

ARCONIC LAFAYETTE OPERATIONS ELLIOTT DITCH - LEVEE SOIL REMEDIATION

PREPARED FOR:
ARCONIC LAFAYETTE OPERATIONS
3131 EAST MAIN STREET
LAFAYETTE, INDIANA 47905

PREPARED BY:
CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2704 CHEROKEE FARM WAY, SUITE 101
KNOXVILLE, TENNESSEE 37920
MARCH 2019

PROJECT DESCRIPTION

IN ACCORDANCE WITH THE INTERIM MEASURES WORK PLAN (IMWP) DATED OCTOBER 2018, THE PROJECT CONSISTS OF THE EXCAVATION, REMOVAL, AND OFF-SITE DISPOSAL OF PCB IMPACTED SOILS TO A REMEDIAL GOAL OF 1.0 MILLIGRAM PER KILOGRAM (MG/KG) ON A LEVEE OF ELLIOTT DITCH. UPON COMPLETION OF REMEDIATION, THE LEVEE WILL BE RESTORED TO PRE-PROJECT CONDITIONS WITH OFFSITE BORROW MATERIAL CERTIFIED TO BE FREE OF CONTAMINATION. OTHER ASSOCIATED WORK INCLUDES THE INSTALLATION OF SEDIMENT AND EROSION CONTROLS, THE CONSTRUCTION OF AN ACCESS ROAD AND DECONTAMINATION STATION, AND LOCALIZED GRADING.

DATUM

INDIANA STATE PLAN GRID – NORTH AMERICAN DATUM OF 1983 (NAD83).
ELEVATION–NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)

NOTES

THE REMEDIAL EXCAVATION EXTENTS ARE APPROXIMATE AND CONFIRMATION SAMPLES WILL BE COLLECTED TO DETERMINE IF THE REMEDIAL OBJECTIVE IS MET. IN THE EVENT THAT CONFIRMATION SAMPLES DO NOT MEET THE REMEDIAL OBJECTIVE, ADDITIONAL EXCAVATION AND CONFIRMATION SAMPLING WILL BE PERFORMED UNTIL THE REMEDIAL OBJECTIVE IS MET.

DRAWING INDEX

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C000	COVER SHEET
C100	EXISTING SITE CONDITIONS
C200	EXCAVATION OVERVIEW
C201	EXCAVATION PLANS AND CROSS-SECTIONS
C202	EXCAVATION PLANS AND CROSS-SECTIONS
C203	EXCAVATION PLANS AND CROSS-SECTIONS
C204	EXCAVATION PLANS AND CROSS-SECTIONS
C300	RESTORATION OVERVIEW
C301	RESTORATION PLANS AND CROSS-SECTIONS
C302	RESTORATION PLANS AND CROSS-SECTIONS
C303	RESTORATION PLANS AND CROSS-SECTIONS
C304	RESTORATION PLANS AND CROSS-SECTIONS
C800	CONSTRUCTION NOTES

*SEE SHEETS C900 THROUGH C905 FOR STORM WATER POLLUTION AND PREVENTION PLAN



VICINITY MAP
LATITUDE: 40° 23' 47.00" N
LONGITUDE: 86° 51' 33.03" W

SCALE IN FEET
0 400 800

FOR CONSTRUCTION
USE

NO	DATE	DESCRIPTION
1	3/20/2019	REVISED EXCAVATION BOUNDARIES
2	3/24/2019	ADDITION OF EXISTING PUBLIC UTILITIES
3	2/19/2020	ADDITION OF FIELD INFRASTRUCTURE OBSERVATIONS

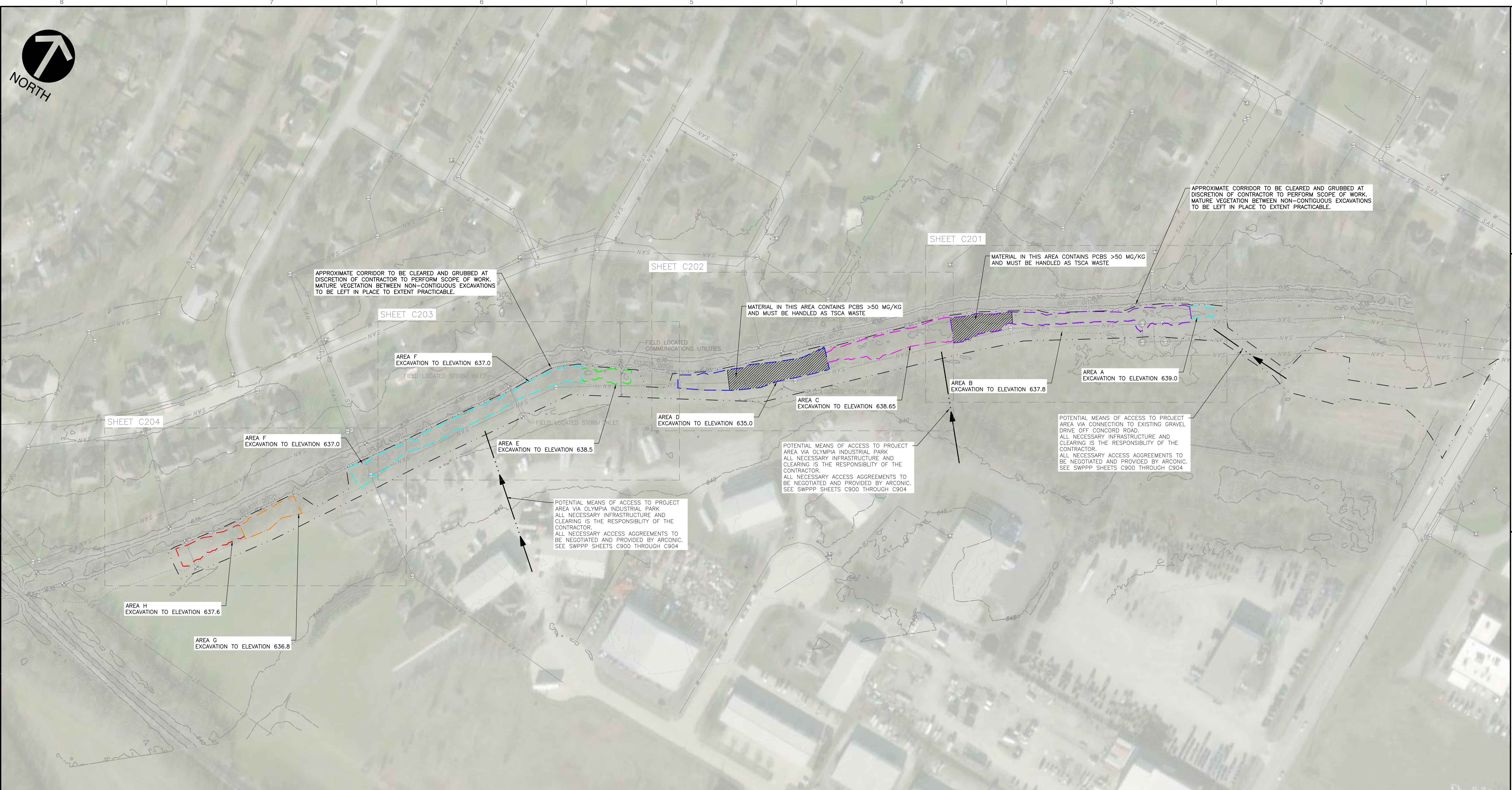
C&E
Civil & Environmental Consultants, Inc.
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www.ccecinc.com

ARCONIC INC.
LAFAYETTE OPERATIONS
ELLIOTT DITCH
LEVEE SOIL REMEDIATION
LAFAYETTE, INDIANA

COVER SHEET
DATE: MARCH 13, 2019
DRAWN BY: KAM
DWG SCALE: NOT TO SCALE
CHECKED BY: GAW
PROJECT NO: 172-387-0011
APPROVED BY: JMB

DRAWING NO.:
C000
SHEET 1 OF 13

P:\100171\172-387-0011\DWG\172387-0011.dwg (172387-0011) 2/19/2020 10:37 AM - IP: 27.21.2020 10:37 AM

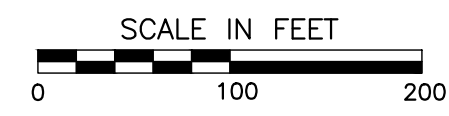


- REFERENCE**
- EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.
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- NOTES**
- SOIL CONTAINING PCB CONCENTRATIONS GREATER THAN 50 MG/KG IS REGULATED UNDER THE TOXIC SUBSTANCE CONTROL ACT (TSCA) AND WILL BE DISPOSED OF AT A RCRA SUBTITLE C OR TSCA LANDFILL.
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LEGEND

	EXISTING MAJOR CONTOUR		EXISTING STORM SEWER		EXISTING STORM MANHOLE
	EXISTING MINOR CONTOUR		EXISTING WATER LINE		EXISTING SANITARY MANHOLE
	EDGE OF EXCAVATION (COLOR CODED)		EXISTING SANITARY SEWER		EXISTING STORM OUTFALL
	LIMITS OF TSCA SOIL (PCBS >50 MG/KG)		EXISTING CATCH BASIN		EXISTING WATER VALVE
	LIMITS OF CLEARING AND GRUBBING				EXISTING HYDRANT



FOR CONSTRUCTION USE

REVISION RECORD

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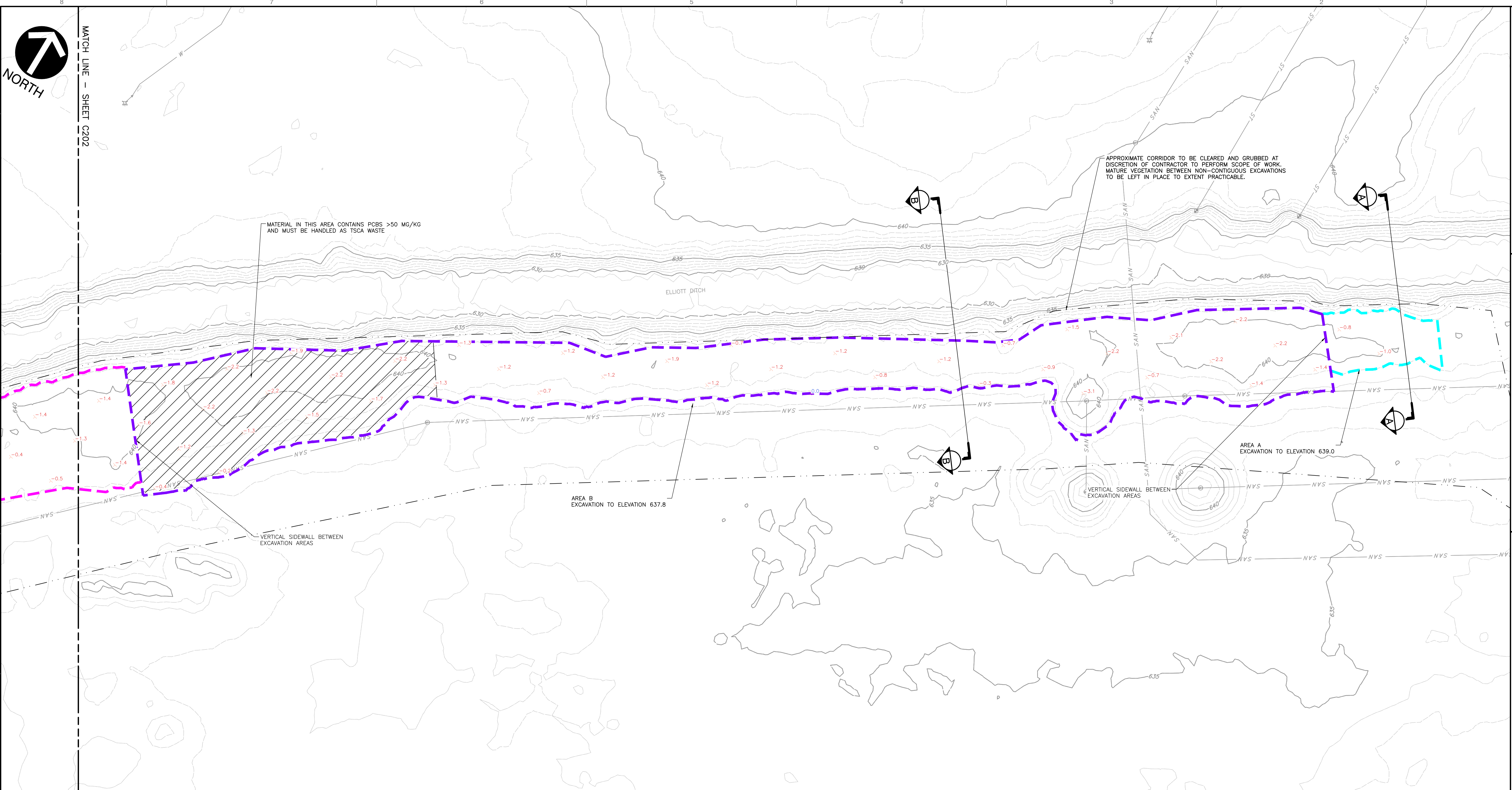
ARCONIC INC.
LAFAYETTE OPERATIONS
ELLIOTT DITCH
LEVEE SOIL REMEDIATION
LAFAYETTE, INDIANA

