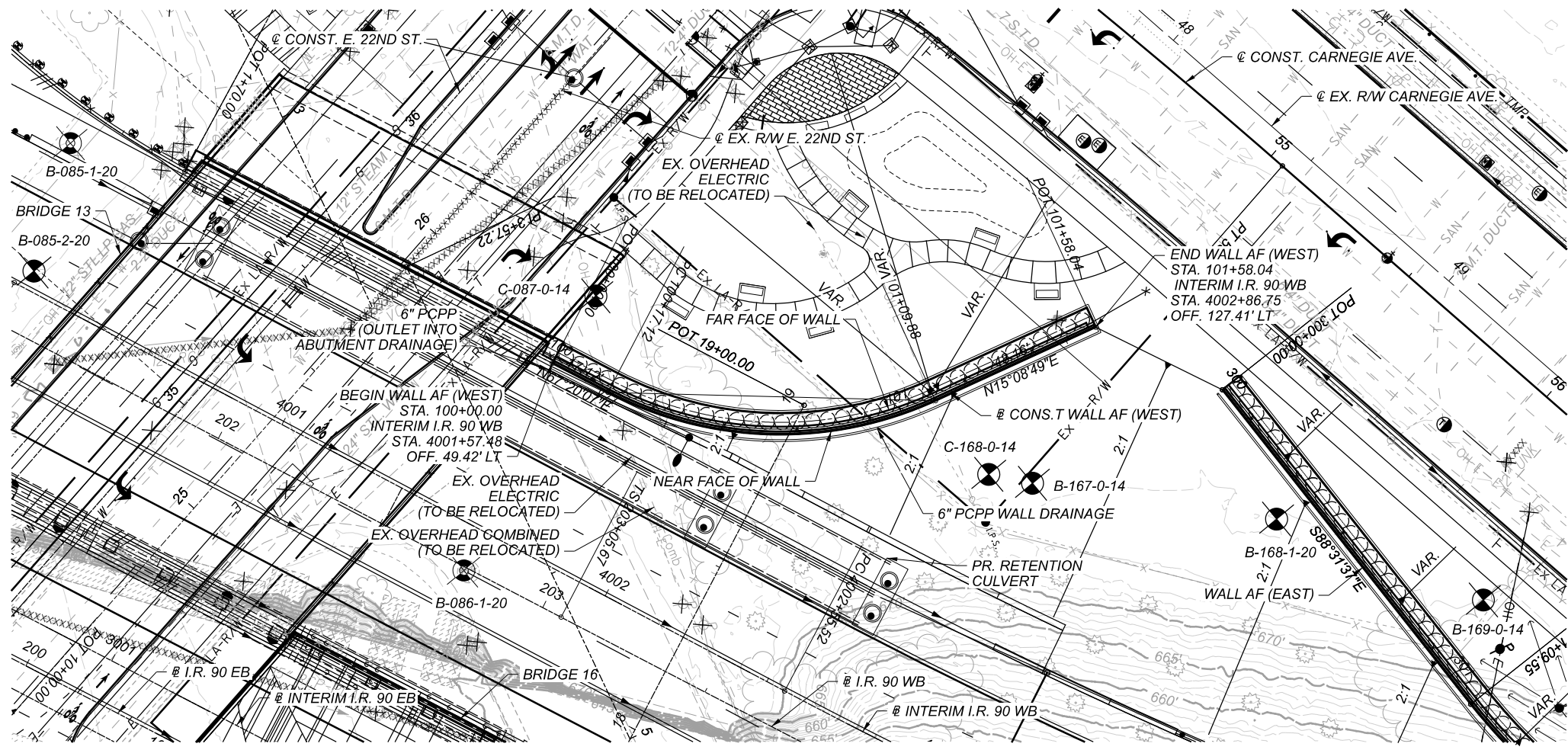


MODEL: Wall AF West - Wall AF Plan-5 PAPER SIZE: 17x11 (in.) DATE: 8/23/2022 TIME: 4:59:59 PM USER: Mbitner  
 p:\c\mb-us-pw-bentley.com\mb-us-pw-03\Documents\Cleveland\_OH101\_Projects\ODOT\Distric12\82382400-Engineering\Structures\WALL\_AF\_Sheets\82382\_AF\_WP001.dgn



**BENCHMARK DATA**

BM #54 STA. 33+01.73	ELEV. 672.54	OFFSET 46.13 RT.	CUT CROSS
BM #62 STA. 35+23.59	ELEV. 672.11	OFFSET 1165.82 LT.	RR SPIKE
BM #72 STA. 23+49.63	ELEV. 674.06	OFFSET 52.19 LT.	CUT CROSS
BM #73 STA. 37+10.17	ELEV. 671.90	OFFSET 403.44' LT.	CUT CROSS

BENCHMARK STATION AND OFFSETS ARE FROM @ CONST. E. 22ND ST.

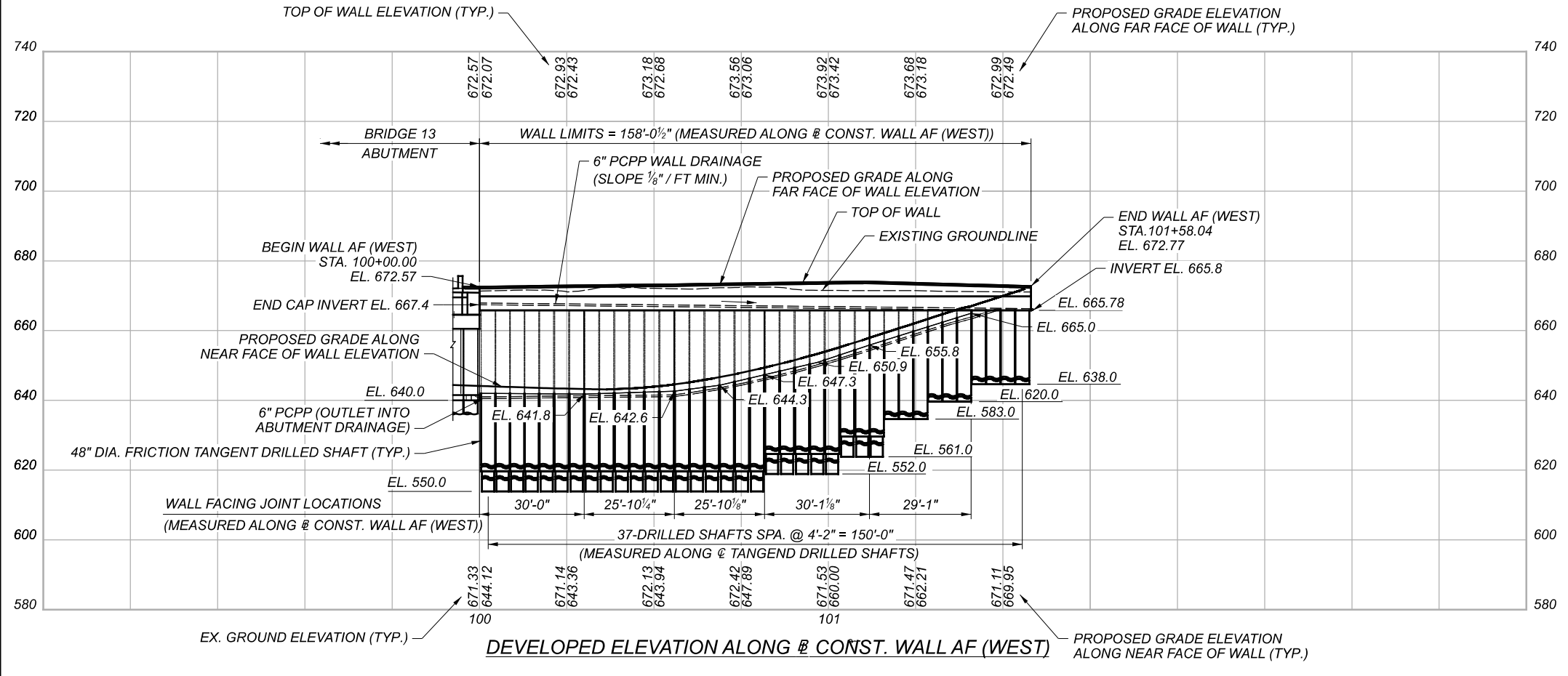
FOR ADDITIONAL BENCHMARK INFORMATION, SEE ROADWAY PLAN SHEET 3 / 2338

@ CONST. WALL AF (WEST)  
 CURVE DATA  
 P.I. = Sta. 100+67.00  
 Δ = 52°11'19" LT  
 Dc = 56°15'51"  
 R = 101.83'  
 T = 49.87'  
 L = 92.76'  
 E = 11.56'

**BORING LOCATION\***

BORING	STATION	OFFSET	TOP OF ROCK EL.
B-085-1-20	4000+12.93	40.88' LT.	-
B-085-2-20	4000+20.43	5.31' LT.	-
B-086-1-20	4000+62.61	11.96' RT.	-
B-087-0-14	4001+59.34	71.27' LT.	-
B-167-0-14	4002+90.73	81.55' LT.	-
B-168-0-14	4002+78.29	78.31' LT.	-
B-168-1-20	4003+59.52	101.13' LT.	-
B-169-0-14	4004+24.72	102.48' LT.	-

\* = BORING STATION AND OFFSETS ARE FROM @ INTERIM I.R. 90 WB



**PROPOSED WORK**

THE PROPOSED WORK CONSISTS OF CONSTRUCTING A RETAINING WALL ALONG THE RIGHT SIDE OF I.R. 90 WB. THE WALL IS TOP DOWN CONSTRUCTION CONSISTING OF TANGENT DRILLED SHAFTS WITH CAST-IN-PLACE CONCRETE FACING WITH A REINFORCED CONCRETE CAP AND FENCE WALL.

**NOTES**

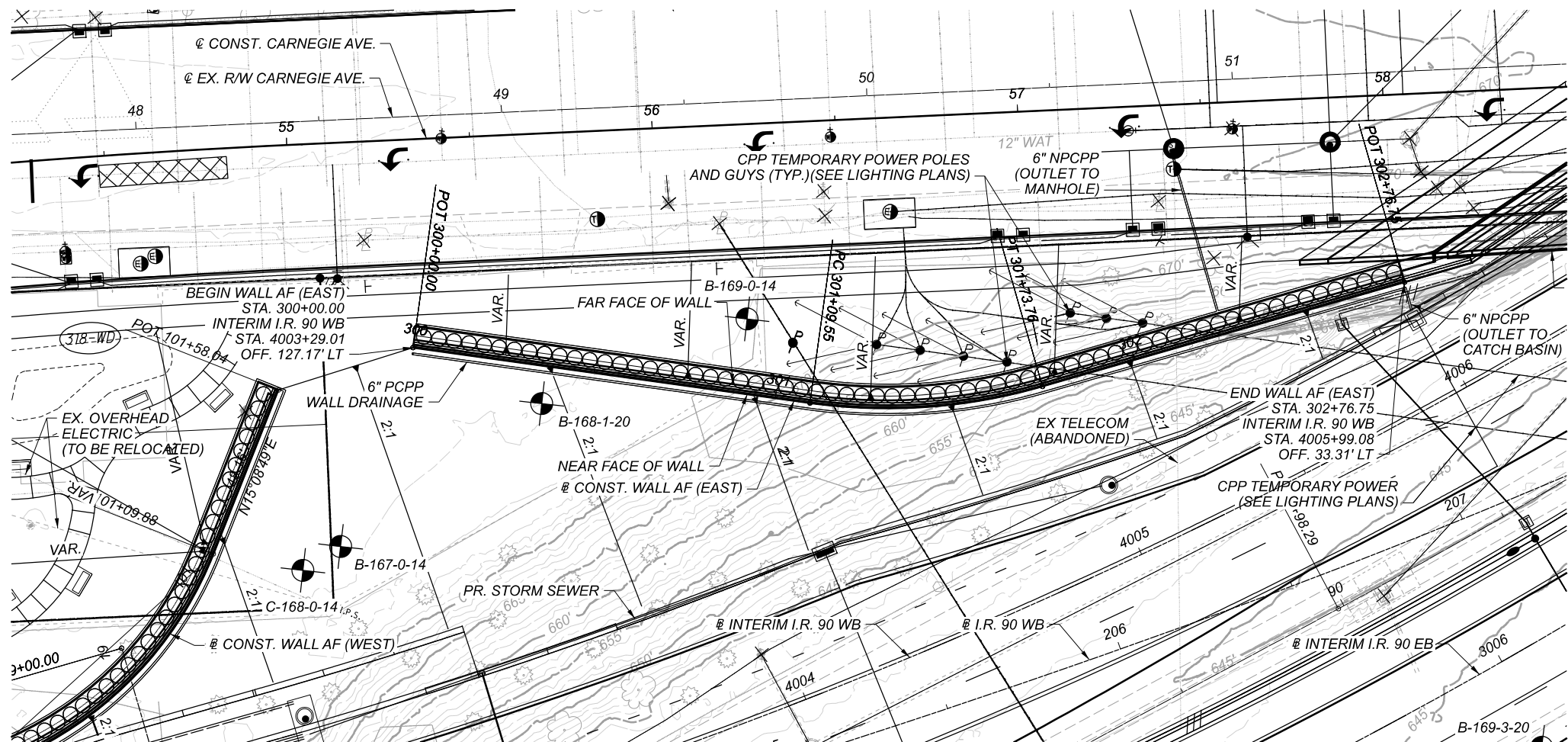
- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- FOR WALL CROSS SECTIONS, SEE SHEET 601 TO 607 / 2338
- STATION AND WALL OFFSETS SHOWN AT FRONT FACE OF WALL.

**LEGEND**

- ⊕ HISTORIC BORING LOCATIONS
- ⊙ PROJECT BORING LOCATIONS
- ⊙ INSTRUMENTED BORING LOCATION

CONST. = CONSTRUCTION  
 EOP = EDGE OF PAVEMENT  
 EOS = EDGE OF SHOULDER

DESIGNER	GZ	CHECKER	SED
REVIEWER	LPC 08-22-22		
PROJECT ID	82382		
SUBSET	1	TOTAL	16
SHEET	1024	TOTAL	2338



TOP OF WALL ELEVATION (TYP.) PLAN PROPOSED GRADE ELEVATION ALONG FAR FACE OF WALL (TYP.)

