

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|-----------|----------|--------------------|-----------|
| 2721 | 2016-054B | COOK | 50 | 1 |
| | | ILLINOIS | CONTRACT NO. 62D40 | |

06-15-2018 LETTING ITEM 153

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAU ROUTE 2721 (KEAN AVE)
SECTION: 2016-054B
PROJECT: STP-QL98(990)
CULVERT REPLACEMENT
COOK COUNTY

C-91-013-17

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

PROJECT IS LOCATED IN PALOS TOWNSHIP

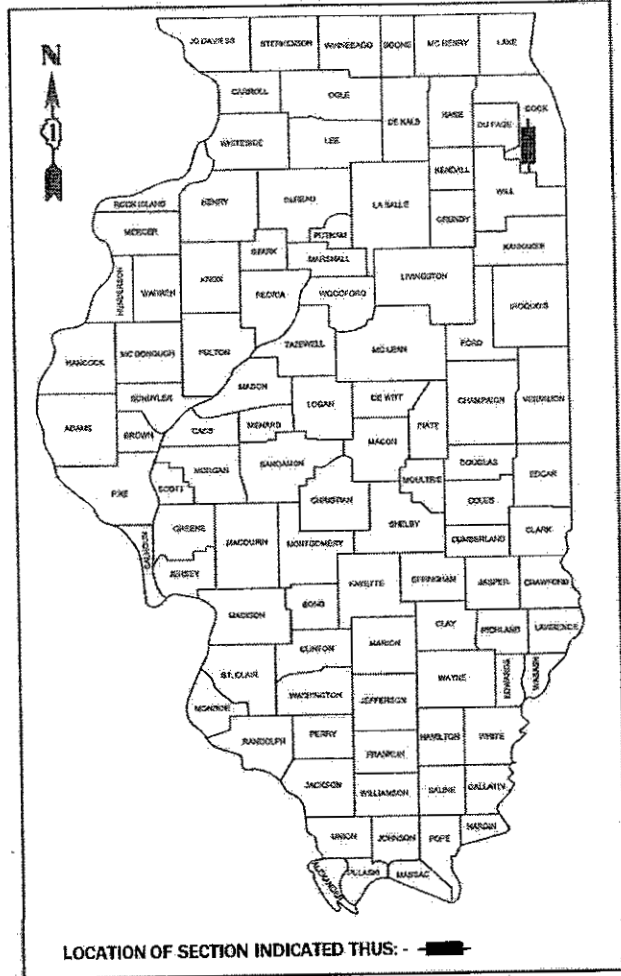
TRAFFIC DATA:

KEAN AVENUE
S.N. 016-2297 2014 ADT = 2,400
S.N. 016-2298 2014 ADT = 2,400

DESIGN DESIGNATION = MINOR COLLECTOR

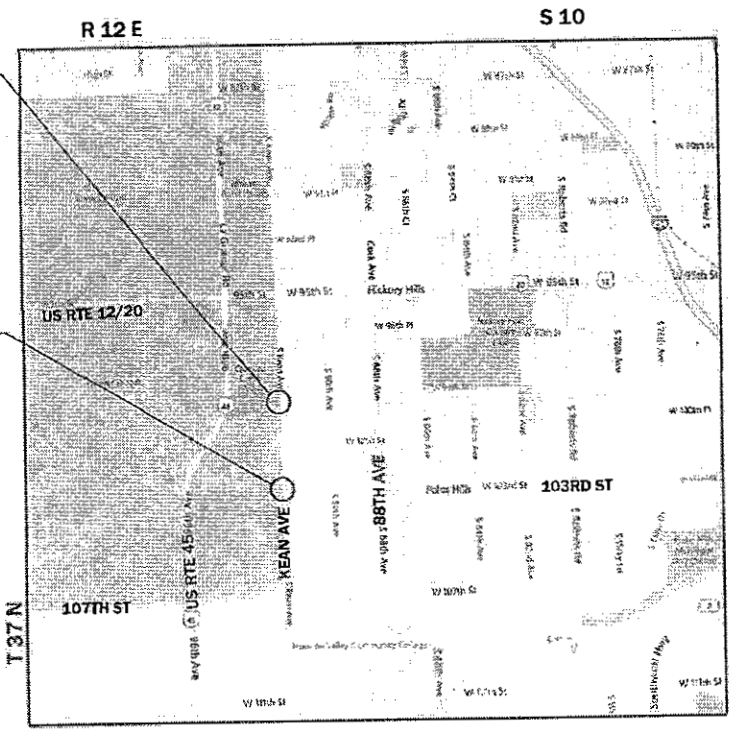
DESIGN SPEED = 40/45 MPH (ASSUMED)
POSTED SPEED = 35/40 MPH

D-91-013-17



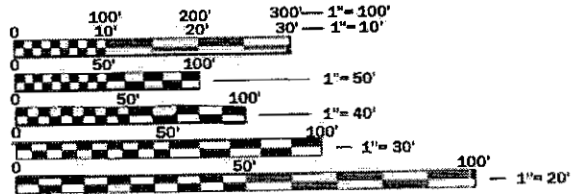
PROJECT LOCATION 2
S.N. 016-2298
BEGIN IMPROVEMENT
STA 74+00
END OF IMPROVEMENT
STA 80+00

PROJECT LOCATION 1
S.N. 016-2297
BEGIN IMPROVEMENT
STA 52+00
END OF IMPROVEMENT
STA 54+00



PALOS TOWNSHIP
LOCATION MAP
NOT TO SCALE

GROSS LENGTH = 2800 FT. = 0.53 MILES
NET LENGTH = 2800 FT. = 0.53 MILES



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: RAGHAD ADEIS-DAHMAN (847) 705-4237
PROJECT MANAGER: FAWAD AQUEEL (847) 705-4247

CONTRACT NO. 62D40



Moussa A. Issa
01/26/2018
EXP. 11/30/2018
Sheets 26-38



Fred M. Lin
FRED M. LIN, P.E.
ILLINOIS REGISTERED ENGINEER NO. 062-056704
REGISTRATION EXPIRES NOV. 30, 2019
PAGES 1-25 & 39-50



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED January 30, 2018

Anthony J. Quigley REGIONAL ENGINEER
May 11, 2018
ENGINEER OF DESIGN AND ENVIRONMENT

May 11, 2018
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

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HIGHWAY STANDARDS

| | |
|-----------|--|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 001001-02 | AREAS OF REINFORCEMENT BARS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 280001-07 | TEMPORARY EROSION CONTROL SYSTEMS |
| 515001-03 | NAME PLATE FOR BRIDGES |
| 542306-03 | PRECAST REINFORCED CONCRETE ELLIPTICAL FLARED END SECTION |
| 601001-05 | PIPE UNDERDRAINS |
| 601101-02 | CONCRETE HEADWALL FOR PIPE UNDERDRAINS |
| 602001-02 | CATCH BASIN TYPE A |
| 602406-08 | MANHOLE TYPE A 6' (1.8 M) DIAMETER |
| 602601-05 | PRECAST REINFORCED CONCRETE FLAT SLAB TOP |
| 602701-02 | MANHOLE STEPS |
| 604001-04 | FRAME AND LIDS TYPE 1 |
| 606001-07 | CONCRETE CURB TYPE B AND COMBINATION CURB AND GUTTER |
| 630001-12 | STEEL PLATE BEAM GUARDRAIL |
| 630106-02 | LONG-SPAN GUARDRAIL OVER CULVERT |
| 630301-08 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS |
| 631011-10 | TRAFFIC BARRIER TERMINAL, TYPE 2 |
| 701006-05 | OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE |
| 701011-04 | OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY |
| 701101-05 | OFF-RD OPERATIONS, 2L, 2W, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE |
| 701301-04 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701311-03 | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY |
| 701901-07 | TRAFFIC CONTROL DEVICES |
| 720001-01 | SIGN PANEL MOUNTING DETAILS |
| 720006-04 | SIGN PANEL ERECTION DETAILS |
| 725001-01 | OBJECT AND TERMINAL MARKERS |
| 728001-01 | TELESCOPING STEEL SIGN SUPPORT |
| 782006 | GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS |

DISTRICT STANDARDS

| | |
|-------|--|
| TC-11 | RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) |
| TC-13 | TYPICAL PAVEMENT MARKINGS |
| TC-21 | DETOUR SIGNING FOR CLOSING STATE HIGHWAYS |

| HOT-MIX ASPHALT MIXTURE REQUIREMENTS | | | QMP |
|---|------------------|-------|-----|
| MIXTURE TYPE | AIR VOIDS @ NDES | | |
| PAVEMENT RESURFACING | | | |
| HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (IL-9.5 MM) | 4% @ 70 GYR. | QC/QA | |
| PAVEMENT RECONSTRUCTION | | | |
| HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, (IL-9.5 MM) | 4% @ 70 GYR. | QC/QA | |
| HOT-MIX ASPHALT BASE COURSE, 6" (HMA BINDER IL-19.0 MM) | 4% @ 70 GYR. | QC/QA | |
| HOT-MIX ASPHALT SHOULDERS, 8" | | | |
| 2" HMA SURFACE COURSE, MIX "D", N70, (IL-9.5 MM) | 4% @ 70 GYR. | QC/QA | |
| 6" HMA SHOULDER (HMA BINDER IL-19.0 MM) | 4% @ 70 GYR. | QC/QA | |
| QMP DESIGNATIONS: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA) | | | |

NOTES:
 THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQYD/IN.
 NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.
 FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS.
 QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLY TO THE HMA MIXTURE.
 THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

| | |
|--------------------------------|------------|
| NITROGEN FERTILIZER NUTRIENTS | 90 LB/ACRE |
| POTASSIUM FERTILIZER NUTRIENTS | 90 LB/ACRE |

GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APRIL 1, 2016 EDITION OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", AND IN ACCORDANCE WITH IDOT'S "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JANUARY 1, 2018. THE ENGINEER WILL RESOLVE ANY CONFLICT WHICH MAY EXIST BETWEEN THESE SPECIFICATIONS.
- ANY AND ALL REFERENCES TO "ENGINEER" SHALL BE INTERPRETED AS THE RESIDENT ENGINEER.
- ALL ELEVATIONS IN THE PLANS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO VARIATIONS FOUND IN THE FIELD. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. ANY ADJUSTMENTS PROPOSED BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED BASED UPON THE UNIT PRICE.
- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL J.U.L.I.E. AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.
- THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OR HER OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE HERETO. THIS WORK SHALL BE PER ARTICLES 105.07 AND 107.31 OF THE STANDARD SPECIFICATIONS.
- ABANDONED UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE OF THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES WHICH HAVE UTILITIES PRESENT IN THE PROJECT AREA BEFORE ANY WORK IS STARTED. ALL UTILITY COMPANIES, CITY OF PALOS HILLS, AND COOK COUNTY SHOULD BE NOTIFIED BY THE CONTRACTOR AT LEAST 3 DAYS PRIOR TO THE START OF CONSTRUCTION. ALL UTILITIES MUST BE STAKED PRIOR TO CONSTRUCTION.
- MEMBERS OF J.U.L.I.E. KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE: COMED, AT&T, AND NICOR.
- TREE REMOVAL MAY BE NECESSARY PRIOR TO UTILITY COMPANIES BEING ABLE TO RELOCATE THEIR FACILITIES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR SHOULD COORDINATE ANY CONTRACT TREE REMOVAL ACTIVITIES WITH THE UTILITY COMPANIES TO ELIMINATE CONFLICTS AND POTENTIAL DELAYS CAUSED BY UTILITY TREE REMOVAL ACTIVITIES OR INCOMPLETE UTILITY RELOCATIONS.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE, COUNTY, OR MUNICIPAL PROPERTY WITHOUT WRITTEN PERMISSION FROM THE JURISDICTIONAL AGENCY OR MUNICIPALITY.
- SAW CUTTING SHALL BE REQUIRED AT THE JOINT BETWEEN PAVEMENT, CURB AND GUTTER, DRIVEWAY PAVEMENT, HOT-MIX ASPHALT SURFACES TO BE REMOVED AND THAT LEFT IN PLACE OR AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE REMOVAL ITEMS.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- SIGN LOCATIONS MAY VARY FROM THE STATIONS SHOWN ON THE PLANS IN ACCORDANCE WITH DIRECTIONS FROM THE ENGINEER AT THE TIME OF CONSTRUCTION. SIGN LOCATIONS MAY BE ADJUSTED IN THE FIELD TO AVOID ANY FOUND UTILITIES.
- THE RESIDENT ENGINEER SHALL VERIFY THE LOCATION OF NO PASSING ZONES PRIOR TO PLACEMENT OF CENTERLINE STRIPING.
- THE CONTRACTOR SHALL USE CARE IN REMOVING, GRADING OR EXCAVATION NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE EXISTING GROUND COVER SHALL REMAIN IN ANY AREA WHERE THERE IS NO PROPOSED GRADING.
- THE CONTRACTOR SHALL LIMIT ALL CONSTRUCTION ACTIVITIES TO REMAIN IN THE EXISTING RIGHT OF WAY.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, AS REQUIRED, PRIOR TO COMMENCING WITH CONSTRUCTION.
- THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN ACCESS TO ALL EXISTING PROPERTIES PER ARTICLE 107.09 AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OUTSIDE THE REMOVAL LIMITS SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- ANY IMPROVED AGGREGATE SUBGRADE DAMAGED BY THE CONTRACTOR'S VEHICLES AND/OR EQUIPMENT IS TO BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK.
- CONTINUOUS PAVING OPERATIONS ON THE MAIN ROADWAY SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION OF THE HOT-MIX ASPHALT SURFACE. NO INTERRUPTIONS FOR SIDE ROADS, ENTRANCES, TURN LANES, ETC. WILL BE ALLOWED.
- WHERE SECTION, SUBSECTION, SUBDIVISION, OR PROPERTY MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THE MONUMENT'S LOCATION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ASSURE THAT NO DEBRIS FALLS INTO THE WATERWAYS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE VARIOUS PAY ITEMS.
- FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.
- MICROSTATION AND GEOPAK FILES OF THIS PROJECT WILL BE MADE AVAILABLE TO THE CONTRACTOR. IF THERE IS A CONFLICT BETWEEN THE ELECTRONIC FILES AND THE PRINTED CONTRACT PLANS AND DOCUMENTS, THE PRINTED CONTRACT PLANS AND DOCUMENTS SHALL TAKE PRECEDENCE OVER THE ELECTRONIC FILES. THE CONTRACTOR SHALL ACCEPT ALL RISK ASSOCIATED WITH USING THE ELECTRONIC FILES AND SHALL HOLD THE DEPARTMENT HARMLESS FOR ANY ERRORS OR OMISSIONS IN THE ELECTRONIC FILES AND THE DATA CONTAINED THEREIN. ERRORS OR DELAYS RESULTING FROM THE USE OF THE ELECTRONIC FILES BY THE CONTRACTOR SHALL NOT RESULT IN AN EXTENSION OF TIME FOR ANY INTERIM OR FINAL COMPLETION DATE OR SHALL NOT BE CONSIDERED CAUSE FOR ADDITIONAL COMPENSATION. THE CONTRACTOR SHALL NOT USE, SHARE, OR DISTRIBUTE THESE ELECTRONIC FILES EXCEPT FOR THE PURPOSE OF CONSTRUCTING THIS CONTRACT. ANY CLAIMS BY THIRD PARTIES DUE TO USE OR ERRORS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL INCLUDE THIS DISCLAIMER WITH THE TRANSFER OF THESE ELECTRONIC FILES TO ANY OTHER PARTIES AND SHALL INCLUDE APPROPRIATE LANGUAGE BINDING THEM TO SIMILAR RESPONSIBILITIES.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKINGS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.
- THE RESIDENT ENGINEER SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT OF ANY TEMPORARY TRAFFIC CONTROL DEVICES.
- THE RESIDENT ENGINEER SHALL CONTACT ERIC CAMPOS, IDOT'S AREA TRAFFIC FIELD ENGINEER FOR THE SOUTHWEST AREA, VIA E-MAIL AT ERIC.CAMPOS@ILLINOIS.GOV AND, OR AT (815) 485-6475, A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- THE CONTRACTOR SHALL MAKE A REASONABLE EFFORT TO MINIMIZE THE SIZE OF DISTURBED AREAS.
- SILT FENCE AND INLET AND PIPE PROTECTION SHALL BE IN GOOD WORKING ORDER PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THEY SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS ARE ADEQUATELY STABILIZED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSPECTING AND CLEANING INLET FILTERS WEEKLY, OR AFTER A RAINFALL EVENT OF 0.5" OR GREATER. INLET FILTERS SHALL BE REPLACED IF NO LONGER DEEMED TO BE IN GOOD WORKING ORDER BY THE ENGINEER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR INLET AND PIPE PROTECTION.
- SILT FENCE SHALL BE INSTALLED PER IDOT STANDARD 280001. THE CONTRACTOR SHALL INSPECT AND CLEAR THE SILT FENCE WEEKLY, OR AFTER A RAINFALL EVENT OF 0.5" OR GREATER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PERIMETER EROSION BARRIER.
- THE CONTRACTOR SHALL ENSURE THAT EXPOSED AREAS HAVE ADEQUATE TEMPORARY SEEDING OR OTHER STABILIZATION PER THE NPDES 7 AND 14 DAY RULE.
- CONCRETE WASHOUT AREAS SHALL BE ADEQUATELY SIGNED AND MAINTAINED. CONCRETE WASHOUT SHALL NOT ENTER ANY DRAINAGE STRUCTURE.
- THE CONTRACTOR SHALL ENSURE THAT ALL MUD, SEDIMENT, AND DEBRIS RESULTING FROM CONSTRUCTION RELATED ACTIVITIES SHALL BE CONTAINED WITHIN THE PROJECT LIMITS.
- THE CONTRACTOR SHALL MINIMIZE THE AMOUNT OF DUST THAT LEAVES THE SITE WHEN NEAR RESIDENTIAL PROPERTY.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE LOCAL SCHOOL DISTRICT AND LOCAL EMERGENCY SERVICES.
- THE SUBGRADE STABILITY SHALL BE VERIFIED BY PROOF ROLLING WITH A FULLY LOADED TANDEM-AXLE TRUCK.
- AGGREGATE SUBGRADE IMPROVEMENT (CU YD) HAS BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSTABLE AND/OR UNSUITABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH ASI WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH A STATIC OR DYNAMIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.04 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND IDOT SUBGRADE STABILITY MANUAL. IF UNSTABLE AND/OR UNSUITABLE SOILS ARE NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO ADDITIONAL COMPENSATION WILL BE DUE TO THE CONTRACTOR.
- PIPE UNDERDRAINS SHALL BE INSTALLED ACCORDING TO SECTION 601 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND STANDARD 601001-05. TOP OF PIPE UNDERDRAINS SHALL BE PLACED MINIMUM 6" BELOW THE AGGREGATE SUBGRADE IMPROVEMENT LAYER. THE COST OF MAKING PIPE UNDERDRAINS CONNECTIONS TO DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF THE PIPE UNDERDRAINS.
- THE RESIDENT ENGINEER SHALL CONTACT THE ROADSIDE DEVELOPMENT UNIT 72 HOURS PRIOR TO TREE REMOVAL, WEED CONTROL AND LANDSCAPING WORK AT (847) 705-4171.

COMMITMENTS

- CROOKED CREEK APPEARS TO HAVE DIRECT WATER CONNECTIVITY TO THE NEARBY MCMAHON WOODS AND FEN NATURE PRESERVE (MCMAHON WOODS AND FEN INAI). ADDITIONALLY, BELLY DEEP SLOUGH MAY SHARE DIRECT WATER CONNECTIVITY TO CRANBERRY SLOUGH NATURE PRESERVE (CRANBERRY SLOUGH INAI). DUE TO THE SENSITIVITY OF THE MCMAHON WOODS AND FEN NATURE PRESERVE (MCMAHON WOODS AND FEN INAI) AND THE CRANBERRY SLOUGH NATURE PRESERVE (CRANBERRY SLOUGH INAI), VARIOUS PROTECTED SPECIES IN THE VICINITY OF THIS PROJECT, AND VICINITY WETLANDS, STRICT ADHERENCE TO EROSION AND SEDIMENTATION CONTROL MEASURES SHOULD BE USED TO MINIMIZE THE POSSIBILITY OF ANY ADVERSE IMPACTS TO THESE RESOURCES.

BECAUSE NATURE PRESERVES ARE PROTECTED BY LAW, NO ADVERSE IMPACT IS ALLOWED TO PRESERVES INCLUDING CHANGES TO CURRENT HYDROLOGY. MONITOR EROSION CONTROL MEASURES TO ENSURE THEY ARE KEEPING ALL SILTATION OUT OF THE NATURE PRESERVES. SOIL STABILIZATION AND RUNOFF CONTROL MEASURES SHOULD BE INCORPORATED THROUGHOUT THE ENTIRE CONSTRUCTION SITES AND DURING THE CONSTRUCTION PERIOD. BMPs SHOULD BE INSPECTED DAILY AND SEED WITH LOCAL GENOTYPE SEED APPROPRIATE TO SURROUNDING HABITAT IF POSSIBLE, OR A NON-INVASIVE COVER CROP SEED.



| | | |
|----------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - RC | REVISED - |
| PLOT SCALE = 2.0000' / in. | DRAWN - RC | REVISED - |
| PLOT DATE = 5/2/2018 | CHECKED - ST | REVISED - |
| | DATE - 12/2017 | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

KEAN AVENUE OVER DITCHES
GENERAL NOTES

SCALE: N.T.S. SHEET 1 OF 1 SHEETS STA. TO STA.

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 2 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | | |
|------------|--|-------|----------------|-------------------------------|-------------------------------|-------------------------------|
| | | | | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS |
| | | | | ROADWAY | S.N. 016-2297 | S.N. 016-2298 |
| | | | | 0004 | 0004 | 0004 |
| | | | | URBAN | URBAN | URBAN |
| 20200100 | EARTH EXCAVATION | CU YD | 785 | 785 | | |
| 20201200 | REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL | CU YD | 694 | | 266 | 428 |
| 20400800 | FURNISHED EXCAVATION | CU YD | 115 | 115 | | |
| 21001000 | GEOTECHNICAL FABRIC FOR GROUND STABILIZATION | SQ YD | 372 | 372 | | |
| 21101615 | TOPSOIL FURNISH AND PLACE, 4" | SQ YD | 5,269 | 5,269 | | |
| 21400100 | GRADING AND SHAPING DITCHES | FOOT | 361 | 361 | | |
| * 25000210 | SEEDING, CLASS 2A | ACRE | 0.25 | 0.25 | | |
| * 25000400 | NITROGEN FERTILIZER NUTRIENT | POUND | 30 | 30 | | |
| * 25000600 | POTASSIUM FERTILIZER NUTRIENT | POUND | 30 | 30 | | |
| 25000775 | SELECTIVE MOWING STAKES | EACH | 3 | 3 | | |
| * 25100125 | MULCH, METHOD 3 | ACRE | 1.00 | 1.00 | | |

1/31/2018

* SPECIALTY ITEM



| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - NK | REVISED - |
| DRAWN - NK | CHECKED - ST | REVISED - |
| PLOT SCALE = 100.0000' / in. | DATE - 12/2017 | REVISED - |
| PLOT DATE = 1/31/2018 | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

KEAN AVENUE OVER DITCHES
SUMMARY OF QUANTITIES

SCALE: N.T.S. SHEET 1 OF 7 SHEETS STA. TO STA.

| | | | | |
|--------------------|-----------|--------|---------------------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 3 |
| CONTRACT NO. 62D40 | | | ILLINOIS FED. AID PROJECT | |

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | | |
|------------|--|-------|----------------|-------------------------------|--------------------------------|--------------------------------|
| | | | | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS |
| | | | | ROADWAY 0004 URBAN | S.N. 016-2297 0004 URBAN | S.N. 016-2298 0004 URBAN |
| * 25100630 | EROSION CONTROL BLANKET | SQ YD | 382 | 382 | | |
| 28000305 | TEMPORARY DITCH CHECKS | FOOT | 160 | 160 | | |
| 28000400 | PERIMETER EROSION BARRIER | FOOT | 1,361 | 1,361 | | |
| 28000500 | INLET AND PIPE PROTECTION | EACH | 2 | 2 | | |
| 28100107 | STONE RIPRAP, CLASS A4 | SQ YD | 85 | | 38 | 47 |
| 28200200 | FILTER FABRIC | SQ YD | 85 | | 38 | 47 |
| 30300001 | AGGREGATE SUBGRADE IMPROVEMENT | CU YD | 207 | 207 | | |
| 30300112 | AGGREGATE SUBGRADE IMPROVEMENT 12" | SQ YD | 167 | 167 | | |
| 35501308 | HOT-MIX ASPHALT BASE COURSE, 6" | SQ YD | 1,486 | 1,486 | | |
| 40600290 | BITUMINOUS MATERIALS (TACK COAT) | POUND | 1,270 | 1,270 | | |
| 40603340 | HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 | TON | 231 | 231 | | |
| 44000100 | PAVEMENT REMOVAL | SQ YD | 1,516 | 1,516 | | |
| 44000500 | COMBINATION CURB AND GUTTER REMOVAL | FOOT | 63 | 63 | | |
| 48203029 | HOT-MIX ASPHALT SHOULDERS, 8" | SQ YD | 671 | 671 | | |

14

* SPECIALTY ITEM



| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - NK | REVISED - |
| | DRAWN - NK | REVISED - |
| PLOT SCALE = 100.0000' / in. | CHECKED - ST | REVISED - |
| PLOT DATE = 1/31/2018 | DATE - 12/2017 | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | |
|---|---------------------|--------------|
| KEAN AVENUE OVER DITCHES SUMMARY OF QUANTITIES | | |
| SCALE: N.T.S. | SHEET 2 OF 7 SHEETS | STA. TO STA. |

| | | | | |
|---------------------------|----------------------|----------------|--------------------|----------------|
| F.A.U. RTE. 2721 | SECTION 2016-054B | COUNTY COOK | TOTAL SHEETS 50 | SHEET NO. 4 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | | |
|----------|--|-------|----------------|-------------------------------|-------------------------------|-------------------------------|
| | | | | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS |
| | | | | ROADWAY | S.N. 016-2297 | S.N. 016-2298 |
| | | | | 0004 | 0004 | 0004 |
| | | | | URBAN | URBAN | URBAN |
| 50100100 | REMOVAL OF EXISTING STRUCTURES | EACH | 2 | | 1 | 1 |
| 50105220 | PIPE CULVERT REMOVAL | FOOT | 116 | 116 | | |
| 50800105 | REINFORCEMENT BARS | POUND | 17,940 | | 6,280 | 11,660 |
| 51500100 | NAME PLATES | EACH | 2 | | 1 | 1 |
| 54003000 | CONCRETE BOX CULVERTS | CU YD | 77.8 | | 30.7 | 47.1 |
| 54213663 | PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18" | EACH | 2 | 2 | | |
| 54214509 | PRECAST REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND-SIZE 24" | EACH | 2 | 2 | | |
| 542A1063 | PIPE CULVERTS, CLASS A, TYPE 2 18" | FOOT | 20 | 20 | | |
| 542A8209 | PIPE CULVERTS, CLASS A, TYPE 2 EQUIVALENT ROUND-SIZE 24" | FOOT | 40 | 40 | | |
| 550A0340 | STORM SEWERS, CLASS A, TYPE 2 12" | FOOT | 24 | 24 | | |
| 550A0380 | STORM SEWERS, CLASS A, TYPE 2 18" | FOOT | 8 | 8 | | |
| 55100500 | STORM SEWER REMOVAL 12" | FOOT | 22 | 22 | | |
| 55100700 | STORM SEWER REMOVAL 15" | FOOT | 17 | 17 | | |
| 60108204 | PIPE UNDERDRAINS, TYPE 2, 4" | FOOT | 44 | 44 | | |

14
* SPECIALTY ITEM



| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - NK | REVISED - |
| | DRAWN - NK | REVISED - |
| PLOT SCALE = 100.0000' / in. | CHECKED - ST | REVISED - |
| PLOT DATE = 1/31/2018 | DATE - 12/2017 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
SUMMARY OF QUANTITIES**

SCALE: N.T.S. SHEET 3 OF 7 SHEETS STA. TO STA.

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 5 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | | |
|------------|---|-------|----------------|-------------------------------|-------------------------------|-------------------------------|
| | | | | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS |
| | | | | ROADWAY | S.N. 016-2297 | S.N. 016-2298 |
| | | | | 0004 | 0004 | 0004 |
| | | | | URBAN | URBAN | URBAN |
| 60100060 | CONCRETE HEADWALLS FOR PIPE DRAINS | EACH | 4 | 4 | | |
| 60200105 | CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, OPEN LID | EACH | 1 | 1 | | |
| 60203805 | CATCH BASINS, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, OPEN LID | EACH | 1 | 1 | | |
| 60223700 | MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, OPEN LID | EACH | 1 | 1 | | |
| 60500050 | REMOVING CATCH BASINS | EACH | 3 | 3 | | |
| 60603800 | COMBINATION CURB AND GUTTER, TYPE B-6.12 | FOOT | 64.0 | 64.0 | | |
| * 63000001 | STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS | FOOT | 400.0 | 400.0 | | |
| * 63000350 | LONG-SPAN GUARDRAIL OVER CULVERT, 12 FT 6 IN SPAN | FOOT | 75.0 | 75.0 | | |
| * 63000360 | LONG-SPAN GUARDRAIL OVER CULVERT, 18 FT 9 IN SPAN | FOOT | 87.5 | 87.5 | | |
| * 63100045 | TRAFFIC BARRIER TERMINAL, TYPE 2 | EACH | 4 | 4 | | |
| * 63100167 | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT | EACH | 4 | 4 | | |
| 63200310 | GUARDRAIL REMOVAL | FOOT | 156 | 156 | | |
| * 66900200 | NON-SPECIAL WASTE DISPOSAL | CU YD | 365 | 365 | | |
| * 66900450 | SPECIAL WASTE PLANS AND REPORTS | LSUM | 1 | 1 | | |

14

* SPECIALTY ITEM



| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lir | DESIGNED - NK | REVISED - |
| | DRAWN - NK | REVISED - |
| PLOT SCALE = 100.0000' / in. | CHECKED - ST | REVISED - |
| PLOT DATE = 1/31/2018 | DATE - 12/2017 | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

KEAN AVENUE OVER DITCHES
SUMMARY OF QUANTITIES

SCALE: N.T.S. SHEET 4 OF 7 SHEETS STA. TO STA.

