HOLES IN TEMPORARY MATERIAL SHALL BE MADE BY ANY OF THE FOLLOWING METHODS (TO BE SELECTED BY THE CONTRACTOR):

1. CAREFUL FIELD MEASUREMENT BY THE CONTRACTOR SHALL BE USED FOR LOCATING HOLES IN TEMPORARY MATERIAL TO BE SUBPUNCHED OR DRILLED UNDERSIZE IN THE SHOP. THE HOLE SHALL BE 3/16 INCH LESS IN DIAMETER THAN THE NOMINAL DIAMETER OF THE TEMPORARY BOLT. THE HOLES SHALL BE REAMED TO PROPER SIZE IN THE FIELD AFTER FIT-UP TO THE EXISTING RIVET OR BOLT HOLES.

2. MAKE TEMPLATES IN THE FIELD OF HOLE PATTERNS AND LOCATIONS AFTER REMOVAL OF RIVETS OR BOLTS. USE THE FIELD TEMPLATES IN THE SHOP TO SUBPUNCH OR DRILL UNDERSIZE HOLES. THE HOLES SHALL BE REAMED IN THE FIELD AFTER FIT-UP TO THE EXISTING RIVET OR BOLT HOLES.

3. FURNISH TEMPORARY STRUCTURAL STEEL WITHOUT SHOP HOLES FOR RECONNECTION TO EXISTING RIVET OR BOLT HOLES. HOLES IN TEMPORARY MATERIAL TO BE FIELD DRILLED AND REAMED TO MATCH EXISTING RIVET OR BOLT LOCATION.

RIVET HOLES NOT USED FOR BOLTED CONNECTIONS OF TEMPORARY STRUCTURAL STEEL SHALL BE FILLED WITH A BOLT UNLESS OTHERWISE NOTED.

EXISTING MATERIAL WITHOUT HOLES FOR CONNECTION TO TEMPORARY MATERIAL SHALL BE FIELD DRILLED.

ALL HOLES THROUGH TEMPORARY AND EXISTING MATERIAL SHALL BE REAMED AFTER ASSEMBLY. THE FINAL HOLES SHALL BE STANDARD SIZE, 1/16 INCH LARGER IN DIAMETER THAN THE NOMINAL BOLT DIAMETER, UNLESS OTHERWISE NOTED.

ADDITIONAL REQUIREMENTS FOR HOLES SHALL BE PER C.M.S. 513.19. SHOP HOLES THAT DO NOT MATCH EXISTING RIVET HOLES SHALL BE FIELD DRILLED.

THE COST OF ALL MATERIAL, EQUIPMENT AND LABOR FOR CONNECTING TEMPORARY MATERIAL TO EXISTING MATERIAL, INCLUDING REAMING NEW OR EXISTING HOLES, AND DRILLING NEW HOLES, SHALL BE INCLUDED AS INCIDENTAL TO THE PERTINENT TEMPORARY MATERIAL PAY ITEM.

TEMPORARY STEEL MATERIALS SHALL NOT BE PRIME COATED IN THE SHOP OR FIELD.

ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: EXPANSION JOINT FINGER REPAIR

DAMAGED AND BENT FINGERS IN THE DECK EXPANSION JOINT AT THE WEST END PIER SHALL BE REPAIRED BY REMOVING THE CRACKED OR BROKEN FINGERS AND INSTALLING NEW FINGERS BY WELDING; OR BY HEAT STRAIGHTENING BENT FINGERS.

HEAT STRAIGHTENING WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A PERSON WHO SHALL PRESENT WRITTEN DOCUMENTATION PRIOR TO BEGINNING WORK OF HIS SUCCESSFUL HEAT STRAIGHTENING EXPERIENCE WITH COMPARABLE MEMBERS. HE SHALL POSSESS THE KNOWLEDGE AND EXPERIENCE TO APPLY THE HEAT IN SUCH A MANNER, SEQUENCE AND AMOUNT THAT THE FINAL STRAIGHTENED MEMBER RETAINS AS LITTLE RESIDUAL STRESS AS POSSIBLE. HEAT SHALL BE APPLIED AT OR BELOW 650° C (1200° F) AND MONITORED WITH CONTACT THERMOMETERS, PYROMETRIC STICKS, OR OTHER HEAT INDICATING DEVICES. THESE HEAT INDICATING DEVICES SHALL BE SUPPLIED BY THE CONTRACTOR AND MADE AVAILABLE TO THE INSPECTOR AT ALL TIMES. TORCH TIP SIZES SHALL BE LIMITED TO 1 INCH DIAMETER MAXIMUM. THE HEAT STRAIGHTENING SHALL BE ACCOMPLISHED WITH THE USE OF "V" HEATS OR TRIANGULAR HEATS. THE "V" IS HEATED FROM THE APEX TO THE BASE IN A MANNER SUCH THAT THE ONLY PLACE SHOWING COLOR IS DIRECTLY UNDER THE TORCH. THE ENTIRE "V" SHALL NOT BE HEATED SIMULTANEOUSLY NOR SHALL IT BE REHEATED UNTIL AFTER IT HAS COOLED TO THE TOUCH. FORCED COOLING IS NOT PERMITTED. THE STRAIGHTENING SHALL BE ACCOMPLISHED WITH AS LITTLE MECHANICAL FORCE AS POSSIBLE.

PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED, PER EACH FINGER, SHALL BE INCLUDED WITH ITEM 516-STRUCTURAL JOINT OR JOINT SEALER, MISC.: EXPANSION JOINT FINGER REPAIR BY WELDING OR ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: EXPANSION JOINT FINGER REPAIR BY HEAT STRAIGHTENING.

GENERAL NOTES CONTINUED: SEE SHEET 5/31.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED ALP | DRAWN KH | REVIEWED DAP | DATE 2/11/09
CHECKED BLN | REVISED | STRUCTURE FILE NUMBER 1809393

GENERAL NOTES - 2
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF THE SUPERSTRUCTURE, AS PER PLAN:

PREVIOUS INSPECTIONS, MEASUREMENTS AND STUDIES OF BRIDGE CUY-90-1524 HAVE IDENTIFIED MOVEMENT OF THE SUBSTRUCTURE FROM ITS ORIGINAL POSITION.

THE WORK INCLUDES REPOSITIONING FIXED BEARINGS LONGITUDINALLY TO PROPERLY ALIGN THE SUPERSTRUCTURE JOINTS. REPOSITIONING THE FIXED BEARINGS REQUIRES MOVING THE CONNECTED SUPERSTRUCTURE SPAN.

THE ESTIMATED DISTANCES FOR RELOCATING THE BEARINGS CAN BE FOUND IN THE PLAN DETAILS. THE ACTUAL DIMENSIONS FOR RELOCATING BEARINGS SHALL BE AS DIRECTED BY THE ENGINEER BASED ON THE LATEST AVAILABLE STUDIES AND MEASUREMENTS.

FINGER JOINT REPAIRS AT THE WEST END PIER SHALL BE COMPLETED BEFORE THE RELOCATION OF SPAN 1 AND SUPPORTED SPAN 2.

SEE "SEQUENCE OF CONSTRUCTION" GENERAL NOTE FOR LIMITATIONS ON RELOCATION WORK. THE PLAN SEQUENCE OF CONSTRUCTION IS A SUGGESTED PROCEDURE WITH SPECIFIC LIMITATIONS. THE CONTRACTOR SHALL SUBMIT A DETAILED SEQUENCE OF CONSTRUCTION FOR HIS PROPOSED EQUIPMENT AND METHODS FOR REVIEW BY THE ENGINEER PRIOR TO BEGINNING JACKING WORK.

THE DETAILS OF TEMPORARY SUPPORT AND JACKING SYSTEMS ARE IN THE PLANS. THE CONTRACTOR SHALL BE REPONSIBLE FOR ANY CHANGES REQUIRED TO FIT HIS PROPOSED EQUIPMENT, JACKS, AND METHODS. THE CONTRACTOR SHALL DESIGN AND FURNISH ALL COMPONENTS TO COMPLETE A WORKABLE JACKING SYSTEM INCLUDING SHIMS, EQUIPMENT SUPPORTS, JACK SUPPORTS, AND BRACING. ANY MODIFICATIONS TO THE PLAN DETAILS DUE TO THE CONTRACTORS PROPOSED EQUIPMENT, JACKS, AND METHODS SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER PRIOR TO BEGINNING JACKING WORK.

THE CONTRACTOR SHALL SUBMIT A DETAILED SEQUENCE OF CONSTRUCTION AND PROCEDURES INCLUDING THE PLAN SEQUENCE OF CONSTRUCTION AND ADDITIONAL DETAILS OF CONTRACTOR DESIGNED MATERIALS, SUPPORTS, EQUIPMENT, AND SPECIFIC METHODS.

THE CONTRACTOR SUBMISSIONS SHALL BE IN ACCORDANCE WITH CMS 501.05 B EXCEPT FOR THE PREPARATION AND ACCEPTANCE REQUIREMENTS. THE CONTRACTOR DESIGNED INFORMATION SHALL BE PREPARED BY AN OHIO REGISTERED ENGINEER. A CHECK BY A SECOND OHIO REGISTERED PROFESSIONAL ENGINEER IS NOT REQUIRED. THE CONTRACTOR SHALL SUBMIT THE INFORMATION TO THE ENGINEER AT LEAST 30 DAYS BEFORE CONSTRUCTION BEGINS. THE SUBMISSIONS WILL BE REVIEWED IN ACCORDANCE WITH THE PROVISIONS OF CMS 105.02 FOR PLANS AND WORKING DRAWINGS.

THE ESTIMATED EXISTING DEAD LOAD AND LIVE LOAD REACTIONS AT THE SUBSTRUCTURE UNITS ARE TABULATED IN THE DRAWINGS. MINIMUM HORIZONTAL JACKING LOADS ARE SHOWN ON SPAN 1 AND 2 FRAMING PLAN AND ELEVATION.

MATERIALS FOR TEMPORARY SUPPORTS SHALL BE AS SPECIFIED IN CMS 513. ALLOWABLE UNIT STRESSES MAY BE INCREASED BY 33 PERCENT FOR TEMPORARY ERECTION LOADING CONDITIONS.

THE HIGH STRENGTH THREAD BARS SHALL BE FURNISHED COMPLETE WITH WASHER PLATES AND NUTS FROM THE MANUFACTURER OF THE HIGH STRENGTH THREAD BARS.

TEMPORARY LOW FRICTION SLIDING PLATE ASSEMBLIES SHALL BE INSTALLED UNDER THE PIER 1 NORTH TRUSS AND SOUTH TRUSS BEARINGS TO RELOCATE THE BEARINGS FOR MOVING SPAN 1. THE SLIDING PLATE ASSEMBLIES SHALL HAVE A MAXIMUM TOTAL THICKNESS OF 2 INCHES AND A MAXIMUM COEFFICIENT OF FRICTION OF 0.15 UNDER THE PRESSURE IMPOSED BY THE DEAD LOAD OF THE STRUCTURE. THE SLIDING PLATE ASSEMBLIES SHALL INCLUDE POLYTETRAFLOURETHYLENE (PTFE) MATERAL AND LUBRICANTS. MANUFACTURERS TEST DATA OR ACTUAL TEST DATA OF THE PROPOSED ASSEMBLY SHALL BE SUBMITTED FOR REVIEW.

THE CONTRACTOR SHALL FURNISH VERTICAL JACKS WITH A TOTAL MINIMUM CAPACITY OF 150% OF THE ESTIMATED EXISTING DEAD LOAD, OR THE SUM OF THE EXISTING DEAD LOAD AND LIVE LOAD, WHICHEVER IS GREATER. THE STRUCTURE SHALL NOT BE RAISED MORE THAN 4 INCHES TO RELOCATE A BEARING. JACKS UNDER HYDRAULIC PRESSURE SHALL NOT BE USED TO SUPPORT LIVE LOADS. JACKS SHALL BE SHIMMED TIGHT OR OTHERWISE BLOCKED WHEN UNDER LIVE LOAD. PROVISION FOR EXPANSION AND CONTRACTION MOVEMENT OF THE STRUCTURE WITH TEMPERATURE CHANGE SHALL BE MADE AT ALL TIMES.

JACKS FOR LIFTING AND MOVING THE STRUCTURE SHALL BE HYDRAULIC RAM TYPE WITH ELECTRIC POWER PUMPS. MULTIPLE JACKS AT A SINGLE BEARING LOCATION SHALL BE CONNECTED TO A HYDRAULIC MANIFOLD AND OPERATED BY A SINGLE PUMP TO PROVIDE EQUAL LIFTING PRESSURE. THE CONTRACTOR SHALL FURNISH PERSONNEL TO OPERATE AND/OR OBSERVE JACKS AT EACH BEARING OR TRUSS CHORD LOCATION. THE PERSONNEL SHALL BE EQUIPPED WITH RADIOS FOR COMMUNICATION WITH EACH JACKING LOCATION DURING THE LONGITUDINAL JACKING OPERATION.

ODOT WILL BE CONTRACTING WITH AN INDEPENDENT CONSULTANT FOR STRAIN AND DISPLACEMENT MONITORING. NORTH TRUSS AND SOUTH TRUSS LOWER CHORD MEMBERS ON BOTH SIDES OF THE SPAN 2 EXPANSION JOINT ARE TO BE INSTRUMENTED WITH STRAIN GAGES. NORTH TRUSS AND SOUTH TRUSS UPPER AND LOWER EXPANSION JOINT OPENING LOCATIONS ARE TO BE INSTRUMENTED WITH DISPLACEMENT TRANSDUCERS. THE INSTRUMENTATION AND A RECORDING DEVICE ARE TO BE IN PLACE FOR CONTINUOUS MONITORING OF THE VERTICAL AND HORIZONTAL JACKING AND MOVING OF THE STRUCTURE. THE INSTRUMENT INSTALLATION AND MONITORING WORK WILL BE PERFORMED BY OTHERS UNDER A SEPARATE CONTRACT WITH ODOT. THE CONTRACTOR SHALL FURNISH EQUIPMENT FOR ACCESS TO THE INSTRUMENT LOCATIONS FOR INSTALLATION AND REMOVAL OF GAGES. THE ACCESS EQUIPMENT SHALL BE A SNOOPER FROM THE BRIDGE ROADWAY OR A MANLIFT FROM THE GROUND BENEATH THE BRIDGE.

PRIOR TO RELOCATING SPAN 1 AND SUPPORTED SPAN 2, THE RAILING, SIDEWALK, ROADWAY AND TRUSS EXPANSION JOINTS AT THE WEST END PIER AND SPAN 2 PANEL POINT 12 SHALL BE "FREED-UP" BY CUTTING, CLEANING AND LUBRICATING PARTS IN CONTACT. NO GAPS SHALL BE LEFT IN THE RAILING OR SIDEWALK SURFACES. TEMPORARY COVERS SHALL BE INSTALLED.

PRIOR TO RELOCATING SPAN 1 AND SUPPORTED SPAN 2, THE ROCKER BEARING COMPONENTS AT THE NORTH TRUSS, THE SOUTH TRUSS , AND THE WIDENING GIRDER AT THE WEST END PIER SHALL BE CLEANED BY AIR BLASTING TO REMOVE DIRT AND DEBRIS.

EXISTING BRIDGE SEATS SHALL BE PREPARED PER 516.07 AS NECESSARY TO PROVIDE A SMOOTH AND LEVEL SEAT FOR THE BEARINGS IN THE NEW POSITIONS.

AFTER ALL RELOCATION IS COMPLETE, ALL JACKS AND TEMPORARY SUPPORT MATERIAL SHALL BE REMOVED.

PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR RELOCATING SPANS AND BEARINGS, INCLUDING ALL TEMPORARY SUPPORTS, JACKING, BEARING RELOCATION, ACCESS FOR STRAIN GAGE INSTALLATION, COORDINATION, AND SUBMITTALS SHALL BE INCLUDED IN THE PRICE BID AS FOLLOWS:

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 518 - 10" DIAMETER PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN

THE DOWNSPOUT SHALL BE STANDARD WEIGHT, SCHEDULE 40 GALVANIZED STEEL PIPE WITH A WALL THICKNESS OF 0.365". THE PIPE SHALL BE IN ACCORDANCE WITH CMS 518.06. ELBOWS SHALL BE WELDED FITTINGS WITH FULL PENETRATION BUTT WELDS. ELBOWS AND DOWNSPOUT INLETS SHALL BE SHOP FABRICATED WITH THE DOWNSPOUTS.

ELBOWS AND BENDS SHALL BE SMOOTH RADIUS OR FABRICATED WITH MITER CUTS.

STEEL MATERIALS FOR DOWNSPOUTS, INCLUDING ELBOWS, MOUNTING BRACKETS, COUPLINGS AND ALL HARDWARE SHALL BE GALVANIZED PER 711.02 AFTER FABRICATION.

DOWNSPOUTS SHALL BE SUPPORTED BY BRACKETS AS SHOWN IN THE PLANS UNLESS OTHERWISE NOTED. THESE BRACKETS ARE TO BE CONSIDERED INCIDENTAL TO THE DOWNSPOUT PIPE AND NO EXTRA PAYMENT WILL BE MADE.

DOWNSPOUT INLETS SHALL BE INCLUDED IN THE MEASURED LENGTH OF THE DOWNSPOUT.

PAYMENT FOR ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE PIPE DOWNSPOUT SHALL BE INCLUDED WITH ITEM 518 - 10" DIAMETER PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN.

ITEM 518 - STRUCTURE DRAINAGE, MISC.: RELOCATE PIER 1 DRAINAGE HOPPER

THE DRAINAGE HOPPERS AT PIER 1 SHALL BE RELOCATED TO ALIGN WITH THE RELOCATION OF SPAN 1 AND SUPPORTED SPAN 2.

PRIOR TO AND AS PART OF SPAN 1 AND SUPPORTED SPAN 2 RELOCATION, THE CONTRACTOR SHALL MAKE SURE THE DRAIN TROUGHS WILL MOVE FREELY WITHIN THE PIER HOPPERS.

DIMENSIONS ARE TO BE FIELD MEASURED BY THE CONTRACTOR AS THE EXISTING DIMENSIONS WILL BE ADJUSTED BY THE RELOCATION OF SPAN 1 AND SUPPORTED SPAN 2.

PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR RELOCATING DRAINAGE HOPPERS SHALL BE INCLUDED WITH ITEM 518 - STRUCTURE DRAINAGE, MISC.: RELOCATE PIER 1 DRAINAGE HOPPERS.

ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN

THIS ITEM SHALL INCLUDE THE FURNISHING OF ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED FOR INSTALLING THE NEW 6 INCH THICK CONCRETE SLOPE PROTECTION TO MATCH THE EXISTING CONCRETE SLOPE PROTECTION AS SHOWN IN THE PLANS AND AS SPECIFIED HEREIN.

THE EXISTING CONCRETE SLOPE PROTECTION SHALL BE SAW CUT ONE FOOT FROM AN EXISTING CRACK CONTROL JOINT AND REMOVED WITH CARE TAKEN NOT TO DAMAGE THE SLOPE PROTECTION AND WELDED WIRE FABRIC TO REMAIN. IF VOIDS ARE FOUND UNDER THE EXISTING CONCRETE SLOPE PROTECTION BEING REMOVED THEY SHALL BE FILLED WITH 304 AGGREGATE BASE MATERIAL OR CONCRETE FOR ADJUSTMENT TO GRADE.

CRACK CONTROL JOINTS SHALL BE PLACED IN THE NEW CONCRETE SLOPE PROTECTION TO LINE UP WITH THE EXISTING CRACK CONTROL JOINTS IN THE CONCRETE SLOPE PROTECTION TO REMAIN. SAW OR FORM THE CRACK CONTROL JOINTS TO A DEPTH OF 1½" AND APPROXIMATELY ⅛" WIDE.

THE INSTALLATION OF THE NEW REINFORCED CONCRETE SLOPE PROTECTION SHALL INCLUDE WELDED STEEL WIRE FABRIC, PREFORMED EXPANSION JOINT FILLER, JOINT SEALER, CRACK CONTROL JOINTS, BASE MATERIAL AND CONCRETE. ANY CRACKS IN THE EXISTING CONCRETE SLOPE PROTECTION THAT ARE SEPARATED MORE THAN ¼" SHALL BE BLOWN CLEAR OF DIRT AND DEBRIS AND SEALED WITH HOT APPLIED JOINT SEALER AS PER C.M.S. 705.04.

ALL COSTS OF CONSTRUCTING THE NEW CONCRETE SLOPE PROTECTION TO THE SATISFACTION OF THE ENGINEER, INCLUDING REMOVAL OF EXISTING CONCRETE SLOPE PROTECTION, ALL NECESSARY BASE MATERIAL, WELDED STEEL WIRE FABRIC, PREFORMED EXPANSION JOINT FILLER, JOINT SEALER AND CONCRETE SHALL BE INCLUDED UNDER ITEM 601 - CONCRETE SLOPE PROTECTION, AS PER PLAN, PER SQUARE YARD.

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29 NORTH PARK STREET
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BLN		1809393	

GENERAL NOTES - 3
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

ESTIMATED QUANTITIES

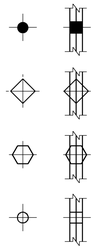
CALCULATED ALP DATED 01/09
CHECKED dht DATED 02/09

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	SUBSTR.	GENERAL	SEE SHEET
								/
202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	LUMP			3/31
203	10001	11	CY	EXCAVATION, AS PER PLAN			11	4/31
513	95030	20	EACH	STRUCTURAL STEEL, MISC.: SWEDGE ANCHOR BOLTS (2½" DIAMETER X 4'-8") WITH NUT AND WASHER		20		4/31
513	95030	44	EACH	STRUCTURAL STEEL, MISC.: CUT EXISTING ANCHOR RODS		44		4/31
513	95030	148	EACH	STRUCTURAL STEEL, MISC.: ⅞" DIAMETER BOLTS	148			4/31
513	95030	6	EACH	STRUCTURAL STEEL, MISC.: ⅜" BENT PLATE FLASHING	6			4/31
516	15000	40	EACH	STRUCTURAL JOINT OR JOINT SEALER, MISC.: EXPANSION JOINT FINGER REPAIR BY WELDING	40			4/31
516	15000	40	EACH	STRUCTURAL JOINT OR JOINT SEALER, MISC.: EXPANSION JOINT FINGER REPAIR BY HEAT STRAIGHTENING	40			4/31
516	41200	83	SF	⅛" PREFORMED BEARING PAD		83		
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP	5/31
518	51201	39	FT	10" DIAMETER PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN			39	5/31
518	62200	2	EACH	STRUCTURE DRAINAGE, MISC.: RELOCATE PIER 1 DRAINAGE HOPPER			2	5/31
601	21001	23	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN			23	5/31

STRUCTURE PLAN INDEX

/

BOLT LEGEND



FIELD BOLT, NUT AND FULL HEAD. TEMPORARY MATERIAL TO TEMPORARY MATERIAL.

INDICATES TEMPORARY MATERIAL TO EXISTING RIVET OR BOLT HOLE, WHEN ADDED TO FIELD BOLT SYMBOL ABOVE.

REMOVE EXISTING RIVET.

EXISTING RIVET OR BOLT TO REMAIN.

RICHLAND ENGINEERING LIMITED
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MANSFIELD, OHIO 44902

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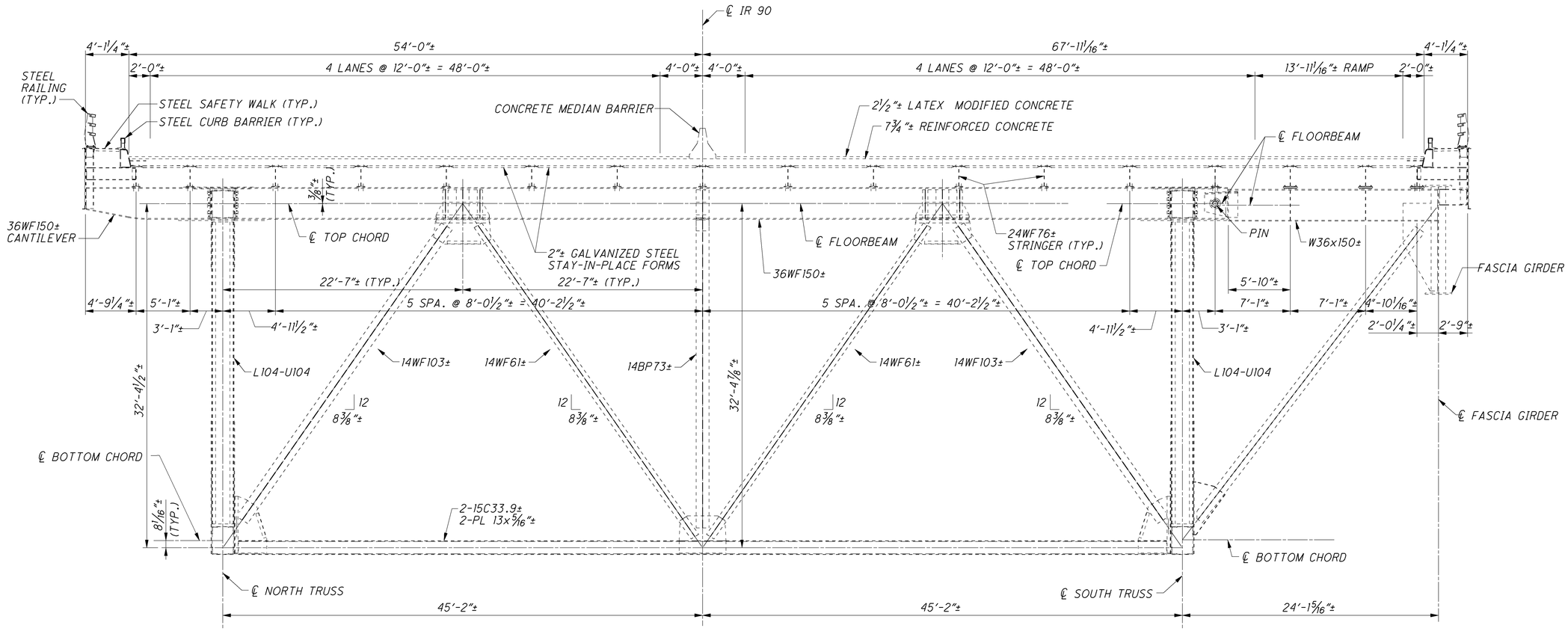
ESTIMATED QUANTITIES
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

090_1542CEQ001.DGN 02/11/09 TWH,SCB,JLS,SCB



EXISTING TRANSVERSE SECTION - SPANS 1 & 2 WITH WIDENING GIRDER

SPAN 1 - FLOORBEAM 4 (104) (SHOWN)

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

090_1542CSD006.DGN 1/19/09 JLS.TWH

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EXISTING TRANSVERSE SECTION
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

