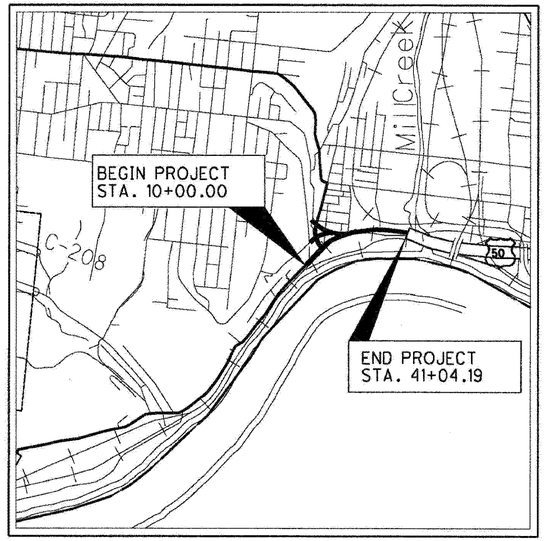

LOCATION MAP

LATITUDE: 39° 6′ 9″ LONGITUDE: -84° 33′ 15″

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION -- SEE SHEET 2

DESIGN EXCEPTIONS	APPROVAL DATE
SUPERELEVATION	MAY/06/2010

CITY OF CINCINNATI
DEPARTMENT OF TRANSPORTATION AND ENGINEERING

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

HAM-50-18.79 PART I

CITY OF CINCINNATI
HAMILTON COUNTY

FOR PART 2, SEE HAM-50-19.03

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PROJECT DESCRIPTION

REMOVAL OF THE EXISTING WALDVOGEL MEMORIAL VIADUCT, INCLUDING FOUR RAMPS TO ELBERON AND WARSAW AVENUES. REPLACEMENT OF STRUCTURES FOR THE FOUR RAMPS TO ELBERON AND WARSAW AND REPLACEMENT OF STRUCTURES FOR THE CONNECTION TO THE SIXTH STREET EXPRESSWAY. REMOVAL AND REPLACEMENT OF ROADWAYS FOR THE REQUIRED PORTIONS OF RIVER ROAD, ELBERON AVENUE, WARSAW AVENUE, STATE AVENUE, EVANS STREET, AND MARYLAND AVE.

PROJECT EARTH DISTURBED AREA:	17.00 ACRES
ESTIMATED CONTRACTOR EARTH DISTRUBED AREA:	3.33 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	20.33 ACRES

2010 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.

PRIMA FACIE SPEED LIMIT

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

MAINTENANCE OF TRAFFIC

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS 72 AND 73.

FEDERAL PROJECT NO. **E060(812)**

PID NO. **20082**

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT **NONE**

HAM-50-18.79

ENGINEERS SEAL: FOR STRUCTURES 20′ & OVER — STATE OF OHIO, PAUL J. LANDRY #E-62193, REGISTERED PROFESSIONAL ENGINEER
SIGNED: P. J. Landry
DATE: 11-16-10

ENGINEERS SEAL: FOR STRUCTURES 20′ & OVER — STATE OF OHIO, XUEQIAN ALICE CHEN #E-66105, REGISTERED PROFESSIONAL ENGINEER
SIGNED: Alice Chen
DATE: 11-16-2010

ENGINEERS SEAL: FOR STRUCTURES 20′ & OVER — STATE OF OHIO, DAVID A. TOWLEY E-58960, REGISTERED PROFESSIONAL ENGINEER
SIGNED: David A. Towley
DATE: 11-16-2010

ENGINEERS SEAL: FOR PLANS EXCEPT STRUCTURES 20′ & OVER — STATE OF OHIO, MARY A. HOSSAIN PE77003, REGISTERED PROFESSIONAL ENGINEER
SIGNED: M. A. Hossain
DATE: 11-16-10

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7/28/00	RM-1.1	10/15/10	HL-10.11	4/17/09	HL-60.11	1/19/07	CITY OF CINCINNATI	
BP-2.1	7/18/08	RM-2.1	10/20/06	HL-10.12	10/15/10	HL-60.12	10/19/07	ES-1-1	7/19/04
BP-2.2	7/18/08	RM-4.2	10/15/10	HL-10.13	10/16/09	HL-60.31	1/19/07	ES-2-1	8/3/04
BP-6.1	7/28/00	RM-4.3	10/16/09	HL-20.11	1/19/07	CB-1.1	7/15/05	ES-2-2	8/3/04
BP-8.1	7/18/08	RM-4.4	10/16/09	HL-20.13	10/15/10	CB-1.2	7/15/05	ES-3-1	8/14/04
BP-4.1	7/16/04	RM-4.6	4/16/10	HL-20.14	10/16/09	CB-2.1	7/15/05	ES-3-2	8/13/04
BP-5.1	7/28/00	RM-5.1	4/18/03	HL-30.11	10/16/09	CB-2.2	7/15/05	ES-3-3	8/13/04
BP-7.1	10/15/10	MT-95.31	7/17/09	HL-30.21	1/19/07	CB-2.3	7/15/05	ES-3-4	8/18/04
F-1.1	4/16/10	MT-95.32	7/17/09	HL-30.22	4/17/09	HW-2.1	7/30/07	ES-3-5	8/20/04
F-3.3	7/28/00	MT-97.10	10/15/10	HL-30.31	4/17/09	HW-2.2	7/30/07	ES-3-6	8/24/04
F-3.4	7/28/00	MT-101.60	4/17/09	HL-30.32	4/17/09	I-1.1	7/15/05	ES-3-7A	8/27/04
GR-1.1	7/16/04	MT-101.70	1/16/09	HL-30.33	4/17/09	MH-1.2	1/20/06	ES-3-9	8/30/04
GR-2.1	1/16/04	MT-101.90	1/16/09	HL-40.10	1/19/07	MH-1.3	7/20/01	ES-3-10A	9/15/04
GR-3.4	10/16/09	MT-105.10	1/16/09	[illegible]	[illegible]	DM-1.1	4/21/06	ES-7-3	4/27/04
GR-4.2	1/19/07	MT-110.10	1/16/09	HL-50.21	1/19/07	DM-1.2	10/21/05	ES-10-1	9/28/04
GR-5.1	4/16/10	TC-82.10	7/16/10	HL-60.11	1/19/07	DM-1.4	4/21/06	[illegible]	[illegible]
GR-6.1	4/16/10					I-2.3	7/15/05	ES-7-1	03-04-99

SUPPLEMENTAL SPECIFICATIONS	
800	1/21/11
832	5/05/09
840	10/15/10
842	1/19/07
878	4/18/08
898	10/15/10

SPECIAL PROVISIONS

Special Provisions Listed on Sheet 20

APPROVED _____
DATE 11/17/10 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

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

OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-929-0988

PLAN PREPARED BY:

PB 100 YEARS
PARSONS BRINCKERHOFF, INC.
312 ELM STREET
SUITE 2500
CINCINNATI, OHIO 45202-2720

UTILITIES

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

GAS:
GAS DISTRIBUTING ENGINEERING, ROOM 460-A
DUKE ENERGY
139 EAST FOURTH STREET
CINCINNATI, OHIO 45202
513-287-2730

POWER:
DUKE ENERGY
P.O. BOX 960, ROOM M 50 M
CINCINNATI, OHIO 45202
513-287-2742

WATER:
CINCINNATI WATER WORKS
4747 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232
513-591-6856

STORM:
CINCINNATI STORMWATER MANAGEMENT UTILITY
705 CENTRAL AVENUE, ROOM 400
CINCINNATI, OHIO 45202
513-352-5344

SANITARY:
METROPOLITAN SEWER DISTRICT
1600 GEST STREET
CINCINNATI, OHIO 45204
513-557-7188

TELEPHONE:
CINCINNATI BELL TELEPHONE COMPANY
201 EAST FOURTH STREET
CINCINNATI, OHIO 45202
513-566-5050

MCI/WORLDCOM
730 WEST HENRY STREET
INDIANAPOLIS, INDIANA 46225
317-685-8050

QWEST COMMUNICATIONS CORPORATION
125 EAST ELLIS DRIVE
WAYNESVILLE, OHIO 45068
513-659-4871

SPRINT
EASTERN REGION, GREAT LAKES DISTRICT
FIBER OPERATIONS
5600 NORTH RIVER ROAD, SUITE 500
ROSEMONT, ILLINOIS 60018
847-318-3193

CABLE:
TIME WARNER CABLE
11252 CORNELL PARK DRIVE
CINCINNATI, OHIO 45242
513-489-5067

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

CONSTRUCTION NOTIFICATION

THE CONTRACTOR WILL ADVISE THE PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE CLOSURES, AND ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THE INFORMATION TO THE CITY OF CINCINNATI DIVISION OF TRAFFIC ENGINEERING AT 513-352-5289 AND TO THE DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT 513-933-7651 OR VIA EMAIL AT D08.PIO.FORM@DOT.STATE.OH.US. THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

ALLOWABLE WORKING HOURS

THE CONTRACTOR IS PERMITTED TO WORK TWENTY-FOUR (24) HOURS PER DAY, SEVEN (7) DAYS PER WEEK SUBJECT TO CITY OF CINCINNATI NOISE ORDINANCE. IN ORDER TO REDUCE THE NOISE IMPACT ON THE SURROUNDING COMMUNITY, ANY CONSTRUCTION OR DEMOLITION ACTIVITY, OR THE OPERATION OF ANY MECHANICAL, ELECTRICAL, OR BATTERY-OPERATED APPARATUS PRODUCING LOUD SOUND WHICH DISTURBS THE PEACE AND QUIET OF RESIDENTS WITHIN 500 FEET SHALL BE PROHIBITED BETWEEN HOURS FROM 11:00 P.M. AND 7:00 A.M. THE FOLLOWING DAY IN ACCORDANCE WITH THE CITY OF CINCINNATI ORDINANCE NO. 272-1987. HOWEVER, THE CONTRACTOR MAY APPLY FOR NIGHTTIME CONSTRUCTION PERMITS, IF NECESSARY, IN ACCORDANCE WITH CITY OF CINCINNATI ORDINANCE NO. 273-1987 FOR OPERATION FROM 11:00 P.M. AND 7:00 A.M. THE FOLLOWING DAY.

WORK LIMITS

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

HAUL ROADS

THE CONTRACTOR SHALL NOTIFY THE DISTRICT DEPUTY DIRECTOR AND THE CITY, IN WRITING, AT LEAST TEN WORKING DAYS BEFORE USING ANY STREET FOR THE PURPOSE OF HAULING MATERIAL OR EQUIPMENT TO OR FROM THE PROJECT, OF HIS INTENT TO USE THE STREETS. THE CONTRACTOR SHALL INCLUDE IN HIS REPORT THE LIMITS OF THE STREET WITHIN WHICH HE INTENDS TO OPERATE. THE CONTRACTOR MAY NOT USE A STREET FOR HAULING PURPOSES WITHOUT APPROVAL OF THE DEPARTMENT OF TRANSPORTATION AND THE CITY MANAGER, CITY OF CINCINNATI. ALL NOTIFICATIONS AND REPORTS SHALL BE IN WRITING.

TEMPORARY RIGHT OF WAY PARCELS

UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL AND/OR EQUIPMENT. UPON THE COMPLETION OF WORK IN THESE AREAS, THE TEMPORARY EASEMENT SHALL BE IMMEDIATELY VACATED.

SPECIAL PROVISIONS

THE FOLLOWING SPECIAL PROVISIONS APPLY TO THIS PROJECT

FLOODWALL MODIFICATION DOCUMENTATION - 11-29-10 (PART 2)

WICK DRAINS - 10-19-10 (PART 1)

NATIONWIDE PERMIT #14 - 09-09-10 (PART 2)

CONTROLLER ITEM MISC: CONTROLLER UNIT, TYPE 170E, WITH CABINET, TYPE 330 - 04-15-11

MAINTAINING SECURITY TO 624 BURNS STREET (MS MANUFACTURING)

THE SECURITY FENCING/BARRICADES AROUND 624 BURNS STREET (MS MANUFACTURING) SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS FOLLOWS:

1. THE EXISTING SECURITY FENCE/BARRICADES AND GATES SURROUNDING 624 BURNS STREET (MS MANUFACTURING) SHALL NOT BE REMOVED UNTIL NECESSARY FOR REGRADING WORK ON THEIR PROPERTY. ALL WORK THAT WOULD HINDER THE OWNER OF 624 BURNS STREET FROM PERMANENTLY REINSTALLING NEW SECURITY FENCING AND GATES SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS OF WHEN THE EXISTING FENCE/BARRICADES AND GATES ARE REMOVED. THE OWNER OF 624 BURNS STREET SHALL BE GIVEN AT LEAST 30 CALENDAR DAYS ADVANCED NOTICE PRIOR TO ANY REMOVAL OF THE EXISTING FENCE/BARRICADES OR GATES SO THAT THE PROPERTY OWNERS CAN MAKE NECESSARY ARRANGEMENTS FOR TEMPORARY SECURITY AND FOR THE INSTALLATION OF PERMANENT FENCING AND GATES.

ALL COSTS ASSOCIATED WITH MAINTAINING SECURITY TO 624 BURNS STREET (MS MANUFACTURING) SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 MAINTAINING TRAFFIC.

MAINTAINING ACCESS AND SECURITY TO 1900 WEST SIXTH STREET (RIS PAPER)

ACCESS TO AND THE SECURITY FENCING AROUND 1900 W. SIXTH STREET (RIS PAPER) SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS FOLLOWS:

1. ACCESS TO 1900 W. SIXTH STREET (RIS PAPER) MAY BE RESTRICTED ON TWO CONSECUTIVE WEEKENDS FROM A PERIOD BEGINNING AT 9:00 P.M. FRIDAY NIGHT UNTIL 9:00 P.M. SUNDAY NIGHT FOR WORK IN AND ADJACENT TO THE PARKING LOT OF 1900 W. SIXTH STREET (RIS PAPER). EXCEPT THAT DURING THESE TWO PERIODS, ACCESS SHALL ALSO BE PROVIDED FOR THE SINGLE "OVERNIGHT" TRUCK THAT NEEDS ACCESS TO THE LOADING DOCKS AT APPROXIMATELY 1 A.M. TO 2 A.M. SATURDAY MORNING. A DISINCENTIVE IN THE AMOUNT OF $2188.39 PER HOUR WILL BE ASSESSED IF ACCESS TO 1900 W. SIXTH STREET (RIS PAPER) IS RESTRICTED AT ANY OTHER TIME OUTSIDE OF THESE TWO PROVIDED WINDOWS. FAILURE TO PROVIDE ACCESS FROM 1 A.M. TO 2 A.M. SATURDAY MORNING WILL ALSO RESULT IN THIS DISINCENTIVE.
2. THE SECURITY FENCE AND GATES SURROUNDING 1900 W. SIXTH STREET (RIS PAPER) SHALL NOT BE REMOVED UNTIL NECESSARY FOR THE ABOVE DESCRIBED WORK TO BE PERFORMED. ALL WORK THAT WOULD HINDER THE OWNER OF 1900 W. SIXTH STREET FROM PERMANENTLY REINSTALLING NEW SECURITY FENCING AND GATES SHALL BE COMPLETED WITHIN 30 CALENDAR DAYS OF WHEN THE FENCE AND GATES ARE REMOVED. THE OWNER OF 1900 W. SIXTH STREET SHALL BE GIVEN AT LEAST 30 CALENDAR DAYS ADVANCED NOTICE PRIOR TO ANY REMOVAL OF THE EXISTING FENCE OR GATES SO THAT THE PROPERTY OWNERS CAN MAKE NECESSARY ARRANGEMENTS FOR TEMPORARY SECURITY AND FOR THE INSTALLATION OF PERMANENT FENCING AND GATES.

ALL COSTS ASSOCIATED WITH MAINTAINING ACCESS AND SECURITY TO 1900 W. SIXTH STREET (RIS PAPER) SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 MAINTAINING TRAFFIC.

BASIS OF BEARING

BEARINGS ARE BASED UPON OHIO SOUTH ZONE GRID COORDINATES. A PROJECT ADJUSTMENT FACTOR (P.A.F.) OF 0.99994784 CAN BE USED TO CONVERT TO GROUND COORDINATES FOR THIS PROJECT.

ELEVATION DATUM

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

ALL ELEVATIONS ARE ORTHOMETRIC HEIGHTS USING THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AND THE GEOID03 GEOID. HORIZONTAL POSITIONS ARE BASED ON THE OHIO STATE PLANE SOUTH ZONE, A LAMBERT CONFORMAL CONIC MAP PROJECTION, THE NORTH AMERICAN DATUM OF 1983 ADJUSTED TO THE NATIONAL SPATIAL REFERENCE SYSTEM OF 2007 (NAD 83(NSRS 2007)), AND THE GRS80 ELLIPSOID.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE. CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

REVIEW OF BUILDINGS AND FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT, AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR ALONG WITH CITY OF CINCINNATI REPRESENTATIVES SHALL MAKE AN INSPECTION OF THE EXISTING BUILDINGS AND FACILITIES WITHIN THE WORK LIMITS WHICH ARE TO REMAIN AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING BUILDINGS AND FACILITIES SHALL BE DETERMINED FROM THE FIELD OBSERVATION, RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL EXISTING BUILDINGS AND FACILITIES INSPECTED INITIALLY BY THE ABOVE- MENTIONED SHALL BE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION, ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTORS OPERATION SHALL BE CORRECTED BY THE CONTRACTOR TO BE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCIDENTAL TO THE TOTAL COST OF PROJECT.

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WORKSITE TRAFFIC
SUPERVISOR NOTE
REMOVED FROM PROJECT

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

ITEM 614, LINEAR DELINEATION, AS PER PLAN

INCREASED DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL CONCRETE BARRIER PERMANENT OR TEMPORARY, LOCATED WITHIN 5 FEET (1.5 METERS) OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS:

ALONG TAPERS AND TRANSITION AREAS

ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES

THE INCREASED DELINEATION SHALL CONSIST OF EITHER LINEAR DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.
THE LINEAR DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE PROVIDED AT THE RATE OF ONE PER SECTION OF PORTABLE CONCRETE BARRIER, OR ONE PANEL EVERY 10 FEET (3 METERS) ON PERMANENT BARRIER, SPACED EVENLY ALONG THE LENGTH OF THE RUN. THE PANELS SHALL BE MOUNTED SUCH THAT THE TOPS OF THE PANELS ARE 26 INCHES (660 MILLIMETERS) FROM THE BASE OF THE CONCRETE BARRIER.TRIPLE STACKED BARRIER REFLECTORS SHALL CONSIST OF THREE BARRIER REFLECTORS STACKED VERTICALLY IN THEIR ATTACHMENT TO CONCRETE BARRIER. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TOP OF THE MIDDLE BARRIER REFLECTOR SHALL BE LOCATED 26 IN (660 MM) ABOVE THE PAVEMENT.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING LINEAR DELINEATION.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS:

ITEM 614 LINEAR DELINEATION, AS PER PLAN 13650 FT

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

CONCRETE BARRIER DELINEATION

OBJECT MARKERS SHALL BE INSTALLED ON ALL PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET (1.5 METERS) OF THE EDGE OF THE ADJACENT TRAVEL LANE. OBJECT MARKER SPACING SHALL BE 50 FEET (15 METERS).

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING OBJECT MARKERS.

AN ESTIMATED QUANTITY OF EACH OF ITEM 614 OBJECT MARKER, 1-WAY HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

ITEM 614 - OBJECT MARKER, ONE-WAY (CONC. BARRIER) 173 EACH

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A 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 RETROREFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

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

THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 2 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.

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

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK. THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR=S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 24 SIGN-MONTH

CALCULATED MTR
CHECKED NJG

MAINTENANCE OF TRAFFIC
GENERAL NOTES

HAM-50-18.79

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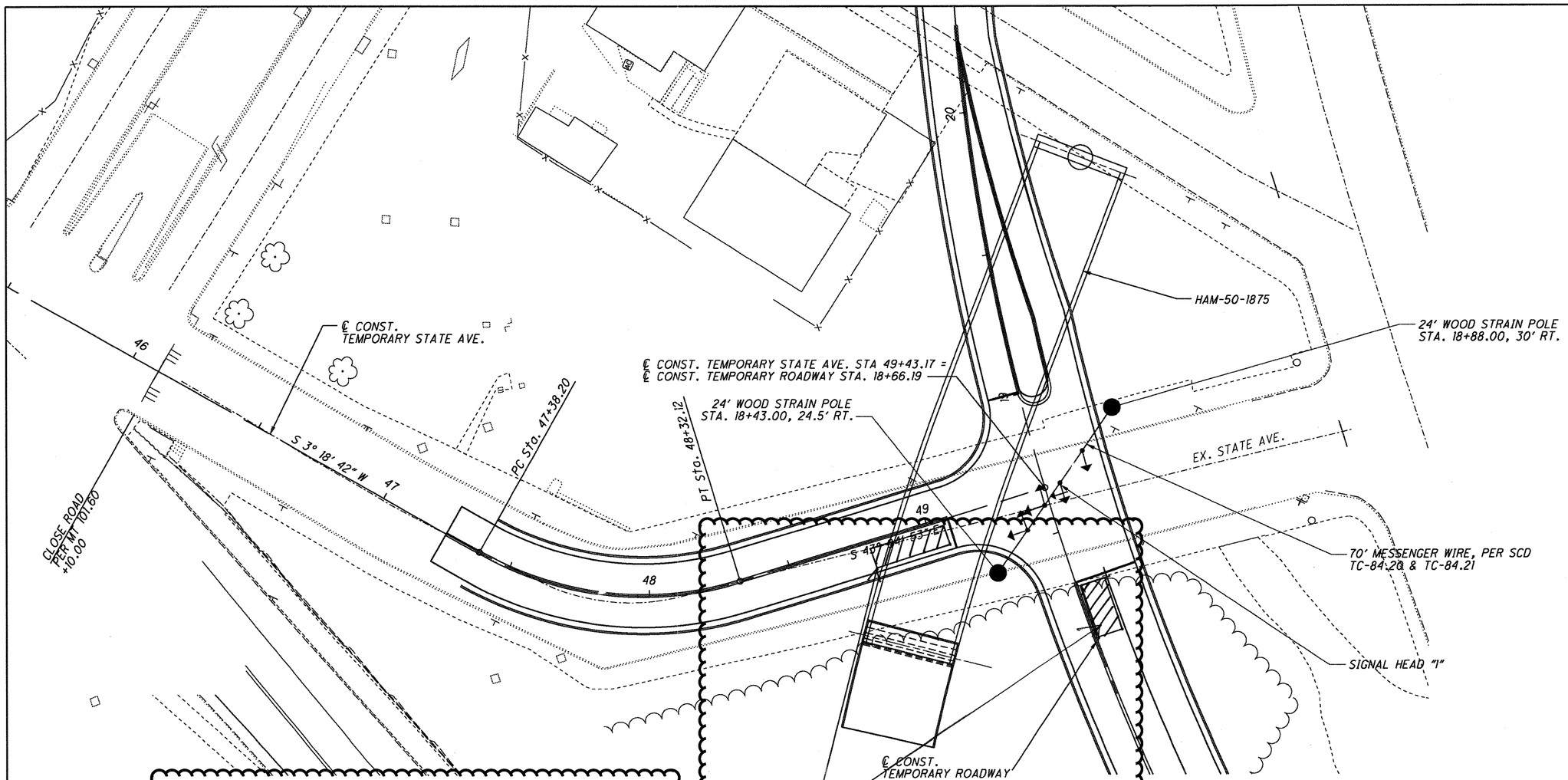
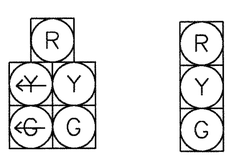


ITEM SPECIAL – WORK ZONE TRAFFIC SIGNAL

THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL AND REMOVE THE TEMPORARY TRAFFIC SIGNAL AS SHOWN IN THE PLANS. THIS WORK SHALL INCLUDE, BUT NOT LIMITED TO THE INSTALLATION OF POLES, CONTROLLER, VEHICLE DETECTION, SIGNAL HEADS, AND CABLE. THE CONTRACTOR CAN CHOSE WHICH TYPE OF VEHICLE DETECTION TO INSTALL, SUCH AS LOOP DETECTORS (6'X30'), VIDEO CAMERA, OR RADAR DETECTION, AND WILL INCLUDE ALL NECESSARY EQUIPMENT TO GET COMMUNICATION FROM THE DETECTOR TO THE CONTROLLER. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE TO SET-UP THE CONTROLLER CABINET FOR THE PHASING SHOWN AND THE SIGNAL TIMING PROVIDED BY THE CITY OF CINCINNATI AT THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADJUSTMENTS TO THE TEMPORARY SIGNAL INCLUDING, BUT NOT LIMITED TO, SIGNAL TIMING, HEAD LOCATION OR VEHICLE DETECTION AS DIRECTED BY THE ENGINEER.