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 6 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | | |
|------------|---|--------|----------------|-------------------------------|-------------------------------|-------------------------------|
| | | | | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS |
| | | | | ROADWAY | S.N. 016-2297 | S.N. 016-2298 |
| | | | | 0004 | 0004 | 0004 |
| | | | | URBAN | URBAN | URBAN |
| * 66900530 | SOIL DISPOSAL ANALYSIS | EACH | 2 | 2 | | |
| 67000400 | ENGINEER'S FIELD OFFICE, TYPE A | CAL MO | 3 | 3 | | |
| 67100100 | MOBILIZATION | LSUM | 1 | 1 | | |
| * 72000100 | SIGN PANEL-TYPE 1 | SQ FT | 45 | 45 | | |
| * 72400100 | REMOVE SIGN PANEL ASSEMBLY-TYPE A | EACH | 7 | 7 | | |
| * 72501000 | TERMINAL MARKER-DIRECT APPLIED | EACH | 8 | 8 | | |
| * 72800100 | TELESCOPING STEEL SIGN SUPPORT | FOOT | 89 | 89 | | |
| * 78000200 | THERMOPLASTIC PAVEMENT MARKING-LINE 4" | FOOT | 2,264 | 2,264 | | |
| * 78100100 | RAISED REFLECTIVE PAVEMENT MARKER | EACH | 11 | 11 | | |
| * 78200005 | GUARDRAIL REFLECTORS, TYPE A | EACH | 8 | 8 | | |
| 78300200 | RAISED REFLECTIVE PAVEMENT MARKER REMOVAL | EACH | 11 | 11 | | |
| * A2016616 | TREE, QUERCUS ELLIPSOIDALIS (HILL'S OAK), 2" CALIPER, BALLED AND BURLAPPED | EACH | 7 | 7 | | |
| * B2000564 | TREE, AMELANCHIER CANADENSIS (SHADBLOW SERVICEBERRY), 5' HEIGHT, SHURB FORM, BALLED AND BURLAPPED | EACH | 9 | 9 | | |
| * C2002036 | SHRUB, CORYLUS AMERICANA (AMERICAN FILBERT), 3' HEIGHT, BALLED AND BURLAPPED | EACH | 25 | 25 | | |

* SPECIALTY ITEM



| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - NK | REVISED - |
| DRAWN - NK | CHECKED - ST | REVISED - |
| PLOT SCALE = 100.0000' / in. | DATE - 12/2017 | REVISED - |
| PLOT DATE = 1/31/2018 | | |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

| | | |
|---|---------------------|--------------|
| KEAN AVENUE OVER DITCHES SUMMARY OF QUANTITIES | | |
| SCALE: N.T.S. | SHEET 5 OF 7 SHEETS | STA. TO STA. |

| | | | | |
|---------------------|----------------------|----------------|--------------------|---------------------------|
| F.A.U. RTE. 2721 | SECTION 2016-054B | COUNTY COOK | TOTAL SHEETS 50 | SHEET NO. 7 |
| CONTRACT NO. 62D40 | | | | ILLINOIS FED. AID PROJECT |

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | | |
|------------|--|--------|----------------|-------------------------------|-------------------------------|-------------------------------|
| | | | | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS |
| | | | | ROADWAY | S.N. 016-2297 | S.N. 016-2298 |
| | | | | 0004 | 0004 | 0004 |
| | | | | URBAN | URBAN | URBAN |
| * C2003360 | SHRUB, HAMAMELIS VIRGINIANA (COMMON WITCHHAZEL), 5' HEIGHT, BALLED AND BURLAPPED | EACH | 5 | 5 | | |
| * C2012748 | SHRUB, VIBURNUM PRUNIFOLIUM (BLACKHAW VIBURNUM), 4' HEIGHT, BALLED AND BURLAPPED | EACH | 10 | 10 | | |
| * C2C09624 | SHRUB, SAMBUCUS CANADENSIS (AMERICAN ELDER), 2' HEIGHT, CONTAINER | EACH | 25 | 25 | | |
| * K0013000 | PERENNIAL PLANTS, PRAIRIE TYPE, 2" DIAMETER BY 4" DEEP PLUG | UNIT | 18 | 18 | | |
| * K0013030 | PERENNIAL PLANTS, WETLAND TYPE, 2" DIAMETER BY 4" DEEP PLUG | UNIT | 7 | 7 | | |
| K0029624 | WEED CONTROL, TEASEL | GALLON | 1 | 1 | | |
| K0029634 | WEED CONTROL, PRE-EMERGENT GRANULAR HERBICIDE | POUND | 18 | 18 | | |
| X0900064 | MEMBRANE WATERPROOFING FOR BURIED STRUCTURES SYSTEM | SQ YD | 112.0 | | 35.0 | 77.0 |
| X0325222 | WEED CONTROL, BASAL TREATMENT | GALLON | 2.5 | 2.5 | | |
| * X1900002 | INTERSEEDING, CLASS 4 (MODIFIED) | ACRE | 0.50 | 0.50 | | |
| * X2501800 | SEEDING, CLASS 4 (MODIFIED) | ACRE | 0.75 | 0.75 | | |
| X2503112 | MOWING (SPECIAL) | SQ YD | 3,179 | 3,179 | | |
| * X2510635 | HEAVY DUTY EROSION CONTROL BLANKET, SPECIAL | SQ YD | 808 | 808 | | |

* SPECIALTY ITEM



| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - NK | REVISED - |
| DRAWN - NK | CHECKED - ST | REVISED - |
| PLOT SCALE = 100,0000' / in. | DATE - 12/2017 | REVISED - |
| PLOT DATE = 1/31/2018 | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

KEAN AVENUE OVER DITCHES
SUMMARY OF QUANTITIES

SCALE: N.T.S. SHEET 6 OF 7 SHEETS STA. TO STA.

| | | | | |
|--------------------|-----------|--------|---------------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 8 |
| CONTRACT NO. 62D40 | | | ILLINOIS FED. AID PROJECT | |

| CODE NO. | ITEM | UNIT | TOTAL QUANTITY | CONSTRUCTION CODE | | |
|------------|---|-------|----------------|-------------------------------|-------------------------------|-------------------------------|
| | | | | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS | 80% FEDERAL / 20% STATE FUNDS |
| | | | | ROADWAY | S.N. 016-2297 | S.N. 016-2298 |
| | | | | 0004 | 0004 | 0004 |
| | | | | URBAN | URBAN | URBAN |
| X4401198 | HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH | SQ YD | 570 | 570 | | |
| Z0013798 | CONSTRUCTION LAYOUT | LSUM | 1 | 1 | | |
| Z0016702 | DETOUR SIGNING | LSUM | 1 | 1 | | |
| Z0030850 | TEMPORARY INFORMATION SIGNING | SQ FT | 88 | 88 | | |
| * Z0054400 | ROCK FILL | CU YD | 694 | | 266 | 428 |
| * Z0073510 | TEMPORARY TRAFFIC SIGNAL TIMING | EACH | 3 | 3 | | |
| Z0076600 | TRAINEES | HOOR | 0 | | | |

* SPECIALTY ITEM

EXCAVATION TABLE

| EARTH EXCAVATION | EARTH EXC. ADJ. FOR SHRINKAGE (15%) | EMBANKMENT | EARTHWORK BALANCE (+/-) |
|------------------|-------------------------------------|------------|-------------------------|
| CU YD | CU YD | CU YD | CU YD |
| 785 | 670 | 785 | 115 |

GEOTECHNICAL FABRIC FOR GROUND STABILIZATION

| FROM STATION | TO STATION | LT/RT | SQ YD |
|---------------|------------|-------|--------|
| 52+60.00 | 53+25.00 | LT/RT | 39.72 |
| 74+50.00 | 79+50.00 | LT/RT | 331.76 |
| ROUNDED TOTAL | | | 372 |

GRADING AND SHAPING DITCHES

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|--------|
| 51+08.01 | 51+75.81 | RT | 67.80 |
| 72+53.64 | 75+46.65 | RT | 293.00 |
| ROUNDED TOTAL | | | 361 |

SELECTIVE MOWING STAKES

| STATION | LT/RT | EACH |
|----------|-------|------|
| 74+38.21 | LT | 1 |
| 79+56.67 | LT | 1 |
| 80+48.29 | LT | 1 |
| TOTAL | | 3 |

INLET AND PIPE PROTECTION

| STATION | LT/RT | EACH |
|----------|-------|------|
| 78+40.98 | RT | 1 |
| 78+64.98 | RT | 1 |
| TOTAL | | 2 |

LANDSCAPING TABLE

| FROM STATION | TO STATION | LT/RT | TOPSOIL FURNISH AND PLACE, 4" | SEEDING, CLASS 2A | MULCH, METHOD 3 | EROSION CONTROL BLANKET | INTERSEEDING, CLASS 4 (MODIFIED) | SEEDING, CLASS 4 (MODIFIED) | MOWING (SPECIAL) | HEAVY DUTY EROSION CONTROL BLANKET, (SPECIAL) |
|---------------|------------|-------|-------------------------------|-------------------|-----------------|-------------------------|----------------------------------|-----------------------------|------------------|---|
| | | | SQ YD | ACRE | ACRE | SQ YD | ACRE | ACRE | SQ YD | SQ YD |
| 51+00.00 | 52+00.00 | LT | 202.05 | | 0.04 | | 0.04 | | 202.05 | |
| 51+08.01 | 52+00.00 | RT | 89.30 | | | | | 0.02 | 89.30 | |
| 51+08.01 | 51+75.81 | RT | 57.65 | 0.01 | | 57.65 | | | 57.65 | |
| 51+50.00 | 52+88.34 | LT | 168.44 | | | | | 0.03 | | 168.44 |
| 51+50.00 | 52+90.34 | RT | 206.91 | | | | | 0.04 | | 206.91 |
| 52+00.00 | 52+78.65 | LT | 45.86 | | 0.01 | | | 0.01 | 45.86 | |
| 53+00.37 | 54+50.00 | LT | 168.02 | | 0.03 | | | 0.03 | | |
| 53+02.49 | 54+50.00 | RT | 192.51 | | 0.04 | | | 0.04 | | |
| 53+04.36 | 56+00.00 | LT | 497.11 | | 0.10 | | 0.10 | | 497.11 | |
| 53+50.00 | 56+00.00 | RT | 504.00 | | 0.10 | | 0.10 | | 504.00 | |
| 72+50.00 | 74+50.00 | LT | 351.81 | | 0.07 | | 0.07 | | 351.81 | |
| 72+53.64 | 75+46.65 | RT | 323.54 | 0.07 | | 323.54 | | | | |
| 72+53.64 | 76+50.00 | RT | | | | | | | 769.79 | |
| 73+50.00 | 74+50.00 | LT | 84.24 | | | | | 0.02 | | 84.24 |
| 73+50.00 | 77+05.80 | RT | 411.77 | | 0.09 | | | 0.09 | | |
| 74+00.00 | 76+50.00 | LT | 334.62 | | 0.07 | | | 0.07 | | |
| 74+50.00 | 77+00.00 | LT | | | | | | | 78.96 | |
| 75+00.00 | 75+83.43 | RT | 15.37 | | | | | 0.00 | | 15.37 |
| 76+02.55 | 77+05.80 | RT | 54.07 | | | | | 0.01 | | 54.07 |
| 76+50.00 | 77+05.80 | LT | 97.93 | | | | | 0.02 | | 97.93 |
| 77+21.30 | 80+49.53 | LT | 316.11 | | 0.07 | | | 0.07 | | |
| 77+21.30 | 78+38.82 | RT | 190.16 | | 0.04 | | | 0.04 | | |
| 77+25.04 | 78+39.48 | RT | 113.01 | | | | | 0.02 | | 113.01 |
| 77+25.04 | 80+49.53 | LT | 322.42 | | 0.07 | | 0.07 | | 354.47 | |
| 78+66.48 | 80+00.00 | RT | 226.70 | | 0.05 | | | 0.05 | | |
| 79+50.00 | 80+41.83 | RT | 67.48 | | | | | 0.01 | | 67.48 |
| 78+66.48 | 80+53.13 | RT | 227.69 | | 0.05 | | 0.05 | | 227.69 | |
| ROUNDED TOTAL | | | 5,269 | 0.25 | 1.00 | 382 | 0.50 | 0.75 | 3,179 | 808 |

TEMPORARY DITCH CHECKS

| STATION | LT/RT | FOOT |
|---------------|-------|-------|
| 52+00.00 | LT | 10.00 |
| 52+00.00 | RT | 10.00 |
| 52+50.00 | LT | 10.00 |
| 52+50.00 | RT | 10.00 |
| 52+64.00 | LT | 10.00 |
| 52+64.00 | RT | 10.00 |
| 74+00.00 | LT | 10.00 |
| 74+50.00 | LT | 12.00 |
| 75+00.00 | LT | 12.00 |
| 75+00.00 | RT | 16.00 |
| 75+50.00 | RT | 12.00 |
| 76+50.00 | LT | 10.00 |
| 76+50.00 | RT | 12.00 |
| 79+00.00 | RT | 16.00 |
| ROUNDED TOTAL | | 160 |

PERIMETER EROSION BARRIER

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|--------|
| 51+08.00 | 52+84.75 | RT | 176.34 |
| 51+50.00 | 52+82.64 | LT | 137.11 |
| 53+00.37 | 54+50.00 | LT | 152.97 |
| 53+02.49 | 54+50.00 | RT | 149.59 |
| 73+50.00 | 74+50.00 | LT | 101.57 |
| 73+50.00 | 75+50.00 | RT | 200.99 |
| 75+83.43 | 76+02.55 | RT | 19.17 |
| 77+25.04 | 80+49.53 | LT | 327.78 |
| 79+50.00 | 80+41.85 | RT | 94.82 |
| ROUNDED TOTAL | | | 1,361 |



| | | |
|---------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - NK | REVISED - |
| | DRAWN - NK | REVISED - |
| PLOT SCALE = 2,000' / in. | CHECKED - ST | REVISED - |
| PLOT DATE = 5/2/2018 | DATE - 12/2017 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
SCHEDULES OF QUANTITIES**

SCALE: N.T.S. SHEET 1 OF 4 SHEETS STA. TO STA.

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|--------|--------------|--------------------|
| 2721 | 2016-054B | COOK | 50 | 10 |
| | | | | CONTRACT NO. 62D40 |
| ILLINOIS FED. AID PROJECT | | | | |

AGGREGATE SUBGRADE IMPROVEMENT

| FROM STATION | TO STATION | LT/RT | CU YD |
|---------------|------------|-------|--------|
| 52+60.00 | 53+25.00 | LT/RT | 22.07 |
| 74+50.00 | 79+50.00 | LT/RT | 184.31 |
| ROUNDED TOTAL | | | 207 |

AGGREGATE SUBGRADE IMPROVEMENT 12"

| FROM STATION | TO STATION | LT/RT | SQ YD |
|---------------|------------|-------|--------|
| 52+60.00 | 53+25.00 | LT/RT | 17.80 |
| 74+50.00 | 79+50.00 | LT/RT | 148.63 |
| ROUNDED TOTAL | | | 167 |

HOT-MIX ASPHALT SURFACE COURSE, MIX"D", N70

| FROM STATION | TO STATION | LT/RT | TON |
|---------------|------------|-------|--------|
| 52+00.00 | 52+60.00 | LT/RT | 16.43 |
| 52+60.00 | 53+25.00 | LT/RT | 17.80 |
| 53+25.00 | 54+00.00 | LT/RT | 20.53 |
| 74+00.00 | 74+50.00 | LT/RT | 13.69 |
| 74+50.00 | 79+50.00 | LT/RT | 148.63 |
| 79+50.00 | 80+00.00 | LT/RT | 13.69 |
| ROUNDED TOTAL | | | 231 |

HOT-MIX ASPHALT BASE COURSE, 6"

| FROM STATION | TO STATION | LT/RT | SQ YD |
|---------------|------------|-------|----------|
| 52+60.00 | 53+25.00 | LT/RT | 158.89 |
| 74+50.00 | 79+50.00 | LT/RT | 1,327.02 |
| ROUNDED TOTAL | | | 1,486 |

HOT-MIX ASPHALT SHOULDERS, 8"

| FROM STATION | TO STATION | LT/RT | SQ YD |
|---------------|------------|-------|--------|
| 52+00.00 | 54+00.00 | LT | 84.25 |
| 52+00.00 | 54+00.00 | RT | 84.25 |
| 74+00.00 | 80+00.00 | LT | 263.75 |
| 74+00.00 | 78+25.04 | RT | 188.91 |
| 78+80.93 | 80+00.00 | RT | 49.18 |
| ROUNDED TOTAL | | | 671 |

BITUMINOUS MATERIALS (TACK COAT)

| FROM STATION | TO STATION | LT/RT | # OF LIFTS | POUND |
|---------------|------------|-------|------------|--------|
| 52+00.00 | 52+60.00 | LT/RT | 1 | 66.00 |
| 52+60.00 | 53+25.00 | LT/RT | 2 | 71.50 |
| 52+60.00 | 53+25.00 | LT/RT | 1 | 35.75 |
| 53+25.00 | 54+00.00 | LT/RT | 1 | 82.50 |
| 74+00.00 | 74+50.00 | LT/RT | 1 | 55.00 |
| 74+50.00 | 79+50.00 | LT/RT | 2 | 597.16 |
| 74+50.00 | 79+50.00 | LT/RT | 1 | 298.58 |
| 79+50.00 | 80+00.00 | LT/RT | 1 | 55.00 |
| ROUNDED TOTAL | | | | 1,270 |

PAVEMENT REMOVAL

| FROM STATION | TO STATION | LT/RT | SQ YD |
|---------------|------------|-------|----------|
| 52+60.00 | 53+25.00 | LT/RT | 156.29 |
| 74+50.00 | 79+50.00 | LT/RT | 1,359.61 |
| ROUNDED TOTAL | | | 1,516 |

HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH

| FROM STATION | TO STATION | LT/RT | SQ YD |
|---------------|------------|-------|--------|
| 52+00.00 | 52+60.00 | LT/RT | 143.15 |
| 53+25.00 | 54+00.00 | LT/RT | 182.31 |
| 74+00.00 | 74+50.00 | LT/RT | 122.87 |
| 79+50.00 | 80+00.00 | LT/RT | 121.66 |
| ROUNDED TOTAL | | | 570 |

COMBINATION CURB AND GUTTER REMOVAL

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|-------|
| 78+26.42 | 78+39.50 | RT | 33.54 |
| 78+81.59 | 78+66.52 | RT | 29.08 |
| ROUNDED TOTAL | | | 63 |

PIPE CULVERT REMOVAL

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|-------|
| 75+83.43 | 76+03.78 | RT | 20.37 |
| 77+99.88 | 78+94.53 | RT | 94.70 |
| ROUNDED TOTAL | | | 116 |

PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"

| STATION | LT/RT | EACH |
|----------|-------|------|
| 75+83.43 | RT | 1 |
| 76+02.55 | RT | 1 |
| TOTAL | | 2 |

PRECAST REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND-SIZE 24"

| STATION | LT/RT | EACH |
|----------|-------|------|
| 78+32.91 | RT | 1 |
| 78+72.46 | RT | 1 |
| TOTAL | | 2 |

PIPE CULVERTS, CLASS A, TYPE 2 18"

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|------|
| 75+83.43 | 76+02.55 | RT | 19.1 |
| ROUNDED TOTAL | | | 20 |

PIPE CULVERTS, CLASS A, TYPE 2 EQUIVALENT ROUND-SIZE 24"

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|-------|
| 78+32.91 | 78+40.29 | RT | 7.38 |
| 78+40.29 | 78+72.46 | RT | 32.16 |
| ROUNDED TOTAL | | | 40 |

STORM SEWERS, CLASS A, TYPE 2 12"

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|------|
| 78+40.98 | 78+64.98 | RT | 24.0 |
| ROUNDED TOTAL | | | 24 |

STORM SEWERS, CLASS A, TYPE 2 18"

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|------|
| 78+40.29 | 78+40.98 | RT | 7.81 |
| ROUNDED TOTAL | | | 8 |

STORM SEWER REMOVAL 12"

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|-------|
| 78+42.88 | 78+64.86 | RT | 21.98 |
| ROUNDED TOTAL | | | 22 |

STORM SEWER REMOVAL 15"

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|-------|
| 78+42.88 | 78+44.36 | RT | 16.83 |
| ROUNDED TOTAL | | | 17 |

CATCH BASINS, TYPE A, 4'- DIAMETER, TYPE 1 FRAME, OPEN LID

| STATION | LT/RT | EACH |
|----------|----------|------|
| 78+64.98 | 37.5' RT | 1 |
| TOTAL | | 1 |

CATCH BASINS, TYPE A, 5'- DIAMETER, TYPE 1 FRAME, OPEN LID

| STATION | LT/RT | EACH |
|----------|----------|------|
| 78+40.98 | 37.5' RT | 1 |
| TOTAL | | 1 |

MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, OPEN LID

| STATION | LT/RT | EACH |
|----------|----------|------|
| 78+40.29 | 29.3' RT | 1 |
| TOTAL | | 1 |

REMOVING CATCH BASINS

| STATION | LT/RT | EACH |
|----------|-------|------|
| 78+42.88 | RT | 1 |
| 78+44.36 | RT | 1 |
| 78+64.86 | RT | 1 |
| TOTAL | | 3 |



USER NAME = Lin
 PLOT SCALE = 2,000' / in.
 PLOT DATE = 12/29/2017

DESIGNED - NK
 DRAWN - NK
 CHECKED - ST
 DATE - 12/2017

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
 SCHEDULES OF QUANTITIES**

SCALE: N.T.S. SHEET 2 OF 4 SHEETS STA. TO STA.

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 11 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

**LONG-SPAN GUARDRAIL OVER CULVERT,
12 FT 6 IN SPAN**

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|------|
| 52+72.58 | 53+10.58 | LT | 37.5 |
| 52+74.54 | 53+12.54 | RT | 37.5 |
| ROUNDED TOTAL | | | 75.0 |

**LONG-SPAN GUARDRAIL OVER CULVERT,
18 FT 9 IN SPAN**

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|-------|
| 76+91.43 | 77+35.68 | LT | 43.75 |
| 76+91.43 | 77+35.68 | RT | 43.75 |
| ROUNDED TOTAL | | | 87.5 |

TRAFFIC BARRIER TERMINAL, TYPE 2

| FROM STATION | TO STATION | LT/RT | EACH |
|--------------|------------|-------|------|
| 51+97.83 | 52+10.33 | LT | 1 |
| 53+74.79 | 53+87.29 | RT | 1 |
| 76+16.68 | 76+29.18 | LT | 1 |
| 77+97.93 | 78+10.43 | RT | 1 |
| TOTAL | | | 4 |

**TRAFFIC BARRIER TERMINAL,
TYPE 1 (SPECIAL) TANGENT**

| FROM STATION | TO STATION | LT/RT | EACH |
|--------------|------------|-------|------|
| 51+87.29 | 52+37.29 | RT | 1 |
| 53+47.83 | 53+97.83 | LT | 1 |
| 76+04.18 | 76+54.18 | RT | 1 |
| 77+72.93 | 78+22.93 | LT | 1 |
| TOTAL | | | 4 |

GUARDRAIL REMOVAL

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|-------|
| 52+40.23 | 53+28.61 | RT | 88.39 |
| 52+44.00 | 53+10.74 | LT | 66.94 |
| ROUNDED TOTAL | | | 156 |

REMOVE SIGN PANEL ASSEMBLY-TYPE A

| STATION | LT/RT | EACH |
|----------|-------|------|
| 51+68.85 | RT | 1 |
| 51+98.86 | LT | 1 |
| 53+26.00 | LT | 1 |
| 75+10.72 | RT | 1 |
| 75+12.49 | LT | 1 |
| 77+35.26 | RT | 1 |
| 77+38.96 | LT | 1 |
| TOTAL | | 7 |

TERMINAL MARKER-DIRECT APPLIED

| STATION | LT/RT | EACH |
|----------|-------|------|
| 51+87.29 | RT | 1 |
| 51+97.83 | LT | 1 |
| 53+87.29 | RT | 1 |
| 53+97.83 | LT | 1 |
| 76+04.18 | RT | 1 |
| 76+16.68 | LT | 1 |
| 78+10.43 | RT | 1 |
| 78+22.93 | LT | 1 |
| TOTAL | | 8 |

TELESCOPING STEEL SIGN SUPPORT

| SIGN | STATION | LT/RT | FOOT |
|---------------|----------|-------|------|
| W14-3 | 52+00.00 | LT | 15.5 |
| W11-7 | 75+10.72 | RT | 18.5 |
| W16-9P | | | |
| R2-1 | 75+12.49 | LT | 19.5 |
| R7-13 | | | |
| W14-3 | 77+35.26 | RT | 18.0 |
| R2-1 | | | |
| W11-7 | 77+38.96 | LT | 17.0 |
| W16-9P | | | |
| ROUNDED TOTAL | | | 89 |

THERMOPLASTIC PAVEMENT MARKING-LINE 4"

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|--------|
| 52+00.00 | 54+00.00 | LT | 200.00 |
| 52+00.00 | 54+00.00 | RT | 200.00 |
| 52+00.00 | 53+28.61 | CL | 128.61 |
| 52+00.00 | 53+28.61 | CL | 32.15 |
| 53+28.61 | 54+00.00 | CL | 71.39 |
| 53+28.61 | 54+00.00 | CL | 17.85 |
| 74+00.00 | 80+00.00 | LT | 600.00 |
| 74+00.00 | 78+16.98 | RT | 416.98 |
| 74+00.00 | 77+35.55 | CL | 335.55 |
| 74+00.00 | 77+35.55 | CL | 83.89 |
| 77+35.55 | 80+00.00 | CL | 66.11 |
| 78+88.98 | 80+00.00 | RT | 111.02 |
| ROUNDED TOTAL | | | 2,264 |

SIGN PANEL-TYPE 1

| SIGN | STATION | LT/RT | SQ FT |
|---------------|----------|-------|-------|
| W14-3 | 52+00.00 | LT | 5.56 |
| W11-7 | 75+10.72 | RT | 9.00 |
| W16-9P | 75+10.72 | RT | 2.00 |
| R2-1 | 75+12.49 | LT | 5.00 |
| R7-13 | 75+12.49 | LT | 1.50 |
| W14-3 | 77+35.26 | RT | 5.56 |
| R2-1 | 77+35.26 | RT | 5.00 |
| W11-7 | 77+38.96 | LT | 9.00 |
| W16-9P | 77+38.96 | LT | 2.00 |
| ROUNDED TOTAL | | | 45 |

COMBINATION CURB AND GUTTER, TYPE B-6.12

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|-------|
| 78+25.04 | 78+39.48 | RT | 31.89 |
| 78+66.48 | 78+80.93 | RT | 31.89 |
| ROUNDED TOTAL | | | 64.0 |

RAISED REFLECTIVE PAVEMENT MARKER

| STATION | LT/RT | EACH |
|----------|-------|------|
| 52+00.00 | CL | 1 |
| 52+80.00 | CL | 1 |
| 53+60.00 | CL | 1 |
| 74+00.00 | CL | 1 |
| 74+80.00 | CL | 1 |
| 75+60.00 | CL | 1 |
| 76+40.00 | CL | 1 |
| 77+20.00 | CL | 1 |
| 78+00.00 | CL | 1 |
| 78+80.00 | CL | 1 |
| 79+60.00 | CL | 1 |
| TOTAL | | 11 |

GUARDRAIL REFLECTORS, TYPE A

| STATION | LT/RT | EACH |
|----------|-------|------|
| 52+37.83 | LT | 1 |
| 52+67.29 | RT | 1 |
| 53+17.83 | LT | 1 |
| 53+47.29 | RT | 1 |
| 76+62.93 | LT | 1 |
| 76+84.18 | RT | 1 |
| 77+42.93 | LT | 1 |
| 77+64.18 | RT | 1 |
| TOTAL | | 8 |

**STEEL PLATE BEAM GUARDRAIL, TYPE A,
6 FOOT POSTS**

| FROM STATION | TO STATION | LT/RT | FOOT |
|---------------|------------|-------|-------|
| 52+10.33 | 52+72.58 | LT | 62.5 |
| 52+37.29 | 52+74.54 | RT | 37.5 |
| 53+10.58 | 53+47.83 | LT | 37.5 |
| 53+12.54 | 53+74.79 | RT | 62.5 |
| 76+29.18 | 76+91.43 | LT | 62.5 |
| 76+54.18 | 76+91.43 | RT | 37.5 |
| 77+35.68 | 77+72.93 | LT | 37.5 |
| 77+35.68 | 77+97.93 | RT | 62.5 |
| ROUNDED TOTAL | | | 400.0 |

**RAISED REFLECTIVE PAVEMENT
MARKER REMOVAL**

| STATION | LT/RT | EACH |
|----------|-------|------|
| 52+00.00 | CL | 1 |
| 52+80.00 | CL | 1 |
| 53+60.00 | CL | 1 |
| 74+00.00 | CL | 1 |
| 74+80.00 | CL | 1 |
| 75+60.00 | CL | 1 |
| 76+40.00 | CL | 1 |
| 77+20.00 | CL | 1 |
| 78+00.00 | CL | 1 |
| 78+80.00 | CL | 1 |
| 79+60.00 | CL | 1 |
| TOTAL | | 11 |

**TREE, QUERCUS ELLIPSOIDALIS (HILL'S OAK),
2" CALIPER, BALLED AND BURLAPPED**

| STATION | LT/RT | EACH |
|----------|-------|------|
| 73+21.98 | LT | 1 |
| 74+55.59 | LT | 1 |
| 75+97.83 | LT | 1 |
| 77+37.35 | LT | 1 |
| 80+06.94 | LT | 1 |
| 80+21.15 | LT | 1 |
| 80+37.26 | LT | 1 |
| TOTAL | | 7 |

**TREE, AMELANCHIER CANADENSIS
(SHADBLOW SERVICEBERRY), 5' HEIGHT,
SHURB FORM, BALLED AND BURLAPPED**

| STATION | LT/RT | EACH |
|----------|-------|------|
| 74+64.31 | RT | 1 |
| 74+79.31 | RT | 1 |
| 74+94.31 | RT | 1 |
| 75+09.31 | RT | 1 |
| 75+24.31 | RT | 1 |
| 75+39.31 | RT | 1 |
| 75+54.31 | RT | 1 |
| 75+69.31 | RT | 1 |
| 75+84.31 | RT | 1 |
| TOTAL | | 9 |

**SHRUB, CORYLUS AMERICANA (AMERICAN FILBERT),
3' HEIGHT, BALLED AND BURLAPPED**

| STATION | LT/RT | EACH |
|----------|-------|------|
| 73+35.61 | RT | 1 |
| 73+40.61 | RT | 1 |
| 73+45.61 | RT | 1 |
| 73+50.61 | RT | 1 |
| 73+55.61 | RT | 1 |
| 73+60.61 | RT | 1 |
| 73+65.61 | RT | 1 |
| 73+70.61 | RT | 1 |
| 73+75.61 | RT | 1 |
| 73+80.61 | RT | 1 |
| 73+85.61 | RT | 1 |
| 73+90.61 | RT | 1 |
| 73+95.61 | RT | 1 |
| 74+00.61 | RT | 1 |
| 74+05.61 | RT | 1 |
| 74+10.61 | RT | 1 |
| 74+15.61 | RT | 1 |
| 74+20.61 | RT | 1 |
| 74+25.61 | RT | 1 |
| 74+30.61 | RT | 1 |
| 74+35.61 | RT | 1 |
| 74+40.61 | RT | 1 |
| 74+45.61 | RT | 1 |
| 74+50.61 | RT | 1 |
| 74+55.61 | RT | 1 |
| TOTAL | | 25 |

**SHRUB, HAMAMELIS VIRGINIANA
(COMMON WITCHHAZEL), 5' HEIGHT,
BALLED AND BURLAPPED**

| STATION | LT/RT | EACH |
|----------|-------|------|
| 72+65.16 | RT | 1 |
| 72+80.16 | RT | 1 |
| 72+95.16 | RT | 1 |
| 73+10.16 | RT | 1 |
| 73+25.16 | RT | 1 |
| TOTAL | | 5 |

**SHRUB, VIBURNUM PRUNIFOLIUM
(BLACKHAW VIBURNUM), 4' HEIGHT,
BALLED AND BURLAPPED**

| STATION | LT/RT | EACH |
|----------|-------|------|
| 72+67.25 | LT | 1 |
| 72+72.25 | LT | 1 |
| 72+77.25 | LT | 1 |
| 72+82.25 | LT | 1 |
| 72+87.25 | LT | 1 |
| 73+44.03 | LT | 1 |
| 73+49.03 | LT | 1 |
| 73+54.03 | LT | 1 |
| 73+59.03 | LT | 1 |
| 73+64.03 | LT | 1 |
| TOTAL | | 10 |

TEMPORARY INFORMATION SIGNING

| DESCRIPTION | HEIGHT (FT) | WIDTH (FT) | SQ FT |
|---------------------|-------------|------------|-------|
| ROAD WILL BE CLOSED | 5.50 | 4.00 | 22.0 |
| ROAD WILL BE CLOSED | 5.50 | 4.00 | 22.0 |
| ROAD WILL BE CLOSED | 5.50 | 4.00 | 22.0 |
| ROAD WILL BE CLOSED | 5.50 | 4.00 | 22.0 |
| ROUNDED TOTAL | | | 88 |

PIPE UNDERDRAINS, TYPE 2, 4"

| STATION | LT/RT | EACH |
|----------|-------|-------|
| 53+32.45 | RT | 10.98 |
| 53+32.45 | LT | 10.98 |
| 77+95.20 | RT | 10.98 |
| 77+95.20 | LT | 10.98 |
| TOTAL | | 44 |

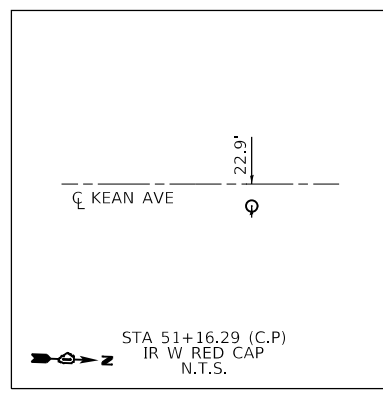
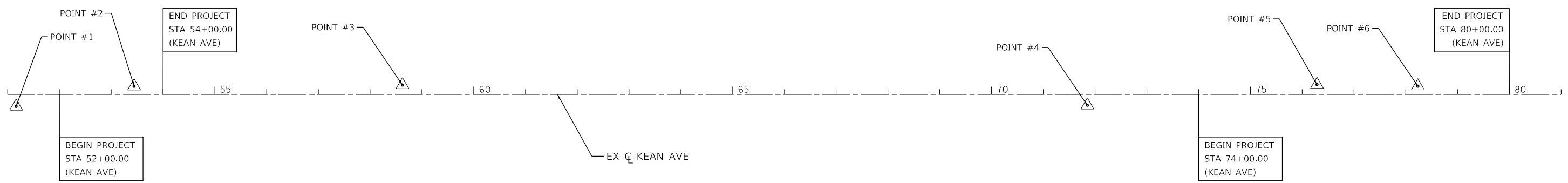
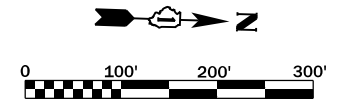
**SHRUB, SAMBUCUS CANADENSIS (AMERICAN ELDER),
2' HEIGHT, CONTAINER**

| STATION | LT/RT | EACH |
|----------|-------|------|
| 73+33.11 | RT | 1 |
| 73+38.11 | RT | 1 |
| 73+43.11 | RT | 1 |
| 73+48.11 | RT | 1 |
| 73+53.11 | RT | 1 |
| 73+58.11 | RT | 1 |
| 73+63.11 | RT | 1 |
| 73+68.11 | RT | 1 |
| 73+73.11 | RT | 1 |
| 73+78.11 | RT | 1 |
| 73+83.11 | RT | 1 |
| 73+88.11 | RT | 1 |
| 73+93.11 | RT | 1 |
| 73+98.11 | RT | 1 |
| 74+03.11 | RT | 1 |
| 74+08.11 | RT | 1 |
| 74+13.11 | RT | 1 |
| 74+18.11 | RT | 1 |
| 74+23.11 | RT | 1 |
| 74+28.11 | RT | 1 |
| 74+33.11 | RT | 1 |
| 74+38.11 | RT | 1 |
| 74+43.11 | RT | 1 |
| 74+48.11 | RT | 1 |
| 74+53.11 | RT | 1 |
| TOTAL | | 25 |

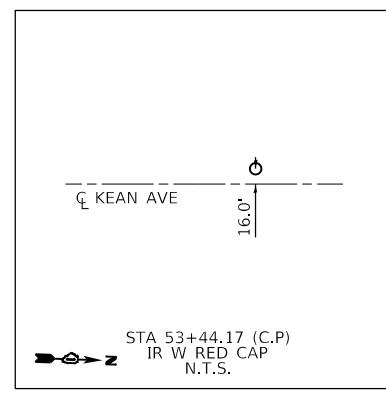
CONCRETE HEADWALLS FOR PIPE DRAINS

| STATION | LT/RT | EACH |
|----------|-------|------|
| 53+32.45 | RT | 1 |
| 53+32.45 | LT | 1 |
| 77+95.20 | RT | 1 |
| 77+95.20 | LT | 1 |
| TOTAL | | 4 |

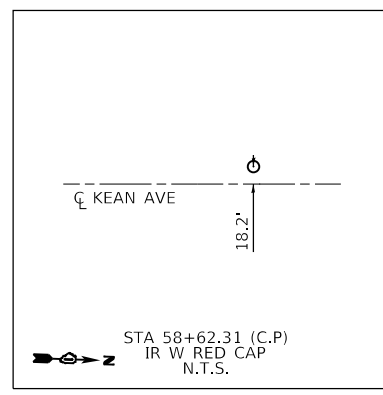
BENCHMARK: DCH 04/DO9260 - THE STATION IS LOCATED 43 FT (13.1 M) SOUTH OF 95TH STREET,
 53 FT (16.2 M) WEST OF THE CENTERLINE OF KEAN AVENUE AND 13.4 FT (4.1 M)
 NORTHEAST OF THE NORTH END OF A 'COOK COUNTY FOREST PRESERVE' SIGN.
 ELEV. = 706.96 (NAVD 88)



