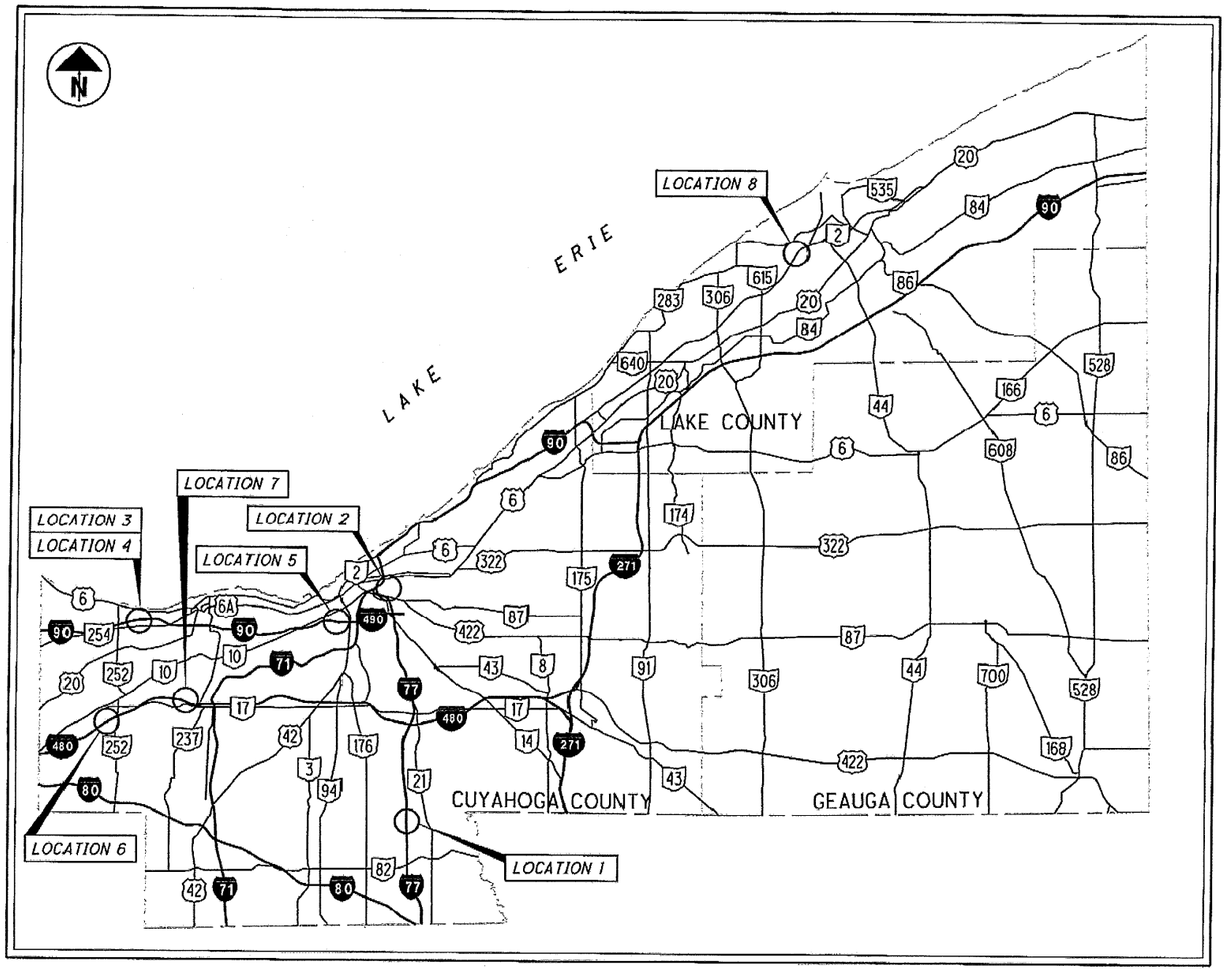


LOCATION MAP

LATITUDE: 41° 24' 54" N LONGITUDE: 81° 36' 54" W
(NOTE: FOR COORDINATES PER LOCATION, SEE SHEETS 2 AND 3)

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

D12-BH-FY2017 MISC.

LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	CITY	TOWNSHIP	VILLAGE
1	CUY-77-0479	1805975	BROADVIEW HEIGHTS		
2	CUY-77-1575 SN	1806912	CLEVELAND		
3	CUY-52-0421	1807587	BAY VILLAGE		
4	CUY-90-0458	1807641	WESTLAKE		
5	CUY-90-1391	1807854	CLEVELAND		
6	CUY-480-0335	1814095	NORTH OLMSTED		
7	CUY-480-0727	1814184	CLEVELAND		
8	LAK-2-1141	4301110	MENTOR		

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF VARIOUS REPAIRS INCLUDING PARAPET REPAIRS; VANDAL PROTECTION FENCE REPAIR AND INSTALLATION; BACKWALL AND PIER REPAIR; SIDEWALK AND CURB REPAIR; CROSSFRAME REPLACEMENT; TIMBER SUBDECKING INSTALLATION; AND OTHER MISCELLANEOUS REPAIRS.

THIS IS A MAINTENANCE PROJECT.

PROJECT EARTH DISTURBED AREA: N/A

ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A

NOTICE OF INTENT EARTH DISTURBED AREA: N/A

2016 SPECIFICATIONS

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

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

APPROVED _____

DATE 01-20-17 DISTRICT DEPUTY DIRECTOR

APPROVED _____

DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

OHIO Utilities Protection SERVICE — Call Before You Dig 1-800-362-2764

(Non-members must be called directly)

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

PLAN PREPARED BY:

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

ENGINEERS SEAL:

STATE OF OHIO PATRICK SCHAAN 61571 REGISTERED PROFESSIONAL ENGINEER

SIGNED: _____

DATE: 1-18-17

STANDARD CONSTRUCTION DRAWINGS

										SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS
RM-4.2	4-18-14	TC-65.10	1-17-14	MT-95.30	7-15-16	MT-98.29	7-19-13	AS-1-15	7-17-15	800	1-20-17	
RM-4.5	7-18-14	TC-65.11	7-15-16	MT-95.31	7-18-14	MT-99.50	7-19-13	EXJ-4-87	7-19-02	821	4-20-12	
		TC-71.10	7-15-16	MT-95.41	7-18-14	MT-99.60	7-15-16	GSD-1-96	7-19-02	844	7-17-15	
BP-5.1	7-19-13			MT-95.45	7-15-16	MT-101.60	7-19-13	PCB-91	1-18-13	848	7-15-16	
				MT-96.11	7-15-16	MT-101.70	7-17-14	VPF-1-90	7-17-15	921	4-20-12	
F-3.1	7-19-13			MT-96.20	7-15-16	MT-101.75	7-15-16			961	7-15-16	
				MT-97.10	7-18-14	MT-105.10	7-19-13					
				MT-98.10	7-8-14	MT-110.10	7-19-13					
				MT-98.20	7-8-14							

FEDERAL PROJECT NO. E161(186)

PID NO. 98599

CONSTRUCTION PROJECT NO.

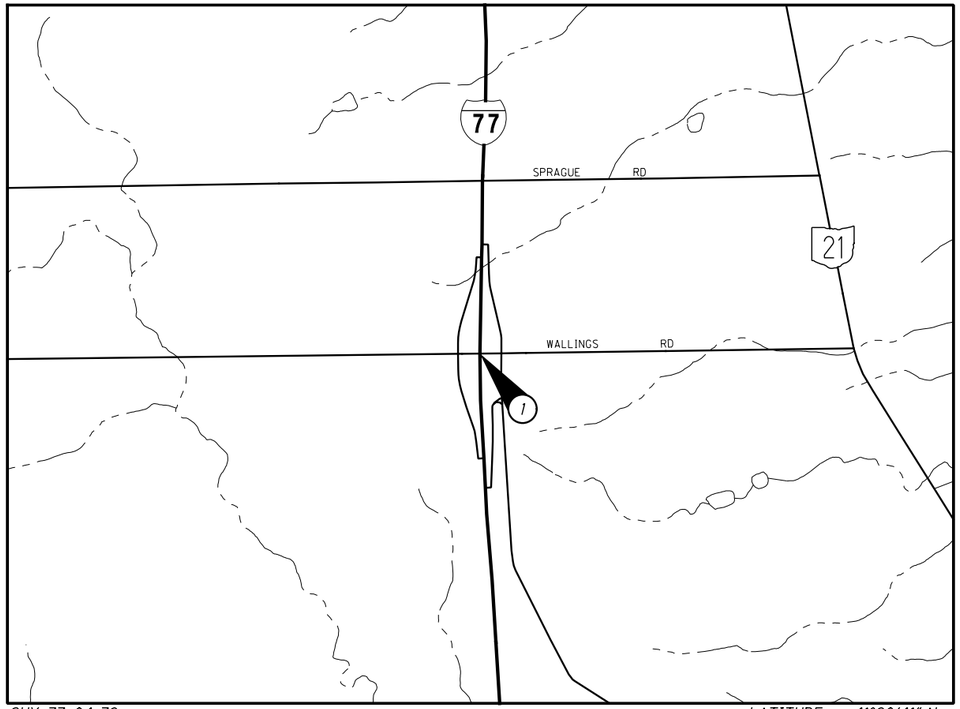
RAILROAD INVOLVEMENT NORFOLK SOUTHERN

D12-BH-FY2017 MISC. PID NO. 98599

1 / 42

170282 Conformed Set
Dist 12

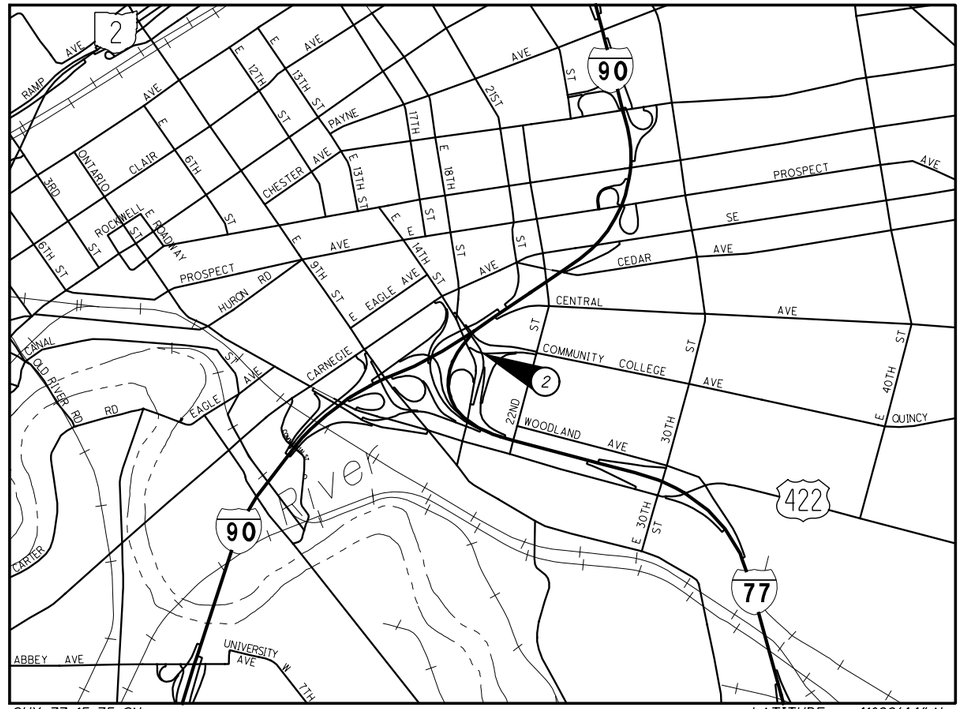
F:\2016\116041 D12 Bridge Rehab\Group 1 Project\ProjectData\98599\Design\Roadway\Sheets\98599-1-GT001.dgn 1/18/2017 11:01:14 AM JeffSmith



CUY-77-04.79
1805975

LATITUDE: 41°20'41" N
LONGITUDE: 81°38'59" W

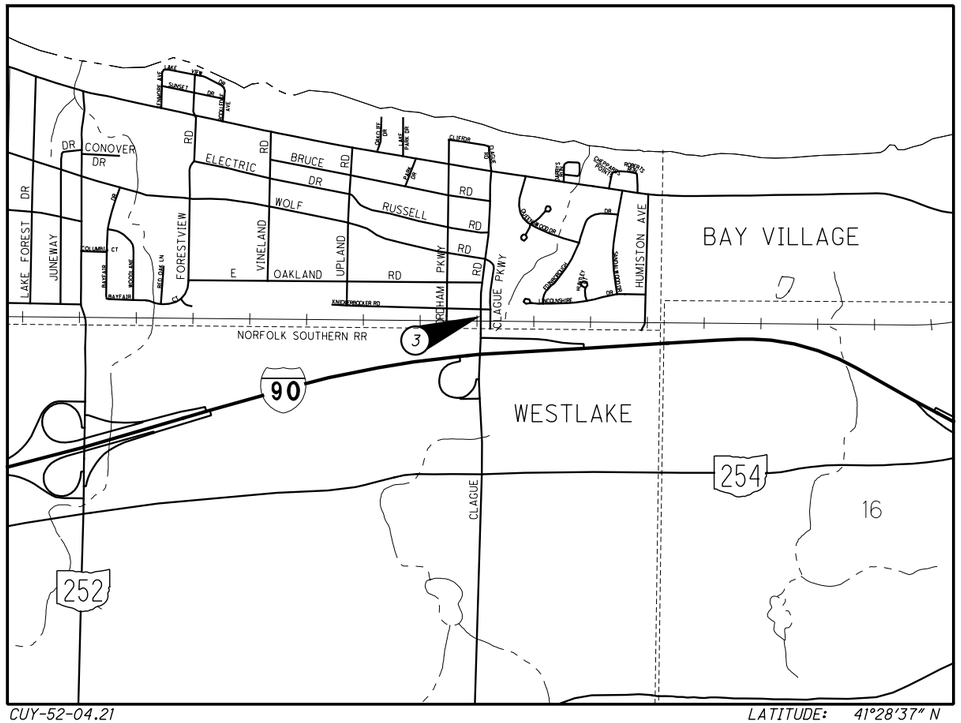
LOCATION MAP FOR LOCATION 1



CUY-77-15.75 SN
1806912

LATITUDE: 41°29'44" N
LONGITUDE: 81°40'37" W

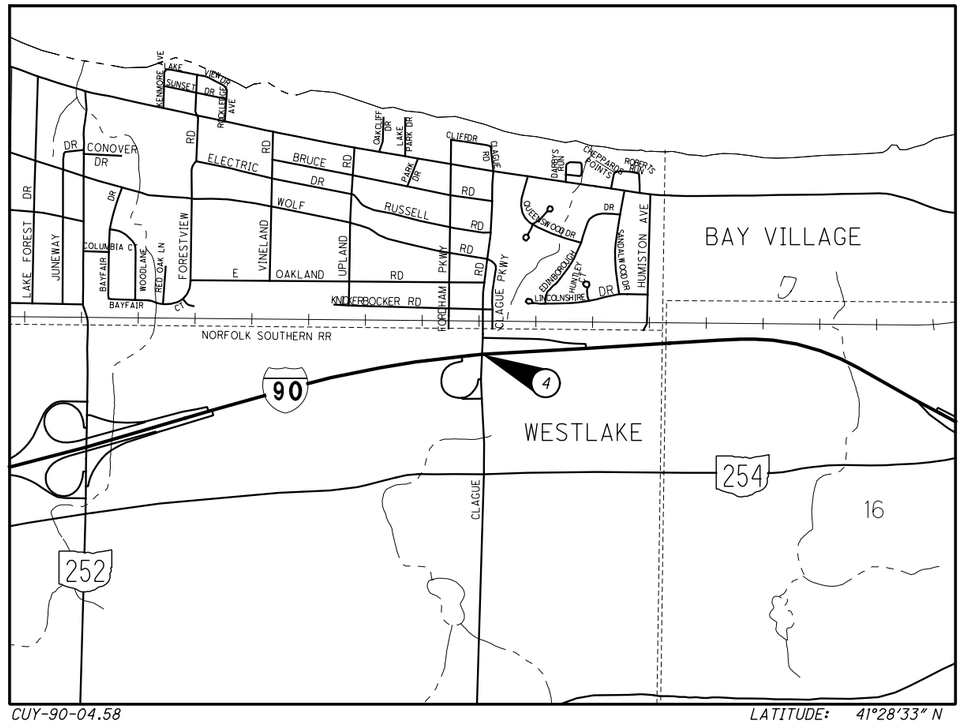
LOCATION MAP FOR LOCATION 2



CUY-52-04.21
1807587

LATITUDE: 41°28'37" N
LONGITUDE: 81°52'57" W

LOCATION MAP FOR LOCATION 3



CUY-90-04.58
1807641

LATITUDE: 41°28'33" N
LONGITUDE: 81°52'57" W

LOCATION MAP FOR LOCATION 4

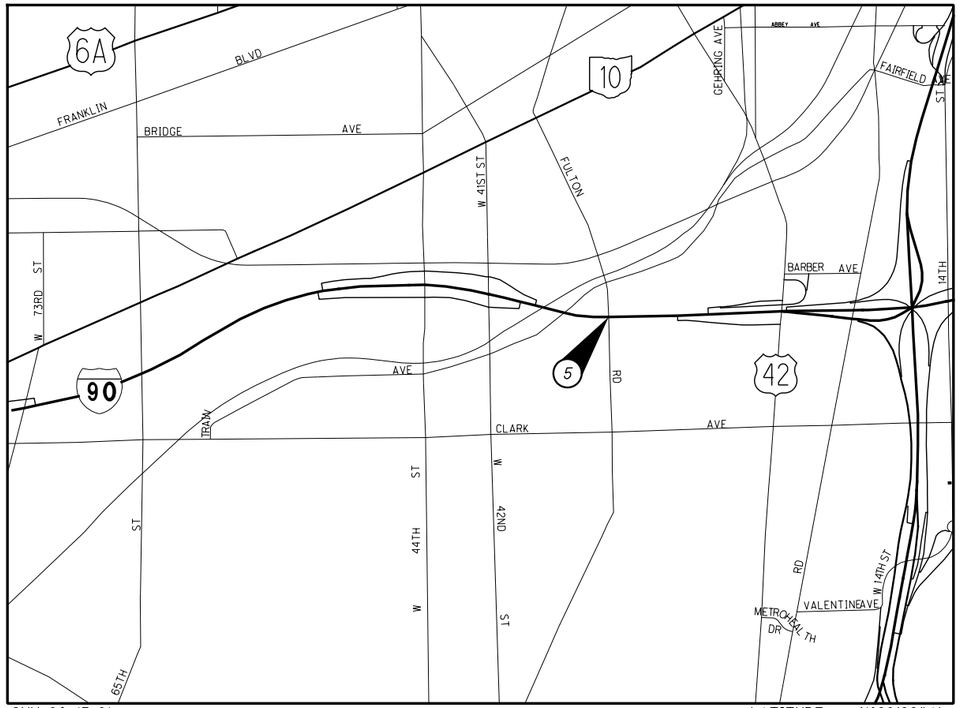
CALCULATED MS
CHECKED PRS

LOCATION MAP - 1

D12-BH-FY2017 MISC.
PID NO. 98599

2
42

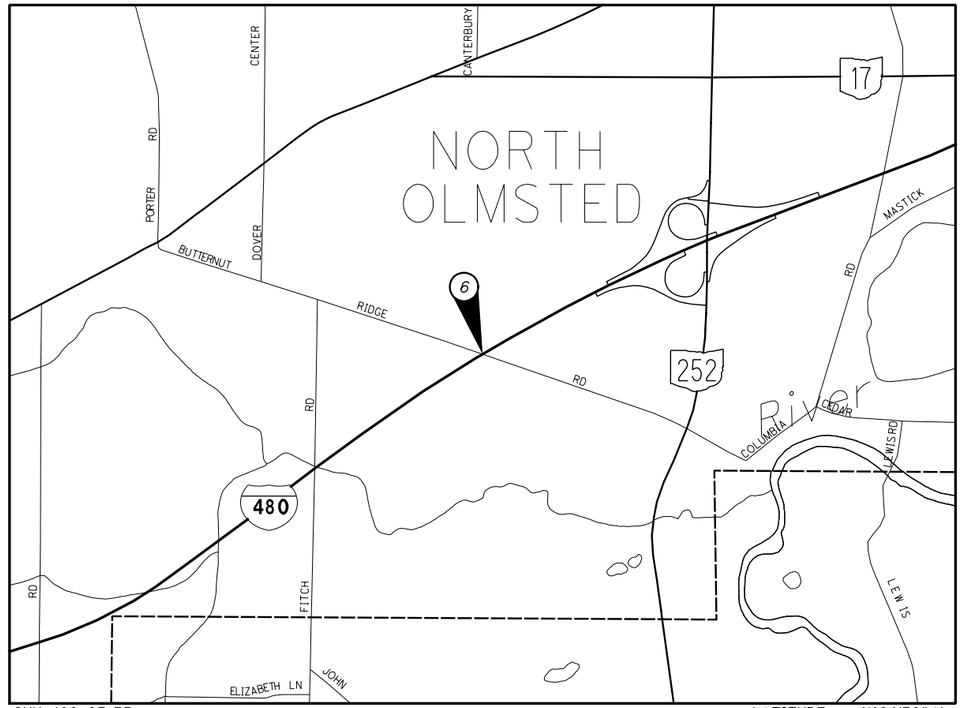
F:\2016\116041 D12 Bridge Rehab\Group 1 Project\ProjectData\98599\Design\Roadway\Sheets\98599-1-LOCATION.dgn 1/3/2017 8:57:50 AM JeffSmith



CUY-90-13.91
1807854

LATITUDE: 41°28'26" N
LONGITUDE: 81°42'28" W

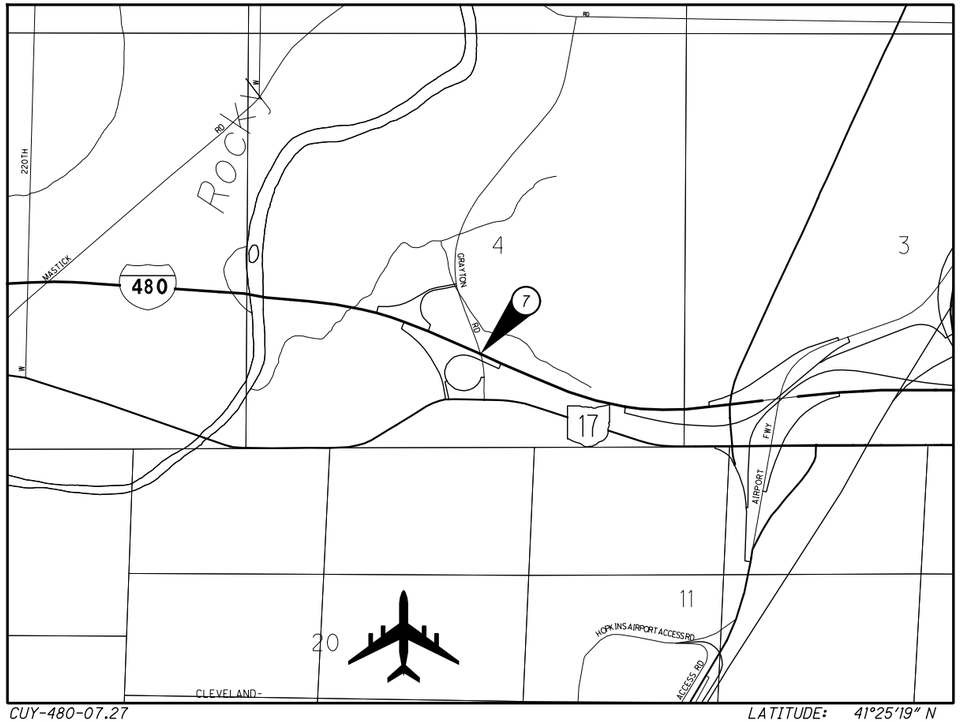
LOCATION MAP FOR LOCATION 5



CUY-480-03.35
1814095

LATITUDE: 41°24'32" N
LONGITUDE: 81°54'46" W

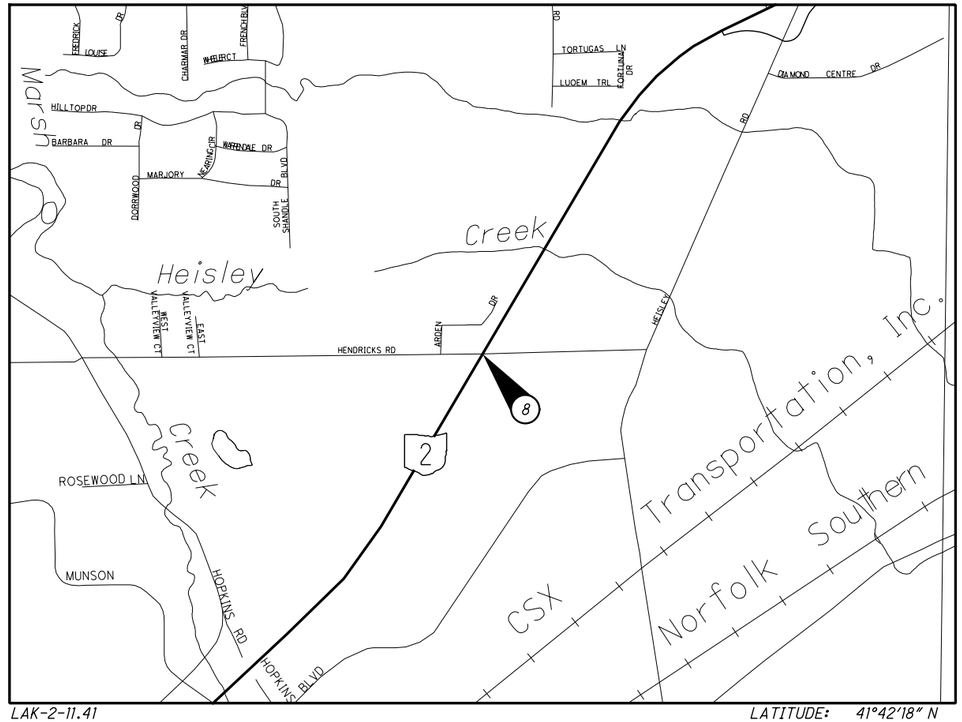
LOCATION MAP FOR LOCATION 6



CUY-480-07.27
1814184

LATITUDE: 41°25'19" N
LONGITUDE: 81°50'35" W

LOCATION MAP FOR LOCATION 7



LAK-2-11.41
4301110

LATITUDE: 41°42'18" N
LONGITUDE: 81°18'53" W

LOCATION MAP FOR LOCATION 8

CALCULATED MS
CHECKED PRS

LOCATION MAP - 2

D12-BH-FY2017 MISC.
PID NO. 98599

3
42

F:\2016\116041 D12 Bridge Rehab\Group 1 Project\ProjectData\98599\Design\Roadway\Sheets\98599-1-LOCATION.dgn 12/14/2016 11:39:13 AM JeffSmith

UTILITIES

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

TRANSPORTATION

GREATER CLEVELAND REGIONAL
TRANSIT AUTHORITY (GCRTA)
1240 WEST 6TH STREET
CLEVELAND, OHIO 44115
ATTN: MIKE SHIPPER
PHONE: (216) 566-5084
FAX: (216) 431-6209

WATER

CITY OF CLEVELAND
DIVISION OF WATER
1201 LAKESIDE AVENUE, 2nd FLOOR
CLEVELAND, OHIO 44114
ATTN: FRED ROBERTS
PHONE: (216) 664-2444, EXT. 5520
FAX: (216) 664-2838

CITY OF CLEVELAND
DIVISION OF WATER
POLLUTION CONTROL
12302 KIRBY ROAD
CLEVELAND, OHIO 44108
ATTN: RACHID ZOGHAIB
PHONE: (216) 664-3785

LAKEWOOD WATER
DIVISION
12805 DETROIT AVENUE
CLEVELAND, OH 44107
ATTN:
PHONE: (216) 529-6820

AQUA OHIO INC
8644 STATION STREET
MENTOR, OH 44060-4316
ATTN: GARY FUSCO
(440) 255-3984, EXT. 214

LAKE COUNTY DEPT. OF UTILITIES
ADMINISTRATION BUILDING
105 MAIN ST.
PAINESVILLE, OHIO 44077
ATTN: ALBERT SAARI
PHONE: (440) 350-2652

SEWER

NORTHEAST OHIO REGIONAL
SEWER DISTRICT (NEORSD)
3900 EUCLID AVENUE
CLEVELAND, OHIO 44115
ATTN: MARY MACIEJOWSKI
PHONE: (216) 881-6600, EXT. 6466

LAKE COUNTY DEPT. UTILITIES
ADMINISTRATION BUILDING
105 MAIN ST.
PAINESVILLE, OHIO 44077
ATTN: ALBERT SAARI
PHONE: (440) 350-2652

CUYAHOGA COUNTY DEPARTMENT OF
PUBLIC WORKS
2079 E. 9TH STREET
5TH FLOOR
CLEVELAND, OH 44115
ATTN: DAVID E. MARGUARD
(216) 698-8614

GAS

DOMINION EAST OHIO GAS COMPANY
320 SPRINGSIDE DR.
AKRON, OHIO 44333
ATTN: BRYAN DAYTON
PHONE: (330) 664-2409

COLUMBIA GAS OF OHIO
7080 FRY ROAD
MIDDLEBURG HEIGHTS, OH 44130
ATTN: DAN SUREN
(440) 891-2428

CABLE

TIME WARNER CABLE
7 SEVERANCE CIRCLE
CLEVELAND HEIGHTS, OHIO 44118
ATTN: PAT SANTOIEMMO
PHONE: (216) 575-8016
EXT. 12165554202
FAX: (216) 581-3262

TIME WARNER CABLE
8179 DOW CIRCLE
STRONGSVILLE, OHIO 44136
SUPERVISOR: GARY NAUMANN
PHONE: (216) 575-8016, EXT. 5033
FIELD ENGINEER: PAUL SILVESTRO
PHONE: (216) 575-8016
EXT. 12165555034
FAX: (440) 826-2940

TIME WARNER CABLE
7820 DIVISION DR.
MENTOR, OH 44060
ATTN: MATT HANAH
(216) 575-8016 EXT. 2165554401
MATHEW.HANNAH@CHARTER.COM

WIDE OPEN WEST INTERNET CABLE & PHONE
105 BLAZE INDUSTRIAL PARKWAY
BEREA, OH 44017
ATTN: BOB HAMMOND
(440) 66-6262

ELECTRIC

CEI, FIRST ENERGY
6896 MILLER RD. #101
BRECKSVILLE, OHIO 44141
ATTN: TED RADER
PHONE: (440) 546-8738

DIVISION OF CLEVELAND PUBLIC
POWER (CPP)
CLEVELAND PUBLIC POWER CIRCUITS:
STREET LIGHTING
1300 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
ATTN: JAMES FERGUSON,
CHIEF, BUREAU OF STREET LIGHTING
PHONE: (216) 420-7704, EXT. 183

CITY OF CLEVELAND DIVISION OF PUBLIC POWER
1300 LAKESIDE AVE.
CLEVELAND, OH 44114
ATTN: CHRIS HIRZEL
(216) 664-2972

PETROLEUM

BUCKEYE PARTNERS, L.P.
(BUCKEYE OIL PIPELINE COMPANY)
FIVE TEK PARK
9999 HAMILTON BOULEVARD
BREINIGSVILLE, PA 18031
ATTN: TRENT MOODY
PHONE: (610) 904-4145

LIGHTING

ODOT DISTRICT 12
5500 TRANSPORTATION BLVD.
GARFIELD HEIGHTS, OHIO 44125
ROADWAY SERVICES LIGHTING
ATTN: ANTHONY TOTH
PHONE: (216) 584-2221

SIGNALS

CITY OF CLEVELAND, DIVISION
OF TRAFFIC ENGINEERING
601 LAKESIDE ROAD, RM 518
CLEVELAND, OHIO 44114
ATTN: ROB MAVEC
PHONE: (216) 644-3194

COMMUNICATIONS

AT & T OHIO
13630 LORAIN AVENUE 2ND FLOOR
CLEVELAND, OHIO 44111
ATTN: JAMES JANIS
PHONE: (216) 476-6142
FAX: (216) 476-6013

WINDSTREAM
100 OWEN BROWN ST.
HUDSON, OHIO 44236
ATTN: JEFF GUYAS
PHONE: (330) 650-8404

WINDSTREAM
560 TERNES AVENUE
ELYRIA, OHIO 44035
ATTN: GEOFFREY HAMM
PHONE: (440) 329-4245

COX COMMUNICATIONS
12221 PLAZA DRIVE
PARMA, OH 44130
ATTN: MARK PRESTON
PHONE: (216) 535-3347

SPREAD NETWORKS, LLC
(DOING BUSINESS AS JOB 8 IN OHIO)
800 WOODLANDS PARKWAY, SUITE 102
RIDGELAND, MS 39157
ATTN: JOHN P. BRUCE
(769) 216-8095

MCI-WORLDCOM
120 RAVINE ST.
AKRON, OH 44303
ATTN: AL GUEST
(330) 253-8267

CENTURYLINK
441 W. BROAD ST.
PATASKALA. OH 43062
ATTN: CHRISTOPHER R. STRAYER
(303) 886-1299

EVERSTREAM SOLUTIONS
1228 EUCLID AVE.
SUITE 250
CLEVELAND, OH 444115
(884) 387-7876

LEVEL 3 COMMUNICATIONS, LLC
1025 EL DORADO BOULEVARD
BROOMFIELD, CO 80021
ATTN: MARVIN MUNCY
(419) 304-5190

WESTERN RESERVE COMMUNICATIONS
2801 HAMILTON AVE.
CLEVELAND, OH 44114
(216) 621-8121

XO COMMUNICATIONS
6900 SOUTHPOINTE PARKWAY
BRECKSVILLE, OH 44141
ATTN: DALE FERGUSON
(216) 619-349-3492

THE NATURE OF THE WORK REQUIRED BY THIS PROJECT IS NOT ANTICIPATED TO AFFECT ANY KNOWN UTILITIES IN THE WORK AREAS.