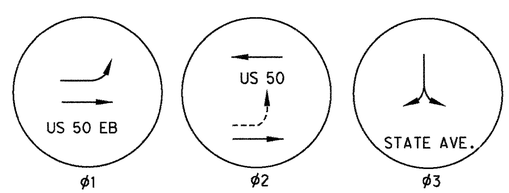
PAYMENT FOR ALL THE ITEMS LISTED ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM SPECIAL WORK ZONE TRAFFIC SIGNAL AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT NECESSARY TO INSTALL AND MAINTAIN THE SIGNAL DURING THE PROJECT.

SIGNAL INDICATIONS



1 ALL OTHER SIGNAL HEADS

SIGNAL PHASING



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NOTES:

1. POLE LOCATIONS WERE DETERMINED BY THE AVAILABLE UNDERGROUND UTILITY INFORMATION. REPOSITIONING OF THE POLES MAY BE REQUIRED BY FIELD CONDITIONS AND REQUIRES APPROVAL BY THE ENGINEER.

2. SPAN LENGTHS FOR THE MESSENGER WIRE ARE GIVEN FOR ESTIMATING PURPOSES ONLY. THE LENGTHS MAY CHANGE DUE TO TENSIONING OF THE MESSENGER WIRE.

3. STRAIN POLE LENGTHS ARE MEASURED FROM THE EXISTING GROUND LINE TO TOP OF POLE. SIGNALS SHALL HAVE A MINIMUM CLEARANCE OF 16' AND A MAXIMUM CLEARANCE OF 18' FROM THE ROADWAY.

NOTES:

4. ALL SIGNAL HEADS SHALL BE POLYCARBONATE WITH 12" LENSES. SIGNAL HEADS SHALL BE CENTERED ON THE LANE AND HAVE A MINIMUM OF 8' SPACING BETWEEN HEADS.

5. ALL TRAFFIC SIGNAL EQUIPMENT AND RELATED EQUIPMENT, METHODS OF INSTALLATION, AND OPERATION SHALL BE IN ACCORDANCE WITH STANDARDS SET FORTH IN THE OMUTCD, ITEM 614, ODOT TRAFFIC ENGINEERING MANUAL, AND APPROPRIATE STANDARD CONSTRUCTION DRAWINGS.

6. ADVANCED WARNING SIGNS SHALL BE PLACED UPON ACTIVATION OF THE SIGNAL ACCORDING TO STANDARD CONSTRUCTION DRAWING MT-120.00 AND THE OMUTCD. THE LAYOUT OF ALL SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. PAYMENT FOR FURNISHING, ERECTING AND SUBSEQUENTLY REMOVING THE SIGNS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 614 WORK ZONE TRAFFIC SIGNAL.

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED MTR
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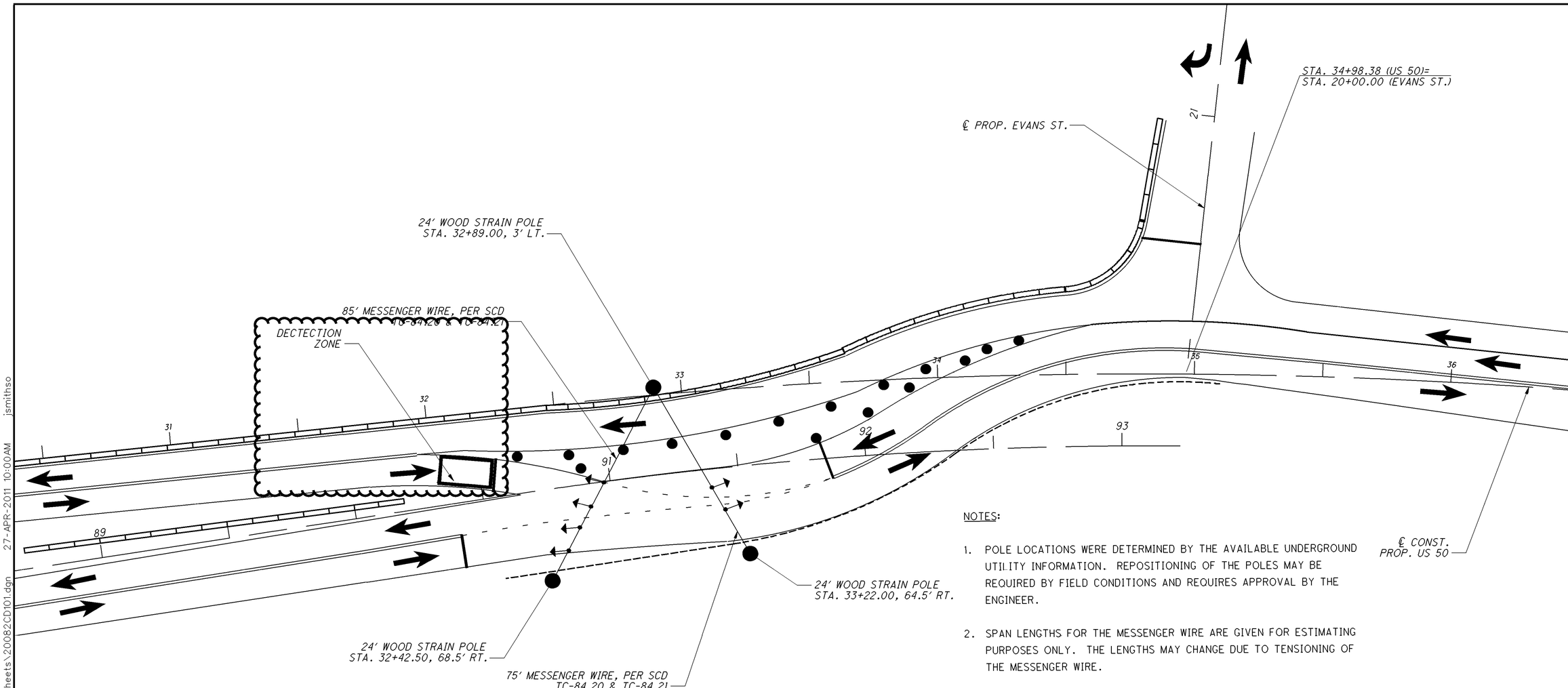
TEMPORARY TRAFFIC SIGNAL PLAN
TEMP. US 50 & TEMP. STATE AVE. INTERSECTION

HAM-50-18.79



NOTES:

1. POLE LOCATIONS WERE DETERMINED BY THE AVAILABLE UNDERGROUND UTILITY INFORMATION. REPOSITIONING OF THE POLES MAY BE REQUIRED BY FIELD CONDITIONS AND REQUIRES APPROVAL BY THE ENGINEER.

2. SPAN LENGTHS FOR THE MESSENGER WIRE ARE GIVEN FOR ESTIMATING PURPOSES ONLY. THE LENGTHS MAY CHANGE DUE TO TENSIONING OF THE MESSENGER WIRE.

3. STRAIN POLE LENGTHS ARE MEASURED FROM THE EXISTING GROUND LINE TO TOP OF POLE. SIGNALS SHALL HAVE A MINIMUM CLEARANCE OF 16' AND A MAXIMUM CLEARANCE OF 18' FROM THE ROADWAY.

4. ALL SIGNAL HEADS SHALL BE POLYCARBONATE WITH 12" LENSES. SIGNAL HEADS SHALL BE CENTERED ON THE LANE AND HAVE A MINIMUM OF 8' SPACING BETWEEN HEADS.

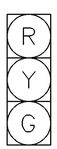
5. ALL TRAFFIC SIGNAL EQUIPMENT AND RELATED EQUIPMENT, METHODS OF INSTALLATION, AND OPERATION SHALL BE IN ACCORDANCE WITH STANDARDS SET FORTH IN THE OMUTCD, ITEM 614, ODOT TRAFFIC ENGINEERING MANUAL, AND APPROPRIATE STANDARD CONSTRUCTION DRAWINGS.

6. ADVANCED WARNING SIGNS SHALL BE PLACED UPON ACTIVATION OF THE SIGNAL ACCORDING TO STANDARD CONSTRUCTION DRAWING MT-120.00 AND THE OMUTCD. THE LAYOUT OF ALL SIGNS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. PAYMENT FOR FURNISHING, ERECTING AND SUBSEQUENTLY REMOVING THE SIGNS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 614 WORK ZONE TRAFFIC SIGNAL.

Item Special Work Zone Traffic Signal
The Contractor shall be responsible to install and remove the temporary traffic signal as shown in the plans. This work shall include, but not limited to the installation of poles, controller, vehicle detection, signal heads, and cable. The Contractor can chose which type of vehicle detection to install, such as loop detectors (6'x30'), video camera, or radar detection, and will include all necessary equipment to get communication from the detector to the controller. In addition, the Contractor shall be responsible to set-up the controller cabinet for the phasing shown and the signal timing provided by the City of Cincinnati at the pre-construction meeting. The Contractor shall be responsible for any adjustments to the temporary signal including, but not limited to, signal timing, head location or vehicle detection as directed by the Engineer.

Payment for all the items listed above shall be included in the unit bid price for Item Special Work Zone Traffic Signal and shall include all labor, materials, equipment necessary to install and maintain the signal during the project.

SIGNAL INDICATIONS



ALL SIGNAL HEADS

SIGNAL PHASING

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0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED MTR
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TEMPORARY TRAFFIC SIGNAL PLAN
US 50 & TEMP. ELBERON RAMP INTERSECTION

HAM-50-18.79

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SHEET NUMBER												PARTICIPATION	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
21		87	88	89	91		286A		592	594	597	100% LOCAL						
																	TRAFFIC SIGNALS (CONT.)	
							5						630	79001	5	EACH	SIGN HANGER ASSEMBLY, SPAN WIRE, AS PER PLAN	269
							25						630	80101	25	SQ FT	SIGN, FLAT SHEET, AS PER PLAN	269
							1						631	88001	1	EACH	PHOTOELECTRIC CONTROL, AS PER PLAN	269
							2						632	05005	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	269
							2						632	05065	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 4-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	269
							3						632	05085	3	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	269
							4						632	20721	4	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, AS PER PLAN	269
							2						632	26001	2	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN	269
							4						632	26501	4	EACH	DETECTOR LOOP, AS PER PLAN	269
							400						632	30201	400	FT	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES, AS PER PLAN	269
							850						632	29901	850	FT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN	269
							895						632	53201	895	FT	INTERCONNECT CABLE, 12 CONDUCTOR, NO. 12 AWG, AS PER PLAN	269
							1665						632	40701	1665	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG, AS PER PLAN	269
							3						632	64001	3	EACH	STRAIN POLE FOUNDATION, AS PER PLAN	269
							3						632	64021	3	EACH	PEDESTAL FOUNDATION, AS PER PLAN	269
							297						632	65301	297	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG, AS PER PLAN	269
							432						632	68101	432	FT	POWER CABLE, 1 CONDUCTOR, NO. 6 AWG, AS PER PLAN	269
							40						632	69601	40	FT	SERVICE CABLE, 2 CONDUCTOR, NO. 4 AWG, AS PER PLAN	269
							1						632	70001	1	EACH	POWER SERVICE, AS PER PLAN	268
							3						632	83600	3	EACH	STRAIN POLE, MISC.: FURNISH AND INSTALL CINCINNATI STRAIN POLE	
							3						632	90010	3	EACH	PEDESTAL, MISC.: FURNISH AND INSTALL CINCINNATI PEDESTAL	
							1						632	90101	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	269
							1						632	90400	1	EACH	SIGNALIZATION, MISC.: SECTIONALIZER, STANDARD	269
							1						633	87201	1	EACH	CONTROLLER WORK PAD, AS PER PLAN	269
							1						633	99000	1	EACH	CONTROLLER ITEM, MISC.: CONTROLLER UNIT, TYPE 170E WITH CABINET, TYPE 330	269
																	BUILDING DEMOLITION	
		LUMP											202	56000	LUMP		BUILDING DEMOLISHED, PARCEL NO. CITY OF CINCINNATI & 22-WD, 1 STORY BLOCK BUILDING	
		LUMP											202	56000	LUMP		BUILDING DEMOLISHED, PARCEL NO. 27-WD & 29-WD, 1 STORY BLOCK BUILDING	
				LUMP									202	56000	LUMP		BUILDING DEMOLISHED, PARCEL NO. 62-WD, 2.5 STORY BRICK BUILDING	
					LUMP								202	56000	LUMP		BUILDING DEMOLISHED, PARCEL NO. 59-WD, 2.5 STORY BRICK BUILDING	
																	BILLBOARD REMOVAL	
			2										202	98100	2	EACH	REMOVAL MISC: BILLBOARD REMOVAL FROM PARCEL 14	22
			1										202	98100	1	EACH	REMOVAL MISC: BILLBOARD REMOVAL FROM PARCEL 27	22
			2										202	98100	2	EACH	REMOVAL MISC: BILLBOARD REMOVAL FROM PARCEL 60	22
																	STRUCTURES	
LUMP													202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	21
																	BRIDGE NO. 1448	375
																	BRIDGE NO. 1457	409
																	BRIDGE NO. 1875	443
																	BRIDGE NO. 1881	483
																	BRIDGE NO. 1903 L (100% DISTRICT ALLOCATION FUNDS)	531
																	BRIDGE NO. 1903 R (100% DISTRICT ALLOCATION FUNDS)	532
																	WALL NO. 2	312
																	WALL NO. 3	320
																	WALL NO. 4	327
																	WALL NO. 6	330
																	WALL NO. 7	338
																	WALL NO. 8	341
																	WALL NO. 9	348
																	GLENWAY/WILDER WALL	362
																	MEDIAN BARRIER AND FOUNDATION/TOWER FOOTINGS	
									LUMP	LUMP	LUMP		503	21300	LUMP		UNCLASSIFIED EXCAVATION	
									332	1		1	511	46000	333	CU YD	CLASS C CONCRETE	
									214	6	6	12	511	46500	226	CU YD	CLASS C CONCRETE, FOOTING	
									36				516	13600	36	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	
									43				609	54000	43	SQ YD	6" CONCRETE TRAFFIC ISLAND	

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GENERAL SUMMARY

HAM-50-18.79

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SHEET NUMBER 23	24	25	26	27	81	87	88	89	90	91	92	93	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
																	MAINTENANCE OF TRAFFIC	
		500											254	01000	500	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE	
			300										614	11110	300	HOURS	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
					2								614	11300	2	EACH	SPECIAL - WORK ZONE TRAFFIC SIGNAL	72, 73
				24									614	11500	24	MONTH	WORKSITE TRAFFIC SUPERVISOR	
					3								614	12336	3	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	
					13								614	12338	13	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	
			20										614	12410	20	EACH	SPEED ZONE AHEAD SYMBOL SIGN	
	LUMP												614	12420	LUMP		DETOUR SIGNING	
			20										614	12470	20	EACH	WORK ZONE SPEED LIMIT SIGN	
			20										614	12484	20	EACH	WORK ZONE INCREASED PENALTIES SIGN	
		50											614	12500	50	EACH	REPLACEMENT SIGN	
		200											614	12600	200	EACH	REPLACEMENT DRUM	
	24	50											614	13000	74	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
				13650									614	11621	13650	FT	LINEAR DELINEATION, AS PER PLAN	27
				173									614	13350	173	EACH	OBJECT MARKER, ONE-WAY (CONCRETE BARRIER)	
				24									614	18511	24	MONTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	27
					2.3								614	20200	2.3	MILE	WORK ZONE LANE LINE, CLASS I, 740.06, TYPE I	
		2											614	20550	2	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
					3.45								614	21200	3.45	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	
		1											614	21550	1	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
		2			8.91								614	22200	10.9	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I	
		3											614	22350	3	MILE	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	
		1000			3441								614	23400	4441	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE I	
					373								614	24400	373	FT	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I	
		150											614	24610	150	FT	WORK ZONE DOTTED LINE, CLASS III, 642 PAINT	
					755								614	25400	755	FT	WORK ZONE TRANSVERSE/DIAGONAL CLASS I, 740.06, TYPE I	
					345								614	26400	345	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I	
					1170								614	27400	1170	FT	WORK ZONE CROSSWALK LINE, CLASS I, 740.06, TYPE I	
					14								614	30400	14	EACH	WORK ZONE ARROW CLASS I, 740.06, TYPE I	
	LUMP												615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC	
					6260								615	25000	6260	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
		2											616	10000	2	M GAL	WATER	
					11725								622	40020	11725	FT	PORTABLE CONCRETE BARRIER, 32"	
																	PAVEMENT	
						25381		5025		8989		1390	304	20000	40785	CU YD	6" AGGREGATE BASE	
						24097		4234		8023			305	16000	36354	SQ YD	12" CONCRETE BASE	
						18				724			452	12000	742	SQ YD	8" NON-REINFORCED CONCRETE PAVEMENT (DRIVEWAY)	
												3850	452	15000	3850	SQ YD	12" NON-REINFORCED CONCRETE PAVEMENT (DRIVEWAY)	
							6190		865		2501	1461	609	26000	11017	FT	CURB, TYPE 6	
LUMP													SPECIAL	69012160	LUMP		TESTING (MATERIAL SAMPLING)	23
250													SPECIAL	69065000	250	TON	WORK INVOLVING NON-REGULATED MATERIALS	23
7500													SPECIAL	69065010	7500	TON	WORK INVOLVING SOLID WASTE	23
125													SPECIAL	69065014	125	TON	WORK INVOLVING HAZARDOUS WASTE	23
2000													SPECIAL	69065016	2000	TON	WORK INVOLVING PETROLEUM-CONTAMINATED SOIL	23
100000													SPECIAL	69065020	100000	GAL	WORK INVOLVING WATER	23
50000													SPECIAL	69065024	50000	GAL	WORK INVOLVING REGULATED WATER	23
5													SPECIAL	69065300	5	EACH	GROUND WATER MONITORING WELL ABANDONMENT	23
5													SPECIAL	69065310	5	EACH	ACTIVE GROUND WATER MONITORING WELL RECONSTRUCTION	23
5													SPECIAL	69065310	5	EACH	ACTIVE GROUND WATER MONITORING WELL GRADE ADJUSTMENT	23
2000													SPECIAL	69098800	2000	TON	TEMPORARY STORAGE OF CONTAMINATED MATERIAL	23
													SPECIAL	10810000	LUMP		CPM PROGRESS SCHEDULE	
													619	16020	24	MONTH	FIELD OFFICE, TYPE C	
	LUMP												614	11000	LUMP		MAINTAINING TRAFFIC	
													623	10000	LUMP		CONSTRUCTION LAYOUT STAKES	
													623	11000	1	EACH	PROVIDING ELECTRONIC INSTRUMENTATION	
													623	11100	16	HOURS	TECHNICAL ASSISTANCE	
													624	10000	LUMP		MOBILIZATION	

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GENERAL SUMMARY

HAM-50-18.79

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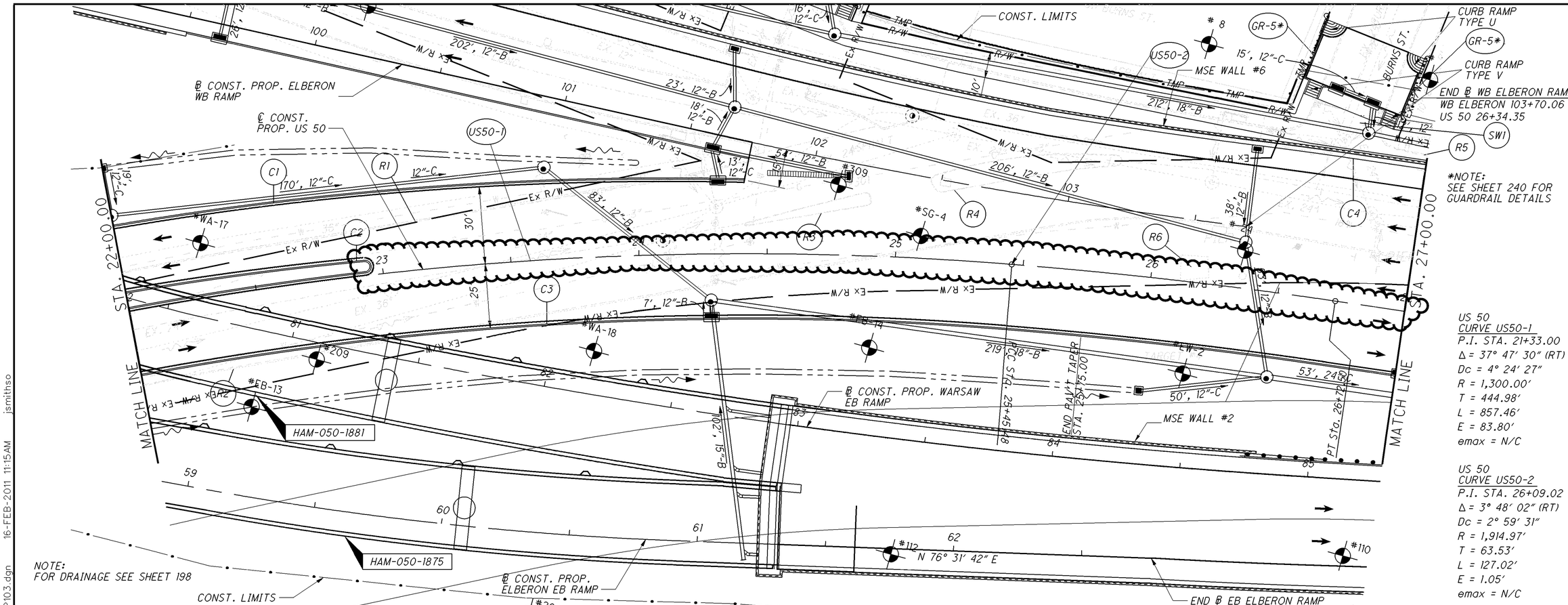

