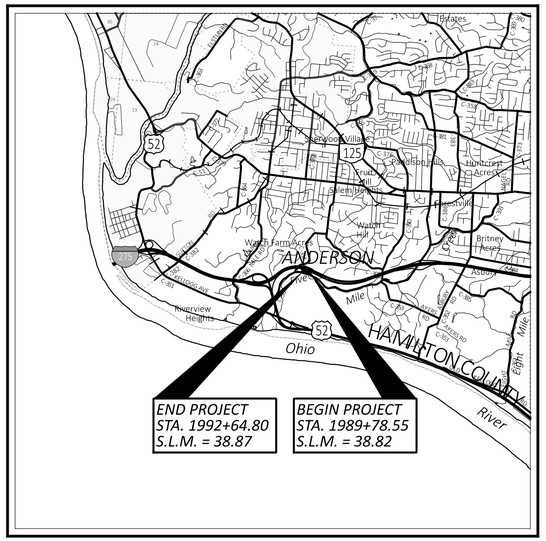
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

HAM-275-38.82

ANDERSON TOWNSHIP

HAMILTON COUNTY



LOCATION MAP

LATITUDE: 39°03'26" LONGITUDE: 84°22'55"

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2025)	64,183
DESIGN YEAR ADT (2045)	95,372
DESIGN HOURLY VOLUME (2045)	10,491
DIRECTIONAL DISTRIBUTION	58%
TRUCKS (24 HOUR B&C)	13%
DESIGN SPEED	70 MPH
LEGAL SPEED	65 MPH

DESIGN FUNCTIONAL CLASSIFICATION:
01 - INTERSTATE (URBAN)
NHS PROJECT ..... YES

DESIGN EXCEPTIONS

NONE

ADA DESIGN WAIVERS

NONE

INDEX OF SHEETS:

FEDERAL PROJECT NUMBER

NONE

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THIS PROJECT INVOLVES A LANDSLIDE REMEDIATION OF 0.05 MILES ALONG I-275 BY THE INSTALLATION OF A DRILLED SHAFT RETAINING WALL. THIS PROJECT ALSO INCLUDES PAVEMENT REPLACEMENT, DRAINAGE AND TRAFFIC CONTROL.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	1.9 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.9 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (NOI NOT REQUIRED) *

* ROUTINE MAINTENANCE PROJECT

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

Douglas A. Gruver, P.E.
District 08 Deputy Director

Pamela Boratyn
Director, Department of Transportation

UNDERGROUND UTILITIES
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:

Stantec
1500 Lake Shore Drive, Suite 100
Columbus, Ohio 43204
(614) 486-4383

ENGINEER'S SEAL
ROADWAY
STATE OF OHIO · ANGELA L. BOYCE · E-71465 · REGISTERED PROFESSIONAL ENGINEER
Boyce, Angie
Digitally signed by Boyce, Angie
DN: CN="Boyce, Angie", OU=Internal, OU=users, OU=stantec, DC=corp, DC=ads
Date: 2025.07.09 16:44:03-04'00'

STANDARD CONSTRUCTION DRAWINGS

BP-1.1	7/28/00	MGS-1.1	1/17/25	TC-41.20	10/18/13			800-2023	1/17/25
BP-2.1	1/21/22	MGS-2.1	1/17/25	TC-42.20	10/18/13			832	7/19/24
BP-2.2	1/15/21	MGS-4.3	1/18/13	TC-52.10	10/18/13			866	4/21/17
BP-2.5	7/19/24			TC-52.20	1/15/21			878	1/21/22
BP-5.1	1/17/25	RM-4.2	7/19/24	TC-61.30	7/19/24			902	7/19/19
BP-8.1	7/19/24			TC-65.10	1/17/14				
BP-9.1	1/18/19	HW-2.1	7/15/22	TC-65.11	1/17/25				
		HW-2.2	7/20/18						
CB-3A	7/19/24								
		MT-101.70	7/19/24						
DM-1.1	1/17/25	MT-101.90	7/17/20						
DM-1.2	1/17/25	MT-102.10	7/21/23						
DM-4.3	1/15/16	MT-105.10	1/17/20						
DM-4.4	1/15/16								

SUPPLEMENTAL SPECIFICATIONS

SPECIAL PROVISIONS

ENGINEER'S SEAL
RETAINING WALL
STATE OF OHIO · MICHAEL R. STURDEVANT · E-49864 · REGISTERED PROFESSIONAL ENGINEER
Digitally signed by Sturdevant, Michael
DN: CN="Sturdevant, Michael", OU=Internal, OU=users, OU=stantec, DC=corp, DC=ads
Date: 2025.07.09 19:56:02-04'00'

TITLE SHEET

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

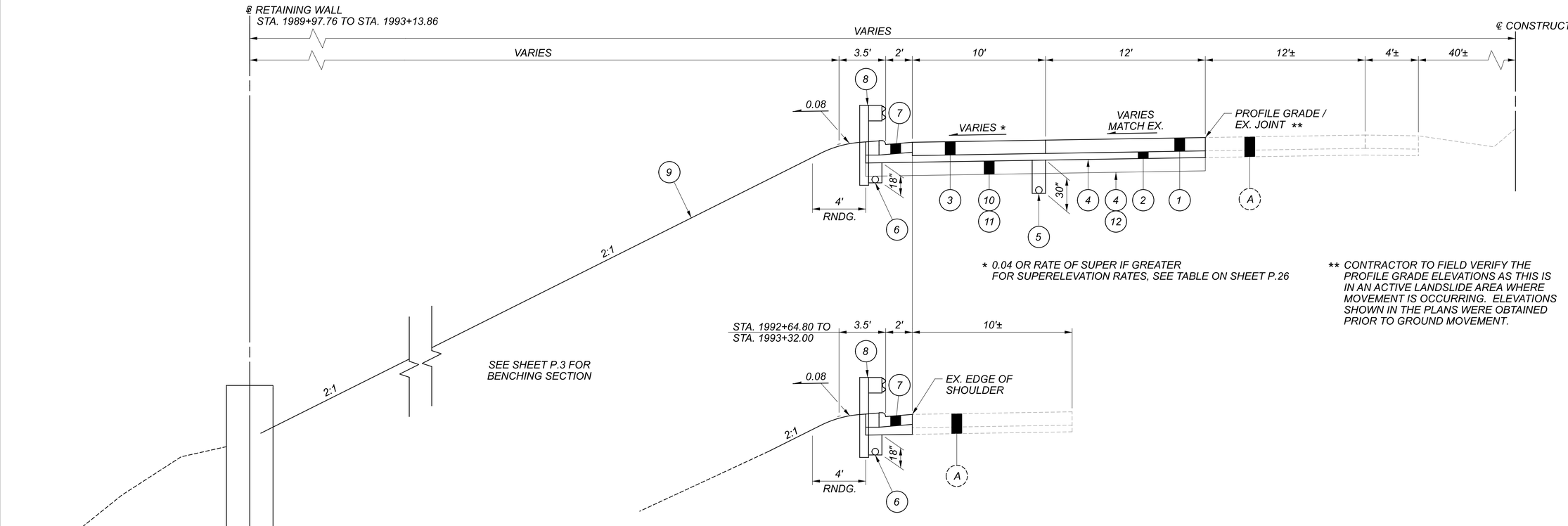
DESIGNER	SLP
REVIEWER	ALB 05/16/25
PROJECT ID	114356
SHEET	P.1
TOTAL	35

HAM-275-38.82
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:46:51 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Roadway\Sheets\114356_GT001.dgn

LEGEND

1. ITEM 452 - 12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
2. ITEM 304 - 6" AGGREGATE BASE
3. ITEM 452 - 12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
4. ITEM 204 - SUBGRADE COMPACTION
5. ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS
6. ITEM 605 - 6" BASE PIPE UNDERDRAINS
7. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2
8. ITEM 606 - GUARDRAIL, TYPE MGS
9. ITEM 659 - SEEDING AND MULCHING
10. ITEM 204 - 12" EXCAVATION OF SUBGRADE
11. ITEM 204 - 12" GRANULAR MATERIAL, TYPE C
12. ITEM 204 - GEOTEXTILE FABRIC

A. EXISTING PAVEMENT (12" ± CONCRETE, 6" ± SUBBASE)



* 0.04 OR RATE OF SUPER IF GREATER FOR SUPERELEVATION RATES, SEE TABLE ON SHEET P.26

** CONTRACTOR TO FIELD VERIFY THE PROFILE GRADE ELEVATIONS AS THIS IS IN AN ACTIVE LANDSLIDE AREA WHERE MOVEMENT IS OCCURRING. ELEVATIONS SHOWN IN THE PLANS WERE OBTAINED PRIOR TO GROUND MOVEMENT.

SUPERELEVATED SECTION

SECTION APPLIES:

STA. 1989+78.55 TO STA. 1993+32.00

TYPICAL SECTION

HAM-275-38.82

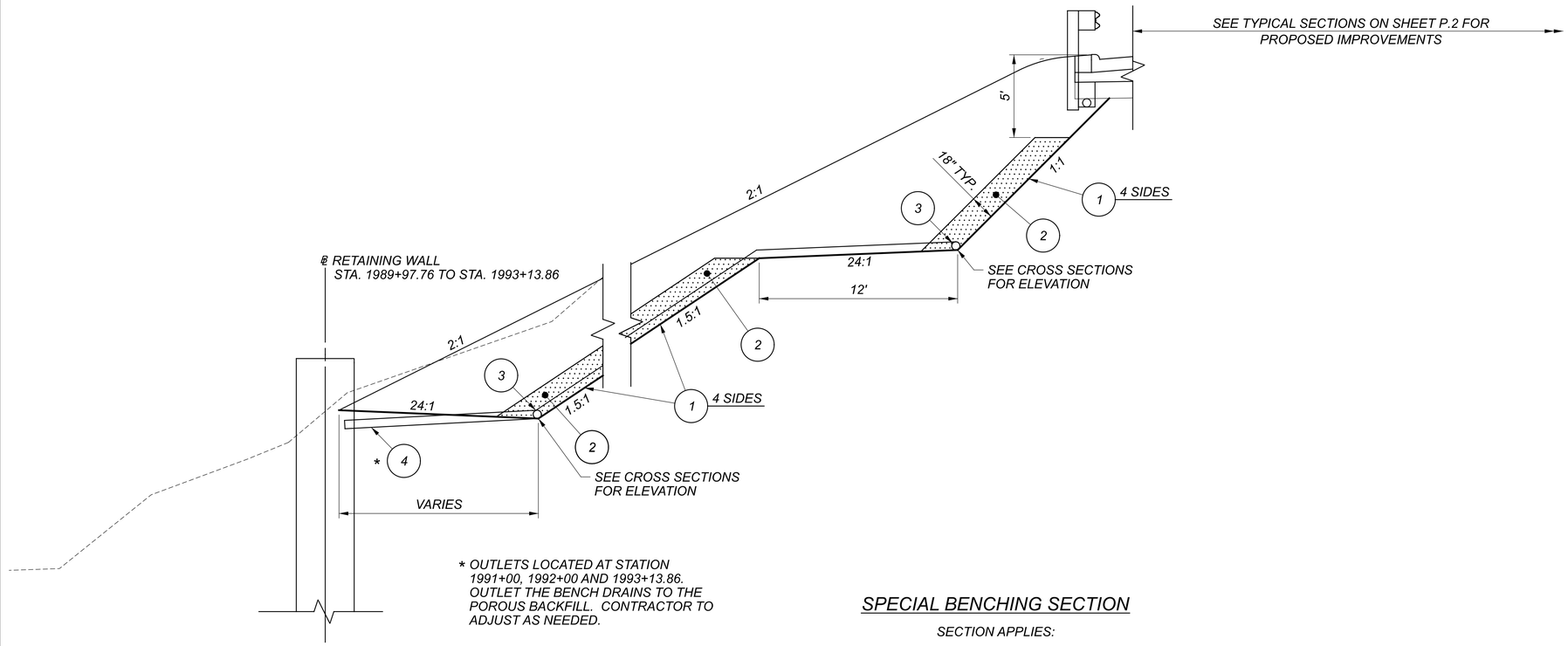
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:48:57 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Roadway\Sheets\114356_GY001.dgn

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER	SLP
REVIEWER	ALB 05/16/25
PROJECT ID	114356
SHEET	P.2
TOTAL	35

LEGEND

1. ITEM 204 - GEOTEXTILE FABRIC, 712.09 TYPE A
2. ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN (NO. 8 STONE)
3. ITEM 611 - 6" CONDUIT, TYPE E, 707.31 (PERFORATED)
4. ITEM 611 - 6" CONDUIT, TYPE F FOR UNDERDRAINS



* OUTLETS LOCATED AT STATION 1991+00, 1992+00 AND 1993+13.86. OUTLET THE BENCH DRAINS TO THE POROUS BACKFILL. CONTRACTOR TO ADJUST AS NEEDED.

SPECIAL BENCHING SECTION

SECTION APPLIES:

STA. 1989+97.76 TO STA. 1993+13.86

TYPICAL SECTION

HAM-275-38.82

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:49:03 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Roadway\Sheets\114356_GY002.dgn

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER	
SLP	
REVIEWER	
ALB	05/16/25
PROJECT ID	
114356	
SHEET	TOTAL
P.3	35

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

UTILITIES

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

ODOT CO ITS
1606 W BROAD STREET
COLUMBUS, OH 43223
614-387-4113
CEN.ITS.LAB@DOT.OHIO.GOV

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

SURVEYING PARAMETERS - OHIO STATE PLANE (NORTH/SOUTH)

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE BELOW FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL
POSITIONING METHOD: OHIO REAL TIME NETWORK (2011)
MONUMENT TYPE: "B"

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 18

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD 83 (2011)(EPOCH 2010.0)
ELLIPSOID: GRS 80
COORDINATE SYSTEM: SPC (3402 OH SOUTH)
MAP PROJECTION: LAMBERT CONFORMAL
PROJECT ADJUSTMENT FACTOR: 1.0000000000
ORIGIN OF COORDINATE SYSTEM: 0,0

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

UNITS ARE IN U.S. SURVEY FEET.

PROJECT CONTROL POINTS
GRID COORDINATES

MON.	NORTH (Y)	EAST (X)	ELEVATION (Z)	STATION	OFFSET	DESCRIPTION
100	390693.697	1433935.967	585.884	1994+07.49	81.23' LT.	5/8" IPINS-STANTEC CAP
101	390525.084	1434331.841	599.014	1989+67.05	87.71' LT.	5/8" IPINS-STANTEC CAP
102	390474.305	1434045.689	526.572	1992+16.66	249.38' LT.	5/8" IPINS-STANTEC CAP
103	390303.759	1434257.215	552.546	1989+42.47	320.00' LT.	5/8" IPINS-STANTEC CAP

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT-OF-WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS). A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRICT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS, AS DEFINED ABOVE, WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 34.4 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FORM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
OBSTRUCTION EVALUATION GROUP
10101 HILLWOOD PARKWAY
FORT WORTH, TX 76177
FAX: (817) 222-5920
HTTP://CEAAA.FAA.GOV

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
OHIO.AIRPORT.PROTECTION@DOT.OHIO.GOV

GENERAL NOTES

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER SLP
REVIEWER ALB 05/16/25
PROJECT ID 114356
SHEET P.4 TOTAL 35

HAM-275-38.82

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:49:08 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Roadway\Sheets\114356_GN001.dgn

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

EXISTING SUBSURFACE DRAINAGE

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS OR AGGREGATE DRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE. UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAINS _____ 40 FT

SEEDING AND MULCHING

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

ITEM 659 - COMMERCIAL FERTILIZER_____ 0.40 TON
ITEM 659 - LIME _____ 0.61 AC
ITEM 659 - WATER _____16 M GAL

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

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.

2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).

   IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.

3. COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.

4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

   PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO C&MS 204.06.

5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.

6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.

7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE. SEE SHEET P.12 FOR QUANTITIES.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING _____ 1 HOUR

ITEM 203 - EMBANKMENT USING NO. 8 AGGREGATE

FURNISH DURABLE, NATURAL AGGREGATE NO. 8 SIZE. PLACE THE AGGREGATE AT THE THICKNESS AND SLOPE AS SHOWN ON THE CROSS-SECTIONS.

PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 203 - GRANULAR EMBANKMENT, AS PER PLAN (NO. 8 STONE).

ITEM SPECIAL STRUCTURES: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTING

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN CONSTRUCTION AND MATERIAL SPECIFICATIONS 455.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S) AND EQUIPMENT AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIANS SHALL BE ACI LEVEL 1 CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TESTS AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR. THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM CONCRETE, MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTING. THE ITEM WILL BE PAID FOR AS FOLLOWS:

UPON APPROVAL OF CONSULTANT 20%
PROGRESSIVE EQUIVALENT PAYMENTS 50%
UPON SUBMISSION OF FINAL REPORT 30%

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

GENERAL NOTES

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER SLP
REVIEWER ALB 05/16/25
PROJECT ID 114356
SHEET P.5 TOTAL 35

HAM-275-38.82
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:49:12 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356401-Engineering_Stantec\Roadway\Sheets\114356_GN002.dgn

SEQUENCE OF CONSTRUCTION

THE CONTRACTOR SHALL COLLECT AND STOCKPILE THE EXISTING TEMPORARY TRAFFIC CONTROL ITEMS THAT HAVE BEEN ERECTED INCLUDING BUT NOT LIMITED TO SIGNS, BARRIER AND DRUMS. ODOT TO COORDINATE WITH THE OWNER TO RETRIEVE THESE ITEMS.

THE CONTRACTOR SHALL ERECT THE TRAFFIC CONTROL AS SHOWN IN THE PLANS AND MAINTAIN TRAFFIC USING THE EXISTING PAVEMENT.

COMPLETE ALL PROPOSED WORK AS SHOWN IN THE PLANS.

ONCE CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL REMOVE ANY UNNECESSARY TRAFFIC CONTROL DEVICES AND SHIFT TRAFFIC BACK OVER TO THE EXISTING AND CONSTRUCTED PAVEMENTS AND MAINTAIN TRAFFIC PER SCD MT-95.45. REMOVE THE EXISTING TEMPORARY PAVEMENT, REGRADE THE EXISTING MEDIAN TO PROVIDE A SMOOTH AND DRAINABLE SURFACE AND SEED AND MULCH AS NEEDED. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - MAINTAINING TRAFFIC

A MINIMUM OF 2 LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING CONCRETE AND TEMPORARY PAVEMENT.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS NEEDED.

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

DUST CONTROL

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

ITEM 616 - WATER _____ 25 M GAL

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW SHALL NOT BE PERMITTED AT PROJECT COST NOR TIME COMPENSATION. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

FOR LANE CLOSURES THAT MEET ALL OF THE CRITERIA LISTED BELOW: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

CRITERIA

- . ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
- . AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION; AND,
- . AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS AND/OR IN CONTRARY TO OTHER TRAFFIC CONTROL DEVICE IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE SHIFT DURATION SHALL NOT BE LESS THAN THE LEO'S MINIMUM SHOW-UP TIME REQUIRED BY THEIR LAW ENFORCEMENT AGENCY.THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE _____. 24 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

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

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

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

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

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

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

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

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

DELINEATION OF PORTABLE AND PERMANENT BARRIER

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

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

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

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

ITEM 614 - BARRIER REFLECTOR, TYPE 1 (ONE-WAY) ____ 14 EACH
ITEM 614 - OBJECT MARKER, ONE-WAY _____ 14 EACH
ITEM 614 - INCREASED BARRIER DELINEATION _____ 670 FEET

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

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF THE RUN OF INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

MAINTENANCE OF TRAFFIC - GENERAL NOTES

HAM-275-38.82
MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:49:18 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\MOT\Sheets\114356_MN001.dgn

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER SLP
REVIEWER ALB 05/16/25
PROJECT ID 114356
SHEET P.6 TOTAL 35

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE		
ITEM	*DURATION OF CLOSURE*	*NOTICE DUE TO PERMITS & PIO*
RAMP & ROAD CLOSURES	*>= 2 WEEKS*	*21 CALENDAR DAYS PRIOR TO CLOSURE*
	> 12 HOURS & < 2 WEEKS	*14 CALENDAR DAYS PRIOR TO CLOSURE*
	<= 12 HOURS	*4 BUSINESS DAYS PRIOR TO CLOSURE*
LANE CLOSURES & RESTRICTIONS	*>= 2 WEEKS*	*14 CALENDAR DAYS PRIOR TO CLOSURE*
	< 2 WEEKS	*5 BUSINESS DAYS PRIOR TO CLOSURE*
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	*N/A*	*14 CALENDAR DAYS PRIOR TO IMPLEMENTATION*

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

MAINTENANCE OF TRAFFIC - GENERAL NOTES

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER
SLP

REVIEWER
ALB 05/16/25

PROJECT ID
114356

SHEET P.7 TOTAL 35

HAM-275-38.82

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:49:22 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\MOT\Sheets\114356_MN002.dgn

END ROAD WORK
G20-2-48

1000'

EXISTING WORK ZONE CHANNELIZING LINE

DRUMS @ 55' SPACING

EXISTING WORK ZONE EDGE LINE

12'

12'

EASTBOUND LANES

℄ CONSTRUCTION I-275

1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987

MATCH LINE STA. 1987+50

WESTBOUND LANES

LEGEND

PB - PORTABLE BARRIER, UNANCHORED

IAU - WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)

→ - DIRECTION OF TRAVEL

▨ - WORK ZONE

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC
STA. 1975+00.00 TO STA. 1987+50.00

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER: SLP
REVIEWER: ALB 05/16/25
PROJECT ID: 114356
SHEET: P.8 TOTAL: 35

HAM-275-38.82

MODEL: BF_XCL_HAM275 - Plan | PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:49:33 AM USER: siparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\40-Engineering_Stantec\MOT\Sheets\114356_MP001.dgn

LANE USE DETAIL

(LOOKING WEST)
N.T.S.

LEGEND

- PB - PORTABLE BARRIER, UNANCHORED
- IAU - WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)
- → - DIRECTION OF TRAVEL
- ▨ - WORK ZONE

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC
STA. 1987+50.00 TO STA. 2000+00.00

HAM-275-38.82

MODEL: BF_XCL_HAM275 - Plan 2 PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:49:40 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\40-Engineering_Stantec\MOT\Sheets\114356_MP002.dgn

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER: SLP
REVIEWER: ALB 05/16/25
PROJECT ID: 114356
SHEET: P.9 TOTAL: 35

SHEET NUMBER													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.4	P.5	P.12	P.13	P.29	P.32	P.33	P.35						01/IMS						
																		ROADWAY	
LS													LS	201	11000	LS		CLEARING AND GRUBBING	
			707										707	202	23000	707	SY	PAVEMENT REMOVED	
		375											375	202	38000	375	FT	GUARDRAIL REMOVED	
		7,059											7,059	203	10000	7,059	CY	EXCAVATION	
		5,856											5,856	203	20000	5,856	CY	EMBANKMENT	
		890											890	203	35001	890	CY	GRANULAR EMBANKMENT, AS PER PLAN, (NO.8 STONE)	P.5
		834	796										1,630	204	10000	1,630	SY	SUBGRADE COMPACTION	
		228											228	204	13000	228	CY	EXCAVATION OF SUBGRADE	
		280											280	204	30020	280	CY	GRANULAR MATERIAL, TYPE C	
	1												1	204	45000	1	HOUR	PROOF ROLLING	
		834											834	204	50000	834	SY	GEOTEXTILE FABRIC	
		3,897											3,897	204	50000	3,897	SY	GEOTEXTILE FABRIC, TYPE A (712.09)	
		375											375	606	15050	375	FT	GUARDRAIL, TYPE MGS	
																		EROSION CONTROL	
		2											2	601	32200	2	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
		2,965											2,965	659	10000	2,965	SY	SEEDING AND MULCHING	
	0.4												0.4	659	20000	0.4	TON	COMMERCIAL FERTILIZER	
	0.61												0.61	659	31000	0.61	ACRE	LIME	
	16												16	659	35000	16	MGAL	WATER	
													5,000	832	30000	5,000	EACH	EROSION CONTROL	
																		DRAINAGE	
		0.3											0.3	602	20000	0.3	CY	CONCRETE MASONRY	
		282											282	605	11100	282	FT	6" SHALLOW PIPE UNDERDRAINS	
	40	12											52	605	13300	52	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
		337											337	605	14000	337	FT	6" BASE PIPE UNDERDRAINS	
		208											208	611	00510	208	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
		630											630	611	01400	630	FT	6" CONDUIT, TYPE E, 707.31 (PERFORATED)	
		100											100	611	06700	100	FT	15" CONDUIT, TYPE F, 707.05 TYPE C, 707.21 OR 707.33	
		1											1	611	98180	1	EACH	CATCH BASIN, NO. 3A	
																		PAVEMENT	
			140										140	304	20000	140	CY	AGGREGATE BASE	
			701										701	452	15010	701	SY	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
			347										347	609	12000	347	FT	COMBINATION CURB AND GUTTER, TYPE 2	
			287										287	618	40200	287	FT	RUMBLE STRIPS, SHOULDER (CONCRETE)	
																		TRAFFIC CONTROL	
			17										17	621	00100	17	EACH	RPM	
		4											4	626	00110	4	EACH	BARRIER REFLECTOR, TYPE 2, ONE-WAY	
			36										36	630	03100	36	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
			2										2	630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
			2										2	630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
			0.78										0.78	646	10010	0.78	MILE	EDGE LINE, 6"	
			0.4										0.4	646	10110	0.4	MILE	LANE LINE, 6"	
																		RETAINING WALLS (001)	
					3,214								3,214	507	00400	3,214	FT	STEEL PILES, MISC.: SOLDIER PILES 2-HP14x89	P.29
	LS												LS	511	81200	LS		CONCRETE, MISC.:CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTING	P.5
								53					53	511	81300	53	EACH	CONCRETE, MISC.: PRECAST CONCRETE PANEL (2'-0")	P.29
								106					106	511	81300	106	EACH	CONCRETE, MISC.: PRECAST CONCRETE PANEL (3'-0")	P.29
								53					53	511	81300	53	EACH	CONCRETE, MISC.: PRECAST CONCRETE PANEL (4'-0")	P.29
						240							240	518	20000	240	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
						42							42	518	21100	42	CY	POROUS BACKFILL	
					2,018								2,018	524	94803	2,018	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN	P.29
					540								540	524	94805	540	FT	DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK, AS PER PLAN	P.29
					8								8	524	95000	8	FT	DRILLED SHAFTS, MISC.: EXTENSION	P.33
					1,981								1,981	524	95000	1,981	FT	DRILLED SHAFTS, MISC.: PLUG PILE, 30" DIAMETER, UNREINFORCED	P.29
				2,743									2,743	SPECIAL	53051020	2,743	SF	RETAINING WALL, TIMBER LAGGING	P.29
				53									53	866	00101	53	EACH	GROUND ANCHOR, AS PER PLAN270 KIP MAX. TEST LOAD	P.29

GENERAL SUMMARY

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER SLP
REVIEWER ALB 05/16/25
PROJECT ID 114356
SHEET P.10 TOTAL 35

HAM-275-38.82

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:49:45 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356401-Engineering_Stantec\Roadway\Sheets\114356_GG001.dgn

SHEET NUMBER													PART.	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
P.6	P.12												01/IMS						
																		MAINTENANCE OF TRAFFIC	
24													24	614	11110	24	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
670													670	614	11630	670	FT	INCREASED BARRIER DELINEATION	
	1												1	614	12380	1	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
14													14	614	13310	14	EACH	BARRIER REFLECTOR, TYPE 1, (ONE-WAY)	
14													14	614	13350	14	EACH	OBJECT MARKER, ONE WAY	
25													25	616	10000	25	MGAL	WATER	
	670												670	622	41100	670	FT	PORTABLE BARRIER, UNANCHORED	
																		INCIDENTALS	
LS													LS	614	11000	LS		MAINTAINING TRAFFIC	
													LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
													LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

HAM-275-38.82

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:49:50 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Roadway\Sheets\114356_GG002.dgn

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER
SLP

REVIEWER
ALB 05/16/25

PROJECT ID
114356

SHEET P.11 TOTAL 35

ROADWAY AND DRAINAGE SUBSUMMARY																
SHEET NO.	REF NO.	STATION		SIDE	202	601	602	605			606	611				626
					GUARDRAIL REMOVED	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	CONCRETE MASONRY	6" SHALLOW PIPE UNDERDRAINS	6" UNCLASSIFIED PIPE UNDERDRAINS	6" BASE PIPE UNDERDRAINS	GUARDRAIL, TYPE MGS	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	15" CONDUIT, TYPE F 707.05 TYPE C, 707.21 OR 707.33	CATCH BASIN, NO. 3A	6" CONDUIT, TYPE E, 707.31 (PERFORATED)	BARRIER REFLECTOR, TYPE 2, ONE-WAY
		FROM	TO		FT	CY	CY	FT	FT	FT	FT	FT	FT	EACH	FT	EACH
P.14	R-1	1989+60.47	1993+42.56	LT	375											
P.14	GR-1	1989+60.47	1993+42.56	LT							375					4
P.14	D-1	1993+11.53	1993+30.21	LT		1.34	0.3						100	1		
P.14	UD-1	1989+78.55	1992+64.80	LT				282		282		13				
P.14	UD-2	1992+64.80	1993+20.48	LT						55						
P.14	UD-3	1993+20.48	1993+32.00	LT					12							
P.14	UD-4	1989+97.76	1991+00.00	LT								65			202	
P.14	UD-5	1991+00.00	1992+00.00	LT								65			200	
P.14	UD-6	1992+00.00	1993+13.86	LT								65			228	
TOTALS CARRIED TO GENERAL SUMMARY					375	2	0.3	282	12	337	375	208	100	1	630	4

EARTHWORK AND SEEDING QUANTITIES										
STATION		203			204					659
		EXCAVATION	EMBANKMENT	GRANULAR EMBANKMENT, AS PER PLAN (NO. 8 STONE)	EXCAVATION OF SUBGRADE	GRANULAR MATERIAL, TYPE C	GEOTEXTILE FABRIC, 712.09 TYPE A	GEOTEXTILE FABRIC	SUBGRADE COMPACTION	SEEDING AND MULCHING
FROM	TO	CY	CY	CY	CY	CY	SY	SY	SY	SY
1989+78.55	1990+00.00	265	204	30	20	20	130	59	59	115
1990+00.00	1990+50.00	1172	900	138	42	45	605	137	137	459
1990+50.00	1991+00.00	1069	916	138	35	46	605	137	137	453
1991+00.00	1991+50.00	1011	923	138	31	46	603	137	137	453
1991+50.00	1992+00.00	1092	921	137	32	46	601	137	137	459
1992+00.00	1992+50.00	1092	892	135	38	46	593	137	137	450
1992+50.00	1992+64.80	311	254	40	13	14	173	41	41	129
1992+64.80	1993+00.00	714	571	92	17	17	405	49	49	294
1993+00.00	1993+32.00	333	275	42	0	0	182	0	0	153
TOTALS CARRIED TO GENERAL SUMMARY		7059	5856	890	228	280	3897	834	834	2965

MAINTENANCE OF TRAFFIC QUANTITIES					
SHEET NO.	REF NO.	STATION		614	622
				WORK ZONE IMPACT ATTENUATOR 24" HAZARDS, (UNIDIRECTIONAL)	PORTABLE BARRIER, UNANCHORED
		FROM	TO	EACH	FT
P.9	PB-1	1989+37.14	1995+20.12		670
P.9	IAU-1	1995+20.12		1	
TOTALS CARRIED TO GENERAL SUMMARY				1	670

SUBSUMMARY

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER SLP

REVIEWER ALB 05/16/25

PROJECT ID 114356

SHEET P.12 TOTAL 35

HAM-275-38.82

SUBSUMMARY

PAVEMENT CALCULATIONS													
SHEET NO.	REF NO.	STATION		LENGTH	WIDTH	SIDE	202	204	304	452		609	618
							PAVEMENT REMOVED	SUBGRADE COMPACTION	6" AGGREGATE BASE	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	COMBINATION CURB AND GUTTER, TYPE 2	RUMBLE STRIPS, SHOULDER (CONCRETE)
		FROM	TO	FT	FT		SY	SY	CY	SY	SY	FT	FT
P.14	P-1	1989+78.55	1992+64.80	286.25	22.00	LT	707	700	117	382	319		287
P.14	P-2	1989+78.55	1993+23.86	345.31	2.50	LT		96	23			347	
TOTALS CARRIED TO GENERAL SUMMARY							707	796	140	701		347	287

SIGNING SUBSUMMARY								
SHEET NO.	REF NO.	STATION	SIDE	CODE	SIZE (INCHES)	630		
						GROUND MOUNTED SUPPORT, NO. 3 POST	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
						FT	EACH	EACH
P.14	S-1	1991+35.75	LT.	M3-2-36	36X18	18/18	2	2
			LT.	M1-1-60	45X36			
TOTALS CARRIED TO GENERAL SUMMARY						36	2	2

PAVEMENT MARKING SUBSUMMARY					
STATION		SIDE	621	646	
			RPM, ONE-WAY WHITE	EDGE LINE, 6"	LANE LINE, 6"
FROM	TO		EACH	MI	MI
1977+16.83	1997+93.59	LT		0.78	
1977+16.83	1997+93.59	LT	17		0.40
TOTALS CARRIED TO GENERAL SUMMARY			17	0.78	0.40

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER SLP

REVIEWER ALB 05/16/25

PROJECT ID 114356

SHEET P.13 TOTAL 35

HAM-275-38.82

A -

STA. 1989+78.55
BEGIN PAVEMENT TAPER, 71.45' LT.
BEGIN SHOULDER TAPER, 81.50' LT.

