

# GENERAL NOTES

|                   |       |         |
|-------------------|-------|---------|
| FED. RD. DIVISION | STATE | PROJECT |
| 2                 | OHIO  |         |

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384

LAKE COUNTY  
LAK-2-1422

## EROSION CONTROL

ITEMS I-10, I-14, AND L-10 ARE PROVIDED IN THESE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO PLACE ANY OF THESE ITEMS. THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

## L-9 COMMERCIAL FERTILIZER

ALL AREAS TO BE SEEDED UNDER ITEM L-9 OR SODDED UNDER ITEM L-10 SHALL HAVE COMMERCIAL FERTILIZER 12-12-12, APPLIED AT THE RATE OF TWENTY (20) POUNDS PER 1,000 SQUARE FEET.

## SEEDING AND PROTECTING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN LINES TEN (10) FEET OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS, OR TO THE RIGHT-OF-WAY LINE IF SUCH LINE IS LESS THAN TEN (10) FEET FROM THE WORK LIMITS, OR TO WORK LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT.

SEED SHALL BE SOWN AT THE RATE OF 3 POUNDS PER 1,000 SQUARE FEET EXCEPT AS OTHERWISE NOTED IN THE PLANS. SEEDING FORMULA FOR ALL SEEDED AREAS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

65% KENTUCKY 31 FESCUE                      5% REDTOP  
25% KENTUCKY BLUEGRASS                    5% ALSIKE CLOVER

## CENTERLINE REFERENCE MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE CAST-IN-PLACE IN A CIRCULAR HOLE, EIGHT INCHES IN DIAMETER AND FORTY-FOUR INCHES IN DEPTH. TOP OF CONCRETE SHALL BE FINISHED TWO INCHES BELOW GROUND LEVEL AND THE UPPER SIX-INCH PORTION OF THE CONCRETE SHALL BE FORMED. A 16d NAIL SHALL BE EMBEDDED IN THE WET CONCRETE AS DIRECTED BY THE ENGINEER TO MARK THE CENTERLINE AND STATION. MONUMENTS SHALL NOT BE PLACED UNTIL SEEDING IS COMPLETED.

## ITEM SPECIAL, DRILLED WELL ABANDONED

THE EXISTING CONCRETE OR STONE SLAB WELL COVER SHALL BE REMOVED AND DISPOSED OF. THE PUMP AND ALL OTHER SALVAGEABLE PARTS SHALL BE CAREFULLY REMOVED AND STORED ON THE ADJUTING PROPERTY.

THE CASING SHALL BE CUT OFF AT LEAST TWO FEET BELOW THE PROPOSED FINISHED GRADE OUTSIDE PROPOSED PAVEMENT AREAS OR AT LEAST TWO FEET BELOW THE PROPOSED SUB-GRADE ELEVATION INSIDE PROPOSED PAVEMENT AREAS AND CAPPED WITH CLASS "E" CONCRETE OR A STANDARD THREADED PIPE CAP.

THE UNIT PRICE BID FOR EACH "DRILLED WELL ABANDONED" SHALL INCLUDE PAYMENT FOR ALL LABOR, TOOLS, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

## SODDING

SOD WIDTH "W" AS NOTED ON THE PLANS IS THE WIDTH OF SOD REQUIRED. ALL AREAS TO BE SODDED SHALL BE LOOSENED TO A DEPTH NOT LESS THAN TWO INCHES JUST PRIOR TO LAYING SOD. COST SHALL BE INCLUDED FOR PAYMENT IN THE PRICE BID PER SQUARE YARD OF SODDING. A QUANTITY OF 1,200 SQUARE YARDS OF ITEM L-10 SODDING HAS BEEN PROVIDED IN THE GENERAL SUMMARY TO BE USED FOR EROSION CONTROL WHERE AND AS DIRECTED BY THE ENGINEER.

## COOPERATION BETWEEN CONTRACTORS

THE WORK COVERED BY THESE PLANS ADJOINS OTHER CONSTRUCTION SECTIONS OF S. R. 2 TO THE WEST AND TO THE EAST. IN THE EVENT THAT CONSTRUCTION ON THE ADJOINING SECTIONS IS BEING CARRIED ON SIMULTANEOUSLY WITH THIS SECTION, THE CONTRACTOR SHALL PLAN AND COORDINATE HIS WORK WITH THAT OF THE OTHER CONTRACTORS SO THAT A MINIMUM OF INTERFERENCE AND INCONVENIENCE WILL RESULT.