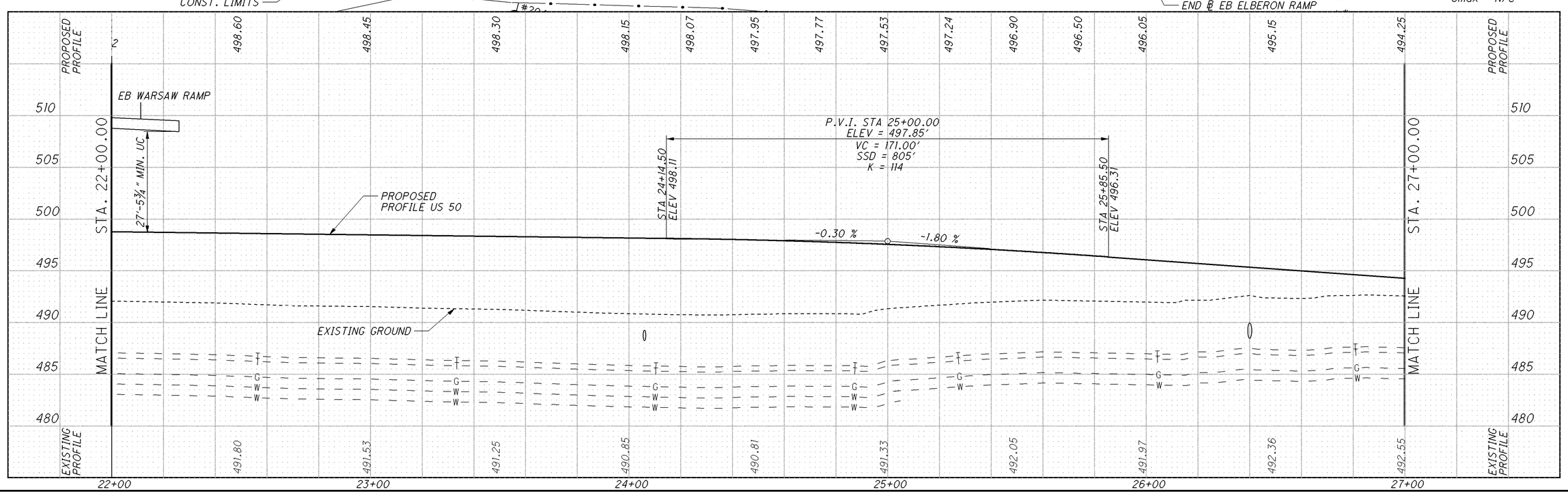

PLAN AND PROFILE (US 50) STA. 22+00.00 TO STA. 27+00.00

HAM-50-18.79

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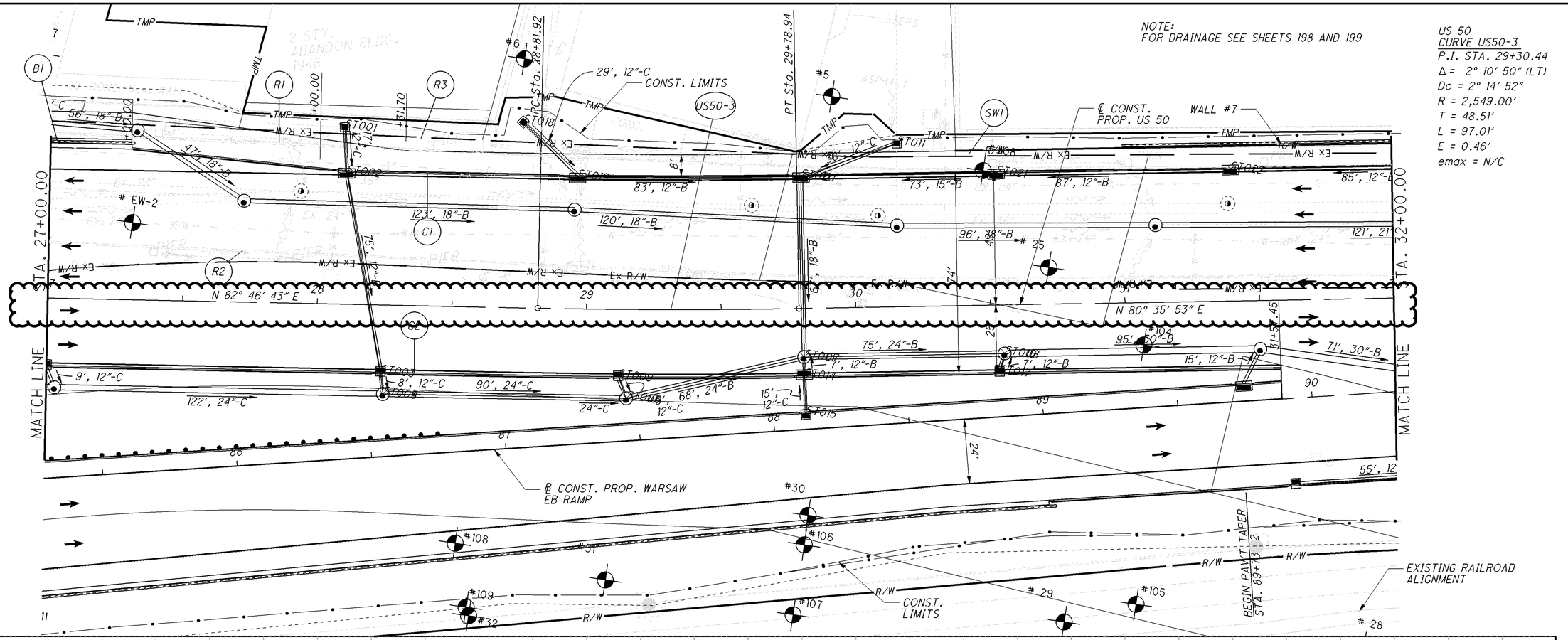
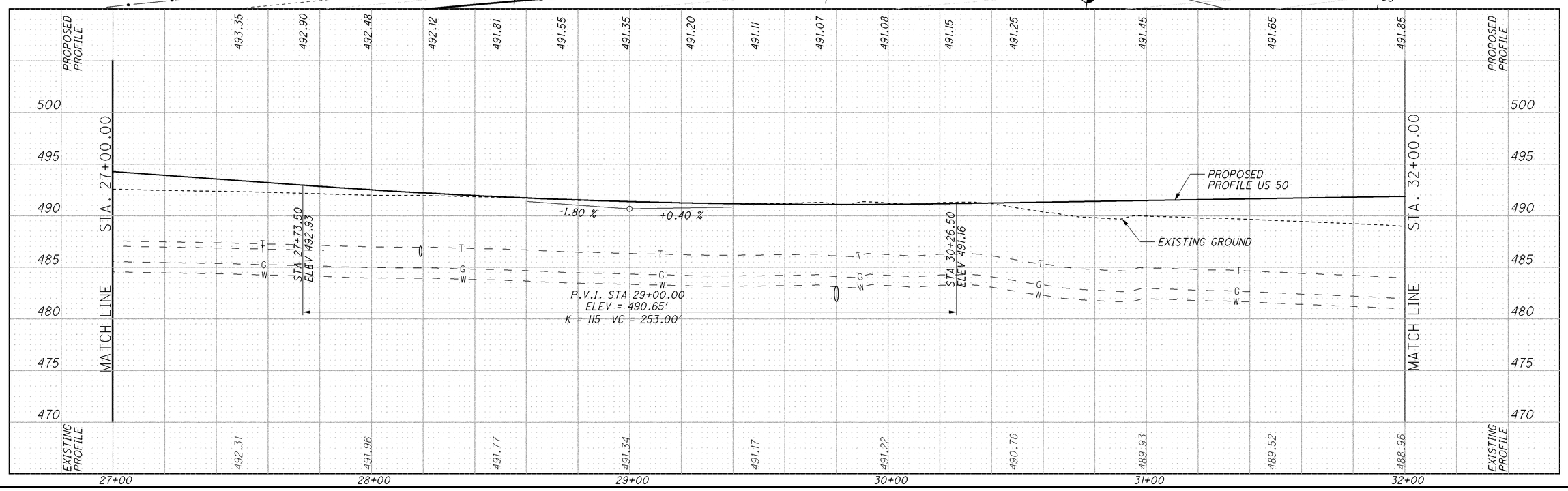
NOTE:
FOR DRAINAGE SEE SHEETS 198 AND 199

US 50
CURVE US50-3
P.I. STA. 29+30.44
Δ = 2° 10′ 50″ (LT)
Dc = 2° 14′ 52″
R = 2,549.00′
T = 48.51′
L = 97.01′
E = 0.46′
emax = N/C





HORIZONTAL SCALE IN FEET

CALCULATED MH
CHECKED JMR

PLAN AND PROFILE (US 50) STA. 27+00.00 TO STA. 32+00.00

HAM-50-18.79

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TRAFFIC SIGNAL GENERAL NOTES

614 MAINTENANCE OF TRAFFIC

1. IT IS THE INTENTION TO PERFORM THE REQUIRED WORK WITH THE LEAST INCONVENIENCE TO, AND MAXIMUM SAFETY OF, THE CONTRACTOR AND THE TRAVELING PUBLIC. ANY VARIANCES FROM THESE MAINTENANCE OF TRAFFIC NOTES MUST BE APPROVED IN ADVANCE IN WRITING BY THE ENGINEER. EXCEPT AS MODIFIED BELOW, THE REQUIREMENTS FOR MAINTAINING TRAFFIC AS INDICATED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS," CURRENT EDITION, LATEST REVISION, AND PERTINENT ITEMS OF SPECIFICATION AND PROPOSAL SHALL APPLY. THE "CITY OF CINCINNATI TRAFFIC SAFETY HANDBOOK" MAY BE REFERRED TO AS A SUPPLEMENT TO THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

2. IN ADDITION TO ITEM 614, "MAINTAINING TRAFFIC," AS SET FORTH IN THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE FOLLOWING NOTES SHALL ALSO APPLY TO THE WORK CARRIED OUT WITHIN THE LIMITS OF THIS PROJECT.

   A. THROUGHOUT THE PROJECT, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE, ERECT, MAINTAIN, AND REMOVE ALL LIGHTS, SIGNS, BARRICADES, AND ANY OTHER TRAFFIC CONTROL DEVICES NECESSARY FOR THE MAINTENANCE OF TRAFFIC, INCLUDING ADVANCE WARNING AND REGULATORY SIGNS. (MAINTAINING THE TRAFFIC INVOLVES ENSURING THAT THE EQUIPMENT IS IN THE PROPER POSITION, IS CLEAN, LEGIBLE, AND IN OVERALL GOOD WORKING CONDITION). ALL SIGNS SHALL BE REFLECTORIZED OR ILLUMINATED. TYPE "B" FLASHING BARRICADE WARNING LIGHT SHALL BE INSTALLED WITH EVERY ADVANCE WARNING TRAFFIC CONTROL DEVICE.

   B. THE STANDARD DEVICE FOR CLOSING ANY LANES TO TRAFFIC SHALL BE 30 OR 55 GALLON DRUMS THAT ARE PROPERLY WEIGHTED AND REFLECTORIZED. TAPERS FOR LANE CLOSURES SHALL HAVE REFLECTORIZED DRUMS SPACED 50 FEET APART WITH CONSTRUCTION ARROWS (W1-H11/OLD ODOT CODE OW 138) MOUNTED ON THE FIRST, FIFTH, AND LAST DRUMS.

   C. AN ELECTRIC FLASHING ARROW BOARD OF A TYPE SHOWN ON STANDARD CONSTRUCTION DRAWING MT-35.10 SHALL BE INSTALLED IN EACH TAPER CLOSING A LANE TO TRAFFIC, CENTERED IN THE CLOSED LANE.

   D. TYPE "C" STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE INSTALLED EVERY 150 FEET IN THE TAPERS FOR NIGHTTIME LANE CLOSURES.

3. BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF A PERSON OR PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE CITY OF CINCINNATI AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ORDER TO ENSURE SAFETY ON THE TRAVELED PAVEMENT.

   A DRAWING FOR EACH LOCATION OF WORK, INDICATING ALL TRAFFIC CONTROL DEVICES TO BE USED, SHALL BE SUBMITTED TO THE CITY TRAFFIC ENGINEER FOR APPROVAL AT LEAST TEN DAYS PRIOR TO START OF WORK. IN ADDITION, A CONSTRUCTION SCHEDULE SHALL BE SUBMITTED FOR EACH LOCATION.

4. THE CONTRACTOR WILL BE REQUIRED TO GIVE AT LEAST SEVEN (7) DAYS NOTICE TO THE ENGINEER PRIOR TO THE CLOSURE OF ANY LANE.

   NO EXCAVATION SHALL BE ALLOWED UNATTENDED WITHOUT ADEQUATE COVERINGS. IN ADDITION, ORANGE FLASHERS SHALL BE PROVIDED FOR OVERNIGHT PROTECTION.

5. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT, UNLESS OTHERWISE APPROVED BY THE ENGINEER. VEHICLES AND EQUIPMENT SHALL MOVE WITH (NOT ACROSS OR AGAINST) THE FLOW OF TRAFFIC. VEHICLES AND EQUIPMENT SHALL NOT PARK OR STOP EXCEPT WITHIN DESIGNATED AREAS, AND SHALL ENTER AND LEAVE WORK AREAS IN A MANNER WHICH WILL NOT BE HAZARDOUS TO, OR INTERFERE WITH, THE NORMAL FLOW OF TRAFFIC. PERSONAL VEHICLES WILL NOT BE PERMITTED TO PARK WITHIN THE RIGHT-OF-WAY, EXCEPT IN SPECIFIC AREAS DESIGNATED BY THE ENGINEER.

6. PEDESTRIAN PROTECTION AND PEDESTRIAN ACCESS MUST BE MAINTAINED AT ALL TIMES. PEDESTRIAN SAFETY IS OF UTMOST IMPORTANCE THROUGHOUT THE LIFE OF THE CONTRACT. PEDESTRIANS MUST BE DIRECTED TO THE SAFEST CROSSING POINT AT ALL TIMES, AND THEIR SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.

7. TO ASSURE MAINTENANCE OF ADEQUATE TRAFFIC CONTROL AT ALL TIMES, NO SIGNS ARE TO BE INSTALLED OR REMOVED WITHOUT THE APPROVAL OF THE CITY TRAFFIC ENGINEER, OR HIS DESIGNEE.

8. IF TEMPORARY SIGNS WHICH RESTRICT PARKING ARE INSTALLED, THE LOCAL POLICE DISTRICT MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO INSTALLATION.

9. POLICE AND FIRE ACCESS MUST BE MAINTAINED AT ALL TIMES.

10. ACCESS TO ABUTTING PROPERTIES MUST BE MAINTAINED AT ALL TIMES.

    SHOULD YOU HAVE ANY FURTHER QUESTIONS ON MAINTENANCE OF TRAFFIC, PLEASE CONTACT MR. MARK MAHONEY AT 352-6229.

THE FOLLOWING RESTRICTIONS ON LOCAL STREETS SHALL APPLY TO THE CONSTRUCTION INVOLVED WITH THIS PROJECT:

A. BETWEEN THE HOURS OF 7-9:00 A.M. AND 4-6:00 P.M., MONDAY THROUGH FRIDAY, AND DURING ALL NON-WORKING HOURS, THE ENTIRE INTERSECTION SHALL BE OPEN AND AVAILABLE FOR THE MOVEMENT OF TRAFFIC. IN ADDITION, THE TRAFFIC SIGNAL SHALL BE IN NORMAL OPERATION.

   DURING ALL OTHER HOURS, ONE TWELVE FOOT LANE IN EACH DIRECTION SHALL BE OPEN AND AVAILABLE FOR THE MOVEMENT OF TRAFFIC.

   ON ONE-WAY STREETS, TWO TEN-FOOT LANES IN THE DIRECTION OF TRAFFIC SHALL BE OPEN AND AVAILABLE FOR THE MOVEMENT OF TRAFFIC.

B. IF TRAFFIC SIGNALS AT THE INTERSECTION ARE TO BE OUT OF SERVICE, OFF-DUTY CITY OF CINCINNATI POLICE OFFICERS MUST BE FURNISHED BY THE CONTRACTOR UNTIL THE SIGNALS ARE PLACED BACK IN SERVICE.

1302 REFERENCES AND SPECIFICATIONS

2010 CONSTRUCTION AND MATERIALS SPECIFICATIONS BY THE OHIO DEPARTMENT OF TRANSPORTATION AND THE SUPPLEMENT BY THE CITY OF CINCINNATI SPECIFICATIONS AND STANDARDS AS LISTED UNDER SECTION 1300. SEE 1202 FOR A COMPLETE LIST OF REFERENCES.

1303 EQUIPMENT QUALITY

ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND OF FIRST QUALITY AS PER SPECIFICATION 1303.

1304 UTILITIES PERMITS AND REGULATIONS

THE CONTRACT DRAWINGS SHOW ALL UTILITIES, WATER, GAS, AND SEWER LINES KNOWN TO EXIST. HOWEVER, THIS DOES NOT GUARANTEE THAT ALL EXISTING LINES AND APPURTENANCES HAVE BEEN SHOWN ON THE CONTRACT DRAWINGS, AND THE CITY ASSUMES NO RESPONSIBILITY FOR THE ACCURACY THEREOF AND DOES NOT FREE THE CONTRACTOR FROM NECESSARY PRECAUTIONS FOR THE PROTECTION OF ANY UTILITY ENCOUNTERED ON THE PROJECT OR THE RESTORATION OF ANY UTILITY DAMAGED DURING THE WORK. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS, AND COMPLY WITH ALL LOCAL AND NATIONAL SAFETY CODES.

THE CONTRACTOR SHALL NOTIFY AT LEAST 48 HOURS BEFORE BREAKING GROUND, ALL PUBLIC AND/OR PRIVATE SERVICE CORPORATIONS HAVING WIRE, POLES, PIPES, CONDUIT, MANHOLES OR OTHER STRUCTURES THAT MAY BE AFFECTED BY THIS OPERATION, INCLUDING ALL STRUCTURES WHICH ARE AFFECTED AND NOT SHOWN ON THESE PLANS. OWNERS OF UNDERGROUND UTILITIES WHICH ARE MEMBERS OF THE OHIO UTILITIES PROTECTION SERVICE CAN BE NOTIFIED BY CALLING 800-362-2784 (TOLL FREE). NON-MEMBER UNDERGROUND UTILITY OWNERS MUST BE CALLED DIRECTLY.

SUPPORTING AND/OR PROTECTING EXISTING WATER LINES, GAS MAINS, TELEPHONE CONDUIT, STORM SEWERS, ETC. SHALL BE INCLUDED IN PAYMENT FOR THE VARIOUS CONTRACT ITEMS OF WORK.

ALL WORK REQUIRED FOR THE MAINTENANCE OF SERVICE OF EXISTING UTILITIES SHALL BE DONE BY, AND AT THE EXPENSE OF, THE CONTRACTOR.

ALL MAINTENANCE, REPAIR AND/OR REPLACEMENT OF EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE VARIOUS UTILITY COMPANIES HAVING JURISDICTION.

ALL EXISTING STORM SEWERS, DRIVEWAY DRAINS, AND OTHER SURFACE DRAIN PIPES, WHETHER SHOWN ON THE CONTRACT DRAWINGS OR NOT, REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AND RECONNECTED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER AT NO COST TO THE CITY. REPLACED DRAIN PIPES SHALL BE LAID ON COMPACTED BEDDING EQUAL IN DENSITY TO SURROUNDING STRATUM. ALL UTILITIES OTHER THAN WATER AND SEWER LINES ARE TO BE RELOCATED, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE CITY.

IT IS ASSUMED THAT THERE ARE WATER AND GAS BRANCH LINES, ETC., SERVING EACH RESIDENCE. THE CONTRACTOR SHALL REPAIR AND REPLACE THESE UTILITIES, IF DAMAGED, AT NO COST TO THE CITY.

1305 COORDINATION

THE CONTRACTOR SHALL NOT REMOVE ANY OPERATING EQUIPMENT FROM SERVICE WITHOUT SEVEN (7) DAYS PRIOR NOTIFICATION TO THE ENGINEER. THE CONTRACTOR SHALL HAVE HIS SUPERVISOR OF CONSTRUCTION CONSULT WITH THE ENGINEER BEFORE AND DURING CONSTRUCTION TO RESOLVE ANY PROBLEMS THAT MAY ARISE.

THE CONTRACTOR SHALL COORDINATE EACH DAY'S ACTIVITIES WITH THE ENGINEER, OR TRAFFIC SERVICES BUREAU INSPECTOR.

THE CONTRACTOR SHALL HAVE A RESPONSIBLE SUPERVISOR ON THE JOB SITE DURING ALL HOURS THAT WORK IS BEING PERFORMED.

1306 CONTRACTOR FURNISHED EQUIPMENT

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE CITY TRAFFIC ENGINEER FOR REVIEW AND APPROVAL SEVEN (7) SETS OF DRAWINGS, CATALOG CUTS, SPECIFICATIONS, DATA SHEETS, WIRING DIAGRAMS, ETC., FOR ALL APPARATUS AND EQUIPMENT THAT THE CONTRACTOR PROPOSES TO FURNISH. NO EQUIPMENT MAY BE PURCHASED OR INSTALLED WITHOUT WRITTEN APPROVAL.

Note 1308 Removed from Plan Set

1309 INSTALLATION PRACTICES

MINOR REPOSITIONING OF SIGNS OR SIGNALS MAY BE NECESSARY AND THE CONTRACTOR SHALL MAKE THE ADJUSTMENTS AS DIRECTED BY THE ENGINEER. WORK SHALL BE INCIDENTAL TO THE COST OF THE ITEM BEING REPOSITIONED.

1311 INSPECTION

IN ADDITION TO THE PROVISIONS OF ITEM 105.10, THE CONTRACTOR SHALL OBSERVE THE FOLLOWING:

1. ALL CONDUIT IN TRENCH SHALL BE APPROVED BEFORE BACKFILL AND/ OR CONCRETE ENCASEMENT IS COMPLETED.

2. ALL FOUNDATIONS FOR ANCHOR BASE POLES, COMPLETE WITH ANCHOR BOLTS AND REBAR CAGES INTACT, SHALL BE APPROVED PRIOR TO CONCRETE POUR.

1312 ELECTRIC POWER SERVICE

COORDINATE WITH DUKE ENERGY FOR POWER SERVICE. CONTACT JEFF VENTRE, TRAFFIC SERVICES, AT 352-3712 TO ARRANGE FOR SERVICE CONNECTION WITH DUKE ENERGY. CONTRACTOR SHALL NOT MAKE CONNECTIONS TO DUKE ENERGY LINES AT ANY TIME.

ELECTRIC SERVICE REQUIREMENTS:

FOR TRAFFIC SIGNALS, 120 VOLTS 2-WIRE.
FOR STREET LIGHTING, 120/240 3-WIRE.

THE CONTRACTOR SHALL PROVIDE ALL SERVICE EQUIPMENT NECESSARY TO CONNECT THE TRAFFIC SIGNALS AND STREET LIGHTING TO THE POWER SOURCE AS PER CONTRACT PLANS, DETAILS AND STANDARD DRAWING ES-2-2.

1313 TESTING

TESTING SHALL MEET THE REQUIREMENTS OF ODOT 625.19. PRIOR TO ACCEPTANCE THE CONTRACTOR SHALL CONDUCT A TEN (10) DAY BURN TEST OF THE COMPLETED AND OPERATIONAL STREET LIGHTING SYSTEM. THE LIGHTING SYSTEM SHALL OPERATE FOR TEN CONSECUTIVE DAYS WITHOUT INTERRUPTION AND BE FREE OF ANY MALFUNCTIONS.