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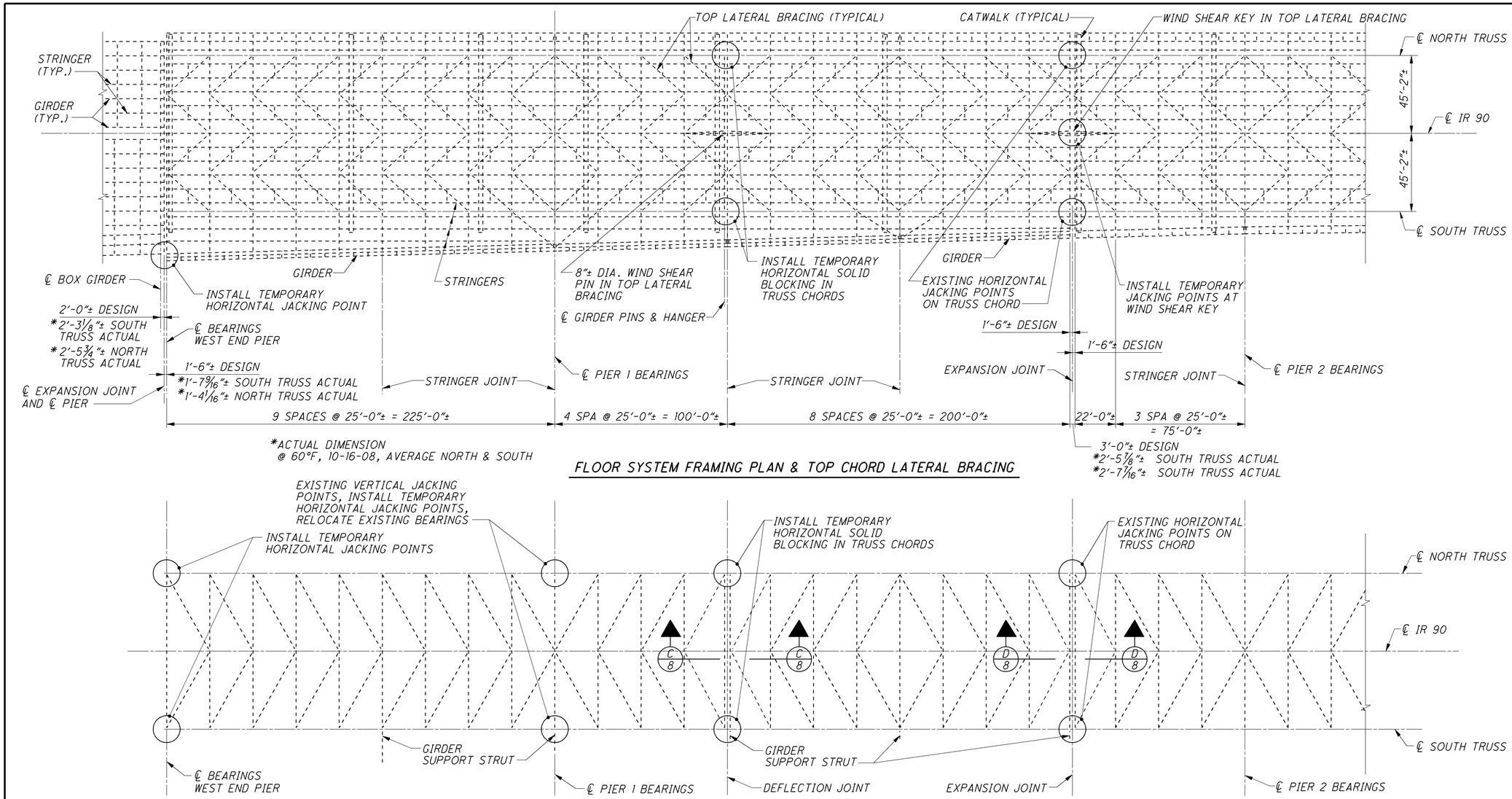
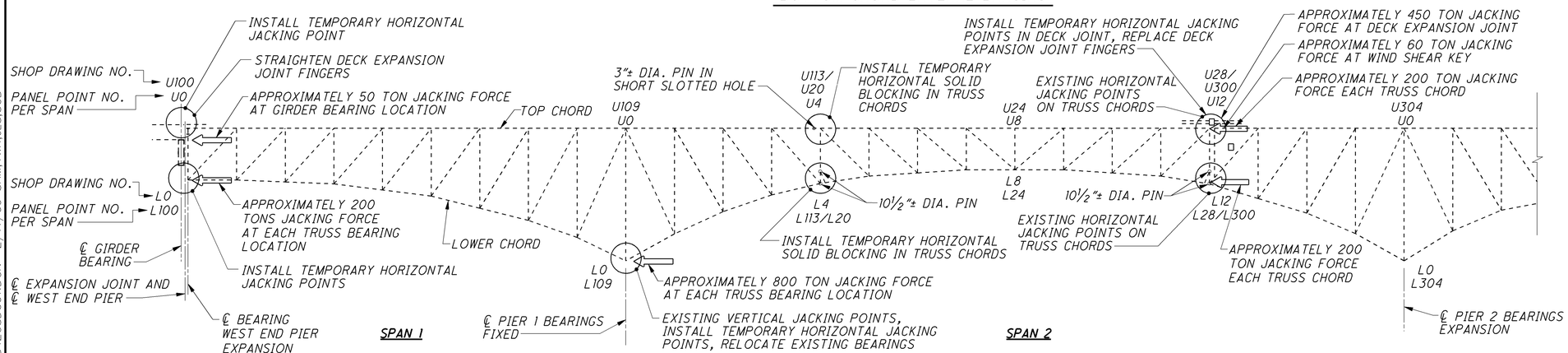
PID No. 82072



FLOOR SYSTEM FRAMING PLAN & TOP CHORD LATERAL BRACING

BOTTOM CHORD LATERAL BRACING



TRUSS ELEVATION

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

WEST END PIER TRUSS BEARING DETAILS:
SEE SHEET 9/31 TO 11/31.

WEST END PIER GIRDER BEARING DETAILS:
SEE SHEET 12/31 TO 13/31.

PIER 1 TRUSS BEARING DETAILS:
SEE SHEET 14/31 TO 19/31.

TRUSS DEFLECTION JOINT DETAILS:
SEE SHEETS 22/31 AND 23/31.

TRUSS EXPANSION JOINT DETAILS:
SEE SHEETS 24/31 AND 25/31.

TRUSS WIND SHEAR KEY DETAILS:
SEE SHEET 26/31.

DECK EXPANSION JOINT DETAILS:
SEE SHEETS 27/31 TO 31/31.

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FRAMING PLAN AND ELEVATION

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OVER CUYAHOGA RIVER

CUY-90-15.24
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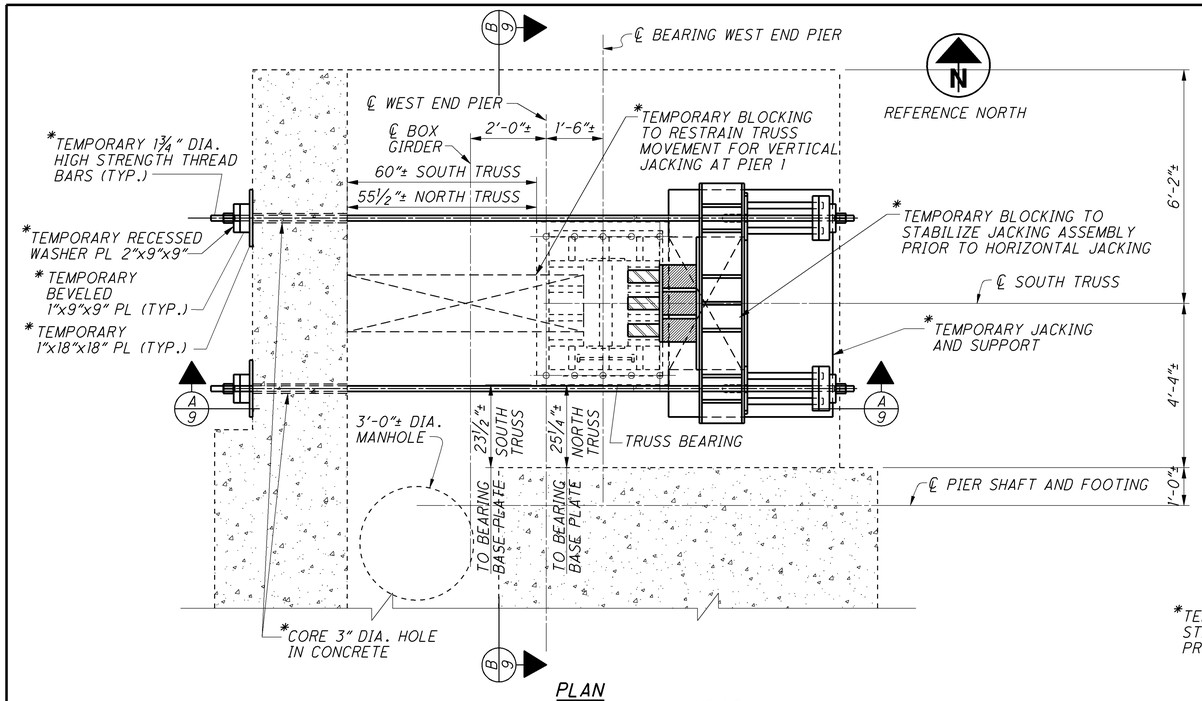
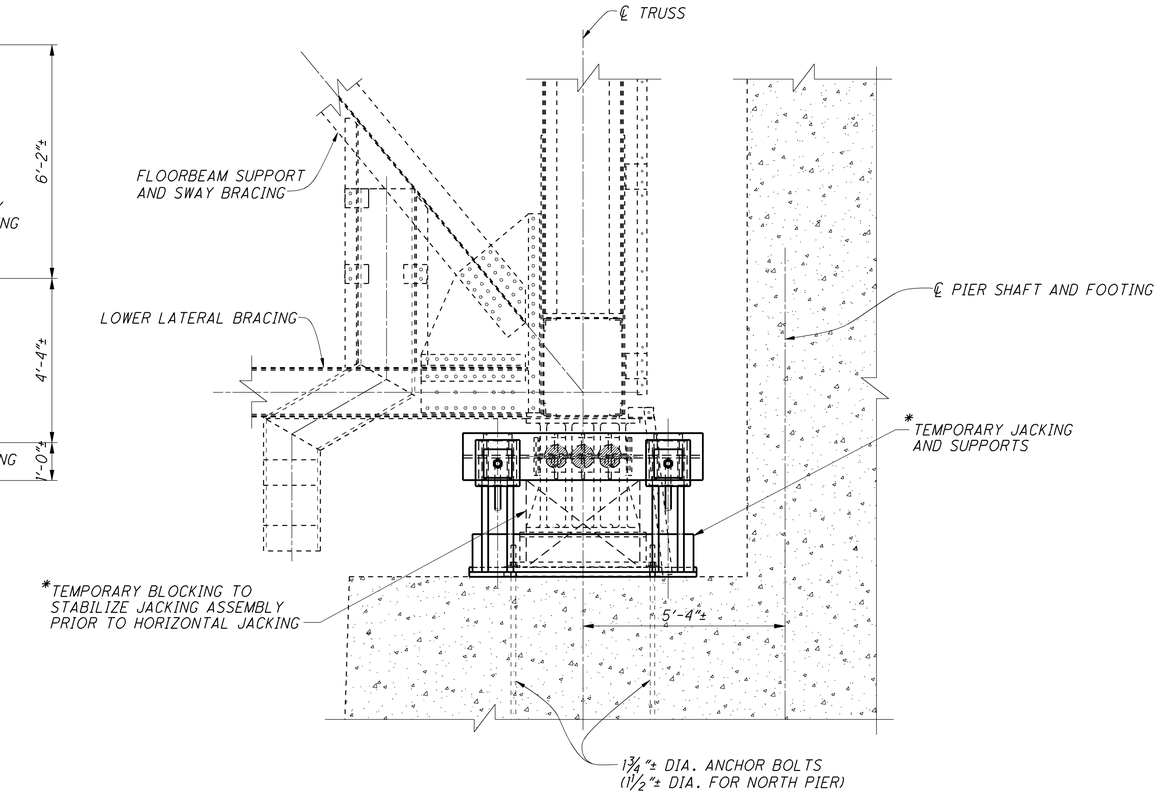
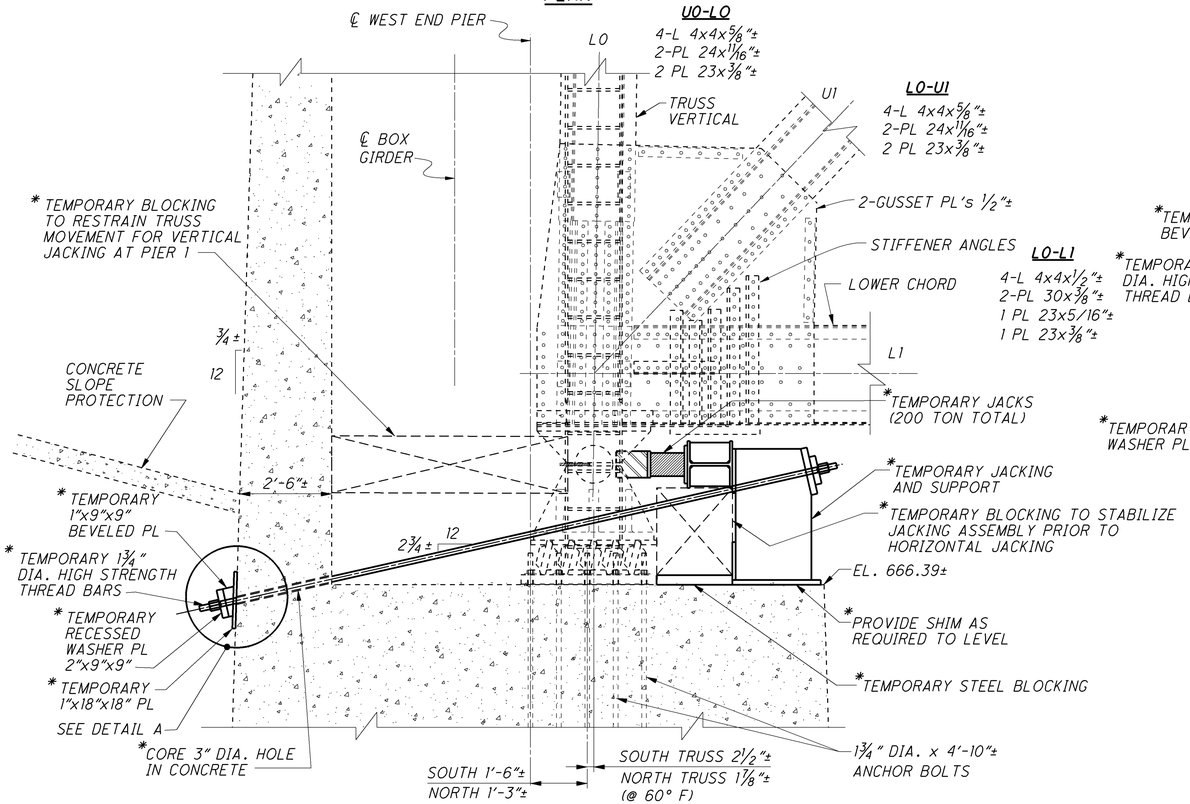


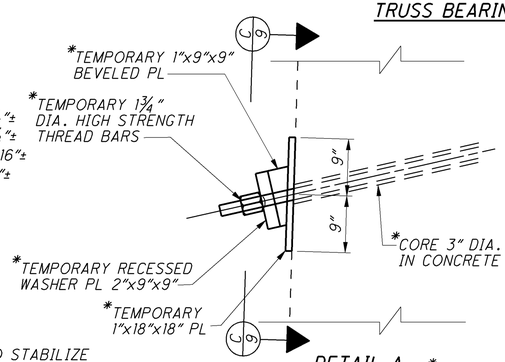
PLAN



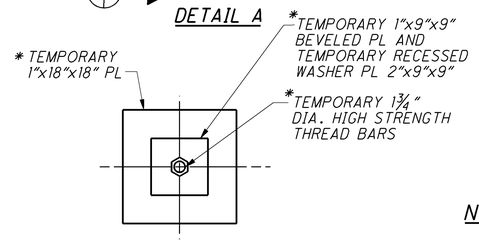
TRUSS BEARING WEST END PIER SOUTH (LOOKING EAST)
TRUSS BEARING WEST END PIER NORTH (SIMILAR)
VIEW B-B



TRUSS BEARING WEST END PIER SOUTH (LOOKING NORTH)
TRUSS BEARING WEST END PIER NORTH (SIMILAR)
VIEW A-A



DETAIL A



VIEW C-C

WEST END PIER TRUSS BEARING REACTION

	NORTH	SOUTH
DEAD LOAD	515 KIPS	560 KIPS
LIVE LOAD (HS10)	162 KIPS	196 KIPS
TOTAL	677 KIPS	756 KIPS

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES:

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

WEST END PIER SOUTH TRUSS EXCAVATION DETAILS: SEE SHEET 11/31.

WEST END PIER TRUSS BEARING JACKING DETAILS: SEE SHEET 10/31.

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WEST END PIER NORTH AND SOUTH TRUSS BEARINGS
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

9 / 31

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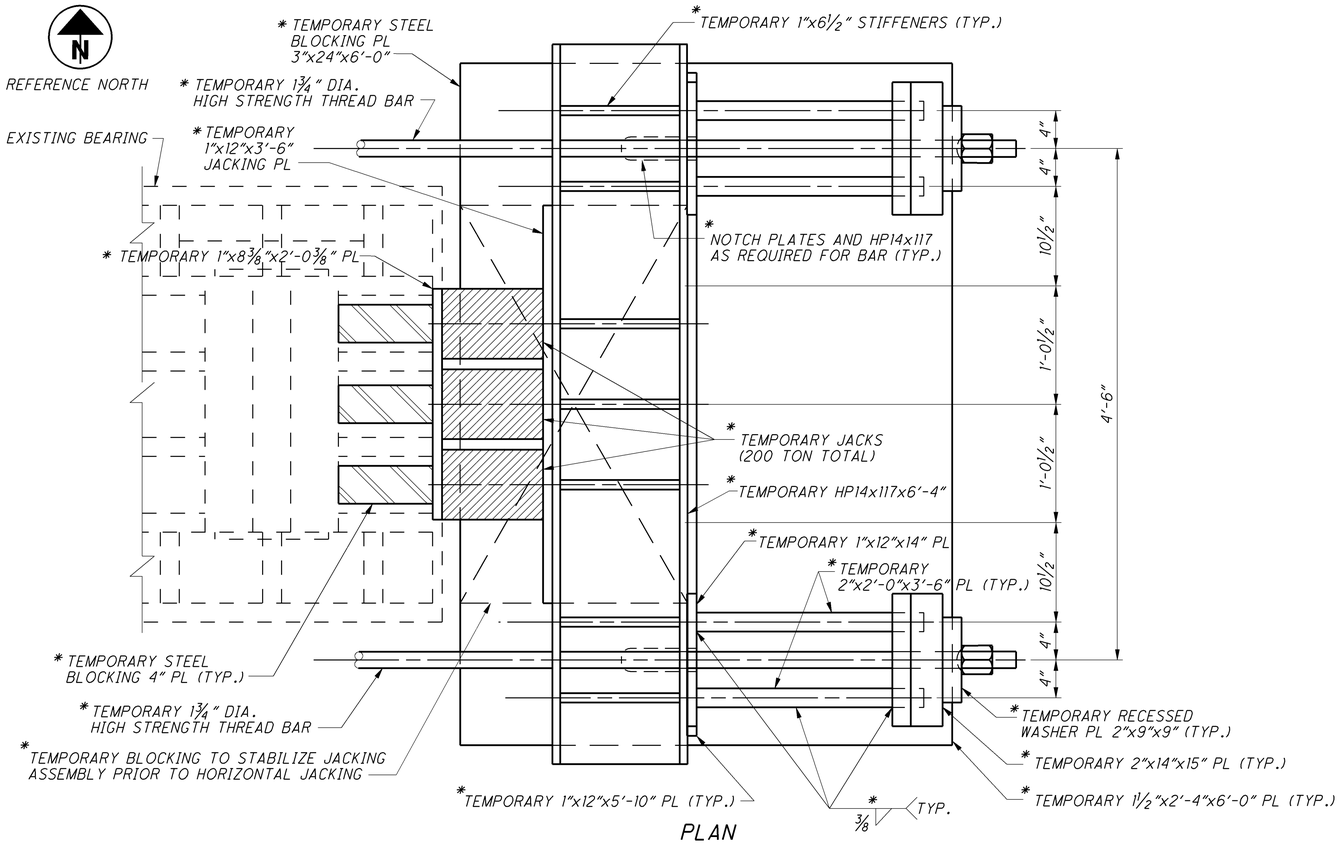
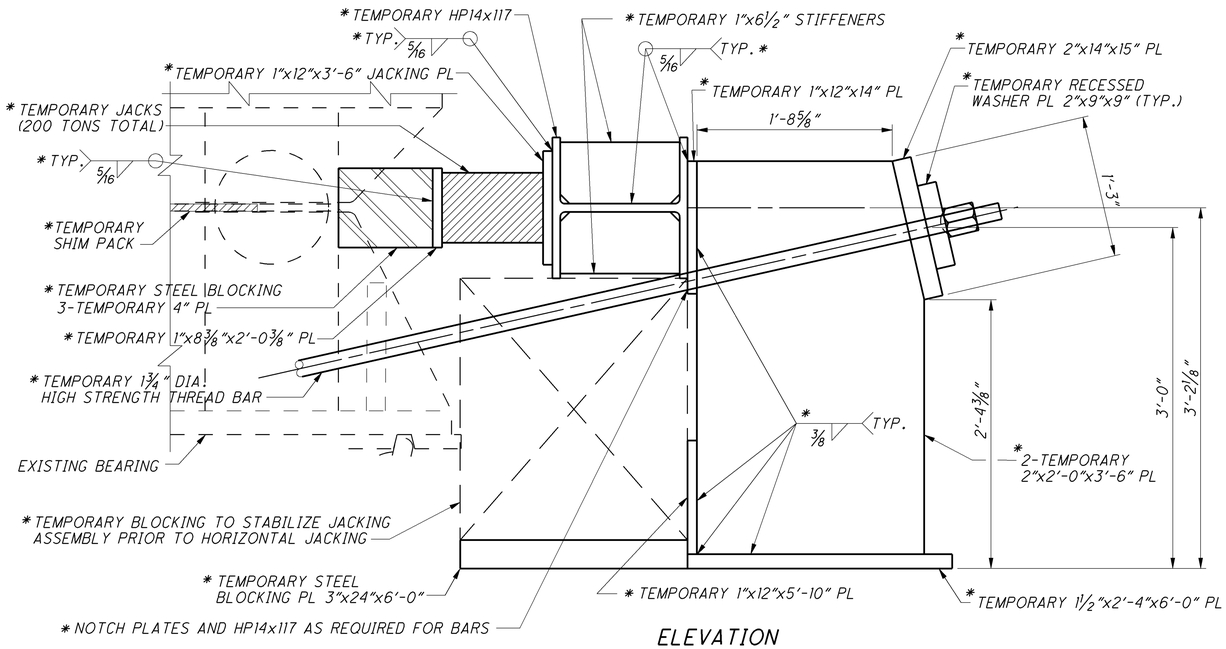
38

090_1542CSD002.DGN 2/12/09 TWH,SCB,JLS

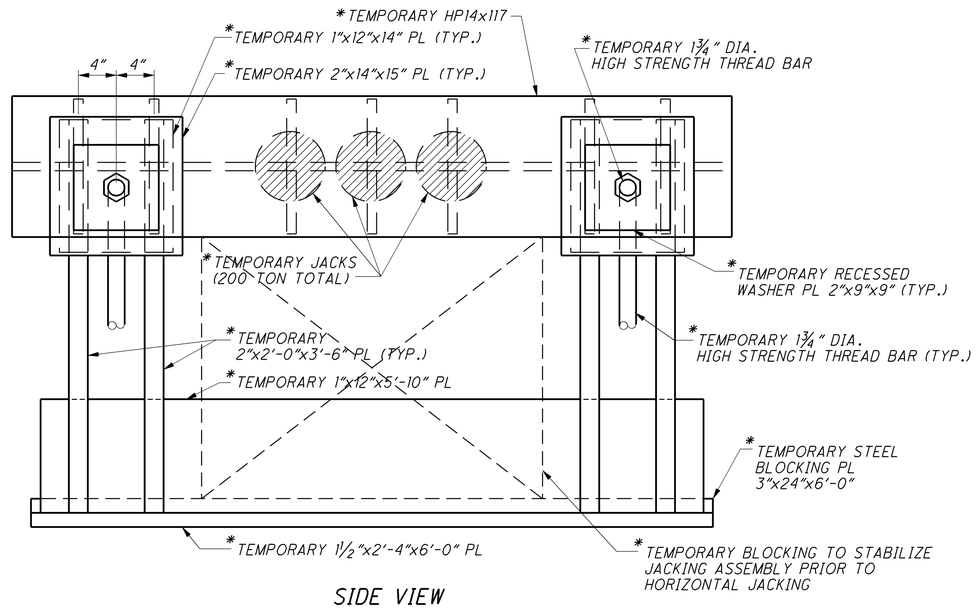


PLAN



ELEVATION

JACKING AND TEMPORARY SUPPORT



SIDE VIEW

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES:

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

JACKING AND TEMPORARY SUPPORT:

FOR LOCATION SEE SHEET 9/31 .

