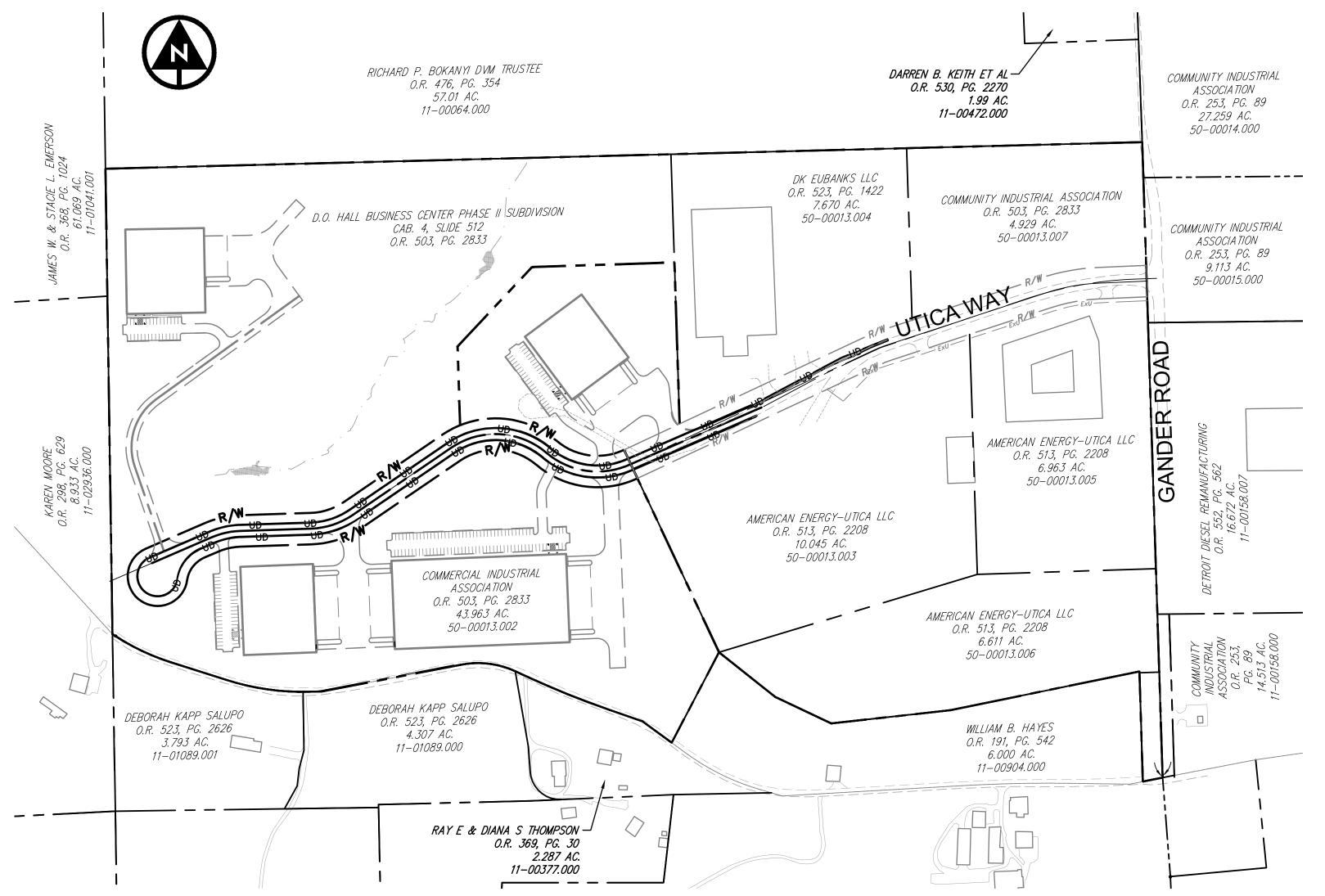
SITE CONSTRUCTION DOCUMENTS FOR:

# D.O. HALL UTICA WAY EXTENSION

CITY OF CAMBRIDGE GUERNSEY COUNTY, OHIO

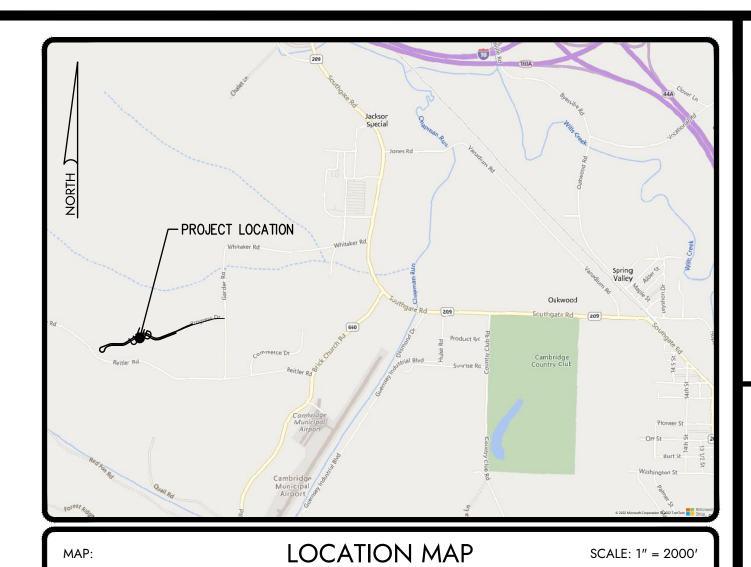


**INDEX MAP** SCALE 1" = 200'

THE STANDARD DRAWINGS LISTED ON THESE PLANS SHALL BE CONSIDERED A PART THEREOF

OHIO DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS						
BP-2.1	1/21/2022	DM-1.1	7/17/2020	TC-42.20	10/18/2013	
BP-3.1	1/21/2022	DM-1.2	7/16/2021	TC-71.10	7/15/2022	
BP-4.1	7/19/2013	DM-4.3	1/15/2016			
CB-1	7/16/2021	DM-4.4	1/15/2016			
CB-2.3	1/20/2023					
HW-2.1	7/20/2018					





DESIGN SPEED	_25 MPH
LEGAL SPEED_	_25 MPH

**DESIGN FUNCTIONAL CLASSIFICATION** MINOR ARTERIAL

#### EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 22.91 ACRES ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.0 ACRES NOTICE OF INTENT EARTH DISTURBED AREA: 23.91 ACRES

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT

# INDEX OF SHEETS

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WATER PROFILE	46-4

# PROJECT OWNER

**GUERNSEY COUNTY ENGINEER** 62782 BENNETT AVENUE CAMBRIDGE, OHIO 43725

CITY OF CAMBRIDGE 1131 STEUBENVILLE AVENUE CAMBRIDGE, OHIO 43725

# **APPROVALS**

THE SIGNATURES BELOW SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSE AND GENERAL LOCATION OF PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE DESIGN ENGINEER PREPARING THE PLANS.

**GUERNSEY COUNTY ENGINEER** DATE

CITY OF CAMBRIDGE ENGINEER

JWE	DRAWN RY.	IWE	1	CUECKEN BV.	CTECNED B1.	SCE	PROJECT NO	 16050
DATE								
KE VISION								

MARCH 6, 2023

SCALE:

JAMES ROBERTS, PE 52927

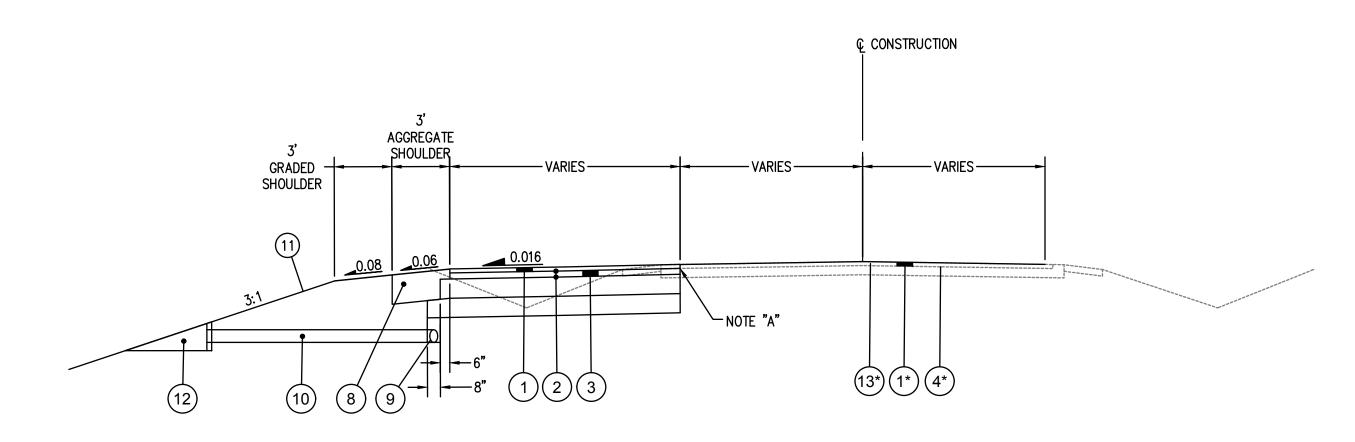
PLANS PREPARED BY:

Verdantas
PEOPLE FOCUSED FUTURE

DATE

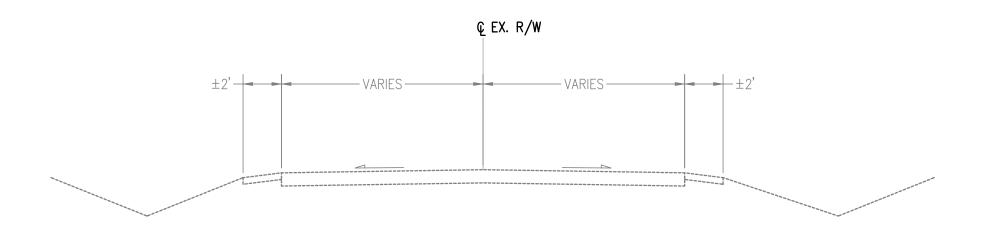
# PROPOSED UTICA WAY - TYPICAL SECTION (STA. 10+82.23 TO STA. 27+85.00)

A VARIES FROM STA. 10+82.23 TO STA. 12+50



# PROPOSED WIDENING TYPICAL SECTION (STA. 27+85.00 TO STA. 31+70.75)

\* MILL & OVERLAY LIMITS EXTEND FROM STA. 31+70.75 TO STA. 32+00 (STA. 32+00 TO STA. 38+65.25 FOR ALTERNATE #1).



# EXISTING TYPICAL SECTION (STA. 25+97.75 TO STA. 38+75.00)

- 1 ITEM 441 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22
- 2 ITEM 407 TACK COAT @ 0.055 GAL/SY
- 3 ITEM 441 1.75" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
- 4 ITEM 407 TACK COAT @ 0.085 GAL/SY
- 5 ITEM 301 6" ASPHALT CONCRETE BASE
- 6 ITEM 304 6" AGGREGATE BASE (LIMESTONE)
- 7 ITEM 204 SUBGRADE COMPACTION
- 8 ITEM 617 9" COMPACTED AGGREGATE

NOTE "A"

THE EXISTING PAVEMENT SHALL BE SAW CUT TO LOCATE A SOUND PAVEMENT EDGE AS PER ITEM 203(E) OF THE CMS. FOR ESTIMATING PURPOSES THE PLAN INDICATES AN AVERAGE WIDTH OF 1' OF EXISTING PAVEMENT BEING REPLACED.

- 9 ITEM 605 4" BASE PIPE UNDERDRAIN (SEE NOTE "B")
- 10 ITEM 611 4" CONDUIT TYPE C
- 11) ITEM 659 SEEDING AND MULCHING, CLASS 1
- 12) ITEM 611 PRECAST REINFORCED CONCRETE OUTLET
- 13) ITEM 254 1.25" PAVEMENT PLANING, ASPHALT CONCRETE

NOTE "B"

THE 4" BASE PIPE UNDERDRAINS SHALL OUTLET INTO STRUCTURE D4 USING 4"
CONDUIT TYPE C. CONSTRUCTION SHALL BE AS PER ODOT SCD DM-1.2.

- 3910 LF

- 30 LF

ITEM 605 4" BASE PIPE UNDERDRAIN
ITEM 611 4" CONDUIT, TYPE C

VECTOR FOR THE FOR THE

3Y:									
DESIGNED BY:	JVVE	DRAWN BY:	IWF	11.5	מחבולעבוט פי	CIECNED DI.	SCE	PROIFCT NO	16050
CHK'D BY DATE									
EVISION									

D.O. HALL
UTICA WAY EXTENSION

MARCH 6, 2023

SCALE:

SHEET:

#### **UTILITY OWNERS**

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THE PROJECT:

STORM WATER
CITY OF CAMBRIDGE
828 WHEELING AVE
CAMBRIDGE, OH 43725
(740) 432-5453

CITY OF CAMBRIDGE 828 WHEELING AVE CAMBRIDGE, OH 43725 (740) 432-5453

CITY OF CAMBRIDGE 828 WHEELING AVE CAMBRIDGE, OH 43725 (740) 432-5453

COLUMBIA GAS OF OHIO 98 STEUBENVILLE AVE CAMBRIDGE, OH 43725

(OHIO POWER COMPANY) 700 MORRISON ROAD GAHANNA, OHIO 43230 (614) 883-6802

**TELECOMMUNICATIONS** SPECTRUM 3251 MAPLE AVE ZANESVILLE, OHIO 43071 1-888-406-7063

#### UTILITY LOCATIONS

(740) 541-2675

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF UTILITIES AS REQUIRED BY SECTION 153.64 ORC. LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES SHOWN IN THE PLANS ARE APPROXIMATE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THEIR EXACT LOCATION AND ELEVATION WHEN WORKING IN THEIR VICINITY.

WHERE POTENTIAL GRADE CONFLICTS MIGHT OCCUR WITH EXISTING UTILITIES, THE CONTRACTOR SHALL UNCOVER SUCH UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT THE EXACT ELEVATION MAY BE DETERMINED AND THE NECESSARY ADJUSTMENTS MADE. COST OF THE ABOVE, IF ANY, WILL BE INCLUDED IN THE PRICE BID FOR THE PERTINENT ITEM.

LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL UTILITY LINES, SERVICES AND APPURTENANCES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED WITH THE PRICE BID FOR THE PERTINENT ITEM, UNLESS OTHERWISE NOTED ON THE PLANS. ESTIMATED QUANTITIES SHOWN ON THE PLANS FOR WATER AND SANITARY SEWER RELOCATIONS ARE FOR THOSE ITEMS ACTUALLY CALLED FOR AND SHOWN ON THE PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING ALL DETAIL SURVEYS NEEDED FOR CONSTRUCTION. ALL CONSTRUCTION STAKING SHALL BE DONE BY OR UNDER THE DIRECTION OF A PROFESSIONAL REGISTERED SURVEYOR.

#### MODIFICATIONS

ANY MODIFICATIONS OR CHANGES TO THE WORK, AS SHOWN ON THE DRAWINGS, MUST HAVE PRIOR WRITTEN APPROVAL BY THE GUERNSEY COUNTY ZONING DEPARTMENT AND THE CITY OF CAMBRIDGE ENGINEERING DEPARTMENT.

THE CONTRACTOR SHALL SOLELY BE RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE, AND LOCAL SAFETY REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS INCLUDING EMPLOYEES AND PROPERTY. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SECURING THE PROJECT SITE FROM THE GENERAL PUBLIC BOTH DURING AND AFTER WORKING HOURS. THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN ALL LIGHTS, SIGNS, FENCES, OR ANY OTHER SAFETY DEVICE TO PREVENT UNAUTHORIZED PERSONNEL FROM HAZARDOUS OR DANGEROUS CONDITIONS ON THE PROJECT SITE. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE VARIOUS ITEMS BID FOR FURNISHING AND INSTALLING MATERIALS ON THIS PROJECT.

# **REVIEW OF PROJECT SITE**

PRIOR TO BIDDING THE CONTRACTOR SHALL, BY PERSONAL EXAMINATION, SATISFY HIMSELF AS TO THE LOCATION OF THE PROPOSED WORK AND TO ACQUAINT HIMSELF THOROUGHLY WITH THE EXISTING CONDITIONS AND THE DIFFICULTIES THAT ARE LIKELY TO BE ENCOUNTERED IN THE PERFORMANCE OF THE PROPOSED WORK.

# IRON PINS AND MONUMENTS

THE CONTRACTOR SHALL REFERENCE ALL IRON PINS AND MONUMENTS BEFORE EXCAVATING AT OR NEAR THEM. IF ANY IRON PINS OR MONUMENTS ARE DESTROYED OR DAMAGED BY THE CONTRACTOR, THEY SHALL BE ACCURATELY REPLACED BY A REGISTERED SURVEYOR EMPLOYED BY THE CONTRACTOR AT THE COMPLETION OF THE PROJECT AND AT NO EXPENSE TO THE COUNTY, CITY, PROJECT OWNER, OR THE PROPERTY OWNERS.

# PRIOR TO COMMENCEMENT OF WORK

A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE CONTRACTOR, GUERNSEY COUNTY CITY OF CAMBRIDGE, PROJECT ENGINEER, DEVELOPER/OWNER, COUNTY ENGINEER, AND THE CITY ENGINEER BEFORE ANY CONSTRUCTION BEGINS. AT THE PRE-CONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL SUBMIT A PROPOSED SCHEDULE REFLECTING ALL WORK THAT IS TO BE CONDUCTED AND SECURE ANY NECESSARY LICENSES.

THE DEVELOPER/OWNER SHALL SECURE ALL NECESSARY PERMITS, PAY ANY INSPECTION, TAP OR CONNECTION FEES. NO CONNECTION TO ANY CITY OWNED LINE SHALL BE MADE UNTIL THESE ITEMS HAVE BEEN RECEIVED BY THE CITY.

THE CONTRACTOR SHALL NOTIFY THE GUERNSEY COUNTY ZONING DEPARTMENT, A MINIMUM OF FIVE (5) DAYS BEFORE BEGINNING WORK, HOLIDAYS AND WEEKENDS EXCLUDED. WHEN THE CONTRACTOR SUSPENDS OPERATIONS FOR TWO (2) OR MORE WORKING DAYS, HE SHALL NOTIFY THE COUNTY ENGINEER, A MINIMUM OF TWENTY-FOUR (24) HOURS BEFORE RESUMING WORK.

AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UTILITY FACILITY SHOWN IN THE PLANS.

# **CONSTRUCTION STAKING**

ALL CONSTRUCTION STAKING SHALL BE DONE BY OR UNDER THE DIRECTION OF A PROFESSIONAL REGISTERED SURVEYOR.

#### SANITARY FACILITIES

THE CONTRACTOR SHALL FURNISH AND MAINTAIN SANITARY CONVENIENCE FACILITIES FOR WORKERS AND INSPECTORS FOR THE DURATION OF THE WORK.

#### LEGAL DIMENSION AND WEIGHT LIMITS

PURSUANT TO SECTIONS 5577.04 AND 5577.05 OHIO REVISED CODE (ORC), LEGAL LIMITS FOR DIMENSIONS AND WEIGHTS FOR HIGHWAY VEHICLES WERE AMENDED EFFECTIVE OCTOBER 1, 1992. THE AMENDED ORC MAY AFFECT THE CONTRACTOR'S COST FOR PERFORMING THE VARIOUS ITEMS OF WORK ON THIS PROJECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FACTOR ANY ADDITIONAL COSTS RESULTING FROM THE AMENDED ORC INTO THE UNIT BID PRICE FOR THE VARIOUS ITEMS OF WORK TO BE PERFORMED ON THIS PROJECT. NO ADDITIONAL REIMBURSEMENT FOR THE COSTS WILL BE PAID BY THE PROJECT OWNER, THE COUNTY, OR THE CITY.

#### **USE OF FIRE HYDRANTS**

THE CONTRACTOR IS HEREBY NOTIFIED THAT THE USE OF FIRE HYDRANTS WILL NOT BE PERMITTED AND THAT THE USE OF FIRE HYDRANTS WILL RESULT IN THE CONTRACTOR'S PROSECUTION FOR THEFT OF A PUBLIC UTILITY. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF CAMBRIDGE TO ACCESS THE WATER SUPPLY.

#### **EMERGENCY PHONE NUMBER**

THE CONTRACTOR SHALL PROVIDE GUERNSEY COUNTY AND CITY OF CAMBRIDGE WITH A 24 HOUR TELEPHONE NUMBER TO READILY CONTACT A RESPONSIBLE PARTY IN THE CASE OF AN EMERGENCY. COSTS AND/OR DAMAGES INCURRED RELATED TO WORK PERFORMED BY THE CONTRACTOR IN SUCH EMERGENCIES ARE THE CONTRACTOR'S RESPONSIBILITY AND NOT THAT OF GUERNSEY COUNTY OR THE CITY OF CAMBRIDGE.

THE CONTRACTOR SHALL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THE PROJECT. COMPENSATION FOR ANY WORK WHICH DOES NOT HAVE A SPECIFIC PAY ITEM WILL BE INCLUDED IN THE PRICE BID FOR THE INDIVIDUAL ITEMS.

#### **WORKING HOURS**

WORKING HOURS ARE LIMITED TO 7:00AM TO 7:00PM MONDAY THROUGH FRIDAY & 7:00AM TO 5:00PM ON SATURDAY. NO WORK SHALL BE PERFORMED ON WEEKENDS OR CITY OF CAMBRIDGE HOLIDAYS WITHOUT PRIOR WRITTEN APPROVAL. IF THE CONTRACTOR NEEDS TO WORK ON A SUNDAY OR A HOLIDAY, HE SHALL SUBMIT HIS REQUEST STATING THE REASONS FOR WORKING THOSE DAYS TO THE CITY A MINIMUM OF TWO BUSINESS DAYS PRIOR TO THE HOLIDAY OR SUNDAY.

#### **ESTIMATED QUANTITIES**

THE QUANTITIES LISTED IN THE "GENERAL SUMMARY" ARE APPROXIMATE ONLY, AND SHALL BE USED IN DETERMINING THE TOTAL AMOUNTS OF BIDS FOR THE PURPOSE OF DETERMINING THE LOWEST AND BEST BIDDER. THE QUANTITIES MAY BE INCREASED OR DIMINISHED AT THE OPTION OF THE ENGINEER.

THE CONTRACTOR SHALL PREPARE AND MAINTAIN A SET OF RECORD CONSTRUCTION DRAWINGS AS HIS WORK ON THE PROJECT PROGRESSES. THE RECORD DRAWINGS SHALL DOCUMENT ALL DEVIATIONS FROM THE ORIGINAL DRAWINGS AS WELL AS DOCUMENT THE LOCATION AND EXTENT OF ANY UNFORESEEN CONDITIONS OR OBSTRUCTIONS. THE RECORD CONDITIONS SHALL BE SHOWN IN RED AND ANY PLAN CHANGES SHALL BE OUTLINED. THE CONTRACTOR SHALL BRING THE RECORD DRAWINGS TO ALL CONSTRUCTION PROGRESS MEETINGS FOR THE COUNTY'S REVIEW.

THE DEVELOPER IS RESPONSIBLE FOR HAVING 4 COPIES OF THE RECORD CONSTRUCTION DRAWINGS SENT TO THE COUNTY AND OWNER AFTER THE PROJECT IS COMPLETED. THE PLANS MUST INCLUDE THE FOLLOWING:

A) LOCATIONS, TOP-OF-CASTINGS, AND FLOW LINE ELEVATIONS FOR ALL SANITARY AND STORM SEWER STRUCTURES ALONG WITH SERVICE LATERAL LOCATIONS. B) LOCATIONS OF ALL WATER LINES, VALVES, HYDRANTS AND SERVICES. C) IDENTIFY ALL FIELD MODIFICATIONS TO THE APPROVED PLAN SET.

THE DEVELOPER SHALL ALSO PROVIDE THE COUNTY AND OWNER WITH ELECTRONIC CADD FILES OF THE RECORD DRAWINGS IN ORDER TO INCORPORATE THE PROJECT INTO THE COUNTY GIS. THE CADD FILE COORDINATE SYSTEM SHALL BE STATE PLANE SOUTH, NAD 83, NAVD 88.

# SHOP DRAWINGS AND/OR PRODUCT DATA

THE CONTRACTOR SHALL SUBMIT FOR THE PROJECT REPRESENTATIVES APPROVAL, FOUR (4) COPIES OF THE SHOP DRAWINGS AND/OR PRODUCT DATA. ALLOW 15 DAYS FOR REVIEW AND APPROVAL. TWO COPIES OF THE APPROVED SHOP DRAWINGS AND/OR PRODUCT DATA WILL BE RETAINED BY THE PROJECT REPRESENTATIVE AND TWO COPIES WILL BE RETURNED TO THE CONTRACTOR.

# NON-RUBBER TIRE VEHICLES

NO NON-RUBBER TIRE VEHICLES SHALL BE MOVED ON ANY STREETS. EXCEPTIONS MAY BE GRANTED BY THE COUNTY WHERE SHORT DISTANCES AND SPECIAL CIRCUMSTANCES ARE INVOLVED. GRANTING OF EXCEPTIONS MUST BE IN WRITING AND ANY RESULTING DAMAGE MUST BE REPAIRED TO THE SATISFACTION OF THE CITY AND COUNTY. THE CONTRACTOR SHALL USE EXTREME CARE WHEN OPERATING NON-RUBBER TIRE VEHICLES ON STREETS OR DRIVEWAYS TO AVOID MARKING OR DAMAGING THE PAVEMENT. PROTECTION OF THE PAVEMENT FROM DAMAGE RESULTING FROM THE TRACKS OF NON-RUBBER TIRE VEHICLES UTILIZED IN TRENCH EXCAVATION SHALL BE REQUIRED. A WOOD PLANK SYSTEM, USED TIRES, RUBBER MATS OR OTHER MEANS AS APPROVED BY THE CITY AND COUNTY'S REPRESENTATIVE SHALL BE USED TO PROTECT THE PAVEMENT. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

# PROTECTION AND RESTORATION OF PROPERTY

THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION AND RESTORATION OF ALL PRIVATE AND PUBLIC PROPERTY IMPACTED BY THE CONTRACTOR'S OPERATIONS IN ACCORDANCE WITH ODOT 107.10.

# **WORK LIMITS**

THE CONTRACTOR SHALL CONFINE HIS ACTIVITIES TO THE PROJECT SITE UNDER DEVELOPMENT OR THE EXISTING RIGHT-OF-WAYS, CONSTRUCTION AND/OR PERMANENT EASEMENTS AND SHALL NOT TRESPASS UPON OTHER PRIVATE PROPERTY WITHOUT THE WRITTEN CONSENT OF THE OWNER.

ALL ADJOINING PROPERTIES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE RESTORED TO THE SAME OR BETTER CONDITION. THIS INCLUDES GRADING, SEEDING, AND REMOVAL OF EXCESS MATERIAL.

# MISCELLANEOUS WORK

ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR AND THE COST OF SAME SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS RELATED ITEMS.

# FINAL CLEAN-UP

THE CONTRACTOR SHALL CLEAN UP ALL DEBRIS AND MATERIALS RESULTING FROM HIS OPERATIONS AND RESTORE ALL SURFACES, STRUCTURES, DITCHES, AND PROPERTY TO ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE COUNTY AND CITY.

ALL DEBRIS SHALL BE DISPOSED OF IN ACCORDANCE WITH LEGAL REQUIREMENTS. NO DEBRIS, REGARDLESS OF COMPLIANCE WITH OTHER LOCAL, STATE, OR FEDERAL REQUIREMENTS, SHALL BE BURIED IN THE DEVELOPMENT EXCEPT IN DEBRIS PITS SPECIFICALLY DESIGNED AND APPROVED AS PART OF AN IMPROVEMENT PLAN IN LOCATIONS OUTSIDE THE BUILDABLE AREA, DRAINAGE WAYS OR DRAINAGE EASEMENTS. DEBRIS PITS SHALL BE PROHIBITED IN ALL OTHER LOCATIONS. IF TREES AND LIMBS ARE REDUCED TO CHIPS, THEY MAY BE USED AS MULCH IN LANDSCAPED AREAS.

#### INDEMNIFICATION

THE CONTRACTOR WILL INDEMNIFY AND HOLD HARMLESS THE COUNTY, CITY, OWNER/DEVELOPER, THE ENGINEER AND THEIR AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING ATTORNEYS' FEES ARISING OUT OF OR RESULTING FROM PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIMS, DAMAGE, LOSS OR EXPENSE IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH, OR INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY, INCLUDING THE LOSS OF USE RESULTING THEREFROM; AND IS CAUSED IN WHOLE OR IN PART BY ANY NEGLIGENT OR WILLFUL ACT OR OMISSION OF THE CONTRACTOR, AND SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE.

IN ANY AND ALL CLAIMS AGAINST THE COUNTY, CITY, OWNER/DEVELOPER OR THE ENGINEER, OR ANY OF THEIR AGENTS OR EMPLOYEES, BY ANY EMPLOYEE OF THE CONTRACTOR, ANY SUBCONTRACTOR, ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, THE INDEMNIFICATION OBLIGATION SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS PAYABLE BY OR FOR THE CONTRACTOR OR ANY SUBCONTRACTOR UNDER WORKERS COMPENSATION ACTS, DISABILITY BENEFIT ACTS, OR OTHER EMPLOYEE BENEFIT

THE OBLIGATION OF THE CONTRACTOR UNDER THIS PARAGRAPH SHALL NOT EXTEND TO THE LIABILITY OF THE ENGINEER, HIS AGENTS OR EMPLOYEES ARISING OUT OF THE PREPARATION OR APPROVAL OF MAPS, PLANS, OPINIONS, REPORTS, SURVEYS, CHANGE ORDERS, DESIGNS OR SPECIFICATIONS.

#### PAVEMENT CLEANING

THE CONTRACTOR IS HEREBY NOTIFIED THAT HE/SHE SHALL BE RESPONSIBLE FOR CLEANING OF STREETS OR ANY MUD, DIRT, SAND, GRAVEL, STONES, OR ANY KIND OF MATERIAL THAT HAVE DEPOSITED AS A RESULT OF HIS/HER OR SUBCONTRACTOR'S OPERATIONS. PAVEMENTS SHALL BE CLEANED AT THE END OF EACH WORK DAY OR MORE OFTEN AS DETERMINED BY THE COUNTY ENGINEER OR HIS REPRESENTITIVE.

#### WEATHER CONDITIONS

ALL CONSTRUCTION AND MATERIAL USAGE SHALL BE IN ACCORDANCE WITH CLIMATIC CONDITIONS ADDRESSED IN CURRENT ISSUE OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS.

#### DUST CONTROL

THE CONTRACTOR IS ADVISED THAT HIS WORK WILL BE IN PROXIMITY TO OCCUPIED RESIDENCES. THEREFORE. IT IS EXPECTED THE CONTRACTOR WILL PERFORM HIS/HER EARTHWORK OPERATIONS TO MINIMIZE DUST. WHEN CONDITIONS ARE SUCH THAT DUST BECOMES A MAJOR PROBLEM OR AS ADVISED BY THE PROJECT OWNER, THE CONTRACTOR WILL APPLY A DUST PALLIATIVE PER ODOT

# FINAL WALK THROUGH INSPECTION

THE CONTRACTOR SHALL CONTACT THE COUNTY ENGINEERS OFFICE AND OWNER TO SCHEDULE A FINAL WALK THROUGH INSPECTION. THE COUNTY INSPECTION SCHEDULE WILL INCLUDE THE

- PRE-CONSTRUCTION MEETING
- 2. CONSTRUCTION OF SEDIMENT, EROSION, AND STORM WATER CONTROLS
- 3. SITE CLEARING & GRUBBING
- 4. ROADWAY EXCAVATION & EMBANKMENT
- SANITARY SEWER PIPE AND COLLECTOR PIPE 6. STORM SEWER PIPE, CULVERTS & BRIDGES
- 7. WATER DISTRIBUTION PIPE
- 8. ROADWAY UTILITY OR STORMWATER CROSSING COMPACTION
- ROADWAY FINAL GRADE AND COMPACTION
- 10. CONCRETE CURB AND GUTTER
- 11. ASPHALT PAVING 12. GUARDRAIL
- 13. FINAL GRADING
- 14. SEEDING AND MULCHING (PERMANENT OR TEMPORARY)
- 15. FINAL CONSTRUCTION INSPECTION
- 16. AS-BUILTS SUBMITTED TO LCPC
- 17. FINAL INSPECTION WALK-THRU WITH DEVELOPER AND CONTRACTOR

# DRAINAGE

ALL STORM SEWER, CULVERTS, HEADWALLS, CURB INLETS, MANHOLES, METHODS OF CONSTRUCTION, AND WORKMANSHIP FOR DRAINAGE AND APPURTENANCES SHOWN ON THESE PLANS SHALL CONFORM TO THE RULES AND REGULATIONS OF THE CITY OF CAMBRIDGE AND ODOT ITEMS 602 & 611 CURRENT ON THE DATE OF CONTRACT UNLESS THE REQUIREMENTS OF SUCH RULES AND REGULATIONS ARE UPGRADED BY THE FOLLOWING NOTES OR BY THE CONSTRUCTION DETAILS SET FORTH HEREIN.