THE CONTRACTOR SHALL OPERATE ALL NEW TRAFFIC SIGNALS FOR FIVE (5) CONTINUOUS DAYS IN FLASHING OPERATION, UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. REBUILT OR REPLACED TRAFFIC SIGNALS ARE TO BE OPERATED IN COLOR MODE DIRECTLY. PRIOR TO ACCEPTANCE OF ANY NEW, REBUILT OR REPLACED TRAFFIC SIGNAL, THE TRAFFIC SIGNAL SHALL HAVE A FINAL TEST CONSISTING OF 30 MINUTES OF COLOR OPERATION WITHOUT FAILURE OR MALFUNCTIONS.

ALL GROUND RODS SHALL BE TESTED BY THE CONTRACTOR AND HAVE A RESISTANCE TO GROUND OF 25 OHMS OR LESS. .

COST SHALL BE INCIDENTAL TO THE ITEM TESTED.

CTCS TYPE INTERCONNECT CABLE SHALL BE TESTED BY THE CONTRACTOR TO VERIFY THE CAPABILITY OF VOICE TRANSMISSION AND THE ABSENCE OF EXCESSIVE INDUCED NOISE. MEASUREMENTS SHALL BE PERFORMED BY THE CONTRACTOR ON ALL DATA CIRCUITS TO INSURE THAT THE TRANSMISSION BANDWIDTH IS REASONABLE FOR DATA TRANSMISSION AT 1200 BAUD USING FREQUENCY SHIFT KEYED MODULATION OF 1200 AND 2200 HERTZ. THE TESTS SHALL ALSO VERIFY THAT THERE ARE NO SHORTS OR OPEN CIRCUITS TO ANY TERMINATION POINT, AND THAT EACH PAIR IS CAPACITIVELY BALANCED TO GROUND. ANY DISCREPANCIES OR TEST FAILURES SHALL BE CORRECTED BY THE CONTRACTOR.

1314 MAINTENANCE OF EXISTING TRAFFIC SIGNAL

THE CONTRACTOR SHALL MAINTAIN AND KEEP OPERATIONAL THE EXISTING TRAFFIC SIGNAL UNTIL ALL OTHER NEW EQUIPMENT HAS BEEN INSTALLED AND IS FUNCTIONAL. WORK WILL INCLUDE ANY MODIFICATIONS TO EXISTING OR TEMPORARY TRAFFIC SIGNAL INSTALLATIONS AS REQUIRED BY CHANGES IN CONSTRUCTION OR OPERATIONAL CONDITIONS IN THE PROJECT AREA THROUGHOUT THE ENTIRE CONTRACT PERIOD. THIS WILL INCLUDE RELOCATIONS, REMOVALS, COVERING OR UNCOVERING OF TRAFFIC/PEDESTRIAN SIGNALS AND ILLUMINATED/REFLECTORIZED SIGNS AND OTHER TRAFFIC SIGNAL EQUIPMENT, AND THE INSTALLATION OF TEMPORARY POLES OR TEMPORARY POLE GUYS TO SATISFY SAFETY AND OPERATIONAL CONDITIONS THROUGHOUT THE PROJECT. THIS WORK WILL BE PERFORMED AS DIRECTED BY THE ENGINEER.

WHERE PROPOSED NEW EQUIPMENT BLOCKS OR OBSCURES THE LINE OF SIGHT OF EXISTING EQUIPMENT, OR WHERE NEW EQUIPMENT IS PROPOSED IN THE SAME LOCATION AS EXISTING EQUIPMENT, THE CONTRACTOR SHALL TEMPORARILY ADJUST EXISTING OR NEW SIGNALS AND SIGNS. NEW TRAFFIC SIGNALS AND SIGNS WHICH WERE TEMPORARILY ADJUSTED, SHALL BE REPOSITIONED IN THE PROPOSED LOCATIONS AS INDICATED IN THE PLANS AFTER EXISTING EQUIPMENT IS REMOVED.

ALL ADJUSTMENTS SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER.

SCHEDULE CONSTRUCTION TROUGHOUT THE PROJECT TO MAINTAIN THE INTERCONNECT SYSTEM DURING THE CONTRACT PERIOD. USE EXISTING, TEMPORARY CABLE OR NEWLY INSTALLED INTERCONNECT CABLE TO MAINTAIN THE INTERCONNECT SYSTEM.

AT INSTALLATIONS WHERE INTERCONNECT CABLE DOES NOT EXIST, INSTALL THE SPECIFIED NEW INTERCONNECT CABLE SYSTEM PRIOR TO COMPLETING AND OPERATING THE NEW OR RECONSTRUCTED TRAFFIC SIGNAL SYSTEMS OR PROVIDE AN EQUIVALENT MEANS, SUBJECT TO THE ENGINEERS APPROVAL, OF MAINTAINING SIGNAL COORDINATION AT ALL TIMES.

1314 MAINTENANCE OF EXISTING STREET LIGHTING CIRCUIT

KEEP THE EXISTING STREET LIGHTING SYSTEM IN OPERATION UNTIL TESTING AND CITY ACCEPTANCE OF THE NEW CIRCUIT(S).

THE CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY STREET LIGHTING EQUIPMENT WHILE IN THE CONTRACTORS POSESSION, OR WHERE EXISTING COMPONENTS ARE DAMAGED DUE TO THE CONTRACTORS OPERATIONS.

THIS ITEM SHALL BE PAID ON A LUMP SUM BASIS.

1316 REMOVAL OF EXISTING TRAFFIC SIGNAL, BY LOCATION

THE CONTRACTOR SHALL REMOVE ALL OLD EQUIPMENT AND MAKE THE NECESSARY RESTORATIONS. STORE OLD EQUIPMENT AT PROJECT SITE FOR PICK UP BY THE CITY OF CINCINNATI EXCEPT CUT OFF STEEL EMBEDDED BASE POLES, OLD SIGNAL CABLE, AND OLD SPAN WIRE. THE CONTRACTOR SHALL CONTACT THE TRAFFIC SERVICES BUREAU SUPERVISOR AT 591-6097 TO ARRANGE PICK UP OF THE OLD EQUIPMENT UNDAMAGED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF THE UNWANTED EQUIPMENT.

CALCULATED ACW
CHECKED SLT

TRAFFIC SIGNAL GENERAL NOTES
US50 AND STATE AVE. (SR264)

HAM-50-18.79

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TRAFFIC SIGNAL GENERAL NOTES

1316 REMOVAL OF EXISTING STREET LIGHTING EQUIPMENT

THIS ITEM SHALL BE PAID ON A LUMP SUM BASIS FOR EACH CIRCUIT DEEMED REUSABLE BY THE CITY. SALVAGE ALL REUSABLE EQUIPMENT. CALL THE TRAFFIC SERVICES BUREAU AT 513-591-6097 TO MAKE ARRANGEMENTS FOR PICK UP BY THE CITY.

1317 PAINTING

WHEREVER REFERENCES IN THE CITY SPECIFICATIONS ARE MADE CONCERNING "RED LEAD", THE CONTRACTOR SHALL SUBSTITUTE THE MORE ENVIRONMENTALLY ACCEPTED SOYA-ALKYD PRIMER. REFER TO ITEM 1317. COST SHALL BE INCIDENTAL TO ITEMS SPOT PRIMED.

1318 STEEL POLES AND PEDESTALS

ALL STEEL POLES SHALL MEET ALL SPECIFICATIONS IN ITEM 1318 AND STANDARD DRAWING ES-10-1. ALL GALVANIZED EXTERIOR POLE SURFACES SHALL HAVE AN ELECTROSTATICALLY APPLIED POWDER COATING AND ONE COAT OF A ZINC DUST PRIMER (GRAY). POLE AND PEDESTAL COLOR TO BE BLACK, 30% SHEEN, TEXTURED FINISH. THE FINISH SHALL BE PROTECTED DURING TRANSPORTATION BY A SUITABLE PLASTIC OR RUBBER WRAPPING.

ALL POLES, AND ANY MATERIALS ATTACHED TO THEM, SHALL BE LOCATED A MINIMUM OF 2 FEET FROM THE FACE OF THE CURB TO THE FACE OF THE POLE. THIS MAY REQUIRE ATTACHMENT HARDWARE IN EXCESS OF ONE FOOT FOR THE ATTACHMENT OF PEDESTRIAN SIGNALS TO POLES.

WHERE STREET LIGHTING BRACKET ARMS ARE SPECIFIED, POLE PLATES AND 1 1/2" HALF COUPLING SHALL BE WELDED TO THE POLE AS SHOWN IN ES-10-1 AND ES-10-3. BRACKET ARMS SHALL BE SIZE AND TYPE AS PER PLAN. CONTRACTOR TO INSTALL DEAD END CLEVIS TO SERVE STREET LIGHT.

CONTRACTOR SHOULD NOTE THAT NEW 4 INCH PEDESTRIAN SIGNAL PEDESTALS TO BE INSTALLED ARE NOW 10 FEET LONG AND DESIGNATED CITY DESIGN NO. 1045. FOUNDATION FDN-25 REMAINS THE SAME.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE POLES WHILE IN HIS POSSESSION. MINOR DEFECTS OR SCRATCHES ARE TO BE REPAIRED AS DIRECTED BY THE ENGINEER. IF ANY MAJOR DAMAGE OR SCRATCHES OCCUR, THE CITY SHALL REPLACE THE POLE WITH A DUPLICATE, AND THE CONTRACTOR SHALL REIMBURSE THE CITY THE COST OF THE DAMAGED POLE, OR THE COST SHALL BE DEDUCTED FROM THE PAYMENT TO THE CONTRACTOR.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH ITEM AS SPECIFIED, AND SHALL BE FULL COMPENSATION FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY FOR EACH ITEM INSTALLED, COMPLETE IN PLACE AND ACCEPTED. (THE WELDING OF NIPPLES FOR CABLE ENTRANCE AND WEATHERHEADS SHALL BE INCIDENTAL TO THE INSTALLATION BY THE CONTRACTOR).

1319 FOUNDATIONS

ALL CONCRETE FOUNDATIONS SHALL BE CONSTRUCTED AS PER SPECIFICATION 1319 AND PER STANDARD DRAWING ES-1-1. ALL FOUNDATIONS SHALL INCLUDE ALL REINFORCING RODS, ANCHOR BOLTS AND CONDUIT ELLS.

FOUNDATIONS SHALL BE CURED FOR A MINIMUM OF SEVEN (7) DAYS BEFORE ERECTION OF POLES, POSTS AND CABINETS.

FOUNDATIONS SHALL BE CURED FOR A MINIMUM OF FOURTEEN (14) DAYS BEFORE LOADING IS APPLIED. SEE ODOT ITEM 632.14.

CURING TIMES CAN BE ACCELERATED USING FAST SET CONCRETE WITH THE SUBMITTAL OF PROPER MATERIAL DOCUMENTATION AND PRIOR APPROVAL FROM THE ENGINEER.

WHERE EXCAVATION CAUSES CAVING DUE TO SOIL CONDITIONS, THE USE OF CORRUGATED PIPE IS AUTHORIZED, AS DIRECTED BY THE ENGINEER. THE EXCAVATION IS TO BE BACKFILLED WITH CONTROL DENSITY FILL AFTER THE FOUNDATION HAS BEEN POURED. THE USE OF SONO-TUBE OR SIMILAR TUBING MATERIAL IS NOT PERMITTED.

THE COST OF THE PIPE, BACKFILL AND LABOR TO INSTALL IT SHALL BE INCIDENTAL TO THE COST OF THE FOUNDATION.

1320 GROUND RODS

A 1" x 10' COPPER CLAD STEEL GROUND ROD SHALL BE DRIVEN INTO THE BOTTOM OF PULLBOXES WHICH ARE ADJACENT TO POLE FOUNDATIONS SO THAT ONE (1) FOOT OF THE ROD IS EXPOSED IN THE PULLBOX. WHERE PULLBOXES ARE NOT ADJACENT TO POLES OR POSTS, DRIVE GROUND RODS ADJACENT TO THE POLE FOUNDATIONS AS PER STANDARD DRAWING ES-1-1. PAYMENTS FOR THE GROUND RODS SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH ITEM INSTALLED COMPLETE WITH #4 AWG GROUND WIRE, EXOTHERMIC WELD, TESTED AND ACCEPTED. IF MORE THAN ONE GROUND ROD IS REQUIRED AT A LOCATION TO OBTAIN THE REQUIRED GROUND RESISTANCE, THE ADDITIONAL GROUND RODS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH AND SHALL INCLUDE ALL WIRE, CONNECTIONS AND OTHER MATERIALS AND LABOR TO INSTALL THE COMPLETE TESTED SYSTEM. TESTS SHALL COMPLY WITH ODOT SPEC. "625.19-TESTING OF INSTALLATIONS".

1321 TRENCH, IN SOD AREA, BLACKTOP PATHS & SIDEWALK

ALL TRENCH FOR INSTALLATION OF CONDUIT IN SOD AREAS, UNDER WALKWAYS, OR SIDEWALKS SHALL BE 24" DEEP. TRENCH IN THE SOD AREAS SHALL INCLUDE BACKFILL AND RESTORATION IN ACCORDANCE WITH ITEM 625.13. THE BACKFILL UNDER SIDEWALKS OR WALKWAYS SHALL BE COMPACTED AS PER ITEM 603.10, AND AGGREGATE BASE SHALL BE RESTORED WITH ITEM 404 OR 608.

1321 TRENCH, IN PAVED AREA

TRENCH UNDER ROADWAYS OR DRIVEWAYS SHALL BE 30" DEEP, AND SHALL INCLUDE PREMARKING THE AREA TO BE TRENCHED, SAW CUTTING, REMOVING THE MATERIAL, BACKFILLING, COMPACTING AND RESTORING THE SURFACE IN ACCORDANCE WITH ITEM 603.11 AND AS DIRECTED BY THE ENGINEER.

1321 CONDUIT

ELECTRICAL CONDUIT UNDER SIDEWALKS OR SOD AREAS SHALL BE POLYVINYL CHLORIDE (PVC) SCHEDULE 40 WITH CONCRETE ENCASEMENT. SIZE AS SPECIFIED IN PLANS.

CONDUIT UNDER STREETS SHALL BE 3-INCH GALVANIZED RIGID METAL CONDUIT (RMC) MEETING THE REQUIREMENTS OF ITEM 725.04.

CONDUIT IN SOD AREAS AND UNDER WALKWAYS OR SIDEWALKS SHALL HAVE A MINIMUM COVER OF 18". GALVANIZED STEEL CONDUIT UNDER ROADWAY SHALL HAVE A MINIMUM COVER OF 24". GROUND BUSHINGS SHALL BE PROVIDED TO GROUND RIGID METALLIC CONDUIT TO THE GROUND ROD IN THE PULLBOX.

1321 WEATHERHEAD AND RISER

THE CONTRACTOR SHALL PROVIDE WEATHERHEADS, CONDUIT RISERS, AND ANY OTHER SIGNAL EQUIPMENT ON WOOD UTILITY POLES AS NECESSARY TO SERVE THE TRAFFIC SIGNAL EQUIPMENT AND THE ELECTRIC SERVICE. ALUMINUM CONDUIT FOR RISERS SHALL BE RIGID ALUMINUM CONDUIT PER ANSI C80.5, AND SHALL BE USED IN THE LOWER SECTION OF RISERS, IN LIEU OF STEEL (RMC). REFER TO STANDARD DRAWING ES-3-2 FOR MORE INFORMATION.

1322 ELECTRICAL BOXES

PULLBOXES MAY BE CAST-IN-PLACE OR PRECAST. PRECAST PULLBOXES SHALL HAVE REINFORCING INCLUDED. REFER TO THE STANDARD DRAWING ES-2-1. ALL PULLBOXES IN SIDEWALK OR STREET AREAS SHALL HAVE THE FRAME AND LID CAST INTEGRAL WITH FINAL SIDEWALK OR PAVING. PRECAST PULLBOXES WITH INTEGRAL FRAMES AND LIDS SHALL NOT BE PERMITTED IN THESE AREAS.

1322 RE-USE EXISTING PULLBOX

THE WORK OF THIS ITEM SHALL INCLUDE CLEARING THE PULLBOX OF DEBRIS, CUTTING INTO THE SIDES OF THE PULLBOX FOR NEW CONDUIT ENTRIES AND CEMENT PATCHING AND REPAIRING THE BOX TO SATISFACTORY CONDITION APPROVED BY THE ENGINEER.

PAYMENT FOR 1322 "RE-USE EXISTING PULLBOX" WILL BE MADE AT THE CONTRACT UNIT PRICE BID AND SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIAL, TOOLS, EQUIPMENT, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM OF WORK.

1322 INSTALLATION OF PULLBOXES OVER EXISTING CONDUITS

THIS WORK SHALL INCLUDE EXCAVATING FOR THE INSTALLATION OF THE NEW PULLBOX, REMOVING PORTIONS OF EXISTING CONDUIT, MAINTAINING AND PROTECTING EXISTING TRAFFIC AND LIGHTING CABLES OR TEMPORARY REMOVAL AND REINSTALLATION OF THESE CABLES, AS APPROVED BY THE ENGINEER.

THIS WORK SHALL ALSO INCLUDE BACKFILLING PER ITEM 603.10 AND DISPOSAL OF REMOVED CONDUIT SECTIONS AND OTHER UNUSABLE EXCAVATED MATERIAL. TYPE A OR B PULLBOXES AS INDICATED MEETING SPEC. 1322.01 (CAST-IN-PLACE OR PRECAST AS APPROVED) SHALL BE INCLUDED IN THIS BID ITEM.

PAYMENT FOR 1322 "INSTALLATION OF PULLBOXES OVER EXISTING CONDUITS" SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PULLBOX SPECIFIED AND SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIAL, TOOLS, EQUIPMENT, AND INCIDENTALS TO COMPLETE THIS ITEM OF WORK.

ITEM 632 SIGNALIZATION, MISC:. SECTIONALIZER STANDARD

SECTIONALIZERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH 1322.04

1323 MESSENGER CABLE, BY SIZE, WITH ACCESSORIES

MESSENGER CABLE SHALL MEET THE REQUIREMENTS OF ITEM 1323.02 AND SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR.

1323 CABLES, CONNECTORS AND ACCESSORIES

TRAFFIC SIGNAL CABLE SHALL BE STRANDED COPPER CONDUCTOR AND MEET THE REQUIREMENTS OF IMSA SPECIFICATION 19-1 OR 20-1. ANY OTHER CABLE AND WIRE SHALL BE THE TYPE AND SIZE SPECIFIED IN ACCORDANCE WITH THE PLANS AND STANDARD DRAWINGS. ALL ACCESSORIES, SPLICES AND HARDWARE WILL BE INCLUDED WITH THE CABLE AND WIRE. THE CITY SHALL APPROVE ALL CONNECTIONS AND SPLICES.

CONNECTION TO THE ENERGIZED TRAFFIC SIGNAL INTERCONNECT CABLE, OR DISCONNECTION, SHALL BE MADE BY THE CITY OF CINCINNATI FORCES. THE CONTRACTOR SHALL CONTACT THE TRAFFIC SERVICES BUREAU FIVE (5) DAYS IN ADVANCE AT 591-6097 TO ARRANGE THIS WORK.

CITY FORCES SHALL MAKE ALL SECTIONALIZER CONNECTIONS AND DISCONNECTIONS TO NEW OR EXISTING ENERGIZED INTERCONNECT CABLE. THE CONTRACTOR SHALL DO ALL OTHER WORK INVOLVED IN COMPLETING THE INSTALLATION OF THE CABLE SYSTEM.

ALL THIS WORK SHALL BE INCIDENTAL TO THE COST OF ITEM 1323 "INTERCONNECT CABLE".

CTCS CABLE (TRAFFIC CONTROL COMMUNICATION SYSTEM CABLE) WILL BE INSTALLED BY THE CONTRACTOR. PREVIOUS NOTES RELATING TO CONNECTIONS BY CITY FORCES ALSO APPLY TO THIS CABLE.

CABLE TAGS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR PER PLANS AND DETAILS CONTAINED HEREIN. PAYMENT FOR CABLE TAGS AND THEIR INSTALLATION IS INCIDENTAL TO THE ITEM "CABLE SUPPLIED AND INSTALLED".

ALL POWER, FEEDER AND POLE AND BRACKET CABLE SHALL BE RHH/RHW/USE INSULATION AND RATED FOR 600 VOLTS. STRANDED COPPER WIRE SHALL MEET THE REQUIREMENTS OF ITEM 1323.01. ALL FEEDER AND POLE BRACKET CABLE SHALL BE COLOR CODED RED, BLACK AND GREEN PER CITY SPEC #ES-7-3. CONDUCTOR OUTER JACKET COLOR SHALL BE AS INDICATED ON PLANS SHEETS AND BE PROVIDED BY COLOR IMPREGNATING THE CONDUCTORS' OUTER JACKET ALONG ITS ENTIRE LENGTH DURING THE MANUFACTURING PROCESS.
CONNECTOR KITS AND SPLICE KITS SHALL MEET THE REQUIREMENTS OF ODOT SPEC. ITEM 725.13.

CONNECTION OF ELECTRIC SERVICES TO THE DUKE ENERGY SECONDARY (120/240 VOLT) SYSTEM SHALL BE MADE BY DUKE ENERGY CREWS ONLY.

1324 SAFETY SWITCHES (BY AMPERE SIZE)

TRAFFIC CONTROL DISCONNECT DEVICES (SAFETY SWITCHES) SHALL MEET THE REQUIREMENTS OF ITEM 1324.03. FUSING SHALL BE FURNISHED AND SHALL BE UL CLASS RK-1 RATED FOR 120 VOLTS.

1324 STREET LIGHTING CONTROLLER

SHALL MEET THE REQUIREMENTS OF ITEM 1324.03 FOR STREET LIGHTING RATED FOR 240 VOLTS.

CONTROLLER. FUSING SHALL BE FURNISHED AND SHALL BE UL CLASS RK-1

1324 PHOTO-ELECTRIC CELL

MOUNTED ON TOP OF DESIGNATED POLE, 25 FEET OR MORE ABOVE ANY ARTIFICIAL LIGHT OR STREET LIGHTING. ORIENT UNIT WITH SENSING ELEMENT FACING NORTH.

1324 CONTROLLER WORK PAD

CONTROLLER WORK PAD SHALL BE INSTALLED PER STANDARD CONSTRUCTION DRAWING ES-3-1. THE WORK PAD SHALL BE 54 INCHES LONG AND 36 INCHES WIDE. THE WORK PAD SHALL BE 5 INCHES DEEP.

REMOVED THE 1324 TRAFFIC SIGNAL, POLE MOUNT TYPE, AS PER PLAN NOTE

1327 TRAFFIC SIGNALS

ALL TRAFFIC SIGNAL INDICATIONS SHALL BE OF THE LED TYPE AND ALL TRAFFIC SIGNAL HEADS SHALL BE OF POLYCARBONATE CONSTRUCTION AND BE PROVIDED WITH A 3/8" DRAIN HOLE IN THE BOTTOM AND TUNNEL VISOR. ALL TRAFFIC SIGNALS SHALL BE CONNECTED TO THE DROP PIPE WITH LOCK NUTS ON THE TOP, AND UNDERNEATH THE TOP SECTION. THE TRAFFIC SIGNAL LAMP AND ALL MOUNTING HARDWARE IS INCLUDED IN THE PRICE OF THE TRAFFIC SIGNAL UNIT, INCLUDING THE ATTACHMENT OF REFLECTORIZED SIGNS TO SIGNALS. SEE STANDARD DRAWINGS ES-3-2, ES-3-4 AND ES-3-5 FOR MORE INFORMATION.