RIGHT OF WAY

ALL WORK IS TO BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY OR EASEMENTS OR WITHIN STATE PROPERTY.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED DURING NON-WORKING HOURS AS APPROVED BY THE ENGINEER. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS/HER OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.08 OF THE 2016 CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

EXISTING DIMENSIONS

ALL DIMENSIONS ARE APPROXIMATE (±).

LIMITATIONS OF OPERATIONS

THE CONTRACTOR'S ACTIVITIES AND WORK SCHEDULE SHALL BE CONSTRAINED BY THE FOLLOWING LIMITATIONS:

1. MAINTENANCE OF TRAFFIC RESTRICTIONS (REFER TO MAINTENANCE OF TRAFFIC NOTES SHEETS WITHIN THIS PLAN).

EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC, THE CONTRACTOR'S ATTENTION IS DIRECTED TO 614.03. IN ADDITION, NO STORAGE OF EQUIPMENT, MATERIALS, AND VEHICLES WITHIN THE HIGHWAY RIGHT-OF-WAY WILL BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE ENGINEER. ALL RESTORATION WILL BE AT NO COST TO THE STATE.

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 SUBSIDIARY AGREEMENT GOVERNING COMPLETION OF THIS PROJECT.

CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN

AN OHIO PROFESSIONAL SURVEYOR SHALL DETERMINE THE MINIMUM VERTICAL CLEARANCES OF ALL EXISTING BRIDGES WITHIN THE PROJECT LIMITS AFTER COMPLETION OF ALL THE WORK, BUT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. AT A MINIMUM, MEASUREMENTS SHALL BE TAKEN ALONG THE CENTERLINE OF EACH FASCIA BEAM AT THE EDGE OF THE SHOULDERS, EDGE LINES, LANE LINES, AND CROWN OF THE ROADWAY BELOW. THE MEASUREMENTS SHALL BE DOCUMENTED IN THE ODOT VERTICAL CLEARANCE SURVEY FORM. THE FORM SHALL BEAR THE STAMP OR SEAL OF THE OHIO PROFESSIONAL SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THE OHIO PROFESSIONAL SURVEYOR SHALL SUBMIT THE COMPLETED FORM TO THE PROJECT ENGINEER AND THE DISTRICT BRIDGE MAINTENANCE ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

IN ADDITION TO VERTICAL CLEARANCE DETERMINATION, THE CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AS NECESSARY PRIOR TO AND AT COMPLETION OF THE WORK, AT WORK INTERFACES SUCH AS ENDS OF DECK, EXPANSION JOINTS, AND END OF APPROACH SLABS. THESE MEASUREMENTS ARE INTENDED TO ENSURE PROPOSED WORK MEETS EXISTING GRADES AND PROVIDES A SMOOTH RIDING SURFACE FOR THE TRAVELING PUBLIC.

ENVIRONMENTAL

NO WORK TO BE WITHIN STREAMS OR WETLANDS.

CALCULATED MS CHECKED PRS

GENERAL NOTES - 1

D12-BH-FY2017 MISC.
PID NO. 98599

EXISTING PAVEMENT MARKINGS

ANY EXISTING PAVEMENT MARKINGS, INCLUDING RAISED PAVEMENT MARKINGS, THAT ARE AFFECTED BY THE PROPOSED WORK SHALL BE REPLACED IN-KIND. PAYMENT FOR THE NEW PAVEMENT MARKINGS IS AS LISTED IN THE PLANS.

ITEM 201 - CLEARING AND GRUBBING

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

ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN

A TYPE B FIELD OFFICE IS REQUIRED FOR THIS PROJECT. THE FOLLOWING REVISIONS TO EQUIPMENT SUPPLIED WITH THE TYPE B FIELD OFFICE, AS SPECIFIED IN TABLE 619.02-1, FIELD OFFICE, SHALL APPLY:

THE COPIER SUPPLIED MUST MEET THE REQUIREMENTS OF THE COPIER SUPPLIED WITH THE TYPE C FIELD OFFICE.

THE BROAD BAND INTERNET CONNECTION MUST MEET A MINIMUM DOWNLOAD SPEED OF 10MB PER SECOND AND A MINIMUM UPLOAD SPEED OF 5MB PER SECOND.

THE CONTRACTOR SHALL FURNISH, SET-UP AND MAINTAIN A WI-FI ROUTER MEETING THE REQUIREMENTS OF IEEE 802.11ac FOR THE EXCLUSIVE USE OF THE DEPARTMENT.

ALL OTHER FIELD OFFICE ITEMS SUPPLIED SHALL MEET THE REQUIREMENTS OF A TYPE B FIELD OFFICE.

ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN 6 MNTH

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 25'-BRIDGE 7 (CUY-480-7.27) / 50'-BRIDGE 6 (CUY-480-3.35) IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FROM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

CALCULATED MS | CHECKED PRS

GENERAL NOTES - 2

D12-BH-FY2017 MISC.
PID NO. 98599

5
42

ITEM 614 - MAINTAINING TRAFFIC

THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS AS TO MAKE PROPOSED REPAIRS WITH A MINIMUM OF HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY AFFECTED BY THE WORK DONE UNDER THIS CONTRACT. IN ADDITION TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

I. 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 MUST SUBMIT A WRITTEN SCHEDULE TO THE ODOT PUBLIC INFORMATION OFFICE (216-584-2007 OR D12.PUBLICINFORMATION@DOT.OHIO.GOV) INDICATING THE LOCATIONS AND DATES OF THE LANE CLOSURES AT LEAST 14 DAYS PRIOR TO THE IMPLEMENTATION OF ANY SUCH CLOSURES. ALSO, NOTIFY THE ENGINEER, RESPONSIBLE LAW ENFORCEMENT AGENCIES AND EMERGENCY SERVICES, AND LOCAL MUNICIPALITIES OF LANE CLOSURES OR OTHER RESTRICTIONS AT LEAST 2 WEEKS PRIOR TO IMPLEMENTATION. USE PORTABLE CHANGEABLE MESSAGE SIGNS TO ALERT MOTORISTS 3 DAYS PRIOR TO THE IMPLEMENTATION OF ANY CHANGES SUCH AS LANE CLOSURES OR OTHER RESTRICTIONS.

II. LANE CLOSURE RESTRICTIONS

1. 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: HTTP://WWW.DOT.STATE.OH.US/DISTRICTS/D12/HIGHWAY MANAGEMENT/PAGES/PERMITTEDLANECLOSURES.ASPX THE LATEST REVISION AT 14 DAYS PRIOR TO THE BID DATE SHALL BE IN EFFECT FOR THIS PROJECT. ALL NOTES ON THE PERMITTED LANE CLOSURE TIMES SHALL BE PART OF THIS PROJECT.

2. UNLESS OTHERWISE NOTED, EXIT AND ENTRANCE RAMP LANES SHALL REMAIN OPEN AT ALL TIMES AND EXHIBIT A MINIMUM WIDTH OF ELEVEN (11) FEET.

3. MAINTENANCE OF TRAFFIC SHALL FOLLOW THE INSTRUCTION OF THE STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET AND THE LATEST REVISION OF THE OMUTCD.

4. PEDESTRIAN TRAFFIC SHALL BE PERMITTED AND ACCOMMODATED ON AT LEAST ONE SIDE AT ALL TIMES AT LOCATIONS WHERE PEDESTRIAN TRAFFIC IS CURRENTLY MAINTAINED.

LOCATION 1 (CUY-77-0479):
LOCATION 2 (CUY-77-1575 SN):
LOCATION 7 (CUY-480-0727):
LOCATION 8 (LAK-2-1141):

THE CONTRACTOR SHALL PERFORM WORK BY CLOSING LANES IN ACCORDANCE WITH SCD MT-95.30 AND MT-98.10 DURING PERMITTED LANE CLOSURE TIMES.

LOCATION 3 (CUY-52-0421):
LOCATION 4 (CUY-90-0458):
LOCATION 6 (CUY-480-0335):
LOCATION 7 (CUY-480-0727) (OVER GRAYTON ROAD):

THE CONTRACTOR SHALL PERFORM WORK BY CLOSING RIGHT LANE IN ACCORDANCE WITH SCD MT-95.31 DURING WORKING HOURS.

LOCATION 5 (CUY-90-1391):

THE CONTRACTOR IS PERMITTED TO CLOSE ONE LANE ON FULTON ROAD IN ACCORDANCE WITH MT-97.10 DURING WORKING HOURS BY UTILIZING FLAGGERS OR PORTABLE TRAFFIC SIGNALS TO DIRECT TRAFFIC.

III. 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, HEREINAFTER 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 CONDITIONS EXISTS, THEY MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.

2. CONDITIONS

DURING ALL PARTS OF THIS PROJECT, FLAGGERS, SIGNING, BARRICADES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE "MANUAL" OR AS SHOWN IN THE STANDARD DRAWINGS.

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. FLAGGERS

AT LEAST TWO FLAGGERS ARE REQUIRED FOR EACH CLOSURE. THE CONTRACTOR SHALL FURNISH ADDITIONAL FLAGGERS AS DIRECTED BY THE ENGINEER.

5. PROTECTION OF PUBLIC

PERSONAL CARS SHALL NOT BE PARKED WITHIN THE RIGHT OF WAY.

6. FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH PROVISIONS FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, OR WITH THE PROVISIONS OF THE "MANUAL", THE HIGHWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY 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.

IV. MAINTENANCE OF TRAFFIC MATERIALS

1. SIGNS

SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES ARE TO 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 THE PROJECT.

2. SIGN SUPPORT

SIGN SUPPORTS SHALL BE OF SUFFICIENT SIZE AND MASS AS TO SUPPORT THE SIGNS AT THE APPROPRIATE HEIGHT. SUPPORTS SHALL BE AS SHOWN ON THE STANDARD DRAWINGS.

3. FLASHING ARROW REQUIREMENT

WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIRECTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW PANEL FOR EACH LANE CLOSED. THE CONTRACTOR SHALL REFER TO SUPPLEMENTAL SPECIFICATION 821, 921, AND THE PROVISIONS SET FORTH IN THE "MANUAL" FOR ALL INFORMATION REGARDING FURNISHING, MAINTAINING, AND USE OF FLASHING ARROW PANELS. PAYMENT FOR THE ABOVE MENTIONED ITEMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

4. DRUMS

DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE "MANUAL". ALL COSTS FOR INSTALLING, MAINTAINING, AND SUBSEQUENT REMOVAL OF SAID DRUMS IS TO BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC MATERIALS (CONT.)

5. CONES

CONES, IF UTILIZED, ARE TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.

6. BARRIER

PORTABLE CONCRETE BARRIER IF NECESSARY IS TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.

7. FLASHERS

FLASHERS SHALL BE 12 VOLT BATTERY-OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHERS OF SHORT DURATION AND ARE TO BE PLACED ON ALL SIGNS AT ALL TIMES AS REQUIRED BY THE "MANUAL" AND THE STANDARD CONSTRUCTION DRAWINGS.

8. FLOODLIGHTING

FLOODLIGHTING OF THE WORKSITE FOR OPERATIONS CONDUCTED DURING THE NIGHTTIME 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 WORKSITE 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.

9. WORK VEHICLES

ALL WORK VEHICLES LICENSED TO OPERATE ON THE HIGHWAY, SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE 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 THE POSTED LEGAL LIMIT. VEHICLE HAZARD LIGHTS DO NOT SATISFY THIS REQUIREMENT. ALL OTHER EQUIPMENT SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT. THE AMBER LIGHT SHALL BE IN OPERATION WHILE THE EQUIPMENT IS WITHIN THE WORK ZONE.

V. PAYMENT

UNLESS STATED OTHERWISE, PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING TEMPORARY MAINTENANCE OF TRAFFIC CONTROL DEVICES INCLUDING DETOURS AND INTERSTATE LANE CLOSURES/SHIFTS SHALL BE MADE UNDER THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

CONTINUOUS ACCESS

THE CONTRACTOR SHALL MAINTAIN SAFE AND ADEQUATE DRIVEWAYS AND WALKWAYS IN ORDER TO PROVIDE CONTINUOUS ACCESS FOR PEDESTRIANS, PASSENGER VEHICLES, TRUCKS, AND SAFETY EQUIPMENT TO ALL ADJOINING PROPERTIES. THE COST FOR ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO PROVIDE CONTINUOUS ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUM AND TEMPORARY PAVEMENT MARKINGS AT THE LOCATIONS DETAILED IN THE PLANS OR SPECIFIED IN THE STANDARD DRAWINGS. WHEN THE CONTRACTOR IS NOTIFIED OF DEFICIENCIES HE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE, PREFERABLY WITHIN 12 HOURS AND NO LATER THAN 24 HOURS.

CALCULATED MS CHECKED PRS

MAINTENANCE OF TRAFFIC NOTES - 1

D12-BH-FY2017 MISC.
PID NO. 98599

6
42

F:\2016\116041 D12 Bridge Rehab\Group 1 Project\Project Data\98599\Design\Roadway\Sheets\98599-1-MN001.dgn 12/14/2016 7:59:13 AM JeffSmith

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

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

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

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

IN ADDITION TO THE REQUIREMENT OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) MAY BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS DETERMINED AND PRE-APPROVED BY THE ENGINEER. ANY LEO HOURS WHICH ARE NOT PRE-APPROVED FOR THE FOLLOWING PURPOSES SHALL NOT BE COMPENSABLE:

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

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

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

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

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

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

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. ANY ADDITIONAL COST (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

A TOTAL OF 150 HOURS IS PROVIDED FOR USE AT ALL 8 LOCATIONS.

MAINTENANCE OF TRAFFIC SCHEME

THE CONTRACTOR SHALL DEVISE A SIMPLE MAINTENANCE OF TRAFFIC SCHEME FOR EACH LOCATION, WHICH SHALL BE STAMPED BY A PROFESSIONAL ENGINEER (SCHEME MAY BE A HAND SKETCH) AND PRESENT IT TO THE DISTRICT WORK ZONE SAFETY ENGINEER AND PROJECT ENGINEER FOR ACCEPTANCE AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION. IN GENERAL, THE METHODS FOR MAINTAINING TRAFFIC THAT THE CONTRACTOR PROPOSES TO USE FOR CONDUCTING THE REQUIRED WORK IN A SAFE AND EFFICIENT MANNER SUPPORTED BY HAND SKETCHES AS NECESSARY. THE MAINTENANCE OF TRAFFIC SCHEME SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE REFERENCED STANDARD CONSTRUCTION DRAWINGS, THE ATTACHED MAINTENANCE OF TRAFFIC SHEETS, AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE MAINTENANCE OF TRAFFIC SCHEME HAS BEEN ACCEPTED.

IF DURING THE PROJECT THE ENGINEER DETERMINES THAT THE APPROVED MAINTENANCE OF TRAFFIC PLAN IS NOT PERFORMING AS DESIRED, THE WORK SHALL BE SUSPENDED UNTIL THE PROBLEM IS RESOLVED TO THE SATISFACTION OF THE ENGINEER AND THE MAINTENANCE OF TRAFFIC PLAN IS REVISED ACCORDINGLY. ANY COSTS OR DELAYS INCURRED AS A RESULT OF THE FAILURE OF THE CONTRACTOR TO ADJUST THE MAINTENANCE OF TRAFFIC SCHEME TO THE SATISFACTION OF THE ENGINEER SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. DURING NON-WORKING HOURS, ALL LANES SHALL BE IN FULL OPERATION WITH ALL TRAFFIC CONTROL SIGNS, EXCEPT OW-124 (ROAD CONSTRUCTION AHEAD) SIGNS, REMOVED OR COVERED AND ALL CHANNELIZING DEVICES REMOVED FROM THE PAVEMENT SURFACES. CHANNELIZING DEVICES MAY BE STORED OR DEPLOYED TEMPORARILY ADJACENT TO THE SHOULDER TO MINIMIZE THE NIGHTLY TRAFFIC CONTROL SET-UP TIME. PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS IS INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

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 RETRO-REFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) 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 IN 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 RETRO-REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE 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 PREPROGRAMMED 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.

FOR THIS PROJECT THERE SHALL BE A TOTAL OF 2 PORTABLE CHANGEABLE MESSAGE SIGNS AVAILABLE FOR USE AT WORK LOCATIONS FOR A TOTAL OF 7 DAYS EACH.

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.

A TOTAL OF 50 DAYS IS PROVIDED FOR USE AT ALL 8 LOCATIONS FOR ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN.

CALCULATED MS
CHECKED PRS

MAINTENANCE OF TRAFFIC NOTES - 2

D12-BH-FY2017 MISC.
PID NO. 98599

ITEM 614 - WORKSITE TRAFFIC SUPERVISOR

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

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

2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703-235-0500.

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

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

A COPY OF EACH WTS 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 WTS CERTIFICATION CONTAINING THE DATE OF ISSUE AND SHALL BE FROM ANY OF THE APPROVED ORGANIZATIONS. AT THE TIME OF THE PRECONSTRUCTION, THE WTS CERTIFICATION DATE OF ISSUE SHALL BE WITHIN 5 YEARS PRIOR TO THE ORIGINAL COMPLETION DATE OF THE PROJECT.

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

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

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

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

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

   A. TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP);

   B. EMERGENCY RESPONSE AND NOTIFICATION;

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

   D. RESPONDERS CONCERNS.

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

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

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

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

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

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

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

    B. DAILY TRAFFIC CONTROL SETUP AND REMOVAL.

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

    D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA.

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

    F. ALL OTHER EMERGENCY TRAFFIC CONTROL NEEDS.

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

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

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

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

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

    B. REGIONAL, COUNTY OR LOCAL 911 DISPATCH; AND

    C. TOWING AND RECOVERY PROVIDERS.

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

16. PROPOSE A RESPONSE/ACTION PLAN TO:

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

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

    C. DIVERT TRAFFIC TO ROUTES THAT CAN ACCOMMODATE DEMANDS;

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

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

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

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

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

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

        I. LOCATION - INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL.

        II. NUMBER AND TYPE OF VEHICLES INVOLVED.

        III. ESTIMATED EXTENT OF DAMAGE OR INJURY.

        IV. ESTIMATED NUMBER OF PATIENTS INVOLVED.

        V. ANY POTENTIAL HAZARDOUS CONDITIONS.

        VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE.

    B. INITIATE TRAFFIC MANAGEMENT / PROVIDE TRAFFIC CONTROL.

    C. ASSIST MOTORIST WITH DISABLED VEHICLES.

    D. RECOMMEND ROADWAY REPAIR NEEDS.

    E. PROVIDE REPAIR RESOURCES.

18. ATTEND POST-INCIDENT DEBRIEFINGS IF REQUIRED.

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

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

PAYMENT FOR THE WORKSITE TRAFFIC SUPERVISOR SHALL BE INCLUDED UNDER THE LUMP SUM FOR ITEM 614 - MAINTAINING TRAFFIC.

CALCULATED MS
CHECKED PRS

MAINTENANCE OF TRAFFIC NOTES - 3

D12-BH-FY2017 MISC.
PID NO. 98599

8
42

PARTICIPATION									ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	01/IMS/BR		02/BRO/BR		03/S>2/BR		04/BRO/BR							
													ROADWAY	
	LS		LS		LS				201	11000	LS		CLEARING AND GRUBBING	
													STRUCTURE REPAIR (CUY-77-0479, SFN 1805975 - LOCATION 1)	
	441								513	21501	441	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	11
	LS								513	95020	LS		STRUCTURAL STEEL, MISC: SIDEWALK COVER PLATE REPAIR	11
	4,378								SPECIAL	53000600	4,378	SF	STRUCTURES, TIMBER SUBDECK	12
	5,092								SPECIAL	53000600	5,092	SF	STRUCTURES, BOTTOM OF DECK SPALL REMOVAL	11
	223								SPECIAL	53000600	223	SF	STRUCTURES, COMPOSITE FIBER WRAP SYSTEM	12
	15								844	10001	15	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	13
													STRUCTURE REPAIR (CUY-77-1575 SN, SFN 1806912 - LOCATION 2)	
			32						512	10101	32	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	11
			32						512	74001	32	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	11
			50						519	11101	50	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	11
			1,112						SPECIAL	53000600	1,112	SF	STRUCTURES, TIMBER SUBDECK	12
			1,392						SPECIAL	53000600	1,392	SF	STRUCTURES, BOTTOM OF DECK SPALL REMOVAL	11
													STRUCTURE REPAIR (CUY-52-0421, SFN 1807587 - LOCATION 3)	
					465				512	10050	465	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
					820				512	10101	820	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	11
					820				512	74001	820	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	11
					696				607	39931	696	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN	13
													STRUCTURE REPAIR (CUY-90-0458, SFN 1807641 - LOCATION 4)	
	LS								202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	11
	383								512	10050	383	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
	687								512	10101	687	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	11
	687								512	74001	687	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	11
	10								519	11101	10	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	11
	953								SPECIAL	53000600	953	SF	STRUCTURES, COMPOSITE FIBER WRAP SYSTEM	12
	568								607	39931	568	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN	13
	453								844	10001	453	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	13
													STRUCTURE REPAIR (CUY-90-1391, SFN 1807854 - LOCATION 5)	
	11,195								SPECIAL	53000600	11,195	SF	STRUCTURES, TIMBER SUBDECK	12
	11,503								SPECIAL	53000600	11,503	SF	STRUCTURES, BOTTOM OF DECK SPALL REMOVAL	11
													STRUCTURE REPAIR (CUY-480-0335, SFN 1814095 - LOCATION 6)	
			LS						202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	11
			512						509	10000	512	LB	EPOXY COATED REINFORCING STEEL	
			250						510	10000	250	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
			30						511	34411	30	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN	34
			213						512	10050	213	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
			681						512	10101	681	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	11
			681						512	74001	681	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	11
			16						516	45305	16	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	11
			LS						516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	11
			72						519	11101	72	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	11
			652						607	39901	652	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	12

CALCULATED MS
CHECKED PRS

GENERAL SUMMARY - 1

D12 BH FY2017 MISC.
PID NO. 98599

9
42

PARTICIPATION									ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
	01/IMS/BR		02/BRO/BR		03/S>2/BR		04/BRO/BR							
													STRUCTURE REPAIR (CUY-480-0727, SFN 1814184 - LOCATION 7)	
			16,020						SPECIAL	53000600	16,020	SF	STRUCTURES, TIMBER SUBDECK	12
			17,183						SPECIAL	53000600	17,183	SF	STRUCTURES, BOTTOM OF DECK SPALL REMOVAL	11
			20						607	98100	20	EACH	FENCE, MISC.: ADDITIONAL PERMANENT STEEL POST TO REINFORCE 4' HIGH VANDAL PROTECTION FENCE	13
													STRUCTURE REPAIR (LAK-2-1141, SFN 4301110 - LOCATION 8)	
							3,609		SPECIAL	53000600	3,609	SF	STRUCTURES, TIMBER SUBDECK	12
							4,562		SPECIAL	53000600	4,562	SF	STRUCTURES, BOTTOM OF DECK SPALL REMOVAL	11
													MAINTENANCE OF TRAFFIC	
	48		64		16		22		614	11110	150	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	12		26				12		614	18401	50	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	7
													INCIDENTALS	
	LS		LS		LS		LS		614	11000	LS		MAINTAINING TRAFFIC	
	2		2		1		1		619	16011	6	MNTH	FIELD OFFICE, TYPE B, AS PER PLAN	5
	LS		LS		LS		LS		623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	4
	LS		LS		LS		LS		624	10000	LS		MOBILIZATION	

CALCULATED MS
CHECKED PRS

GENERAL SUMMARY - 2

D12 BH FY2017 MISC.
PID NO. 98599

10
42

F:\2016\116041 D12 Bridge Rehab\Group 1 Project\ProjectData\98599\Design\Roadway\Sheets\98599-1-GG001.dgn 2/24/2017 8:31:17 AM JeffSmith

PROJECT DESCRIPTION

AS LISTED IN STRUCTURE DATA TABLE ON SHEET 4/5.

REFER TO STANDARD BRIDGE DRAWINGS

AS LISTED ON TITLE SHEET

REFER TO SUPPLEMENTAL SPECIFICATIONS

SS 844

RIGHT OF WAY

ALL WORK IS TO BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY OR EASEMENTS OR WITHIN STATE PROPERTY.

UTILITY OWNERSHIP

THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UTILITIES IN THE WORK AREAS.

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 SECTIONS 102.05 AND 105.02 OF THE 2016 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

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

THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 12 OFFICE
5500 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OH 44125

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE:
HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX

EXISTING DIMENSIONS

ALL DIMENSIONS ARE ±.

LIMITATIONS OF OPERATIONS

THE CONTRACTOR'S ACTIVITIES AND WORK SCHEDULE SHALL BE CONSTRAINED BY THE FOLLOWING SPECIAL LIMITATIONS:

1. TIMBERS MUST BE COMPLETELY SECURED AS SHOWN IN THE PLANS BEFORE TRAFFIC IS ALLOWED UNDERNEATH.
2. MAINTENANCE OF TRAFFIC RESTRICTIONS (REFER TO THE MAINTENANCE OF TRAFFIC NOTES SHEETS IN THIS PLAN).

ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT 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 TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

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

AT LOCATIONS 2 (CUY-77-1575 SN), 3 (CUY-52-0421), 4 (CUY-90-0458), AND 6 (CUY-480-0335), SEAL CONCRETE AREAS SPECIFIED IN THE PLANS. THE COLOR OF THE FINISH COAT SHALL BE AS INDICATED ON THE STRUCTURE DATA SHEET. CONTRACTOR SHALL ENSURE ANY EXISTING UNDERPASS LIGHTING, FENCE AND POSTS, RAILING AND ALL OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE SEALING OPERATIONS. SEALING OF THE FIBER WRAPPED AREAS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM SPECIAL - STRUCTURES, COMPOSITE FIBER WRAP SYSTEM.

ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS REQUIRED TO SEAL ALL OF THE AREAS DETAILED IN THE PLANS SHALL BE PAID UNDER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN.

ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN

AT LOCATIONS 2 (CUY-77-1575 SN), 3 (CUY-52-0421), 4 (CUY-90-0458), AND 6 (CUY-480-0335), THIS ITEM IS INCLUDED FOR THE REMOVAL OF EXISTING COATINGS FROM EXISTING CONCRETE SURFACES TO BE SEALED. AREAS OF CONCRETE REQUIRING PATCHES OR FIBERWRAP SHALL NOT BE INCLUDED IN THIS ITEM.

ITEM 513 - REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN

FOR LOCATION 1 (CUY-77-0479), EXISTING DAMAGED OR DETERIORATED PLATES AND ANGLES ARE TO BE REMOVED AND REPLACED AS PER THE PLANS OR AS DIRECTED BY THE ENGINEER. THE EXISTING END CROSSFRAME MEMBERS SHALL BE REMOVED FLUSH WITH THE BEAM WEB, WHEN APPLICABLE. ALL END CROSSFRAME MEMBERS DESIGNATED FOR REPLACEMENT IN ONE BAY SHALL BE REMOVED AND REPLACED PRIOR TO REMOVING ANY END CROSSFRAME MEMBERS IN AN ADJACENT BAY.

EXCEPT AS NOTED IN THE PLANS, EXISTING GUSSET PLATES ARE TO BE REUSED AS WELD CONNECTING POINTS FOR THE NEW STEEL CROSSFRAME MEMBERS. CUT OR GRIND EXISTING GUSSET PLATES TO HAVE A 1½" ± TAB REMAINING FOR WELDING PURPOSES. THE MINIMUM PORTION OF MEMBERS FOR REPLACEMENT AND REMOVAL IS SHOWN IN THE PLAN DETAILS. THE CONTRACTOR MAY AT HIS EXPENSE REMOVE AND REPLACE ADDITIONAL MEMBERS TO FACILITATE THE WORK.

MATERIAL SHALL BE A709 GRADE 50.

FOR ADDITIONAL DETAILS NOT SHOWN IN PLANS, REFER TO SCD GSD-1-96. PAINTING OF THIS REPAIR WORK IS NOT REQUIRED.

ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO REMOVE AND INSTALL THE END CROSSFRAMES SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 513 - REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN.

ITEM 513 - STRUCTURAL STEEL, MISC.: SIDEWALK COVER PLATE REPAIR

FOR LOCATION 1 (CUY-77-0479), THE PLATE COVERING THE RIGHT SIDEWALK EXPANSION OPENING AT THE REAR ABUTMENT SHALL BE RETROFIT. TRIM THE EXISTING BENT SLIDING PLATE AT THE FACE OF THE SIDEWALK ARMOR. GRIND THE CUT EDGE FLUSH WITH THE TOP SURFACE OF THE ARMOR. WELD THE NEW SLIDING PLATE TO THE TOP OF THE ABUTMENT ARMOR.

MATERIAL SHALL BE A709 GRADE 36 OR 50.

PAINTING OF THIS REPAIR WORK IS NOT REQUIRED.

ALL EQUIPMENT, LABOR AND MATERIALS REQUIRED TO REMOVE THE EXSISTING SLIDING PLATE AND INSTALL THE NEW SLIDING PLATE SHALL BE INCLUDED FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL, MISC.: SIDEWALK COVER PLATE REPAIR.

ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN

AT LOCATION 6 (CUY-480-0335), THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE LOWER MASONRY PLATE BY RELOCATING IT SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60-DEGREES F [15-DEGREES C], LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS.

ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. NEW BEARINGS SHALL BE PAINTED PER ITEM 514.

PAINT AND/OR OVERSPRAY SHALL NOT BE PERMITTED ON THE CONCRETE SURFACES.

ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN.

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

FOR LOCATION 6 (CUY-480-0335), THIS WORK INCLUDES RAISING OR RE-POSITIONING EXISTING STRUCTURES TO PERFORM THE WORK DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

AT LOCATIONS 2 (CUY-77-1575 SN), 4 (CUY-90-0458), AND 6 (CUY-480-0335), PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED, INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. WHERE APPLICABLE, CONTRACTOR SHALL ENSURE ANY EXISTING UNDERPASS LIGHTING, BRIDGE RAIL OR ANY OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE PATCHING OPERATIONS.

SPECIFIC PATCHING LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH ITEM 519 UNLESS IDENTIFIED IN THE PLANS. IF EXISTING UTILITIES ARE LOCATED WITHIN THE SPECIFIED PATCHING AREAS, THE COST FOR REMOVAL AND REINSTALLING THE UTILITIES SHALL BE INCLUDED IN THIS ITEM. ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS REQUIRED TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED FOR PAYMENT AT THE SQUARE FOOT CONTRACT PRICE FOR ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL

LOCATIONS 1 (CUY-77-0479), 2 (CUY-77-1575 SN), 5 (CUY-90-1391), 7 (CUY-480-0727), AND 8 (LAK-2-1141):

THE CONTRACTOR SHALL PROVIDE ACCESS, SOUND AREAS WHERE DESIGNATED ON THE PLANS AND MARK AREAS OF DETERIORATED CONCRETE. UPON APPROVAL FROM THE ENGINEER, SUBSEQUENT REMOVAL OF MARKED AREAS AND DISPOSAL OF ALL DEBRIS SHALL BE PERFORMED. STANDARD DESCRIPTIONS OF CONCRETE AREAS SUBJECT TO REMOVAL INCLUDE, BUT NOT LIMITED TO: SPALLED, DELAMINATED, MOTTLED, DAMP, HONEYCOMBED, EFFLORESCENCE, AND ETC.

THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN PROXIMITY TO THE EXISTING UTILITY FACILITIES. SECTIONS 105.07 AND 107.16 OF THE CMS REQUIRE THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

THE CONTRACTOR SHALL MAKE PROVISION TO ENSURE PUBLIC SAFETY WHILE REMOVING THE LOOSE AND DELAMINATED CONCRETE. THE MATERIAL CAN BE REMOVED BEFORE OR AFTER THE TIMBER SUBDECK IS INSTALLED. ALL DEBRIS MUST BE REMOVED FROM THE SUBDECK BEFORE WORK IS CONSIDERED COMPLETE. THE REMOVED CONCRETE SHALL BE DISPOSED OF OFF SITE IN CONFORMANCE WITH LOCAL, STATE, AND FEDERAL POLLUTION CONTROL LAWS.

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HAND HELD CONVENTIONAL HAMMERS MAY BE USED TO REMOVE MINOR SPALLS. HOWEVER, PNEUMATIC HAMMERS SHOULD ALSO BE EMPLOYED TO ENSURE COMPLETE REMOVAL OF ALL DELAMINATED CONCRETE. RESOUNDING OF THE DELAMINATED AREA TO ENSURE COMPLETE REMOVAL WILL BE REQUIRED AT NO ADDITIONAL COST. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH EXISTING REINFORCING STEEL.

METHOD OF MEASUREMENT: THE PAYMENT FOR THIS ITEM SHALL BE PER SQUARE FOOTAGE OF DECK BOTTOM SOUNDED, MARKED, SPALLED AND ACCEPTED. THIS INCLUDES ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY FOR ACCESS, SOUNDING OF ENTIRE AREA DESIGNATED IN THE PLANS, SPALL REMOVAL AND DEBRIS REMOVAL. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JDB	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		VARIOUS	

STRUCTURE GENERAL NOTES - 1

D12-BH-FY2017 MISC.
PID No. 98599

ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK

FOR LOCATIONS 1 (CUY-77-0479), 2 (CUY-77-1575 SN), 5 (CUY-90-1391), 7 (CUY-480-0727), AND 8 (LAK-2-1141).

DESCRIPTION:

THIS ITEM SHALL CONSIST OF FURNISHING, CUTTING, FITTING, PLACING AND ERECTING OF TIMBER, AND THE FURNISHING AND INSTALLING OF ALL NECESSARY HARDWARE AS SPECIFIED.

SUBDECK AREAS ABOVE TRAVELED LANES, AS WELL AS PAVED SHOULDERS.

MATERIALS:

TIMBER BEAMS SHALL CONFORM TO CMS 711.26 AND SHALL BE DOUGLAS FIR LARCH, GRADE 2 OR BETTER. PRESERVATIVE TREATMENT FOR TIMBER BEAMS SHALL CONFORM TO CMS 712.06.

THE TIMBER PLYWOOD SHEETING SHALL BE CDX - 3/4" THICK DOUGLAS FIR PLYWOOD OR BETTER. ALL TRANSVERSE EDGES OF THE PLYWOOD SHALL BE SUPPORTED BY THE TIMBER BEAMS. THE BOLTS SHALL BE ASTM A449 - TYPE 1 OR SAE J429 - GRADE 5, 3/8" DIAMETER GALVANIZED BOLTS WITH GALVANIZED FENDER WASHERS AND LOCK NUTS. SPACING OF THE BOLTS SHALL BE A MAXIMUM OF 2 FOOT SPACING.

WOOD SCREWS SHALL BE GALVANIZED 3" LONG #10 FASTENERS SPACED AT 2 FOOT MAXIMUM, UNLESS OTHERWISE NOTED.

GENERAL:

FIELD MEASUREMENTS SHALL BE TAKEN BEFORE ANY FABRICATION IS PERFORMED.

METHOD OF MEASUREMENT:

THE PAYMENT FOR THIS ITEM SHALL BE SQUARE FOOTAGE IN PLACE AND ACCEPTED. THIS ITEM SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE TIMBER SUBDECKS. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

ITEM SPECIAL - STRUCTURES, COMPOSITE FIBER WRAP SYSTEM

FOR LOCATIONS 1 (CUY-77-0479) AND 4 (CUY-90-0458).

DESCRIPTION: THIS WORK SHALL CONSIST OF PROVIDING AND INSTALLING A FIBER WRAP INCLUDING PREPARATION, WRAPPING THE PIER, AND ALL INCIDENTALS NECESSARY TO COMPLETE THIS WORK. THE INSTALLATION SHALL BE PER THE MANUFACTURER'S REQUIREMENTS.

MATERIALS: SUPPLIERS SHALL HAVE A MINIMUM OF 10 INSTALLATIONS AND FURNISH CERTIFIED TEST REPORTS INCLUDING 1000 HOUR TESTS FOR 140 °F WATER, SALT WATER, ALKALINE SOIL, OZONE AND EFFERVESCENCE IN ADDITION TO THE REQUIREMENTS LISTED BELOW.

THE FABRIC FOR THE COMPOSITE CASING SHALL BE CONTINUOUS FILAMENT WOVEN FABRIC. PRIMARY FIBERS FOR THE FABRIC SHALL BE (E) ELECTRICAL GLASS FIBERS. THE FIBER SHALL HAVE A MINIMUM NOMINAL THICKNESS OF 0.05 INCHES.

THE MINIMUM WEIGHT OF THE FABRIC SHALL BE 27.0 OUNCES PER SQUARE YARD.

THE EPOXY SHALL BE SUPPLIED BY THE MANUFACTURER TO MEET THE COMPOSITE STRENGTH GIVEN BELOW. POLYESTER RESIN SHALL NOT BE ALLOWED AS A SUBSTITUTE FOR EPOXY RESIN.

THE COMPOSITE OF THE FIBER WRAPPED COLUMN CASING SYSTEM SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

PROPERTY	REQUIREMENTS	ASTM TEST METHOD
ULTIMATE TENSILE STRENGTH, PSI MIN. IN PRIMARY FIBER DIRECTION	60,000 PSI	D3039, AVERAGE OF 7, 1" BY 10" NORMALIZED TO 0.80" THICK 0.01" PER MINUTE TESTING SPEED
ULTIMATE TENSILE STRENGTH, PSI MIN. IN ORTHOGONAL FIBER DIRECTION	3,000 PSI	D3039, AVERAGE OF 7, 1" BY 10" NORMALIZED TO 0.80" THICK 0.01" PER MINUTE TESTING SPEED
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO 100% HUMIDITY	60,000 PSI	C581
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO OZONE	60,000 PSI	D1149 EXCEPT NOT UNDER STRESS DURING OZONE EXPOSURE
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO ALKALI	60,000 PSI	D3038 USING SOIL BURIAL - WATER CONTENT OF 73% ± 3%
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE TO SALT WATER	60,000 PSI	C581 AND D1141 OMITTING ADDITION OF HEAVY METAL REAGENTS
TENSILE STRENGTH (MIN. AFTER TEST) 1000 HOURS EXPOSURE @ 140 DEGREES F	60,000 PSI	D3045
TENSILE STRENGTH (MIN. AFTER TEST) ULTRAVIOLET (UV) EXPOSURE	60,000 PSI	G154 USING FS40 UV-B BULBS FOR A MIN. 40 CYCLES. THE CYCLE SHALL BE 4 HOURS OF CONDENSATE EXPOSURE AT 40 DEGREES C.
ELONGATION: PERCENT, MIN. PERCENT, MAX.	 1.7 % 5.0 %	
TENSILE MODULUS, PSI MIN. OF PRIMARY FIBERS	3,000,000	D3039
VISUAL EFFECTS	ACCEPTANCE LEVEL III	D2563
COEFFECIENT OF THERMAL EXPANSION IN THE PRIMARY DIRECTION	4,300,000 PPM/DEG. F (+15%)	D696

SURFACE PREPARATION: THE SURFACE TO RECEIVE THE COMPOSITE WRAP SHALL BE FREE FROM FINS, SHARP EDGES, AND PROTRUSIONS THAT WILL CAUSE VOIDS BEHIND THE CASING OR THAT, IN THE OPINION OF THE ENGINEER, WILL DAMAGE THE FIBER. IF FIBERS ARE TO WRAP AROUND CORNERS OF RECTANGLE CROSS-SECTIONS, THE CORNERS SHALL BE ROUNDED TO A 1/2 INCH RADIUS. THIS WILL HELP PREVENT STRESS CONCENTRATIONS IN THE FIBER WRAP AND VOIDS BETWEEN THE FIBER WRAP AND THE CONCRETE. IN ADDITION, THE SURFACE SHALL BE SMOOTH AND FREE OF VOIDS OR UNDULATIONS THAT WOULD PREVENT FULL CONTACT BETWEEN THE CONCRETE AND THE FIBER WRAP. THE REMOVAL OF THE EXISTING COATING FROM THE CONCRETE SURFACES IS INCLUDED WITH THE SURFACE PREPARATION FOR THE COMPOSITE FIBER WRAP SYSTEM AND WILL NOT BE PAID SEPARATELY UNDER ITEM 512.

COMPOSITE APPLICATION: THE AMBIENT TEMPERATURE AND THE TEMPERATURE OF THE EPOXY RESIN COMPONENTS SHALL BE BETWEEN 55 DEG. F AND 95 DEG. F AT THE TIME OF MIXING. THE COMPOSITE SHALL BE APPLIED WHEN THE RELATIVE HUMIDITY IS LESS THAN 85% AND THE SURFACE TEMPERATURE IS MORE THAN 5 DEG. F ABOVE THE DEW POINT. APPLICATION SHALL BEGIN WITHIN ONE HOUR AFTER THE BATCH HAS BEEN MIXED. A MANUFACTURER REPRESENTATIVE SHALL BE ON SITE FOR THE FIRST APPLICATION OF THE COMPOSITE FIBER WRAP SYSTEM TO APPROVE THE CONTRACTOR'S APPLICATION PROCESS. THIS REQUIREMENT MAY BE WAIVED WITH WRITTEN APPROVAL FROM THE ENGINEER.

THE COMPONENTS OF THE EPOXY RESIN SHALL BE MIXED WITH A MECHANICAL MIXER AND APPLIED UNIFORMLY TO THE FIBER AT A RATE THAT SHALL INSURE COMPLETE SATURATION OF THE FABRIC.

THE FABRIC/EPOXY COMPOSITE SHALL BE APPLIED TO THE SURFACE OF THE COLUMN BY WRAPPING METHODS THAT PRODUCE A UNIFORM FORCE THAT IS DISTRIBUTED ACROSS THE ENTIRE WIDTH OF THE FABRIC. THE PRIMARY FIBERS OF THE FABRIC SHALL NOT DEVIATE FROM A HORIZONTAL LINE MORE THAN 1/2 INCH PER FOOT. ENTRAPPED AIR SHALL BE RELEASED OR ROLLED OUT BEFORE THE EPOXY SETS.

SUCCESSIVE LAYERS OF COMPOSITE MATERIALS SHALL BE PLACED BEFORE POLYMERIZATION OF THE PREVIOUS LAYER OF EPOXY IS TOO DRY TO ACHIEVE ADEQUATE BOND BETWEEN LAYERS. IF POLYMERIZATION DOES OCCUR BETWEEN LAYERS THE SURFACE MUST BE ROUGHENED USING A LIGHT ABRASIVE THAT WILL NOT DAMAGE THE FIBER.

THE FINAL LAYER OF EPOXY SHALL BE APPLIED TO THE FINAL LAYER OF FABRIC, WITH CARE TAKEN TO ENSURE COATING OF ALL EDGES AND SEAMS. SPACES BETWEEN THE BANDS OF FABRIC SHALL BE FILLED WITH EPOXY THICKENED AS DIRECTED BY THE MANUFACTURER.

A FINAL INSPECTION SHALL BE PERFORMED ON ALL FIBER WRAPPED COLUMNS AFTER THE EPOXY SETS YET PRIOR TO THE APPLICATION OF THE URETHANE TOP COAT. ALL DEFECTS (INCLUDING BUBBLES, DELAMINATIONS AND FABRIC TEARS) MORE THAN 1 SQUARE INCH OF THE SURFACE AREA, OR AS SPECIFIED BY THE PROJECT ENGINEER, SHALL BE REPAIRED AS SUCH.

1. SMALL DEFECTS (ON THE ORDER OF 6" DIAMETER) SHALL BE INJECTED OR BACK FILLED WITH EPOXY.
2. BUBBLES LESS THAN 12" DIAMETER SHALL BE REPAIRED BY INJECTING WITH EPOXY. TWO HOLES SHALL BE DRILLED INTO THE BUBBLE TO ALLOW INJECTION OF THE EPOXY AND ESCAPE OF ENTRAPPED AIR.
3. BUBBLES, DELAMINATIONS AND FABRIC TEARS GREATER THAN 12" IN DIAMETER SHALL BE REPAIRED BY REMOVING AND REAPPLYING THE REQUIRED NUMBER OF LAYERS OF THE COMPOSITE AND THE REQUIRED FINISH COATING. ALL REPAIRS SHALL BE APPROVED BY THE PROJECT ENGINEER.

COATING SYSTEM APPLICATION: A FINAL URETHANE COATING IS REQUIRED TO PROTECT THE FIBERS FROM THE ELEMENTS, SPECIFICALLY UV RADIATION, AND TO GIVE THE FINAL AESTHETIC EFFECT.

AFTER 96 HOURS FROM THE FINAL APPLICATION OF EPOXY, IF THE FINAL EPOXY COAT IS COMPLETELY POLYMERIZED, THE EXTERIOR SURFACES OF THE COMPOSITE WRAP SHALL BE CLEANED AND ROUGHENED BY A LIGHT ABRASIVE. CARE SHOULD BE TAKEN DURING THE ROUGHENING PROCESS SO THAT THE FIBERS ARE NOT DAMAGED. ALL CLEANED AND ROUGHENED SURFACES SHALL BE DRY BEFORE APPLYING THE URETHANE COATING.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL PAY FOR THIS ITEM PER SQUARE FOOT OF FIBER WRAP MATERIAL INSTALLED AND ACCEPTED TO COMPLETE THE PROPOSED WORK. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PROVIDE AND INSTALL A FIBER WRAP COLUMN CASING SYSTEM USING HIGH STRENGTH, HYBRID FIBER/EPOXY COMPOSITES FIELD APPLIED TO THE COLUMN, INCLUDING ERECTION OF SCAFFOLDING, CLEANING, SURFACE PREPARATION, WRAPPING THE COLUMN AND ALL INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION PER THE MANUFACTURER'S REQUIREMENTS. PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM SPECIAL - STRUCTURES, COMPOSITE FIBER WRAP SYSTEM.

ITEM 607 - VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN

AT LOCATION 6 (CUY-480-0335), THE EXISTING STEEL POSTS THAT ARE ANCHORED IN CORED HOLES SHALL BE CUT OFF FLUSH WITH THE TOP OF THE CONCRETE RAILING AND ANY VOID FILLED WITH NON-SHRINKING GROUT. GRIND THE TOP OF THE ROUNDED PARAPET FLAT SO THAT THE NEW PLATE SETS LEVEL PER DETAIL. EACH OF THESE LOCATIONS WILL BE COVERED BY NEW VANDAL PROTECTION BASE PLATES.

THIS ITEM SHALL BE AS PER THE DETAILS IN THE PLANS WITH THE APPLICABLE PORTIONS OF STANDARD DRAWING VPF-1-90 AND THE MANUFACTURER'S RECOMMENDATIONS.

PATCHING OPERATIONS SHALL OCCUR PRIOR TO FENCE INSTALLATION.

ANY ADDITIONAL DRILLING REQUIRED TO OBTAIN ANCHOR DEPTH OR CORE DIAMETER IS INCLUDED WITH THIS ITEM. ANCHORS SHALL BE INSTALLED WITH NON-SHRINK, NON-METALLIC GROUT PER CMS 510.

AT LOCATIONS WHERE THE FENCE SPANS ACROSS THE EXPANSION JOINT, DO NOT INSTALL LINE RAILS AND EXPANSION JOINT SLEEVES; HOWEVER, THE FABRIC SHALL REMAIN CONTINUOUS ACROSS THE EXPANSION JOINT.

THE COLOR OF THE FENCE FABRIC, RAILS, POSTS, PLATES, TIE WIRES, AND ADDITIONAL VISUAL HARDWARE AND CAULK SHALL BE BLACK.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 607 - VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16 | CHECKED DLR | REVISED | STRUCTURE FILE NUMBER VARIOUS

STRUCTURE GENERAL NOTES - 2

D12-BH-FY2017 MISC.
PID No. 98599

ITEM 607 - VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN

AT LOCATIONS 3 (CUY-52-0421) AND 4 (CUY-90-0458), THIS ITEM IS INTENDED TO COMPLETELY REMOVE THE EXISTING VANDAL PROTECTION FENCE (VPF). THE EXISTING ANCHOR BOLT INSERTS SHALL BE SAVED TO BE REUSED WITH THE NEW VANDAL PROTECTION FENCE. MEASURE LOCATION OF BOLTS OR CREATE A TEMPLATE SO THAT A NEW BASE PLATE CAN BE FABRICATED. IF EXISTING ANCHOR BOLT INSERTS ARE UNUSABLE, THEN ENLARGED OR RELOCATED PLATES WITH DOWELED ANCHORS PER THE STANDARD DRAWING SHALL BE USED.

THE CONTRACTOR SHALL FIELD VERIFY EXISTING BASE PLATE DIMENSIONS AND POST SPACINGS PRIOR TO REMOVAL.

THIS ITEM SHALL BE AS PER THE DETAILS IN THE PLANS WITH THE APPLICABLE PORTIONS OF STANDARD DRAWING VPF-1-90 AND THE MANUFACTURER'S RECOMMENDATIONS.

PATCHING OPERATIONS SHALL OCCUR PRIOR TO FENCE INSTALLATION.

NEW A325 HIGH STRENGTH BOLTS SHALL BE SUPPLIED TO MATCH THE EXISTING RAILING INSERTS PER THIS ITEM. BASE PLATES SHALL BE FABRICATED TO MATCH THE EXISTING INSERT SPACING. THE BASE PLATE TYPE APPEARS TO BE PER BP-1 OF THE CURRENT STANARD DRAWING VPF-1-90.

ANY ADDITIONAL DRILLING REQUIRED TO OBTAIN ANCHOR DEPTH OR CORE DIAMETER IS INCLUDED WITH THIS ITEM. ANCHORS SHALL BE INSTALLED WITH NON-SHRINK, NON-METALLIC GROUT PER CMS 510 IF THERE ARE LOCATIONS WHERE THE INSERTS CAN NOT BE REUSED.

AT LOCATIONS WHERE THE FENCE SPANS ACROSS THE EXPANSION JOINT, DO NOT INSTALL LINE RAILS AND EXPANSION JOINT SLEEVES; HOWEVER, THE FABRIC SHALL REMAIN CONTINUOUS ACROSS THE EXPANSION JOINT.

THE COLOR OF THE FENCE FABRIC, RAILS, POSTS, PLATES, TIE WIRES, AND ADDITIONAL VISUAL HARDWARE AND CAULK SHALL BE BLACK.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 607 - VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 607 - FENCE, MISC.: ADDITIONAL PERMANENT STEEL POST TO REINFORCE 4' HIGH VANDAL PROTECTION FENCE:

AT LOCATION 7 (CUY-480-0727), 12" DEEP 2½" MINIMUM DIAMETER HOLES SHALL BE CORED INTO THE TOP OF THE EXISTING CONCRETE RAILING AT LOCATIONS PER THE DIRECTION OF THE ENGINEER. 5' LONG 1.660" MINIMUM OUTSIDE DIAMETER STEEL POST PER VPF-1-90 STANDARD DRAWING FOR LINE POSTS SHALL BE GROUTED IN PLACE WITH NON-SHRINK, NON-METALLIC GROUT. THE POST SHALL BE ATTACHED TO THE FENCE FABRIC WITH TIES PER THE VPF-1-90 STANDARD DRAWING. THIS ITEM ALSO INCLUDES REMOVING EXISTING DETERIORATED FENCE POSTS THAT ARE LOOSE OR BROKEN AS DIRECTED BY THE ENGINEER. A QUANTITY OF 20 EACH IS INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK TO BE USED AS DIRECTED BY THE ENGINEER.

PAYMENT FOR THIS ITEM SHALL BE PER EACH POST FURNISHED AND INSTALLED IN THE EXISTING CONCRETE RAILING. PAYMENT SHALL BE MADE UNDER ITEM 607 - FENCE, MISC.: ADDITIONAL PERMANENT STEEL POST TO REINFORCE 4' HIGH VANDAL PROTECTION FENCE.

ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN

AT LOCATIONS 1 (CUY-77-0479) AND 4 (CUY-90-0458), REPAIR WORK SHALL BE PER SUPPLEMENTAL SPECIFICATION 844. THE MINIMUM SPACING OF 100 GRAM ZINC ANODE SHALL BE 18" OR EQUIVALENT TOTAL ZINC CONTENT PER AREA. THIS ITEM SHALL BE PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN AND INCLUDE ALL REQUIRED PATCHING AND PROTECTION WORK TO MAKE THE PIER COLUMNS READY FOR THE COMPOSITE FIBER WRAP SYSTEM.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	11/13/16	STRUCTURE FILE NUMBER
BLN	JLS	JDB	12/12/16	VARIOUS
CHECKED	REVISED			
DLR				

STRUCTURE GENERAL NOTES - 3

D12-BH-FY2017 MISC.
PID No. 98599

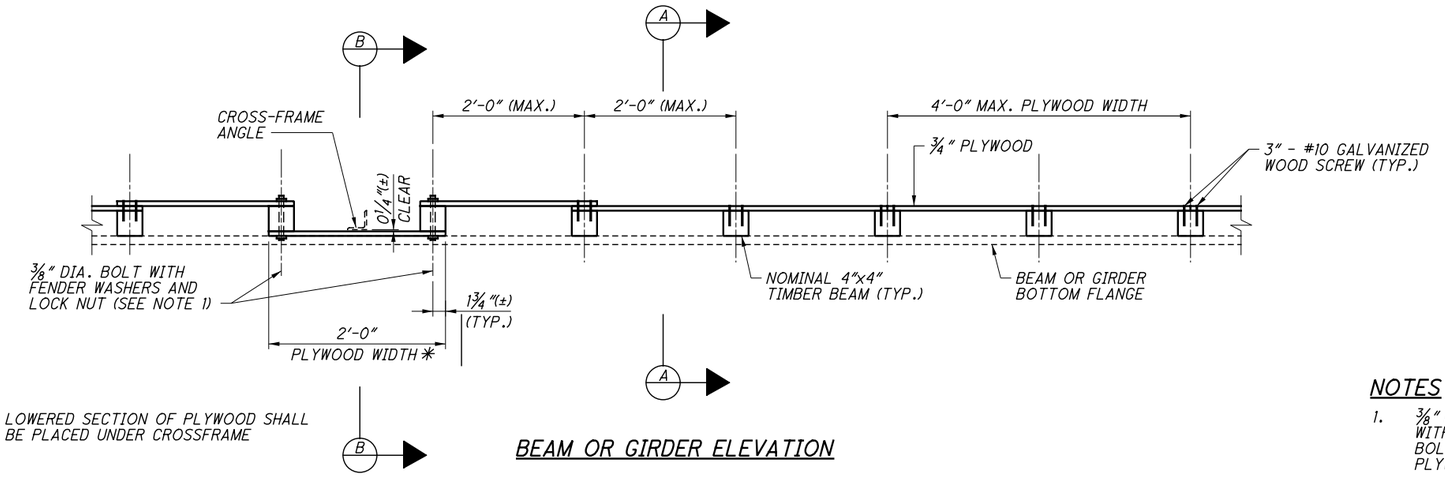
LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	STRUCTURE TYPE	STRUCTURE LIMITS	BRIDGE WIDTH (OUT/OUT)	LANES ON	LANES UNDER	SEALER AND PAINT COLOR	PROPOSED WORK (WORK SHOWN IS REPRESENTATIVE AND DOES NOT INCLUDE ALL WORK REQUIRED)
1	CUY-77-0479	1805975	4 SPAN CONTINUOUS STEEL BEAM	284'	38.33'	2	6	N/A	- TIMBER SUBDECK AND SPALL REMOVAL - CONCRETE PIER COLUMN REPAIR - END CROSSFRAME REPAIR - SIDEWALK COVER PLATE REPAIR
2	CUY-77-1575 SN	1806912	3 SPAN CONTINUOUS STEEL BEAM	161'	30.67'	2	3	N/A	- TIMBER SUBDECK AND SPALL REMOVAL - PATCHING OF CONCRETE BACKWALL
3	CUY-52-0421	1807587	6 SPAN CONTINUOUS STEEL BEAM	328'	64.33'	4	2	MATCH EXISTING SEALER COLOR	- 12' HIGH CURVED VANDAL PROTECTION FENCE REMOVED AND REPLACED
4	CUY-90-0458	1807641	4 SPAN CONTINUOUS STEEL BEAM	267'	64.33'	4	7	MATCH EXISTING SEALER COLOR	- 12' HIGH CURVED VANDAL PROTECTION FENCE REMOVED AND REPLACED - CONCRETE PIER COLUMN REPAIR - PATCHING OF CONCRETE CURB
5	CUY-90-1391	1807854	3 SPAN CONTINUOUS STEEL BEAM	139'	160'	10	2	N/A	- TIMBER SUBDECK AND SPALL REMOVAL
6	CUY-480-0335	1814095	4 SPAN CONTINUOUS STEEL BEAM	295'	64.33'	4	6	MATCH EXISTING SEALER COLOR	- 4' HIGH VANDAL PROTECTION FENCE REMOVED AND REPLACED WITH 6' HIGH STRAIGHT FENCE - REFURBISH BEARINGS - PATCHING OF CONCRETE RAILING - CONCRETE SIDEWALK AND CURB REPAIR
7	CUY-480-0727	1814184	4 SPAN CONTINUOUS STEEL GIRDER	378'	72.33'	4	10	N/A	- TIMBER SUBDECK AND SPALL REMOVAL - REINFORCE 4' HIGH VANDAL PROTECTION FENCE WITH ADDITIONAL POSTS
8	LAK-2-1141	4301110	4 SPAN CONTINUOUS STEEL BEAM	282'	30.33'	2	6	N/A	- TIMBER SUBDECK AND SPALL REMOVAL

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER VARIOUS

STRUCTURE DATA TABLE

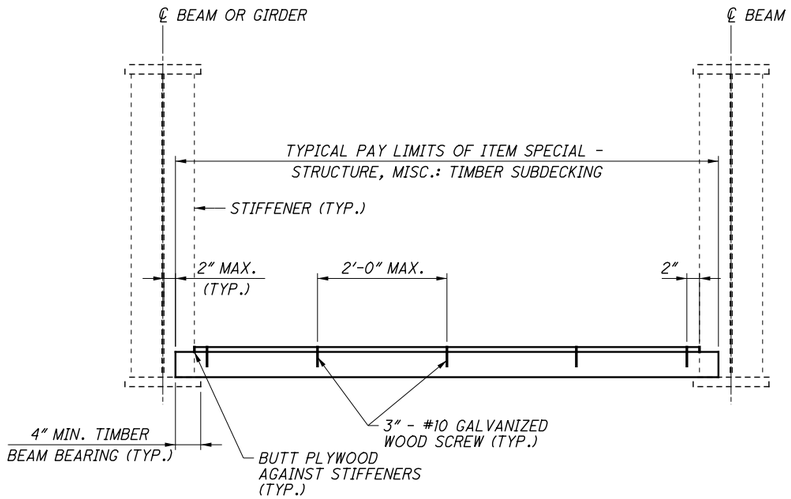
D12 BH FY2017 MISC.
PID No. 98599



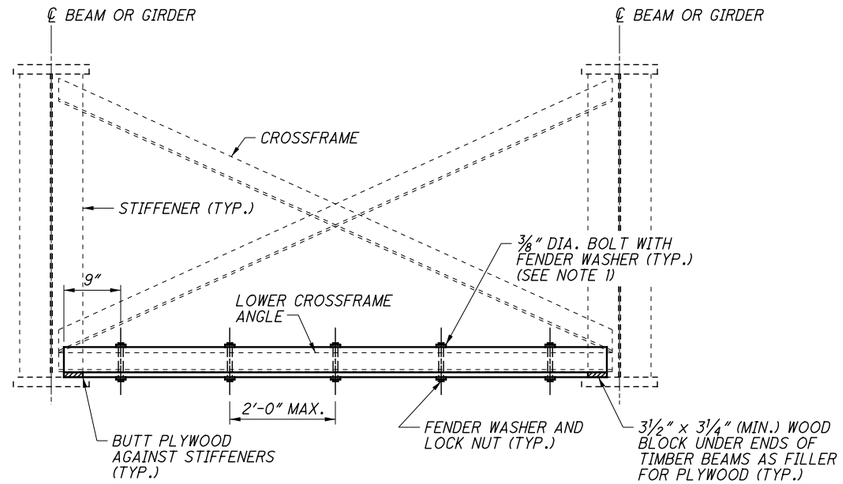
BEAM OR GIRDER ELEVATION

NOTES

1. ⅜" DIA. BOLTS SHALL BE INSTALLED FACE DOWN, WITH HEAD ON THE UPPERSIDE OF THE PLYWOOD. BOLT SHALL NOT EXTEND MORE THAN 1" BELOW PLYWOOD.