THE FLOW IN ALL STORM SEWERS, DRAINS AND WATERCOURSES ENCOUNTERED SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS OWN EXPENSE, AND WHENEVER SUCH WATERCOURSES AND DRAINS ARE DISTURBED OR DESTROYED DURING THE PROSECUTION OF THE WORK, THEY SHALL BE RESTORED BY THE CONTRACTOR AT HIS OWN EXPENSE TO A CONDITION SATISFACTORY TO THE CITY OF CAMBRIDGE.

# **MATERIALS**

ALL STORM SEWERS AND CULVERTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. STORM SEWERS SHALL BE REINFORCED CONCRETE (706.02) OR HDPE (707.33) IN ACCORDANCE WITH ODOT ITEM 611, TYPES B-F (DEPENDING ON THE LOCATION), WITH A MINIMUM SIZE OF 12 INCHES. CULVERTS SHALL BE REINFORCED CONCRETE (706.02) IN ACCORDANCE WITH ODOT ITEM 611, TYPE A, WITH A MINIMUM SIZE OF 12 INCHES. STORM MANHOLES AND INLETS SHALL BE IN ACCORDANCE WITH ODOT STANDARD DRAWINGS AND INSTALLED AS PER ODOT ITEM 611. ALL CATCH BASINS, MANHOLES, AND CURB INLETS SHALL HAVE CONCRETE CHANNELS POURED IN PLACE TO ASSURE POSITIVE DRAINAGE THROUGH THESE STRUCTURES.

#### **BACKFILL**

ALL BACKFILL FOR STORM SEWER AND CULVERTS UNDER PAVEMENT AND WITHIN 5 FEET PAVEMENT SHALL BE IN ACCORDANCE WITH ODOT 611.06. IN AREAS DEPICTED CONSTRUCTION DRAWINGS AS TYPE B OR GRANULAR BACKFILL, WITHIN THESE LIMITS THE E SHALL BE PER TYPE A & B, EXCEPT THE STRUCTURAL FILL SHALL EXTEND FROM THE TRENCH BOTTOM TO THE SUBGRADE.

#### ITEM 602 - CONCRETE MASONRY, AS PER PLAN

THIS ITEM OF WORK SHALL BE COMPLETED PER THE SPECIFICATIONS FOUND IN THE CMS AND INCLUDES A QUANTITY FOR THE FOLLOWING:

HALF HEIGHT HEADWALL HW-2.1 (18") - 5 EACH

#### SANITARY SEWER WORK

ALL SANITARY SEWER PIPE, MANHOLES, FITTINGS, METHODS OF CONSTRUCTION, AN WORKMANSHIP FOR SANITARY SEWER AND APPURTENANCES SHOWN ON THESE PLAN SHALL CONFORM TO THE RULES AND REGULATIONS OF THE CITY OF COLUMBUS AND ODO ITEMS 611, CURRENT ON THE DATE OF CONTRACT UNLESS THE REQUIREMENTS OF SUCH RULES AND REGULATIONS ARE UPGRADED BY THE FOLLOWING NOTES OR BY THE CONSTRUCTION DETAILS SET FORTH HEREIN.

NO PERSON SHALL UNCOVER, MAKE ANY CONNECTIONS WITH OR OPENINGS INTO, USI ALTER OR DISTURB ANY PUBLIC SEWER OR APPURTENANCE THEREOF WITHOUT FIRST OBTAINING A WRITTEN PERMIT FROM THE CITY OF CAMBRIDGE.

ALL WATER LINES SHALL BE INSTALLED WITH AT LEAST 10 FEET HORIZONTAL SEPARATION FROM SANITARY SEWER AND STORM SEWER LINES. WHENEVER A WATER LINE AND SEWER MUST CROSS, THE SEWER MAIN (STORM OR SANITARY) SHALL BE LAID SUCH THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES BELOW THE INVERT OF FROM THE WATE LINE MEASURED BETWEEN THE OUTSIDE PIPE WALLS. IN CASES WHERE THE REQUIRED SEPARATION CANNOT BE MAINTAINED, CLOSER INSTALLATION MAY BE PERMITTED ON CASE-BY-CASE BASIS ONLY AFTER RECEIPT OF WRITTEN CONCURRENCE FROM THE OHIO EPA DIVISION OF DRINKING WATER. CURRENT RECOMMENDED STANDARDS FOR WATER WORKS, SECTIONS 8.8.2 AND 8.8.3 SHALL GOVERN AS TO THE SEPARATION OF WATER LINI FROM CONTAMINATION SOURCES. PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT ODOT 611 ITEMS

ALL SANITARY SEWER PIPE MATERIAL SHALL CONFORM TO ASTM D-3034 SDR 35. ALL JOIN' SPECIFICATIONS SHALL MEET ASTM D-3212 AND ALL BEDDING CLASSIFICATION SHALL BE PER ASTM D-2321 FOR PLASTIC PIPE.

#### **BACKFILL**

ALL TRENCH BACKFILL SHALL BE COMPACTED BACKFILL AS PER ODOT ITEM 611.06. THE COS OF ALL COMPACTED BACKFILL SHALL BE INCLUDED IN THE PRICE BID FOR FURNISHING AND INSTALLING PIPE.

UNLESS STATED SPECIFICALLY IN THE CONSTRUCTION DRAWINGS, ALL CONDUIT SHALL E INSTALLED AS ODOT TYPE C. THERE MAY BE AREAS ON THE PLANS WITH THE LIMIT INDICATED ON THE PROFILE VIEW OF THE SEWER AS "COMPACTED GRANULAR BACKFILL WITHIN THESE LIMITS THE BACKFILL SHALL BE PER TYPE A & B, EXCEPT THE STRUCTURAL FILL SHALL EXTEND FROM THE TRENCH BOTTOM TO THE SUBGRADE.

# SERVICE CONNECTIONS

SERVICES OR HOUSE CONNECTIONS SHALL NOT BE CONNECTED TO THE LATERAL OR MAIN LINE SEWERS SHOWN HEREON UNTIL FULL APPROVAL OF SAID LATERAL OR MAIN LINE SEWER HAS BEEN RECEIVED.

# CONNECTION TO EXISTING MANHOLE

WHERE NEW SEWERS ARE CONNECTED TO EXISTING MANHOLES. THE CONTRACTOR SHALL CORE DRILL ANY NEW OPENINGS INTO THE EXISTING MANHOLE. THE PIPE TO MANHOLE SHALL HAVE A WATER TIGHT JOINT OF A FLEXIBLE RUBBER GASKET EXPANSION BOOT. THE CONTRACTOR SHALL THEN CLEAN THE MANHOLE OF AL DEBRIS BEFORE MAKING THE CONNECTION. THE CONTRACTOR SHALL CONSTRUCT A SEMI-CIRCULAR. CONCRETE CHANNEL TO THE NEW PIPE TO PROVIDE SMOOTH, UNINTERRUPTED FLOW THROUGH THE MANHOLE.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE ITEMS BID FOR FURNISHING AN INSTALLING PIPE.

# ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTE

CONNECTIONS TO SANITARY SEWER SYSTEM

ARE PROHIBITED IN THE CITY OF CAMBRIDGE. **EXISTING SEWERS AND STRUCTURES** 

THE CONTRACTOR SHALL REPLACE TO THE SATISFACTION OF THE ENGINEER ALL EXISTING MANHOLES, CATCI BASINS, DRAINS, SEWERS AND APPURTENANCES REMOVED OR DAMAGED DURING CONSTRUCTION. THE ABOVI IS NOT APPLICABLE TO STRUCTURES TO BE ABANDONED. THE CONTRACTOR SHALL REMOVE DEBRIS, SILT, ETC FROM EXISTING MANHOLES AND CATCH BASINS AND VARIOUS SEWER PIPE WHICH ARE CONNECTED IN THE NEW SYSTEM.

# SANITARY SEWER-MANHOLE CONNECTIONS

THE SANITARY SEWER PIPE TO MANHOLE CONNECTIONS SHALL BE OF FLEXIBLE WATERTIGHT JOINT OF APPROVED MANUFACTURE. THE JOINT MAY BE OF THE FOLLOWING DESIGN (A)RUBBER SLEEVE WITH STAINLESS STEEL BANDING, (B)RUBBER GASKET COMPRESSION OR (C)RUBBER GASKET EXPANSION.

PAYMENT FOR THIS WORK AND MATERIALS SHALL BE INCLUDED WITH THE ITEM BID FOR FURNISHING AND INSTALLING MANHOLES.

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SCALE:

MARCH 6, 2023

#### **WATER MAIN NOTES**

- 1. THIS WORK CONSISTS OF CONSTRUCTING WATER MAINS AND SERVICE BRANCHES, INCLUDING FIRE HYDRANTS, CORPORATION STOPS, SERVICE BOXES, SERVICE STOPS, VALVES, FITTINGS, AND VALVE BOXES, AND INCLUDES:
  - A. EXCAVATION FOR ITEMS AND PREPARATION OF THE FOUNDATIONS NECESSARY FOR PLACING WATER MAINS AND SERVICE BRANCHES, INCLUDING FIRE HYDRANTS, CORPORATION STOPS, SERVICE BOXES, SERVICE STOPS, VALVES, FITTINGS, AND VALVE BOXES.
  - B. FURNISHING AND PLACING BEDDING AND BACKFILL.
- C. CONSTRUCTING AND SUBSEQUENTLY REMOVING ALL NECESSARY COFFERDAMS,
- BRACING, CRIBS AND SHEETING.

  D. PUMPING AND DEWATERING.
- E. PROVIDING ALL JOINTS AS SHOWN ON THE PLANS.
- . FURNISHING AND INSTALLING ALL NECESSARY BENDS AND BRANCHES.
- FURNISHING AND INSTALLING ALL NECESSARY TRACER TAPE.
- H. JOINING TO EXISTING AND PROPOSED APPURTENANCES AS REQUIRED IN THE PROJECT PLANS.
- PERFORMING ALL NECESSARY TESTS (LEAKAGE TEST, DISINFECTIONS, HYDROSTATIC).
- J. RESTORATION OF DISTURBED UNDERGROUND FACILITIES.
- K. CONSTRUCTING ALL REQUIRED BLOCKING AND WEDGING AND/OR THRUST BLOCKING.
- L. FURNISHING AND INSTALLING ALL NECESSARY RESTRAINING OF JOINTS AND
- M. CUTTING AND PLUGGING, AS REQUIRED, EXISTING WATER MAINS TO BE ABANDONED.
- USE REMOVED OR EXCAVATED MATERIALS IN THE WORK WHEN THE MATERIAL CONFORMS TO THE SPECIFICATIONS; IF NOT, THEN RECYCLE OR DISPOSE OF THE MATERIAL ACCORDING TO 105.16 AND 105.17.
- 2. THE CONTRACTOR SHALL SUPPLY ALL OF THE WATER MAIN MATERIALS, INCLUDING THE PIPE, FITTINGS AND FITTING RESTRAINTS, HYDRANTS AND VALVES, ALL OTHER APPURTENANCES AND ANY ITEMS SPECIALLY ITEMIZED AS REQUIRED FOR THE WATER MAIN INSTALLATION. ALL WATER MAIN MATERIALS SHALL COMPLY WITH THE PROJECT SPECIFICATIONS. ALL BOLTS SHALL BE STAINLESS STEEL. ALL FITTINGS SHALL BE DUCTILE IRON.
- 3. POLYVINYL CHLORIDE (PVC) PIPE SHALL CONFORM TO AWWA C900, AWWA C905, AWWA C909, DR-14, OR ASTM D 2241. THE CONTRACTOR SHALL FURNISH PUSH-ON TYPE PIPE JOINTS CONFORMING TO ASTM D 3139 WITH A THICKENED BELL AND WITH A RUBBER GASKET CONFORMING TO ASTM F 477. USE PVC, PE, OR PB PIPE AND COUPLINGS, AND SOLVENT CEMENTS MADE FROM COMPOUNDS THAT ARE TESTED AND CERTIFIED AS SUITABLE FOR POTABLE WATER DISTRIBUTION PRODUCTS BY THE NATIONAL SANITATION FOUNDATION (NSF) TESTING LABORATORY OR THE CANADIAN STANDARDS ASSOCIATION TESTING LABORATORY, OR ANY OTHER SIMILARLY ACCREDITED TESTING AGENCY ACCEPTABLE TO THE LABORATORY. DO NOT USE PVC, PE, OR PB PIPE AND COUPLINGS, OR SOLVENT CEMENTS CONTAINING ANY INGREDIENT IN AN AMOUNT THAT HAS BEEN DEMONSTRATED TO MIGRATE INTO WATER IN QUANTITIES CONSIDERED TO BE TOXIC, AS TESTED ACCORDING TO SECTIONS 3 AND 4 OF NSF STANDARD NUMBER 14. HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL CONFORM TO HDPE DR-11, ASTM F714. THE CONTRACTOR SHALL FURNISH PIPE JOINTS CONFORMING TO ASTM F2620/ASTM 1290.
- 4. ALL NEW GATE VALVES SHALL OPEN COUNTER-CLOCKWISE.
- 5. ALL JOINTS WILL BE PUSH-ON.
- 6. FURNISH CAST IRON VALVE BOXES CONSISTING OF ADJUSTABLE TWO PIECE WITH COVER AND WITH A BASE CORRESPONDING TO THE SIZE OF THE VALVE. USE HEAVY-DUTY TYPE VALVE BOXES FOR LOCATIONS WITHIN EXISTING OR PROPOSED PAVEMENT, DRIVEWAY, OR OTHER TRAVELED AREAS. ENSURE THAT VALVE BOXES ARE COATED WITH AN ASPHALTIC COATING BY THE MANUFACTURER. THE COVER SHALL HAVE THE WORD "WATER" CAST IN IT.
- 7. FURNISH INSERTING VALVES THAT OPERATE LIKE ORDINARY GATE VALVES, WITH THE SAME GATE AND SEATING ASSEMBLY AS AWWA C509 GATE VALVES. FURNISH MATERIAL THAT CONSIST OF A TWO-PIECE SLEEVE FOR ASSEMBLY AROUND THE MAIN VALVE, AND A VALVE BOX CONFORMING TO PROJECT SPECIFICATIONS. FURNISH THE EQUIPMENT NECESSARY TO DRILL THE MAIN WALL AND INSERT THE VALVE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- 8. FURNISH CUTTING-IN VALVES WITH THE SAME GATE AND SEATING ASSEMBLY AS AWWA C509 GATE VALVES. FURNISH MATERIAL THAT CONSISTS OF A CUTTING-IN SLEEVE AND VALVE SUITABLE FOR ASSEMBLING OVER THE ENDS OF A CUTOUT LENGTH OF EXISTING PIPE, ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, AND A VALVE BOX CONFORMING TO PROJECT SPECIFICATIONS.
- 9. FURNISH BRONZE SERVICE STOPS WITH COUPLING THREADS CONFORMING TO AWWA C800. USE SERVICE STOPS DESIGNED SO THAT WATER PRESSURE FROM THE INLET SIDE OF THE BODY PROVIDES ADDITIONAL SEALING ACTION. FURNISH SERVICE STOPS THAT OPEN COUNTER-CLOCKWISE. USE BUFFALO TYPE SERVICE BOXES. FURNISH COVERS THAT HAVE THE WORD "WATER" CAST IN RAISED LETTERS. SECURELY FASTEN COVERS WITH A BRONZE OR BRASS BOLT.
- 10. NOTIFY THE CITY OF CAMBRIDGE OF THE FOLLOWING:
- A. THE DATES SCHEDULED FOR TESTING AND FOR DISINFECTIONS OF MAINS AND
- BRANCHES.

  B. ANY CLEARANCES LESS THAN 1.5 FEET BETWEEN NEW MAINS AND EXISTING PIPES, SEWERS, AND STRUCTURES.

#### WATER MAIN NOTES (CONT.)

- 11. FURNISH CAST IRON, DRY-BARREL POST TYPE FIRE HYDRANTS CONFORMING TO AWWA C502, WITH THE FOLLOWING MODIFICATIONS: FURNISH HYDRANTS INCORPORATING AN APPROVED GROUNDLINE BREAKABLE FLANGE AND VALVE STEM COUPLING. FURNISH COMPRESSION TYPE HYDRANTS WITH THE VALVE OPENING AGAINST THE PRESSURE ENSURE THAT THE VALVE END OF THE VALVE STEM IS DESIGNED TO ELIMINATE CONTACT OF DISSIMILAR METALS. ENSURE THAT THE VALVE STEM IS AT LEAST 1-INCH (25 MM) DIAMETER OR 1-INCH (25 MM) SQUARE STEEL BETWEEN THE HYDRANT OPERATING NUT AND THE VALVE, EXCEPT FOR THE VALVE STEM COUPLING LOCATED AT THE POINT CORRESPONDING TO THE BREAKABLE FLANGE. FURNISH A MAIN VALVE PORT THAT IS AT LEAST 4 1/4-INCH (108 MM) DIAMETER. FURNISH A RUBBER FACED VALVE. ENSURE THAT THE HYDRANT IS DESIGNED SO THE NOZZLES MAY BE ORIENTED TO POINT IN ANY DIRECTION. ENSURE THAT THE HYDRANT CONNECTION TO THE PIPE HAS AT LEAST A 6 INCH (150 MM) INSIDE DIAMETER. FURNISH PUSH-ON OR MECHANICAL TYPE JOINTS CONFORMING TO ANSI/AWWA C111/A21.11. ENSURE THAT THE HYDRANT HAS ONE CENTER-FRONT PUMPER NOZZLE OF 4-INCH (100 MM) INTERNAL DIAMETER WITH MALE THREADS TO MATCH THE FIRE APPARATUS OF THE MAINTAINING AGENCY FURNISH TWO HOSE OR STREAMER NOZZLES OF 2 1/2-INCH (63 MM) INTERNAL DIAMETER WITH MALE THREADS TO MATCH APPARATUS OF THE MAINTAINING AGENCY ENSURE THAT NOZZLE SECTIONS ARE DESIGNED TO LOCK INTO THE HYDRANT BODY USING LOCKING LUGS OR THREADS. FURNISH NOZZLES WITH THREADED CAST IRON CAPS HAVING AN INTEGRAL NUT OF THE SAME DESIGN AS THE HYDRANT OPERATING NUT. CONTACT THE MAINTAINING AGENCY (CITY OF CAMBRIDGE) TO DETERMINE THE DESIRED COLOR AND NUMBER OF COATS OF ENAMEL FOR THE HYDRANTS. THE CONTRACTOR SHALL REMOVE AND STORE THE EXISTING FIRE HYDRANTS ONSITE FOR SALVAGE BY THE CITY OF CAMBRIDGE.
- 12. EXCAVATE ACCORDING TO SPECIFICATIONS WITH THE FOLLOWING ADDITIONS:
- A. EXCAVATE THE TRENCH A SUITABLE DISTANCE IN ADVANCE OF PIPE LAYING TO ENSURE PROPER CLEARANCE BETWEEN THE WATERLINE AND ANY UTILITY CROSSING OR UNDERGROUND STRUCTURE. SUITABLY BRACE AND SUPPORT UTILITIES AND STRUCTURES.
- B. EXCAVATE THE TRENCH WALLS IN ACCORDANCE TO SD-118. ENSURE THAT THE CLEARANCE ON EITHER SIDE OF A PIPE IS A MINIMUM OF 4 INCHES (101.6 MM) AND A MAXIMUM OF 6 INCHES (152.4 MM). IN PAVED AREAS, NEATLY SAW CUT THE PAVEMENT AND REMOVE PAVING MATERIAL.
- C. FURNISH COVER OVER PIPES OF 4 FEET (1.3 M) UNLESS OTHERWISE SHOWN ON THE PLANS
- D. PILE EXCAVATED MATERIAL IN A MANNER THAT WILL NOT ENDANGER THE WORK OR OBSTRUCT SIDEWALKS AND DRIVEWAYS. KEEP GUTTERS CLEAR OR MAKE OTHER SATISFACTORY PROVISIONS FOR DRAINAGE. DO NOT OBSTRUCT NATURAL WATER-COURSES.
- E. FURNISH HOLES FOR PIPE BELLS AT EACH JOINT, BUT MAKE THEM NO LONGER THAN NECESSARY FOR JOINT ASSEMBLY AND ASSURANCE THAT THE PIPE BARREL WILL BE FLAT ON THE TRENCH BOTTOM.
- F. FURNISH, PLACE, AND MAINTAIN SUCH SHEETING AND BRACING AS MAY BE REQUIRED. IMMEDIATELY BACKFILL AND COMPACT VOIDS APPEARING OUTSIDE OF SHEETING. NOTIFY THE MAINTAINING AGENCY OF SHEETING AND BRACING LEFT IN PLACE. DO NOT REMOVE SHEETING AND BRACING UNTIL SUFFICIENT BACKFILL HAS BEEN PLACED TO PROVIDE AMPLE SUPPORT TO THE SIDES OF THE EXCAVATION. WHEN SHEETING IS LEFT IN PLACE, CUT IT OFF AT LEAST 2 FEET (0.6 M) BELOW THE PROPOSED FINISHED SURFACE OR SUBGRADE IN PAVED AREAS.
- 13. WHERE SPECIFIED, PROVIDE STRUCTURAL BACKFILL FOR BEDDING ACCORDING TO SPECIFICATIONS.
- 14. INSPECT WATER MAINS AND AUXILIARY EQUIPMENT UPON DELIVERY IN THE FIELD TO ENSURE PROPER WORKING ORDER BEFORE INSTALLATION.
- 15. WHERE WATER IS ENCOUNTERED IN THE TRENCH, REMOVE IT DURING PIPE-LAYING OPERATIONS AND MAINTAIN THE TRENCH WATER FREE UNTIL THE ENDS OF THE PIPE ARE SEALED AND PROVISIONS ARE MADE TO PREVENT FLOATING OF THE PIPE. DO NOT ALLOW TRENCH WATER OR OTHER DELETERIOUS MATERIALS TO ENTER THE PIPE AT ANY TIME.
- 16. LAY PIPE AT LEAST 12 INCHES FROM ANY STRUCTURE OR UNDERGROUND UTILITY, AND MAINTAIN A MINIMUM 10-FOOT (3 M) HORIZONTAL SEPARATION FROM SANITARY
- 17. DO NOT OPERATE ANY VALVE OR OTHER CONTROL ON THE EXISTING SYSTEM. THE CITY OF CAMBRIDGE WILL OPERATE ALL VALVES, HYDRANTS, AIR VALVES, AND SERVICE
- 18. HANDLE PIPE IN A MANNER THAT WILL PREVENT DAMAGE TO THE PIPE, PIPE LINING, OR COATING. LOAD, UNLOAD, AND PLACE PIPE AND FITTINGS USING HOISTS AND SLINGS IN A MANNER THAT WILL AVOID SHOCK OR DAMAGE. DO NOT DROP, SKID, OR ROLL PIPE OR FITTINGS AGAINST OTHER PIPE.
- 19. WHENEVER IT BECOMES NECESSARY TO CUT A LENGTH OF PIPE, MAKE THE PIPE ENDS SQUARE WITH THE LONGITUDINAL AXIS OF THE PIPE AND OTHERWISE SMOOTH SO THAT GOOD CONNECTIONS CAN BE MADE. CUT PIPE USING CUTTERS RECOMMENDED BY THE MANUFACTURER.
- 20. ENSURE THAT PIPE AND FITTINGS ARE CLEAN WHEN LAID. TAKE PRECAUTIONS TO PREVENT FLOATING. PLACE THE PIPE ON THE TRENCH BOTTOM OR BEDDING. AFTER THE PIPE HAS BEEN ALIGNED AND JOINTED, AND THRUST BLOCKING HAS BEEN PLACED, SECURE THE PIPE IN PLACE WITH APPROVED BACKFILL MATERIAL. AT TIMES WHEN PIPE LAYING IS NOT IN PROGRESS, CLOSE THE OPEN ENDS OF THE PIPE WITH A WATERTIGHT PLUG.
- 21. PIPE JOINTS SHALL BE DEFLECTED TO OBTAIN HORIZONTAL ALIGNMENT AND VERTICAL ELEVATIONS UNLESS OTHERWISE INDICATED. DEFLECTIONS ARE TO BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATION OR AS NOTED ON THE DETAILED PLANS. IF THE PIPE IS SHOWN CURVED ON THE PLANS, CONSTRUCT THE CURVES BY SPECIAL FITTINGS OR BY DEFLECTING THE JOINTS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. DO NOT MAKE JOINT DEFLECTIONS AT VALVES.
- 22. WHEN RUBBER-GASKETED PIPE IS LAID ON A CURVE, JOINT THE PIPE IN A STRAIGHT ALIGNMENT AND THEN DEFLECT IT TO THE CURVED ALIGNMENT.

#### **WATER MAIN NOTES (CONT.)**

- 23. WHERE A PIPE IS TO BE PLACED WITHIN AN EMBANKMENT OR THE TOP OF THE PIPE IS ABOVE THE EXISTING GROUND, CONSTRUCT THE EMBANKMENT TO AT LEAST 6 INCHES (150 MM) ABOVE THE TOP OF THE PIPE BEFORE TRENCHING FOR THE PIPE. EXCAVATE THE TRENCH TO THE MINIMUM WIDTH NECESSARY FOR THE PROPER PLACING AND BACKFILLING OF THE PIPE.
- 24. INSTALL COPPERHEAD TRACER TAPE (#10 ON HDPE, #12 ON OTHER PIPES) OVER COPPER AND NON-METALLIC WATER LINES, INCLUDING SERVICE LINES. PLACE THE TRACER TAPE APPROXIMATELY 1 FOOT (0.3 M) ABOVE THE TOP OF THE LINE AND EXTEND THE TAPE FOR THE LINE'S FULL LENGTH. USE TRACER TAPE THAT IS A DETECTABLE TYPE AND IS MARKED "WATER". TRACER TAPE SHALL BE INSTALLED IN EVERY VALVE BOX, AND LOCATED ALONG THE OUTSIDE OF THE VALVE BOX WITH A HOLE DRILLED INTO THE VALVE BOX AT THE TOP OF THE CASTING.
- 25. LAY FIRE HYDRANTS, VALVES, AND FITTINGS ON TREATED BLOCKING AND HOLD THEM IN POSITION BY WEDGES. BED BLOCKS FIRMLY IN THE BOTTOM OF THE TRENCH WITH UNIFORM BEARING AND WITH THE LONG DIMENSION OF THE BLOCK PERPENDICULAR TO THE PIPE BARREL. ENSURE THAT THE BLOCKS ARE LEVEL ACROSS THE TRENCH AND THAT THE PROPER NUMBER OF BLOCKS ARE PLACED ONE UPON THE OTHER TO BRING THE FITTINGS TO THE REQUIRED GRADE FOR JOINTING.
- 26. AT THE CLOSE OF THE JOB, ALL EXISTING LINES SHOULD BE CUT AND CAPPED AND ABANDONED IN PLACE. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES. THE CONTRACTOR DOES NOT NEED TO FILL THE PIPES WITH SAND OR OTHER MATERIAL.
- 27. THE CITY OF CAMBRIDGE WILL PERFORM BACTERIA TESTING. CONTRACTOR SHALL REQUEST BACTERIA TESTING A MINIMUM OF 24-HOURS IN ADVANCE. CONTRACTOR SHALL PERFORM ALL OTHER REQUIRED TESTS.
- 28. FURNISH PLUGS, CAPS, TEES, HYDRANTS, AND ELBOWS OR BENDS HAVING A DEFLECTION OF 11 1/4 DEGREES OR GREATER WITH CONCRETE THRUST BLOCKING. CONSTRUCT THE THRUST BLOCKING BY PLACING CONCRETE CLASS QC-MISC. BETWEEN FIRM ORIGINAL UNDISTURBED EARTH AND THE FITTING TO BE ANCHORED. PLACE AND SHAPE THE THRUST BLOCKING IN A MANNER SATISFACTORY TO THE ENGINEER WITH THE THRUST FORCE CONTAINED BY THE BLOCKING. PLACE THE HARDWOOD BLOCKS BETWEEN THE PLUGS, CAPS, AND HYDRANTS, AND THE THRUST BLOCKING. PLACE THE THRUST BLOCKING SO THAT IT ALLOWS FOR PIPE AND JOINT ACCESSIBILITY OR REPAIR.
- 29. RESTRAIN PUSH-ON OR MECHANICAL JOINTS AND FITTINGS BY USE OF ROMAC GRIP RINGS/600 SERIES PIPE RESTRAINT, WITH REQUIRED HARDWARE. PROTECT THE DEVICES AGAINST CORROSION BY THE APPLICATION OF AN ASPHALT COATING. RESTRAIN MECHANICAL JOINTS BY A WEDGE ACTION TYPE JOINT RESTRAINT WITH TWIST-OFF NUTS. IF POLYETHYLENE ENCASEMENT IS SPECIFIED, ENSURE THAT THE ENCASEMENT COVERS THE ENTIRE ASSEMBLY. THE CONTRACTOR MAY USE RESTRAINING DEVICES INSTEAD OF THRUST BLOCKING WHEN APPROVED BY THE ENGINEER.
- 30. APPLY A HYDROSTATIC TEST TO THE WHOLE SYSTEM OR TO ALL INDIVIDUAL VALVED-OFF SECTIONS OF THE MAINS WHERE WORK HAS BEEN PERFORMED. PERFORM THE HYDROSTATIC TESTS ACCORDING TO AWWA C605, EXCEPT MAKE THE TEST PRESSURE GREATER THAN 150 POUNDS PER SQUARE INCH (1000 KPA). ENSURE THAT THE QUANTITY OF WATER LOST FROM THE MAIN DOES NOT EXCEED THE NUMBER OF GALLONS (LITERS) PER HOUR AS DETERMINED IN AWWA C605.
- 31. AFTER PASSING THE HYDROSTATIC TESTING, DISINFECT THE COMPLETED WATER WORK ACCORDING TO AWWA. MAKE ALL NECESSARY TAPS AND FURNISH ALL EQUIPMENT AND LABOR REQUIRED FOR THE DISINFECTIONS. OBTAIN THE CITY OF CAMBRIDGE'S APPROVAL OF THE TIME AND THE SECTION OF LINE TO BE DISINFECTED.
- 32. NO WATER SERVICE CONNECTIONS SHALL BE MADE UNTIL AFTER THE MAINLINE HAS BEEN TESTED AND STERILIZED.
- 33. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING WATER SYSTEM RESULTING FROM NONCONFORMANCE WITH SPECIFICATIONS AND/OR GENERAL NEGLIGENCE.
- 34. IN LOCATIONS WHERE EXISTING FEATURES (E.G. RETAINING WALLS, LANDSCAPE TIMBERS, LANDSCAPE ROCKS, FLOWER BEDS, SIDEWALKS ETC.) ARE IN CONFLICT WITH THE WATER MAIN AND/OR SERVICE LINE CONSTRUCTION THE CONTRACTOR SHALL TAKE MEASURES TO PROTECT THE EXISTING FEATURES FROM DAMAGE. ANY EXISTING FEATURES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR IN-KIND AND AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF BOTH THE OWNER AND THE CITY. WITH APPROVAL FROM THE CITY THE CONTRACTOR MAY ELECT TO UTILIZE TRENCHLESS CONSTRUCTION TECHNOLOGIES, WITH NO ADDITIONAL COST TO THE CITY, IN ORDER TO AVOID EXISTING FEATURES.
- 35. IN AREAS WHERE THE PROPOSED WATER MAIN MAY BE IN CONFLICT WITH THE EXISTING STORM SEWER, SANITARY SEWER LATERALS, AND/OR GAS MAIN OR SERVICES, THE CONTRACTOR SHALL AVOID CONFLICTS TO THE EXTENT PRACTICABLE BY ADJUSTING THE DEPTH OF THE WATER MAIN. ALL ADJUSTMENTS MUST BE APPROVED BY THE CITY ENGINEER. WHERE PROPOSED WATER MAINS CROSS EXISTING UTILITIES AND LATERALS/SERVICES, THE CONTRACTOR SHALL PROTECT THE EXISTING LATERALS/SERVICES FROM DAMAGE. REPAIR OF THE EXISTING LATERALS/SERVICES SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 36. EXISTING FIRE HYDRANTS SHALL BE REMOVED AND RETURNED TO THE CITY OF CAMBRIDGE. ANY MATERIAL NOT OBTAINED BY THE CITY SHALL BE DISPOSED OF BY THE CONTRACTOR. CONTACT NICK CUNNINGHAM, CITY ENGINEER, AT 740-432-3601.
- 37. ALL PROPOSED FIRE HYDRANTS ARE TO BE INSTALLED A MINIMUM OF THREE FEET FROM THE EDGE OF PAVEMENT UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 38. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WATER SERVICE TO ALL CUSTOMERS AT ALL TIMES. THE MAXIMUM ALLOWABLE SHUT DOWN TIME SHALL BE FOUR (4) HOURS WITH PRIOR NOTIFICATION AND APPROVAL BY CITY OF CAMBRIDGE. THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER LINE(S) TO PROPERTY OWNERS AFFECTED BY SHUT DOWNS EXCEEDING FOUR (4) HOURS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS REQUIREMENT.