WHERE LOUVERS ARE SPECIFIED FOR TRAFFIC SIGNALS, THE CIRCULAR GREEN AND ARROW LENSES SHALL BE FURNISHED WITH LOUVERS IN LIEU OF STANDARD VISORS. THE LOUVERS SHALL BE POLYCARBONATE (ALUMINUM MAY BE FURNISHED ONLY IF POLYCARBONATE UNITS ARE NOT AVAILABLE). FLAT BLACK IN COLOR, 5 VANE, AND 12" LONG. THE COST OF THE LOUVERS SHALL BE INCIDENTAL TO THE TRAFFIC SIGNAL HEADS FURNISHED AND INSTALLED.

1327 PEDESTRIAN SIGNALS

PEDESTRIAN SIGNALS SHALL BE OF ALUMINUM CONSTRUCTION WITH A BLACK FINISH AND SHALL BE THE TYPE D2 (16 INCH, 1 SECTION, LED) & SHALL HAVE THE SYMBOL TYPE LEGENDS SIDE BY SIDE - THE PORTLAND ORANGE HAND (DON'T WALK INDICATION) SHALL OCCUPY THE LEFT ONE HALF OF THE SIGNAL AND LUNAR WHITE WALKING MAN (WALK INDICATION) SHALL OCCUPY THE RIGHT ONE HALF OF THE SIGNAL. SIGNALS SHALL BE PROVIDED WITH A 3/8" DRAIN HOLE IN THE BOTTOM. SIGNALS SHALL BE PROVIDED WITH 1 INCH DEEP EGGCRATE TYPE VISORS. ALL MOUNTING HARDWARE (CLAMSHELL TYPE FOR STEEL POLES, PIPE MOUNT FOR WOOD POLES) SHALL BE INCLUDED IN THE PRICE OF THE SIGNAL. SEE STANDARD DRAWINGS ES-3-2 AND ES-3-6 FOR MORE INFORMATION.

1328 PEDESTRIAN PUSHBUTTONS WITH ASSOCIATED SIGNS

THE CONTRACTOR SHALL FURNISH AND INSTALL PUSHBUTTONS AND SIGNS PER ITEM 1328. FOR LOCATIONS WHERE PUSHBUTTONS ARE TO BE MOUNTED ON THE CONTROLLER CABINET, THE CITY WILL PROVIDE THE PUSHBUTTON. IT REMAINS THE CONTRACTOR'S RESPONSIBILITY TO FURNISH AND INSTALL THE ASSOCIATED SIGNS.

1328 LOOP DETECTORS

LOOP DETECTORS SHALL BE CONSTRUCTED AS PER STANDARD DRAWING TC-82.10.

1329 REFLECTORIZED SIGNS

SIGNS SHALL BE 24" X 30" AND SHALL BE CITY STANDARD #79A AND 79C. PAYMENT FOR THE SIGNS IS ON A SQUARE FOOT BASIS PER ITEM 630 SIGN, FLAT SHEET, AS PER PLAN.

1335 CABLE AND POLE IDENTIFICATION

IN ADDITION TO ITEM 1335, ALL AERIAL INTERCONNECT CABLE INSTALLATIONS SHALL INCLUDE THE INSTALLATION OF WEATHERPROOF PLASTIC CABLE TAGS WITH INDELIBLE, IMPRINTED TEXT "COC 591-6000", ZIP TIED TO THE CABLE AT EVERY POLE ATTACHMENT POINT.

ITEM SPECIAL, INFRASTRUCTURE SIGNS

THE CONTRACTOR SHALL INSTALL INFRASTRUCTURE SIGNS ON EACH APPROACH TO EACH INTERSECTION BEING CONSTRUCTED. THESE SIGNS WILL BE SUPPLIED BY THE CITY, AND THE CONTRACTOR CAN PICK THEM UP FROM THE TRAFFIC SERVICES BUREAU. THE CONTRACTOR SHALL PROVIDE ALL MATERIAL REQUIRED TO MOUNT THE SIGNS, AND IS RESPONSIBLE FOR THEIR INSTALLATION.

ITEM 633 CONTROLLER ITEM, MISC.: CONTROLLER UNIT, TYPE 107E WITH CABINET, TYPE 330

AT LEAST 30 DAYS PRIOR TO INSTALLATON, FURNISH THE CONTROLLER TO THE CITY OF CINCINNATI FOR PROGRAMMING. WHEN READY TO PICK UP, PROVIDE AT LEAST 48 HOURS NOTICE TO T. DUKES AT 513-352-4391.

THE CONTRACTOR SHALL SUPPLY A CONTROLLER AND CABINET PER THE SPECIFICATIONS PROVIDED IN THE SPECIAL PROVISIONS, ITEM 633- CONTROLLER ITEM MISC: CONTROLLER UNIT, TYPE 170E, WITH CABINET, TYPE 330.

PAYMENT FOR ITEM 633 CONTROLLER ITEM, MISC.: CONTROLLER UNIT, TYPE 170E, WITH CABINET TYPE 330 SHALL BE MADE AT THE CONTRACT PRICE FOR EACH ANDE SHALL BE FULL COMPENSATION FOR ALL LABOR MATERIAL, EQUIPMENT AND INCIDENTALS TO COMPLETE THIS ITEM OF WORK.

CALCULATED ACW
CHECKED SLT

HAM-50-18.79

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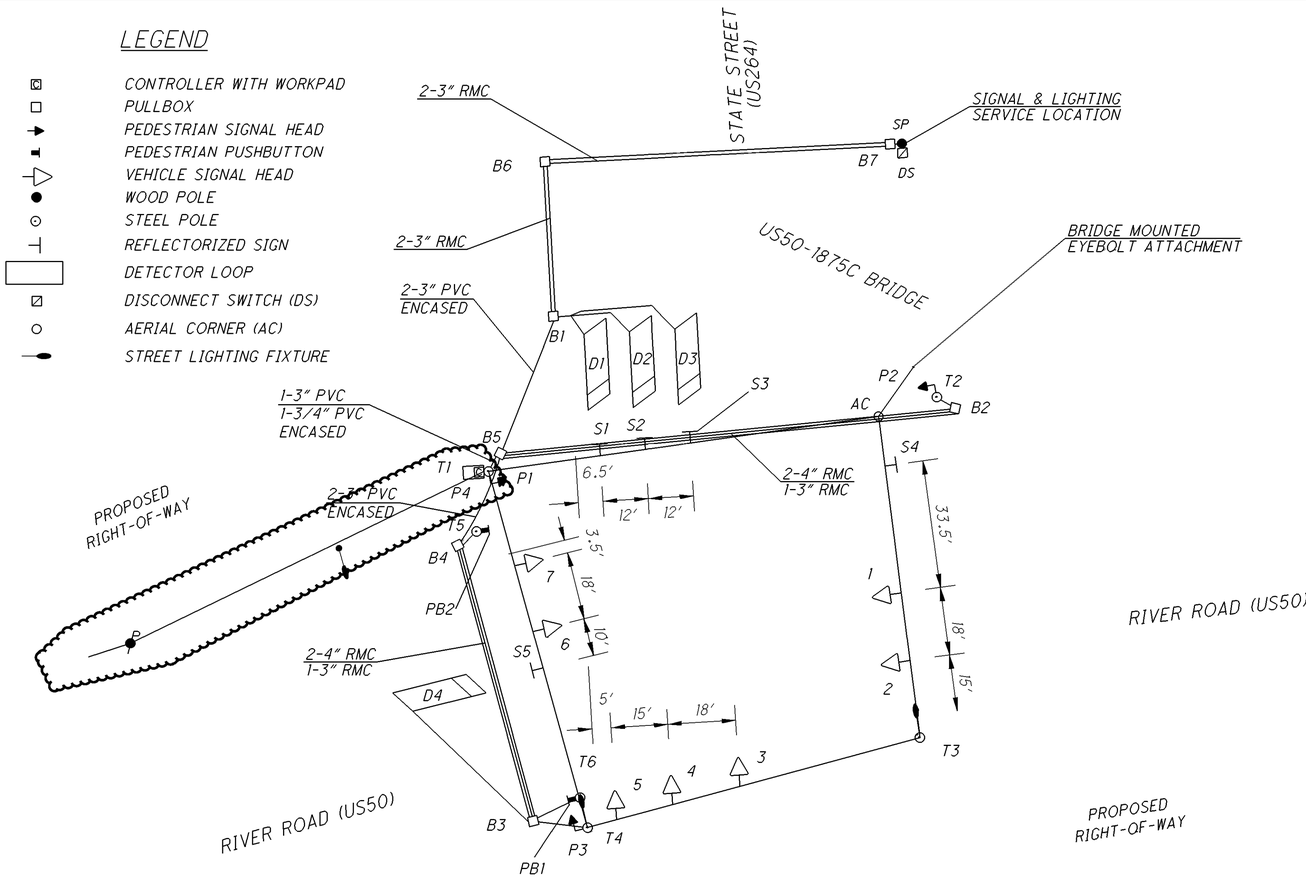
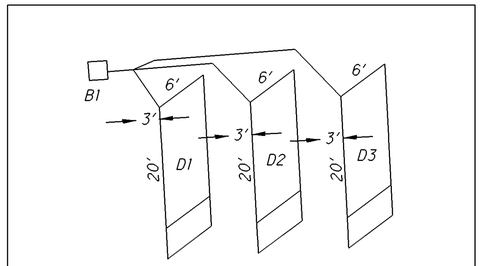
LEGEND

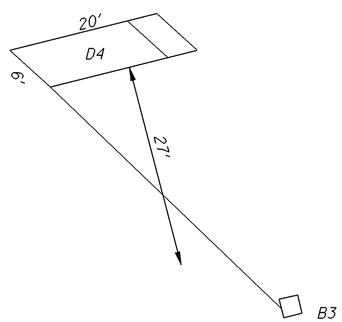
- CONTROLLER WITH WORKPAD
- PULLBOX
- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSHBUTTON
- VEHICLE SIGNAL HEAD
- WOOD POLE
- STEEL POLE
- REFLECTORIZED SIGN
- DETECTOR LOOP
- DISCONNECT SWITCH (DS)
- AERIAL CORNER (AC)
- STREET LIGHTING FIXTURE





LOOP DETAIL - LOOPS D1, D2, D3
(SCALE: 1" = 10')

LOOP DETAIL - LOOP D4
(SCALE: 1" = 10')



EQUIPMENT NO.	EQUIPMENT DESCRIPTION
2,6	TRAFFIC SIGNAL HEAD, 3 SECTION, LED, VERTICAL, 12" RYG
3,4	TRAFFIC SIGNAL HEAD, 4 SECTION, LED, VERTICAL, 12" RYG G ←
1	TRAFFIC SIGNAL HEAD, 5 SECTION, CLUSTER, LED, 12" RYG Y G ← ←
5,7	TRAFFIC SIGNAL HEAD, 5 SECTION, CLUSTER, LED, 12" RYG Y G → →
P1,P2,P3,P4	PEDESTRIAN SIGNAL, TYPE D2, 16" LED W/ CLAMSHELL MOUNTING
PB1,PB2	PEDESTRIAN PUSHBUTTON WITH ASSOCIATED SIGNS
S2,S3,S5	REFLECTORIZED SIGN, 24" X 30", "↱ ONLY", CITY #79C
S1,S4	REFLECTORIZED SIGN, 24" X 30", "↰ ONLY", CITY #79A
D1	LOOP DETECTOR, POWERHEAD, 3-3 TURNS
D2	LOOP DETECTOR, POWERHEAD, 3-3 TURNS
D3	LOOP DETECTOR, POWERHEAD, 3-3 TURNS
D4	LOOP DETECTOR, POWERHEAD, 3-3 TURNS
B2,B3,B4,B5	PULLBOX, 24" X 24", TYPE "C"
B1,B6,B7	PULLBOX, 18" X 18", TYPE "B"
T1	STEEL POLE, ANCHOR BASE, 11" X 30', CITY #38045
T3, T4	STEEL LT POLE, ANCHOR BASE, 11" X 30', CITY #38045LT W/ 6' ARM
T2	STEEL POLE, ANCHOR BASE, 4" X 10', CITY #1045 (PEDESTAL)
T5, T6	STEEL POLE, ANCHOR BASE, 4" X 4', CITY #445 (PEDESTAL)
SP	SERVICE LOCATION (POWER SERVICE "B" FROM LIGHTING PLANS)
S	SECTIONALIZER - CITY STD DWG ES-3-7A

FULL SIZE SCALE: 1" = 20'
HALF SIZE SCALE: 1" = 40'

NOTES:

1. ALL SIGNAL HEADS AND SIGNS SHALL BE FIELD ADJUSTED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER TO ENSURE VISIBILITY.
2. ALL OVERHEAD WIRES SHALL BE RUN TO THE NEAREST POLE, DOWN THE POLE, AND UNDERGROUND TO THE CONTROLLER.
3. CITY TO APPROVE LOOP LAYOUT BEFORE CUTTING.
4. THE MESSENGER WIRE TAIL EXTENDING AWAY FROM THE AERIAL CORNER SHALL BE ATTACHED TO THE US50 (1875C) BRIDGE USING THE PROVIDED ATTACHMENT POINT. REFER TO THE BRIDGE PLANS FOR DETAILS.
5. INSTALL A CONCRETE WORK PAD PER STANDARD DRAWING ES-3-1.
6. CONSTRUCT CONCRETE ENCASEMENT OF CONDUIT PER STANDARD DRAWING ES-2-1.
7. ALL CONDUIT IS 2-INCH PVC CONCRETE ENCASED UNLESS OTHERWISE NOTED.
8. REFER TO STREET LIGHTING SHEETS FOR ADDITIONAL LIGHTING INFORMATION AND DETAILS.
9. SERVICE POINT IS TENTATIVELY LOCATED PER INFORMATION FROM THE LIGHTING PLANS. DISCONNECT SWITCH SHALL BE POLE MOUNTED. REFER TO STANDARD DRAWING ES-2-2.
10. ROUTE INTERCONNECT WEST ALONG WOOD POLE LINE ON NORTH SIDE OF RIVER RD FROM SECTIONALIZER ON T1 TO END OF PROJECT.

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED ACW
CHECKED SLT

TRAFFIC SIGNAL
US50 AND STATE AVE. (SR264)

HAM-50-18.79

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CABLE SCHEDULE

CABLE NO.	CONNECTING DEVICES	CABLE TYPE	CABLE ROUTING	LINEAR FEET
1	TRAFFIC SIGNAL TS1	7C#14	TS1-T3-T4-B3-B4-B5-T1-C	303
2	TRAFFIC SIGNAL TS2	7C#14	TS2-T3-T4-B3-B4-B5-T1-C	285
3	TRAFFIC SIGNALS TS3, TS4	7C#14	TS3-TS4-T4-B3-B4-B5-T1-C	188
4	TRAFFIC SIGNAL TS5	7C#14	TS5-T4-B3-B4-B5-T1-C	181
5	TRAFFIC SIGNAL TS6	7C#14	TS6-T1-C	77
6	TRAFFIC SIGNAL TS7	7C#14	TS7-T1-C	59
7	PED SIGNAL P1	7C#14	P1-T1-C	20
8	PED SIGNAL P2	7C#14	P2-T2-B2-B5-T1-C	164
9	PED SIGNAL P3	7C#14	P3-T4-B3-B4-B5-T1-C	155
10	PED SIGNAL P4	7C#14	P4-T1-C	20
11	PUSHBUTTON PB1	7C#14	PB1-T6-B3-B4-B5-T1-C	148
12	PUSHBUTTON PB2	7C#14	PB2-T5-B4-B5-T1-C	65
13	LOOP DETECTOR D1 - LEAD IN	2C#14	B1-B5-T1-C	47
14	LOOP DETECTOR D2 - LEAD IN	2C#14	B1-B5-T1-C	47
15	LOOP DETECTOR D3 - LEAD IN	2C#14	B1-B5-T1-C	47
16	LOOP DETECTOR D4 - LEAD IN	2C#14	B3-B4-B5-T1-C	52
17	LOOP WIRE - D1	1C#14	B1-LOOP D1-B1	316
18	LOOP WIRE - D2	1C#14	B1-LOOP D2-B1	460
19	LOOP WIRE - D3	1C#14	B1-LOOP D3-B1	460
20	LOOP WIRE - D4	1C#14	B3-LOOP D3-B3	220
21	STREET LIGHT, POLE T3	2EA#10	T3-T4-B3-B4-B5-T1-LIGHTING CIRCUIT	546
22	STREET LIGHT, POLE T4	2EA#10	T4-B3-B4-B5-T1-LIGHTING CIRCUIT	358
23	POWER CABLE	2EA#6	DS-B7-B6-B5-T1-C	432
24	SERVICE CABLE	#4 DPL	DUKE SECONDARY-DS	40
25	INTERCONNECT	12C#12	C-T1-P5-P6-P7-P8-P9-P10-SECT	895

MATERIAL SCHEDULE

VEHICULAR SIGNAL HEADS (12 INCH)

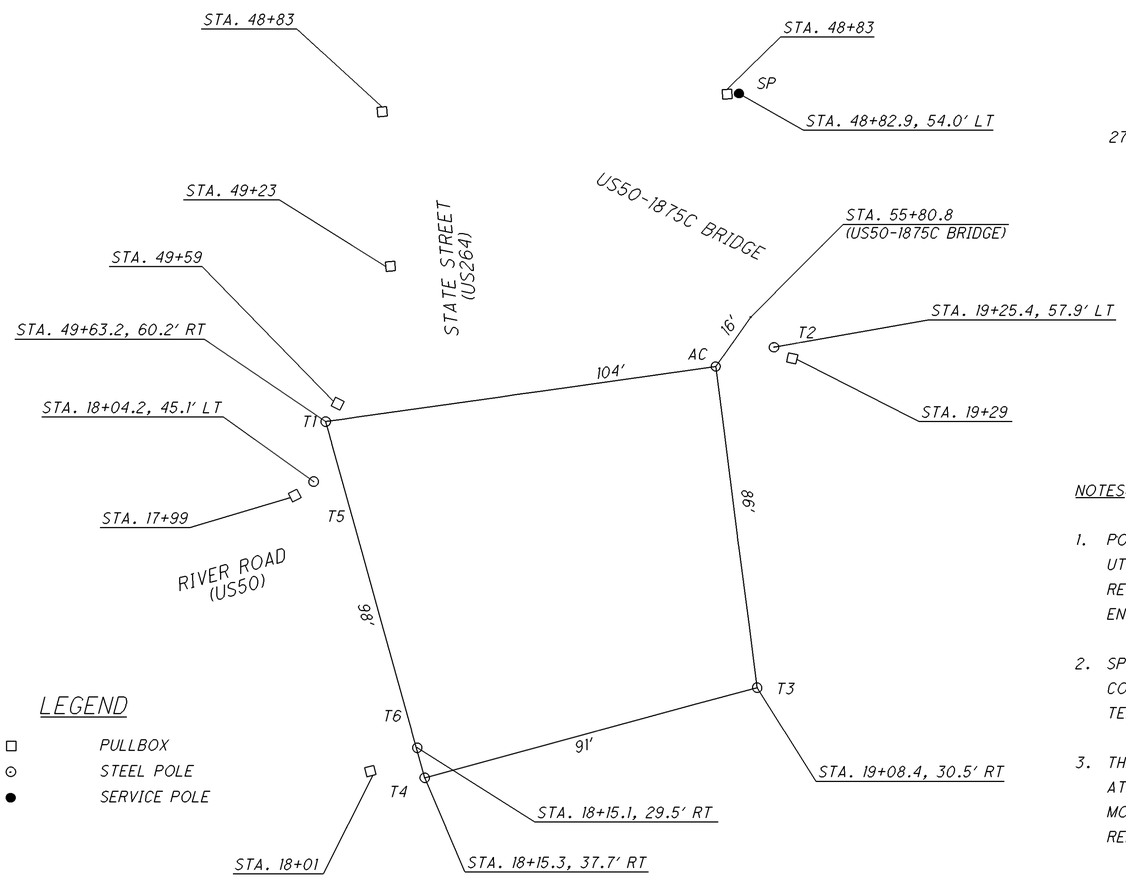
NO.	1	2	3	4	5	6	7
	R	R	R	R	R	R	R
	Y	Y	Y	Y	Y	Y	Y
	G	G	G	G	G	G	G
	~~Y~~		~~G~~	~~G~~	~~Y~~		~~Y~~
	~~G~~				~~G~~		~~G~~

LOOP DETECTORS

D1	D2	D3	D4
IRREG. DIPOLE, 3 TURNS	DIPOLE, 12'x30', 3 TURNS	DIPOLE, 12'x30', 3 TURNS	6'x15', 3 TURNS

1 SECTION 16-INCH LED PEDESTRIAN HEAD WITH CLAMSHELL MOUNTING

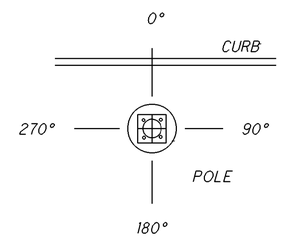
POLE NO.	POLE DATA: CITY NUMBER	SHAFT SIZE IN X FT	FOUNDATION TYPE	PUSHBUTTONS: PB1	PB2			PEDESTRIAN SIGNALS: P1	P2	P3	P4					CABLE ENTRANCE (ANGLE)	SPAN WIRE ATTACHMENT HEIGHT (FEET)	SPAN WIRE ATTACHMENT HEIGHT (FEET)	HANDHOLE	LUMINAIRE ARM	SAFETY SWITCH	CONTROLLER
								D	D	D	D											
								W	W	W	W											
				ANGLE OF ORIENTATION (DEGREES)																		
T1	38045	11x30	FDN-10					0			90					45	27.0	27.0	270			180
T2	1045	4x10	FDN-25						180													
T3	38045LT	11x30	FDN-10														27.0	27.0	180	0		
T4	38045LT	11x30	FDN-10							270						45	27.0	27.0	180	0		
T5	445	4x4	FDN-20		270																	
T6	445	4x4	FDN-20	270																		
SP																					270	



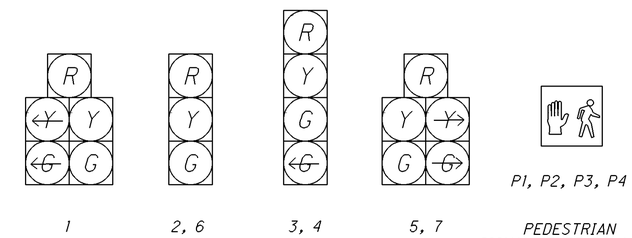
LEGEND

- □ PULLBOX
- ⊙ STEEL POLE
- ● SERVICE POLE

TYPICAL POLE ORIENTATION



SIGNAL INDICATIONS



ALL LENSES SHALL BE 12" LED

PEDESTRIAN SIGNAL (TYPE D2) LED W/ CLAMSHELL MOUNTING

NOTES:

1. POLE LOCATIONS WERE DETERMINED BY THE AVAILABLE UNDERGROUND UTILITY INFORMATION. REPOSITIONING OF THE POLES MAY BE REQUIRED BY FIELD CONDITIONS AND REQUIRES APPROVAL BY THE ENGINEER.
2. SPAN LENGTHS FOR THE MESSENGER WIRE ARE GIVEN TO INITIALLY CONSTRUCT THE TRAFFIC SIGNAL. THE LENGTHS MAY CHANGE DUE TO TENSIONING OF THE MESSENGER WIRE.
3. THE MESSENGER WIRE TAIL NEAR THE AERIAL CORNER SHALL BE ATTACHED TO THE US50 (1875C) BRIDGE AT THE STATION LISTED. THE MOUNTING ELEVATION OF THE PROVIDED ATTACHMENT IS 27 FEET. REFER TO BRIDGE PLANS FOR ADDITIONAL DETAILS.