EXCAVATION OVERVIEW

DATE:	MARCH 13, 2019	DRAWN BY:	KAM
DWG SCALE:	1" = 100'	CHECKED BY:	GAW
PROJECT NO.:	172-887-0011	APPROVED BY:	JMB

DRAWING NO.: **C200**
 SHEET 3 OF 13

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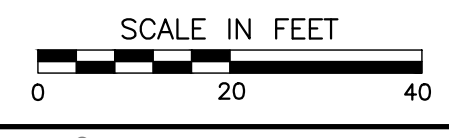
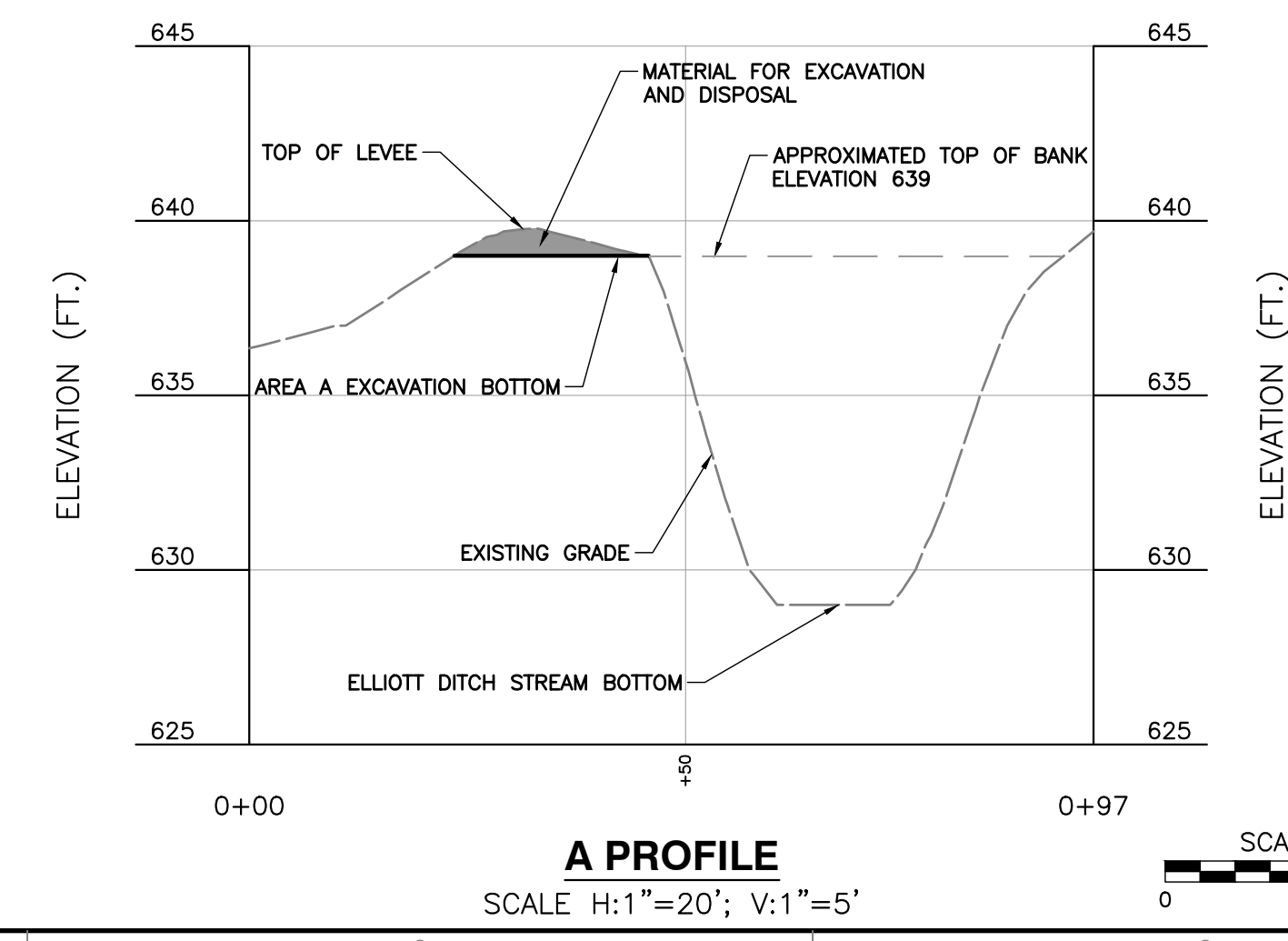
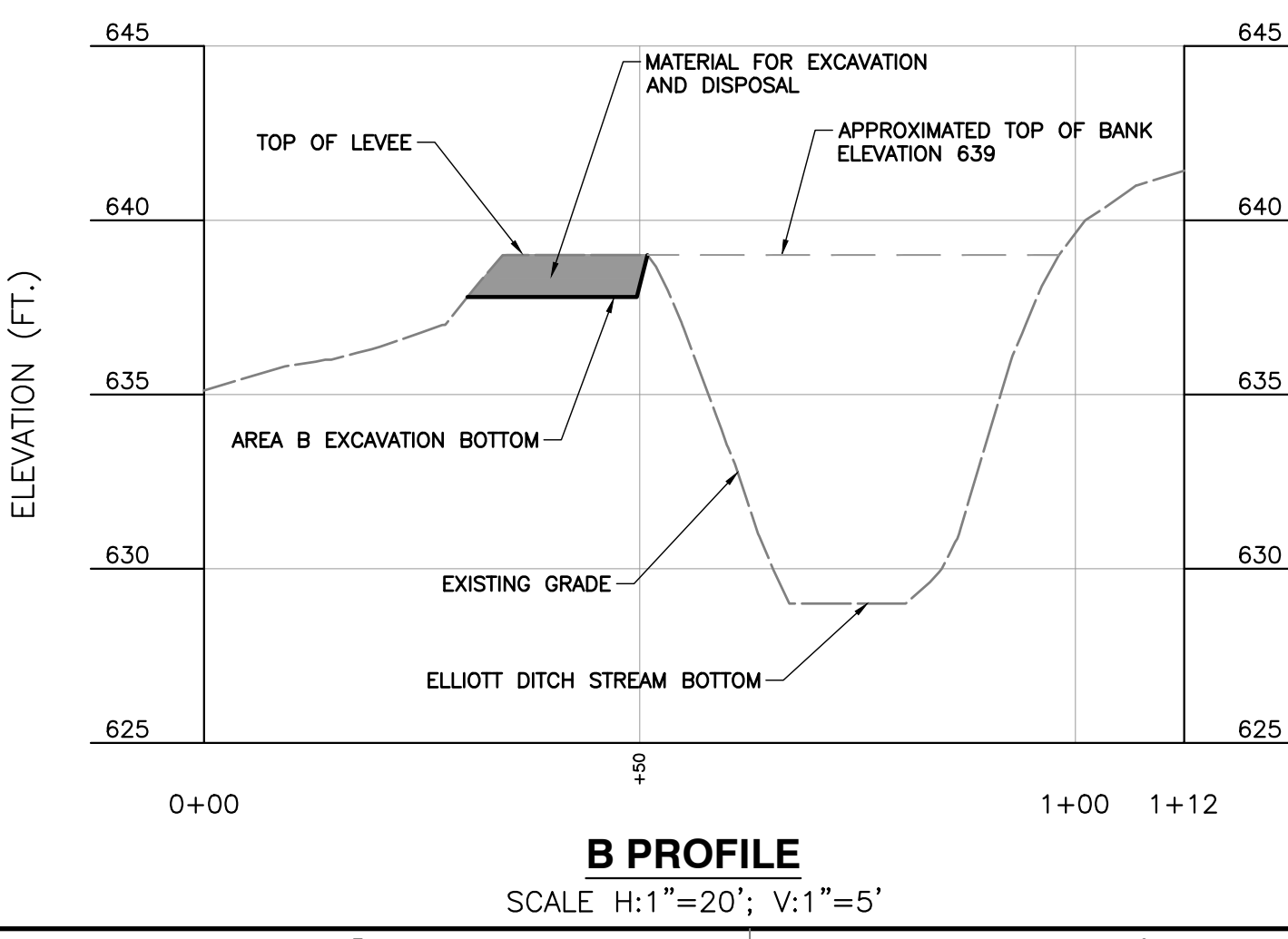
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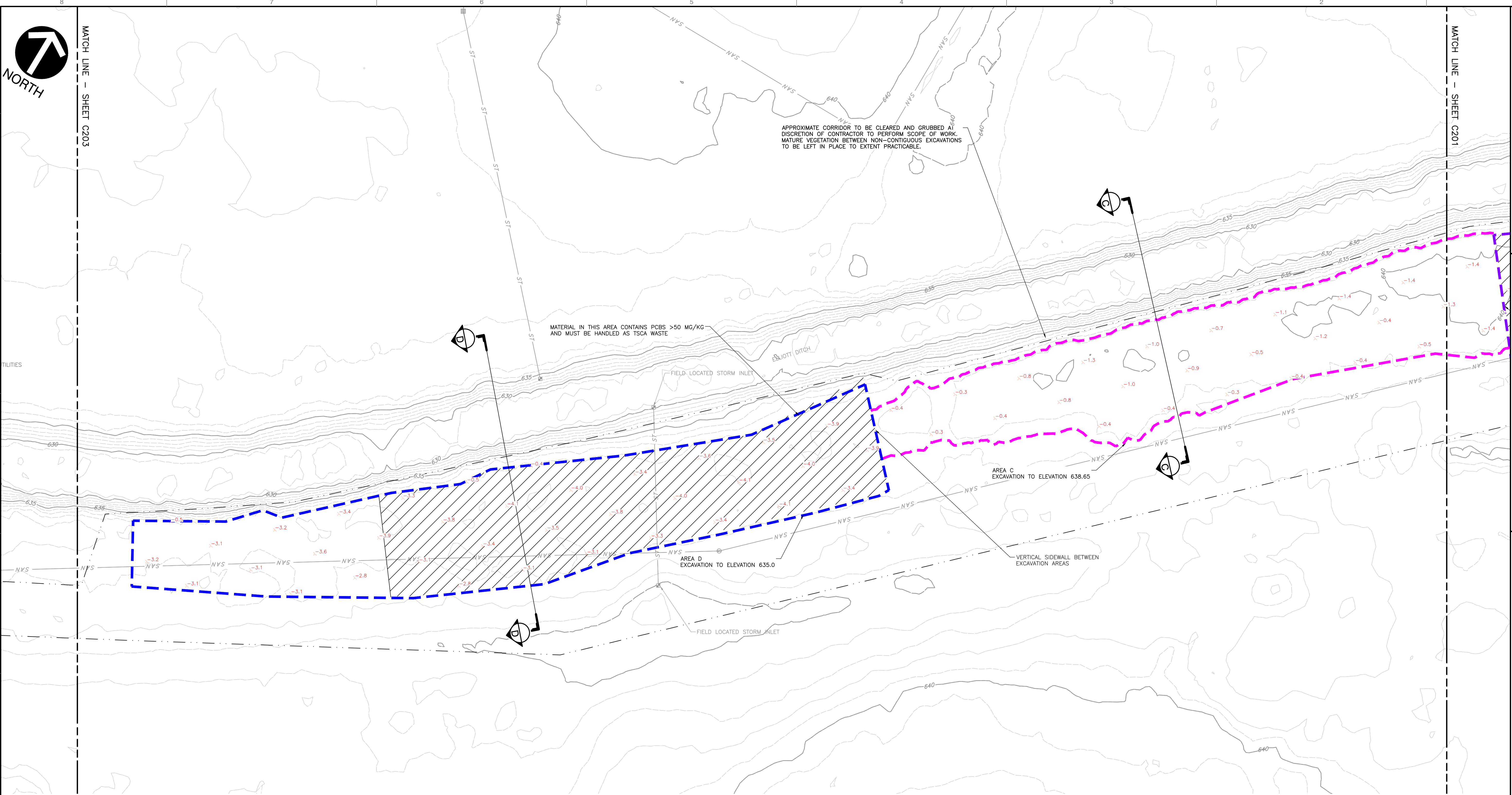
LEGEND