#### WATER MAIN NOTES (CONT.)

- 39. FURNISH AND INSTALL SERVICE BRANCHES, EITHER PIPE OR TUBING AND FITTINGS, AS NECESSARY, OR AS SHOWN ON THE PLANS INCLUDING THE REMOVAL OF THE EXISTING SERVICE BRANCHES OR SERVICE BOXES, AS REQUIRED ACCORDING TO THE FOLLOWING SITUATIONS. TAPPING SADDLES, CORPORATION STOPS, SERVICE STOPS, AND SERVICE BOXES, IF REQUIRED, ARE INCLUDED. AFTER THE EXISTING WATER MAIN HAS BEEN ABANDONED THE CONTRACTOR SHALL REMOVE THE EXISTING VALVE BOXES. THE REMOVAL SHALL INCLUDE THE VALVE BOX, FILL THE REMAINING VOID WITH SAND OR CONTROLLED DENSITY FILL (CDF), AND BACKFILL WITH ASPHALT IF UNDER PAVEMENT OR BACKFILL WITH SOIL, SEED AND MULCH IF IN GRASS.
- 40. CONTRACTOR SHALL AVOID DISRUPTION TO MAIL SERVICE. THE CONTRACTOR SHALL AVOID MAIL BOXES WHEN POSSIBLE. WHEN IT IS NECESSARY TO DISTURB AN EXISTING MAILBOX, THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR TEMPORARY MAIL FACILITIES UNTIL THE PERMANENT FACILITY CAN BE RESTORED. ALL MAILBOXES DISTURBED SHALL BE REPLACED IN EQUAL OR BETTER CONDITION TO THE SATISFACTION OF THE CITY. CONTRACTOR IS RESPONSIBLE FOR COORDINATING TEMPORARY SERVICE WITH U.S.P.S.



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#### ITEM 203 - EXCAVATION & EMBANKMENT-AS PER PLAN:

THE ENGINEER DETERMINED QUANTITIES ARE AS FOLLOWS

ITEM 203 - EXCAVATION AS PER PLAN 194,850 CU YD ITEM 203 - EMBANKMENT AS PER PLAN 194,436 CU YD

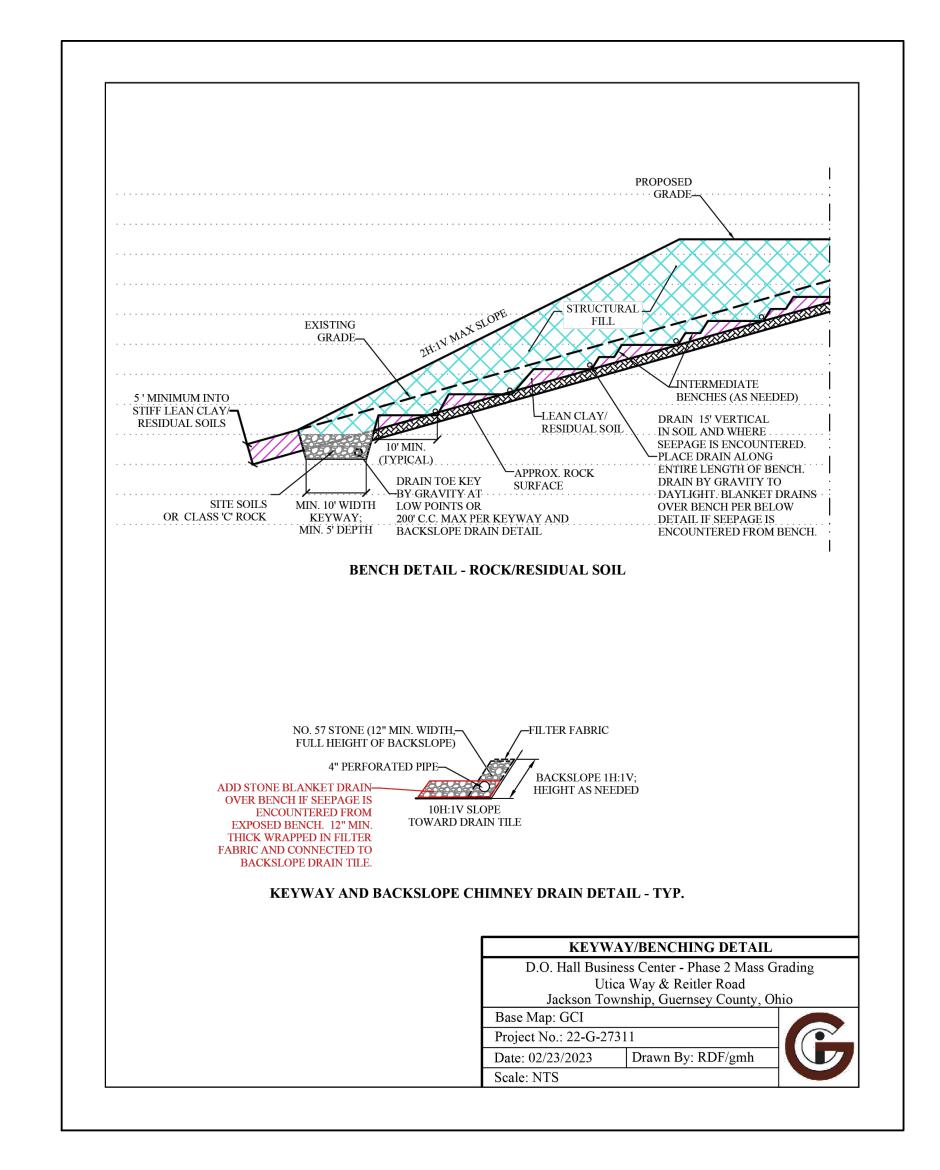
THE CONTRACTOR SHALL DETERMINE HIS OWN QUANTITIES TO BE USED FOR THE LUMP SUM LINE ITEM BIDS SUBMITTED FOR EXCAVATION AND EMBANKMENT. NO ADDITIONAL PAYMENT BEYOND THE SUBMITTED BID WILL BE GRANTED FOR DISCREPANCIES BETWEEN THE ENGINEERS CUT/FILL VERSUS THE CONTRACTOR CALCULATED CUT/FILL.

CONTRACTOR SHALL CONSTRUCT ALL KEYWAYS AND BENCHES FOR FILL 5' AND OVER IN HEIGHT PER THE KEYWAY/BENCHING DETAIL SHOWN ON THIS SHEET. THE COST SHALL BE INCLUDED WITHIN THE COST FOR EXCAVATION.

CONTRACTOR SHALL UTILIZE THE GEOTECHNICAL REPORT "PHASE 2 MASS GRADING FOR D.O. HALL BUSINESS CENTER" DATED JAN. 23, 2023, FOR GUIDANCE AND PROCEDURE ON ALL EARTH MOVING OR RELATED ACTIVITIES.

CONTRACTOR SHALL COORDINATE WITH OWNER ON LOCATION FOR SOIL STOCKPILES. STOCKPILING OF SOIL SHALL BE INCLUDED WITHIN THE COST FOR EXCAVATION.

CAD FILE: A CAD FILE IS AVAILABLE UPON REQUEST AND FOLLOWING THE SUBMITTAL OF A RELEASE FORM TO VERDANTAS. CONTACT SAMUEL EPPLEY AT 740-224-0831 TO OBTAIN THIS RELEASE FORM AND CAD FILE.



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LINE NO.	ITEM	DESCRIPTION	QTY	UNIT
		ROADWAY		
1	201	CLEARING AND GRUBBING	1	LS
2	202	PAVEMENT REMOVED	477	SY
3	203	EXCAVATION	194850	CY
4	203	EMBANKMENT	194436	CY
5	204	SUBGRADE COMPACTION	6297	SY
6	254	1.25" PAVEMENT PLANING, ASPHALT CONCRETE	1199	SY
		EROSION CONTROL		
7	601	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER	2	CY
8	659	SEEDING AND MULCHING, CLASS 1	9125	SY
9	659	REPAIR SEEDING AND MULCHING	456	SY
10	659	WATER	49	MGAL
11	659	COMMERCIAL FERTILIZER	0.83	TON
12	659	LIME	1.89	ACRE
		DRAINAGE		
13	602	CONCRETE M ASONRY, AS PER PLAN	1.0	CY
14	605	4" BASE PIPE UNDERDRAIN	3910	FT
15	611	4" CONDUIT, TYPE C	30	FT
16	611	PRECAST REINFORCED CONCRETE OUTLET	2	EACH
17	611	12" CONDUIT, TYPE B	275	FT
18	611	CATCH BASIN, NO. 2-3	6	EACH
		PAVEMENT		
19	301	6" ASPHALT CONCRETE BASE, PG64-22	1050	CY
20	304	6" AGGREGATE BASE	1050	CY
21	407	TACK COAT @ 0.055 GAL/SY	347	GAL
22	407	TACK COAT @ 0.085 GAL/SY	102	GAL
23	441	1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	261	CY
24	441	1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	307	CY
25	617	9" COMPACTED AGGREGATE	289	CY

LINE NO.	ITEM	DESCRIPTION	QTY	UNIT
		SANITARY SEWER		
26	611	8" CONDUIT, TYPE B, PVC SDR 35	1744	FT
27	611	MANHOLE, NO. 1	10	EACH
		WATERWORKS		
28	638	12" W ATERMAIN PVC PIPE & FITTINGS, AWW A C900, DR 18	2246	FT
29	638	12" GATE VALVE WITH ACCESSORIES	4	EACH
30	638	FIRE HYDRANT, TYPE A	6	EACH
31	638	12"x12" TAPPING SLEEVE & VALVE	1	EACH
32	638	PLUG & THRUST BLOCK	1	EACH
		INCIDENTALS		
33	103	PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND	1	LUMP
34	623	CONSTRUCTION LAYOUT STAKES AND SURVEYING	1	LUMP
35	624	MOBILIZATION	1	LUMP
36	624	AS-BUILT SURVEY	1	LUMP
		ALTERNATE BID		
37	254	1.25" PAVEMENT PLANING, ASPHALT CONCRETE	2083	SY
38	407	TACK COAT @ 0.085 GAL/SY	178	GAL
39	441	1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	73	CY
		U		

PEOPLE FOCUSED FUTURE 1555 WEST MAIN STREET NEWARK, OH 43055-3939 TEL. 740.344.5451 FAX 614.360.0023

No. REVISION CHK'D BY DESIGNED BY:

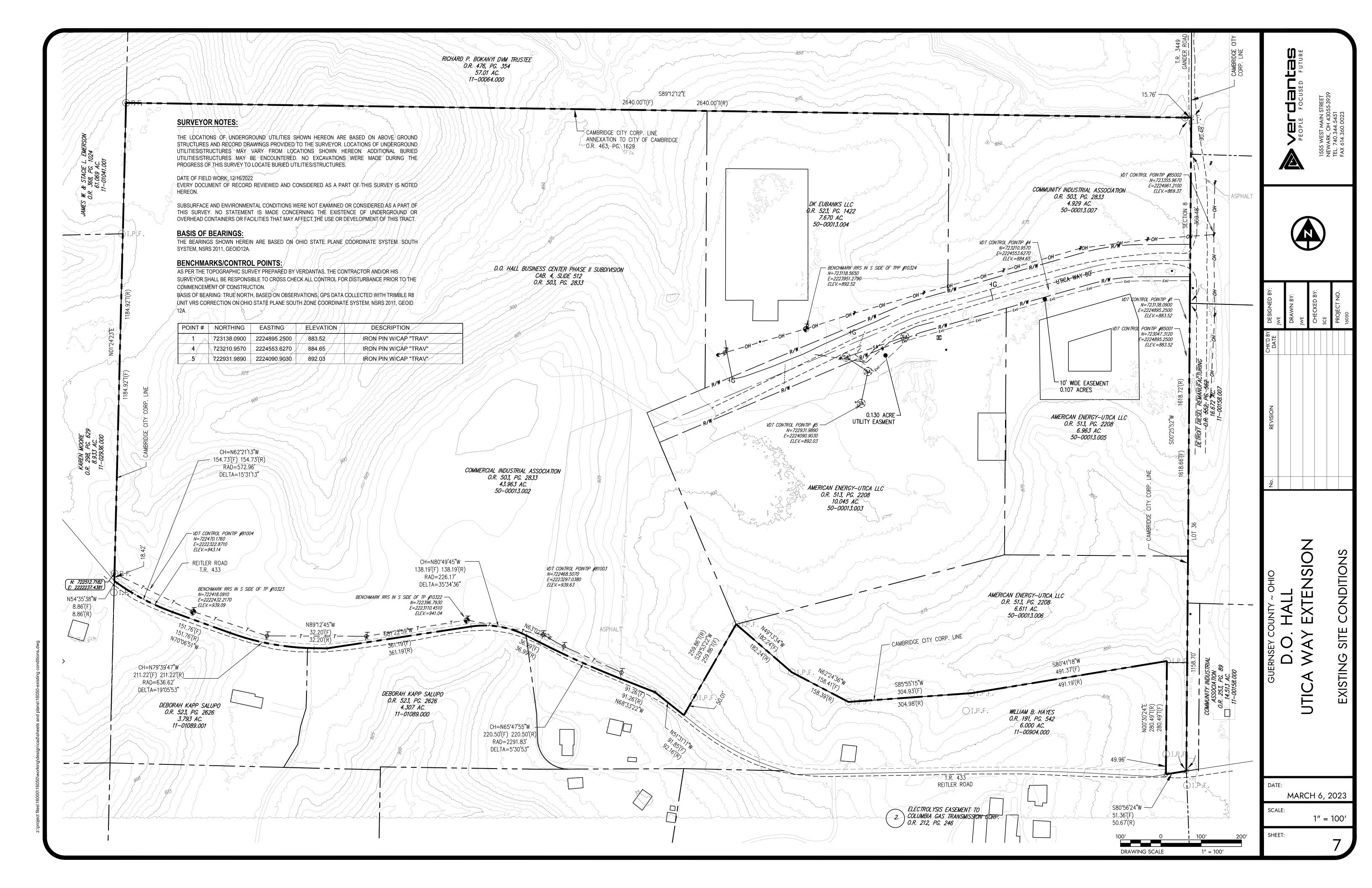
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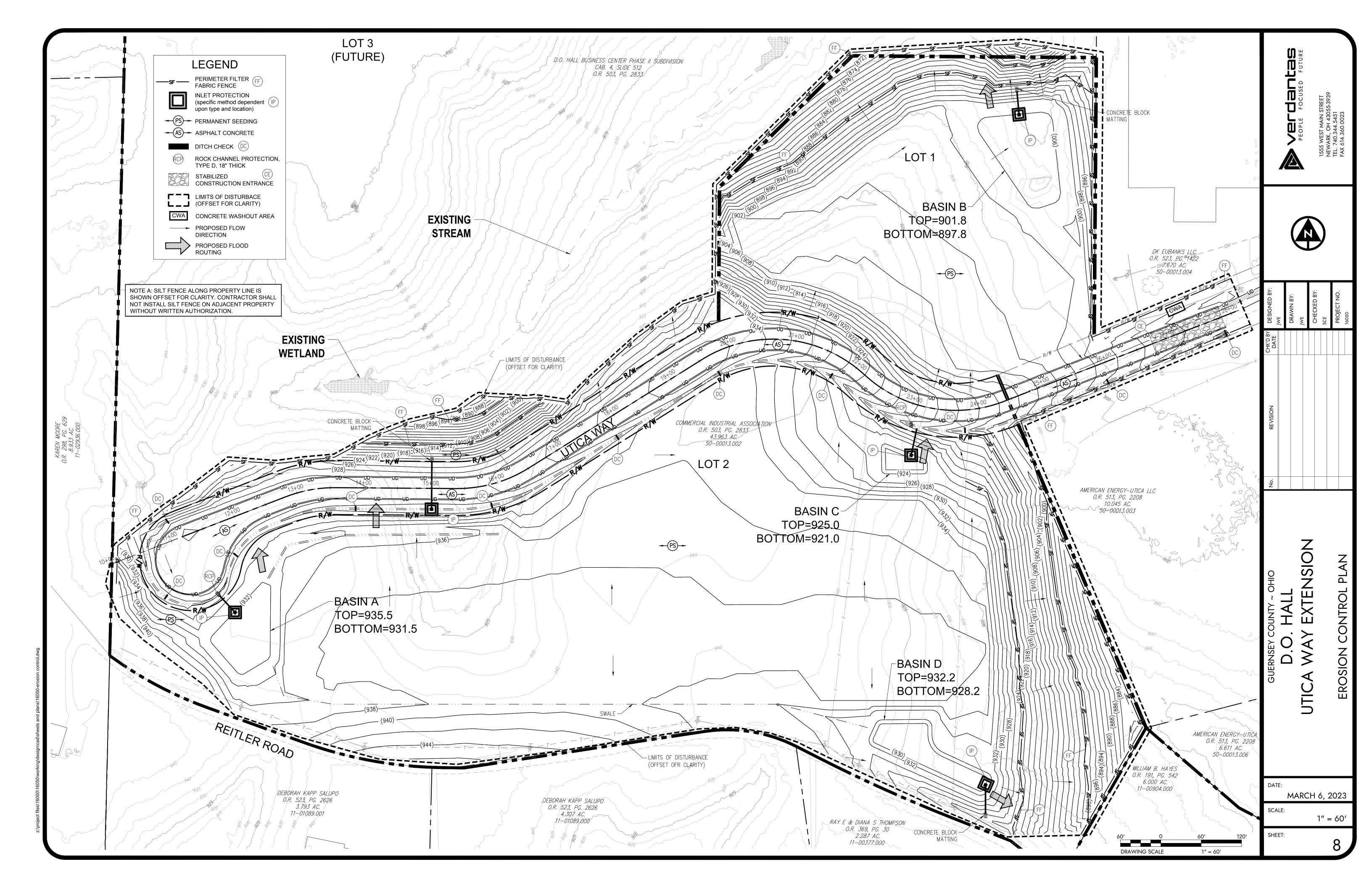
D.O. HALL CA WAY EXTENSIC

MARCH 6, 2023

SCALE:

SHEET:





PROPERTY OWNER: GUERNSEY COUNTY ENGINEER

62782 BENNETT AVE.

CAMBRIDGE, OH 43725 CITY OF CAMBRIDGE 1131 STEUBENVILLE AVENUE

CAMBRIDGE, OHIO 43725

CONTACT: SAMUEL EPPLEY

#### PROJECT DESCRIPTION:

THE PROPOSED 24 ACRE LOT IS PART OF THE DO HALL INDUSTRIAL PARK PROJECT. THIS PROJECT IS AN EXTENSION OF UTICA WAY APPROXIMATELY 1300 FT WEST OF THE INTERSECTION OF UTICA WAY AND GANDER ROAD. THE PROJECT INCLUDES RESURFACING OF 1100 FT OF ROADWAY AND CONSTRUCTION OF A 1700 FT ROADWAY WHICH WILL SERVE FUTURE INDUSTRIAL BUILDINGS.

#### RECEIVING STREAM:

THE SITE DRAINS TO THE NORTH INTO AN UNNAMED STREAM.

#### **ADJACENT AREAS:**

THE SITE IS BORDERED TO THE NORTH AND WEST BY WOODS, TO THE SOUTH BY RESIDENTIAL AREAS, AND TO THE EAST BY INDUSTRIAL MANUFACTURING BUILDINGS.

#### PROJECT DATA:

DOLO I DATA.	
PRE-CONSTRUCTION IMPERVIOUS AREA	0.42 AC.
POST CONSTRUCTION IMPERVIOUS AREA	1.62 AC.
PRE-CONSTRUCTION RUNOFF COEFFICIENT	52
POST CONSTRUCTION RUNOFF COEFFICIENT	64
NOTICE OF INTENT EARTH DISTURBED AREA	23.91 AC.

#### **SOILS:** THE FOLLOWING SOILS ARE PRESENT ONSITE:

AbC2 - AARON-UPSHUR COMPLEX, 8 TO 15 PERCENT SLOPES, ERODED BeF - BERKS CHANNERY SLIT LOAM, 35 TO 70 PERCENT SLOPES

Bhs4F - BETHESDA CHANNERY SLIT LOAM, 25 TO 70 PERCENT SLOPES, UNRECLAIMED GdD - GILPIN SILT LOAM, 15 TO 25 PERCENT SLOPES LWE - LOWELL-WESTMORELAND SILT LOAMS, 25 TO 35 PERCENT SLOPES

WmD - WESTMORELAND SILT LOAM, 15 TO 25 PERCENT SLOPES WnF - WESTMORELAND-BERKS COMPLEX, 40 TO 70 PERCENT SLOPES

# **GRADING REQUIREMENTS:**

THE PORTION OF THE SITE BEING DEVELOPED WILL NEED TO BE STRIPPED AND THE EXISTING VEGETATION REMOVED AND DISPOSED OF. THE SITE WILL REQUIRE AREAS OF CUT AND FILL TO CONSTRUCT TO SUBGRADE AND WILL BE RELATIVELY FLAT.

#### **EROSION AND SEDIMENT CONTROL MEASURES:**

ZnB - ZANESVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES

EROSION AND SEDIMENT WILL BE CONTROLLED THROUGH THE USE OF THE DETENTION BASIN, INLET PROTECTION AT THE PROPOSED INLETS, TEMPORARY SEDIMENT CONTROL STRUCTURES. AND PERIMETER FILTER FABRIC FENCE.

# PERMANENT STABILIZATION:

THE SITE WILL BE STABILIZED BY THE USE OF SEEDING OR SODDING.

# MAINTENANCE:

ALL EROSION CONTROL DEVICES ARE TO BE INSPECTED BY THE CONSTRUCTION SUPERINTENDENT DAILY AND AFTER SIGNIFICANT RAINFALLS. ANY DAMAGED FACILITIES ARE TO BE REPLACED / REPAIRED IMMEDIATELY AS MAY BE NECESSARY

# **CONSTRUCTION SEQUENCE:**

- 1. ESTABLISH THE DESIGNATED CONSTRUCTION ENTRANCE.
- 2. INSTALL PERIMETER FILTER FABRIC FENCE.
- 3. INSTALL DETENTION POND AND THE PERMANENT OUTLET STRUCTURE, WITH SKIMMER. USE TEMPORARY DIVERSIONS TO ROUTE STORM WATER RUNOFF TO THE BASINS DURING CLEARING AND GRADING.
- 4. INSTALL THE STORM WATER OUTLET PIPES AND STRUCTURES.
- 5. REMOVE THE EXISTING VEGETATION FROM THE REMAINDER OF THE SITE AND
- STRIP AND STOCKPILE THE TOPSOIL. 6. MASS GRADE THE SITE AS NECESSARY TO FORM THE BUILDING PADS, ROADWAYS,
- CONSTRUCT THE ROAD.
- 8. FINE-GRADE AREAS AS NEEDED
- 9. STABILIZE ANY REMAINING DISTURBED AREAS.
- 10. WHEN PERMANENT VEGETATION AND OTHER BMP'S ARE ESTABLISHED, REMOVE SKIMMER & SEDIMENT FROM THE SEDIMENT BASINS. SEED BASINS AND INSTALL PERMANENT CONTROL.

# **SCHEDULE:**

THE CONTRACTOR SHALL PROVIDE A SCHEDULE OF OPERATIONS TO THE OWNER. SEDIMENTATION AND EROSION CONTROL FEATURES SHALL BE PLACED IN ACCORDANCE WITH THIS SCHEDULE.

# **OEPA NPDES PERMIT NUMBER:**

NOT YET APPLIED FOR

**TEMPORARY SEEDING** 

(Rainwater and Land Development rev.11-06-14)

STRUCTURAL EROSION AND SEDIMENT

CONTROL PRACTICES SUCH AS

DIVERSIONS AND SEDIMENT TRAPS SHALL

BE INSTALLED AND STABILIZED WITH

TEMPORARY SEEDING PRIOR TO GRADING

TEMPORARY SEED SHALL BE APPLIED

BETWEEN CONSTRUCTION OPERATIONS

ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 15 DAYS OR GREATER.

THESE IDLE AREAS SHALL BE SEEDED

THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF

ESTABLISHING VEGETATION. TEMPORARY

SEEDING SHOULD NOT BE POSTPONED IF

IDEAL SEEDBED PREPARATION IS NOT

VEGETATION SEEDING RATES SHALL ESTABLISH ADEQUATE STANDS OF

VEGETATION, WHICH MAY REQUIRE THE

USE OF SOIL AMENDMENTS. BASE RATES

FOR LIME AND FERTILIZER SHALL BE USED.

SEEDING METHOD—SEED SHALL BE

APPLIED UNIFORMLY WITH A CYCLONE

SPREADER, DRILL, CULTIPACKER SEEDER,

OR HYDROSEEDER. WHEN FEASIBLE, SEED

THAT HAS BEEN BROADCAST SHALL BE

COVERED BY RAKING OR DRAGGING AND

THEN LIGHTLY TAMPED INTO PLACE USING

A ROLLER OR CULTIPACKER. IF

HYDROSEEDING IS USED, THE SEED AND

FERTILIZER WILL BE MIXED ON-SITE AND

THE SEEDING SHALL BE DONE

AND

WITHOUT

AMENDMENTS—TEMPORARY

WITHIN 7 DAYS AFTER GRADING.

POSSIBLE.

IMMEDIATELY

INTERRUPTION.

THE REST OF THE CONSTRUCTION SITE.

				(1)
SEEDING DATES	SPECIES	Lb. / 1000 ft2	Lb / Acre	1
March 1	Oats	3	128 (4 bushel)	
to	Tall Fescue	1	40	
August 15	Annual Ryegrass	1	40	
	Perennial Ryegrass	1	40	2
	Tall Fescue	1	40	
	Annual Ryegrass	1	40	
	Annual Ryegrass	1.25	55	
	Perennial Ryegrass	3.25	142	
	Creeping Red Fescue	0.4	17	3
	Kentucky Bluegrass	0.4	17	
	Oats	3	128 (3 bushel)	
	Tall Fescue	1	40	
	Annual ryegrass	1	40	
August 16	Rye	3	112 (2 bushel)	4
to	Tall Fescue	1	40	
November	Annual Ryegrass	1	40	
	Wheat	3	120 (2 bushel)	
0	Tall Fescue	1	40	
	Annual Ryegrass	1	40	5
	Perennial Rye	1	40	·
	Tall Fescue	1	40	
	Annual Ryegrass	1	40	
	Annual Ryegrass	1.25	40	
	Perennial Ryegrass	3.25	40	
	Creeping Red Fescue	0.4	40	
	Kentucky Bluegrass	0.4	40	
November 1	Use mulch only or dorm	nant se	eeding.	

NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.

# MULCHING TEMPORARY SEEDING

APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH, WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES ON FAVORABLE, VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION.

- STRAW—IF STRAW IS USED, IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 LBS./ 1,000 SQ. FT. (2-3 BALES)
- HYDROSEEDERS—IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2000 LBS./ AC. OR 46 LB./ 1,000-SQ.-FT.
- OTHER-OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TON/ AC.
- 3. STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. ANCHORING METHODS:
- MECHANICAL—A DISK, CRIMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT LEFT TO A LENGTH OF APPROXIMATELY 6 INCHES.
- MULCH NETTING-NETTING SHALL BE USED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES.
- SYNTHETIC BINDERS—SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TRACK OR EQUIVALENT MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.
- WOOD-CELLULOSE FIBER-WOOD-CELLULOSE FIBER BINDER SHALL BE APPLIED AT A NET DRY WT. OF 750 LB./AC. THE WOOD-CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LB. / 100 GAL.

TEMPORARY S	STABILIZATION
AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE	WITHIN TWO (2) DAYS OF THE MOST RECENT DISTURBANCE IF THAT AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN ONE YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE	WITHIN SEVEN (7) DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA FOR RESIDENTIAL SUBDIVISION, DISTURBED AREAS MUST BE STABILIZED AT LEAST SEVEN (7) DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR THE INDIVIDUAL LOT(S).
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER	PRIOR TO THE ONSET OF WINTER WEATHER

PERMANENT S	STABILIZATION
AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREAS THAT WILL LIE DORMANT FOR ONE (1) OR MORE YEARS	WITHIN SEVEN (7) DAYS OF THE MOST RECENT DISTURBANCE
ANY AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND AT FINAL GRADE	WITHIN TWO (2) DAYS OF REACHING FINAL GRADE
ANY OTHER AREAS AT FINAL GRADE	WITHIN SEVEN (7) DAYS OF REACHING FINAL GRADE IN THAT AREA

WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED. PERMANENT AND TEMPORARY STABILIZATION ARE DEFINED IN PART VII.

# PERMANENT SEEDING

	Seeding	, Rate	Notes:		
Seed Mix	Lbs Ac	Lbs. 1,000 Sq.Ft.	NOTES:		
Gener	ral Use				
Creeping Red Fescue	20-40	1/2 -1	For close mowing &		
Perennial Ryegrass	10-20	$\frac{1}{4} - \frac{1}{2}$	waterways w/ <2 ft/sec		
Kentucky Bluegrass	20-40	1/2 - 1	~2 10300		
Tall Fescue	40-50	1 - 1 <del>1</del>			
Turf-type (dwarf) Fescue	90	2 <del>1</del>			
Steep Banks	or Cut Slo	pes			
Tall Fescue	40-50	1 - 1 <del>1</del>			
Crown Vetch	10-20	$\frac{1}{4} - \frac{1}{2}$	Do not seed later than		
Tall Fescue	20-30	$\frac{1}{2} - \frac{3}{4}$	August		
Flat Pea	20-25	$\frac{1}{2} - \frac{3}{4}$	Do not seed later than		
Tall Fescue	20-30	$\frac{1}{2} - \frac{3}{4}$	August		
Road Ditche	s and Swa	ales			
Tall Fescue	40-50	1 - 1 <u>1</u>			
Turf-type (dwarf) Fescue	90	2 <u>1</u>			
Kentucky Bluegrass	5	0.1			
Lav	vns	, ,			
Kentucky Bluegrass Perennial Ryegrass	100-120	2			
Kentucky Bluegrass	100-120	1 <sup>1</sup> / <sub>2</sub> -2	For shaded areas.		
Consider Dad Consider	1	1			

Creeping Red Fescue NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.