**BENCHMARK DATA**

BM #62 STA.	41+38.42	ELEV.	672.11	OFFSET	75.42 LT.	RR SPIKE
BM #64 STA.	58+35.86	ELEV.	671.25	OFFSET	47.90 LT.	RR SPIKE
BM #65 STA.	66+35.73	ELEV.	668.92	OFFSET	38.62 RT.	RR SPIKE
BM #73 STA.	49+25.90	ELEV.	671.90	OFFSET	31.86 LT.	CUT CROSS

BENCHMARK STATION AND OFFSETS ARE FROM @ CONST. CARNEGIE AVE.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 3 / 2338



@ CONST. WALL AF (EAST)  
 CURVE DATA  
 P.I. = Sta. 301+42.14  
 $\Delta = 23^{\circ}59'36''$  LT  
 $D_c = 37^{\circ}22'01''$   
 $R = 153.33'$   
 $T = 32.58'$   
 $L = 64.21'$   
 $E = 3.42'$

**BORING LOCATION\***

BORING	STATION	OFFSET	TOP OF ROCK EL.
B-167-0-14	4002+90.73	81.55' LT.	-
B-168-0-14	4002+78.29	78.31' LT.	-
B-168-1-20	4003+59.52	101.13' LT.	-
B-169-0-14	4004+24.72	102.48' LT.	-
B-169-3-20	4005+71.75	96.25' RT.	-

\* = BORING STATION AND OFFSETS ARE FROM @ INTERIM I.R. 90 WB

**PROPOSED WORK**

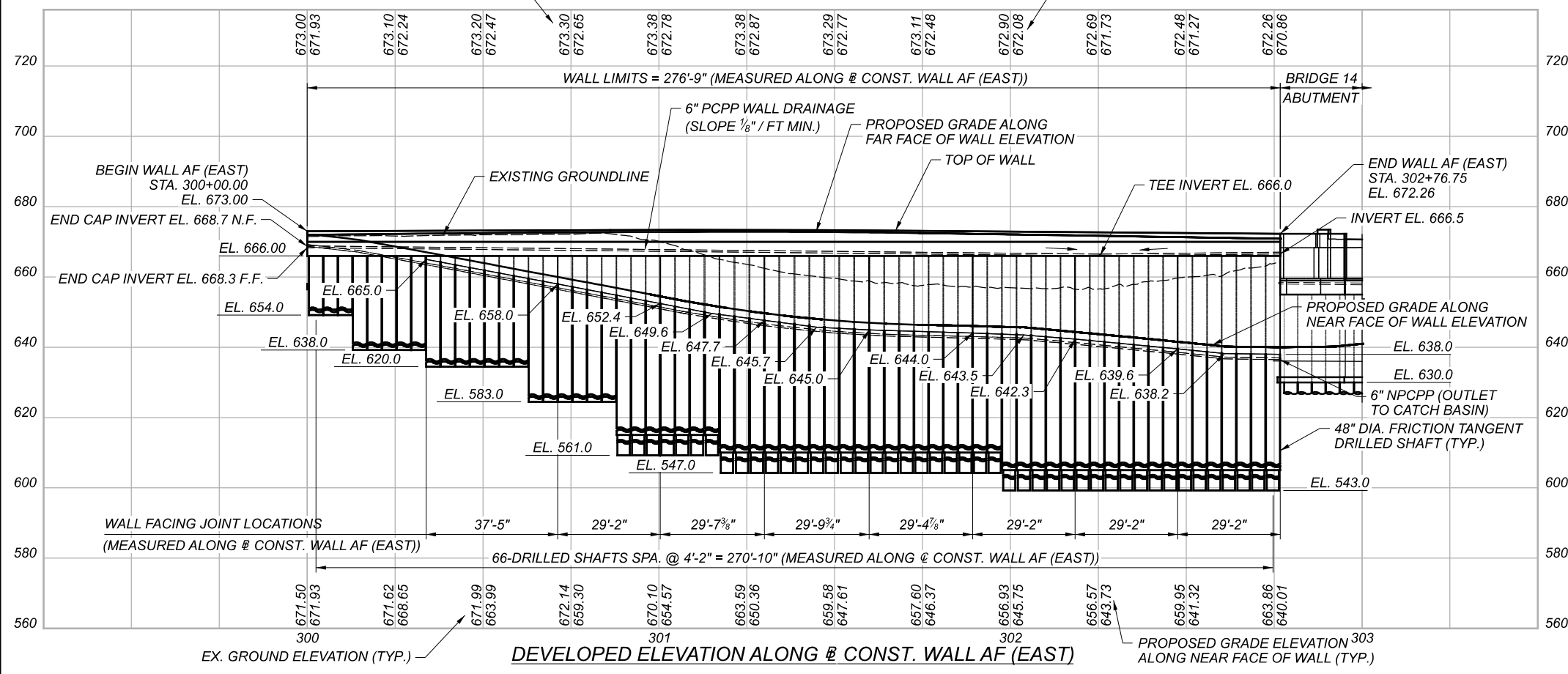
THE PROPOSED WORK CONSISTS OF CONSTRUCTING A RETAINING WALL ALONG THE RIGHT SIDE OF I.R. 90 WB. THE WALL IS TOP DOWN CONSTRUCTION CONSISTING OF TANGENT DRILLED SHAFTS WITH CAST-IN-PLACE CONCRETE FACING WITH A REINFORCED CONCRETE CAP AND FENCE WALL.

**NOTES**

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- FOR WALL CROSS SECTIONS, SEE SHEET 601 TO 607 / 2338
- STATION AND WALL OFFSETS SHOWN AT FRONT FACE OF WALL.

**LEGEND**

- HISTORIC BORING LOCATIONS
- PROJECT BORING LOCATIONS
- CONST. = CONSTRUCTION
- EOP = EDGE OF PAVEMENT
- EOS = EDGE OF SHOULDER



EX. GROUND ELEVATION (TYP.) DEVELOPED ELEVATION ALONG @ CONST. WALL AF (EAST) PROPOSED GRADE ELEVATION ALONG NEAR FACE OF WALL (TYP.)

DESIGNER	GZ	CHECKER	SED
REVIEWER	LPC 08-22-22		
PROJECT ID	82382		
SUBSET	2	TOTAL	16
SHEET	1025	TOTAL	2338

**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:**

REFER TO THE FOLLOWING STANDARD CONSTRUCTION DRAWINGS:

- VPF-1-90 REVISED 7/20/2018
- DM-1.1 REVISED 7/17/2020

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

- 800 DATED 1/21/2022

**DESIGN SPECIFICATIONS:**

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS", 9TH EDITION, ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AND THE ODOT BRIDGE DESIGN MANUAL, 2020 (DATED 07-16-21).

**DESIGN DATA:**

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI  
(CONCRETE FACING, DRILLED SHAFT CAP & FENCE WALL)

CONCRETE CLASS QC5, WITH 3/8" IN MAX. AGGREGATE SIZE:  
COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

PERMANENT STEEL CASING - ASTM A252 GRADE 3 - MINIMUM YIELD STRESS 45 KSI

**SEQUENCE OF CONSTRUCTION**

CONSTRUCT WALL AF EAST AND WALL AF WEST DURING MOT PHASE 2.

SEE MAINTENANCE OF TRAFFIC NOTES FOR ADDITIONAL PHASES AND INFORMATION

**ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN, PERMANENT GRAFFITI PROTECTION**

APPLY A PERMANENT GRAFFITI COATING QUALIFIED ACCORDING TO SUPPLEMENT 1083 THAT IS COMPATIBLE WITH THE CONCRETE SEALER OVER WHICH IT IS APPLIED. PROVIDE A COATING THAT MEETS THE REQUIREMENTS LISTED BELOW. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

- A. THE MATERIAL SHALL BE A SINGLE COMPONENT, RTV (ROOM TEMPERATURE VULCANIZED), NEUTRAL MOISTURE CURE, PERMANENT (NON-SACRIFICIAL), TYPE III (WATER CLEANABLE) POLYSILOXANE (SILICONE) ANTI-GRAFFITI COATING, FREE OF ANY WAXES, EPOXIES, OR POLYURETHANE COMPONENTS.
- B. THE COATING SHALL BE A ONE COAT SYSTEM (NO PRIMER) CAPABLE OF BEING SPRAY APPLIED TO A DRY FILM THICKNESS OF 15 MILS (375 MICRONS) WITHOUT RUNS OR SAGS (MULTIPLE COAT APPLICATION ACCEPTABLE FOR BRUSH/ROLLER USAGE AND PRIMER USAGE ACCEPTABLE FOR SPECIALTY SUBSTRATES SUCH AS GALVANIZED METAL).
- C. THE COATING SHALL EMIT LESS THAN 300 G/L (2.5 POUNDS PER GALLON) OF VOLATILE ORGANIZE COMPOUNDS (EPA METHOD 24).
- D. THE COATING SHALL MEET THE FOLLOWING PERFORMANCE REQUIREMENTS:
  - 1. CLEANABILITY LEVEL 1 (GRAFFITI COMPLETELY REMOVED WITH COLD WATER POWER WASH) AS PER ASTM D7089 WITH LOW PRESSURE (1200 PSI) COLD WATER WASH AFTER 2000 HOURS ACCELERATED UV-CONDENSATION EXPOSURE IN ACCORDANCE WITH ASTM D4587.
  - 2. GRAFFITI RESISTANCE LESS THAN 7.5 AS PER ASTM D6578 AFTER 2000 HOURS ACCELERATED UV-CONDENSATION EXPOSURE IN ACCORDANCE WITH ASTM 4578.
  - 3. NO SIGNS OF GRAFFITI OR GRAFFITI STAINING AND MUST BE INTACT AND EXHIBIT NO SIGNS OF STREAKING, CRACKING, PINHOLING, DISCOLORING, OR OTHER VISIBLE COATING DEGRADATION UPON CASUAL OBSERVATION WHEN TESTED IN ACCORDANCE WITH TXDOT TEX 890-B, TYPE III METHOD.
  - 4. BREATHABILITY OF 10 PERMS (+/- 3) PER ASTM D1653 USING "WET CUP METHOD".
  - 5. ELONGATION AT BREAK GREATER THAN 100% AS PER ASTM D412 (USING DIE "D").
  - 6. ADHESION RATING OF "8 - DIFFICULT TO REMOVE" AS PER ASTM D6677 (ADHESION BY KNIFE).

**ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN**

APPLY SEALER TO ALL EXPOSED SURFACES INCLUDING THE CAST IN PLACE CONCRETE FACING. THE FINISH COAT COLOR SHALL BE AS REQUIRED BY THE LANDSCAPING PLANS. SEE LANDSCAPING PLANS FOR COLOR INFORMATION. THE ADDITIONAL MATERIAL AND LABOR REQUIRED TO SEAL THE FORM LINER RELIEF SHALL BE INCLUDED IN THIS ITEM. TO ACCOUNT FOR THE SURFACE VARIATIONS DUE TO THE FORM LINERS, AN EXTRA 20 PERCENT HAS BEEN ADDED TO THE SEALING QUANTITIES FOR THE PURPOSE OF ESTIMATING.

**ITEM 518 - PREFABRICATED GEOCOMPOSITE DRAIN**

THIS WORK CONSISTS OF FURNISHING AND PLACING PREFABRICATED GEOCOMPOSITE DRAIN (PGD) AGAINST THE CONCRETE WALL FACING.

FURNISH PGD CONSISTING OF A DRAINAGE CORE WITH A GEOTEXTILE FABRIC BONDED TO AT LEAST ONE SIDE. USE CORE MATERIAL THAT CONSISTS OF A STABLE, POLYMER PLASTIC MATERIAL WITH A CUSPATED OR GEONET STRUCTURE. THE CORE MATERIAL SHALL HAVE SUFFICIENT FLEXIBILITY TO WITHSTAND BENDING AND HANDLING DURING INSTALLATION WITHOUT DAMAGE. FURNISH GEOTEXTILE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS FORMED INTO A WOVEN OR NON-WOVEN FABRIC. FURNISH PGD CONFORMING TO THE FOLLOWING REQUIREMENTS. FURNISH MANUFACTURER'S CERTIFIED TEST DATA.

	PROPERTY	TEST METHOD	VALUE
CORE	THICKNESS	ASTM D 5199	0.4 INCH
	COMPRESSIVE STRENGTH	ASTM D 1621	13,650 PSF MIN.
	FLOW RATE	ASTM D 4716	9 TO 25 GPM/FT
FABRIC	APPARENT OPENING SIZE	ASTM D 4751	0.3 MM MAX.
	FLOW RATE	ASTM D 4491	40 GPM/SQ.FT. MIN.
	GRAB TENSILE STRENGTH	ASTM D 4632	90 LBS MIN.
	CBR PUNCTURE	ASTM D 6241	65 LBS MIN.

PLACE PGD BETWEEN THE TANGENT SHAFTS, INCLUDING THE CANTILEVER PORTION AT THE END OF THE WALL. PLACE THE SIDE FACED WITH GEOTEXTILE AGAINST THE TIMBER LAGGING, FACING TOWARDS THE RETAINED GROUND, AND SECURE THE PGD TO THE LAGGING. USE NAILS AND WASHERS AT LEAST 1-INCH DIAMETER IN SIZE TO SECURE THE PGD ALONG THE EDGES OF THE PGD AND AT A MAXIMUM SPACING OF 4 FEET.

SPLICE ABUTTING SECTIONS TOGETHER BY OVERLAPPING THE GEOTEXTILE FLAP (IF PROVIDED) ON ONE SECTION WITH THE ADJACENT SECTION OF PGD. OVERLAP THE GEOTEXTILE IN A SHINGLED OVERLAP SO THAT THE UPPER GEOTEXTILE IS ON TOP OF THE LOWER GEOTEXTILE. IF A GEOTEXTILE FLAP IS NOT PROVIDED, COVER THE SEAM WITH A 12-INCH WIDE STRIP OF GEOTEXTILE FABRIC CENTERED OVER THE SEAM AND SECURED IN PLACE USING 3-INCH WIDE WATERPROOF PLASTIC TAPE.