STA. 1989+98.55
END PAVEMENT TAPER, 70.86' LT.
END SHOULDER TAPER, 80.86' LT.

B -

STA. 1992+44.80
BEGIN PAVEMENT TAPER, 67.46' LT.
BEGIN SHOULDER TAPER, 77.46' LT.

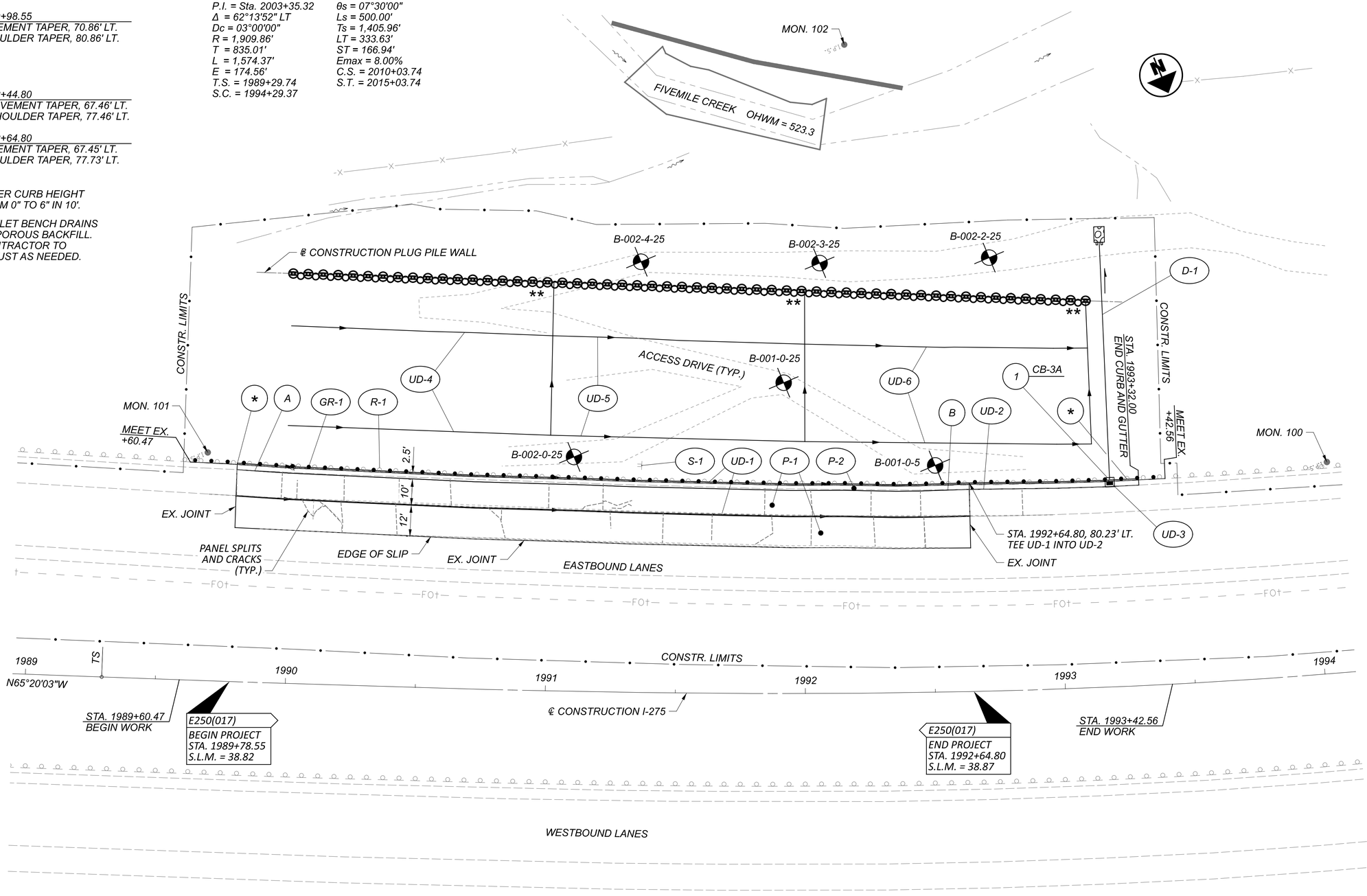
STA. 1992+64.80
END PAVEMENT TAPER, 67.45' LT.
END SHOULDER TAPER, 77.73' LT.

* TAPER CURB HEIGHT FROM 0" TO 6" IN 10'.

** OUTLET BENCH DRAINS TO POROUS BACKFILL. CONTRACTOR TO ADJUST AS NEEDED.

CURVE DATA
I-275
CURVE NO. 1

P.I. = Sta. 2003+35.32
Δ = 62°13'52" LT
Dc = 03°00'00"
R = 1,909.86'
T = 835.01'
L = 1,574.37'
E = 174.56'
T.S. = 1989+29.74
S.C. = 1994+29.37
θs = 07°30'00"
Ls = 500.00'
Ts = 1,405.96'
LT = 333.63'
ST = 166.94'
Emax = 8.00%
C.S. = 2010+03.74
S.T. = 2015+03.74



NOTE:

CONSTRUCTION LIMITS EXTEND TO INCLUDE THE LIMITS OF THE PROPOSED PAVEMENT MARKINGS AND THE AREA FOR THE REMOVAL OF THE TEMPORARY PAVEMENT AND REGRADING OF THE MEDIAN.

FOR QUANTITIES, SEE SHEETS P.12-P.13
FOR PROFILE, SEE SHEET P.15
FOR STORM SEWER PROFILE, SEE SHEET P.28
FOR RETAINING WALL, SEE SHEETS P.29-P.35

HORIZONTAL SCALE IN FEET
0 10 20 40

PLAN
STA. 1989+00.00 TO STA. 1994+00.00

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER SLP
REVIEWER ALB 05/16/25
PROJECT ID 114356
SHEET P.14 TOTAL 35

HAM-275-38.82

MODEL: BF_XCL_HAM276 - Plan 3 (Sheet) PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:50:11 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01Active Projects\District 08\Hamilton\114356 401-Engineering_Stantec\Roadway\Sheets\114356_GP001.dgn

HAM-275-38.82

MODEL: Plan-Profile | PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:50:19 AM USER: sparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\Active Projects\District 08\Hamilton\114356\40-Engineering\Engineering_Stantec\Roadway\Sheets\114356_GP001.dgn

PROFILE

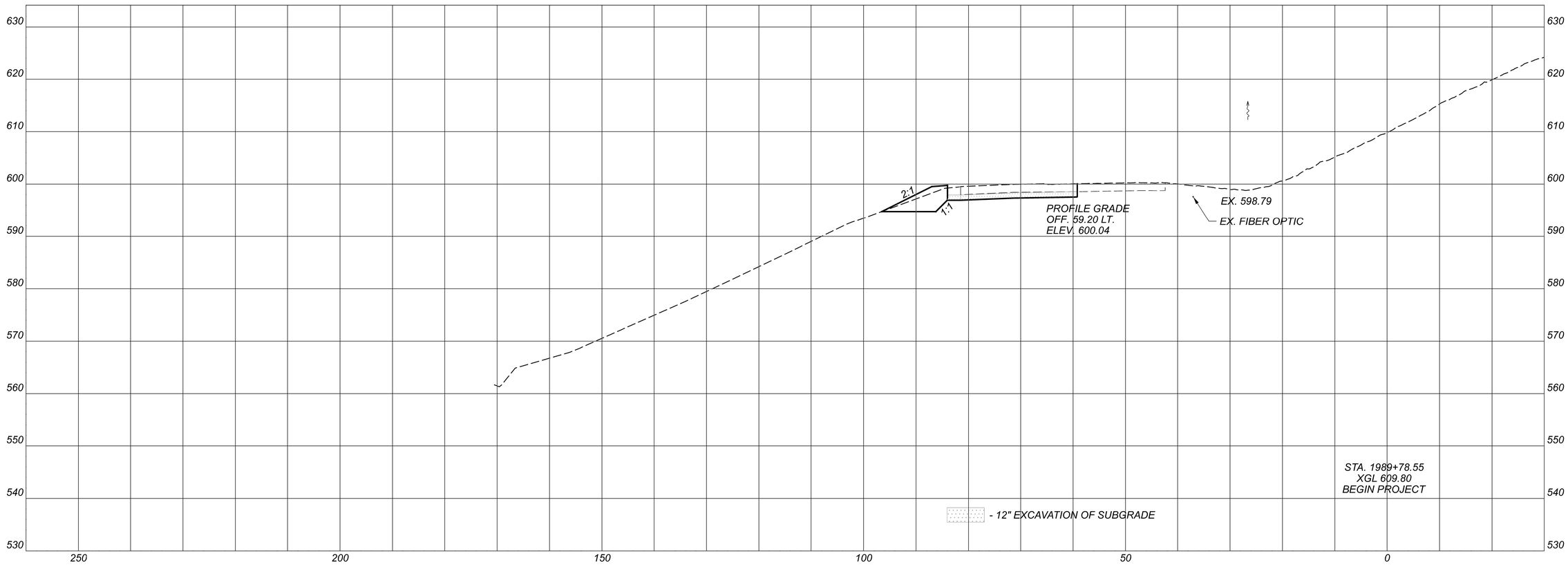
STA. 1989+00.00 TO STA. 1994+00.00

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER	SLP
REVIEWER	ALB 05/16/25
PROJECT ID	114356
SHEET	P.15
TOTAL	35

HAM-275-38.82

MODEL: BF_XCL_HAM275 - 1989+78.55 (Sheet) PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:50:48 AM USER: slparker
pw:\\ohlodot-pw.bentley.comsohlodot-pw-02\Documents\01Active Projects\District 08\Hamilton\114356\40i-Engineering_Stantec\Roadway\Sheets\114356_XS001.dgn



CROSS SECTIONS
STA. 1989+78.55

Sheet Totals		
Seeding	Cut	Fill
-	-	-

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER
SLP

REVIEWER
ALB 05/16/25

PROJECT ID
114356

SHEET P.16 | TOTAL 35

HAM-275-38.82

MODEL: BF_XCL_HAM275 - 1990+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:5:05 AM USER: sjparker
pw:\\ohlodot-pw.bentley.com:ohlodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\40-Engineering\Stantec\Roadway\Sheets\114356_XS001.dgn

630
620
610
600
590
580
570
560
550
540
530

250 200 150 100 50 0

2:1
1:1
PROFILE GRADE
OFF. 58.83 LT.
ELEV. 599.64
EX. 598.44
EX. FIBER OPTIC
ITEM 203 - GRANULAR EMBANKMENT,
AS PER PLAN (NO. 8 STONE)
ELEV. 581.00
1.5:1
ITEM 203 - GRANULAR EMBANKMENT,
AS PER PLAN (NO. 8 STONE)
24:1
ELEV. 563.01
556.15
STA. 1990+00.00
XGL 609.19
- 12" EXCAVATION OF SUBGRADE

CROSS SECTIONS
STA. 1990+00.00

Sheet Totals		
Seeding	Cut	Fill
-	-	-

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

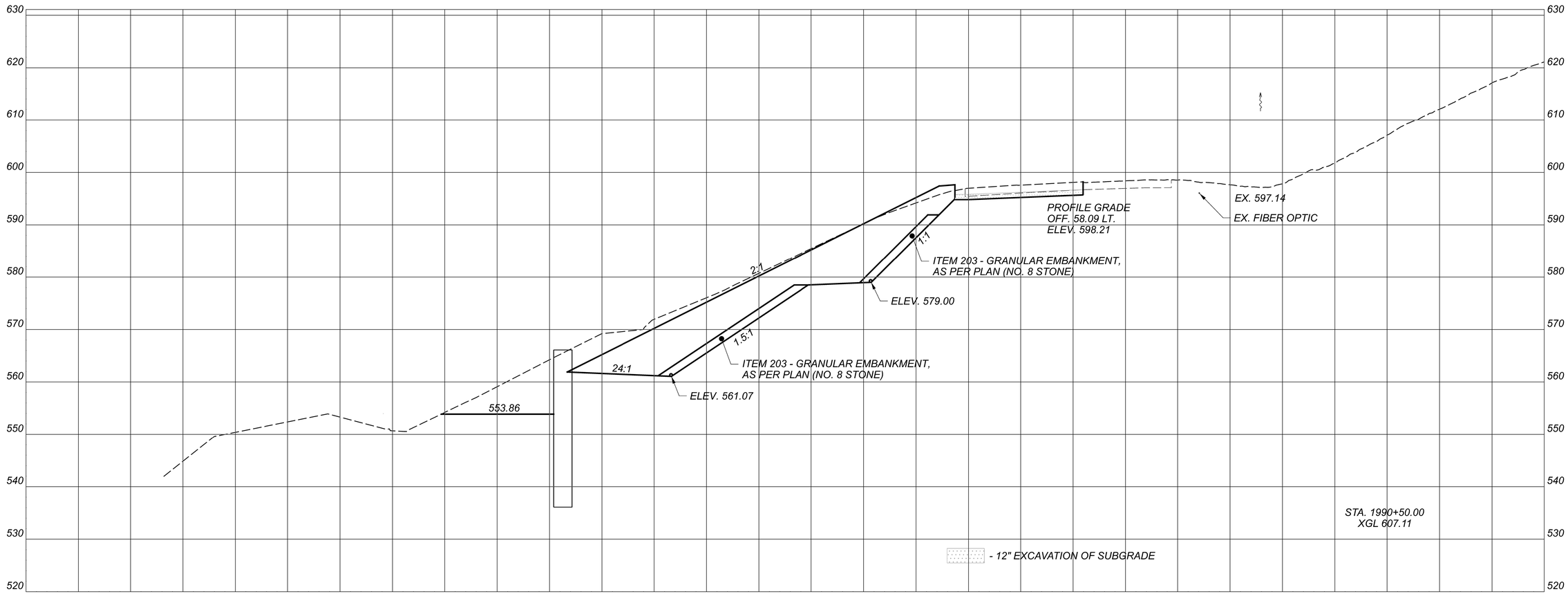
DESIGNER
SLP

REVIEWER
ALB 05/16/25

PROJECT ID
114356

SHEET P.17 TOTAL 35

HAM-275-38.82



CROSS SECTIONS
STA. 1990+50.00

Sheet Totals		
Seeding	Cut	Fill
-	-	-

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

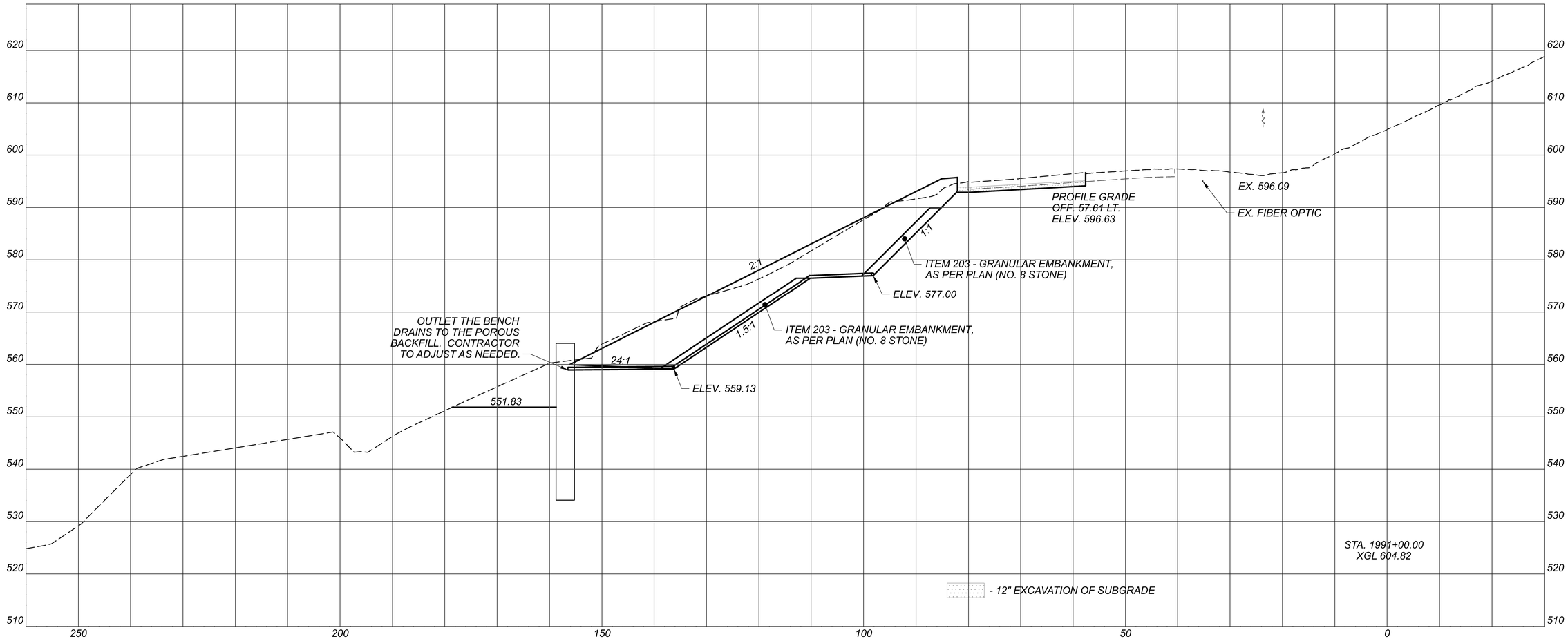
DESIGNER
SLP

REVIEWER
ALB 05/16/25

PROJECT ID
114356

SHEET	TOTAL
P.18	35

HAM-275-38.82



CROSS SECTIONS
STA. 1991+00.00

Sheet Totals		
Seeding	Cut	Fill
-	-	-

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

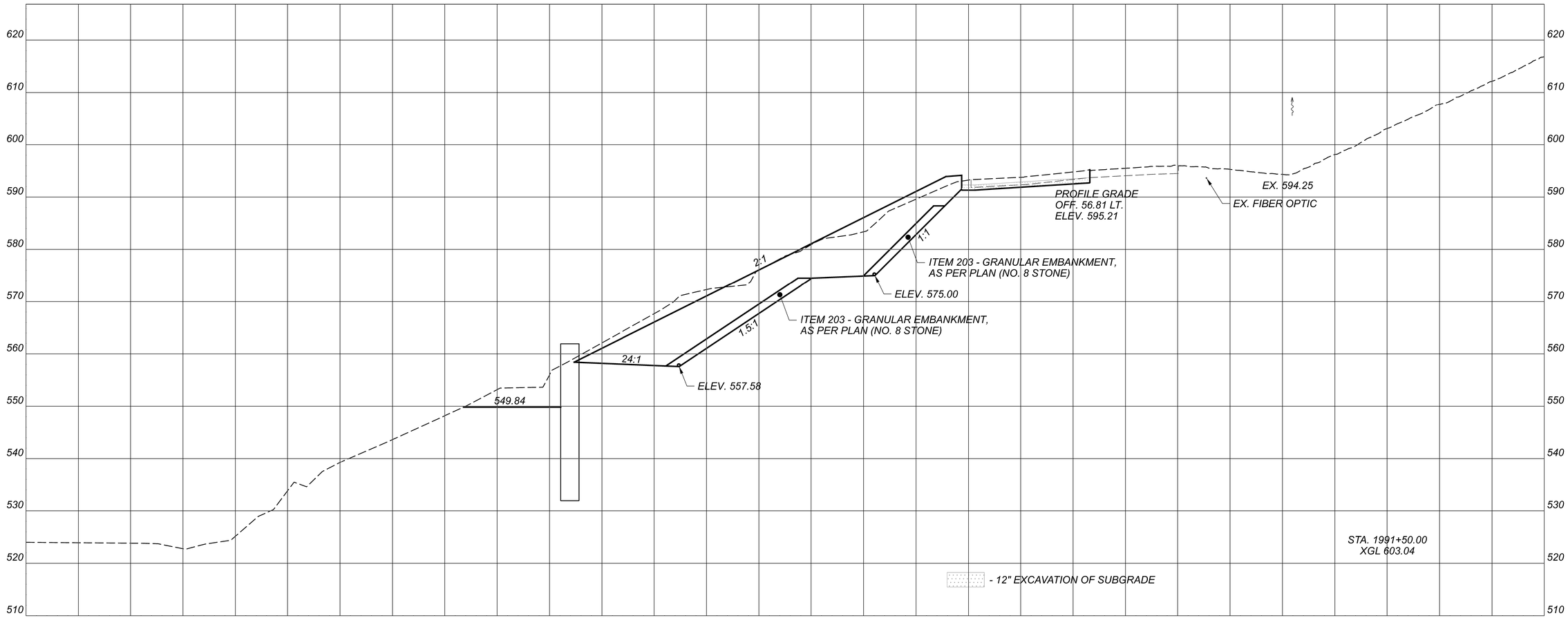
DESIGNER
SLP

REVIEWER
ALB 05/16/25

PROJECT ID
114356

SHEET	TOTAL
P.19	35

CROSS SECTIONS
STA. 1991+50.00



Sheet Totals		
Seeding	Cut	Fill
-	-	-

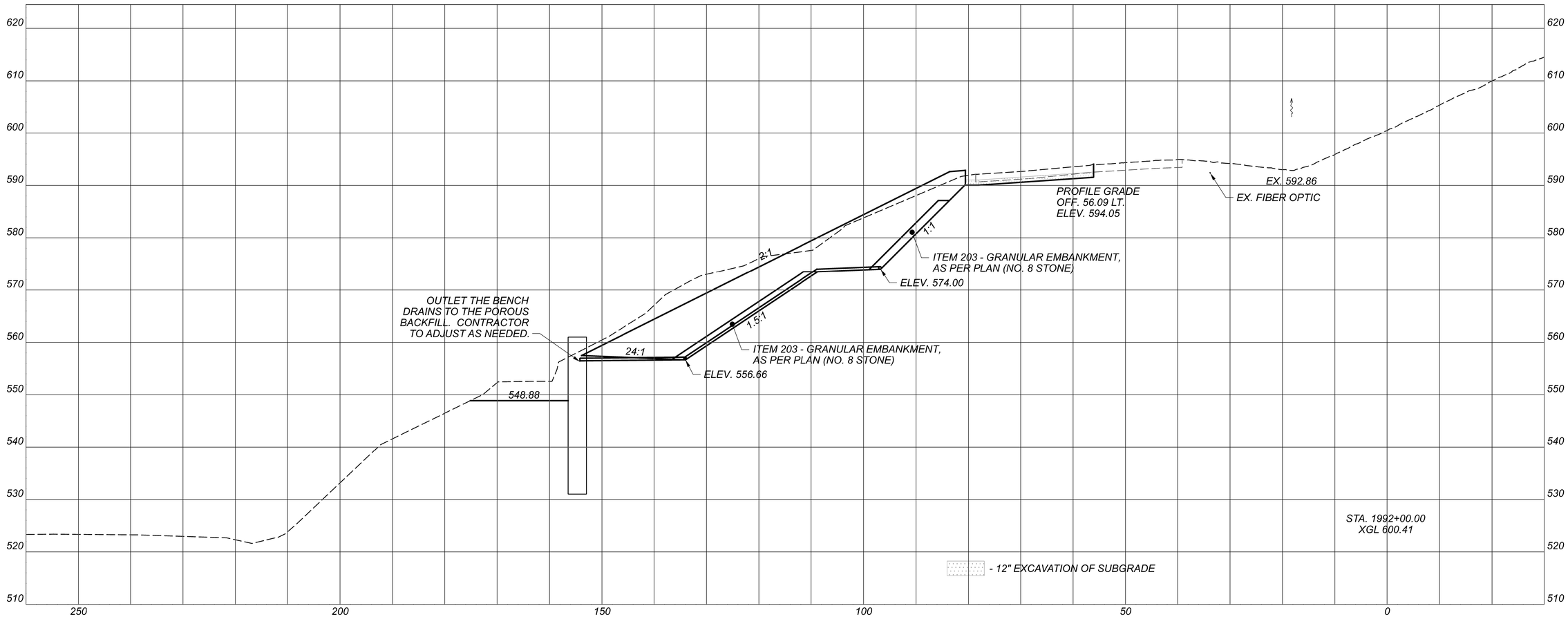
DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER	SLP
REVIEWER	ALB 05/16/25
PROJECT ID	114356
SHEET	P.20
TOTAL	35

HAM-275-38.82

MODEL: BF_XCL_HAM275 - 1991+50.00 [Sheet] PAPERSIZE: 34x22 (in) DATE: 7/8/2025 TIME: 8:51:58 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Roadway\Sheets\114356_XS001.dgn

HAM-275-38.82



CROSS SECTIONS
STA. 1992+00.00

Sheet Totals		
Seeding	Cut	Fill
-	-	-

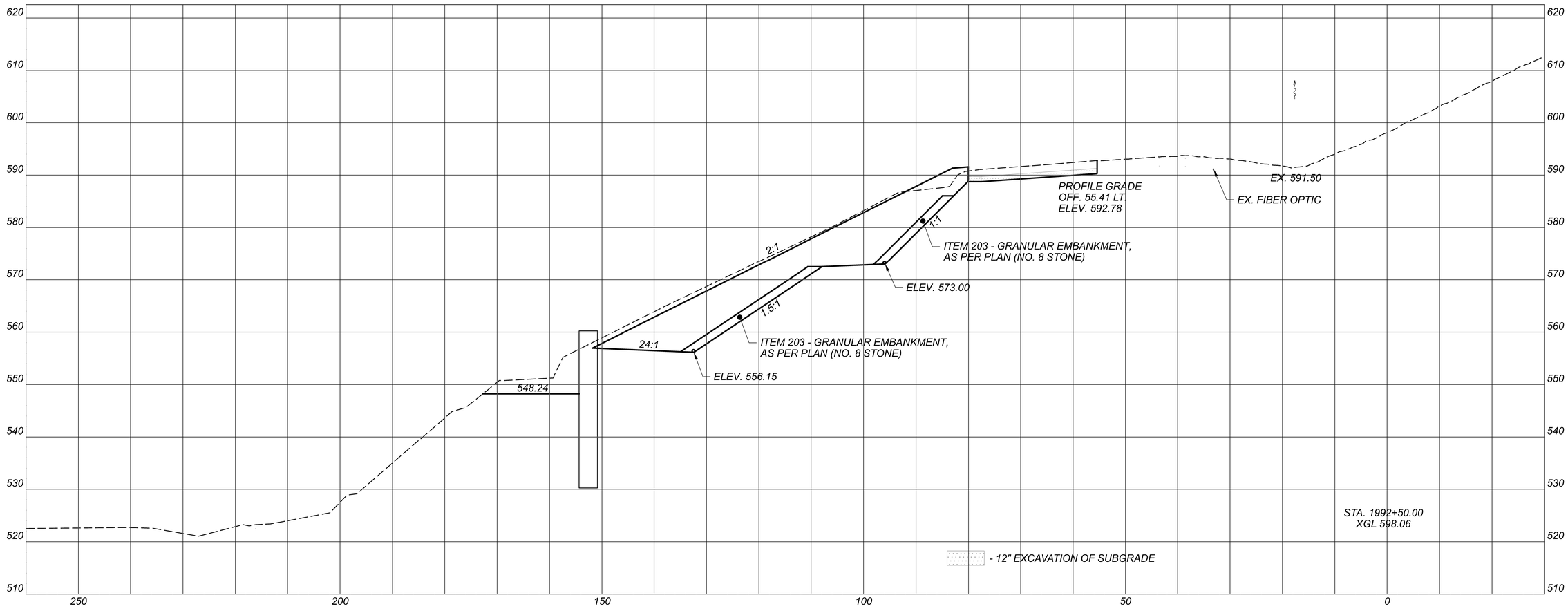
DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER
SLP