#### (Rainwater and Land Development rev.11-06-14)

SITI	E PREPARATION
	IMPLEMENT SHALL BE USED TO
	REDUCE SOIL COMPACTION AND
	ALLOW MAXIMUM INFILTRATION.
	(MAXIMIZING INFILTRATION WILL
	HELP CONTROL BOTH RUNOFF
	RATE AND WATER QUALITY.)
	SUBSOILING SHOULD BE DONE
	WHEN THE SOIL MOISTURE IS LOW
	ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING
	SHALL NOT BE DONE ON
	SLIP-PRONE AREAS WHERE SOIL
	PREPARATION SHOULD BE LIMITED
	TO WHAT IS NECESSARY FOR
	ESTABLISHING VEGETATION.
2.	THE SITE SHALL BE GRADED AS
	NEEDED TO PERMIT THE USE OF
	CONVENTIONAL EQUIPMENT FOR
	SEEDBED PREPARATION AND
	SEEDING.
3.	TOPSOIL SHALL BE APPLIED WHERE
	NEEDED TO COTABLIQUE

NEEDED TO ESTABLISH VEGETATION.

EDBED PREPARATION

LIME—AGRICULTURAL GROUND LIMESTONE SHALL BE APPLIED TO ACID SOIL AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST. LIME SHALL BE APPLIED AT THE RATE OF 100 POUNDS PER 1,000-SQ.

FT. OR 2 TONS PER ACRE. FERTILIZER—FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY A SOIL TEST. IN PLACE OF A SOIL TEST, FERTILIZER SHALL BE APPLIED AT A RATE OF 25 POUNDS PER 1,000-SQ. FT. OR 1000 POUNDS PER ACRE OF A 10-10-10 OR 12-12-12 ANALYSES.

3. THE LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING-TOOTH HARROW, OR OTHER SUITABLE FIELD IMPLEMENT TO A DEPTH OF 3 INCHES. ON

# SEEDING DATES AND SOIL CONDITIONS

SLOPING LAND, THE SOIL SHALL BE WORKED ON THE CONTOUR.

SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THE ABOVE SPECIFIED DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHOULD BE DONE WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. FOR WINTER SEEDING, SEE THE FOLLOWING SECTION ON DORMANT SEEDING.

# DORMANT SEEDINGS

- 1. SEEDINGS SHOULD NOT BE MADE FROM OCTOBER 1 THROUGH NOVEMBER 20. DURING THIS PERIOD, THE SEEDS ARE LIKELY TO GERMINATE BUT PROBABLY WILL NOT BE ABLE TO SURVIVE THE WINTER.
- 2. THE FOLLOWING METHODS MAY BE USED FOR "DORMANT SEEDING"
- FROM OCTOBER 1 THROUGH NOVEMBER 20, PREPARE THE SEEDBED, ADD THE REQUIRED AMOUNTS OF LIME AND FERTILIZER, THEN MULCH AND ANCHOR. AFTER NOVEMBER 20, AND BEFORE MARCH 15, BROADCAST THE SELECTED SEED MIXTURE. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
- FROM NOVEMBER 20 THROUGH MARCH 15, WHEN SOIL CONDITIONS PERMIT, PREPARE THE SEEDBED, LIME AND FERTILIZE, APPLY THE SELECTED SEED MIXTURE, MULCH AND ANCHOR. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
- APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRO-SEEDER (SLURRY MAY INCLUDE SEED AND FERTILIZER) ON A FIRM, MOIST SEEDBED. • WHERE FEASIBLE, EXCEPT WHEN A CULTIPACKER TYPE SEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTIPACKER, ROLLER, OR LIGHT DRAG. ON SLOPING LAND, SEEDING OPERATIONS SHOULD BE ON THE CONTOUR WHERE FEASIBLE.

# MULCHING

- 1. MULCH AND OTHER APPROPRIATE VEGETATIVE PRACTICES SHALL BE APPLIED TO DISTURBED AREAS WITHIN 7 DAYS OF GRADING IF THE AREA IS TO REMAIN DORMANT (UNDISTURBED) FOR MORE THAN 15 DAYS OR ON AREAS AND PORTIONS OF THE SITE WHICH CAN BE BROUGHT TO FINAL GRADE.
- MATERIALS
- STRAW-IF STRAW IS USED IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT THE RATE OF 2 TONS PER ACRE OR 90 POUNDS (TWO TO THREE BALES) PER 1,000-SQ. FT. THE MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY APPLIED SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000-SQ.-FT. SECTIONS AND SPREAD TWO 45-LB. BALES OF STRAW IN EACH
- HYDROSEEDERS—IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE APPLIED AT 2,000 LB./AC. OR 46 LB./1,000 SQ. FT.
- OTHER-OTHER ACCEPTABLE MULCHES INCLUDE ROLLED EROSION CONTROL MATTINGS OR BLANKETS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS PER ACRE.
- 3. STRAW AND MULCH ANCHORING METHODS
- STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. • MECHANICAL-A DISK, CRIMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL
- NOT BE FINELY CHOPPED BUT, GENERALLY, BE LEFT LONGER THAN 6 INCHES. • MULCH NETTING-NETTING SHALL BE USED ACCORDING TO THE MANUFACTURER'S
- RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES. • ASPHALT EMULSION—ASPHALT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURE
- OR AT THE RATE OF 160 GALLONS PER ACRE. • SYNTHETIC BINDERS—SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUIVALENT MAY BE USED AT RATES SPECIFIED BY THE
- MANUFACTURER. • WOOD CELLULOSE FIBER-WOOD CELLULOSE FIBER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER WITH THE MIXTURE CONTAINING A MAXIMUM OF 50 POUNDS CELLULOSE PER 100 GALLONS OF WATER.

#### IRRIGATION

PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY WEATHER OR ON ADVERSE SITE CONDITIONS, WHICH REQUIRE ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH.

IRRIGATION RATES SHALL BE MONITORED TO PREVENT EROSION AND DAMAGE TO SEEDED AREAS FROM EXCESSIVE RUNOFF.

#### SOIL AND EROSION CONTROL GENERAL NOTES

THE CONTRACTOR SHALL BE DESIGNATED A CO-PERMITTEE TO THE GENERAL CONSTRUCTION STORM WATER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS UNDER THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OHIO EPA) GENERAL PERMIT.

THE CONTRACTOR SHALL FILE A CO-PERMITTEE FORM. INFORMATION ABOUT THE CO-PERMITTEE FORM CAN BE FOUND AT www.epa.state.oh.us/dsw/storm/stormform.html. THE CONTRACTOR SHALL FURNISH A COPY OF THE FORM SUBMITTED TO THE OHIO EPA TO THE PROJECT OWNER, OR OWNER'S REPRESENTATIVE, AND ZONING DEPARTMENT AT OR BEFORE THE PRE-CONSTRUCTION

ALL CONTRACTOR'S AND SUB-CONTRACTORS SHALL PROVIDE SIGNATURES TO THE OWNER ACKNOWLEDGING THAT THEY REVIEWED AND UNDERSTAND THE CONDITIONS AND RESPONSIBILITIES OF THE GENERAL PERMIT AND THE SOIL AND EROSION CONTROL PLAN. THESE SIGNATURES SHALL BE PROVIDED PRIOR TO COMMENCEMENT OF WORK ON THE CONSTRUCTION

EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO INITIAL DISTURBANCE ACTIVITIES. THE CONTRACTOR SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE OHIO EPA GENERAL PERMIT AND THE SOIL AND EROSION CONTROL PLAN DEVELOPED FOR THE PROJECT.

DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PROPER SOIL EROSION MEASURES FOR PROTECTION OF ALL ADJOINING ROADS, LANDS, AND STREAMS. REFER TO O.D.N.R. MANUAL "RAINWATER AND LAND DEVELOPMENT" AND ODOT "HANDBOOK FOR SEDIMENT AND EROSION CONTROL" FOR REQUIREMENTS.

ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PLACED PRIOR TO OR AS THE FIRST STEP IN GRADING. THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL AT ALL POINTS WHERE STORM WATER LEAVES THE LIMITS OF THE PROJECT, ALL POINTS WHERE STORM WATER ENTERS A STREAM THAT TRAVERSES THE PROJECT, AND ALL POINTS WHERE STORM WATER ENTERS PORTIONS OF COMPLETED UNDERGROUND PIPING.

#### SOIL AND EROSION CONTROL PLAN UPDATES

THE SOIL AND EROSION CONTROL PLAN IS A DYNAMIC PLAN BASED UPON SITE CONDITIONS AND THE CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND UPDATING THE SOIL AND EROSION CONTROL PLAN AS THE PROJECT PROCEEDS.

THE CONSTRUCTION BMP'S WITHIN THESE PLANS REPRESENT THE MINIMUM REQUIRED ONSITE. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ONSITE BMP'S AS THE PROJECT PROGRESSES AT NO ADDITIONAL COST OVER THE ITEMS BID.

# INSPECTION

THE CONTRACTOR SHALL PROVIDE A QUALIFIED INSPECTION PERSONNEL TO CONDUCT INSPECTIONS PER PART III.G.2 OF THE GENERAL PERMIT. RECORDS OF THESE INSPECTIONS SHALL BE KEPT AND MADE AVAILABLE TO THE OWNER, THE CITY OF CAMBRIDGE, THE OWNER'S REPRESENTATIVE, OR THE JURISDICTIONAL AGENCIES IF REQUESTED.

AT A MINIMUM, ALL CONTROLS ON THE SITE SHALL BE INSPECTED AT LEAST ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN ONE-HALF INCH OF RAIN PER 24 HOUR PERIOD. INSPECTION PERIODS MAY BE REDUCED PER PART III.G.2 OF THE GENERAL PERMIT.

# MAINTENANCE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIR OF ALL TEMPORARY AND PERMANENT CONTROL PRACTICES TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. SHOULD A STRUCTURE OR FEATURE BECOME DAMAGED, THE CONTRACTOR SHALL REPAIR OR REPLACE AT NO ADDITIONAL COST TO THE OWNER.

# TREE PRESERVATION

ANY AREA SHOWN IN THE CONSTRUCTION DRAWINGS OR ON THE STORM WATER POLLUTION PREVENTION PLAN AS A "TREE PRESERVATION" OR "TREE PROTECTION" AREA, THE CONTRACTOR SHALL ENCLOSE THE AREA WITH T-POSTS AND CONSTRUCTION FENCING.

0 S 

MARCH 6, 2023

SCALE:

SHEET:

2"x4" FRAME GEOTEXTILE OVER WIRE MESH BACKING

1. INLET PROTECTION SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR AROUND BEFORE THE INLET BECOMES FUNCTIONAL.

> 2. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH AT LEAST 18 INCHES.

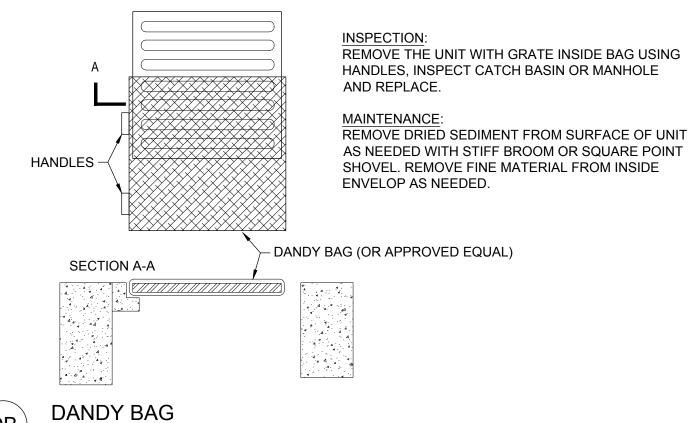
(Not to Scale)

- 3. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2-INCH BY 4-INCH CONSTRUCTION GRADE LUMBER. THE 2-INCH BY 4-INCH POSTS SHALL BE DRIVEN ONE (1) FT. INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2-INCH BY 4-INCH FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WILL POSE A SAFETY HAZARD TO TRAFFIC.
- 4. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME
- 5. GEOTEXTILE MATERIAL SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18 INCHES BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
- 6. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6-INCH LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.
- 7. A COMPACTED EARTH DIKE OR CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION. THE TOP OF THE DIKE SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.

# GEOTEXTILE INLET PROTECTION

FOR USE OUTSIDE OF PAVEMENT

(Rainwater and Land Development rev.6-24-09)



FOR USE IN PAVEMENT (Not to Scale)

70' MIN. (as required)

**PROFILE** 

GEOTEXTILE

PLAN

- EXISTING GROUND

- WATER BAR (RIGHT-OF-WAY

DIVERSION) AS NEEDED

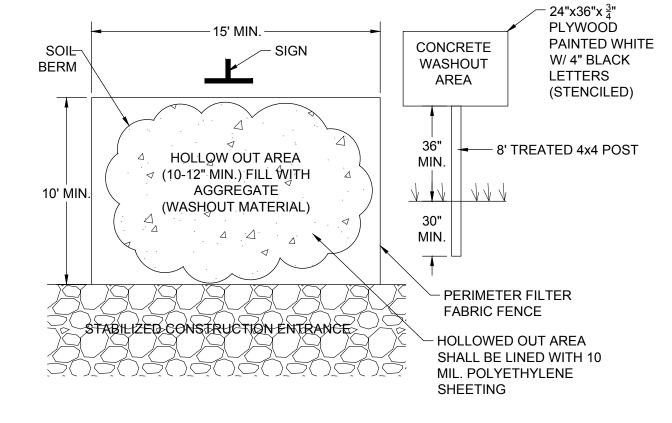
**EXISTING** PAVEMENT

- CULVERT

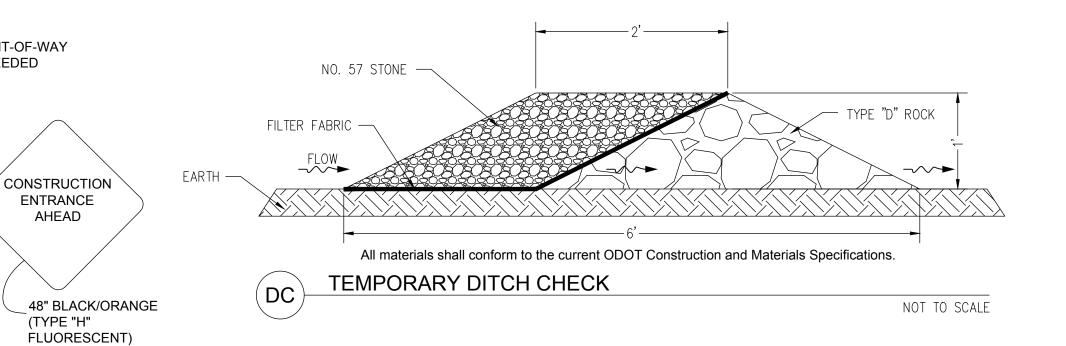
NEEDED

**EXISTING** 

PAVEMENT



**CONCRETE WASHOUT AREA** 



(Not to Scale)

DIRECTION 1. STONE SIZE - ODOT #2 (1.5-2.5 INCH) STONE SHALL BE USED, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.

- 2. LENGTH AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FT. 3. THICKNESS - NOT LESS THAN SIX (6) INCHES FOR LIGHT DUTY OR AT LEAST TEN (10) INCHES FOR
- 4. WIDTH FOURTEEN (14) FEET MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- 5. GEOTEXTILE LAID OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMETRIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:

MIN. TENSILE STRENGTH = 200 LBS. MIN. TEAR STRENGTH = 50 LBS. MIN. ELONGATION = 20%

MIN. PUNCTURE STRENGTH = 80 PSI MIN. BURST STRENGTH = 320 PSI EQUIVALENT OPENING SIZE = EOS < 0.6MM

AHEAD

INSTALLED 300' IN

ADVANCE OF

CONSTRUCTION

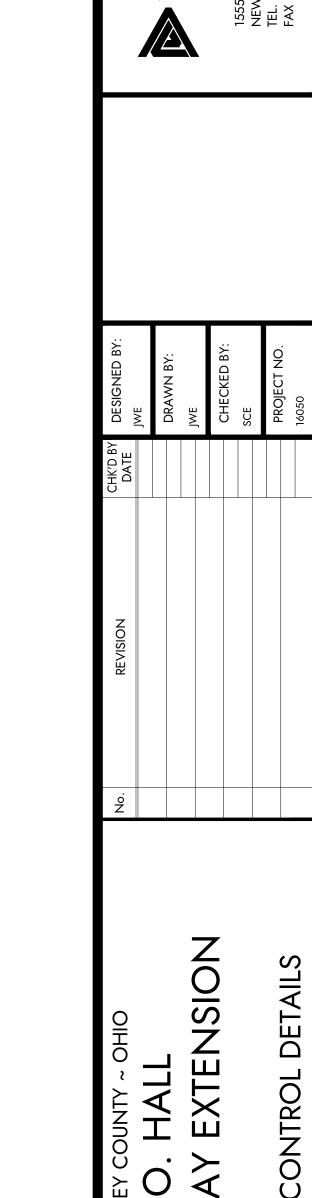
ENTRANCE, EACH

- PERMITTIVITY = 1X10-3 CM/SEC. 6. TIMING - THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
- 7. CULVERT A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
- 8. WATER BAR A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
- 9. MAINTENANCE TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
- 10.CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION-SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
- 11.REMOVAL THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.



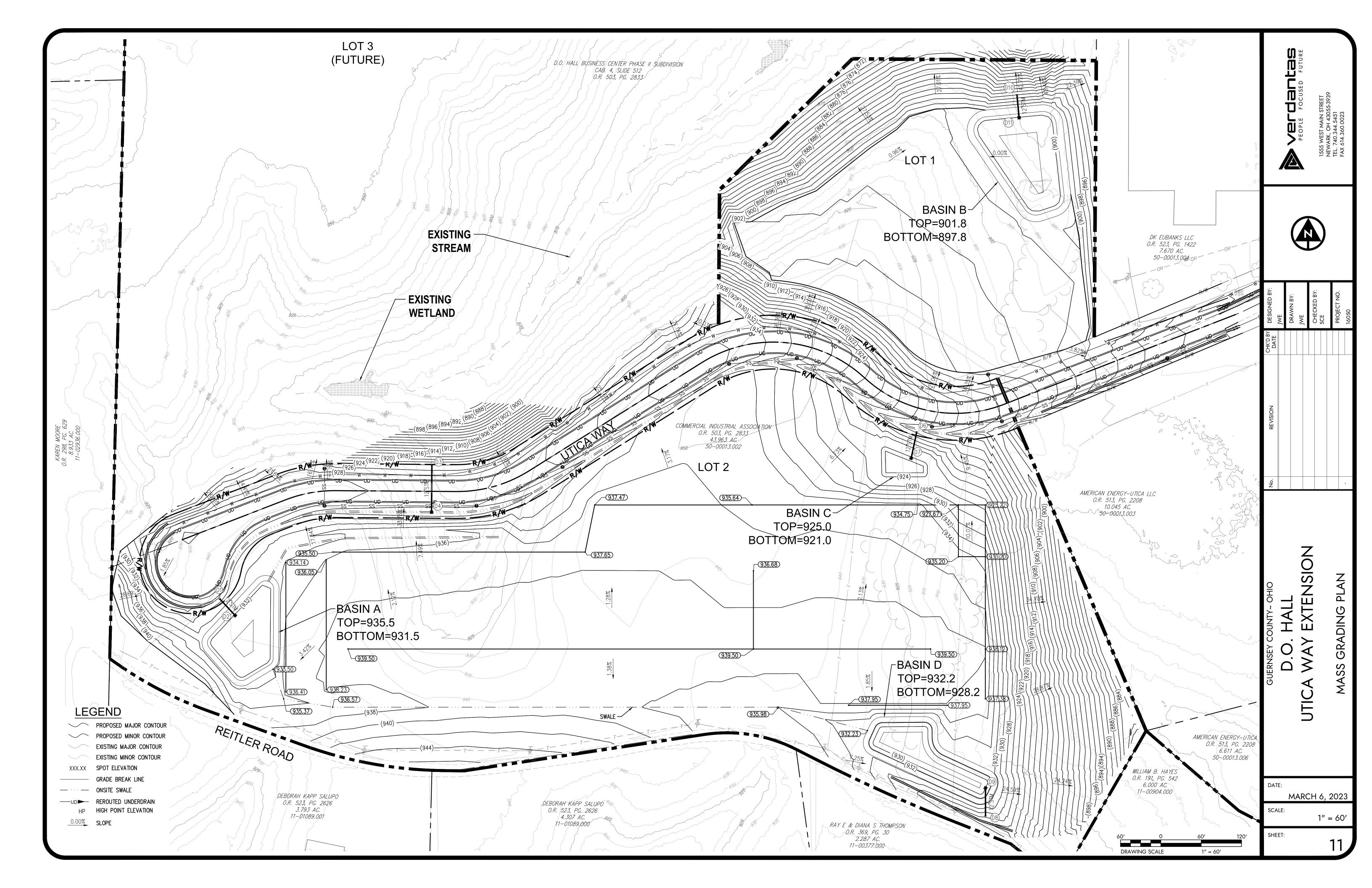
STABILIZED CONSTRUCTION ENTRANCE

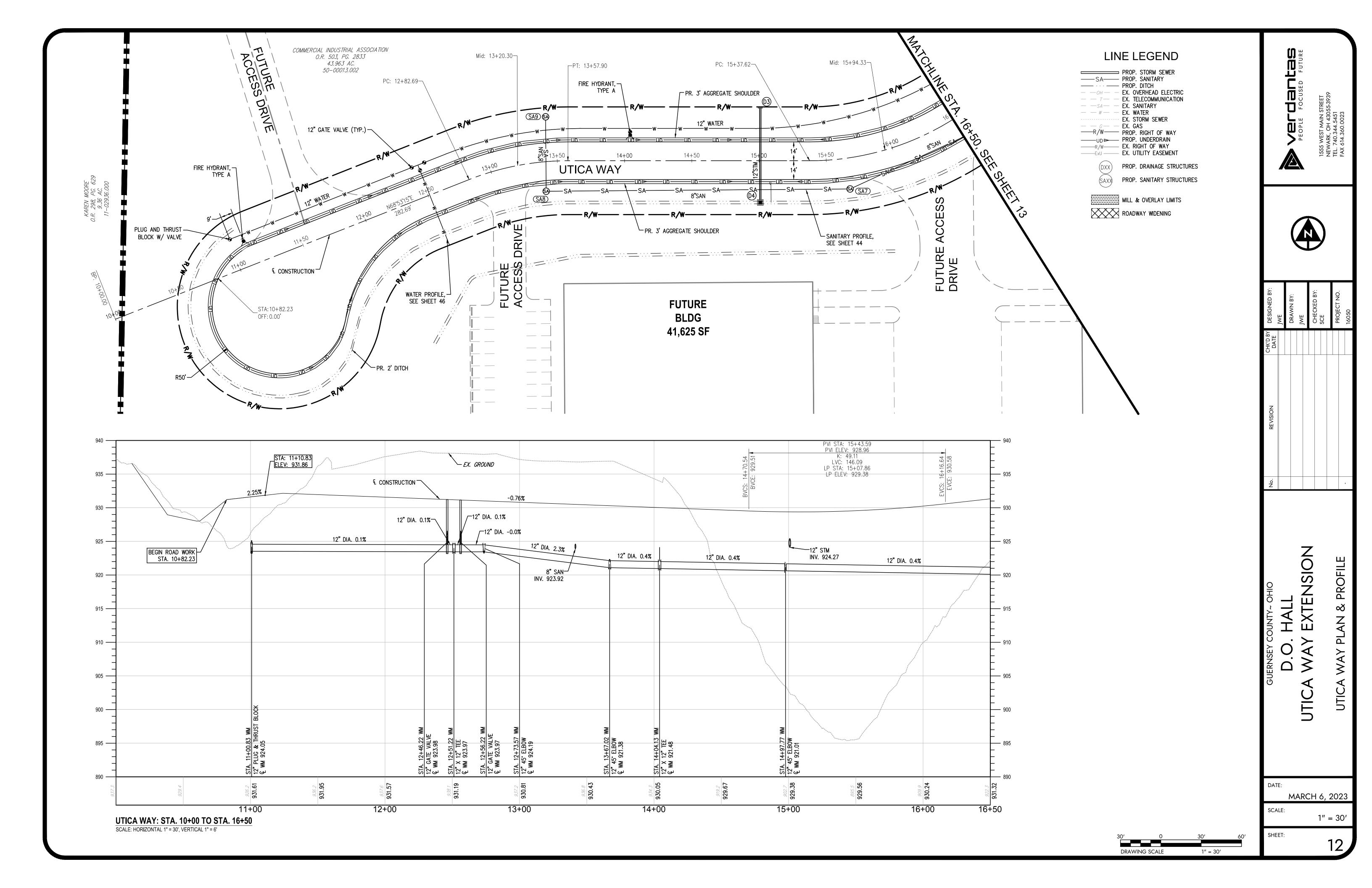
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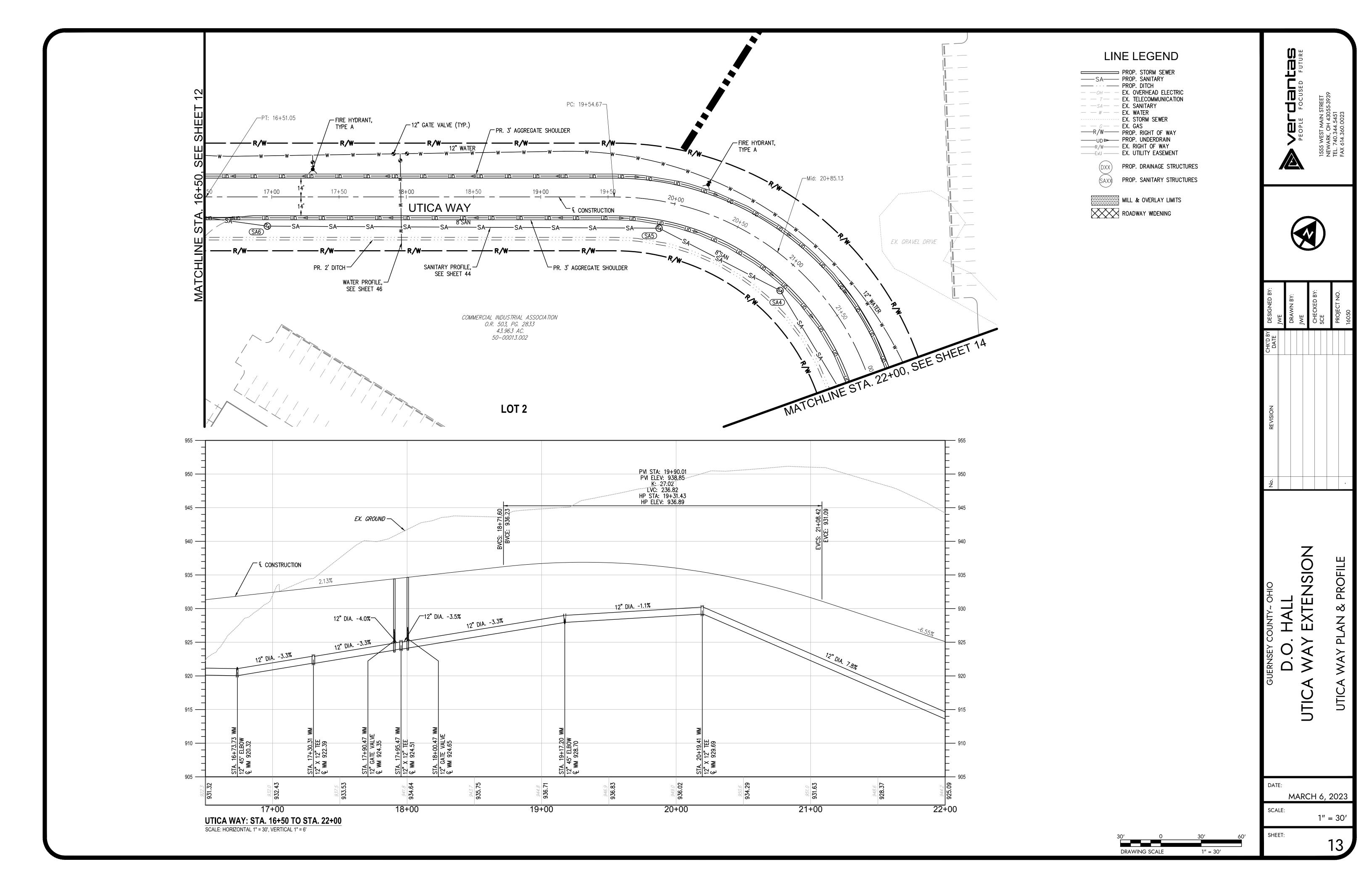