SEAL ALL EXPOSED EDGES OF THE CORE MATERIAL TO PREVENT SOIL INTRUSION. SEAL EXPOSED EDGES BY FOLDING THE GEOTEXTILE FLAPS OVER AND AROUND THE PGD OR, IF A FLAP IS NOT PROVIDED, COVERING THE EXPOSED EDGE WITH A 12-INCH WIDE STRIP OF GEOTEXTILE FABRIC, TAPING THE STRIP TO THE PGD GEOTEXTILE 8 INCHES FROM THE EXPOSED EDGE, AND FOLDING THE REMAINING 4 INCHES OVER AND AROUND THE PGD. SECURE LOOSE EDGES OF THE GEOTEXTILE FABRIC WITH 3-INCH WIDE WATERPROOF PLASTIC TAPE.

REPAIR ANY DAMAGE TO THE GEOTEXTILE FABRIC BY COVERING WITH A PATCH WHICH OVERLAPS THE DAMAGED AREA AND EXTENDS AT LEAST 6 INCHES BEYOND THE EDGE OF THE DAMAGED AREA. TAPE THE EDGES OF THE PATCH IN PLACE USING 3-INCH WIDE WATERPROOF PLASTIC TAPE. IF THE CORE OF THE PGD IS DAMAGED, REPLACE IT WITH A NEW SECTION OF PGD AND SPLICE IT AS DESCRIBED ABOVE.

WHERE SHOWN ON THE PLANS, PLACE THE BOTTOM OF THE PGD ADJACENT TO A PERFORATED DRAINAGE COLLECTION PIPE AND POROUS BACKFILL AND COVER WITH GEOTEXTILE FABRIC. ENSURE A CONTINUOUS DRAINAGE PATH FROM THE PGD CORE TO THE PIPE. WHERE A WALL HAS WEEPHOLES FOR DRAINAGE, ENSURE WATER CAN DRAIN FROM THE PGD TO THE WEEPHOLE. IF NECESSARY, CUT A HOLE IN THE CORE TO ALLOW DRAINAGE OR USE A WEEPHOLE FITTING FROM THE PGD MANUFACTURER. DO NOT CUT GEOTEXTILE.

**ITEM 524 - DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN  
ITEM 524 - DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN**

**GENERAL:**

THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT TO INSTALL DRILLED SHAFTS AS DETAILED IN THE PLANS IN ACCORDANCE WITH THE REQUIREMENTS OF ODOT C&MS SECTION 524, AND WITH THE ADDITIONAL REQUIREMENTS DEFINED BELOW.

**ANTICIPATED DRILLED SHAFT DEFLECTIONS:**

TANGENT DRILLED SHAFTS ("SHAFT", "SHAFTS") ARE INCORPORATED AS WALLS IN VARIOUS STRUCTURAL ELEMENTS FOR THIS BRIDGE. AS DESIGNED AND DETAILED THE SHAFTS ARE EXPECTED TO DEFLECT UNDER THE APPLIED PERMANENT LOADS (DC, DW, EP, WA) AND TRANSIENT LOADS (LL, LS, TU) AT THE SERVICE LIMIT STATE. MEASURES FOR ACCOMODATING THESE DEFLECTIONS ARE DETAILED BELOW.

THE SHAFT HEAD IS CONSIDERED TO BE THE DESIGN BEAM SEAT ELEVATION FOR SHAFTS INCORPORATED IN ABUTMENTS. THE SHAFT HEAD IS CONSIDERED TO BE THE DESIGN TOP OF CAP ELEVATION FOR SHAFTS INCORPORATED IN RETAINING WALLS. IN BOTH CASES THE FINISHED TOP OF SHAFT IS LOWER THAN THE SHAFT HEAD ELEVATION.

THE ANTICIPATED DEFLECTION AT THE SHAFT HEAD ELEVATION RELATIVE TO THE SHAFT TIP ELEVATION DUE TO PERMANENT LOADS ARE AS FOLLOWS:

WALL AF EAST	6.00 INCHES	SHAFTS AFW01 THROUGH AFW26 ONLY
WALL AF WEST	6.00 INCHES	SHAFTS AFE29 THROUGH AFE66 ONLY

**DESIGN ASSUMPTIONS:**

BEHAVIOR OF THE DRILLED SHAFTS AS DESCRIBED ABOVE IS PREDICATED UPON THE FOLOWING DESIGN ASSUMPTIONS:

- DESIGN HEIGHT OF DRILLED SHAFT IS THE DISTANCE FROM THE SHAFT HEAD ELEVATION TO THE DREDGE LINE ELEVATION
- PERMANENT LOAD DEFLECTIONS ARE ASSUMED TO OCCUR FOLLOWING REMOVAL OF SOIL IN FRONT OF THE TANGENT SHAFT WALLS
- ADDITIONAL ASSUMPTIONS AND CONSTRAINTS ARE DETAILED IN THE PLANS.

**DREDGE LINE ELEVATIONS:**

WALL AF EAST ELEV. 630.5 SHAFTS AFE47 THROUGH AFE66  
FOR DRAINAGE STRUCTURE EXCAVATION VARIES FOR OTHER SHAFTS

WALL AF WEST ELEV. 633.5 SHAFTS AFW01 THROUGH AFW19  
FOR DRAINAGE STRUCTURE EXCAVATION VARIES FOR OTHER SHAFTS

**DRILLED SHAFT LOCATION SURVEY:**

THE CORRECT LOCATION OF SHAFT IS CRITICAL TO ESTABLISHING AND MAINTAINING THE STRUCTURE GEOMETRY. THE CONTRACTOR SHALL EMPLOY THE SERVICES OF A OHIO REGISTERED PROFESSIONAL SURVEYOR ("THE SURVEYOR") TO ESTABLISH, MAINTAIN AND VERIFY HORIZONTAL AND VERTICAL SHAFT GEOMETRY. THE SURVEYOR SHALL BE READILY AVAILABLE TO ESTABLISH GEOMETRIC CONTROL AND PERFORM THE SURVEYS REQUIRED BELOW.

**CONTRACTOR'S INSTALLATION PLAN:**

THE CONTRACTOR SHALL PROVIDE AN INSTALLATION PLAN AS REQUIRED BY ODOT C&MS SECTION 524.03. THE INSTALLATION PLAN SHALL ALSO INCLUDE:

- CONTRACTOR'S PROPOSED METHODS TO MAINTAIN LOCATION AND ALIGNMENT OF SHAFTS
- CONTRACTOR'S PROPOSED METHODS FOR PERFORMING THE DRILLED SHAFT LOCATION SURVEY

**COSTRUCTION CONSTRAINTS:**

THE CONTRACTOR IS ADVISED THAT THE PROPOSED DRILLED SHAFT INSTALLATIONS MAY REQUIRE ADVANCING SHAFTS THROUGH EXISTING PILES. ADDITIONAL INFORMATION AND NOTES REGARDING POSSIBLE CONFLICTS ARE PROVIDED IN THE PLANS.

**MATERIALS:**

CONCRETE AND REINFORCING STEEL FOR DRILLED SHAFTS SHALL CONFORM TO ODOT C&MS SECTION 524.02.

A SELF CONSOLIDATION CONCRETE MIX SHALL BE INCORPORATED

THE MAXIMUM COARSE AGGREGATE SIZE SHALL BE: 3/8"

PERMANENT STEEL CASINGS SHALL BE ASTM A252 GRADE 3 WITH A MINIMUM YIELD STRESS OF 45 KSI. CASING SECTION LENGTHS SHALL BE MAXIMIZED TO MINIMIZE THE NUMBER OF FIELD SPLICE LOCATIONS. FIELD SPLICE LOCATIONS SHALL BE AS REQUIRED BY THE PLAN DETAILS. THE USE OF SPIRAL WELDED PIPE IS PERMITTED.

CUY-90-16.28 (CCG3A)

MODEL: Sheet (2 of 2) PAPER: 17x11 (in.) DATE: 8/23/2022 TIME: 5:00:55 PM USER: Mblttrr pwc:\mb-us-pw-bentley.com\mb-us-pw-03\Documents\Cleveland\_OH101\_P\Projects\ODOT\Dist\1282382400-Engineering\Structures\WALL\_AF\_Sheets\82382\_AF\_WN001.dgn

WALL GENERAL NOTES (1 OF 2)

WALL AF

ALONG NORTH SIDE OF I.R. 90 NEAR E. 22ND ST. AND CARNEGIE AVE.

SFN

N/A

DESIGN AGENCY

Michael Baker INTERNATIONAL

DESIGNER CHECKER

GZ SED

REVIEWER

LPC 08-22-22

PROJECT ID

82382

SUBSET TOTAL

3 16

SHEET TOTAL

1026 2338

**ITEM 524 - DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT**

**PART 1: DESCRIPTION**

THIS WORK CONSISTS OF ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO CONSTRUCT A DEMONSTRATION DRILLED SHAFT FOR TESTING AND EVALUATION TO VERIFY THE PROPOSED CONSTRUCTION METHODS FOR THE PRODUCTION OF DRILLED SHAFTS.

**PART 2: MATERIALS**

THE DEMONSTRATION DRILLED SHAFT SHALL USE THE SAME CONCRETE MIX DESIGN AND STEEL REINFORCEMENT AS THE PRODUCTION DRILLED SHAFTS.

**PART 3: EXECUTION**

SUBMIT A DRILLED SHAFT INSTALLATION PLAN TO THE ENGINEER FOR ACCEPTANCE IN ACCORDANCE WITH THE REQUIREMENTS OF C&MS 524.03. CONSTRUCT AT LEAST ONE DEMONSTRATION DRILLED SHAFT IN THE AREA SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE ACCEPTED WRITTEN INSTALLATION. UPON CONSTRUCTION OF THE DEMONSTRATION DRILLED SHAFT, AND RECEIPT OF TESTING AND EVALUATION RESULTS CONFIRMING THE DEMONSTRATION DRILLED SHAFT HAS BEEN INSTALLED IN ACCORDANCE WITH CONTRACT DOCUMENT, THE ENGINEER WILL ISSUE A LETTER ACCEPTING THE INSTALLATION PLAN FOR THE CONSTRUCTION OF THE SUBSEQUENT PRODUCTION DRILLED SHAFTS.

IF MODIFICATION(S) TO THE INSTALLATION PLAN ARE MADE, WHETHER DUE TO THE TESTING AND EVALUATION RESULTS OR FOR OTHER REASON, THE DEPARTMENT WILL REQUIRE CONSTRUCTION OF AN ADDITIONAL DEMONSTRATION SHAFT CONSTRUCTED IN ACCORDANCE WITH THE MODIFIED INSTALLATION PLAN, AT NO ADDITIONAL COST. THE DIAMETER, LENGTH, REINFORCING, INSTALLATION METHODS, AND OTHER MISCELLANEOUS DETAILS OF THE DEMONSTRATION SHAFT SHALL BE THE SAME AS THE PRODUCTION DRILLED SHAFTS.

SUBMIT THE LOCATION OF THE DEMONSTRATION SHAFT TO THE ENGINEER FOR ACCEPTANCE. LOCATE THE DEMONSTRATION DRILLED SHAFT SUCH THAT NO INTERFERENCE OCCURS WITH THE FOUNDATIONS OF EXISTING OR PROPOSED STRUCTURES, THE PROPOSED MAINTENANCE OF TRAFFIC, OR EXISTING OR PROPOSED UTILITIES.

LOCATE THE DEMONSTRATION DRILLED SHAFT SO THAT TESTING DOES NOT DAMAGE THE JUVENILE JUSTICE CENTER BUILDING.

TEST THE DEMONSTRATION DRILLED SHAFT BY THERMAL INTEGRITY PROFILING (TIP) ACCORDING TO ASTM D7949, METHOD BE, BY CROSSHOLE SONIC LOGGING (CSL) ACCORDING TO ASTM D6760; AND BY HIGH-STRAIN DYNAMIC TESTING ACCORDING TO ASTM D4945.

**PART 4: MEASUREMENT AND PAYMENT**

THE DEPARTMENT WILL MEASURE DEMONSTRATION DRILLED SHAFT BY THE NUMBER OF FEET, MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE REQUIRED BOTTOM ELEVATION OF THE SHAFT TO THE PROPOSED TOP PLAN ELEVATION.

IN ADDITION TO THE PROVISIONS OF C&MS 524.17, THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF DEMONSTRATION DRILLED SHAFT AFTER INSTALLATION OF THE DEMONSTRATION SHAFT AND AFTER BEING PROVIDED WITH WRITTEN TESTING AND EVALUATION RESULTS ACCEPTABLE TO THE ENGINEER.

THE CONTRACT PRICE IS FULL COMPENSATION FOR FURNISHING AND INSTALLING DRILLED SHAFTS IN ACCORDANCE WITH THE ABOVE REQUIREMENTS, INCLUDING MOBILIZATION, SITE ACCESS, AND FINAL REMOVAL OF THE SHAFT TO 36 INCHES BELOW FINAL GRADE.

THE DEPARTMENT WILL PAY FOR TESTING AND EVALUATION OF THE ACCEPTED DEMONSTRATION SHAFT SEPARATELY.

THE DEPARTMENT WILL NOT PAY FOR TESTING AND EVALUATION FOR ADDITIONAL DEMONSTRATION DRILLED SHAFTS.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS: ITEM 524 DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT.

**ITEM 524 - DRILLED SHAFTS, MISC.: THERMAL INTEGRITY PROFILER (T.I.P.) TEST**

PERFORM INTEGRITY TESTING ON THE DEMONSTRATION DRILLED SHAFT AT THE REAR ABUTMENT BY THERMAL INTEGRITY PROFILING (TIP). PERFORM TIP TESTING PER ASTM D7949, "STANDARD TEST METHODS FOR THERMAL INTEGRITY PROFILING OF CONCRETE DEEP FOUNDATIONS," METHOD B, AND PER THE PROJECT SPECIAL PROVISIONS.

**ITEM 524 - DRILLED SHAFTS, MISC.: CSL TESTING, 48" DIA. SHAFT**

PERFORM INTEGRITY TESTING ON THE DEMONSTRATION DRILLED SHAFTS AT THE REAR ABUTMENT BY CROSSHOLE SONIC LOGGING (CSL). PERFORM CSL TESTING PER ASTM D6760, "STANDARD TEST METHOD FOR INTEGRITY TESTING OF CONCRETE DEEP FOUNDATIONS BY ULTRASONIC CROSSHOLE TESTING." AND PER THE PROJECT SPECIAL PROVISIONS.

**ITEM SPECIAL - STRUCTURAL SURVEY AND MONITORING OF VIBRATION**

THIS PAY ITEM IS SPECIFICALLY INTENDED FOR THE PROTECTION OF THE WALKER WEEKS BUILDING, 2351 CARNEGIE AVENUE, CLEVELAND, OH 44115.