SECTION A-A



SECTION B-B

(AT INTERMEDIATE CROSSFRAMES)

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

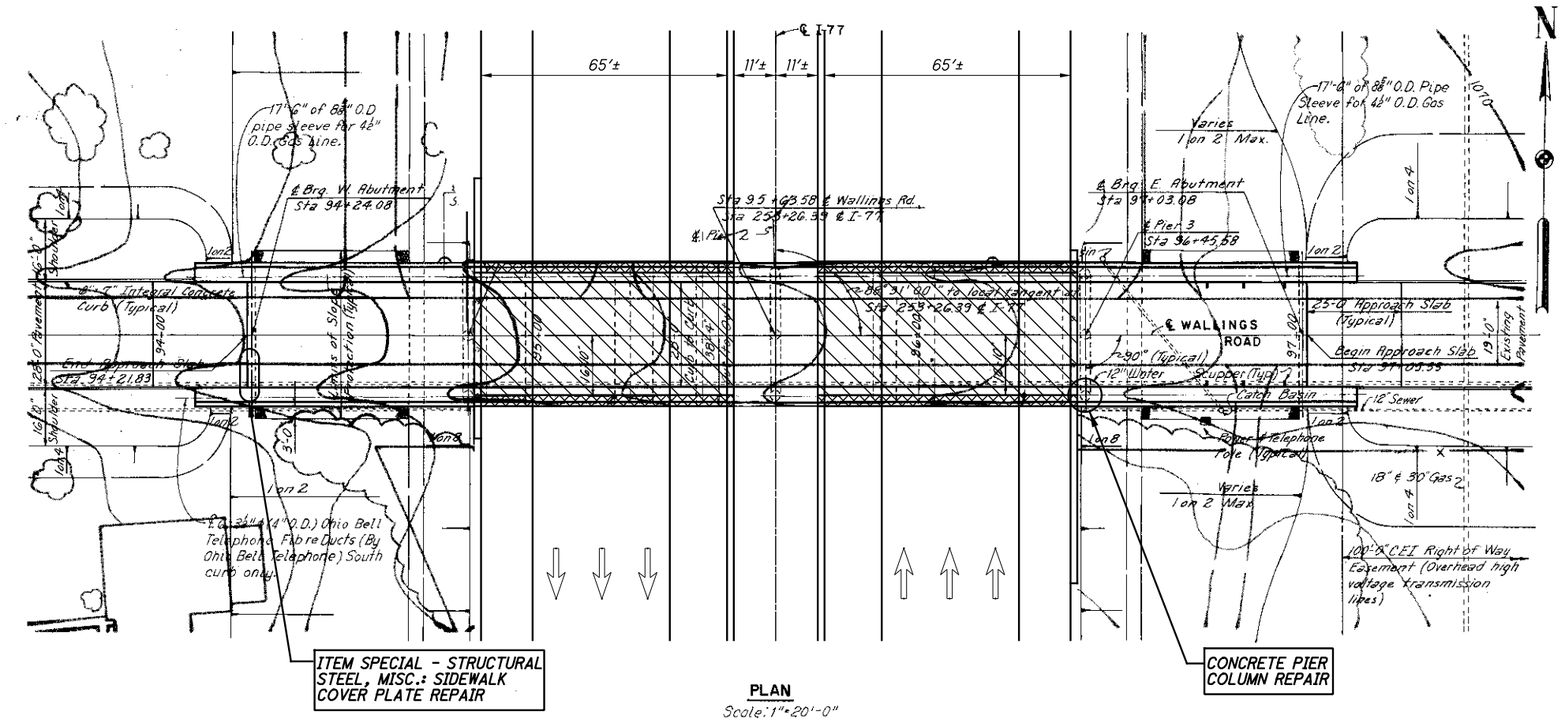
DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JBD	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		VARIOUS	

TIMBER SUBDECKING DETAILS

D12 BH FY2017 MISC.
PID No. 98599

5 / 5

15
42

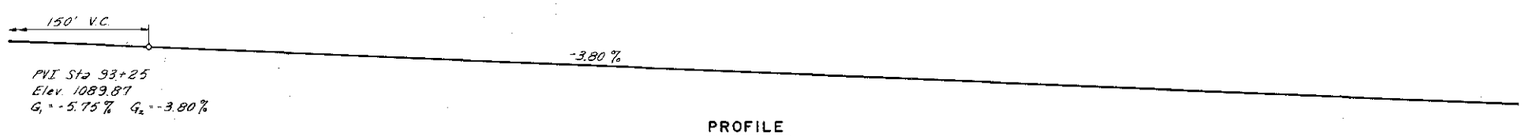


PLAN

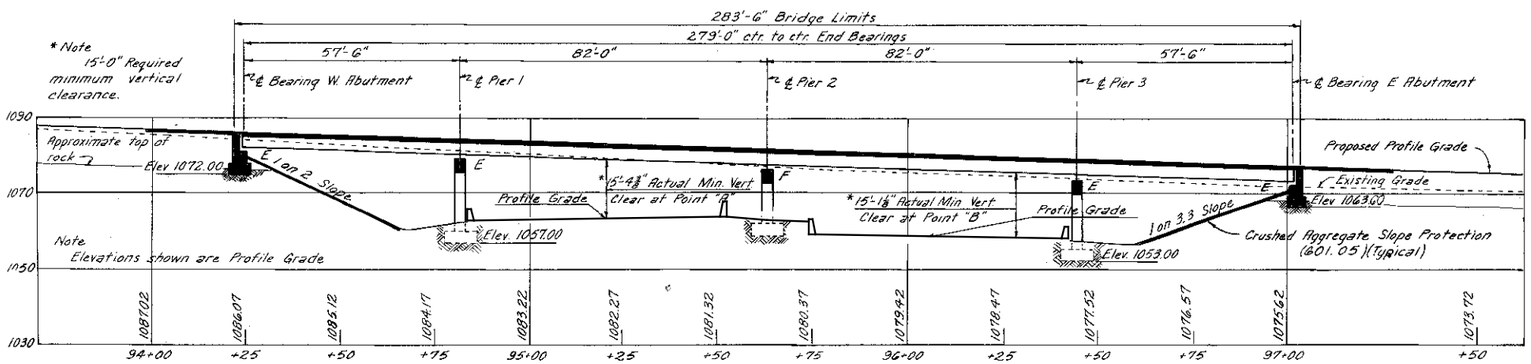
Scale: 1"=20'-0"

CURVE DATA ℄ I-77

P.I. Sta. 249+15.50
Δ = 4°46'30"
Dc = 0°28'00" Rt.
R = 12,277.67'
L = 1023.19'
T = 511.89'
E = 10.67'



PROFILE



ELEVATION

LEGEND

INDICATES TIMBER SUBDECK AND SPALL REMOVAL PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL AND ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

INDICATES SPALL REMOVAL (BEYOND TIMBER SUBDECK) PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 2/4.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | CHECKED DLR | REVIEWED JDB | DATE 12/12/16 | REVISED | STRUCTURE FILE NUMBER 1805975

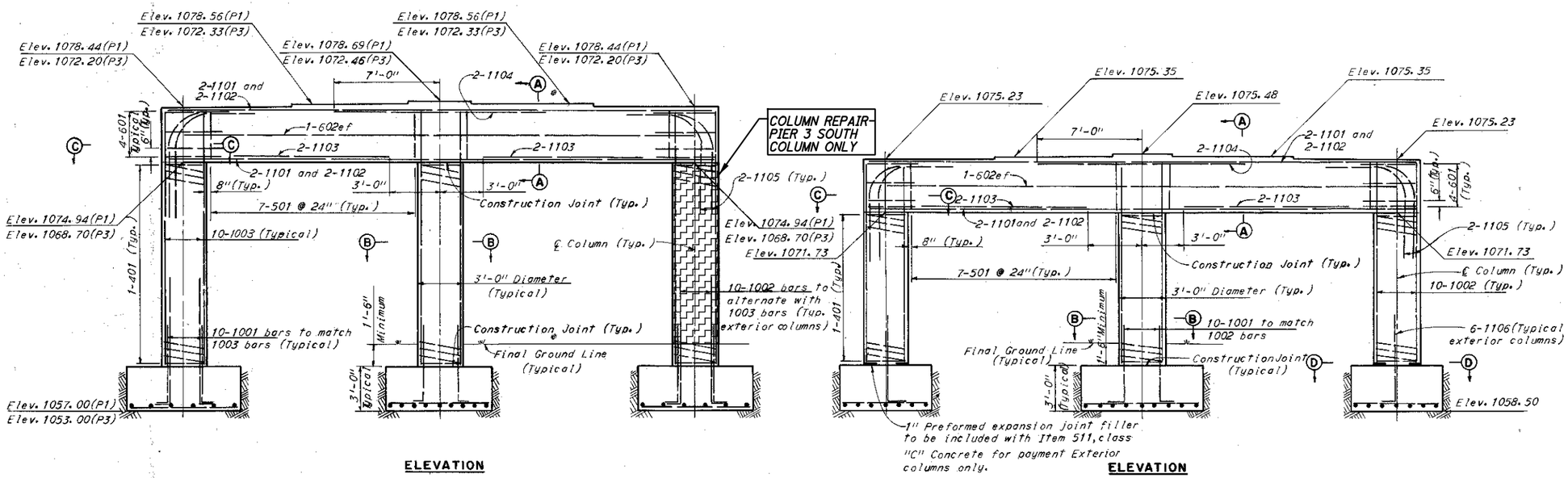
GENERAL PLAN - LOCATION 1
BRIDGE NO. CUY-77-0479
WALLINGS ROAD (C.R. 57) OVER I.R. 77

D12 BH FY2017 MISC.
PID No. 98599

1/4

16/42

F:\2016\116041 D12 Bridge Rehab\Group 1 Project\ProjectData\98599\Design\Structures\1 - CUY-77-0479\077_0479GP001.dgn 12/13/2016 10:36:16 AM JeffSmith

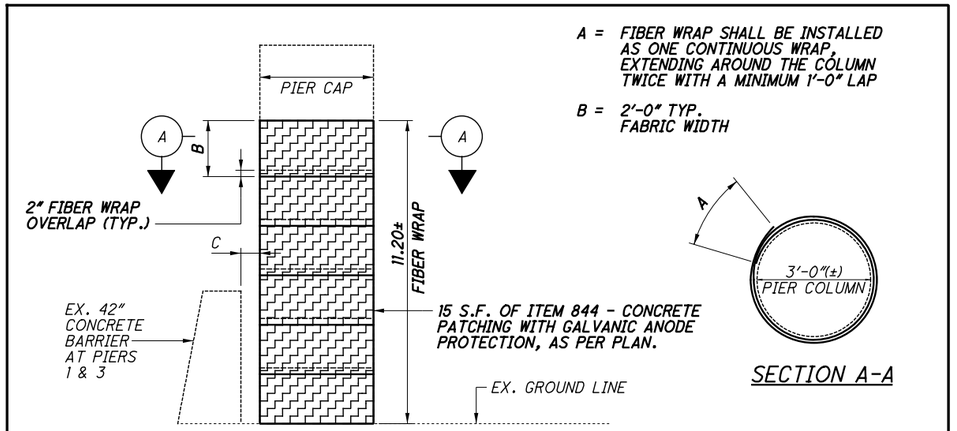


PIERS 1 & 3

PIER 2

LEGEND

INDICATES CONCRETE PIER COLUMN REPAIR PER ITEM SPECIAL - STRUCTURES, COMPOSITE FIBER WRAP SYSTEM AND ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN.



PIER COLUMN FIBER WRAP DETAIL

ESTIMATED QUANTITIES (01/IMS/BR)

CALCULATED JLS DATED 12/16
CHECKED JSB DATED 12/16

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
513	21501	441	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	11
513	95020	LS		STRUCTURAL STEEL, MISC.: SIDEWALK COVER PLATE REPAIR	11
SPECIAL	53000600	4,378	SF	STRUCTURES, TIMBER SUBDECK	12
SPECIAL	53000600	5,092	SF	STRUCTURES, BOTTOM OF DECK SPALL REMOVAL	11
SPECIAL	53000600	223	SF	STRUCTURES, COMPOSITE FIBER WRAP SYSTEM	12
844	10001	15	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	13

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

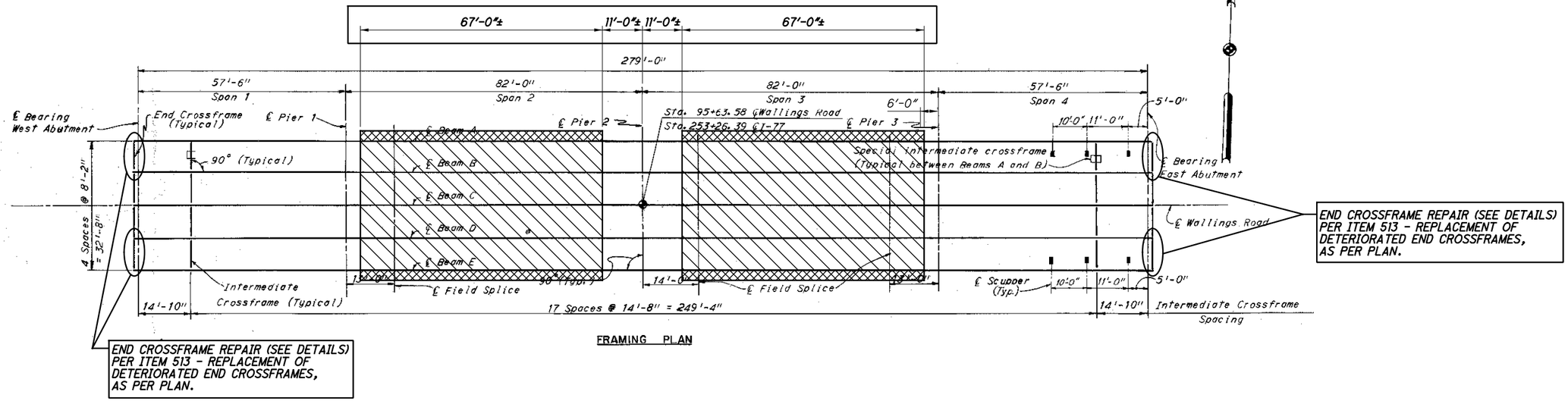
DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JDB	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		1805975	

PIER REPAIR DETAILS - LOCATION 1
BRIDGE NO. CUY-77-0479
WALLINGS ROAD (C.R. 57) OVER I.R. 77

D12 BH FY2017 MISC.
PID No. 98599

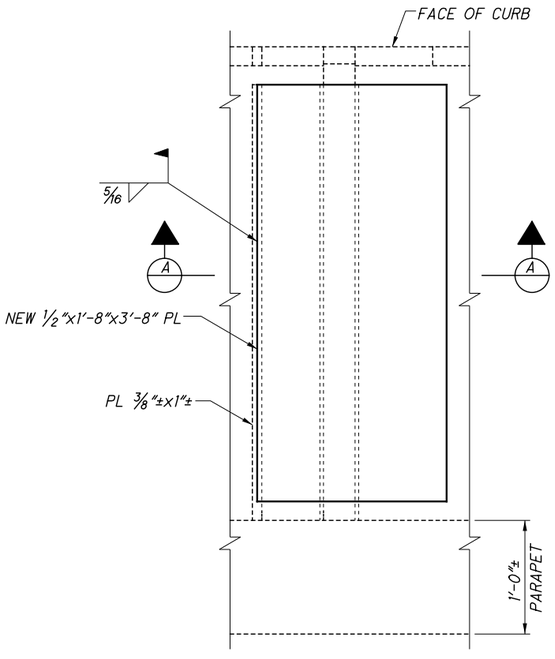
2 / 4

17
42



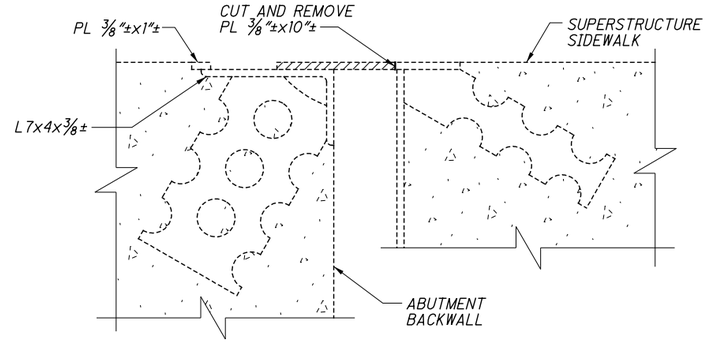
FRAMING PLAN

END CROSSFRAME REPAIR (SEE DETAILS) PER ITEM 513 - REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN.



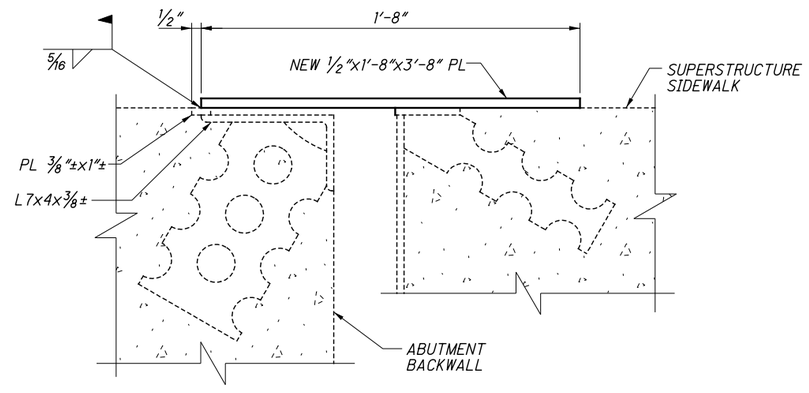
SIDEWALK COVER PLATE REPAIR PLAN

REAR (WEST) JOINT - SOUTH SIDEWALK



SECTION A-A

(REMOVAL)



SECTION A-A

(REPAIR)

LEGEND

INDICATES TIMBER SUBDECK AND SPALL REMOVAL PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL AND ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

INDICATES SPALL REMOVAL (BEYOND TIMBER SUBDECK) PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 2/4.
4. END CROSSFRAME REPAIR DETAILS: SEE SHEET 4/4.
5. SIDEWALK COVER PLATE REPAIR INCLUDED WITH ITEM 513 - STRUCTURAL STEEL, MISC.: SIDEWALK COVER PLATE REPAIR. FOR LOCATION SEE SHEET 1/4.
6. TIMBER SUBDECK DETAILS - SEE SHEET 15 OF 42.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | CHECKED DLR | REVIEWED JDB | DATE 12/12/16 | REVISED | STRUCTURE FILE NUMBER 1805975

FRAMING PLAN - SUBDECKING - LOCATION 1

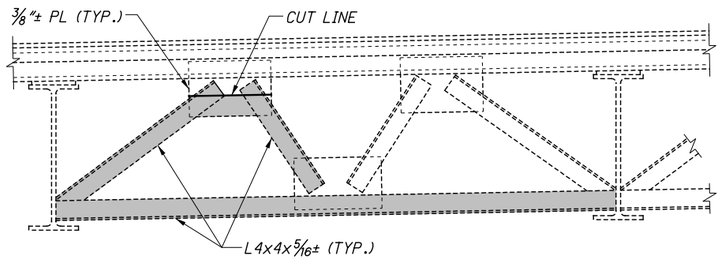
BRIDGE NO. CUY-77-0479
WALLINGS ROAD (C.R. 57) OVER I.R. 77

D12 BH FY2017 MISC.

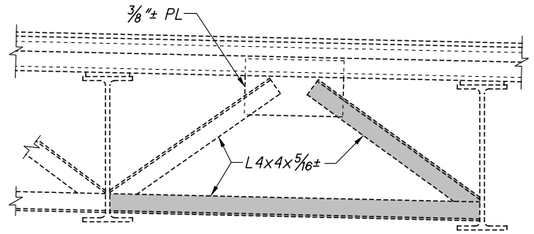
PID No. 98599

3 / 4

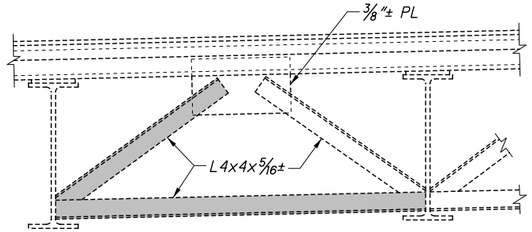
18
42



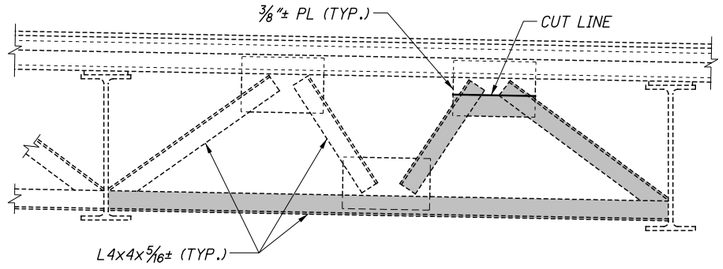
REAR ABUTMENT (WEST) - SOUTH BAY
(LOOKING WEST)



REAR ABUTMENT (WEST) - NORTH BAY
(LOOKING WEST)



FORWARD ABUTMENT (EAST) - NORTH BAY
(LOOKING EAST)

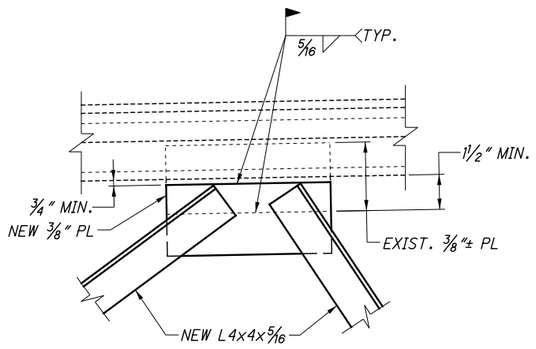


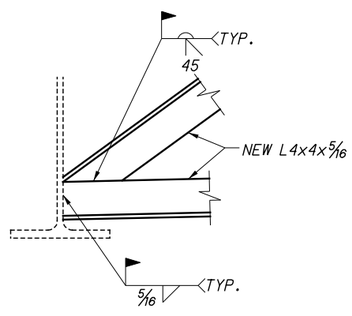
FORWARD ABUTMENT (EAST) - SOUTH BAY
(LOOKING EAST)

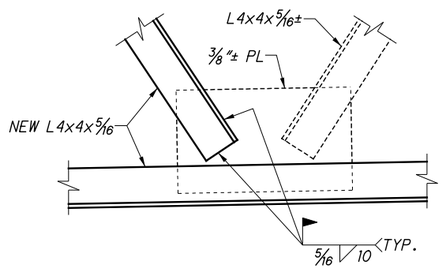
LEGEND

INDICATES END CROSSFRAME ANGLES AND PLATES TO BE REMOVED AND REPLACED PER ITEM 513 - REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN.

END CROSSFRAME REMOVAL DETAILS







END CROSSFRAME REPAIR DETAILS

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JBD	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		1805975	

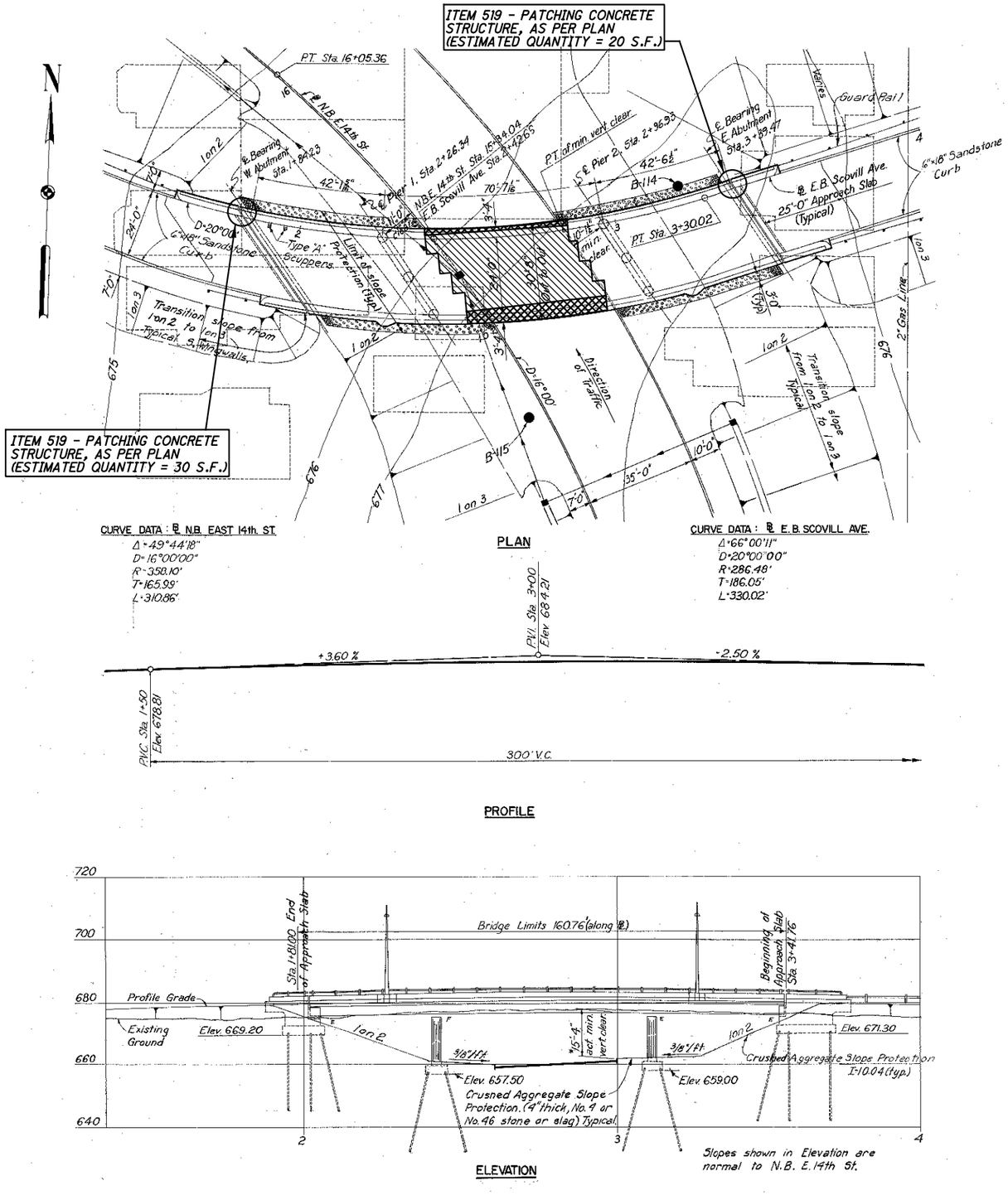
END CROSSFRAME REPAIR DETAILS - LOCATION 1

BRIDGE NO. CUY-77-0479
WALLINGS ROAD (C.R. 57) OVER I.R. 77

D12 BH FY2017 MISC.
PID No. 98599

4 / 4

19
42



ESTIMATED QUANTITIES (02/BRO/BR)

CALCULATED JLS DATED 12/16
CHECKED JSB DATED 12/16

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
512	10101	32	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	11
512	74001	32	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	11
519	11101	50	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	11
SPECIAL	53000600	1,112	SF	STRUCTURES, TIMBER SUBDECK	12
SPECIAL	53000600	1,392	SF	STRUCTURES, BOTTOM OF DECK SPALL REMOVAL	11

LEGEND

INDICATES TIMBER SUBDECK AND SPALL REMOVAL PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL AND ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

INDICATES SPALL REMOVAL (BEYOND TIMBER SUBDECK) PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

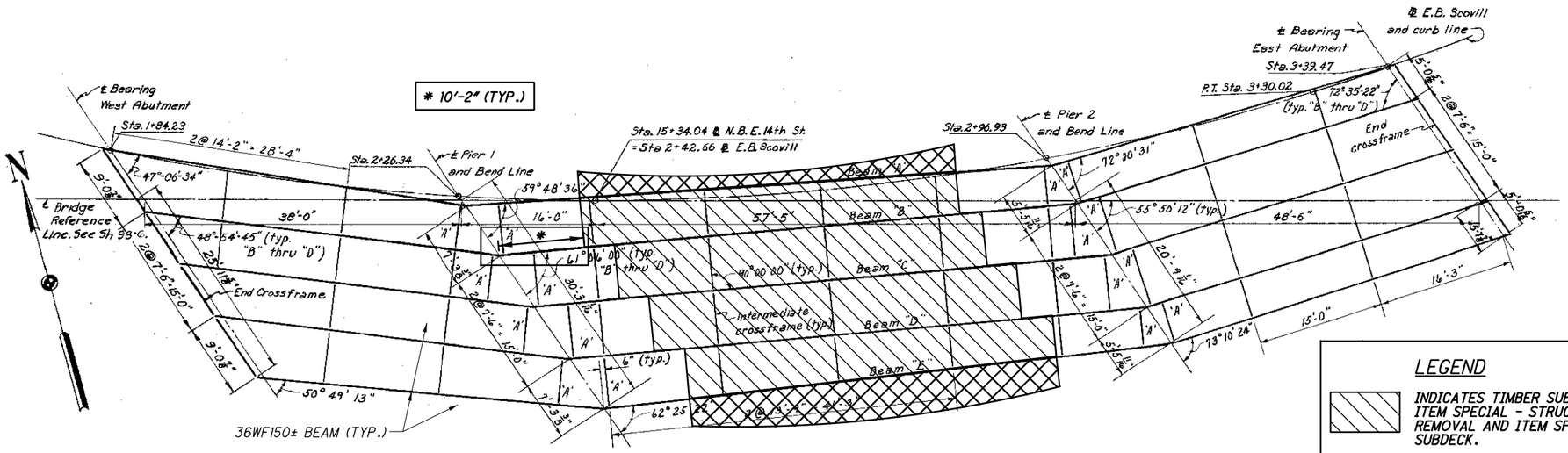
DESIGNED BLN | DRAWN JLS | CHECKED DLR | REVIEWED JDB | DATE 12/12/16 | REVISED | STRUCTURE FILE NUMBER 1806912

GENERAL PLAN - LOCATION 2
BRIDGE NO. CUY-77-1575 SN
E. 14TH STREET RAMP OVER I.R. 77 RAMP

D12 BH FY2017 MISC.
PID No. 98599

1 / 2

20
42

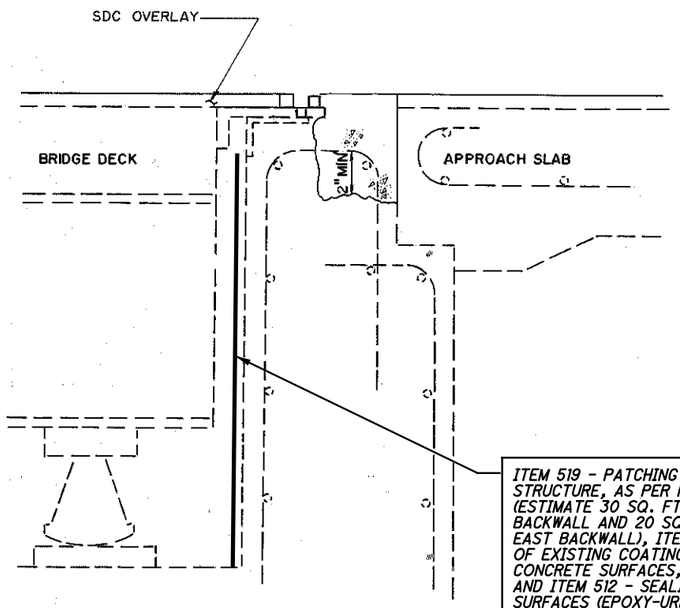


FRAMING PLAN
Scale: 3/32"=1'-0"

LEGEND

INDICATES TIMBER SUBDECK AND SPALL REMOVAL PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL AND ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

INDICATES SPALL REMOVAL (BEYOND TIMBER SUBDECK) PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.



ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN (ESTIMATE 30 SQ. FT. FOR WEST BACKWALL AND 20 SQ. FT. FOR EAST BACKWALL), ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN AND ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN (FULL WIDTH OF BOTH BACKWALLS)

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 1/2.
4. TIMBER SUBDECK DETAILS - SEE SHEET 15 OF 42.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

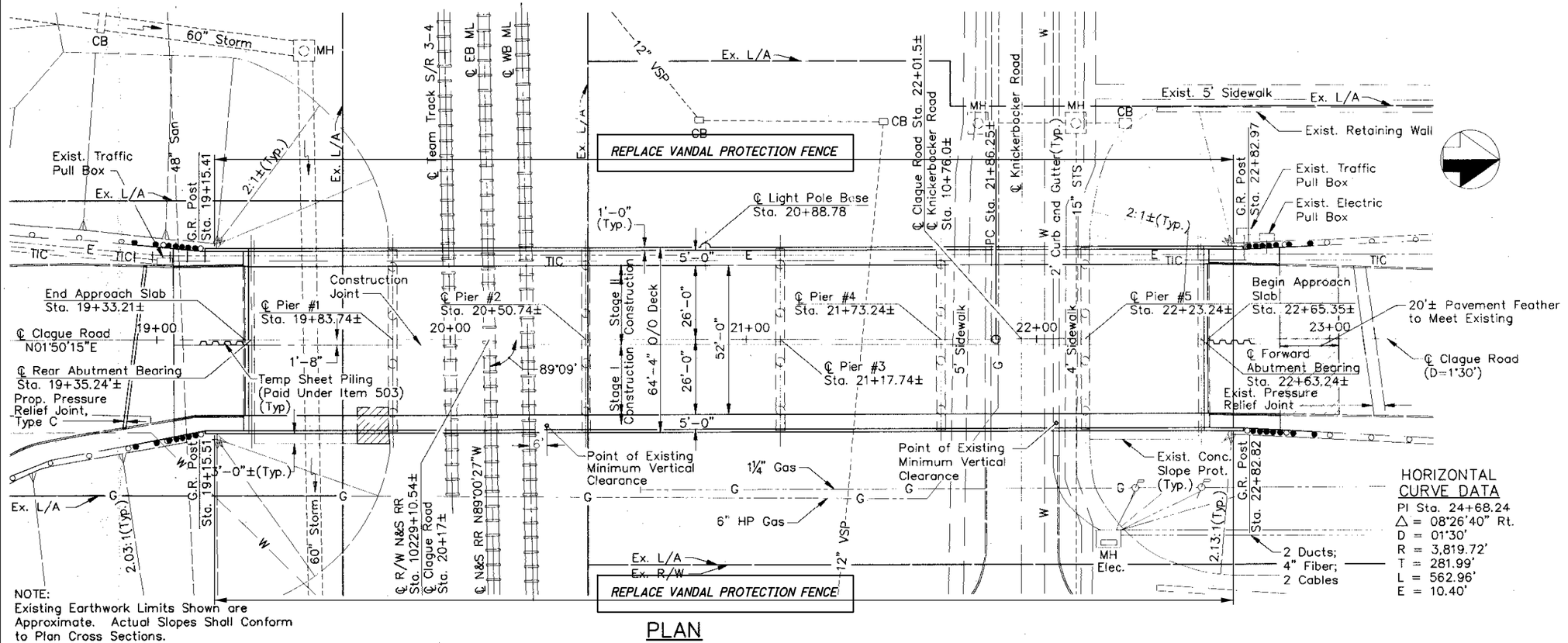
DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JDB	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		1806912	

REPAIR DETAILS - LOCATION 2
BRIDGE NO. CUY-77-1575 SN
E. 14TH STREET RAMP OVER E. 14TH STREET

D12 BH FY2017 MISC.
PID No. 98599

2 / 2

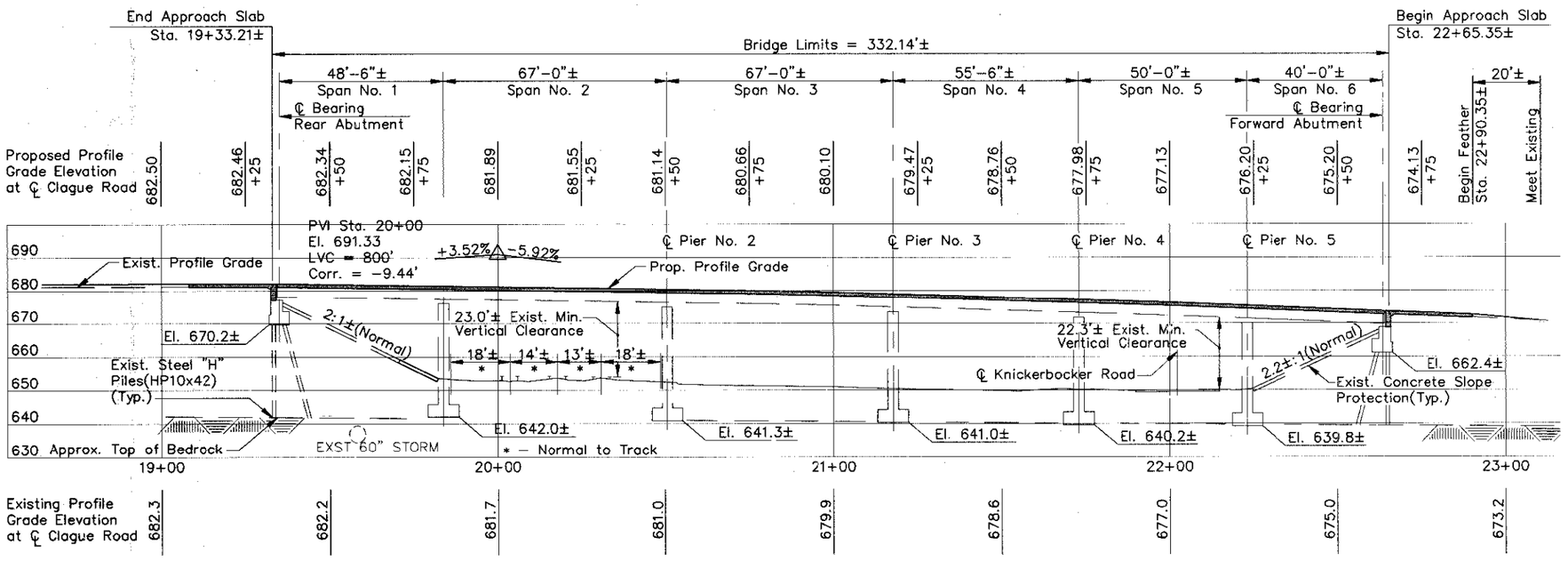
21
42



PLAN

HORIZONTAL CURVE DATA

PI Sta. 24+68.24
△ = 08°26'40" Rt.
D = 01°30'
R = 3,819.72'
T = 281.99'
L = 562.96'
E = 10.40'



PROFILE

NOTES:

1. *DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.*
2. *PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.*
3. *FOR ESTIMATED QUANTITIES SEE SHEET* 3/4.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1807587

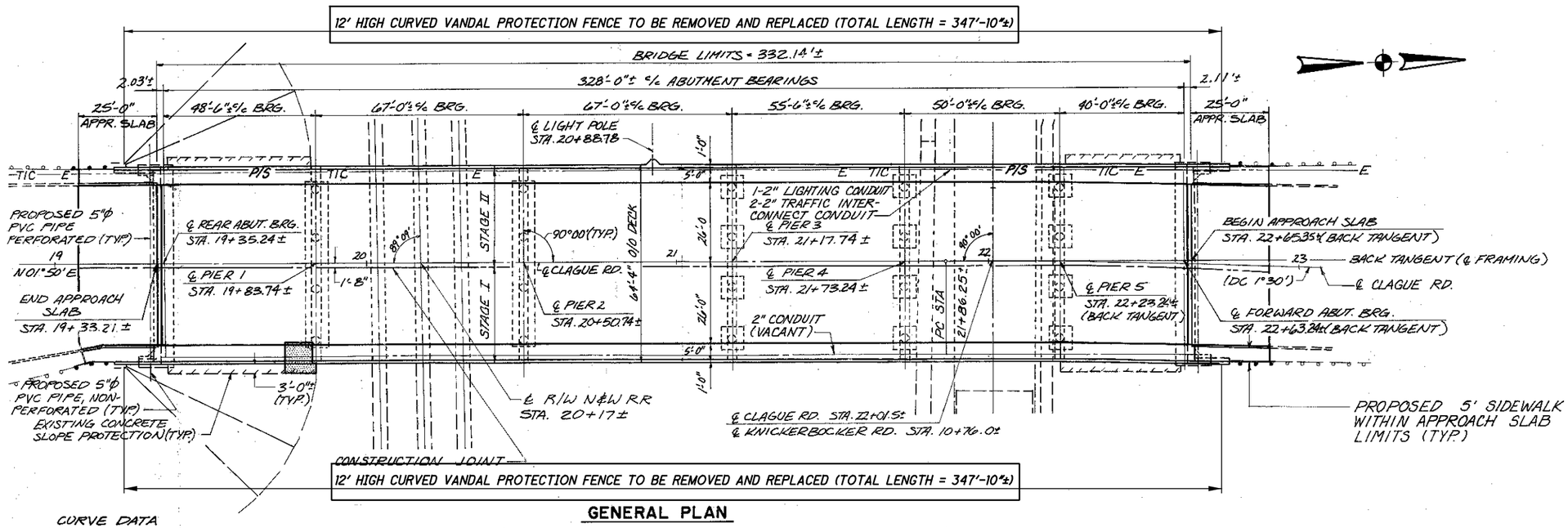
GENERAL PLAN - LOCATION 3
BRIDGE NO. CUY-52-0421
C.R. 52 (CLAGUE ROAD) OVER NSC R.R. & KNICKERBOCKER ROAD

D12 BH FY2017 MISC.
PID No. 98599

1 / 4

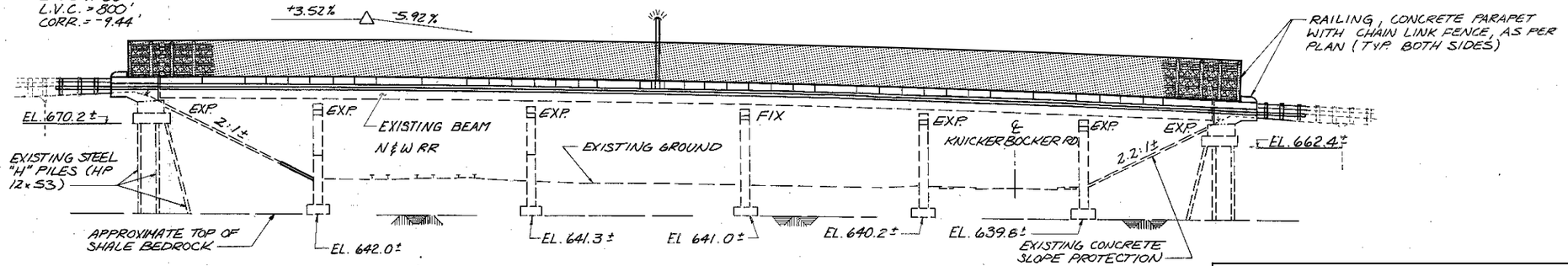
22
42

F:\2016\116041 D12 Bridge Rehab\Group 1 Project\ProjectData\98599\Design\Structures\3 - CUY-52-0421\052_0458NGP001.dgn 12/13/16 10:24:04 AM JeremyBurns



GENERAL PLAN

CURVE DATA
P.V.I. STA. 20+00
EL. 691.33
L.V.C. = 800'
CORR. = -9.44'



GENERAL ELEVATION

LEGEND

INDICATES 12' HIGH CURVED VANDAL PROTECTION FENCE REMOVED AND REPLACED PER ITEM 607 - VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 3/4.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

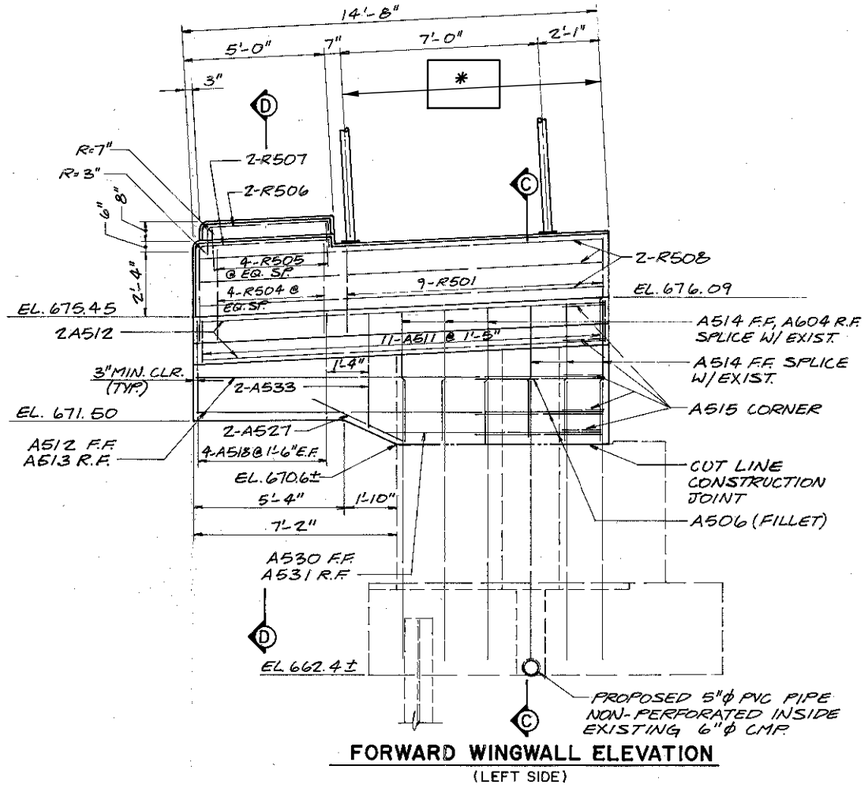
DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1807587

FENCE REMOVAL AND REPLACEMENT - LOCATION 3
BRIDGE NO. CUY-52-0421
C.R. 52 (CLAGUE ROAD) OVER NSC R.R. & KNICKERBOCKER

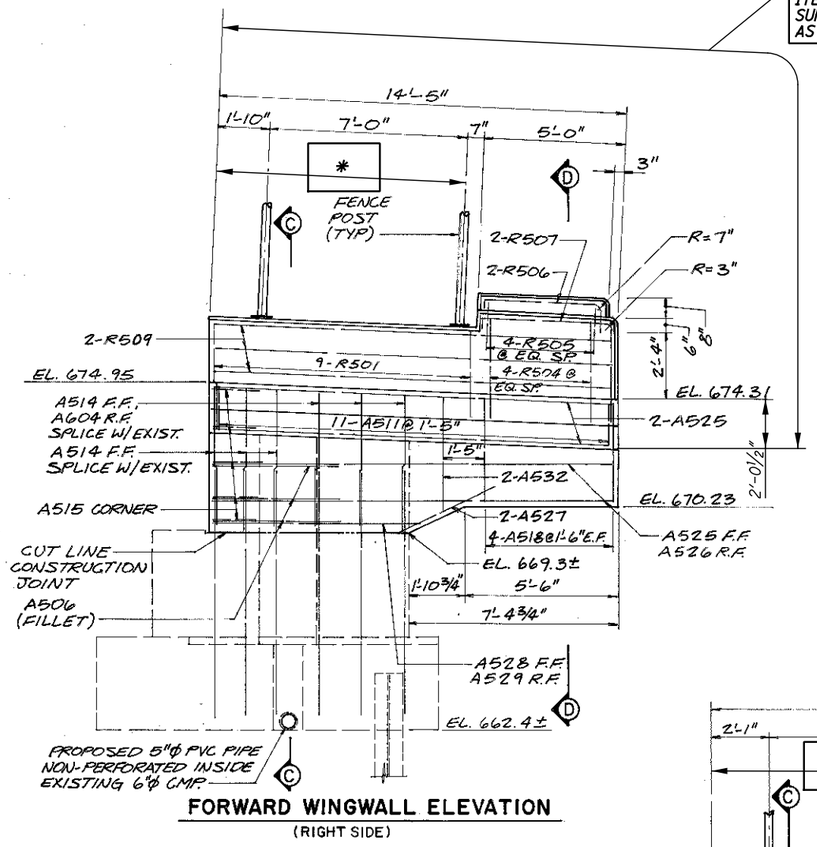
D12 BH FY2017 MISC.
PID No. 98599

2 / 4

23
42



FORWARD WINGWALL ELEVATION
(LEFT SIDE)

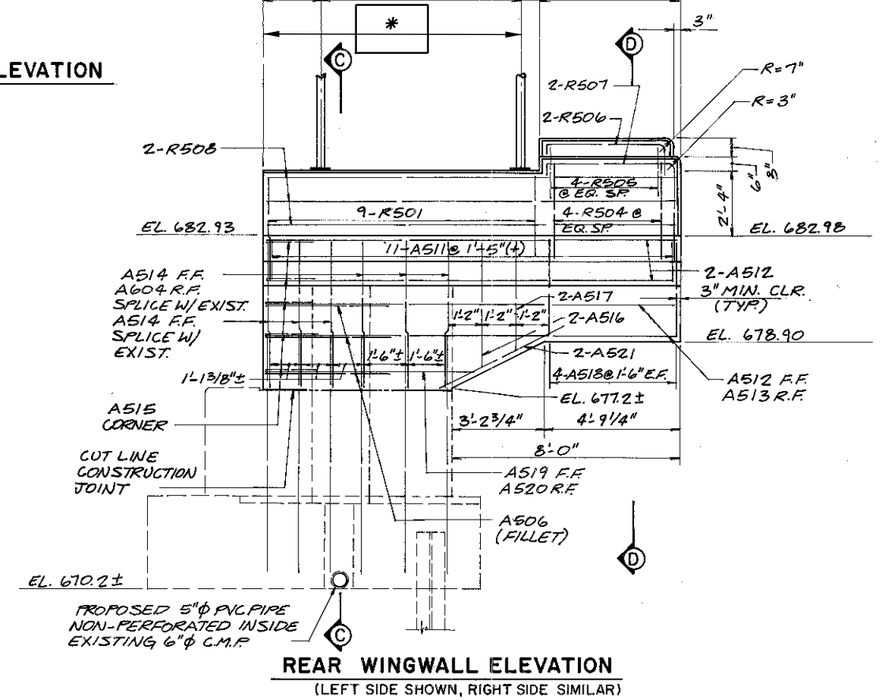


FORWARD WINGWALL ELEVATION
(RIGHT SIDE)

* 12' HIGH CURVED VANDAL PROTECTION FENCE REMOVED AND REPLACED PER ITEM 607 - VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.



REAR WINGWALL ELEVATION
(LEFT SIDE SHOWN, RIGHT SIDE SIMILAR)

ESTIMATED QUANTITIES (03/S>2/BR)

CALCULATED JLS DATED 12/16
CHECKED JSB DATED 12/16

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
512	10050	465	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
512	10101	820	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	11
512	74001	820	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	11
607	39931	696	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN	13

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

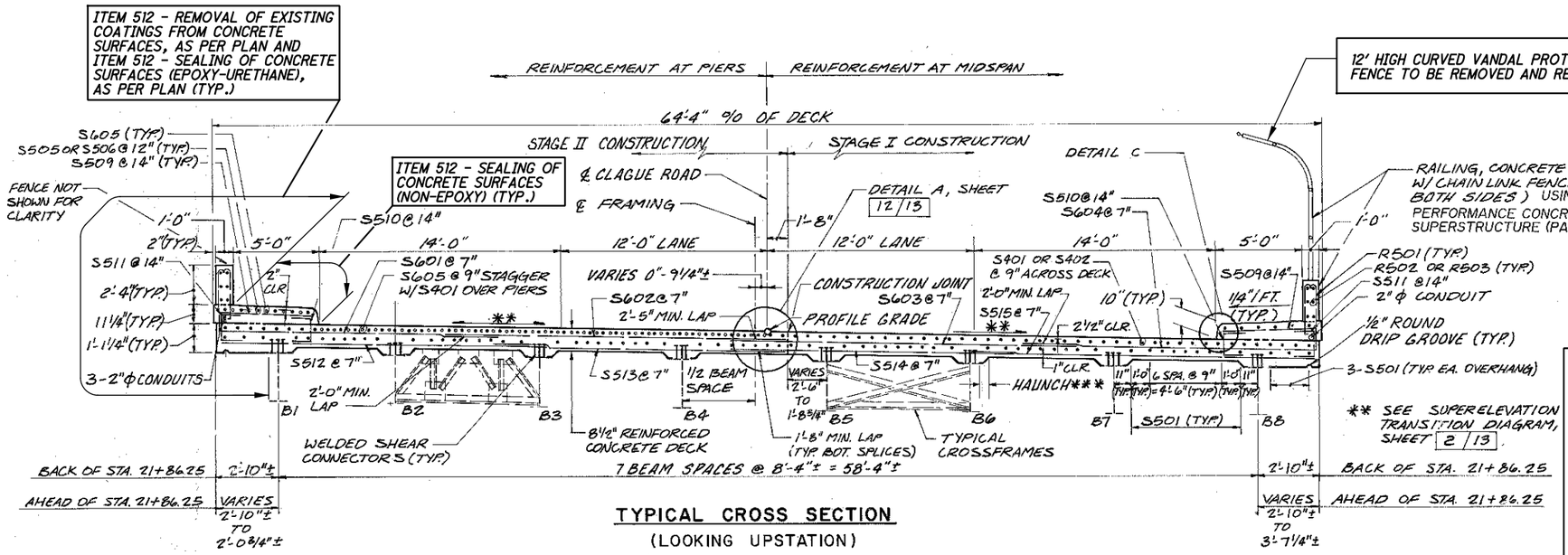
DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JDB	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		1807587	

FENCE DETAILS ON ABUTMENT WINGWALLS - LOCATION 3
BRIDGE NO. CUY-52-0421
C.R. 52 (CLAGUE ROAD) OVER NSC R.R. & KNICKERBOCKER ROAD

D12 BH FY2017 MISC.
PID No. 98599

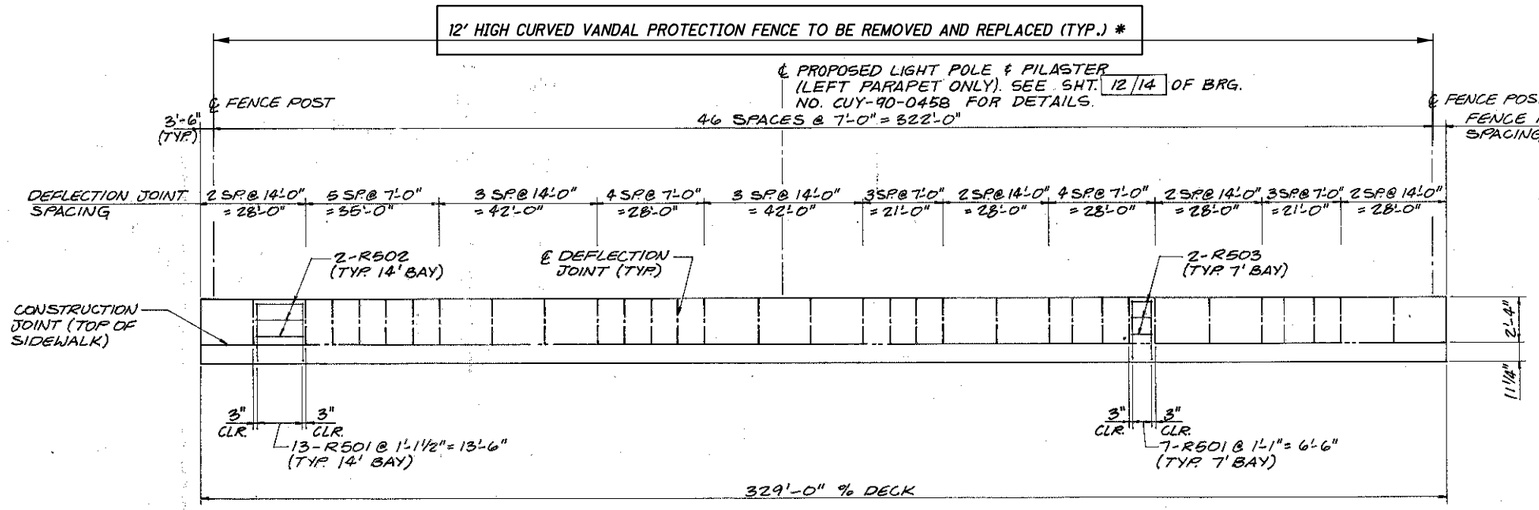
3 / 4

24
42

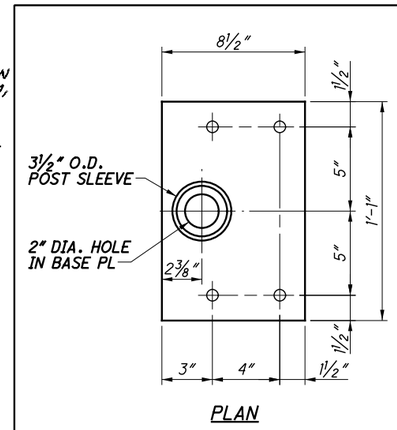


TYPICAL CROSS SECTION

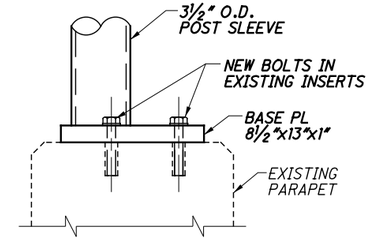
(LOOKING UPSTATION)



PARAPET ELEVATION



PLAN



ELEVATION

FENCE POST BASE PLATE DETAIL

(EXISTING AND PROPOSED)

* PER ITEM 607 - VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 3/4.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1807587

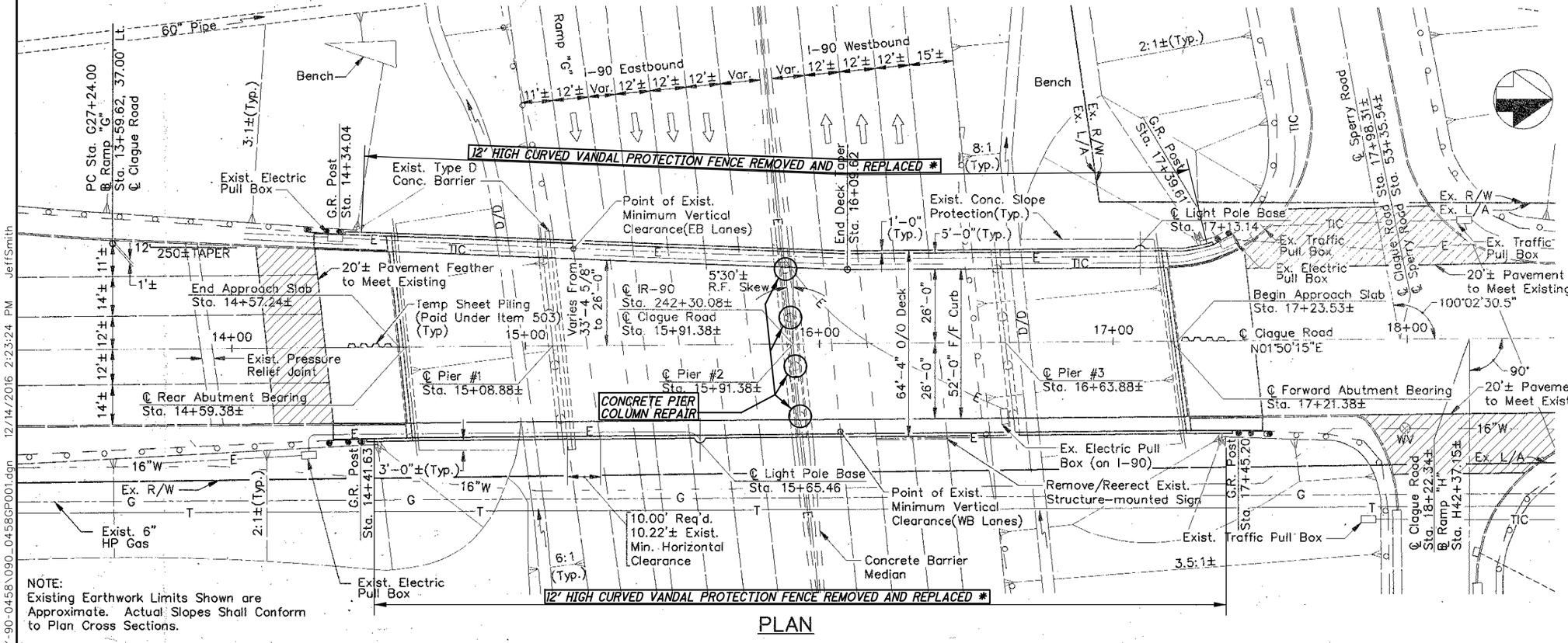
VANDAL PROTECTION FENCE DETAILS - LOCATION 3