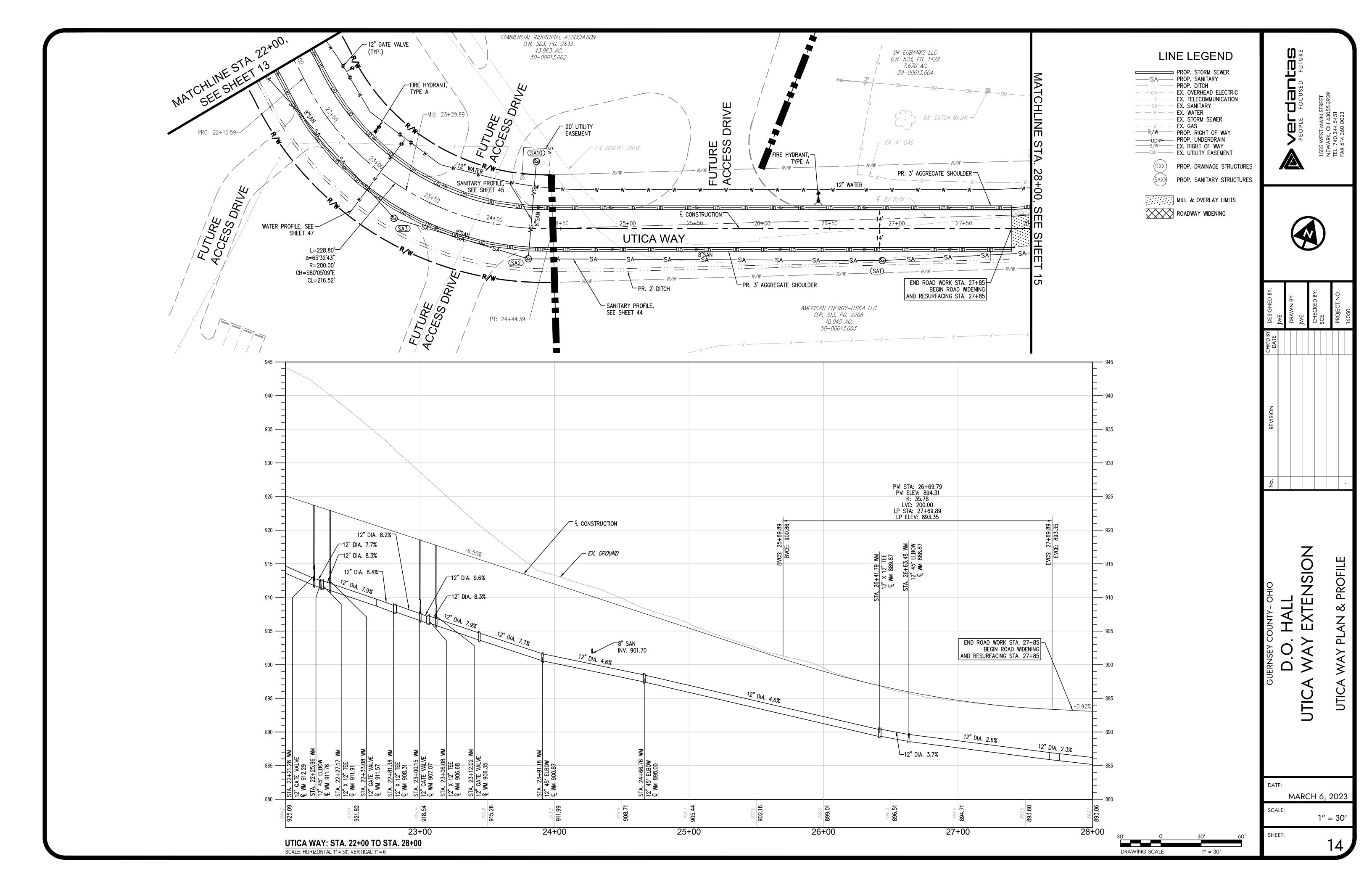
MARCH 6, 2023

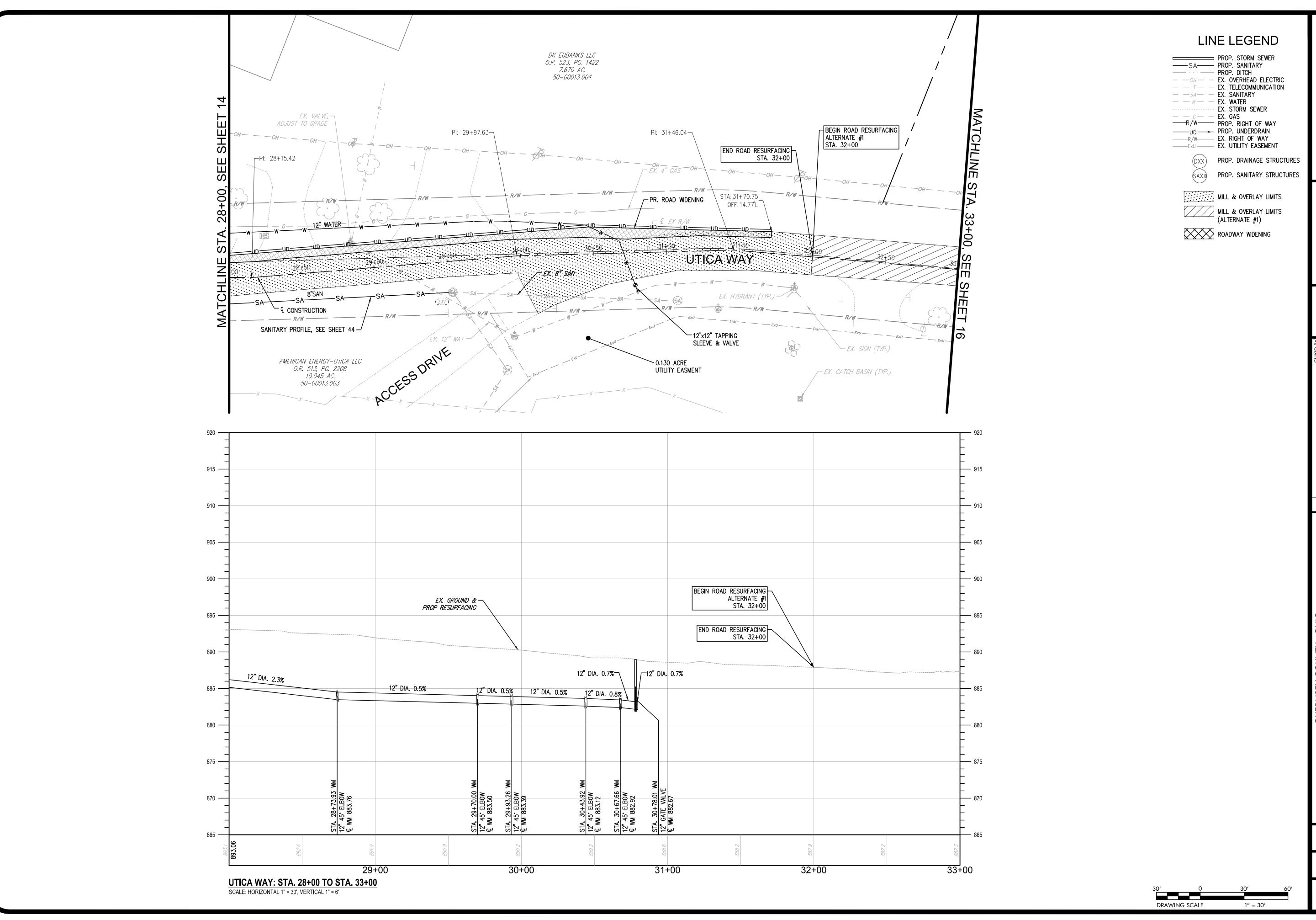
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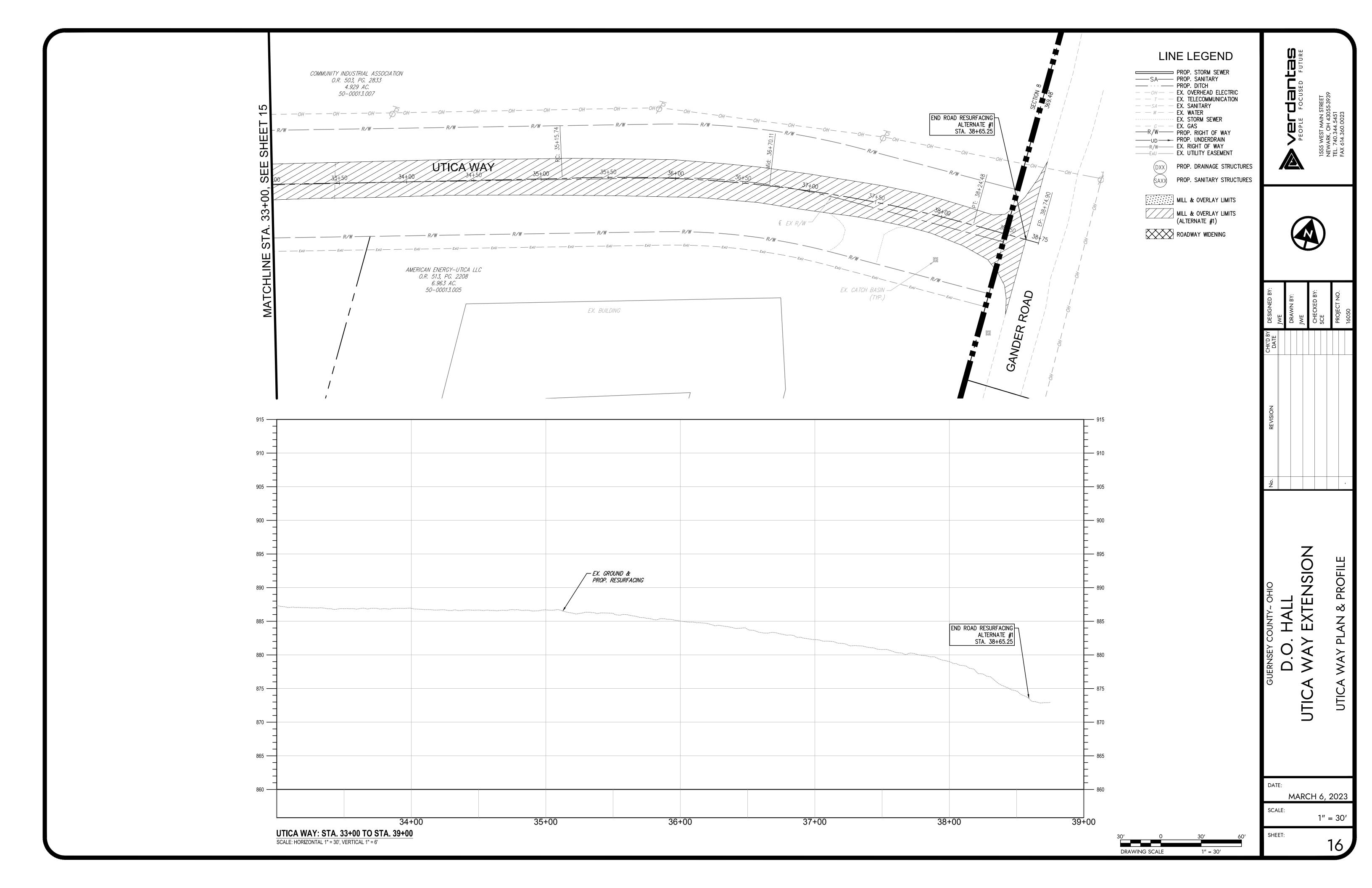


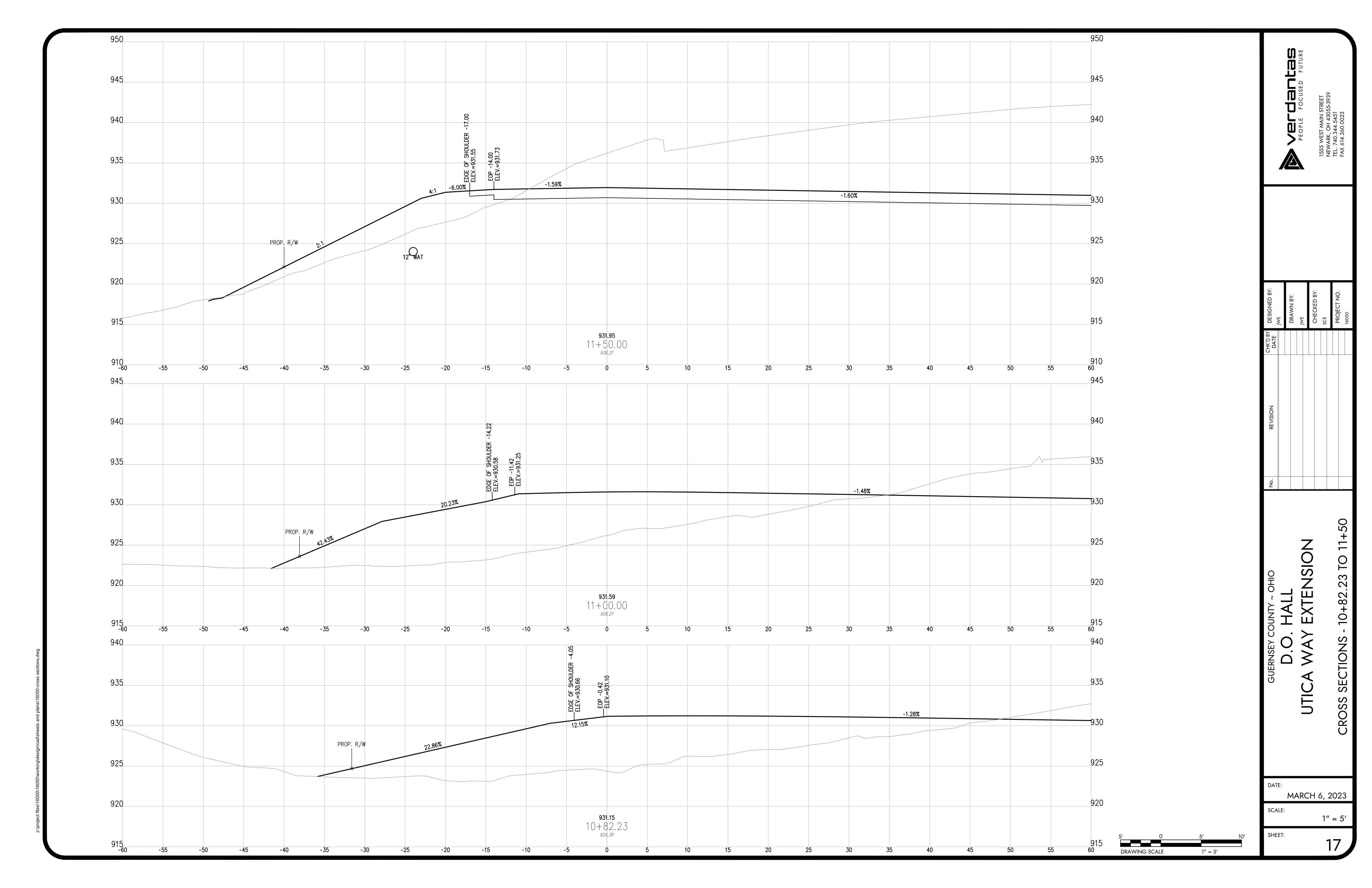


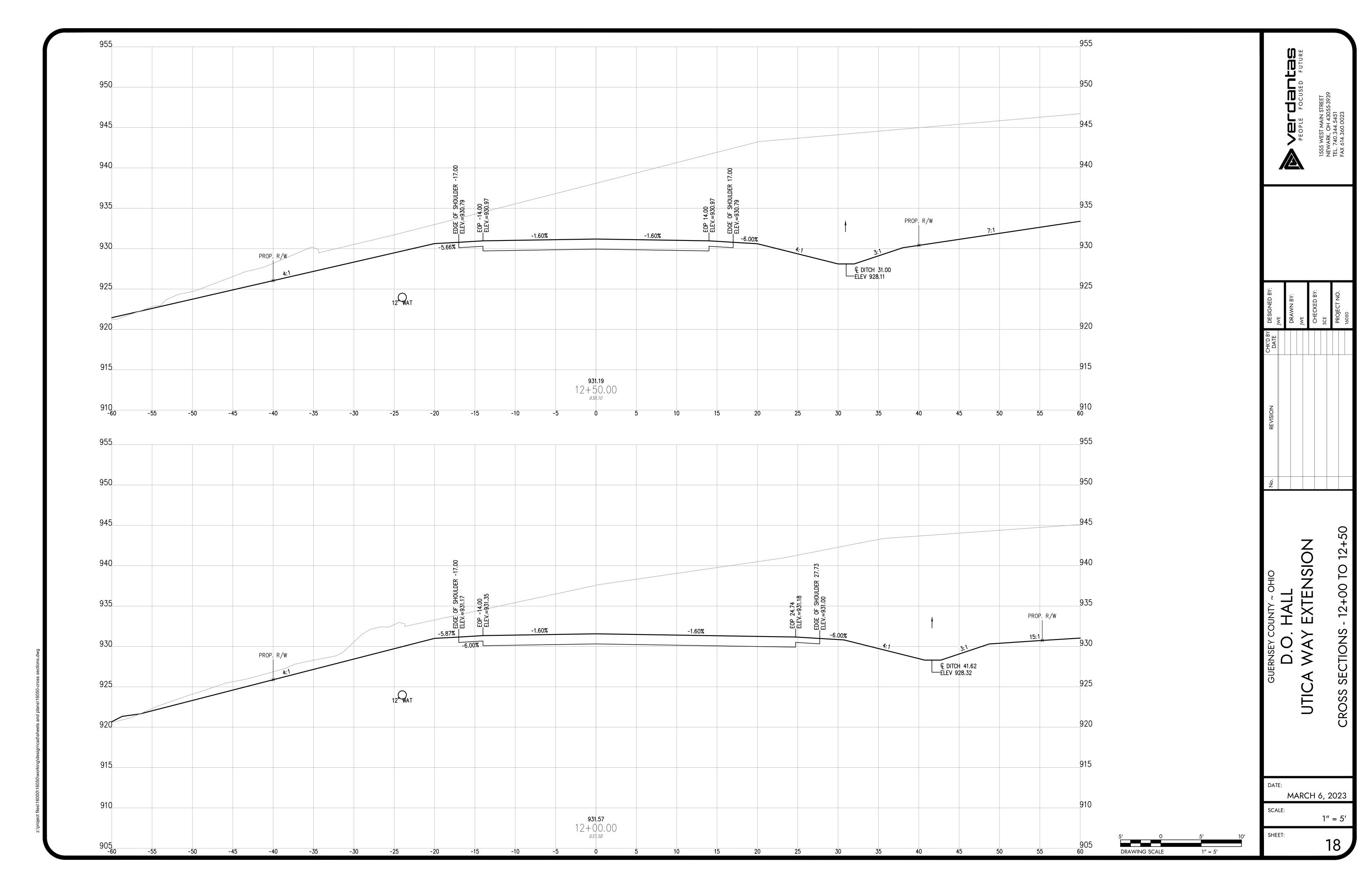
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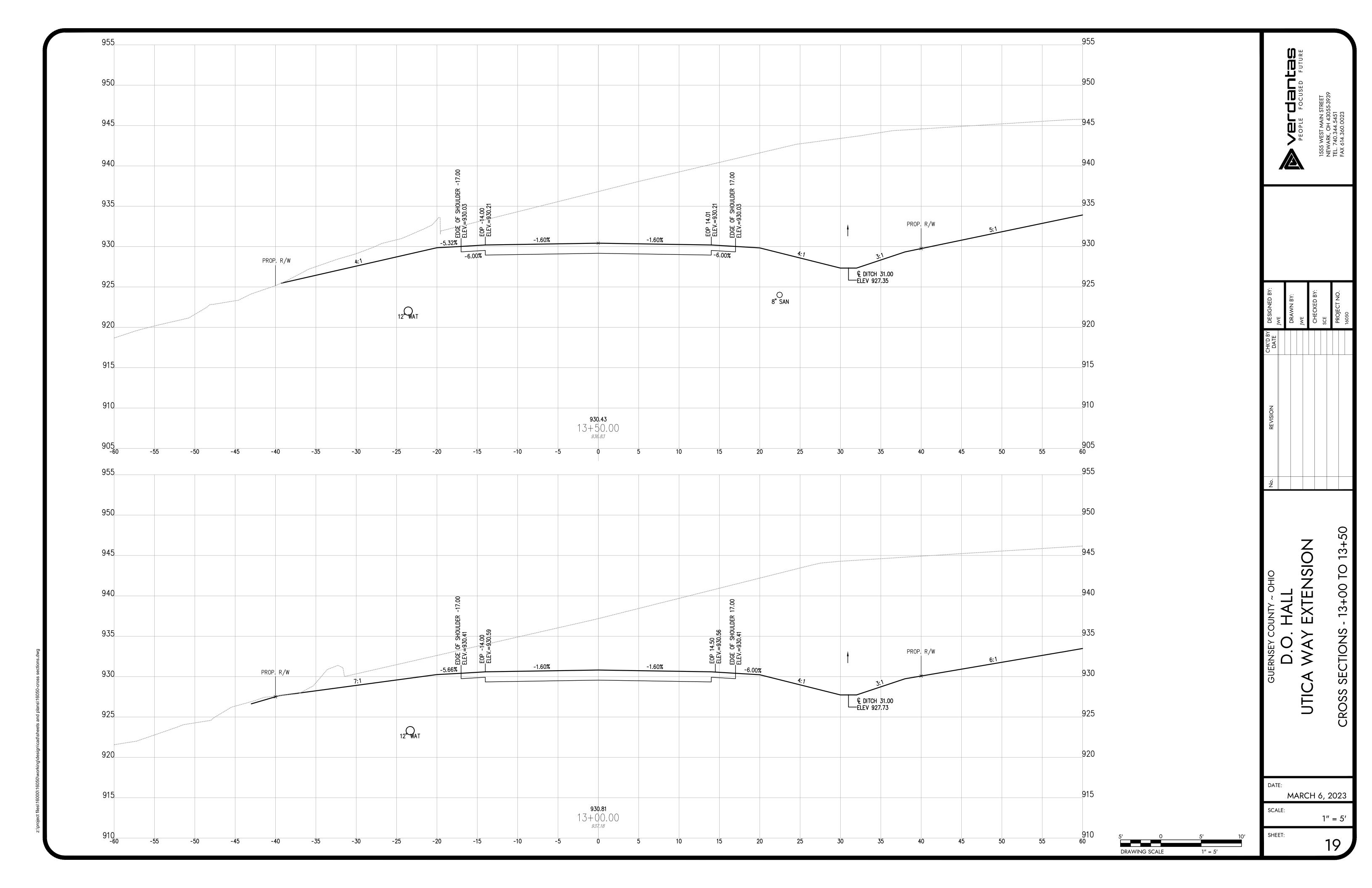
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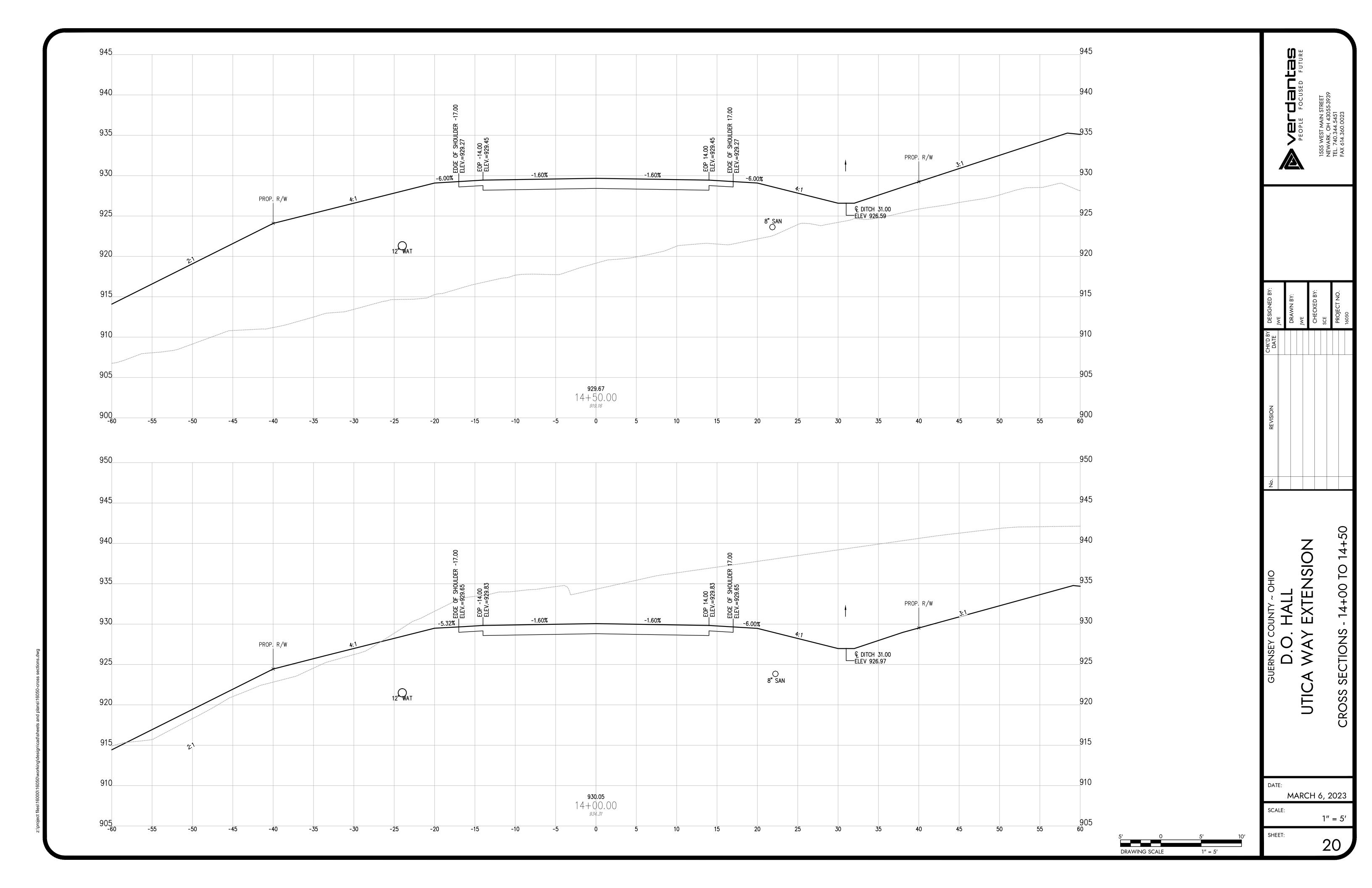
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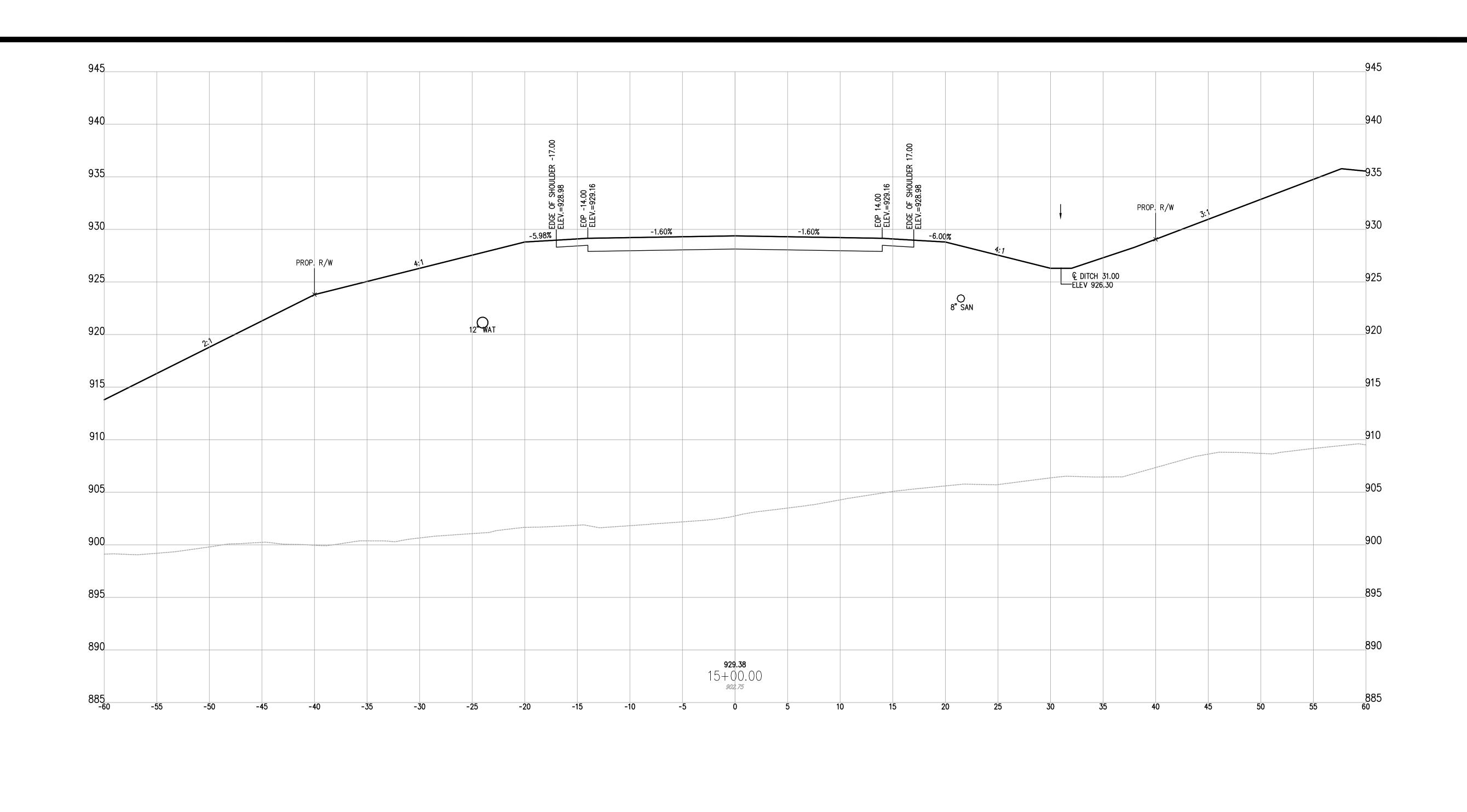


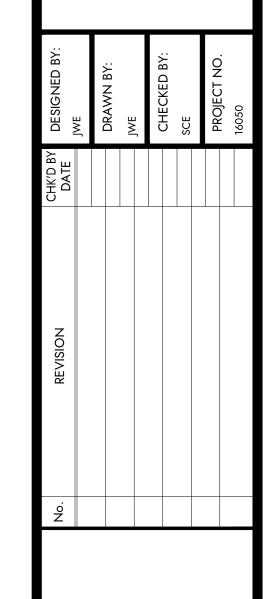












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GUERNSEY COUNTY ~ OHIO

D.O. HALL

UTICA WAY EXTENSION

DATE:

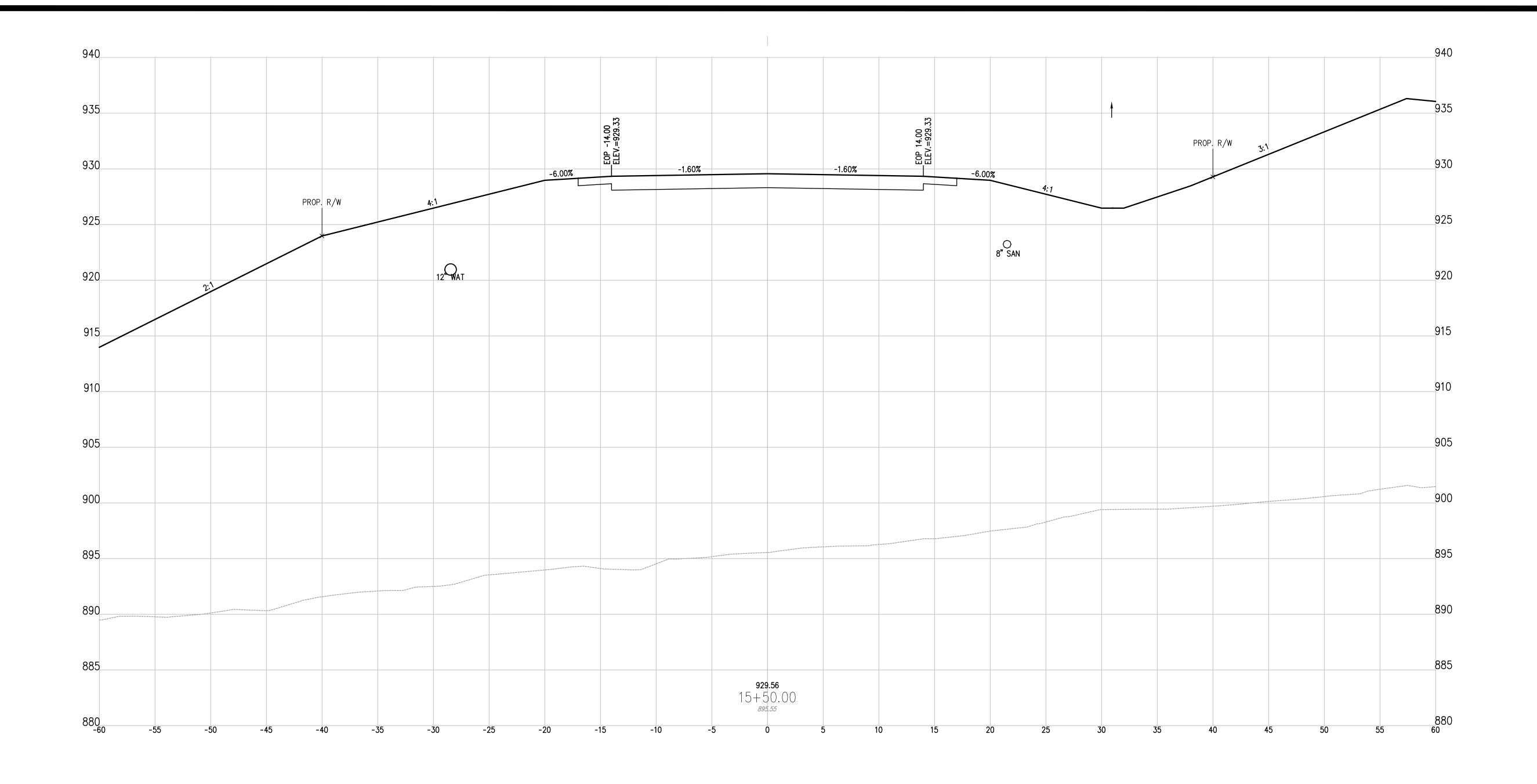
MARCH 6, 2023

SCALE:

1" = 5'

5' 0 5' 10'

DRAWING SCALE 1" = 5'



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GUERNSEY COUNTY ~ OHIO

D.O. HALL

TICA WAY EXTENSION

CROSS SECTIONS - 15+50

DATE: MARCH 6, 2023

SCALE: 1" = 5'