REVIEWER
ALB 05/16/25

PROJECT ID
114356

SHEET P.21 TOTAL 35



CROSS SECTIONS
STA. 1992+50.00

HAM-275-38.82

MODEL: BF_XCL_HAM275 - 1992+50.00 [Sheet] PAPERSIZE: 34x22 (in) DATE: 7/8/2025 TIME: 8:52:22 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Roadway\Sheets\114356_XS001.dgn

Sheet Totals		
Seeding	Cut	Fill
-	-	-

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

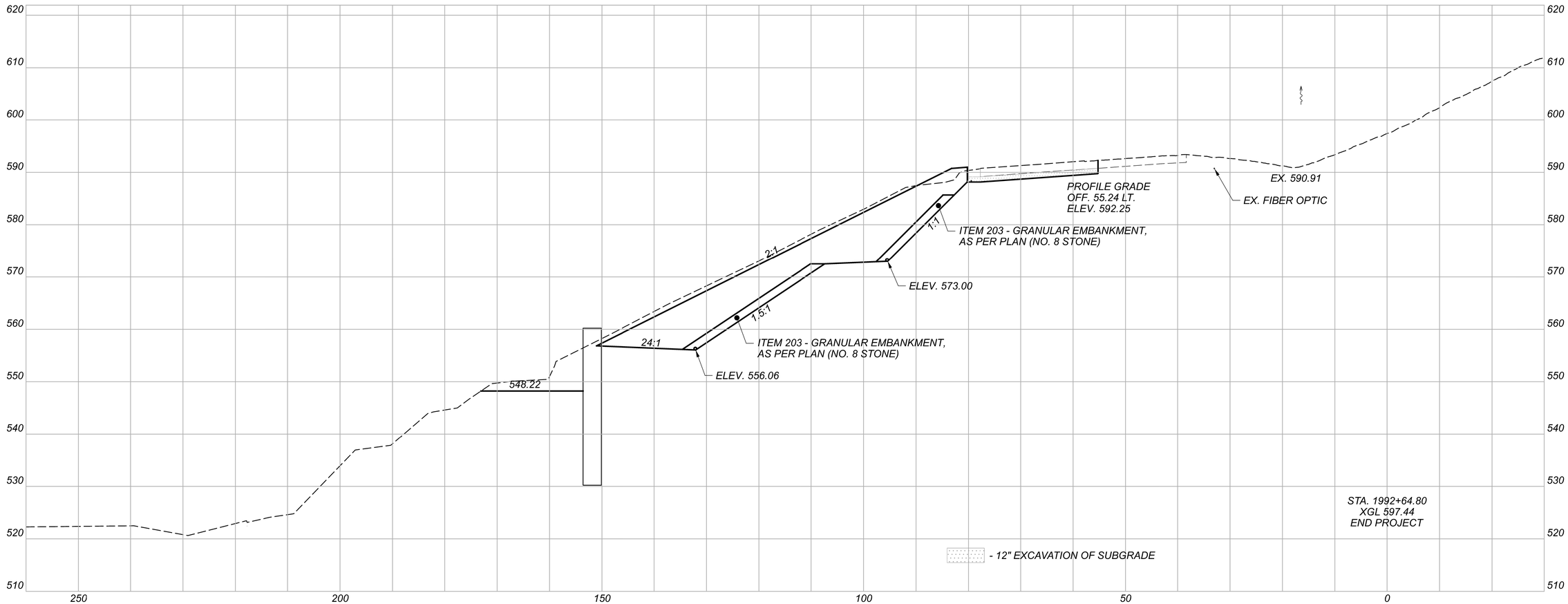
DESIGNER
SLP

REVIEWER
ALB 05/16/25

PROJECT ID
114356

SHEET P.22 | TOTAL 35

HAM-275-38.82



CROSS SECTIONS
STA. 1992+64.80

Sheet Totals		
Seeding	Cut	Fill
-	-	-

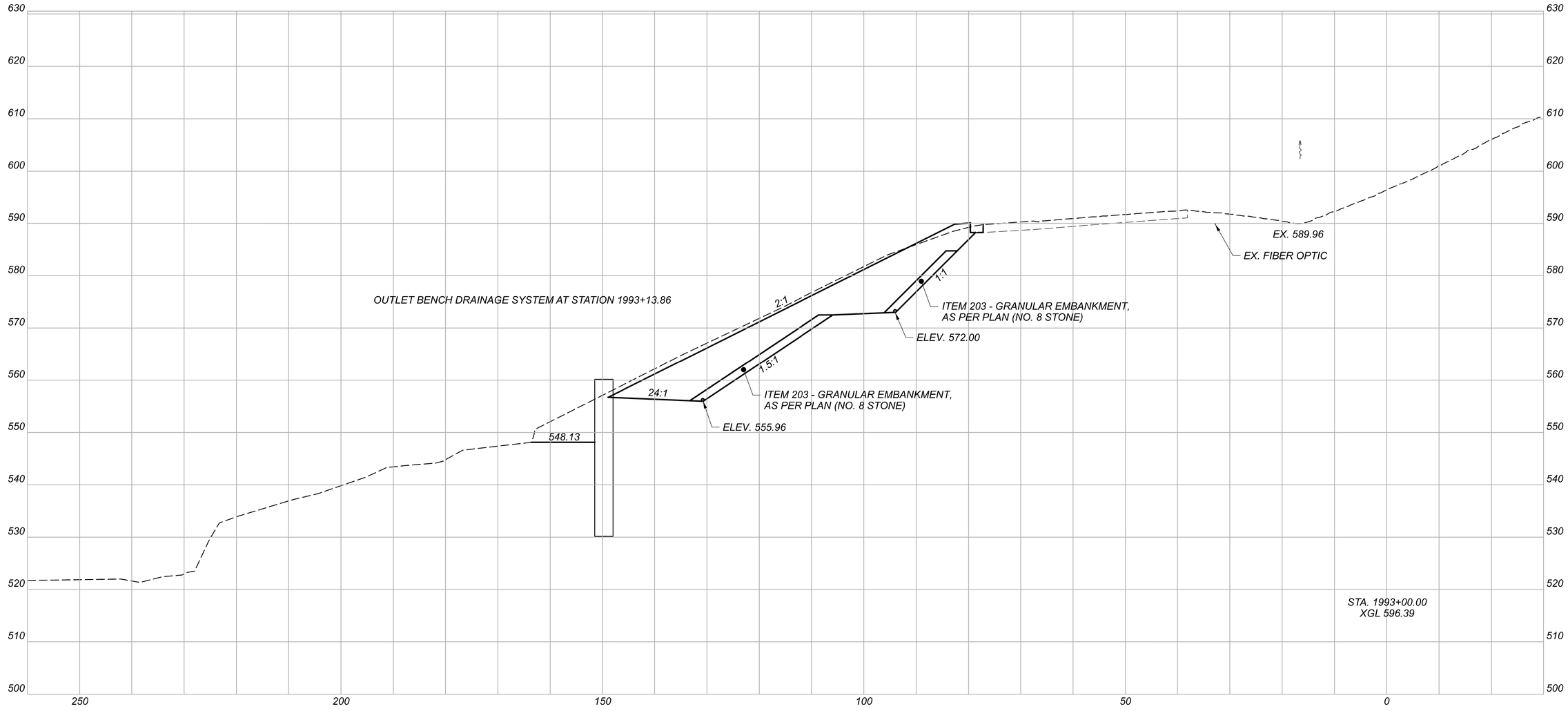
DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER: SLP

REVIEWER: ALB 05/16/25

PROJECT ID: 114356

SHEET: P.23 TOTAL: 35



CROSS SECTIONS
STA. 1993+00.00

HAM-275-38.82

MODEL: BF_XCL_HAM276 - 1993+00.00 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:52:46 AM USER: sparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01Active Projects\District 08\Hamilton\114356\40-Engineering_Stantec\Roadway\Sheets\114356_XS001.dgn

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER: SLP

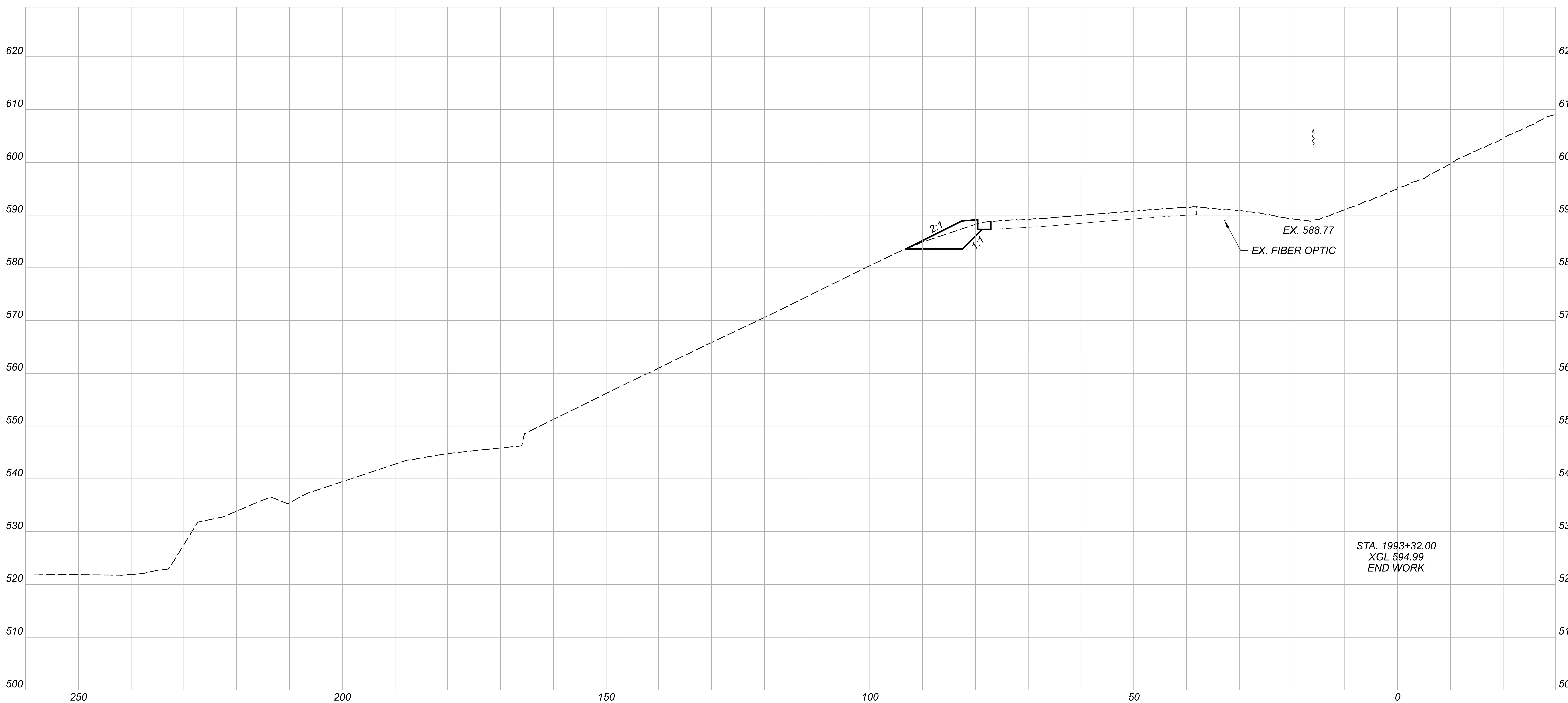
REVIEWER: ALB 05/16/25

PROJECT ID: 114356

Sheet Totals		
Seeding	Cut	Fill
.	.	.

SHEET: P.24 TOTAL: 35

CROSS SECTIONS
STA. 1993+32.00



Sheet Totals		
Seeding	Cut	Fill
•	•	•

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER: SLP
REVIEWER: ALB 05/16/25
PROJECT ID: 114356
SHEET: P.25 TOTAL: 35

HAM-275-38.82

MODEL: BF_XCL_HAM276 - 1993+23.86 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:53:04 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Roadway\Sheets\114356_XS001.dgn

SUPERELEVATION TABLE - CURVE NO.1 - I-275

P.I. STA. 2003+35.32

Dc = 03° 00' 00"

RIGHT EASTBOUND LANE					CENTERLINE CONTROL	
EDGE OF PAVEMENT ELEVATION	ELEVATION CORRECTION	CROSS SLOPE MATCH EX.	WIDTH	PROFILE GRADE / EXISTING JOINT ELEVATION **	STATION	PROFILE GRADE OFFSET FROM CENTERLINE
599.83	*-0.21*	*-0.0172*	*12*	*600.04*	*1989+78.55*	*59.20*
599.34	*-0.30*	*-0.0251*	*12*	*599.64*	*1990+00.00*	*58.83*
598.56	*-0.40*	*-0.0331*	*12*	*598.96*	*1990+25.00*	*58.46*
597.72	*-0.49*	*-0.0407*	*12*	*598.21*	*1990+50.00*	*58.09*
596.81	*-0.60*	*-0.0496*	*12*	*597.41*	*1990+75.00*	*57.72*
595.96	*-0.67*	*-0.0560*	*12*	*596.63*	*1991+00.00*	*57.61*
595.01	*-0.79*	*-0.0660*	*12*	*595.80*	*1991+25.00*	*57.20*
594.45	*-0.76*	*-0.0632*	*12*	*595.21*	*1991+50.00*	*56.81*
593.86	*-0.82*	*-0.0681*	*12*	*594.68*	*1991+75.00*	*56.39*
593.23	*-0.82*	*-0.0687*	*12*	*594.05*	*1992+00.00*	*56.09*
592.55	*-0.86*	*-0.0719*	*12*	*593.41*	*1992+25.00*	*55.80*
591.94	*-0.84*	*-0.0697*	*12*	*592.78*	*1992+50.00*	*55.41*
591.39	*-0.86*	*-0.0714*	*12*	*592.25*	*1992+64.80*	*55.24*

** *CONTRACTOR TO FIELD VERIFY THE PROFILE GRADE ELEVATIONS AS THIS IS IN AN ACTIVE LANDSLIDE AREA WHERE MOVEMENT IS OCCURRING. ELEVATIONS SHOWN IN THE PLANS WERE OBTAINED PRIOR TO GROUND MOVEMENT.*

SUPERELEVATION TABLE
I-275

HAM-275-38.82

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:53:18 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Roadway\Sheets\114356_GE001.dgn

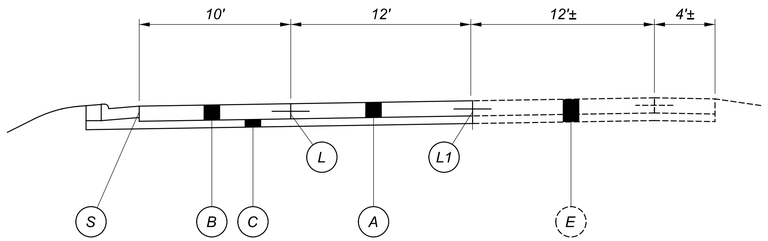
DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER
SLP

REVIEWER
ALB 05/16/25

PROJECT ID
114356

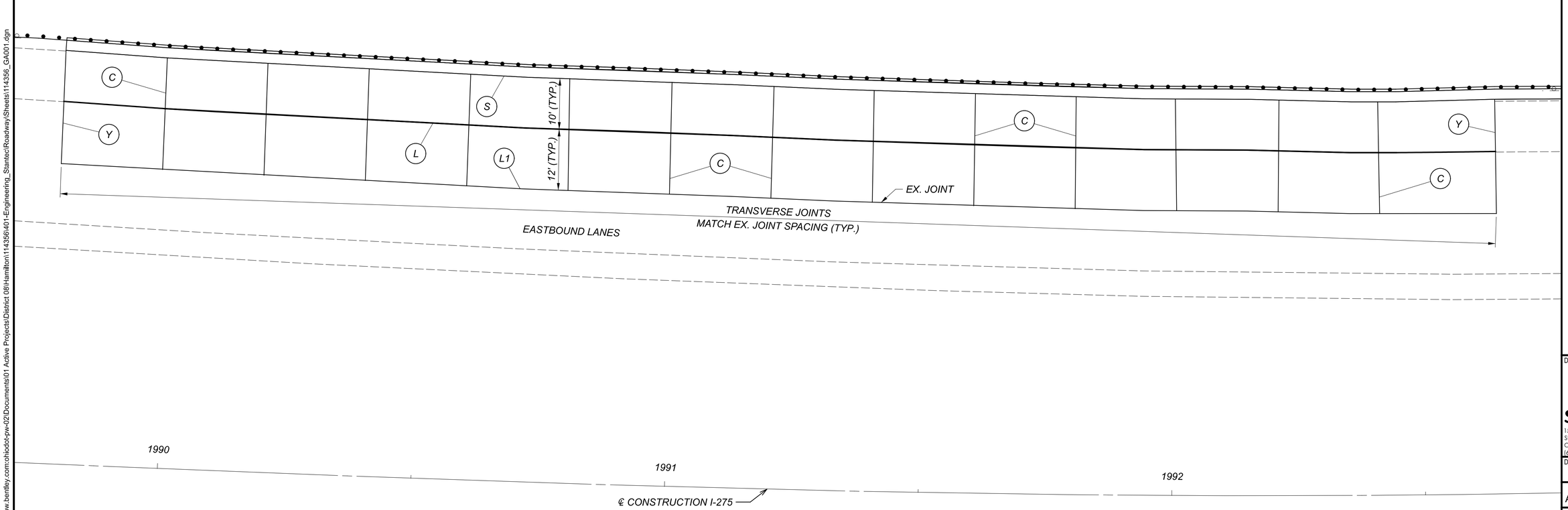
SHEET P.26 | TOTAL 35



TYPICAL SECTION OF PROPOSED PAVEMENT EASTBOUND I-275

LEGEND

- (L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1
- (L1) STANDARD LONGITUDINAL JOINT AS PER BP-2.1, (TYPE D)
- (S) STANDARD LONGITUDINAL JOINT AS PER BP-2.1 WITHOUT TIE BARS
- (C) CONTRACTION JOINT AS PER BP-2.2
- (Y) BUTT JOINT BETWEEN EXISTING PAVEMENT AND PROPOSED PAVEMENT, DOWELS PER THE TYPE 1 REPAIR AS PER BP-2.5 SHALL BE PROVIDED.
- (A) 12" NON-REINFORCED CONCRETE PAVEMENT
- (B) 12" NON-REINFORCED CONCRETE PAVEMENT
- (C) 6" AGGREGATE BASE
- (E) EXISTING PAVEMENT (12"± CONCRETE, 6"± SUBBASE)



HORIZONTAL SCALE IN FEET
0 10 20 40

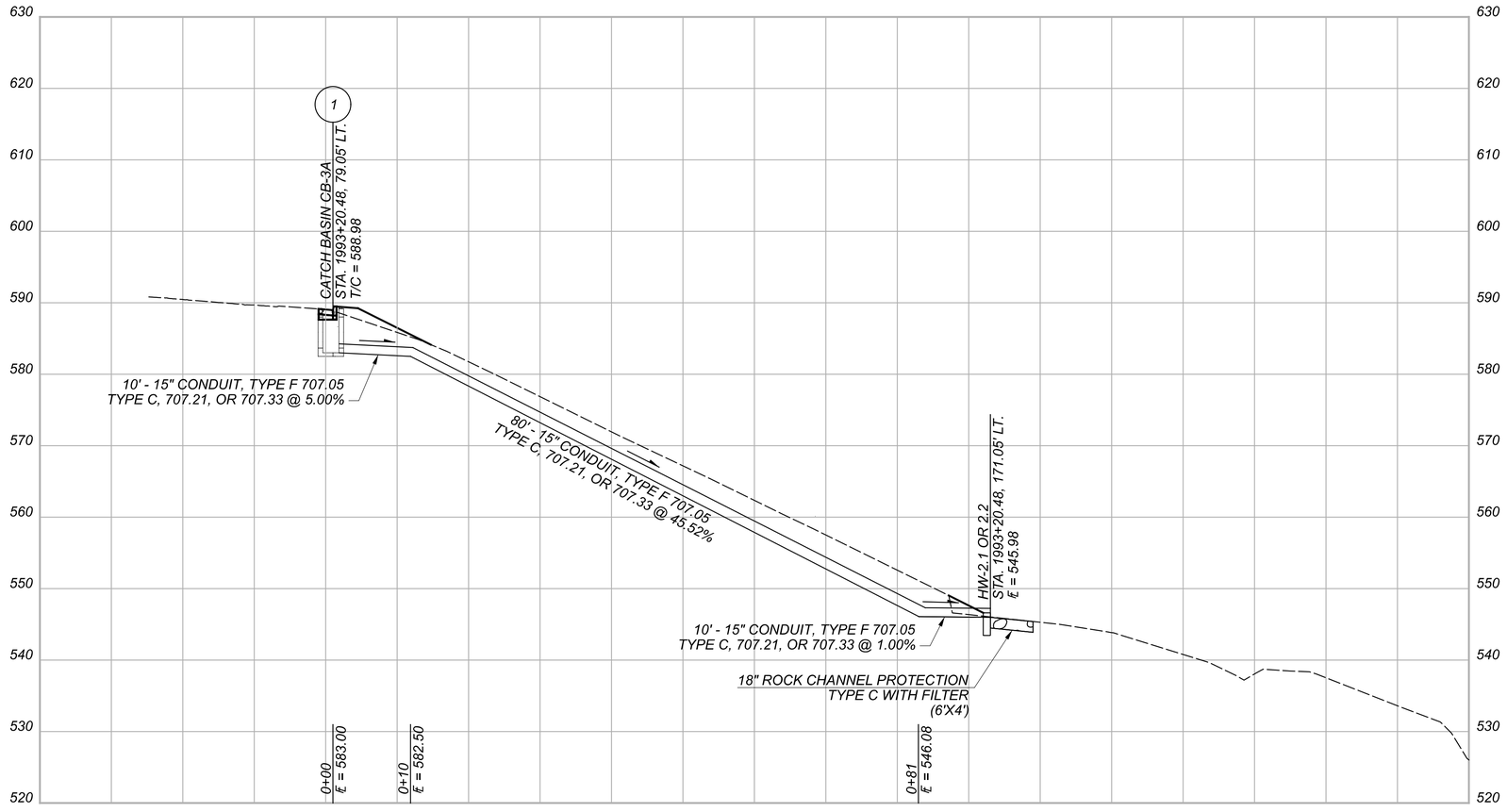
PAVEMENT JOINT DETAIL

HAM-275-38.82

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:53:23 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Roadway\Sheets\114356_GA001.dgn

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER	SLP
REVIEWER	ALB 05/16/25
PROJECT ID	114356
SHEET	P.27
TOTAL	35



HORIZONTAL
SCALE IN FEET
0 5 10 20

STORM SEWER PROFILE

HAM-275-38.82

MODEL: Plan- - Profile 1 [Sheet] PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:53:28 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Drainage\Sheets\114356_DF001.dgn

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER	
SLP	
REVIEWER	
ALB	05/16/25
PROJECT ID	
114356	
SHEET	TOTAL
P.28	35

GENERAL NOTES

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE SUPPLEMENTAL SPECIFICATION:

866 DATED 04-21-17

DESIGN DATA:

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI
(CONCRETE LAGGING)
CONCRETE CLASS QC5 - COMPRESSIVE STRENGTH 4.5 KSI
(DRILLED SHAFT)
STRUCTURAL STEEL - ASTM A572 GRADE 50
YIELD STRENGTH - 50 KSI
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60
MIN. YIELD STRENGTH - 60 KSI

ITEM 507, STEEL PILES, MISC.: SOLDIER PILES 2-HP14x89

THIS WORK CONSISTS OF FURNISHING AND PLACING STEEL SOLDIER PILES INTO DRILLED HOLES. FURNISH SOLDIER PILES CONSISTING OF STRUCTURAL STEEL MEMBERS THAT MEET THE PLAN REQUIREMENTS AND CONFORM TO ASTM A572, GRADE 50. DO NOT FIELD WELD OR SPLICE THOSE PARTS OF THE STEEL SOLDIER PILES THAT WILL BE ABOVE GROUND.

THE INDIVIDUAL LENGTHS SHOWN IN THE DRILLED SHAFT SUMMARY TABLES AND THE TOTAL LENGTHS SHOWN IN THE ESTIMATED QUANTITIES ARE CALCULATED FROM THE ESTIMATED TOP OF ROCK ELEVATIONS AND THE ACTUAL LENGTH OF EACH STEEL BEAM MAY VARY. THE CONTRACTOR SHOULD ANTICIPATE THAT THE STEEL BEAMS WILL NEED TO BE TRIMMED OR SPLICED TO THE ACTUAL TOP OF THE ROCK. THE CONTRACTOR MAY WANT TO ORDER ADDITIONAL LENGTH OF EACH TYPE OF STEEL BEAM FOR SPLICING.

MEASUREMENT FOR PAYMENT WILL BE LIMITED TO THE DISTANCE BETWEEN THE TOP OF WALL ELEVATION AND THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER. THE DEPARTMENT WILL PAY FOR SOLDIER PILES AT THE CONTRACT UNIT PRICE PER FOOT OF ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES 2-HP14x89

ITEM 524, DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN
ITEM 524, DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK, AS PER PLAN

THIS WORK CONSISTS OF FURNISHING AND INSTALLING DRILLED SHAFTS FOR SOLDIER PILE AND LAGGING WALLS. THE DRILLED SHAFTS ARE REINFORCED WITH SOLDIER PILES INSTEAD OF REINFORCING STEEL CAGES. THE SOLDIER PILES EXTEND ABOVE THE TOP OF THE DRILLED SHAFT. FURNISH AND INSTALL DRILLED SHAFTS IN ACCORDANCE WITH CMS 524 EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

EXCAVATE THE HOLE FOR THE DRILLED SHAFTS WITHIN 3 INCHES OF THE PLAN LOCATION IN THE HORIZONTAL PLANE. IF FIELD CONDITIONS INDICATE GREATER DEPTHS, NOTIFY THE ENGINEER FOR FURTHER EVALUATION.

PLACE THE SOLDIER PILE VERTICALLY WITHIN THE HOLE SO IT IS NOT INCLINED MORE THAN 1" BETWEEN THE TOP AND BOTTOM. PLACE THE SOLDIER PILE SO THAT THE FLANGES ARE PARALLEL TO THE CENTERLINE OF CONSTRUCTION. DO NOT ALLOW THE ORIENTATION OF THE FLANGES TO VARY BY MORE THAN 10 DEGREES. SUPPORT THE SOLDIER PILE SO THAT IT DOES NOT MOVE DURING CONCRETE PLACEMENT.

USE CLASS QC5 CONCRETE ACCORDING TO CMS 511. THE CONTRACTOR MAY PLACE CONCRETE USING THE FREE FALL METHOD PROVIDED THE DEPTH OF WATER IS LESS THAN 6 INCHES AND THE CONCRETE FALLS WITHOUT STRIKING THE SIDES OF THE HOLE. POURING CONCRETE ALONG THE WEB OF THE SOLDIER PILE IS ACCEPTABLE.

CHECK THE POSITION, THE VERTICAL ALIGNMENT AND ORIENTATION OF THE SOLDIER PILE IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO MEET THE ABOVE TOLERANCES.

DO NOT DISPOSE OF DRILLED SHAFT SPOILS OR DRILLING FLUIDS DOWN SLOPE OR STORE ON THE ROADWAY. DRILLING SPOILS SHALL BE REMOVED FROM THE SITE THE SAME DAY THEY ARE EXCAVATED.

PLACE PRECAST LAGGING SO THAT THE SOLDIER PILE FLANGE OVERLAPS THE END OF THE LAGGING BY AT LEAST 3 INCHES AT BOTH ENDS OF THE LAGGING.

THE INSTALLATION SEQUENCE SHALL BE SUCH THAT NO DRILLED SHAFT IS INSTALLED ADJACENT TO EITHER AN OPEN DRILLED SHAFT EXCAVATION OR A DRILLED SHAFT IN WHICH THE CONCRETE HAS LESS THAN A 48 HOUR CURE. INSTALLING THE SHAFTS IN AN ALTERNATING SEQUENCE OR ANY OTHER SEQUENCE THAT MEETS THIS CRITERIA IS PERMISSIBLE. CASING MAY BE REQUIRED FOR THE CONSTRUCTION OF THE DRILLED SHAFTS.

CARE SHALL BE EXERCISED AS TO COVERING UNATTENDED OPEN SHAFTS. TEMPORARY COVERS SHALL BE OF ADEQUATE STRENGTH TO PREVENT A PERSON OR ANIMAL FROM FALLING IN. NO DRILLED SHAFT EXCAVATION SHALL BE LEFT UN-POURED OVERNIGHT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE DRILLED SHAFTS AND PLACE CONCRETE PANELS. ANY TEMPORARY GRADING, EXCAVATION, EMBANKMENT, AGGREGATE, DRAINAGE, CASING, SHEETING, ETC. NEEDED TO COMPLETE THE WORK AREA SHALL BE INCLUDED IN THE BID PRICE FOR THE DRILLED SHAFTS. THE COST OF ANY EXCAVATION AND SUBSEQUENT REPLACEMENT OF EMBANKMENT (PER ITEM 203 EMBANKMENT) SHALL BE INCLUDED IN THE VARIOUS BID ITEMS FOR THE DRILLED SHAFTS AND CONCRETE PANELS. NO SEPARATE PAYMENT WILL BE MADE.

PAYMENT IS FULL COMPENSATION FOR CONSTRUCTING THE DRILLED SHAFTS, INCLUDING FURNISHING AND PLACING CONCRETE. PAYMENT FOR SOIL OVERBURDEN DRILLING , WHICH IS GROUND LEVEL TO THE TOP OF THE SHAFT, SHALL BE INCLUSIVE OF ITEM 524 DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN, MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE DRILLING PLATFORM ELEVATION TO THE TOP OF INTERBEDDED GRAY SHALE AND LIMESTONE, AS DETERMINED BY THE ENGINEER. DRILLED SHAFT LENGTH INTO BEDROCK WILL BE MEASURED FROM THE TOP OF INTERBEDDED GRAY SHALE AND LIMESTONE IN EACH SHAFT TO THE FINAL TIP ELEVATION, AS DETERMINED BY THE ENGINEER.