## FLAP GATE

THE 15" PIPE OUTLET INTO THE #2 MANHOLE 50' LEFT OF STATION 10+93 RAMP "E-E" SPUR IS TO BE PROVIDED WITH A FLAP GATE, COMPLETE WITH HOOK AND CHAIN, (NEENAH #5040 OR EQUAL) AS INDICATED ON THE CROSS SECTIONS. FLAP GATE SHALL BE FITTED WITH BRONZE HINGE PINS AND HAVE A GROUND OR MACHINED LID AND SEAT.

## LINE DATA CALCULATION FOR APPROACHES LENGTH OF WORK F-329 (18)

|                                |  |               |               |
|--------------------------------|--|---------------|---------------|
| RECONSTRUCTED BLACKBROOK ROAD: |  | STA. 50+60.00 |               |
| BEGIN WORK                     |  | STA. 53+69.19 |               |
| END WORK                       |  |               | 309.19 L.F.   |
| LENGTH                         |  |               |               |
| RECONSTRUCTED NEWELL STREET:   |  | STA. 23+75.00 |               |
| BEGIN WORK                     |  | STA. 37+00.00 |               |
| END WORK                       |  |               | 1,325.00 L.F. |
| LENGTH                         |  |               |               |
| RELOCATED BUTTON AVENUE:       |  | STA. 0+29.90  |               |
| BEGIN WORK                     |  | STA. 4+75.00  |               |
| END WORK                       |  |               | 445.10 L.F.   |
| LENGTH                         |  |               |               |
| TOTAL F-329(18)                |  |               | 2,079.29 L.F. |

## LINE DATA CALCULATION FOR APPROACHES LENGTH OF WORK U-329 (18)

|                            |          |                |               |
|----------------------------|----------|----------------|---------------|
| RELOCATED RICHMOND STREET: |          | STA. 18+40.00  |               |
| BEGIN WORK                 |          | STA. 45+55.00  |               |
| END WORK                   |          |                | 2,715.00 L.F. |
| LENGTH                     |          |                |               |
| ACCESS ROAD CONNECTOR:     |          | STA. 9+75.00   |               |
| BEGIN WORK                 |          | STA. 14+75.00  |               |
| END WORK                   |          |                | 500.00 L.F.   |
| LENGTH                     |          |                |               |
| ACCESS ROAD:               |          | STA. 51+90.20  |               |
| BEGIN WORK                 | EQUATION | (STA. 69+05.36 |               |
|                            |          | (STA. 33+26.53 |               |
| END WORK                   |          | STA. 37+00.00  |               |
| LENGTH                     |          |                | 2088.63 L.F.  |
| TOTAL U-329(18)            |          |                | 5,303.63 L.F. |

## TEST FOR INFILTRATION OR LEAKAGE

AS SANITARY SEWERS ARE COMPLETED AND PRIOR TO THE FINAL ACCEPTANCE OF THE WORK, SEWERS INCLUSIVE OF APPURTENANCES SHALL BE TESTED FOR INFILTRATION OR LEAKAGE. ONE TEST SHALL BE MADE AT EACH LOCATION WHERE A SECTION OF SANITARY SEWER IS PLACED, THE SECTION TO BE TESTED AND THE MANNER OF TEST WILL BE DETERMINED BY THE ENGINEER AS DIRECTED BY THE CITY MANAGER OF PAINESVILLE.

EACH TEST SHALL BE CONDUCTED ON A SECTION OF SEWER BETWEEN TWO (2) SUCCESSIVE MANHOLES. SHOULD ANY TEST SHOW INFILTRATION OR LEAKAGE IN EXCESS OF THAT SPECIFIED HEREIN, THE ENGINEER MAY REQUIRE ADDITIONAL TESTS UNTIL SATISFACTORY RESULTS BE PROVED AND PRIOR TO THE INSTITUTION OF ANY CORRECTIVE MEASURES, AT NO COST TO THE STATE.