---	EXISTING MAJOR CONTOUR	- - - -	LIMITS OF CLEARING AND GRUBBING	⊙	EXISTING STORM MANHOLE
- - - -	EXISTING MINOR CONTOUR	ST	EXISTING STORM SEWER	⊕	EXISTING SANITARY MANHOLE
---	EDGE OF EXCAVATION (COLOR CODED)	W	EXISTING WATER LINE	⊖	EXISTING STORM OUTFALL
---	DEPTH OF EXCAVATION	SAN	EXISTING SANITARY SEWER	⊕	EXISTING WATER VALVE
▨	LIMITS OF TSCA SOIL (PCBS >50 MG/KG)	CB	EXISTING CATCH BASIN	⊕	EXISTING HYDRANT



FOR CONSTRUCTION USE

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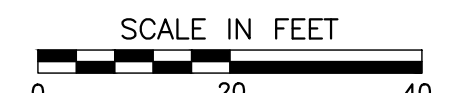
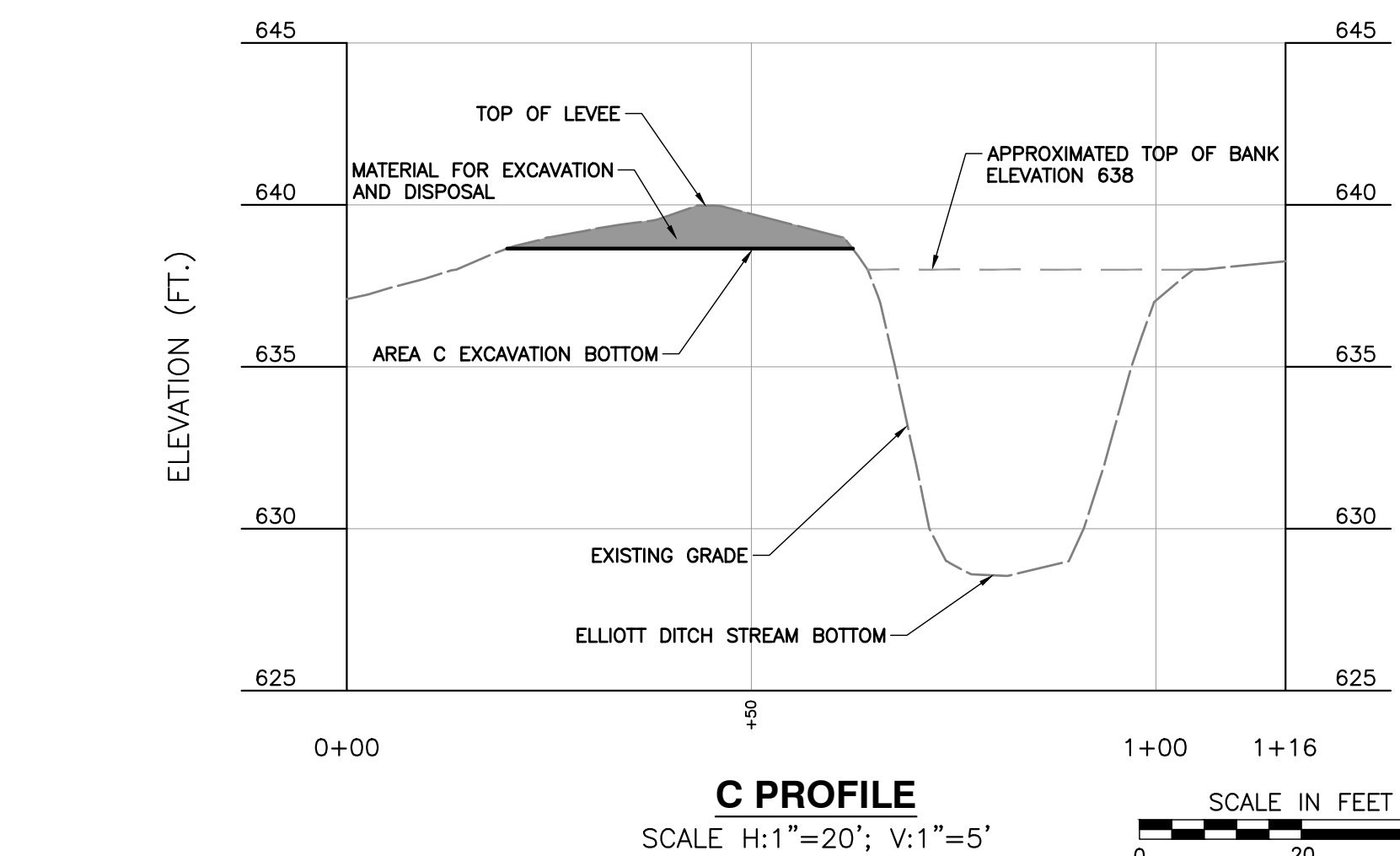
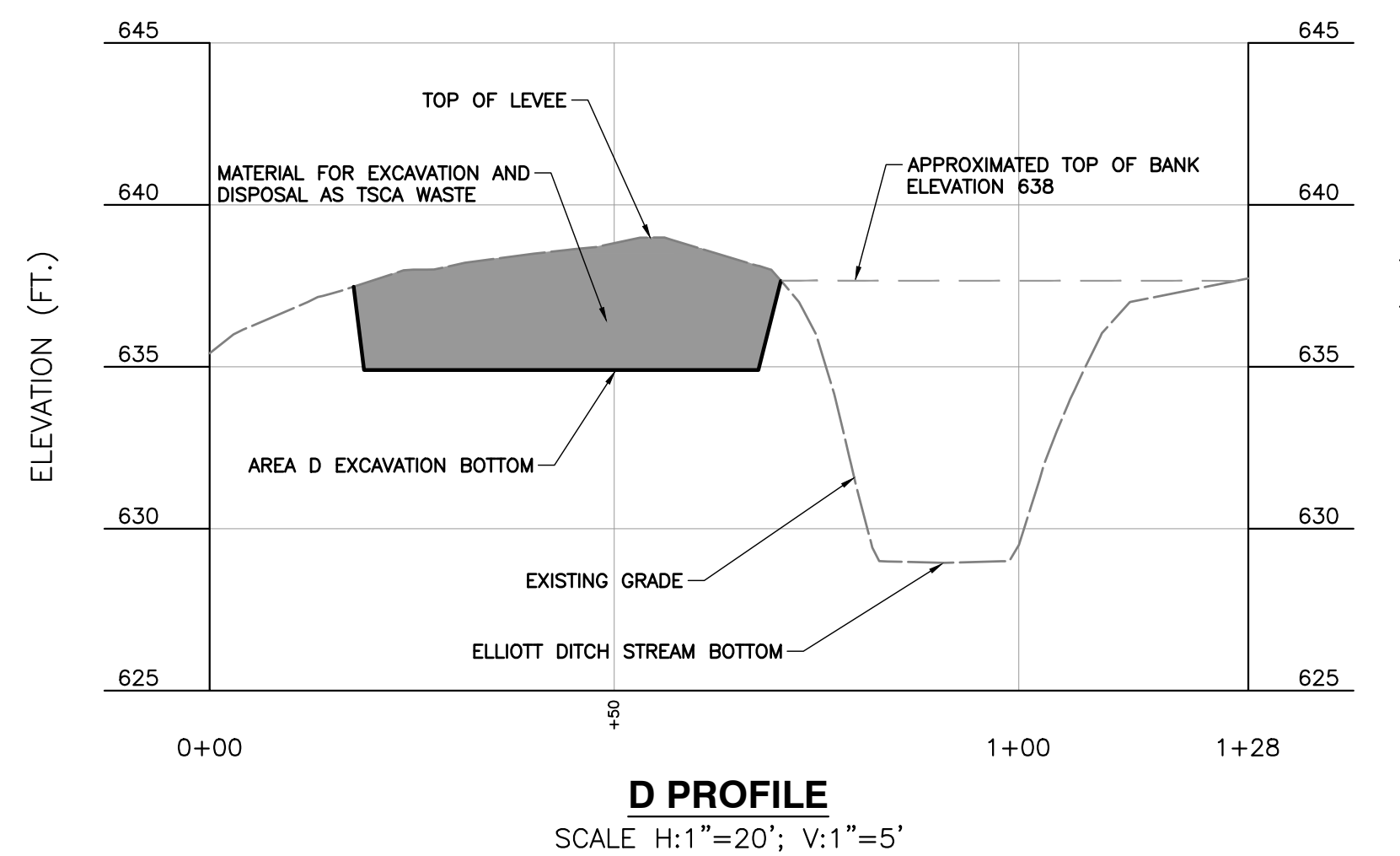
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---	EXISTING MAJOR CONTOUR	---	LIMITS OF CLEARING AND GRUBBING	⊙	EXISTING STORM MANHOLE
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---	DEPTH OF EXCAVATION	SAN	EXISTING SANITARY SEWER	⊙	EXISTING WATER VALVE
---	LIMITS OF TSCA SOIL (PCBS >50 MG/KG)	⊙	EXISTING CATCH BASIN	⊙	EXISTING HYDRANT



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NO	DATE	DESCRIPTION
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ARCONIC INC.
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ELLIOTT DITCH
LEVEE SOIL REMEDIATION
LAFAYETTE, INDIANA

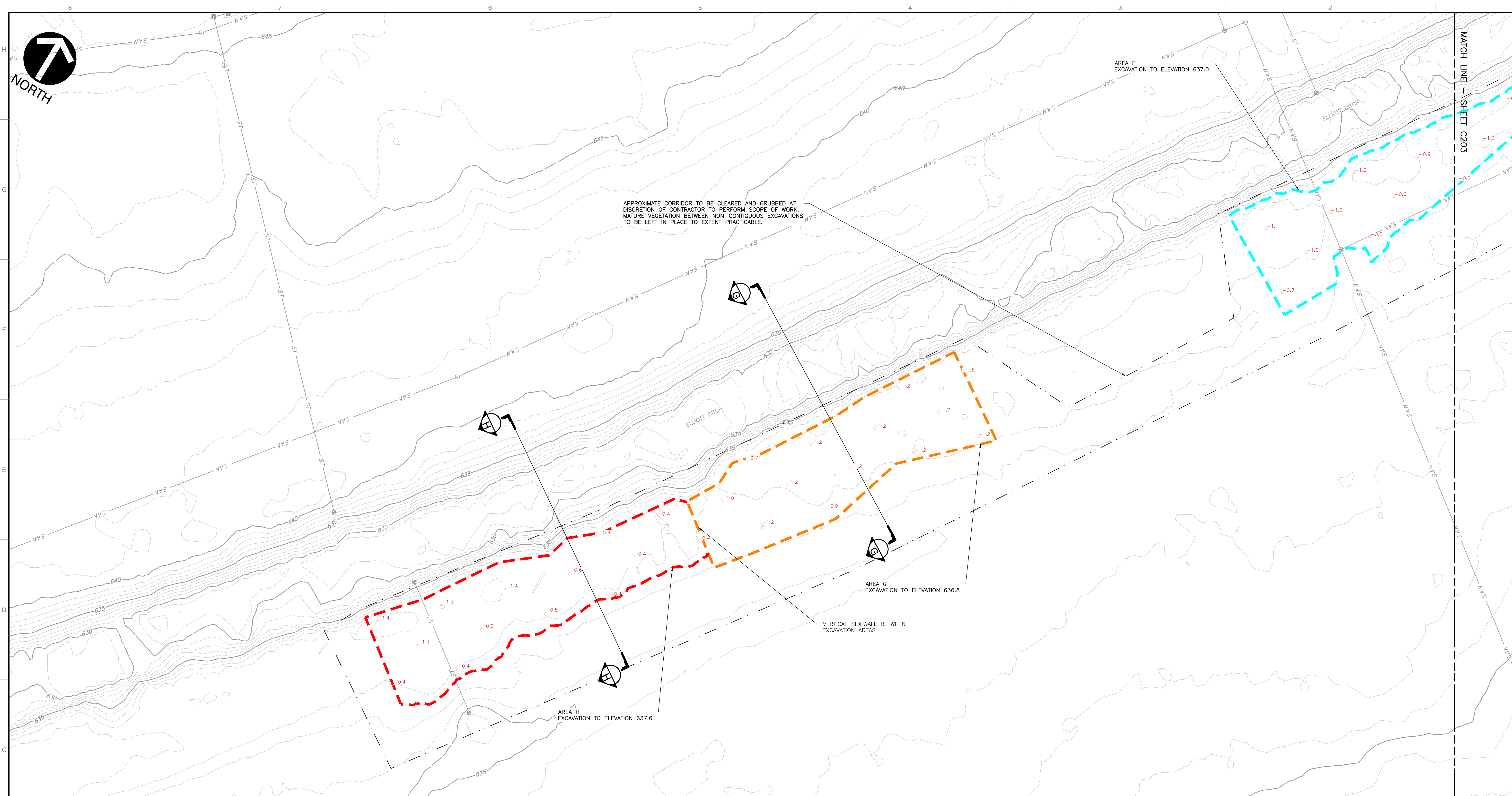
EXCAVATION PLANS AND CROSS-SECTIONS

DRAWING NO.: **C202**

SHEET 5 OF 13

DATE: MARCH 13, 2019
 DRAWN BY: KAM
 DWG SCALE: 1"=20'
 CHECKED BY: GAW
 PROJECT NO.: 172-387.001
 APPROVED BY: JMB

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APPROXIMATE CORRIDOR TO BE CLEARED AND GRUBBED AT DISCRETION OF CONTRACTOR TO PERFORM SCOPE OF WORK. MATURE VEGETATION BETWEEN NON-CONTIGUOUS EXCAVATIONS TO BE LEFT IN PLACE TO EXTENT PRACTICABLE.