FULL SIZE SCALE: 1" = 20'
HALF SIZE SCALE: 1" = 40'

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED ACW
CHECKED SLT

TRAFFIC SIGNAL DETAILS
US50 AND STATE AVE. (SR264)

HAM-50-18.79

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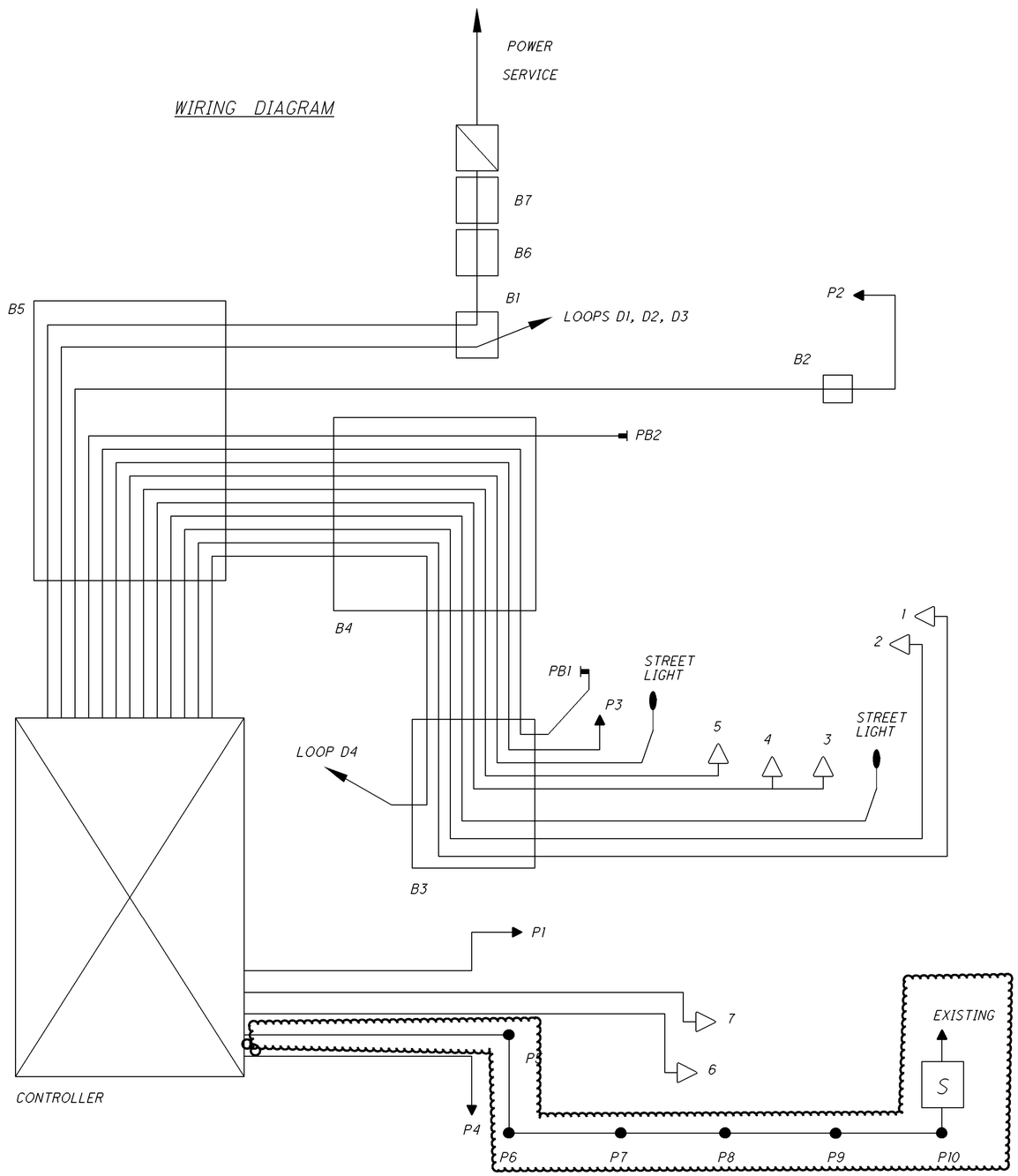
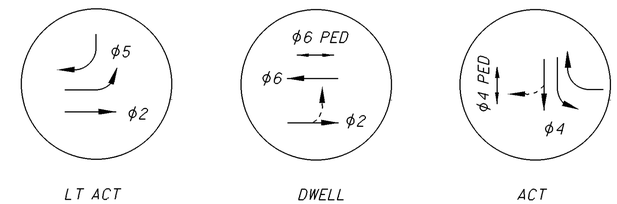
WIRING DIAGRAM



REFER TO PREVIOUS TRAFFIC SIGNAL DETAILS SHEET FOR CONDUCTOR SIZE AND TYPE.

SIGNAL PHASING



THIS IS THE GENERAL SEQUENCING FOR THIS TRAFFIC SIGNAL. REFER TO THE CITY OF CINCINNATI FOR FINAL SEQUENCING, LABELING AND TIMINGS.

CALCULATED ACW
CHECKED SLT

TRAFFIC SIGNAL DETAILS
US50 AND STATE AVE. (SR264)

HAM-50-18.79

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THESE ITEMS REFER TO CITY OF CINCINNATI STANDARD SPECIFICATIONS. THEY HAVE BEEN CROSS REFERENCED TO ODOT STANDARD BID ITEMS FOR INCLUSION IN THE GENERAL SUMMARY

CITY OF CINCINNATI SPECIFICATIONS

UNITS	ITEM NO.	TOTAL QTY	DESCRIPTION	ODOT REF
EACH	1312	1	POWER SERVICE	30
LUMP SUM	1314	1	MAINTENANCE OF EXISTING TRAFFIC SIGNAL	1
LUMP SUM	1314	1	MAINTENANCE OF EXISTING STREET LIGHTING CIRCUIT	15
EACH	1316	1	REMOVAL OF EXISTING TRAFFIC SIGNAL INSTALLATION, BY LOCATION	34
EACH	1318	1	STEEL POLE, ANCHOR BASE, 11"x30', CITY #38045	32
EACH	1318	2	STEEL LT POLE, ANCHOR BASE, 11"x30', CITY #38045LT W/ 6' ARM	32
EACH	1318	1	STEEL POLE, ANCHOR BASE, 4"x10', CITY #1045 (PEDESTAL)	33
EACH	1318	2	STEEL POLE, ANCHOR BASE, 4"x4', CITY #445 (PEDESTAL)	33
EACH	1319	3	CONCRETE ANCHOR BASE POLE FOUNDATION, 3 FT. DIA. X 11 FT. DEEP, FOUNDATION #FDN-10	26
EACH	1319	1	CONCRETE ANCHOR BASE POLE FOUNDATION, 2 FT. WIDE X 4 FT. DEEP, FOUNDATION #FDN-25	27
EACH	1319	2	CONCRETE ANCHOR BASE POLE FOUNDATION, 2 FT. WIDE X 2 FT. DEEP, FOUNDATION #FDN-20	27
EACH	1320	7	GROUND ROD	14
LIN. FT.	1321	135	TRENCH, 24 INCHES DEEP, INCLUDING RESTORATION	10
LIN. FT.	1321	287	TRENCH, 30 INCHES DEEP, INCLUDING RESTORATION (PAVED AREAS)	11
LIN. FT.	1321	456	CONDUIT, 3 INCH RIGID METAL CONDUIT	6
LIN. FT.	1321	392	CONDUIT, 4 INCH RIGID METAL CONDUIT	8
LIN. FT.	1321	136	CONDUIT, 3 INCH PVC, CONCRETE ENCASED	7
LIN. FT.	1321	40	CONDUIT, 2 INCH PVC, CONCRETE ENCASED	5
LIN. FT.	1321	10	CONDUIT, 3/4 INCH RIGID METAL CONDUIT	4
EACH	1322	4	PULLBOX, CONCRETE, 24 X 24 INCHES, TYPE C	13
EACH	1322	3	PULLBOX, CONCRETE, 18 X 18 INCHES, TYPE B	12
EACH	1322	1	SECTIONALIZER, STANDARD	38
LIN. FT.	1323	40	SERVICE CABLE, DUPLEX #4 AWG	30
LIN. FT.	1323	216	POWER CABLE, 1 CONDUCTOR, #6 AWG, 600 VOLT, TYPE RHH/RHW/USE, WHITE, AC NEUTRAL	29
LIN. FT.	1323	216	POWER CABLE, 1 CONDUCTOR, #6 AWG, 600 VOLT, TYPE RHH/RHW/USE, BLACK, AC POS	29
LIN. FT.	1323	904	POLE AND BRACKET CABLE, #10 AWG RHH/RHW/USE STRANDED COPPER	3
LIN. FT.	1323	1665	TRAFFIC SIGNAL CABLE, 7 CONDUCTOR, #14 AWG, STRANDED COPPER IMSA 19-1/20-1	25
LIN. FT.	1323	400	MESSENGER WIRE, 7 STRAND #10 AWG (5/16 INCH DIA) WITH ACCESSORIES	24
LIN. FT.	1323	1406	LOOP DETECTOR WIRE, 1 CONDUCTOR #14 AWG, THWN, STRANDED	23
LIN. FT.	1323	297	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR #14 AWG, STRANDED, SHIELDED, TWISTED PAIR	28
LIN. FT.	1323	895	INTERCONNECT CABLE, 12 CONDUCTOR #12 AWG	39
LIN. FT.	1323	850	MESSENGER WIRE, 7 STRAND NUMBER 12 AVG (1/4"), WITH ACCESSORIES	40
EACH	1324	1	TRAFFIC SIGNAL CONTROLLER, POLE MOUNT TYPE, AS PER PLAN	36
EACH	1324	1	CONTROLLER WORK PAD	35
EACH	1324	1	SAFETY SWITCH, 60 AMP W/60 AMP UL CLASS RK-1, 240 VOLT FUSE	2
EACH	1324	1	PHOTO-ELECTRIC CELL, RECEPTACLE, MOUNTING BRACKET AND 3-#14 AWG CABLE	37
EACH	1325	2	LUMINAIRE, 150W HPS TYPE II W/ LAMP	9
EACH	1327	2	TRAFFIC SIGNAL HEAD, 3 SECTION, LED, VERTICAL, 12" RYG, 1-WAY	18
EACH	1327	2	TRAFFIC SIGNAL HEAD, 4 SECTION, LED, VERTICAL, 12" RYG G ←1-WAY	19
EACH	1327	1	TRAFFIC SIGNAL HEAD, 5 SECTION, LED, CLUSTER, 12" RYG Y G→, 4-WAY	20
EACH	1327	2	TRAFFIC SIGNAL HEAD, 5 SECTION, LED, CLUSTER, 12" RYG Y G→ 1-WAY	20
EACH	1327	4	PEDESTRIAN SIGNAL HEAD, 1 SECTION, LED, 16" W/ CLAMSHELL MOUNTING	21
EACH	1328	2	PEDESTRIAN PUSHBUTTON W/ ASSOCIATED SIGNS	22
LIN. FT.	1328	406	LOOP DETECTOR PAVEMENT CUTTING	23
EACH	1329	2	REFLECTORIZED SIGN, FLAT SHEET TYPE, 24" X 30", "⌈ ONLY", CITY #79A	16, 17
EACH	1329	3	REFLECTORIZED SIGN, FLAT SHEET TYPE, 24" X 30", "⌉ ONLY", CITY #79C	16, 17

TRAFFIC SIGNAL SUB-SUMMARY

ODOT REF	UNITS	ITEM NO.	TOTAL QTY	DESCRIPTION
1	LUMP SUM	614	1	MAINTAINING TRAFFIC, MISC.: MAINTENANCE OF EXISTING TRAFFIC SIGNAL
2	EACH	625	1	LIGHTING, MISC.: SAFETY SWITCH, 60 AMP W/60 AMP UL CLASS RK-1, 240 VOLT FUSE
3	LIN. FT.	625	904	NO. 10 AWG POLE AND BRACKET CABLE, AS PER PLAN
4	LIN. FT.	625	10	CONDUIT, 3/4", 725.05, AS PER PLAN
5	LIN. FT.	625	40	CONDUIT, 2", 725.05, AS PER PLAN
6	LIN. FT.	625	456	CONDUIT, 3", 725.04, AS PER PLAN
7	LIN. FT.	625	136	CONDUIT, 3", 725.05, AS PER PLAN
8	LIN. FT.	625	392	CONDUIT, 4", 725.04, AS PER PLAN
9	EACH	625	2	LUMINAIRE, CONVENTIONAL, AS PER PLAN
10	LIN. FT.	625	135	TRENCH, 24" DEEP, AS PER PLAN
11	LIN. FT.	625	287	TRENCH, 30" DEEP, AS PER PLAN
12	EACH	625	3	PULL BOX, 725.08, 18", AS PER PLAN
13	EACH	625	4	PULL BOX, 725.08, 24", AS PER PLAN
14	EACH	625	7	GROUND ROD, AS PER PLAN
15	LUMP SUM	625	1	SPECIAL - MAINTAIN EXISTING LIGHTING
16	EACH	630	5	SIGN HANGER ASSEMBLY, SPAN WIRE, AS PER PLAN
17	SQ. FT.	630	25	SIGN, FLAT SHEET, AS PER PLAN
18	EACH	632	2	VEHICULAR SIGNAL HEAD, (LED), 3 SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN
19	EACH	632	2	VEHICULAR SIGNAL HEAD, (LED), 4 SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN
20	EACH	632	3	VEHICULAR SIGNAL HEAD, (LED), 5 SECTION, 12" LENS, 1-WAY, POLYVARBONATE, AS PER PLAN
21	EACH	632	4	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, AS PER PLAN
22	EACH	632	2	PEDESTRIAN PUSHBUTTON, AS PER PLAN
23	EACH	632	4	DETECTOR LOOP, AS PER PLAN
24	LIN. FT.	632	400	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES, AS PER PLAN
25	LIN. FT.	632	1665	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG, AS PER PLAN
26	EACH	632	3	STRAIN POLE FOUNDATION, AS PER PLAN
27	EACH	632	3	PEDESTAL FOUNDATION, AS PER PLAN
28	LIN. FT.	632	297	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG, AS PER PLAN
29	LIN. FT.	632	432	POWER CABLE, 1 CONDUCTOR, NO. 6 AWG, AS PER PLAN
30	LIN. FT.	632	40	SERVICE CABLE, 2 CONDUCTOR, NO. 4 AWG, AS PER PLAN
31	EACH	632	1	POWER SERVICE, AS PER PLAN
32	EACH	632	3	STRAIN POLE, MISC.: FURNISH AND INSTALL CINCINNATI STRAIN POLE
33	EACH	632	3	PEDESTAL, MISC.: FURNISH AND INSTALL CINCINNATI PEDESTAL
34	EACH	632	1	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
35	EACH	633	1	CONTROLLER WORK PAD, AS PER PLAN
36	EACH	633	1	CONTROLLER ITEM, MISC.: CONTROLLER UNIT, TYPE 170E WITH CABINET, TYPE 332
37	EACH	631	1	PHOTOELECTRIC CONTROL, AS PER PLAN
38	EACH	632	1	SIGNALIZATION MISC.: SECTIONALIZER, STANDARD
39	LIN. FT.	632	895	INTERCONNECT CABLE, 12 CONDUCTOR, NO. 12 AWG, AS PER PLAN
40	LIN. FT.	632	850	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN

CALCULATED ACW
CHECKED SLT

TRAFFIC SIGNAL DETAILS
US50 AND STATE AVE. (SR264)

HAM-50-18.79

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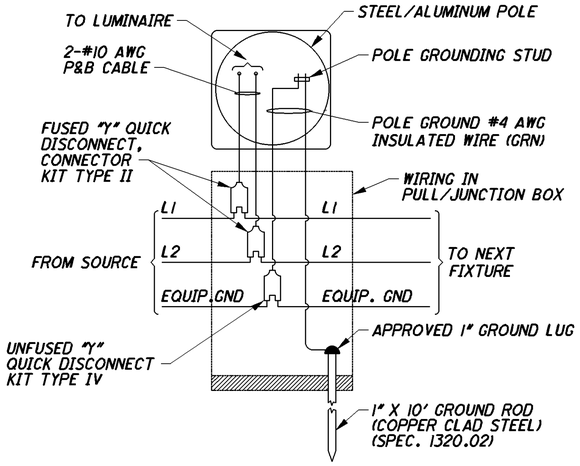
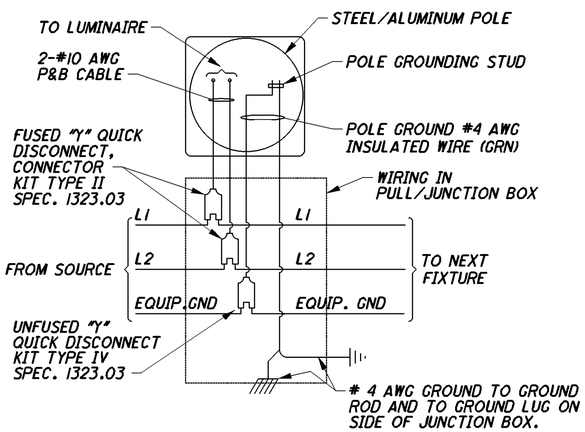


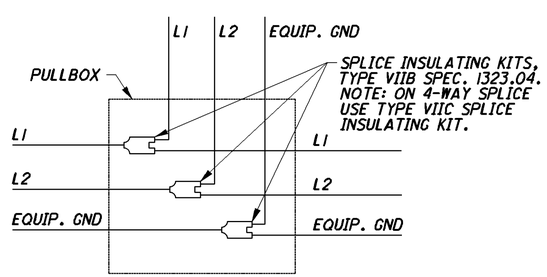
WIRING DIAGRAM #1

POLE WITH PULL BOX/JUNCTION BOX
(NOT TO SCALE)



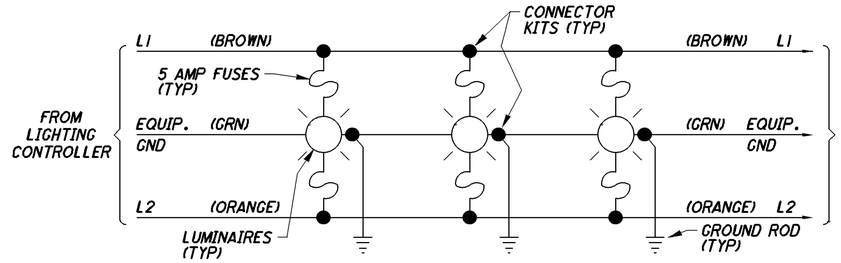
WIRING DIAGRAM #2

STEEL POLE WITH PULL/JUNCTION BOX
(NOT TO SCALE)



WIRING DIAGRAM #3

3-WAY SPLICE IN A PULL/JUNCTION BOX
(NOT TO SCALE)

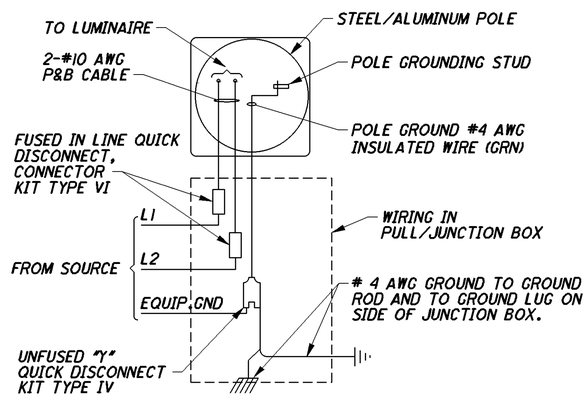


TYPICAL CIRCUIT WIRING SCHEMATIC

(NOT TO SCALE)

NOTES

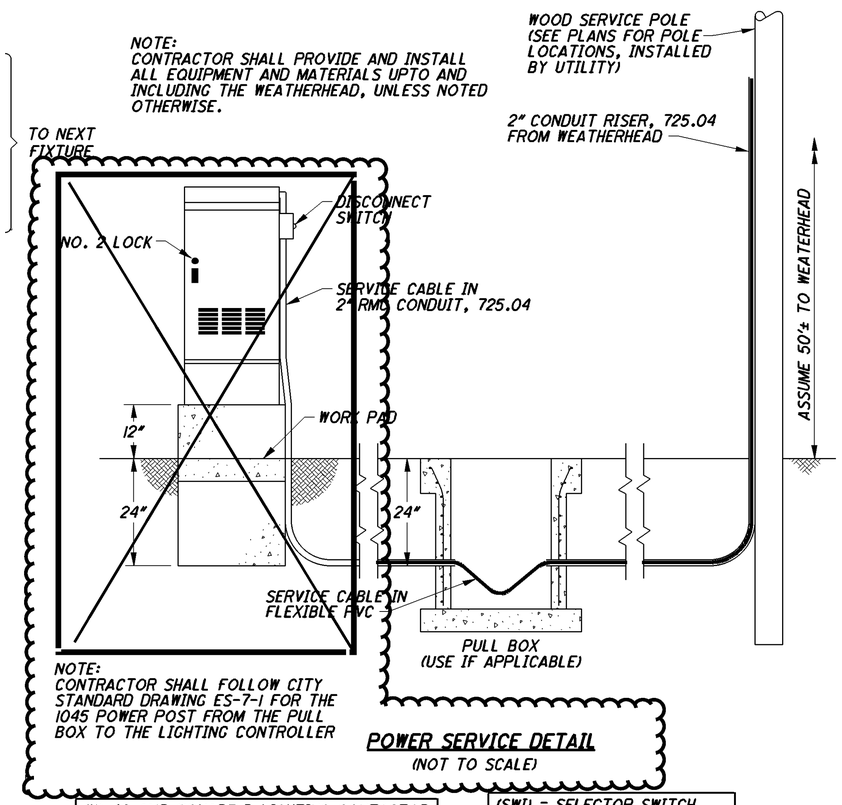
1. REFER TO LIGHTING CONTROLLER SCHEDULE FOR EACH LOCATION.
2. FOR CONTROLLER INSTALLATION DETAILS, SEE SCD HL-40.10.



WIRING DIAGRAM #4

POLEITH PULL/JUNCTION BOX
END OF LINE
(NOT TO SCALE)

NOTE:
CONTRACTOR SHALL PROVIDE AND INSTALL ALL EQUIPMENT AND MATERIALS UPTO AND INCLUDING THE WEATHERHEAD, UNLESS NOTED OTHERWISE.



