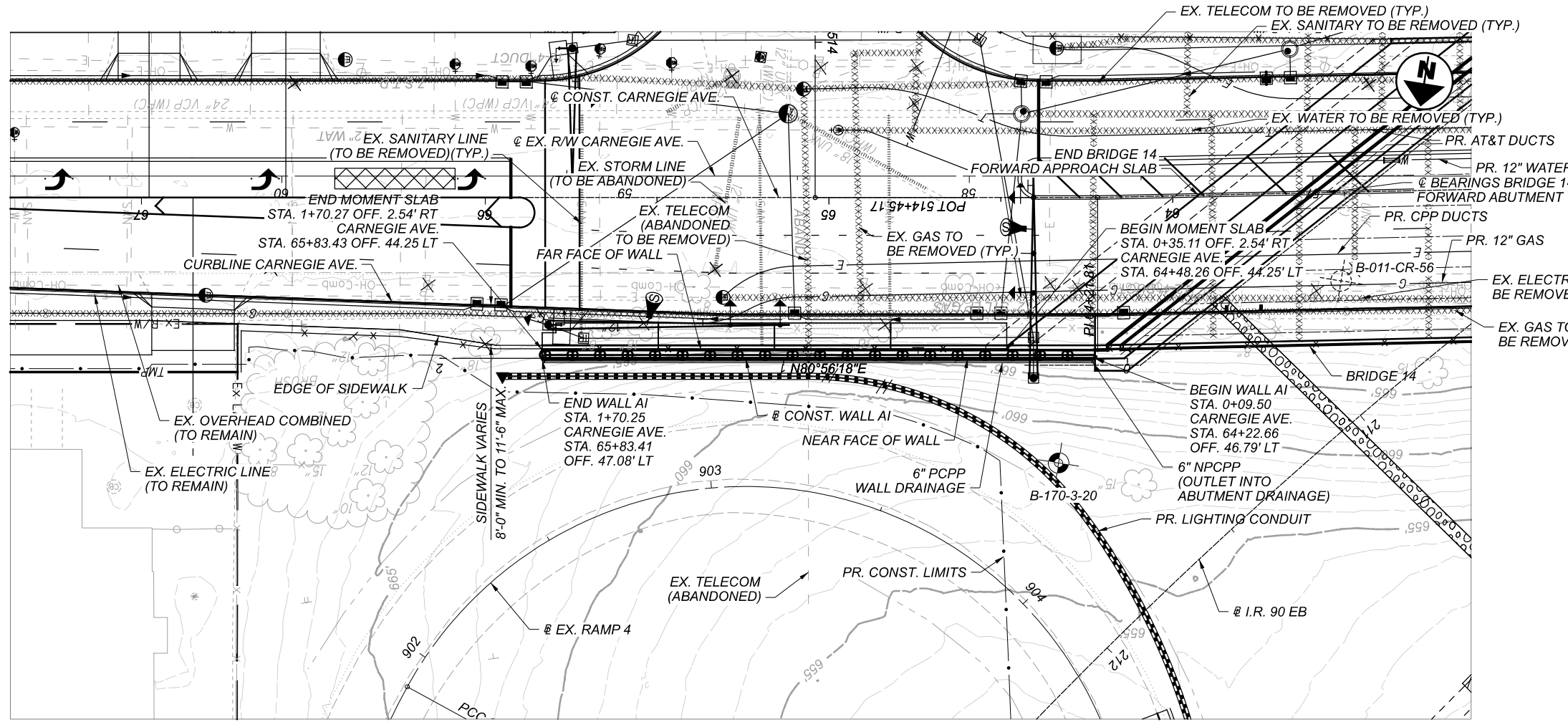


CUY-90-16.28 (CCG3A)

MODEL: CUP 1 - Wall AI Plan, PAPER SIZE: 17x11 (in.) DATE: 7/6/2022 TIME: 2:35:31 PM USER: Mblitner  
 p:\c\mb-us-pw-bentley.com\mb-us-pw-03\Documents\Cleveland\_OH\01\_Projects\ODOT\Dist\128238240-Engineering\Structures\WALL\_AI\Sheets\82382\_AI\_WP001.dgn

