

UTILITIES

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

TELECOM

FRONTIER COMMUNICATIONS
1315 ALBERT STREET
PORTSMOUTH, OHIO 45662
MS. DENA MARTIN
(740) 354-0521

CHARTER COMMUNICATIONS
32 ENTERPRISE DRIVE
CHILlicothe, OHIO 45601
MR. AARON KEMPTON
(740) 648-3091

SOCS INTERNET
219 W. EMMITT AVENUE
WAVERLY, OHIO 45690
MR. PATRICK DUNHAM
(740) 947-2409 EXT. 239

ELECTRIC

AMERICAN ELECTRIC POWER (DISTRIBUTION)
38831 STATE ROUTE 7
REEDSVILLE, OHIO 45772
MR. CLARKE SAUNDERS
(740) 985-3054

AMERICAN ELECTRIC POWER (TRANSMISSION)
8600 SMITHSMILL ROAD
NEW ALBANY, OHIO 43054
MR. MICHAEL CARR
(380) 205-5072

WATER

PIKE WATER, INC.
P.O. BOX 191
WAVERLY, OHIO 45690
FARON YOUNG
(740) 947 - 2524

TRAFFIC

ODOT DISTRICT 9 TRAFFIC DEPARTMENT
650 EASTERN AVENUE
CHILLICOTHE, OH 45601
REX LEIST
(740) 774-9050

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET P.2 OF 123 OF THE PLANS. FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
MONUMENT TYPE: SEE TABLE ON SHEET P.2 OF 123

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID 18

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL, CONIC TWO PARALLEL
COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE
COMBINED SCALE FACTOR: 1.00003
ORIGIN OF COORDINATE
SYSTEM: (0,0)

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

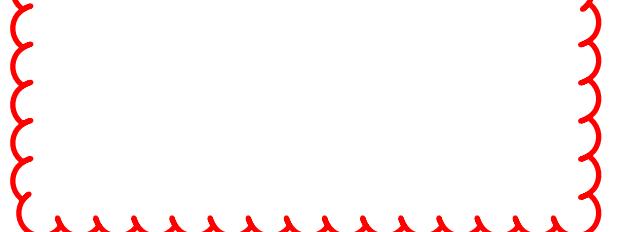
UNITS ARE IN U.S. SURVEY FEET.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7 PM AND 7 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

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.

**SEEDING AND MULCHING**

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

| | |
|----------------------------------|--------------|
| 659, TOPSOIL | 801 CU. YD. |
| 659, SEEDING AND MULCHING | 7202 SQ. YD. |
| 659, REPAIR SEEDING AND MULCHING | 361 SQ. YD. |
| 659, INTER-SEEDING | 361 SQ. YD. |
| 659, COMMERCIAL FERTILIZER | 1.01 TON |
| 659, LIME | 1.49 ACRES |
| 659, WATER | 41 GAL. |

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

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

POST CONSTRUCTION STORM WATER TREATMENT

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

VEGETATED BIOFILTER

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS. THE FOLLOWING QUANITITES WILL CARRY TO THE GENERAL SUMMARY.

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| ITEM 670 - DITCH EROSION CONTROL | 128 SY |
| ITEM 659 - TOPSOIL | 14.5 CY |

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).
3. IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.
4. COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.
5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIAN.
6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.
7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

UNSTABLE SOILS

IT IS RECOMMENDED THAT THE ENTIRE SUBGRADE SHOULD BE PROOF-ROLLED TO EVALUATE THE SUBGRADE AND IDENTIFY ANY AREAS THAT MAY REQUIRE STABILIZATION. THE FOLLOWING ITEMS WILL BE CARRIED TO GENERAL SUMMARY AS A CONTINGENCY QUANTITY FOR USE IF AN AREA OF SUBGRADE IS DETERMINED UNSUITABLE.

| | |
|--------------------------------------|----------|
| ITEM 203 - GRANULAR MATERIAL, TYPE B | 604 CY |
| ITEM 204 - EXCAVATION OF SUBGRADE | 604 CY |
| ITEM 204 - GEOTEXTILE FABRIC | 1,812 SY |



DESIGNER

JML

REVIEWER

MAG 10/17/25

PROJECT ID

118121

SHEET

P.7

TOTAL

P.126

ITEM 614, MAINTAINING TRAFFIC

DURING ALL MOT PHASES A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION ON STATE ROUTE 32 SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT. TENNYSON ROAD AND GLEASON ROAD MAY BE CLOSED AND DETOURED AS SHOWN ON SHEETS P.13 - P.15 .