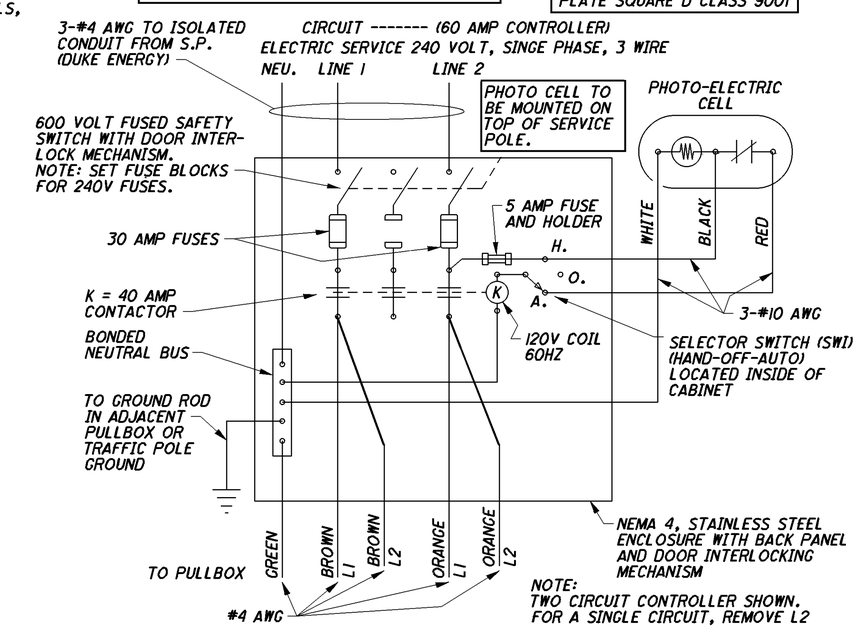
NOTE:
CONTRACTOR SHALL FOLLOW CITY STANDARD DRAWING ES-7-1 FOR THE 1045 POWER POST FROM THE PULL BOX TO THE LIGHTING CONTROLLER

POWER SERVICE DETAIL

(NOT TO SCALE)

(K)=40 AMP SQUARE D LIGHTING CONTACTOR 3 POLE W/120V COIL CLASS 8903 TYPE S ELECTRICALLY HELD

(SWI) = SELECTOR SWITCH WITH PANEL MOUNTING AND HAND-OFF-AUTO LEGEND PLATE SQUARE D CLASS 9001



NOTE:
TWO CIRCUIT CONTROLLER SHOWN.
FOR A SINGLE CIRCUIT, REMOVE L2

LIGHTING CONTROLLER WIRING

FOR ADDITIONAL INFORMATION, SEE STD. DWG HL-60.31
(NOT TO SCALE)

LIGHTING DETAILS

HAM-50-18.79

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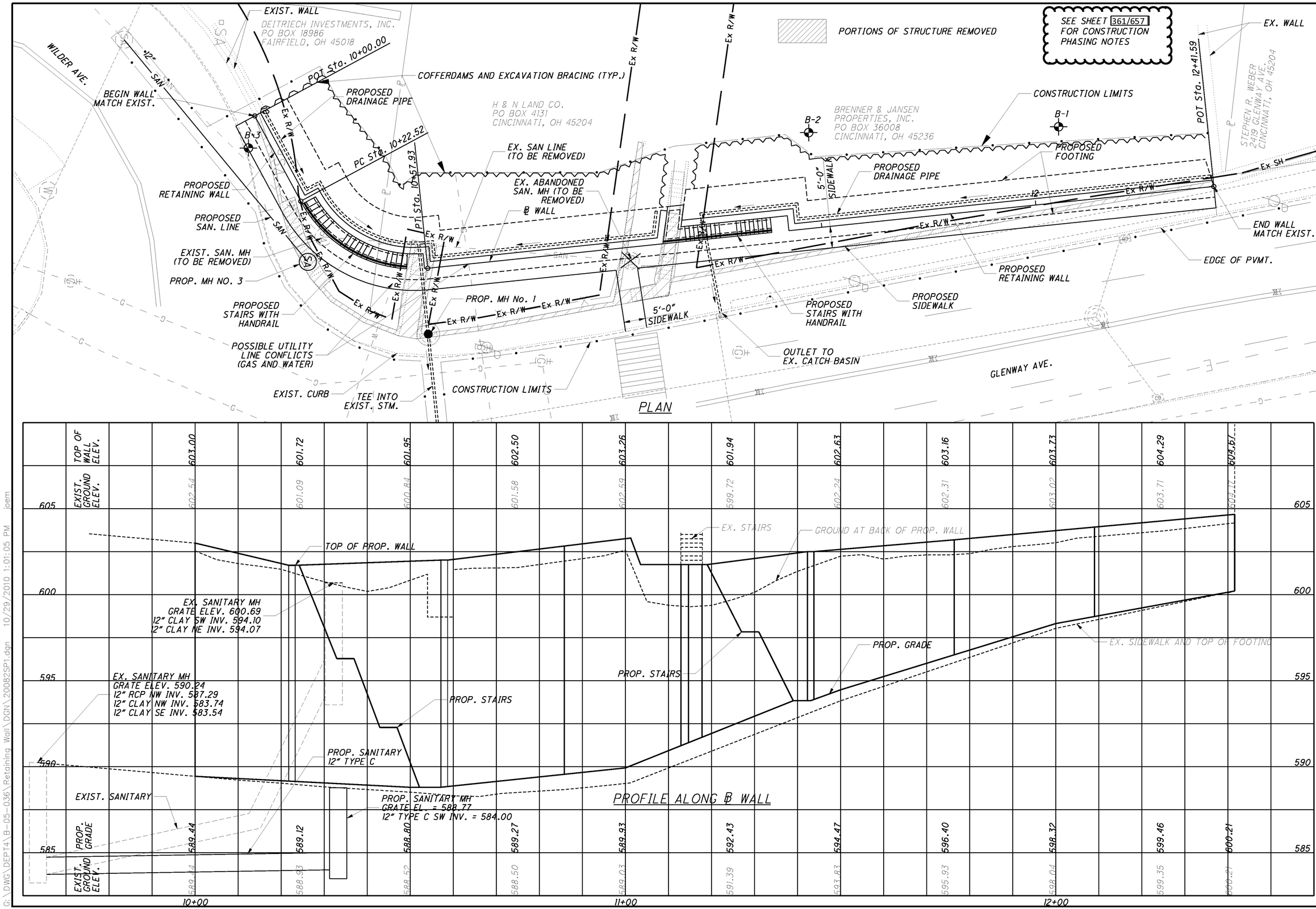

HORIZONTAL SCALE IN FEET

CALCULATED JLM
CHECKED NCK

PLAN AND PROFILE - RETAINING WALL
STA. 10+00.00 TO STA. 12+41.59

HAM-50-18.79
PID 20082

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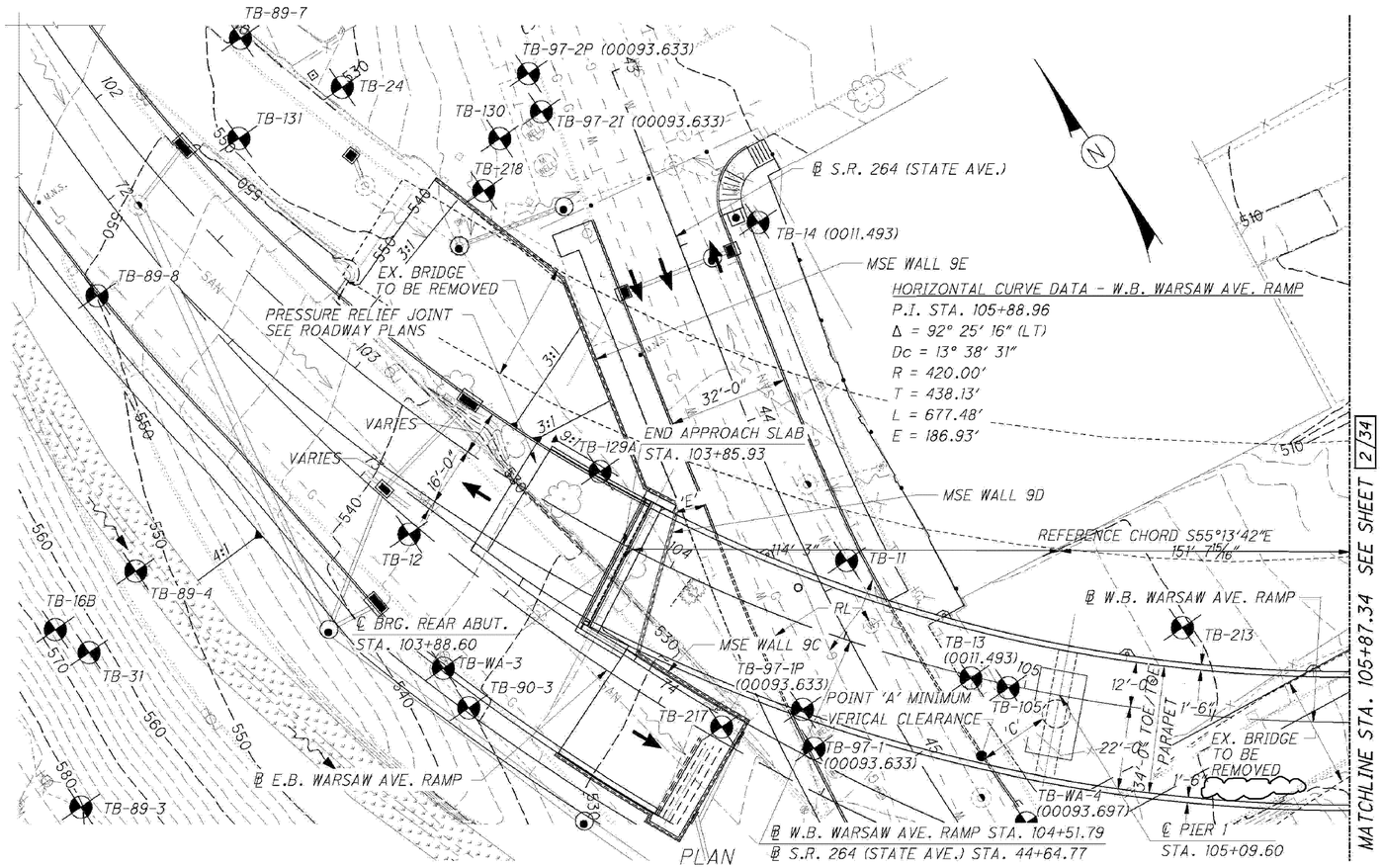
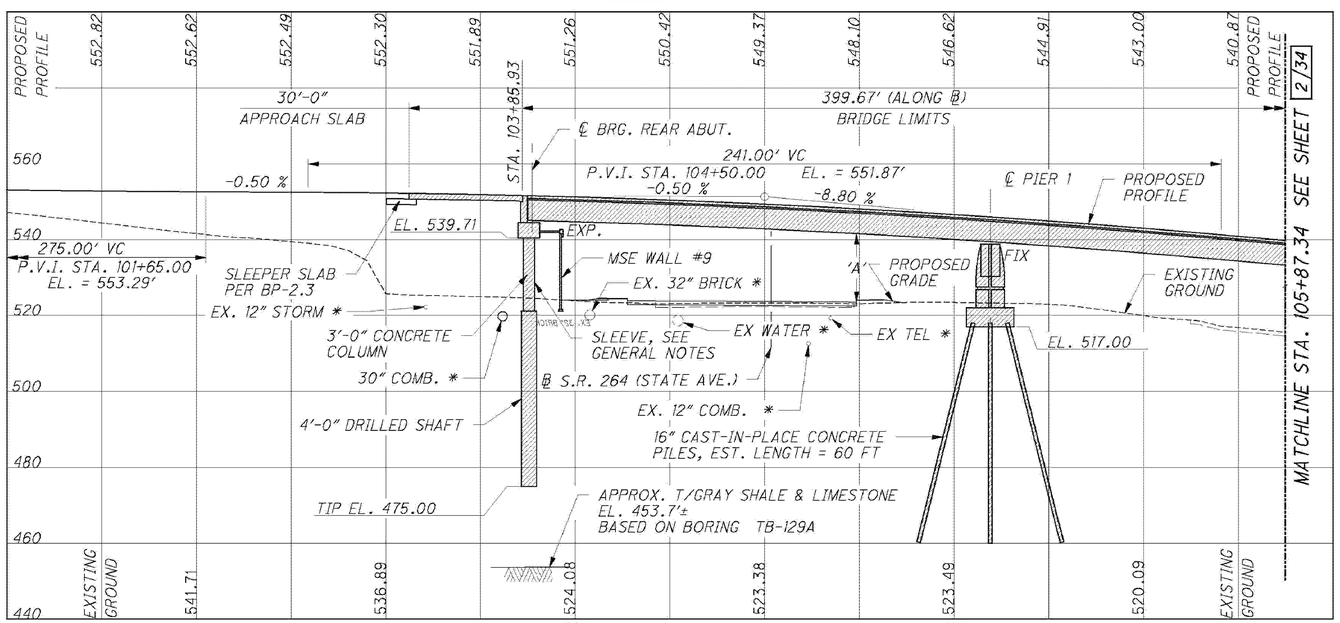


PLAN



PROFILE ALONG ℄ W.B. WARSAW AVE. RAMP

* EX UTILITIES TO BE RELOCATED BY OTHERS

VERTICAL CLEARANCE
REQUIRED MINIMUM VERTICAL CLEARANCE = 16'-6"
'A' ACTUAL MINIMUM VERTICAL CLEARANCE = 17'-3"

HORIZONTAL CLEARANCE
'C' REQUIRED MINIMUM HORIZONTAL CLEARANCE = 15'-0"
'C' ACTUAL MINIMUM HORIZONTAL CLEARANCE = 19'-2"

'E' REQUIRED MINIMUM HORIZONTAL CLEARANCE = 15'-0"
'E' ACTUAL MINIMUM HORIZONTAL CLEARANCE = 8'-6"

BENCHMARK DATA

BM #1 STA. 102+33.95 (HUB SET)	ELEV. 533.32	OFFSET 48.84' LT
BM #2 STA. 102+61.09 (PKF)	ELEV. 520.21	OFFSET 99.63' LT
BM #3 STA. 107+73.32 (PKF)	ELEV. 502.57	OFFSET 24.51 LT

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS AND MSE WALL PLAN.

DESIGN TRAFFIC:
2006 ADT = 4305 2006 ADTT = 43
2026 ADT = 4390 2026 ADTT = 44

SEE ROADWAY PLANS FOR DISPOSITION OF EXISTING UTILITIES.

LEGEND

- SOIL BORING LOCATION
- EXISTING PIER LOCATION
- POINT OF MINIMUM VERTICAL CLEARANCE

RL - EXISTING UTILITY TO BE RELOCATED
TB - TEST BORING

EXISTING STRUCTURE

TYPE: 5-SPAN STEEL FRAMES WITH ALTERNATELY SUSPENDED SPANS SUPPORTING A GIRDER-FLOORBEAM-STRINGER SYSTEM WITH REINFORCED CONCRETE DECK. THE SUPERSTRUCTURE IS SUPPORTED BY REINFORCED CONCRETE ABUTMENT ON SPREAD FOOTINGS AND TAPERED, BUILT-UP STEEL COLUMN STRADDLE BENTS ON DRILLED CASSIONS OR PEDESTALS AND PILING.

SPANS: 61.355', 86.234', 55.000', 78.026', 56.084' (MEASURED ALONG CHORDS BETWEEN ℄ BEARING ABUTMENT AND PIERS.

ROADWAY: 24' F/F SAFETY CURB

LOADING: POSTED 16 TON

WEARING SURFACE: CONCRETE

SKEW: NONE (RADIAL)

APPROACH SLABS: AS-1-54 (25' LONG)

CROWN: VARIES

STRUCTURAL FILE NUMBER: 3102785

DATE BUILT: 1950

DISPOSITION: TO BE REMOVED

PROPOSED STRUCTURE

TYPE: 3-SPAN CONTINUOUS PLATE GIRDERS A709 GRADE 50 (PAINTED) WITH COMPOSITE CONCRETE DECK. SUPPORTED BY REINFORCED CONCRETE ABUTMENTS AND PIERS ON PILING OR DRILLED SHAFTS.

SPANS: 121', 152.5', 121', c/c BEARINGS ALONG ℄ (114'-3", 151'-7 15/16", 114'-3" c/c BEARINGS ALONG REFERENCE CHORD)

ROADWAY: 34'-0" TOE/TOE PARAPET

LOADING: HS25 CASE II AND ALTERNATE MILITARY FUTURE WEARING SURFACE (FWS) OF 60 PSF

SKEW: NONE (RADIAL)

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: 30' LONG (AS-1-81) MODIFIED

ALIGNMENT: LEFT CURVE - RADIUS = 420'

SUPERELEVATION: VARIES TO 0.058 FT/FT

COORDINATES: LATITUDE N 39° 06' 05"
LONGITUDE W 84° 33' 15"

DESIGN AGENCY
BURGESS & NIPLE
Jul Jackson Road, Suite 100
Cincinnati, Ohio 45202

DESIGNED	DRAWN	REVIEWED	DATE
XAC	KML	RMK	02-20-08
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SJA		3111636	

HAMILTON COUNTY
STA. 103+85.93
STA. 107+85.60

SITE PLAN 1
BRIDGE NO. HAM-264-1448
W.B. WARSAW AVE. RAMP OVER S.R. 264

HAM-50-18.79
PID No. 20082

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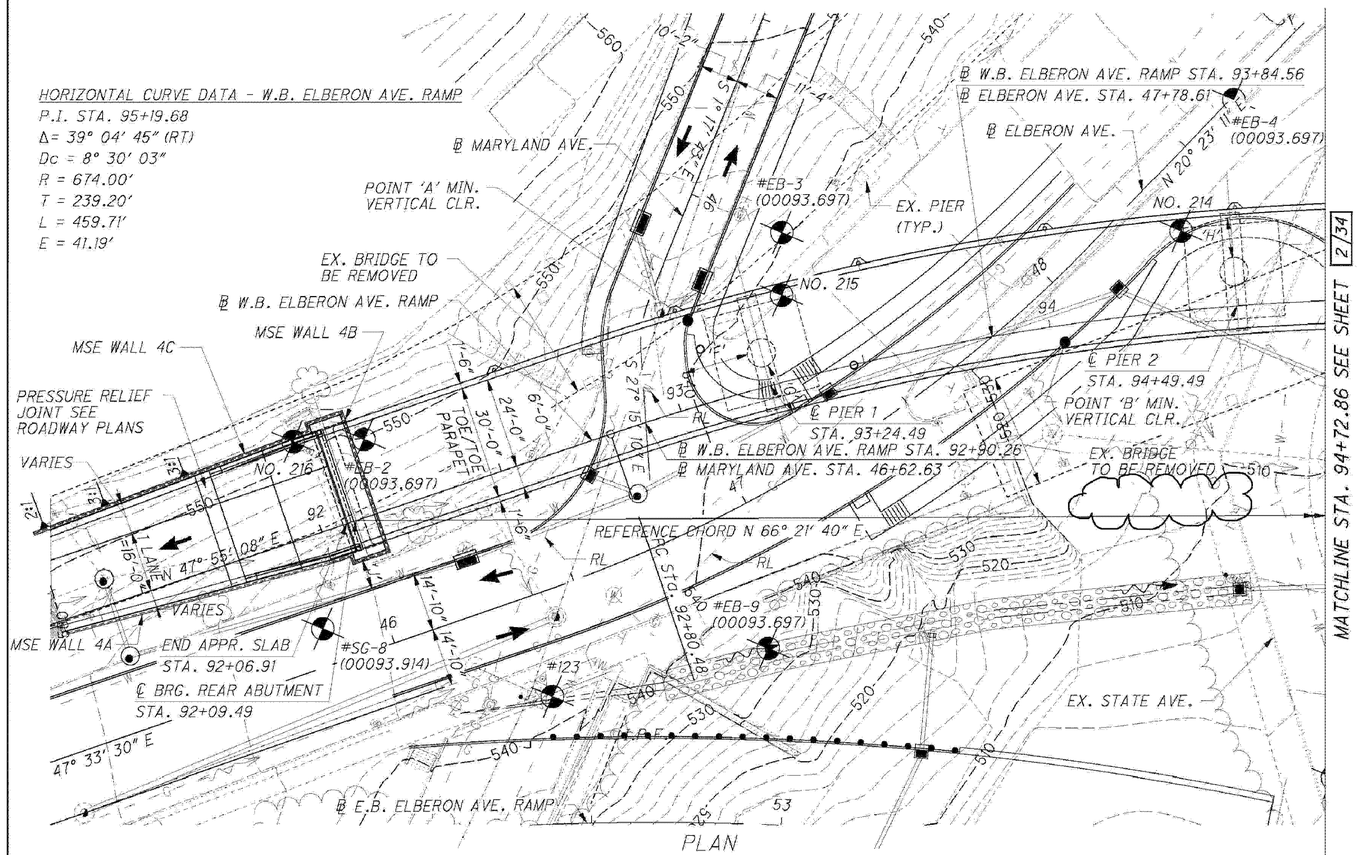
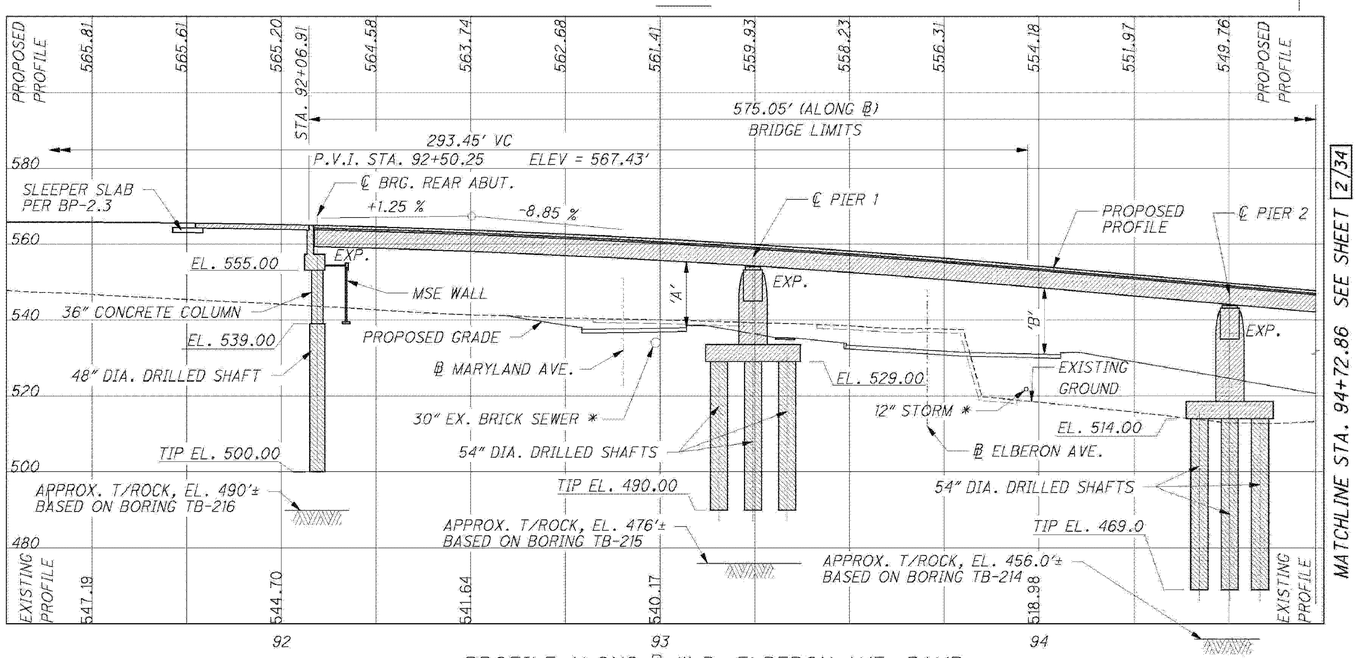


PLAN



PROFILE ALONG ℄ W.B. ELBERON AVE. RAMP

* EX UTILITIES TO BE RELOCATED BY OTHERS

VERTICAL CLEARANCE
REQUIRED MINIMUM VERTICAL CLEARANCE = 14'-6"

'A' ACTUAL MINIMUM VERTICAL CLEARANCE = 14'-10½"
'B' ACTUAL MINIMUM VERTICAL CLEARANCE = 19'-11¼"

HORIZONTAL CLEARANCE
REQUIRED MINIMUM HORIZONTAL CLEARANCE = 15'-0"
'F' ACTUAL MINIMUM HORIZONTAL CLEARANCE = 16'-7"
'G' ACTUAL MINIMUM HORIZONTAL CLEARANCE = 14'-3"
'H' ACTUAL MINIMUM HORIZONTAL CLEARANCE = 10'-5"
'J' ACTUAL MINIMUM HORIZONTAL CLEARANCE = 7'-9"

BENCHMARK DATA

BM #1 STA. 92+55.69, ELEV. 541.03, OFFSET 54.63', RT
CHISELED BENCH MARK FOUND
BM #2 STA. 97+87.15, ELEV. 502.57, OFFSET 60.54', LT
PK NAIL FOUND

NOTES

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

DESIGN TRAFFIC:
2006 ADT = 5325 2006 ADTT = 53
2026 ADT = 5325 2026 ADTT = 53

SEE ROADWAY PLANS FOR DISPOSITION OF EXISTING UTILITIES.