AREA F EXCAVATION TO ELEVATION 637.0

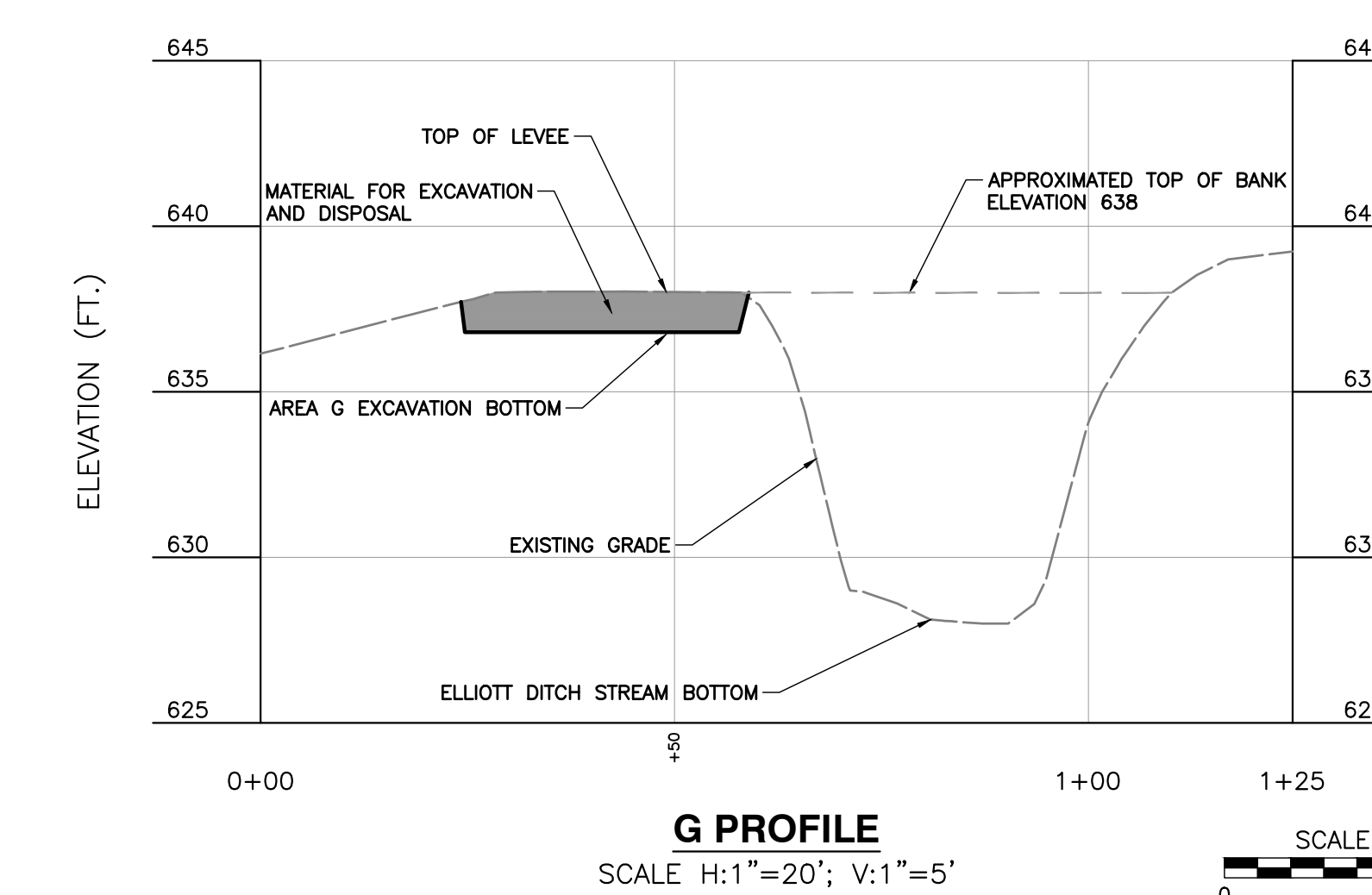
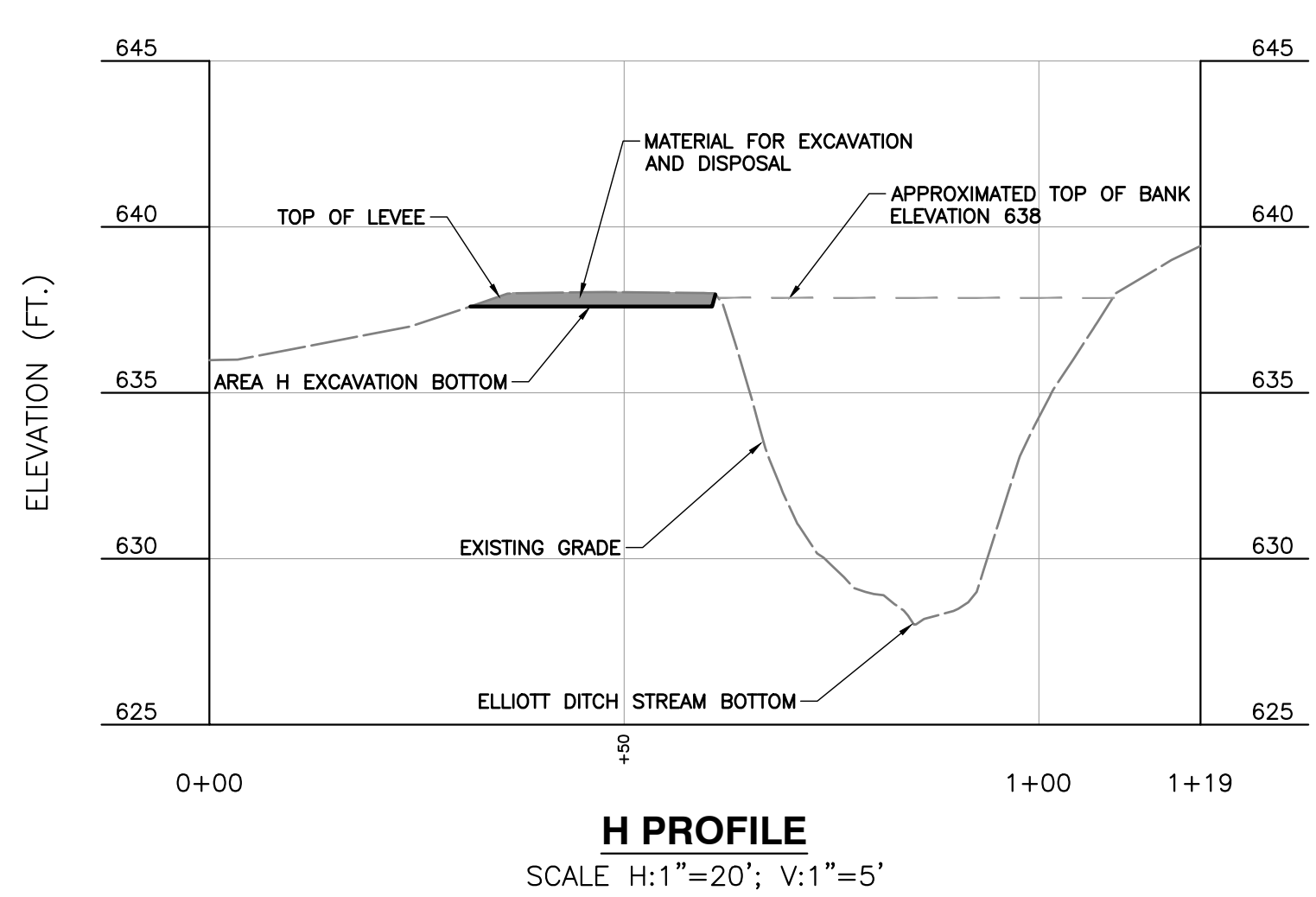
AREA G EXCAVATION TO ELEVATION 636.8

AREA H EXCAVATION TO ELEVATION 637.6

VERTICAL SIDEWALL BETWEEN EXCAVATION AREAS

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- LEGEND**
- | | | | | | |
|-------|--------------------------------------|-----|---------------------------------|---|---------------------------|
| — | EXISTING MAJOR CONTOUR | --- | LIMITS OF CLEARING AND GRUBBING | ⊙ | EXISTING STORM MANHOLE |
| - - - | EXISTING MINOR CONTOUR | ST | EXISTING STORM SEWER | ⊕ | EXISTING SANITARY MANHOLE |
| - - - | EDGE OF EXCAVATION (COLOR CODED) | W | EXISTING WATER LINE | ⊕ | EXISTING STORM OUTFALL |
| - - - | DEPTH OF EXCAVATION | SAN | EXISTING SANITARY SEWER | ▽ | EXISTING WATER VALVE |
| ▨ | LIMITS OF TSCA SOIL (PCBS >50 MG/KG) | □ | EXISTING CATCH BASIN | ⊕ | EXISTING HYDRANT |



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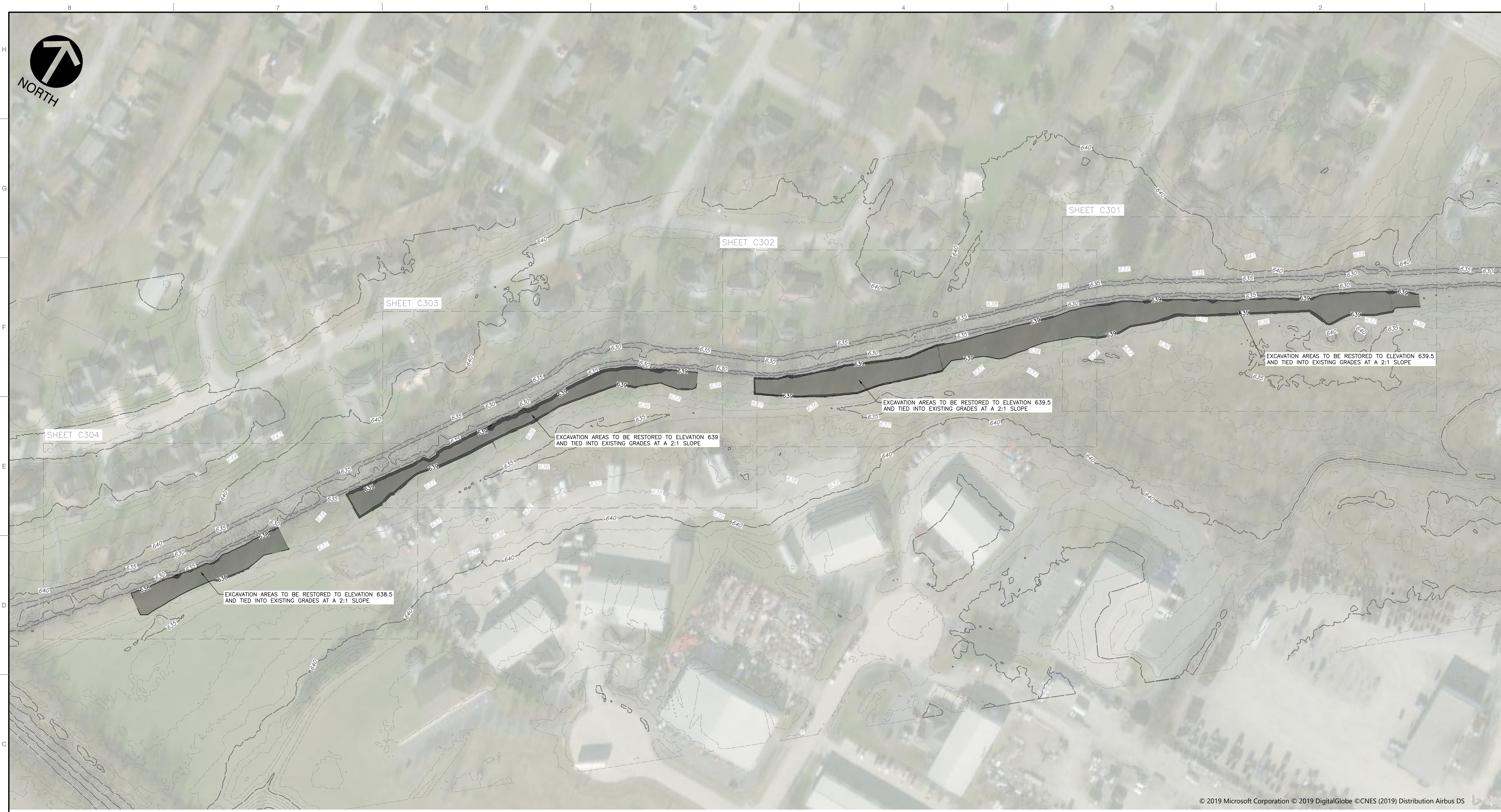
EXCAVATION PLANS AND CROSS-SECTIONS

DRAWING NO: **C204**

SHEET 7 OF 13

DATE: MARCH 13, 2019
 DRAWN BY: KAM
 DWG SCALE: 1"=20'
 CHECKED BY: JAW
 PROJECT NO: 172-387-0011
 APPROVED BY: JMB

P:\12071\172-387-0011\DWG\172387-0011-Excavation Plans.dwg (C204) LS:2/20/2020 - Arconic\jmb - 2/27/2020 10:39 AM



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- NOTES**
- EXCAVATION AREAS SHALL BE RESTORED TO DESIGNATED ELEVATIONS AND TIED INTO EXISTING CONDITIONS AT 2:1 SLOPES AS DRAWN.
 - EXCAVATIONS SHALL BE BACKFILLED USING CLEAN AND STRUCTURALLY SUITABLE OFF-SITE BORROW MATERIAL IN ACCORDANCE WITH THE IMWP, PREPARED BY CEC, DATED OCTOBER 2018.