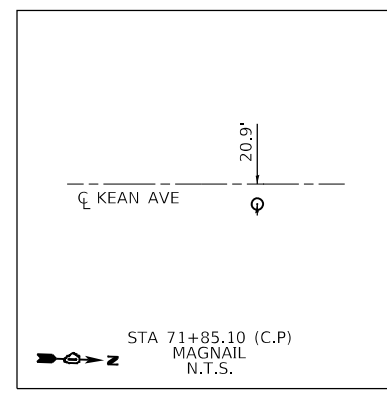
△ CONTROL POINT #1



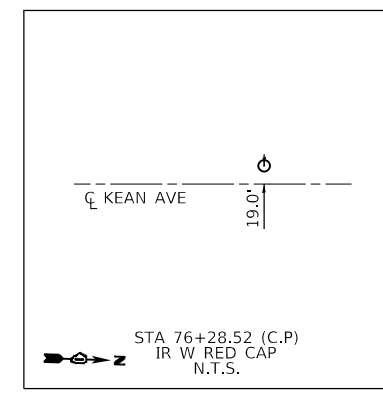
△ CONTROL POINT #2



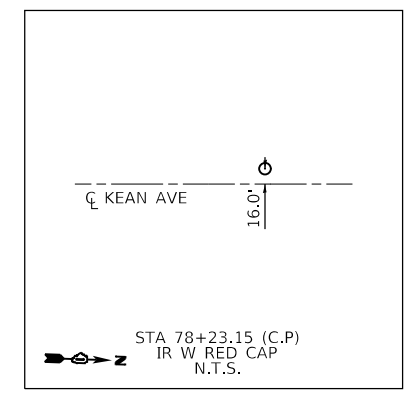
△ CONTROL POINT #3



△ CONTROL POINT #4



△ CONTROL POINT #5



△ CONTROL POINT #6

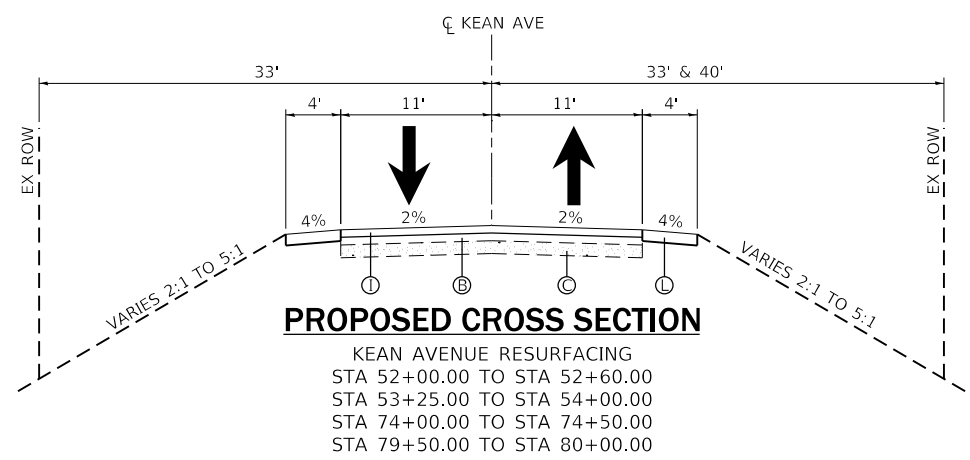
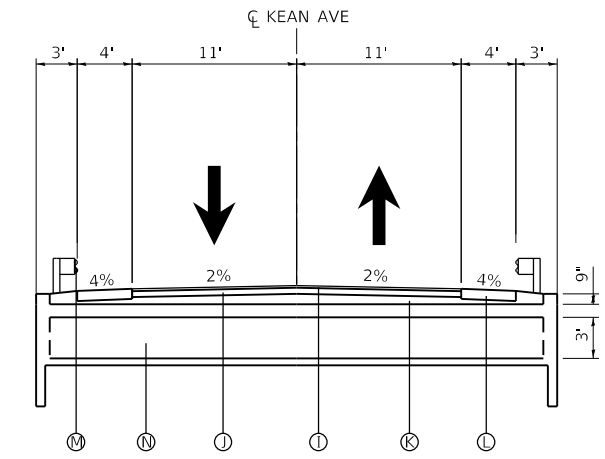
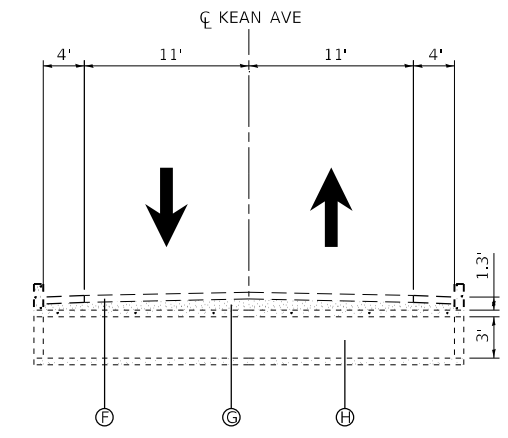
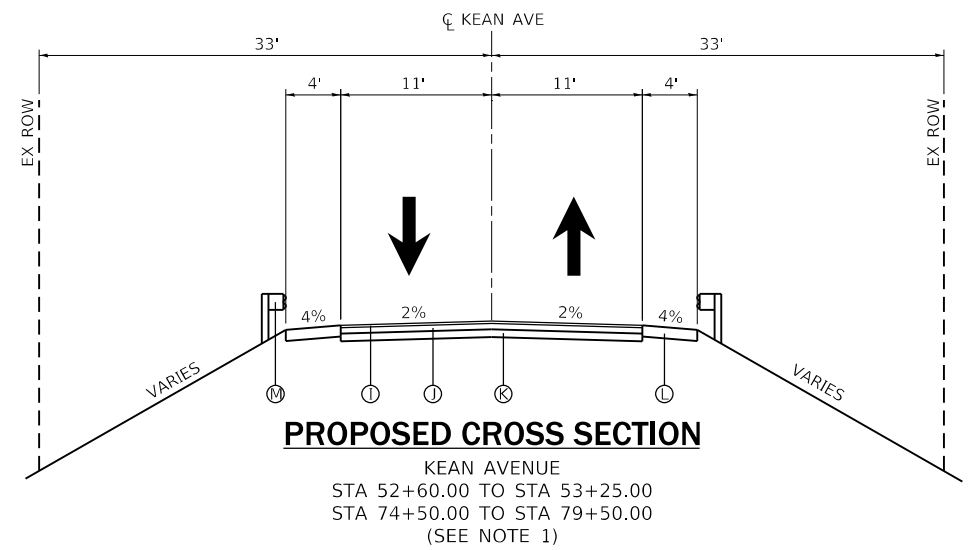
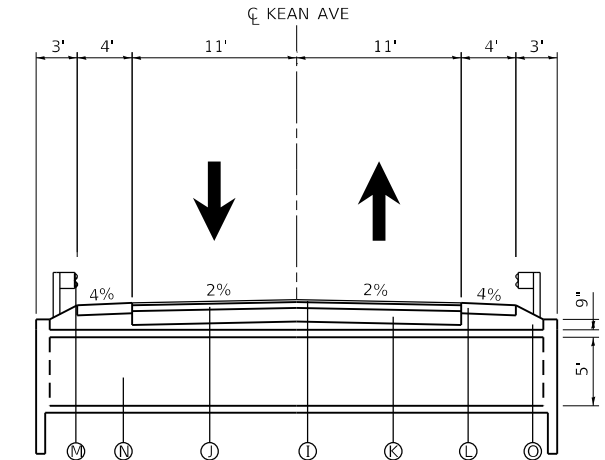
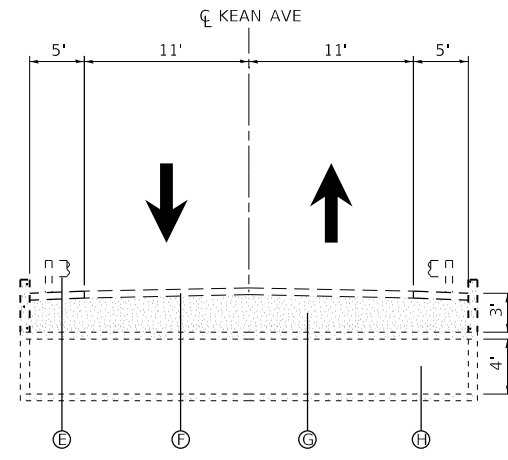
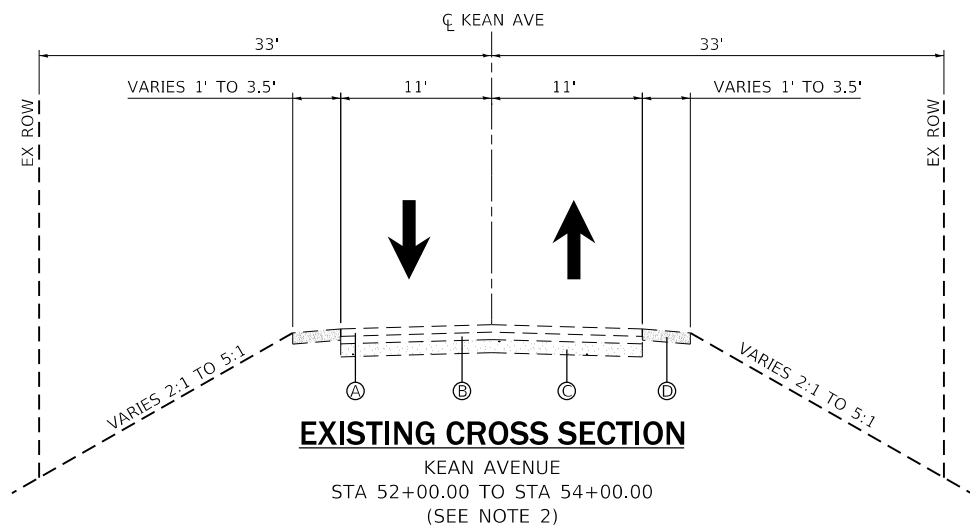


| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - RC | REVISED - |
| PLOT SCALE = 200.0000' / in. | DRAWN - RC | REVISED - |
| PLOT DATE = 12/29/2017 | CHECKED - ST | REVISED - |
| | DATE - 11/2017 | REVISED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

| | | |
|--|---------------------|--------------|
| KEAN AVENUE OVER DITCHES ALIGNMENT, TIES AND BENCHMARKS | | |
| SCALE: 1"=100' | SHEET 1 OF 1 SHEETS | STA. TO STA. |

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 14 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



LEGEND

- Ⓐ EXISTING HMA RESURFACING (1983), 3"
- Ⓑ EXISTING BIT RESURFACING (DATE UNKNOWN), 3"
- Ⓒ EXISTING PCC PAVEMENT
- Ⓓ EXISTING AGGREGATE SHOULDER, TYPE B
- Ⓔ EXISTING GUARDRAIL
- Ⓕ EXISTING PAVEMENT
- Ⓖ EXISTING SUBBASE/COVER
- Ⓗ EXISTING CULVERT
- Ⓚ PROPOSED HMA SURFACE COURSE, MIX "D", N70, 2"
- Ⓛ PROPOSED HMA BASE COURSE, 6"
- Ⓜ PROPOSED AGGREGATE SUBGRADE IMPROVEMENT, 12" & VARIES
- Ⓝ PROPOSED HMA SHOULDER, 8"
- Ⓜ PROPOSED LONG-SPAN GUARDRAIL (630106)
- Ⓝ PROPOSED CULVERT
- Ⓞ COMPACTED SUBGRADE

NOTES: 1. SEE PLAN & PROFILE SHEETS FOR PROPOSED GUARDRAIL LIMITS.
2. AS-BUILT INFORMATION IS NOT AVAILABLE FOR THE PAVEMENT AT THE NORTH STRUCTURE.

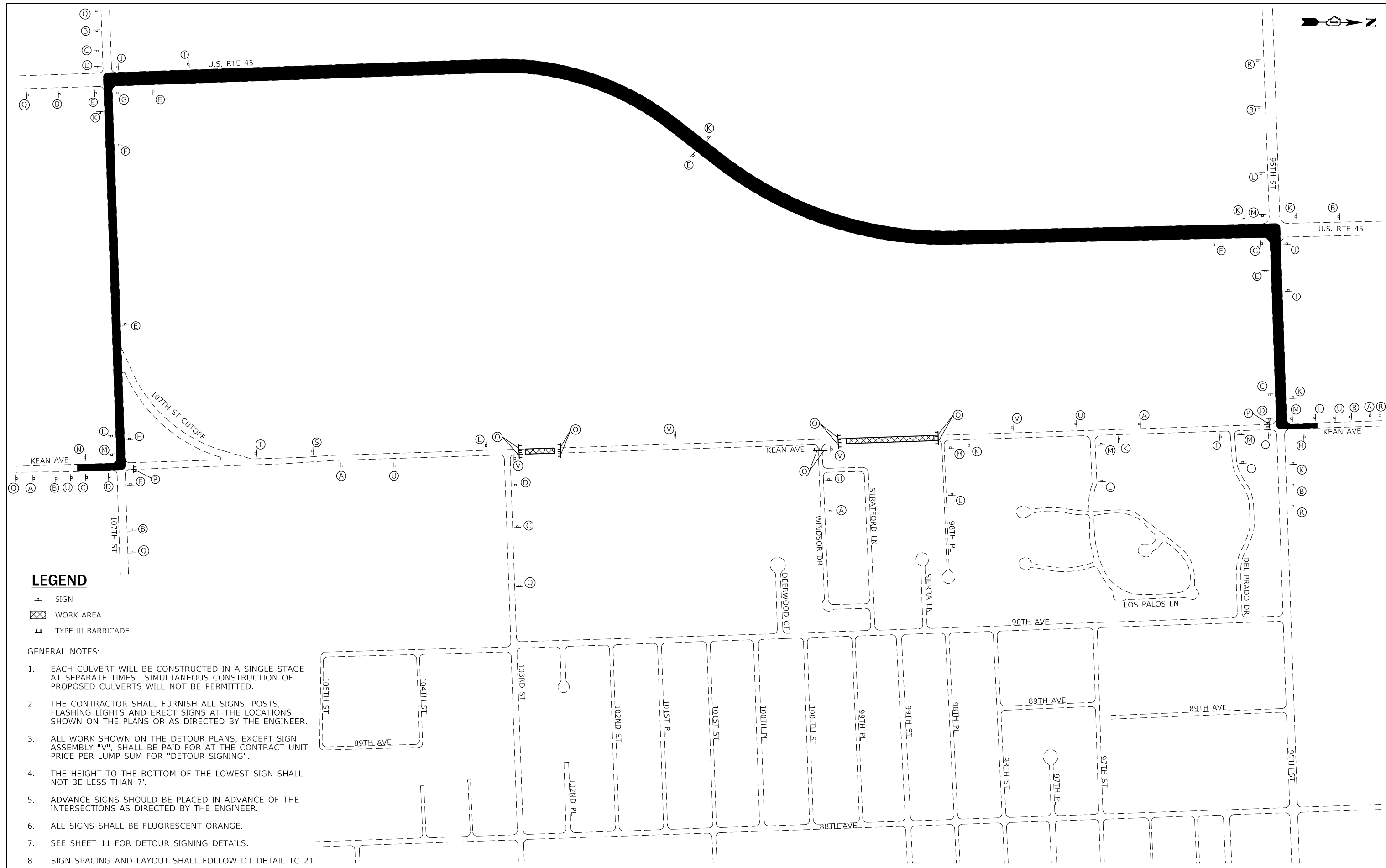
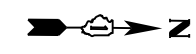


| | | |
|-----------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - NK | REVISED - |
| PLOT SCALE = 1/4" = 14.0000' / 1" | DRAWN - NK | REVISED - |
| PLOT DATE = 12/29/2017 | CHECKED - ST | REVISED - |
| | DATE - 11/2017 | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | |
|--|---------------------|
| KEAN AVENUE OVER DITCHES TYPICAL SECTIONS | |
| SCALE: N.T.S. | SHEET 1 OF 1 SHEETS |
| STA. | TO STA. |

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 15 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



LEGEND

- ▲ SIGN
- ▨ WORK AREA
- ⏏ TYPE III BARRICADE

GENERAL NOTES:

1. EACH CULVERT WILL BE CONSTRUCTED IN A SINGLE STAGE AT SEPARATE TIMES.. SIMULTANEOUS CONSTRUCTION OF PROPOSED CULVERTS WILL NOT BE PERMITTED.
2. THE CONTRACTOR SHALL FURNISH ALL SIGNS, POSTS, FLASHING LIGHTS AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
3. ALL WORK SHOWN ON THE DETOUR PLANS, EXCEPT SIGN ASSEMBLY "V", SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LUMP SUM FOR "DETOUR SIGNING".
4. THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT BE LESS THAN 7'.
5. ADVANCE SIGNS SHOULD BE PLACED IN ADVANCE OF THE INTERSECTIONS AS DIRECTED BY THE ENGINEER.
6. ALL SIGNS SHALL BE FLUORESCENT ORANGE.
7. SEE SHEET 11 FOR DETOUR SIGNING DETAILS.
8. SIGN SPACING AND LAYOUT SHALL FOLLOW D1 DETAIL TC 21.

Lin ENGINEERING, LTD.
 Consulting Engineers
 Westmont, Illinois

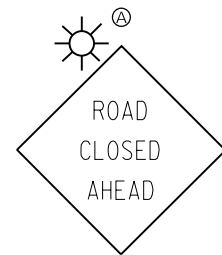
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|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - RC | REVISED - |
| PLOT SCALE = 600,0000' / in. | DRAWN - RC | REVISED - |
| PLOT DATE = 12/29/2017 | CHECKED - ST | REVISED - |
| | DATE - 11/2017 | REVISED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

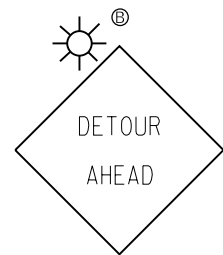
**KEAN AVENUE OVER DITCHES
 DETOUR PLAN**

SCALE: N.T.S. SHEET 1 OF 2 SHEETS STA. TO STA.

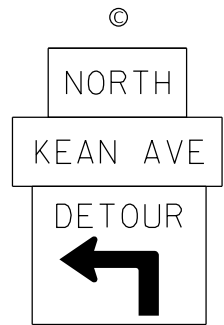
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|--------------------|-------------------|-------------|---------------------------|--------------|
| F.A.U. RTE. 2721 | SECTION 2016-054B | COUNTY COOK | TOTAL SHEETS 50 | SHEET NO. 16 |
| CONTRACT NO. 62D40 | | | ILLINOIS FED. AID PROJECT | |



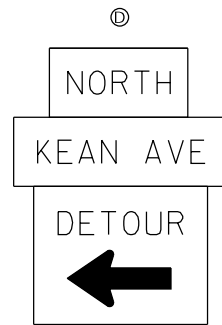
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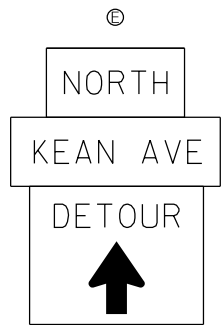
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M3-1-2412
D3-1-3612*
M4-9-3024



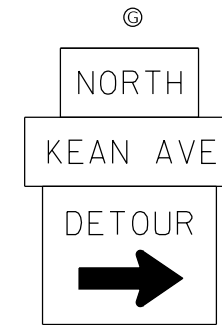
M3-1-2412
D3-1-3612*
M4-9-3024



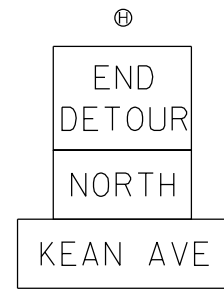
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D3-1-3612*
M4-9-3024



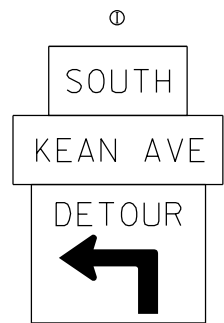
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D3-1-3612*
M4-9-3024



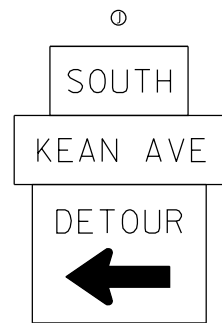
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D3-1-3612*
M4-9-3024



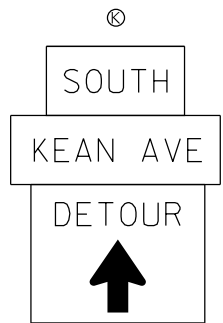
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M3-1-2412
D3-1-3612*



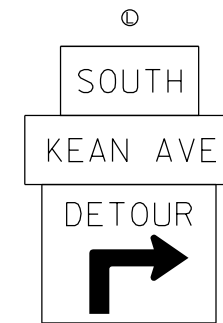
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D3-1-3612*
M4-9-3024



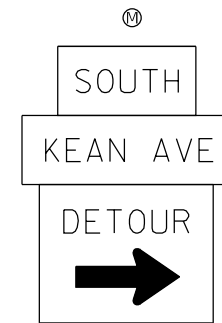
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D3-1-3612*
M4-9-3024



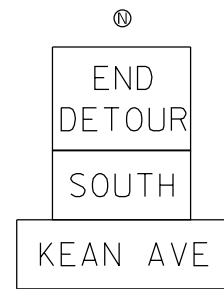
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D3-1-3612*
M4-9-3024



M3-3-2412
D3-1-3612*
M4-9-3024



M3-3-2412
D3-1-3612*
M4-9-3024



M4-8A-2418
M3-3-2412
D3-1-3612*



R11-2-4830



R11-4-6030



60"x48"
ORANGE BACKGROUND
WITH BLACK
6" LETTERING



60"x48"
ORANGE BACKGROUND
WITH BLACK
6" LETTERING

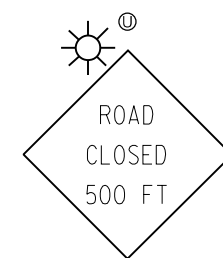


M3-1-2412
D3-1-3612*
M4-9-3024

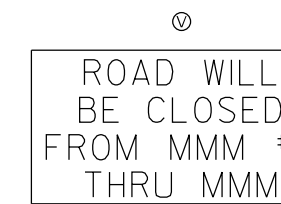
* - ORANGE REFLECTIVE BACKGROUND
WITH MINIMUM 6" BLACK LETTERING



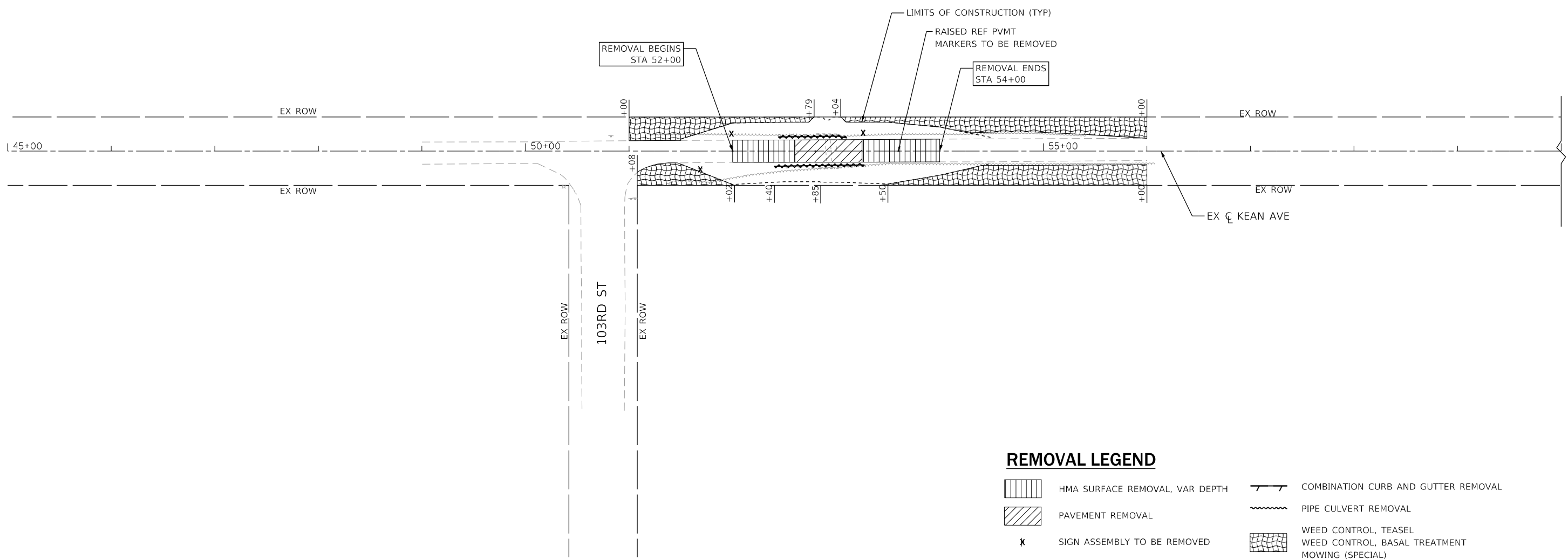
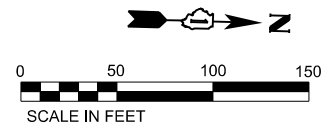
M3-1-2412
D3-1-3612*
M4-9-3024



W20-3-4848



60"x48"
ORANGE BACKGROUND
WITH BLACK
7" LETTERING

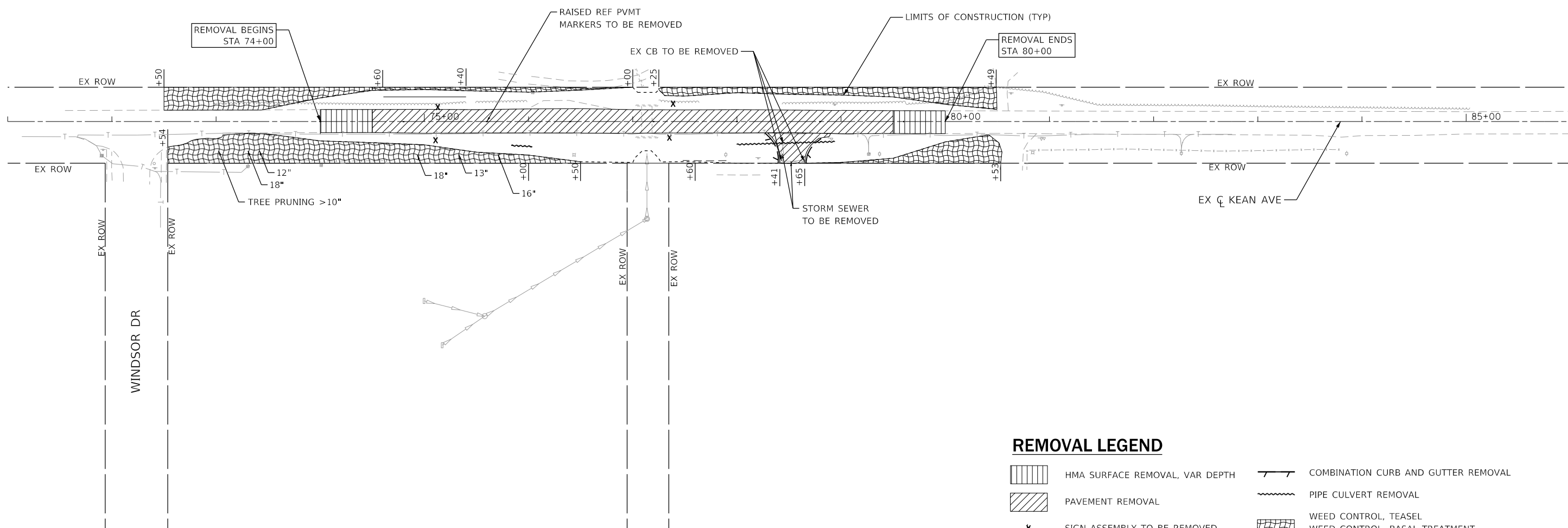
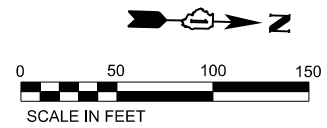


REMOVAL LEGEND

- HMA SURFACE REMOVAL, VAR DEPTH
- PAVEMENT REMOVAL
- SIGN ASSEMBLY TO BE REMOVED
- GUARDRAIL REMOVAL
- COMBINATION CURB AND GUTTER REMOVAL
- PIPE CULVERT REMOVAL
- WEED CONTROL, TEASEL
WEED CONTROL, BASAL TREATMENT
MOWING (SPECIAL)

| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - NK | REVISED - |
| | DRAWN - NK | REVISED - |
| PLOT SCALE = 100,0000' / in. | CHECKED - ST | REVISED - |
| PLOT DATE = 5/2/2018 | DATE - 12/2017 | REVISED - |

| | | | | |
|---------------------------|-----------|--------|--------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 18 |
| ILLINOIS FED. AID PROJECT | | | CONTRACT NO. 62D40 | |

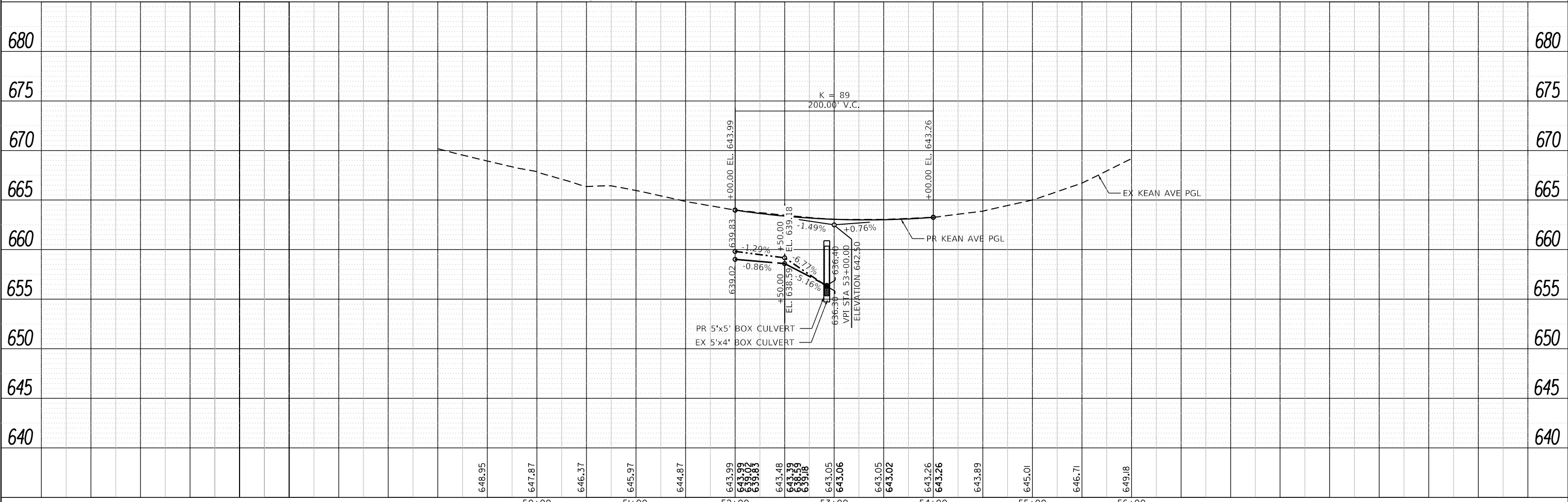
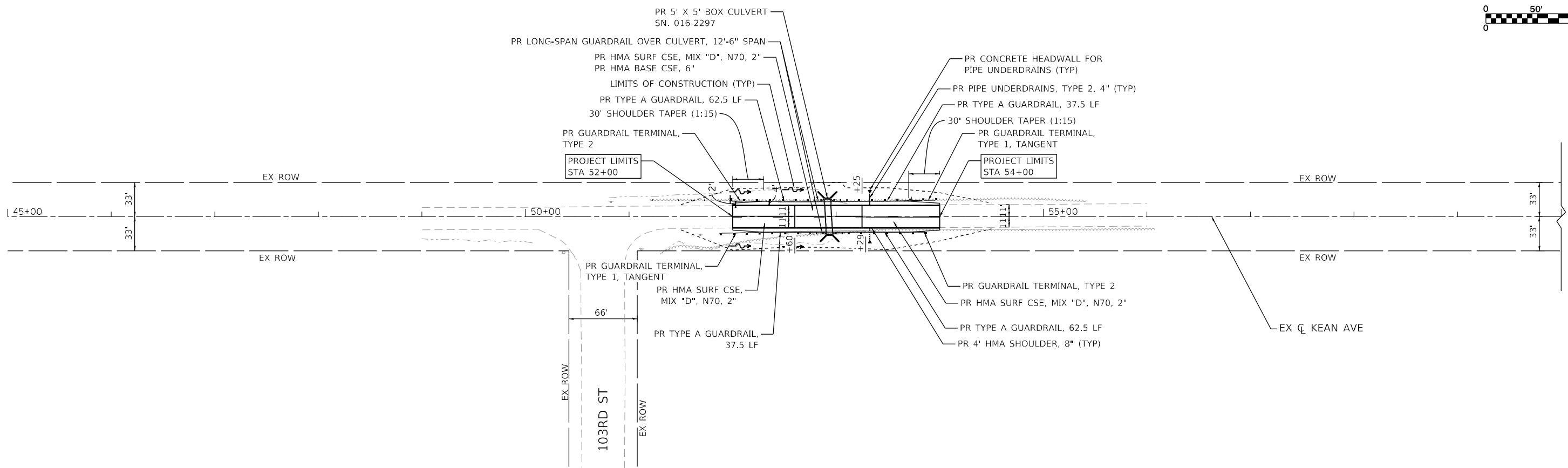