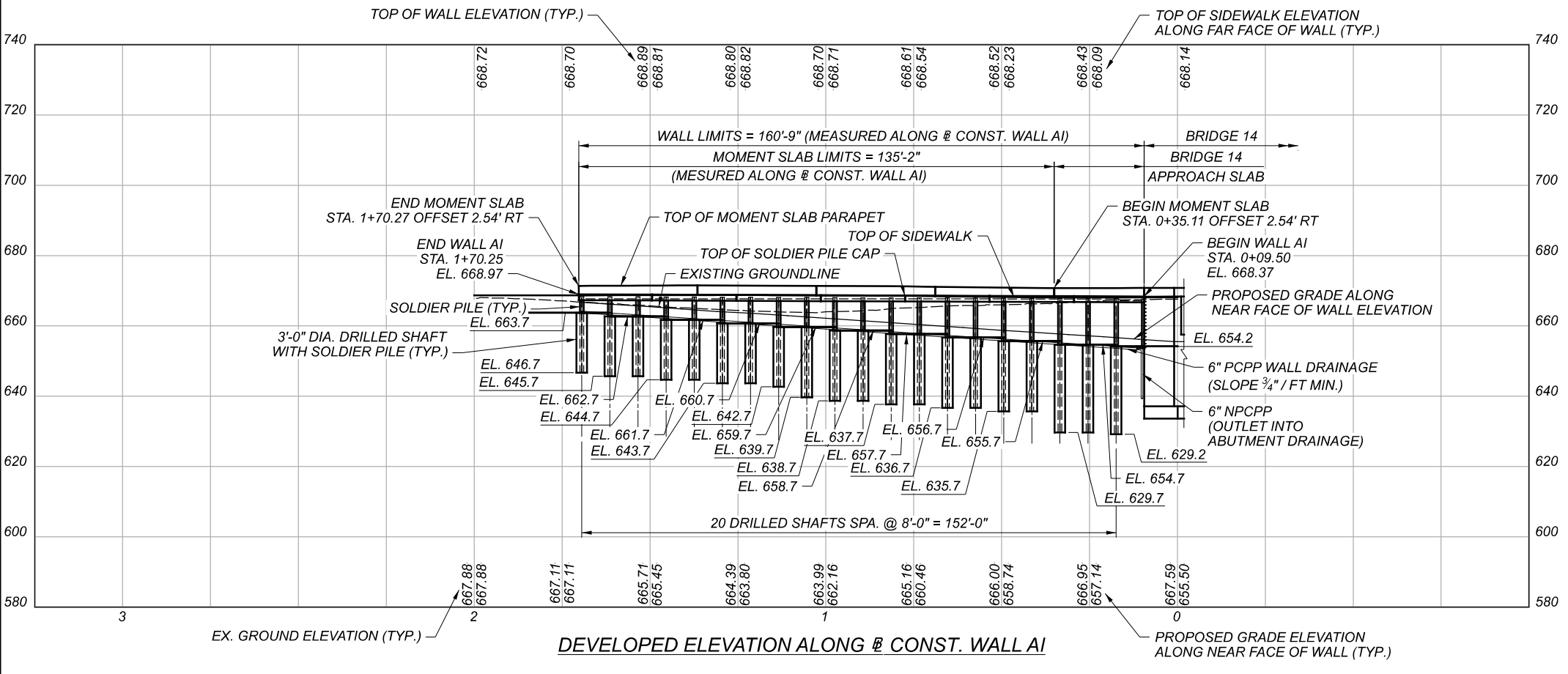


BENCHMARK DATA			
BM #62 STA.	41+38.42	ELEV.	672.11, OFFSET 75.42 LT., RR SPIKE
BM #64 STA.	58+35.86	ELEV.	671.25, OFFSET 47.90 LT., RR SPIKE
BM #65 STA.	66+35.73	ELEV.	668.92, OFFSET 38.62 RT., RR SPIKE
BM #73 STA.	49+25.90	ELEV.	671.90, OFFSET 31.86 LT., CUT CROSS

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

PLAN

WALL PLAN AND PROFILE  
 WALL AI  
 ALONG NORTH SIDE OF CARNEGIE AVE.



**NOTES**

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR WALL CROSS SECTIONS, SEE SHEETS 750 TO 752 / 2338
3. STATION AND WALL OFFSETS SHOWN AT FRONT FACE OF WALL.

**LEGEND**

- ⊕ HISTORIC BORING LOCATIONS
- ⊙ PROJECT BORING LOCATIONS
- ⊛ INSTRUMENTED BORING LOCATION
- CONST. = CONSTRUCTION

SFN	N/A
DESIGN AGENCY	
<b>Michael Baker</b>	<b>INTERNATIONAL</b>
DESIGNER/CHECKER	MKB YC
REVIEWER	LPC 7/06/22
PROJECT ID	82382
SUBSET	TOTAL
1	12
SHEET	TOTAL
1062	2338

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD CONSTRUCTION DRAWINGS:

VPF-1-90 REVISED 7/20/2018  
BR-2-15 REVISED 1/21/2022

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

800 DATED 5/02/2022

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS", 9TH EDITION, ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020 (DATED 01-21-22).

DESIGN DATA:

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (PRECAST LAGGING)  
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (MOMENT SLAB)  
CONCRETE CLASS QC5 - COMPRESSIVE STRENGTH 4.0 KSI (DRILLED SHAFTS)  
REINFORCING STEEL / WELDED WIRE REINFORCEMENT - MINIMUM YIELD STRENGTH 60 KSI  
STEEL SOLDIER PILES - ASTM A572 - YIELD STRENGTH 50 KSI  
RETENTION ANGLE - ASTM A709 - YIELD STRENGTH 50 KSI

SEQUENCE OF CONSTRUCTION

CONSTRUCT WALL AI DURING MOT PHASE 3.

SEE MAINTENANCE OF TRAFFIC NOTES FOR ADDITIONAL PHASES AND INFORMATION.

ITEM 524 - DRILLED SHAFTS, 36" DIAMETER, ABOVE 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 THE DRILLED SHAFTS IN ACCORDANCE WITH C&MS 524 EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

EXCAVATE THE HOLE FOR THE DRILLED SHAFT WITHIN 1½ INCHES OF THE PLAN LOCATION. PLACE THE SOLDIER PILE WITHIN THE HOLE SO IT IS VERTICAL AND NOT INCLINED MORE THAN 1 INCH BETWEEN TOP TO BOTTOM. PLACE THE SOLDIER PILE SO THAT THE FLANGES ARE PARALLEL TO THE CENTERLINE OF THE ROW OF DRILLED SHAFTS. 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 QC 5 CONCRETE ACCORDING TO C&MS 511. PLACE CONCRETE TO THE ELEVATION FOR THE TOP OF THE DRILLED SHAFT. 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. IF SHOWN ON THE PLANS, FILL THE HOLE ABOVE THE BOTTOM OF THE LAGGING TO THE EXISTING GROUND SURFACE WITH ITEM C&MS 613 LOW STRENGTH MORTAR BACKFILL (LSM).