THE TEST PROCEDURE SHALL CONSIST OF BULKHEADING OFF THE MANHOLES AT EACH END OF THE TEST SECTION THEN FILLING THE SEWER WITH CLEAN WATER TO A DEPTH OF THREE (3) FEET OVER THE INSIDE TOP OF THE SEWER PIPE MEASURED AT THE UPPER MANHOLE, OR TO THREE (3) FEET ABOVE THE GROUND WATER LINE, WHICHEVER IS THE HIGHER. THE WATER LEVEL SHALL BE MAINTAINED FOR NOT LESS THAN EIGHT (8) HOURS BY ADDING ACCURATELY MEASURED AMOUNTS OF WATER AND THE INFILTRATION OR LEAKAGE SHALL BE DETERMINED FROM THE AMOUNT OF WATER REQUIRED TO BE ADDED. NO TEST SHALL BE CONDUCTED WITHOUT THE PRESENCE OF AN INSPECTOR. TESTS SHALL BE MADE ONLY ON SEWER WHICH IS SUFFICIENTLY BACKFILLED OR SAFEGUARDED OTHERWISE AGAINST FLOATION. MEASUREMENTS APPROPRIATE TO TESTS WILL BE MADE AS DIRECTED BY THE ENGINEER. TEST PROCEDURE MAY BE ALTERED BY THE ENGINEER IF SUCH CHANGES MIGHT BE DESIRABLE IN ORDER TO ASSURE RELIABLE AND ACCURATE DATA ON INFILTRATION AND LEAKAGE.

THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIAL REQUIRED FOR MAKING THE TESTS INCLUSIVE OF BULKHEADS, WEIRS, HOSE LINES, AND INCLUSIVE AS WELL OF WATER FROM THE FIRE HYDRANTS WHERE SUCH IS AVAILABLE, OTHERWISE BY SUCH MEANS AS MAY BE AVAILABLE, ALL AT CONTRACTOR'S EXPENSE.

## TEST FOR INFILTRATION OR LEAKAGE (continued)

THE MAXIMUM INFILTRATION AND/OR LEAKAGE PERMITTED UNDER TEST SHALL BE AT THE RATE OF SIX HUNDRED (600) GALLONS PER INCH INTERNAL DIAMETER OF SEWER PER MILE OF SEWER LINE PER TWENTY-FOUR (24) HOURS AND, INCLUSIVE OF ALL APPURTENANCES WITHIN THE SECTION SUCH AS MANHOLES, HOUSE CONNECTIONS, ETC.; BUT THE LENGTH OF SEWER USED IN THE COMPUTATION SHALL BE THE HORIZONTAL DISTANCE BETWEEN MANHOLE CENTERLINES OF THE SECTION BEING TESTED.

IF THE SPECIFIED RATE OF INFILTRATION OR LEAKAGE IS EXCEEDED ON TEST, THE CONTRACTOR SHALL LOCATE THE POINTS OF EXCESSIVE INFILTRATION OR LEAKAGE AND HE SHALL INSTITUTE APPROPRIATE MEASURES OF CORRECTION, WHEREUPON THE LENGTH OF SEWER SHALL BE RETESTED AND THIS PROCEDURE CONTINUED UNTIL TEST REQUIREMENTS ARE MET. SHOULD ANY TEST SECTION SHOW LEAKAGE OR EXCESSIVE INFILTRATION, THE ENGINEER MAY ORDER OTHER SECTIONS OF THE SAME SEWER TESTED AT CONTRACTOR'S EXPENSE, IN ORDER TO DETERMINE THAT ALL OF THE SEWER WILL MEET THE LIMITATIONS SET FOR INFILTRATION OR LEAKAGE. SUCH TESTS REQUIRED BECAUSE OF EXCESSIVE INFILTRATION OR LEAKAGE WILL BE IN ADDITION TO THE NUMBER CALLED FOR IN THE FIRST PARAGRAPH OF THIS SECTION.

FOLLOWING COMPLETION OF TESTING IN ANY SECTION OF SEWER, THE CONTRACTOR SHALL REMOVE ALL BULKHEADS, WEIRS AND ANY OTHER OBSTRUCTIONS AND HE SHALL FREE THE SEWER OF WATER.

## MAINTENANCE OF TRAFFIC

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES ON SANFORD, ST. CLAIR AND STATE STREETS, EXCEPT THAT, FOR PERIODS NOT IN EXCESS OF 48 HOURS, TRAFFIC MAY BE DETOURED. NOT MORE THAN ONE OF THESE THREE STREETS MAY BE CLOSED AT ANY TIME. S. R. 283 TRAFFIC IS TO BE DETOURED VIA STAGE AVENUE, BUTTON AVENUE AND NEWELL STREET. S. R. 535 TRAFFIC IS TO BE DETOURED VIA ST. CLAIR STREET, SANFORD STREET, STATE STREET AND S. R. 20. NEWELL STREET IS TO REMAIN OPEN UNTIL RELOCATED RICHMOND STREET AND CONNECTION TO 283 ARE COMPLETED.