090_1542CSD002A.DGN 2/12/09 TWH,SCB,JLS

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29 NORTH PARK STREET
MANSFIELD, OHIO 44902

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WEST END PIER NORTH AND SOUTH TRUSS BEARING JACKING DETAILS

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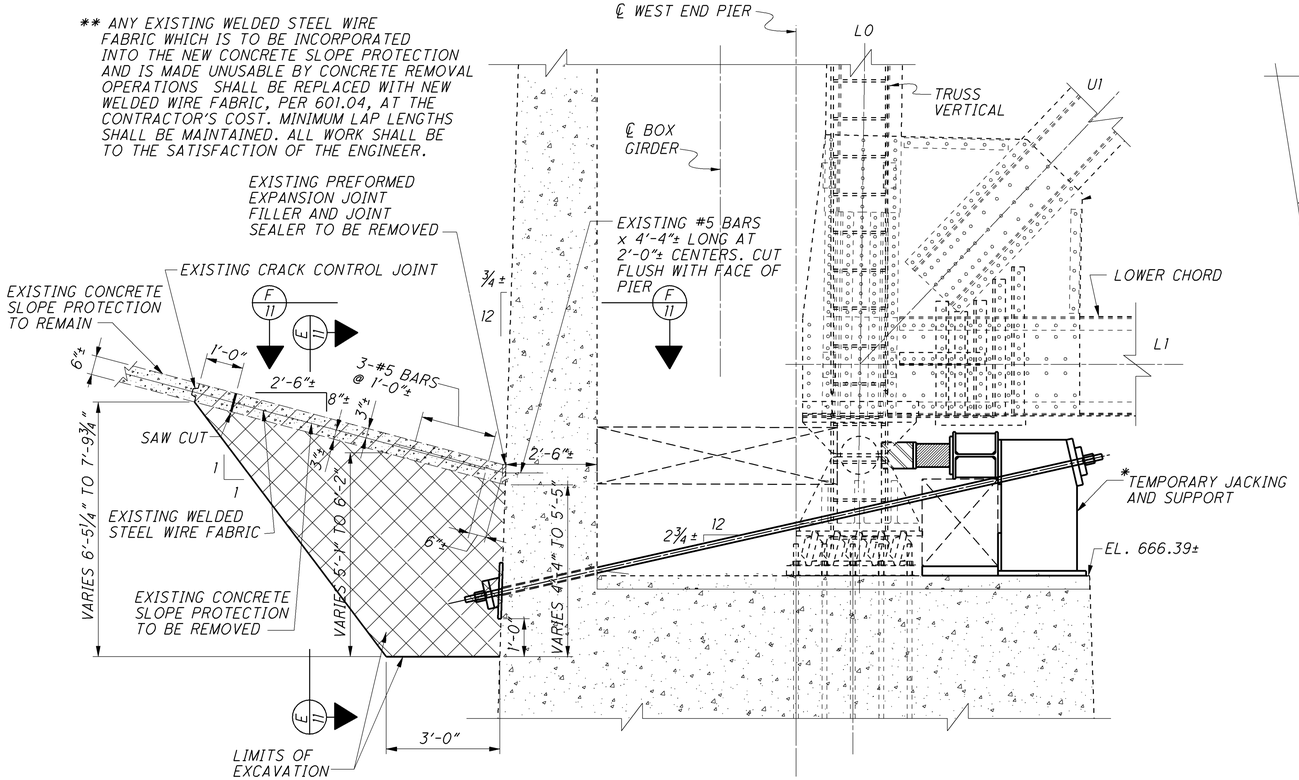
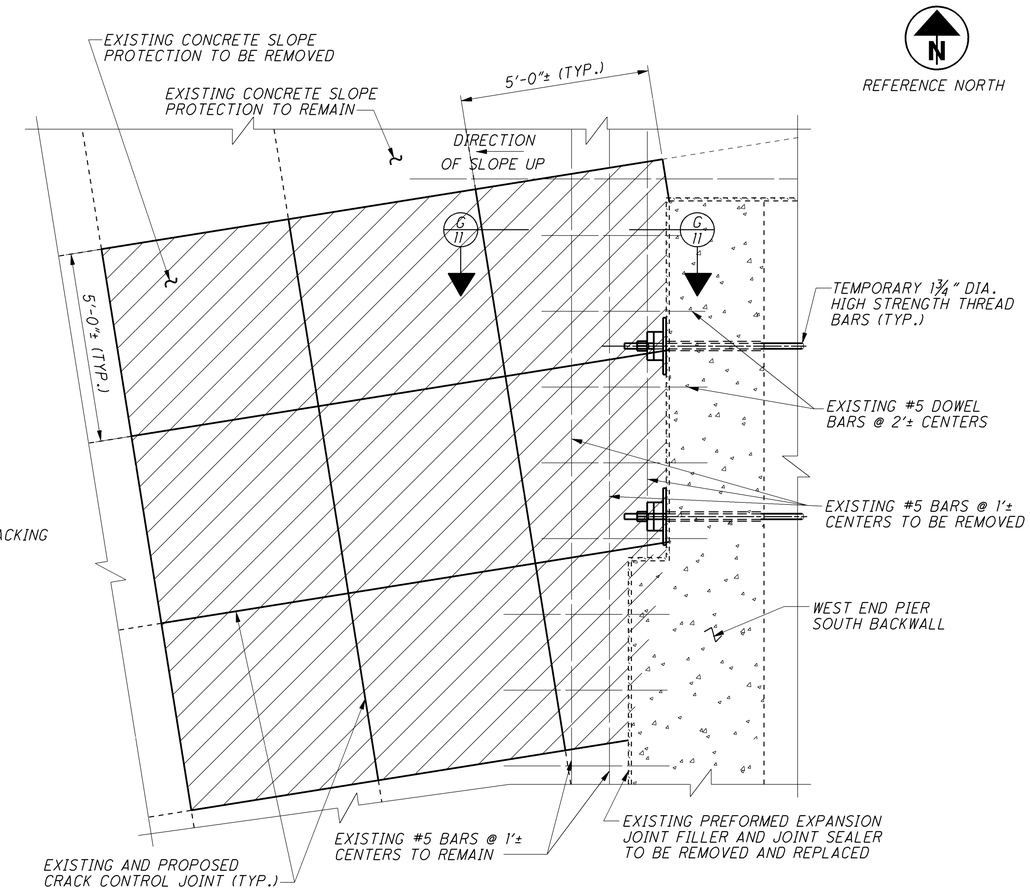
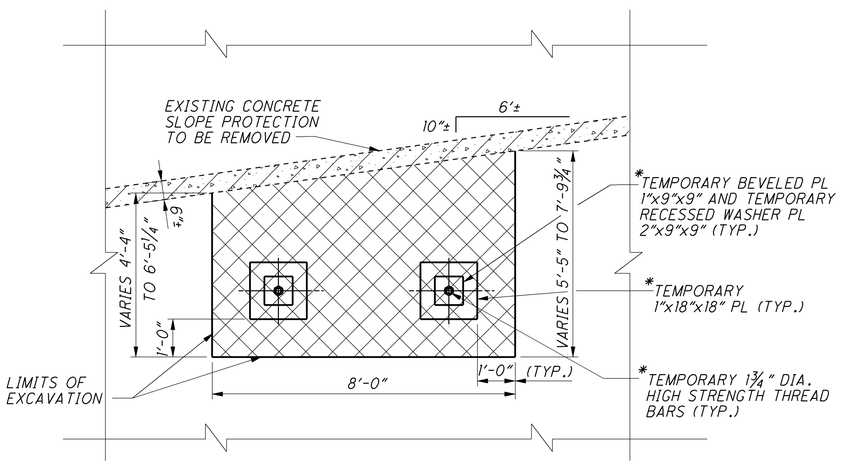


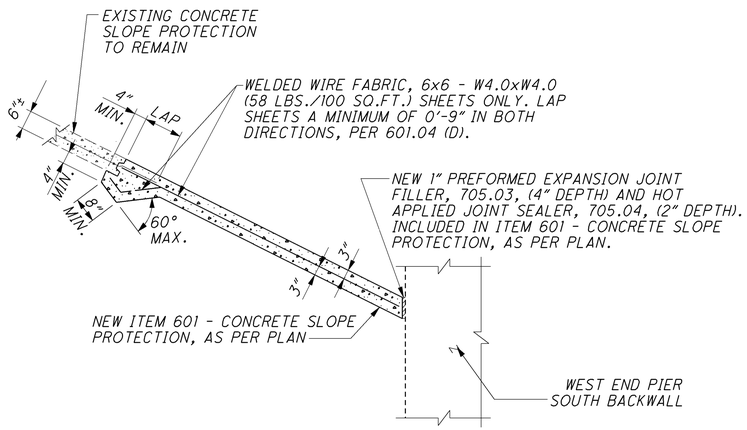
TRUSS BEARING WEST END PIER SOUTH (LOOKING NORTH)



PLAN VIEW F-F



SECTION E-E



PROPOSED SECTION G-G

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

LEGEND

- INDICATES LIMITS OF EXCAVATION TO BE INCLUDED WITH ITEM 203-EXCAVATION, AS PER PLAN.
- INDICATES EXISTING CONCRETE SLOPE PROTECTION TO BE REMOVED. THIS REMOVAL IS INCLUDED WITH ITEM 601-CONCRETE SLOPE PROTECTION, AS PER PLAN.

NOTES:

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

JACKING AND TEMPORARY SUPPORT DETAILS: SEE SHEET 10/31.

RICHLAND ENGINEERING LIMITED
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WEST END PIER SOUTH TRUSS EXCAVATION DETAILS
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CUY-90-15.24
PID No. 82072

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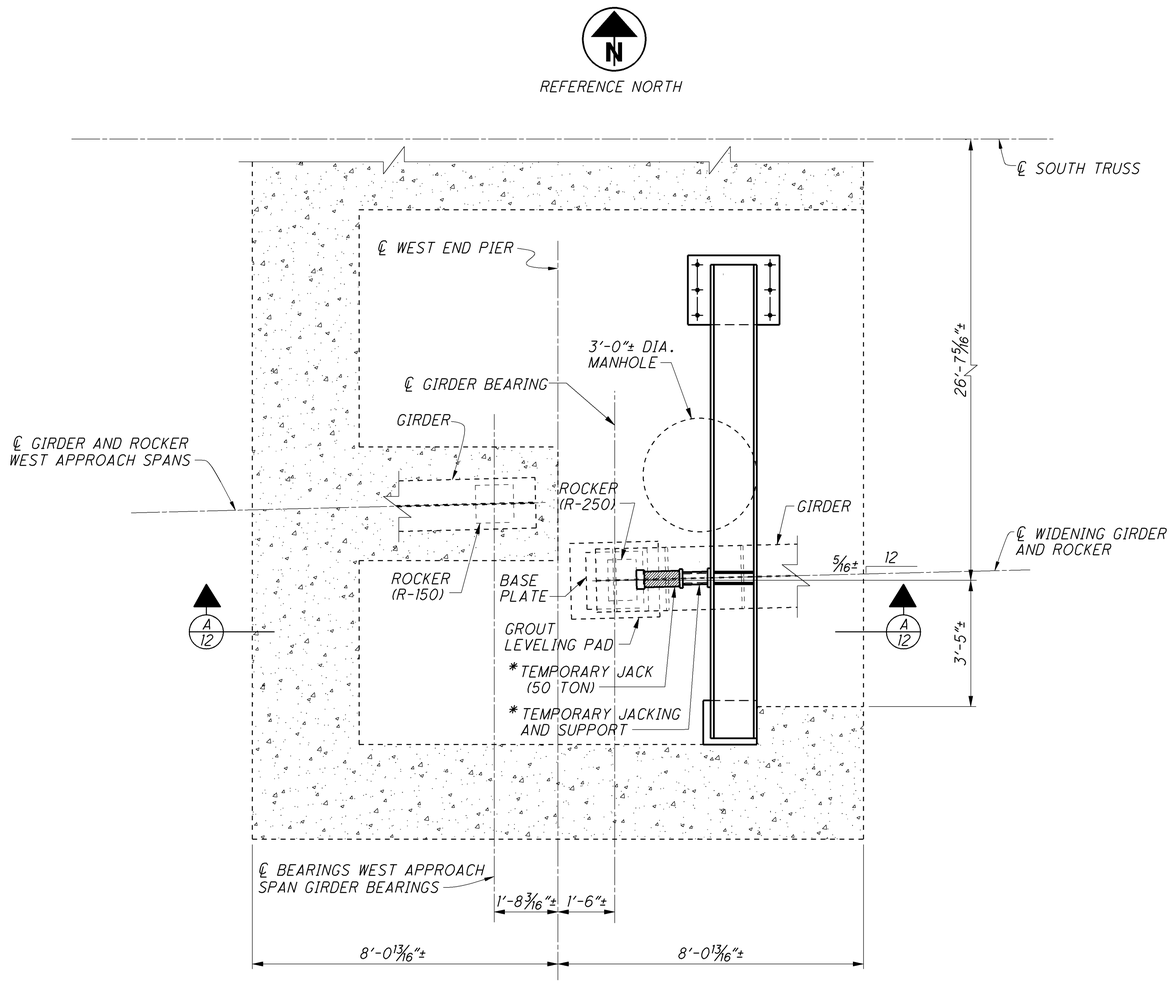
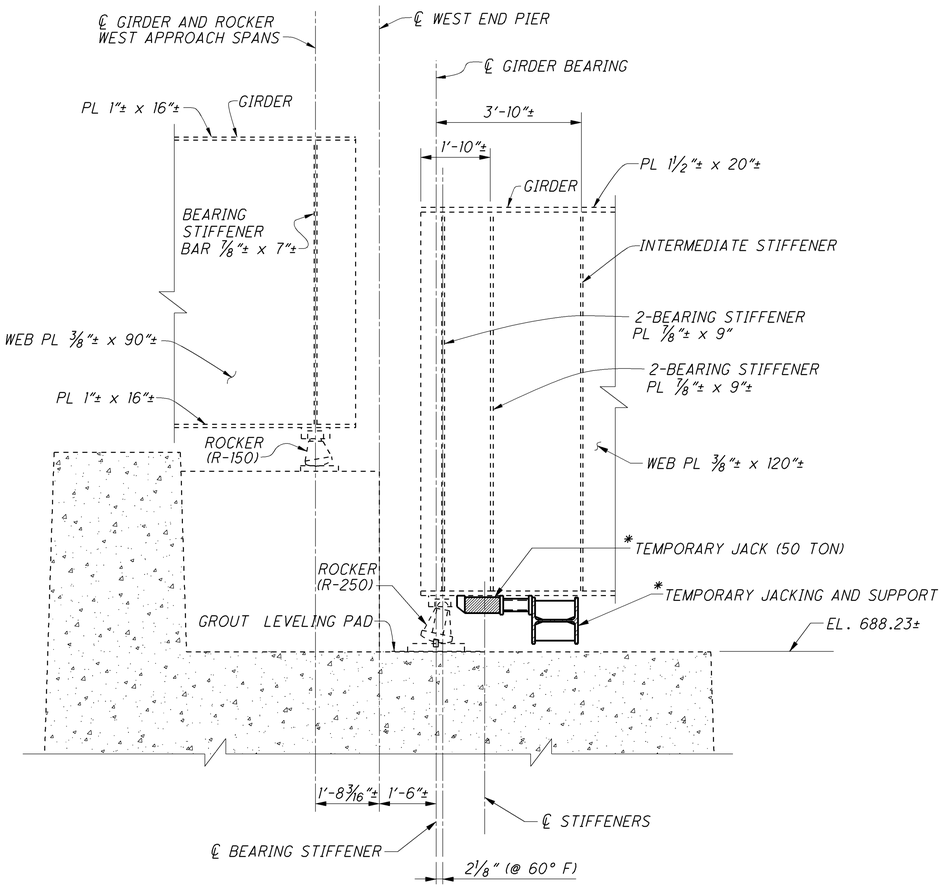
090_1542CSD0018.DGN 2/12/09 RB,SCB,TWH,JLS



PLAN AT EL. 688.23±

NOTE: FLOORBEAMS, STRINGERS, DECK AND JOINT NOT SHOWN.



GIRDER BEARING WEST END PIER (LOOKING NORTH)
SECTION A-A

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

WEST END PIER
GIRDER BEARING REACTION

DEAD LOAD	172 KIPS
LIVE LOAD (HS10)	13 KIPS
	185 KIPS

NOTES:

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

WEST END PIER GIRDER BEARING JACKING DETAILS:
SEE SHEET 13/31.

090_1542CSD003.DGN 2/11/09 JLS,SCB,KH,TWH

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WEST END PIER GIRDER BEARING
BRIDGE NO. CUY-90-1524
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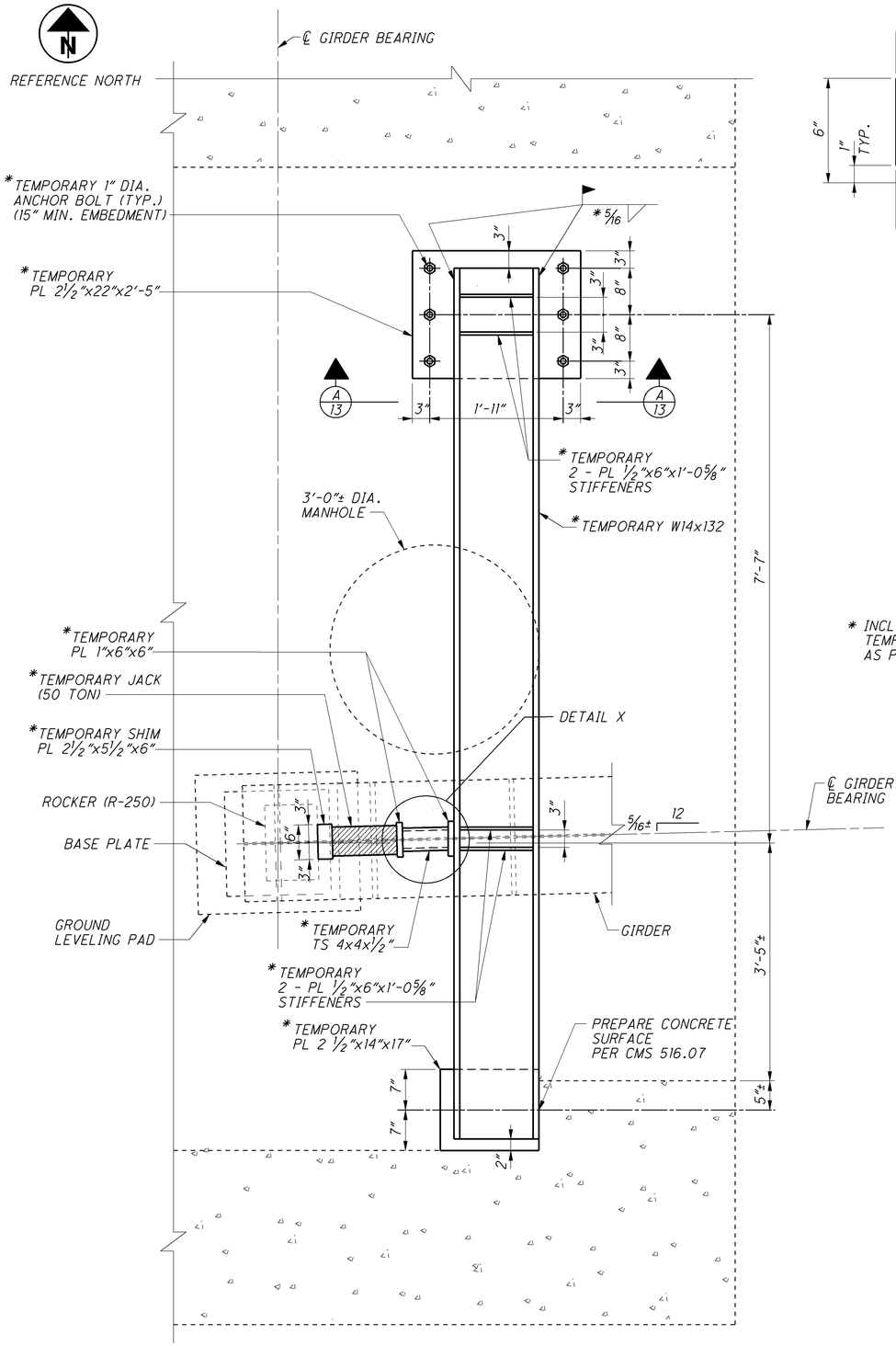
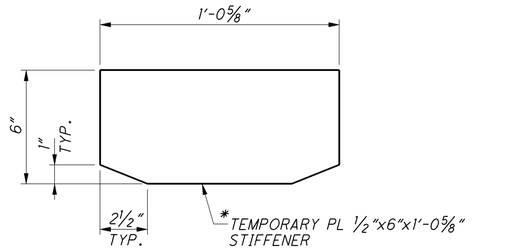
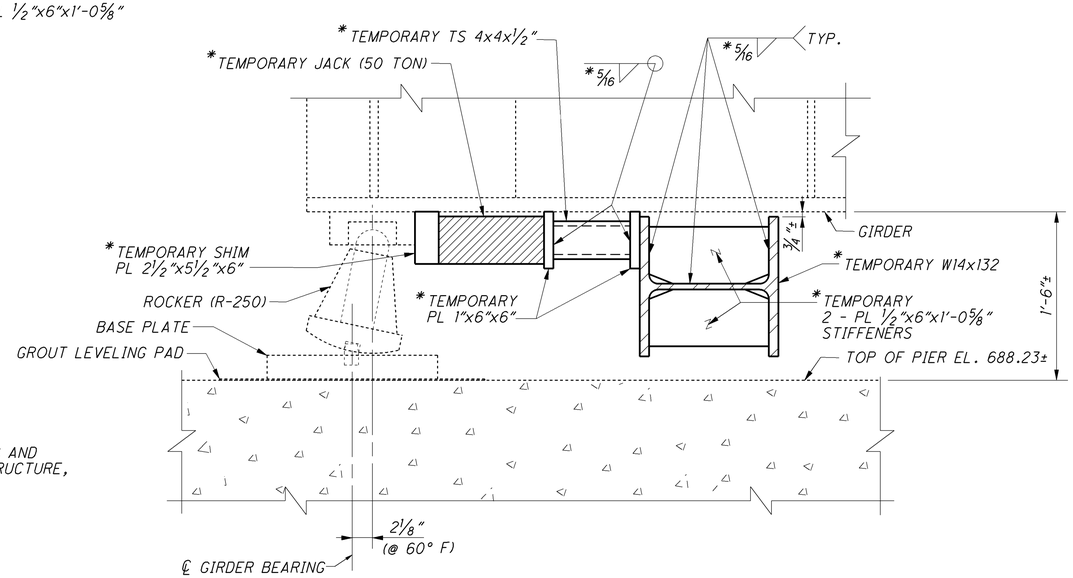


WEST END PIER GIRDER BEARING JACKING PLAN

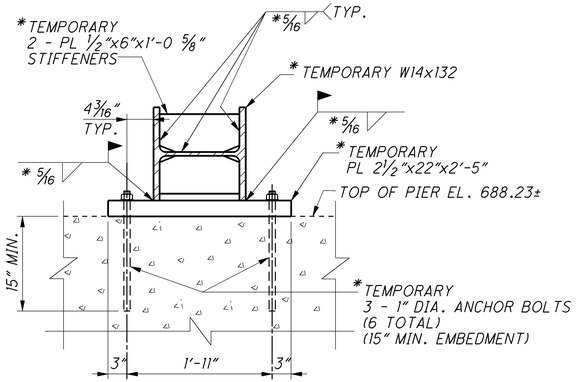


*STIFFENER DETAIL

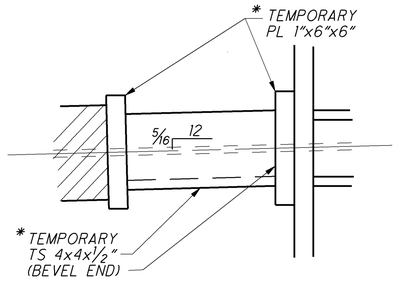
* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.



WEST END PIER GIRDER BEARING JACKING ELEVATION



SECTION A-A



DETAIL X

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

JACKING AND TEMPORARY SUPPORT: FOR LOCATION SEE SHEET 12/31.

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WEST END PIER GIRDER BEARING JACKING DETAILS
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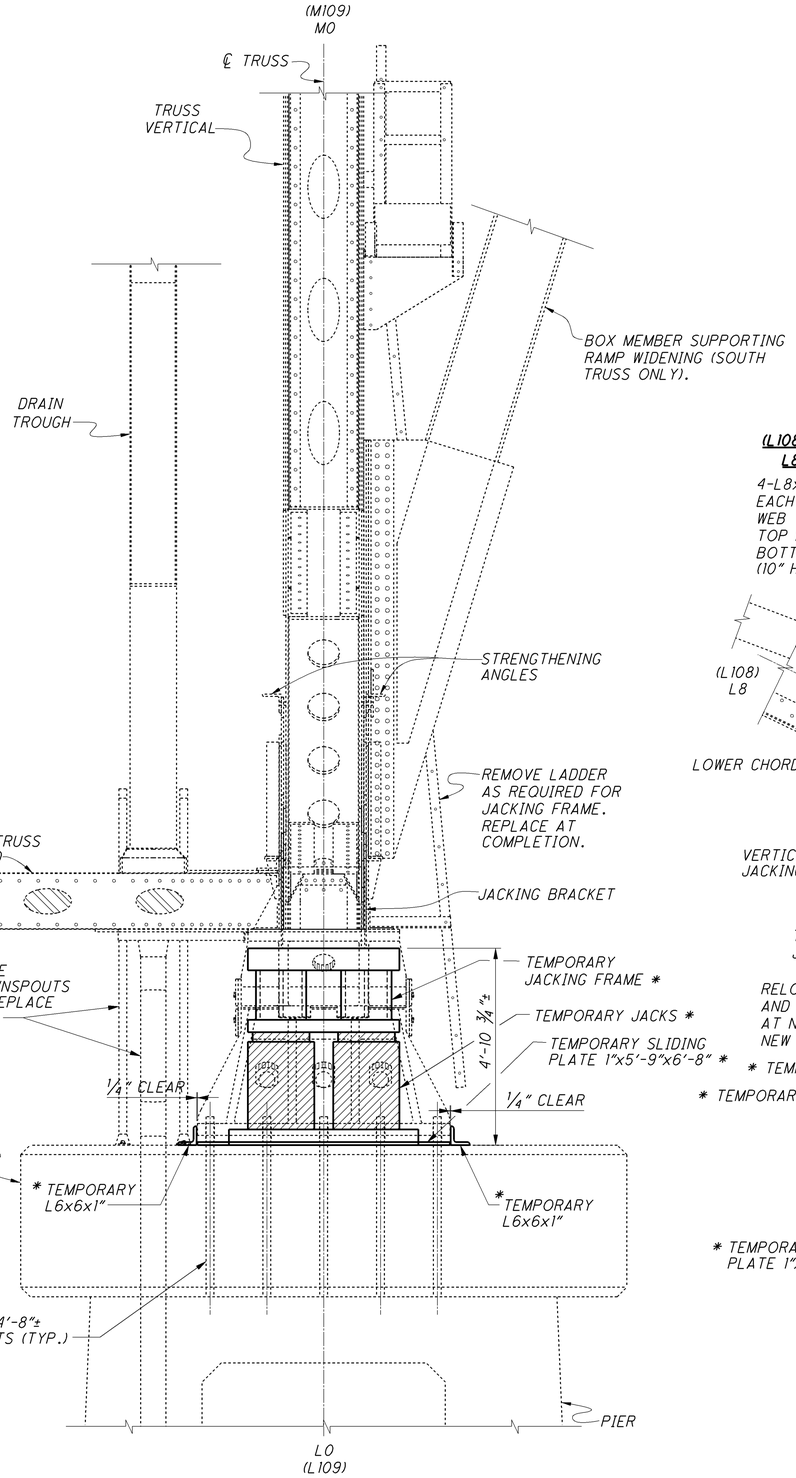
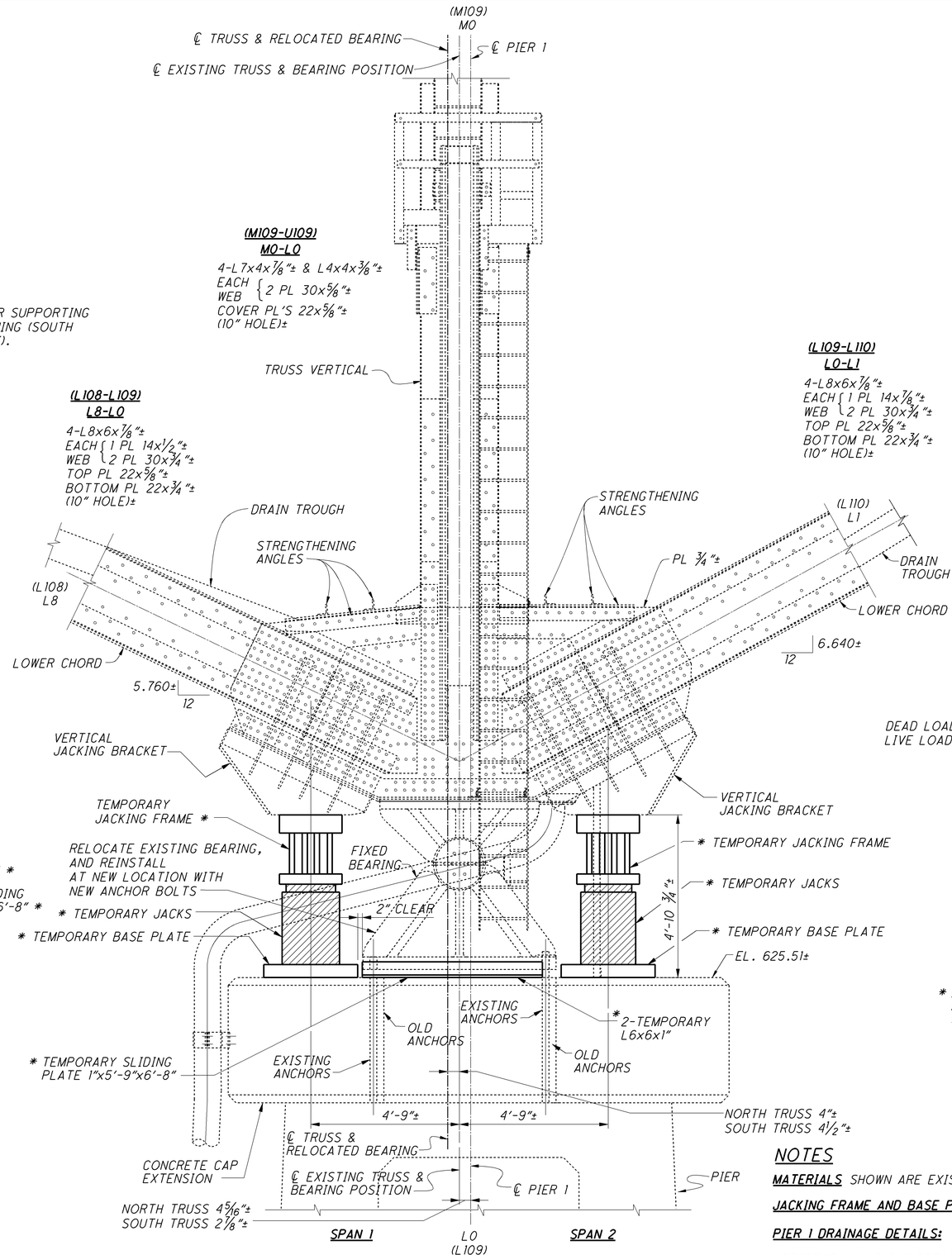


PIER 1 SOUTH (LOOKING EAST) (AS SHOWN)
PIER 1 NORTH (SIMILAR)



PIER 1 SOUTH (LOOKING NORTH) (AS SHOWN)
PIER 1 NORTH (SIMILAR)

PIER 1 TEMPORARY JACKING ASSEMBLY FOR RELOCATING TRUSS

PIER 1 BEARING REACTION

	NORTH	SOUTH
DEAD LOAD	4,491 KIPS	5,604 KIPS
LIVE LOAD (HS 10)	513 KIPS	576 KIPS
TOTAL	5,004 KIPS	6,180 KIPS

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

JACKING FRAME AND BASE PLATE DETAILS: SEE SHEET 15/31.