THIS WORK IS INCLUDED AND PAID FOR WITH THE CUY-90-1696 (BRIDGE 14) PLANS. SEE BRIDGE 14 PLANS FOR DETAILED NOTES.

**ITEM SPECIAL - STRUCTURES - PRECONSTRUCTION CONDITION SURVEY**

THIS PAY ITEM IS SPECIFICALLY INTENDED FOR THE PROTECTION OF THE WALKER WEEKS BUILDING, 2351 CARNEGIE AVENUE, CLEVELAND, OH 44115.

THIS WORK IS INCLUDED AND PAID FOR WITH THE CUY-90-1696 (BRIDGE 14) PLANS. SEE BRIDGE 14 PLANS FOR DETAILED NOTES.

**ITEM-503 UNCLASSIFIED EXCAVATION, AS PER PLAN**

THIS ITEM INCLUDES ALL EXCAVATION NECESSARY TO CONSTRUCT WALL AF EAST AND WALL AF WEST.

THE DEPARTMENT WILL PAY FOR THIS ITEM AT THE CONTRACT LUMP SUM PRICE FOR ITEM 503 UNCLASSIFIED EXCAVATION, AS PER PLAN.

**ITEM-511 CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN**

THIS WORK CONSISTS OF ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS TO CONSTRUCT THE DRILLED TANGENT SHAFT CAP AND FENCE WALL ABOVE THE CAP. REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS: ITEM 511 CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN.

**ITEM-511 CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN**

THIS WORK CONSISTS OF ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS TO CONSTRUCT THE RETAINING WALL CAST-IN-PLACE CONCRETE FACING BELOW THE TANGENT DRILLED SHAFT CAP. REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 509.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS: ITEM 511 CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN.

**ITEM-511 CONCRETE, MISC.: ARCHITECTURAL TREATMENT**

THIS WORK CONSISTS OF ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS TO CONSTRUCT THE ARCHITECTURAL TREATMENTS IN THE CONCRETE SURFACE OF THE RETAINING WALL.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS: ITEM 511 CONCRETE, MISC.: ARCHITECTURAL TREATMENT.

**ITEM 524 - DRILLED SHAFTS, MISC.: HIGH-STRAIN DYNAMIC TESTING OF DRILLED SHAFTS**

PERFORM FIELD VERIFICATION OF NOMINAL AXIAL RESISTANCE TESTING ON THE DEMONSTRATION DRILLED SHAFT AT THE REAR ABUTMENT BY HIGH-STRAIN DYNAMIC TESTING. PERFORM HIGH-STRAIN DYNAMIC TESTING PER ASTM D4945, "STANDARD TEST METHOD FOR HIGH-STRAIN DYNAMIC TESTING OF DEEP FOUNDATIONS" AND PER THE PROJECT SPECIAL PROVISIONS.

**ITEM 607 - VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC, AS PER PLAN:**

INSTALL VANDAL PROTECTION FENCE ACCORDING TO STD. CONSTRUCTION DRAWING VPF-1-90 AND C&MS 607, EXCEPT AS MODIFIED BELOW.

POSTS, PLATES, TIE WIRES, CAULK AND ADDITIONAL VISIBLE HARDWARE SHALL BE COLOR BLACK (FEDERAL STD. 595C #17038). FENCE FABRIC SHALL BE BLACK VINYL-COATED, CHAIN LINK STYLE. MOUNT FENCING TO TOP OF RETAINING WALL WITH CAST-IN-PLACE ANCHORS.

**PLAN ABBREVIATIONS:**

- @ = BASELINE
- B.F. = BACK FACE
- BM = BENCHMARK
- BOT. OR BTM. = BOTTOM
- @ = CENTERLINE
- C/C = CENTER TO CENTER
- C.I.P. = CAST-IN-PLACE
- C.J. = CONSTRUCTION JOINT
- CLR. = CLEAR
- CMS = CONSTRUCTION AND MATERIAL SPECIFICATIONS
- CONST. = CONSTRUCTION
- DIA. = DIAMETER
- DWG. = DRAWING
- EB = EASTBOUND
- E.F. = EACH FACE
- EL. OR ELEV. = ELEVATION
- EQ. = EQUAL
- EX. = EXISTING
- F/F = FACE TO FACE
- F.F. = FRONT FACE
- FT. = FOOT OR FEET
- FWD. = FORWARD
- IN. = INCH
- JT. = JOINT
- LT. = LEFT
- MAX. = MAXIMUM
- MIN. = MINIMUM
- MISC. = MISCELLANEOUS
- NB = NORTHBOUND
- NO. = NUMBER
- N.P.C.P.P. = NON-PERFORATED CORRUGATED PLASTIC PIPE
- O/O = OUT TO OUT
- P.C.P.P. = PERFORATED CORRUGATED PLASTIC PIPE
- P.E.J.F. = PREFORMED EXPANSION JOINT FILLER
- PSF = POUNDS PER SQUARE FOOT
- SB = SOUTHBOUND
- S.O. OR SER. = SERIES OF
- SPA. = SPACE OR SPACES
- STA. = STATION
- STD. = STANDARD
- STR = STRAIGHT
- TBR = TO BE REMOVED
- TEMP. = TEMPORARY
- TYP. = TYPICAL
- U.N.O. = UNLESS NOTED OTHERWISE
- VAR. = VARIES
- WB = WESTBOUND
- WWR = WELDED WIRE REINFORCEMENT

**SECTION/DETAIL/VIEW CALLOUTS**



(SEE SECTION A ON SHEET 10)



(SECTION A CUT FROM SHEET 9)

WALL GENERAL NOTES (2 OF 2)

WALL AF

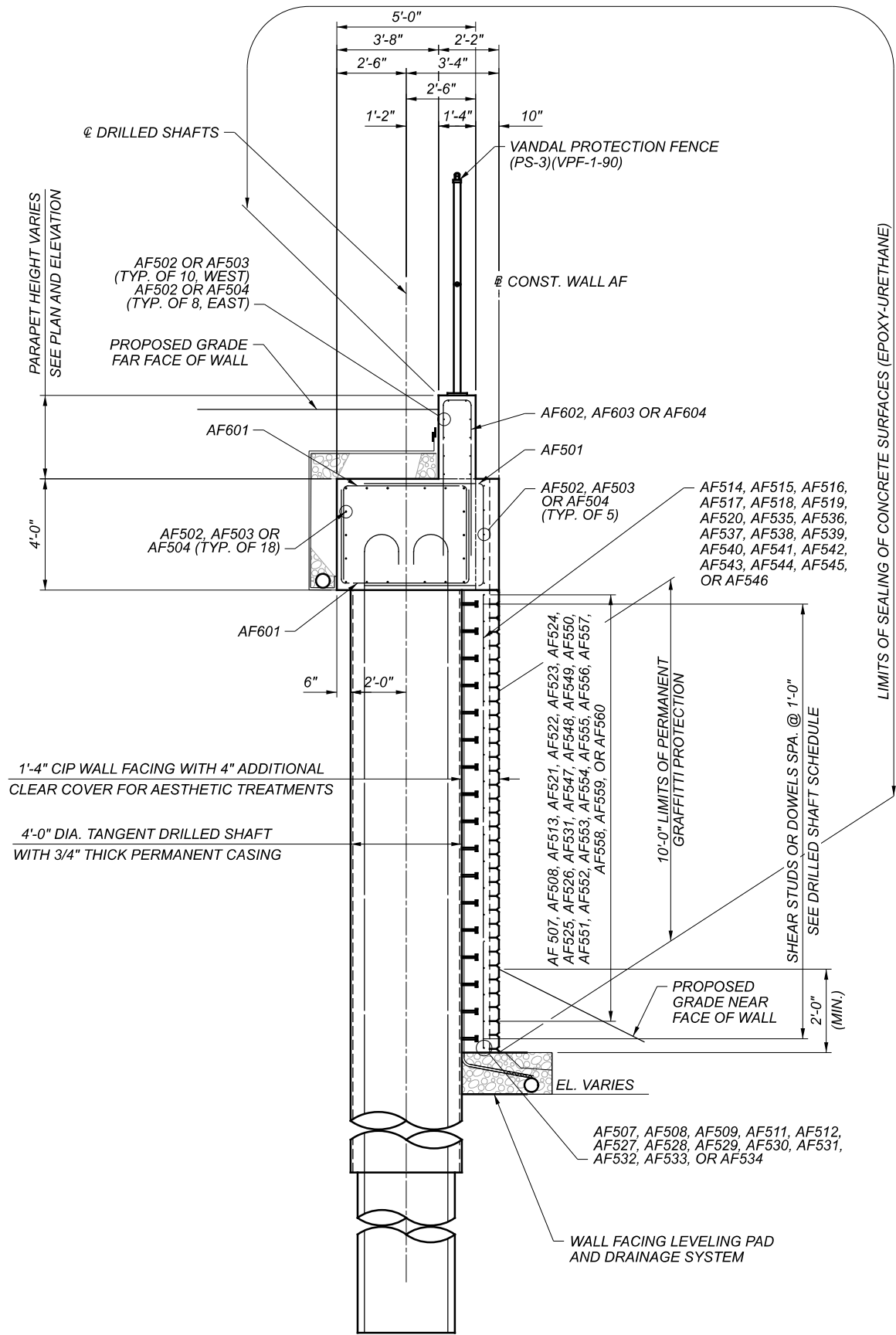
ALONG NORTH SIDE OF I.R. 90 NEAR E. 22ND ST. AND CARNEGIE AVE.

SFN	N/A
DESIGN AGENCY	
<b>Michael Baker</b>	<b>INTERNATIONAL</b>
DESIGNER	CHECKER
GZ	SED
REVIEWER	
LPC	08-22-22
PROJECT ID	82382
SUBSET	TOTAL
4	16
SHEET	TOTAL
1027	2338

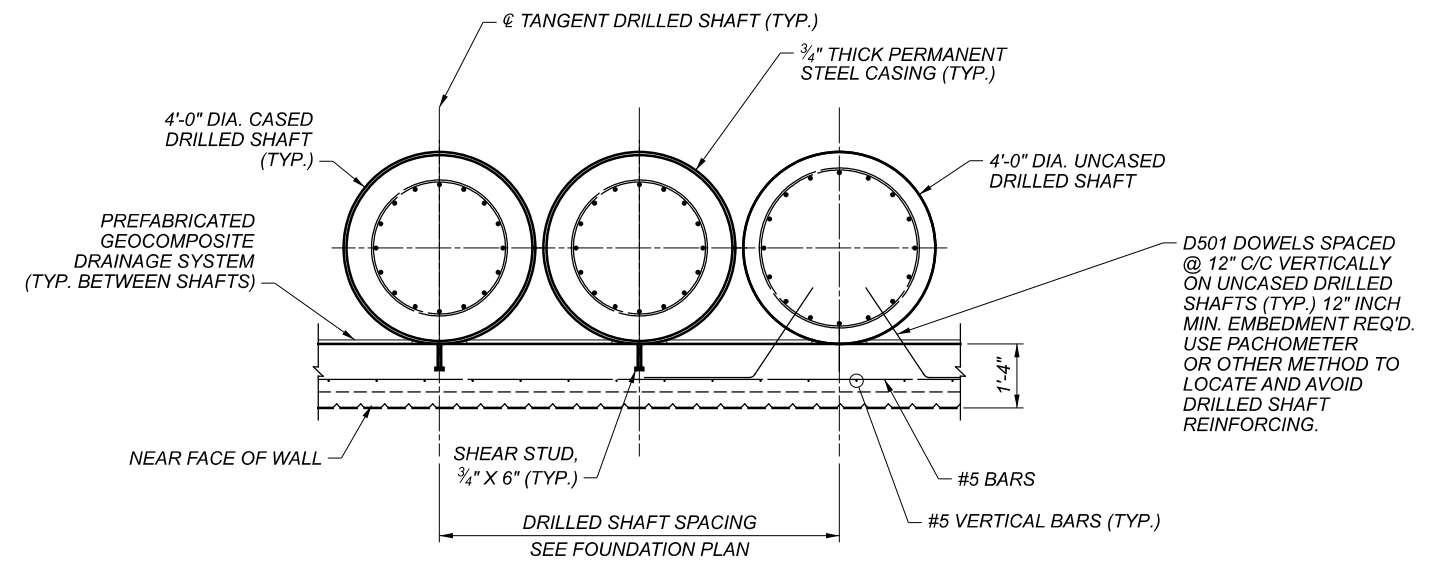
ITEM NO.	EXT.	TOTAL	UNIT	DESCRIPTION	ABUT	PIERS	SUPER	GEN	AS PER PLAN SHEET
503	21301	1	LS	UNCLASSIFIED EXCAVATION, AS PER PLAN				1	4
509	10000	112,515	LB	EPOXY COATED REINFORCING STEEL				112,515	
510	10000	182	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT				182	
511	44113	445	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN				445	4
511	46013	339	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN				339	4
511	71200	10,000	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT				10,000	4
512	10001	490	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)				490	3
512	10101	1,300	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN				1,300	3
513	20000	1,434	EACH	WELDED STUD SHEAR CONNECTORS				1,434	
518	20000	860	SY	PREFABRICATED GEOCOMPOSITE DRAIN				860	3
518	21200	220	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC				220	
518	40000	473	FT	6" PERFORATED CORRUGATED PLASTIC PIPE				473	
518	40010	20	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS				20	
524	94801	2,660	FT	DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN				2,660	3
524	94900	1,493	FT	DRILLED SHAFTS, 48" DIAMETER				1,493	
524	94901	5,760	FT	DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN				5,760	3
524	95100	1	EACH	DRILLED SHAFTS, MISC.: CSL TESTING, 48" DIA. SHAFT				1	4
524	95100	1	EACH	DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT				1	4
524	95100	1	EACH	DRILLED SHAFTS, MISC.: HIGH STRAIN DYNAMIC TESTING OF DRILLED SHAFTS				1	4
524	95100	1	EACH	DRILLED SHAFTS, MISC.: THERMAL INTEGRITY PROFILER (T.I.P.) TEST				1	4
607	39911	435	FT	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC, AS PER PLAN				435	4