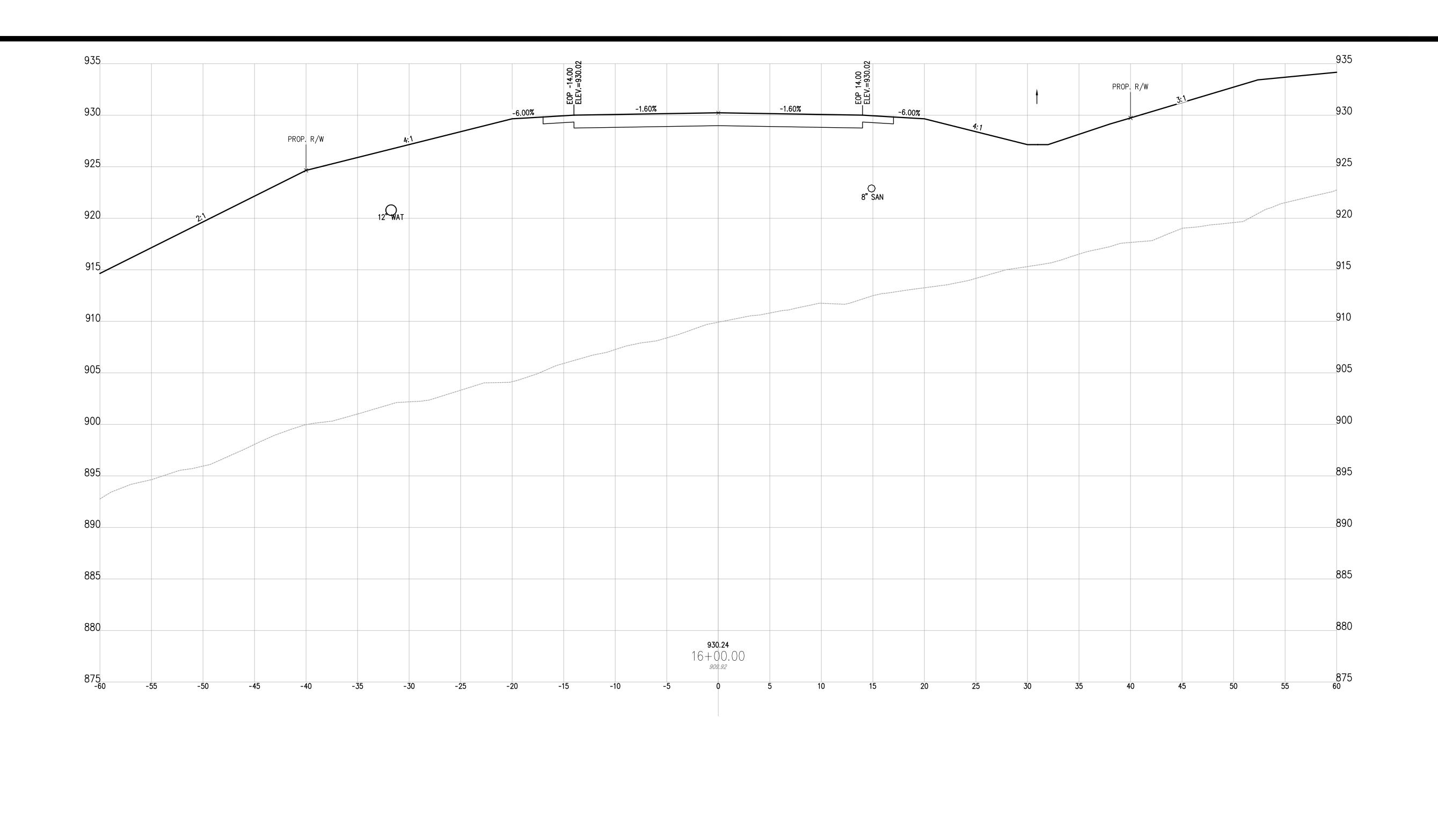
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DRAWING SCALE 1" = 5'

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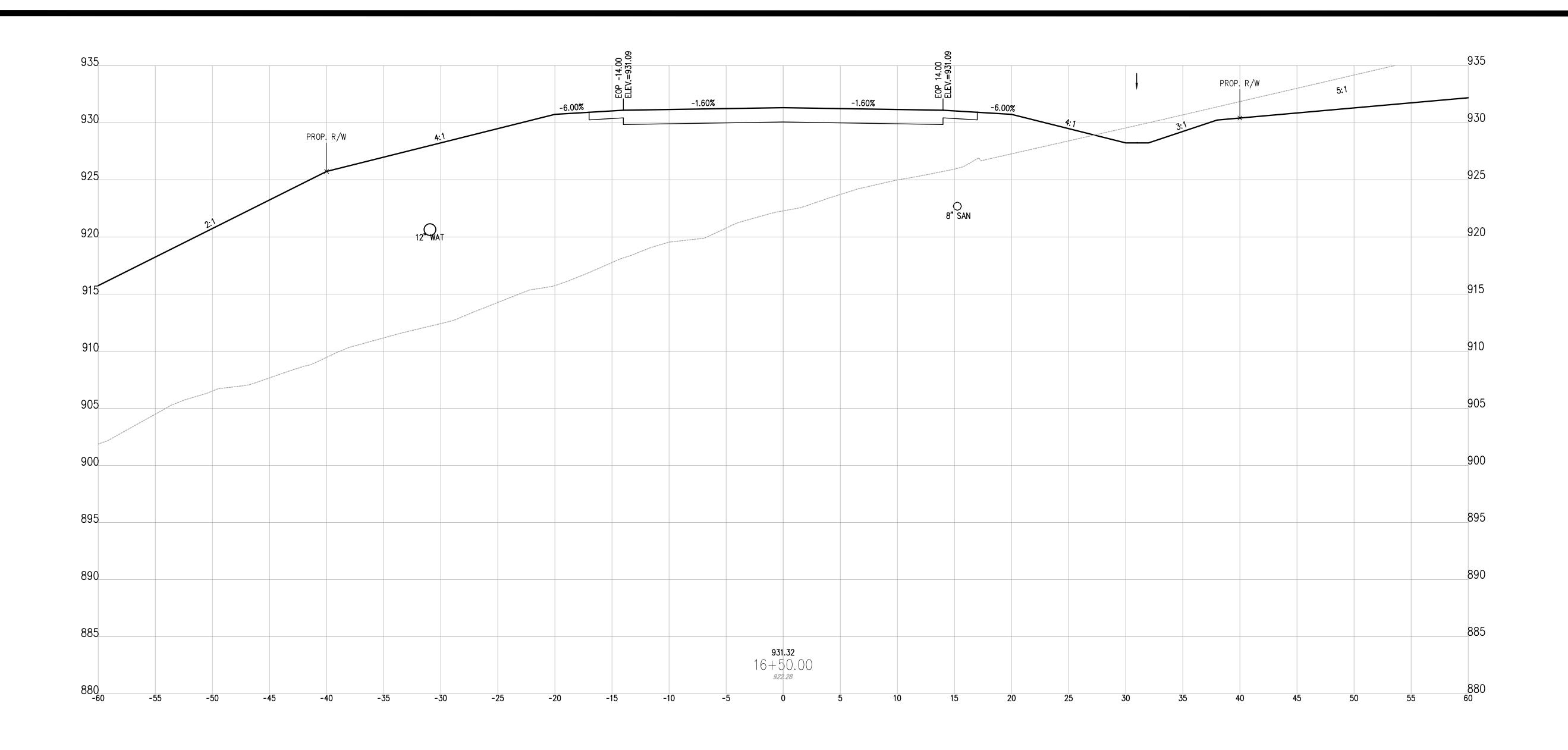
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CA WAY EXTENSION

MARCH 6, 2023 SCALE:

1'' = 5'

DRAWING SCALE



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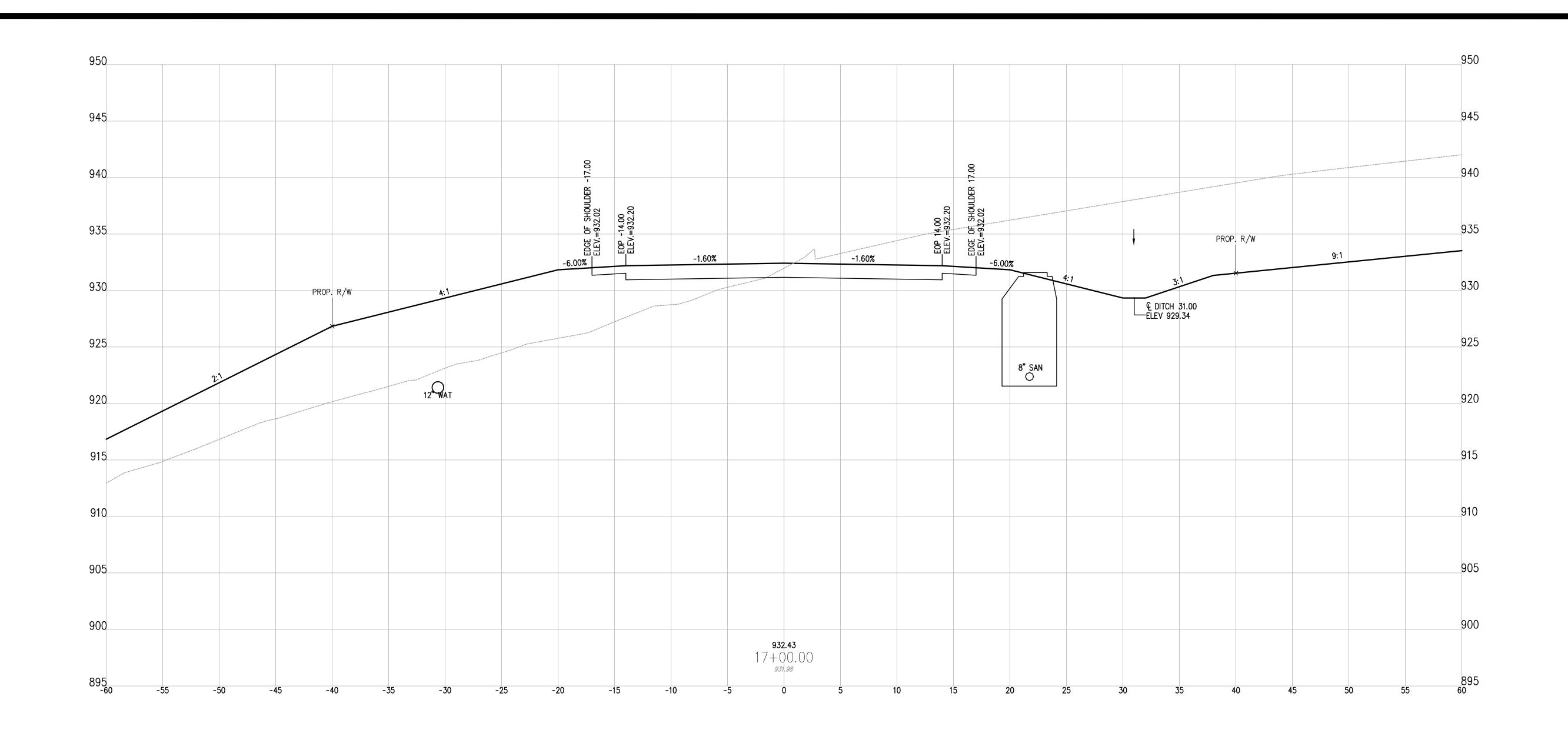
CA WAY EXTENSION

CROSS SECTIONS - 16+50

DATE: MARCH 6, 2023 SCALE:

1'' = 5'

DRAWING SCALE 1" = 5'



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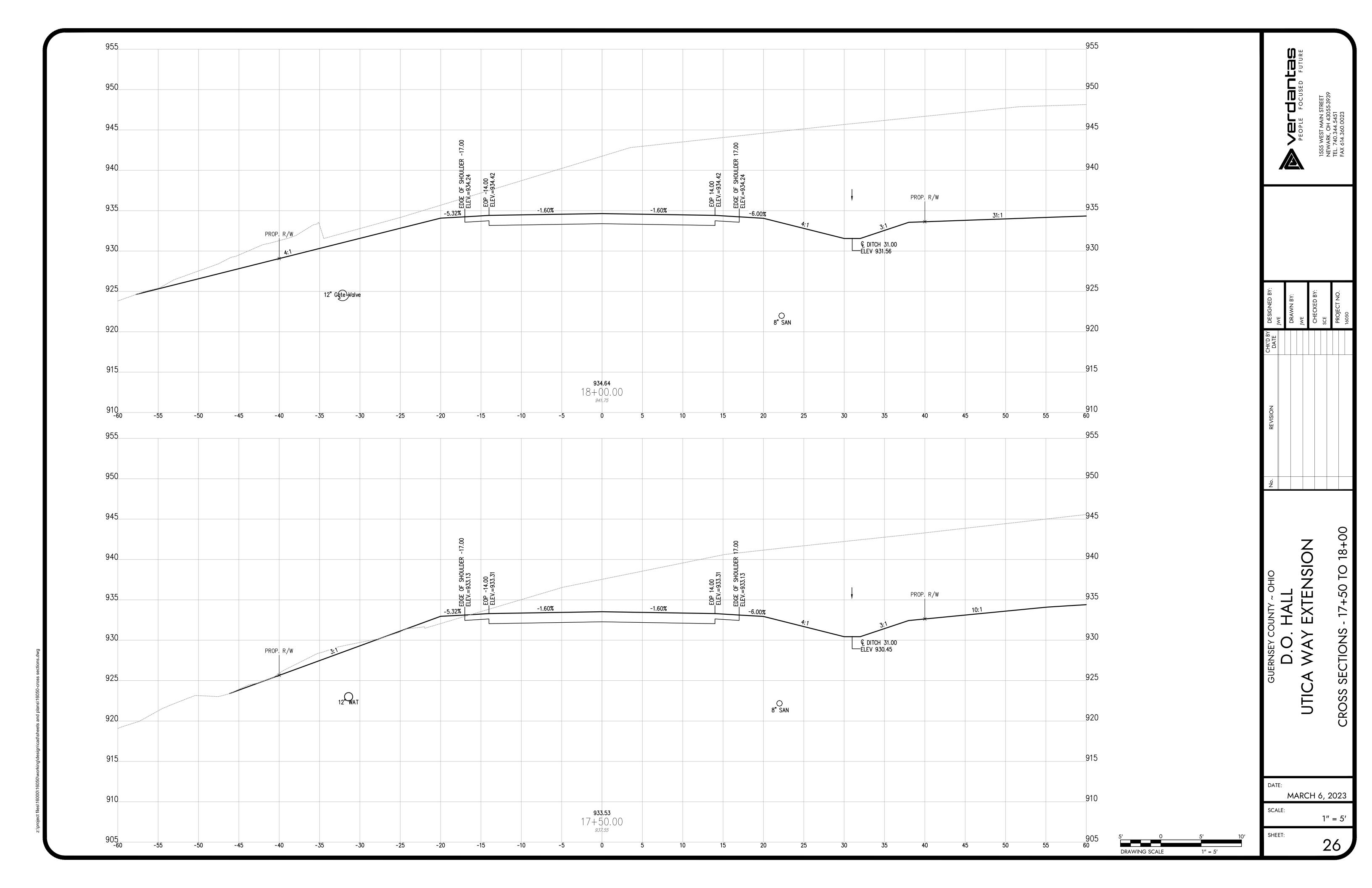
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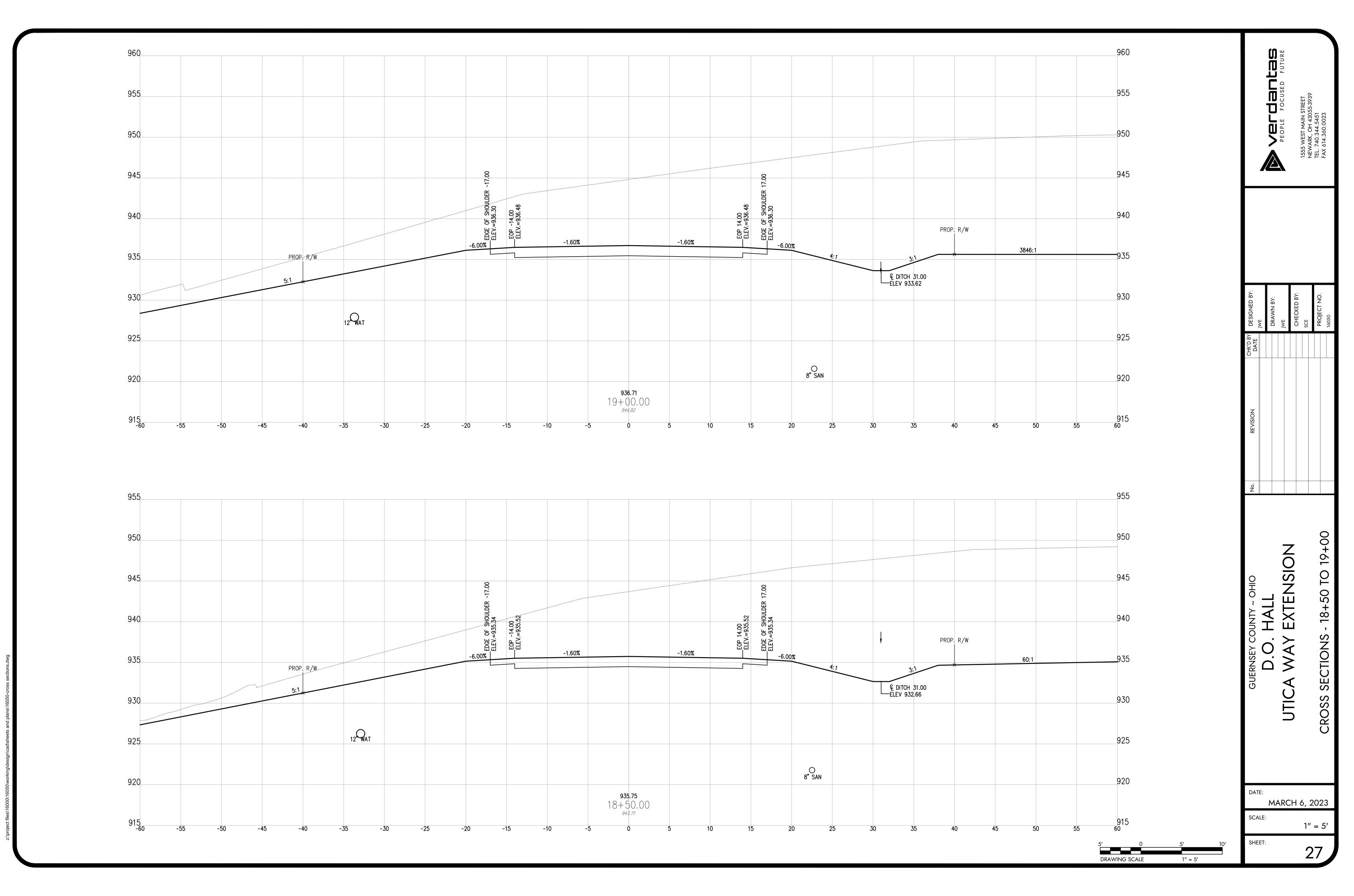
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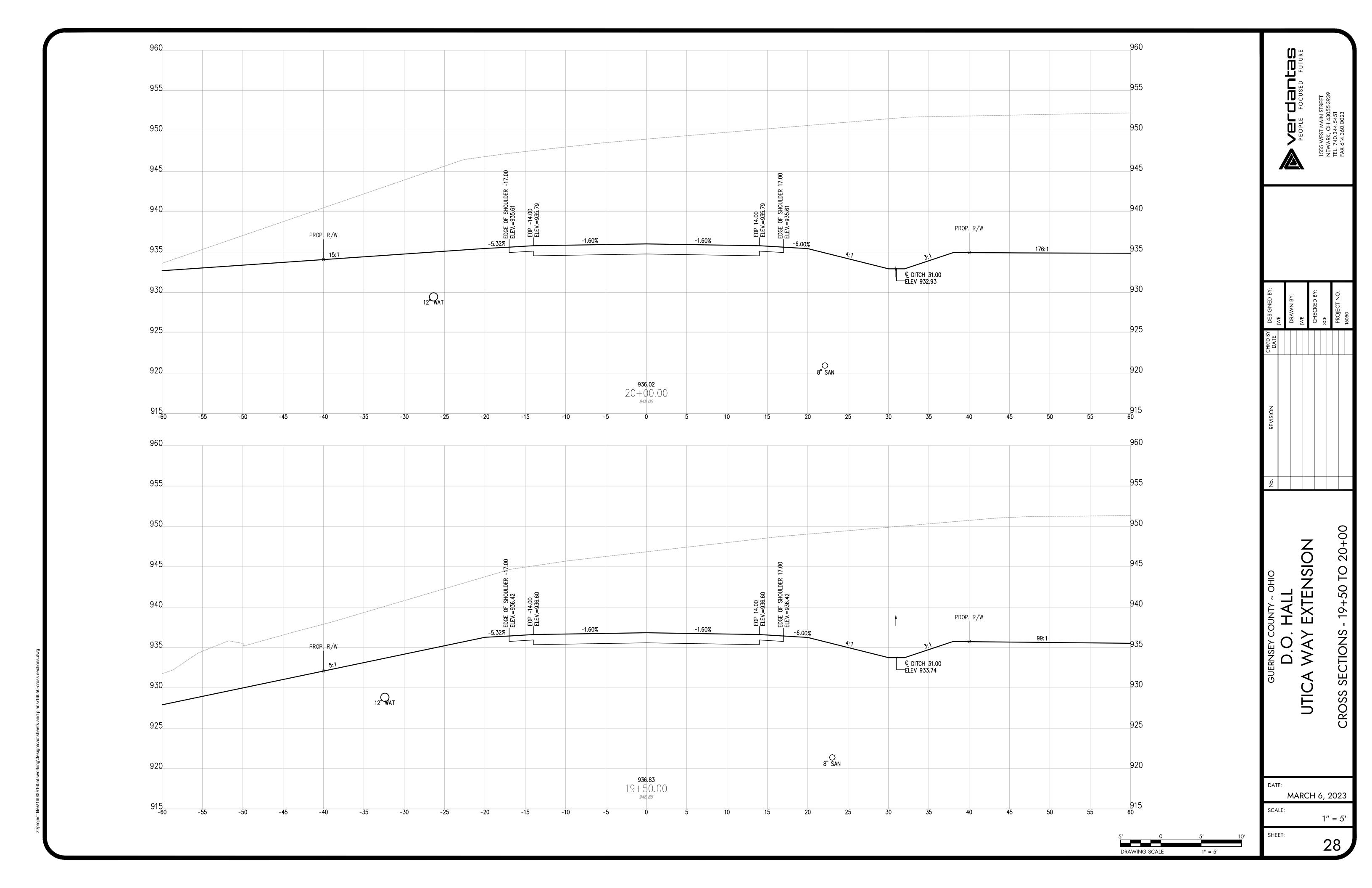
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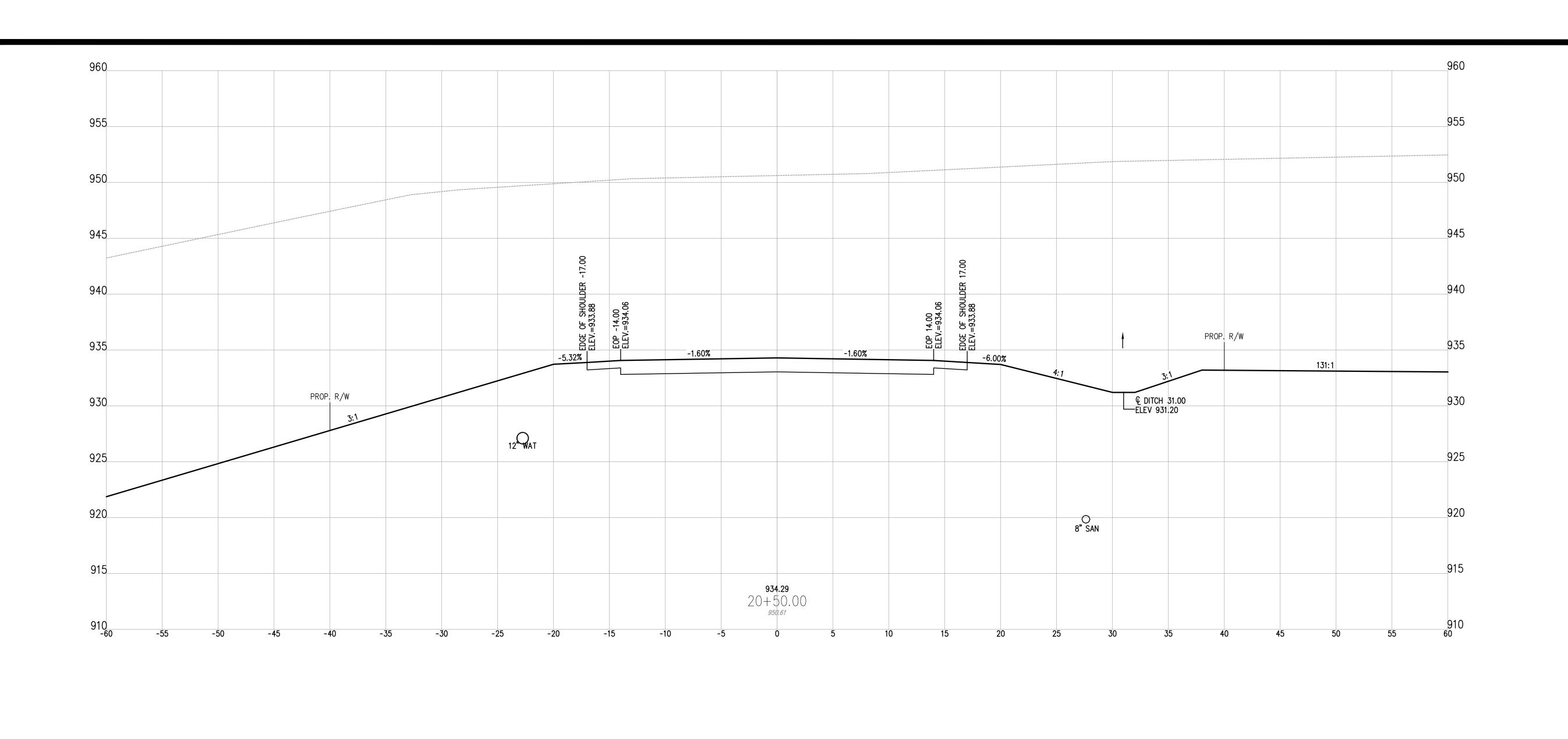
1'' = 5'

DRAWING SCALE 1" = 5'







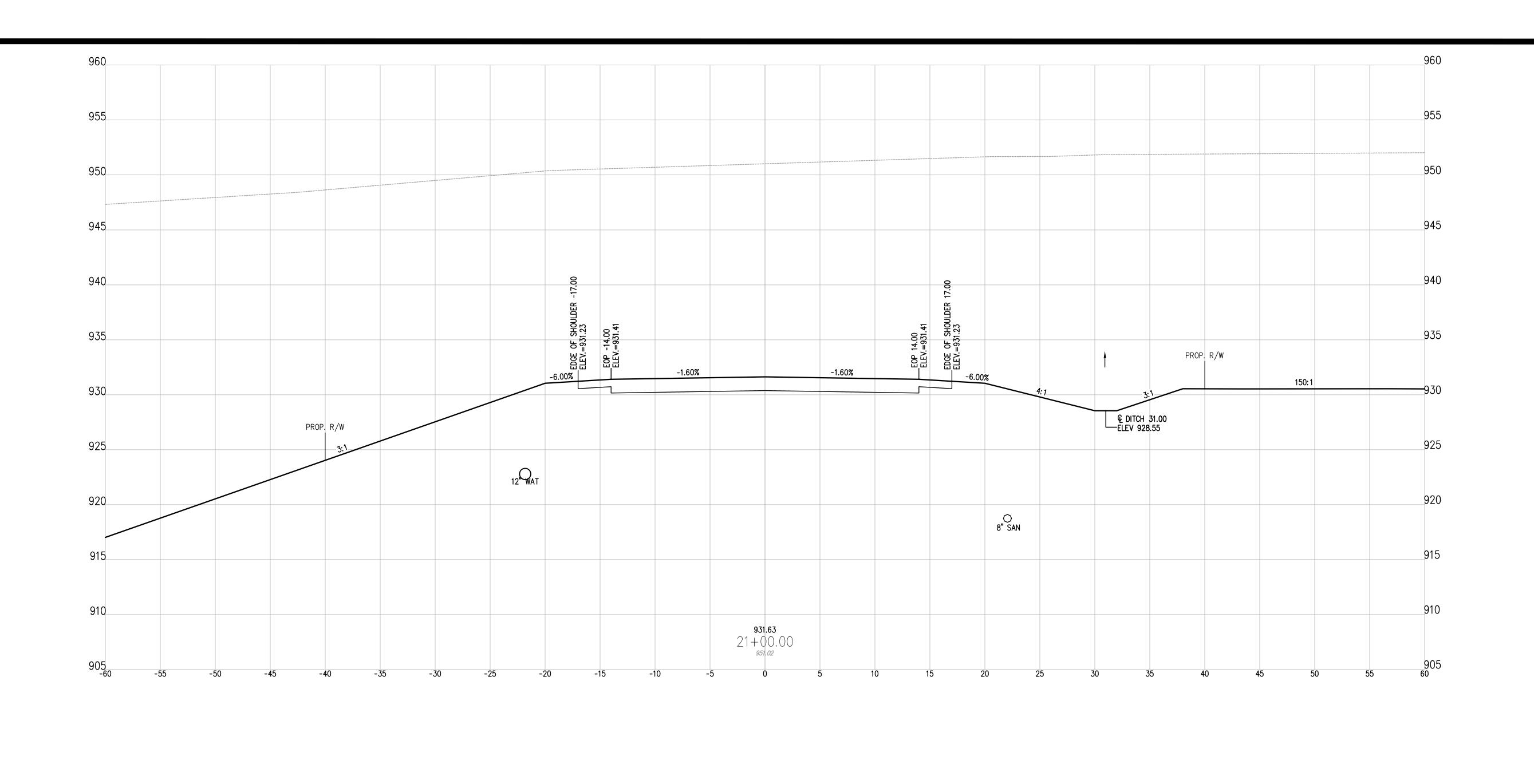


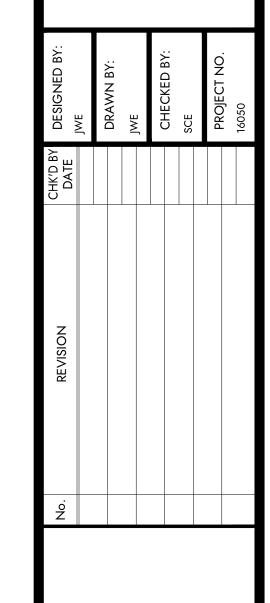
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MARCH 6, 2023

SCALE: 1'' = 5'

DRAWING SCALE



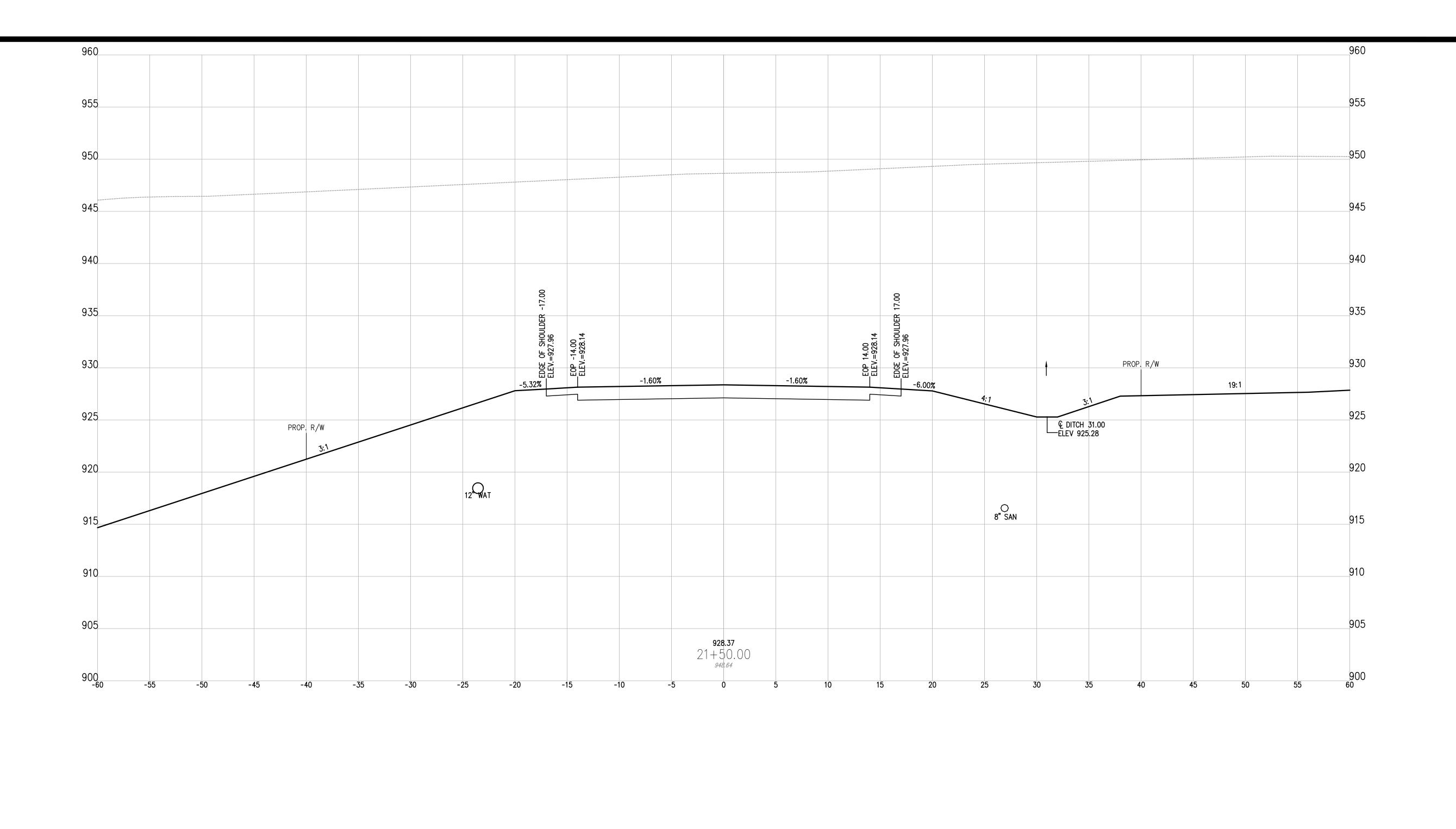


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MARCH 6, 2023 SCALE:

1'' = 5'

DRAWING SCALE



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GUERNSEY COUNTY ~ OHIO

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UTICA WAY EXTENSION

DATE: MARCH 6, 2023

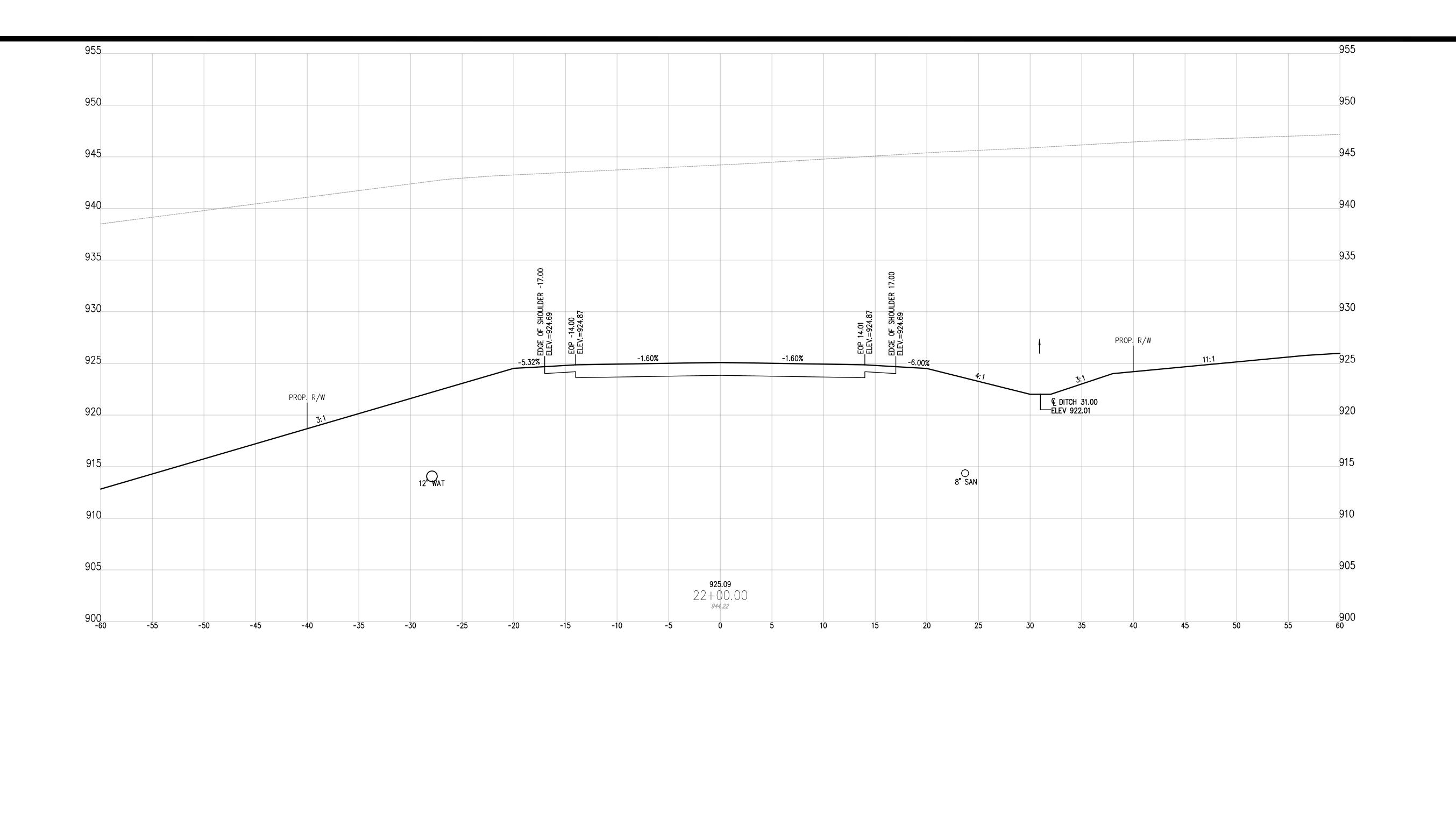
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5' 0 5'

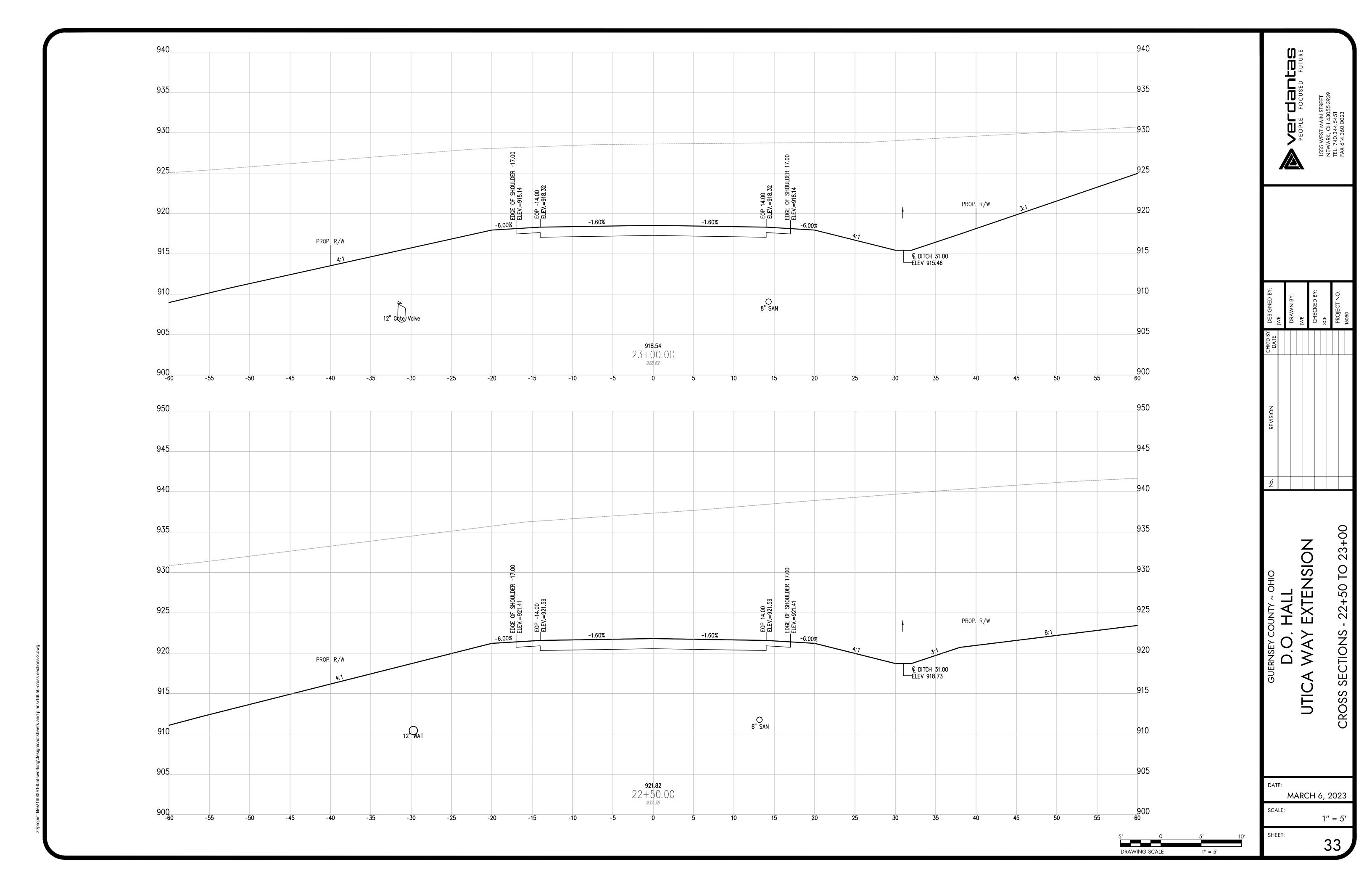
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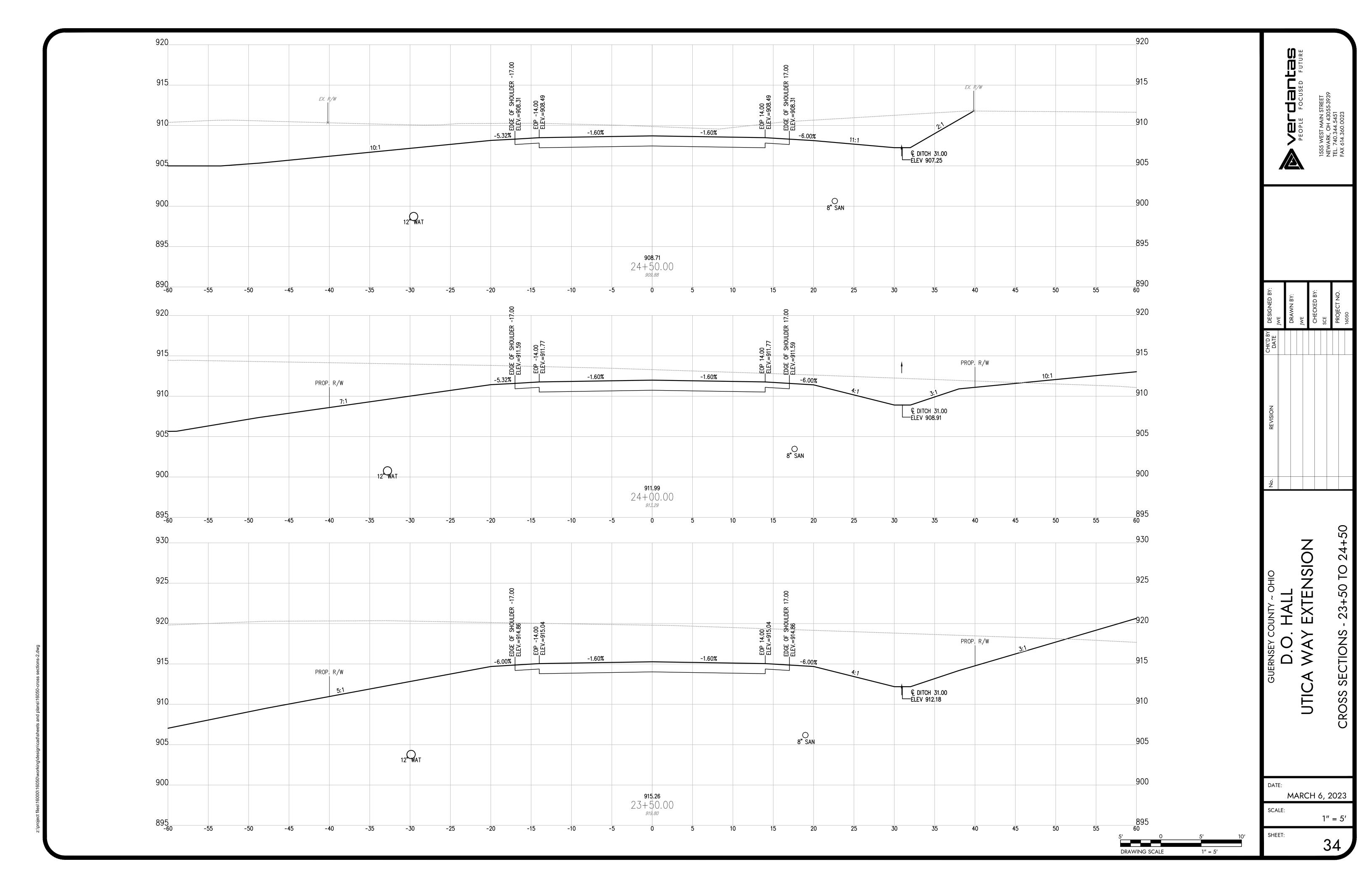


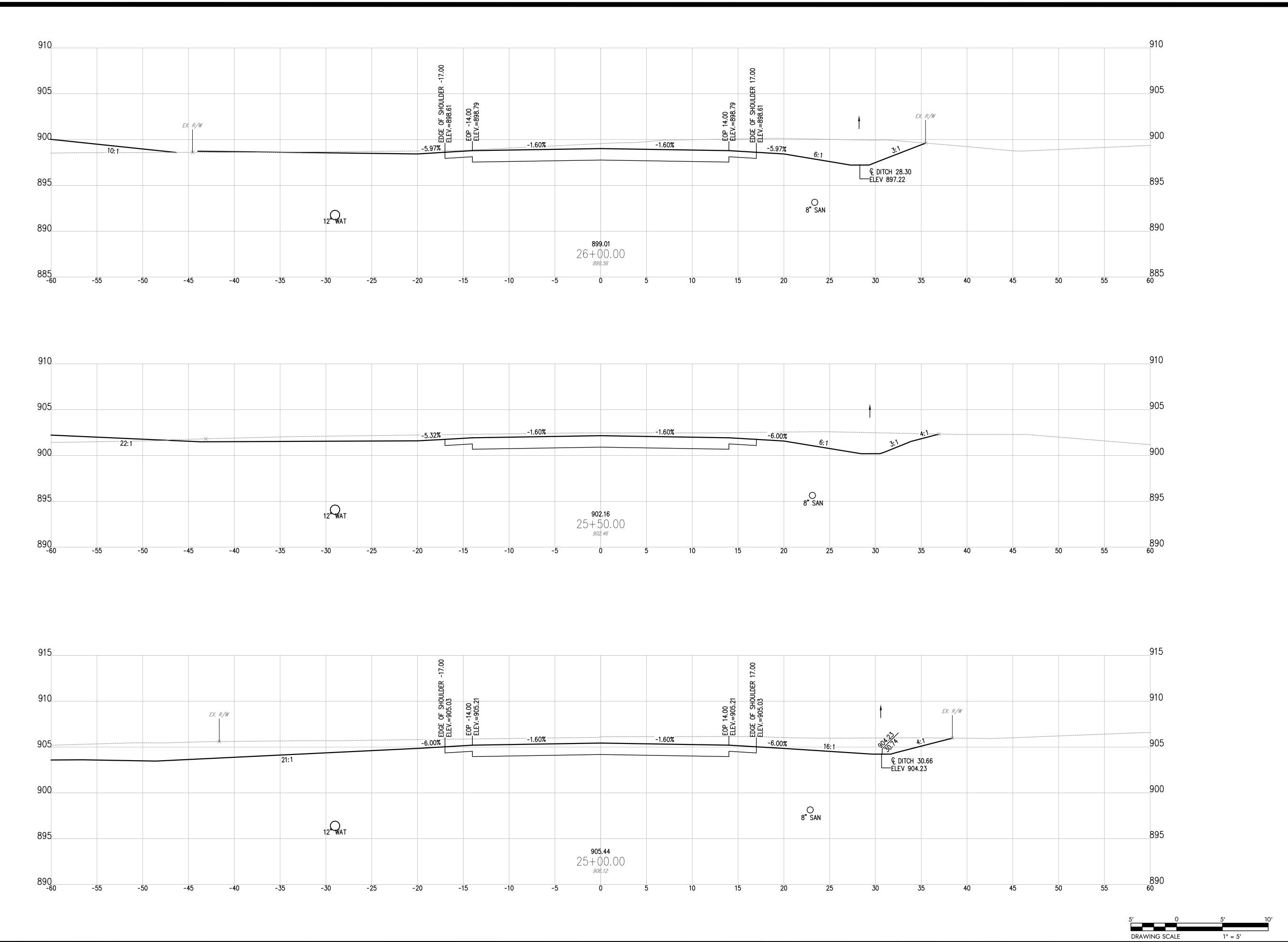
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MARCH 6, 2023 SCALE: 1'' = 5'

DRAWING SCALE







**EXTENSION** 25+00 TO GUERNSEY COUNTY ~ OHIO

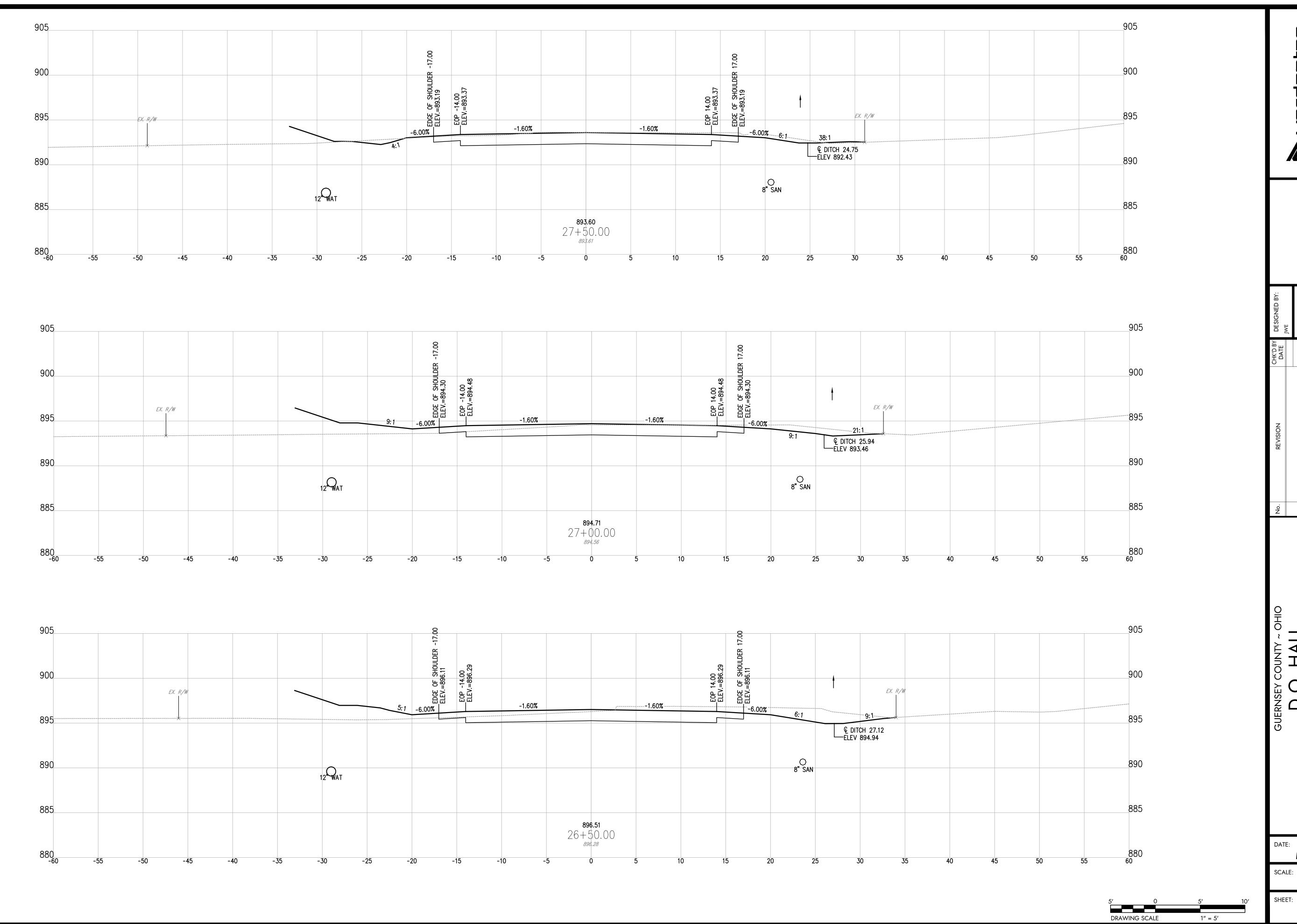
D.O. HALL

CA WAY EXTENSION

Verdantas
PEOPLE FOCUSED FUTURE

CROSS SECTIONS

DATE: MARCH 6, 2023 SCALE: 1'' = 5'



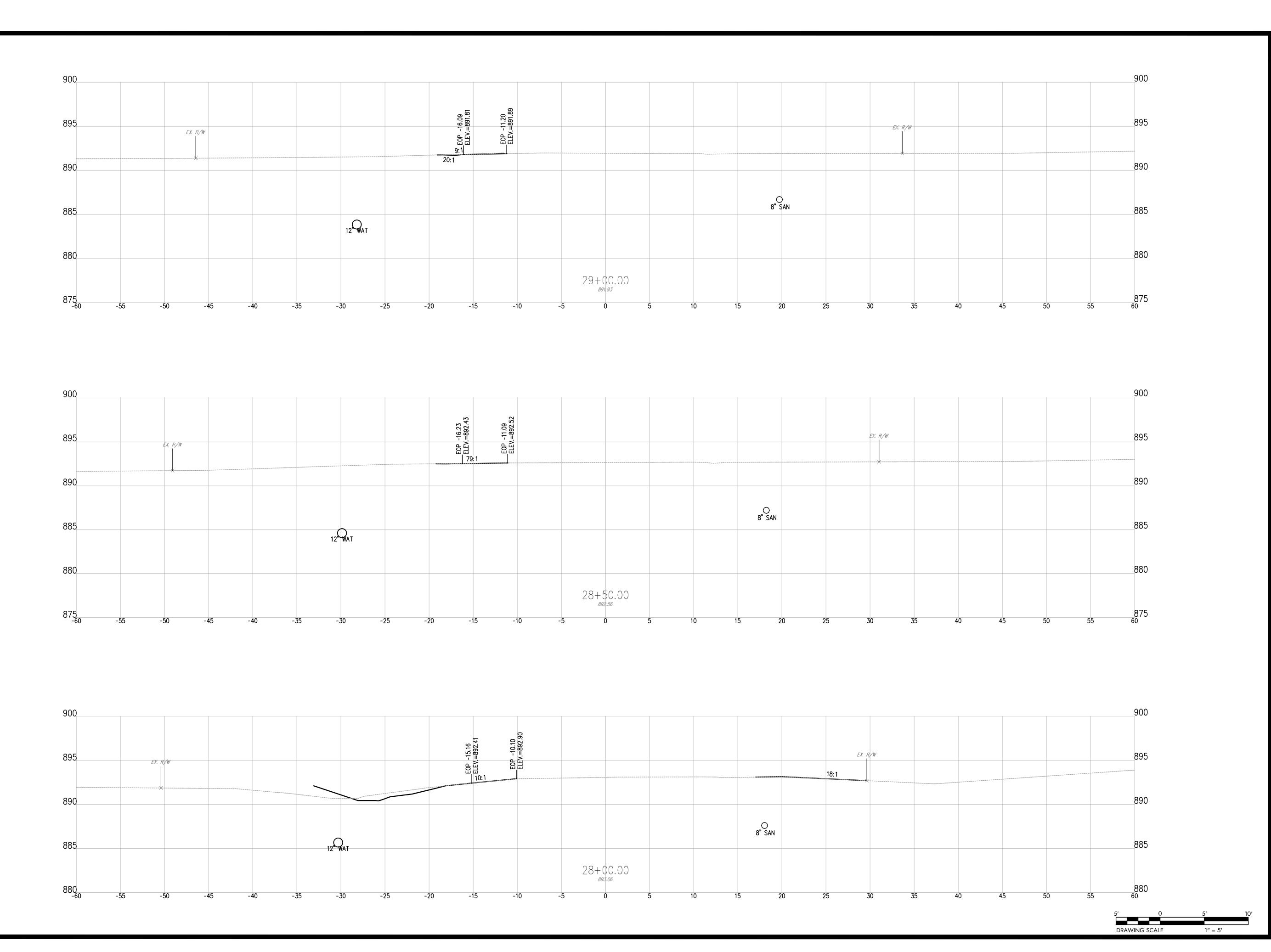
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EXTENSION 26+50 TO GUERNSEY COUNTY ~ OHIO

D.O. HALL

CA WAY EXTENSI CROSS SECTIONS

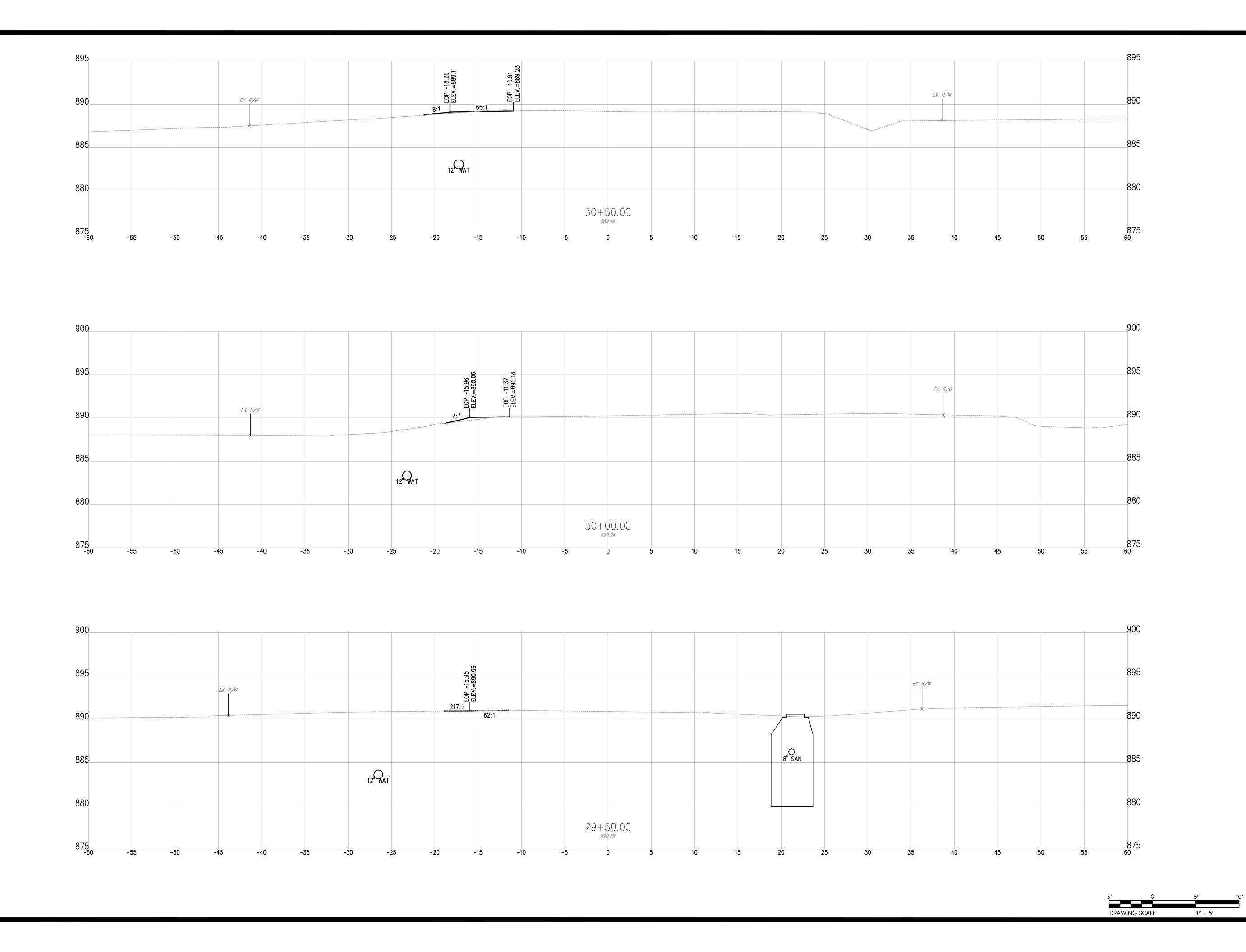
> MARCH 6, 2023 1'' = 5'



Verdantas
PEOPLE FOCUSED FUTURE 1555 WEST MAIN STREET NEWARK, OH 43055-3939 TEL. 740.344.5451 FAX 614.360.0023

D.O. HALL UTICA WAY EXTENSION	CDOSS SECTIONS 28+00 TO 30+00
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DATE: MARCH 6, 2023 SCALE: 1'' = 5'



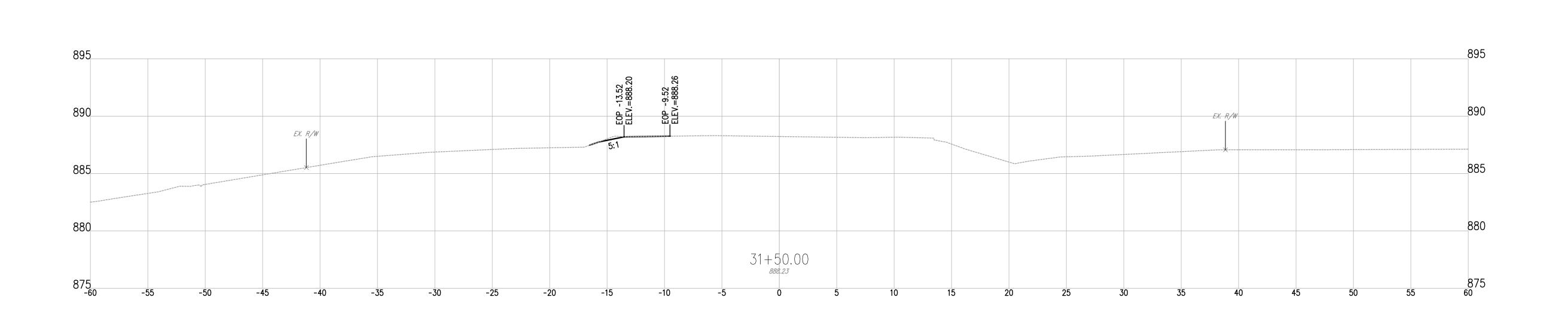
Verdantas PEOPLE FOCUSED FUTURE 1555 WEST MAIN STREET NEWARK, OH 43055-3939 TEL. 740.344.5451 FAX 614.360.0023

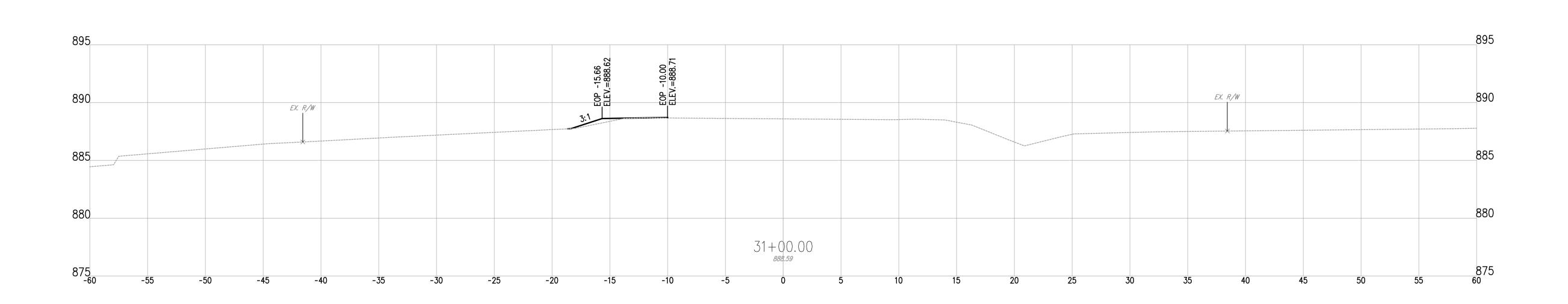
GUERNSEY COUNTY ~ OHIO

D.O. HALL

CA WAY EXTENSION SECTIONS -CROSS

DATE: MARCH 6, 2023 SCALE: 1'' = 5'