ITEM 511, CONCRETE, MISC.: PRECAST CONCRETE PANEL

THIS WORK CONSISTS OF FURNISHING AND PLACING PRECAST REINFORCED CONCRETE PANELS BETWEEN THE SOLDIER PILES TO FUNCTION AS LAGGING FOR THE RETAINING WALL. PROVIDE PRECAST CONCRETE LAGGING FROM A PRECAST CONCRETE MANUFACTURER CERTIFIED UNDER SUPPLEMENT 1073. PROVIDE CONCRETE WITH A 28-DAY DESIGN STRENGTH OF AT LEAST 4000 PSI ACCORDING TO CMS 499. PROVIDE EPOXY COATED REINFORCING STEEL ACCORDING TO CMS 709.00. IN LIEU OF EPOXY COATING, A CORROSION INHIBITING CONCRETE ADMIXTURE MAY BE USED AT THE SPECIFIED DOSAGE RATE. A QUALIFIED PRODUCT LIST OF CORROSION INHIBITING ADMIXTURES IS ON FILE AT THE LABORATORY. MANUFACTURERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR MAY AFFECT THE STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE MANUFACTURER'S CHOICE TO USE ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING ALL DESIGN REQUIREMENTS. DO NOT ALLOW THE DIMENSIONS OF THE REINFORCING STEEL TO VARY BY MORE THAN ¼INCH. PERMANENTLY MARK EACH PANEL TO INDICATE THE FACE TO BE PLACED AGAINST THE SOIL. PLACE THE PANEL BETWEEN THE FLANGES OF THE SOLDIER PILES AND BEARING AGAINST THE FLANGES ON THE EXPOSED SIDE OF THE WALL.

SEAL EACH PANEL PER ITEM 512 WITH EPOXY URETHANE SEALER TO THE LIMITS INDICATED IN THE PLANS. SEAL PANELS PRIOR TO DELIVERY TO THE SITE.

THE DEPARTMENT WILL PAY FOR PRECAST LAGGING, INCLUDING SEALING, AT THE CONTRACT UNIT PRICE PER EACH FOR ITEM 511, CONCRETE, MISC.: PRECAST CONCRETE PANEL.

ITEM 530, RETAINING WALL, TIMBER LAGGING (OPTIONAL)

THIS ITEM CONSISTS OF FURNISHING AND INSTALLING UNTREATED HARDWOOD LAGGING, AT THE CONTRACTORS OPTION, TO SERVE AS TEMPORARY LAGGING FOR THE SOLDIER PILE WALL. THE LAGGING SHALL CONSIST OF HARDWOOD WITH NOMINAL 3"x8" DIMENSIONS. PAYMENT FOR THE HARDWOOD LAGGING INCLUDES MATERIAL SUPPLY, NON- DEGRADABLE SPACERS BETWEEN THE LAGGING BOARDS AND INSTALLATION AS INDICATED IN THE PROJECT PLANS. LAGGING SHALL BE PLACED IN A TOP-DOWN MANNER SUCH THAT NO MORE THAN 3 FEET OF UNSUPPORTED EXCAVATION IS EXPOSED. EXCAVATION FOR PLACEMENT OF THE LAGGING SHALL BE PERFORMED IN SUCH A MANNER THAT THE LAGGING IS TIGHT AGAINST THE EXCAVATED FACE. ANY VOIDS BEHIND THE LAGGING SHALL BE BACKFILLED WITH NO. 57 CRUSHED CARBONATE STONE AS DIRECTED BY THE ENGINEER. REDUCE UNSUPPORTED HEIGHT AS NECESSARY TO PREVENT CAVING AND SLOUGHING OF THE SOILS BETWEEN THE SOLDIER PILES. PROVIDE ¼" TO ⅜" HORIZONTAL JOINT SPACING BETWEEN THE LAGGING BOARDS TO PERMIT DRAINAGE. CONNECT THE LAGGING TO THE SOLDIER PILES USING THREADED SHEAR CONNECTORS, LAGGING WASHERS AND NUTS PROVIDED AND INSTALLED PER CMS 513. LAGGING PLATES AND NUTS SHALL BE ASTM A 709 GRADE 36, YIELD STRENGTH 36,000 PSI OR GREATER.

A QUANTITY OF 2743 SF HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK.

FINAL GRADING

CONTRACTOR SHALL GRADE AS NECESSARY IN FRONT OF THE DRILLED SHAFT WALL TO ENSURE POSITIVE DRAINAGE AWAY FROM THE FACE OF THE WALL. NO DEPRESSIONS WHICH MAY HOLD WATER SHALL BE PERMITTED TO REMAIN.

ALL FINAL GRADING, EXCAVATION, EMBANKMENT, AND SEEDING AND MULCHING, UNLESS OTHERWISE NOTED IN THE PLANS, SHALL BE INCLUDED IN VARIOUS BID ITEMS FOR THE DRILLED SHAFTS AND CONCRETE PANELS.

ITEM 524, DRILLED SHAFTS, MISC.: PLUG PILE, 30" DIAMETER, UNREINFORCED

THE SHAFTS ARE TO BE UNREINFORCED NON-STRUCTURAL "PLUG PILES" SERVING THE PURPOSE OF LAGGING.

THIS WORK SHALL BE AS PER ITEM 524 EXCEPT A REINFORCING CAGE WILL NOT BE USED IN THE SHAFT. EACH PLUG PILE SHALL BE CENTERED BETWEEN EACH REINFORCED 42" DIAMETER DRILLED SHAFT AND DRILLED TO THE ELEVATION SHOWN AND BACKFILLED WITH UNREINFORCED CLASS QC5 CONCRETE.

CASING MAY BE REQUIRED FOR THE CONSTRUCTION OF THE PLUG PILES. ADJACENT PLUG PILES SHALL NOT BE OPEN SIMULTANEOUSLY. PLUG PILES SHALL NOT BE DRILLED UNTIL THE CONCRETE IN ADJACENT PLUG PILES OR DRILLED SHAFTS HAS CURED 48 HOURS.

PAYMENT FOR LABOR, EQUIPMENT AND MATERIALS FOR THE ABOVE SHALL BE INCLUDED IN THE PER FOOT CONTRACT PRICE FOR ITEM 524, DRILLED SHAFTS, MISC.: PLUG PILE, 30" DIAMETER, UNREINFORCED.

ITEM 866, GROUND ANCHOR, AS PER PLAN

ALL ANCHOR TESTING TO BE DONE IN ACCORDANCE WITH SS866. FIRST TWO ANCHORS AND 5% OF THE REMAINING ANCHORS WILL BE PERFORMANCE/EXTENDED CREEP TESTED TO THE SPECIFIED TEST LOADS. ALL REMAINING ANCHORS WILL BE PROOF TESTED TO THE SPECIFIED LOAD.

THE COST FOR MATERIAL, FABRICATION, AND INSTALLATION OF WALERS, INCLUDING SUPPORTING BRACKETS AND BEARING PLATES, SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 866, GROUND ANCHORS, AS PER PLAN.

A QUANTITY OF 53 EACH HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK.

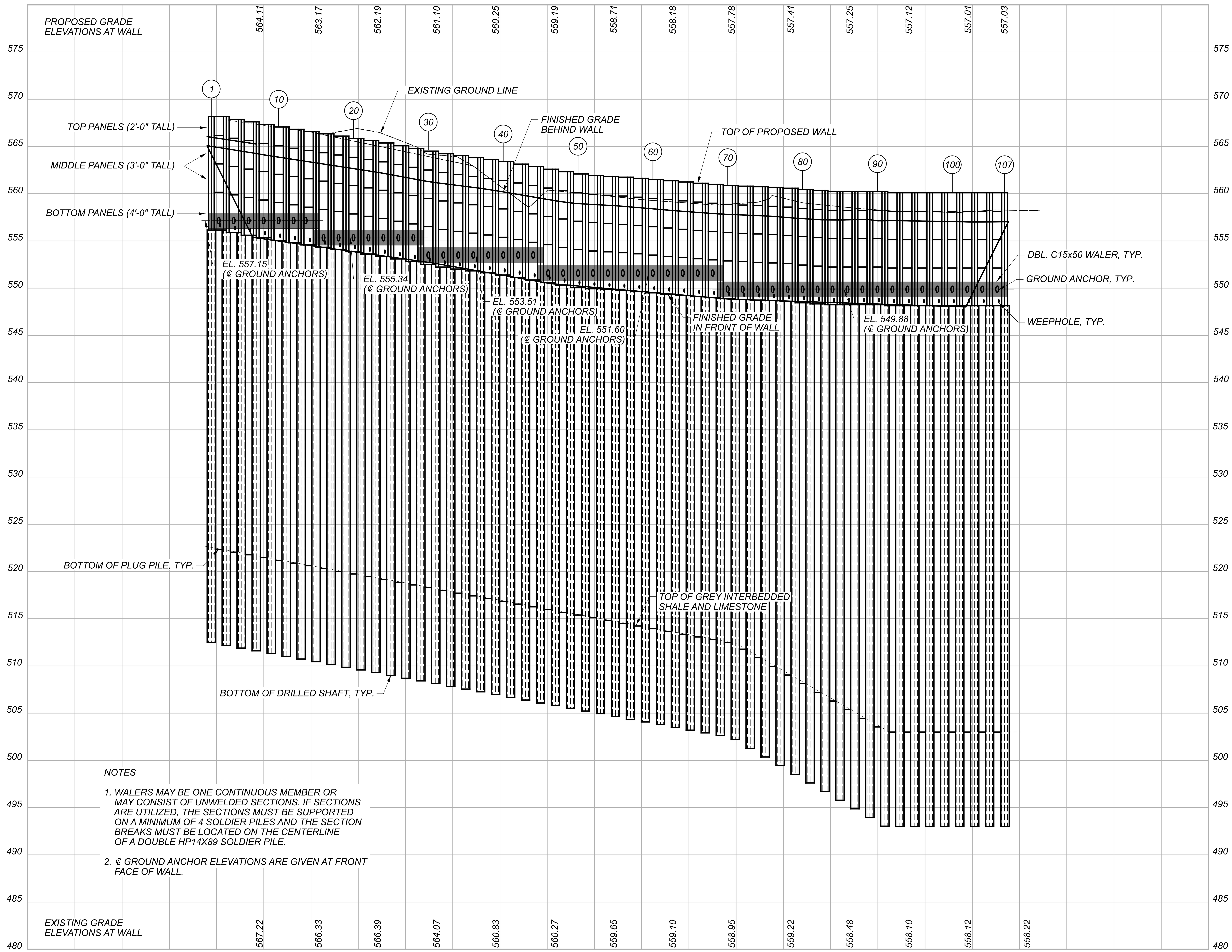
DRILLED SHAFT WALL GENERAL NOTES
WALL 1 STA. 1989+97.76 TO 1993+13.86

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER MRS
REVIEWER EDA 05/16/25
PROJECT ID 114356
SHEET P.29 TOTAL 35

HAM-275-38.82

MODEL: Sheet PAPERSIZE: 2.83333x1.83333 (ft.) DATE: 7/8/2025 TIME: 8:53:32 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01Active Projects\District 08\Hamilton\114356\40-Engineering_Stantec\Structures\Wall_001\Sheets\114356_001_WN001.dgn



NOTES

1. WALERS MAY BE ONE CONTINUOUS MEMBER OR MAY CONSIST OF UNWELDED SECTIONS. IF SECTIONS ARE UTILIZED, THE SECTIONS MUST BE SUPPORTED ON A MINIMUM OF 4 SOLDIER PILES AND THE SECTION BREAKS MUST BE LOCATED ON THE CENTERLINE OF A DOUBLE HP14X89 SOLDIER PILE.

2. ℄ GROUND ANCHOR ELEVATIONS ARE GIVEN AT FRONT FACE OF WALL.

PROFILE SHEET
WALL 1 STA. 1989+97.76 TO 1993+13.86

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER	MRS
REVIEWER	EDA 05/16/25
PROJECT ID	114356
SHEET	P.30
TOTAL	35

HAM-275-38.82

MODEL: wall_front_existing-2 - Profile 2 PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:53:38 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Structures\Wall_001\Sheets\114356_001_WF001.dgn

SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILLED SHAFT ELEVATION	APPROX. BOTTOM OF DRILLED SHAFT ELEVATION	TOP OF STEEL BEAM ELEVATION	ESTIMATED TOP OF ROCK ELVATION	ITEM 524				ITEM 507
							DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK AS PER PLAN	DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK AS PER PLAN	DRILLED SHAFTS, MISC.: PLUG PILE, 30" DIAMETER, UNREINFORCED	DRILLED SHAFTS, MISC.:EXTENSION	STEEL PILES, MISC.: SOLDIER PILES 2-HP14x89
		FT.					FT.	FT.	FT.	FT.	FT.
1	1989+97.76	157.60	556.15	512.47	568.15	522.47	33.68	10.00	---	0.00	55.68
2	1990+00.67	156.74	556.15	522.34		---	---	---	33.81	---	---
3	1990+03.58	157.60	555.88	512.18	568.15	522.18	33.70	10.00	---	0.27	55.97
4	1990+06.49	156.74	555.88	522.05		---	---	---	33.83	---	---
5	1990+09.40	157.59	555.61	511.89	567.88	521.89	33.72	10.00	---	0.27	55.99
6	1990+12.32	156.73	555.61	521.76		---	---	---	33.85	---	---
7	1990+15.23	157.58	555.33	511.60	567.61	521.60	33.73	10.00	---	0.28	56.01
8	1990+18.15	156.72	555.33	521.47		---	---	---	33.86	---	---
9	1990+21.07	157.57	555.06	511.31	567.33	521.31	33.75	10.00	---	0.27	56.02
10	1990+23.99	156.70	555.06	521.18		---	---	---	33.88	---	---
11	1990+26.91	157.55	554.82	511.02	567.06	521.02	33.80	10.00	---	0.24	56.04
12	1990+29.83	156.69	554.82	520.89		---	---	---	33.93	---	---
13	1990+32.76	157.53	554.58	510.73	566.82	520.73	33.85	10.00	---	0.24	56.09
14	1990+35.68	156.67	554.58	520.60		---	---	---	33.98	---	---
15	1990+38.61	157.51	554.34	510.44	566.58	520.44	33.90	10.00	---	0.24	56.14
16	1990+41.54	156.64	554.34	520.31		---	---	---	34.03	---	---
17	1990+44.47	157.48	554.10	510.16	566.34	520.16	33.94	10.00	---	0.24	56.18
18	1990+47.40	156.61	554.10	520.03		---	---	---	34.07	---	---
19	1990+50.33	157.45	553.86	509.87	566.10	519.87	33.99	10.00	---	0.24	56.23
20	1990+53.26	156.58	553.86	519.74		---	---	---	34.12	---	---
21	1990+56.20	157.42	553.61	509.58	565.86	519.58	34.03	10.00	---	0.25	56.28
22	1990+59.13	156.54	553.61	519.45		---	---	---	34.16	---	---
23	1990+62.08	157.38	553.37	509.29	565.61	519.29	34.08	10.00	---	0.24	56.32
24	1990+65.01	156.50	553.37	519.16		---	---	---	34.21	---	---
25	1990+67.96	157.34	553.09	509.00	565.37	519.00	34.09	10.00	---	0.28	56.37
26	1990+70.90	156.46	553.09	518.87		---	---	---	34.22	---	---
27	1990+73.85	157.29	552.80	508.71	565.09	518.71	34.09	10.00	---	0.29	56.38
28	1990+76.78	156.41	552.80	518.58		---	---	---	34.22	---	---
29	1990+79.74	157.23	552.51	508.42	564.80	518.42	34.09	10.00	---	0.29	56.38
30	1990+82.68	156.35	552.51	518.29		---	---	---	34.22	---	---
31	1990+85.64	157.18	552.23	508.13	564.51	518.13	34.10	10.00	---	0.28	56.38
32	1990+88.58	156.29	552.23	518.00		---	---	---	34.23	---	---
33	1990+91.54	157.11	552.02	507.84	564.23	517.84	34.18	10.00	---	0.21	56.39
34	1990+94.49	156.22	552.02	517.71		---	---	---	34.31	---	---
35	1990+97.45	157.04	551.83	507.55	564.02	517.55	34.28	10.00	---	0.19	56.47
36	1991+00.40	156.15	551.83	517.42		---	---	---	34.41	---	---
37	1991+03.37	156.96	551.63	507.26	563.83	517.26	34.37	10.00	---	0.20	56.57
38	1991+06.32	156.07	551.63	517.13		---	---	---	34.50	---	---
39	1991+09.29	156.88	551.39	506.97	563.63	516.97	34.42	10.00	---	0.24	56.66
40	1991+12.24	155.98	551.39	516.84		---	---	---	34.55	---	---
41	1991+15.22	156.79	551.13	506.68	563.39	516.68	34.45	10.00	---	0.26	56.71
42	1991+18.17	155.89	551.13	516.55		---	---	---	34.58	---	---
43	1991+21.15	156.70	550.87	506.39	563.13	516.39	34.48	10.00	---	0.26	56.74
44	1991+24.10	155.79	550.87	516.26		---	---	---	34.61	---	---
45	1991+27.09	156.59	550.60	506.10	562.87	516.10	34.50	10.00	---	0.27	56.77
46	1991+30.04	155.68	550.60	515.97		---	---	---	34.63	---	---
47	1991+33.03	156.48	550.32	505.81	562.60	515.81	34.51	10.00	---	0.23	56.79
48	1991+35.99	155.57	550.32	515.68		---	---	---	34.64	---	---
49	1991+38.98	156.37	550.09	505.52	562.32	515.52	34.57	10.00	---	0.23	56.80
50	1991+41.94	155.45	550.09	515.39	---	---	---	---	34.70	---	---
						SUBTOTAL SHAFTS 1-50	852.30	250.00	855.55	6.01	1408.36

SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILLED SHAFT ELEVATION	APPROX. BOTTOM OF DRILLED SHAFT ELEVATION	TOP OF STEEL BEAM ELEVATION	ESTIMATED TOP OF ROCK ELVATION	ITEM 524				ITEM 507
							DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK AS PER PLAN	DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK AS PER PLAN	DRILLED SHAFTS, MISC.: PLUG PILE, 30" DIAMETER, UNREINFORCED	DRILLED SHAFTS, MISC.:EXTENSION	STEEL PILES, MISC.: SOLDIER PILES 2-HP14x89
		FT.					FT.	FT.	FT.	FT.	FT.
51	1991+44.94	156.24	549.93	505.23	562.09	515.23	34.70	10.00	---	0.16	56.86
52	1991+47.90	155.32	549.93	515.10		---	---	---	34.83	---	---
53	1991+50.90	156.11	549.84	504.94	561.93	514.94	34.90	10.00	---	0.09	56.99
54	1991+53.86	155.19	549.84	514.81		---	---	---	35.03	---	---
55	1991+56.87	155.97	549.75	504.65	561.84	514.65	35.10	10.00	---	0.09	57.19
56	1991+59.83	155.04	549.75	514.52		---	---	---	35.23	---	---
57	1991+62.84	155.82	549.64	504.36	561.75	514.36	35.28	10.00	---	0.11	57.39
58	1991+65.81	154.89	549.64	514.23		---	---	---	35.41	---	---
59	1991+68.82	155.67	549.50	504.07	561.64	514.07	35.43	10.00	---	0.14	57.57
60	1991+71.79	154.73	549.50	513.94		---	---	---	35.56	---	---
61	1991+74.80	155.50	549.37	503.78	561.50	513.78	35.59	10.00	---	0.13	57.72
62	1991+77.77	154.56	549.37	513.65		---	---	---	35.72	---	---
63	1991+80.79	155.33	549.24	503.49	561.37	513.49	35.75	10.00	---	0.13	57.88
64	1991+83.76	154.38	549.24	513.36		---	---	---	35.88	---	---
65	1991+86.79	155.14	549.11	503.20	561.24	513.20	35.91	10.00	---	0.13	58.04
66	1991+89.76	154.19	549.11	513.07		---	---	---	36.04	---	---
67	1991+92.79	154.95	549.00	502.91	561.11	512.91	36.09	10.00	---	0.11	58.20
68	1991+95.76	153.99	549.00	512.78		---	---	---	36.22	---	---
69	1991+98.80	154.75	548.88	502.62	561.00	512.62	36.26	10.00	---	0.12	58.38
70	1992+01.77	153.79	548.88	512.50		---	---	---	36.38	---	---
71	1992+04.81	154.54	548.80	502.19	560.88	512.19	36.61	10.00	---	0.08	58.69
72	1992+07.78	153.57	548.80	511.78		---	---	---	37.02	---	---
73	1992+10.82	154.32	548.74	501.28	560.80	511.28	37.46	10.00	---	0.06	59.52
74	1992+13.80	153.34	548.74	510.87		---	---	---	37.87	---	---
75	1992+16.84	154.08	548.67	500.36	560.74	510.36	38.31	10.00	---	0.07	60.38
76	1992+19.82	153.11	548.67	509.95		---	---	---	38.72	---	---
77	1992+22.87	153.84	548.59	499.45	560.67	509.45	39.14	10.00	---	0.08	61.22
78	1992+25.85	152.86	548.59	509.04		---	---	---	39.55	---	---
79	1992+28.90	153.59	548.45	498.53	560.59	508.53	39.92	10.00	---	0.14	62.06
80	1992+31.88	152.60	548.45	508.12		---	---	---	40.33	---	---
81	1992+34.94	153.32	548.34	497.62	560.45	507.62	40.72	10.00	---	0.11	62.83
82	1992+37.92	152.33	548.34	507.21		---	---	---	41.13	---	---
83	1992+40.98	153.05	548.24	496.70	560.34	506.70	41.54	10.00	---	0.10	63.64
84	1992+43.96	152.05	548.24	506.29		---	---	---	41.95	---	---
85	1992+47.03	152.76	548.24	495.78	560.24	505.78	42.46	10.00	---	0.00	64.46
86	1992+50.01	151.76	548.24	505.34		---	---	---	42.90	---	---
87	1992+53.08	152.47	548.24	494.87	560.24	504.87	43.37	10.00	---	0.00	65.37
88	1992+56.06	151.46	548.24	504.46		---	---	---	43.78	---	---
89	1992+59.14	152.16	548.24	493.95	560.24	503.95	44.29	10.00	---	0.00	66.29
90	1992+62.12	151.14	548.24	503.54		---	---	---	44.70	---	---
91	1992+65.20	151.83	548.13	493.04	560.24	503.04	45.09	10.00	---	0.11	67.20
92	1992+68.18	150.81	548.13	503.00		---	---	---	45.13	---	---
93	1992+71.27	151.50	548.13	493.00	560.13	503.00	45.13	10.00	---	0.00	67.13
94	1992+74.25	150.47	548.13	503.00		---	---	---	45.13	---	---
95	1992+77.34	151.15	548.13	493.00	560.13	503.00	45.13	10.00	---	0.00	67.13
96	1992+80.32	150.12	548.13	503.00		---	---	---	45.13	---	---
97	1992+83.42	150.79	548.13	493.00	560.13	503.00	45.13	10.00	---	0.00	67.13
98	1992+86.40	149.75	548.13	503.00		---	---	---	45.13	---	---
99	1992+89.50	150.42	548.13	493.00	560.13	503.00	45.13	10.00	---	0.00	67.13
100	1992+92.48	149.38	548.13	503.00		---	---	---	45.13	---	---
						SUBTOTAL SHAFTS 51-100	984.44	250.00	989.90	1.96	1536.40

DRILLED SHAFT ELEVATIONS
WALL 1 STA. 1989+97.76 TO 1993+13.86

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER MRS

REVIEWER EDA 05/16/25

PROJECT ID 114356

SHEET P.31 | TOTAL 35

HAM-275-38.82

SHAFT NO.	STATION	OFFSET LEFT	TOP OF DRILLED SHAFT ELEVATION	APPROX. BOTTOM OF DRILLED SHAFT ELEVATION	TOP OF STEEL BEAM ELEVATION	ESTIMATED TOP OF ROCK ELVATION	ITEM 524				ITEM 507
							DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK AS PER PLAN	DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK AS PER PLAN	DRILLED SHAFTS, MISC.: PLUG PILE, 30" DIAMETER, UNREINFORCED	DRILLED SHAFTS, MISC.:EXTENSION	STEEL PILES, MISC.: SOLDIER PILES 2-HP14x89
		FT.					FT.	FT.	FT.	FT.	FT.
101	1992+95.58	150.04	548.13	493.00	560.13	503.00	45.13	10.00	---	0.00	67.13
102	1992+98.56	148.98	548.13	503.00		---	---	---	45.13	---	---
103	1993+01.67	149.64	548.13	493.00	560.13	503.00	45.13	10.00	---	0.00	67.13
104	1993+04.65	148.58	548.13	503.00		---	---	---	45.13	---	---
105	1993+07.77	149.23	548.13	493.00	560.13	503.00	45.13	10.00	---	0.00	67.13
106	1993+10.75	148.16	548.13	503.00		---	---	---	45.13	---	---
107	1993+13.86	148.80	548.13	493.00	560.13	503.00	45.13	10.00	---	0.00	67.13
						SUBTOTAL SHAFTS 101-107	180.52	40.00	135.39	0.00	268.52
						SUBTOTAL SHAFTS 51-100	984.44	250.00	989.90	1.96	1536.40
						SUBTOTAL SHAFTS 1-50	852.30	250.00	855.55	6.01	1408.36
						TOTAL CARRIED TO GENERAL SUMMARY	2018	540	1981	8	3214

DRILLED SHAFT ELEVATIONS
WALL 1 STA. 1989+97.76 TO 1993+13.86

HAM-275-38.82

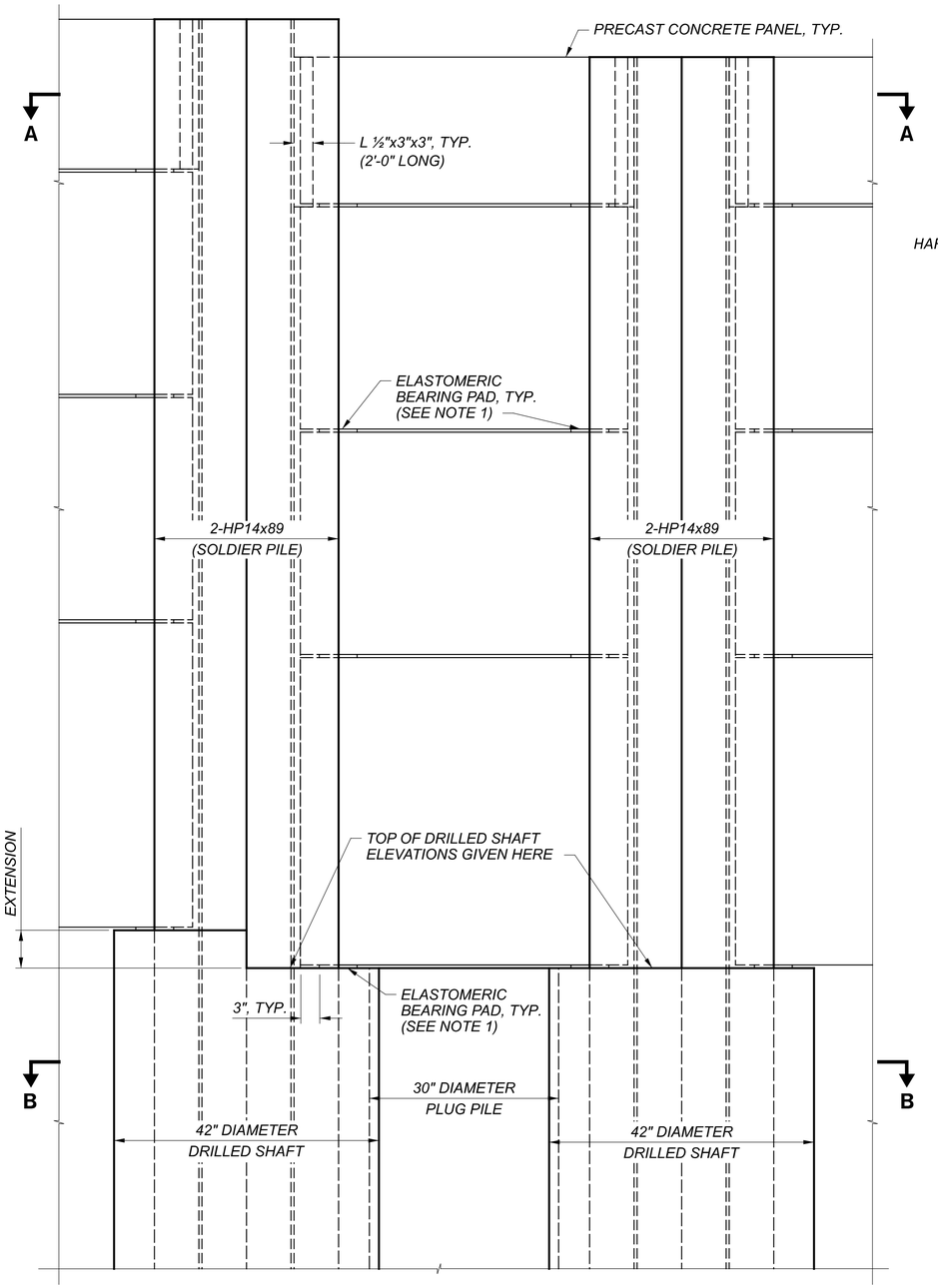
DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER MRS