**ESTIMATED QUANTITIES**  
 WALL AF  
 ALONG NORTH SIDE OF I.R. 90 NEAR E. 22ND ST. AND CARNEGIE AVE.

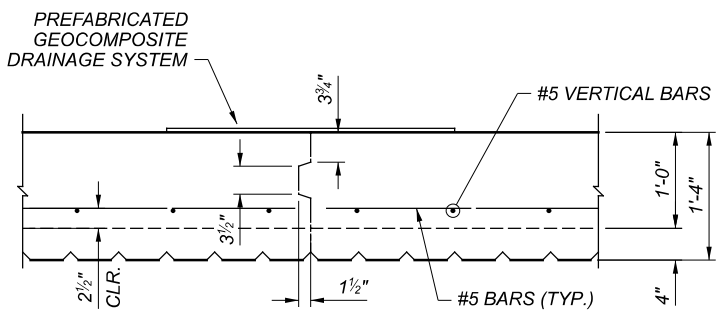
SFN	N/A
DESIGN AGENCY	
<b>Michael Baker INTERNATIONAL</b>	
DESIGNER	CHECKER
GZ	SED
REVIEWER	
LPC 08-22-22	
PROJECT ID	
82382	
SUBSET	TOTAL
5	16
SHEET	TOTAL
1028	2338



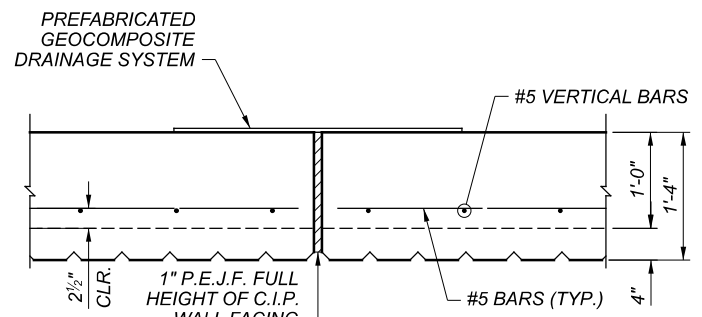
**FRICION TANGENT DRILLED SHAFT WALL (WITH CASING) TYP. SECTION**



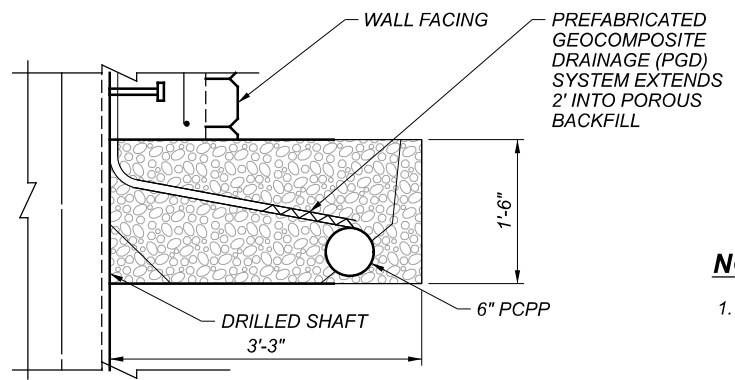
**TYPICAL TANGENT DRILLED SHAFT WALL PLAN**



**TYPICAL CONTRACTION JOINT DETAIL**



**TYPICAL EXPANSION JOINT DETAIL**



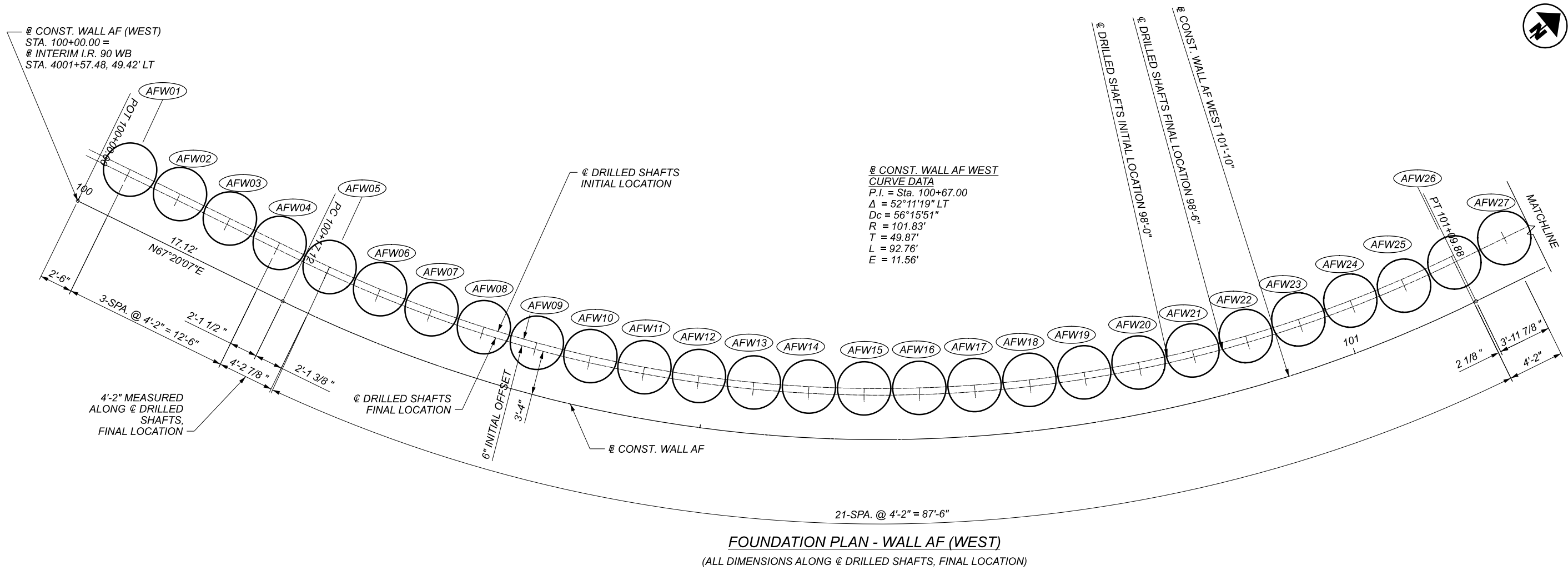
**FACING DRAINAGE DETAIL**

**NOTES:**

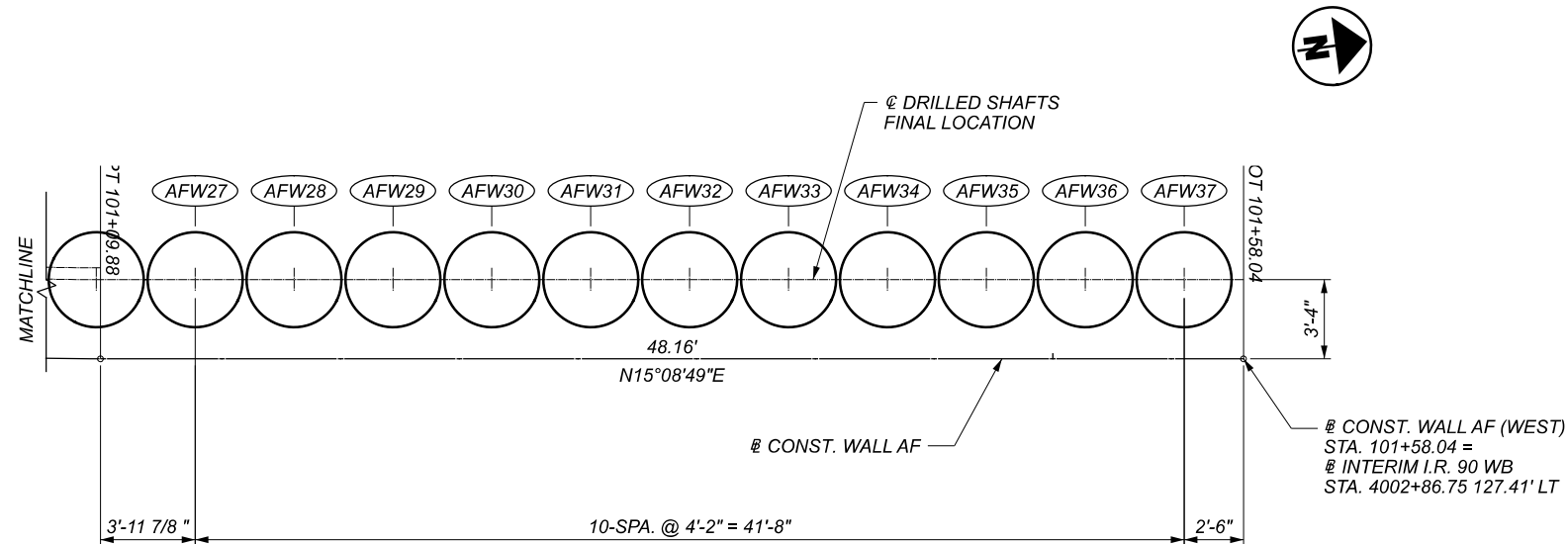
1. PAYMENT FOR DRILLED SHAFTS INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS SHALL BE MADE UNDER ITEM 524-DRILLED SHAFTS, 48" DIAMETER, ITEM 524-DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN OR ITEM 524-DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN.
2. FOR DRILLED SHAFT SCHEDULES SEE SHEETS AND OF .6

**WALL TYPICAL SECTION**  
**WALL AF**  
**ALONG NORTH SIDE OF I.R. 90 NEAR E. 22ND ST. AND CARNEGIE AVE.**

SFN	N/A
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	GZ
REVIEWER	SED
PROJECT ID	LPC 08-22-22
SUBSET	82382
TOTAL	6
SHEET	16
TOTAL	1029
	2338



**FOUNDATION PLAN - WALL AF (WEST)**  
 (ALL DIMENSIONS ALONG @ DRILLED SHAFTS, FINAL LOCATION)



**FOUNDATION PLAN - WALL AF (WEST)**  
 (ALL DIMENSIONS ALONG @ DRILLED SHAFTS, FINAL LOCATION)

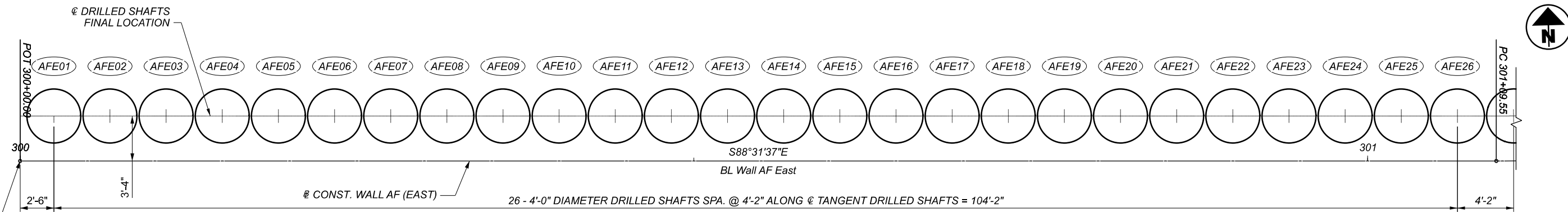
**LEGEND:**

- AFW# - DRILLED SHAFT NUMBER
- - INITIAL DRILLED SHAFT LOCATION

**NOTES:**

1. DRILLED SHAFTS AFW1 THROUGH AFW24 TO BE INSTALLED IN THE INITIAL POSITION INDICATED IN THE FOUNDATION PLAN. REFER TO THE GENERAL NOTES FOR ADDITIONAL INFORMATION.
2. DRILLED SHAFTS AFW25 THROUGH AFW37 TO BE INSTALLED IN THE FINAL POSITION INDICATED IN THE FOUNDATION PLAN.
3. PAYMENT FOR DRILLED SHAFTS INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS SHALL BE MADE UNDER ITEM 524-DRILLED SHAFTS, 48" DIAMETER, ITEM 524-DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN OR ITEM 524-DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN.
4. FOR DRILLED SHAFT SCHEDULES SEE SHEETS ~~XX AND XX OF XX~~.
5. FOR DRILLED SHAFT DETAILS SEE SHEET ~~XX OF XX~~.

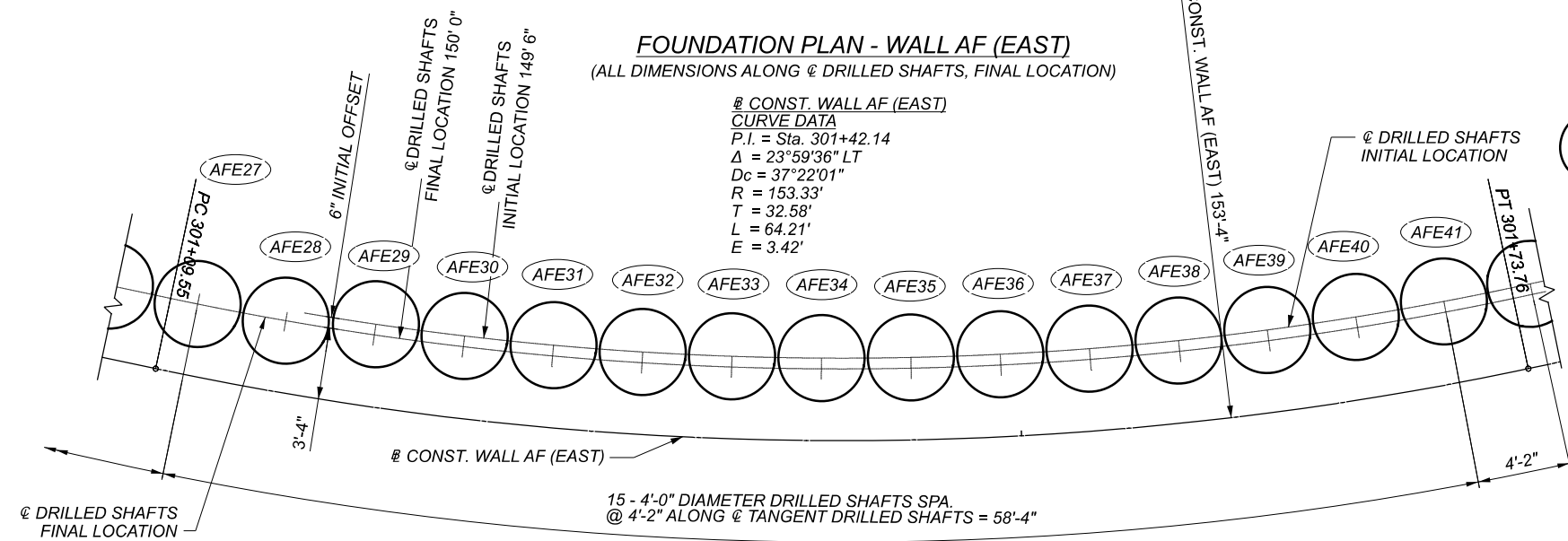
SFN	--NA--	
DESIGN AGENCY	Michael Baker INTERNATIONAL	
DESIGNER	GZ	SED
CHECKER	SED	
REVIEWER	LPC 08-22-22	
PROJECT ID	82382	
SUBSET	7	16
SHEET	1030	2338



@ CONST. WALL AF (EAST)  
 STA. 300+00.00 =  
 @ INTERIM I.R. 90 WB  
 STA. 4003+29.01, 127.71' LT.