BRIDGE NO. CUY-52-0421
C.R. 52 (CLAGUE ROAD) OVER NSC R.R. & KNICKERBOCKER ROAD

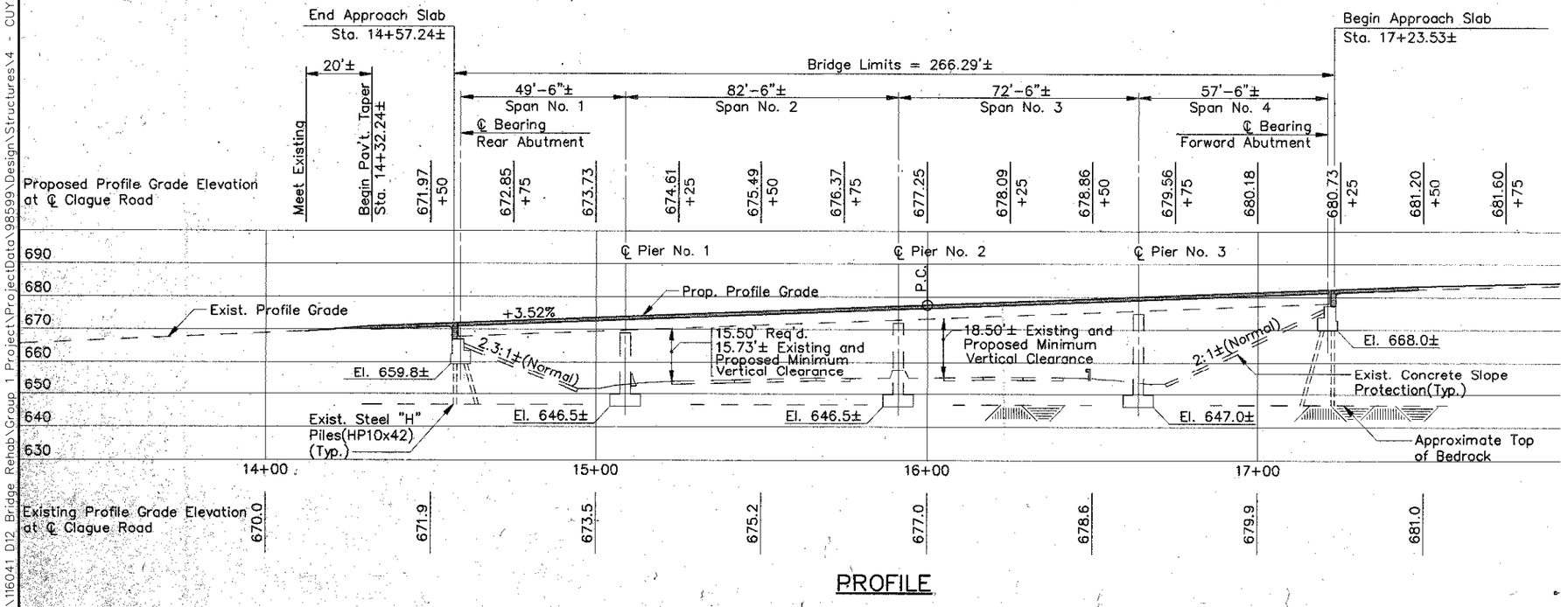
D12 BH FY2017 MISC.
PID No. 98599

4 / 4

25
42



PLAN



PROFILE

* PER ITEM 607 - VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 3/5.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | REVIEWED JBD | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1807641

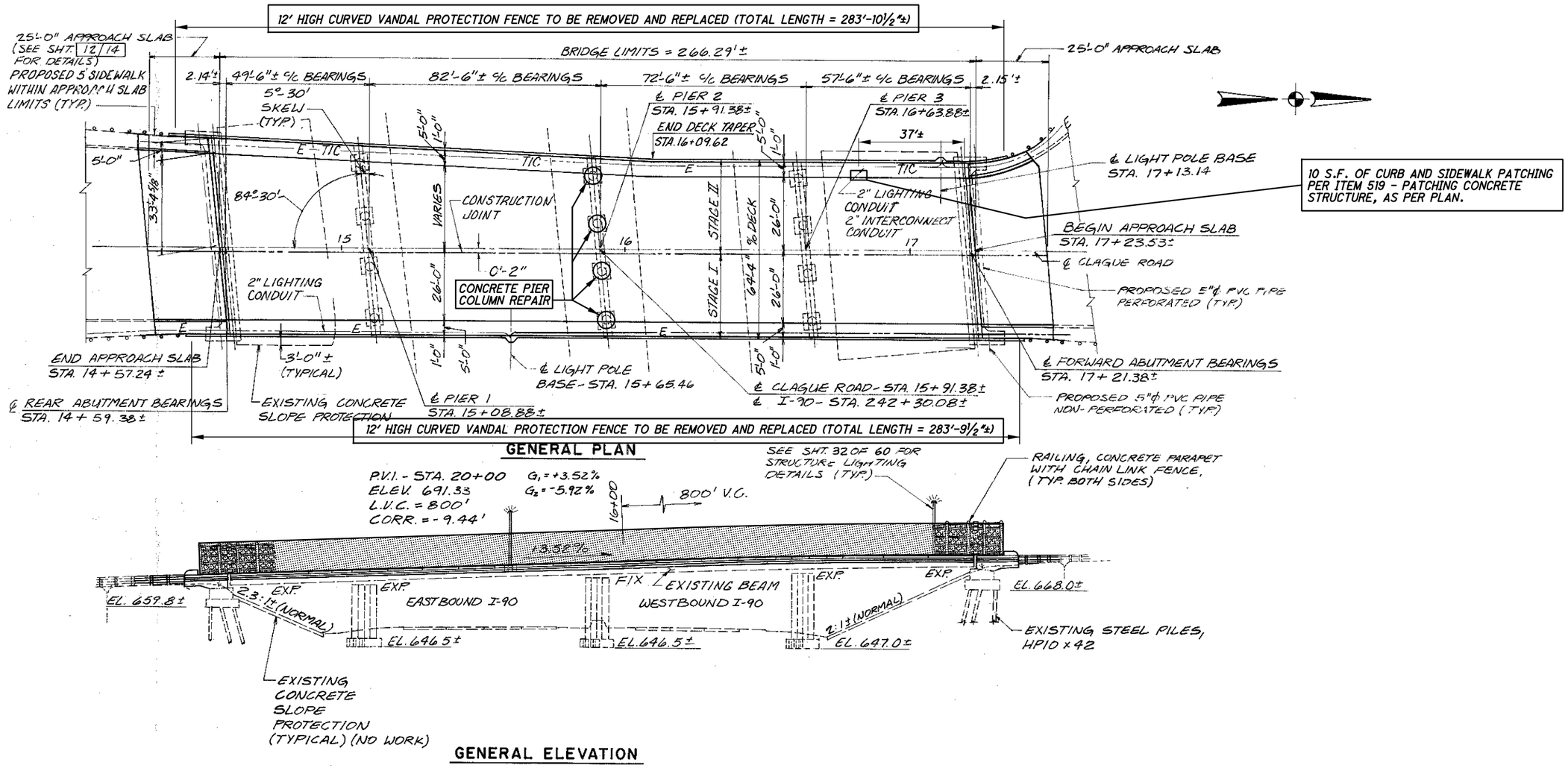
GENERAL PLAN - LOCATION 4
BRIDGE NO. CUY-90-0458
C.R. 52 (CLAGUE ROAD) OVER I.R. 90

D12 BH FY2017 MISC.
PID No. 98599

1/5

26/42

F:\2016\116041 D12 Bridge Rehab\Group 1 Project\ProjectData\98599\Design\Structures\4 - CUY-90-0458\090_0458GP001.dgn 12/14/2016 2:23:24 PM JeffSmith



GENERAL PLAN

GENERAL ELEVATION

LEGEND

INDICATES 12' HIGH CURVED VANDAL PROTECTION FENCE REMOVED AND REPLACED PER ITEM 607 - VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN.

NOTES:

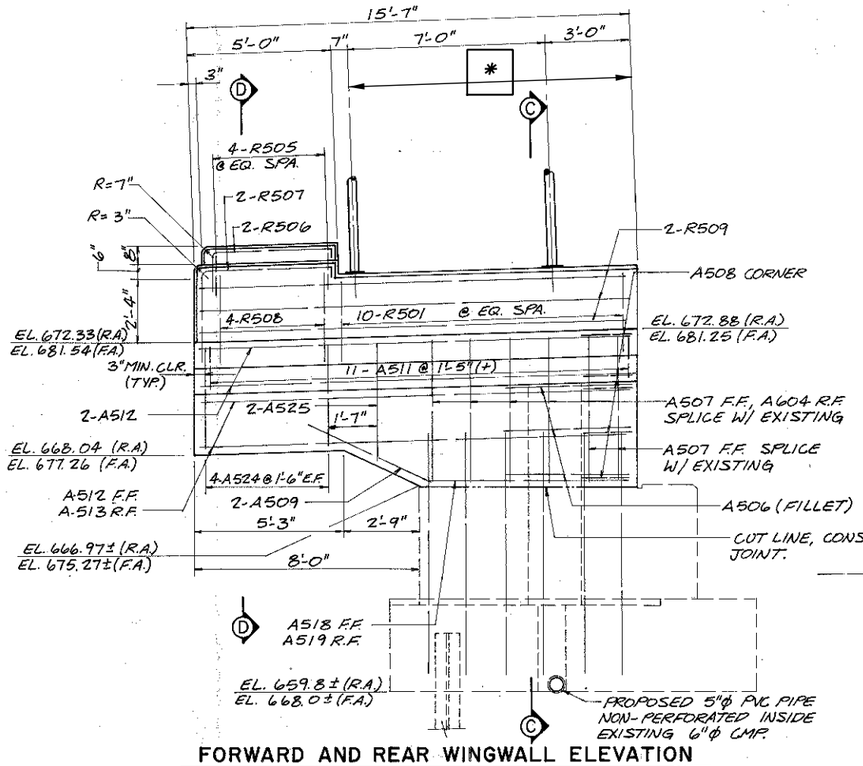
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 3/5.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | CHECKED DLR | REVIEWED JDB | DATE 12/12/16 | REVISED | STRUCTURE FILE NUMBER 1807641

REPAIR LOCATION PLAN - LOCATION 4
BRIDGE NO. CUY-90-0458
C.R. 52 (CLAGUE ROAD) OVER I.R. 90

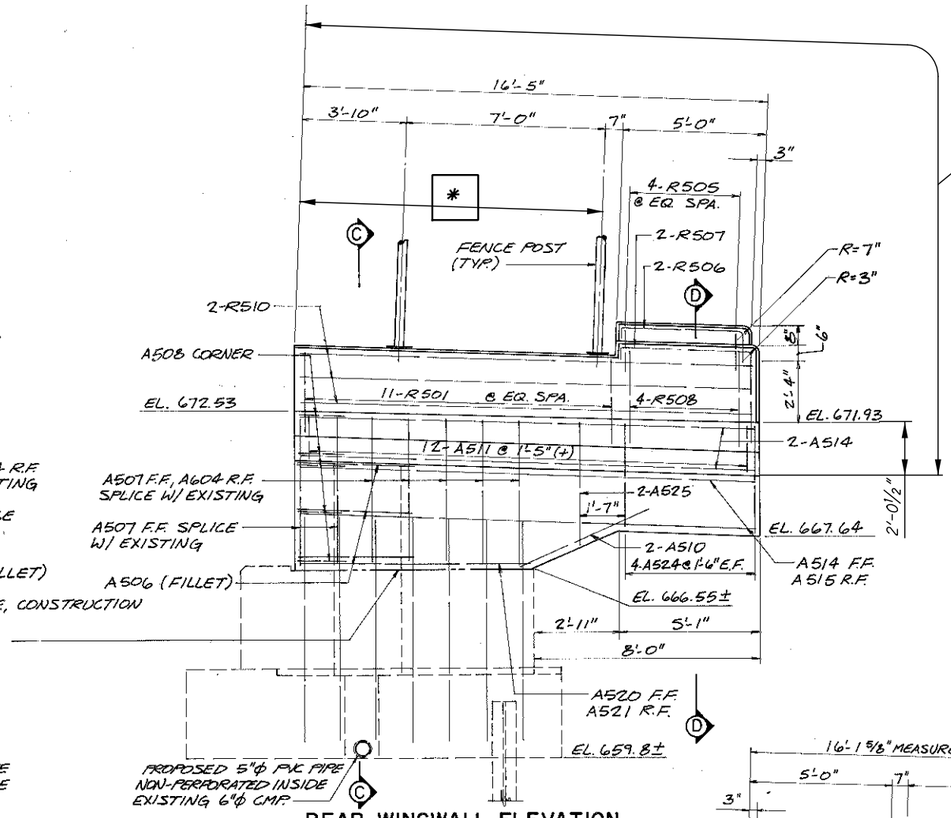
D12 BH FY2017 MISC.
PID No. 98599



FORWARD AND REAR WINGWALL ELEVATION

(RIGHT SIDE)

(REAR WINGWALL SHOWN, FORWARD WINGWALL SIMILAR)



REAR WINGWALL ELEVATION

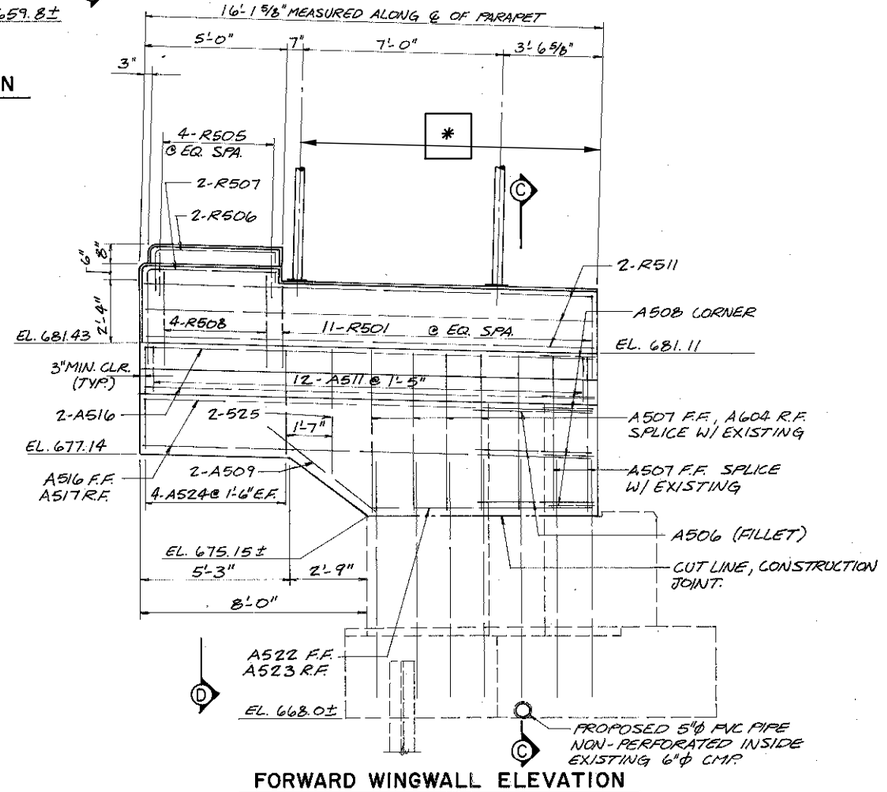
(LEFT SIDE)

ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN AND ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN (TYP.)

* 12' HIGH CURVED VANDAL PROTECTION FENCE REMOVED AND REPLACED PER ITEM 607 - VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.



FORWARD WINGWALL ELEVATION

(LEFT SIDE)

ESTIMATED QUANTITIES (01/IMS/BR)

CALCULATED JLS DATED 12/16
CHECKED JSB DATED 12/16

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	11
512	10050	383	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
512	10101	687	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	11
512	74001	687	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	11
519	11101	10	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	11
SPECIAL	53000600	953	SF	STRUCTURES, COMPOSITE FIBER WRAP SYSTEM	12
607	39931	568	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN	13
844	10001	453	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	13

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1807641

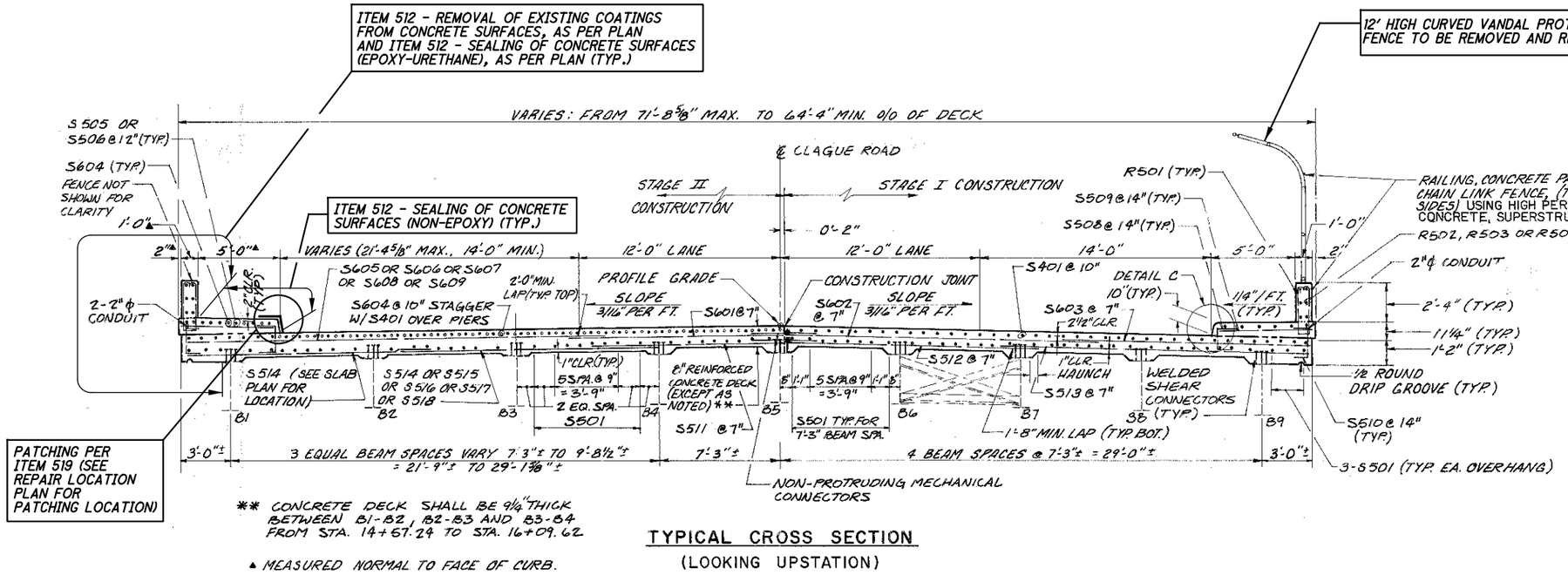
FENCE DETAILS ON ABUTMENT WINGWALLS - LOCATION 4

BRIDGE NO. CUY-90-0458
C.R. 52 (CLAGUE ROAD) OVER I.R. 90

D12 BH FY2017 MISC.
PID No. 98599

3 / 5

28
42

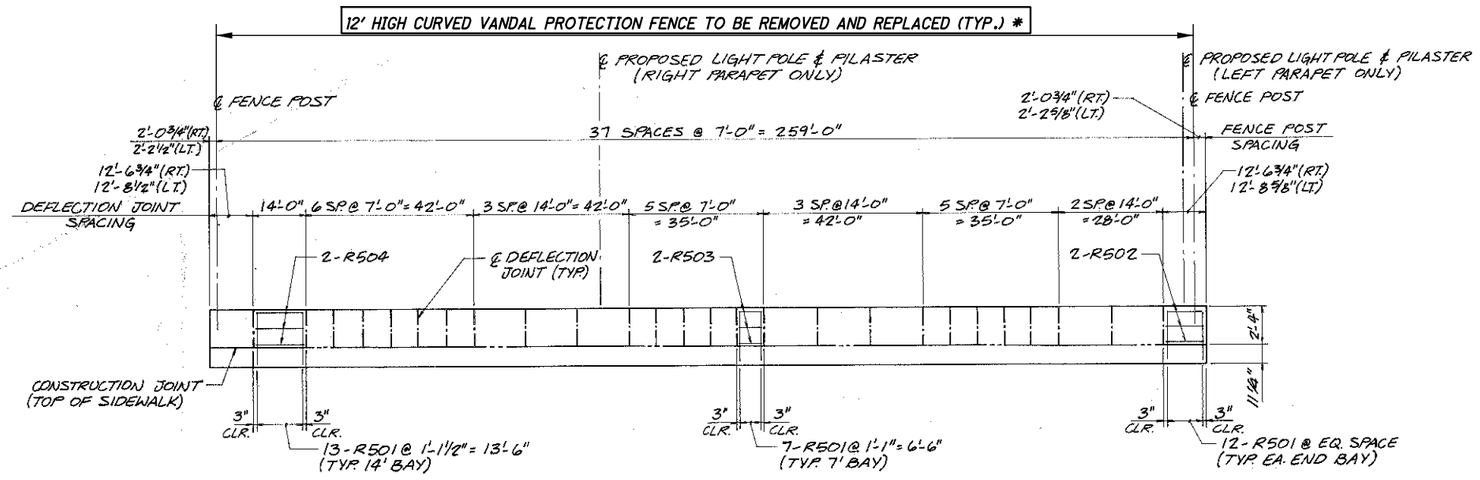


** CONCRETE DECK SHALL BE 9 1/4" THICK BETWEEN B1-B2, B2-B3 AND B3-B4 FROM STA. 14+67.24 TO STA. 16+09.62

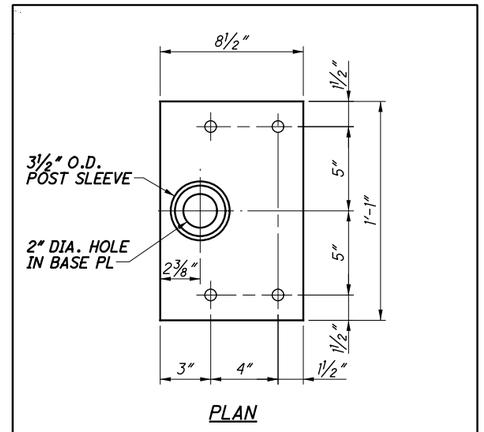
▲ MEASURED NORMAL TO FACE OF CURB.

TYPICAL CROSS SECTION

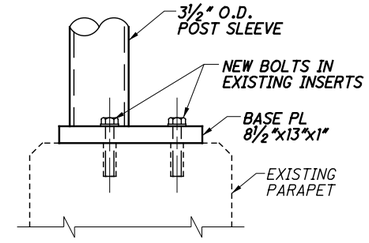
(LOOKING UPSTATION)



PARAPET ELEVATION



PLAN



ELEVATION

FENCE POST BASE PLATE DETAIL

(EXISTING AND PROPOSED)

* PER ITEM 607 - VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC, AS PER PLAN.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 3/5.
4. REPAIR LOCATION PLAN: SEE SHEET 2/5.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

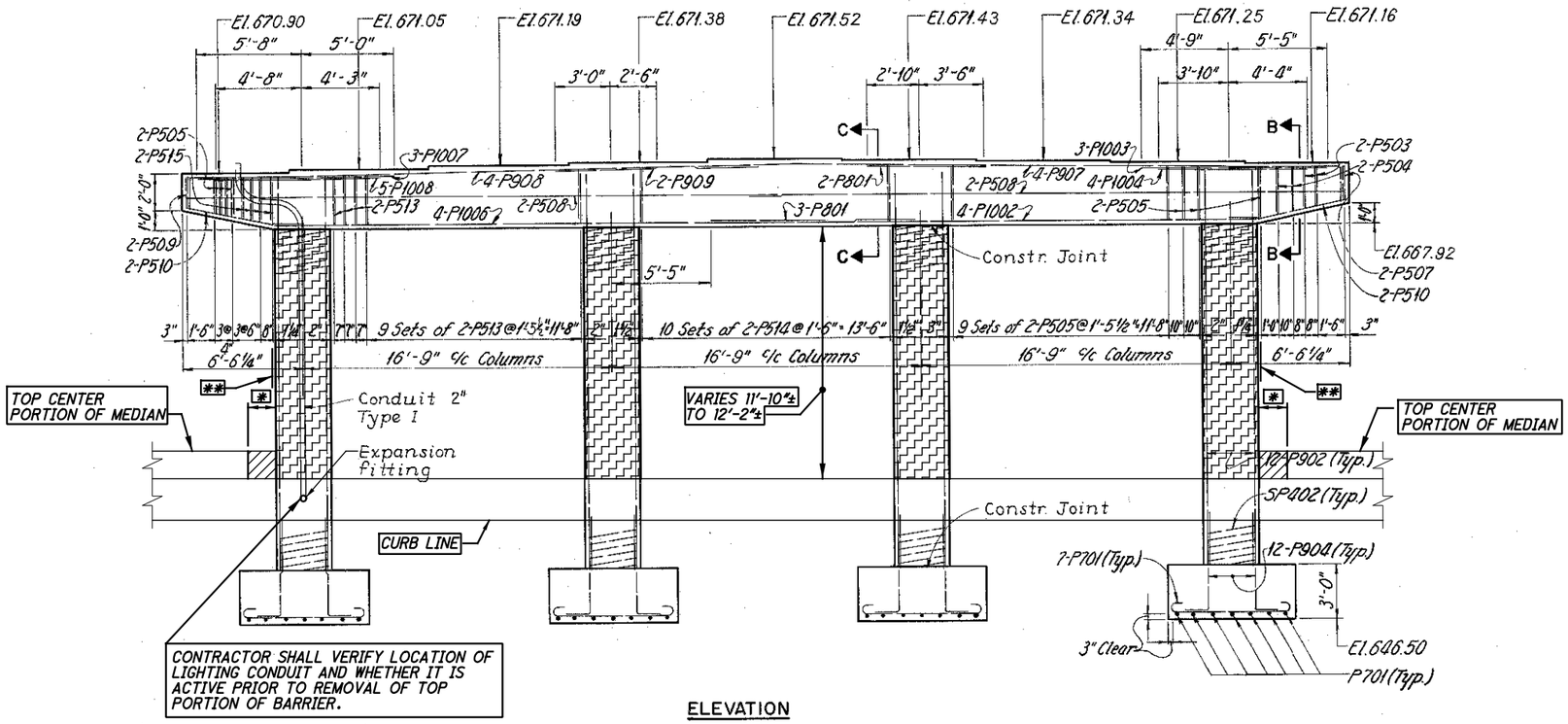
DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1807641

VANDAL PROTECTION FENCE DETAILS - LOCATION 4
BRIDGE NO. CUY-90-0458
C.R. 52 (CLAGUE ROAD) OVER I.R. 90

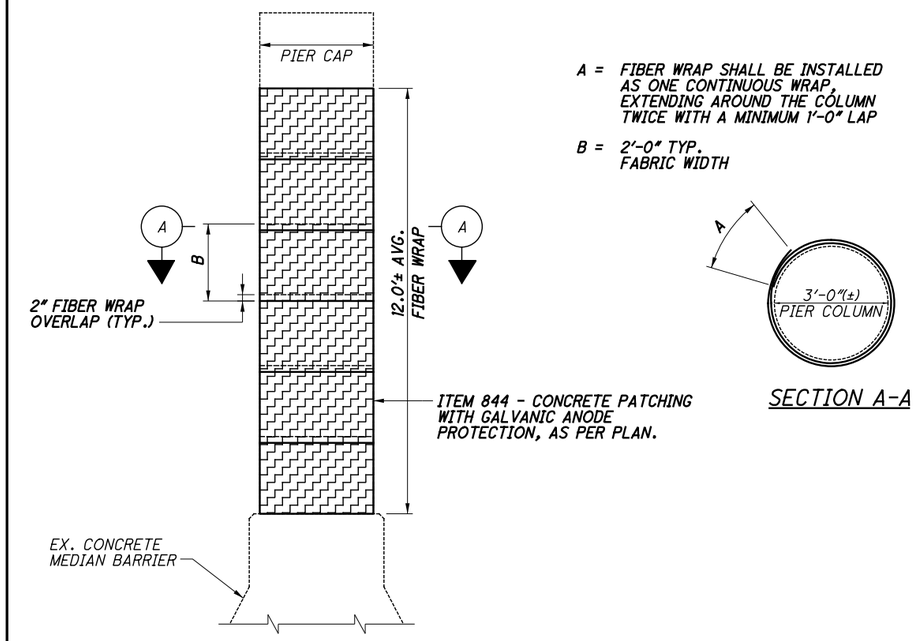
D12 BH FY2017 MISC.
PID No. 98599

4 / 5

29
42



ELEVATION



SECTION A-A

PIER COLUMN FIBER WRAP DETAIL

LEGEND

INDICATES CONCRETE PIER COLUMN REPAIR PER ITEM SPECIAL - STRUCTURES, COMPOSITE FIBER WRAP SYSTEM AND ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN.