LEGEND

	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR



FOR CONSTRUCTION USE

RESTORATION OVERVIEW

DATE:	MARCH 13, 2019	DRAWN BY:	KAM
DWG SCALE:	1"=80'	CHECKED BY:	GAW
PROJECT NO.:	172-367.0011	APPROVED BY:	JMB

DRAWING NO.: **C300**

SHEET 8 OF 13

ARCONIC INC.
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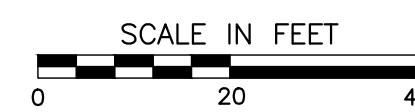
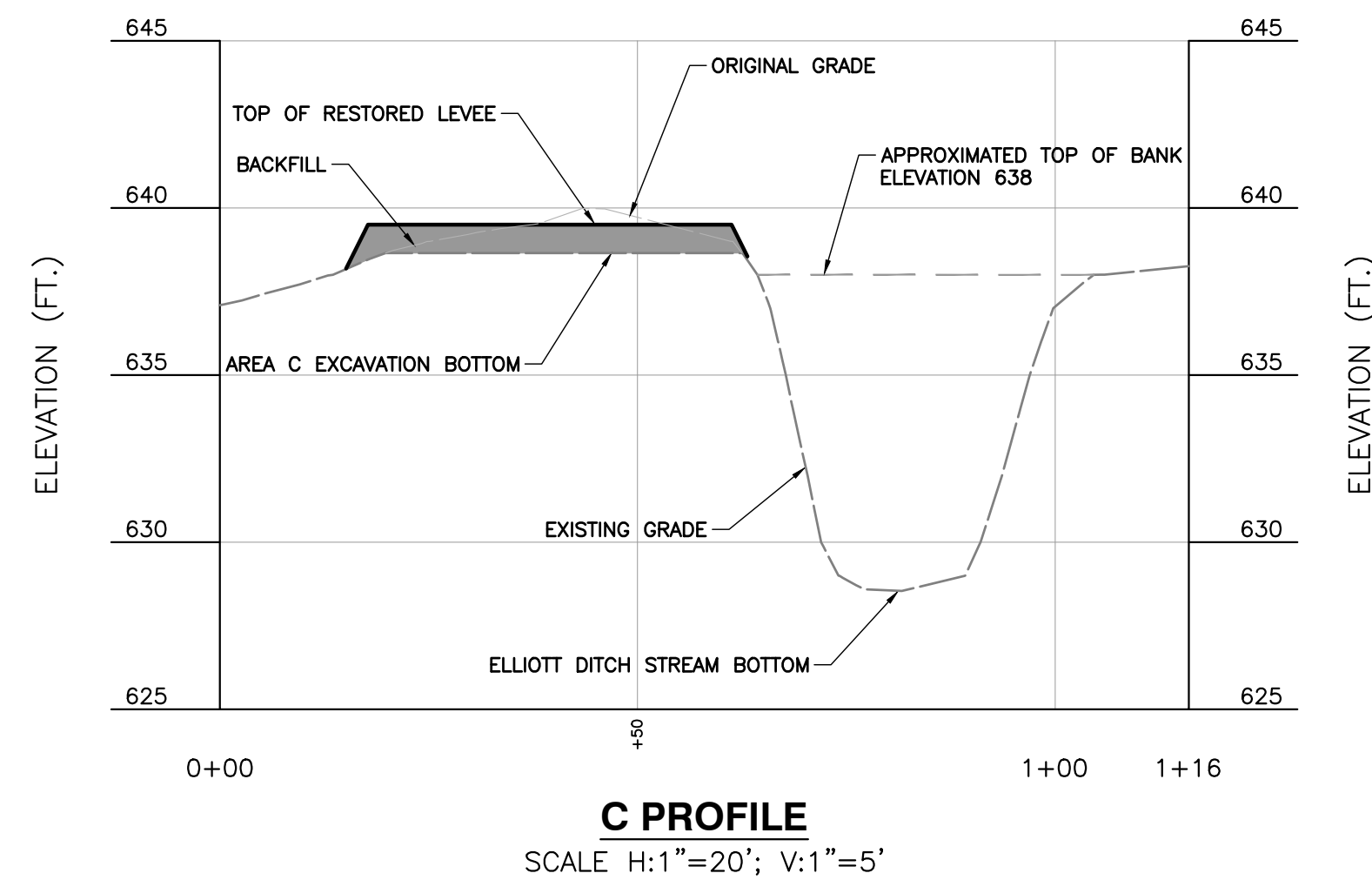
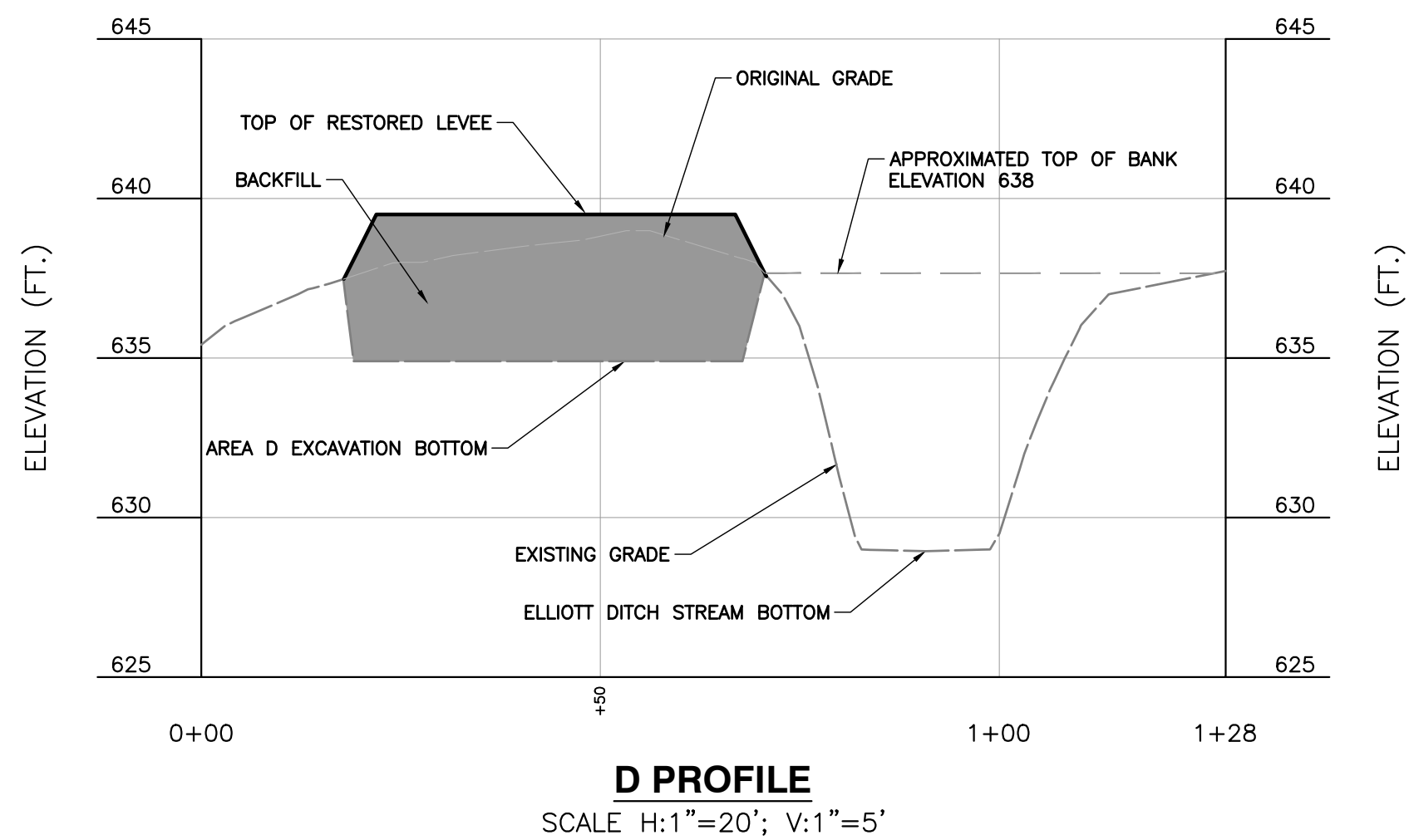
1. EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.

NOTES

- EXCAVATION AREAS A, B, C, AND D SHALL BE RESTORED TO ELEVATION 639.5 AND TIED INTO EXISTING CONDITIONS AT 2:1 SLOPES AS DRAWN.
- EXCAVATIONS SHALL BE BACKFILLED USING CLEAN AND STRUCTURALLY SUITABLE OFF-SITE BORROW MATERIAL IN ACCORDANCE WITH THE IWP, PREPARED BY CEC, DATED OCTOBER 2018.

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- AREA TO BE RESTORED



FOR CONSTRUCTION USE

NO	DATE	DESCRIPTION
1	3/20/2019	REVISED EXCAVATION BOUNDARIES
2	2/24/2019	ADDITION OF EXISTING PUBLIC UTILITIES
3	2/19/2020	ADDITION OF FIELD INFRASTRUCTURE OBSERVATIONS

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 LAFAYETTE OPERATIONS
 ELLIOTT DITCH
 LEVEE SOIL REMEDIATION
 LAFAYETTE, INDIANA**