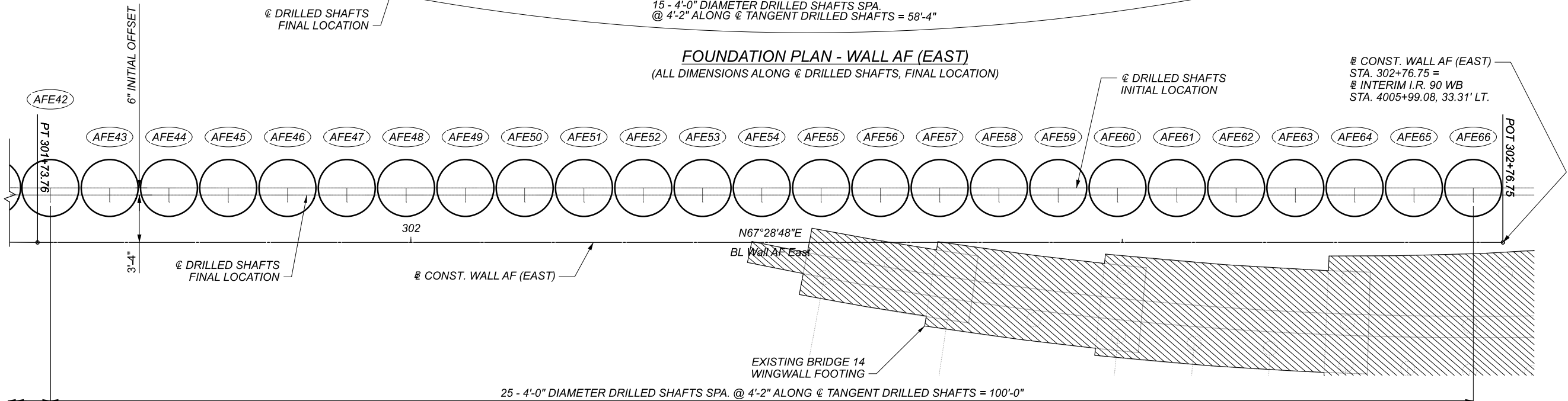
**FOUNDATION PLAN - WALL AF (EAST)**  
 (ALL DIMENSIONS ALONG @ DRILLED SHAFTS, FINAL LOCATION)

@ CONST. WALL AF (EAST)  
**CURVE DATA**  
 P.I. = Sta. 301+42.14  
 $\Delta = 23^\circ 59' 36''$  LT  
 $D_c = 37^\circ 22' 01''$   
 $R = 153.33'$   
 $T = 32.58'$   
 $L = 64.21'$   
 $E = 3.42'$



**FOUNDATION PLAN - WALL AF (EAST)**  
 (ALL DIMENSIONS ALONG @ DRILLED SHAFTS, FINAL LOCATION)

@ CONST. WALL AF (EAST)  
 STA. 302+76.75 =  
 @ INTERIM I.R. 90 WB  
 STA. 4005+99.08, 33.31' LT.



**FOUNDATION PLAN - WALL AF (EAST)**  
 (ALL DIMENSIONS ALONG @ DRILLED SHAFTS, FINAL LOCATION)

**LEGEND:**

- AFE# INDICATES PROPOSED DRILLED SHAFT NUMBER
- INITIAL DRILLED SHAFT LOCATION

**NOTES**

1. DRILLED SHAFTS AFE29 THROUGH AFE66 TO BE INSTALLED IN THE INITIAL POSITION INDICATED IN THE FOUNDATION PLAN. REFER TO THE GENERAL NOTES FOR ADDITIONAL INFORMATION.
2. DRILLED SHAFTS AFE01 THROUGH AFE28 TO BE INSTALLED IN THE FINAL POSITION INDICATED IN THE FOUNDATION PLAN.
3. PAYMENT FOR DRILLED SHAFTS INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS SHALL BE MADE UNDER ITEM 524- DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN OR ITEM 524-DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN.
4. FOR DRILLED SHAFT SCHEDULE, SEE SHEET XX OF XX.
5. FOR DRILLED SHAFT DETAILS, SEE SHEET XX OF XX.

SFN	N/A
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	GZ
REVIEWER	SED
PROJECT ID	LPC 08-22-22
SUBSET	82382
TOTAL	16
SHEET	1031
TOTAL	2338



WALL AF (WEST) DRILLED SHAFT SCHEDULE

DESIGNATION	INITIAL NORTHING	INITIAL EASTING	DIAMETER (in.)	TOP ELEV.	TIP ELEV.	TOTAL LENGTH (FT.)	PRIMARY REINFORCING	CONFINEMENT REINFORCING	NUMBER OF STUDS OR ANCHORS	CASING LENGTH (ft.)	CASING THICKNESS (in.)	DESIGN FINAL NORTHING	DESIGN FINAL EASTING
AFW01	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668565.00	2194947.34
AFW02	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668566.60	2194951.19
AFW03	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668568.20	2194955.03
AFW04	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668569.81	2194958.88
AFW05	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668571.44	2194962.72
AFW06	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668573.20	2194966.49
AFW07	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668575.13	2194970.19
AFW08	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668577.21	2194973.80
AFW09	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668579.43	2194977.32
AFW10	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668581.81	2194980.74
AFW11	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668584.33	2194984.06
AFW12	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668586.98	2194987.27
AFW13	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	23	80.0	0.750	668589.77	2194990.36
AFW14	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	21	80.0	0.750	668592.69	2194993.34
AFW15	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	21	80.0	0.750	668595.73	2194996.19
AFW16	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	21	80.0	0.750	668598.89	2194998.90
AFW17	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	19	80.0	0.750	668602.16	2195001.48
AFW18	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	19	80.0	0.750	668605.54	2195003.92
AFW19	0.00	0.00	48	665.78	550.00	116	16 SETS OF 4-DS10001& 1-DS1002	1-DSSP401& 1-DSSP402	19	80.0	0.750	668609.02	2195006.22
AFW20	0.00	0.00	48	665.78	552.00	114	16 SETS OF 4-DS10001& 1-DS1003	1-DSSP403& 1-DSSP404	16	60.0	0.750	668612.59	2195008.36
AFW21	0.00	0.00	48	665.78	552.00	114	16 SETS OF 4-DS10001& 1-DS1003	1-DSSP403& 1-DSSP404	16	60.0	0.750	668616.25	2195010.36
AFW22	0.00	0.00	48	665.78	552.00	114	16 SETS OF 4-DS10001& 1-DS1003	1-DSSP403& 1-DSSP404	16	60.0	0.750	668619.99	2195012.19
AFW23	0.00	0.00	48	665.78	552.00	114	16 SETS OF 4-DS10001& 1-DS1003	1-DSSP403& 1-DSSP404	16	60.0	0.750	668623.80	2195013.87
AFW24	0.00	0.00	48	665.78	552.00	114	16 SETS OF 4-DS10001& 1-DS1003	1-DSSP403& 1-DSSP404	11	60.0	0.750	668627.68	2195015.38
AFW25	0.00	0.00	48	665.78	561.00	105	16 SETS OF 4-DS10001& 1-DS1004	1-DSSP403& 1-DSSP405	11	60.0	0.750	668631.62	2195016.73
AFW26	0.00	0.00	48	665.78	561.00	105	16 SETS OF 4-DS10001& 1-DS1004	1-DSSP403& 1-DSSP405	11	60.0	0.750	668635.62	2195017.91
AFW27	0.00	0.00	48	665.78	561.00	105	16 SETS OF 4-DS10001& 1-DS1004	1-DSSP403& 1-DSSP405	11	60.0	0.750	668639.64	2195019.00
AFW28	0.00	0.00	48	665.78	583.00	83	16 SETS OF 3-DS10001& 1-DS1005	1-DSSP406	8	-	-	668643.66	2195020.09
AFW29	0.00	0.00	48	665.78	583.00	83	16 SETS OF 3-DS10001& 1-DS1005	1-DSSP406	8	-	-	668647.68	2195021.18
AFW30	0.00	0.00	48	665.78	583.00	83	16 SETS OF 3-DS10001& 1-DS1005	1-DSSP406	8	-	-	668651.71	2195022.27
AFW31	0.00	0.00	48	665.78	620.00	46	16 SETS OF 1-DS10001& 1-DS1006	1-DSSP407	8	-	-	668655.73	2195023.36
AFW32	0.00	0.00	48	665.78	620.00	46	16 SETS OF 1-DS10001& 1-DS1006	1-DSSP407	8	-	-	668659.75	2195024.45
AFW33	0.00	0.00	48	665.78	620.00	46	16 SETS OF 1-DS10001& 1-DS1006	1-DSSP407	8	-	-	668663.77	2195025.53
AFW34	0.00	0.00	48	665.78	638.00	28	1SET OF 16-DS1007	1-DSSP408	0	-	-	668667.79	2195026.62
AFW35	0.00	0.00	48	665.78	638.00	28	1SET OF 16-DS1007	1-DSSP408	0	-	-	668671.82	2195027.71
AFW36	0.00	0.00	48	665.78	638.00	28	1SET OF 16-DS1007	1-DSSP408	0	-	-	668675.84	2195028.80
AFW37	0.00	0.00	48	665.78	638.00	28	1SET OF 16-DS1007	1-DSSP408	0	-	-	668679.86	2195029.89

NOTES

- DRILLED SHAFTS ARE TO BE INSTALLED IN THE INITIAL POSITION INDICATED IN THE FOUNDATION PLAN AND DRILLED SHAFT SCHEDULES. REFER TO THE GENERAL NOTES FOR DETAILS.
- PAYMENT FOR DRILLED SHAFTS INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS SHALL BE MADE UNDER ITEM 524-DRILLED SHAFTS, 48" DIAMETER, ITEM 524-DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN AND ITEM 524-DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN. REFER TO GENERAL NOTES.
- SEE SHEET ~~OF~~ FOR CASED SHAFT ELEVATION AND SECTION VIEWS.
- SEE SHEET ~~OF~~ FOR UNCASD SHAFT ELEVATION AND SECTION VIEWS.

WALL AF (WEST) DRILLED SHAFT TABLE

WALL AF

ALONG NORTH SIDE OF I.R. 90 NEAR E. 22ND ST. AND CARNEGIE AVE.

SFN	N/A
DESIGN AGENCY	
<b>Michael Baker</b> INTERNATIONAL	
DESIGNER	CHECKER
GZ	SED
REVIEWER	
LPC	08-22-22
PROJECT ID	82382
SUBSET	TOTAL
9	16
SHEET	TOTAL
1032	2338

CUY-90-16.28 (CCG3A)

MODEL: DRILLED SHAFT TABLE 2 PAPERSIZE: 17x11 (in.) DATE: 8/23/2022 TIME: 5:02:17 PM USER: Mkhitrer  
pvc:\mb-us-pw-bentley.com\mb-us-pw-403\Documents\Cleveland\_OH101\_P\Projects\ODOT\Distric12\282382403-Engineering\Structures\WALL\_AF\_Sheets\82382\_AF\_WC001.dgn

WALL AF (EAST) DRILLED SHAFT SCHEDULE

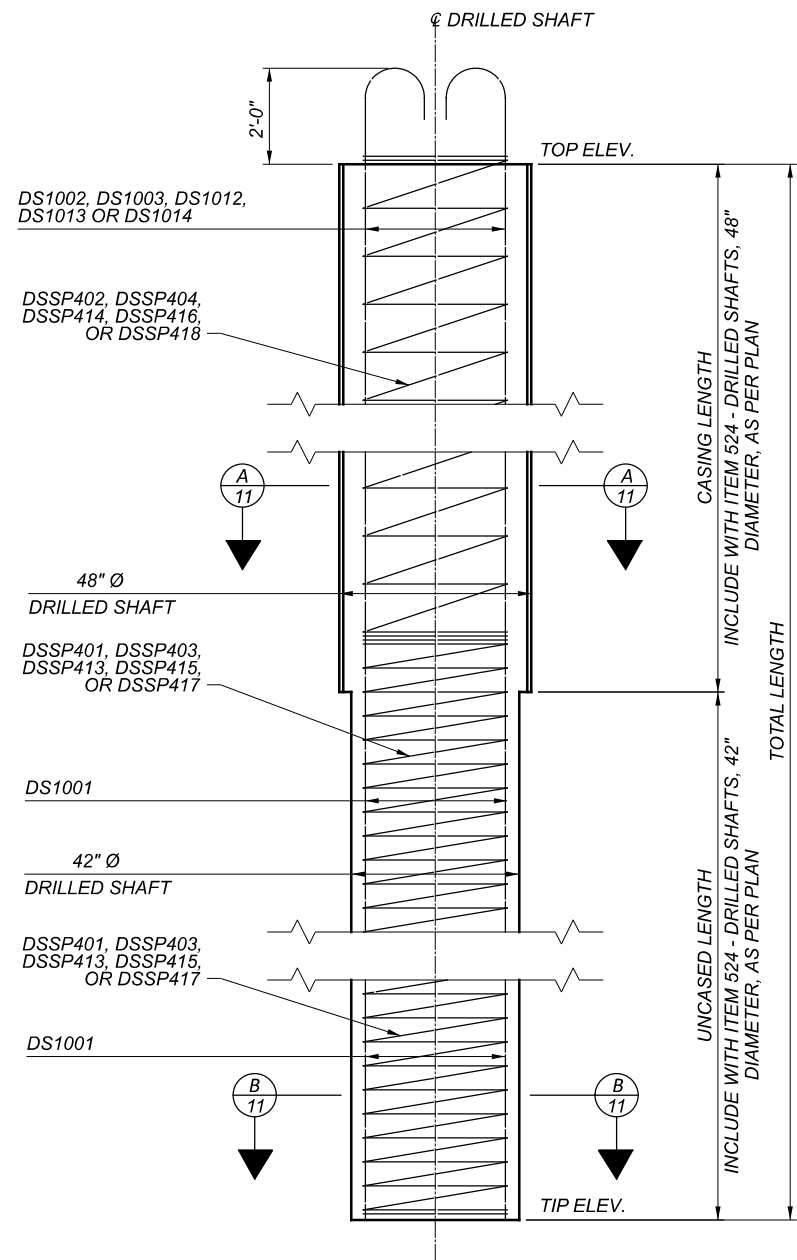
Table with columns: DESIGNATION, INITIAL NORTHING, INITIAL EASTING, DIAMETER (in.), TOP ELEV., TIP ELEV., TOTAL LENGTH (ft.), PRIMARY REINFORCING, CONFINEMENT REINFORCING, NUMBER OF STUDS OR ANCHORS, CASING LENGTH (ft.), CASING THICKNESS (in.), DESIGN FINAL NORTHING, DESIGN FINAL EASTING. Rows include AFE01 through AFE66.