* SAWCUT AND REMOVE AS REQUIRED TO REPAIR COLUMN (1'-6" MAX.) PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

** REMOVE AND REPLACE EXISTING SIGNS AFTER REPAIR WORK IS COMPLETED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 3/5.
4. CONCRETE PATCHING WORK ON A COLUMN SHALL BE COMPLETED PRIOR TO BEGINNING REMOVALS FOR CONCRETE PATCHING ON AN ADJACENT COLUMN.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

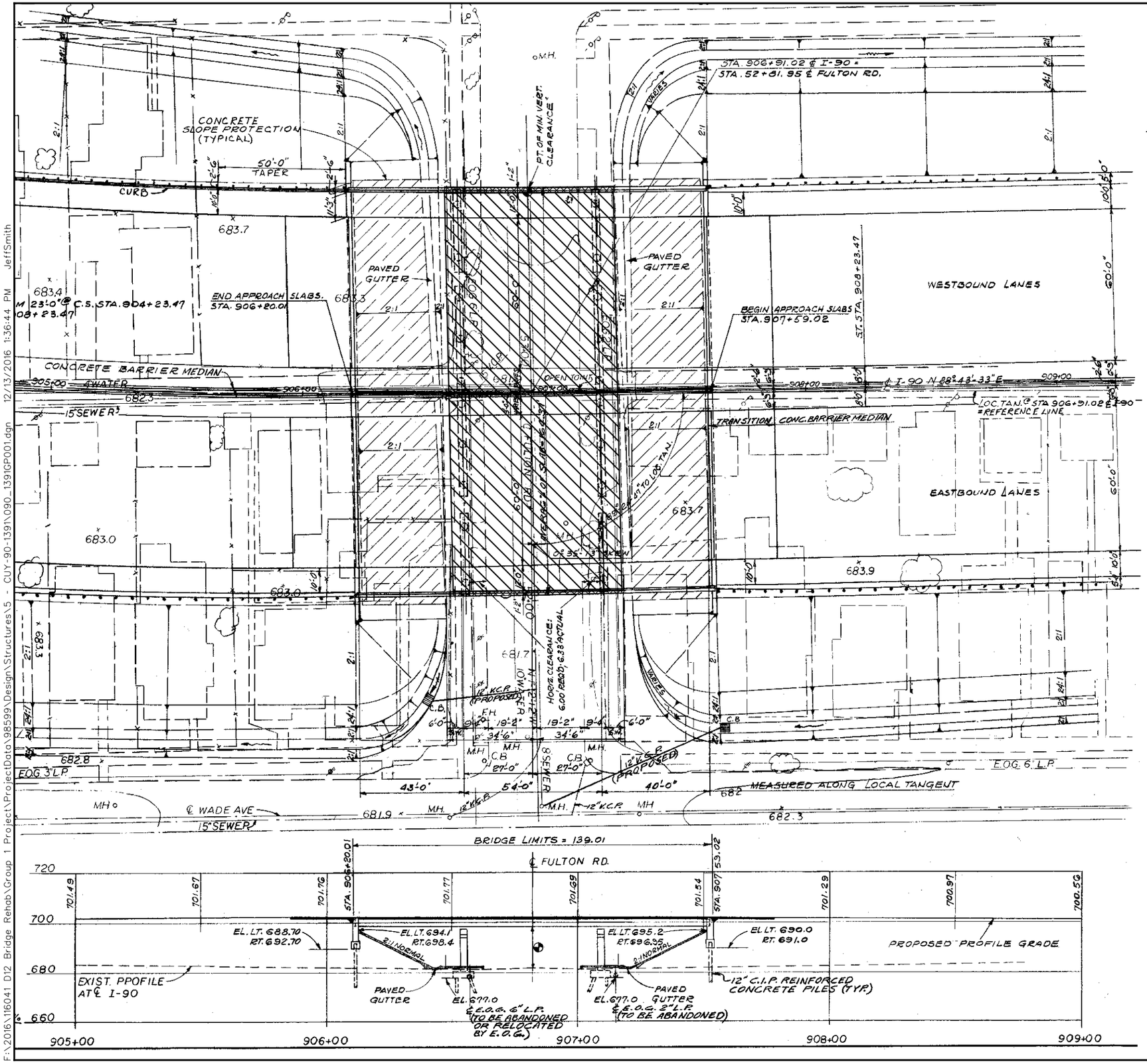
DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1807641

PIER 2 REPAIR - LOCATION 4
BRIDGE NO. CUY-90-0458
C.R. 52 (CLAGUE ROAD) OVER I.R. 90

D12 BH FY2017 MISC.
PID No. 98599

5 / 5

30
42



℄ I-90 CURVE DATA

P.I. STA. 903+45.96

$\Delta = 16°47'56"$ LT.	LT. = 266.82'
$D_c = 3°00'00"$	ST = 133.47'
$R_s = 6°00'00"$	p = 3.49
$R_c = 1909.86'$	k = 199.93
$T_s = 482.45'$	$X_c = 399.56$
$L_c = 159.96'$	$Y_c = 13.95$
$L_s = 400.00'$	$E_s = 24.23$

LEGEND

INDICATES TIMBER SUBDECK AND SPALL REMOVAL PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL AND ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

INDICATES SPALL REMOVAL (BEYOND TIMBER SUBDECK) PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 2/2.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

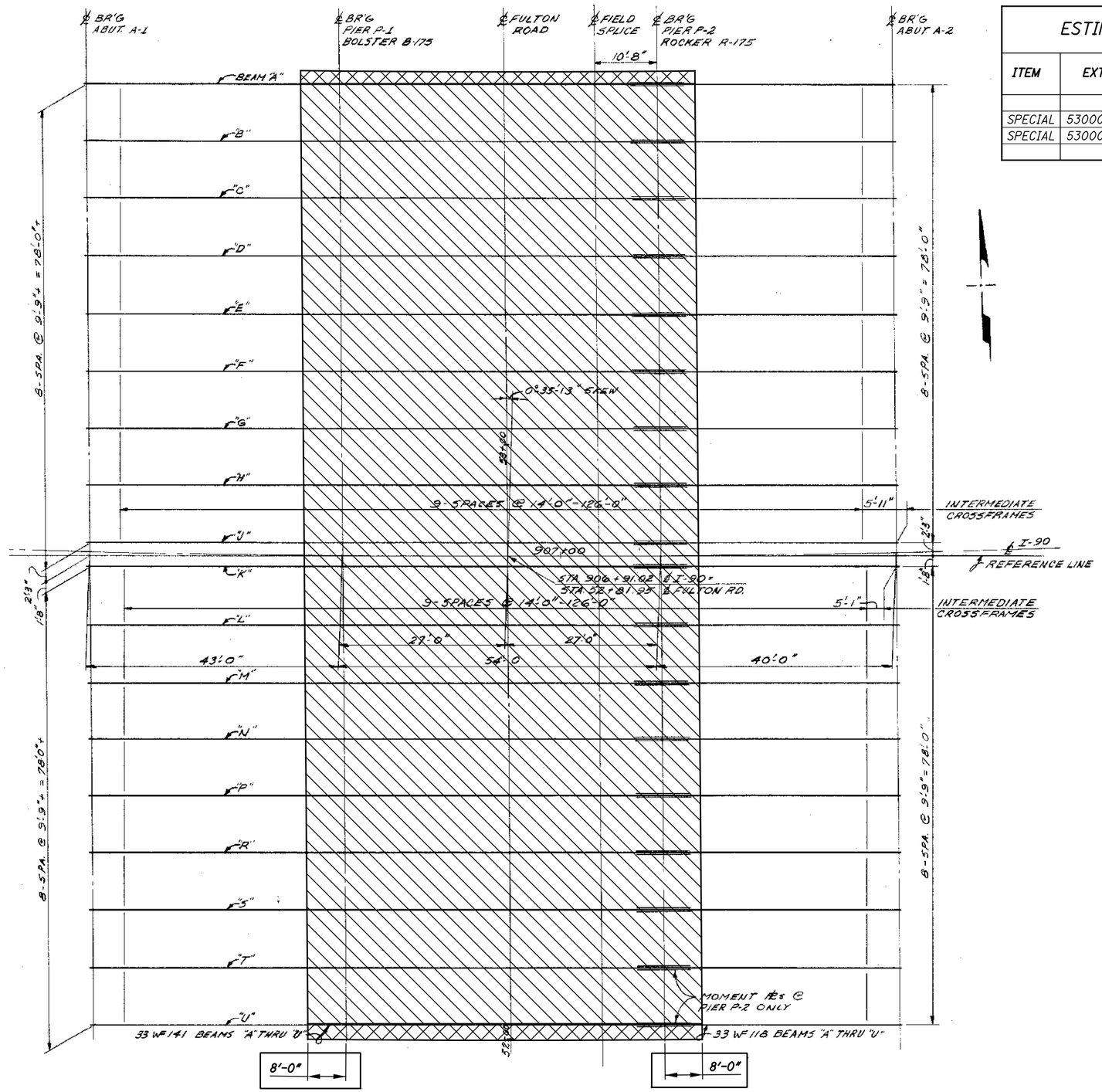
DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JDB	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		1807854	

GENERAL PLAN - LOCATION 5
BRIDGE NO. CUY-90-1391
I.R. 90 OVER FULTON ROAD

D12 BH FY2017 MISC.
PID No. 98599

1/2

31/42



FRAMING PLAN

ESTIMATED QUANTITIES (01/IMS/BR)

CALCULATED JLS DATED 12/16
CHECKED JSB DATED 12/16

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
SPECIAL	53000600	11,195	SF	STRUCTURES, TIMBER SUBDECK	12
SPECIAL	53000600	11,503	SF	STRUCTURES, BOTTOM OF DECK SPALL REMOVAL	11

LEGEND

INDICATES TIMBER SUBDECK AND SPALL REMOVAL PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL AND ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

INDICATES SPALL REMOVAL (BEYOND TIMBER SUBDECK) PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. TIMBER SUBDECK DETAILS - SEE SHEET 15 OF 42.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

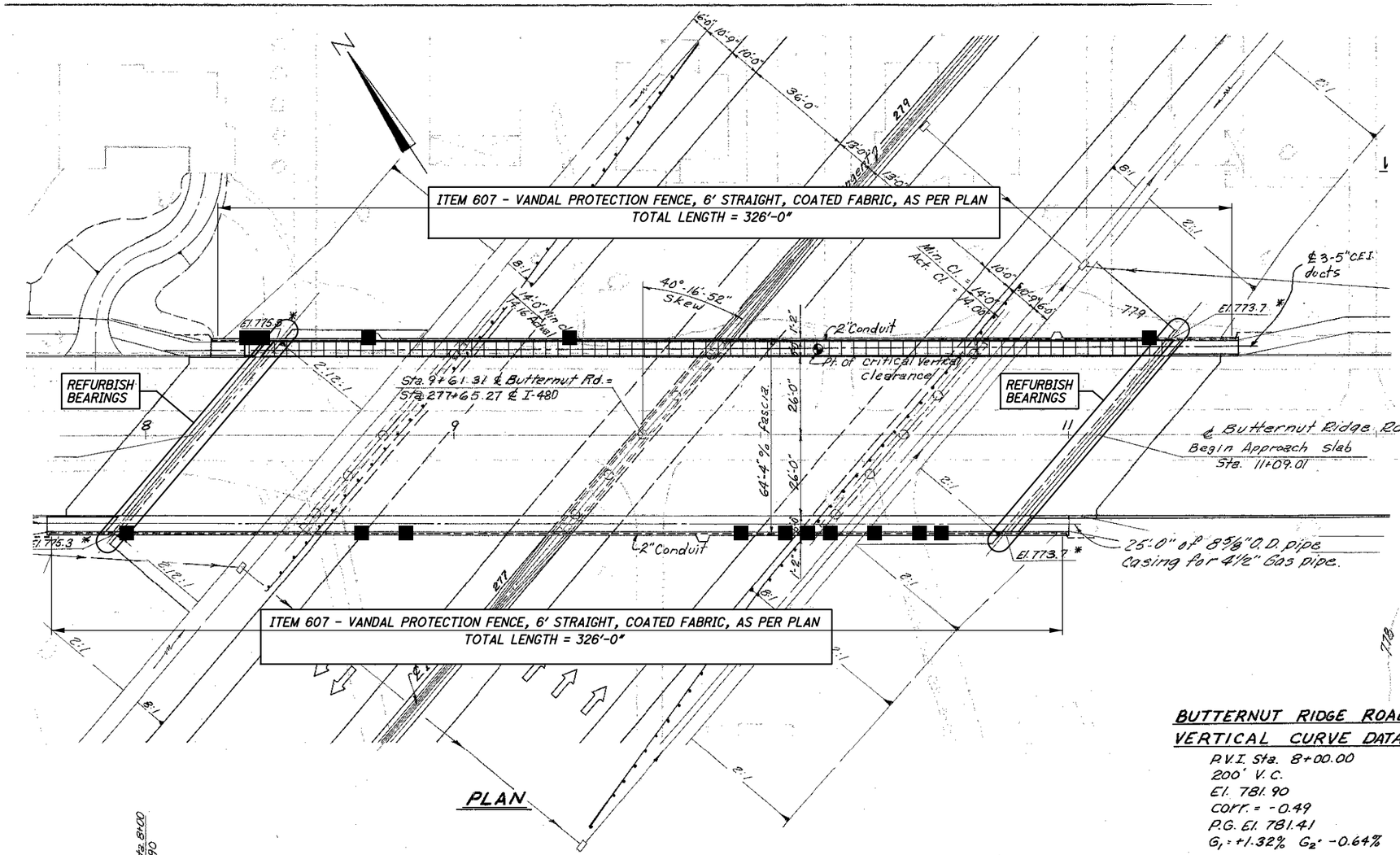
DESIGNED BLN | DRAWN JLS | CHECKED DLR | REVIEWED JDB | DATE 12/12/16 | REVISED | STRUCTURE FILE NUMBER 1807854

DECK REPAIRS - LOCATION 5
BRIDGE NO. CUY-90-1391
I.R. 90 OVER FULTON ROAD

D12 BH FY2017 MISC.
PID No. 98599

2 / 2

32 / 42



I-480 CURVE DATA

P.I. Sta. 287+83.88 FWD
288+29.76 BACK
Δ = 16°-29'-10"
D_c = 0°-15'-00"
R = 22,818.31'
T = 3320.16'
L_c = 6594.44'
E = 239.25'

*Elevations marked with an asterisk are at top of slope at face of abutment

Earthwork limits shown are schematic. Actual slopes shall conform to plan cross-sections.

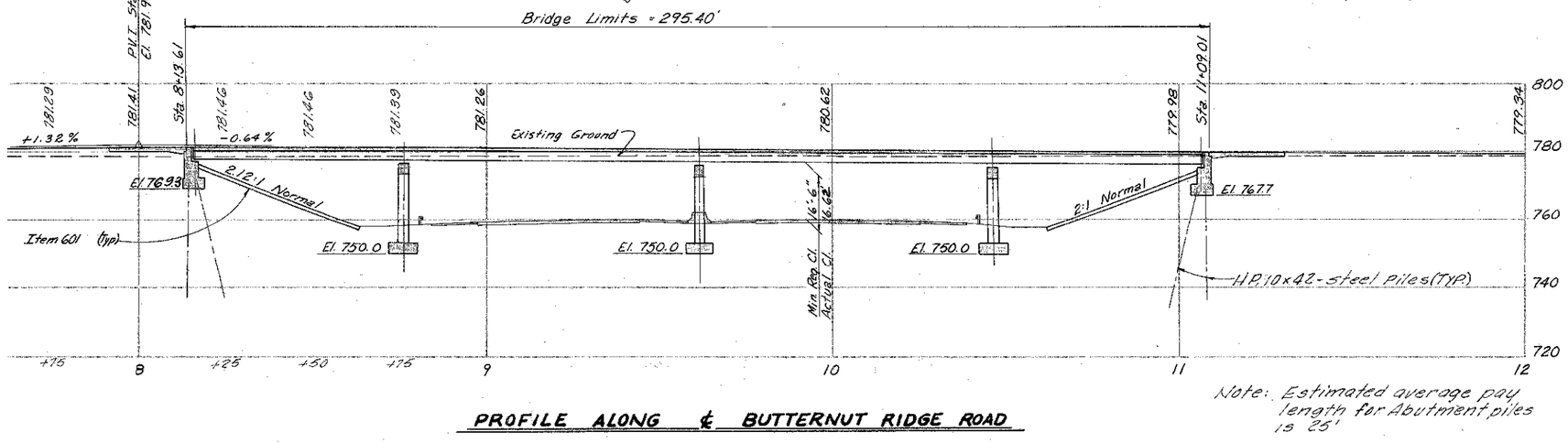
LEGEND

INDICATES CONCRETE SIDEWALK AND CURB REPAIR PER ITEMS 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, ITEM 509 - EPOXY COATED REINFORCING STEEL, ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AND ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN.

INDICATES AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

BUTTERNUT RIDGE ROAD VERTICAL CURVE DATA

P.V.I. Sta. 8+00.00
200' V.C.
El. 781.90
Corr. = -0.49
P.G. El. 781.41
G_1 = +1.32% G_2 = -0.64%



PROFILE ALONG ℄ BUTTERNUT RIDGE ROAD

Note: Estimated average pay length for Abutment piles is 25'

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 4/5.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | CHECKED DLR | REVIEWED JDB | DATE 12/12/16 | REVISED | STRUCTURE FILE NUMBER 1814095

GENERAL PLAN - LOCATION 6
BRIDGE NO. CUY-480-0335
BUTTERNUT RIDGE ROAD (C.R. 93) OVER I.R. 480

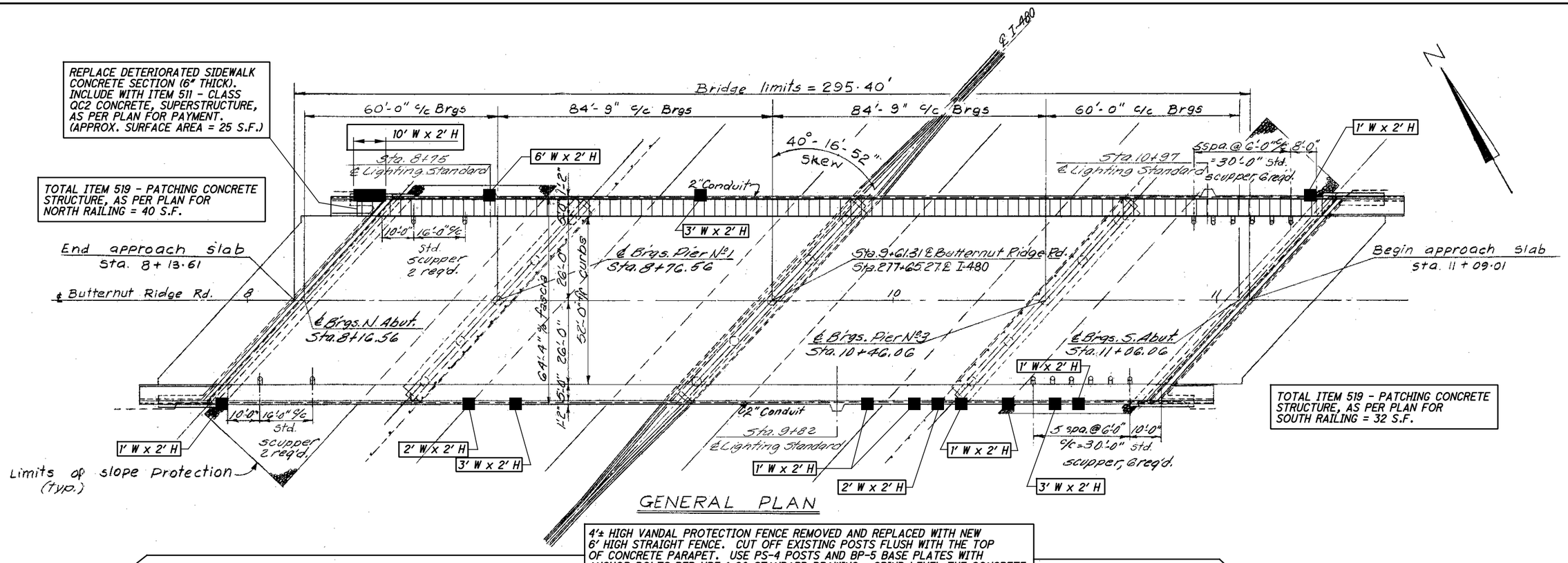
D12 BH FY2017 MISC.
PID No. 98599

1/5

33/42

REPLACE DETERIORATED SIDEWALK CONCRETE SECTION (6" THICK). INCLUDE WITH ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN FOR PAYMENT. (APPROX. SURFACE AREA = 25 S.F.)

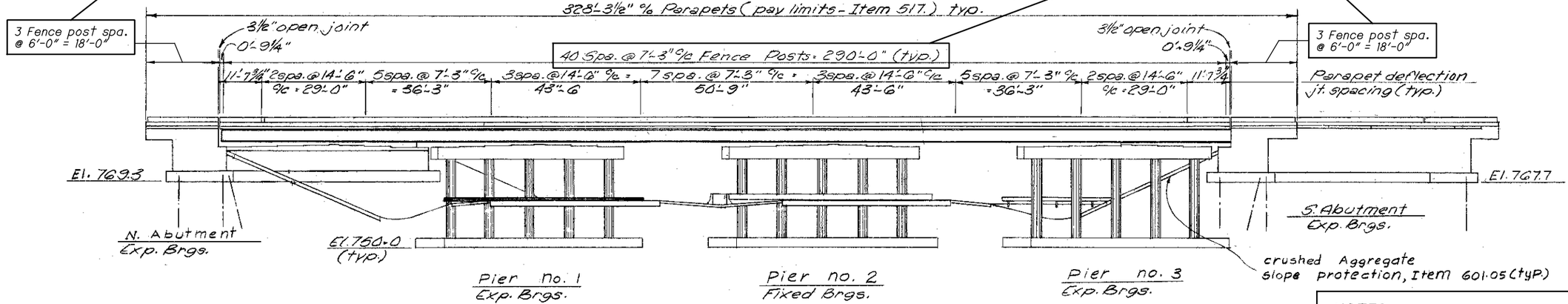
TOTAL ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN FOR NORTH RAILING = 40 S.F.



GENERAL PLAN

4'± HIGH VANDAL PROTECTION FENCE REMOVED AND REPLACED WITH NEW 6' HIGH STRAIGHT FENCE. CUT OFF EXISTING POSTS FLUSH WITH THE TOP OF CONCRETE PARAPET. USE PS-4 POSTS AND BP-5 BASE PLATES WITH ANCHOR BOLTS PER VPF-1-90 STANDARD DRAWING. GRIND LEVEL THE CONCRETE ROUND PARAPET TOP UNDERNEATH THE NEW BASE PLATES. (SEE DETAILS).

TOTAL ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN FOR SOUTH RAILING = 32 S.F.



ELEVATION

LEGEND

INDICATES CONCRETE SIDEWALK AND CURB REPAIR PER ITEMS 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN, ITEM 509 - EPOXY COATED REINFORCING STEEL, ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AND ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN.

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.
- W = WIDTH
- H = HEIGHT

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 4/5.
4. PARAPET AND CURB REPAIR DETAILS: SEE SHEET 3/5.
5. VANDAL PROTECTION FENCE DETAILS: SEE SEE SHEET 4/5.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1814095

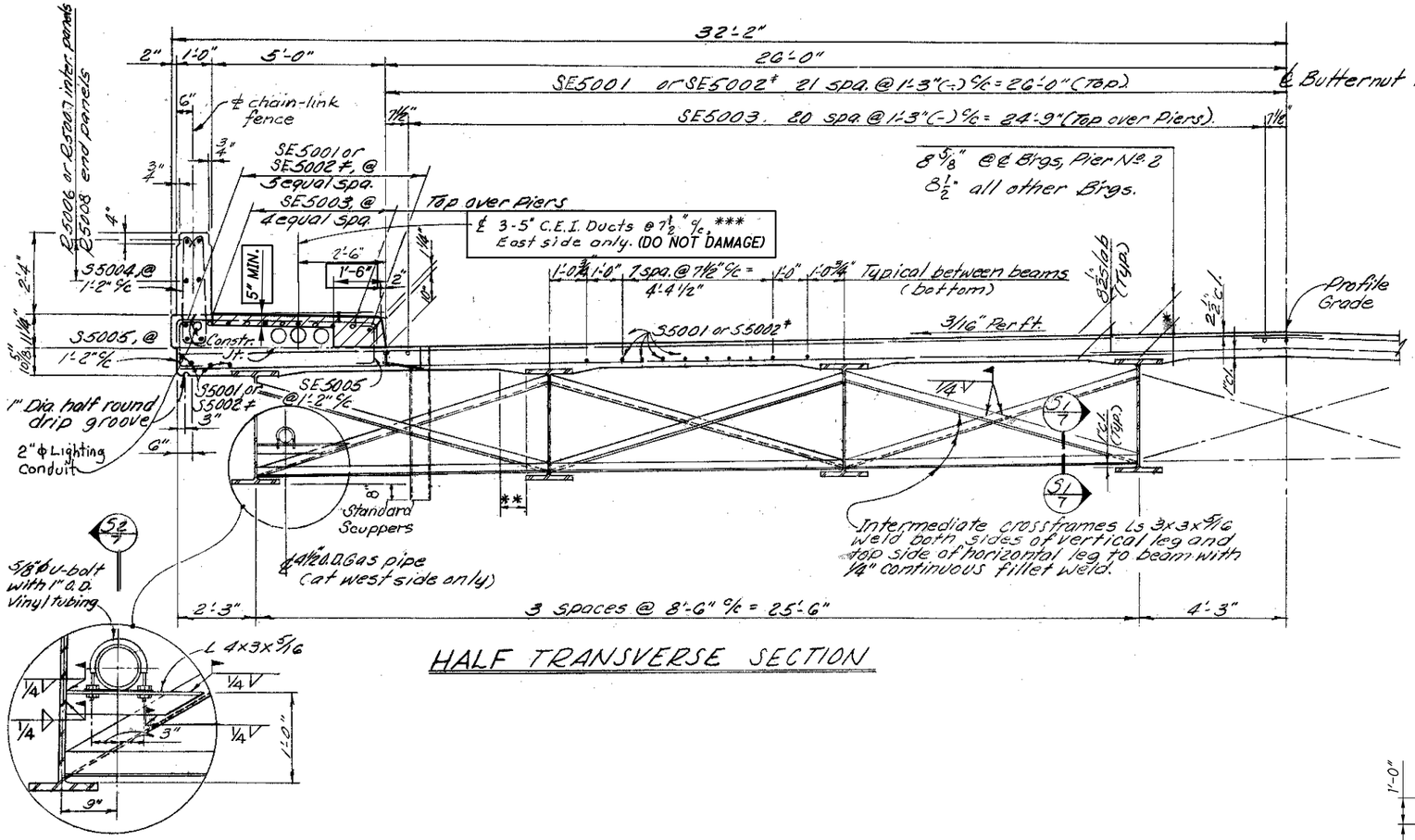
GENERAL REPAIR PLAN - LOCATION 6
BRIDGE NO. CUY-480-0335
BUTTERNUT RIDGE ROAD (C.R. 93) OVER I.R. 480

D12 BH FY2017 MISC.
PID No. 98599

2 / 5

34
42

F:\2016\116041 D12 Bridge Rehab\Group 1 Project\ProjectData\98599\Design\Structures\6 - CUY-480-0335\480_0335SD001.dgn 12/13/16 10:40:18 AM JeremyBurns



LEGEND

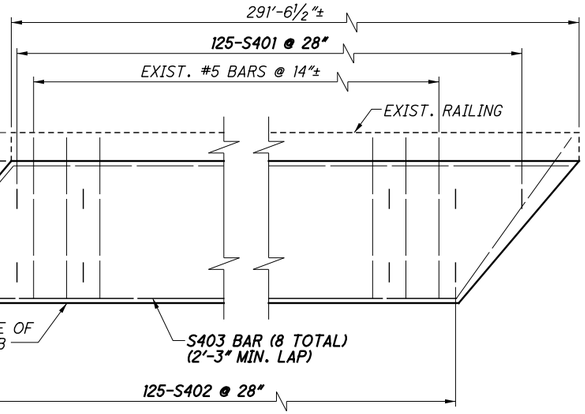
INDICATES SIDEWALK AND CURB TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN. (NORTH SIDEWALK ONLY)

* SEAL THE PARAPET AND OUTSIDE OF DECK FOR THE ENTIRE LENGTH OF THE DECK AND ABUTMENT WINGWALLS PER ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN AND ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN.

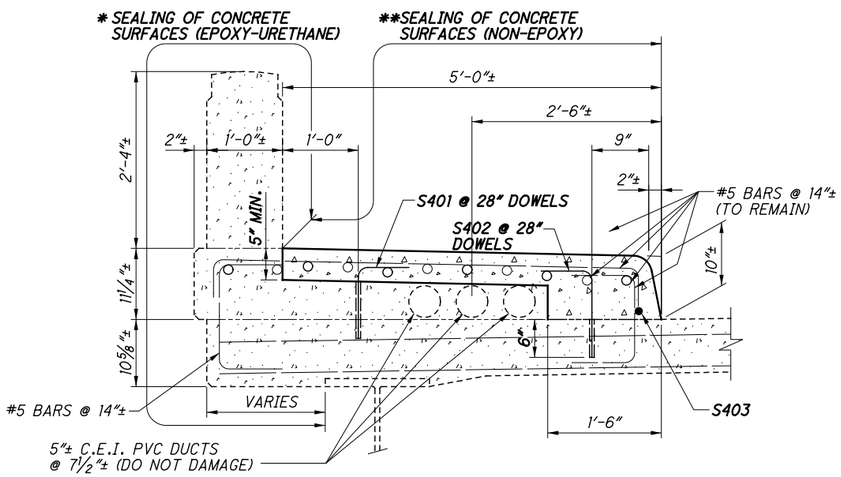
** SEAL THE NORTH SIDEWALK AND CURB FOR THE ENTIRE LENGTH OF THE DECK AND WINGWALLS PER ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY).

*** PER C.E.I., THESE PVC DUCTS ARE CURRENTLY EMPTY. CARE SHALL BE TAKEN TO NOT DAMAGE THE DUCTS.

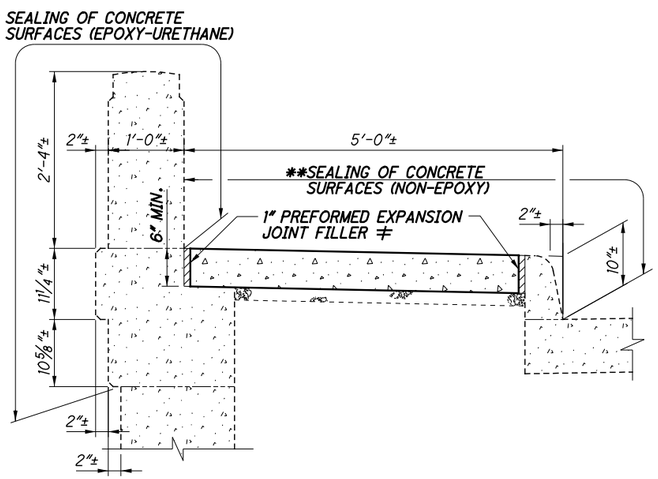
≠ INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN FOR PAYMENT.