PIER 1 DRAINAGE DETAILS: SEE SHEETS 20/31 AND 21/31.

HORIZONTAL JACKING DETAILS: SEE SHEETS 16/31 AND 17/31.

PIER 1 TRUSS BEARING DETAILS: SEE SHEETS 18/31 AND 19/31.

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PIER 1 TRUSS BEARINGS ELEVATION - VERTICAL JACKING

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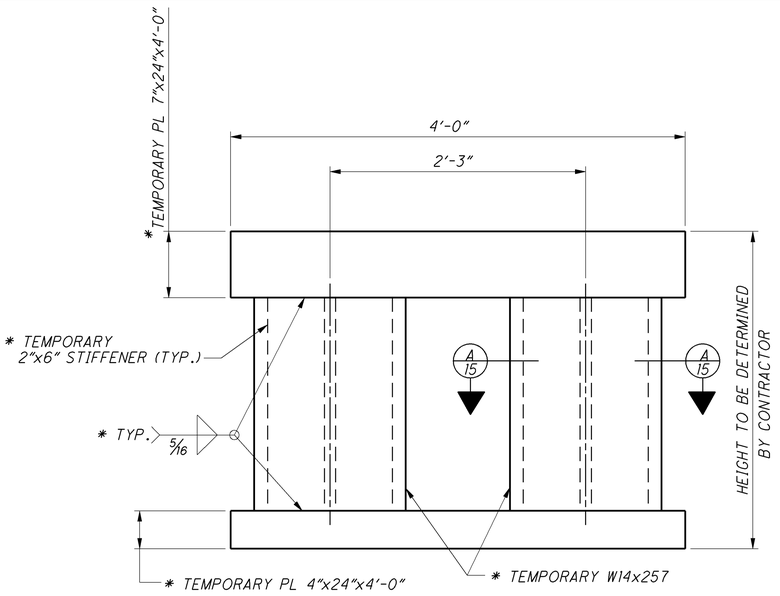
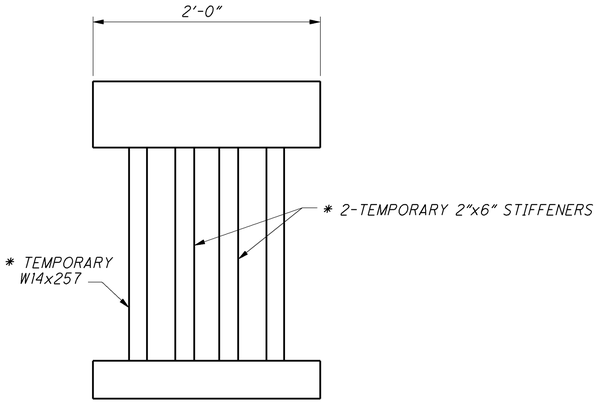
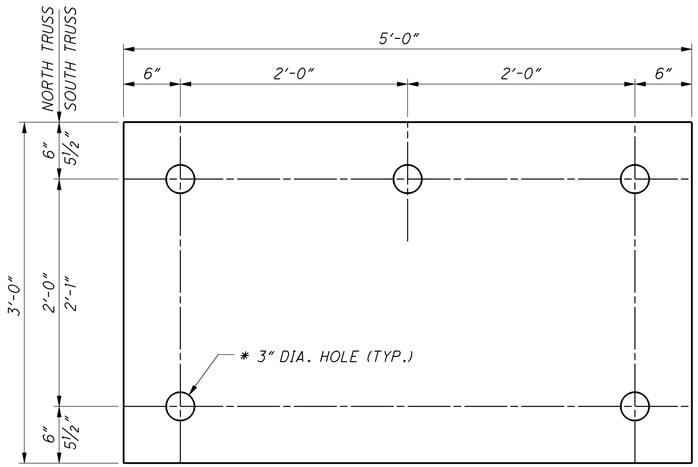
090_1542CSD004.DGN 2/11/09 sam,SCB,JLS,SCB,TWH



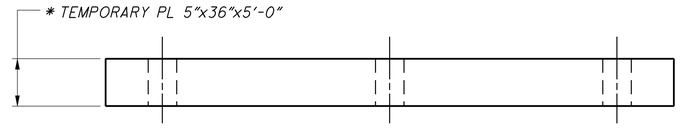
ELEVATION



SIDE VIEW

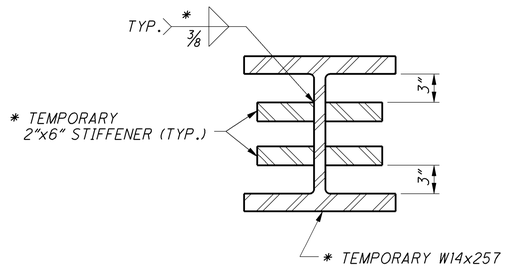


PLAN



ELEVATION

TEMPORARY VERTICAL JACKING FRAME BASE PLATE



SECTION A-A

TEMPORARY VERTICAL JACKING FRAME

NOTE: W14x257 SECTION MAY BE MADE UP FROM SIMILAR SIZED WELDED PLATES

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES

TEMPORARY VERTICAL JACKING FRAME: FOR LOCATION SEE SHEET 14/31.

TEMPORARY VERTICAL JACKING FRAME: THE CONTRACTOR MAY VARY THE HEIGHT OF THE W14x257 MEMBERS DEPENDING ON THE SIZE OF THE JACK USED FOR THIS PROCEDURE. THE VERTICAL JACKING DESIGN LOAD IS 1,000 TONS PER JACKING FRAME.

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PIER 1 VERTICAL JACKING FRAME DETAILS

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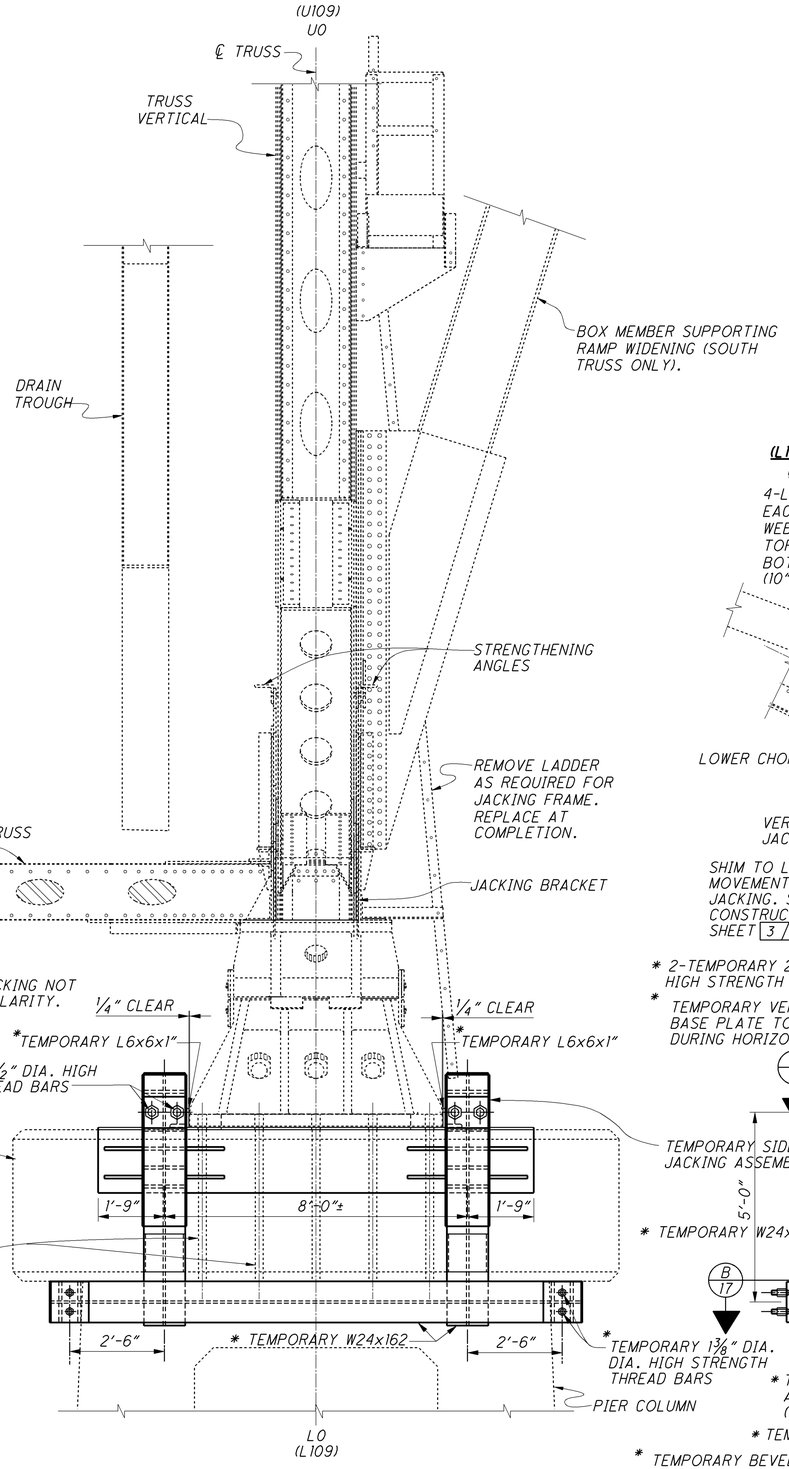
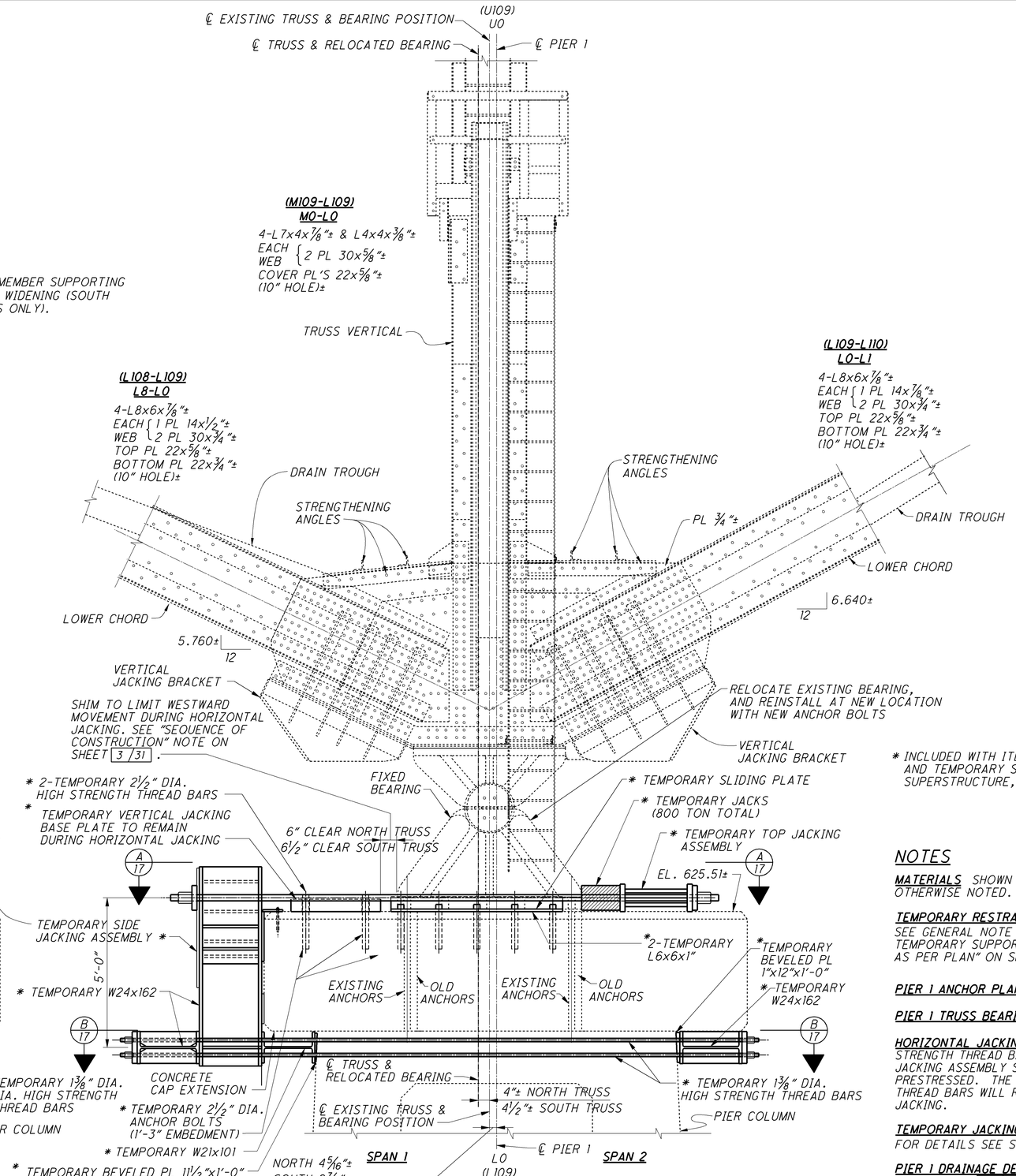


PIER 1 SOUTH (LOOKING EAST) (AS SHOWN)
PIER 1 NORTH (SIMILAR)



PIER 1 SOUTH (LOOKING NORTH) (AS SHOWN)
PIER 1 NORTH (SIMILAR)

PIER 1 TEMPORARY JACKING ASSEMBLY FOR RELOCATING TRUSS

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

TEMPORARY RESTRAINT AND SUPPORT: SEE GENERAL NOTE "ITEM 516- JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN" ON SHEET 5/31.

PIER 1 ANCHOR PLAN: SEE SHEET 19/31.

PIER 1 TRUSS BEARINGS: SEE SHEET 18/31.

HORIZONTAL JACKING: THE 1⅜" DIA. HIGH STRENGTH THREAD BARS IN THE LOWER JACKING ASSEMBLY SHALL NOT BE PRESTRESSED. THE 1⅜" DIA. HIGH STRENGTH THREAD BARS WILL RESIST LOAD CAUSED BY JACKING.

TEMPORARY JACKING AND SUPPORT: FOR DETAILS SEE SHEET 17/31.

PIER 1 DRAINAGE DETAILS: SEE SHEETS 20/31 AND 21/31.

VERTICAL JACKING DETAILS: SEE SHEETS 14/31 AND 15/31.

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PIER 1 TRUSS BEARINGS ELEVATION - HORIZONTAL JACKING

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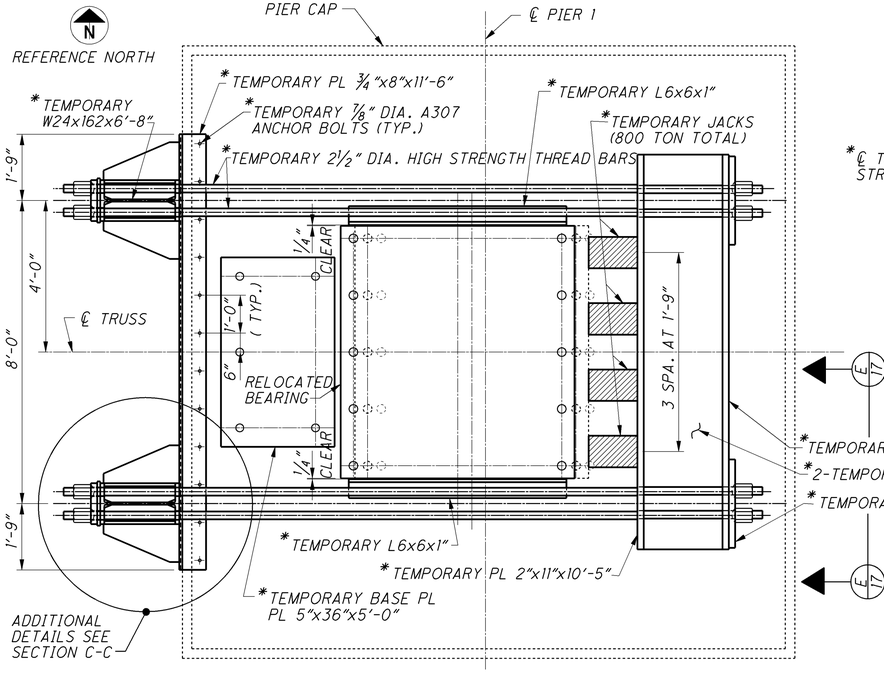
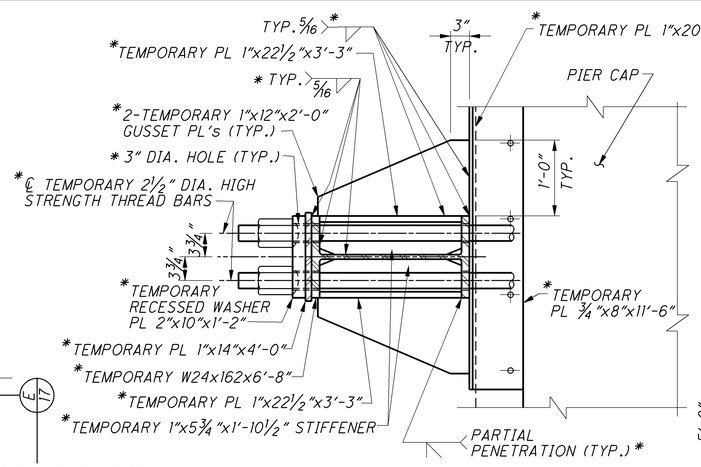
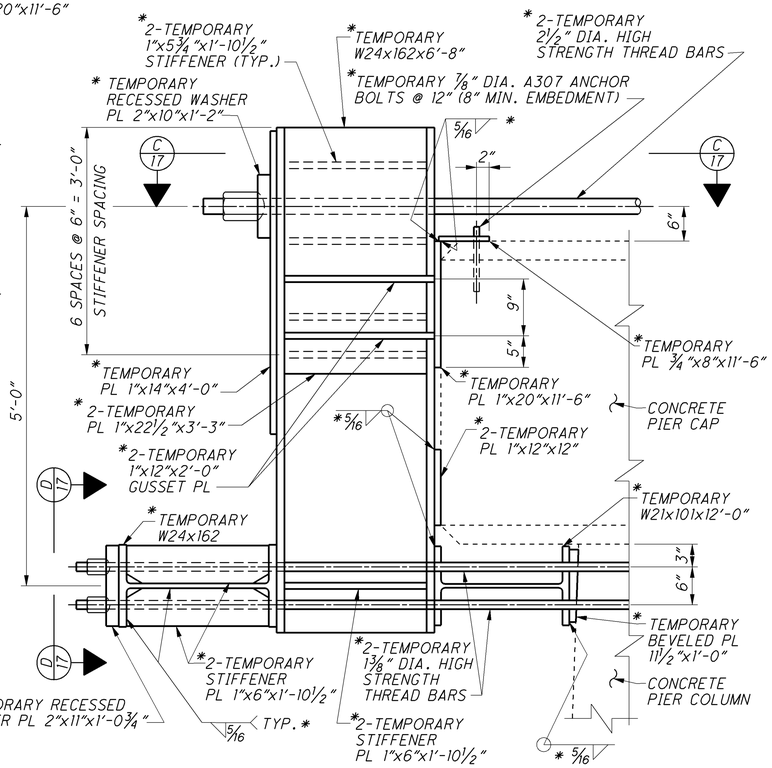


SECTION A-A

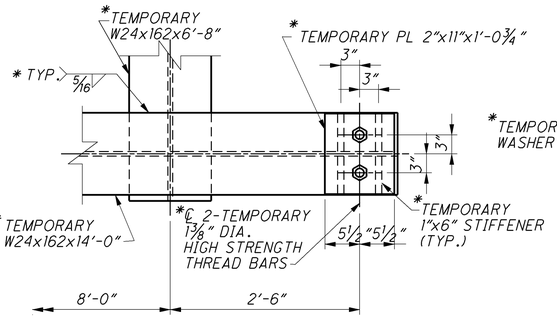


SECTION C-C

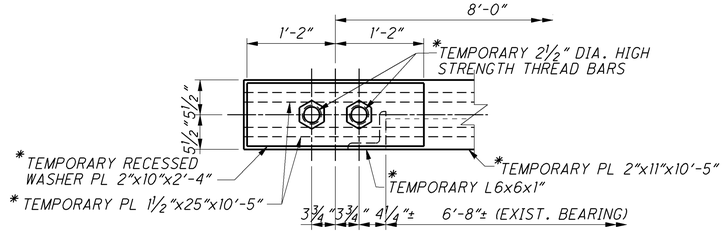


SIDE JACKING ASSEMBLY

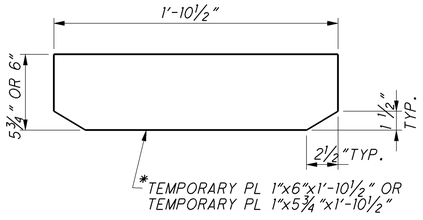
(ELEVATION)



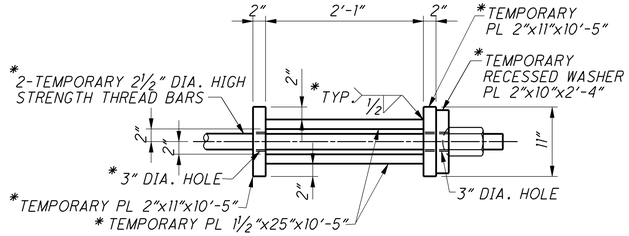
VIEW D-D



VIEW E-E

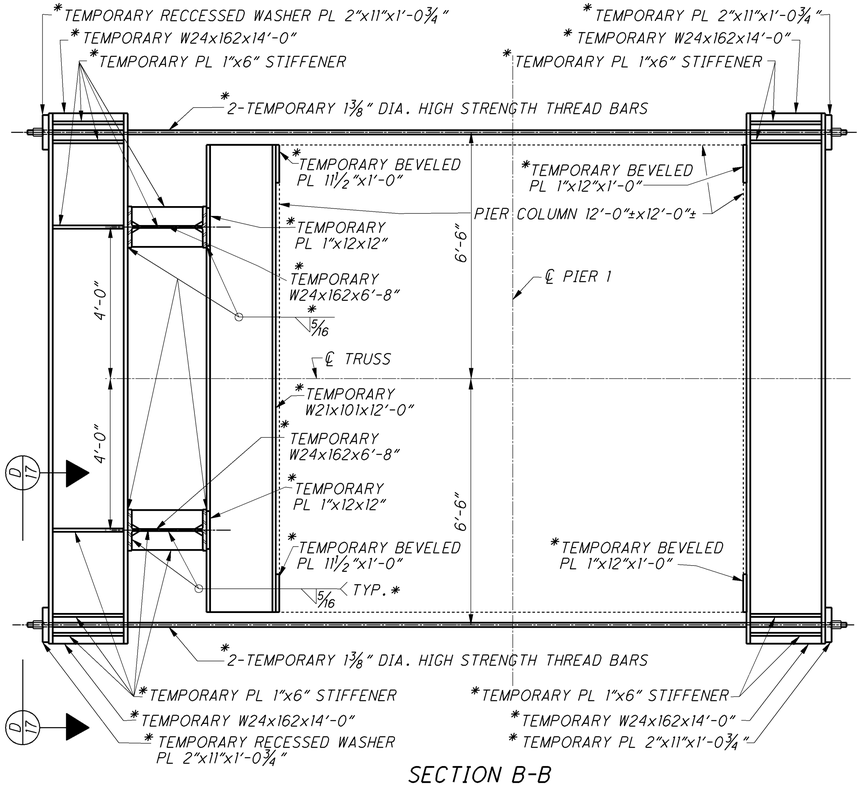


STIFFENER DETAIL



ELEVATION
TOP JACKING ASSEMBLY

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.



SECTION B-B

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

JACKING ASSEMBLIES: FOR LOCATIONS OF JACKING ASSEMBLIES SEE SHEET 16/31.

SECTIONS A-A AND B-B: FOR LOCATIONS SEE SHEET 16/31.