REMOVAL LEGEND

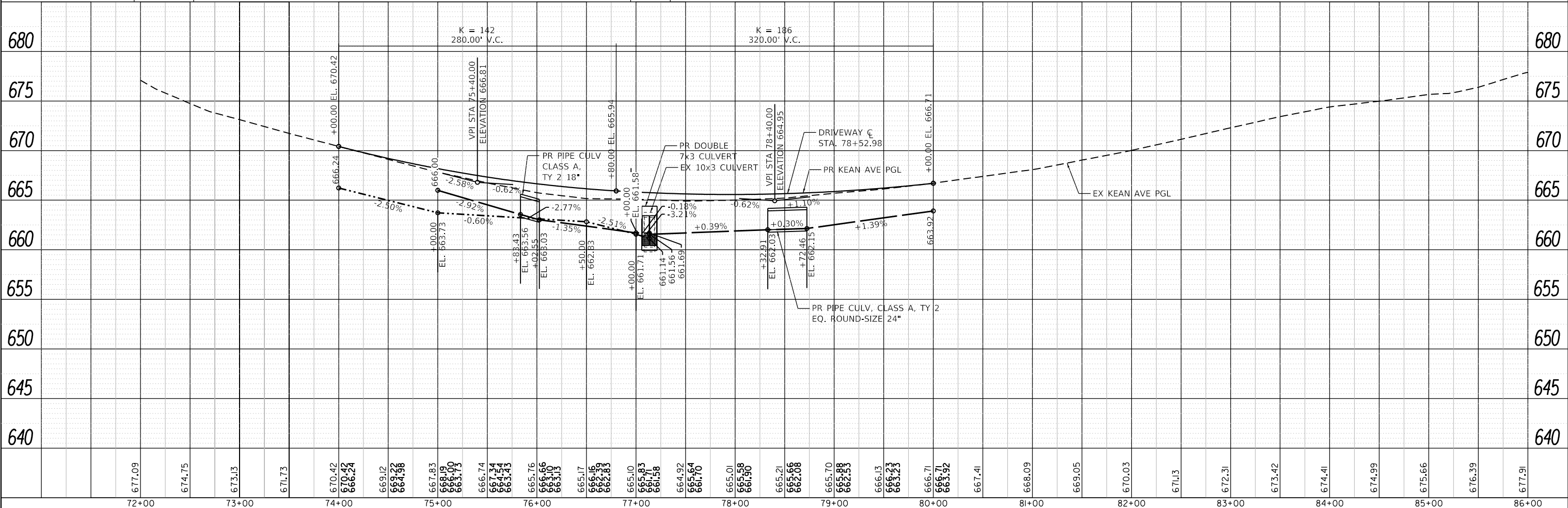
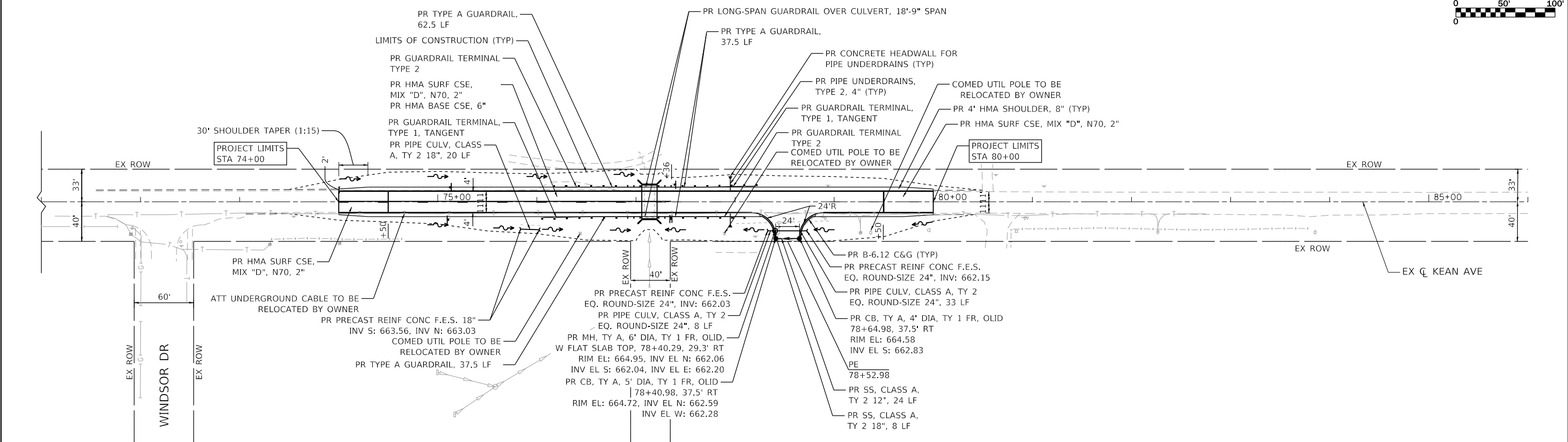
- HMA SURFACE REMOVAL, VAR DEPTH
- PAVEMENT REMOVAL
- SIGN ASSEMBLY TO BE REMOVED
- GUARDRAIL REMOVAL
- COMBINATION CURB AND GUTTER REMOVAL
- PIPE CULVERT REMOVAL
- WEED CONTROL, TEASEL
WEED CONTROL, BASAL TREATMENT
MOWING (SPECIAL)

| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - NK | REVISED - |
| | DRAWN - NK | REVISED - |
| PLOT SCALE = 100,0000' / in. | CHECKED - ST | REVISED - |
| PLOT DATE = 5/2/2018 | DATE - 12/2017 | REVISED - |

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 19 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



| | | | | | | | | | | | |
|--|------------------------------|----------------|-----------|---|--|--|--------------------|-------------------|-------------|---------------------------|--------------|
| | USER NAME = Lin | DESIGNED - RC | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | KEANE AVENUE OVER DITCHES PLAN & PROFILE | | F.A.U. RTE. 2721 | SECTION 2016-054B | COUNTY COOK | TOTAL SHEETS 50 | SHEET NO. 20 |
| | PLOT SCALE = 100.0000' / in. | CHECKED - ST | REVISED - | | SCALE: 1"=50' SHEET 1 OF 2 SHEETS STA. 52+00.00 TO STA. 54+00.00 | | CONTRACT NO. 62D40 | | | ILLINOIS FED. AID PROJECT | |
| | PLOT DATE = 12/29/2017 | DATE - 12/2017 | REVISED - | | | | | | | | |



| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 677.09 | 674.75 | 673.13 | 671.73 | 670.42 | 669.12 | 667.83 | 666.74 | 665.17 | 664.92 | 665.01 | 665.21 | 665.70 | 666.13 | 666.71 | 667.41 | 668.09 | 669.05 | 670.03 | 671.13 | 672.31 | 673.42 | 674.41 | 674.99 | 675.66 | 676.39 | 677.91 |
| 72+00 | 73+00 | 74+00 | 75+00 | 76+00 | 77+00 | 78+00 | 79+00 | 80+00 | 81+00 | 82+00 | 83+00 | 84+00 | 85+00 | 86+00 | | | | | | | | | | | | |

Lin Engineering, Ltd.
Consulting Engineers
Westmont, Illinois

| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - RC | REVISED - |
| PLOT SCALE = 100,0000' / in. | DRAWN - RC | REVISED - |
| PLOT DATE = 2/20/2018 | CHECKED - ST | REVISED - |
| | DATE - 12/2017 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

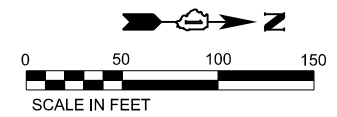
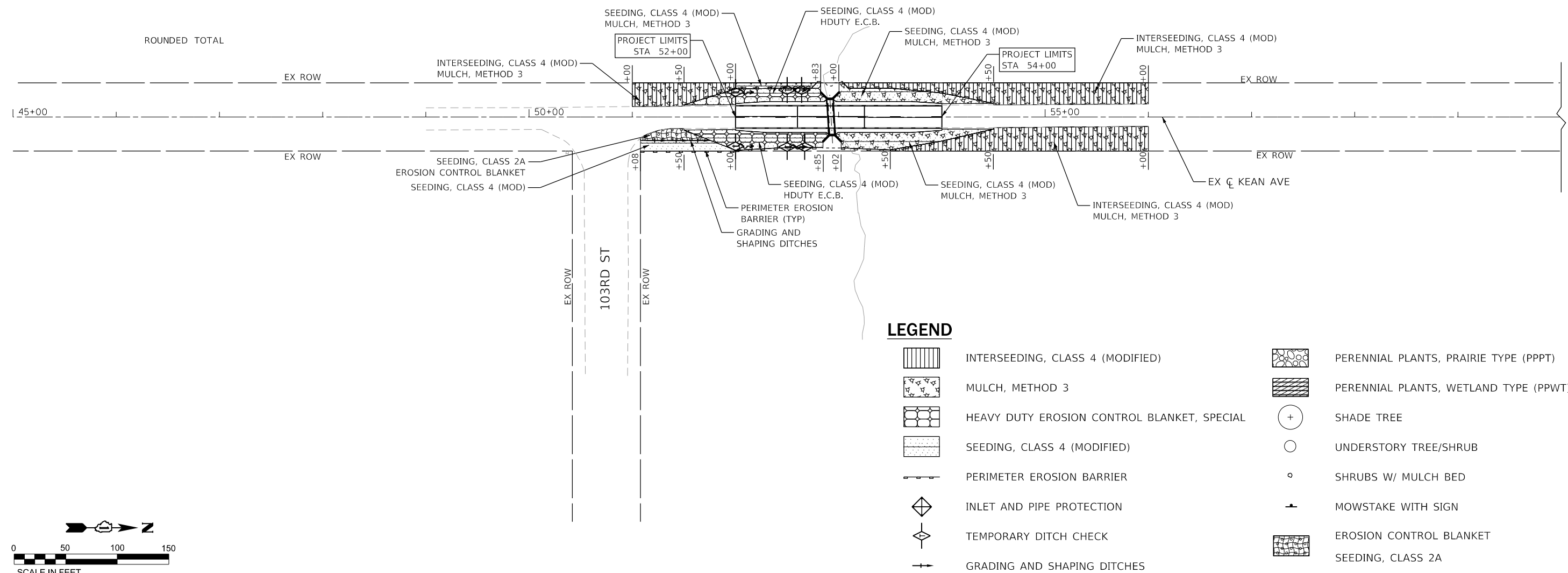
**KEAN AVENUE OVER DITCHES
PLAN & PROFILE**

SCALE: 1"=50' SHEET 2 OF 2 SHEETS STA. 74+00.00 TO STA. 80+00.00

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 21 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

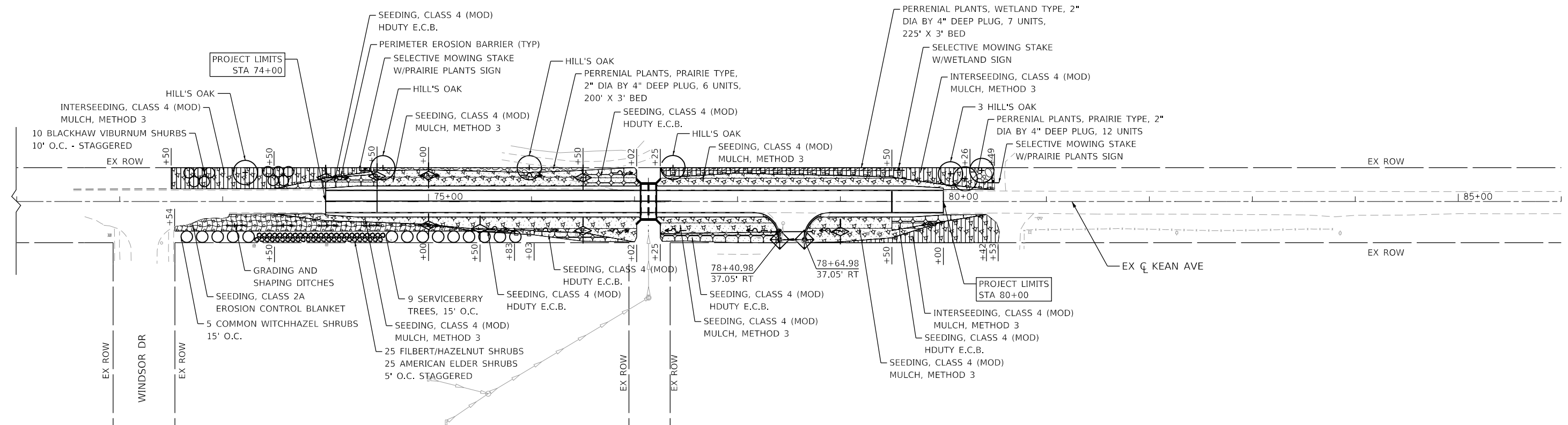
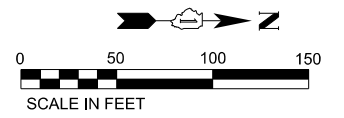
SCHEDULE OF PERENNIALS

| SCIENTIFIC NAME | COMMON NAME | SIZE | SPACING | BED SOUTH OF CULVERT | BED NORTH OF CULVERT | BED ADJACENT TO PATH CROSSING | SUBTOTALS BY SPECIES | SUBTOTALS IN UNITS(BY TYPE) |
|------------------------------|------------------------|-------------------|---------|----------------------|----------------------|-------------------------------|----------------------|-----------------------------|
| PRAIRIE TYPE/SAVANNA | | | | | | | | |
| ALLIUM CERNUUM | NODDING WILD ONION | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| ASCLEPIAS TUBEROSA | BUTTERFLY MILKWEED | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| CAREX RADIATA | STRAIGHT-STYLED SEDGE | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| DODECATHEON MEADIA | SHOOTING STARS | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| ECHINACEA PALLIDA | PALE PURPLE CONEFLOWER | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| GERANIUM MACULATUM | WILD GERANIUM | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| GEUM TRIFLORUM | PRAIRIE SMOKE | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| PENSTEMON DIGITALIS | FOXGLOVE BEARDTONGUE | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| PHLOX DIVARICATA | WILD BLUE PHLOX | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| RUELLIA HUMILIS | WILD PETUNIA | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| SPOROBOLIS HETEROLEPIS | PRAIRIE DROPSEED | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | |
| ZIZIA AUREA | GOLDEN ALEXANDERS | 2" DIA BY 4" PLUG | 12" | 50.00 | | 100.00 | 150.00 | PRAIRIE |
| | | | | 600.00 | | 1200.00 | 1800.00 | 18.00 |
| WETLAND TYPE | | | | | | | | |
| ASCLEPIAS INCARNATA | SWAMP MILKWEED | 2" DIA BY 4" PLUG | 12" | | 50.00 | | 50.00 | |
| CAREX STIPATA | FOX SEDGE | 2" DIA BY 4" PLUG | 12" | | 100.00 | | 100.00 | |
| CAREX VULPINOIDEA | BROWN FOX SEDGE | 2" DIA BY 4" PLUG | 12" | | 100.00 | | 100.00 | |
| ECHINACEA PURPUREA | PURPLE CONEFLOWER | 2" DIA BY 4" PLUG | 12" | | 50.00 | | 50.00 | |
| IRIS VIRGINICA | BLUE FLAG IRIS | 2" DIA BY 4" PLUG | 12" | | 50.00 | | 50.00 | |
| JUNCUS TORREYI | TORREY'S RUSH | 2" DIA BY 4" PLUG | 12" | | 100.00 | | 100.00 | |
| SPARTINA PECTINATA | PRAIRIE CORD GRASS | 2" DIA BY 4" PLUG | 12" | | 100.00 | | 100.00 | |
| SYMPHYOTRICHUM NOVEA-ANGLIAE | NEW ENGLAND ASTER | 2" DIA BY 4" PLUG | 12" | | 50.00 | | 50.00 | |
| VERBENA HASTATA | BLUE VERVAIN | 2" DIA BY 4" PLUG | 12" | | 50.00 | | 50.00 | |
| ZIZIA AUREA | GOLDEN ALEXANDERS | 2" DIA BY 4" PLUG | 12" | | 50.00 | | 50.00 | WETLAND |
| | | | | | 700.00 | | 700.00 | 7.00 |



LEGEND

| | | | |
|--|---|--|---------------------------------------|
| | INTERSEEDING, CLASS 4 (MODIFIED) | | PERENNIAL PLANTS, PRAIRIE TYPE (PPPT) |
| | MULCH, METHOD 3 | | PERENNIAL PLANTS, WETLAND TYPE (PPWT) |
| | HEAVY DUTY EROSION CONTROL BLANKET, SPECIAL | | SHADE TREE |
| | SEEDING, CLASS 4 (MODIFIED) | | UNDERSTORY TREE/SHRUB |
| | PERIMETER EROSION BARRIER | | SHRUBS W/ MULCH BED |
| | INLET AND PIPE PROTECTION | | MOWSTAKE WITH SIGN |
| | TEMPORARY DITCH CHECK | | EROSION CONTROL BLANKET |
| | GRADING AND SHAPING DITCHES | | SEEDING, CLASS 2A |



LEGEND

- | | | | |
|--|---|--|---------------------------------------|
| | INTERSEEDING, CLASS 4 (MODIFIED) | | PERENNIAL PLANTS, PRAIRIE TYPE (PPPT) |
| | MULCH, METHOD 3 | | PERENNIAL PLANTS, WETLAND TYPE (PPWT) |
| | HEAVY DUTY EROSION CONTROL BLANKET, SPECIAL | | SHADE TREE |
| | SEEDING, CLASS 4 (MODIFIED) | | UNDERSTORY TREE/SHRUB |
| | PERIMETER EROSION BARRIER | | SHRUBS W/ MULCH BED |
| | INLET AND PIPE PROTECTION | | MOWSTAKE WITH SIGN |
| | TEMPORARY DITCH CHECK | | EROSION CONTROL BLANKET |
| | GRADING AND SHAPING DITCHES | | SEEDING, CLASS 2A |



| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - RC | REVISED - |
| DRAWN - RC | REVISIONS - | |
| PLOT SCALE = 100,0000' / in. | CHECKED - ST | REVISED - |
| PLOT DATE = 12/29/2017 | DATE - 12/2017 | REVISED - |

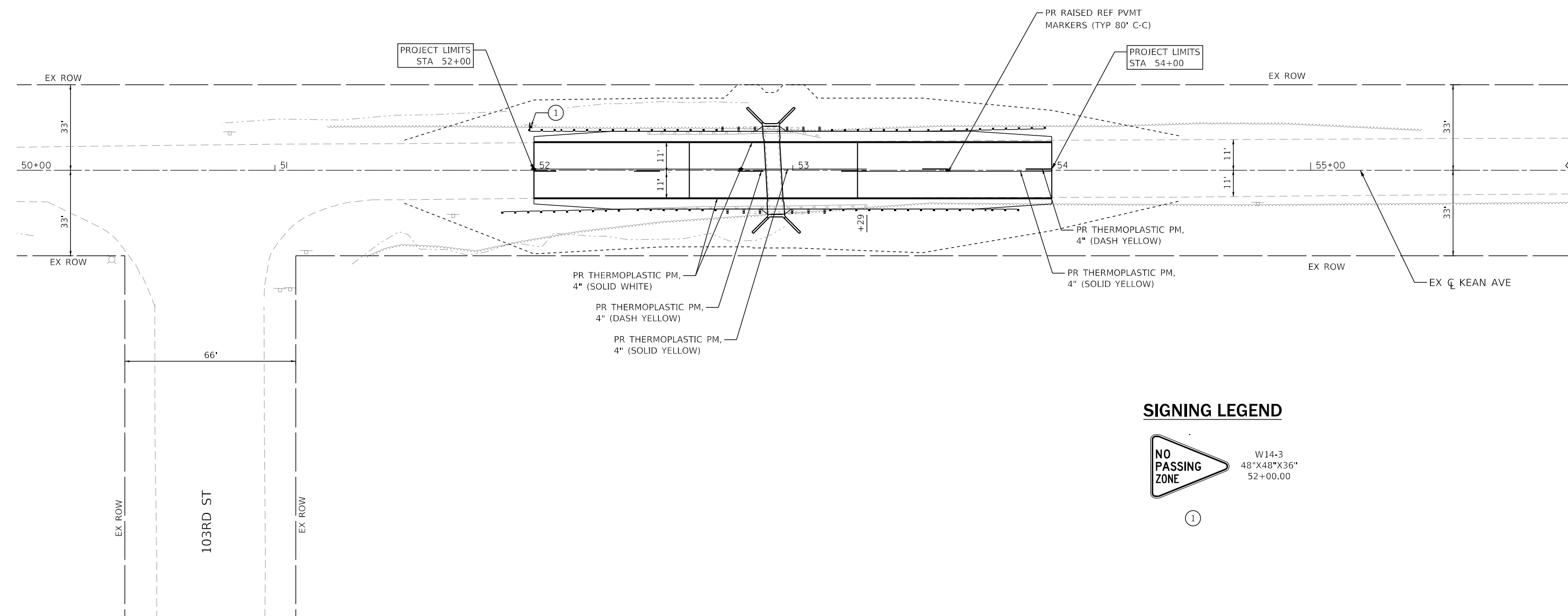
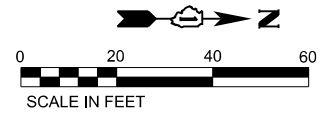
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

| | |
|--|---------------------|
| KEAN AVENUE OVER DITCHES LANDSCAPING AND EROSION CONTROL PLAN | |
| SCALE: 1"=50' | SHEET 2 OF 2 SHEETS |
| STA. 74+00.00 | TO STA. 80+00.00 |

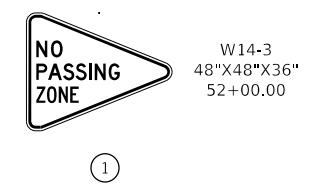
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|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 23 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

NOTE:

1. PAVEMENT MARKINGS TO BE INSTALLED ACCORDING TO IDOT D1 DETAIL TC-13.
2. RAISED REFLECTIVE PAVEMENT MARKERS TO BE INSTALLED ACCORDING TO IDOT D1 DETAIL TC-11.



SIGNING LEGEND



| |
|------------------------------|
| USER NAME = Lin |
| PLOT SCALE = 40,0000 ' / in. |
| PLOT DATE = 1/18/2018 |

| | |
|----------------|----------|
| DESIGNED - MA | REVISD - |
| DRAWN - MA | REVISD - |
| CHECKED - ST | REVISD - |
| DATE - 12/2017 | REVISD - |

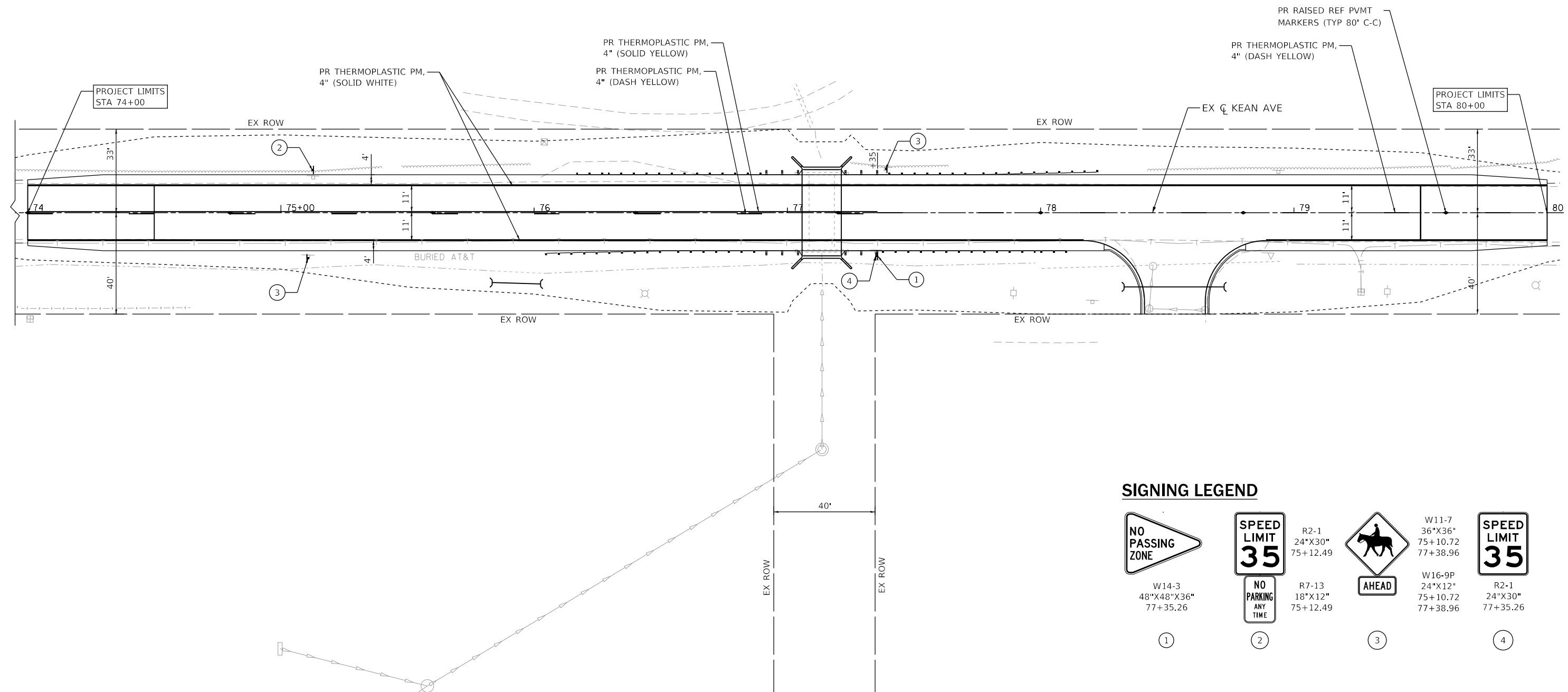
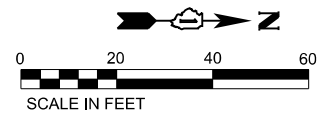
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

| | |
|---|---------------------|
| KEAN AVENUE OVER DITCHES PAVEMENT MARKING AND SIGNING PLAN | |
| SCALE: 1"=20' | SHEET 1 OF 2 SHEETS |
| STA. 52+00.00 | TO STA. 54+00.00 |

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 24 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

NOTE:

1. PAVEMENT MARKINGS TO BE INSTALLED ACCORDING TO IDOT D1 DETAIL TC-13.
2. RAISED REFLECTIVE PAVEMENT MARKERS TO BE INSTALLED ACCORDING TO IDOT D1 DETAIL TC-11.



SIGNING LEGEND

| | | | |
|---|--|--|--------------------------------------|
| W14-3 48"X48"X36" 77+35.26 ① | R2-1 24"X30" 75+10.72 77+38.96 ② | W16-9P 24"X12" 75+10.72 77+38.96 ③ | R2-1 24"X30" 77+35.26 ④ |
|---|--|--|--------------------------------------|



| | | |
|------------------------------|----------------|-----------|
| USER NAME = Lin | DESIGNED - MA | REVISED - |
| DRAWN - MA | REVISIONS - | |
| PLOT SCALE = 40,0000 ' / in. | CHECKED - ST | REVISED - |
| PLOT DATE = 1/18/2018 | DATE - 12/2017 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
PAVEMENT MARKING AND SIGNING PLAN**

SCALE: 1"=20' SHEET 2 OF 2 SHEETS STA. 74+00.00 TO STA. 80+00.00

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 25 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

Bench Mark: Found Iron rod with cap on north end of guardrail at approx. Sta. 53+45.00 Elevation 641.83

Existing Structure: SN 016-1254 originally constructed as a single cast-in-place box culvert 5' wide by 3' high and 34'-9" long. The date of construction is unknown. The existing structure to be removed and replaced with a cast-in-place single box culvert 5' wide by 5' high and 36'-0" long. Traffic will be detoured during construction.

Salvage: No salvage.

WATERWAY INFORMATION

| Drainage Area = 60.2 acres | | | Existing Overtopping Elev. = 643.05 at Sta. 53+00 | | | | | | |
|----------------------------|-----------|------------------|--|-------|-------------|------------|-------|---------------|--------|
| | | | Proposed Overtopping Elev. = 643.01 at Sta. 53+32.50 | | | | | | |
| Flood | Freq. Yr. | Discharge C.F.S. | Opening Sq. Ft. | | Nat. H.W.E. | Head - Ft. | | Headwater El. | |
| | | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| Design | 10 | 37.9 | N/A | N/A | N/A | N/A | N/A | 638.56 | 638.59 |
| Base | 50 | 70.8 | N/A | N/A | N/A | N/A | N/A | 639.61 | 639.64 |
| Overtop Existing | 100 | 89.8 | N/A | N/A | N/A | N/A | N/A | 640.15 | 640.18 |
| Overtop Proposed | | | N/A | N/A | N/A | N/A | N/A | | |
| Max. Calc. | 500 | 118.5 | N/A | N/A | N/A | N/A | N/A | 640.89 | 640.92 |

10-year velocity through the existing culvert = 5.72 fps.
 10-year velocity through the proposed culvert = 5.68 fps.
 2 Year Flow Rate = 5.10 cfs
 Estimated Water Surface Elevation = 637.40 ft

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition, with 2015 and 2016 Interims

LOADING HL-93

Allow 50 lb/sq. ft. for future wearing surface.

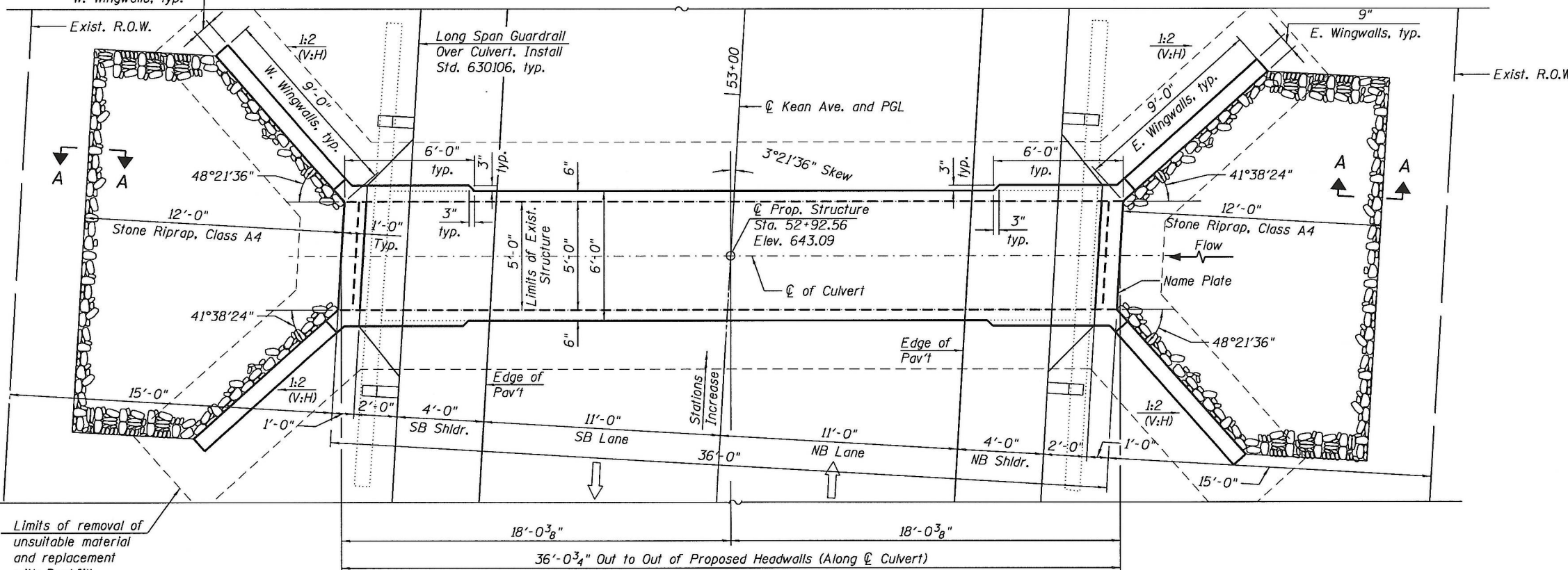
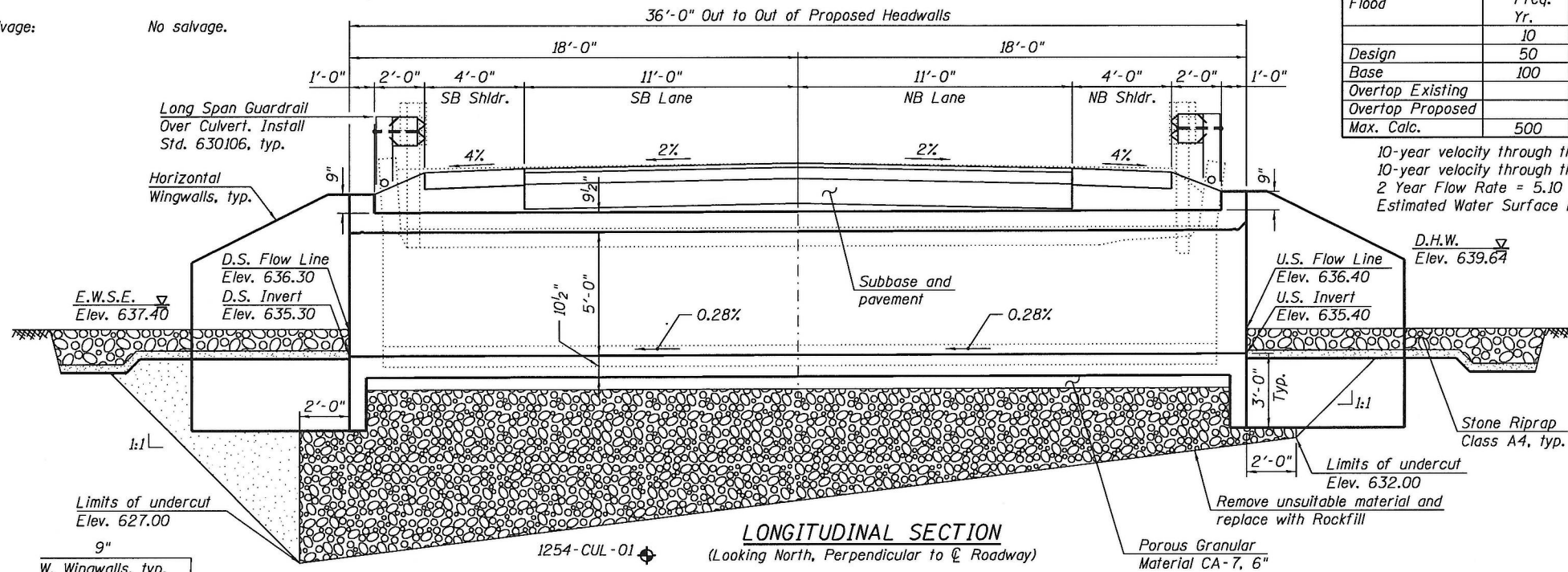
DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi (Concrete)
 $f_y = 60,000$ psi (Reinforcement)

NOTES:

1. For General Notes, Index of Sheets and Total Bill of Materials, see Sheet S-2.



| Boring | Station | Offset |
|-------------|---------------|----------|
| 1254-CUL-01 | Sta. 53+16.01 | 7.49 Lt. |
| 1254-CUL-02 | Sta. 52+76.27 | 6.10 Rt. |

LEGEND:

Soil Boring

PLAN



1254-CUL-02



Signed *Moussa A. Issa*
 Moussa A. Issa, HBM II, Lic. No. 081-005738
 Expires 11-30-2018

Date 12/27/2017 For Sheets S-1 Thru S-6
 (Total of 6 Sheets)

**GENERAL PLAN AND ELEVATION
 KEAN AVENUE OVER UNNAMED DITCH**

F.A.U. 2721- SEC. 2016-054B

COOK COUNTY

STATION 52+92.56

STRUCTURE NO. 016-2297

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|-----------|--------|--------------|-----------|
| 2721 | 2016-054B | COOK | 50 | 26 |

CONTRACT NO. 62D40
 ILLINOIS FED. AID PROJECT

FILE PATH = P:\1702-692-PTB102-04-Calluna\Structural\CADD_Sheets\016-2297\SI-GPE.dgn



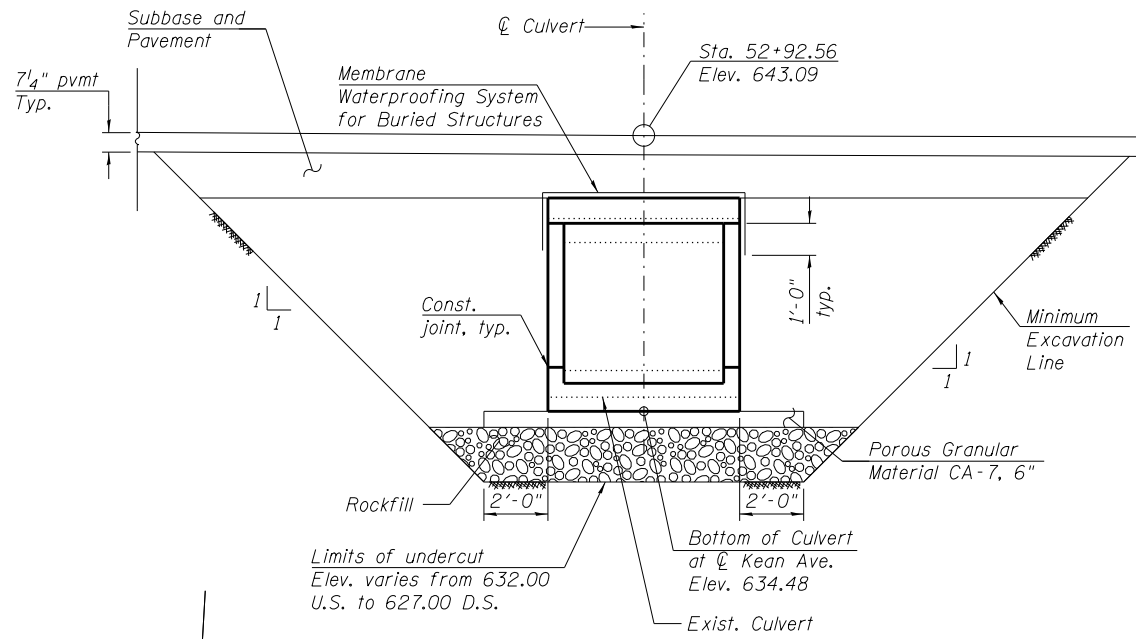
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|------------------------------|---------------------|-----------|
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| USER NAME = isa.buntin | DRAWN - MAA | REVISED - |
| PLOT SCALE = 600.0000 ' = 1" | CHECKED - MI | REVISED - |
| PLOT DATE = 12/27/2017 | DATE - 12/27/2017 | REVISED - |

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCALE: SHEET S-1 OF S-6 SHEETS STA. TO STA.