NOTES

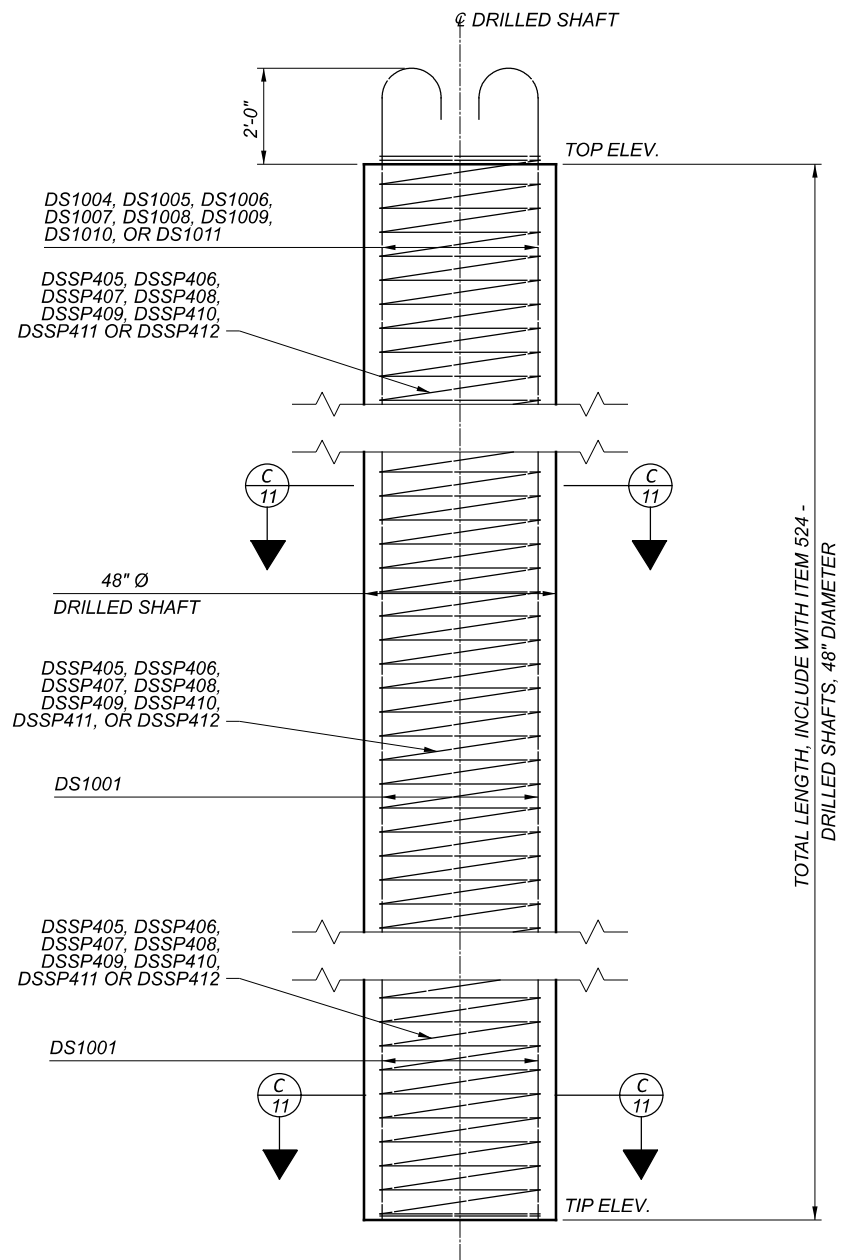
- 1. DRILLED SHAFTS ARE TO BE INSTALLED IN THE INITIAL POSITION INDICATED IN THE FOUNDATION PLAN AND DRILLED SHAFT SCHEDULES. REFER TO THE GENERAL NOTES FOR DETAILS.
2. PAYMENT FOR DRILLED SHAFTS INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS SHALL BE MADE UNDER ITEM 524-DRILLED SHAFTS, 48" DIAMETER, ITEM 524-DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN AND ITEM 524-DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN. REFER TO GENERAL NOTES.
3. SEE SHEET OF FOR CASED SHAFT ELEVATION AND SECTION VIEWS.
4. SEE SHEET OF FOR UNCASED SHAFT ELEVATION AND SECTION VIEWS.

WALL AF (EAST) DRILLED SHAFT TABLE  
WALL AF  
ALONG NORTH SIDE OF I.R. 90 NEAR E. 22ND ST. AND CARNEGIE AVE.

Table with project information: SFN (N/A), DESIGN AGENCY (Michael Baker International), DESIGNER (GZ), CHECKER (SED), REVIEWER (LPC), PROJECT ID (82382), SUBSET (10), TOTAL (16), SHEET (1032A), TOTAL (2338).



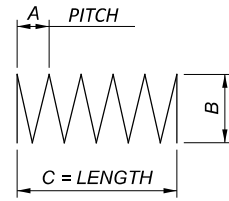
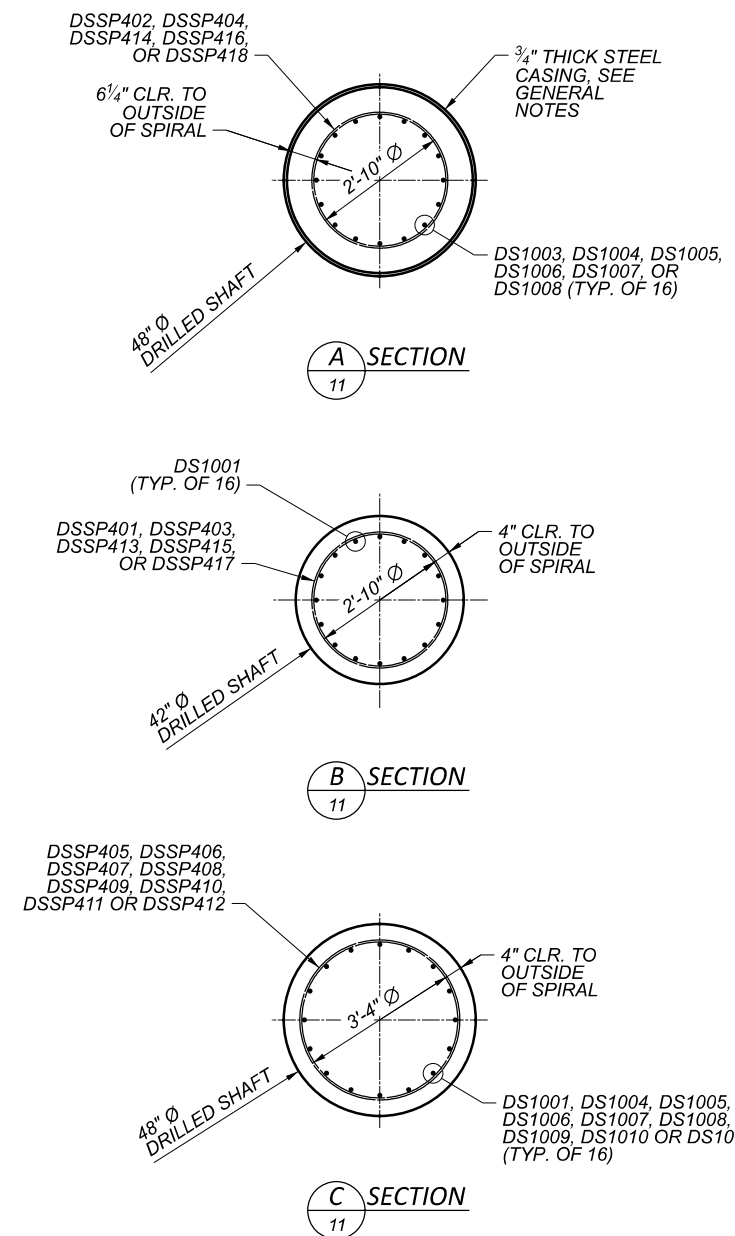
CASED DRILLED SHAFT ELEVATION



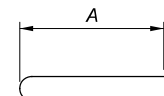
UNCASED DRILLED SHAFT ELEVATION

BAR MARK	LENGTH	TYPE	A	B	C
DS1001	30'-0"	STR.			
DS1002		16	39'-0"		
DS1003		16	37'-0"		
DS1012		16	28'-3"		
DS1013		16	42'-3"		
DS1014		16	26'-6"		
DSSP401		27	6"	2'-10"	
DSSP402		27	12"	2'-10"	
DSSP403		27	6"	2'-10"	
DSSP404		27	12"	2'-10"	
DSSP413		27	6"	2'-10"	
DSSP414		27	12"	2'-10"	
DSSP415		27	6"	2'-10"	
DSSP416		27	12"	2'-10"	
DSSP417		27	6"	2'-10"	
DSSP418		27	12"	2'-10"	

BAR MARK	LENGTH	TYPE	A	B	C
DS1001	30'-0"	STR.			
DS1004		16	28'-0"		
DS1005		16	25'-9"		
DS1006		16	28'-3"		
DS1007		16	30'-0"		
DS1008		16	14'-0"		
DS1009		16	30'-0"		
DS1010		16	28'-6"		
DS1011		16	26'-0"		
DSSP405		27	6"	3'-4"	
DSSP406		27	6"	3'-4"	
DSSP407		27	6"	3'-4"	
DSSP408		27	6"	3'-4"	
DSSP409		27	6"	3'-4"	
DSSP410		27	6"	3'-4"	
DSSP411		27	6"	3'-4"	
DSSP412		27	6"	3'-4"	



TYPE-27



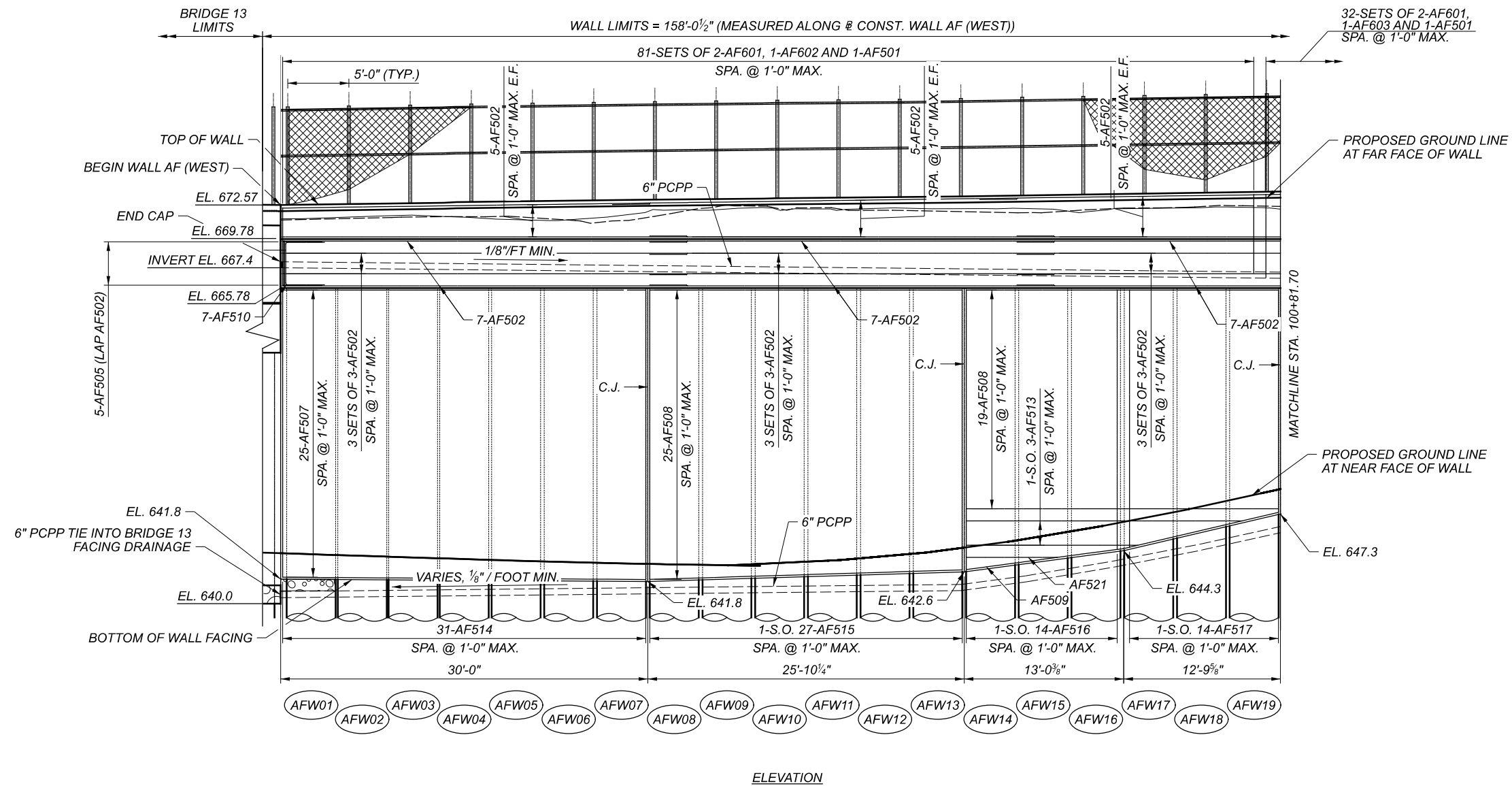
TYPE-16

NOTES

- PAYMENT FOR DRILLED SHAFTS INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS SHALL BE MADE UNDER ITEM 524-DRILLED SHAFTS, 48" DIAMETER, ITEM 524-DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN AND ITEM 524-DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN. REFER TO GENERAL NOTES.
- DRILLED SHAFT REINFORCING SCHEDULES PROVIDED FOR REFERENCE ONLY.
- FOR WALL AF WEST DRILLED SHAFT SCHEDULE SEE SHEET XX OF XX.
- FOR WALL AF EAST DRILLED SHAFT SCHEDULE SEE SHEET XX OF XX.
- FOR ADDITIONAL NOTES REFER TO THE FOUNDATION PLANS ON SHEETS XX AND YY OF ZZ.