NEWELL STREET TRAFFIC IS TO BE DETOURED VIA LEXINGTON STREET, STAGE AVENUE, RELOCATED RICHMOND STREET AND S. R. 283.

TEMPORARY ROADWAYS WILL BE NECESSARY FOR MAINTENANCE OF TRAFFIC. SUCH TEMPORARY ROADWAYS SHALL BE SURFACED WITH ITEM T-10 AGGREGATE AND STABILIZED WITH ITEM M-10 CALCIUM CHLORIDE. THESE ITEMS SHALL BE APPLIED WHERE DIRECTED AND IN AMOUNTS REQUESTED BY THE ENGINEER. THE LIMITS AND DURATION OF USE OF TEMPORARY ROADWAYS SHALL BE HELD TO AN ABSOLUTE MINIMUM AND, IN ALL CASES, SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

PAYMENT FOR CONSTRUCTION, MAINTENANCE, AND SUBSEQUENT REMOVAL, WHEREVER REQUIRED, OF TEMPORARY ROADWAYS, EXCEPT FOR FURNISHING AND PLACING OF ITEMS M-10, T-10 AND "T-35 FOR MAINTAINING TRAFFIC" SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "MAINTAINING TRAFFIC".

M-10, T-10 AND T-35 REQUIRED FOR MAINTENANCE OF TRAFFIC IS PROVIDED IN THE SUMMARY OF QUANTITIES IN THE FOLLOWING AMOUNTS:

- 250 CUBIC YARDS TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC USING NO. 2, NO. 3 OR NO. 34 SIZE AGGREGATE AS DIRECTED.
- 250 CUBIC YARDS TRAFFIC COMPACTED SURFACE COURSE, ITEM T-10,
- 10 TONS CALCIUM CHLORIDE, OR CALCIUM MAGNESIUM CHLORIDE, ITEM M-10,
- 100 CUBIC YARDS ASPHALTIC CONCRETE, ITEM T-35.

REQUIREMENTS FOR HARDNESS AND SOUNDNESS WILL BE WAIVED FOR AGGREGATE USED FOR MAINTAINING TRAFFIC.

THE CONTRACTOR SHALL SAFEGUARD THE TRAVELING PUBLIC ON RICHMOND STREET, SANFORD STREET, ST. CLAIR STREET, AND STATE STREET BY PROVIDING PLATFORMS, NETS, OR OTHER SUITABLE PROTECTION ABOVE THE TRAVELED LANES. PAYMENT TO BE INCLUDED IN LUMP SUM PRICE BID FOR "MAINTAINING TRAFFIC".

## INLET RECONSTRUCTED TO GRADE, AS PER PLAN

THIS ITEM SHALL CONSIST OF RECONSTRUCTION OF THE INLET TO THE NEW GRADE CONFORMING AS NEARLY AS PRACTICABLE TO THE EXISTING DIMENSIONS AND TYPE OF CONSTRUCTION AND USING THE SALVAGED INLET FRAME AND COVER.

## GRADING TOLERANCES

FOR AREAS BETWEEN CURB AND SIDEWALK AND FOR AREAS IN FRONT OF RESIDENCES AND SIMILAR AREAS SPECIFICALLY INDICATED BELOW, THE SEED BED SHALL BE PREPARED TO PROVIDE A SMOOTH SURFACE. ALL STONES LARGER THAN ONE INCH IN DIAMETER SHALL BE REMOVED FROM THE SURFACE OF THE SEED BED. HAND RAKING WILL BE REQUIRED IN AREAS INACCESSIBLE TO MACHINES AND HAND RAKING MAY BE REQUIRED, IF DIRECTED BY THE ENGINEER, IN ALL THE AFOREMENTIONED AREAS IF MACHINES USED DO NOT PROVIDE RESULTS EQUIVALENT TO RESULTS OBTAINED BY HAND RAKING. COST OF THIS ADDITIONAL WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ROADWAY EXCAVATION, ITEM E-1.