GENERAL NOTES:

1. A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
2. It will be the responsibility of the Contractor to direct the stream flow during construction in order to keep the Construction areas free of water. The method of water diversion shall be subject to the approval of the Engineer and the cost shall be included with the cost of the Concrete Box Culverts.
3. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
4. The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.
5. The Rockfill shall be capped with 6 in. of CA7 and satisfy the Standard Specifications unless otherwise indicated in the Special Provisions. The cost of the capping material shall be included in the pay item for Rockfill.



SECTION THRU BARREL

TOTAL BILL OF MATERIAL

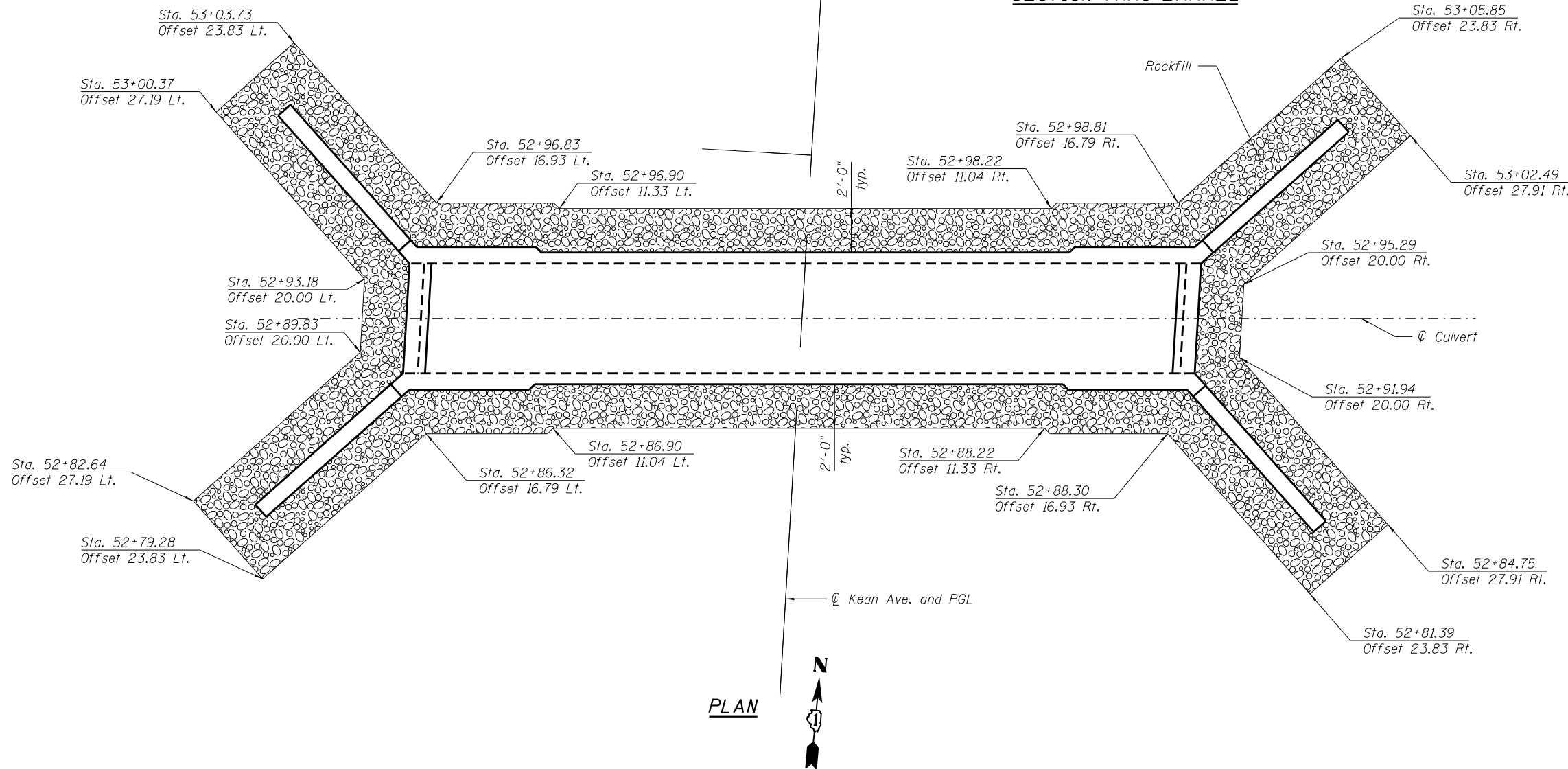
| ITEM | UNIT | TOTAL |
|---|---------|-------|
| Removal and Disposal of Unsuitable Material | Cu. Yd. | 266 |
| Stone Riprap, Class A4 | Sq. Yd. | 38 |
| Filter Fabric | Sq. Yd. | 38 |
| Removal of Existing Structures | Each | 1.0 |
| Reinforcement Bars | Pound | 6280 |
| Name Plates | Each | 1.0 |
| Concrete Box Culverts | Cu. Yd. | 30.7 |
| Membrane Waterproofing System For Buried Structures | Sq. Yd. | 35 |
| Rockfill | Cu. Yd. | 266 |

INDEX OF SHEETS

- S-1 General Plan and Elevation
- S-2 General Notes, Index of Sheets and Total Bill of Material
- S-3 Culvert Plan Bottom Slab Details
- S-4 Culvert Plan Top Slab Details
- S-5 Culvert Sections and Details
- S-6 Soil Boring Logs

STATION 52+92.56
 BUILT 201_ BY
 STATE OF ILLINOIS
 F.A.U. 2721 SEC.2016-054B
 LOADING HL-93
 STR. NO. 016-2297

NAME PLATE
 See Std. 515001



PLAN

FILE PATH = P:\1702-602-PTB182-04-11ms\Structural\CADD_Sheets\016-2297\S2-GenNotesBOMSec.dgn



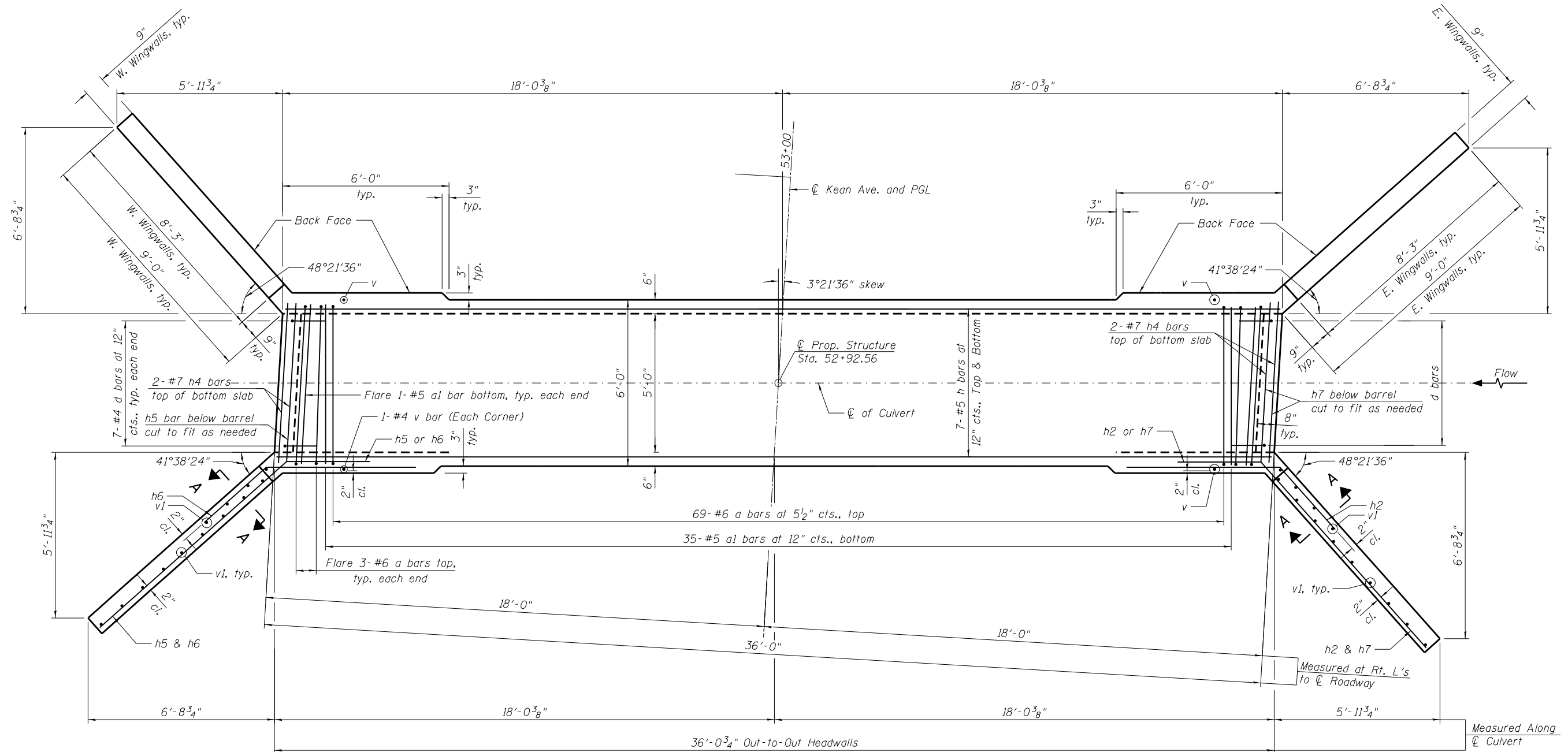
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| PLOT SCALE = 6.00" / in. | CHECKED - MI | REVISED - |
| PLOT DATE = 5/10/2018 | DATE - 12/27/2017 | REVISED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
 STRUCTURE NO. 016-2297**

SCALE: SHEET S-2 OF S-6 SHEETS STA. TO STA.

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|--------|--------------|-----------|
| 2721 | 2016-054B | COOK | 50 | 27 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



BOTTOM SLAB - REINFORCEMENT



NOTES:

1. A distance of half of the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
2. For top slab reinforcement, see Sheet S-4.
3. For Culvert sections and details, wingwall reinforcement, Section A-A, and Bill of Material and bar diagrams, see Sheet S-5.

FILE PATH = P:\1702-602-PTB182-04-Collins\Structural\CADD_Sheets\016-2297\S3-Culvert-Plan-Bottom-Slab-Details.dgn



S3-Culvert Plan Bottom Slab Details.dgn
 USER NAME = lisa.buntin
 PLOT SCALE = 4:8.0000 '1' / in.
 PLOT DATE = 12/27/2017

DESIGNED - MAA, LAB
 DRAWN - MAA, LAB
 CHECKED - MI
 DATE - 12/27/2017

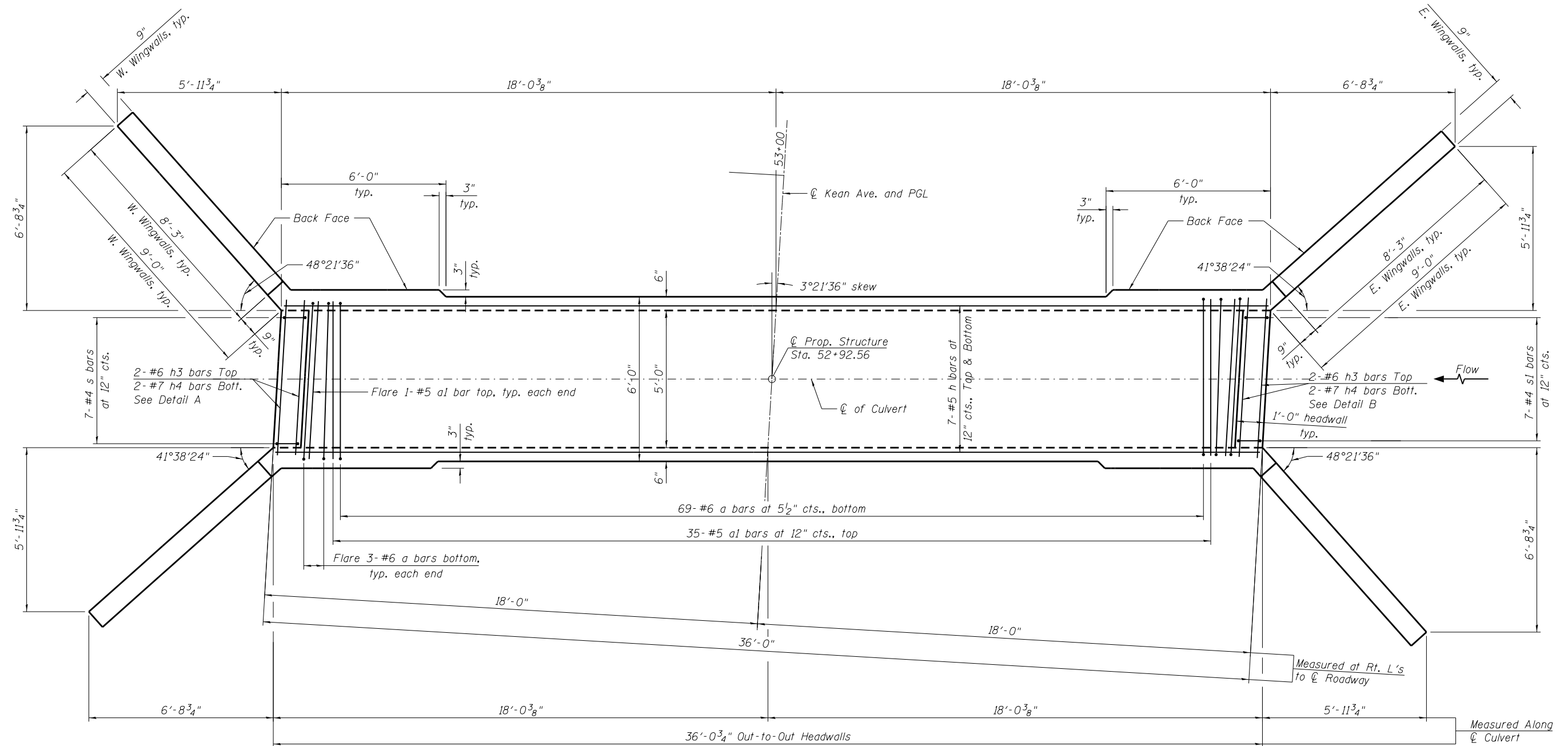
REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CULVERT PLAN BOTTOM SLAB DETAILS
 STRUCTURE NO. 016-2297**

SCALE: SHEET S-3 OF S-6 SHEETS STA. TO STA.

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|--------|--------------|-----------|
| 2721 | 2016-054B | COOK | 50 | 28 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



TOP SLAB - REINFORCEMENT



NOTES:

1. A distance of half of the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
2. For bottom slab reinforcement, see Sheet S-3.
3. For Culvert sections and details, wingwall reinforcement, Section A-A, and Bill of Material and bar diagrams, see Sheet S-5.

FILE PATH = P:\1702-602-PTB182-04-Collins\Structural\CADD\Sheets\016-2297\S4-Culvert-Plan-Top-Slab-Details.dgn



S4-Culvert Plan Top Slab Details.dgn
 USER NAME = lisa.buntin
 PLOT SCALE = 4:8.0000 '1' / in.
 PLOT DATE = 12/27/2017

DESIGNED - MAA, LAB
 DRAWN - MAA, LAB
 CHECKED - MI
 DATE - 12/27/2017

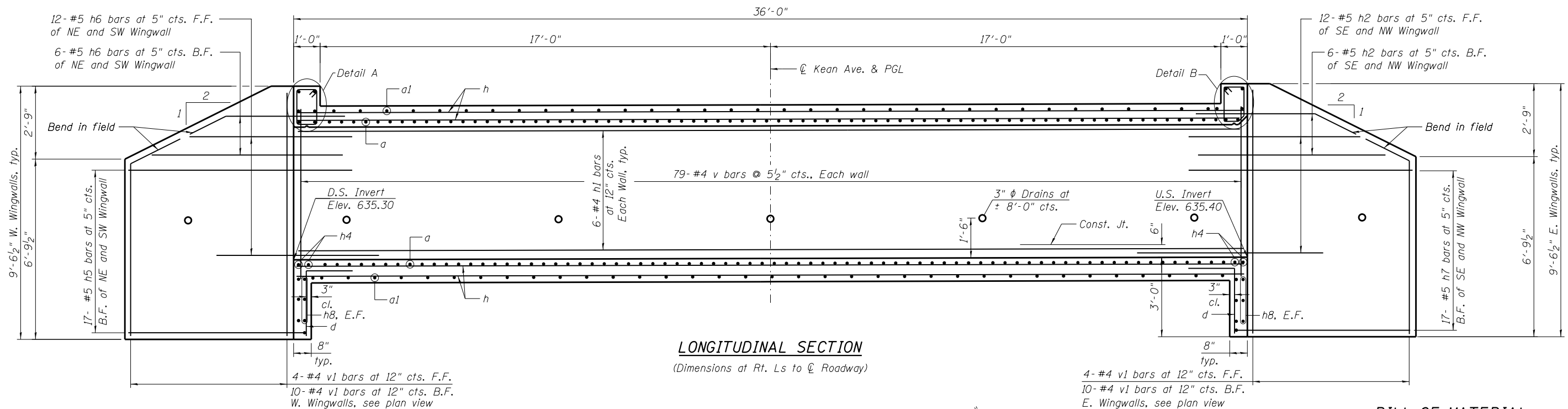
REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

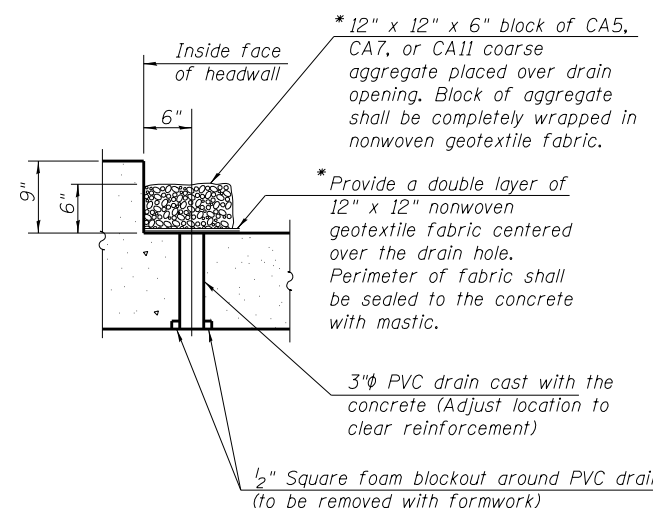
**CULVERT PLAN TOP SLAB DETAILS
 STRUCTURE NO. 016-2297**

SCALE: SHEET S-4 OF S-6 SHEETS STA. TO STA.

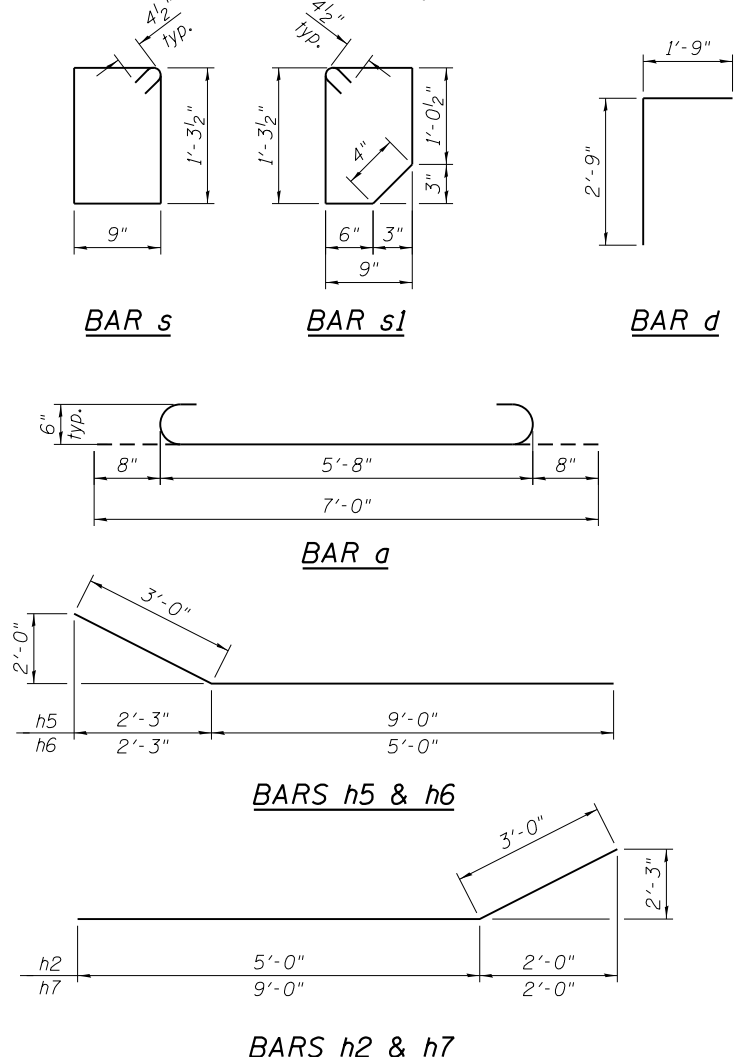
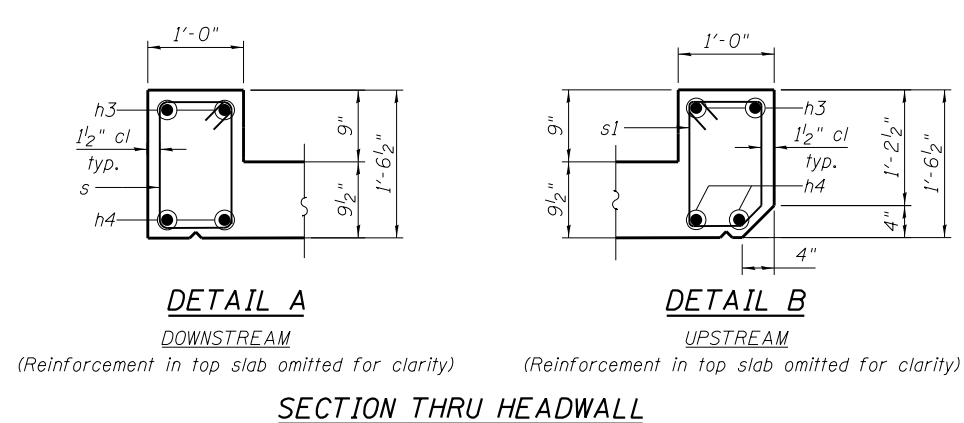
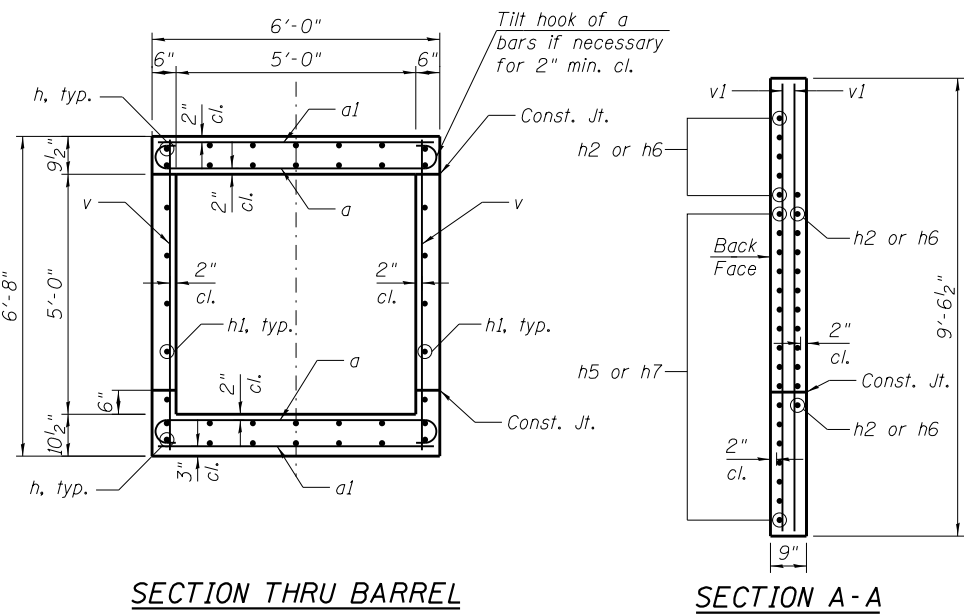
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|--------|--------------|-----------|
| 2721 | 2016-054B | COOK | 50 | 29 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|---|-----|------|---------|-------|
| a | 150 | 6 | 7'-0" | |
| a1 | 74 | 5 | 5'-8" | |
| d | 14 | 4 | 4'-6" | |
| h | 28 | 5 | 35'-9" | |
| h1 | 12 | 4 | 35'-9" | |
| h2 | 36 | 5 | 8'-0" | |
| h3 | 4 | 6 | 6'-2" | |
| h4 | 8 | 7 | 6'-2" | |
| h5 | 34 | 5 | 12'-0" | |
| h6 | 36 | 5 | 8'-0" | |
| h7 | 34 | 5 | 12'-0" | |
| h8 | 12 | 5 | 6'-2" | |
| s | 7 | 4 | 4'-10" | |
| s1 | 7 | 4 | 4'-8" | |
| v | 162 | 4 | 6'-3" | |
| v1 | 56 | 4 | 9'-2" | |
| Reinforcement Bars | | | Pound | 6,280 |
| Concrete Box Culverts | | | Cu. Yd. | 30.7 |
| Membrane Waterproofing System for Buried Structures | | | Sq. Yd. | 35 |

FILE PATH = P:\1702-602-PTB182-04-Columns\Structural\CADD\Sheets\016-2297\55-Culvert Sections and Details.dgn



SS-Culvert Sections and Details.dgn
USER NAME = lisa.buntin
PLOT SCALE = 4:8.0000 1' = 1/4"
PLOT DATE = 5/10/2018

DESIGNED - MAA, LAB
DRAWN - MAA, LAB
CHECKED - MI
DATE - 12/27/2017

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT SECTIONS AND DETAILS
STRUCTURE NO. 016-2297

SCALE: SHEET S-5 OF S-6 SHEETS STA. TO STA.

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 30 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



wangeng@wangeng.com
1145 N Main Street
Lombard, IL 60148
Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 1254-CUL-01

Page 1 of 1

WEI Job No.: 486-23-01

Client: **Collins Engineers, Inc.**
Project: **Kean Avenue Culverts**
Location: **Palos Hills, Cook County**

Datum: NGVD
Elevation: 642.69 ft
North: 1835134.67 ft
East: 1117226.75 ft
Station: 53+16.01
Offset: 7.49 LT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample No. | SPT Values (blows/6 in) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample No. | SPT Values (blows/6 in) | Qu (tsf) | Moisture Content (%) |
|------------------------|---|------------|------------|-------------------------|----------|----------------------|------------------------|---|------------|------------|-------------------------|----------|----------------------|
| 641.9 | 10-inch thick ASPHALT -PAVEMENT- | | | | | | 622.2 | Very stiff, gray SILTY CLAY, trace gravel | | | | | |
| 641.4 | Brown SANDY GRAVEL -BASE COURSE- | | | | | | | | | | | | |
| | Medium stiff to stiff, brown SILTY CLAY LOAM -FILL- | 1 | 7 | 5 | NR | | | | 9 | 3 | 5 | 2.62 | 17 |
| | | 2 | 3 | 2 | 1.31 | 32 | | | 10 | 4 | 6 | 3.69 | 17 |
| | | 3 | 1 | 2 | 0.82 | 25 | | | 11 | 5 | 6 | 2.30 | 15 |
| 634.9 | Sand; saturated | | | | | | | | | | | | |
| 634.4 | Soft to medium stiff, gray SILTY CLAY LOAM with organic matter, wet | 4 | 0 | 2 | 0.25 | 37 | | | 12 | 6 | 7 | 3.36 | 13 |
| | | 5 | 0 | 0 | 0.74 | 36 | | | | | | | |
| | | 6 | 0 | 0 | 0.98 | 63 | | | 13 | 6 | 8 | 2.21 | 14 |
| | | 7 | 2 | 3 | NP | 22 | | | | | | | |
| 627.2 | Loose, gray SILTY LOAM to SILT; wet to saturated | | | | | | | | | | | | |
| 625.4 | Medium stiff (0.75P), gray SILTY CLAY LOAM | | | | | | | | | | | | |
| 624.7 | Gray, fine SANDY LOAM; wet | | | | | | | | | | | | |
| 623.9 | Stiff, gray SILTY CLAY LOAM, trace gravel, damp | 8 | 5 | 5 | 1.25 | 20 | | | 14 | 5 | 7 | 2.05 | 11 |
| | | | | | | | 602.7 | | | | | | |

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling: 07-18-2017 Complete Drilling: 07-18-2017
Drilling Contractor: Wang Testing Services Drill Rig: CME-55 TMR
Driller: JA + JG Logger: J. Rowells Checked by: NSB
Drilling Method: 2.25 IDA HSA; Boring backfilled upon completion

While Drilling: 8.00 ft
At Completion of Drilling: 38.00 ft
Time After Drilling: NA
Depth to Water: NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



wangeng@wangeng.com
1145 N Main Street
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Telephone: 630 953-9928
Fax: 630 953-9938

BORING LOG 1254-CUL-02

Page 1 of 1

WEI Job No.: 486-23-01

Client: **Collins Engineers, Inc.**
Project: **Kean Avenue Culverts**
Location: **Palos Hills, Cook County**

Datum: NGVD
Elevation: 643.10 ft
North: 1835095.41 ft
East: 1117241.65 ft
Station: 52+76.27
Offset: 6.10 RT

| Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample No. | SPT Values (blows/6 in) | Qu (tsf) | Moisture Content (%) | Profile Elevation (ft) | SOIL AND ROCK DESCRIPTION | Depth (ft) | Sample No. | SPT Values (blows/6 in) | Qu (tsf) | Moisture Content (%) |
|------------------------|---|------------|------------|-------------------------|----------|----------------------|------------------------|---------------------------|------------|------------|-------------------------|----------|----------------------|
| 642.3 | 9.5-inch thick ASPHALT PAVEMENT -PAVEMENT- | | | | | | | | | | | | |
| 641.8 | Brown SANDY GRAVEL; dry | | | | | | | | | | | | |
| | Stiff, dark brown SILTY CLAY LOAM, trace gravel | 1 | 6 | 3 | NP | 16 | | | 9 | 4 | 8 | 5.74 | 19 |
| | | 2 | 2 | 2 | 0.82 | 45 | | | 10 | 3 | 7 | 2.46 | 18 |
| 640.1 | Medium stiff, dark brown to black SILTY CLAY LOAM, trace organic matter | | | | | | | | | | | | |
| | | 3 | 1 | 2 | 0.90 | 33 | | | 11 | 6 | 6 | 1.80 | 15 |
| 637.6 | Medium stiff, dark brown to gray CLAY LOAM, trace organic matter | | | | | | | | | | | | |
| | | 4 | 1 | 2 | 0.82 | 40 | | | 12 | 5 | 6 | 3.85 | 13 |
| 632.9 | Sand; saturated | | | | | | | | | | | | |
| 632.4 | Stiff to hard, gray SILTY CLAY LOAM, trace gravel | | | | | | | | | | | | |
| | | 5 | 2 | 4 | 1.15 | 21 | | | | | | | |
| | | 6 | 3 | 5 | 2.71 | 18 | | | 13 | 6 | 8 | NA | 14 |
| | | 7 | 3 | 3 | 1.23 | 18 | | | | | | | |
| | | 8 | 3 | 4 | 2.30 | 14 | | | 14 | 6 | 9 | 4.26 | 14 |
| | | | | | | | 603.1 | | | | | | |

GENERAL NOTES

WATER LEVEL DATA

Begin Drilling: 07-19-2017 Complete Drilling: 07-19-2017
Drilling Contractor: Wang Testing Services Drill Rig: CME-55 TMR
Driller: JA + JG Logger: J. Rowells Checked by: NSB
Drilling Method: 2.25 IDA HSA; Boring backfilled upon completion

While Drilling: 10.50 ft
At Completion of Drilling: 39.00 ft
Time After Drilling: NA
Depth to Water: NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.



S6-Soil Boring Logs.dgn
USER NAME: isa.buntan
PLOT SCALE: 4:8.0000 1" = 10'
PLOT DATE: 12/27/2017

DESIGNED - MAA
DRAWN - MAA
CHECKED - MI
DATE - 12/27/2017

REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 016-2297
SCALE: SHEET S-6 OF S-6 SHEETS STA. TO STA.