REMOVE CONCRETE AND LSM AS NECESSARY FROM AROUND THE SOLDIER PILE IN ORDER TO PLACE THE LAGGING. PLACE LAGGING SO THAT THE SOLDIER PILE FLANGE OVERLAPS THE END OF THE LAGGING BY AT LEAST 3 INCHES AT BOTH ENDS OF THE LAGGING. WAIT AT LEAST 12 HOURS AFTER PLACING CONCRETE BEFORE PLACING LAGGING.

SEQUENCE OF INSTALLATION: 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 THESE CRITERIA IS PERMISSIBLE.

PROTECTION OF UNATTENDED OPEN SHAFTS: CARE SHALL BE EXERCISED AS TO COVER 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 LAGGING. ANY TEMPORARY GRADING, EXCAVATION, EMBANKMENT, AGGREGATE, DRAINAGE, SHEETING, ETC. NEEDED TO COMPLETE THE WORK 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 LAGGING, UNLESS SEPARATELY ITEMIZED. NO SEPARATE PAYMENT WILL BE MADE.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE DRILLED SHAFTS ABOVE BEDROCK, AS PER PLAN, ALONG THE AXIS OF THE DRILLED SHAFT FROM THE EXISTING GROUND SURFACE TO THE TOP OF BEDROCK, AS DETERMINED BY THE ENGINEER. THE DEPARTMENT WILL MEASURE DRILLED SHAFTS INTO BEDROCK, AS PER PLAN, ALONG THE AXIS OF THE DRILLED SHAFT FROM TOP OF BEDROCK TO THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER.

PAYMENT IS FULL COMPENSATION FOR CONSTRUCTING THE DRILLED SHAFTS, INCLUDING FURNISHING AND PLACING CONCRETE AND LSM, REMOVAL OF CONCRETE OR LSM FROM AROUND THE SOLDIER PILE IN ORDER TO PLACE LAGGING.

ITEM 507 - STEEL PILES, MISC.: W24x162, FURNISHED  
ITEM 507 - STEEL PILES, MISC.: W24x229, FURNISHED

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 IN ACCORDANCE WITH C&MS 711.01. GALVANIZE SOLDIER PILES AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH C&MS 711.02. DO NOT FIELD WELD OR SPLICE STEEL SOLDIER PILES.

THE DEPARTMENT WILL MEASURE SOLDIER PILES ALONG THE AXIS OF THE SOLDIER PILE FROM THE TOP OF WALL ELEVATION TO 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 FOR ITEM 507, STEEL PILES, MISC.: W24x162, FURNISHED AND ITEM 507, STEEL PILES, MISC.: W24x229, FURNISHED.

ITEM 610 - RETAINING WALL, MISC.: PRECAST CONCRETE LAGGING

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 ACCORDING TO SUPPLEMENT 1073. PROVIDE CLASS QC1 CONCRETE ACCORDING TO C&MS 499. PROVIDE EPOXY COATED REINFORCING STEEL ACCORDING TO C&MS 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 LAGGING OR LOCATION OF THE REINFORCING STEEL TO VARY BY MORE THAN ¼-INCH. CAST THREADED INSERTS INTO THE TOP OF EACH PANEL FOR LIFTING AND PLACEMENT.

FINISH THE FACES OF THE PRECAST CONCRETE LAGGING PANELS THAT WILL NOT BE EXPOSED TO A UNIFORM SURFACE, FREE OF OPEN POCKETS OF AGGREGATE. \*FINISH THE EXPOSED FACE OF THE PANELS TO A SMOOTH SURFACE. SEAL THE FRONT (EXPOSED) FACE AND SIDES OF EACH CONCRETE PANEL WITH ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY URETHANE). THE COLOR OF THE URETHANE SHALL BE SHERWIN WILLIAMS ALPACA 7022 OR APPROVED EQUAL.

PERMANENTLY MARK EACH PRECAST CONCRETE LAGGING PANEL TO INDICATE WHICH FACE WILL 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 SO THAT THE SOLDIER PILE FLANGE OVERLAPS THE END OF THE LAGGING BY AT LEAST ONE INCH MORE THAN THE CONCRETE COVER OVER THE REINFORCING STEEL AT BOTH ENDS OF THE LAGGING.

HANDLE, STORE, AND SHIP THE PRECAST CONCRETE LAGGING PANELS TO AVOID CHIPPING, CRACKING AND FRACTURING THE PANELS. SUPPORT THE PANELS ON FIRM BLOCKING WHILE STORING AND SHIPPING. DO NOT SHIP PANELS UNTIL CONCRETE HAS ATTAINED THE REQUIRED COMPRESSIVE STRENGTH. SUBMIT SHIPMENT DOCUMENTATION TO THE ENGINEER AS THE PANELS ARE DELIVERED TO THE PROJECT, INCLUDING THE PRECASTER'S RECORD OF FINAL INSPECTION, THE MEASUREMENTS AND TOLERANCES, STRENGTH, AND DIMENSIONS OF EACH PANEL, ALONG WITH THE TE-24 SHIPPING DOCUMENT.

INSPECT ALL PRECAST CONCRETE LAGGING PANELS AND REJECT PANELS HAVING ANY OF THE FOLLOWING:

1. DEFECTS THAT INDICATE IMPERFECT MOLDING.
2. DEFECTS THAT INDICATE HONEYCOMBED OR OPEN TEXTURE CONCRETE.
3. DEFECTS IN THE PHYSICAL CHARACTERISTICS OF THE CONCRETE, OR DAMAGE TO THE AESTHETIC SURFACE TREATMENTS.
4. CONCRETE CHIPS OR SPALLS THAT ARE LARGER THAN 4 INCHES WIDE OR 2 INCHES DEEP. REPAIR ALL CHIPS AND SPALLS THAT ARE SMALLER.
5. STAINED FORM FACES, DUE TO FORM OIL, CURING OR OTHER CONTAMINANTS.
6. SIGNS OF AGGREGATE SEGREGATION.
7. CRACKS WIDER THAN 0.01 INCH OR PENETRATING MORE THAN 1 INCH OR LONGER THAN 20 PERCENT OF THE LENGTH OF THE FACE CONTAINING THE CRACK.
8. PANELS THAT DO NOT MEET THE SPECIFIED DIMENSIONAL TOLERANCES.
9. UNUSABLE LIFTING INSERTS.
10. EXPOSED REINFORCING STEEL.
11. INSUFFICIENT CONCRETE COMPRESSIVE STRENGTH.