REVIEWER EDA 05/16/25

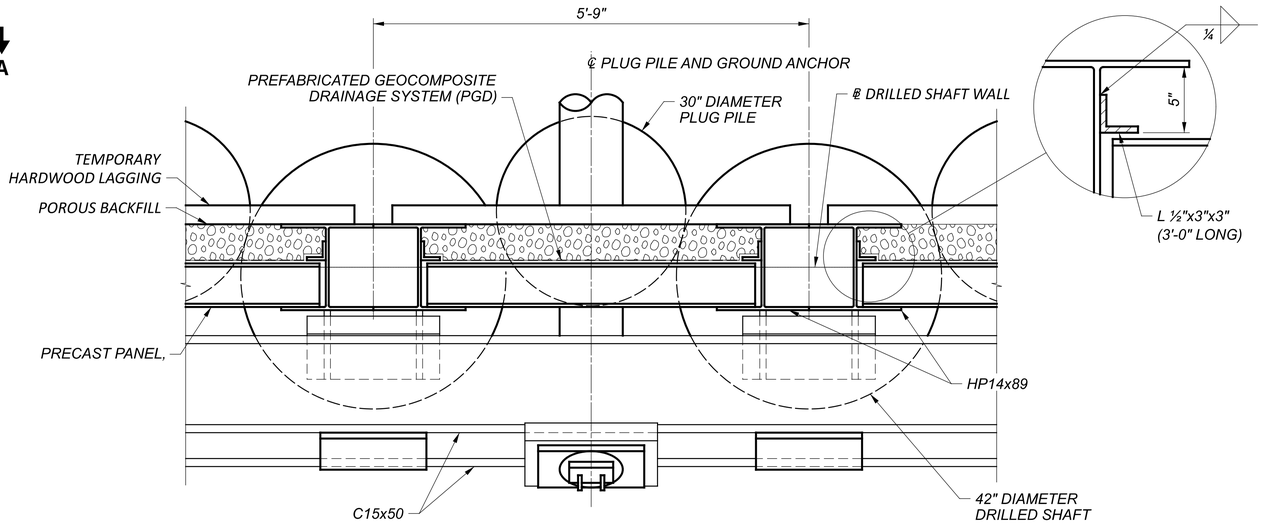
PROJECT ID 114356

SHEET P.32 | TOTAL 35

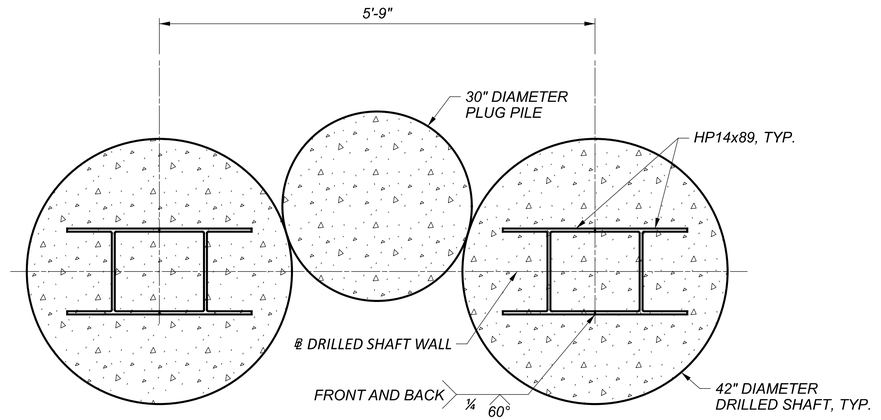


WALL ELEVATION

(WALER AND GROUND ANCHORS NOT SHOWN FOR CLARITY)



SECTION A-A



SECTION B-B

ESTIMATED QUANTITIES

PREFABRICATED GEOCOMPOSITE DRAIN = 53 x (5.75' - 14.75" / 12) x 9' / 9 = 240 SY

POROUS BACKFILL = 53 x (5.75' - 14.75" / 12) x (13.875" - .625" - 7") / 12 x 9' / 27 = 42 CY

NOTES:

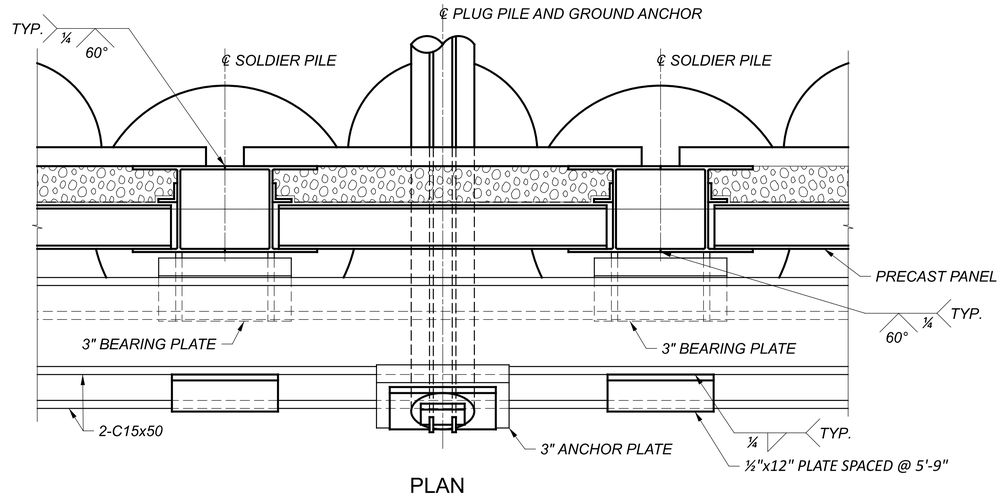
1. *ELASTOMERIC BEARINGS SHALL BE 1/2"X 6"X 6", 70 DUROMETER PER CMS 711.21 TYPE PEP AND ARE INCLUDED FOR PAYMENT WITH ITEM 511 CONCRETE, MISC.: PRECAST CONCRETE PANEL FOR PAYMENT.*
2. *SECURE PRECAST CONCRETE PANELS AGAINST PILE FLANGE.*
3. *FOR PRECAST CONCRETE PANEL DETAILS, SEE SHEET 34 | 34.*
4. *FOR DRILLED SHAFT AND PLUG PILE ELEVATIONS, SEE SHEETS 30 | 34, AND 31 | 34.*

DRILLED SHAFT WALL DETAILS (1)
WALL 1 STA. 1989+97.76 TO 1993+13.86

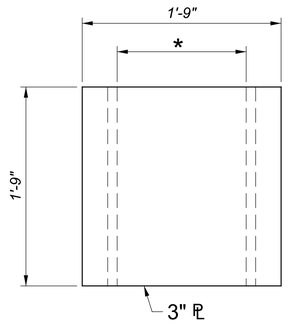
DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER	MRS
REVIEWER	EDA 05/16/25
PROJECT ID	114356
SHEET	P.33
TOTAL	35

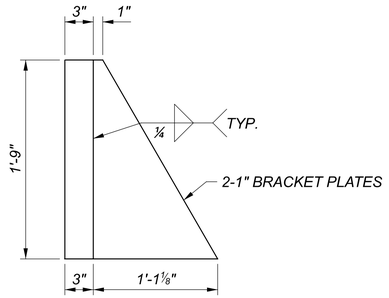
HAM-275-38.82



PLAN



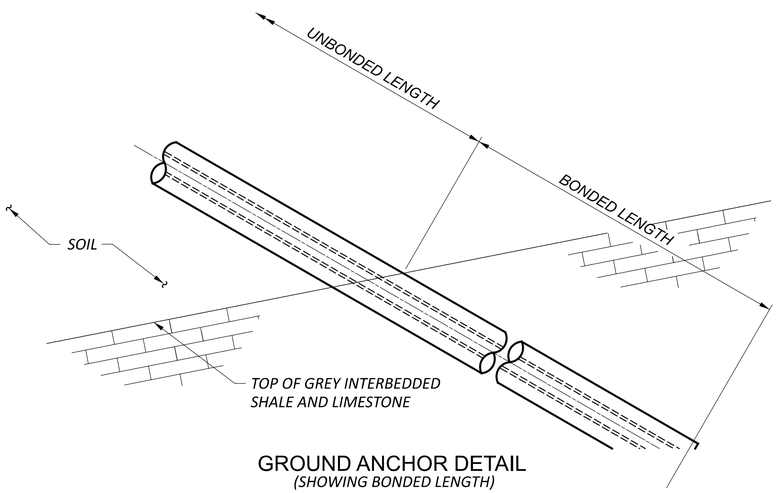
TOP VIEW



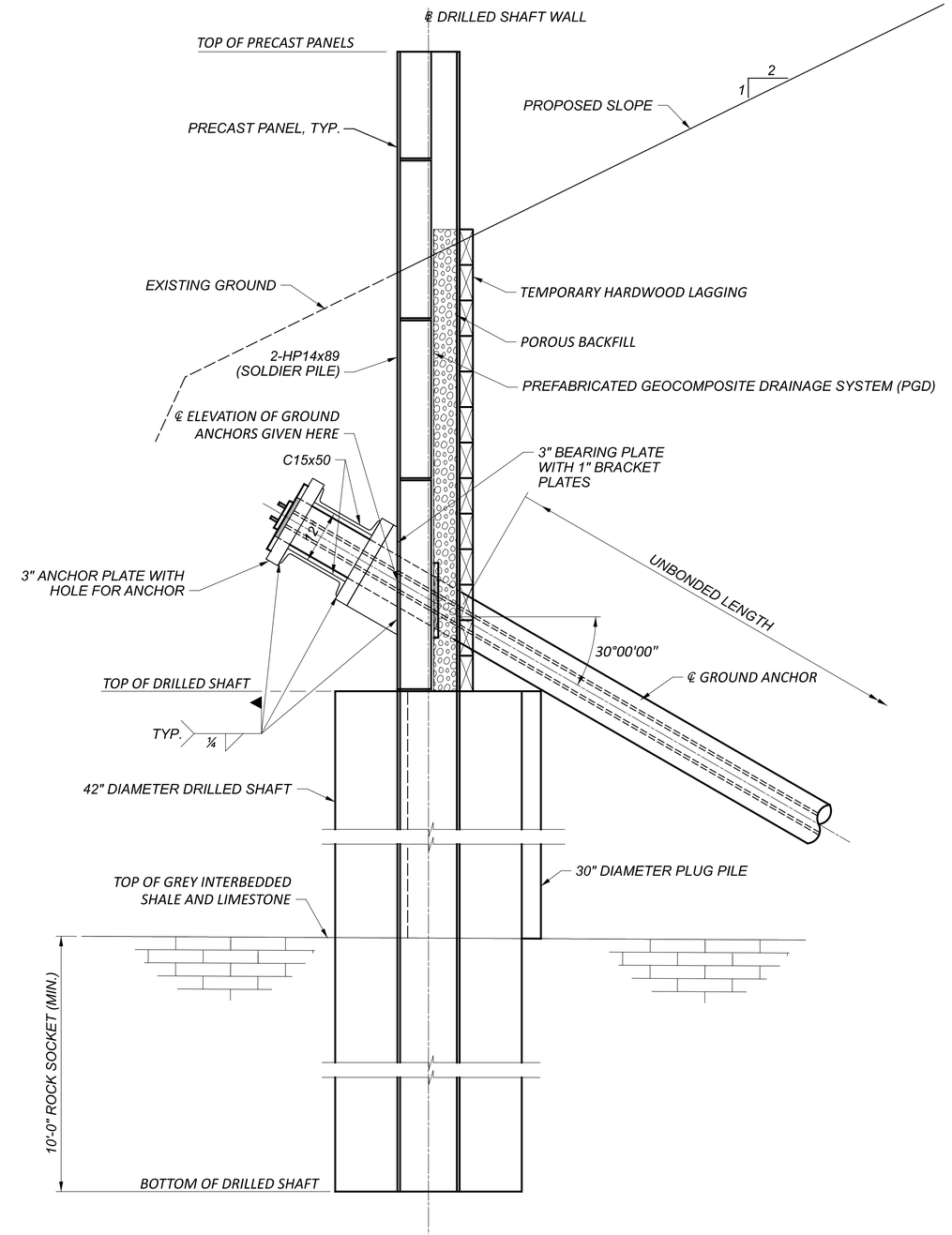
SIDE VIEW

BEARING PLATE DETAIL

* *DIMENSION TO MATCH F/F DIMENSION OF HP SECTIONS*



GROUND ANCHOR DETAIL
(SHOWING BONDED LENGTH)



GROUND ANCHOR DETAIL

SOIL PARAMETERS

PARAMETER	*ASSUMED VALUE*
RETAINED SOIL UNIT WEIGHT (PCF)	*125*
RETAINED SOIL FRICTION ANGLE (DEGREES)	*28*
LANDSLIDE FORCE (POUNDS PER FOOT OF WALL)	*62,000*
ROCK ULTIMATE BOND STRESS (PSI)	*80*

NOTES:

1. *GROUND ANCHORS TO BE DESIGNED AND PROVIDED IN ACCORDANCE WITH SS 866. ANCHORS TO BE INCLUDED FOR PAYMENT WITH ITEM 866, GROUND ANCHOR, AS PER PLAN.*
2. *GROUND ANCHOR FINAL DESIGN LOAD = 293 KIPS*
   GROUND ANCHOR TEST LOAD = 293 KIPS
   GROUND ANCHOR LOCK-OFF LOAD = 265 KIPS

WALER AND GROUND ANCHOR DETAILS WALL 1 STA. 1989+97.76 TO 1993+13.86

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE, SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER MRS

REVIEWER EDA 05/16/25

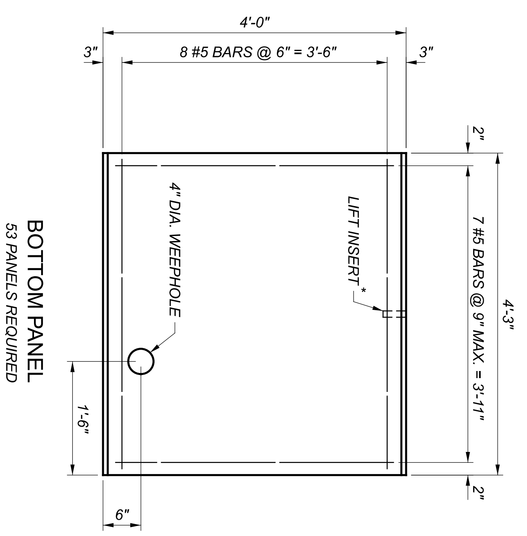
PROJECT ID 114356

SHEET P.34 TOTAL 35

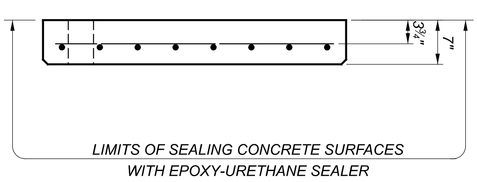
HAM-275-38.82

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 7/8/2025 TIME: 8:53:57 AM USER: slparker
pw:\\ohlodot-pw.bentley.com:ohlodot-pw-02\Documents\01 Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Structures\Wall_001\Sheets\114356_001_W000.dgn

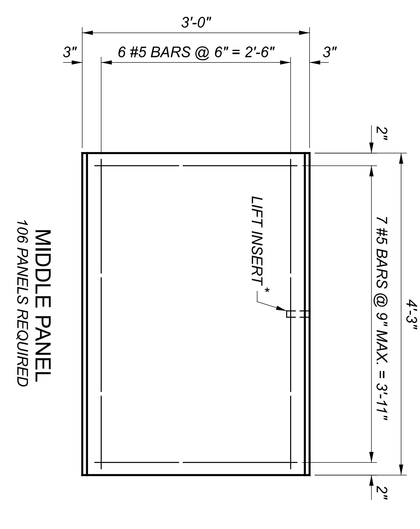
MODEL: Sheet PAPERSIZE: 34x22 (In.) DATE: 7/8/2025 TIME: 8:54:02 AM USER: slparker
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01Active Projects\District 08\Hamilton\114356\401-Engineering_Stantec\Structures\Wall_001\Sheets\114356_001_WD003.dgn



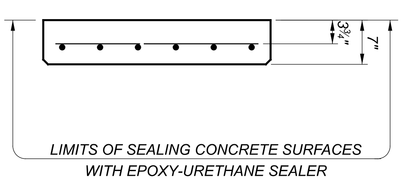
BOTTOM PANEL
53 PANELS REQUIRED



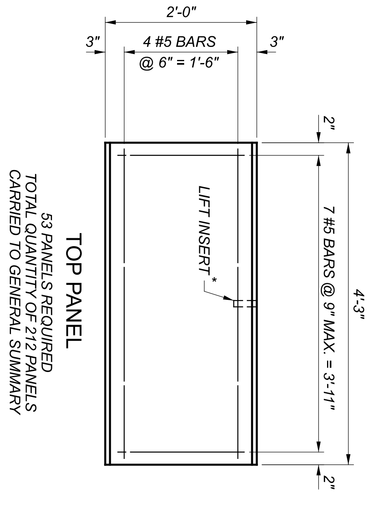
LIMITS OF SEALING CONCRETE SURFACES WITH EPOXY-URETHANE SEALER



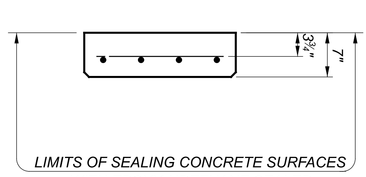
MIDDLE PANEL
106 PANELS REQUIRED



LIMITS OF SEALING CONCRETE SURFACES WITH EPOXY-URETHANE SEALER



TOP PANEL
53 PANELS REQUIRED
TOTAL QUANTITY OF 212 PANELS CARRIED TO GENERAL SUMMARY



LIMITS OF SEALING CONCRETE SURFACES WITH EPOXY-URETHANE SEALER

* *LIFT INSERT LOCATION AND DESIGN TO BE DETERMINED BY THE PRECAST PANEL MANUFACTURER.*

DESIGN AGENCY
Stantec
1500 LAKE SHORE DRIVE
SUITE 100
COLUMBUS, OH 43204
(614) 486-4383

DESIGNER	REVIEWER	PROJECT ID	SHEET	TOTAL
MRS	EDA 05/16/25	114356	P.35	35

DRILLED SHAFT WALL DETAILS (2)
WALL 1 STA. 1989+97.76 TO 1993+13.86

PROJECT DESCRIPTION

THE PROJECT INVOLVES REPAIRING THE SLOPE AND RESTORING THE PAVEMENT ALONG EASTBOUND I-275 EAST OF BIRNEY LANE BY CONSTRUCTING A RETAINING WALL ALONG THE FAILING EMBANKMENT. THE EXISTING LANDSLIDE IS LOCATED ALONG THE FIVE MILE CREEK NORTH OF FIVE MILE ROAD AND THE EASTBOUND OUTSIDE SHOULDER OF I-275. THE LANDSLIDE IS APPROXIMATELY 300 FEET LONG AND A CRACK ALONG THE OUTSIDE LANE HAS BEEN OBSERVED CAUSING THE OUTSIDE LANE TO CLOSE FOR INCOMING TRAFFIC.

HISTORIC RECORDS

S&ME SEARCHED THE ONLINE TRANSPORTATION INFORMATION MAPPING SYSTEM (TIMS) RECORDS AND NO HISTORICAL BORINGS WERE IN THE PROJECT AREA. HISTORICAL BORINGS CAN BE FOUND WEST OF THE SLIDE OUTSIDE THE PROJECT LIMITS.

GEOLOGY

PER THE USDA WEB SOIL SURVEY, THE PREVAILING NEAR SURFACE SOIL CONSISTS OF ENTIRELY OF URBAN LAND-MOLLIC UDARENTS-LANIER COMPLEX (UMLXAO), 0 TO 2 PERCENT SLOPES DERIVED FROM STRATIFIED LOAMY ALLUVIUM OVER SANDY AND GRAVELLY ALLUVIUM. THE PHYSIOGRAPHIC REGION OF THE SITE IS THE ILLINOIAN TILL PLAIN. THIS REGION CONSISTS OF SILT-LOAM HIGH LIME ILLINOIAN-AGE TILL WITH LOESS CAP UNDERLAIN BY ORDOVICIAN-AND SILURIAN-CARBONATE ROCKS AND CALCAREOUS SHALES.

A REVIEW OF THE OHIO GEOLOGY INTERACTIVE MAP MAINTAINED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) INDICATES THE SITE IS UNDERLAIN BY GROUND MORAINE OF ILLINOIAN AGE. THE BEDROCK OF THE SITE IS IN THE KOPE FORMATION FROM THE ORDOVICIAN AGE. THIS FORMATION CONSISTS OF GRAY TO BLUEISH GRAY INTERBEDDED SHALE AND LIMESTONE THAT WEATHERS LIGHT GRAY TO YELLOWISH GRAY. THIS FORMATION CONSISTS OF 75% SHALE.

BASED ON THE REVIEW OF KARST MAPPING MAINTAINED BY THE ODNR, THERE ARE NO SUSPECTED OR VERIFIED KARST FEATURES WITHIN THE IMMEDIATE VICINITY OF THE SITE.

RECONNAISSANCE

ON FEBRUARY 5, 2025, S&ME, INC. VISITED THE SITE WITH ODOT TO ASSESS THE AFFECTED SLIDE AREA, IDENTIFY A SUITABLE ACCESS ROUTE FOR THE DRILL RIG, DETERMINE THE NUMBER AND LOCATIONS OF BORINGS AND DEVELOP A GEOHAZARD EXPLORATION PLAN. DURING THIS INITIAL SITE RECONNAISSANCE, IT WAS OBSERVED THAT APPROXIMATELY A 300-FEET SECTION OF THE EASTBOUND LANE OF I-275 AT MM38.82 IN ANDERSON TOWNSHIP, CINCINNATI, OHIO HAD BEEN IMPACTED BY A LANDSLIDE. VISIBLE SIGNS OF PAVEMENT CRACKING WERE NOTED BETWEEN THE INSIDE LANE AND OUTSIDE LANE OF I275.

ALTHOUGH THE EMBANKMENT SLOPE IN THE AFFECTED AREA WAS HEAVILY VEGETATED, CRACKS WERE STILL VISIBLE WITHIN THE SLOPE. AT THE TOE OF THE EMBANKMENT SLOPE, A SLIDE MASS APPROXIMATELY 20 FEET HIGH WAS OBSERVED EXTENDING DOWN TO FIVE MILE CREEK AT THE BASE OF THE EMBANKMENT.

FOLLOWING THE INITIAL SITE RECONNAISSANCE, MULTIPLE SITE VISITS WERE CONDUCTED TO STAKE THE BORING LOCATIONS, TO OBSERVE BENCH AREAS FOR DRILL RIG ACCESS, DRILLING, INCLINOMETER READINGS, ETC. DURING THE WEEK OF MARCH 10, 2025, ODOT D-08 REPORTED AN ADDITIONAL 4-INCHES OF MOVEMENT IN THE SLIDE AREA, PROMPTING THE CLOSURE OF THE OUTSIDE LANE TO TRAFFIC. TO MAINTAIN TRAFFIC FLOW, ODOT PROMPTLY ADDED A TRAVEL LANE ALONG THE MEDIAN OF I-275 IN THE AFFECTED SECTION.

SUBSURFACE EXPLORATION

SIX (6) BORINGS WERE PERFORMED ON SITE BETWEEN MARCH 21 AND APRIL 2, WHICH WERE EXTENDED TO DEPTH RANGING FROM 41.3 TO 77.3 FEET BELOW THE EXISTING GRADE. THE BORINGS WERE ADVANCED WITH CONTINUOUS SAMPLING FROM THE GROUND SURFACE WITH ROCK CORING PERFORMED ON EACH BORING. THE BORING LOCATIONS WERE STAKED IN THE FIELD PRIOR TO OUR EXPLORATION BY S&ME PERSONNEL AND SURVEYED BY STANTEC PERSONNEL.

THE BORINGS WERE PERFORMED USING D-50 TRACK MOUNTED DRILL RIG USING 3¼-INCH HOLLOW STEM AUGERS WITH AN 87.5% EFFICIENCY. SOIL SAMPLES WERE OBTAINED USING A SPLIT-BARREL SAMPLER (SPT) DRIVEN BY AN AUTOMATIC HAMMER SYSTEM IN GENERAL ACCORDANCE WITH ASTM D1586. SPLIT-BARREL SOIL SAMPLES WERE PLACED IN AIR-TIGHT CONTAINERS AND RETAINED FOR VISUAL CLASSIFICATION AND SUBSEQUENT LABORATORY TESTING. FOR THIS PROJECT, ONE (1) UNDISTURBED SAMPLES (SHELBY TUBES) WERE COLLECTED FROM THREE (3) BORINGS (B-001-0-25, B-001-1-25, AND B-002-2-25), AND TWO (2) UNDISTURBED SAMPLES WERE COLLECTED FROM B-002-4-25. BEDROCK CORING WAS PERFORMED USING AN NQ2 CORE BARREL.

EXPLORATION FINDINGS

EACH OF THE BORINGS WERE DRILLED THROUGH THE EMBANKMENT. THE SUBSURFACE CONDITIONS WERE CONSISTENT WITH THE PUBLISHED GEOLOGICAL MAPPING INFORMATION.

EMBANKMENT FILL WAS ENCOUNTERED CONSISTING OF SOFT TO HARD SILTY CLAY (A-6b), CLAY (A-7-6), SILT AND CLAY (A-6a), SANDY SILT (A-4a). HIGHLY WEATHERED SHALE AND LIMESTONE BOULDERS INTERMIXED WITH CLAY (A-7-6) WERE ENCOUNTERED IN BORINGS B-001-0-25, B-001-1-25, B-002-2-25 AND B-002-4-25.

BEDROCK WAS ENCOUNTERED CONSISTING OF SEVERELY TO MODERATELY WEATHERED SHALE ENCOUNTERED IN BORINGS B-001-1-25, B-002-3-25, AND B-002-4-25.

SEEPAGE AND GROUNDWATER OBSERVATIONS WERE MADE DURING DRILLING OPERATION. BORING B-002-4-25 SHOWED SIGNS OF SEEPAGE AT A DEPTH OF 6.5 FEET AND ENCOUNTERED GROUNDWATER AT 17.5 FEET BELOW GROUND SURFACE. THE OTHER BORINGS REMAINED DRY THROUGHOUT THE DRILLING PROCESS.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2025.

AVAILABLE INFORMATION

THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE GEOTECHNICAL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.

LEGEND

DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
SANDY SILT	A-4a	1	--
SILT AND CLAY	A-6a	1	16
SILTY CLAY	A-6b	12	52
CLAY	A-7-6	5	20
	TOTAL	19	88
SHALE	VISUAL		
LIMESTONE	VISUAL		
BOULDERY ZONE	VISUAL		
SOD AND TOPSOIL = X = APPROXIMATE THICKNESS	VISUAL		

BORING LOCATION - PLAN VIEW.

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

WC — INDICATES WATER CONTENT IN PERCENT.

N_{60} — INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

W— — INDICATES FREE WATER ELEVATION.

X/D" — NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.

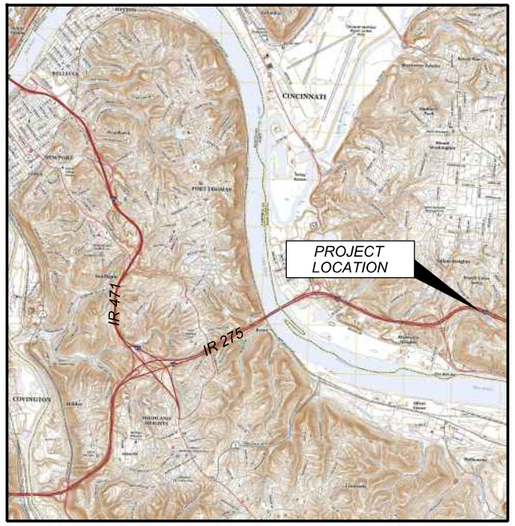
X/Y/D" — NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES (UNCORRECTED). Y/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.

X/Y/Z/D" — NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT): X= NUMBER OF BLOWS FOR FIRST 6 INCHES (UNCORRECTED). Y= NUMBER OF BLOWS FOR SECOND 6 INCHES (UNCORRECTED). Z/D"= NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.

● — INDICATES A PLASTIC MATERIAL WITH A MOISTURE CONTENT EQUAL TO OR GREATER THAN THE LIQUID LIMIT MINUS 3.

SS — INDICATES A SPLIT SPOON SAMPLE.

NP — INDICATES A NON-PLASTIC SAMPLE.



LOCATION MAP

SCALE IN MILES

0 1 2 3 4

PARTICLE SIZE DEFINITIONS

12"	3"	2.0 mm	0.42 mm	0.074 mm	0.005 mm
BOULDERS | COBBLES		GRAVEL	COARSE SAND	FINE SAND	SILT | CLAY
		No. 10 SIEVE	No. 40 SIEVE	No. 200 SIEVE	

INDEX OF SHEETS

RECON. - S&ME 2/5/25

DRILLING - S&ME 3/21/25 - 4/2/25

DRAWN - KAH 6/16/25 - 6/19/25, 7/7/25

REVIEWED - BCD 6/19/25, 7/7/25

GEOTECHNICAL PROFILE - LANDSLIDE

DESIGN AGENCY

DESIGNER KAH

REVIEWER BCD

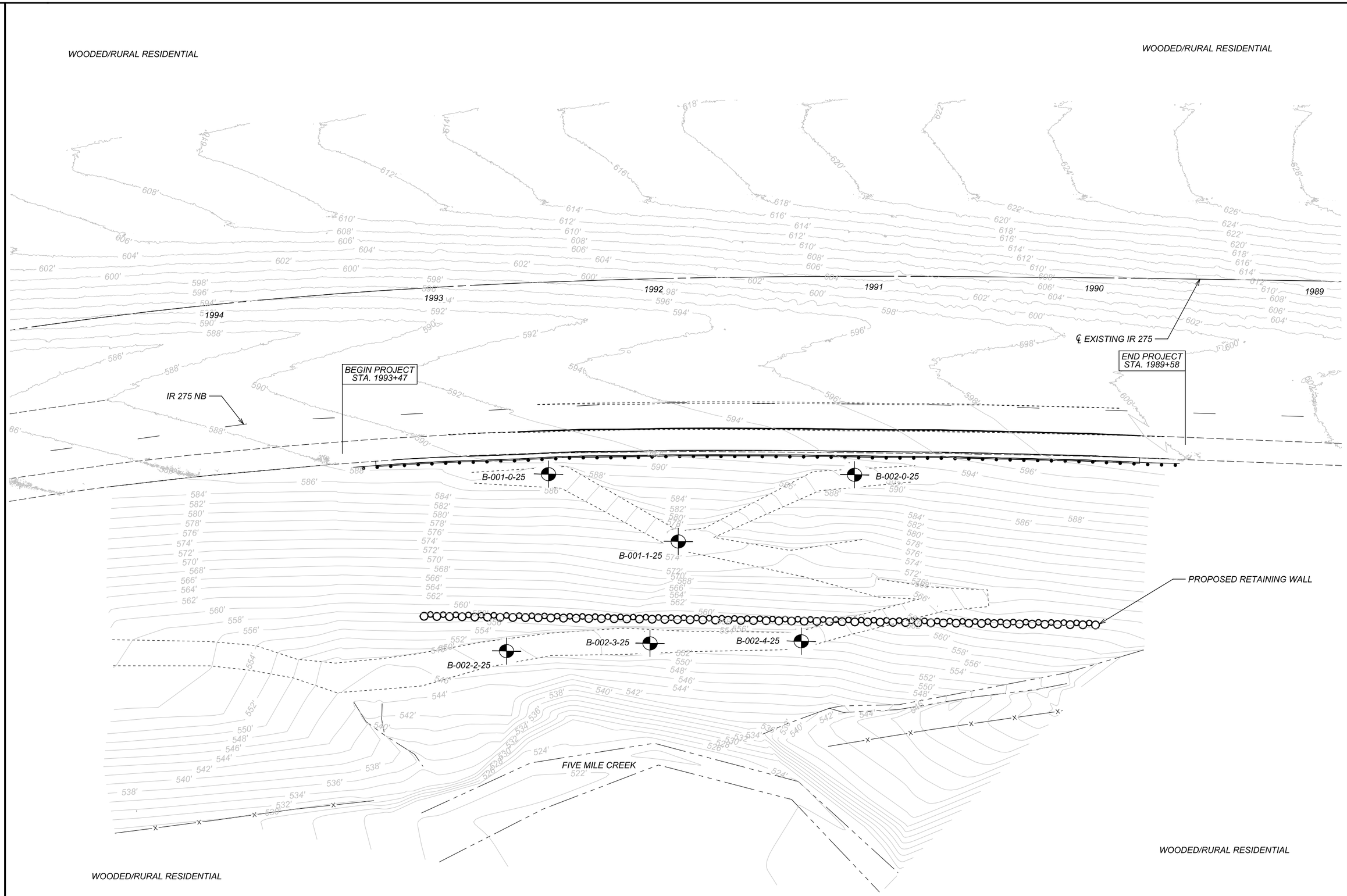
PROJECT ID 114356

SUBSET 1 TOTAL 22

SHEET P.__ TOTAL __

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/8/2025 TIME: 4:13:53 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82_Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YC001 - Cover Sheet.dgn



HAM-275-38.82 LANDSLIDE

HORIZONTAL SCALE IN FEET
0 10 20 40

GEOTECHNICAL PROFILE - LANDSLIDE
STA. 1994+94 TO STA. 1988+88

DESIGN AGENCY

DESIGNER	KAH
REVIEWER	BCD
PROJECT ID	114356
SUBSET	2
TOTAL	22
SHEET	P. __
TOTAL	__

HAM-275-38.82 LANDSLIDE

GEOTECHNICAL PROFILE - LANDSLIDE
STA. 1994+94 TO STA. 1988+88

HORIZONTAL SCALE IN FEET
0 10 20 40

PROPOSED RETAINING WALL
EXISTING GROUND

B-001-0-25
87' LT.