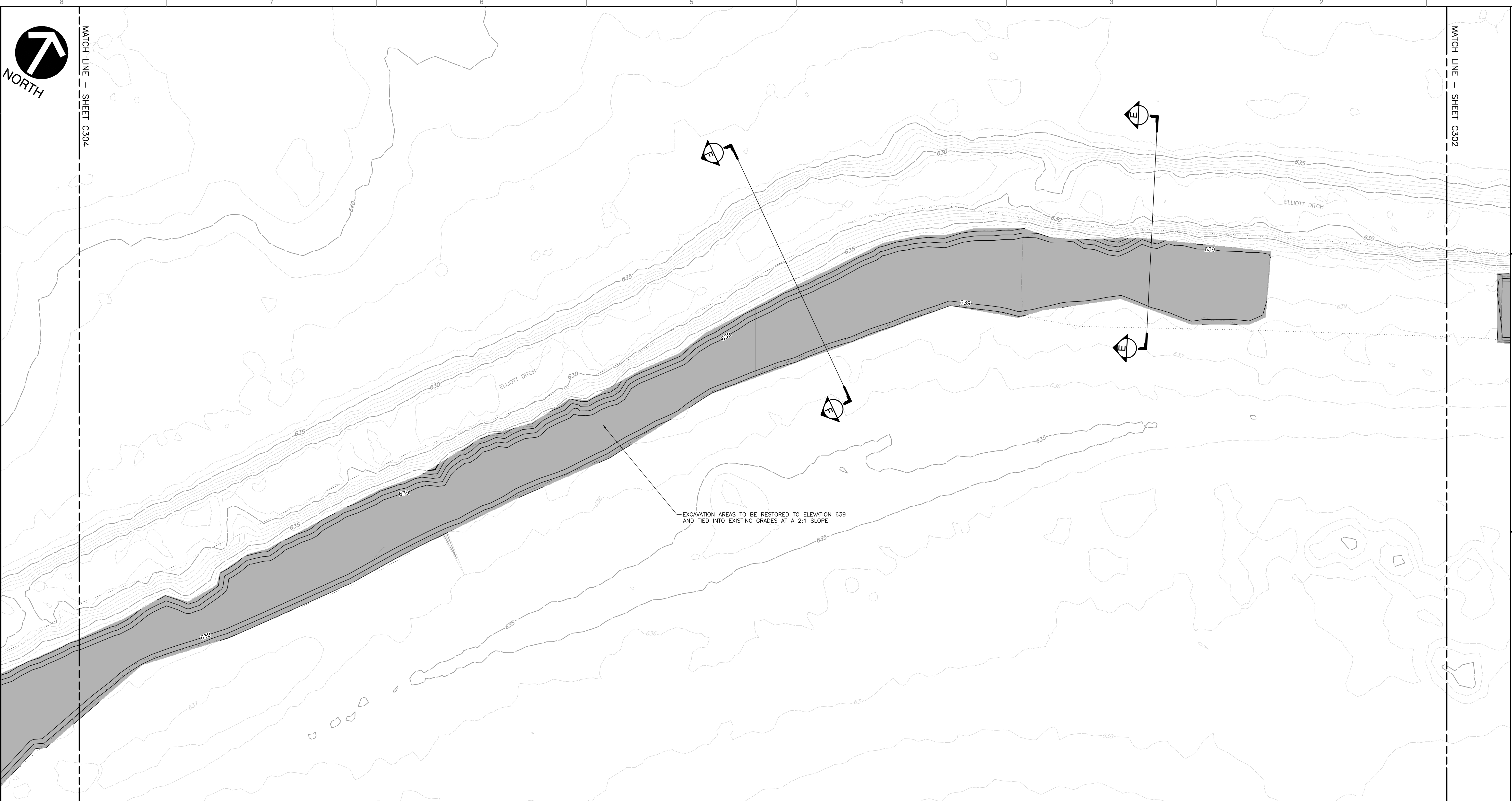
RESTORATION PLANS AND CROSS-SECTIONS

DRAWING NO: **C302**

SHEET 10 OF 13

DATE: MARCH 13, 2019
 DWG SCALE: 1"=20'
 PROJECT NO: 172-987.0011
 DRAWN BY: KAM
 CHECKED BY: GAW
 APPROVED BY: JMB

P:\1071\172-9871-2400\DWG\1002\172987-002-C302-REVISION.dwg (P:\1071\172-9871-2400 - Arconic) - Up: 2/21/2020 10:37 AM



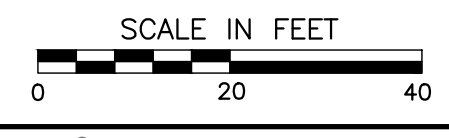
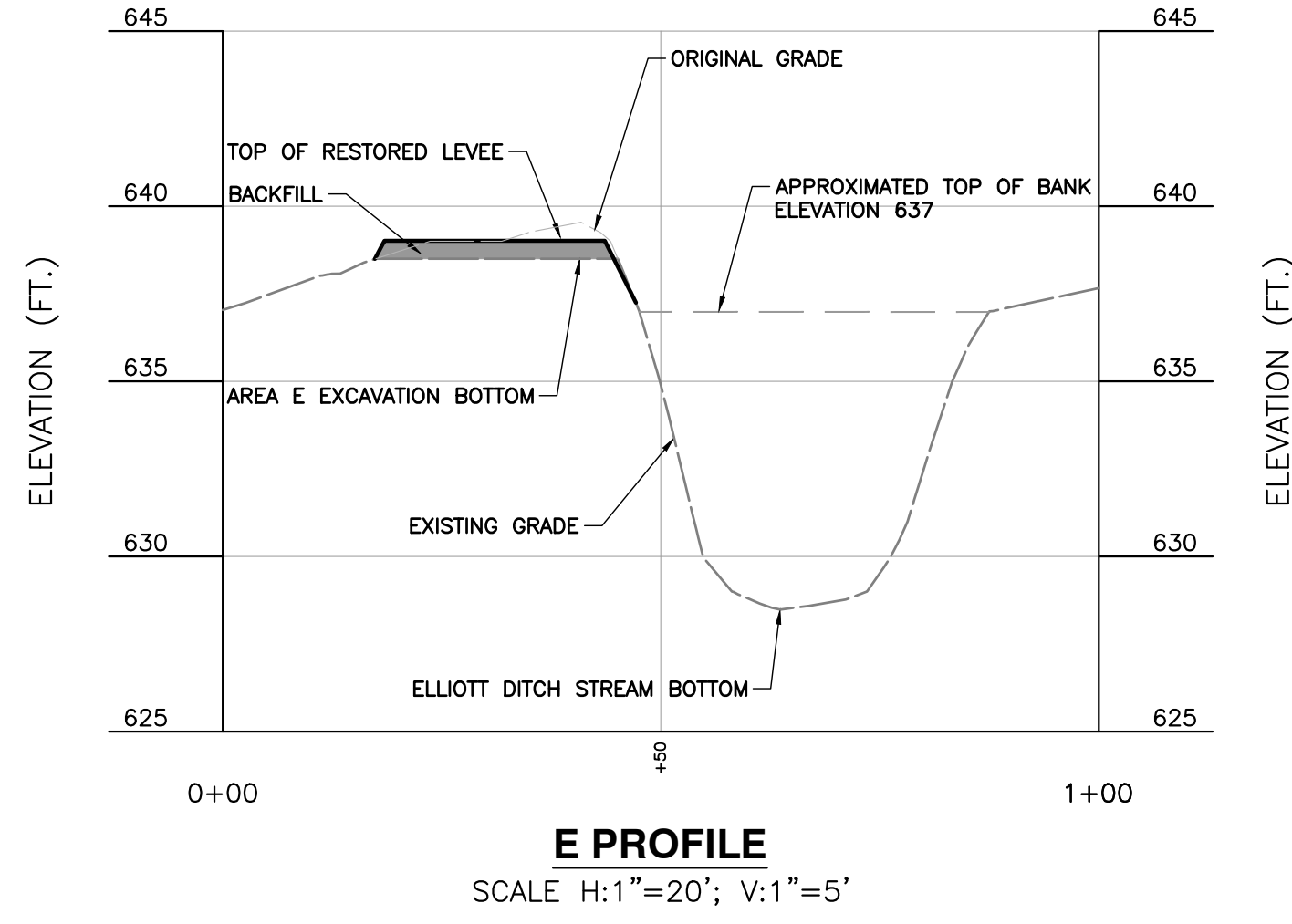
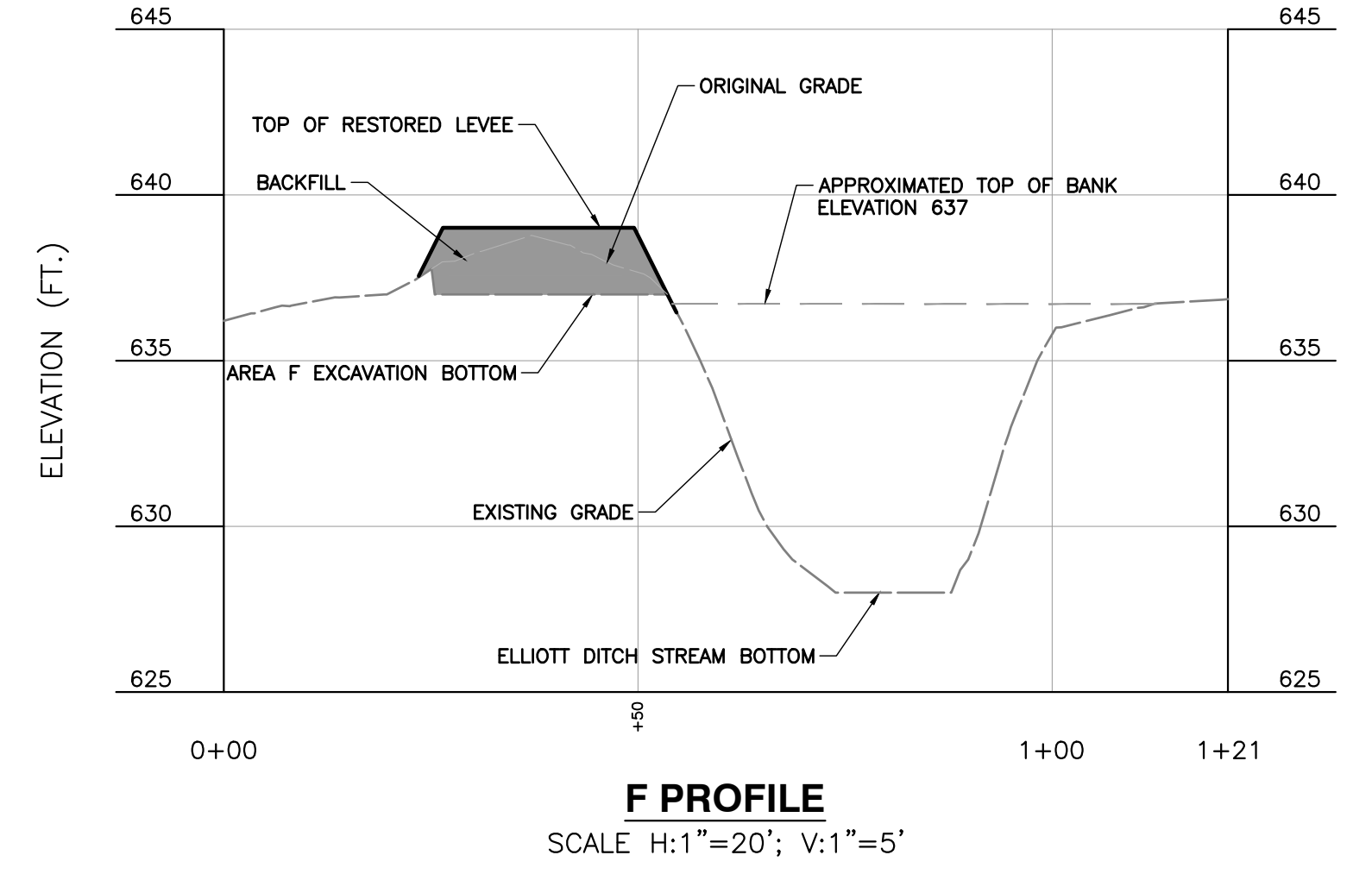
EXCAVATION AREAS TO BE RESTORED TO ELEVATION 639 AND TIED INTO EXISTING GRADES AT A 2:1 SLOPE

REFERENCE
 1. EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.

NOTES
 1. EXCAVATION AREAS E AND F SHALL BE RESTORED TO ELEVATION 639 AND TIED INTO EXISTING CONDITIONS AT 2:1 SLOPES AS DRAWN.
 2. EXCAVATIONS SHALL BE BACKFILLED USING CLEAN AND STRUCTURALLY SUITABLE OFF-SITE BORROW MATERIAL IN ACCORDANCE WITH THE IMP, PREPARED BY CEC, DATED OCTOBER 2018.

LEGEND


	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	AREA TO BE RESTORED



FOR CONSTRUCTION USE

REVISION RECORD

NO	DATE	DESCRIPTION
1	3/20/2019	REVISED EXCAVATION BOUNDARIES
2	3/24/2019	ADDITION OF EXISTING PUBLIC UTILITIES
3	2/19/2020	ADDITION OF FIELD INFRASTRUCTURE OBSERVATIONS