DRILLED SHAFT DETAILS  
 WALL AF  
 ALONG NORTH SIDE OF I.R. 90 NEAR E. 22ND ST. AND CARNEGIE AVE.

SFN	N/A
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	GZ
REVIEWER	SED
PROJECT ID	LPC 08-22-22
SUBSET	82382
TOTAL	11
SHEET	1033
TOTAL	2338



ELEVATION

DEVELOPMENT LENGTHS:

#6 BAR VERTICAL = 33"

LAP LENGTHS:

#5 BAR = 37"

#6 BAR VERTICAL = 43"

LEGEND:

# - DENOTES DRILLED SHAFT NUMBER

NOTES:

- SEE ODOT STANDARD DRAWING VPF-1-90 FOR FENCE DETAILS.
- FENCE POSTS SHALL BE INSTALLED PLUMB.

WALL AF (WEST) ELEVATION (1 OF 2)

WALL AF

ALONG NORTH SIDE OF I.R. 90 NEAR E. 22ND ST. AND CARNEGIE AVE.

SFN

N/A

DESIGN AGENCY

Michael Baker INTERNATIONAL

DESIGNER CHECKER

GZ SED

REVIEWER

LPC 08-19-22

PROJECT ID

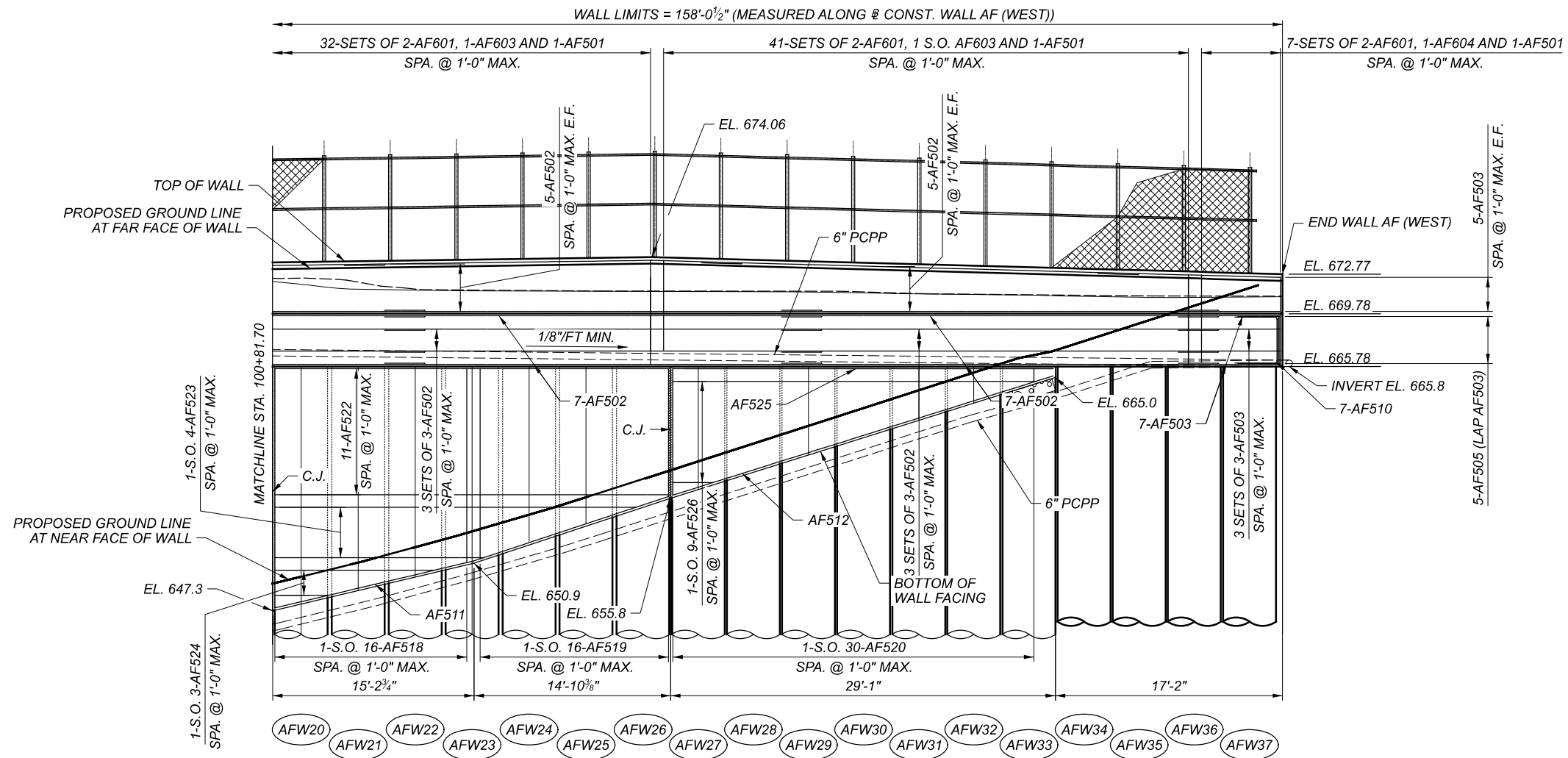
82382

SUBSET TOTAL

12 16

SHEET TOTAL

1034 2338



ELEVATION

DEVELOPMENT LENGTHS:

#6 BAR VERTICAL = 33"

LAP LENGTHS:

#5 BAR = 37"  
 #6 BAR VERTICAL = 43"

LEGEND:

# - DENOTES DRILLED SHAFT NUMBER

NOTES:

- SEE ODOT STANDARD DRAWING VPF-1-90 FOR FENCE DETAILS.
- FENCE POSTS SHALL BE INSTALLED PLUMB.

SFN

N/A

DESIGN AGENCY

**Michael Baker**  
INTERNATIONAL

DESIGNER CHECKER

GZ SED

REVIEWER

LPC 08-22-22

PROJECT ID

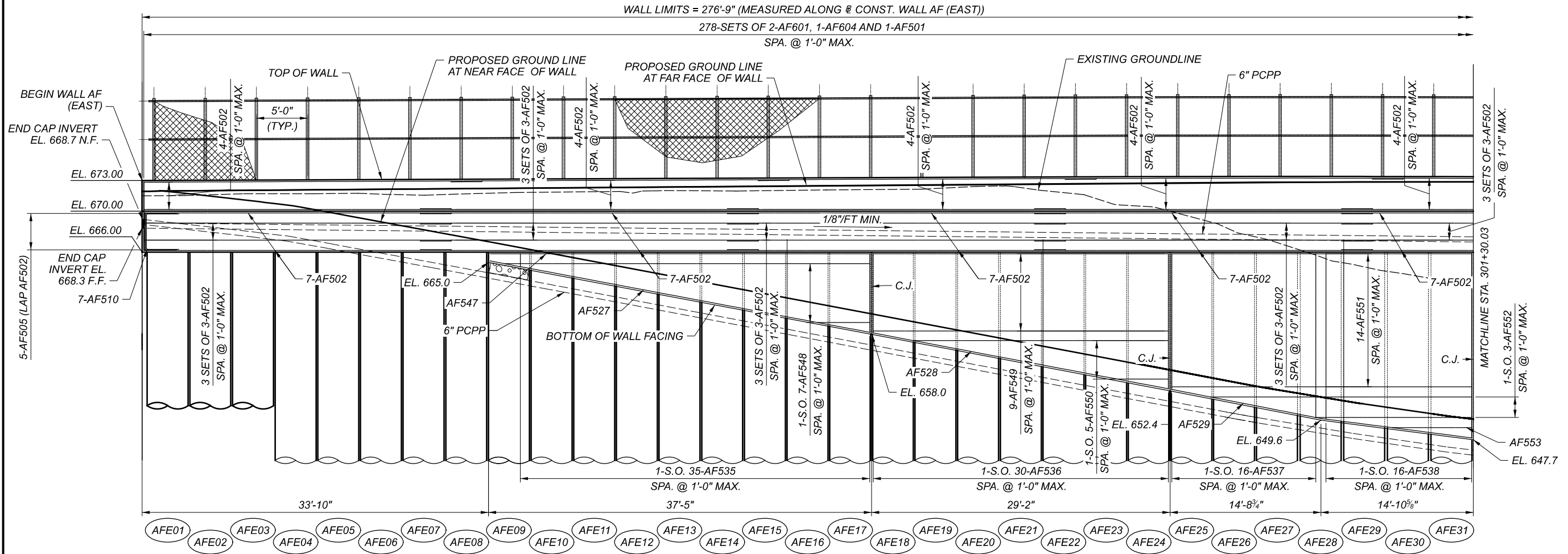
82382

SUBSET TOTAL

13 16

SHEET TOTAL

1035 2338



ELEVATION

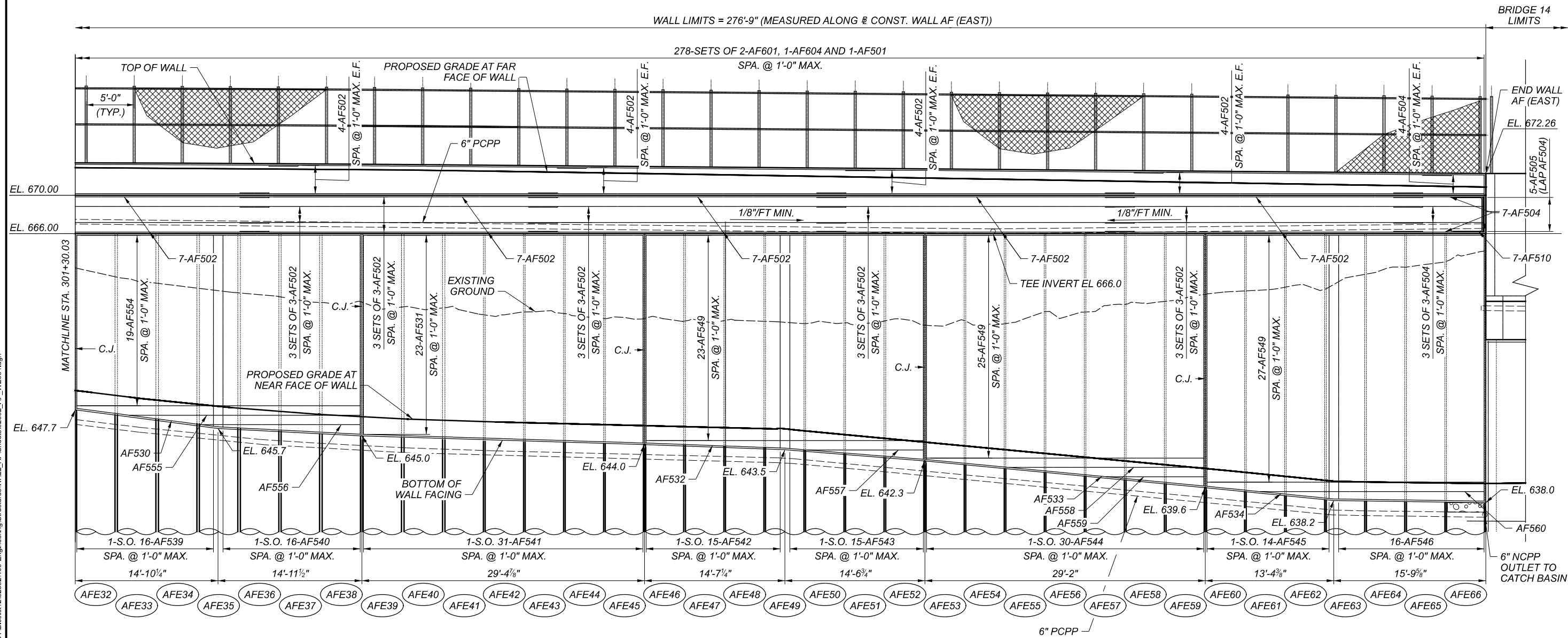
DEVELOPMENT LENGTHS:  
 #6 BAR VERTICAL = 33"

LAP LENGTHS:  
 #5 BAR = 37"  
 #6 BAR VERTICAL = 43"

- LEGEND:  
 # - DENOTES DRILLED SHAFT NUMBER
- NOTES:  
 1. SEE ODOT STANDARD DRAWING VPF-1-90 FOR FENCE DETAILS.  
 2. FENCE POSTS SHALL BE INSTALLED PLUMB.

WALL AF (EAST) ELEVATION (1 OF 2)  
 WALL AF  
 ALONG NORTH SIDE OF I.R. 90 NEAR E. 22ND ST. AND CARNEGIE AVE.

SFN	N/A
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	
REVIEWER	
PROJECT ID	82382
SUBSET	14
SHEET	1036
TOTAL	16
TOTAL	2338



ELEVATION

- DEVELOPMENT LENGTHS:**  
 #6 BAR VERTICAL = 33"
- LAP LENGTHS:**  
 #5 BAR = 37"  
 #6 BAR VERTICAL = 43"
- LEGEND:**  
 # - DENOTES DRILLED SHAFT NUMBER
- NOTES:**  
 1. SEE ODOT STANDARD DRAWING VPF-1-90 FOR FENCE DETAILS.  
 2. FENCE POSTS SHALL BE INSTALLED PLUMB.

WALL AF (EAST) ELEVATION (2 OF 2)  
 WALL AF  
 ALONG NORTH SIDE OF I.R. 90 NEAR E. 22ND ST. AND CARNEGIE AVE.

SFN	N/A
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	GZ
REVIEWER	SED
PROJECT ID	82382
SUBSET	15
TOTAL	16
SHEET	1036A
TOTAL	2338