EITHER REPLACE DAMAGED PRECAST CONCRETE LAGGING PANELS OR DOCUMENT THE DAMAGE AND PROPOSE TO THE ENGINEER A REPAIR METHOD FOR THE DAMAGED PANEL. PROVIDE ACCEPTABLE REPLACEMENT PANELS FOR ANY THAT ARE REJECTED. WHEN INSTALLING THE PRECAST CONCRETE LAGGING PANELS, PLACE HARDWOOD WEDGES NEAR THE TOP AND BOTTOM ON EACH SIDE TO HOLD THE LAGGING PANELS AGAINST THE FRONT INSIDE FLANGE OF THE STEEL PILES.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIAL REQUIRED TO FABRICATE, TRANSPORT, AND INSTALL THE PRECAST REINFORCED CONCRETE PANELS SHALL BE MADE AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR ITEM 610 - RETAINING WALL, MISC.: PRECAST CONCRETE LAGGING.

CUY-90-16.28 (CCG3A)

MODEL: Sheet (1 of 2) PAPER: 17x11 (in.) DATE: 7/6/2022 TIME: 2:35:54 PM USER: Mblittner p:\c\mb-us-pw-bentley.com\mb-us-pw-03\Documents\Cleveland\_OH\01\_P\Projects\ODOT\Bisitf:1282382400-Engineering\Structures\WALL\_AI\Sheets\82382\_AI\_WN001.dgn

WALL GENERAL NOTES (1 OF 2)  
WALL AI  
ALONG NORTH SIDE OF CARNEGIE AVE.

SFN	N/A
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	
MKB	YC
REVIEWER	
LPC	7/06/22
PROJECT ID	82382
SUBSET	TOTAL
2	12
SHEET	TOTAL
1063	2338

**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 511- CONCRETE, MISC.: CLASS QCI CONCRETE FOR RAISED PANEL SEAT**

PROVIDE LEVEL CAST-IN-PLACE SEATS FOR LEVEL INSTALLATION OF THE BOTTOM ROW OF LAGGING. SEATS SHALL BE PLACED AS SHOWN IN THE PLANS ON SOUND CONCRETE FROM THE SOLDIER PILE DRILLED SHAFT.

THE CONTRACTOR IS PERMITTED TO USE A PRECAST ALTERNATIVE SUBJECT TO APPROVAL OF THE ENGINEER.

**ITEM 511 - CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET WITH QC/QA**

ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE MOMENT SLABS AND PARAPETS ALONG WALL A1 SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET WITH QC/QA. PAYMENT FOR THIS ITEM SHALL INCLUDE ALL DOWEL RODS, SLEEVES, AND ALL JOINT MATERIALS IN CONTACT WITH THE MOMENT SLAB. ALL REINFORCING STEEL EMBEDDED IN THE MOMENT SLAB AND WITHIN THE PARAPET SHALL BE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL FOR PAYMENT. THIS ITEM SHALL ALSO REQUIRE QUALITY CONTROL, MEETING THE REQUIREMENTS PER CMS 455 AND CMS 511.04.

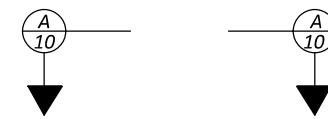
**ITEM 513 - STRUCTURAL STEEL, MISC.: RETENTION ANGLE**

PROVIDE RETENTION ANGLE FOR PRECAST LAGGING WHERE WALL A1 CONNECTS TO THE BRIDGE 14 FORWARD ABUTMENT AS SHOWN IN THE PLANS. ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE RETENTION ANGLE SHALL BE INCLUDED FOR PAYMENT WITH ITEM 513- STRUCTURAL STEEL, MISC.: RETENTION ANGLE.

**PLAN ABBREVIATIONS:**

- ABUT. = ABUTMENT
- APPR. = APPROACH
- B = BOTTOM
- ⊕ = 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
- CONC. = CONCRETE
- CONST. = CONSTRUCTION
- DIA. = DIAMETER
- DIM. = DIMENSION
- DTBD = DISPOSITION TO BE DETERMINED
- DWG. = DRAWING
- EB = EASTBOUND
- E.F. = EACH FACE
- EL. OR ELEV. = ELEVATION
- EQ. = EQUAL
- EST. = ESTIMATED
- EX. = EXISTING
- F.A. = FORWARD ABUTMENT
- F/F = FACE TO FACE
- F.F. = FRONT FACE
- FT. = FOOT OR FEET
- FTG. = FOOTING
- FWD. = FORWARD
- IN. = INCH
- JT. = JOINT
- LT. = LEFT
- MAX. = MAXIMUM
- MIN. = MINIMUM
- MISC. = MISCELLANEOUS
- N = NORTH
- NB = NORTHBOUND
- NO. = NUMBER
- N.P.C.P.P. = NON-PERFORATED CORRUGATED PLASTIC PIPE
- OHWM = ORDINARY HIGH WATER MARK
- O/O = OUT TO OUT
- P.C.P.P. = PERFORATED CORRUGATED PLASTIC PIPE
- P.E.J.F. = PREFORMED EXPANSION JOINT FILLER
- PROP. = PROPOSED
- PSF = POUNDS PER SQUARE FOOT
- R.A. = REAR ABUTMENT
- S = SOUTH
- SB = SOUTHBOUND
- SER. = SERIES
- SHLDR = SHOULDER
- SPA. = SPACE OR SPACES
- STA. = STATION
- STD. = STANDARD
- STR = STRAIGHT
- T = TOP
- T&B = TOP & BOTTOM
- TBR = TO BE REMOVED
- TBRBO = TO BE RELOCATED BY OTHERS
- 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)