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PIER 1 HORIZONTAL JACKING DETAILS
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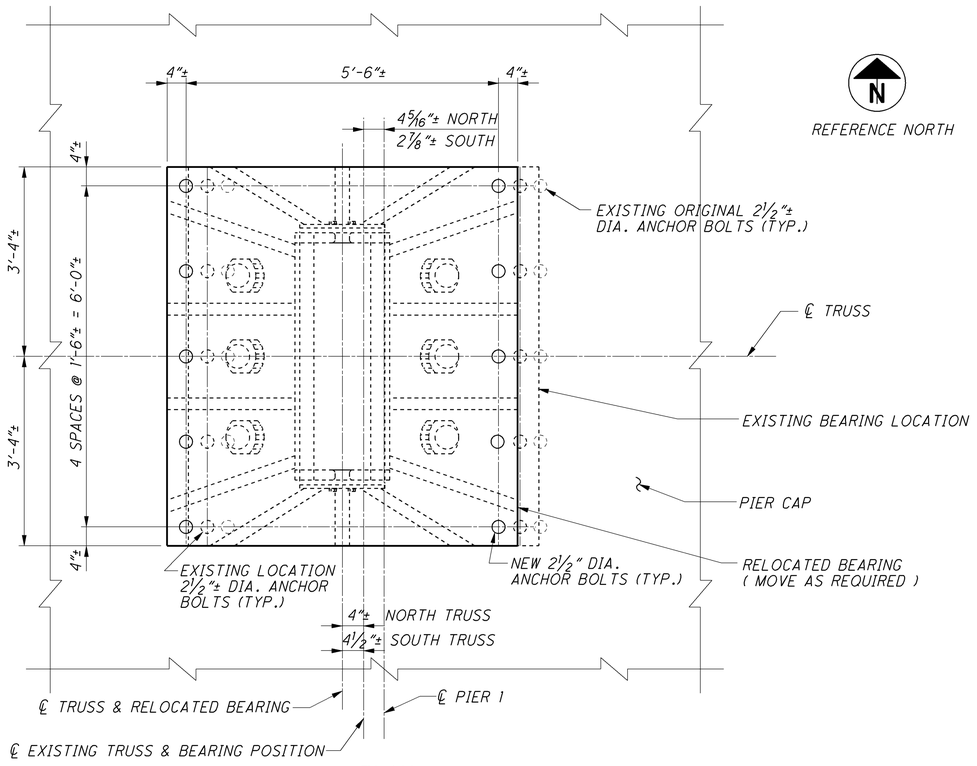
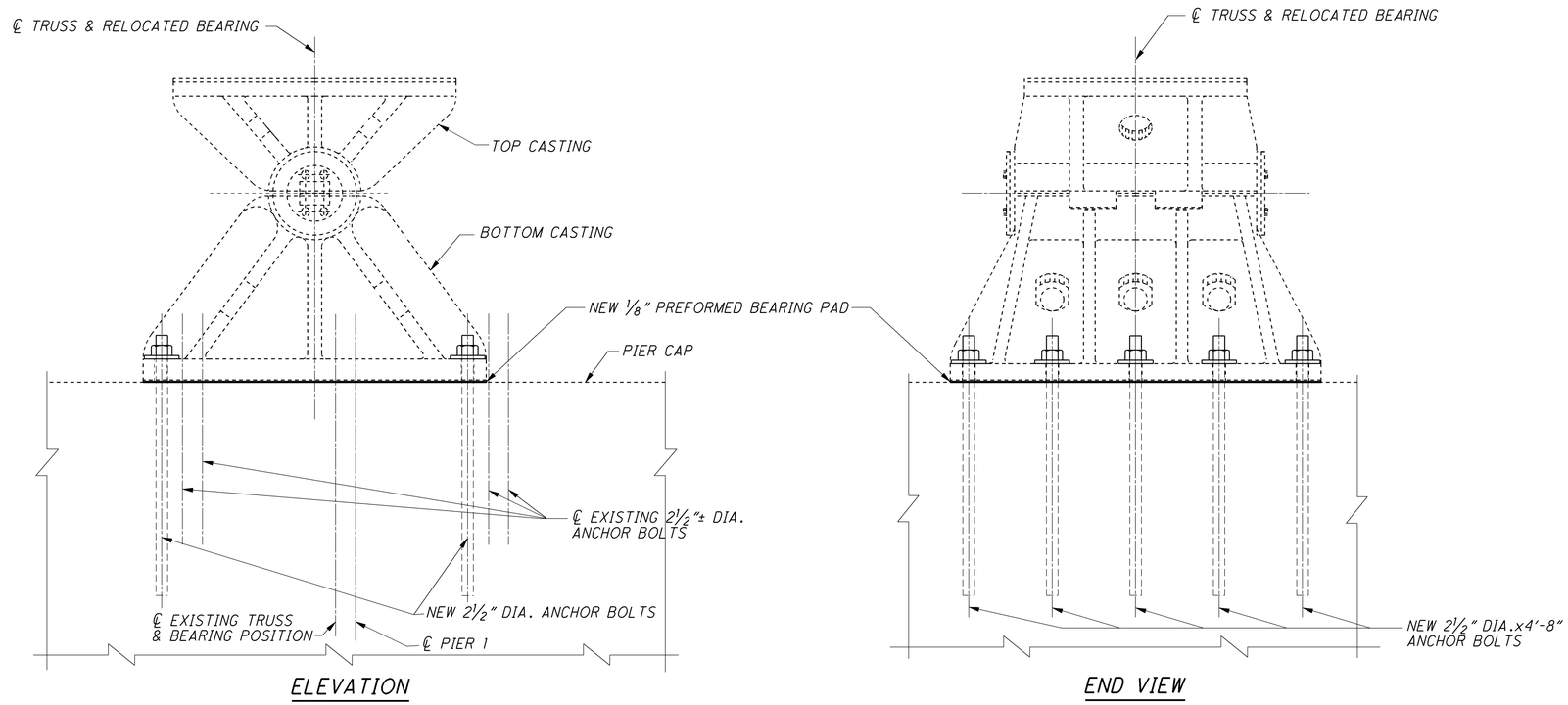


PLAN



ELEVATION

END VIEW

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

PIER 1 ANCHOR DETAILS: SEE SHEET 19/31.

PIER 1 TRUSS BEARINGS: FOR LOCATIONS SEE SHEET 16/31.

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PIER 1 TRUSS BEARINGS
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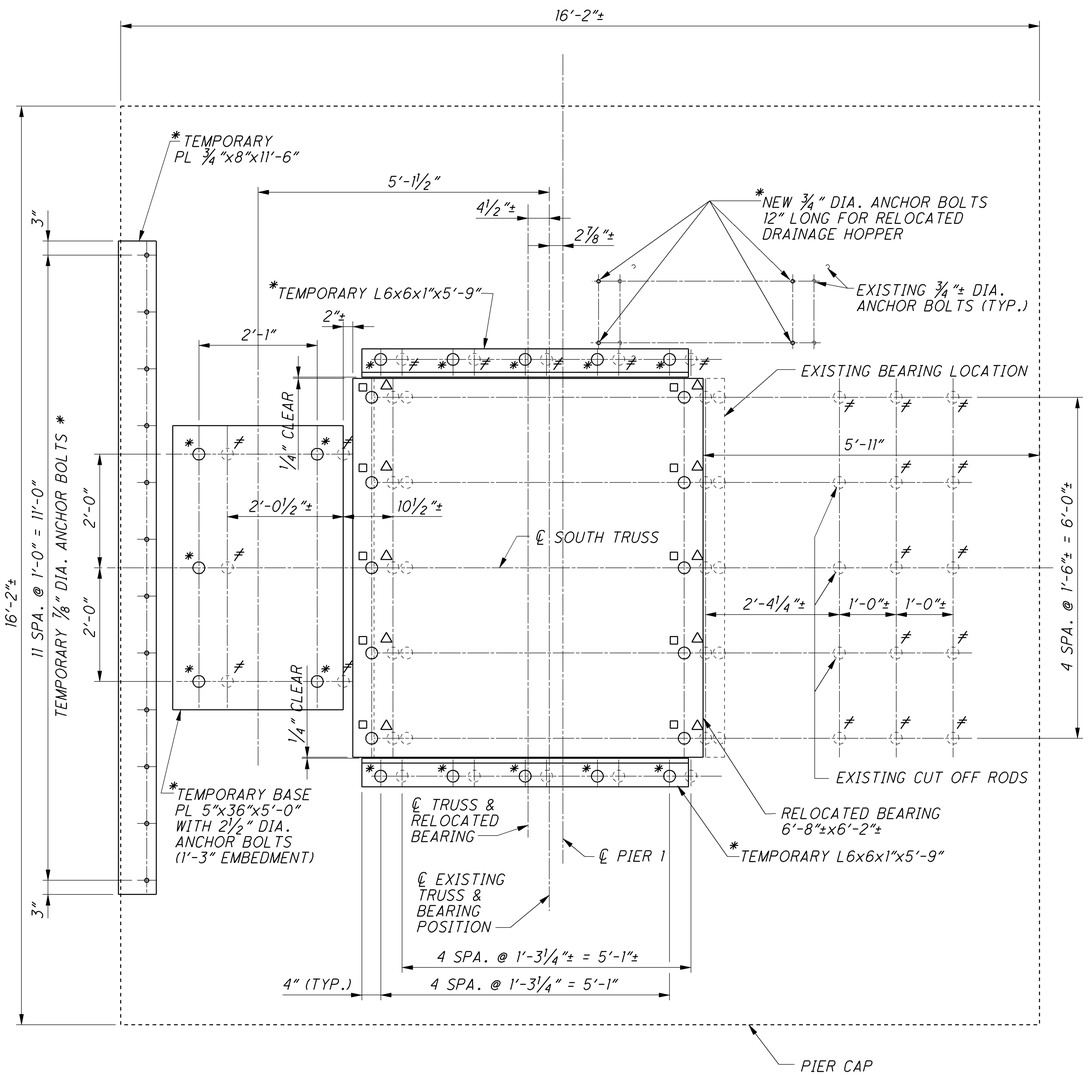
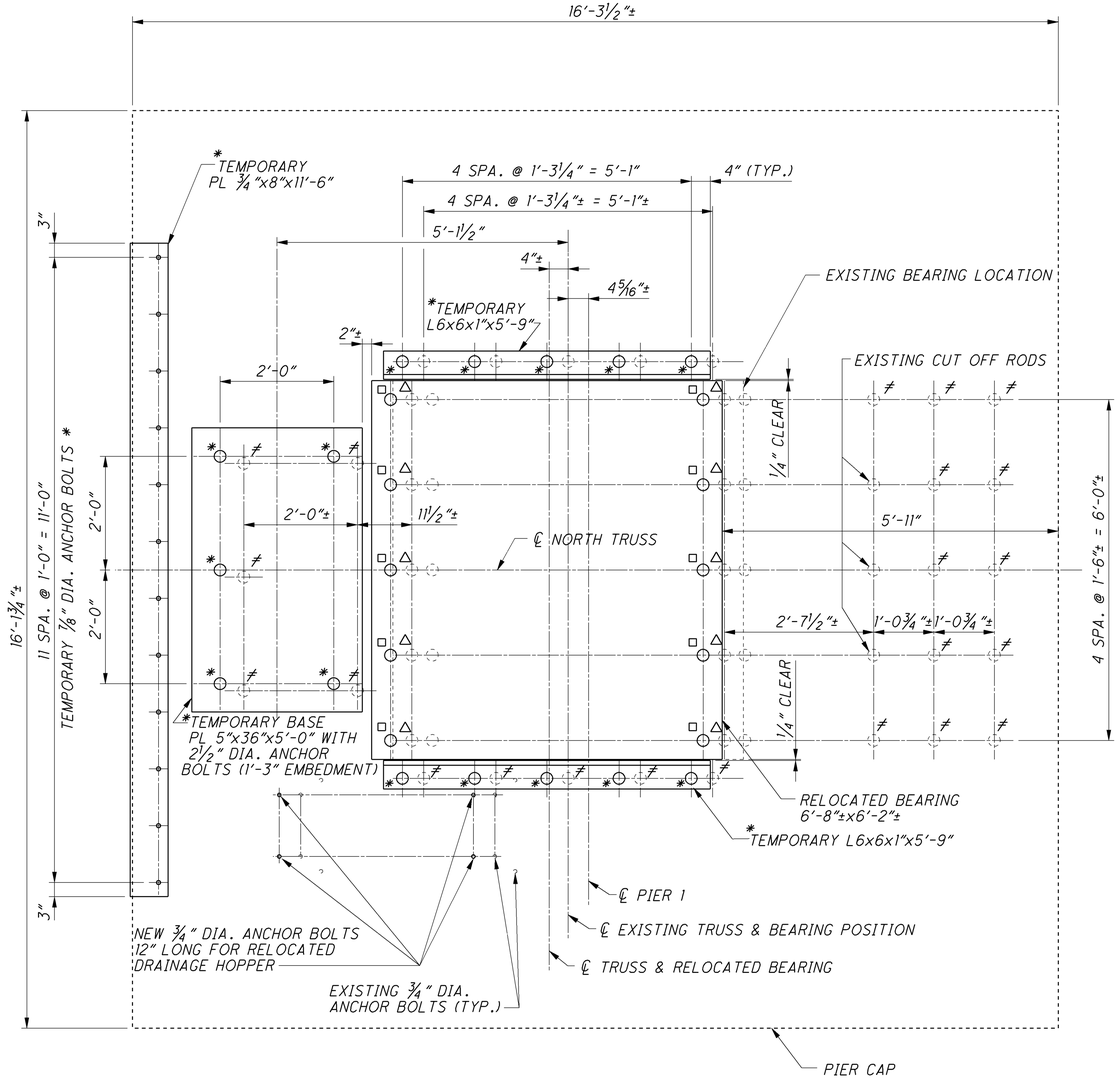
REFERENCE NORTH



PIER 1 - SOUTH TRUSS PLAN



PIER 1 - NORTH TRUSS PLAN

□ INDICATES NEW 2½" DIAMETER ANCHOR BOLTS TO BE INCLUDED WITH ITEM 513-STRUCTURAL STEEL, MISC.: SWEDGE ANCHOR BOLTS (2½" DIAMETER x 4'-8") WITH NUT AND WASHER.

≠ INDICATES EXISTING ANCHOR RODS FROM PREVIOUS HORIZONTAL JACKING TO BE CUT FLUSH WITH TOP OF PIER CAP AND INCLUDED WITH ITEM 513 - STRUCTURAL STEEL, MISC.: CUT EXISTING ANCHOR RODS FOR PAYMENT.

* INCLUDED WITH ITEM 516-JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

△ EXISTING BEARING ANCHOR BOLTS TO BE CUT FLUSH WITH THE PIER 1 CAP. INCLUDED WITH ITEM 516-JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

ANCHOR BOLTS ARE 2½" DIA. UNLESS OTHERWISE NOTED.

TRUSS BEARING DETAILS: SEE SHEET 18/31 .

VERTICAL JACKING: SEE SHEET 14/31 .

HORIZONTAL JACKING: SEE SHEET 16/31 .

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PIER 1 - ANCHOR PLAN
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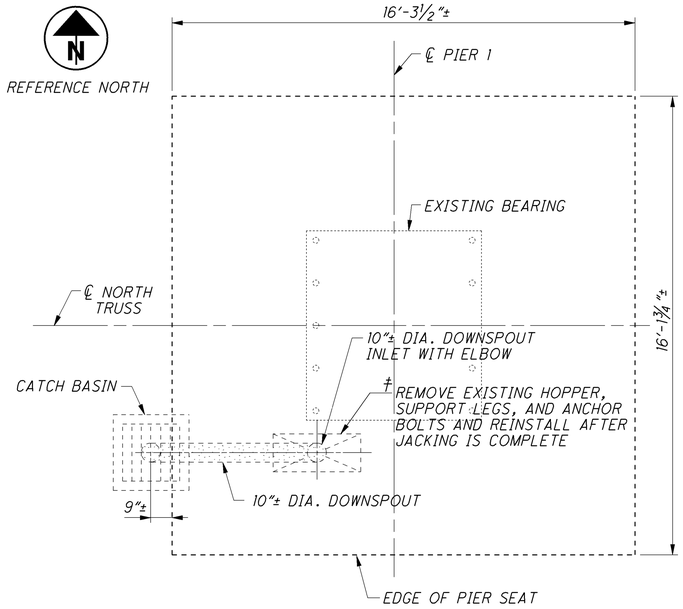
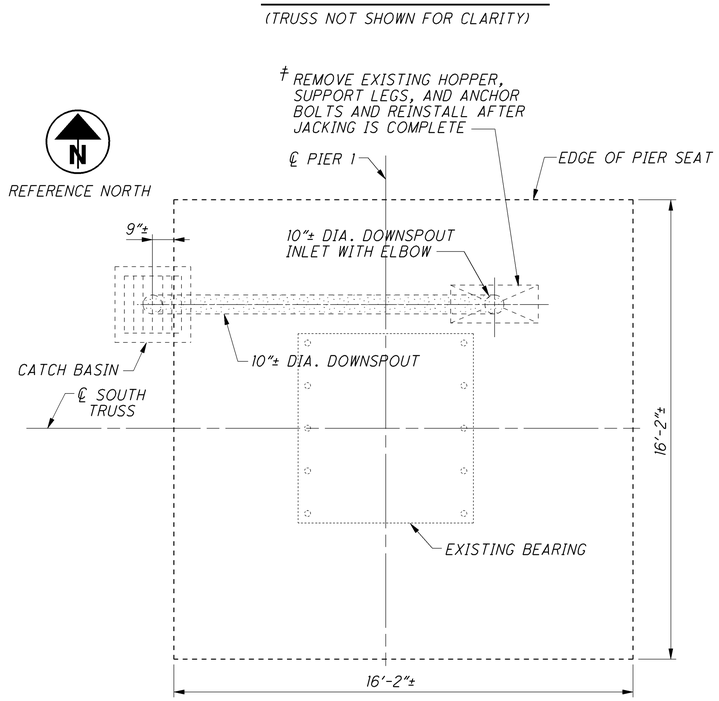


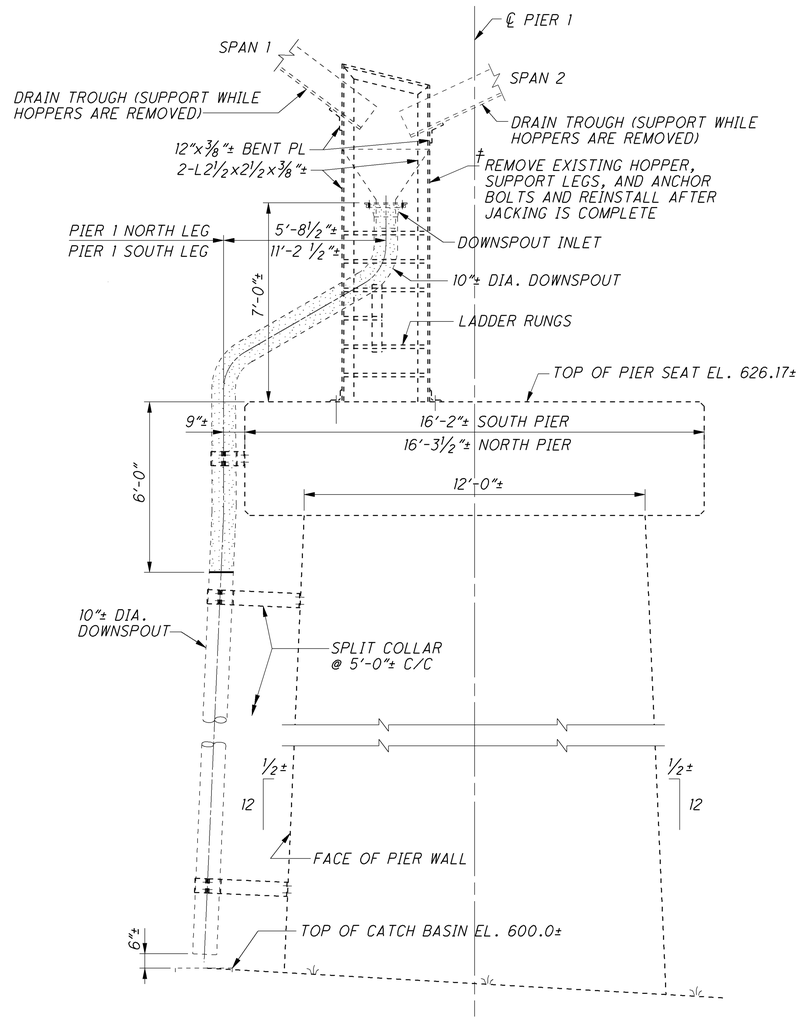
PIER 1 - NORTH LEG PLAN

(TRUSS NOT SHOWN FOR CLARITY)



PIER 1 - SOUTH LEG PLAN

(TRUSS NOT SHOWN FOR CLARITY)



PIER 1 - NORTH LEG ELEVATION (LOOKING NORTH)

(AS SHOWN)

PIER 1 - SOUTH LEG ELEVATION (LOOKING NORTH)

(SIMILAR)
(TRUSS AND BEARING NOT SHOWN FOR CLARITY)

† PAYMENT INCLUDED WITH ITEM 518 - STRUCTURE DRAINAGE, MISC.: RELOCATE PIER 1 HOPPER

LEGEND

- DENOTES AREA TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

DRAIN TROUGHS: PRIOR TO AND AS PART OF SPAN 1 & 2 RELOCATION, THE CONTRACTOR SHALL MAKE SURE THE DRAIN TROUGHS WILL MOVE FREELY WITHIN THE PIER HOPPERS.†

DRAIN HOPPERS: THE CONTRACTOR SHALL REINSTALL THE REUSED DRAINAGE HOPPERS IN THE SAME RELATIVE POSITION WITH THE EXISTING TRUSS DRAIN TROUGH AFTER THE STRUCTURE HAS BEEN MOVED AND RESET.†

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PIER 1 DRAINAGE REMOVAL DETAILS

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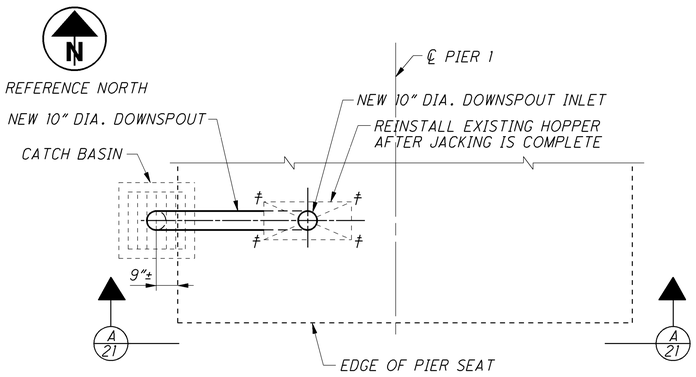
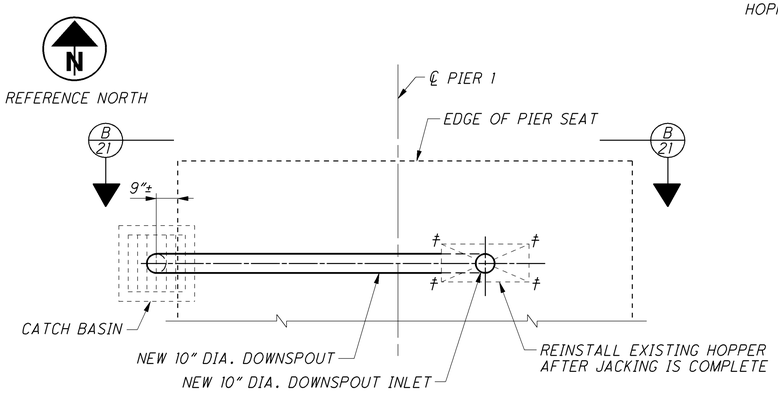


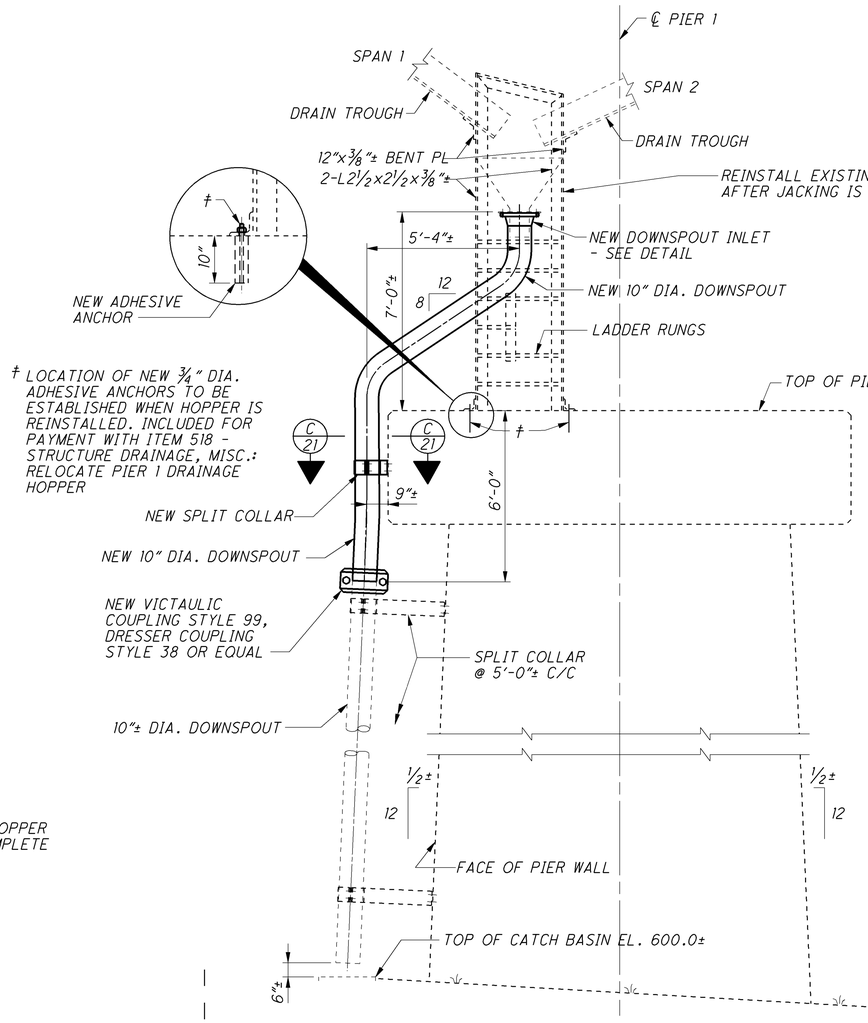
PIER 1 - NORTH LEG PLAN

(TRUSS AND BEARING NOT SHOWN FOR CLARITY)



PIER 1 - SOUTH LEG PLAN

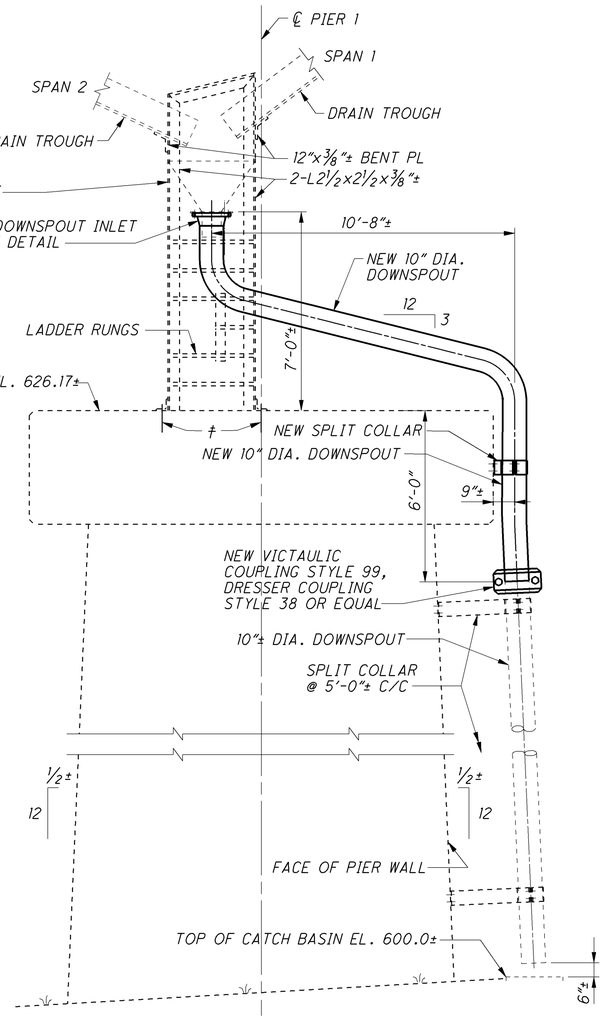
(TRUSS AND BEARING NOT SHOWN FOR CLARITY)



PIER 1 - NORTH LEG ELEVATION (LOOKING NORTH)

VIEW A-A

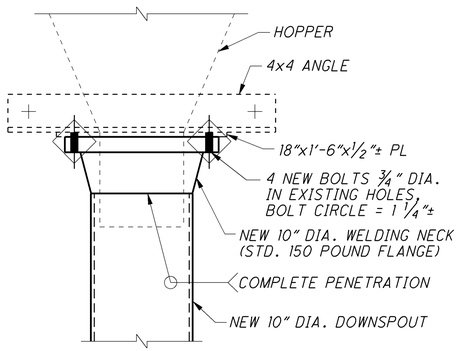
(TRUSS AND BEARING NOT SHOWN FOR CLARITY)



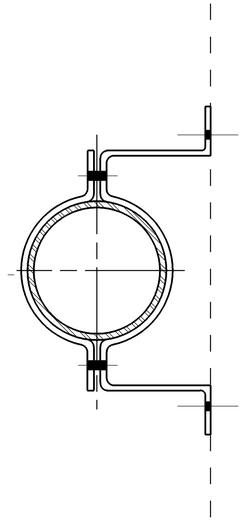
PIER 1 - SOUTH LEG ELEVATION (LOOKING SOUTH)

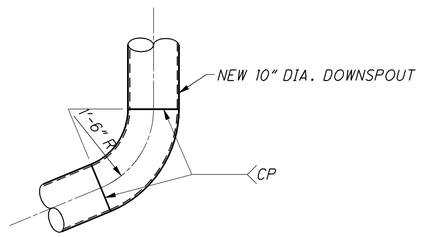
VIEW B-B

(TRUSS AND BEARING NOT SHOWN FOR CLARITY)



DOWNSPOUT INLET DETAIL





DOWNSPOUT BEND DETAIL

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

ADHESIVE FOR ANCHORS IN CONCRETE SHALL BE 705.20 NON-SHRINK, NON-METALLIC GROUT USING EPOXY RESIN.