B-001-1-25
119' LT.

B-002-0-25
89' LT.

B-002-2-25
166' LT.

B-002-3-25
164' LT.

B-002-4-25
165' LT.

14/50/5"
2/3/50/5"
13/50/5"
50/5"
50/3"
TR
WC
N_{60}

610 600 590 580 570 560 550 540 530 520 510 500 490 480 470 460 450 440 430

1994+00 1993+00 1992+00 1991+00 1990+00

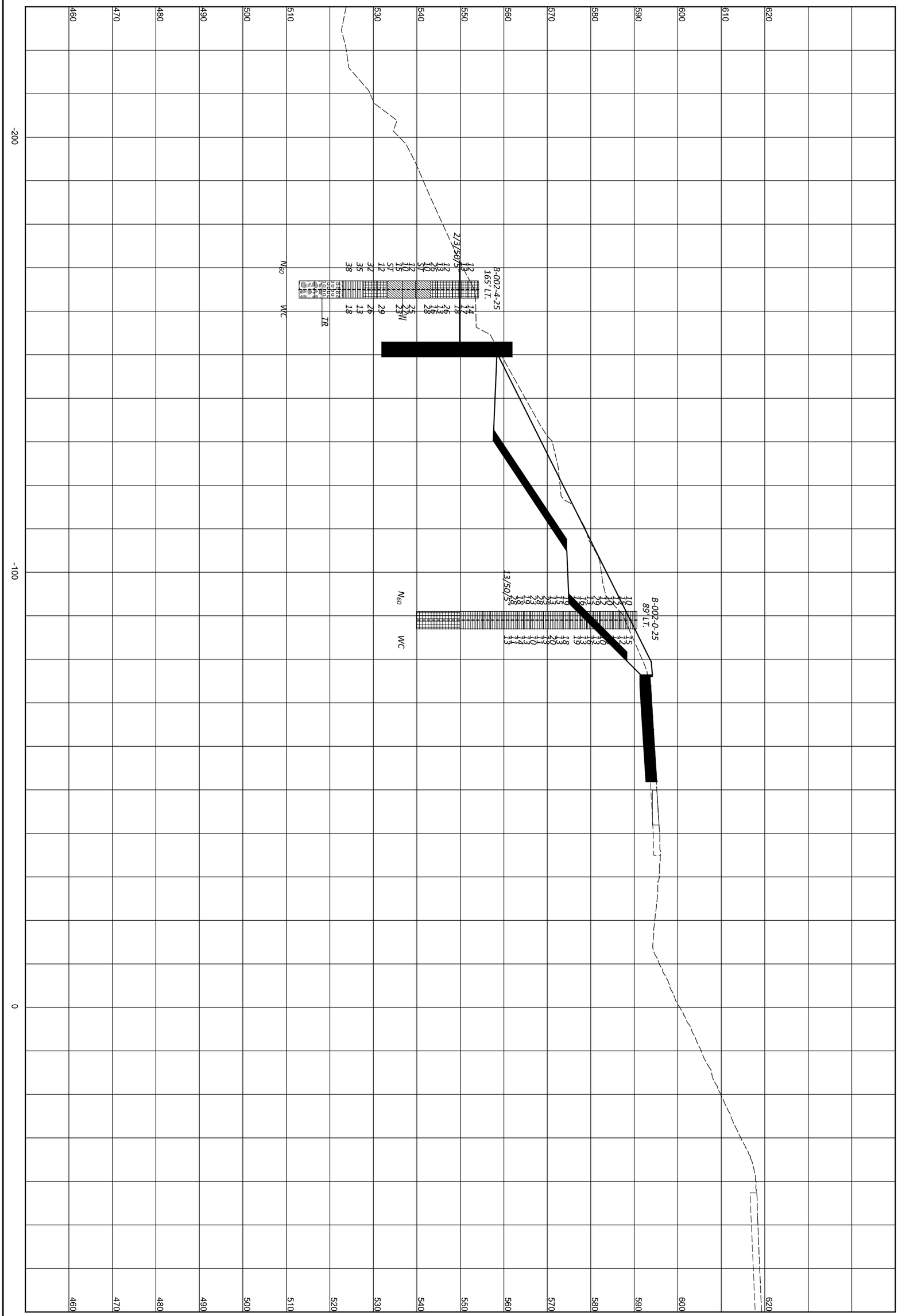
DESIGN AGENCY

DESIGNER KAH
REVIEWER BCD
PROJECT ID 114356
SUBSET 3 TOTAL 22
SHEET P.__ TOTAL __

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 7/8/2025 TIME: 5:00:37 PM USER: CChandler
T:\Cincinnati-II78\Projects\2025\2578007_Stantec_HAM-275-38.82 Landslide\GEO\CAD\II4356\400-Engineering\Geotechnical\Sheets\II4356_YP002 - Plan and Profile (20-scale).dgn

HAM-275-38.82 LANDSLIDE

MODEL: Sheet - 2 PAPERSIZE: 17x11 (in.) DATE: 7/8/2025 TIME: 4:58:25 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YX001 - Cross Section.dgn



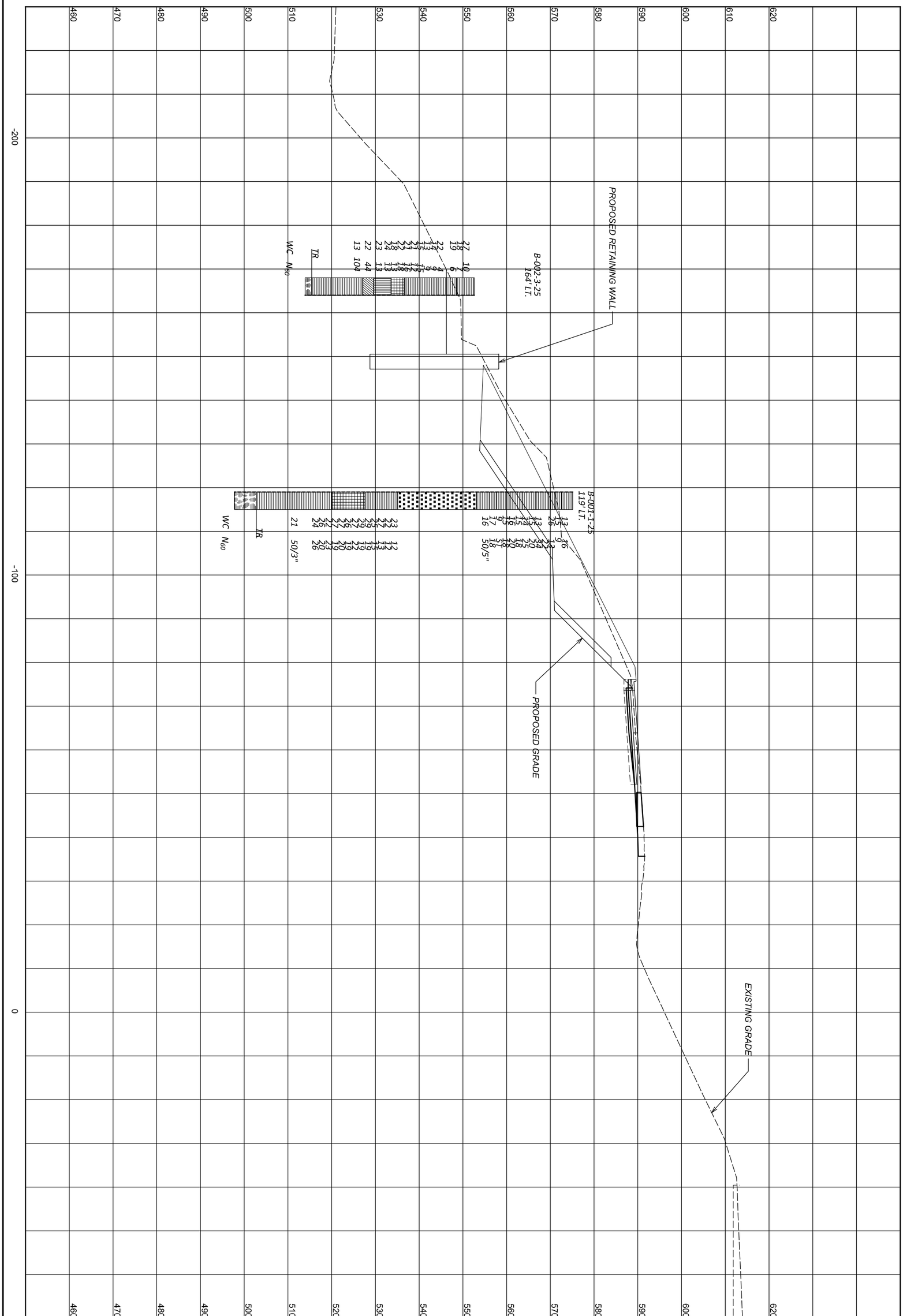
SHEET P: __	SUBSET 4 / TOTAL 22	PROJECT ID 114356	REVIEWER BCD	DESIGNER KAH	DESIGN AGENCY

GEOTECHNICAL PROFILE - LANDSLIDE
CROSS-SECTION STA. 1991+50.00 IR 275

HORIZONTAL SCALE IN FEET
0 10
5 20

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/8/2025 TIME: 4:50:08 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YX001 - Cross Section.dgn



DESIGNER KAH
REVIEWER BCD
PROJECT ID 114356
SUBSET 5 TOTAL 22
SHEET P. __ TOTAL __
DESIGN AGENCY

GEOTECHNICAL PROFILE - LANDSLIDE
CROSS-SECTION STA. 1992+84.00 IR 275

HORIZONTAL SCALE IN FEET
0 10
5 20

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/9/2025 TIME: 4:01:01 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YL001 (11x17 log).dgn

S&ME JOB:

PROJECT: HAM-I-275-38.82	DRILLING FIRM / OPERATOR: S&ME / B. KENYON	DRILL RIG: S&ME D50 TRACK	STATION / OFFSET: 1992+44, 87' LT	EXPLORATION ID B-001-0-25
TYPE: GEOHAZARD EXPLORATION	SAMPLING FIRM / LOGGER: S&ME / B. KEYNON	HAMMER: CME AUTOMATIC	ALIGNMENT: I-275	
PID: 114356 BR ID: N/A	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 8/29/23	ELEVATION: 587.4 (MSL) EOB: 50.0 ft.	PAGE 1 OF 1
START: 3/21/24 END: 3/24/25	SAMPLING METHOD: SPT / ST / NQ2	ENERGY RATIO (%): 87.5	COORD: 39.057250 N, -84.382151 W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
HARD, DARK GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE ROCK FRAGMENTS, MOIST , **FILL**	584.9	1	2 4 3	10	100	SS-1	4.5	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
HARD, BROWN AND DARK GRAY, **SILTY CLAY**, TRACE ROCK FRAGMENTS, LITTLE FINE TO COARSE SAND, MOIST , **FILL**	583.4	3	3 7 9	23	100	SS-2	4.5	-	-	-	-	-	-	-	-	12	A-6b (V)	-	
HARD, BROWN AND DARK GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, LITTLE SHALE FRAGMENTS, MOIST , **FILL**	580.4	5	11 12 17	42	100	SS-3	4.5	27	4	2	29	38	38	20	18	11	A-6b (10)	-	
		6	4 7 10	25	100	SS-4	4.5	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
VERY STIFF, BROWN AND DARK GRAY, **SILTY CLAY**, LITTLE FINE TO COARSE SAND, TRACE ROCK FRAGMENTS, MOIST , **FILL**	578.9	8	3 5 7	18	100	SS-5	4	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
VERY STIFF, BROWN AND DARK GRAY, **SILTY CLAY**, TRACE ROCK FRAGMENTS, MOIST , **FILL**	577.4	9	3 4 7	16	100	SS-6	3.5	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
HARD, BROWN AND GRAY, **SILT AND CLAY**, SOME ROCK FRAGMENTS, SOME FINE TO COARSE SAND, MOIST , **FILL**	575.9	11	7 22 14	53	100	SS-7	4.5	-	-	-	-	-	-	-	-	14	A-6a (V)	-	
HARD, BROWN AND GRAY, **SILT AND CLAY**, LITTLE FINE TO COARSE SAND, TRACE ROCK FRAGMENTS, MOIST , **FILL**	572.4	12	3 5 7	18	100	SS-8	4.5	-	-	-	-	-	-	-	-	11	A-6a (V)	-	
		14			100	ST-1		10	12	7	45	26	35	22	13	12	A-6a (8)	-	
VERY STIFF, BROWN AND GRAY, **SILT AND CLAY**, LITTLE FINE TO COARSE SAND, LITTLE ROCK FRAGMENTS, MOIST , **FILL**	570.9	16	2 3 5	12	100	SS-9	3.5	-	-	-	-	-	-	-	-	17	A-6a (V)	-	
HARD, BROWN AND GRAY, **SILT AND CLAY**, LITTLE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, MOIST , **FILL** soil consistency changes from hard to very stiff at 18.0 to 19.5 feet	564.9	17	4 5 6	16	100	SS-10	4.5	-	-	-	-	-	-	-	-	13	A-6a (V)	-	
		18	3 5 6	16	100	SS-11	3.5	-	-	-	-	-	-	-	-	14	A-6a (V)	-	
		19	3 7 5	18	100	SS-12	4.5	-	-	-	-	-	-	-	-	14	A-6a (V)	-	
		21	4 7 5	18	100	SS-13	4.25	-	-	-	-	-	-	-	-	11	A-6a (V)	-	
HARD, BROWN AND DARK GRAY, **CLAY**, LITTLE LIMESTONE FRAGMENTS, LITTLE FINE TO COARSE SAND, MOIST , **FILL**	561.9	23	2 10 14	35	100	SS-14	4.5	-	-	-	-	-	-	-	-	15	A-7-6 (V)	-	
		24	31 22 9	45	11	SS-15		-	-	-	-	-	-	-	-	15	A-7-6 (V)	-	
HARD, BROWN AND DARK GRAY, **CLAY**, TRACE SHALE FRAGMENTS, TRACE FINE TO COARSE SAND, MOIST , **FILL** soil consistency changes from hard to very stiff at 27.0 to 28.5 feet	557.4	26	2 6 9	22	100	SS-16	4.5	4	4	4	35	53	43	20	23	15	A-7-6 (14)	-	
		27	3 5 9	20	100	SS-17	3.75	-	-	-	-	-	-	-	-	20	A-7-6 (V)	-	
		29	5 6 11	25	100	SS-18	4	-	-	-	-	-	-	-	-	15	A-7-6 (V)	-	
LOOSE, BROWN AND DARK GRAY, **CLAY**, TRACE SHALE FRAGMENTS, TRACE FINE TO COARSE SAND, MOIST , **FILL** soil consistency changes from hard to very stiff at 33.0 to 34.5 feet	549.4	31	2 4 5	13	100	SS-19	4.5	-	-	-	-	-	-	-	-	16	A-7-6 (V)	-	
		32	2 5 6	16	17	SS-20	4.25	-	-	-	-	-	-	-	-	14	A-7-6 (V)	-	
		34	3 5 6	16	50	SS-21	3.75	-	-	-	-	-	-	-	-	16	A-7-6 (V)	-	
		35	3 5 10	22	33	SS-22	4.5	-	-	-	-	-	-	-	-	18	A-7-6 (V)	-	
		37	3 5 7	18	67	SS-23	4.5	4	4	6	31	55	41	20	21	17	A-7-6 (13)	-	
BROWN AND DARK GRAY **HIGHLY WEATHERED SHALE BOULDERS**, **FILL**	548.4	38	14 50-5"	-	45	SS-24	4.5	-	-	-	-	-	-	-	-	13	A-7-6 (V)	-	
HARD, LIGHT GRAY, **CLAY**, SOME GRAVEL, MOIST , **FILL**	547.2	40	0		25	NQ2-1											CORE		
HARD, GRAY AND LIGHT ORANGISH BROWN, **CLAY**, SOME GRAVEL, SOME LIMESTONE FRAGMENTS, MOIST , **FILL**	544.9	42	57		66	NQ2-2											CORE		
HIGHLY INDURATED AND VERTICALLY DISCONTINUOUS AND FRACTURED, DISCONTINUITY FILLED WITH SILTY CLAY WITH FINE GRAVEL, SENDIMENT IS LIGHT GRAYISH BROWN TO DARK BROWNISH GRAY. **SHALE AND LIMESTONE BOULDERS**, **FILL** Auger Refusal at 42.5 feet	537.4 EOB	47	7		15	NQ2-3											CORE		

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING. LOCATION COORDINATES AND ELEVATIONS WERE OBTAINED FROM STANTEC SURVEY.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BENTONITE AND CEMENT GROUT MIXTURE

PLATE 1

SHEET	SUBSET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P__ TOTAL __	6 TOTAL 22	114356	BCD	KAH	

GEOTECHNICAL PROFILE - LANDSLIDE
BORING LOG B-001-0-25

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/9/2025 TIME: 4:01:08 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YL002 (11x17 log).dgn

S&ME JOB:

PROJECT: HAM-I-275-38.82	DRILLING FIRM / OPERATOR: S&ME / B. KENYON	DRILL RIG: S&ME D50 TRACK	STATION / OFFSET: 1991+92, 119' LT	EXPLORATION ID B-001-1-25
TYPE: GEOHAZARD EXPLORATION	SAMPLING FIRM / LOGGER: S&ME / B. KEYNON	HAMMER: CME AUTOMATIC	ALIGNMENT: I-275	
PID: 114356 BR ID: N/A	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 8/29/23	ELEVATION: 575.1 (MSL) EOB: 77.33 ft.	PAGE 1 OF 2
START: 3/26/25 END: 3/29/25	SAMPLING METHOD: SPT / ST / NQ2	ENERGY RATIO (%): 87.5	COORD: 39.057110 N, -84.382001 W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	INCL.
STIFF, BROWN, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE GRAVEL, MOIST , **FILL**	575.1	1	4 5 6	16	50	SS-1	2	-	-	-	-	-	-	-	-	13	A-6b (V)	-	
	572.6	2																	
HARD, BROWN, **SILTY CLAY**, LITTLE FINE TO COARSE SAND, TRACE GRAVEL, MOIST , **FILL**		3	2 3 3	9	67	SS-2	4.5	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
	571.1	4																	
STIFF, BROWN AND GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, WET , **FILL**		5	5 5 4	13	50	SS-3	2.5	-	-	-	-	-	-	-	-	26	A-6b (V)	-	
	569.6	6																	
HARD, BROWN AND GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, MOIST , **FILL**		7	5 7 8	22	100	SS-4	4.5	-	-	-	-	-	-	-	-	-	A-6b (V)	-	
	566.6	8	4 7 16	34	100	SS-5	4.5	4	5	4	34	53	38	19	19	13	A-6b (12)	-	
HARD, BROWN AND GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, MOIST , **FILL**		9	6 6 8	20	100	SS-6	4.5	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
	563.6	10	5 8 9	25	33	SS-7	4.5	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
HARD, BROWN WITH MOTTLED GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, MOIST , **FILL**		11	3 5 7	18	100	SS-8	4.5	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
	560.6	12	6 6 8	20	17	SS-9	4.5	-	-	-	-	-	-	-	-	16	A-6b (V)	-	
HARD, BROWN WITH MOTTLED BLACK, **SILTY CLAY**, LITTLE FINE TO COARSE SAND, FEW ORGANICS, TRACE SHALE FRAGMENTS, TRACE LIMESTONE FRAGMENTS, MOIST , **FILL**		13	3 6 6	18	67	SS-10	4.25	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
	557.6	14			100	ST-1		7	8	6	37	42	39	19	20	9	A-6b (12)	-	
HARD, BROWN, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, MOIST , **FILL**		15	6 4 8	18	83	SS-11	4.5	-	-	-	-	-	-	-	-	17	A-6b (V)	-	
	556.1	16	50-5"	-	60	SS-12	4.5	-	-	-	-	-	-	-	-	16	A-6b (V)	-	
HARD, BROWN AND GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, MOIST , **FILL**		17																	
	553.1	18																	
DARK GRAY HIGHLY INDURATED AND VERTICALLY DISCONTINUOUS AND FRACTURED, DISCONTINUITY FILLED WITH SILTY CLAY WITH FINE GRAVEL, SENDIMENT IS LIGHT GRAYISH BROWN TO DARK BROWNISH GRAY. **SHALE AND LIMESTONE BOULDERS**, **FILL**		19	6		29	NQ2-1											CORE		
		20																	
		21																	
		22	15		25	NQ2-2											CORE		
		23																	
		24																	
		25																	
		26																	
		27	0		10	NQ2-3											CORE		
		28																	
		29																	
		30																	
		31																	
		32																	
		33																	
		34																	
		35																	
		36																	
		37																	
		38	27		31	NQ2-4											CORE		
		39																	
	535.1	40																	
STIFF TO VERY STIFF, DARK GRAY WITH MOTTLED BROWN, **SILTY CLAY**, TRACE FINE TO COARSE SAND, LITTLE ROCK FRAGMENTS, MOIST , **FILL**		41	4 3 5	12	67	SS-13	1.25	-	-	-	-	-	-	-	-	23	A-6b (V)	-	
		42	2 3 5	12	83	SS-14	1.25	14	3	2	22	59	40	20	20	22	A-6b (12)	-	
limestone fragments encountered at 41.5 to 43.0 feet		43																	
		44	3 4 5	13	100	SS-15	2.5	-	-	-	-	-	-	-	-	27	A-6b (V)	-	
		45	2 4 6	15	100	SS-16	3.5	-	-	-	-	-	-	-	-	25	A-6b (V)	-	
		46																	
		47	3 5 8	19	100	SS-17	3	-	-	-	-	-	-	-	-	29	A-6b (V)	-	
	527.6	48																	
VERY STIFF, DARK GRAY, **CLAY**, TRACE FINE TO COARSE SAND, TRACE ROCK FRAGMENTS, MOIST , **FILL**		49	3 6 7	19	100	SS-18	2.5	-	-	-	-	-	-	-	-	29	A-7-6 (V)	-	
		50	3 6 9	22	83	SS-19	3.5	0	1	1	17	81	43	20	23	27	A-7-6 (14)	-	
		51	4 5 8	19	83	SS-20	3	-	-	-	-	-	-	-	-	26	A-7-6 (V)	-	
		52	4 6 8	20	83	SS-21	2.25	-	-	-	-	-	-	-	-	27	A-7-6 (V)	-	
		53																	
		54	5 6 7	19	100	SS-22	2.75	-	-	-	-	-	-	-	-	27	A-7-6 (V)	-	
	520.1	55																	
VERY STIFF, DARK GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE ROCK FRAGMENTS, MOIST , **FILL**		56	2 6 10	23	83	SS-23	2	-	-	-	-	-	-	-	-	22	A-6b (V)	-	
		57	3 6 8	20	67	SS-24	3	1	1	1	24	73	40	20	20	26	A-6b (12)	-	
limestone fragments encountered at 58.0 to 59.5 feet		58																	
		59	4 7 11	26	67	SS-25	2.75	-	-	-	-	-	-	-	-	24	A-6b (V)	-	

PLATE 2

SHEET	SUBSET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P__ TOTAL __	7 TOTAL 22	114356	BCD	KAH	

GEOTECHNICAL PROFILE - LANDSLIDE
BORING LOG B-001-1-25

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/9/2025 TIME: 4:01:14 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YL003 (11x17 log).dgn

PID: 114356	BR ID: N/A	PROJECT: HAM-I-275-38.82	STATION / OFFSET: 1991+92, 119' LT	START: 3/26/25	END: 3/29/25	PG 2 OF 2	B-001-1-25

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	INCL.
VERY STIFF, DARK GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE ROCK FRAGMENTS, MOIST , **FILL** *(continued)*	515.1	61																	
	511.1	64	50/3"	-	100	SS-26	2.5	-	-	-	-	-	-	-	-	21	A-6b (V)	-	
HARD, GRAY, **SILTY CLAY**, SOME SHALE FRAGMENTS, SOME LIMESTONE FRAGMENTS, MOIST , **FILL**		65																	
		66	36		77	NQ2-5											CORE		
		68	10		45	NQ2-6											CORE		
	502.8	72 TR																	
SHALE, GRAY, HIGHLY TO MODERATELY WEATHERED, WEAK, LAMINATED TO VERY THIN BEDDED, DOLOMITIC.		73	55		98	NQ2-7											CORE		
	497.8	77 EOB																	

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING. LOCATION COORDINATES AND ELEVATIONS WERE OBTAINED FROM STANTEC SURVEY.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BENTONITE AND CEMENT GROUT MIXTURE; SLOPE INCLINOMETER

PLATE 2

S&ME SULFATE MYLAR (11X17) - SGE 01/2019 - OH DOT GDT - 6/16/25 15:40 - \\EGNYTEDRIVE\OPS\CINCINNATI-1178\PROJECTS\2025\25780017_STANTEC_HAM-275-38.82 LANDSLIDE\GEO\PROJECT DOCS\REPORTS\25780017.GPJ

SHEET	SUBSET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P__ TOTAL __	8 TOTAL 22	114356	BCD	KAH	

GEOTECHNICAL PROFILE - LANDSLIDE
BORING LOG B-001-1-25 (CONTINUED)

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/9/2025 TIME: 4:01:18 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YL004 (11x17 log).dgn

S&ME JOB:

PROJECT: HAM-I-275-38.82	DRILLING FIRM / OPERATOR: S&ME / B. KENYON	DRILL RIG: S&ME D50 TRACK	STATION / OFFSET: 1991+09, 89' LT	EXPLORATION ID B-002-0-25
TYPE: GEOHAZARD EXPLORATION	SAMPLING FIRM / LOGGER: S&ME / B. KEYNON	HAMMER: CME AUTOMATIC	ALIGNMENT: I-275	
PID: 114356 BR ID: N/A	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 8/29/23	ELEVATION: 590.6 (MSL) EOB: 50.67 ft.	PAGE 1 OF 1
START: 3/25/25 END: 3/25/25	SAMPLING METHOD: SPT / ST / NQ2	ENERGY RATIO (%): 87.5	COORD: 39.057102 N, -84.381700 W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	INCL.
HARD, BROWN AND GRAY, **SILTY CLAY**, TRACE GRAVEL, TRACE FINE TO COARSE SAND, MOIST , **FILL**	588.1	2.0	2 3 4	10	83	SS-1	4.5	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
HARD, GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, MOIST , **FILL**	586.6	3.5	2 5 5	15	50	SS-2	4.5	-	-	-	-	-	-	-	-	12	A-6b (V)	-	
VERY STIFF, BROWN AND GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, MOIST , **FILL**	585.1	5.0	3 3 5	12	83	SS-3	3.5	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
HARD, GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, MOIST , **FILL**	582.1	8.0	2 3 4	10	50	SS-4	4	-	-	-	-	-	-	-	-	13	A-6b (V)	-	
			2 3 5	12	83	SS-5	4.5	-	-	-	-	-	-	-	-	10	A-6b (V)	-	
VERY STIFF, BROWN AND GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, LITTLE LIMESTONE FRAGMENTS, MOIST , **FILL**	580.6	9.5	3 11 9	29	50	SS-6	3.25	20	6	3	30	41	38	18	20	13	A-6b (11)	-	
HARD, BROWN, **SILTY CLAY**, LITTLE FINE TO COARSE SAND, TRACE LIMESTONE FRAGMENTS, MOIST , **FILL**	579.1	11.0	3 4 5	13	100	SS-7	4.5	-	-	-	-	-	-	-	-	16	A-6b (V)	-	
VERY STIFF, BROWN, **SILTY CLAY**, TRACE LIMESTONE FRAGMENTS, MOIST , **FILL**	577.6	12.5	2 6 5	16	50	SS-8		-	-	-	-	-	-	-	-	13	A-6b (V)	-	
VERY STIFF, BROWN, **SILTY CLAY**, LITTLE FINE TO COARSE SAND, TRACE LIMESTONE FRAGMENTS, MOIST , **FILL**	575.1	15.0	3 4 5	13	67	SS-9	2.5	-	-	-	-	-	-	-	-	19	A-6b (V)	-	
VERY STIFF, BROWN, **SILTY CLAY**, LITTLE FINE TO COARSE SAND, TRACE LIMESTONE FRAGMENTS, MOIST , **FILL**	573.6	16.5	3 5 8	19	67	SS-10	3	-	-	-	-	-	-	-	-	18	A-6b (V)	-	
HARD, BROWN AND GRAY, **SILTY CLAY**, SOME FINE TO COARSE SAND, TRACE LIMESTONE FRAGMENTS, MOIST , **FILL** soil consistency changes from hard to very stiff at 18.5 to 20.0 feet	569.1	21.0	2 4 6	15	100	SS-11	4.5	-	-	-	-	-	-	-	-	13	A-6b (V)	-	
			2 3 6	13	100	SS-12	3	-	-	-	-	-	-	-	-	20	A-6b (V)	-	
			3 6 11	25	83	SS-13	4.5	5	11	14	30	40	32	16	16	13	A-6b (9)	-	
VERY STIFF, GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, LITTLE SHALE FRAGMENTS, MOIST , **FILL**	566.1	24.0	8 9 10	28	100	SS-14	4.5	-	-	-	-	-	-	-	-	11	A-6b (V)	-	
			5 8 8	23	83	SS-15	4.5	-	-	-	-	-	-	-	-	10	A-6b (V)	-	
HARD, GRAY, **SILTY CLAY**, LITTLE FINE TO COARSE SAND, LITTLE SHALE FRAGMENTS, MOIST , **FILL**	564.6	25.5	4 5 8	19	100	SS-16	4.5	-	-	-	-	-	-	-	-	13	A-6b (V)	-	
HARD, GRAY, **SILTY CLAY**, LITTLE FINE TO COARSE SAND, LITTLE SHALE AND LIMESTONE FRAGMENTS, MOIST , **FILL**	563.1	27.0	2 5 7	18	100	SS-17	4.5	-	-	-	-	-	-	-	-	14	A-6b (V)	-	
HARD, BROWN AND GRAY, **SILTY CLAY**, LITTLE FINE TO COARSE SAND, SOME SHALE FRAGMENTS, MOIST , **FILL**	556.9	33.5	4 7 12	28	83	SS-18	4.5	-	-	-	-	-	-	-	-	11	A-6b (V)	-	
			13 50-5"	-	145	SS-19		24	7	4	27	38	39	21	18	13	A-6b (9)	-	
HARD, GRAY AND BROWN, **SILTY CLAY**, SOME DARK GRAY MUDSTONE, MOIST , **FILL** Auger Refusal at 33.67 feet	555.2	35.0	46		46	NQ2-1											CORE		
STIFF, LIGHT BROWN TO DARK BROWN, **SILTY CLAY**, TRACE GRAVEL, TRACE FINE TO COARSE SAND, MOIST limestone floaters encountered at 40 feet	549.9	40.0	22		28	NQ2-2											CORE		
SOFT, DARK GRAY, **SILTY CLAY**, MOIST , **FILL**	539.9	50.0	0		0	NQ2-3											CORE		
	EOB		10		19	NQ2-4											CORE		