CUY-90-16.28

MODEL: Untitled Sheet PAPER SIZE: 17x11 (in.) DATE: 7/6/2022 TIME: 2:35:59 PM USER: Maltner pwc:\mb-us-pw-bentley.com\mb-us-pw-03\Documents\Cleveland\_OH101\_Projects\ODOT\Drawings\Structures\WALL\_A1\Sheets\82382\_A1\_WN002.dgn

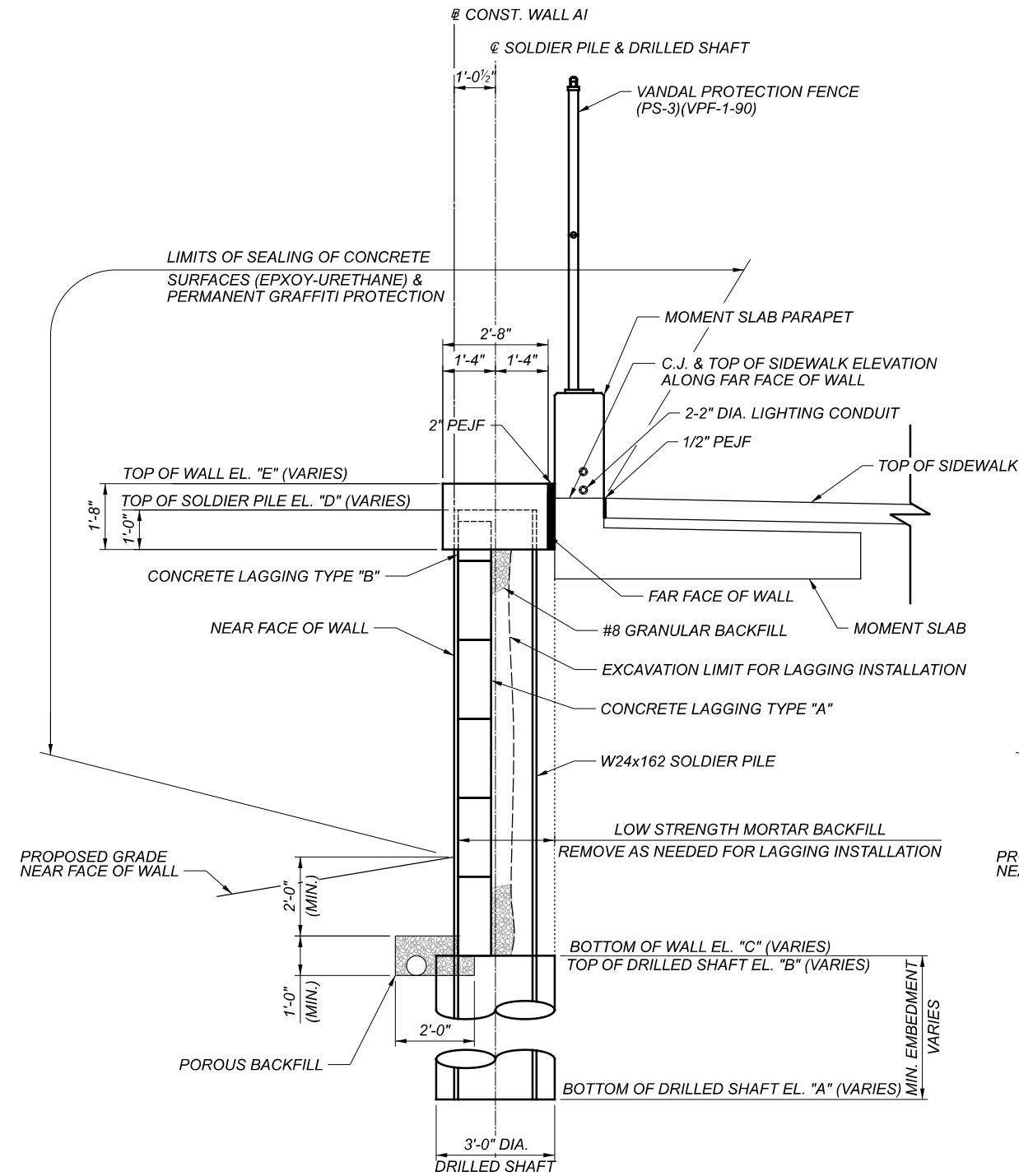
WALL GENERAL NOTES (2 OF 2)  
WALL A1  
ALONG NORTH SIDE OF CARNEGIE AVE.