BOLT LEGEND: SEE SHEET 6 / 31 .

CP - COMPLETE PENETRATION WELD.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
BLN		1809393	

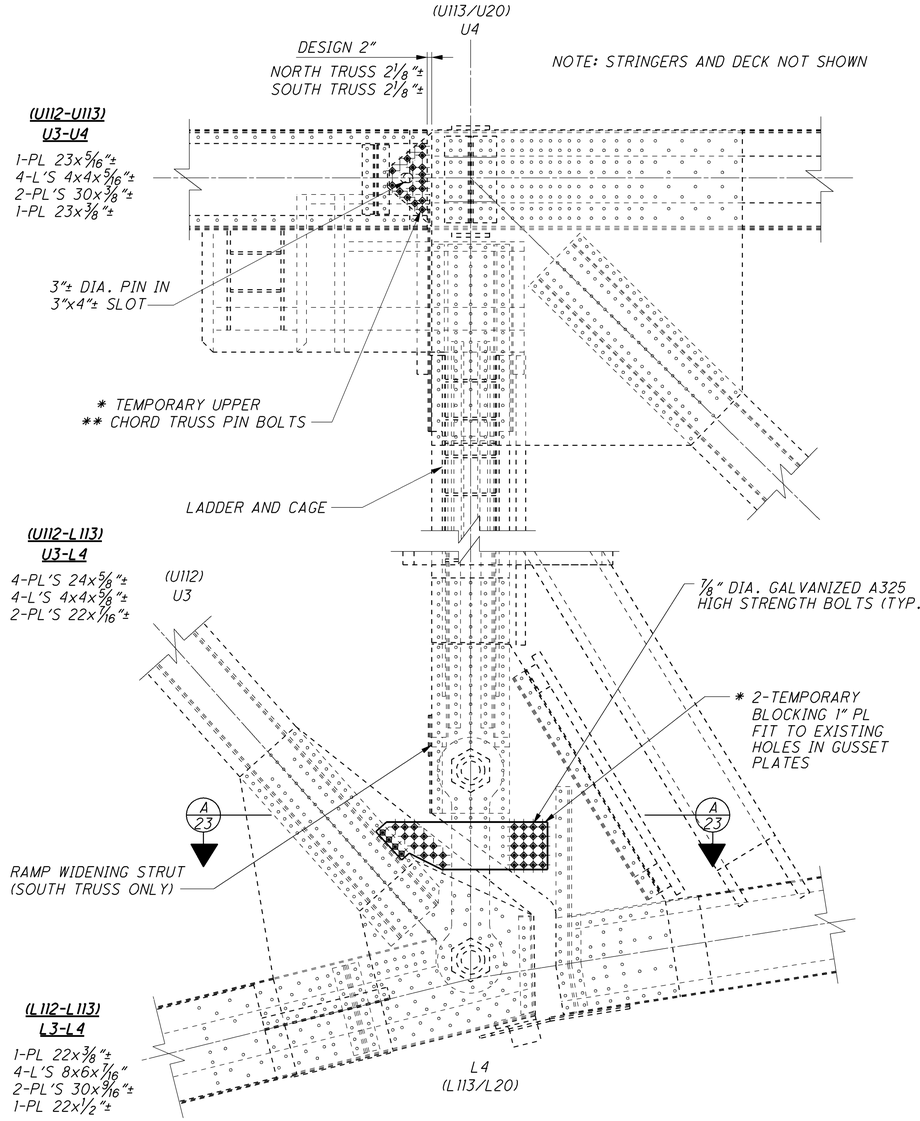
PIER 1 DRAINAGE DETAILS

BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24

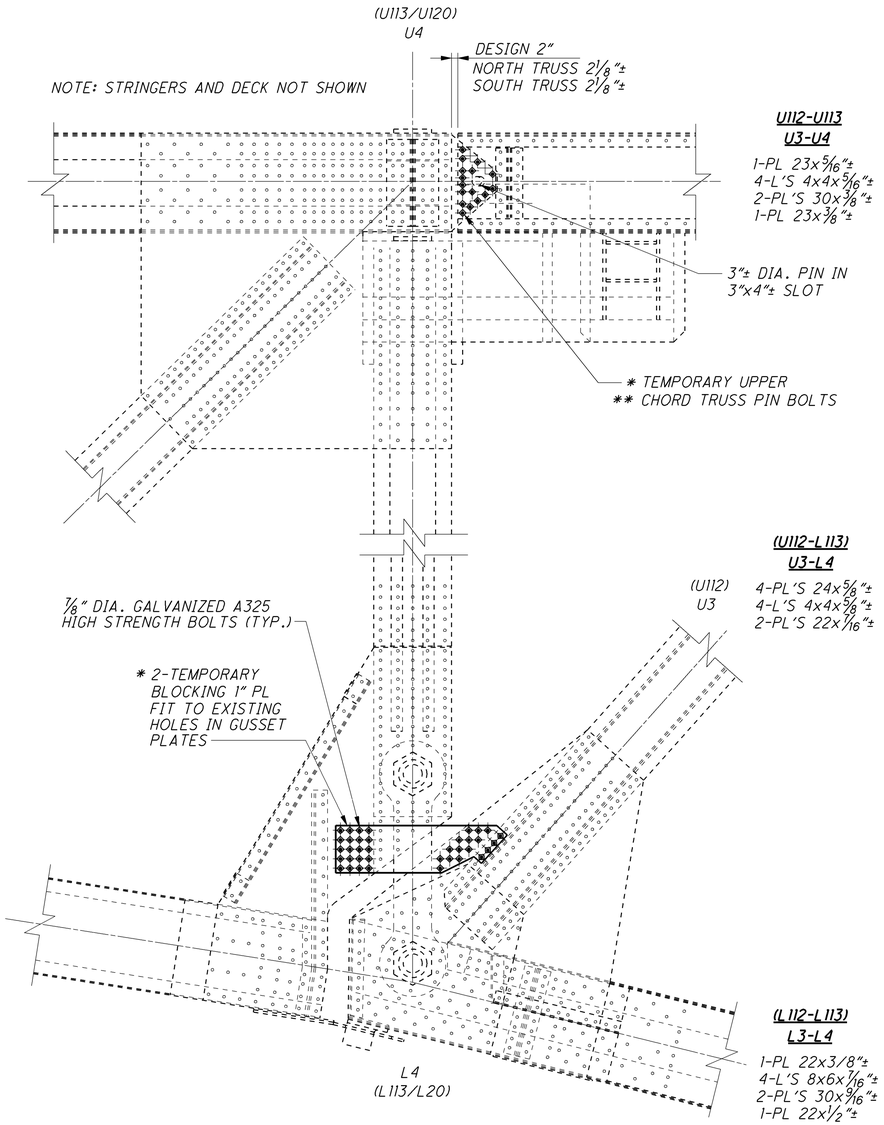
PID No. 82072

090_2524CSD012.DGN 02/11/09 KH,SCB,RB,TWH



TRUSS DEFLECTION JOINT SOUTH TRUSS SPAN 2 (LOOKING NORTH) (AS SHOWN)

TRUSS DEFLECTION JOINT NORTH TRUSS SPAN 2 (SIMILAR)



TRUSS DEFLECTION JOINT SOUTH TRUSS SPAN 2 (LOOKING SOUTH) (AS SHOWN)

TRUSS DEFLECTION JOINT NORTH TRUSS SPAN 2 (SIMILAR)

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

** THE EXISTING BOLT HOLES IN U3-U4 AND U4-U5 DO NOT LINE UP. REAM THE HOLES IN U3-U4 TO PROVIDE BOLT HOLES THAT COINCIDE IN ORDER TO INSTALL THE TEMPORARY BOLTS. INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

BOLT LEGEND: SEE SHEET 6/31.

TRUSS DEFLECTION JOINT TEMPORARY BLOCKING: SEE SHEET 23/31.

090_1542CSD005.DGN 2/11/09 JLS,SAM,RB,SCB,TWH,KH

RICHLAND ENGINEERING LIMITED
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MANSFIELD, OHIO 44902

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
BLN		1809393	

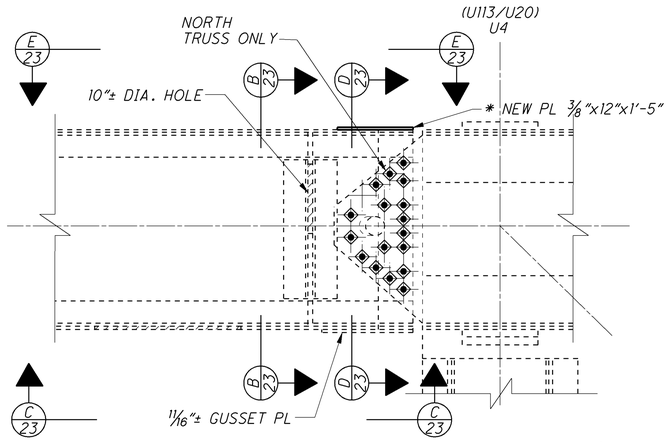
TRUSS DEFLECTION JOINT ELEVATION

BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

22 / 31

29
38

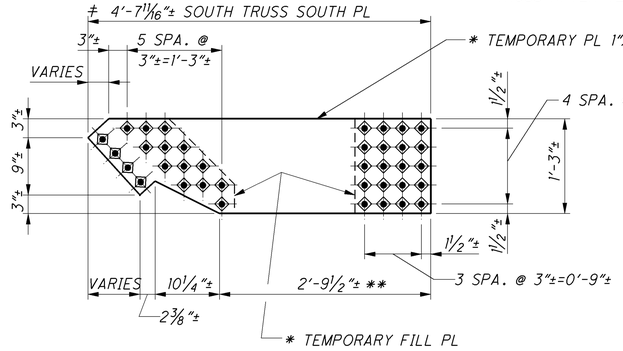


TEMPORARY UPPER CHORD TRUSS PIN BOLTING * **

(SOUTH TRUSS - 16 BOLTS PER LOCATION, 2 LOCATIONS REQUIRED
NORTH TRUSS - 17 BOLTS PER LOCATION, 2 LOCATIONS REQUIRED)

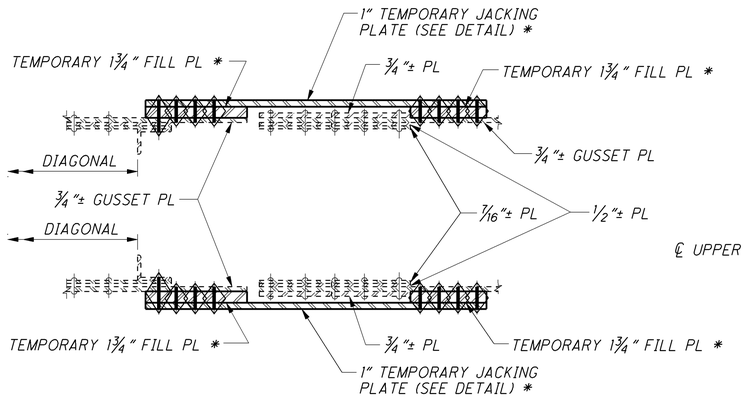
≠ 4'-5 3/4"± NORTH TRUSS SOUTH PL
≠ 4'-5 5/8"± NORTH TRUSS NORTH PL
≠ 4'-7"± SOUTH TRUSS NORTH PL
≠ 4'-7 11/16"± SOUTH TRUSS SOUTH PL

≠ THESE DIMENSIONS ARE APPROXIMATE. ACTUAL DIMENSIONS MAY VARY DEPENDING UPON LOCATION OF THE TRUSS AFTER VERTICAL JACKING.

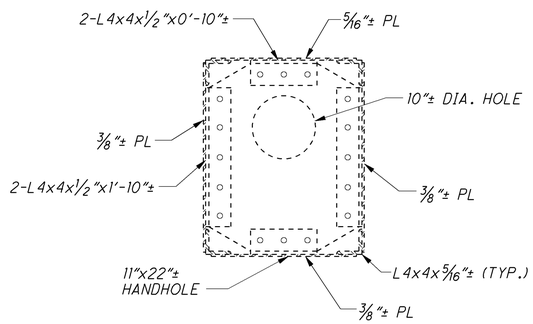


TEMPORARY JACKING PLATE DETAIL

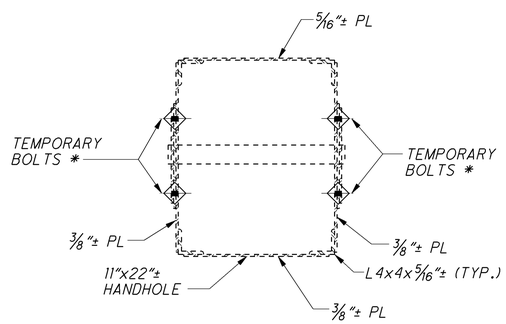
(4 REQUIRED)



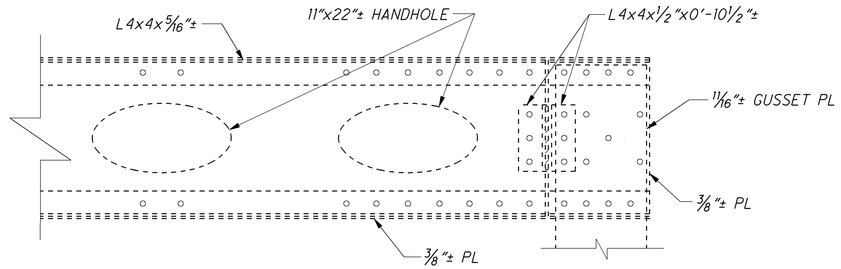
SECTION A-A



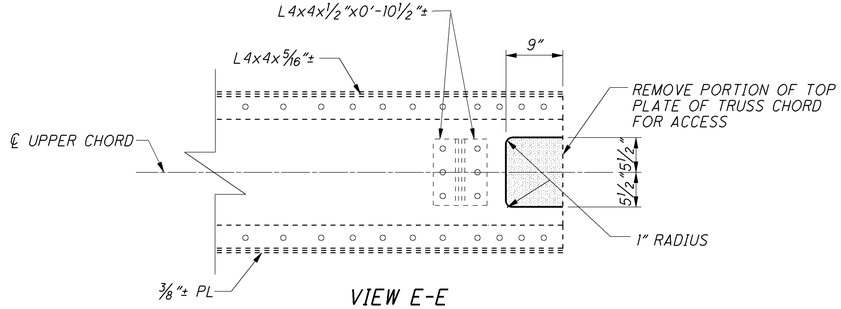
SECTION B-B



SECTION D-D

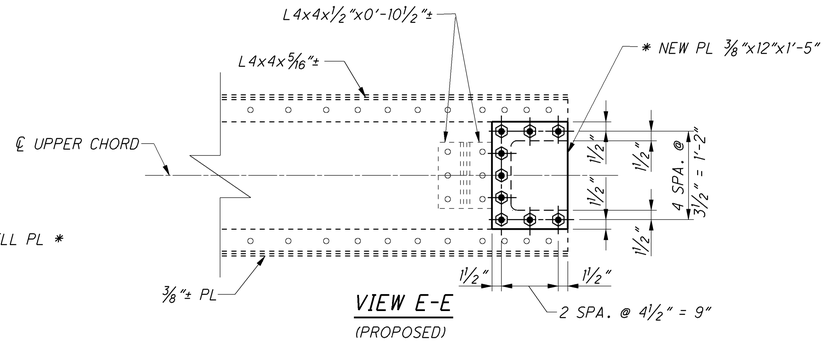


VIEW C-C



VIEW E-E

(EXISTING)



VIEW E-E

(PROPOSED)

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

** THE EXISTING BOLT HOLES IN U3-U4 AND U4-U5 DO NOT LINE UP. REAM THE HOLES IN U3-U4 TO PROVIDE BOLT HOLES THAT COINCIDE IN ORDER TO INSTALL THE TEMPORARY BOLTS. INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

LEGEND

INDICATES AREA TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

BOLTS SHALL BE 7/8" DIAMETER A325.

TEMPORARY JACKING PLATES AND FILL PLATES SHALL BE REMOVED UPON COMPLETION OF JACKING. REMAINING HOLES IN THE LOWER CHORD ARE TO BE FILLED WITH PERMANENT 7/8" DIA. A325 GALVANIZED BOLTS. PAYMENT FOR REMOVAL OF EXISTING BOLTS, FIELD DRILLING HOLES IN EXISTING STEEL AND TEMPORARY PLATES, FILLS AND BOLTS SHALL BE INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN. PERMANENT BOLTS ARE TO BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL, MISC.: 7/8" DIAMETER BOLTS.

TEMPORARY UPPER CHORD TRUSS PIN BOLTS SHALL BE REMOVED UPON COMPLETION OF JACKING. PAYMENT SHALL BE INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

BOLT LEGEND: SEE SHEET 6/31.

SECTION A-A: FOR LOCATION SEE SHEET 22/31.

TEMPORARY BLOCKING: FOR LOCATION SEE SHEET 22/31.

RICHLAND ENGINEERING LIMITED
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DESIGNED ALP | DRAWN JLS | REVIEWED DAP | DATE 2/11/09
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TRUSS DEFLECTION JOINT TEMPORARY BLOCKING

BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

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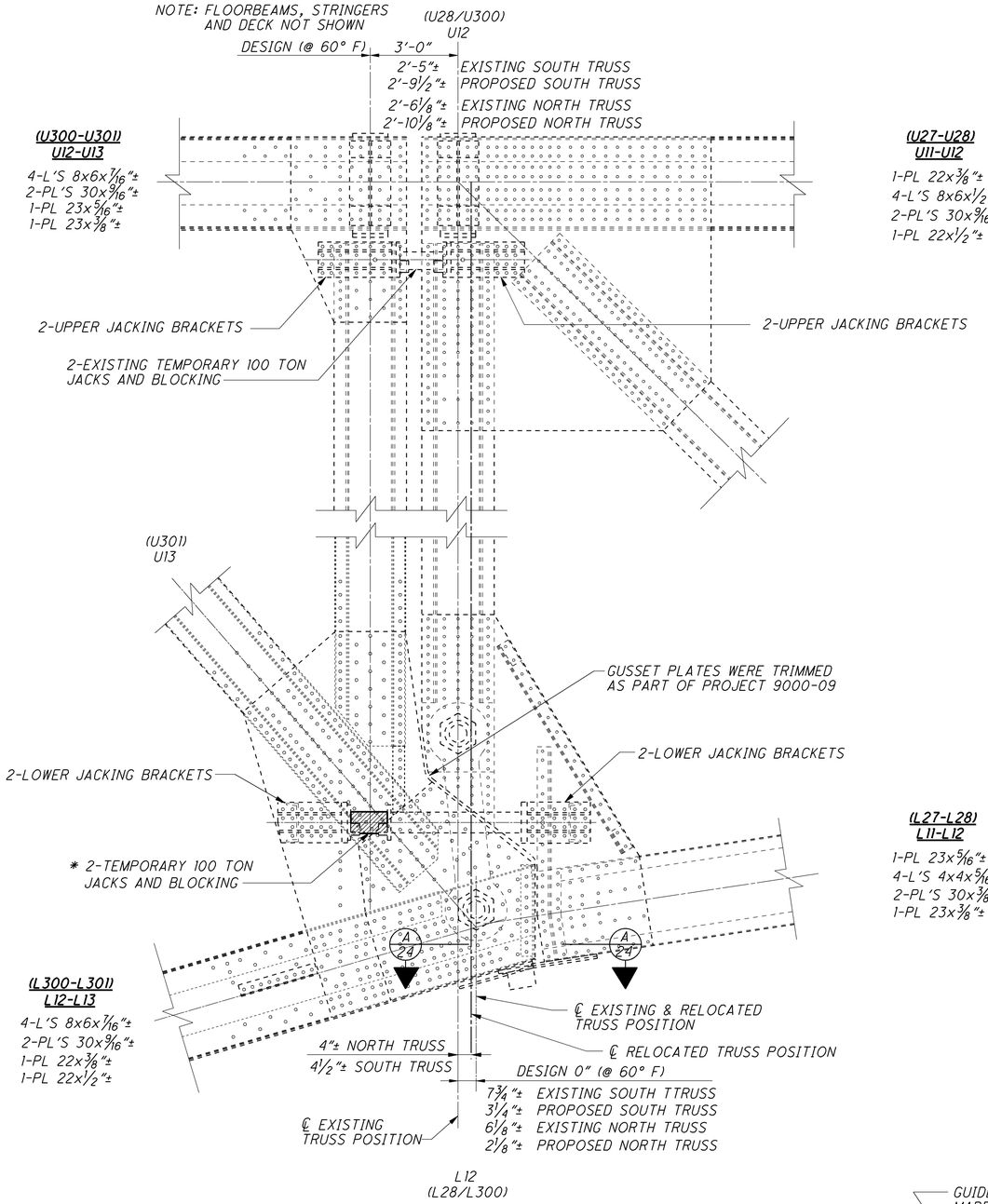
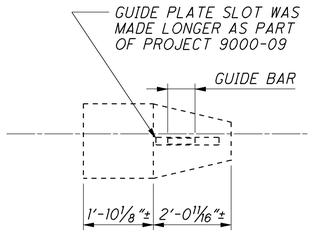
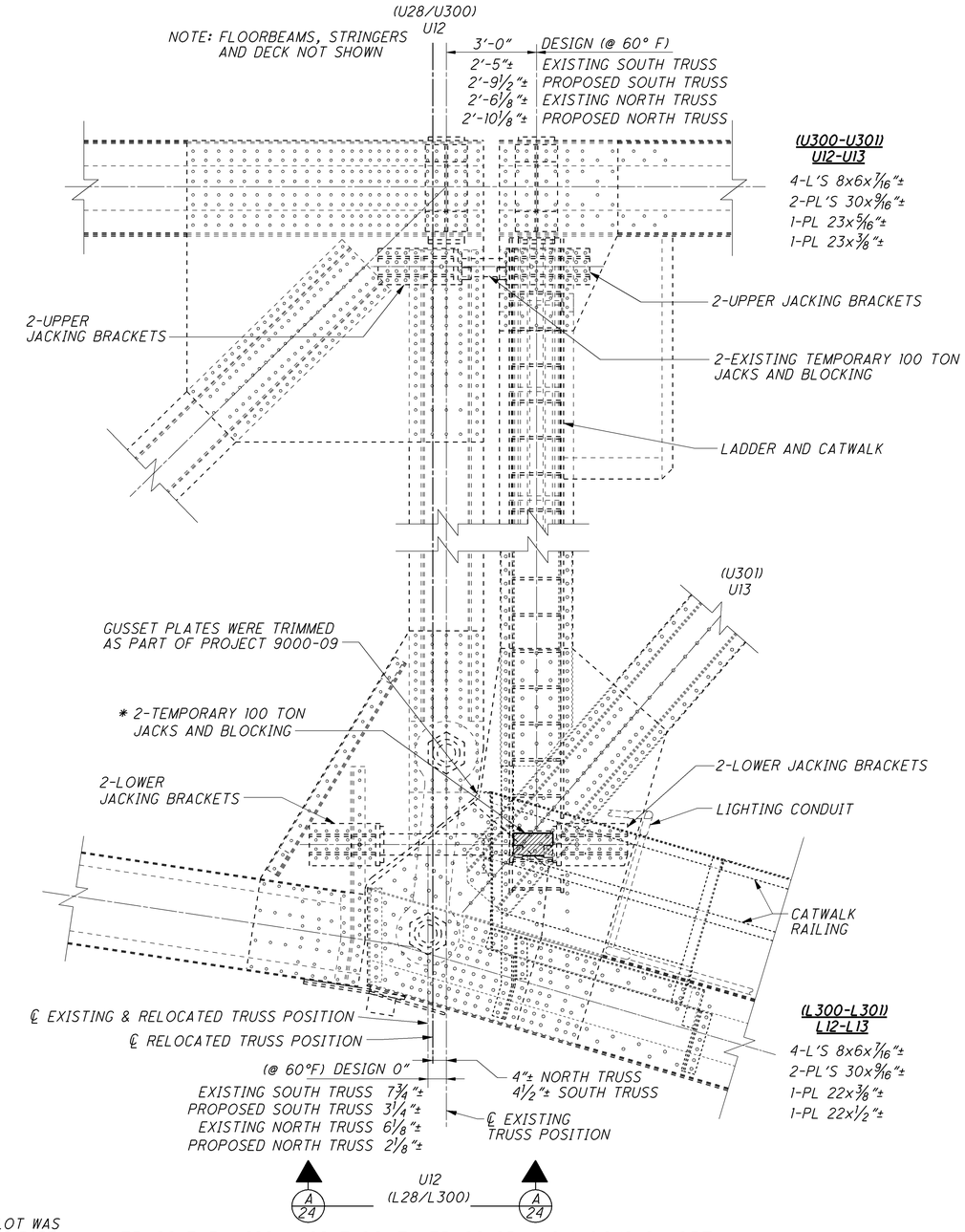
090_1524CSD009.DGN 2/11/09 SAM,RB,SCB,JLS,TWH,SCB



TRUSS EXPANSION JOINT SOUTH TRUSS SPAN 2 (LOOKING SOUTH)
TRUSS EXPANSION JOINT NORTH TRUSS SPAN 2 (SIMILAR)



VIEW A-A



TRUSS EXPANSION JOINT SOUTH TRUSS SPAN 2 (LOOKING NORTH)
TRUSS EXPANSION JOINT NORTH TRUSS SPAN 2 (SIMILAR)

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

JACKING DETAILS: SEE SHEET 25/31.