LEGEND

- SOIL BORING LOCATION
- EXISTING PIER LOCATION
- I.P.F. = IRON PIN FOUND
- ● POINT OF MINIMUM VERTICAL CLEARANCE
- RL - EXISTING UTILITY TO BE RELOCATED

EXISTING STRUCTURE

TYPE: 9-SPAN STEEL FRAMES WITH ALTERNATELY SUSPENDED SPANS SUPPORTING A GIRDER-FLOORBEAM-STRINGER SYSTEM WITH REINFORCED CONCRETE DECK. THE SUPERSTRUCTURE IS SUPPORTED BY REINFORCED CONCRETE ABUTMENT ON SPREAD FOOTINGS AND TAPERED, BUILT-UP STEEL COLUMN STRADDLE BENTS ON DRILLED CASSIONS OR PEDESTALS AND PILING.

SPANS: 80.393', 72.0', 86.632', 52.0', 67.988' 61.790', 100.983' 55.117', 55.482' (MEASURED ALONG CHORDS BETWEEN ℄ BEARING ABUTMENT AND PIERS.)

ROADWAY: VARIES, 22.0' - 24.0 F/F SAFETY CURB W/ 5'-0" SIDEWALK

LOADING: POSTED 16 TONS

WEARING SURFACE: CONCRETE

SKEW: VARIES

APPROACH SLABS: AS-1-54 (25' LONG)

CROWN: VARIES

STRUCTURAL FILE NUMBER: 3102785

DATE BUILT: 1950

DISPOSITION: TO BE REMOVED

PROPOSED STRUCTURE

TYPE: 5-SPAN CONTINUOUS PLATE GIRDERS A709 GRADE 50 (PAINTED) WITH COMPOSITE CONCRETE DECK. SUPPORTED BY REINFORCED CONCRETE ABUTMENTS AND PIERS ON PILING OR DRILLED SHAFTS.

SPANS: 115', 125', 125', 115', 89'-11 11/16", c/c BEARINGS ALONG ℄ (109'-6¼", 123'-11 3/16", 124'-9½", 112'-6⅞", 84'-9⅜" c/c BEARINGS ALONG REFERENCE CHORD)

ROADWAY: 30'-0" TOE/TOE PARAPET

LOADING: HS25 CASE II AND ALTERNATE MILITARY FUTURE WEARING SURFACE (FWS) OF 60 PSF

SKEW: RADIAL EXCEPT 10°51'54" LF AT FWD. ABUT.

WEARING SURFACE: MONOLITHIC CONCRETE

APPROACH SLABS: 30' LONG (AS-1-81), MODIFIED

ALIGNMENT: TANGENT WITH RIGHT CURVE - RADIUS = 674'

SUPERELEVATION: VARIES TO 0.050 FT/FT MAX

COORDINATES: LATITUDE N 39° 06' 05"
LONGITUDE W 84° 33' 17"

BURGESS & NIPLE
1305 Dublin Road, P.O. Box 1305
Columbus, Ohio 43216-1305

DESIGNED	DRAWN	REVIEWED	DATE
SJA	KML	RMK	03-05-08
CHECKED	REVISED	STRUCTURE FILE NUMBER	
XAC		3111652	

HAMILTON COUNTY
STA. 92+06.91
STA. 97+81.96

SITE PLAN 1
BRIDGE NO. HAM-264-1457
W.B. ELBERON AVE. RAMP OVER S.R. 264

HAM-50-18.79
PID No. 20082

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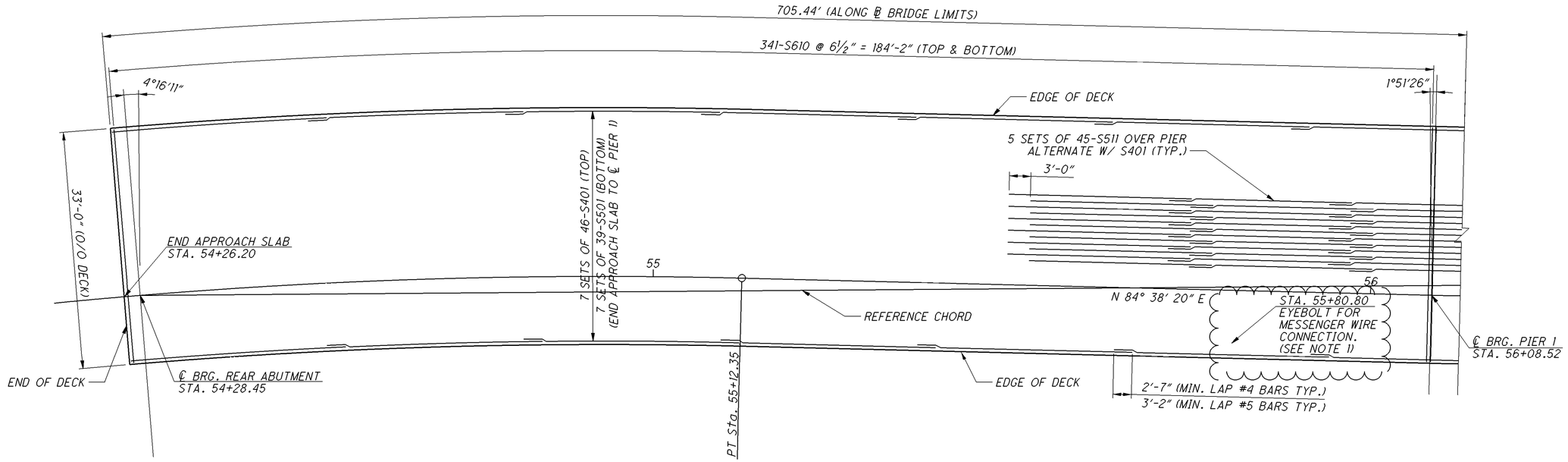
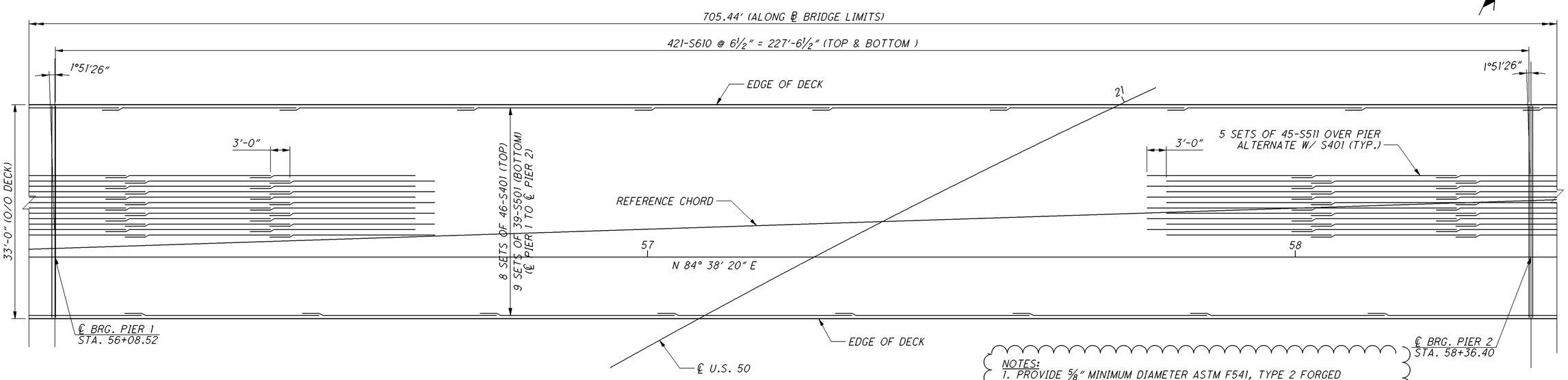


SPAN 1 DECK PLAN



SPAN 2 DECK PLAN

NOTES:
1. PROVIDE ⅝" MINIMUM DIAMETER ASTM F541, TYPE 2 FORGED EYEBOLT WITH NUT AND WASHER. NUT SHALL BE PLACED AT THE END OF THREADING AND WELDED TO THREADS. THE WASHER SHALL BE PLACED AT THE DECK EDGE. ALL MATERIAL SHALL BE GALVANIZED PER CMS 711.02. THE EYEBOLT SHALL BE LOCATED AT THE VERTICAL CENTER OF THE DECK EDGE AND SHALL BE CAST IN PLACE INTO THE CONCRETE A MINIMUM OF 8". THE CONTRACTOR SHALL SELECT AN EYEBOLT WITH A MINIMUM TENSILE CAPACITY (ALLOWABLE CAPACITY) OF 1325 POUNDS.

PAYMENT FOR ALL LABOR AND MATERIALS NECESSARY TO PERFORM THIS WORK SHALL BE INCLUDED WITH ITEM 898 QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN.

DESIGN AGENCY
PB AMERICAS, INC.
312 ELM STREET
SUITE 2500
CINCINNATI, OHIO 45202

DESIGNED	DRAWN	REVIEWED	DATE
PJL	LEL	EBS	6/2/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		3102793	

DECK PLAN 1 OF 2
BRIDGE NO. HAM-050-1875
EB ELBERON AVE. RAMP OVER S.R. 264 AND U.S.R. 50

HAM-50-18.79
PID No. 20082

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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-81	DATED/REVISED	07-19-02
BR-1	DATED/REVISED	07-19-02
EXJ-4-87	DATED/REVISED	07-19-02
SBR-1-99	DATED/REVISED	07-19-02
GSD-1-96	DATED/REVISED	07-19-02

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

840	DATED	07-17-09
898	DATED	07-17-09

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE FOLLOWING SPECIFICATIONS:

- "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17th EDITION, 2002.
- THE ODOT BRIDGE DESIGN MANUAL.
- AASHTO GUIDE SPECIFICATIONS FOR HORIZONTALLY CURVED STEEL GIRDER HIGHWAY BRIDGES, 2003.
- SECTION 3.6.5 OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2005, INCLUDING THE 2008 INTERM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL, 2007 SHALL BE REFERENCED AS IT APPLIES TO THE PIER COLUMN DESIGN. NO OTHER SECTION OF THIS SPECIFICATION SHALL BE APPLICABLE FOR THESE PLANS.

DESIGN LOADING

DESIGN LOADING: HS25, CASE II AND THE ALTERNATE MILITARY LOADING.

FUTURE WEARING SURFACE (FWS) OF 60 POUNDS PER SQUARE FOOT.

DESIGN DATA

CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS QSC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

STRUCTURAL STEEL - ASTM A709 GRADE 50, MINIMUM YIELD STRENGTH 50,000 PSI

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL
2-1/2" CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING EASTBOUND WARSAW AVENUE RAMP.

ITEM 202, APPROACH SLAB REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE APPROCH SLABS FOR THE EXISTING EASTBOUND WARSAW AVENUE RAMP.

ITEM 511, CLASS HP CONCRETE, SUPERSTRUCTURE, AS PER PLAN

ITEM 511, CLASS HP CONCRETE, SUPERSTRUCTURE, AS PER PLAN: LOCATE THE LOWER CONTACT POINT OF THE OVERHANG FALSEWORK AT LEAST 76 INCHES MEASURED BELOW THE BOTTOM OF THE GIRDER'S TOP FLANGE. THE BRACKET CONTACT POINT LOCATION REQUIREMENTS OF C&MS 508 DO NOT APPLY.

ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION):

APPLY A CLEAR PERMANENT GRAFFITI COATING QUALIFIED ACCORDING TO SUPPLEMENT 1083 THAT IS COMPATIBLE WITH THE CONCRETE SEALER OVER WHICH IT IS APPLIED. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

PERMANENT GRAFFITI PROTECTION SHALL BE APPLIED TO THE LIMITS SHOWN IN THE PLANS.

PILE DRIVING CONSTRAINTS

PRIOR TO DRIVING ABUTMENT PILES TO THE ULTIMATE BEARING VALUE (UBV), CONSTRUCT THE MSE WALL AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENT UP TO THE BOTTOM OF THE FOOTING FOR A MINIMUM DISTANCE OF 200 FT BEHIND EACH ABUTMENT. PROVIDE A SURCHARGE FROM THE BOTTOM OF THE ABUTMENT FOOTING TO THE BOTTOM OF THE SUBGRADE, FOR A MINIMUM DISTANCE OF 200 FEET BEHIND EACH ABUTMENT. SURCHARGE LOADS SHALL REMAIN UNTIL THE REQUIRED SETTLEMENT HAS OCCURED AND AS DIRECTED BY THE ENGINEER. COMPLETE THE MSE WALL AND EMBANKMENT CONSTRUCTION IMMEDIATELY FOLLOWING THE SURCHARGE REMOVAL.

THE CONTRACTOR MAY PRE-DRIVE ABUTMENT PILES BEFORE CONSTRUCTING MSE WALLS. PRE-DRIVING CONSISTS OF INSTALLING THE ABUTMENT PILES INTO THE SOIL ONLY AS FAR AS NECESSARY SO THAT THE PIPE WILL REMAIN VERTICAL DURING MSE WALL CONSTRUCTION. IF PRE-DRIVING PILES, INSTALL PILE SLEEVES AROUND PILES BEFORE CONSTRUCTING THE MSE WALL. AT LEAST THREE FEET OF PILE MUST EXTEND ABOVE THE TOP OF THE PILE SLEEVE TO MEET THE REQUIREMENTS OF CMS 507.09 REGARDING SPLICES. DO NOT DRIVE ABUTMENT PILES TO THE UBV UNTIL AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED, AND THE SPECIFIED WAITING PERIOD HAS ELAPSED.

IF NOT PRE-DRIVING ABUTMENT PILES, INSTALL THE ABUTMENT PILES THROUGH PILE SLEEVES AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED AND THE SPECIFIED WAITING PERIOD HAS ELAPSED.

ABUTMENT PILE DRIVING TO THE UBV (FOR PILES DRIVEN AFTER MSE CONSTRUCTION) OR PILE REDRIVING (FOR PILES PRE-DRIVEN BEFORE MSE CONSTRUCTION) MAY NOT BEGIN UNTIL A MINIMUM 30 CALENDAR DAY WAITING PERIOD HAS ELAPSED AFTER THE COMPLETION OF EMBANKMENT AND SURCHARGE CONSTRUCTION. IN ADDITION, CONSECUTIVE SETTLEMENT READINGS, RECORDED AFTER EMBANKMENT CONSTRUCTION IS COMPLETE AND AT LEAST ONE WEEK (168 HOURS) APART, SHALL RESULT IN ELEVATION DIFFERENCES EQUAL TO OR LESS THAN 1/8 INCH FOR ABUTMENT CONSTRUCTION TO CONTINUE. IF SETTLEMENT RATES EXCEED 1/2 INCH PER MONTH AFTER EMBANKMENT CONSTRUCTION HAS BEEN COMPLETE FOR 40 DAYS, REMAINING ABUTMENT CONSTRUCTION, INCLUDING ANY NECESSARY CORRECTIVE MEASURES, MAY PROCEED ONLY AT THE DIRECTION OF THE ENGINEER.

THE ENGINEER MAY ADJUST THE SPECIFIED WAITING PERIOD BASED ON SETTLEMENT PLATFORM READINGS. AFTER THE SPECIFIED WAITING PERIOD HAS ELAPSED, DRIVE ABUTMENT PILES TO THE UBV. IN ORDER TO REMOVE ANY NEGATIVE SKIN FRICTION THAT HAS DEVELOPED DURING THE WAITING PERIOD, DRIVE EACH ABUTMENT PILE A DISTANCE OF AT LEAST 0.5 INCH.

PROPRIETARY RETAINING WALL DATA

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH THE SPECIAL PROVISIONS TO SUPPORT THE ABUTMENT. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE AN UNFACTORED HORIZONTAL STRIP LOAD FROM THE SUPERSTRUCTURE OF 1.6 K/FT (REAR ABUTMENT) AND 1.7 K/FT (FORWARD ABUTMENT) APPLIED PERPENDICULAR TOTHE FACE OF WALL AT THE BASE OF THE CONCRETE FOOTING.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

PILE DESIGN LOADS (ULTIMATE BEARING VALUE): THE ULTIMATE BEARING VALUE IS 158 TONS PER PILE FOR THE 16" CAST-IN-PLACE CONCRETE FORWARD ABUTMENT PILES.

THE ULTIMATE BEARING VALUE IS 175 TONS PER PILE FOR THE PIER 1 PILES, 140 TONS PER PILE FOR PIER 2 PILES, 155 TONS PER PILE FOR PIER 3 PILES, AND 175 TONS PER PILE FOR PIER 4 PILES. ALL PIER PILES SHALL BE 16" CAST-IN-PLACE CONCRETE.

ABUTMENT PILES:
9 PILES 75 FEET LONG, ORDER LENGTH (FORWARD ABUTMENT)
1 DYNAMIC LOAD TESTING ITEM

PIERS 1 PILES:
24 PILES 80 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

PIER 2 & 3 PILES:
28 PILES 55 FEET LONG, ORDER LENGTH
2 DYNAMIC LOAD TESTING ITEM

PIER 4 PILES:
24 PILES 45 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

BATTERED PILES

BATTERED PILES: THE BLOW COUNT FOR BATTERED PILES SHALL BE THE BLOW COUNT DETERMINED FOR VERTICAL PILES OF THE SAME ULTIMATE BEARING VALUE DIVIDED AN EFFICIENCY FACTOR (D). COMPUTE THE EFFICIENCY FACTOR (D) AS FOLLOWS:

$$D = \frac{1-UG}{\sqrt{(1+G^2)}}$$

U = COEFFICIENT OF FRICTION, WHICH IS ESTIMATED AT 0.05 FOR DOUBLE-ACTING AIR OPERATED OR DIESEL HAMMERS; 0.1 FOR SINGLE-ACTING AIR OPERATED OR DIESEL HAMMERS; AND 0.2 FOR DROP HAMMERS.

G = RATE OF BATTER (1/3, 1/4, ETC.)

UTILITY LINES

UTILITY LINES: THE UTILITY(IES) SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

DRILLED SHAFTS

THE DESIGN LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 200 TONS AT THE ABUTMENTS. THIS LOAD IS RESISTED BY SHAFT END BEARING. THE ALLOWABLE BEARING END PRESSURE IS 10 TONS PER SQUARE FOOT. THE REINFORCING STEEL SHALL BE EPOXY COATED ACCORDING TO 709.00.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (APPROACH SLAB), AS PER PLAN

FURNISH APPROACH SLABS CONFORMING TO CMS 526 EXCEPT CONCRETE SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 898, QC/QA CONCRETE, CLASS QSC2. THE ACCEPTED QUANTITIES SHALL INCLUDE: CONCRETE, CURBS, REINFORCING STEEL, JOINT FILLERS, JOINT SEALERS, JOINT SEALS, AND WATERPROOFING. THE DEPARTMENT WILL MEASURE APPROACH SLABS BY THE NUMBER OF SQUARE YARDS. THE DEPARTMENT WILL INITIALLY PAY THE FULL BID PRICE TO THE CONTRACTOR UPON COMPLETING THE WORK. THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK), AS PER PLAN

THE DEPARTMENT WILL CALCULATE THE FINAL ADJUSTED PAYMENT ACCORDING TO 898.17 AND INCLUDE APPROACH SLAB CONCRETE AND DECK CONCRETE IN THE SAME LOT TO DETERMINE FINAL PAY FACTORS.

MAINTENANCE OF TRAFFIC

FOR MAINTENANCE OF TRAFFIC NOTES AND DETAILS, REFER TO SHEETS 24 THRU 81.

COLORS:

THE COLOR FOR THE ALTERNATE STEEL PARAPET RAILS AND ALL HARDWARE SHALL BE FEDERAL COLOR NUMBER 27038 (BLACK, 30% SHEEN).

LIGHT POLES LOCATED ON THE BRIDGE SHALL BE FEDERAL COLOR NUMBER 27038 (BLACK, 30% SHEEN).

THE COLOR FOR ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL 5, SHALL BE AS FOLLOWS:

THE OUTSIDE FACE AND BOTTOM FLANGES OF THE FASCIA BEAMS TO BE PAINTED FEDERAL COLOR NUMBER 27038 (BLACK, 30% SHEEN)

ALL REMAINING BRIDGE SUPERSTRUCTURE ELEMENTS TO BE PAINTED FEDERAL COLOR NUMBER 10324 (DARK NEUTRAL)

ITEM 512 SEALING OF CONCRETE SURFACES (NON-EPOXY) SHALL BE CLEAR.

THE COLOR FOR ITEM 512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) AT THE PIERS SHALL BE FEDERAL COLOR NUMBER 11136 (TERRA COTTA)

DESIGN AND MAINTENANCE TO ALLOW FOR HILLSIDE MOVEMENT:

IT IS ANTICIPATED THAT THE REAR ABUTMENT COULD MOVE DUE TO HILLSIDE CREEP. FOR THIS REASON A DISTANCE OF 6" WAS PROVIDED FROM THE END OF THE GIRDER TO THE ABUTMENT BACKWALL.

DESIGN AGENCY
PB AMERICAS, INC.
312 ELM STREET
SUITE 2500
CINCINNATI, OHIO 45202

DESIGNED	DRAWN	REVIEWED	DATE
PJL	LEL	EBS	11/16/10
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SAP		3102858	

GENERAL NOTES
BRIDGE NO. HAM-050-1881
EB WARSAW AVE. RAMP OVER S.R. 264 AND U.S.R. 50

HAM-50-18.79
PID No. 20082

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