DUE TO THE HEAVY USAGE BY TRUCKS AND THE LONG DETOUR, ALL THE WORK TO BE COMPLETED IN MOT PHASE 2 SHALL BE COMPLETED WITHIN A PERIOD NOT TO EXCEED 90 CONSECUTIVE CALENDAR DAYS. THIS PERIOD BEGINS WHEN MOT FOR THIS PHASE IS INITIALLY SET UP AND A TRAFFIC LANE RESTRICTED. THE MOT PHASE 2 DETOUR SHALL BE AS SHOWN ON SHEET 14.

A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$5,000 PER DAY FOR EACH CALENDAR DAY THE MOT PHASE 2 TRAFFIC CONTROL RESTRICTS THE TURNING MOVEMENTS AT SR 124 / 772 INTERSECTIONS AND BOTH LANES OF SR 32 AND THE NEWLY CONSTRUCTED TURBO LANE ARE NOT OPEN TO TRAFFIC WITH ALL FINAL OR TEMPORARY PAVEMENT MARKINGS, SIGNAGE AND TRAFFIC CONTROL INSTALLED AND COMPLETE.

ITEM 614, MAINTAINING TRAFFIC (CLOSING PARAGRAPH FOR NOTE)

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

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

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES, EXCEPT FOR LANES CLOSED BY PCB, SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR SPECIAL EVENTS:

NEW YEAR'S (OBSERVED)
MEMORIAL DAY
FOURTH OF JULY (OBSERVED)
LABOR DAY
GENERAL/REGULAR ELECTION DAY (NOVEMBER)
THANKSGIVING
CHRISTMAS (OBSERVED)

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

| DAY OF HOLIDAY OR SPECIAL EVENT | TIME ALL LANES MUST BE OPEN TO TRAFFIC |
|---------------------------------|--|
| SUNDAY | 12:00N FRIDAY THROUGH 6:00 AM MONDAY |
| MONDAY | 12:00N FRIDAY THROUGH 6:00 AM TUESDAY |
| TUESDAY | 12:00N MONDAY THROUGH 6:00 AM WEDNESDAY (GEN./REG. ELECTION) |
| TUESDAY | 5:00 AM TUESDAY THROUGH 12:00 AM WEDNESDAY |
| WEDNESDAY | 12:00N TUESDAY THROUGH 6:00 AM THURSDAY |
| THURSDAY | 12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY (THANKSGIVING ONLY) |
| THURSDAY | 6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY |
| FRIDAY | 12:00N THURSDAY THROUGH 6:00 AM MONDAY |
| SATURDAY | 12:00N FRIDAY THROUGH 6:00 AM MONDAY |

NEWLY CONSTRUCTED LANE ADDITIONS, ONCE COMPLETED AND INITIALLY OPENED TO TRAFFIC, SHALL BE OPEN TO TRAFFIC DURING ALL SUBSEQUENT DESIGNATED HOLIDAYS AND SPECIAL EVENTS, AND RELATED PERIODS OF TIME, SPECIFIED ABOVE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

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

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

ITEM 614, MAINTAINING TRAFFIC (NOTICE OF CLOSURE SIGN)

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN 1 WEEK.

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

NOTICE OF CLOSURE SIGN TIME TABLE

| ITEM | DURATION OF CLOSURE | SIGN DISPLAYED TO PUBLIC |
|----------|------------------------|-----------------------------------|
| RAMP & | >=2 WEEKS | 14 CALENDAR DAYS PRIOR TO CLOSURE |
| ROAD | > 12 HOURS & < 2 WEEKS | 7 CALENDAR DAYS PRIOR TO CLOSURE |
| CLOSURES | <= 12 HOURS | 2 BUSINESS DAYS PRIOR TO CLOSURE |

Tennyson WILL BE CLOSED MMM/DD FOR XX DAYS INFO: 740-774-8834

W20-H13-60

Gleason WILL BE CLOSED MMM/DD FOR XX DAYS INFO: 740-774-8834

W20-H13-60

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

ITEM 614, MAINTAINING TRAFFIC (ESTIMATED QUANTITIES)

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

| | |
|---|------------|
| ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC | 15 CU. YD. |
| ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL) | 4 EACH |

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| ITEM 622, PORTABLE BARRIER, UNANCHORED | 7470 FT. |
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ITEM 614, MAINTAINING TRAFFIC (ROAD CLOSED SIGN)

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE LOCATIONS SHOWN ON SHEETS P.13 - P.15 . DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

ITEM 614, MAINTAINING TRAFFIC (SIGNS AND BARRICADES)

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES AT THE LOCATIONS SHOWN ON SHEETS P.13 - P.15 .