RICHLAND ENGINEERING LIMITED
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TRUSS EXPANSION JOINT ELEVATION
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

24 / 31

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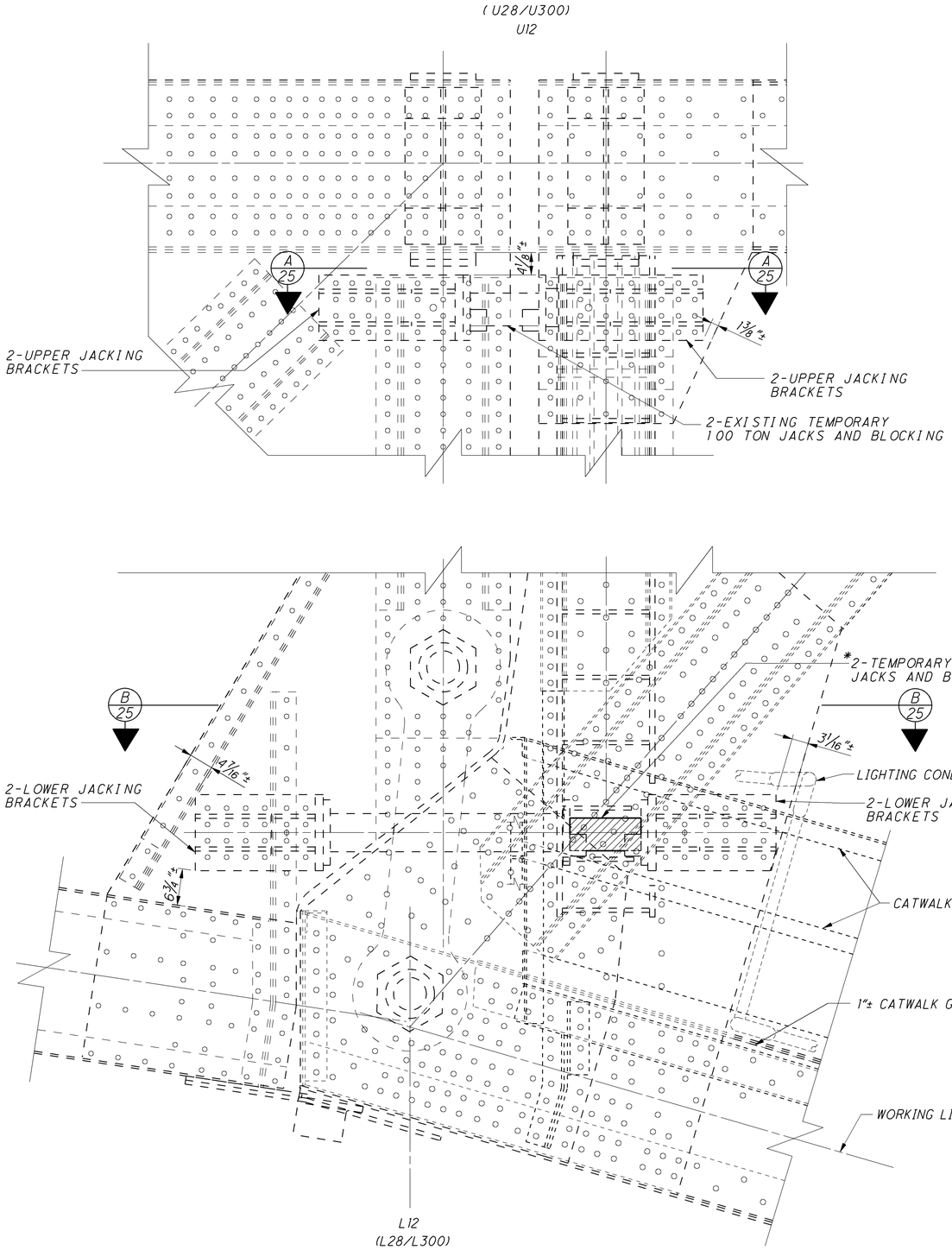
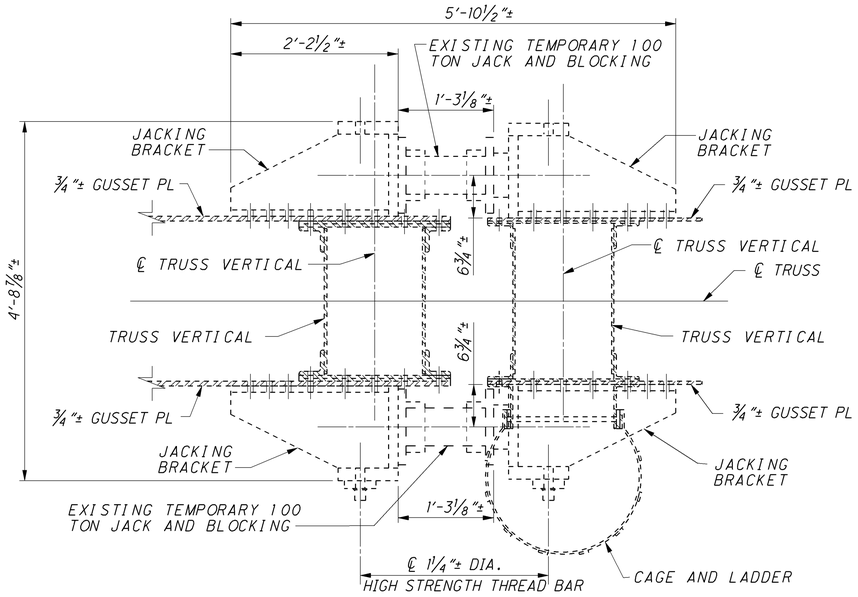
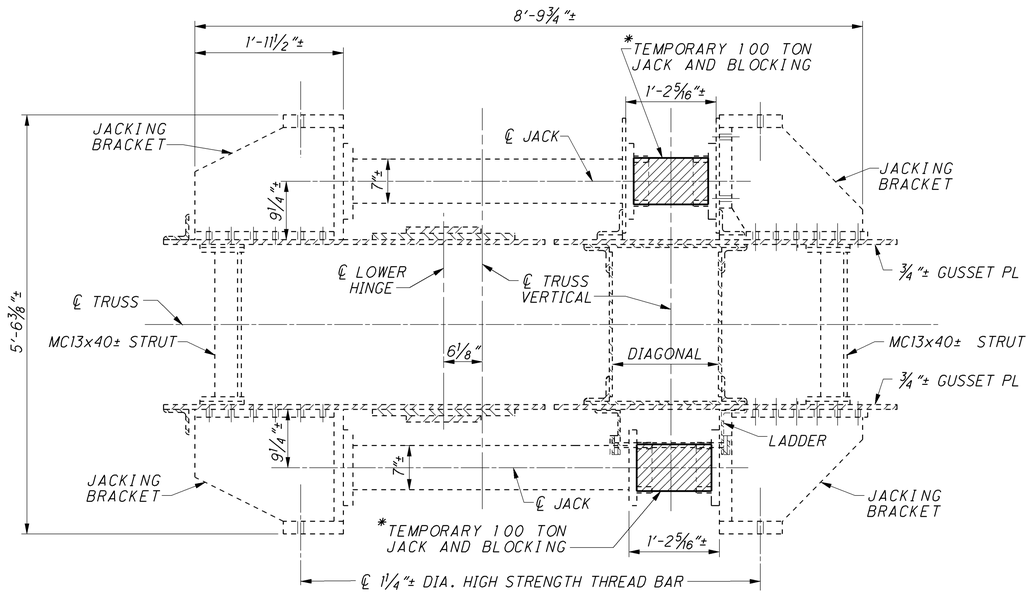
090_1542CSD007.DGN 2/12/09 TWH,SCB,JLS



TRUSS EXPANSION JOINT SOUTH TRUSS SPAN 2 (LOOKING NORTH)
TRUSS EXPANSION JOINT NORTH TRUSS SPAN 2 (SIMILAR)



SECTION A-A



SECTION B-B

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

JACKING SUPPORT LOCATIONS: SEE SHEET 24/31 .

RICHLAND ENGINEERING LIMITED
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DESIGNED ALP | DRAWN TWH | REVIEWED DAP | DATE 2/11/09
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TRUSS EXPANSION JOINT JACKING DETAILS

BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

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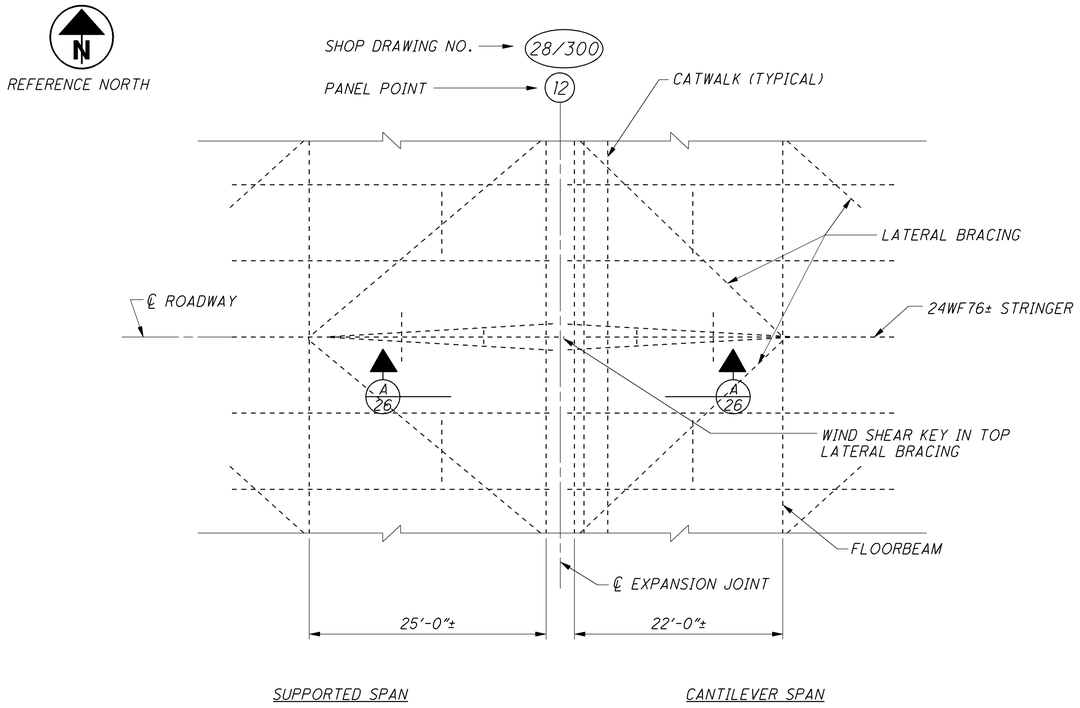
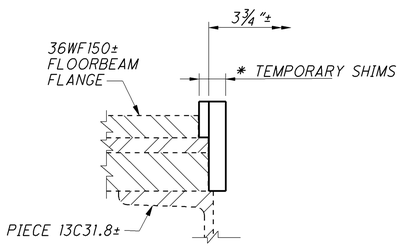
090_1542CSD007B.DGN 2/12/09 RB,TWH,SCB,JLS

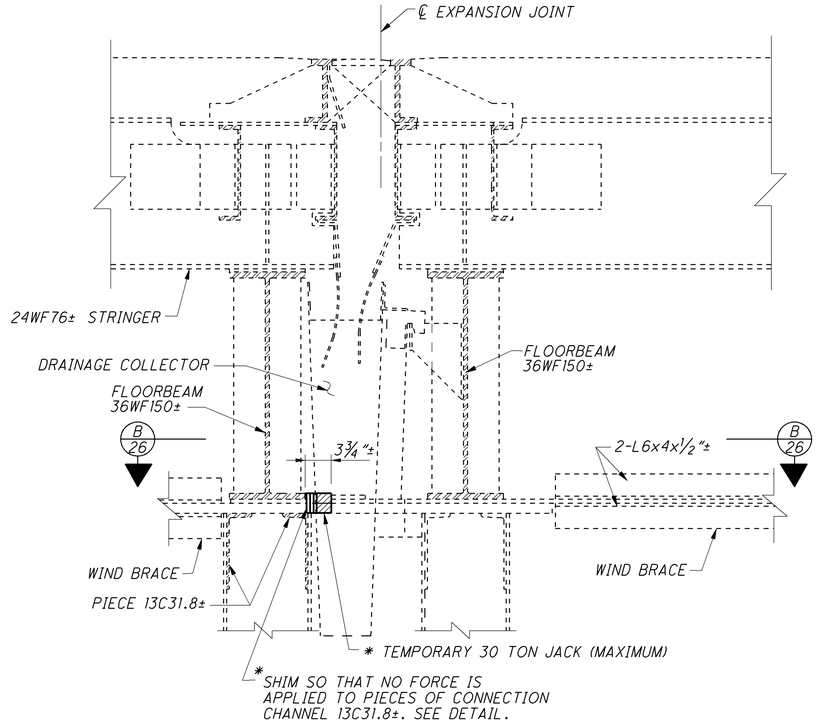


PARTIAL FLOOR SYSTEM FRAMING PLAN & TOP CHORD LATERAL BRACING

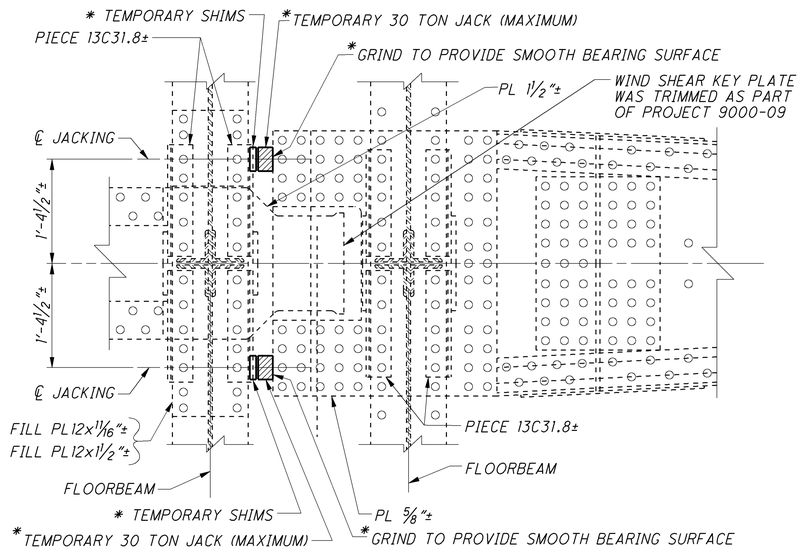
(SPAN 2)



SHIM DETAIL



SECTION A-A



SECTION B-B

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

090_1542CSD008.DGN 2/11/09 SAM,RB,JLS,SCB,SCB

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DESIGNED ALP | DRAWN JLS | REVIEWED DAP | DATE 2/11/09
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TRUSS WIND SHEAR KEY PLAN AND ELEVATION
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

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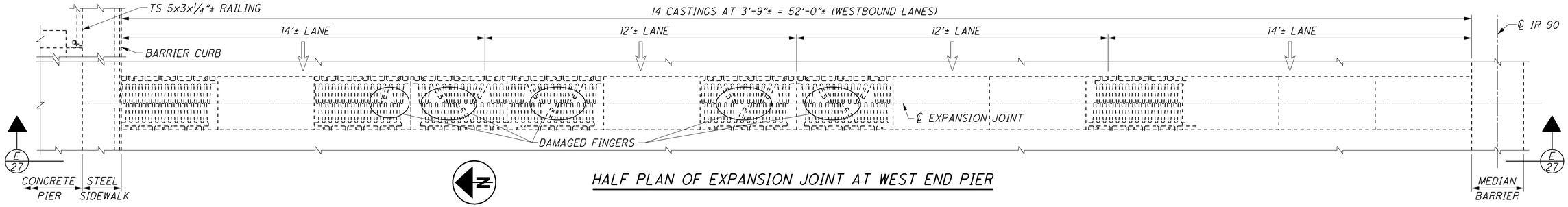
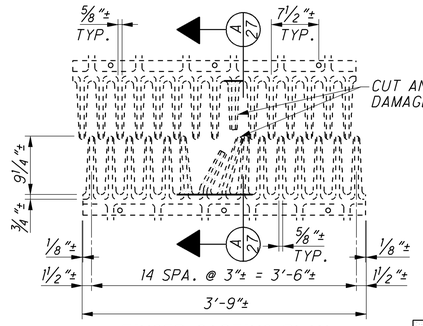
38

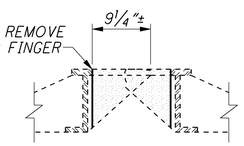


HALF PLAN OF EXPANSION JOINT AT WEST END PIER

REFERENCE NORTH



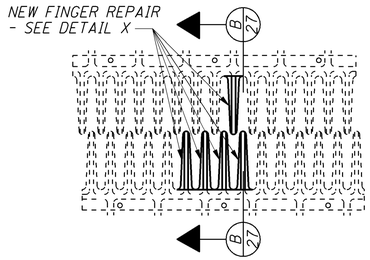
FINGER CASTING PLAN
(REMOVAL)



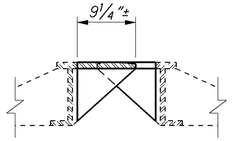
SECTION A-A

LEGEND

▭ - DENOTES AREA TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN



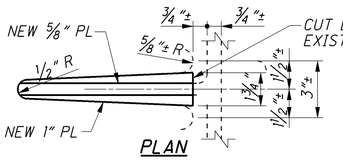
FINGER CASTING PLAN
(NEW)



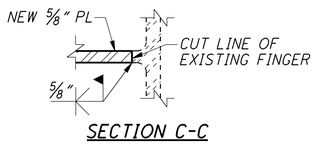
SECTION B-B

WEST END PIER JOINT REPAIR

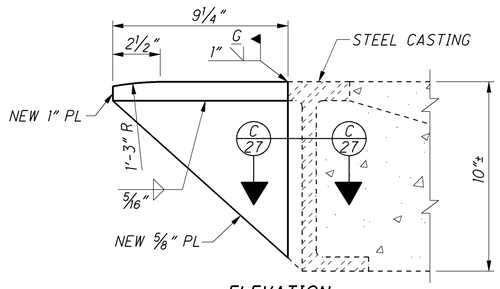
(NEW CASTINGS SAME DIMENSIONS AS EXISTING)



PLAN

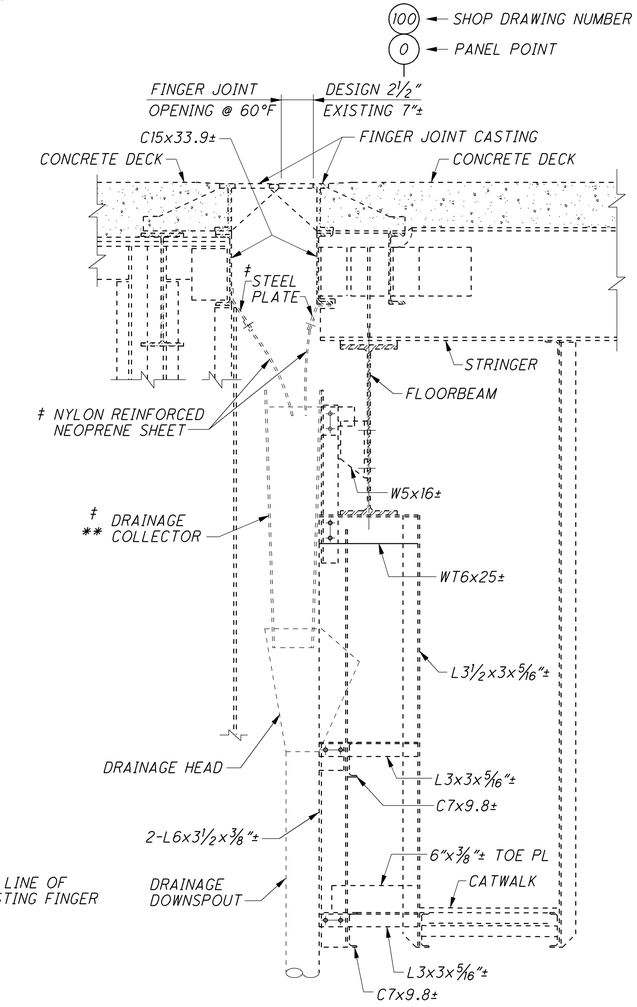


SECTION C-C

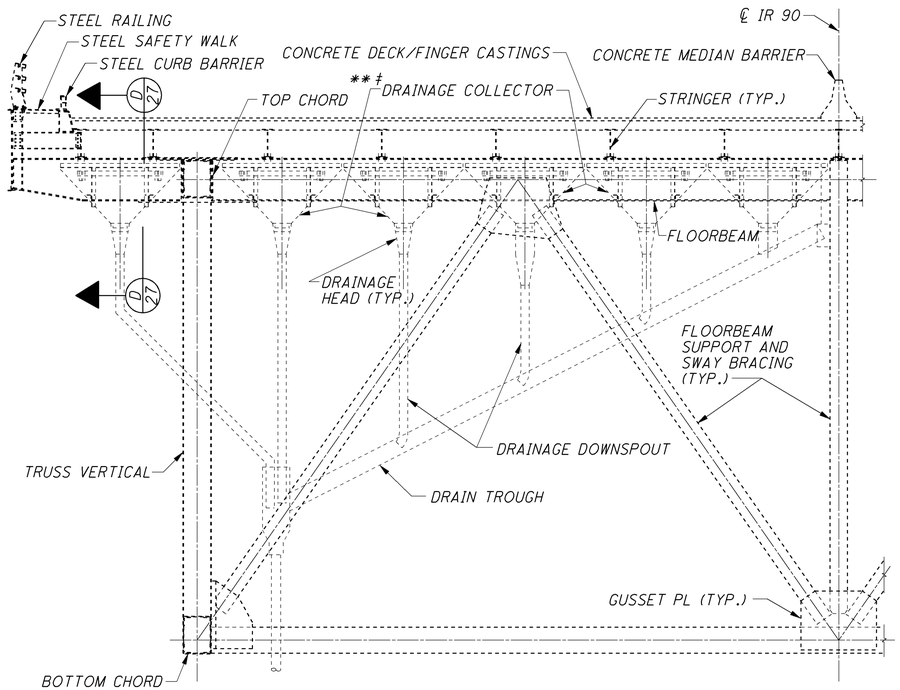


ELEVATION

DETAIL X



SECTION D-D



HALF TYPICAL SECTION AT WEST END PIER

SECTION E-E

‡ CONTRACTOR SHALL REMOVE AND REINSTALL THIS MATERIAL AS NEEDED FOR FINGER REPAIRS. PAYMENT SHALL BE INCLUDED AS INCIDENTAL TO ITEM 516 - STRUCTURAL JOINT OR JOINT SEAL MISC.: EXPANSION JOINT FINGER REPAIR BY WELDING, OR BY HEAT STRAIGHTENING.

** CONTRACTOR SHALL REMOVE AND REINSTALL DRAINAGE COLLECTORS AS NEEDED FOR VERTICAL AND HORIZONTAL JACKING OF STRUCTURE. PAYMENT SHALL BE INCLUDED AS INCIDENTAL TO ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

FINGER REPAIR: THE CONTRACTOR SHALL HEAT STRAIGHTEN OR REPLACE A DAMAGED FINGER ON THE EXPANSION JOINT STEEL CASTING AS DIRECTED BY THE ENGINEER. AS OF JANUARY 2009 A TOTAL OF 27 FINGERS WERE DAMAGED REQUIRING REPAIR BY HEAT STRAIGHTENING AND 5 FINGERS WERE BROKEN REQUIRING REPAIR BY WELDING. A CONTINGENCY QUANTITY FOR ADDITIONAL DAMAGE REPAIR HAS BEEN INCLUDED IN THE ESTIMATED QUANTITIES TO BE USED AT THE DIRECTION OF THE ENGINEER.

STRUCTURAL JOINT OR JOINT SEAL MISC.: EXPANSION JOINT FINGER REPAIR: SEE GENERAL NOTES SHEET 4/31.

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DESIGNED ALP | DRAWN KH | CHECKED BLN | REVIEWED DAP | DATE 2/11/09 | REVISED | STRUCTURE FILE NUMBER 1809393

DECK EXPANSION JOINT FINGER REPAIR WEST END PIER

BRIDGE NO. CUY-90-1524
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CUY-90-15.24
PID No. 82072

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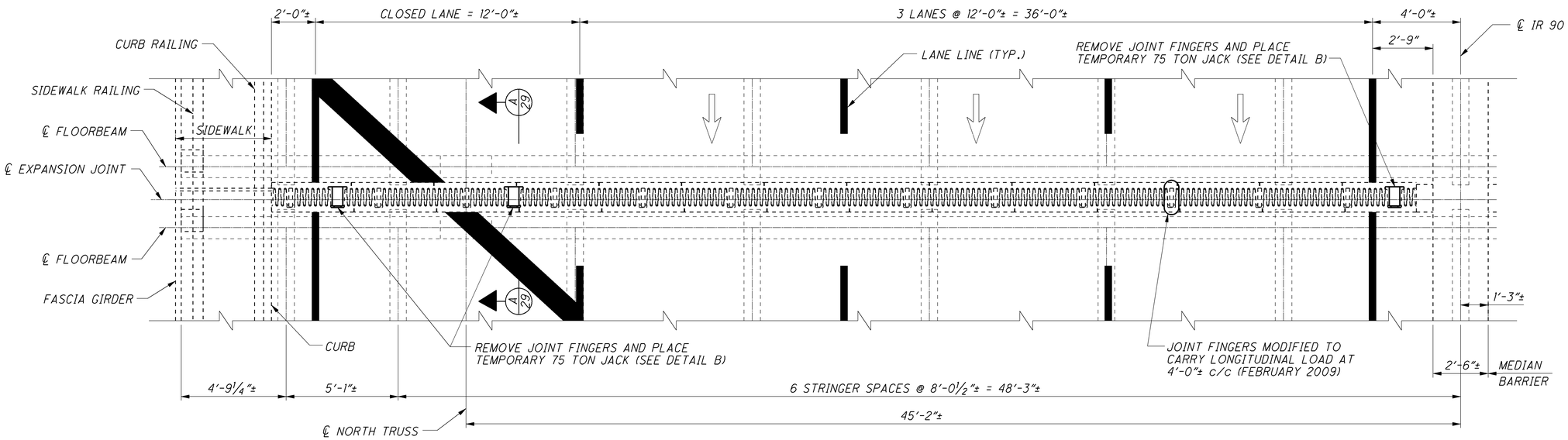
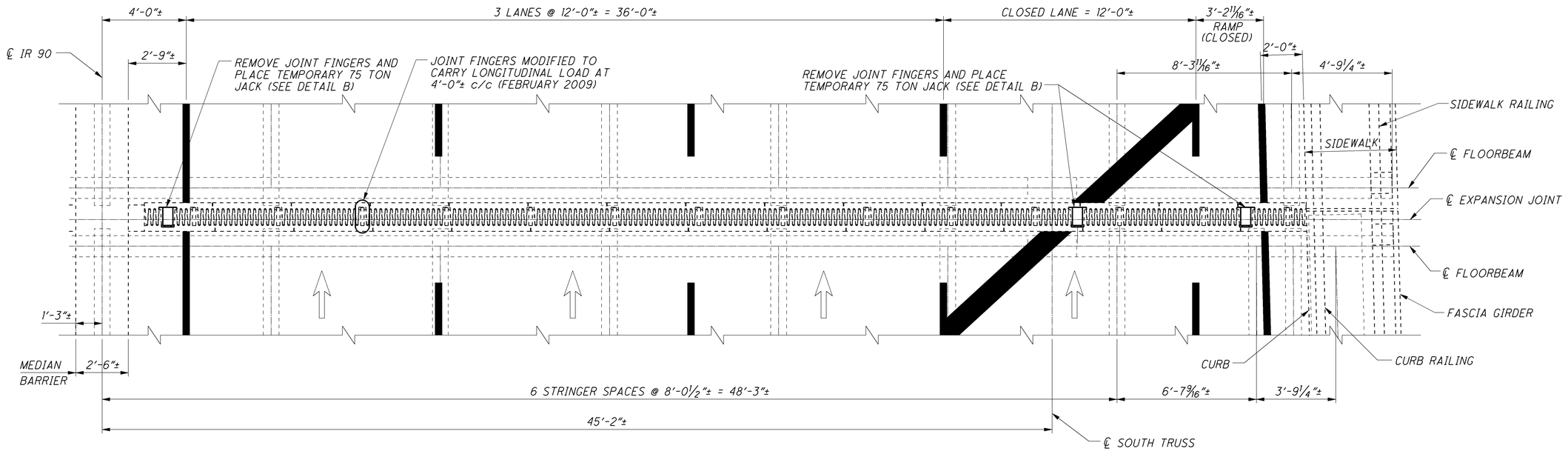
090_2524CEX001.DGN 2/10/09 RB,TWH,SCB,JLS,KH,SCB



PLAN - WESTBOUND LANES



PLAN - EASTBOUND LANES

NOTES

MATERIALS *SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.*

TEMPORARY JACK LOCATION DETAILS: *SEE SHEET* 29/31.

FINGER REPLACEMENT DETAILS: *SEE SHEET* 29/31.

DETAIL B: *SEE SHEET* 29/31.