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|--------|--------------|-----------|
| 2721 | 2016-054B | COOK | 50 | 31 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

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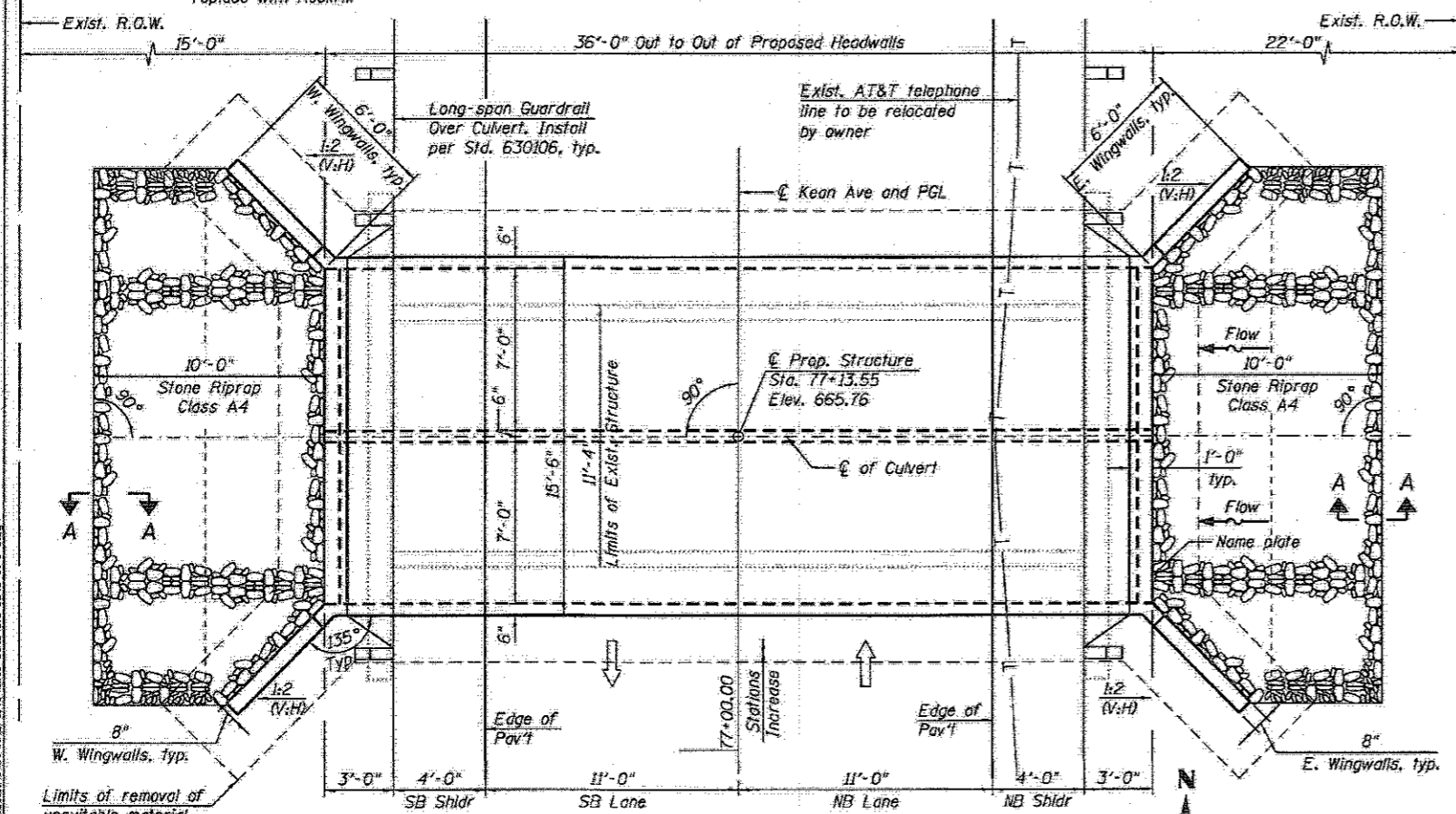
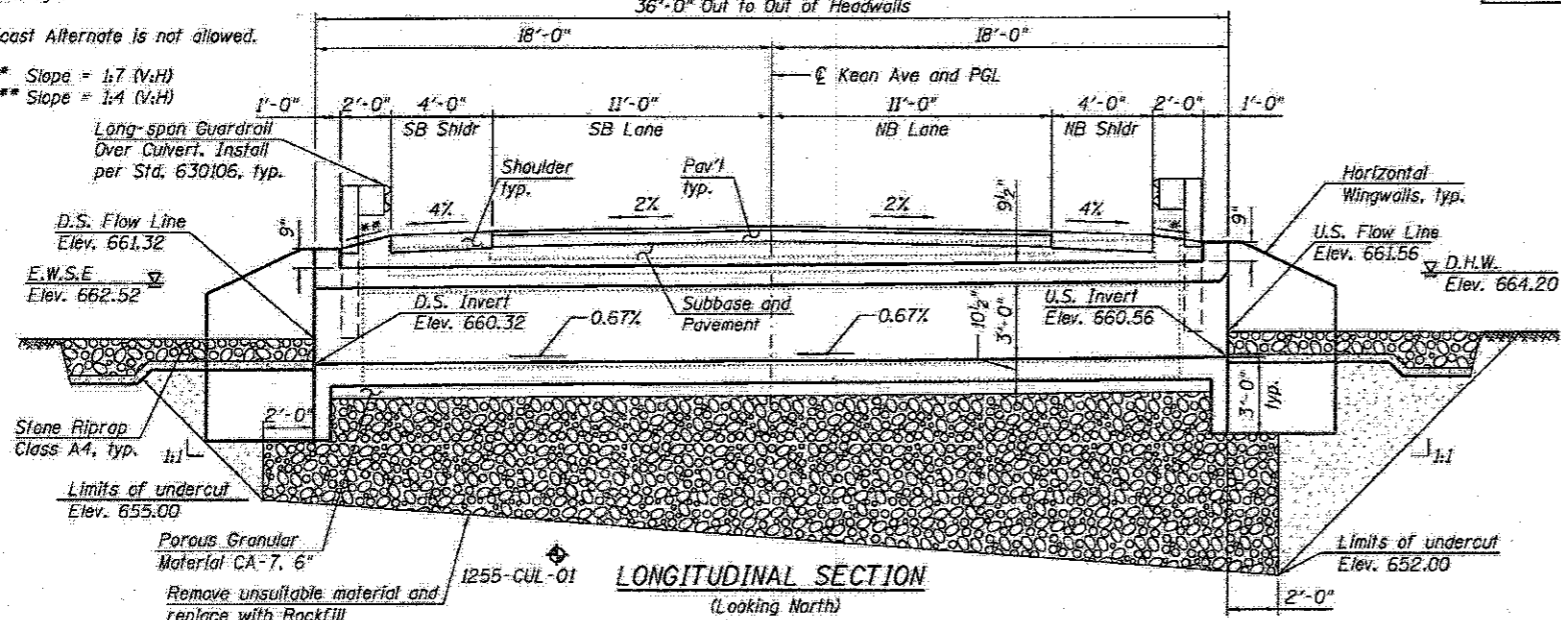
Bench Mark: Found Iron rod with cap on east side of roadway at approx. Sta. 76+29.00 Elevation 664.60

Existing Structure: SH 016-1255 originally constructed as a single cast-in-place box culvert 10' wide and 3' high and 32'-2" long. The date of construction is unknown. The existing structure is to be removed and replaced with a cast-in-place double box culvert 7' wide and 3' high and 36'-0" long. Traffic will be detoured during construction.

No Salvage.

Precast Alternate is not allowed.

- ** Slope = 1:7 (V:H)
- *** Slope = 1:4 (V:H)



| Boring | Station | Offset |
|-------------|---------------|----------|
| 1255-CUL-01 | Sta. 77+34.88 | 8.38 Lt. |
| 1255-CUL-02 | Sta. 76+92.90 | 6.20 Rt. |

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition, with 2015 and 2016 Interims

DESIGN STRESSES

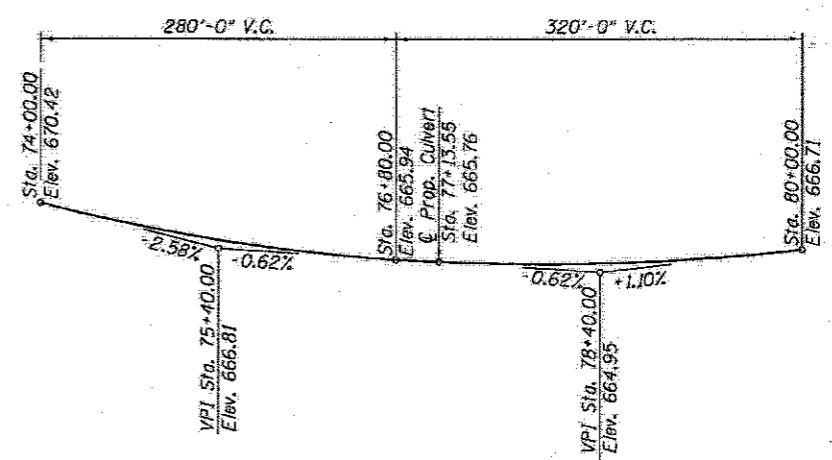
FIELD UNITS
 $f'_c = 3,500$ psi (Concrete)
 $f_y = 60,000$ psi (Reinforcement)

LOADING HL-93

Allow 50 lb/sq. ft. for future wearing surface.

NOTE:

1. For General Notes, Index of Sheets, Total Bill of Materials and Waterway Information Table, see Sheet S-2.

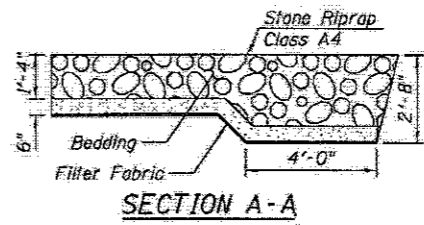


LEGEND:

Soil Boring

PROFILE GRADE

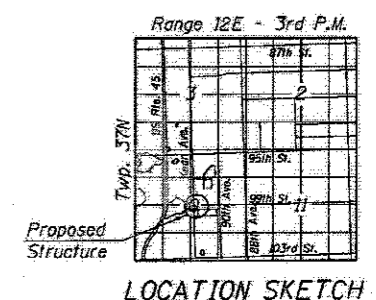
(Along E Roadway)



APPROVED

For Structural Adequacy Only

Moussa A. Issa
 Engineer of Bridges & Structures



GENERAL PLAN AND ELEVATION

**KEAN AVE
 OVER UNNAMED DITCH
 (0.5 MI SOUTH OF 95TH ST)
 FAU 2721- SEC. 2016-054B
 COOK COUNTY
 STATION 77+13.55
 STRUCTURE NO. 016-2298**

Signed *Moussa A. Issa*
 Moussa A. Issa, HBM Il. Lic. No. 081-005738
 Expires 11-30-2018
 Date 12/27/2017 For Sheets S-1 Thru S-7 (Total of 7 Sheets)



FILE PATH: \\P:\2016\2016-054B\Structural\016-2298-01.dwg

| | | | | | | | | | | |
|--|---------------------------|--------------------|-----------|---|------------------------|---------------------------|-----------|--------|--------------|-----------|
| | SI-EPE/dgn | DESIGNED - SK, LAB | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | STRUCTURE NO. 016-2298 | F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | USER NAME = hbeburton | DRAWN - SK | REVISED - | | | 2721 | 2016-054B | COOK | 50 | 32 |
| | PLT. SCALE = 7/8" = 1'-0" | CHECKED - LAB, MI | REVISED - | | | CONTRACT NO. 62040 | | | | |
| | PLT. DATE = 12/27/2017 | DATE = 12/27/2017 | REVISED - | | | ILLINOIS FED. AID PROJECT | | | | |

GENERAL NOTES:

1. It will be the responsibility of the Contractor to direct the stream flow during construction in order to keep the Construction areas free of water. The method of water diversion shall be subject to the approval of the Engineer and the cost shall be included with the cost of the Concrete Box Culverts.
2. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
3. The limits and quantities of removal and replacement shown are based on the boring data and may be modified by the District Geotechnical and Field Engineers for variable subsurface conditions encountered in the field.
4. The Rockfill shall be capped with 6 in. of CA7 and satisfy the Standard Specifications unless otherwise indicated in the Special Provisions. The cost of the capping material shall be included in the pay item for Rockfill.
5. Precast alternate is not allowed.

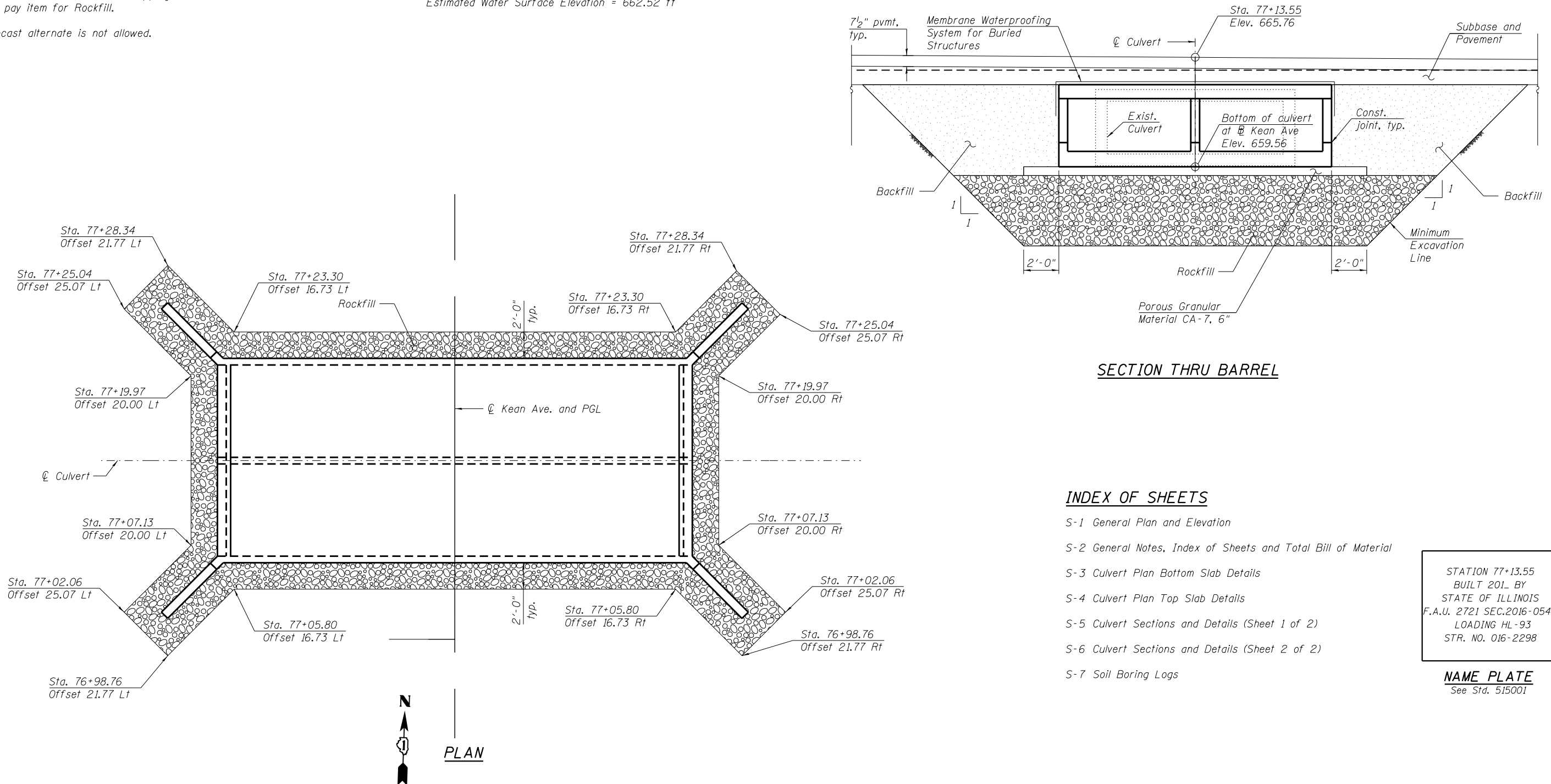
WATERWAY INFORMATION

| Drainage Area = 0.08 square miles | | | | | Existing Overtopping Elev. = 664.91 at Sta. 77+50 Proposed Overtopping Elev. = 665.58 at Sta. 77+95 | | | | |
|-----------------------------------|-----------|------------------|-----------------|-------|--|------------|-------|---------------|--------|
| Flood | Freq. Yr. | Discharge C.F.S. | Opening Sq. Ft. | | Nat. H.W.E. | Head - Ft. | | Headwater El. | |
| | | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| Design | 10 | 64.0 | N/A | N/A | N/A | N/A | N/A | 663.88 | 663.73 |
| Base | 50 | 120.0 | N/A | N/A | N/A | N/A | N/A | 664.74 | 664.20 |
| Overtop Existing | 100 | 155.3 | N/A | N/A | N/A | N/A | N/A | 664.97 | 664.64 |
| Overtop Proposed | | 127.9 | N/A | N/A | N/A | N/A | N/A | 664.91 | |
| Max. Calc. | 500 | 203.5 | N/A | N/A | N/A | N/A | N/A | 665.04 | 665.43 |

10-year velocity through the existing culvert = 3.2 fps.
 10-year velocity through the proposed culvert = 2.3 fps.
 2 Year Peak Flow (Q) = 6.9 cfs
 Estimated Water Surface Elevation = 662.52 ft

TOTAL BILL OF MATERIAL

| ITEM | UNIT | TOTAL |
|---|---------|--------|
| Removal and Disposal of Unsuitable Material | Cu. Yd. | 428 |
| Stone Riprap, Class A4 | Sq. Yd. | 47 |
| Filter Fabric | Sq. Yd. | 47 |
| Removal of Existing Structures | Each | 1 |
| Reinforcement Bars | Pound | 11,660 |
| Name Plates | Each | 1 |
| Concrete Box Culverts | Cu. Yd. | 47.1 |
| Membrane Waterproofing System For Buried Structures | Sq. Yd. | 77 |
| Rockfill | Cu. Yd. | 428 |



INDEX OF SHEETS

- S-1 General Plan and Elevation
- S-2 General Notes, Index of Sheets and Total Bill of Material
- S-3 Culvert Plan Bottom Slab Details
- S-4 Culvert Plan Top Slab Details
- S-5 Culvert Sections and Details (Sheet 1 of 2)
- S-6 Culvert Sections and Details (Sheet 2 of 2)
- S-7 Soil Boring Logs

STATION 77+13.55
 BUILT 2011 BY
 STATE OF ILLINOIS
 F.A.U. 2721 SEC.2016-054B
 LOADING HL-93
 STR. NO. 016-2298

NAME PLATE
 See Std. 515001

FILE PATH = P:\1702-602-PTB182-04-11ns\Structural\CADD_Sheets\016-2298\S2-GenNotesBOM.dgn



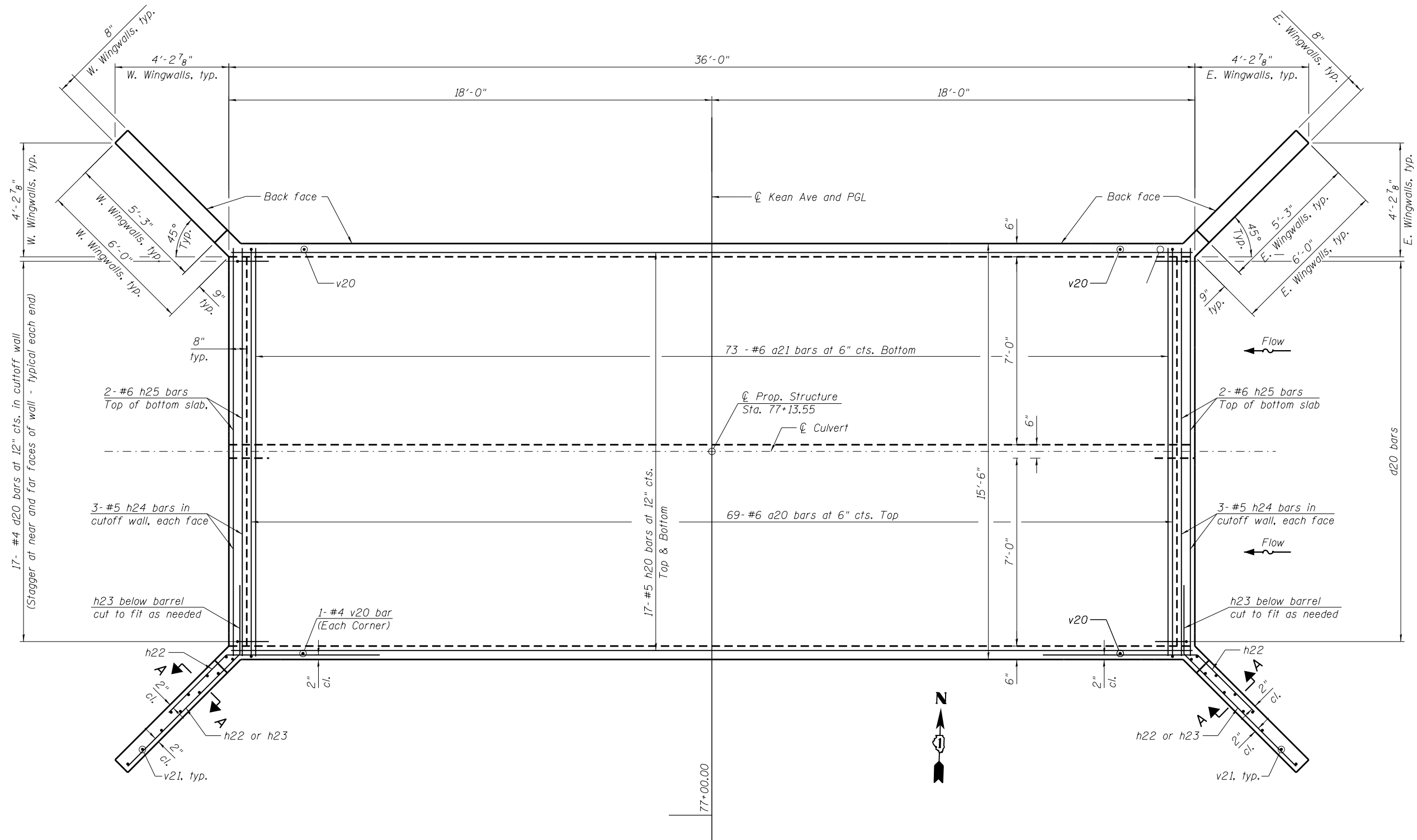
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| USER NAME = isa.buntin | DRAWN - SK | REVISED - |
| PLOT SCALE = 8.00 ' / in. | CHECKED - LAB, MI | REVISED - |
| PLOT DATE = 5/10/2018 | DATE - 12/27/2017 | REVISED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
STRUCTURE NO. 016-2298

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|--------|--------------|-----------|
| 2721 | 2016-054B | COOK | 50 | 33 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

SCALE: SHEET S-2 OF S-7 SHEETS STA. TO STA.



BOTTOM SLAB - REINFORCEMENT

NOTES:

1. A distance of half of the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
2. For Bill of Material and bar diagrams, see Sheet S-6.
3. For top slab reinforcement, see Sheet S-4.
4. For wingwall reinforcement and section A-A, see Sheet S-5.
5. For culvert sections and details, see Sheets S-5 and S-6.

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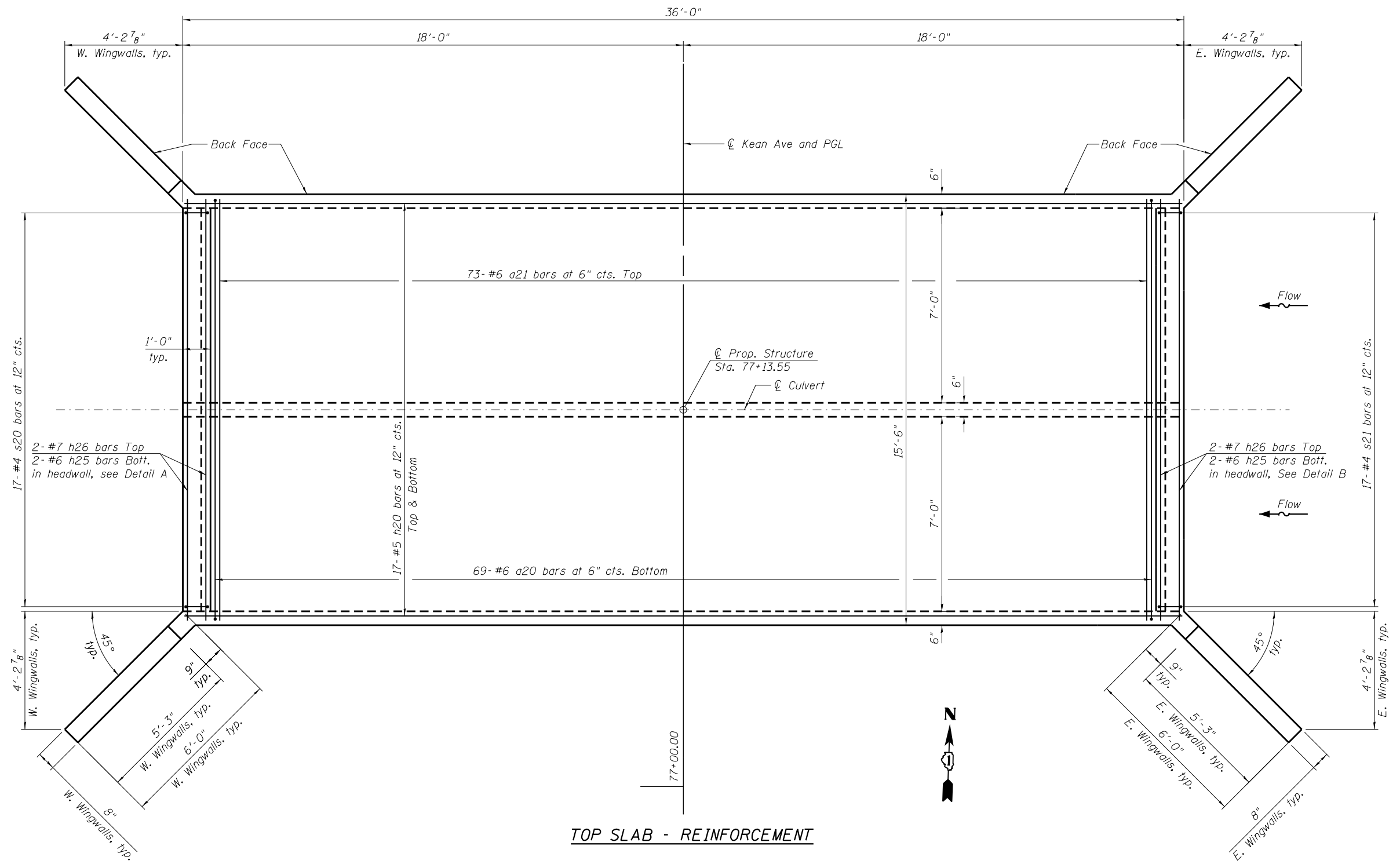
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| PLOT SCALE = 4:8.0000 '1' = 1" | CHECKED - LAB, MI | REVISED - |
| PLOT DATE = 12/27/2017 | DATE - 12/27/2017 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CULVERT PLAN BOTTOM SLAB DETAILS
STRUCTURE NO. 016-2298**

SCALE: SHEET S-3 OF S-7 SHEETS STA. TO STA.

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 34 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



TOP SLAB - REINFORCEMENT

NOTES:

1. A distance of half of the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
2. For Bill of Material and bar diagrams, see Sheet S-6.
3. For bottom slab reinforcement, see Sheet S-3.
4. For wingwall reinforcement and Details A and B, see Sheet S-5.
5. For culvert sections and details, see Sheets S-5 and S-6.

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| USER NAME = lisa.buntin | DRAWN - SK | REVISED - |
| PLOT SCALE = 4:8.0000 '1' = 1/8" | CHECKED - LAB, MI | REVISED - |
| PLOT DATE = 12/27/2017 | DATE - 12/27/2017 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

| | | |
|--------------------------------------|-------------------------|--------------|
| CULVERT PLAN TOP SLAB DETAILS | | |
| STRUCTURE NO. 016-2298 | | |
| SCALE: | SHEET S-4 OF S-7 SHEETS | STA. TO STA. |

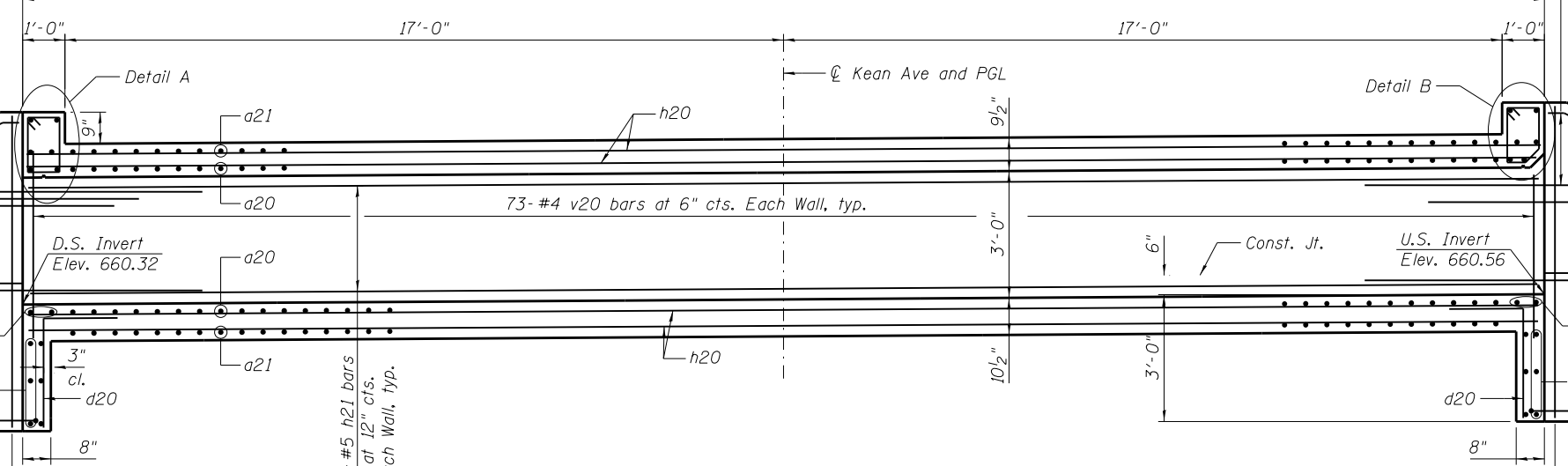
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| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

3- #4 h22 bars at 9" cts.
B.F. of W. Wingwalls, typ.

5- #4 h22 bars at 9" cts.
F.F. of W. Wingwalls, typ.

Bend in Field, typ.

7'-6 5/8" W. Wingwalls, typ.
1'-9"
5'-9 5/8"



3- #4 h22 bars at 9" cts.
B.F. of W. Wingwalls, typ.

5- #4 h22 bars at 9" cts.
F.F. of W. Wingwalls, typ.

Bend in Field, typ.

1'-9"
5'-9 1/2" E. Wingwalls, typ.

LONGITUDINAL SECTION

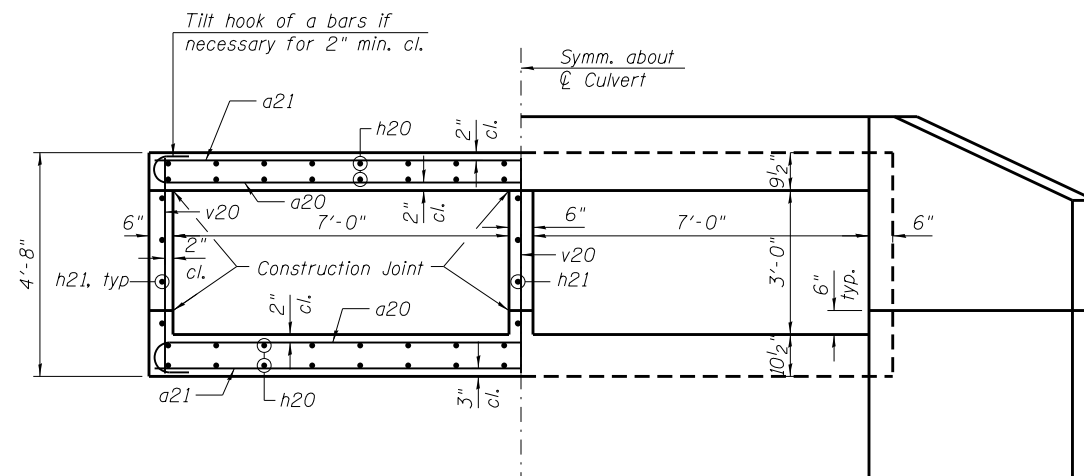
9- #4 h23 bars at 9" cts.
B.F. of W. Wingwalls, typ.

4- #4 v21 bars at 12" cts. F.F.
7- #4 v21 bars at 12" cts. B.F.
of W. Wingwalls, See plan view

4- #5 h21 bars
at 12" cts.
Each Wall, typ.

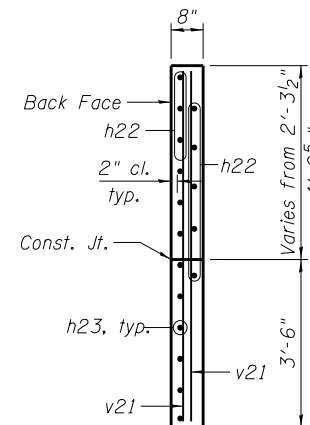
4- #4 v21 bars at 12" cts. F.F.
7- #4 v21 bars at 12" cts. B.F.
of E. Wingwalls, See plan view

9- #4 h23 bars at 9" cts.
B.F. of E. Wingwalls, typ.