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, DETOUR SIGNING, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

DUST CONTROL

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

ITEM 616, WATER 15 M. GAL.

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11.

| | |
|---|-----------|
| ITEM 614 WORK ZONE EDGE LINE, CLASS I, 6", 642 PAINT | 3.75 MILE |
| ITEM 614 WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT | 1561 FEET |
| ITEM 614 WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT | 0.13 MILE |
| ITEM 614 WORK ZONE ARROW, CLASS I, 642 PAINT | 6 EACH |
| ITEM 614, WORK ZONE DOTTED LINE, CLASS I, 642 PAINT | 3791 FEET |

RESTORATION OF EXISTING MARKINGS

THE FOLLOWING ESTIMATED QUANTITIES ARE FORWARDED TO THE GENERAL SUMMARY FOR RESTORATION OF EXISTING MARKINGS BEYOND THE LIMITS OF THE TRAFFIC CONTROL PLANS.

STATE ROUTE 32, PHASE 1:

| | |
|---|-----------|
| ITEM 807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6" | 0.79 MILE |
| ITEM 807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6" | 1.58 MILE |
| ITEM 850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, ASPHALT | 2.37 MILE |
| 621 RPM REFLECTOR | 53 EACH |

STATE ROUTE 32, PHASE 2 AND 3:

| | |
|---|-----------|
| ITEM 807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6" | 0.90 MILE |
| ITEM 807 WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6" | 1.80 MILE |
| ITEM 850 GROOVING FOR 6" RECESSED PAVEMENT MARKING, ASPHALT | 2.70 MILE |
| 621 RPM REFLECTOR | 61 EACH |

| LANE VALUE CONTRACT TABLE | | | |
|--|--------------------------------|---------------------|--|
| DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED | RESTRICTED TIME PERIOD | TIME UNIT | DISINCENTIVE \$ PER TIME UNIT PER LANE |
| ONE LANE OF SR 32 | ALL TIMES, EXCEPT AS NOTED | PER LANE PER MINUTE | \$30 |
| ONE LANE OF SR 32 | HOLIDAYS AS SPECIFIED IN NOTES | PER LANE PER MINUTE | \$30 |



DESIGNER AJS
REVIEWER LAS 10/17/25
PROJECT ID 118121
SHEET TOTAL P.8 P.126

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

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

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

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

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

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

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

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. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEETS P.13-15 OF THE PLAN AND AT SMOKEY HOLLOW ROAD.

INSTALLATION, 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 AWAY FROM ALL TRAFFIC.

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

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

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

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

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

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

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 30 SIGN MONTH ASSUMING 5 PCMS SIGN(S) OR 6 MONTH(S)

DELINeATION OF PORTABLE AND PERMANENT BARRIER

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

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

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

ITEM 614, BARRIER REFLECTOR, TYPE 1, ONE-WAY 150 EACH
ITEM 614, OBJECT MARKER, ONE-WAY 150 EACH

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

WORK ZONE SPEED ZONES (WZSzs)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

| WZSZ REVISION NUMBER(S) | COUNTY-ROUTE-SECTION(S) | DIRECTION(S) |
|-------------------------|-------------------------|-------------------------|
| WZ-50459 | PIK-32-9.00 | EASTBOUND AND WESTBOUND |
| | PIK-32-9.76 | |
| WZ-50459 | PIK-32-9.70 | EASTBOUND AND WESTBOUND |
| | PIK-32-10.66 | |

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSzs FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

WZSzs USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSzs SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH)
FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

| ORIGINAL POSTED SPEED | WITH POSITIVE PROTECTION | | WITHOUT POSITIVE PROTECTION | |
|-----------------------------|-----------------------------|------------------------|--------------------------------|------------------------|
| | WORKERS PRESENT | WORKERS NOT PRESENT | WORKERS PRESENT | WORKERS NOT PRESENT |
| 70 | 60 | 65 | 55 | 65 |
| 65 | 55 | 60 | 50 | 60 |
| 60 | 55 | 60 | 50 | 60 |
| 55 | 50 | 55 | 45 | 55 |

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
36 SIGN MINTH
ASSUMING 6 DSL SIGN ASSEMBLY(IES) FOR
6 MONTH(S)