DRAWING SCALE

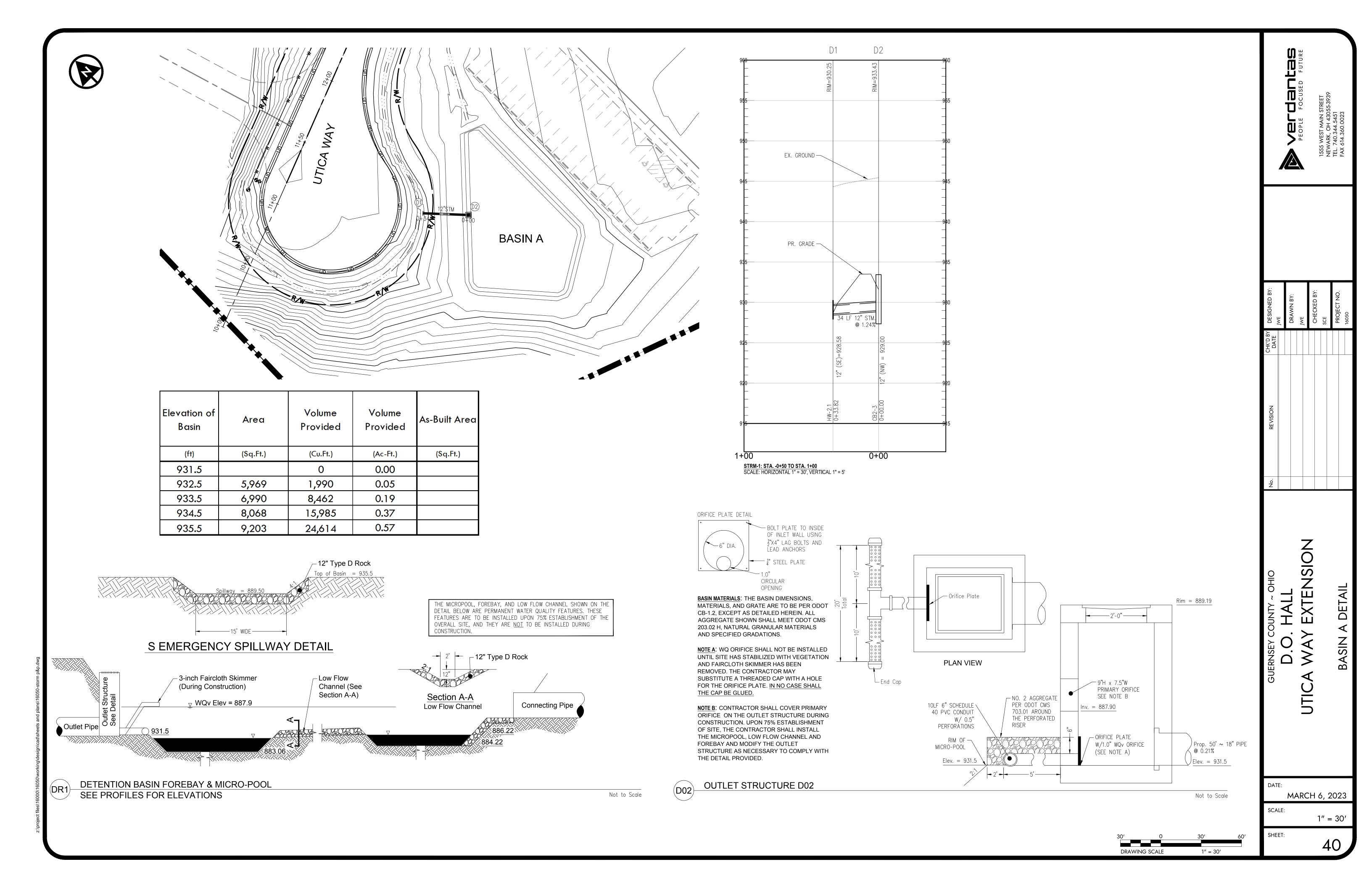
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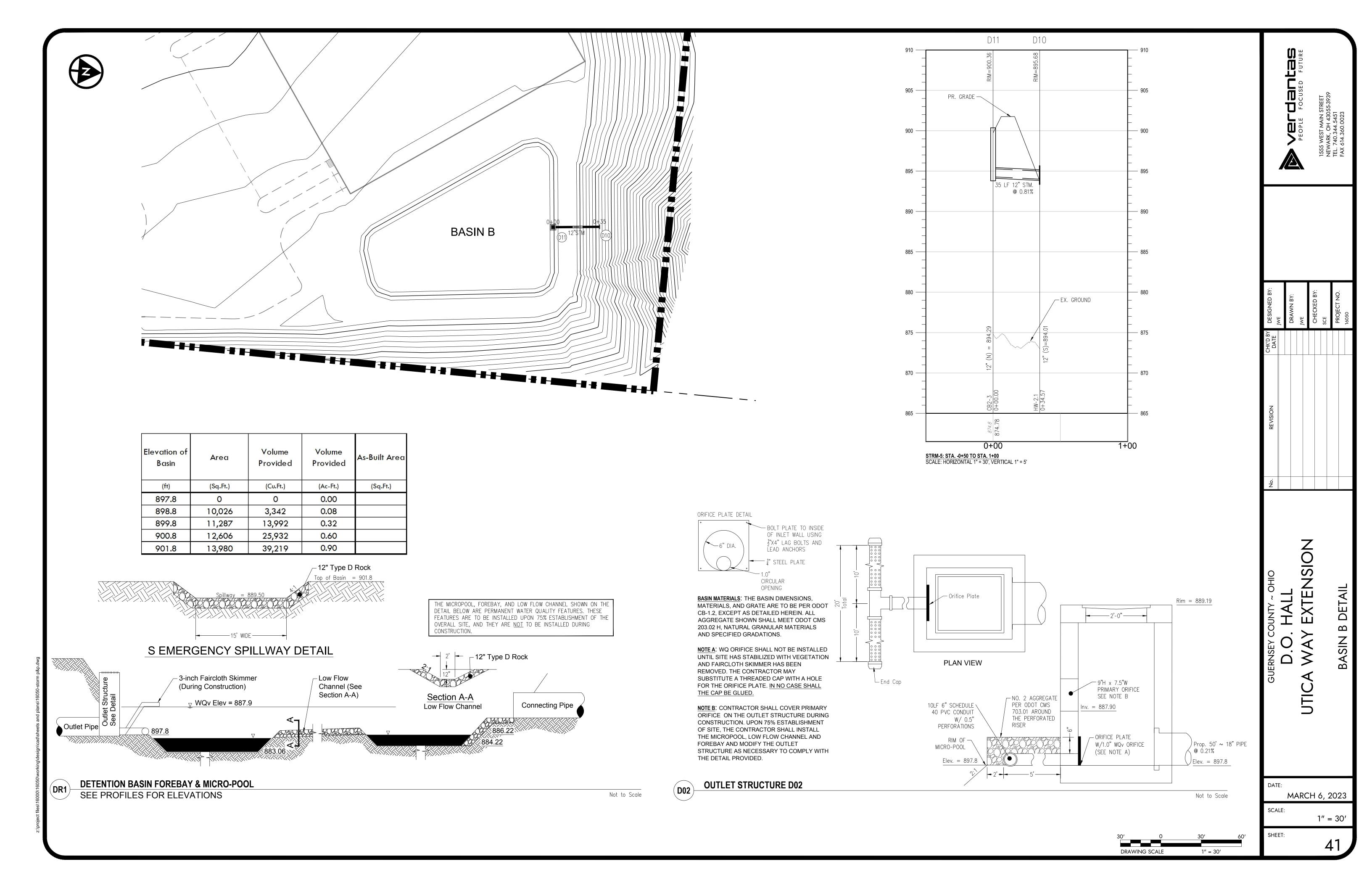
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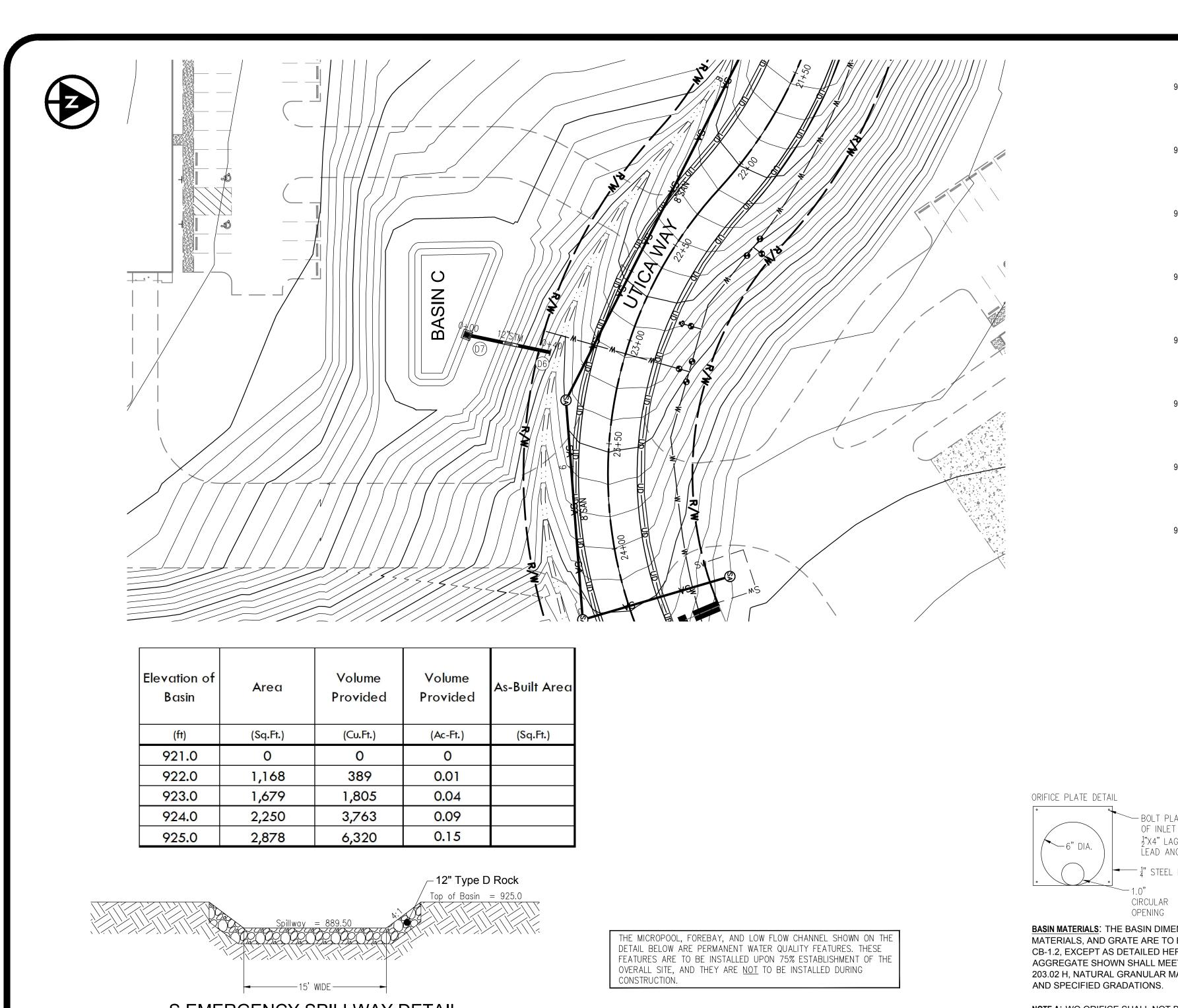
: - 31+00 TO ( CROSS SECTIONS

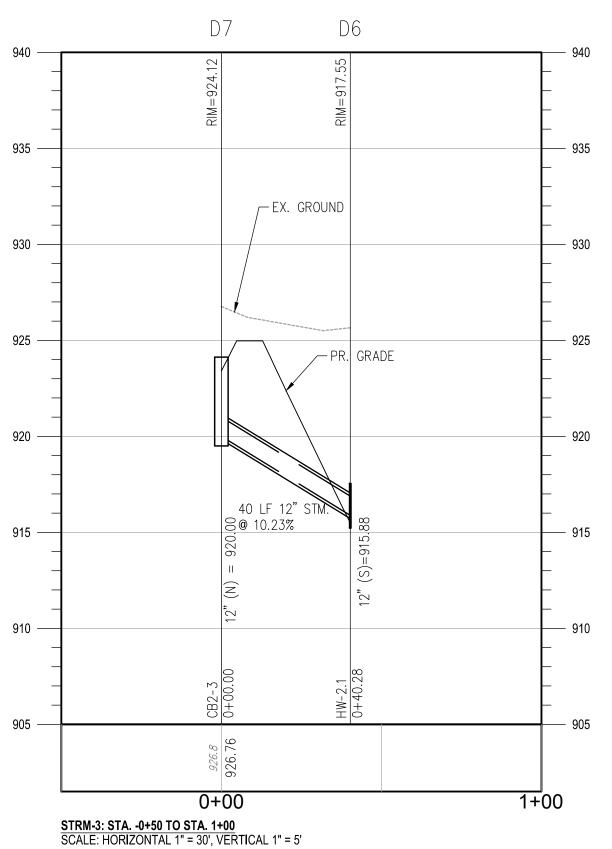
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SCALE: 1'' = 5'





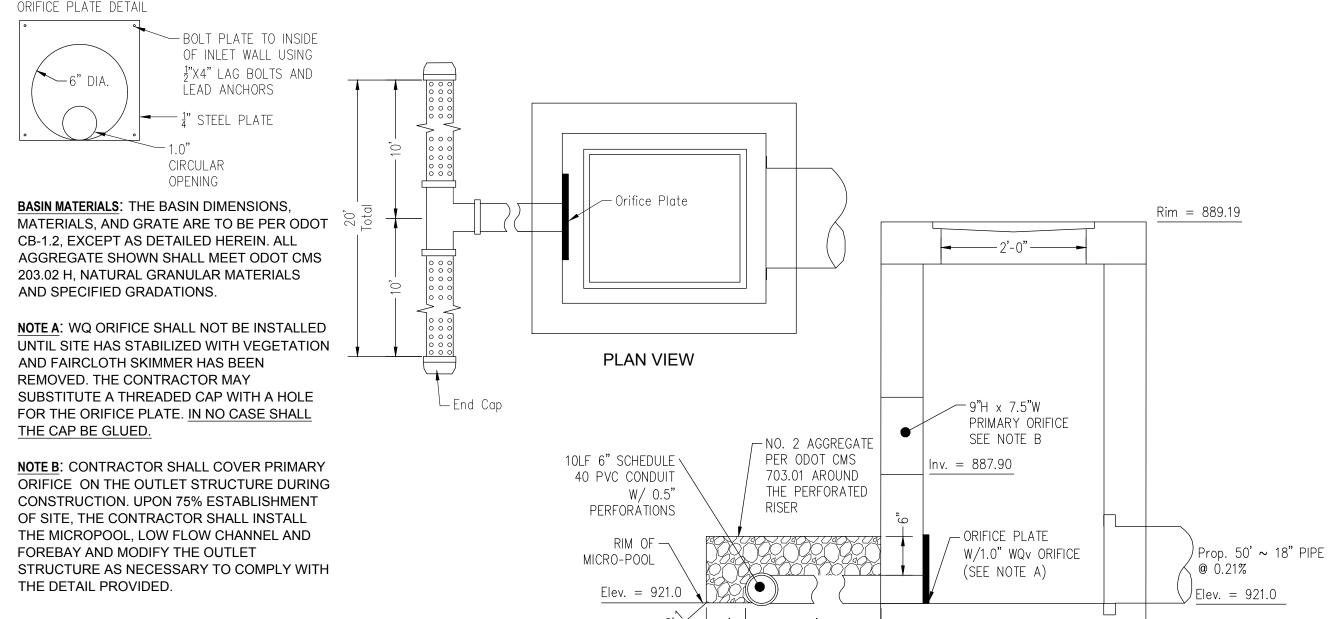




# S EMERGENCY SPILLWAY DETAIL - 3-inch Faircloth Skimmer \_Low Flow (During Construction) Channel (See Section A-A) Section A-A $\nabla$ WQv Elev = 887.9 Connecting Pipe Low Flow Channel Outlet Pipe ဝ တိ

**DETENTION BASIN FOREBAY & MICRO-POOL** 

SEE PROFILES FOR ELEVATIONS



**OUTLET STRUCTURE D02** 

Not to Scale

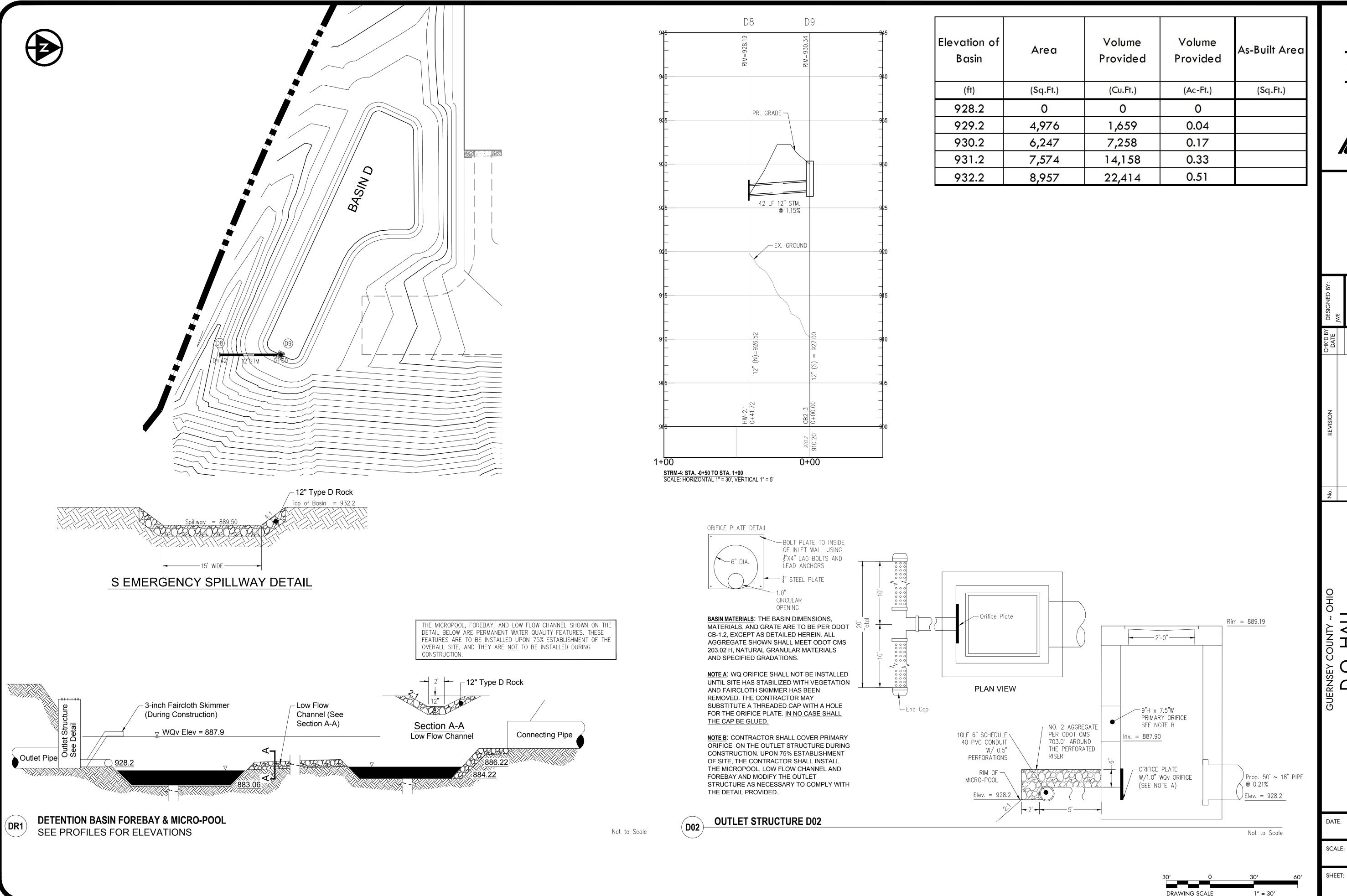
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DRAWING SCALE 1'' = 30'

**EXTENSI** DETAIL HALL BASIN 0 

MARCH 6, 2023 SCALE:

1'' = 30'



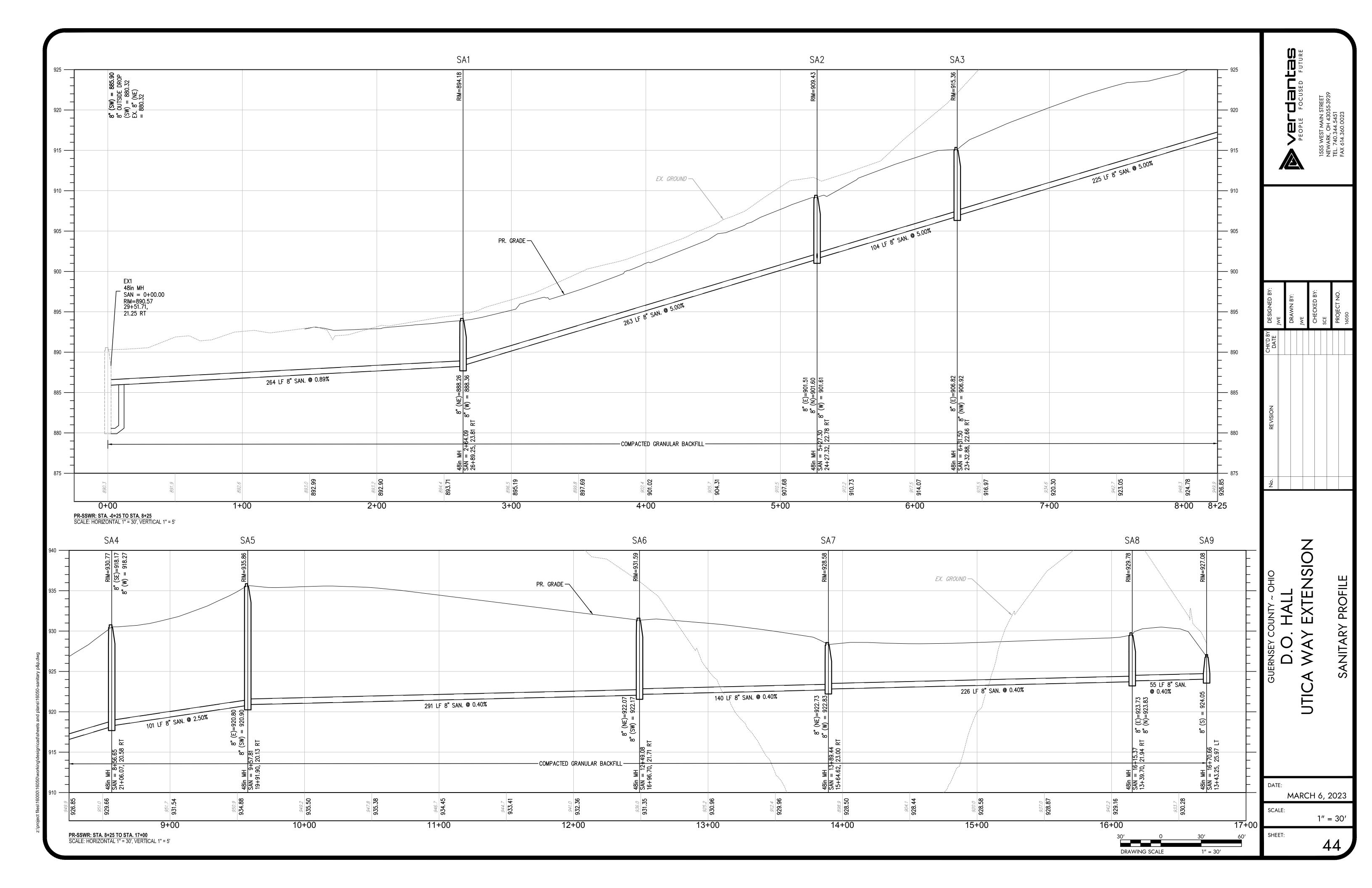
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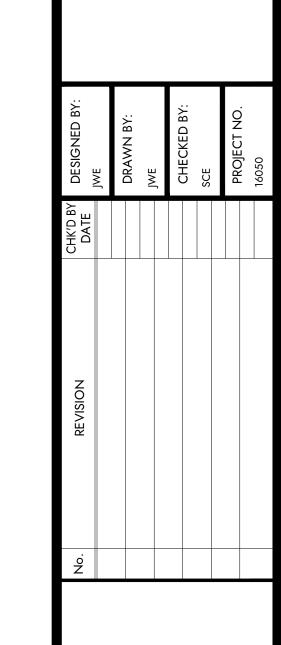
DETAIL

BASIN

MARCH 6, 2023

1'' = 30'





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GUERNSEY COUNTY ~ OHIO

D.O. HALL

UTICA WAY EXTENSION

MARCH 6, 2023

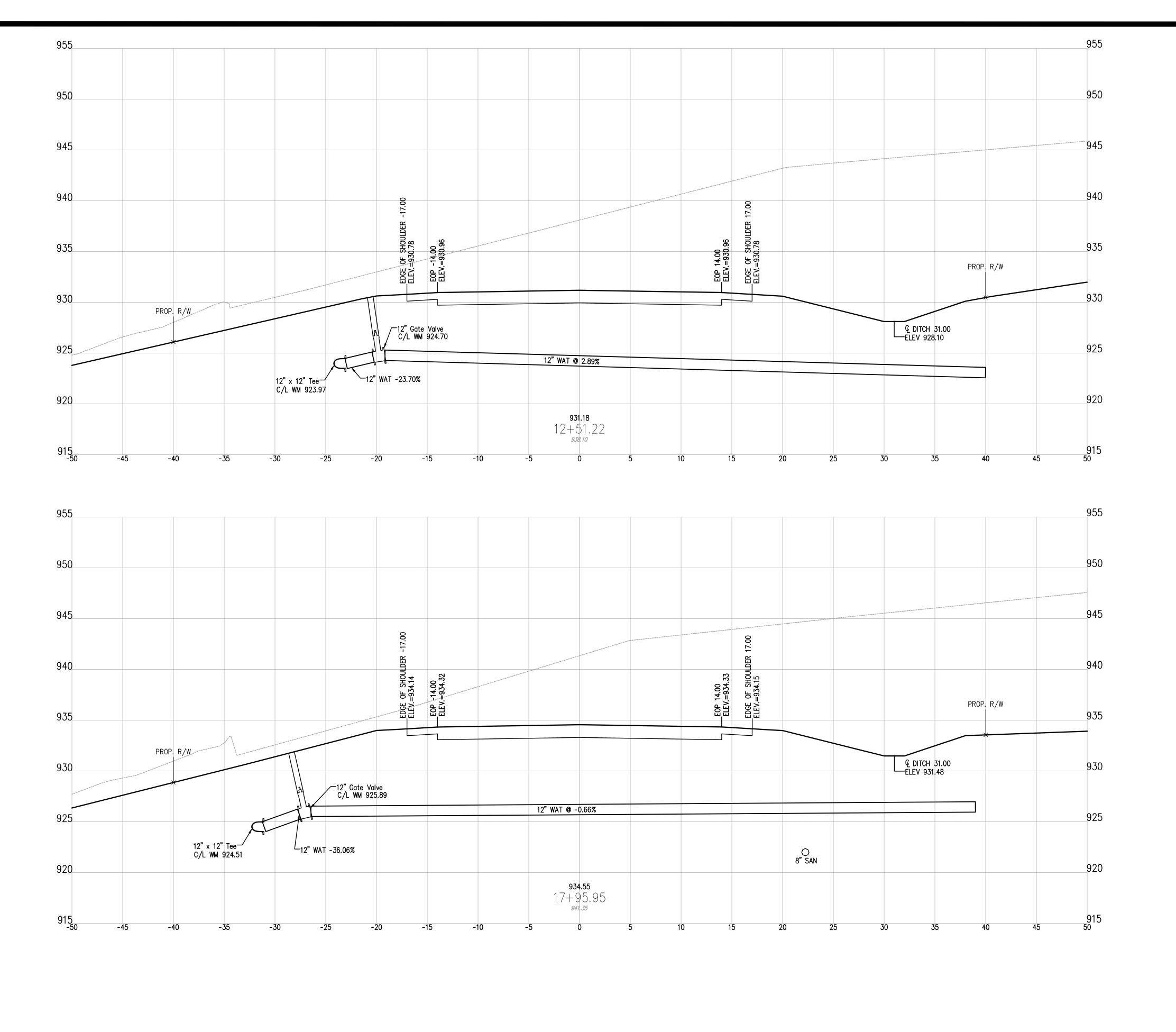
1" = 30'

SCALE:

30' 0 30' 60

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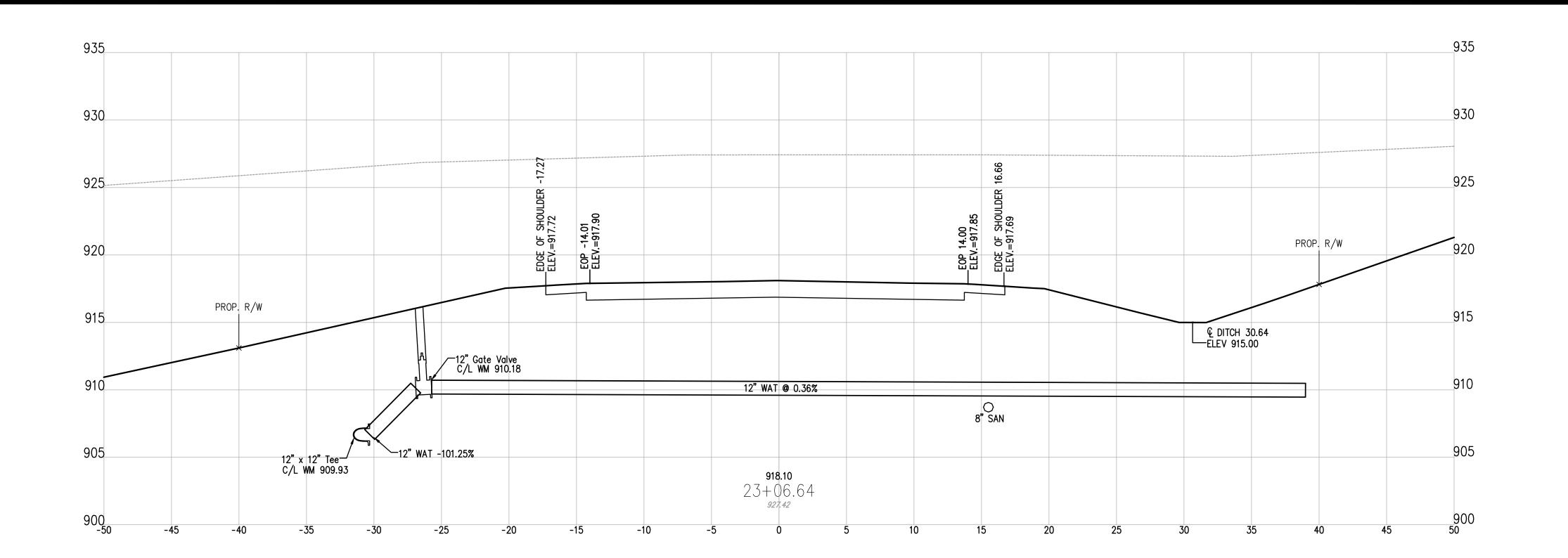
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**EXTENSION** WATER PROFILE COUNTY ~ 0 D.O.

DATE: MARCH 6, 2023

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Verdantas
PEOPLE FOCUSED FUTURE

1555 WEST MAIN STREET NEWARK, OH 43055-3939 TEL. 740.344.5451 FAX 614.360.0023

GUERNSEY COUNTY ~ OHIO

D.O. HALL

UTICA WAY EXTENSIC

DATE: MARCH 6, 2023

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DRAWING SCALE 1" = 5'