NORTH SIDEWALK REINFORCING PLAN



NORTH SIDEWALK & CURB REPAIR DETAIL
(AT SUPERSTRUCTURE)



NORTH SIDEWALK REPAIR DETAIL
(AT ABUTMENT)

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 4/5.
4. SIDEWALK AND CURB REPAIR PER ITEM 509 - EPOXY COATED REINFORCING STEEL, ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AND ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

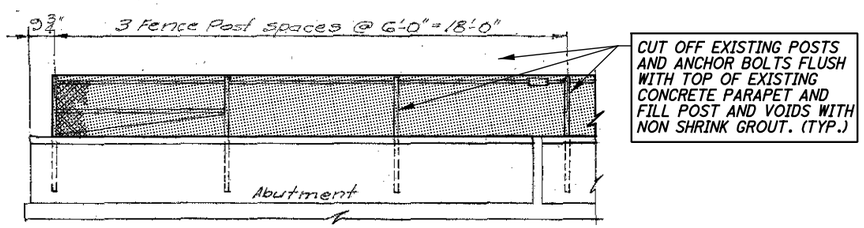
DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1814095

SIDEWALK REPAIR DETAILS - LOCATION 6
BRIDGE NO. CUY-480-0335
BUTTERNUT RIDGE ROAD (C.R. 93) OVER I.R. 480

D12 BH FY2017 MISC.
PID No. 98599

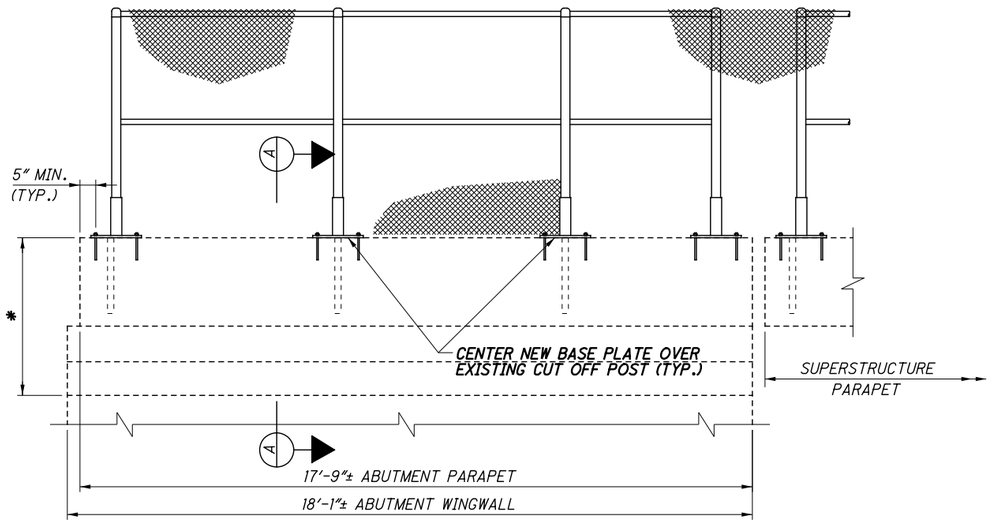
3 / 5

35
42

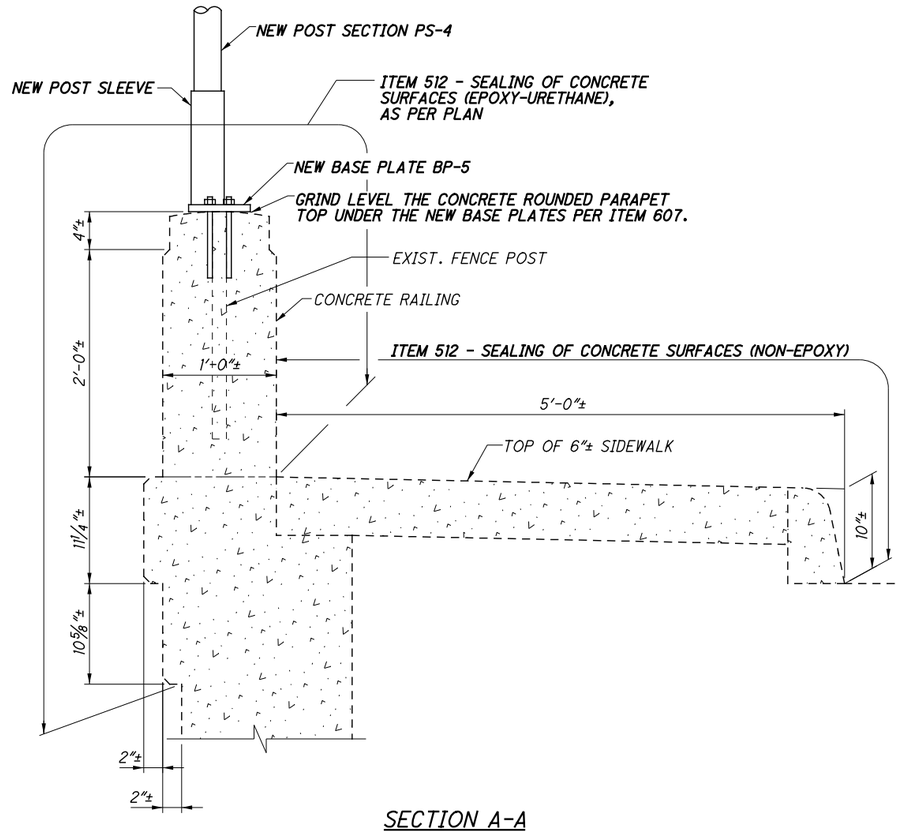


TYPICAL PARAPET AND FENCING DETAIL

REMOVAL DETAIL



FENCE REPLACEMENT ELEVATION



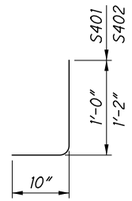
SECTION A-A

ESTIMATED QUANTITIES (02/BRO/BR)

CALCULATED JLS DATED 12/16
CHECKED JSB DATED 12/16

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	11
509	10000	512	LB	EPOXY COATED REINFORCING STEEL	
510	10000	250	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
511	34411	30	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN	34
512	10050	213	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
512	10101	681	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	11
512	74001	681	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	11
516	45305	16	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	11
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	11
519	11101	72	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	11
607	39901	652	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	12

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE
SIDEWALK				
S401	125	1'-9"	146	1
S402	125	1'-11"	160	1
S403	8	38'-6"	206	STR
		TOTAL	512	



TYPE-1

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1814095

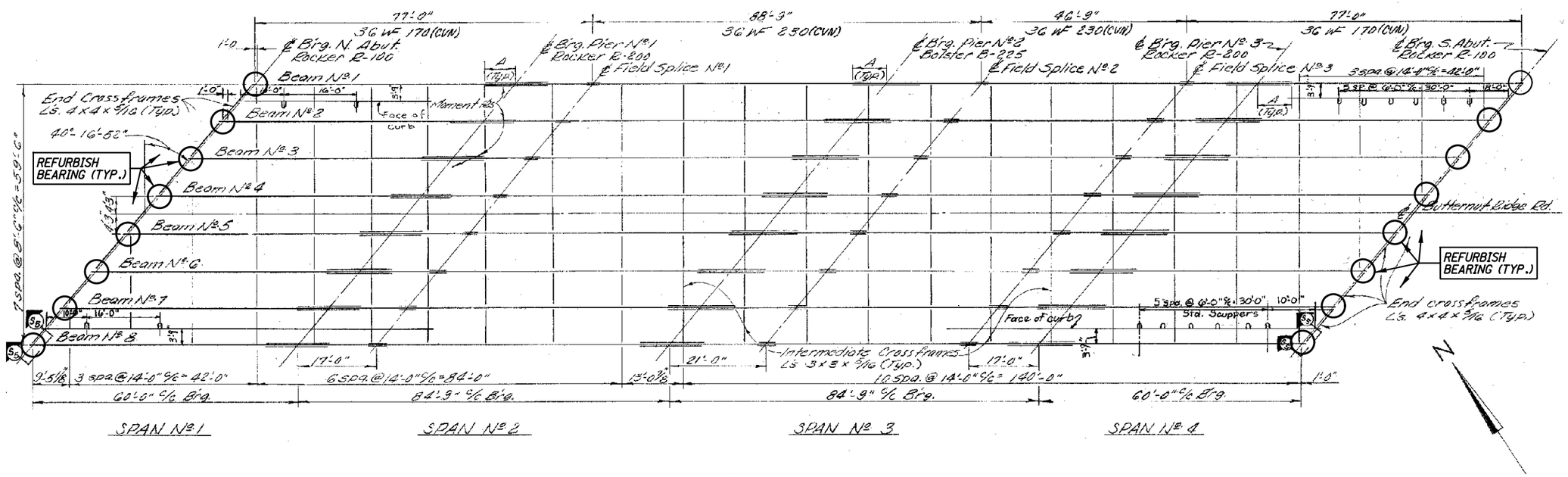
FENCE REPLACEMENT DETAILS - LOCATION 6
BRIDGE NO. CUY-480-0335
BUTTERNUT RIDGE ROAD (C.R. 93) OVER I.R. 480

D12 BH FY2017 MISC.
PID No. 98599

4 / 5

36
42

F:\2016\116041 D12 Bridge Rehab\Group 1 Project\ProjectData\98599\Design\Structures\6 - CUY-480-0335\480_0335SD003.dgn 12/19/2016 10:55:27 AM JeffSmith



FRAMING PLAN

REFURBISH ABUTMENT R-100 ROCKER BEARINGS PER ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN AND ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 4/5.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

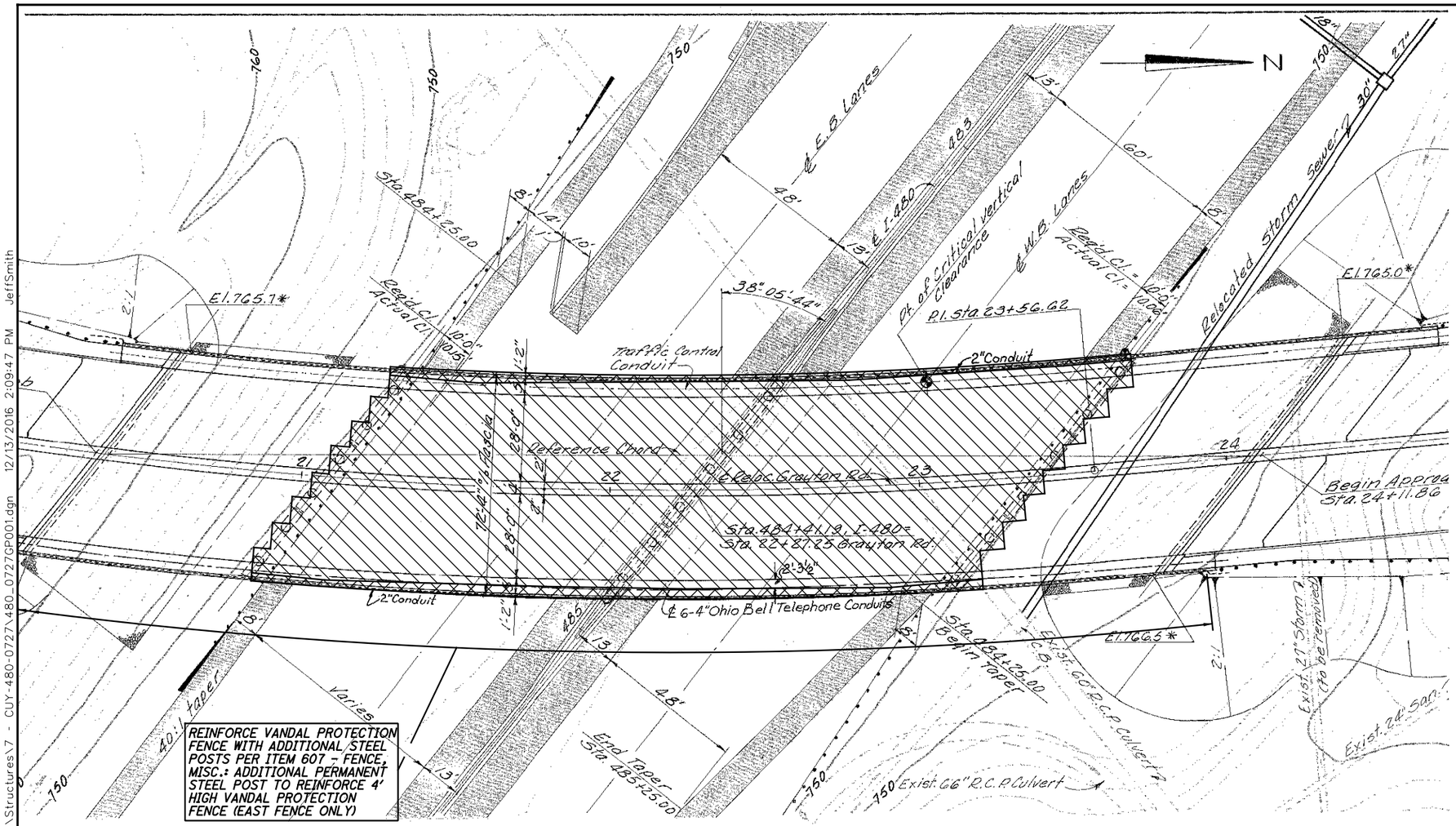
DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JDB	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		1814095	

BEARING REPAIRS - LOCATION 6
BRIDGE NO. CUY-480-0335
BUTTERNUT RIDGE ROAD (C.R. 93) OVER I.R. 480

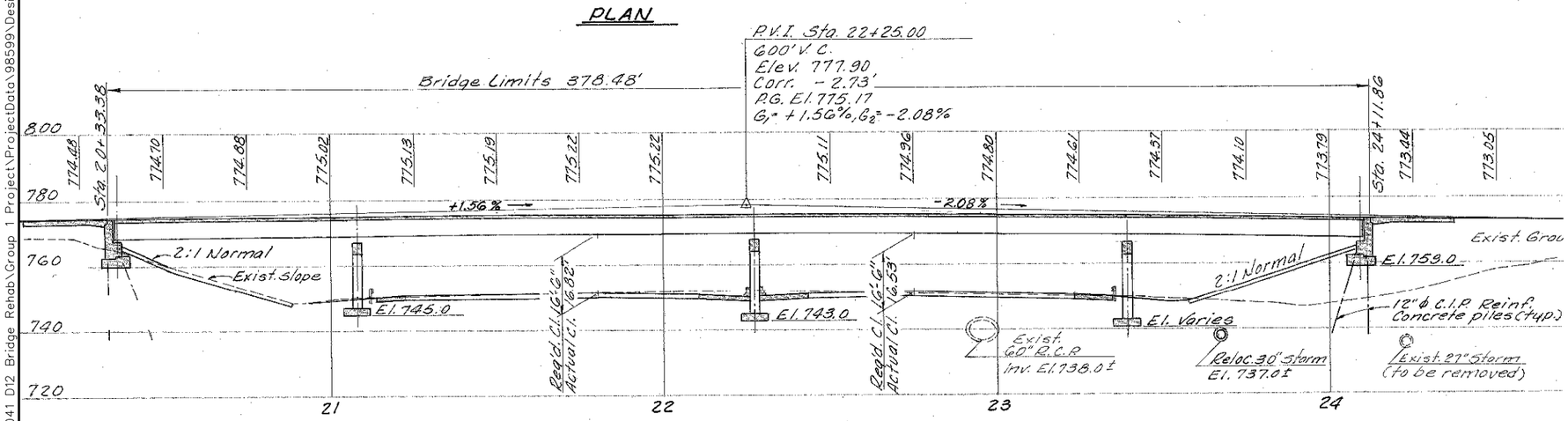
D12 BH FY2017 MISC.
PID No. 98599

5 / 5

37
42



PLAN



PROFILE ALONG ℄ RELOCATED GRAYTON ROAD

GRAYTON RD. CURVE DATA

P.I. Sta. 21+06.84
Δ = 20°11'39"
Dc = 4°00'00"
R = 1432.39'
L = 504.85'
T = 255.07'
C = 502.24'

LEGEND

INDICATES TIMBER SUBDECK AND SPALL REMOVAL PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL AND ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

INDICATES SPALL REMOVAL (BEYOND TIMBER SUBDECK) PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 3/3.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

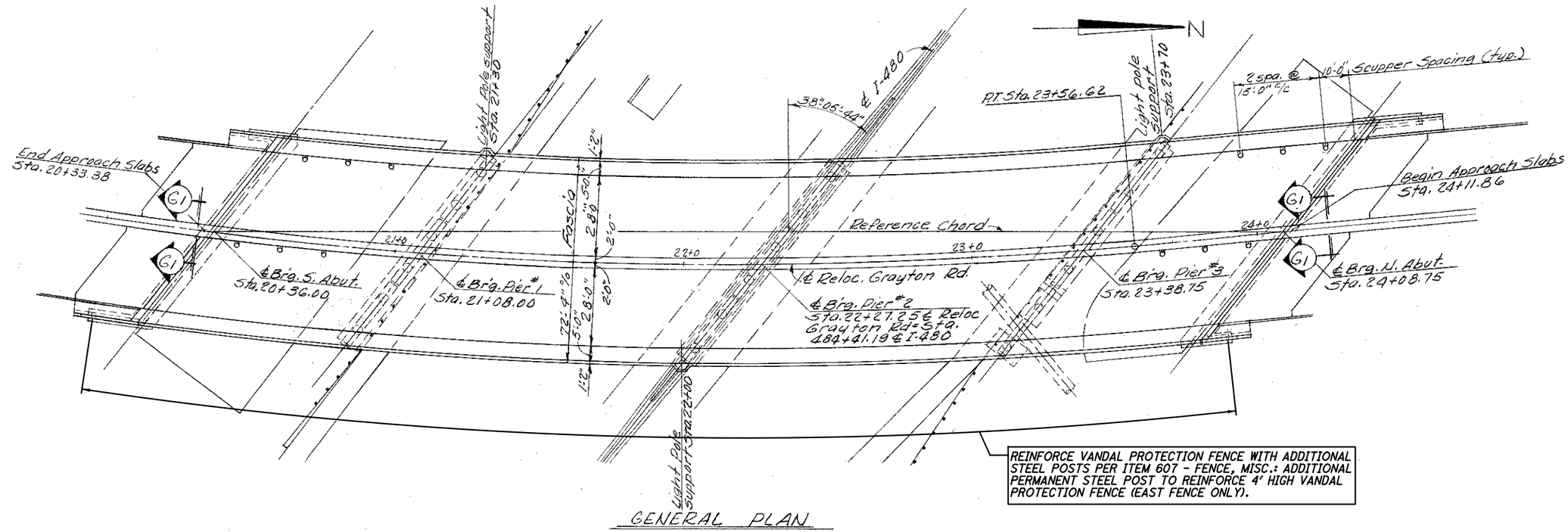
DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JDB	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		1814184	

GENERAL PLAN - LOCATION 7
BRIDGE NO. CUY-480-0727
GRAYTON ROAD (C.R. 68) OVER I.R. 480

D12 BH FY2017 MISC.
PID No. 98599

1 / 3

38
42



NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 3/3.

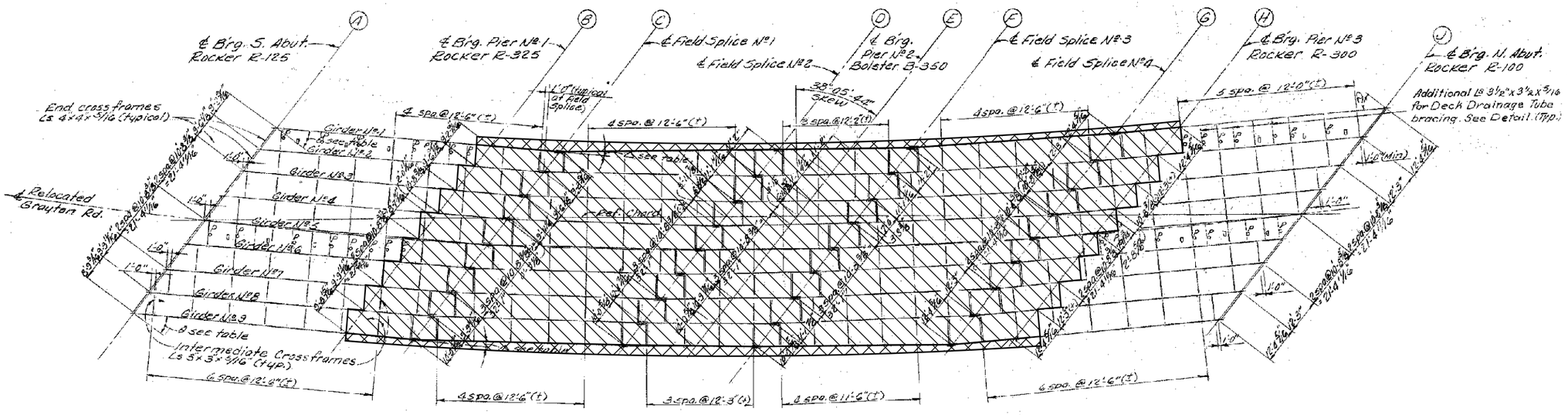
RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JDB	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		181484	

VANDAL PROTECTION FENCE REPAIR DETAIL - LOCATION 7

BRIDGE NO. CUY-480-0727
GRAYTON ROAD (C.R. 68) OVER I.R. 480

D12 BH FY2017 MISC.
PID No. 98599



FRAMING PLAN

ESTIMATED QUANTITIES (02/BRO/BR)

CALCULATED JLS DATED 12/16
CHECKED JSB DATED 12/16

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
SPECIAL	53000600	16,020	SF	STRUCTURES, TIMBER SUBDECK	12
SPECIAL	53000600	17,183	SF	STRUCTURES, BOTTOM OF DECK SPALL REMOVAL	11
607	98100	20	EACH	FENCE, MISC.: ADDITIONAL PERMANENT STEEL POST TO REINFORCE 4' HIGH VANDAL PROTECTION FENCE	13

LEGEND

INDICATES TIMBER SUBDECK AND SPALL REMOVAL PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL AND ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

INDICATES SPALL REMOVAL (BEYOND TIMBER SUBDECK) PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. TIMBER SUBDECK DETAILS - SEE SHEET 15 OF 42.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

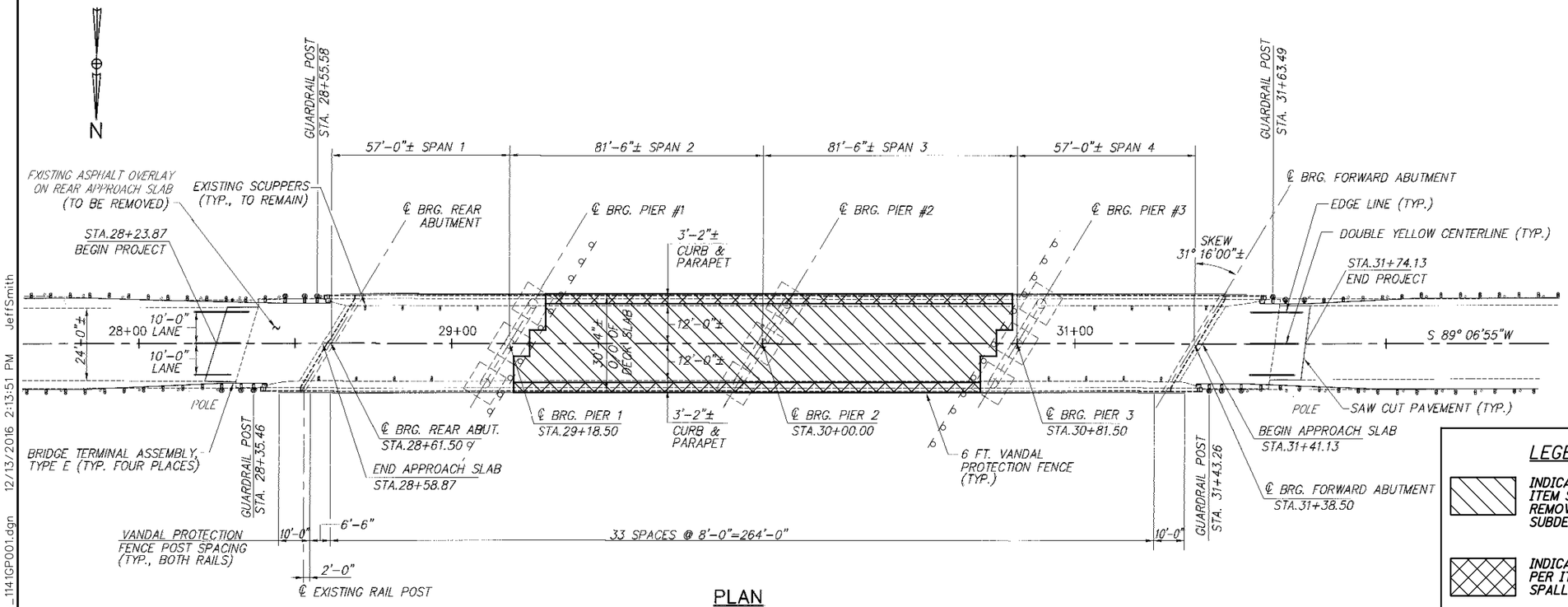
DESIGNED BLN | DRAWN JLS | REVIEWED JDB | DATE 12/12/16
CHECKED DLR | REVISED | STRUCTURE FILE NUMBER 1814184

TIMBER SUBDECKING - LOCATION 7
BRIDGE NO. CUY-480-0727
GRAYTON ROAD(C.R. 68) OVER I.R. 480

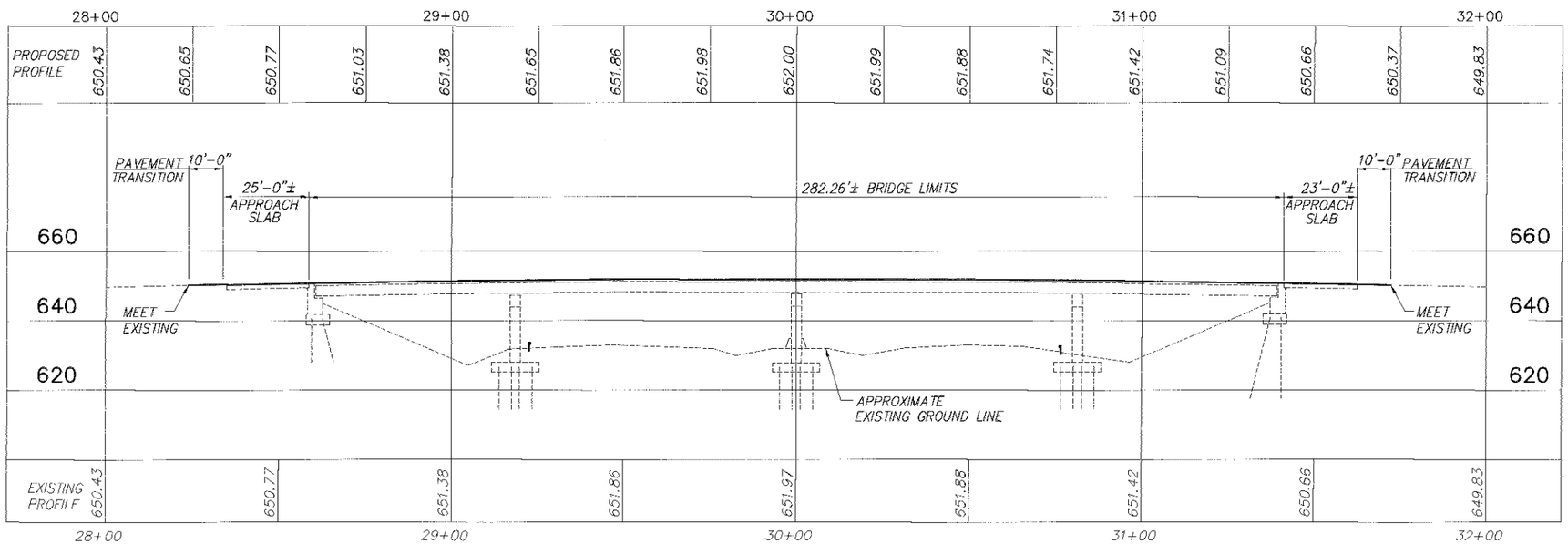
D12 BH FY2017 MISC.
PID No. 98599

3 / 3

40
42



PLAN



PROFILE ALONG ℄ SURVEY

LEGEND

INDICATES TIMBER SUBDECK AND SPALL REMOVAL PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL AND ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

INDICATES SPALL REMOVAL (BEYOND TIMBER SUBDECK) PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 2/2.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

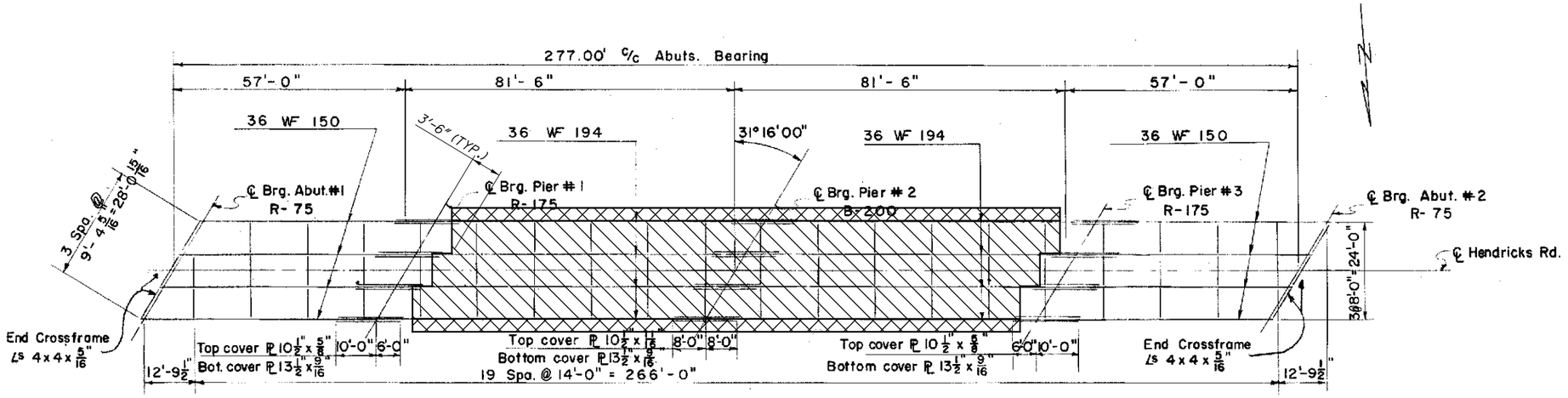
DESIGNED BLN | DRAWN JLS | CHECKED DLR | REVIEWED JDB | DATE 12/12/16 | REVISED | STRUCTURE FILE NUMBER 4301110

GENERAL PLAN - LOCATION 8
BRIDGE NO. LAK-2-1141
HENDRICKS ROAD OVER S.R. 2

D12 BH FY2017 MISC.
PID No. 98599

1 / 2

41
42



STEEL FRAMING PLAN

ESTIMATED QUANTITIES (04/BRO/BR)

CALCULATED JLS DATED 12/16
CHECKED JSB DATED 12/16

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
SPECIAL	53000600	3,609	SF	STRUCTURES, TIMBER SUBDECK	12
SPECIAL	53000600	4,562	SF	STRUCTURES, BOTTOM OF DECK SPALL REMOVAL	11

LEGEND

INDICATES TIMBER SUBDECK AND SPALL REMOVAL PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL AND ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

INDICATES SPALL REMOVAL (BEYOND TIMBER SUBDECK) PER ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. TIMBER SUBDECK DETAILS - SEE SHEET 15 OF 42.

RICHLAND ENGINEERING LIMITED
29 NORTH PARK STREET
MANSFIELD, OHIO 44902

DESIGNED	DRAWN	REVIEWED	DATE
BLN	JLS	JDB	12/12/16
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DLR		4301110	

TIMBER SUBDECKING & DECK REPAIR - LOCATION 8
BRIDGE NO. LAK-2-1141
HENDRICKS ROAD OVER S.R. 2

D12 BH FY2017 MISC.
PID No. 98599

2 / 2

42
42