DESIGNER
AJS

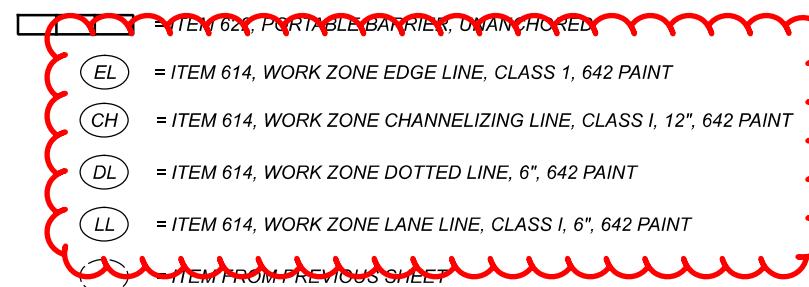
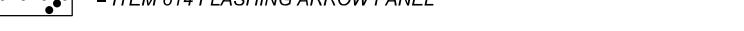
REVIEWER
LAS 10/17/25

PROJECT ID
118121

SHEET TOTAL
P.9 P.126

PAVEMENT MARKING LEGEND

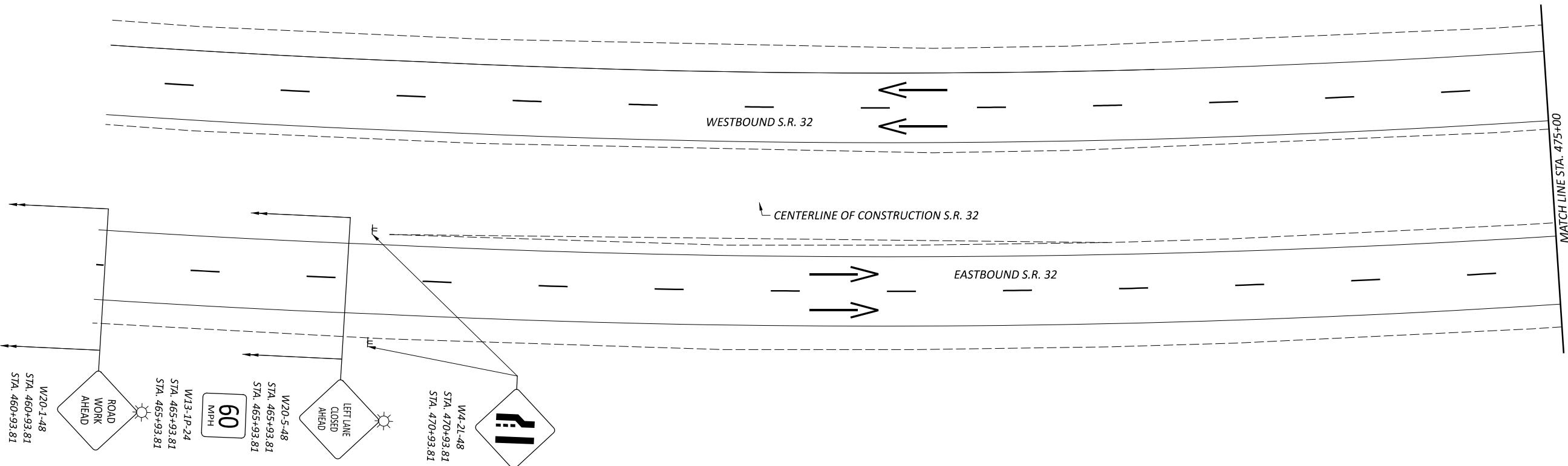
XXX = ITEM 644 REMOVAL OF EX. PVMT. MARKINGS

-  ITEM 62, PORTABLE BARRIER, OWN HORED
-  = ITEM 614, WORK ZONE EDGE LINE, CLASS I, 642 PAINT
-  = ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS I, 12", 642 PAINT
-  = ITEM 614, WORK ZONE DOTTED LINE, 6", 642 PAINT
-  = ITEM 614, WORK ZONE LANE LINE, CLASS I, 6", 642 PAINT
-  ITEM FROM PREVIOUS SHEET
-  = WORK ZONE
-  = DRUMS
-  = TYPE A, WARNING LIGHTS
-  = IMPACT ATTENUATOR
-  = ITEM 614 FLASHING ARROW PANEL



MAINTENANCE OF TRAFFIC PLAN - PHASE 1

STA. 470+00.00 TO STA. 475+00.00

HORIZONTAL SCALE IN FEET
0 10 20 30 40

DESIGNER
SKB
REVIEWER
LAS 10/17/25
PROJECT ID
118121

SHEET TOTAL
P.16 P.126

625, POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING IS ADDED.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY AMERICAN ELECTRIC POWER (DISTRIBUTION)