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING. LOCATION COORDINATES AND ELEVATIONS WERE OBTAINED FROM STANTEC SURVEY.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BENTONITE AND CEMENT GROUT MIXTURE; SLOPE INCLINOMETER

PLATE 4

S&ME SULFATE MYLAR (11X17) - SGE 01/2019 - OH DOT GDT - 7/9/25 12:16 - T:\CINCINNATI-1178\PROJECTS\2025\25780017_STANTEC_HAM-275-38.82_LANDSLIDE\GEO\PROJECT DOCS\REPORTS\25780017.GPJ

SHEET	SUBSET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P__ TOTAL __	9 TOTAL 22	114356	BCD	KAH	

GEOTECHNICAL PROFILE - LANDSLIDE
BORING LOG B-002-0-25

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/9/2025 TIME: 4:01:24 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YL005 (11x17 log).dgn

PROJECT: HAM-I-275-38.82	DRILLING FIRM / OPERATOR: S&ME / B. KENYON	DRILL RIG: S&ME D50 TRACK	STATION / OFFSET: 1992+76, 166' LT	EXPLORATION ID B-002-2-25
TYPE: GEOHAZARD EXPLORATION	SAMPLING FIRM / LOGGER: S&ME / B. KEYNON	HAMMER: CME AUTOMATIC	ALIGNMENT: I-275	
PID: 114356 BR ID: N/A	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 8/29/23	ELEVATION: 549.4 (MSL) EOB: 40.25 ft.	PAGE 1 OF 1
START: 3/21/25 END: 3/21/25	SAMPLING METHOD: SPT / ST / NQ2	ENERGY RATIO (%): 87.5	LAT / LONG: 39.057066 N, 84.382322 W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
	549.4																		
VERY STIFF, BROWN AND GRAY, **SILTY CLAY**, MOIST , **FILL**			1 3 2	7	100	SS-1	3	-	-	-	-	-	-	-	-	20	A-6b (V)	-	
					100	ST-1		-	-	-	-	-	-	-	-	-	A-6b (V)	-	
	544.9																		
HARD, GRAY, **SILTY CLAY**, TRACE SHALE FRAGMENTS, LITTLE FINE TO COARSE SAND, MOIST , **FILL**			3 4 6	15	100	SS-2	4.5	-	-	-	-	-	-	-	-	8	A-6b (V)	-	
	541.9		2 7 5	18	100	SS-3	4.5	7	10	3	37	43	39	20	19	11	A-6b (12)	-	
VERY STIFF, GRAY, **SILTY CLAY**, SOME SHALE FRAGMENTS, MOIST , **FILL**	540.4		5 10 10	29	67	SS-4		-	-	-	-	-	-	-	-	10	A-6b (V)	-	
HIGHLY INDURATED AND VERTICALLY DISCONTINUOUS AND FRACTURED, DISCONTINUITY FILLED WITH SILTY CLAY WITH FINE GRAVEL, SENDIMENT IS LIGHT GRAYISH BROWN TO DARK BROWNISH GRAY. **SHALE AND LIMESTONE BOULDERS**, **FILL** Auger Refusal at 9.0 feet			0		10	NQ2-1											CORE		
			12		35	NQ2-2											CORE		
			18		35	NQ2-3											CORE		
			32		48	NQ2-4											CORE		
			0		0	NQ2-5											CORE		
			45		74	NQ2-6											CORE		
	509.1	EOB	76		88	NQ2-7											CORE		

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING. LOCATION COORDINATES AND ELEVATIONS WERE OBTAINED FROM STANTEC SURVEY.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BENTONITE AND CEMENT GROUT MIXTURE

PLATE 1

S&ME SULFATE MYLAR (11X17) - SGE 01/2019 - OH DOT GDT - 6/16/25 15:43 - \\EGNYTEDRIVE\OPS\CINCINNATI-1178\PROJECTS\2025\25780017_STANTEC_HAM-275-38.82 LANDSLIDE\GEO\PROJECT DOCS\REPORTS\25780017.GPJ

SHEET	SUBSET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P__ / __	10 / TOTAL 22	114356	BCD	KAH	

GEOTECHNICAL PROFILE - LANDSLIDE
BORING LOG B-002-2-25

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/9/2025 TIME: 4:01:29 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YL006 (11x17 log).dgn

S&ME JOB:

PROJECT: HAM-I-275-38.82	DRILLING FIRM / OPERATOR: S&ME / B. KENYON	DRILL RIG: S&ME D50 TRACK	STATION / OFFSET: 1992+26, 164' LT	EXPLORATION ID B-002-3-25
TYPE: GEOHAZARD EXPLORATION	SAMPLING FIRM / LOGGER: S&ME / B. KEYNON	HAMMER: CME AUTOMATIC	ALIGNMENT: I-275	
PID: 114356 BR ID: N/A	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 8/29/23	ELEVATION: 552.6 (MSL) EOB: 38.67 ft.	PAGE 1 OF 1
START: 4/2/25 END: 4/2/25	SAMPLING METHOD: SPT / ST / NQ2	ENERGY RATIO (%): 87.5	COORD: 39.057006 N, -84.382105 W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	INCL.
STIFF, BROWN, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE GRAVEL, MOIST , **FILL**	552.6	0	1 3 4	10	50	SS-1	2	-	-	-	-	-	-	-	-	27	A-6b (V)	-	
		1	1 2 3	7	11	SS-2	2	-	-	-	-	-	-	-	-	18	A-6b (V)	-	
	548.6	2	2 2 2	6	22	SS-3	3.5	-	-	-	-	-	-	-	-	19	A-6b (V)	-	
VERY STIFF, BROWN, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, MOIST , **FILL**		3																	
		4	1 1 2	4	33	SS-4	2	-	-	-	-	-	-	-	-	22	A-6b (V)	-	
	544.1	5	2 3 3	9	100	SS-5	2.75	5	6	3	32	54	39	19	20	14	A-6b (12)	-	
VERY STIFF, DARK GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, MOIST , **FILL**		6	3 3 3	9	50	SS-6	2.75	-	-	-	-	-	-	-	-	13	A-6b (V)	-	
		7	2 4 6	15	28	SS-7	3.5	-	-	-	-	-	-	-	-	15	A-6b (V)	-	
	539.6	8	3 4 4	12	33	SS-8	3.25	-	-	-	-	-	-	-	-	21	A-6b (V)	-	
VERY STIFF, LIGHT GROWN, **SILTY CLAY**, MOIST , **FILL** **SILTY CLAY** few root hairs encoutered at 13.5 to 15.0 feet		9	2 5 6	16	67	SS-9	3.5	-	-	-	-	-	-	-	-	21	A-6b (V)	-	
	536.6	10	2 5 7	18	83	SS-10	2.75	2	2	9	30	57	43	19	24	22	A-7-6 (14)	-	
VERY STIFF, BROWN, **CLAY**, LITTLE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, MOIST , **FILL** trace gravel encountered at 17.5 to 19.0 feet		11	0 4 5	13	83	SS-11	3.5	-	-	-	-	-	-	-	-	18	A-6a (V)	-	
	533.6	12	1 4 5	13	67	SS-12	3	-	-	-	-	-	-	-	-	24	A-6a (V)	-	
VERY STIFF, BROWN, **SANDY SILT**, LITTLE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, MOIST , **FILL**		13																	
		14	3 4 5	13	100	SS-13	2.5	2	1	15	48	34	25	16	9	23	A-4a (8)	-	
	529.6	15																	
VERY STIFF, DARK GRAY WITH MOTTLED BROWN, **SILT AND CLAY**, LITTLE FINE TO COARSE SAND, TRACE LIMESTONE FRAGMENTS, MOIST , **FILL**		16	3 4 26	44	100	SS-14	3.5	-	-	-	-	-	-	-	-	22	A-6a (V)	-	
	527.1	17																	
VERY STIFF TO HARD, BROWN AND GRAY, **SILTY CLAY**, LITTLE FINE TO COARSE SAND, AND LIMESTONE FRAGMENTS, MOIST , **FILL**		18	3 21 50	104	100	SS-15	3	36	9	7	15	33	36	17	19	13	A-6b (6)	-	
		19																	
Auger Refusal at 28.67 feet		20																	
		21	67		96	NQ2-1											CORE		
		22																	
		23																	
		24	80		100	NQ2-2											CORE		
		25																	
		26																	
		27																	
	515.4	28	56		100	NQ2-3											CORE		
SHALE, GRAY, HIGHLY TO MODERATELY WEATHERED, WEAK TO MODERATELY STRONG, LAMINATED TO VERY THIN BEDDED, DOLOMITIC; RQD 98.67%, REC 67.6%.	513.9	TR EOB																	

NOTES: GROUNDWATER WAS NOT ENCOUNTERED DURING DRILLING. LOCATION COORDINATES AND ELEVATIONS WERE OBTAINED FROM STANTEC SURVEY.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BENTONITE AND CEMENT GROUT MIXTURE

PLATE 6

S&ME SULFATE MYLAR (11X17) - SGE 01/2019 - OH DOT GDT - 7/9/25 12:17 - T:\CINCINNATI-1178\PROJECTS\2025\25780017_STANTEC_HAM-275-38.82_LANDSLIDE\GEO\PROJECT DOCS\REPORTS\25780017.GPJ

SHEET	SUBSET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P__ TOTAL __	11 TOTAL 22	114356	BCD	KAH	

GEOTECHNICAL PROFILE - LANDSLIDE
BORING LOG B-002-3-25

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/9/2025 TIME: 4:01:34 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YL007 (11x17 log).dgn

PROJECT: HAM-I-275-38.82	DRILLING FIRM / OPERATOR: S&ME / B. KENYON	DRILL RIG: S&ME D50 TRACK	STATION / OFFSET: 1991+33, 165' LT	EXPLORATION ID B-002-4-25
TYPE: GEOHAZARD EXPLORATION	SAMPLING FIRM / LOGGER: S&ME / B. KEYNON	HAMMER: CME AUTOMATIC	ALIGNMENT: I-275	
PID: 114356 BR ID: N/A	DRILLING METHOD: 3.25" HSA / NQ2	CALIBRATION DATE: 8/29/23	ELEVATION: 554.2 (MSL) EOB: 41.3 ft.	PAGE 1 OF 1
START: 3/31/25 END: 3/31/25	SAMPLING METHOD: SPT / ST / NQ2	ENERGY RATIO (%): 87.5	LAT / LONG: 39.056936 N, 84.381881 W	

MATERIAL DESCRIPTION AND NOTES	ELEV.	DEPTHS	SPT/ RQD	N_{60}	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%) GR	CS	FS	SI	CL	ATTERBERG LL	PL	PI	WC	ODOT CLASS (GI)	SO4 ppm	HOLE SEALED
VERY STIFF, BROWN, **CLAY**, TRACE ROOT HAIR, TRACE SHALE FRAGMENTS, MOIST , **FILL**	554.2		2 3 5	12	83	SS-1	2.75	-	-	-	-	-	-	-	-	14	A-7-6 (V)	-	
HARD, BROWN AND GRAY, **CLAY**, TRACE SHALE FRAGMENTS, MOIST , **FILL**	551.7		2 4 5	13	83	SS-2	4.5	-	-	-	-	-	-	-	-	17	A-7-6 (V)	-	
VERY STIFF, BROWN AND GRAY, **CLAY**, TRACE FINE TO COARSE SAND, TRACE SHALE FRAGMENTS, LITTLE LIMESTONE FRAGMENTS, MOIST , **FILL**	550.2		2 3 50/5"	-	88	SS-3	3	-	-	-	-	-	-	-	-	18	A-7-6 (V)	-	
STIFF TO VERY STIFF, BROWN AND GRAY, **CLAY**, TRACE SHALE FRAGMENTS, TRACE FINE TO COARSE SAND, MOIST , **FILL**	548.2		7 3 5	12	83	SS-4	1.5	2	3	4	28	63	48	22	26	26	A-7-6 (16)	-	
	544.7		2 4 5	13	67	SS-5	2.5	-	-	-	-	-	-	-	-	13	A-7-6 (V)	-	
HARD, BROWN AND GRAY, **CLAY**, TRACE SHALE FRAGMENTS, MOIST , **FILL**	543.2		3 7 11	26	100	SS-6	4.5	-	-	-	-	-	-	-	-	16	A-7-6 (V)	-	
STIFF, BROWN WITH MOTTLED GRAY, **SILT AND CLAY**, TRACE FINE TO COARSE SAND, MOIST , **FILL**	539.7		2 3 4	10	100	SS-7	1.5	-	-	-	-	-	-	-	-	28	A-6a (V)	-	
					39	ST-1		-	-	-	-	-	-	-	-	-	A-6a (V)	-	
STIFF, BROWN WITH MOTTLED GRAY, **SILT AND CLAY**, WET , **FILL**	536.7	W 536.7	3 4 4	12	89	SS-8		-	-	-	-	-	-	-	-	25	A-6a (V)	-	
			2 3 4	10	44	SS-9		-	-	-	-	-	-	-	-	27	A-6a (V)	-	
STIFF, BROWN AND GRAY, **SILT AND CLAY**, MOIST , **FILL**	533.2		2 4 6	15	100	SS-10	2	-	-	-	-	-	-	-	-	23	A-6a (V)	-	
					100	ST-2		-	-	-	-	-	-	-	-	-	A-6a (V)	-	
VERY STIFF, BROWN AND GRAY, **CLAY**, TRACE FINE TO COARSE SAND, MOIST , **FILL**	530.7		2 3 5	12	100	SS-11	3.5	-	-	-	-	-	-	-	-	29	A-7-6 (V)	-	
VERY STIFF, BROWN AND GRAY, **CLAY**, LITTLE LIMESTONE FRAGMENTS, MOIST , **FILL**	527.7		3 8 14	32	67	SS-12	3.5	-	-	-	-	-	-	-	-	26	A-7-6 (V)	-	
HARD, GRAY, **SILTY CLAY**, TRACE FINE TO COARSE SAND, SOME LIMESTONE FRAGMENTS, MOIST , **FILL**	522.9		8 9 15	35	67	SS-13	4.5	29	6	2	21	42	36	18	18	13	A-6b (9)	-	
			7 11 15	38	100	SS-14	4.5	-	-	-	-	-	-	-	-	18	A-6b (V)	-	
HIGHLY INDURATED AND VERTICALLY DISCONTINUOUS AND FRACTURED, DISCONTINUITY FILLED WITH SILTY CLAY WITH FINE GRAVEL. **LIMESTONE BOULDER, FILL** Auger Refusal at 31.25 feet	522.2		10		83	NQ2-1											CORE		
HIGHLY INDURATED AND VERTICALLY DISCONTINUOUS AND FRACTURED, DISCONTINUITY FILLED WITH SILTY CLAY WITH FINE GRAVEL, SENDIMENT IS LIGHT GRAYISH BROWN TO DARK BROWNISH GRAY. **SHALE AND LIMESTONE BOULDER, FILL**	518.2	TR																	
SHALE, SEVERELY WEATHERED, VERY WEAK, MORE SOIL LIKE, CONTS THIN 1/4" LIMESTONE LAYER.	516.5		35		100	NQ2-2											CORE		
SHALE, HIGHLY WEATHERED, VERY WEAK.	512.9	EOB																	

NOTES: GROUNDWATER WAS ENCOUNTERED AT 17.5 FEET DURING DRILLING. LOCATION COORDINATES AND ELEVATIONS WERE OBTAINED FROM STANTEC SURVEY.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: BENTONITE AND CEMENT GROUT MIXTURE

PLATE 1

S&ME SULFATE MYLAR (11X17) - SGE 01/2019 - OH DOT GDT - 6/16/25 15:45 - \\EGNYTEDRIVE\OPS\CINCINNATI-1178\PROJECTS\2025\25780017_STANTEC_HAM-275-38.82_LANDSLIDE\GEO\PROJECT DOCS\REPORTS\25780017.GPJ

SHEET	SUBSET	PROJECT ID	REVIEWER	DESIGNER	DESIGN AGENCY
P__ TOTAL __	12 TOTAL 22	114356	BCD	KAH	

GEOTECHNICAL PROFILE - LANDSLIDE
BORING LOG B-002-4-25

Boring B-001-0-25

Core Run #:	Depth	Recovery		RQD	
NQ-1	33.0' - 40.0'	3 / 84	4%	0 / 84	0%
NQ-2	40.0' - 45.0'	39.5 / 60	66%	34 / 60	57%
NQ-3	45.0' - 50.0'	9 / 60	15%	4 / 60	6%
HAM-275-38.82 LANDSLIDE				**PID 114356**	

Boring B-001-1-25

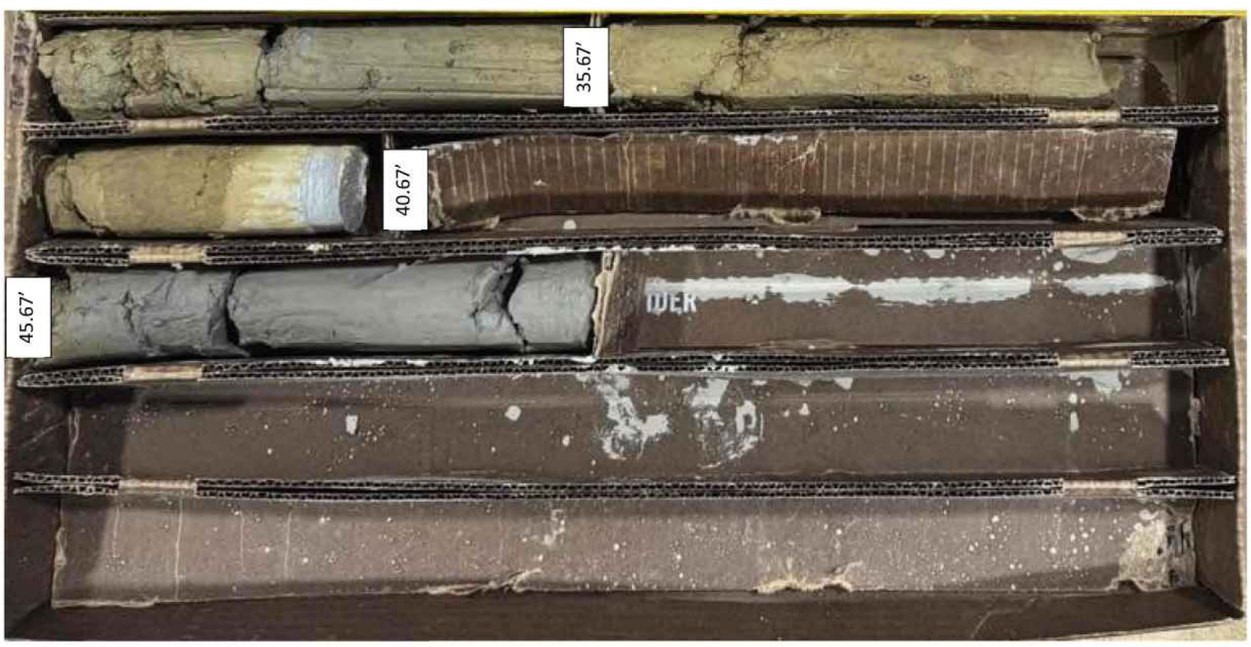
Core Run #:	Depth	Recovery		RQD	
NQ-1	22.0' - 25.83'	13.5 / 46	29%	9.5 / 46	21%
NQ-2	25.83' - 30.83'	15 / 60	25%	5 / 60	8%
NQ-3	30.83' - 35.83'	6 / 60	10%	0 / 60	0%
NQ-4	35.83' - 40.83'	18.5 / 60	31%	12 / 60	20%
HAM-275-38.82 LANDSLIDE				**PID 114356**	

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/8/2025 TIME: 3:50:40 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YR002 - Rock Core Photos.dgn

Boring B-001-1-25

Core Run #:	Depth	Recovery		RQD	
NQ-1	65.5' - 67.3'	17 / 22	77%	8 / 22	36%
NQ-2	67.3' - 72.3'	27 / 60	45%	6 / 60	10%
NQ-3	72.3' - 77.3'	59 / 60	98%	28 / 60	47%
HAM-275-38.82 LANDSLIDE				**PID 114356**	

Boring B-002-0-25



Core Run #:	Depth	Recovery		RQD	
NQ-1	33.67' - 35.67'	11 / 24	46%	11 / 24	46%
NQ-2	35.67' - 40.67'	17 / 60	28%	13 / 60	22%
NQ-3	40.67' - 45.67'	0 / 60	0%	0 / 60	0%
NQ-4	45.67' - 50.67'	11.5 / 60	19%	6 / 60	10%
HAM-275-38.82 LANDSLIDE				**PID 114356**	

Boring B-002-2-25

Core Run #:	Depth	Recovery		RQD	
NQ-1	9.0' - 10.25'	1.5 / 15	10%	0 / 15	0%
NQ-2	10.25' - 15.25'	21 / 60	35%	7 / 60	12%
NQ-3	15.25' - 20.25'	21 / 60	35%	11 / 60	18%
NQ-4	20.25' - 25.25'	29 / 60	48%	19 / 60	32%
NQ-5	25.25' - 30.25'	0 / 60	0%	0 / 60	0%
NQ-6	30.25' - 35.25'	44.5 / 60	75%	27 / 60	45%

Boring B-002-2-25

Core Run #:	Depth	Recovery		RQD	
NQ-7	35.25' - 40.25'	52.5 / 60	88%	45.5 / 60	76%
HAM-275-38.82 LANDSLIDE				**PID 114356**	

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/8/2025 TIME: 3:50:45 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YR004 - Rock Core Photos.dgn

Boring B-002-3-25

Core Run #:	Depth	Recovery		RQD	
NQ-1	28.67' - 30.67'	23 / 24	96%	16 / 24	67%
NQ-2	30.67' - 35.67'	60 / 60	100%	48 / 60	80%
NQ-3	35.67' - 38.67'	36 / 36	100%	20 / 60	33%
HAM-275-38.82 LANDSLIDE				**PID 114356**	

Boring B-002-4-25

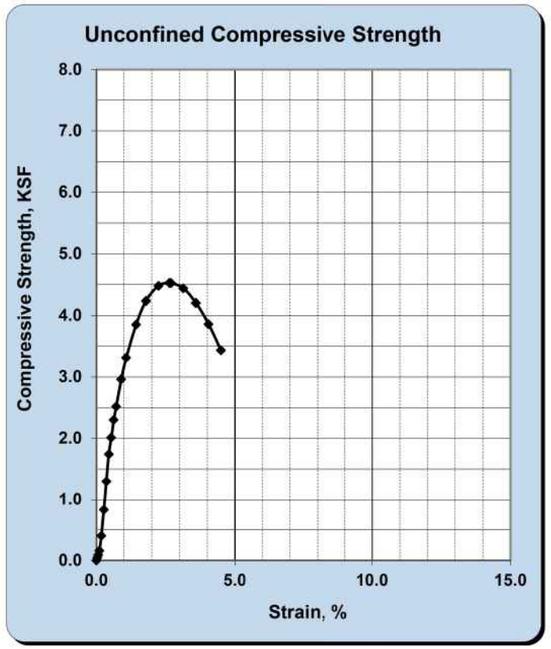
Core Run #:	Depth	Recovery		RQD	
NQ-1	31.5' - 36.3'	57 / 57	100%	6 / 57	10%
NQ-2	36.3' - 41.3'	60 / 60	100%	26 / 60	43%
HAM-275-38.82 LANDSLIDE				**PID 114356**	

Form No. TR-D2166-01-C
Revision No. : 1LEXd
Revision Date: 07/09/24

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOILS

ASTM D2166

S&ME, Inc. - Lexington:	2020 Liberty Road, Suite 105, Lexington, KY 40505		
Project No.:	25780017	Report Date:	04/22/25
Project Name:	HAM-275-38.82 Landslide	Test Date(s):	04/15/25
Client Name:	Stantec		
Client Address:	400 Techne Center Dr, Suite 300, Milford, Oh 45150		
Type:	Intact	Sample Date:	3/20/2025
Location:	B-001-0-25	Depth (ft.):	13.9 - 14.4
Sample Description:	SILT AND CLAY		



Failed Specimen

Type of Sample: Intact
Source of Moisture Sample: Entire

Initial Dry Unit Weight: 127.6 pcf Initial Water Content: 12.0%
Unconfined Compressive Strength, q_u: **4529** PSF
Undrained Shear Strength, s_u: **2264** PSF

Liquid Limit: 35
Plasticity Index: 13
Height to Diameter Ratio: 1.9
Rate of Strain (%/min.): 1
Strain at Failure: 2.6%

References / Comments / Deviations:

Jacob Folsom	Jacob Folsom	Lab Services Manager	04/23/25
Technical Responsibility	*Signature*	*Position*	*Date*

Form No. TR-D7012C-01
Revision No. : 1LexC
Revision Date: 12/12/23

UNIAXIAL COMPRESSIVE STRENGTH OF ROCK

ASTM D7012 Method C

Quality Assurance

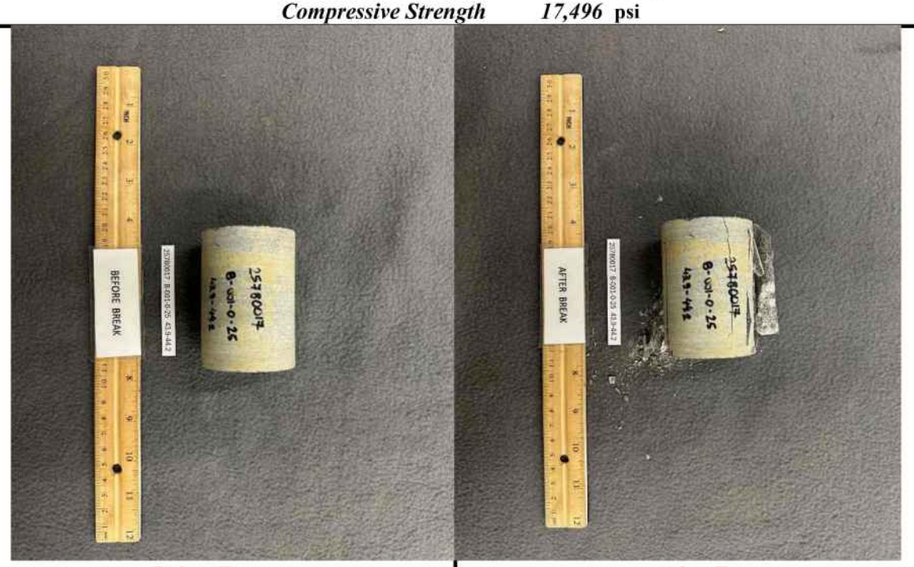
S&ME, Inc. - Lexington:	2020 Liberty Road, Suite 105, Lexington, KY 40505		
Project No.:	25780017	Report Date:	04/22/25
Project Name:	HAM-275-38.82 Landslide	Test Date(s):	04/10/25
Client Name:	Stantec		
Client Address:	400 Techne Center Dr, Suite 300, Milford, Oh 45150	Received Date:	03/20/25
Location:	B-001-0-25	Depth, ft:	43.9 - 44.2
Sample Description:	Limestone		

Angle of load relative to lithology: Approximately perpendicular

Test Results

Moisture Content ***0.2 %*** ***Dry Unit Weight*** ***163.7 pcf***

Compressive Strength ***17,496 psi***



Before Test **After Test**

Strain rate: 0.015 in/min.