REFERENCE NORTH

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
ALP	JLS	DAP	2/11/09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BLN		1809393	

DECK EXPANSION JOINT JACKING PLAN - SPAN 2
BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

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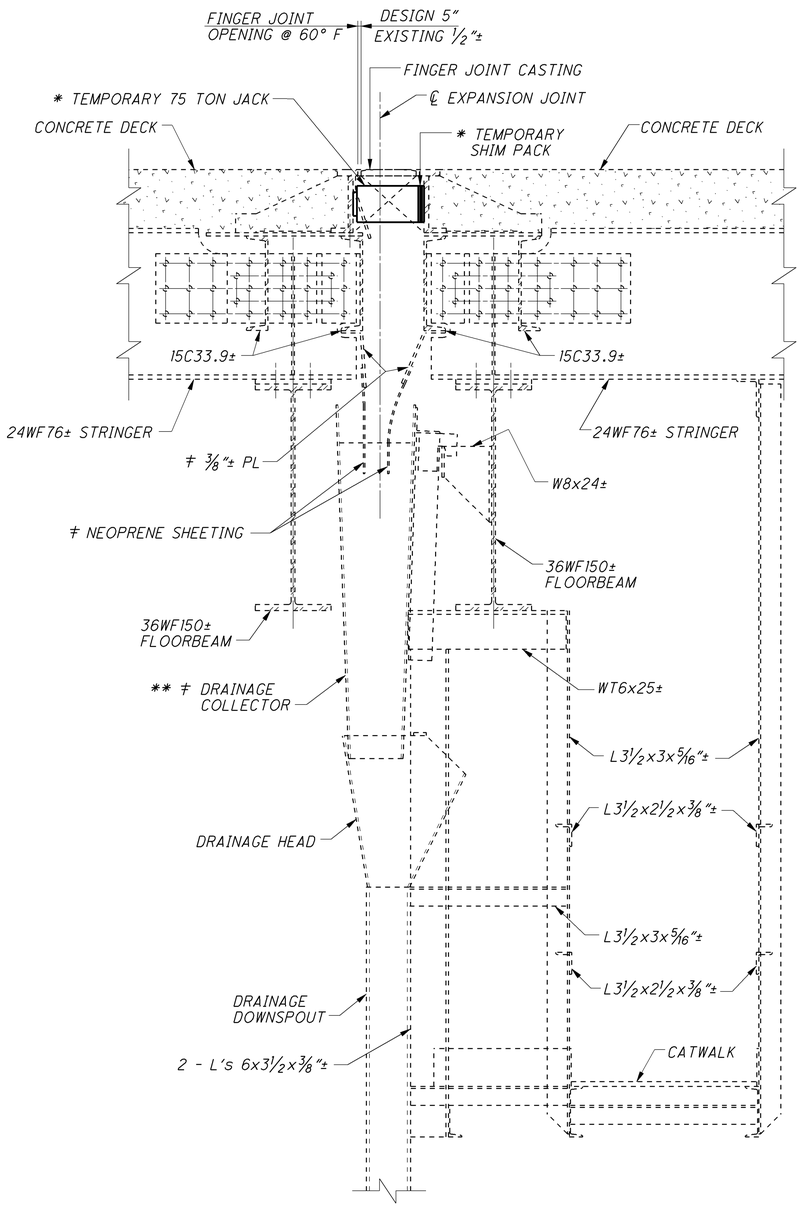
35
38

090_1524CEX002.DGN 2/11/09 SCB,JLS

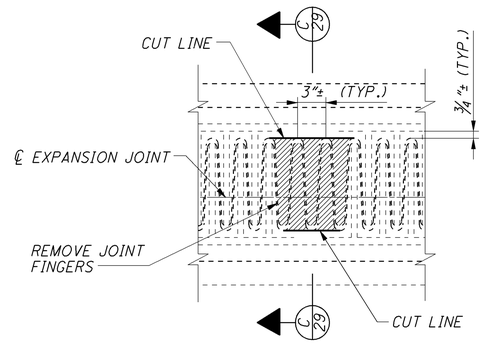


SECTION A-A

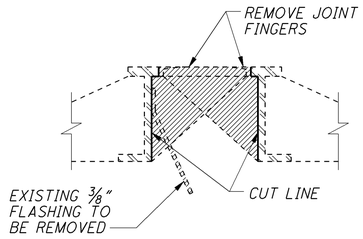
* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

** CONTRACTOR SHALL REMOVE AND REINSTALL DRAINAGE COLLECTORS AS NEEDED FOR VERTICAL AND HORIZONTAL JACKING OF STRUCTURE. PAYMENT SHALL BE INCLUDED AS INCIDENTAL TO ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

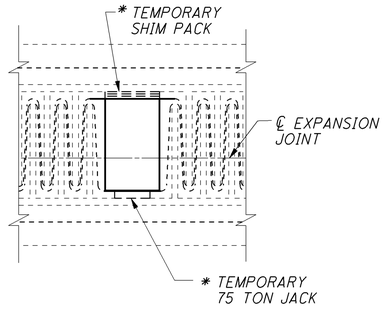
≠ CONTRACTOR SHALL REMOVE AND INSTALL THIS MATERIAL AS NEEDED FOR FINGER REPLACEMENTS. PAYMENT SHALL BE INCLUDED AS INCIDENTAL TO ITEM 516 - STRUCTURAL JOINT OR JOINT SEAL MISC.: EXPANSION JOINT FINGER REPAIR BY WELDING, OR BY HEAT STRAIGHTENING.



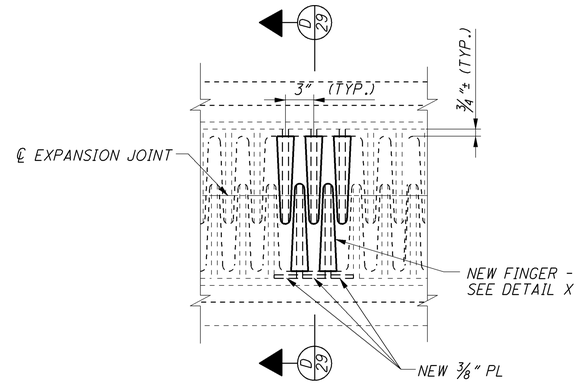
REMOVAL DETAIL



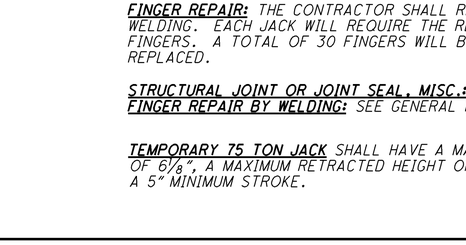
SECTION C-C



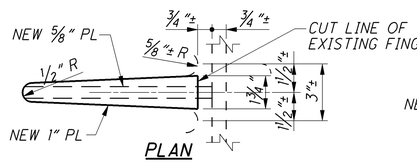
DETAIL B



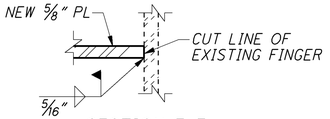
FINGER CASTING PLAN



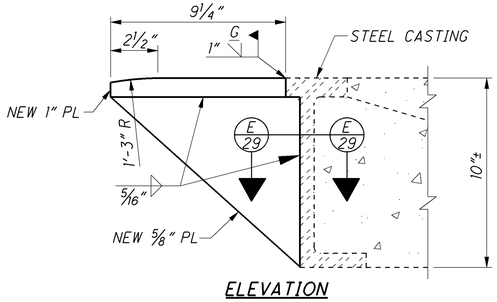
SECTION D-D



PLAN



SECTION E-E



ELEVATION

DETAIL X

LEGEND

INDICATES AREA TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

NOTES

SECTION A-A: FOR LOCATION SEE SHEET 28/31.

DETAIL B: FOR LOCATION SEE SHEET 28/31.

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

FINGER REPAIR: THE CONTRACTOR SHALL REPLACE FINGERS BY WELDING. EACH JACK WILL REQUIRE THE REMOVAL OF FIVE FINGERS. A TOTAL OF 30 FINGERS WILL BE REMOVED AND REPLACED.

STRUCTURAL JOINT OR JOINT SEAL, MISC.: EXPANSION JOINT FINGER REPAIR BY WELDING: SEE GENERAL NOTES SHEET 4/31.

TEMPORARY 75 TON JACK SHALL HAVE A MAXIMUM DIAMETER OF 6⅛", A MAXIMUM RETRACTED HEIGHT OF 11¼" AND A 5" MINIMUM STROKE.

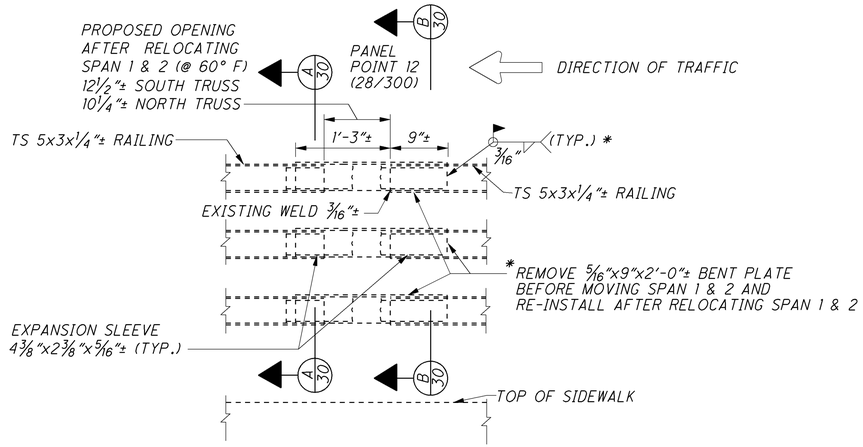
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED ALP | DRAWN JLS | REVIEWED DAP | DATE 2/11/09
CHECKED BLN | REVISED | STRUCTURE FILE NUMBER 1809393

DECK EXPANSION JOINT DETAILS - SPAN 2
BRIDGE NO. CUY-90-1524 OVER CUYAHOGA RIVER

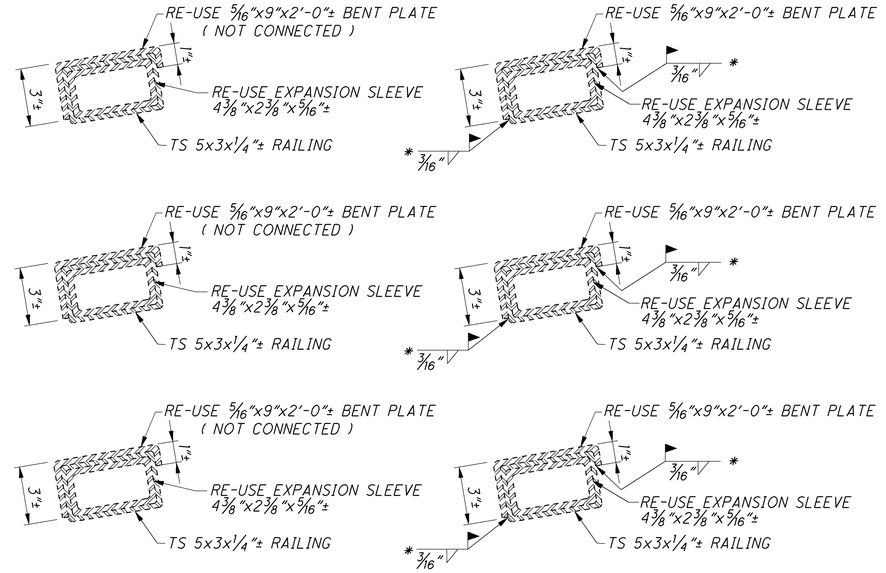
CUY-90-15.24
PID No. 82072

090_1524CEX003.DGN 2/11/09 SCB,JLS



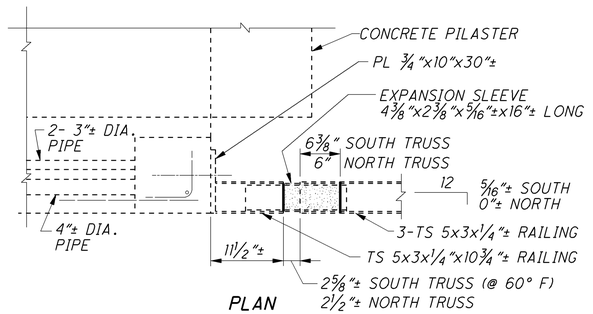
ELEVATION

SPAN 2 EXPANSION JOINT RAILING

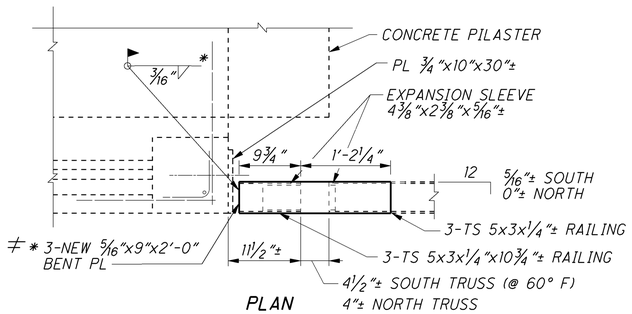


SECTION A-A

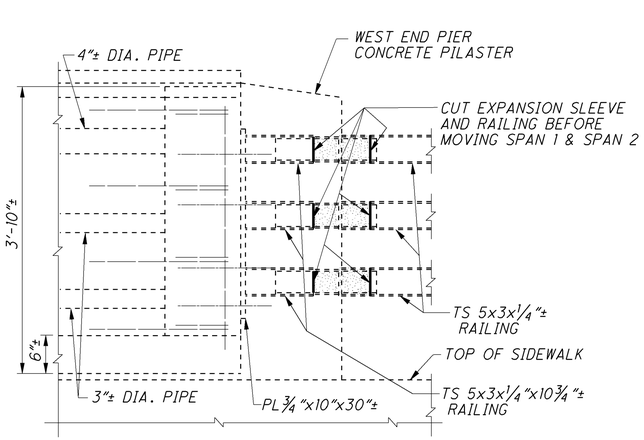
SECTION B-B



PLAN
(EXISTING)



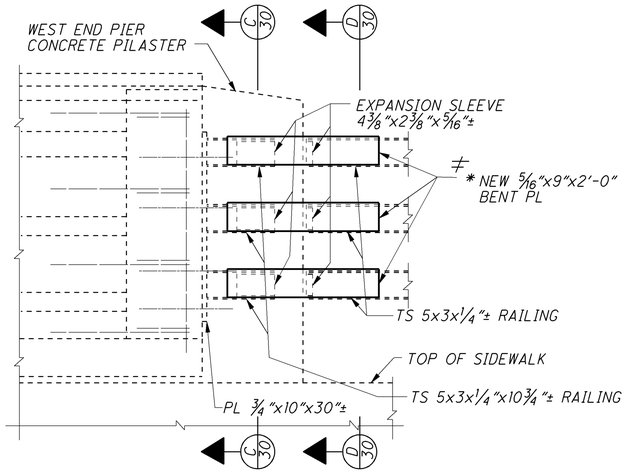
PLAN
(NEW)



ELEVATION
(EXISTING)

WEST END PIER EXPANSION JOINT RAILING

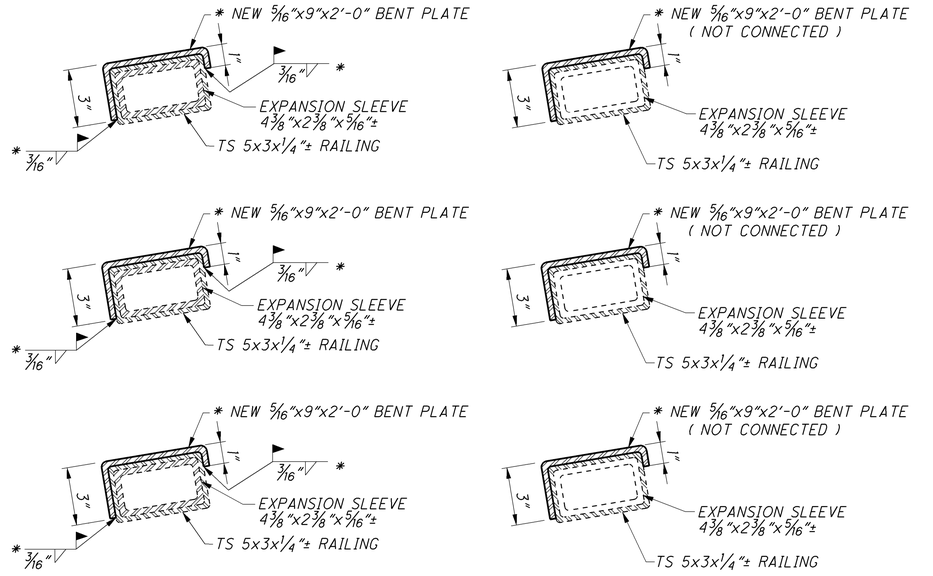
(NORTH SIDE SHOWN, SOUTH SIDE SIMILAR)



ELEVATION
(NEW)

WEST END PIER EXPANSION JOINT RAILING

(NORTH SIDE SHOWN, SOUTH SIDE SIMILAR)



SECTION C-C

SECTION D-D

≠ INSTALL AFTER STRUCTURE RELOCATION.

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

LEGEND

INDICATES AREA TO BE REMOVED PER ITEM 202- PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

NOTES:

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE: SEE GENERAL NOTE SHEET 5 / 31 .

090_1524CRD001.DGN 2/11/09 RB,SCB,JLS,KH

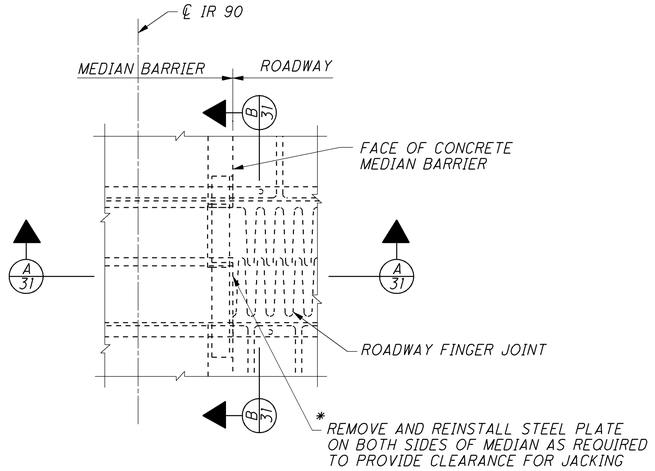
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
ALP	TWH	DAP	2/11/09
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BLN		1809393	

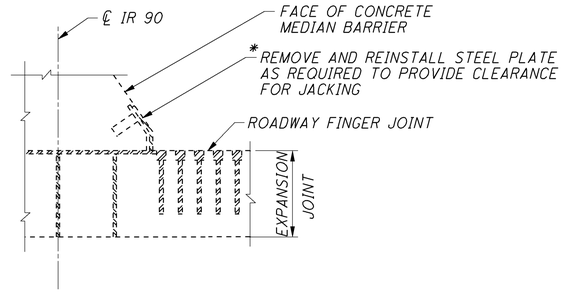
RAILING EXPANSION JOINT DETAILS

BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

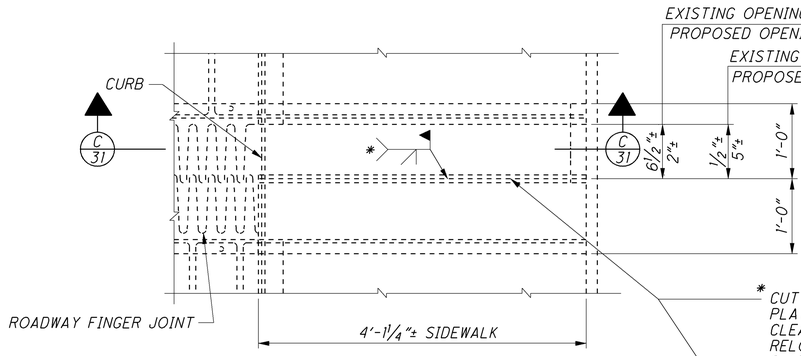
CUY-90-15.24
PID No. 82072



PARTIAL PLAN AT MEDIAN
(WEST END PIER)

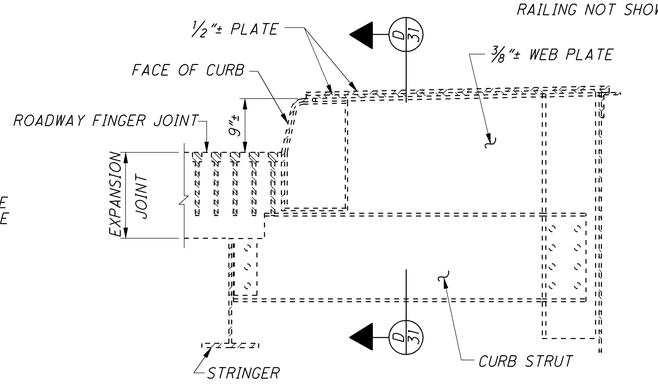


SECTION A-A

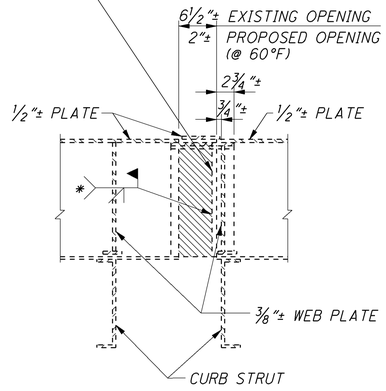


PARTIAL PLAN AT SIDEWALK
(TYPICAL BOTH SIDES OF BRIDGE)
(WEST END PIER AND SPAN 2 EXPANSION JOINT)

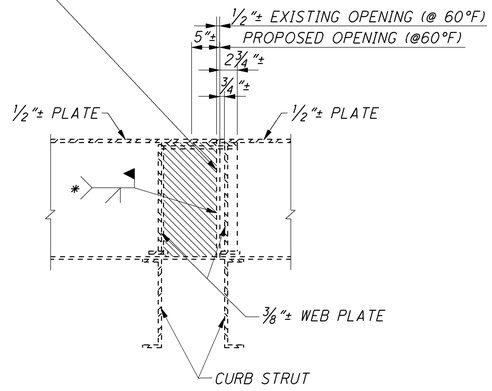
NOTE:
RAILING NOT SHOWN



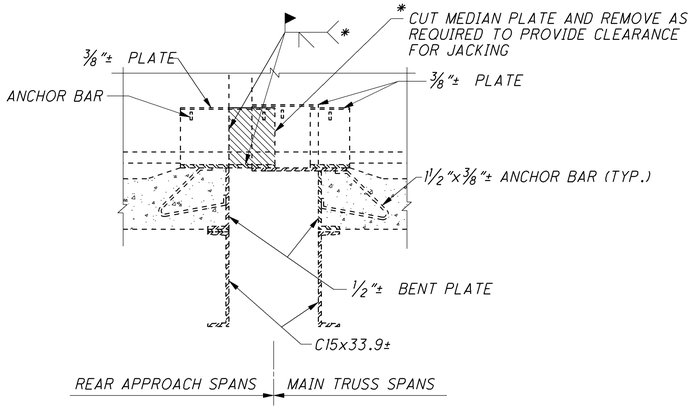
SECTION C-C



SECTION D-D
(AT WEST END PIER)



SECTION D-D
(AT SPAN 2 EXPANSION JOINT)



SECTION B-B

* INCLUDED WITH ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

LEGEND

INDICATES MATERIAL TO BE REMOVED AND REINSTALLED. INCLUDED FOR PAYMENT WITH ITEM 516- JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

NOTES:

MATERIALS SHOWN ARE EXISTING UNLESS OTHERWISE NOTED.

JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE: CONTRACTOR IS TO CAREFULLY DISASSEMBLE AS MUCH OF THE CURB AND SIDEWALK JOINTS AS NEEDED TO ALLOW THE STRUCTURE TO MOVE PRIOR TO THE RELOCATION OF THE BRIDGE. AFTER THE BRIDGE IS MOVED THE JOINTS WILL BE REBUILT USING THE ORIGINAL MATERIALS UNLESS DAMAGED BY THE CONTRACTORS DISASSEMBLY. DAMAGED PLATES WILL BE REPLACED AT THE CONTRACTORS COST. SEE GENERAL NOTES SHEET 5/31 FOR ADDITIONAL INFORMATION.

TEMPORARY COVER PLATES ARE TO BE PROVIDED AS NEEDED TO PROTECT PEDESTRIAN TRAFFIC DURING JACKING OPERATION. A MINIMUM ⅜" PLATE SHALL BE TEMPORARILY WELDED TO ONE SIDE OF THE JOINT TO COVER THE OPENING.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED ALP | DRAWN TWH | REVIEWED DAP | DATE 2/11/09
CHECKED BLN | REVISED | STRUCTURE FILE NUMBER 1809393

SIDEWALK AND MEDIAN EXPANSION JOINT DETAILS

BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER

CUY-90-15.24
PID No. 82072

31 / 31

38
38

OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223
TED STRICKLAND, GOVERNOR • JOLENE M. MOLITORIS, DIRECTOR

THE DEPARTMENT UTILIZES BID EXPRESS (http://www.bidx.com) AS THE OFFICIAL MEDIUM FOR ELECTRONIC BID SUBMITTAL. ALL BIDDERS MUST PREPARE BIDS AND SUBMIT THEM ONLINE VIA BID EXPRESS.

3/10/2009

Project 096000 **Addendum No. 1**
PID No. 82072
CUY – IR 90 – 15.24
Bridge Repair
Letting: March 18, 2009

Notice to all Bidders and Suppliers to please be advised of the attached proposal addendum.

The quantity sheets that show revised items will no longer be attached to the addenda. All Reference Item revisions are reflected in the EBS files (Expedite) for this project.

ADDENDA AMENDMENTS MUST BE ACKNOWLEDGED IN THE MISCELLANEOUS SECTION OF THE EXPEDITE (EBS) FILE AND ALL AMENDMENTS LOADED IN ORDER FOR YOUR BID TO BE CONSIDERED FOR AWARD OF THIS PROJECT. BID EXPRESS WILL NOT ACCEPT BIDS THAT DO NOT HAVE AMENDMENTS INCORPORATED. FAILURE TO INCORPORATE CHANGED QUANTITIES OR ITEMS IN YOUR EXPEDITE (EBS) SUBMISSIONS WILL RESULT IN THE REJECTION OF YOUR BID.

Respectfully,

Jolene M. Molitoris, Director
Ohio Department of Transportation

TP: jwt

Proposal Addendum
for
CUY-90-15.24 PID 82072
Project 6000-09

Be advised of the following changes:

Revised Item Quantity:

Ref. No.	Item Number	Quantity	Unit	Description
11	516E15000	10	Each	Structural Joint or Joint Sealer Misc.: Expansion Joint Finger Repair by Heat Straightening
12	516E15000	10	Each	Structural Joint or Joint Sealer Misc.: Expansion Joint Finger Repair by Welding

Sheet 1:

Add SS 832: 04/25/2006

Sheet 2:

Revise Contact information: Coast Guard Coordination: Scott Stiffler (216) 902-6087

Sheet 3:

Revise Plan Note Item 614-Maintaining Traffic, as follows:

C-Restrictions and Exceptions: paragraph two:

"The latest revision, at 3 days prior to the bid date, shall be in effect for this project, with the following exceptions:…."

Sheet 31 & 32:

Delete Plan Note: 2 Existing Temporary 100 Ton Jacks and Blocking.
Contractor is to furnish and install jacks and blocking; to be paid under Item 516-Jacking and Temporary Support of Superstructure, as per plan.

OHIO DEPARTMENT OF TRANSPORTATION
CENTRAL OFFICE • 1980 WEST BROAD STREET • COLUMBUS, OH 43223
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3/16/2009

Project 096000 **Addendum No. 2**
PID No. 82072
CUY – IR 90 – 15.24
Bridge Repair
Letting: March 20, 2009

Notice to all Bidders and Suppliers to please be advised that the above referenced project has been delayed from the March 18, 2009 letting and is rescheduled to sell on Friday, March 20, 2009.

ADDENDA AMENDMENTS MUST BE ACKNOWLEDGED IN THE MISCELLANEOUS SECTION OF THE EXPEDITE (EBS) FILE AND ALL AMENDMENTS LOADED IN ORDER FOR YOUR BID TO BE CONSIDERED FOR AWARD OF THIS PROJECT. BID EXPRESS WILL NOT ACCEPT BIDS THAT DO NOT HAVE AMENDMENTS INCORPORATED. FAILURE TO INCORPORATE CHANGED QUANTITIES OR ITEMS IN YOUR EXPEDITE (EBS) SUBMISSIONS WILL RESULT IN THE REJECTION OF YOUR BID.

Respectfully,

Jolene M. Molitoris, Director
Ohio Department of Transportation

TP: jwt