SFN	--NA--
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	
REVIEWER	
PROJECT ID	82382
SUBSET	TOTAL
3	12
SHEET	TOTAL
1064	2338

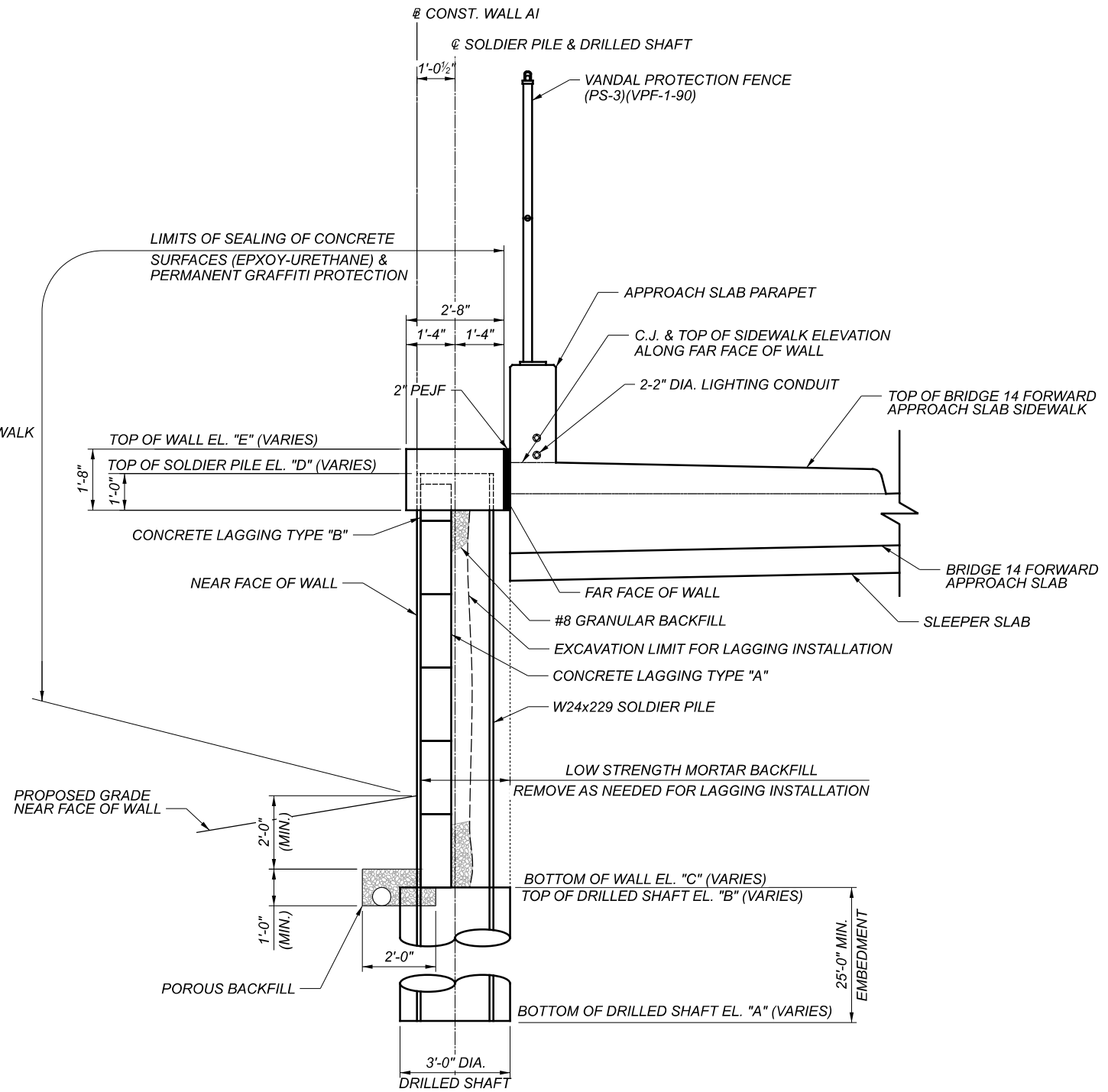
ITEM NO.	EXT.	TOTAL	UNIT	DESCRIPTION	ABUT	PIERS	SUPER	GEN	AS PER PLAN
507	00400	454	FT	STEEL PILES, MISC.: W24x162, FURNISHED					2
507	00400	96	FT	STEEL PILES, MISC.: W24x229, FURNISHED					2
509	10000	30900	LB	EPOXY COATED REINFORCING STEEL					
511	53012	70	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET WITH QC/QA					3
511	81300	11	EACH	CONCRETE MISC.: CLASS QC1 CONCRETE FOR RAISED PANEL SEAT					3
512	10100	144	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)					
512	10001	144	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)					3
513	90000	525	LB	STRUCTURAL STEEL, MISC.: RETENTION ANGLE					3
516	13600	268	SF	1" PREFORMED EXPANSION JOINT FILLER					
516	42000	150	EACH	ELASTOMERIC BEARING PAD, MISC.: 6"x10"x3/8" THICK					8
518	40000	160	FT	6" PERFORATED CORRUGATED PLASTIC PIPE					
518	40010	14	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS					
524	94703	383	FT	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK, AS PER PLAN					2
607	39910	160	FT	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC					
610	50010	1590	SF	RETAINING WALL, MISC.: PRECAST CONCRETE LAGGING					2

ESTIMATED QUANTITIES  
 WALL AI  
 ALONG NORTH SIDE OF CARNEGIE AVE.