THE ABOVE NOTE SHALL BE CONSIDERED TO BE PARTICULARLY APPLICABLE IN THE FOLLOWING AREAS:

|               |          |                               |
|---------------|----------|-------------------------------|
| STATION 0+30  | TO 3+00  | LEFT, TAYLOR PLACE            |
| STATION 27+50 | TO 30+50 | RIGHT, SANFORD ST.            |
| STATION 30+50 | TO 31+00 | RIGHT, SANFORD ST.            |
| STATION 29+25 | TO 32+00 | LEFT, SANFORD ST.             |
| STATION 28+40 | TO 30+50 | LT. & RT., ST. CLAIR ST.      |
| STATION 30+50 | TO 31+50 | LT. & RT., ST. CLAIR ST.      |
| STATION 28+50 | TO 29+50 | LT. & RT., STATE ST.          |
| STATION 30+75 | TO 31+50 | LT. & RT., STATE ST.          |
| STATION 10+00 | TO 12+50 | LT., WHEELING AVE. TURNAROUND |
| STATION 21+50 | TO 27+50 | LT. & RT., NEWELL ST.         |
| STATION 31+50 | TO 37+00 | RT., NEWELL ST.               |
| STATION 18+50 | TO 20+00 | LEFT, RICHMOND ST.            |

## UNDERDRAINS

UNDERDRAIN IS PROVIDED ON CUT SLOPES LEFT AND RIGHT OF STATIONS 745+ AND 770+ AS INDICATED ON THE PLANS AND CROSS SECTIONS. THIS DRAIN IS TO BE PLACED WHEN THE EXCAVATION HAS REACHED THE ELEVATION OF BENCHES AS SHOWN ON CROSS SECTIONS. THE CONTRACTOR IS TO PROVIDE A TEMPORARY OUTLET FOR THESE UNDERDRAINS THROUGHOUT THE DURATION OF THE BALANCE OF CONSTRUCTION UNTIL SUCH TIME AS THE PERMANENT OUTLET INTO THE STORM SEWER SYSTEM IS IN PLACE. CONTINUOUS DRAINAGE MUST BE MAINTAINED IN THIS AREA AT ALL TIMES.

## TEMPLATE REVISION

JUST PRIOR TO PLAN COMPLETION, THE SHOULDER WIDTH ON THE RIGHT OF TRAFFIC WAS REVISED FROM 16 FEET TO 15 FEET. THIS DETAIL SHOWS ON THE TYPICAL SECTION. ALSO, THE PAVED SHOULDER ON THE LEFT OF TRAFFIC WAS REVISED FROM 5' TO 4' IN WIDTH.

NO ADJUSTMENT OR CORRECTION IN PLOTTED DIMENSION WAS MADE ON THE PROJECT CROSS SECTIONS FOR THE RELOCATION OF S. R. 2. HOWEVER, THE EARTHWORK HAS BEEN ADJUSTED TO ACCOUNT FOR THE ONE-FOOT (1') CHANGE IN TEMPLATE WIDTH AND ALL QUANTITIES FOR THE PAVED SHOULDER ARE CORRECTLY TABULATED.

## EARLY EMBANKMENT CONSTRUCTION

THE EMBANKMENT LYING EAST OF FOBES STREET AND WEST OF THE GRAND RIVER SHALL BE CONSTRUCTED AS THE INITIAL EARTHWORK OPERATION SO AS TO PROVIDE THE CONTRACTOR ON THE NEXT WESTERLY CONSTRUCTION SECTION A PROPER WORKING AREA TO CONSTRUCT THE NECESSARY S. R. 2 CROSSING OVER THE GRAND RIVER.

## NON-RIGID PAVEMENT REMOVAL

REMOVAL AND DISPOSAL OF EXISTING NON-RIGID PAVEMENT, UNLESS OTHERWISE INDICATED ON THESE PLANS, SHALL BE MEASURED AND PAID FOR AS ITEM E-1, ROADWAY EXCAVATION.

## ITEM S-2 PATCHING CONCRETE STRUCTURES, AS PER PLAN

THIS ITEM SHALL, IN ADDITION TO CONFORMING TO THE GENERAL REQUIREMENTS OF ITEM S-2, CONSIST OF SEALING OPENINGS IN THE EXISTING CONCRETE BOX SEWER AT THE REMOVED OR ABANDONED 15" AND 30" LATERAL CONNECTIONS AT A POINT APPROX. 45' RIGHT OF STATION 38+75 ON RICHMOND STREET. THE SEAL SHALL CONSIST OF CLASS E CONCRETE, BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 8 INCHES AND SHALL HAVE A SMOOTH INNER FACE.