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 LAFAYETTE, INDIANA**

RESTORATION PLANS AND CROSS-SECTIONS

DATE:	MARCH 13, 2019	DRAWN BY:	KAM
DWG SCALE:	1"=20'	CHECKED BY:	GAW
PROJECT NO.:	172-987.0011	APPROVED BY:	JMB

DRAWING NO.: **C303**
 SHEET 11 OF 13

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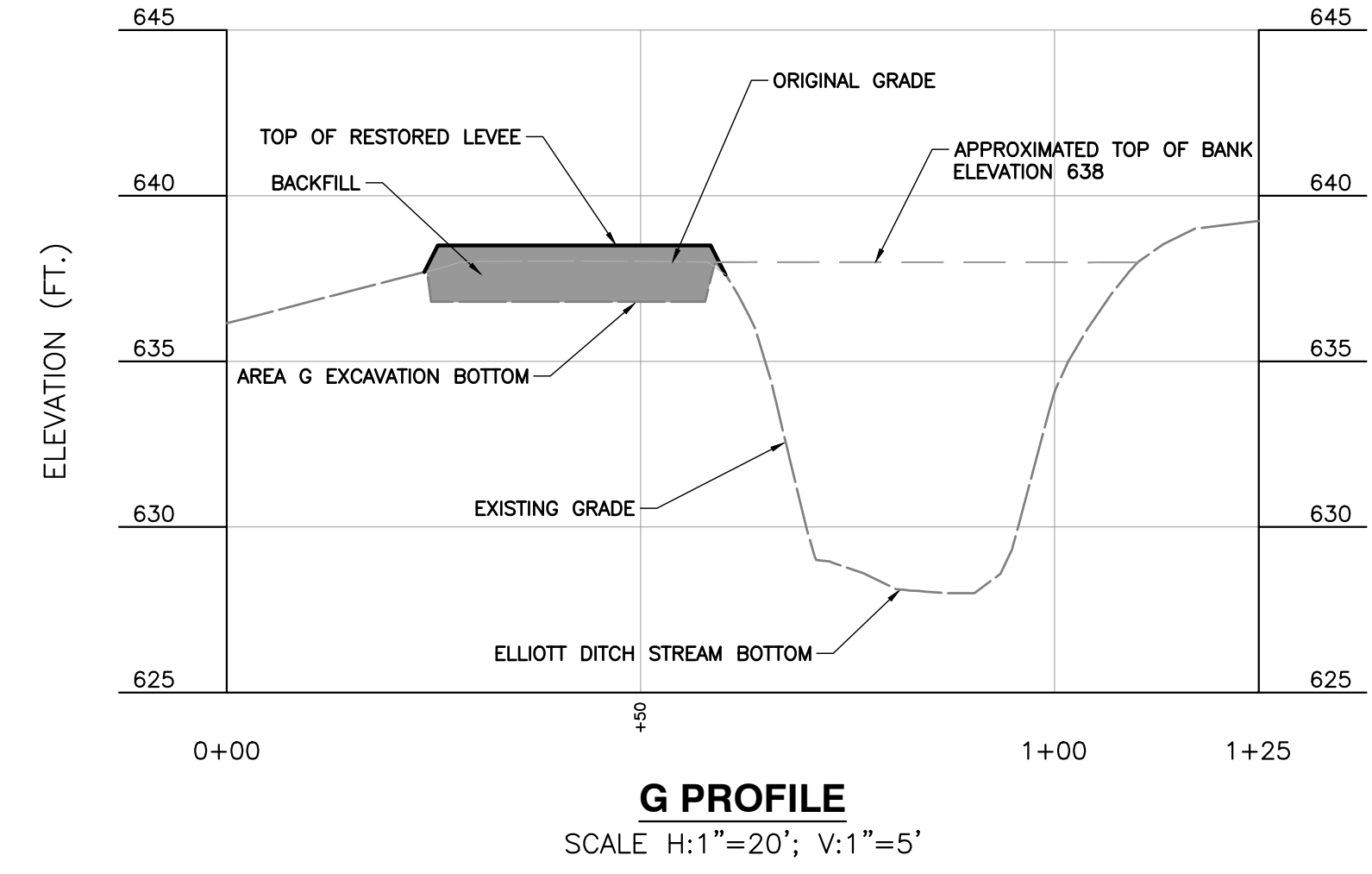
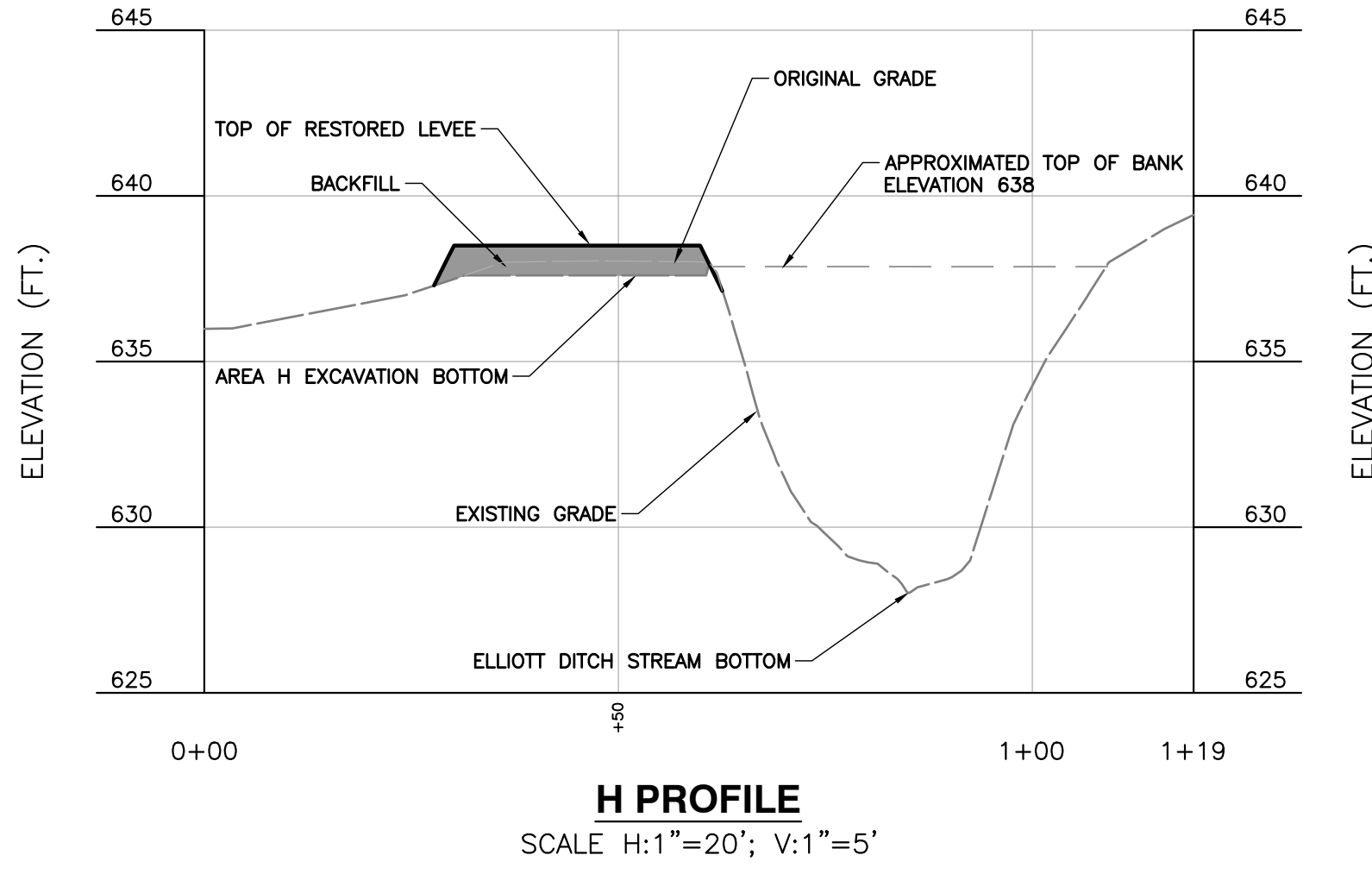
EXCAVATION AREAS TO BE RESTORED TO ELEVATION 638.5 AND TIED INTO EXISTING GRADES AT A 2:1 SLOPE

REFERENCE
 1. EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.

NOTES
 1. EXCAVATION AREAS G AND H SHALL BE RESTORED TO ELEVATION 638.5 AND TIED INTO EXISTING CONDITIONS AT 2:1 SLOPES AS DRAWN.
 2. EXCAVATIONS SHALL BE BACKFILLED USING CLEAN AND STRUCTURALLY SUITABLE OFF-SITE BORROW MATERIAL IN ACCORDANCE WITH THE IMWP, PREPARED BY CEC, DATED OCTOBER 2018.

LEGEND

	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	AREA TO BE RESTORED



FOR CONSTRUCTION USE

REVISION RECORD

NO	DATE	DESCRIPTION
1	3/20/2019	REVISED EXCAVATION BOUNDARIES
2	3/24/2019	ADDITION OF EXISTING PUBLIC UTILITIES
3	2/19/2020	ADDITION OF FIELD INFRASTRUCTURE OBSERVATIONS

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LAFAYETTE, INDIANA

RESTORATION PLANS AND CROSS-SECTIONS

DATE:	MARCH 13, 2019	DRAWN BY:	KAM
DWG SCALE:	1"=20'	CHECKED BY:	GAW
PROJECT NO.:	172-387.0011	APPROVED BY:	JMB

DRAWING NO.: **C304**

SHEET 12 OF 13

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ELLIOTT DITCH LEVEE REMEDIAL APPROACH

- A. MOBILIZATION – TRANSPORT EQUIPMENT, MATERIAL, AND PERSONNEL TO THE SITE.
- B. BENCHMARKS – FIELD BENCHMARKS SHALL BE ESTABLISHED BY THE OWNER/ENGINEER AND MAINTAINED DURING CONSTRUCTION. A MINIMUM OF TWO PERMANENT BENCHMARKS WILL BE ESTABLISHED BY A STATE OF INDIANA PROFESSIONAL LAND SURVEYOR.
 - a. BENCHMARK LOCATIONS WILL BE RECORDED WITH HORIZONTAL AND VERTICAL DATA ON PROJECT RECORD DOCUMENTS. THE DATUM USED WILL BE A KNOWN COORDINATE SYSTEM, SUCH AS INDIANA STATE PLANE. THE USE OF A LOCAL OR SITE-SPECIFIC COORDINATE SYSTEM IS UNACCEPTABLE.
 - b. WHERE THE ACTUAL LOCATION OR ELEVATION OF LAYOUT POINTS CANNOT BE MARKED, TEMPORARY REFERENCE POINTS WILL BE PROVIDED AS NECESSARY TO LOCATE THE EXTENTS OF THE IM PROJECT.
 - c. TEMPORARY REFERENCE POINTS WILL BE REMOVED WHEN NO LONGER NEEDED.

C. PROJECT STAKEOUT – PRIOR TO STARTING CONSTRUCTION, IMPROVEMENT LOCATIONS WILL BE LAID OUT INCLUDING: CONSTRUCTION ENTRANCES, ACCESS ROADS, EROSION AND SEDIMENTATION CONTROLS, PROJECT SUPPORT AREAS, AND EXCAVATION FOOTPRINTS. ALTERNATIVELY, IF GPS-GUIDED EQUIPMENT SHALL BE USED TO COMPLETE THE EXCAVATIONS, EXCAVATION FOOTPRINTS ARE NOT REQUIRED TO BE STAKED IN THE FIELD.

D. SITE PREPARATION – FURNISH AND INSTALL SILT FENCE, STABILIZED CONSTRUCTION ENTRANCE, ACCESS ROADS, HEAVY EQUIPMENT DECONTAMINATION AREA AND OTHER SEDIMENTATION CONTROL DEVICES AS APPLICABLE. ALL EXISTING SANITARY MANHOLES AND STORM CATCHMENTS LOCATED WITHIN THE THE PROJECT BOUNDARIES (INCLUDING THOSE OUTSIDE OF THE EXCAVATION FOOTPRINT) MUST BE SUFFICIENTLY DEMARCATED AND PROTECTED FROM ALL EQUIPMENT TRAFFIC DURING THE COURSE OF PROJECT IMPLEMENTATION. A TOTAL OF SEVEN MANHOLES ARE KNOWN TO BE WITHIN THE ANTICIPATED PROJECT BOUNDARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES INCURRED TO EXISTING UTILITIES.

E. CLEARING, GRUBBING, AND DISPOSAL OF VEGETATIVE WASTE – ALL TREES, SHRUBS, AND PLANTS WITHIN THE EXCAVATION AREAS WILL BE REMOVED. TREES, SHRUBS, AND PLANTS FROM AREAS ADJACENT TO THE EXCAVATION FOOTPRINT WILL BE REMOVED AS DETERMINED NECESSARY TO PROVIDE ACCESS TO THE IM PROJECT AREA. FOR VEGETATION WITH A TRUNK DIAMETER MEASURING AT LEAST 2-INCHES IN DIAMETER, COMPLETE GRUBBING OF TREES, STUMPS, ROOTS, BUSHES, OR HEDGE FENCES WILL BE ACCOMPLISHED. VEGETATION THAT MEASURES LESS THAN 2-INCHES IN TRUNK DIAMETER NEED NOT BE GRUBBED, BUT WILL BE REMOVED AFTER BEING CUT OFF APPROXIMATELY 2-INCHES ABOVE THE GROUND SURFACE. GRUBBED MATERIALS (VEGETATIVE MATERIAL ONLY) FROM BELOW GRADE THAT ARE IN CONTACT WITH PCB-IMPACTED MATERIAL WILL BE TRANSPORTED OFFSITE FOR DISPOSAL ALONG WITH THE MATERIAL EXCAVATED FROM THE AREA. CLEARED MATERIALS FROM ABOVE SURFACE GRADES WILL EITHER BE CHIPPED AND USED ONSITE OR TRANSPORTED OFF THE PROPERTY FOR DISPOSAL AT A RCRA SUBTITLE D (NON-HAZARDOUS MUNICIPAL AND SOLID WASTE) FACILITY.