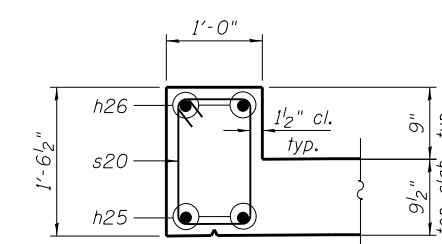


HALF SECTION THRU BARREL

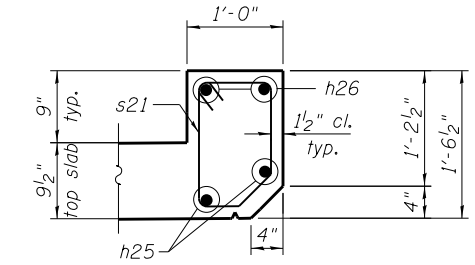
HALF END ELEVATION



SECTION A-A



DETAIL A
DOWNSTREAM
(Reinforcement in top slab omitted for clarity)



DETAIL B
UPSTREAM
(Reinforcement in top slab omitted for clarity)

SECTION THRU HEADWALL

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| PLOT DATE = 12/27/2017 | DATE - 12/27/2017 | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

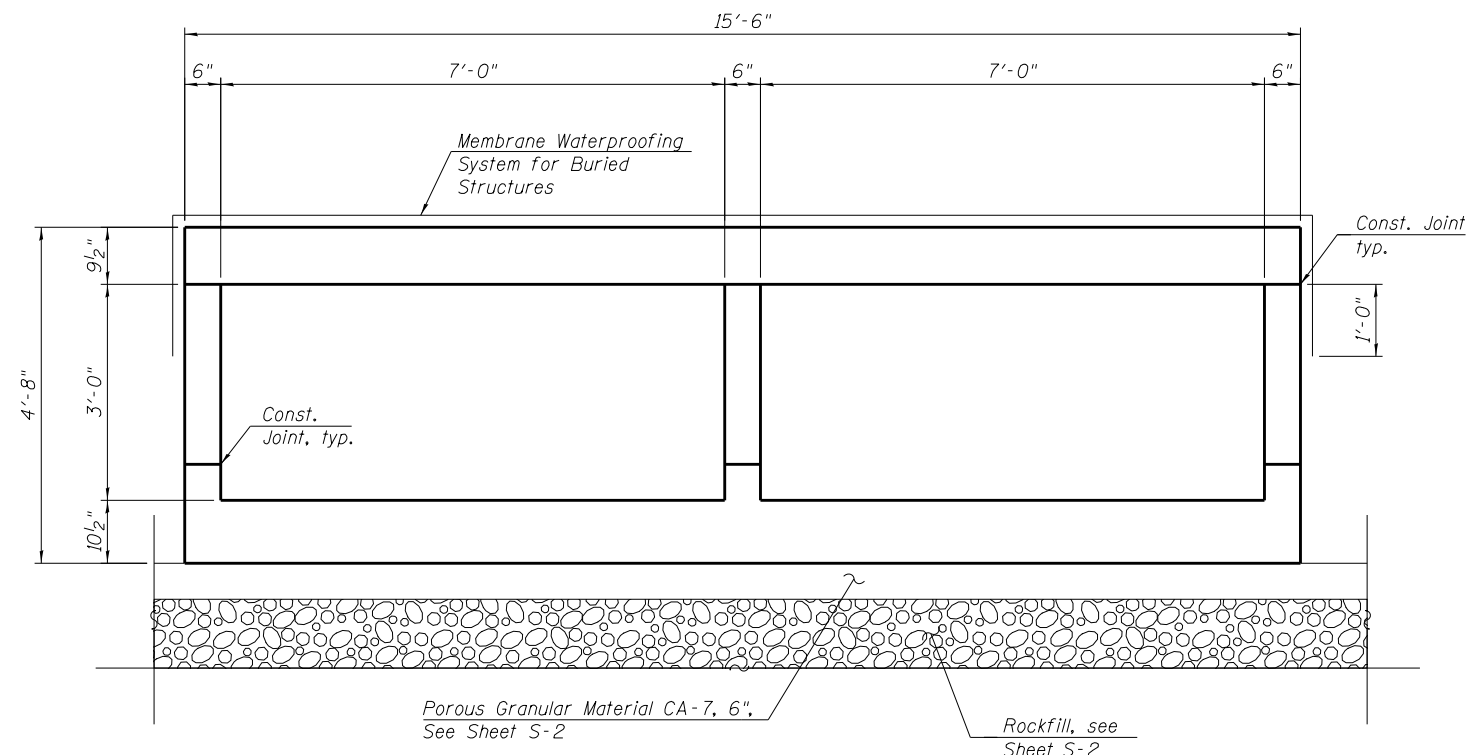
CULVERT SECTIONS AND DETAILS (SHEET 1 OF 2)
STRUCTURE NO. 016-2298

SCALE: SHEET S-5 OF S-7 SHEETS STA. TO STA.

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|--------|--------------|-----------|
| 2721 | 2016-054B | COOK | 50 | 36 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

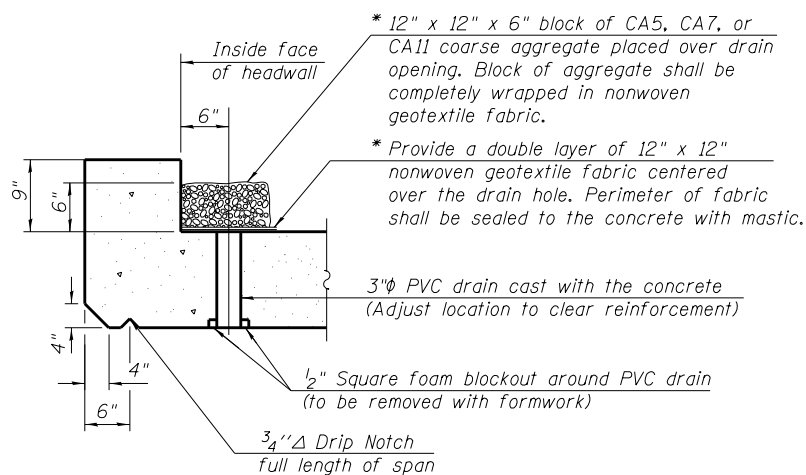
BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|---|-----|------|---------|--------|
| a20 | 138 | #6 | 16'-6" | |
| a21 | 146 | #6 | 15'-2" | |
| d20 | 34 | #4 | 4'-6" | |
| h20 | 68 | #5 | 35'-8" | |
| h21 | 12 | #5 | 35'-8" | |
| h22 | 32 | #4 | 8'-0" | |
| h23 | 36 | #4 | 9'-0" | |
| h24 | 12 | #5 | 15'-2" | |
| h25 | 8 | #6 | 15'-2" | |
| h26 | 4 | #7 | 15'-2" | |
| s20 | 17 | #4 | 4'-10" | |
| s21 | 17 | #4 | 4'-8" | |
| v20 | 223 | #4 | 4'-3" | |
| v21 | 44 | #4 | 7'-2" | |
| Reinforcement Bars | | | Pound | 11,660 |
| Concrete Box Culverts | | | Cu. Yd. | 47.1 |
| Membrane Waterproofing System for Buried Structures | | | Sq. Yd. | 77 |

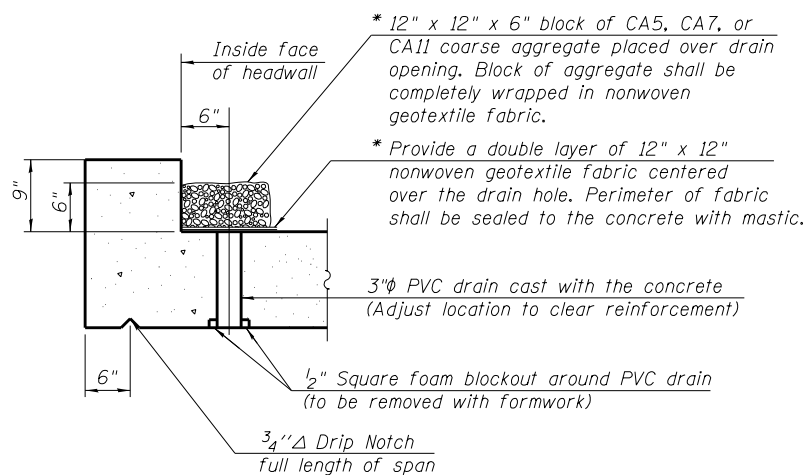


SECTION THRU BARREL

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



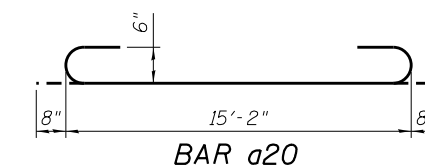
AT UPSTREAM END



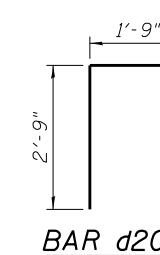
AT DOWNSTREAM END

DRAIN DETAIL

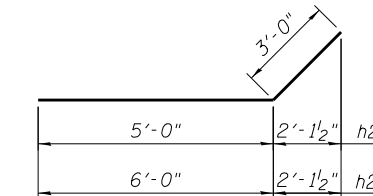
(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



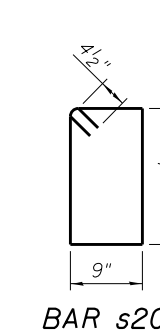
BAR a20



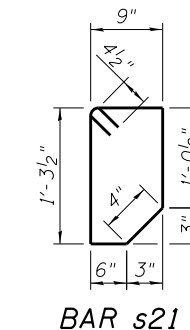
BAR d20



BARS h22 & h23



BAR s20



BAR s21

| Minimum Bar Laps | |
|------------------|--------|
| Bar | Lap |
| #4 | 2'-7" |
| #5 | 3'-2" |
| #6 | 3'-10" |
| #7 | 4'-5" |

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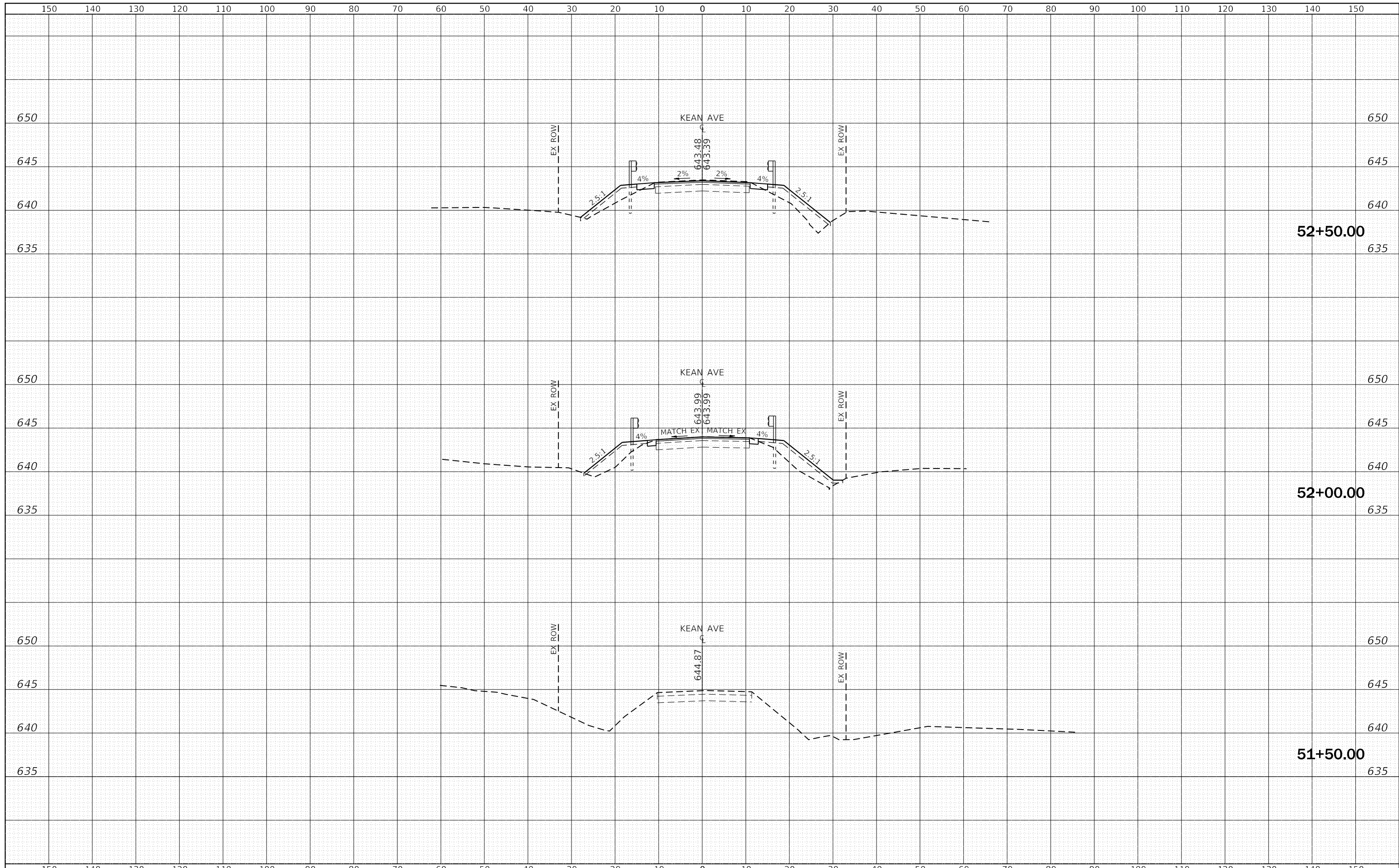
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| PLOT DATE = 5/10/2018 | DATE - 12/27/2017 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CULVERT SECTIONS AND DETAILS (SHEET 2 OF 2)
STRUCTURE NO. 016-2298**

SCALE: SHEET S-6 OF S-7 SHEETS STA. TO STA.

| | | | | |
|---------------------------|-----------|--------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 37 |
| CONTRACT NO. 62D40 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



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 Consulting Engineers
 Westmont, Illinois

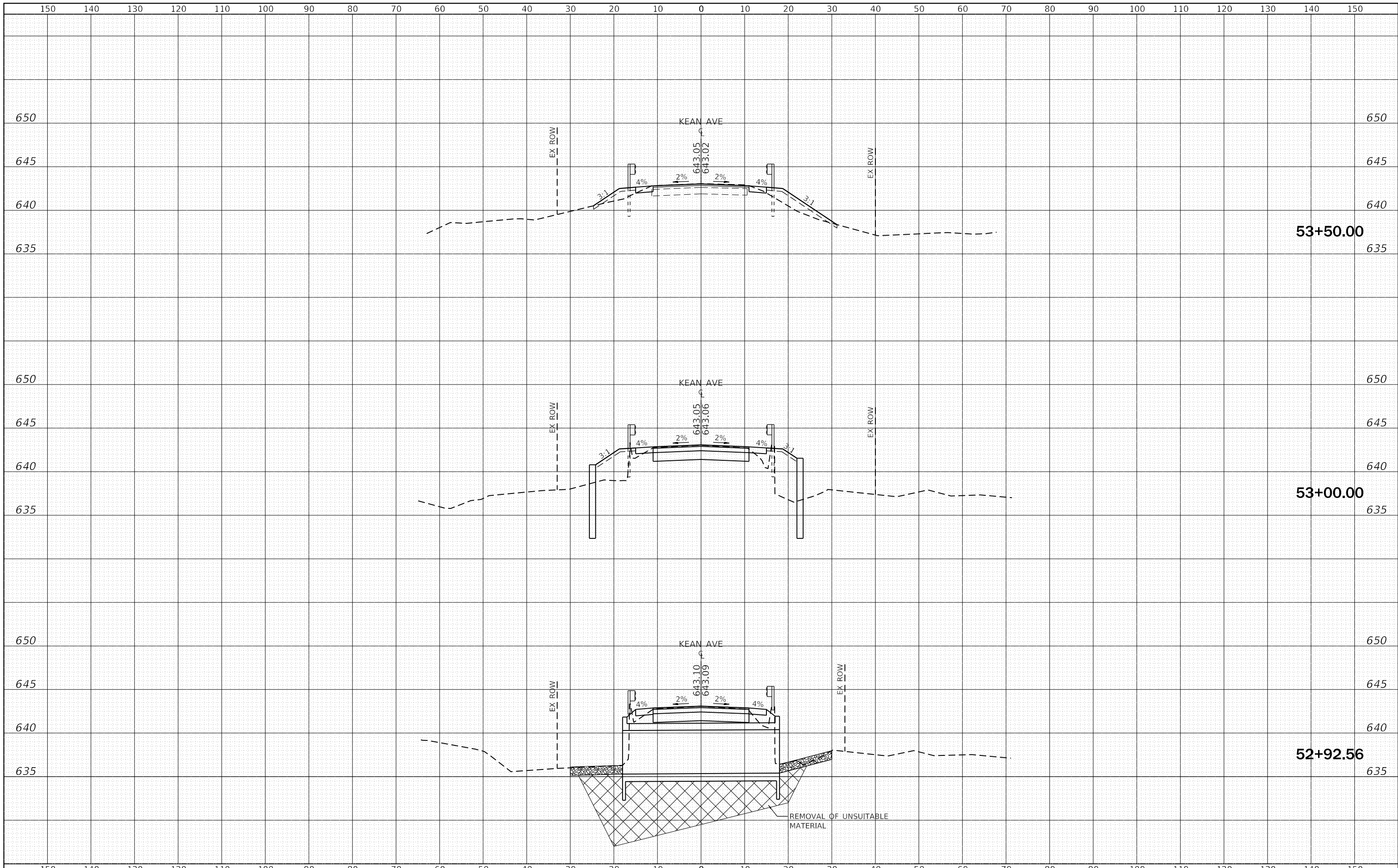
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| PLOT DATE = 12/29/2017 | DATE - 11/2017 | REVISED - |

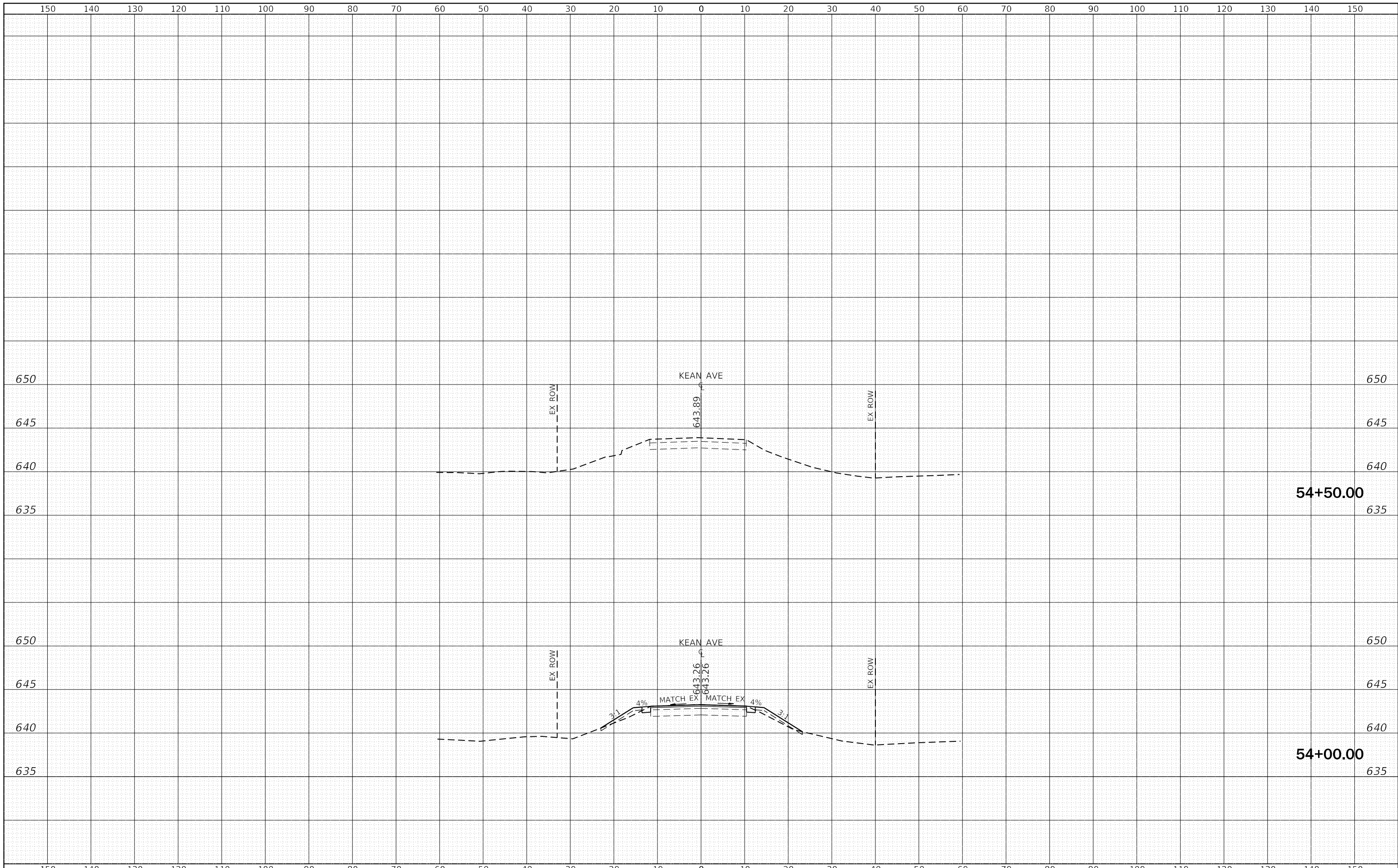
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
 CROSS SECTIONS**

SCALE: 1"=10'H, 5'V SHEET 1 OF 9 SHEETS STA. 51+50.00 TO STA. 52+50.00

| | | | | |
|--------------------|-----------|--------|---------------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 39 |
| CONTRACT NO. 62D40 | | | ILLINOIS FED. AID PROJECT | |





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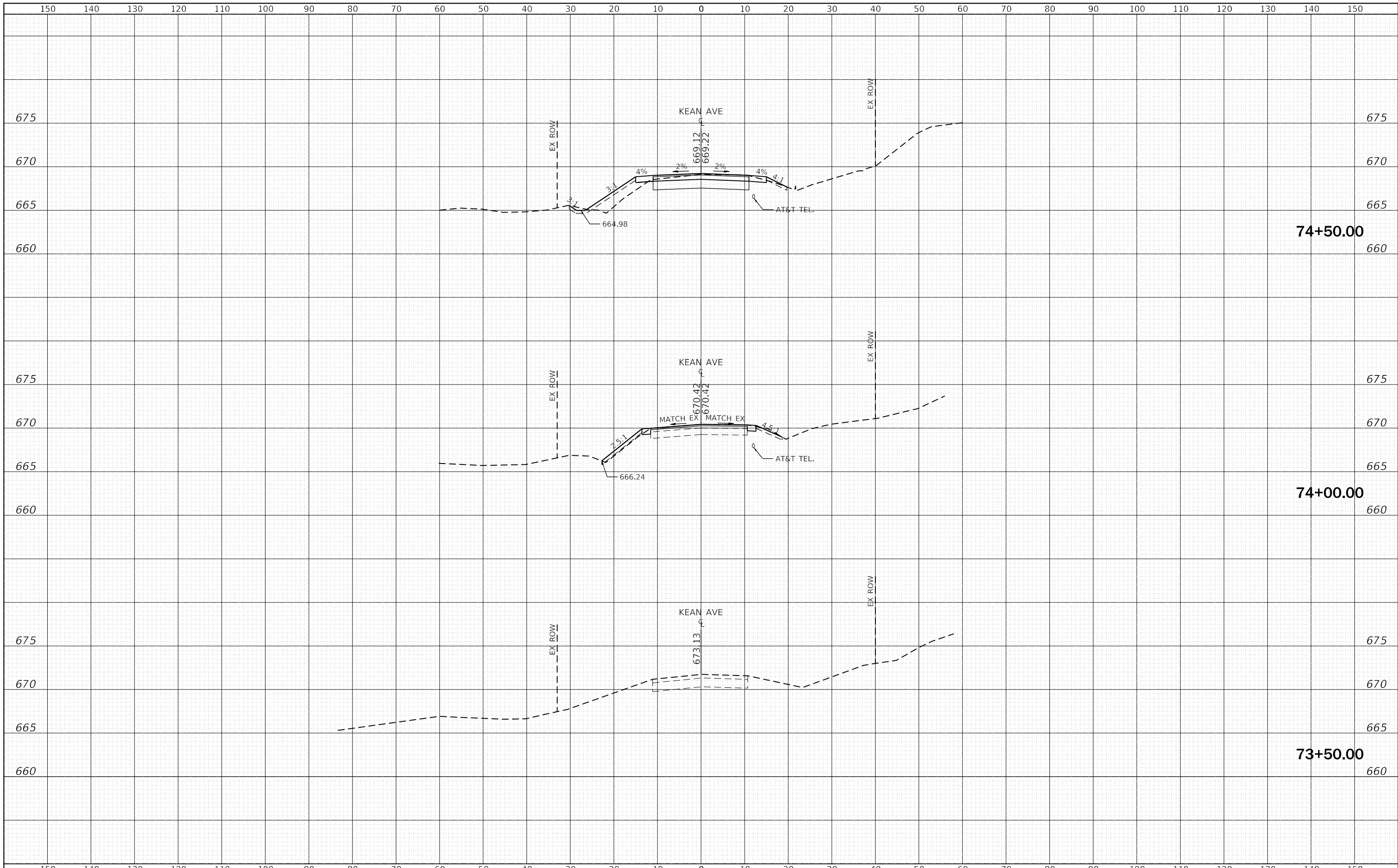
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| PLOT DATE = 12/29/2017 | CHECKED - ST | REVISIED - |
| | DATE - 11/2017 | REVISIED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
 CROSS SECTIONS**

SCALE: 1"=10'H, 5'V SHEET 3 OF 9 SHEETS STA. 54+00.00 TO STA. 54+50.00

| | | | | |
|--------------------|-----------|--------|---------------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 41 |
| CONTRACT NO. 62D40 | | | ILLINOIS FED. AID PROJECT | |



74+50.00

74+00.00

73+50.00



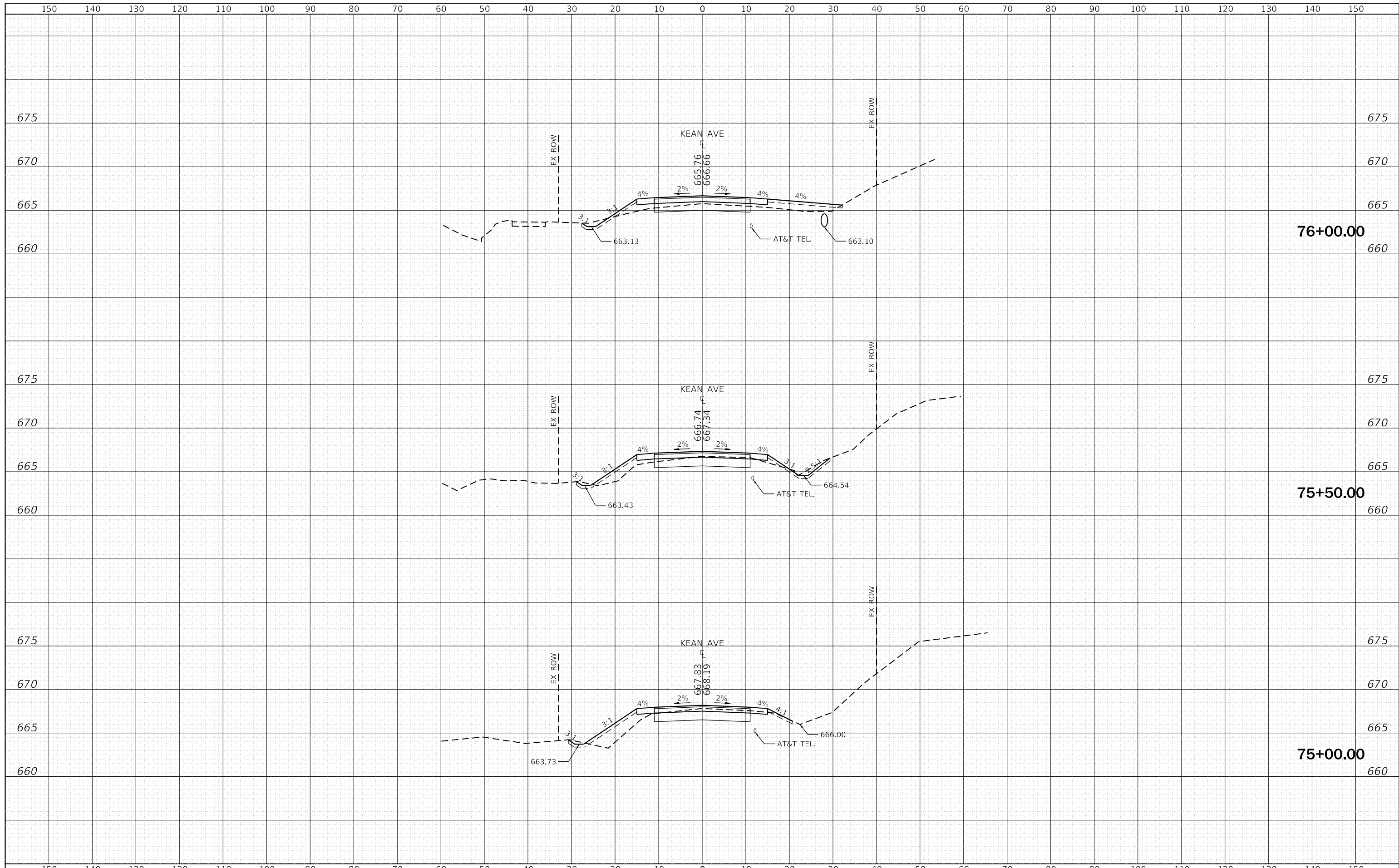
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| PLOT DATE = 12/29/2017 | DATE - 11/2017 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
CROSS SECTIONS**

SCALE: 1"=10'H, 5'V SHEET 4 OF 9 SHEETS STA. 73+50.00 TO STA. 74+50.00

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------|-----------|--------|---------------------------|-----------|
| 2721 | 2016-054B | COOK | 50 | 42 |
| CONTRACT NO. 62D40 | | | ILLINOIS FED. AID PROJECT | |



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 Westmont, Illinois

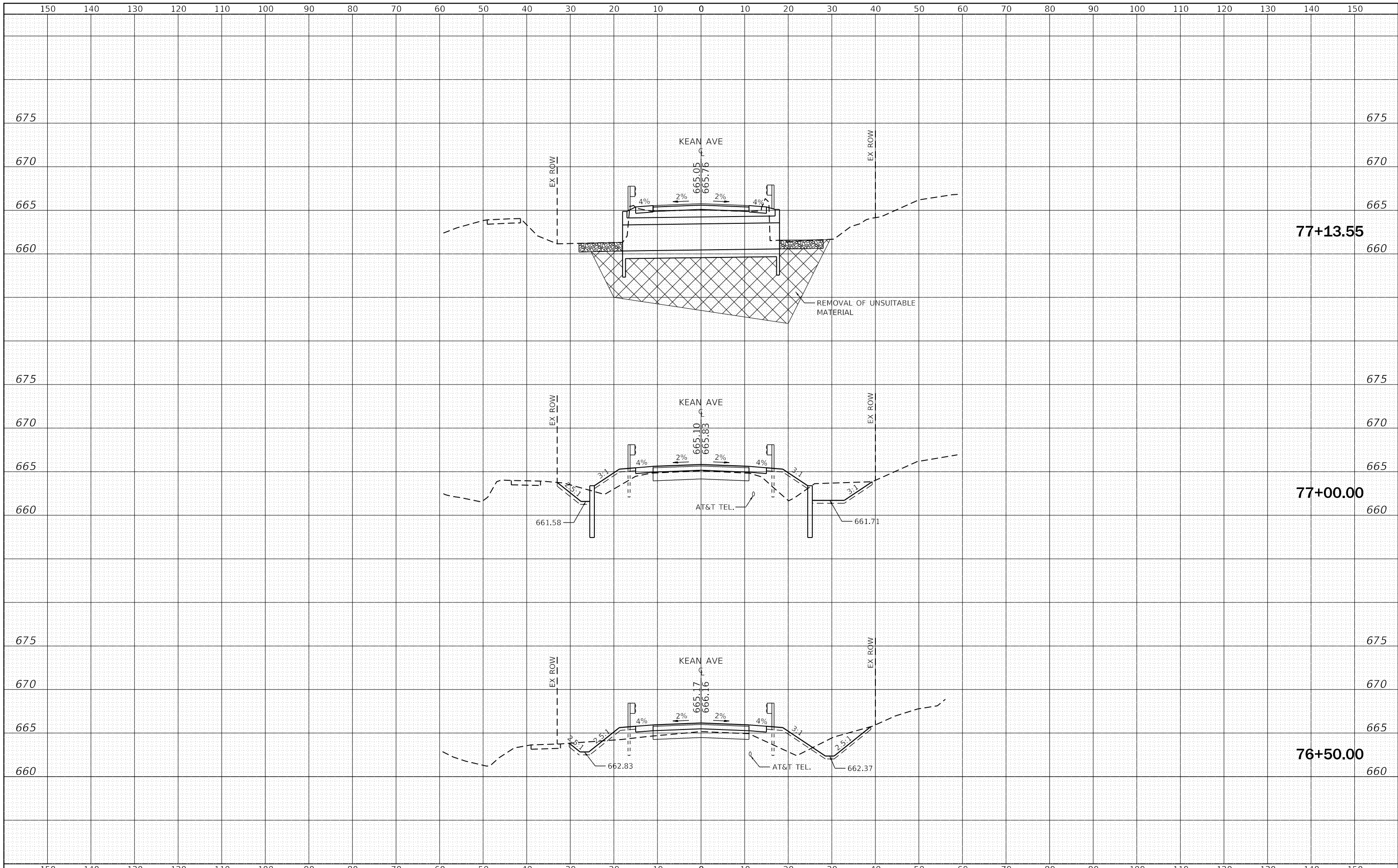
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| PLOT DATE = 12/29/2017 | CHECKED - ST | REVISIED - |
| | DATE - 11/2017 | REVISIED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
 CROSS SECTIONS**

SCALE: 1"=10'H, 5'V SHEET 5 OF 9 SHEETS STA. 75+00.00 TO STA. 76+00.00

| | | | | |
|---------------------------|-----------|--------|--------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 43 |
| | | | CONTRACT NO. 62D40 | |
| ILLINOIS FED. AID PROJECT | | | | |