Notes / Deviations / References: **Test specimen did not meet the ASTM D7012 specification for a height to diameter ratio of 2:1. Test results for specimens not meeting this requirement may differ from test results obtained from specimens meeting this requirement.**

J.Folsom	Jacob Folsom	Lab Services Manager	04/23/25
Technical Responsibility	*Signature*	*Position*	*Date*

GEOTECHNICAL PROFILE - LANDSLIDE
COMPRESSIVE STRENGTH TEST RESULTS B-001-0-25

DESIGN AGENCY
DESIGNER KAH
REVIEWER BCD
PROJECT ID 114356
SUBSET 17 TOTAL 22
SHEET P.- TOTAL —

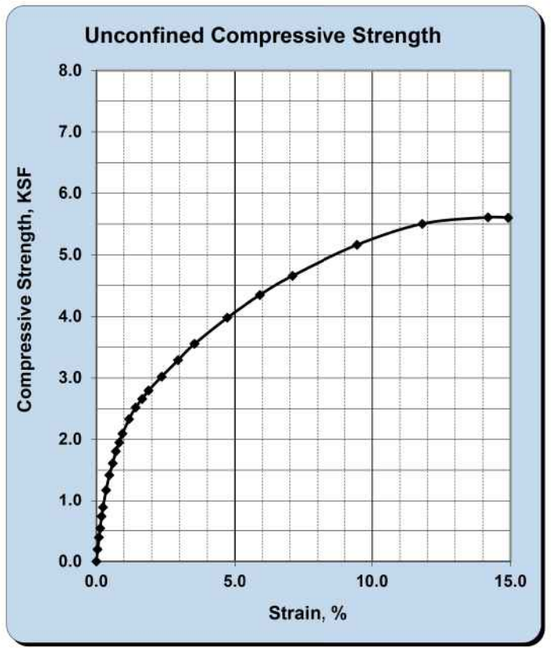
HAM-275-38.82 LANDSLIDE

Form No. TR-D2166-01-C
Revision No. : 1LEXd
Revision Date: 07/09/24

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOILS

ASTM D2166

S&ME, Inc. - Lexington:	2020 Liberty Road, Suite 105, Lexington, KY 40505		
Project No.:	25780017	Report Date:	04/22/25
Project Name:	HAM-275-38.82 Landslide	Test Date(s):	04/14/25
Client Name:	Stantec		
Client Address:	400 Techne Center Dr, Suite 300, Milford, Oh 45150		
Type:	Rock Core	Sample Date:	03/20/25
Location:	B-002-0-25	Depth (ft.):	36.0 - 36.4
Sample Description:	SHALE		



Failed Specimen

Type of Sample: Intact
Source of Moisture Sample: Entire

Initial Dry Unit Weight: 108.3 pcf
Initial Water Content: 20.0%
Unconfined Compressive Strength, q_u: **5610** PSF
Undrained Shear Strength, s_u: **2805** PSF

Liquid Limit: NP
Plasticity Index: NP
Height to Diameter Ratio: 2.2
Rate of Strain (%/min.): 1
Strain at Failure: 14.2%

References / Comments / Deviations:

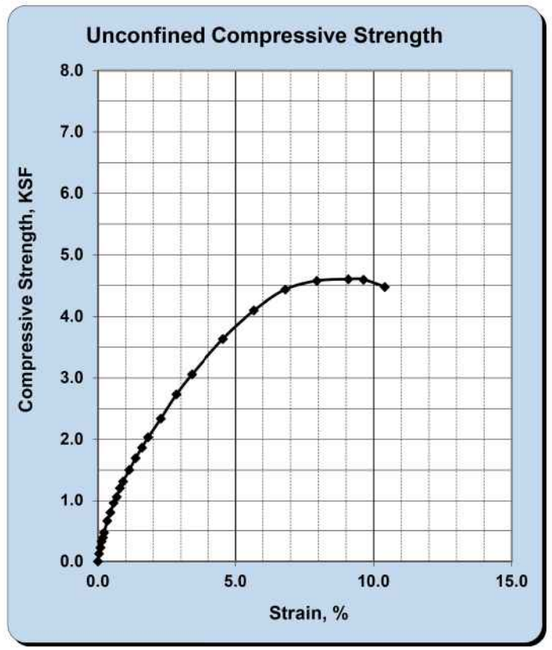
Jacob Folsom	Jacob Folsom	Lab Services Manager	04/23/25
Technical Responsibility	*Signature*	*Position*	*Date*

Form No. TR-D2166-01-C
Revision No. : 1LEXd
Revision Date: 07/09/24

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOILS

ASTM D2166

S&ME, Inc. - Lexington:	2020 Liberty Road, Suite 105, Lexington, KY 40505		
Project No.:	25780017	Report Date:	04/22/25
Project Name:	HAM-275-38.82 Landslide	Test Date(s):	04/07/25
Client Name:	Stantec		
Client Address:	400 Techne Center Dr, Suite 300, Milford, Oh 45150		
Type:	Rock Core	Sample Date:	03/20/25
Location:	B-002-02-25	Depth (ft.):	21.4 - 22.1
Sample Description:	SHALE		



Failed Specimen

Type of Sample: Intact
Source of Moisture Sample: Entire

Initial Dry Unit Weight: 100.2 pcf
Initial Water Content: 24.3%
Unconfined Compressive Strength, q_u: **4604** PSF
Undrained Shear Strength, s_u: **2302** PSF

Liquid Limit: NP
Plasticity Index: NP
Height to Diameter Ratio: 2.2
Rate of Strain (%/min.): 1
Strain at Failure: 9.1%

References / Comments / Deviations:

Jacob Folsom	Jacob Folsom	Lab Services Manager	04/23/25
Technical Responsibility	*Signature*	*Position*	*Date*

GEOTECHNICAL PROFILE - LANDSLIDE
COMPRESSIVE STRENGTH TEST RESULTS B-002-0-25 & B-002-2-25

DESIGN AGENCY
DESIGNER KAH
REVIEWER BCD
PROJECT ID 114356
SUBSET 18 TOTAL 22
SHEET P.- TOTAL —

HAM-275-38.82 LANDSLIDE

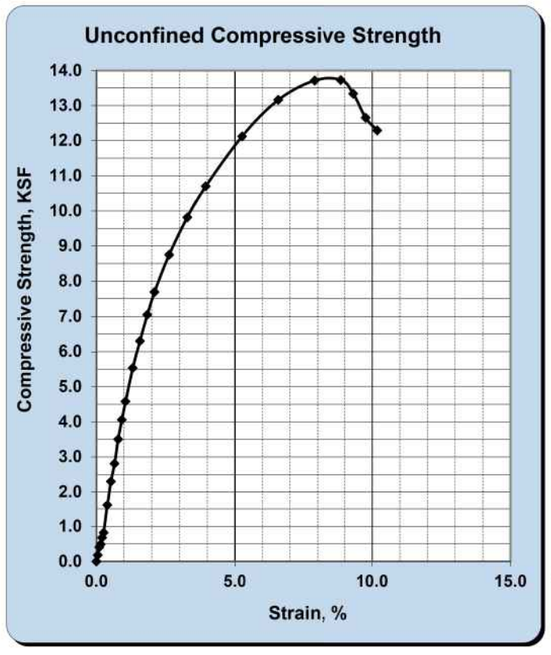
Form No. TR-D2166-01-C
Revision No. : 1LEXd
Revision Date: 07/09/24

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOILS

ASTM D2166

S&ME, Inc. - Lexington: 2020 Liberty Road, Suite 105, Lexington, KY 40505

Project No.:	25780017	Report Date:	04/22/25
Project Name:	HAM-275-38.82 Landslide	Test Date(s):	04/07/25
Client Name:	Stantec		
Client Address:	400 Techne Center Dr, Suite 300, Milford, Oh 45150		
Type:	Rock Core	Sample Date:	03/20/25
Location:	B-002-02-25	Depth (ft.):	39.3 - 39.8
Sample Description:	SHALE		



Failed Specimen

Type of Sample: Intact
Source of Moisture Sample: Entire

Initial Dry Unit Weight: 117.9 pcf
Initial Water Content: 16.7%
Unconfined Compressive Strength, q_u: **13733** PSF
Undrained Shear Strength, s_u: **6866** PSF

Liquid Limit: NP
Plasticity Index: NP
Height to Diameter Ratio: 2.0
Rate of Strain (%/min.): 1
Strain at Failure: 8.9%

References / Comments / Deviations:

Jacob Folsom	Jacob Folsom	Lab Services Manager	04/23/25
Technical Responsibility	*Signature*	*Position*	*Date*

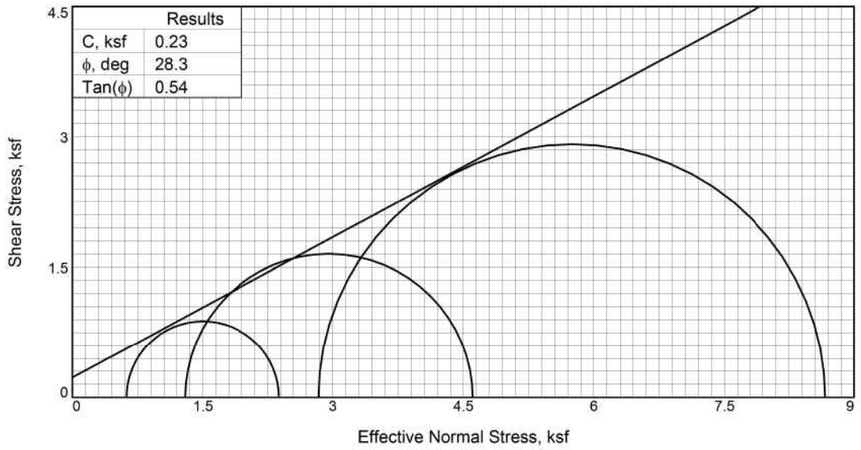
GEOTECHNICAL PROFILE - LANDSLIDE
COMPRESSIVE STRENGTH TEST RESULTS B-002-2-25

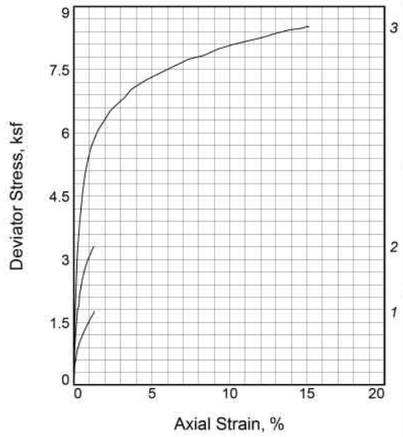
DESIGN AGENCY

DESIGNER KAH
REVIEWER BCD
PROJECT ID 114356
SUBSET 19 TOTAL 22
SHEET P.- TOTAL —

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/8/2025 TIME: 3:50:56 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356400-Engineering\Geotechnical\Sheets\114356_YD003 - Lab Test Results.dgn





Sample No.		1	2	3
Initial	Water Content, %	18.2	18.2	18.2
	Dry Density, pcf	115.4	115.4	115.4
	Saturation, %	99.5	99.5	99.5
	Void Ratio	0.5114	0.5114	0.5114
	Diameter, in.	2.854	2.854	2.854
	Height, in.	5.549	5.549	5.549
At Test	Water Content, %	17.2	16.5	15.5
	Dry Density, pcf	117.9	119.5	121.7
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.4801	0.4598	0.4333
	Diameter, in.	2.830	2.825	2.813
	Height, in.	5.525	5.469	5.416
Strain rate, %/min.		0.01	0.01	0.01
Eff. Cell Pressure, psi		10.00	20.00	40.00
Fail. Stress, ksf		1.76	3.31	5.83
Excess Pore Pr., ksf		0.82	1.58	2.92
Strain, %		1.3	1.3	1.3
Ult. Stress, ksf		1.76	3.31	8.51
Excess Pore Pr., ksf		0.82	1.58	1.58
Strain, %		1.3	1.3	15.1
$\bar{\sigma}_1$ Failure, ksf		2.38	4.61	8.67
$\bar{\sigma}_3$ Failure, ksf		0.62	1.30	2.84

Type of Test:
CU with Pore Pressures
Sample Type: Intact
Description: Brown and gray Silty Clay (A-6b).

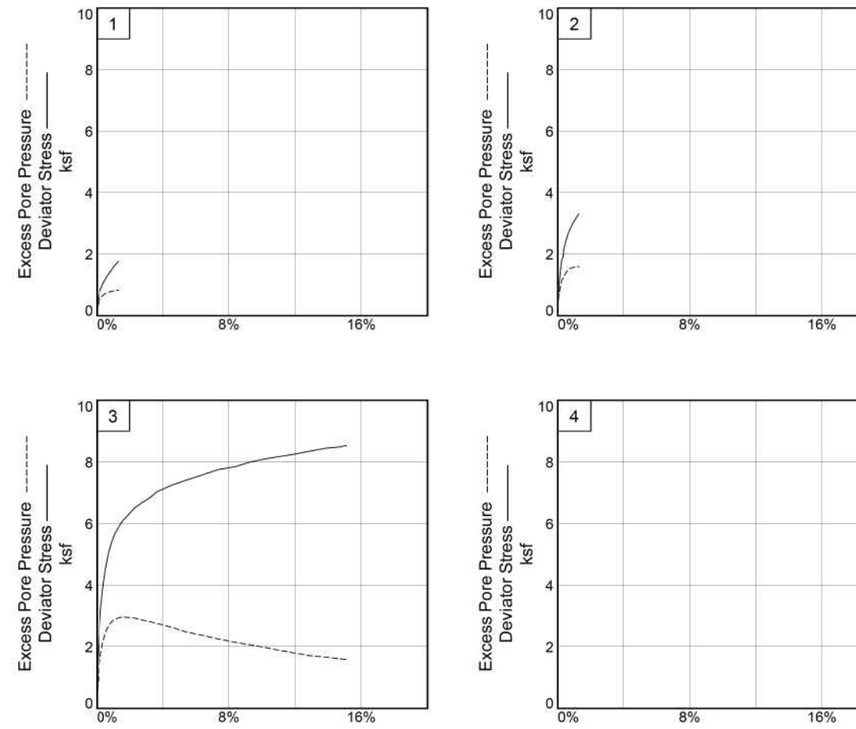
LL= 37 **PL=** 19 **PI=** 18
Specific Gravity= 2.795
Remarks: Plotted at 1.3% strain

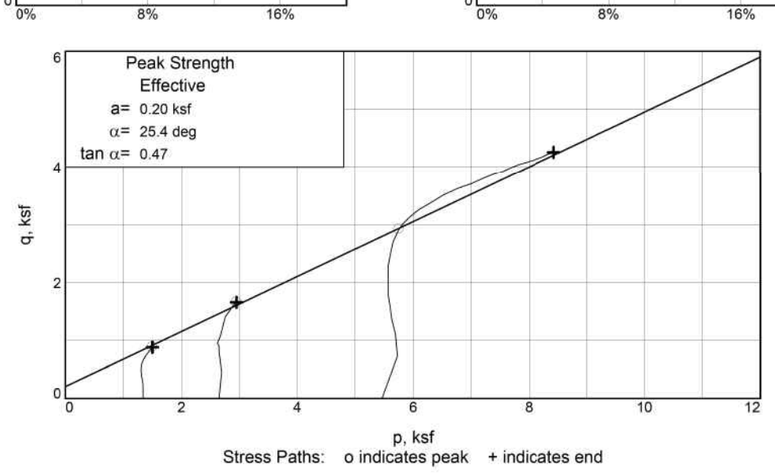
Client: Stantec
Project: HAM-275-38.82 Landslide
Source of Sample: B-002-02-25 **Depth:** 2.5 - 4.5
Sample Number: ST-1
Proj. No.: 25780017 **Date Sampled:** 03/20/25

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Cincinnati, Ohio

Figure 1 of 2

Tested By: J. LaMothe **Checked By:** B. Dusina





Client: Stantec
Project: HAM-275-38.82 Landslide
Source of Sample: B-002-02-25 **Depth:** 2.5 - 4.5 **Sample Number:** ST-1
Project No.: 25780017

Figure 2 of 2

S&ME, Inc.

Tested By: J. LaMothe **Checked By:** B. Dusina

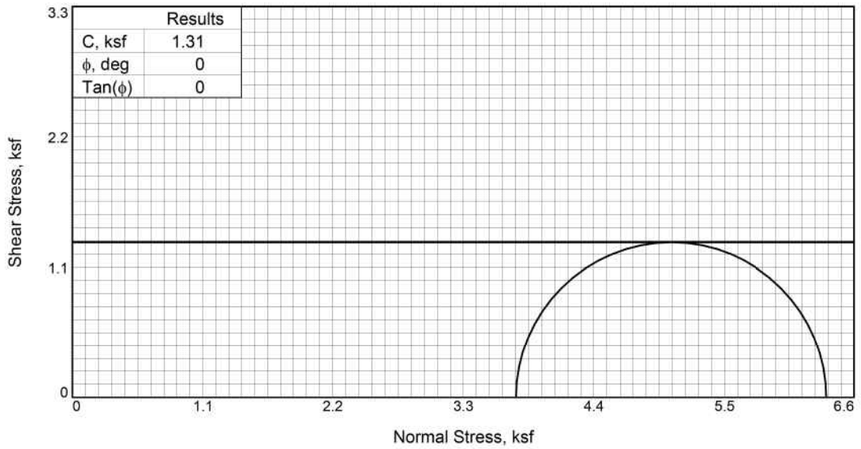
GEOTECHNICAL PROFILE - LANDSLIDE
TRIAXIAL SHEAR TEST RESULTS B-002-2-25

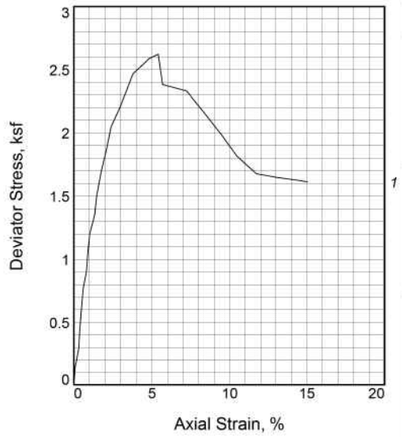
DESIGN AGENCY
S&ME

DESIGNER KAH
REVIEWER BCD
PROJECT ID 114356
SUBSET 20 TOTAL 22
SHEET P.- TOTAL —

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/8/2025 TIME: 3:50:59 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YD004 - Lab Test Results.dgn





Sample No.		1
Initial	Water Content, %	17.3
	Dry Density, pcf	116.2
	Saturation, %	100.0
	Void Ratio	0.4769
	Diameter, in.	1.927
	Height, in.	4.022
At Test	Water Content, %	17.3
	Dry Density, pcf	116.2
	Saturation, %	100.0
	Void Ratio	0.4769
	Diameter, in.	1.927
	Height, in.	4.022
Strain rate, %/min.		1.00
Back Pressure, psi		0.00
Cell Pressure, psi		26.00
Fail. Stress, ksf		2.62
Strain, %		5.4
Ult. Stress, ksf		1.61
Strain, %		15.0
σ_1 Failure, ksf		6.37
σ_3 Failure, ksf		3.74

Type of Test:
Unconsolidated Undrained
Sample Type: Intact
Description: Shale

LL= NP **PI=** NP
Assumed Specific Gravity= 2.75
Remarks: Failure criterion is peak deviator stress.

Client: Stantec

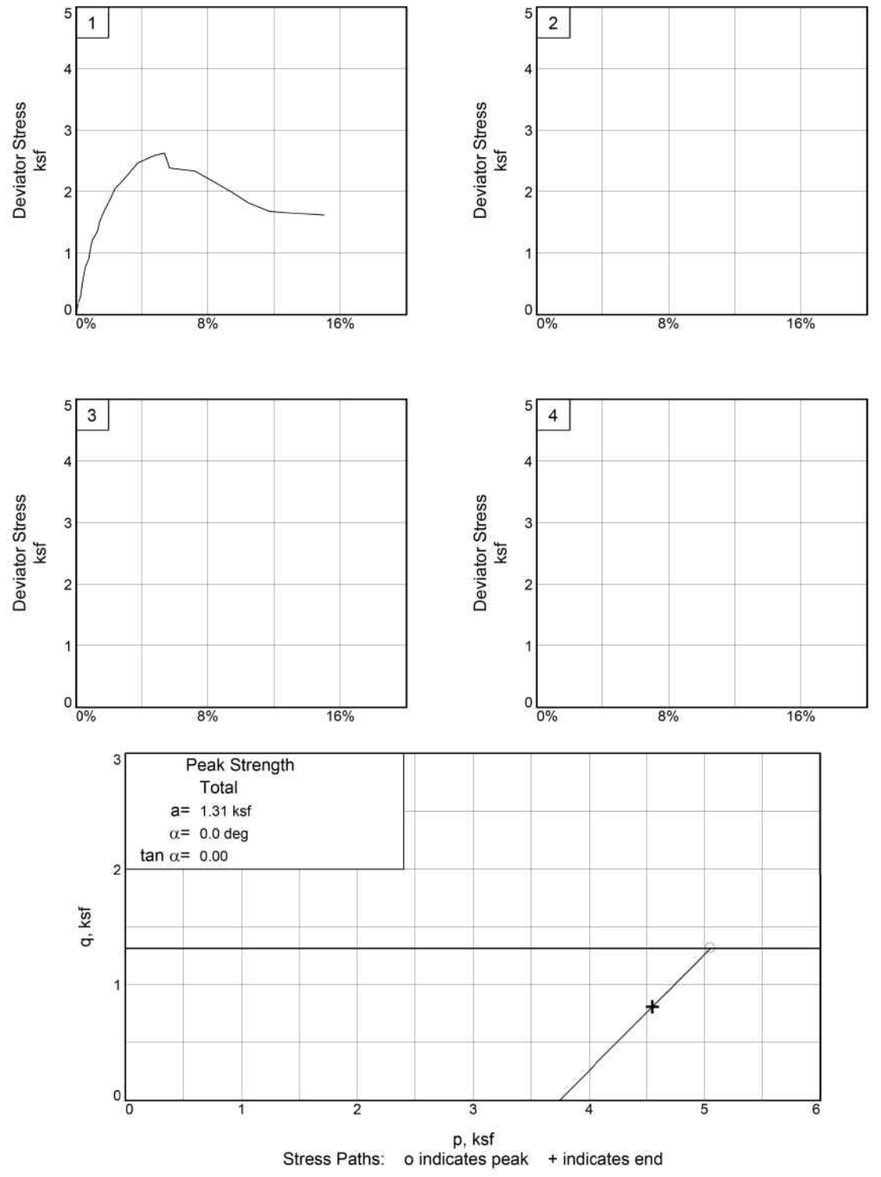
Project: HAM-275-38.82 Landslide

Source of Sample: B-002-02-25 **Depth:** 31.8 - 32.3
Sample Number: RC-6
Proj. No.: 25780017 **Date Sampled:** 03/20/25

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Cincinnati, Ohio

Figure 1 of 2

Tested By: J. LaMothe **Checked By:** J. Folsom 04/22/25



Client: Stantec
Project: HAM-275-38.82 Landslide
Source of Sample: B-002-02-25 **Depth:** 31.8 - 32.3 **Sample Number:** RC-6
Project No.: 25780017 **Figure** 2 of 2

S&ME, Inc.

Tested By: J. LaMothe **Checked By:** J. Folsom 04/22/25

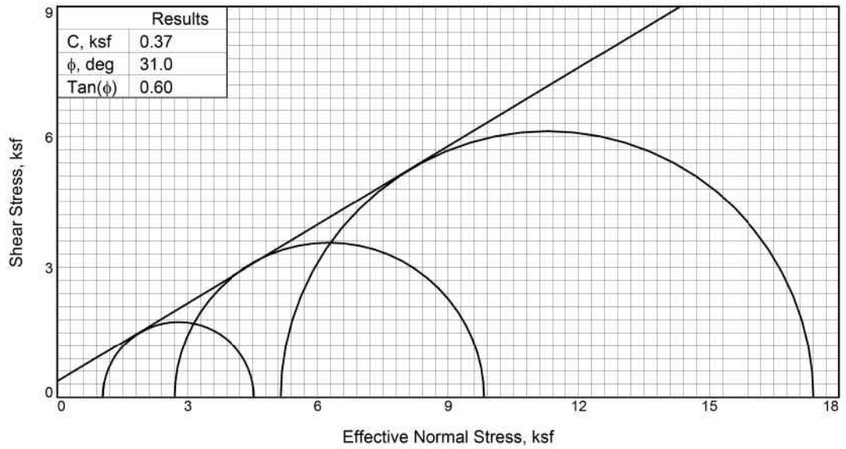
GEOTECHNICAL PROFILE - LANDSLIDE
TRIAXIAL SHEAR TEST RESULTS B-002-2-25

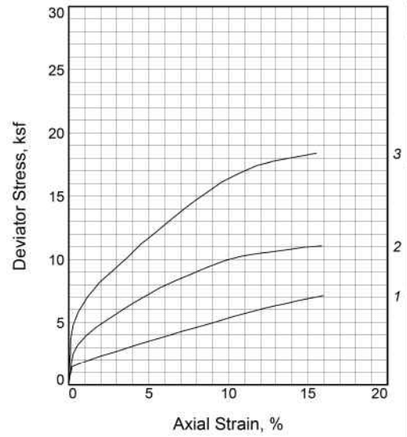
DESIGN AGENCY

DESIGNER KAH
REVIEWER BCD
PROJECT ID 114356
SUBSET 21 TOTAL 22
SHEET P.· TOTAL —

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/8/2025 TIME: 3:51:05 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YD006 - Lab Test Results.dgn





Sample No.		1	2	3
Initial	Water Content, %	25.8	25.0	23.3
	Dry Density, pcf	102.0	102.7	104.0
	Saturation, %	105.1	103.5	99.7
	Void Ratio	0.6699	0.6588	0.6374
	Diameter, in.	2.872	2.850	2.856
	Height, in.	5.490	5.544	5.548
At Test	Water Content, %	20.8	22.6	21.5
	Dry Density, pcf	108.6	105.3	107.4
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.5679	0.6175	0.5853
	Diameter, in.	2.796	2.828	2.831
	Height, in.	5.440	5.491	5.467
Strain rate, %/min.		0.07	0.07	0.07
Eff. Cell Pressure, psi		15.00	30.00	60.00
Fail. Stress, ksf		3.5	7.1	12.3
Excess Pore Pr., ksf		1.1	1.6	3.5
Strain, %		5.0	4.9	5.6
Ult. Stress, ksf		6.8	11.0	18.2
Excess Pore Pr., ksf		-0.2	-0.4	0.7
Strain, %		14.5	14.8	14.8
$\bar{\sigma}_1$ Failure, ksf		4.5	9.8	17.4
$\bar{\sigma}_3$ Failure, ksf		1.0	2.7	5.2

Type of Test:
CU with Pore Pressures
Sample Type: Intact
Description: Brown and gray Silt and Clay (A-6a).

LL= 30 **PL=** 18 **PI=** 12
Specific Gravity= 2.728
Remarks: Plotted at approximately 5% strain.

Client: Stantec

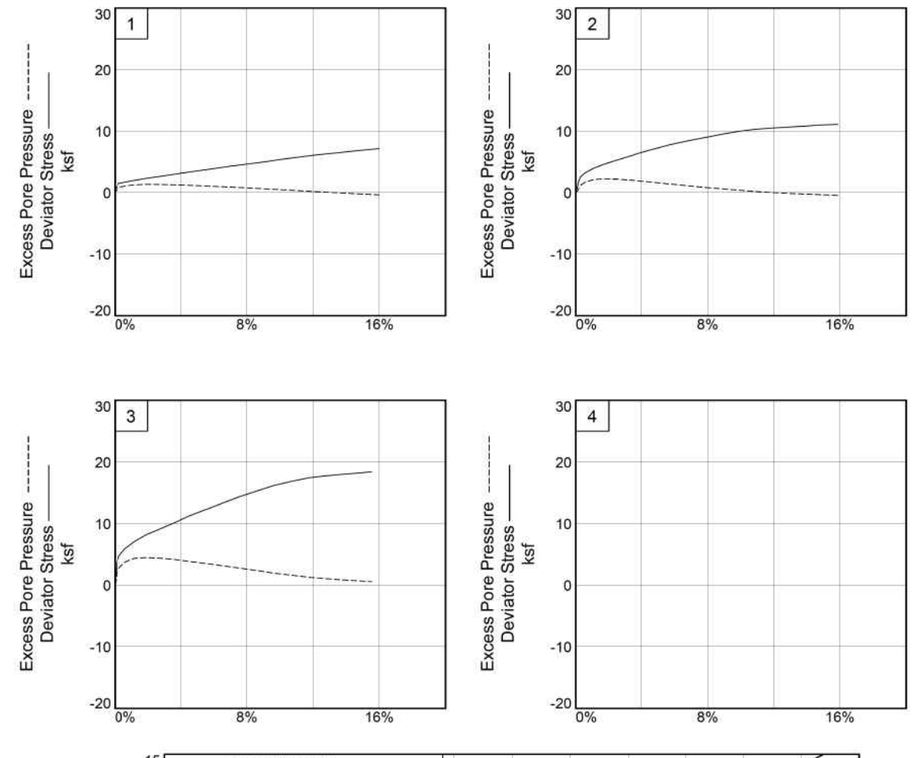
Project: HAM-275-38.82 Landslide

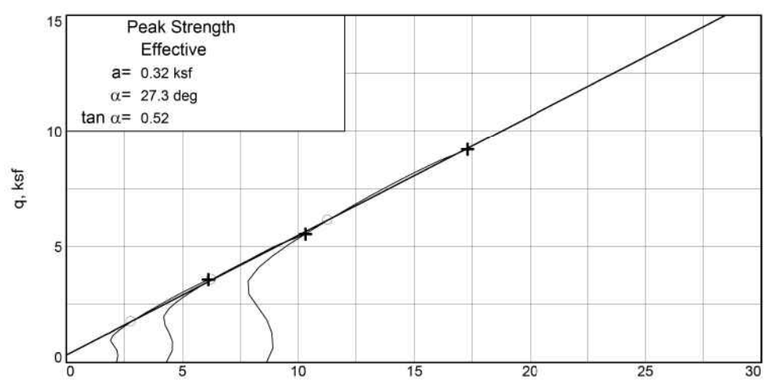
Source of Sample: B-002-4-25 **Depth:** 19.0 - 21.0
Sample Number: ST-2
Proj. No.: 25780017 **Date Sampled:** 03/20/25

TRIAXIAL SHEAR TEST REPORT
S&ME, Inc.
Cincinnati, Ohio

Figure 1 of 2

Tested By: J. LaMothe **Checked By:** B. Dusina





Client: Stantec
Project: HAM-275-38.82 Landslide
Source of Sample: B-002-4-25 **Depth:** 19.0 - 21.0 **Sample Number:** ST-2
Project No.: 25780017 **Figure** 2 of 2

S&ME, Inc.

Tested By: J. LaMothe **Checked By:** B. Dusina

GEOTECHNICAL PROFILE - LANDSLIDE
TRIAXIAL SHEAR TEST RESULTS B-002-4-25

DESIGN AGENCY

DESIGNER KAH
REVIEWER BCD
PROJECT ID 114356
SUBSET 22 TOTAL 22
SHEET P.- TOTAL —

HAM-275-38.82 LANDSLIDE

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 7/8/2025 TIME: 3:51:11 PM USER: CChandler
T:\Cincinnati-1178\Projects\2025\25780017_Stantec_HAM-275-38.82 Landslide\GEO\CAD\114356\400-Engineering\Geotechnical\Sheets\114356_YD005 - Lab Test Results.dgn