F. REMOVAL OF TARGETED MATERIALS – PCB-IMPACTED MATERIALS WILL BE MANAGED AS ENCOUNTERED AND PER THE DELINEATION SAMPLING CONDUCTED AS PART OF THE INVESTIGATIONS AND SHOWN IN THE CONSTRUCTION DRAWINGS. THE CONTRACTOR WILL USE THE EXCAVATION PLANS AND VISUAL INDICATORS TO DIRECT REMEDIATION. IF EVIDENCE OF PCB IMPACTS TO SOIL, I.E. BLACK STAINING AND OILY TEXTURE, EXTENDS BEYOND THE PROPOSED EXCAVATION GRADES, IT WILL BE REMOVED BEFORE COLLECTING THE INITIAL CONFIRMATION SAMPLES. ADDITIONAL BLACK STAINED MATERIAL ENCOUNTERED OUTSIDE OF THE PROPOSED EXCAVATION GRADES WILL BE MANAGED AS A TSCA REGULATED MATERIAL WITH PCB CONCENTRATIONS GREATER THAN OR EQUAL TO 50 MG/KG. THE EXCAVATION PROCESS WILL BE CONDUCTED TO EFFICIENTLY HANDLE REMOVED MATERIAL. FOR EXAMPLE, THE CONTRACTOR MAY CHOOSE TO DIRECT LOAD EXCAVATED MATERIAL INTO LINED TRUCKS, INSTEAD OF STOCKPILING. THE CONTRACTOR SHALL REMOVE ANY SOIL CONTAINING LESS THAN 50 MG/KG TOTAL PCBs BEFORE PERFORMING EXCAVATION OF ANY SOIL CONTAINING GREATER THAN 50 MG/KG FROM THE SAME AREA. IN GENERAL, EXCAVATED MATERIALS WILL BE MANAGED AS FOLLOWS:

- a. SOIL CONTAINING GREATER THAN OR EQUAL TO 1.0 MG/KG AND LESS THAN 50 MG/KG TOTAL PCBs WILL BE EXCAVATED, LOADED, AND HAULED OFF-SITE TO AN APPROVED RCRA SUBTITLE D LANDFILL.
- b. SOIL CONTAINING GREATER THAN OR EQUAL TO 50 MG/KG TOTAL PCBs WILL BE EXCAVATED, LOADED, AND HAULED OFF-SITE TO AN APPROVED RCRA SUBTITLE C OR TSCA LANDFILL.

G. EXCAVATION IN VICINITY OF EXISTING INFRASTRUCTURE – EXISTING PUBLIC UTILITY INFRASTRUCTURE LOCATED WITHIN THE LIMITS OF EXCAVATION MUST BE PROTECTED FROM DAMAGES DURING THE COURSE OF REMEDIATION. BASED ON UTILITY INFORMATION OBTAINED FROM THE CITY OF LAFAYETTE GIS, SUBSURFACE PIPING ASSOCIATED WITH SANITARY UTILITIES ARE CONFIRMED TO BE A MINIMUM OF FIVE FEET BELOW FINAL EXCAVATION GRADES AT ALL LOCATIONS. EXCAVATION WORK MAY BE PERFORMED BY MECHANICAL MEANS TO WITHIN ONE FOOT OF EXISTING MANHOLES. ALL REQUIRED EXCAVATION WORK WITHIN ONE FOOT OF EXISTING MANHOLES SHALL BE PERFORMED BY HAND. A TOTAL OF THREE MANHOLES ARE KNOWN TO BE WITHIN THE PROPOSED LIMITS OF EXCAVATION. EXISTING SUBSURFACE STORM SEWER INFRASTRUCTURE BENEATH AREAS F AND H IS APPROXIMATELY FOUR FEET BELOW FINAL EXCAVATION ELEVATIONS BASED ON FIELD OBSERVATIONS. SUBSURFACE STORM SEWER INFRASTRUCTURE BENEATH EXCAVATION AREA D MAY BE LESS THAN 1 FOOT BELOW FINAL EXCAVATION BASED ON FIELD OBSERVATIONS.

H. PRECIPITATION ACCUMULATION MANAGEMENT – RAIN WATER THAT COLLECTS WITHIN THE OPEN EXCAVATION FOOTPRINT AND IS IN CONTACT WITH SOILS POTENTIALLY CONTAINING PCBs WILL BE TREATED THE SAME AS THE DECONTAMINATION WASTEWATER AS DISCUSSED IN SECTION 3.5 OF THE IMWP.

I. EXCAVATION EQUIPMENT MANAGEMENT – EQUIPMENT WILL REMAIN EITHER WITHIN OR OUTSIDE OF THE DISTURBED EXCAVATION FOOTPRINT OF THE EXCAVATION AREAS DURING THE PROJECT. THIS WILL PREVENT AGAINST MOBILIZING POTENTIALLY IMPACTED MATERIALS INTO OTHER AREAS OF THE SITE. HAUL TRUCKS WILL REMAIN OUTSIDE OF THE EXCAVATION FOOTPRINT OR ON CLEAN MATERIALS PLACED WITHIN TO PREVENT AGAINST MOBILIZING IMPACTED MATERIALS. EXCAVATION EQUIPMENT SHALL BE DECONTAMINATED BEFORE MOVING FROM ONE COMPLETED EXCAVATION AREA TO ANOTHER TO PREVENT POTENTIALLY INTRODUCING IMPACTED MATERIALS TO THE CLEAN AREAS BETWEEN EXCAVATION AREAS.

J. CONFIRMATION SAMPLE COLLECTION – CONFIRMATION SAMPLES WILL BE COLLECTED FROM THE BOTTOM OF THE EXCAVATION TO CONFIRM THE REMOVAL OF MATERIALS CONTAINING TOTAL PCBs GREATER THAN OR EQUAL TO 1.0 MG/KG. SAMPLES WILL BE COLLECTED IN ACCORDANCE WITH THE INTERSTATE TECHNOLOGY REGULATORY COUNCIL (ITRC) INCREMENTAL SAMPLING METHODOLOGY (ISM), DATED FEBRUARY 2012. SUPPLEMENTAL SOIL REMOVAL AND RE-SAMPLING WILL BE CONDUCTED AT AREAS THAT DO NOT MEET THE PROJECT REMEDIAL GOAL OF 1 MG/KG. SEE SECTION 3.7 OF THE IMWP OR THE ISM DOCUMENT FOR ADDITIONAL DETAILS REGARDING THE CONFIRMATION SAMPLING PLAN.

K. RETRIEVE BORROW SOIL FROM OFFSITE SOURCES – THE LEVEE WILL BE RESTORED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS. OFFSITE BORROW SOURCE(S) USED FOR SITE RESTORATION MUST MEET THE REQUIREMENTS OUTLINED IN SECTION 3.4 OF THE IMWP, AND MUST BE CERTIFIED TO BE FREE OF CONTAMINATION. BORROW SOIL WILL BE TRANSPORTED IN DUMP TRUCKS TO ELLIOTT DITCH AND DIRECTLY DUMPED INTO THE EXCAVATION FOOTPRINT OR TEMPORARILY STOCKPILED. IF TEMPORARY STOCKPILES FOR THE BORROW MATERIAL ARE CREATED, EROSION AND SEDIMENTATION CONTROLS WILL BE INSTALLED AS NECESSARY.

L. PLACE, GRADE, AND COMPACT THE BACKFILL SOILS – SOIL BACKFILL MATERIALS ARE TO BE PLACED IN LOOSE LIFTS NOT TO EXCEED 9 INCHES IN DEPTH FOR COMPACTION BY HEAVY EQUIPMENT. PLACEMENT WILL OCCUR IN A MANNER SUCH THAT EQUIPMENT IS NOT IN DIRECT CONTACT WITH THE COMPLETED EXCAVATION BOTTOM. BACKFILL MATERIALS ARE TO BE COMPACTED TO NOT LESS THAN 95-PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D-698 (STANDARD PROCTOR TEST) USING MECHANICAL EQUIPMENT. COMPACTED FILL WILL BE PLACED TO THE ELEVATIONS DESIGNATED IN THE PROJECT DRAWINGS.

M. BACKFILL EQUIPMENT MANAGEMENT – EQUIPMENT WILL TAKE SPECIAL PRECAUTIONS TO NOT TRACK PCB-IMPACTED SOIL ACROSS CLEAN AREAS. IF EQUIPMENT IS SUSPECTED OF COMING INTO CONTACT WITH IMPACTED MATERIALS, IT WILL BE PROPERLY DECONTAMINATED. THE DECONTAMINATION PROCESS WILL BE PERFORMED IN ACCORDANCE WITH 40 CFR 761.79 DECONTAMINATION STANDARDS AND PROCEDURES. THE PROCESS IS LIKELY TO INCLUDE DRY SOIL REMOVAL, PRESSURE WASHING, CLEANING WITH ENVIRONMENTALLY FRIENDLY DETERGENT/WATER, RINSING WITH POTABLE WATER, AND WIPING DOWN EQUIPMENT AREAS THAT WERE IN CONTACT WITH IMPACTED SOIL USING A SOLVENT (E.G. HEXANE, ACETONE, DIESEL FUEL, OR OTHERS). THE DECONTAMINATION PROCESS AND MANAGEMENT OF DECONTAMINATION FLUIDS IS FURTHER DISCUSSED IN SECTION 3.5 OF THE IMWP.


N. REMOVAL OF ACCESS ROADS, SUMPS, AND TEMPORARY STOCKPILE AREAS – ANY PROJECT SUPPORT FEATURES (I.E. SUMPS, TEMPORARY STOCKPILE AREAS, ETC) WILL BE REMOVED AFTER SUCCESSFUL EXECUTION OF THE IM PROJECT, UNLESS SPECIFICALLY REQUESTED TO BE LEFT IN PLACE BY THE TIPPECANOE COUNTY DRAINAGE BOARD OR THE PRIVATE PROPERTY OWNER, OR IDENTIFIED AS BEING NEEDED FOR SUBSEQUENT REMEDIAL EFFORTS.

O. POST-EXCAVATION AND POST-BACKFILL TOPOGRAPHIC SURVEYS – PERIODIC TOPOGRAPHIC SURVEYS WILL BE CONDUCTED AFTER SUCCESSFUL EXCAVATION OF PCB-IMPACTED SOIL TO THE REMEDIAL OBJECTIVE. THE SURVEYS WILL COLLECT INFORMATION REGARDING THE DEPTH AND EXTENT OF THE COMPLETED EXCAVATION AND BE USED TO ESTIMATE THE VOLUME OF MATERIAL REMOVED DURING THE IM PROJECT. THE PERIODIC SURVEYS WILL BE CONDUCTED BY ONSITE STAFF TRAINED TO USE SURVEY-GRADE GPS EQUIPMENT. A STATE OF INDIANA PROFESSIONAL LAND SURVEYOR WILL PERFORM THE POST-BACKFILL TOPOGRAPHIC SURVEY TO DOCUMENT THAT COMPLETED CONDITIONS MEET OR EXCEED PRE-PROJECT CONDITIONS. THE SURVEY WILL BE RECORDED IN A KNOWN COORDINATE SYSTEM, SUCH AS INDIANA STATE PLANE, AND A KNOWN ELEVATION DATUM.

P. VEGETATIVE PLANTING – AREAS DISTURBED BY THE IM PROJECT WILL RECEIVE AT LEAST A SINGLE, LOOSE 3-INCH LIFT OF TOPSOIL AND BE SUBJECT TO FERTILIZATION AND SEEDING RATES AND SELECTION IN ACCORDANCE WITH THE PROJECT STORMWATER POLLUTION PREVENT PLAN (SWPPP). TOPSOIL AND VEGETATIVE PLANTING WILL BE INSTALLED ON TOP OF THE FINAL GRADES SHOWN IN THE CONSTRUCTION DRAWINGS. EROSION AND SEDIMENTATION CONTROLS WILL NOT BE REMOVED UNTIL ADEQUATE VEGETATIVE COVER HAS BEEN ESTABLISHED AND THE NOTICE OF TERMINATION FOR THE NPDES GENERAL PERMIT HAS BEEN SUBMITTED.

REVISION RECORD

NO.	DATE	DESCRIPTION
1	3/30/2019	REVISED EXCAVATION BOUNDARIES
2	3/24/2019	ADDITION OF EXISTING PUBLIC UTILITIES
3	2/19/2020	ADDITION OF FIELD INFRASTRUCTURE OBSERVATIONS



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**ARCONIC INC.
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 ELLIOTT DITCH
 LEVEE SOIL REMEDIATION
 LAFAYETTE, INDIANA**

CONSTRUCTION NOTES

DATE: MARCH 13, 2019
 DRAWN BY: KAM
 DWG SCALE: NOT TO SCALE
 CHECKED BY: GAW
 PROJECT NO: 172-387-0011
 APPROVED BY: JMB

DRAWING NO.: **C800**
 SHEET 13 OF 13

FOR CONSTRUCTION USE

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