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 Westmont, Illinois

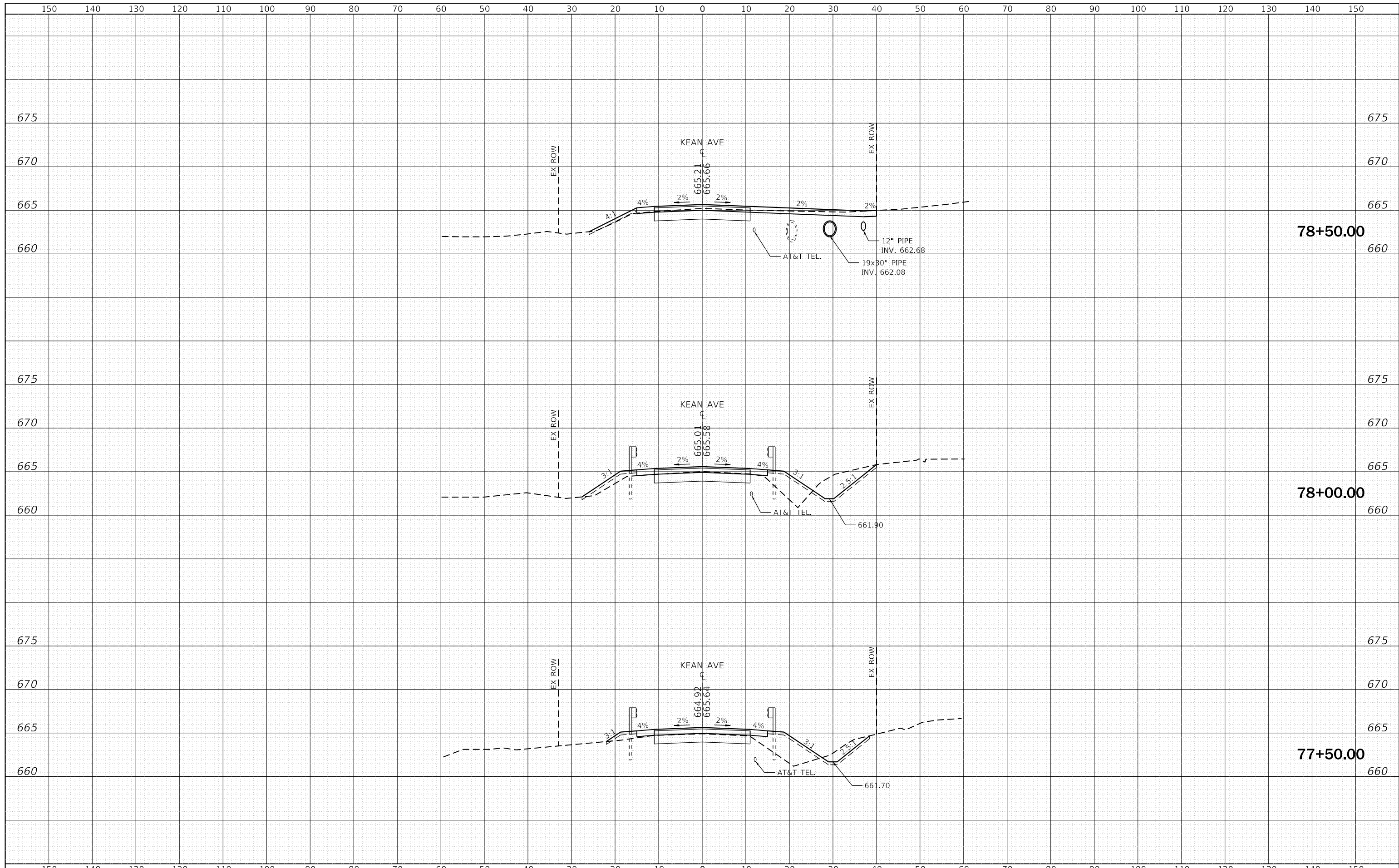
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| PLOT DATE = 2/26/2018 | CHECKED - ST | REvised - |
| | DATE - 12/2017 | REvised - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
 CROSS SECTIONS**

SCALE: 1"=10'H, 5'V SHEET 6 OF 9 SHEETS STA. 76+50.00 TO STA. 77+13.55

| | | | | |
|--------------------|-----------|--------|---------------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 44 |
| CONTRACT NO. 62D40 | | | ILLINOIS FED. AID PROJECT | |



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 Westmont, Illinois

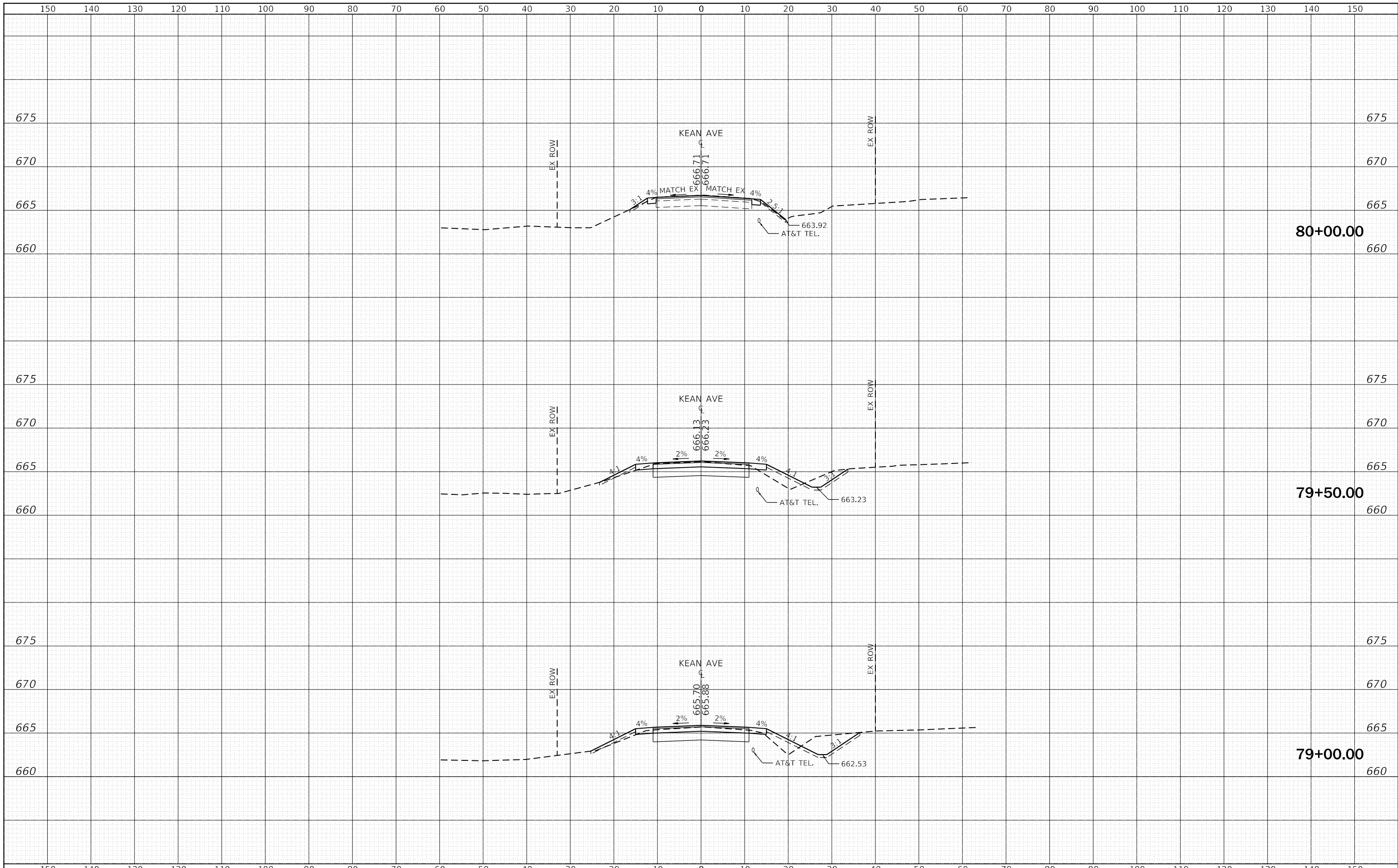
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| PLOT DATE = 12/29/2017 | DATE - 11/2017 | REVISIED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
 CROSS SECTIONS**

SCALE: 1"=10'H, 5'V SHEET 7 OF 9 SHEETS STA. 77+50.00 TO STA. 78+50.00

| | | | | |
|---------------------------|-----------|--------|--------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 45 |
| | | | CONTRACT NO. 62D40 | |
| ILLINOIS FED. AID PROJECT | | | | |



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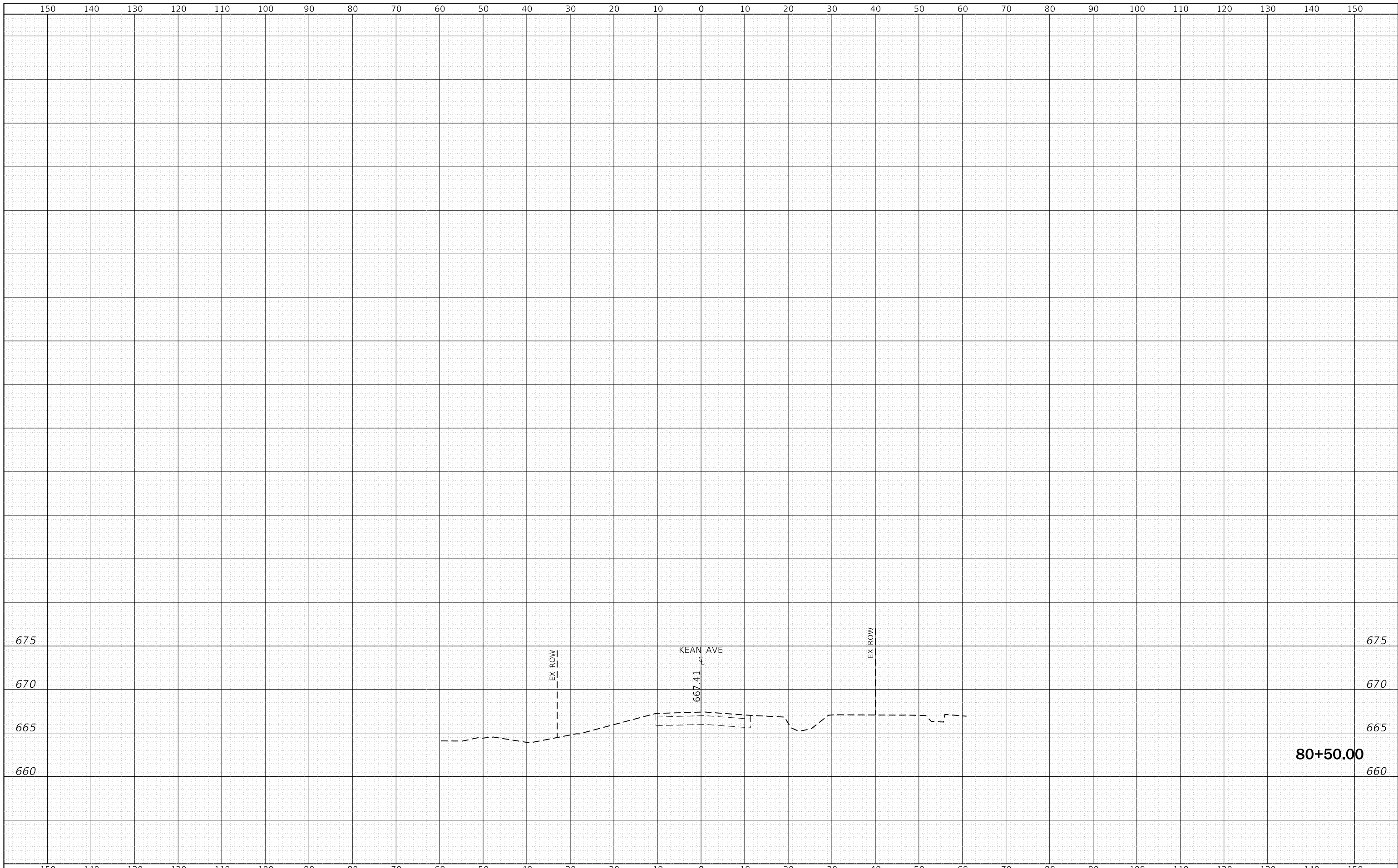
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| PLOT DATE = 12/29/2017 | CHECKED - ST | REVISD - |
| | DATE - 11/2017 | REVISD - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
 CROSS SECTIONS**

SCALE: 1"=10'H, 5'V SHEET 8 OF 9 SHEETS STA. 79+00.00 TO STA. 80+00.00

| | | | | |
|--------------------|-----------|--------|---------------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 46 |
| CONTRACT NO. 62D40 | | | ILLINOIS FED. AID PROJECT | |



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 Westmont, Illinois

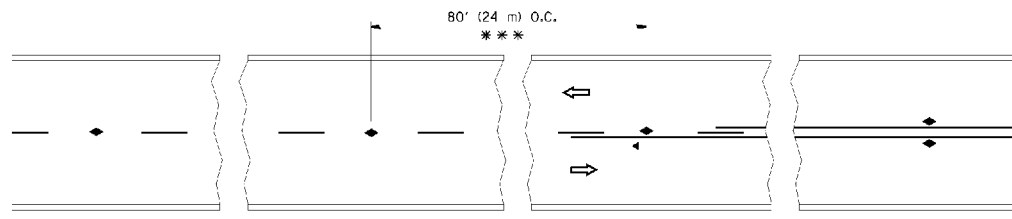
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| DRAWN - RC | REVISIONS - | |
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| PLOT DATE = 12/29/2017 | DATE - 11/2017 | REVISED - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**KEAN AVENUE OVER DITCHES
 CROSS SECTIONS**

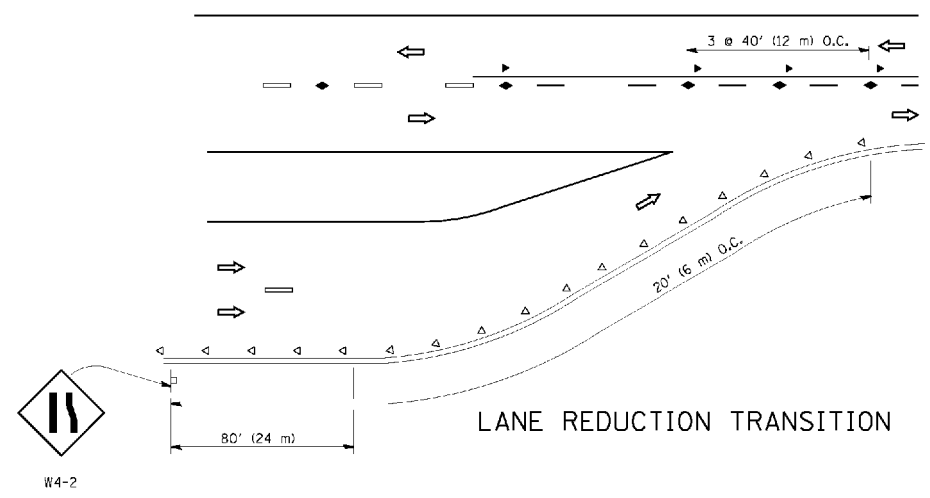
SCALE: 1"=10'H, 5'V SHEET 9 OF 9 SHEETS STA. 80+50.00 TO STA. 80+50.00

| | | | | |
|--------------------|-----------|--------|---------------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 47 |
| CONTRACT NO. 62D40 | | | ILLINOIS FED. AID PROJECT | |

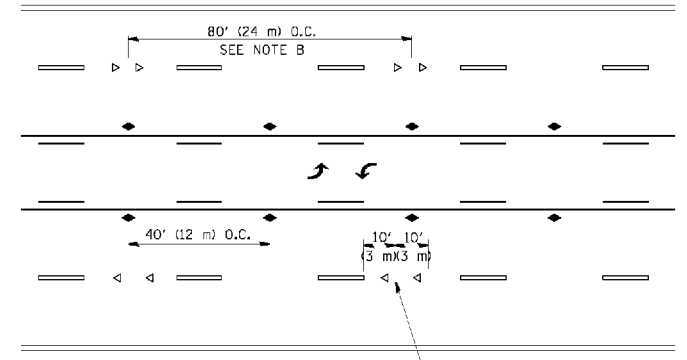


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

TWO-LANE/TWO-WAY

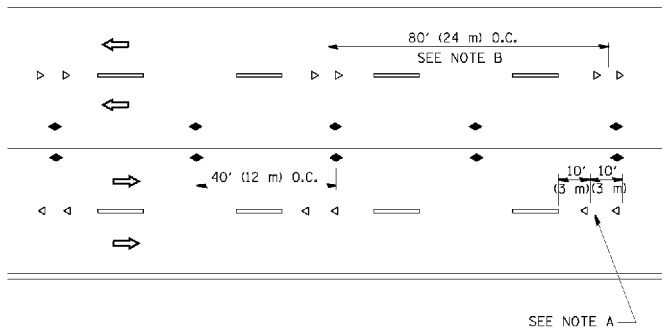


LANE REDUCTION TRANSITION



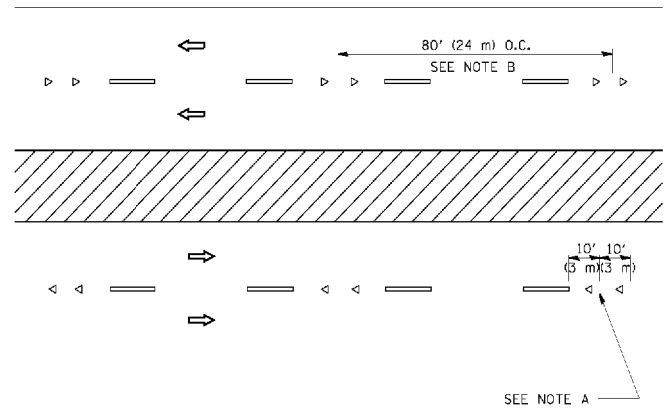
TWO-WAY LEFT TURN

SEE NOTE A



MULTI-LANE/UNDIVIDED

SEE NOTE A



MULTI-LANE/DIVIDED

SEE NOTE A

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

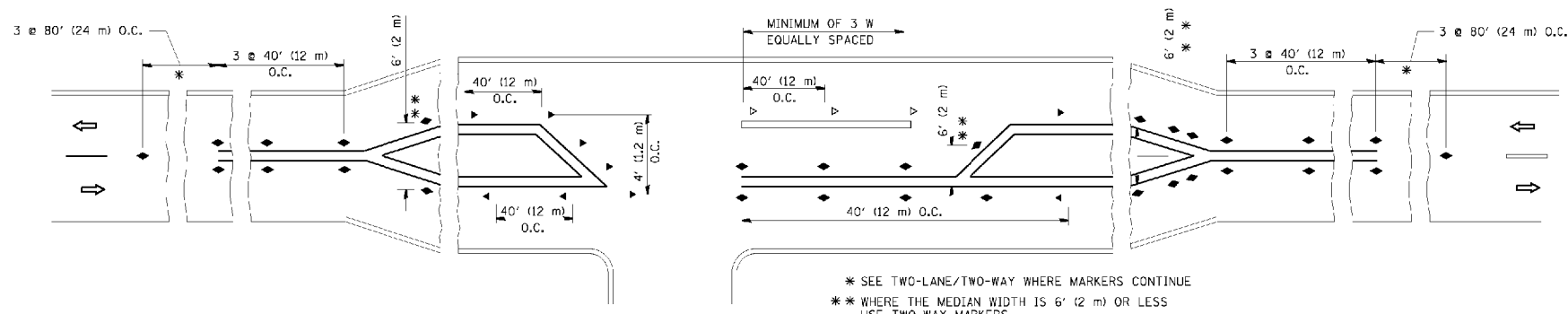
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- < ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

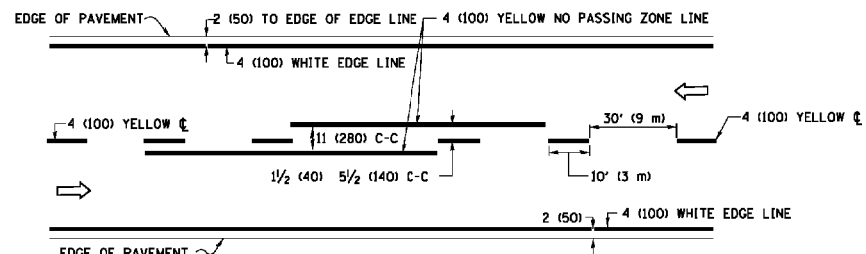


LEFT TURN

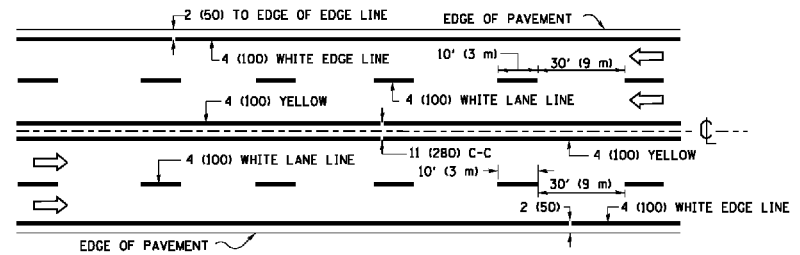
* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

All dimensions are in inches (millimeters) unless otherwise shown.

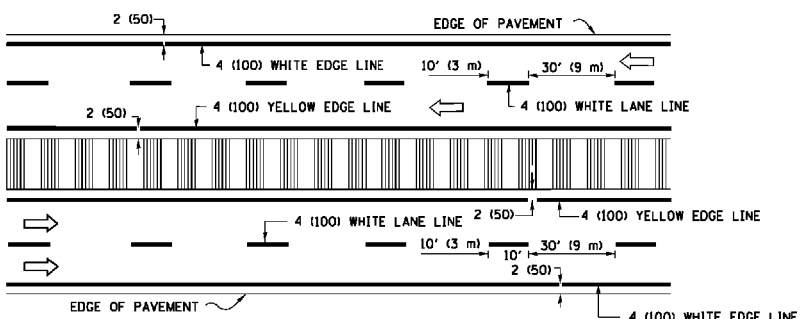
| | | | | | | | | | | |
|---|------------------------------|---------------------------------|---|--|--|---------------------------|-----------|--------------------|--------------|-----------|
| PLOT SCALE = 100,000' / in. PLOT DATE = 12/29/2017 | DESIGNED - | REVISED - T. RAMMACHER 09-19-94 | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TYPICAL APPLICATIONS | | F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| | DRAWN - | REVISED - T. RAMMACHER 03-12-99 | | RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) | | 2721 | 2016-054B | COOK | 50 | 48 |
| | CHECKED - | REVISED - T. RAMMACHER 01-06-00 | | SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA. | | TC-11 | | CONTRACT NO. 62D40 | | |
| DATE - | REVISED - C. JUCIUS 09-09-09 | | | | | ILLINOIS FED. AID PROJECT | | | | |



2-LANE ROADWAY

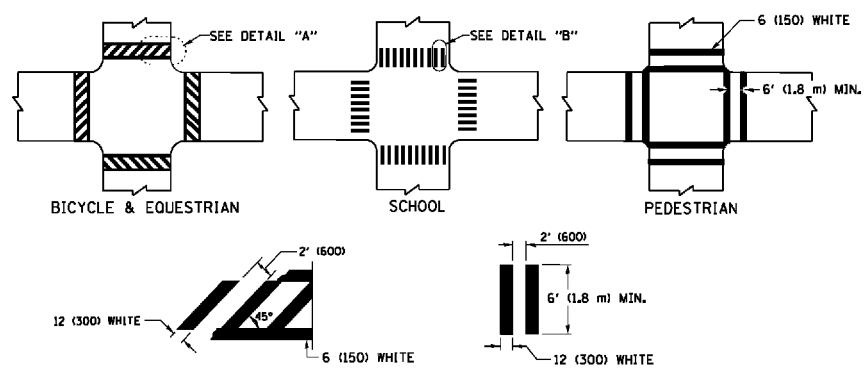


MULTI-LANE UNDIVIDED



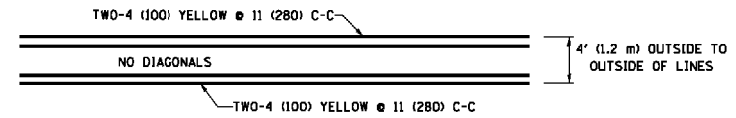
MULTI-LANE DIVIDED WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

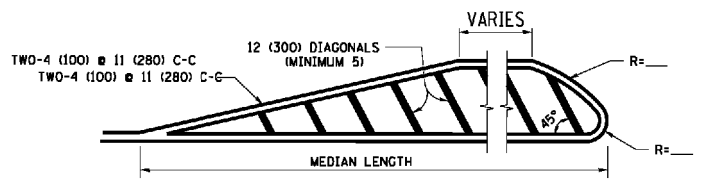


TYPICAL CROSSWALK MARKING

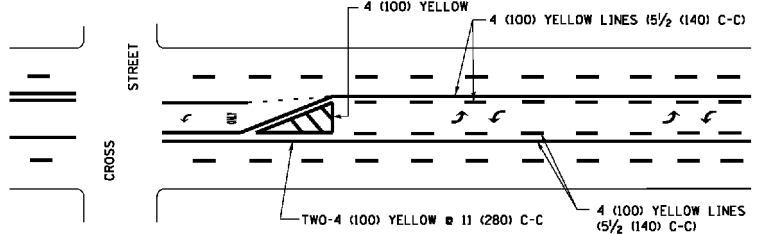
* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



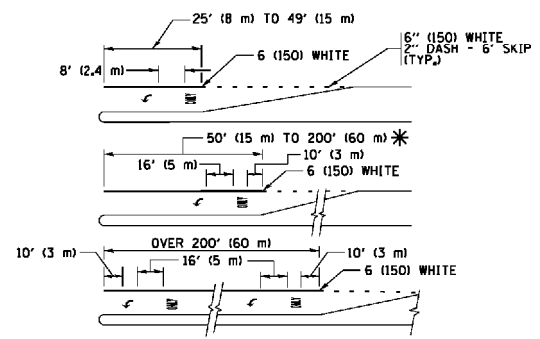
4' (1.2 m) WIDE MEDIANS ONLY



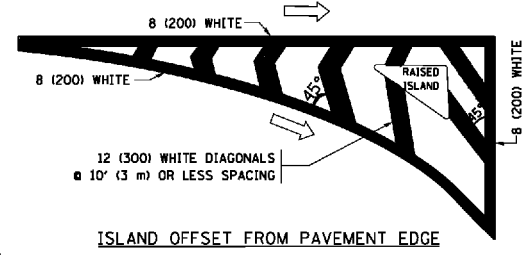
MEDIANS OVER 4' (1.2 m) WIDE



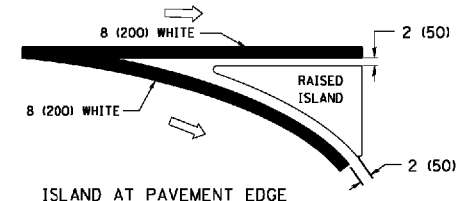
MEDIAN WITH TWO-WAY LEFT TURN LANE TYPICAL PAINTED MEDIAN MARKING



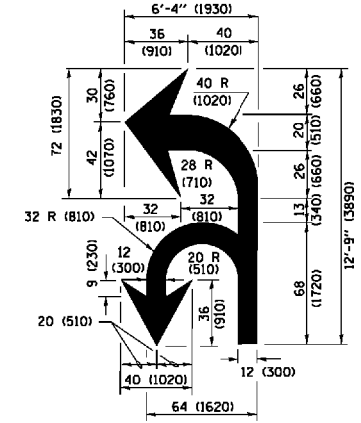
TYPICAL LEFT (OR RIGHT) TURN LANE TYPICAL TURN LANE MARKING



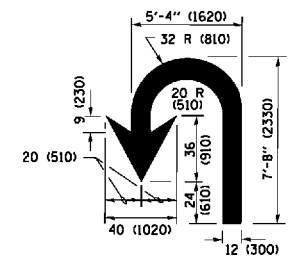
ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE TYPICAL ISLAND MARKING



COMBINATION LEFT AND U-TURN



U-TURN

LANE REDUCTION TRANSITION

* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

| D(FT) | SPEED LIMIT |
|-------|-------------|
| 345 | 30 |
| 425 | 35 |
| 500 | 40 |
| 580 | 45 |
| 665 | 50 |
| 750 | 55 |

| TYPE OF MARKING | WIDTH OF LINE | PATTERN | COLOR | SPACING /REMARKS |
|---|--|------------------------------|---|--|
| CENTERLINE ON 2 LANE PAVEMENT | 4 (100) | SKIP-DASH | YELLOW | 10' (3 m) LINE WITH 30' (9 m) SPACE |
| CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT | 2 @ 4 (100) | SOLID | YELLOW | 11 (280) C-C |
| NO PASSING ZONE LINES FOR BOTH DIRECTIONS | 4 (100) 2 @ 4 (100) | SOLID SOLID | YELLOW YELLOW | 5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN |
| LANE LINES | 4 (100) 5 (125) ON FREEWAYS | SKIP-DASH SKIP-DASH | WHITE WHITE | 10' (3 m) LINE WITH 30' (9 m) SPACE |
| DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS) | SAME AS LINE BEING EXTENDED | SKIP-DASH | SAME AS LINE BEING EXTENDED | 2' (600) LINE WITH 6' (1.8 m) SPACE |
| EDGE LINES | 4 (100) | SOLID | YELLOW-LEFT WHITE-RIGHT | OUTLINE MEDIANS IN YELLOW |
| TURN LANE MARKINGS | 6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m)) | SOLID | WHITE | SEE TYPICAL TURN LANE MARKING DETAIL |
| TWO WAY LEFT TURN MARKING | 2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW | SKIP-DASH AND SOLID IN PAIRS | YELLOW WHITE | 10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL |
| CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL) | 2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90° | SOLID SOLID SOLID | WHITE WHITE WHITE | NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS. |
| STOP LINES | 24 (600) | SOLID | WHITE | PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE |
| PAINTED MEDIANS | 2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS | SOLID | YELLOW TWO WAY TRAFFIC WHITE ONE WAY TRAFFIC | 11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING. |
| GORE MARKING AND CHANNELIZING LINES | 8 (200) WITH 12 (300) DIAGONALS @ 45° | SOLID | WHITE | DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h)) |
| RAILROAD CROSSING | 24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X" | SOLID | WHITE | SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²) |
| SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS ≥ 8') | 12 (300) @ 45° | SOLID | WHITE - RIGHT YELLOW - LEFT | 50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h)) |
| U TURN ARROW | SEE DETAIL | SOLID | WHITE | 16.3 SF |
| 2 ARROW COMBINATION LEFT AND U TURN | SEE DETAIL | SOLID | WHITE | 30.4 SF |

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.




| | |
|------------------------------|------------------------------|
| DESIGNED - EVERS | REVISED - C. JUCIUS 09-09-09 |
| DRAWN - | REVISED - C. JUCIUS 07-01-13 |
| PLOT SCALE = 100,0000' / in. | REVISED - C. JUCIUS 12-21-15 |
| CHECKED - | REVISED - C. JUCIUS 04-12-16 |
| DATE - 03-19-90 | |

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION






| DISTRICT ONE | |
|---------------------------|----------------------------------|
| TYPICAL PAVEMENT MARKINGS | |
| SCALE: NONE | SHEET 1 OF 1 SHEETS STA. TO STA. |

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|-----------|--------|--------------------|-----------|
| 2721 | 2016-054B | COOK | 50 | 49 |
| TC-13 | | | CONTRACT NO. 62D40 | |
| ILLINOIS FED. AID PROJECT | | | | |





ROUTE MARKERS

-  FOR U.S. ROUTES
MI-40-2424
-  FOR ILLINOIS ROUTES
MI-50-2424
-  R.R. UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

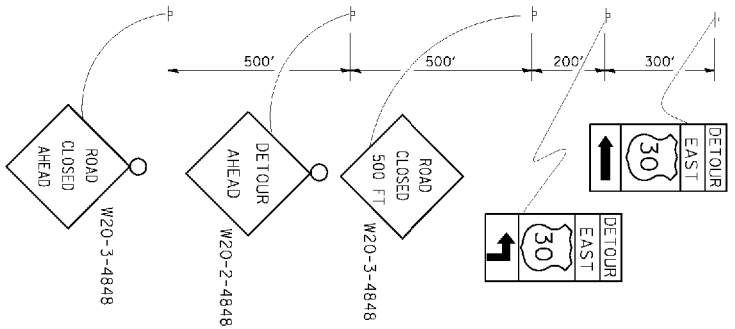
ARROWS SIGNS

-  M5-1L-2115
-  M5-1R-2115
-  M6-1-2115
-  M6-1-2115
-  M6-3-2115

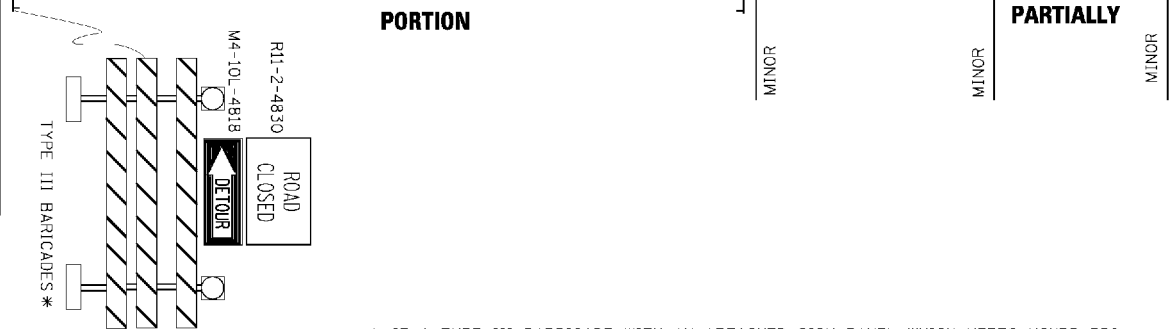
CARDINAL DIRECTION & DETOUR SIGNS

-  NORTH M3-1-2412
-  EAST M3-2-2412
-  SOUTH M3-3-2412
-  WEST M3-4-2412
-  DETOUR M4-8-2412

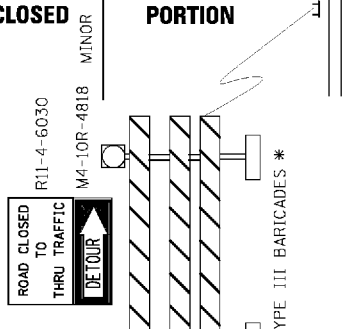
STATE ROUTE



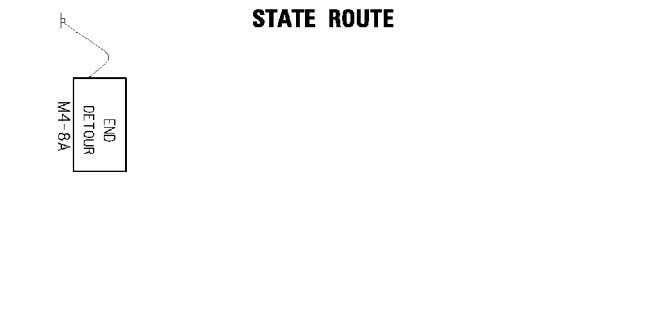
COMPLETELY CLOSED PORTION



PARTIALLY CLOSED PORTION



STATE ROUTE



* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

| | |
|------------|---------------------------|
| DESIGNED - | REVISD - 10-18-02 |
| DRAWN - | REVISD - R. BORO 09-14-09 |
| CHECKED - | REVISD - |
| DATE - | REVISD - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

| | |
|--|----------------------------------|
| DETOUR SIGNING FOR CLOSING STATE HIGHWAYS | |
| SCALE: NONE | SHEET 1 OF 1 SHEETS STA. TO STA. |

| | | | | |
|---------------------------|-----------|--------------------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 2721 | 2016-054B | COOK | 50 | 50 |
| TC-21 | | CONTRACT NO. 62D40 | | |
| ILLINOIS FED. AID PROJECT | | | | |