SFN	--NA--
DESIGN AGENCY	
<b>Michael Baker</b> INTERNATIONAL	
DESIGNER	CHECKER
MKB	YC
REVIEWER	
LPC	7/06/22
PROJECT ID	
82382	
SUBSET	TOTAL
4	12
SHEET	TOTAL
1065	2338



**SOLDIER PILE AND LAGGING WALL AI TYP. SECTION**  
 (ALONG MOMENT SLAB)



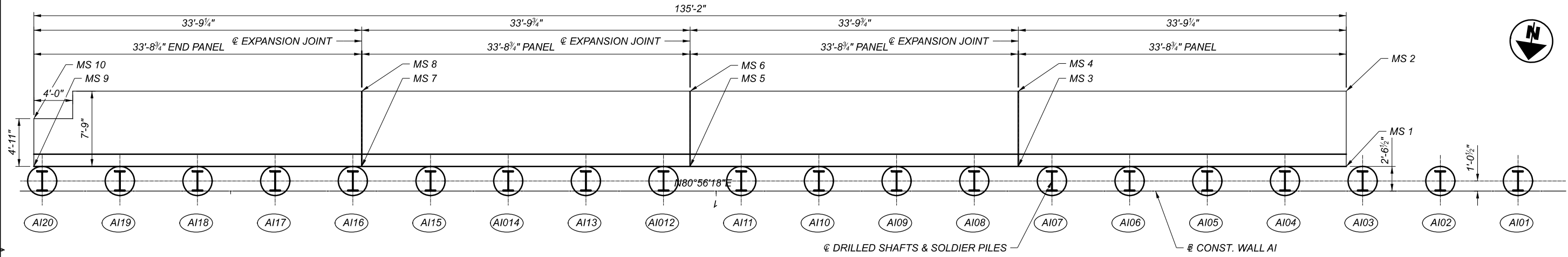
**SOLDIER PILE AND LAGGING WALL AI TYP. SECTION**  
 (ALONG BRIDGE 14 APPROACH SLAB)

**NOTES:**

1. SEE BRIDGE 14 APPROACH SLAB DETAILS FOR ADDITIONAL INFORMATION.

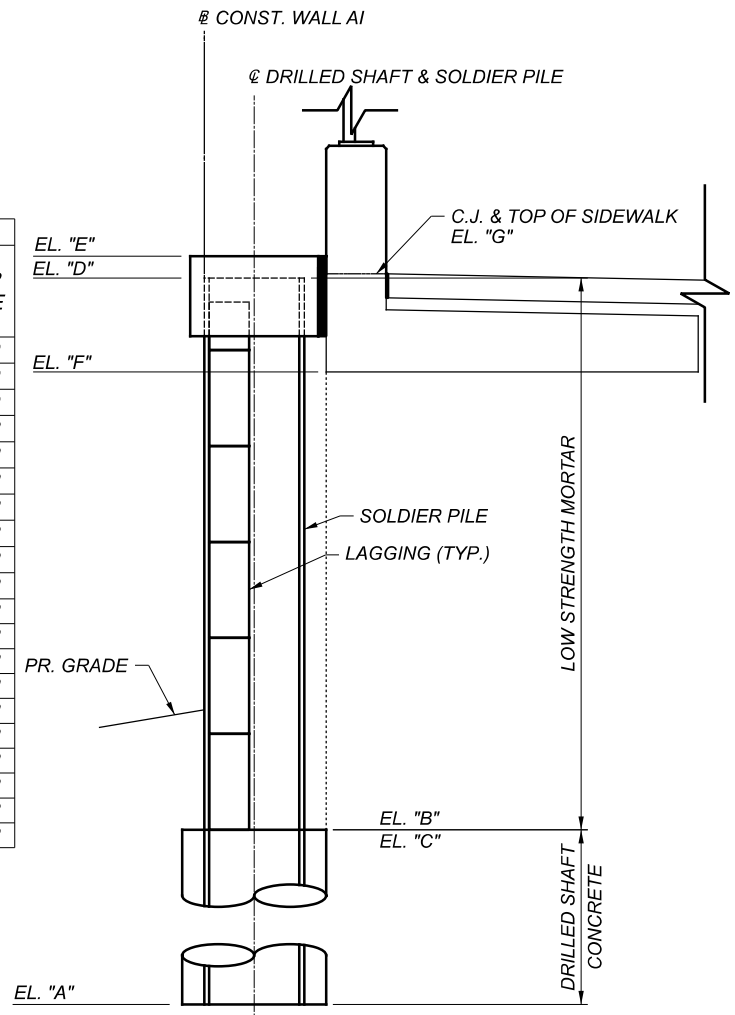
WALL TYPICAL SECTIONS  
 WALL AI  
 ALONG NORTH SIDE OF CARNEGIE AVE.

SFN	N/A
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	
REVIEWER	YC
PROJECT ID	82382
SUBSET	5
TOTAL	12
SHEET	1066
TOTAL	2338