ADDRESS 38831 STATE ROUTE 7
REEDSVILLE, OHIO 45772

CONTACT MR. CLARKE SAUNDERS
DISTRIBUTION PUBLIC PROJECTS COORDINATOR
PHONE 740-985-3054

THE ENGINEER SHALL ENSURE THAT EACH POWER SERVICE ELECTRICAL ENERGY ACCOUNT IS IN THE NAME OF AND THAT THE BILLING ADDRESS IS TO THE MAINTAINING AGENCY NOTED IN THE PLANS. THIS SHALL BE DONE NOT ONLY FOR EACH NEW POWER SERVICE ESTABLISHED BY THIS PROJECT BUT ALSO FOR EACH EXISTING POWER SERVICE, SINCE THERE MAY BE A REASSIGNMENT OF THE RESPONSIBILITY FOR AN EXISTING SERVICE AS A RESULT OF THE WORK PERFORMED BY THIS PROJECT.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH C&MS ITEM 625, "POWER SERVICE, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CONTINUOUS LIGHTING

EXISTING LIGHTING SHALL REMAIN IN PLACE AND ACTIVE UNTIL PROPOSED LIGHTING HAS BEEN INSTALLED AND ACTIVATED. IN THE EVENT THAT THE OLD SERVICE MUST BE DISCONNECT BEFORE THE NEW SERVICE CAN BE CONNECTED, THE SWITCH SHALL BE MADE DURING DAYLIGHT HOURS TO PREVENT ANY NIGHTTIME OUTAGES.

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYED IN ACCORDANCE WITH C&MS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

625, LUMINAIRE, CONVENTIONAL, SOLID-STATE (LED), AS PER PLAN, TYPE III, 240 VOLT

IN ADDITION TO THE REQUIREMENTS OF ITEM 625 OF THE OHIO DEPARTMENT OF TRANSPORTATION'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES SHOULD BE AS FOLLOWS:

1. GENERAL ELECTRIC EVOLVE ERL2-240V-23-C5-30 OR EQUAL AS APPROVED BY THE ENGINEER.

PHOTOCELL CONTROL WILL BE EXTERNAL. OPERATION WILL BE AT 240 VOLTS.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER EACH LUMINAIRE, COMPLETE AND INSTALLED.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.

A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.

B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.

C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.

D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.

E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.

F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.

A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.

B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURBED AT ALL TERMINATION POINTS.

C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.

A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:

I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.

II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.

B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.

A. A 3/4-INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.

B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND.

| NO. | COLOR | VEHICLE SIGNAL | PEDESTRIAN SIGNAL |
|-----|--------------------|------------------|-------------------|
| 1 | BLACK | GREEN BALL | #1 WALK |
| 2 | WHITE | AC NEUTRAL | AC NEUTRAL |
| 3 | RED | RED BALL | #1 DW/FDW |
| 4 | GREEN | EQUIPMENT GROUND | EQUIPMENT GROUND |
| 5 | ORANGE | YELLOW BALL | #2 DW/FDW |
| 6 | BLUE | GREEN ARROW | #2 WALK |
| 7 | WHITE/BLACK STRIPE | YELLOW ARROW | NOT USED |

6. POWER SERVICE AND DISCONNECT SWITCH.

A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.

B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.

I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.

II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT - ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

REMOVAL OF LIGHTING EQUIPMENT

EXISTING LIGHTING EQUIPMENT SHALL BE CAREFULLY REMOVED IN ACCORDANCE WITH CM&S 625, AS INDICATED ON THE PLANS AND IN ACCORDANCE WITH THE LISTING BELOW. ALL OTHER LIGHTING EQUIPMENT NOT LISTED SHALL BE DISPOSED BY THE CONTRACTOR.

ITEMS TO BE SALVAGED WITHOUT CAUSING DAMAGE INCLUDE: BREAK AWAY BASES, LIGHT POLES AND LUMINAIRES

REMOVED ITEMS SHALL BE DELIVERED TO THE ODOT D9 TRAFFIC DEPARTMENT WHOSE ADDRESS IS LISTED BELOW.

CONTACT: DUSTIN PFEIFER, (740) 774-8943, AT LEAST TWO BUSINESS DAY PRIOR TO DELIVERY AT 650 EASTERN AVE., CHILLICOTHE, OHIO.

PAYMENT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 625 LIGHT POLE REMOVED.