FOUNDATION PLAN

WALL AI DRILLED SHAFT & SOLDIER PILE SCHEDULE													
DESIGNATION	STATION BASELINE WALL AI	CENTERLINE OFFSET FROM BASELINE WALL AI (FT.)	DIAMETER (IN.)	SHEAR STUDS (YES/NO)	BOTTOM OF DRILLED SHAFT EL. "A"	TOP OF SHAFT CONCRETE EL. "B"	CONCRETE SHAFT LENGTH (FT.)	BOTTOM OF WALL EL. "C"	TOP OF SOLDIER PILE E. "D"	TOP OF WALL EL. "E"	ESTIMATED LENGTH OF SOLDIER PILE (FT.)	HEIGHT OF LAGGING (FT.)	SOLDIER PILE SIZE
AI01	00+17.42	1.042 RT	36	NO	629.2	654.2	25.0	654.2	667.7	668.4	38.5	13.0	W24x229
AI02	00+25.42	1.042 RT	36	NO	629.7	654.7	25.0	654.7	667.8	668.4	38.1	13.0	W24x229
AI03	00+33.42	1.042 RT	36	NO	629.7	654.7	25.0	654.7	667.8	668.5	38.1	13.0	W24x229
AI04	00+41.42	1.042 RT	36	NO	635.7	655.7	20.0	655.7	667.8	668.5	32.1	12.0	W24x162
AI05	00+49.42	1.042 RT	36	NO	635.7	655.7	20.0	655.7	667.8	668.5	32.1	12.0	W24x162
AI06	00+57.42	1.042 RT	36	NO	636.7	656.7	20.0	656.7	667.9	668.6	31.2	11.0	W24x162
AI07	00+65.42	1.042 RT	36	NO	636.7	656.7	20.0	656.7	667.9	668.6	31.2	11.0	W24x162
AI08	00+73.42	1.042 RT	36	NO	637.7	657.7	20.0	657.7	667.9	668.6	30.2	10.0	W24x162
AI09	00+81.42	1.042 RT	36	NO	637.7	657.7	20.0	657.7	668.0	668.6	30.3	10.0	W24x162
AI10	00+89.42	1.042 RT	36	NO	638.7	658.7	20.0	658.7	668.0	668.7	29.3	9.0	W24x162
AI11	00+97.42	1.042 RT	36	NO	638.7	658.7	20.0	658.7	668.0	668.7	29.3	9.0	W24x162
AI12	01+05.42	1.042 RT	36	NO	639.7	659.7	20.0	659.7	668.0	668.7	28.3	8.0	W24x162
AI13	01+13.42	1.042 RT	36	NO	642.7	659.7	17.0	659.7	668.1	668.8	25.4	8.0	W24x162
AI14	01+21.42	1.042 RT	36	NO	643.7	660.7	17.0	660.7	668.1	668.8	24.4	7.0	W24x162
AI15	01+29.42	1.042 RT	36	NO	643.7	660.7	17.0	660.7	668.1	668.8	24.4	7.0	W24x162
AI16	01+37.42	1.042 RT	36	NO	644.7	661.7	17.0	661.7	668.2	668.8	23.5	6.0	W24x162
AI17	01+45.42	1.042 RT	36	NO	644.7	661.7	17.0	661.7	668.2	668.9	23.5	6.0	W24x162
AI18	01+53.42	1.042 RT	36	NO	645.7	662.7	17.0	662.7	668.2	668.9	22.5	5.0	W24x162
AI19	01+61.42	1.042 RT	36	NO	645.7	662.7	17.0	662.7	668.3	668.9	22.6	5.0	W24x162
AI20	01+69.42	1.042 RT	36	NO	646.7	663.7	17.0	663.7	668.3	669.0	21.6	4.0	W24x162



DRILLED SHAFT & SOLDIER PILE SCHEMATIC

WALL AI MOMENT SLAB ELEVATIONS				
DESIGNATION	STATION BASELINE WALL AI	OFFSET FROM BASELINE WALL AI (FT.)	BOTTOM OF MOMENT SLAB EL. "F"	TOP OF SIDEWALK EL. "G"
MS 1	00+35.11	2.542 RT	666.0	668.09
MS 2	00+35.11	10.292 RT	666.0	
MS 3	00+68.88	2.542 RT	666.4	668.46
MS 4	00+68.88	10.292 RT	666.4	
MS 5	01+02.69	2.542 RT	666.7	668.72
MS 6	01+02.69	10.292 RT	666.7	
MS 7	01+36.50	2.542 RT	666.8	668.87
MS 8	01+36.50	10.292 RT	666.8	
MS 9	01+70.27	2.542 RT	666.7	668.72
MS 10	01+70.27	7.458 RT	666.7	

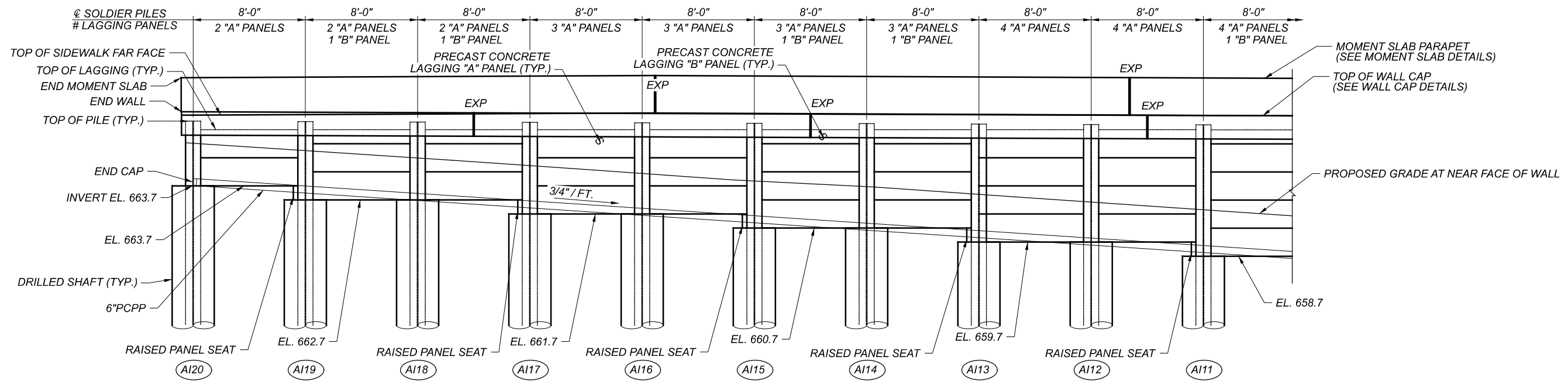
LEGEND:  
 # - DENOTES SOLDIER PILE NUMBER

CUY-90-16.28 (CCG3A)

MODEL: Untitled Sheet PAPER SIZE: 17x11 (in.) DATE: 7/6/2022 TIME: 2:36:16 PM USER: Maltner  
 p:\mb-us-pw-bentley.com\mb-us-pw-03\Documents\Cleveland\_OH01\_P\Projects\ODOT\Dist\1282382\400-Engineering\Structures\WALL\_AI\Sheets\82382\_AI\_WT001.dgn

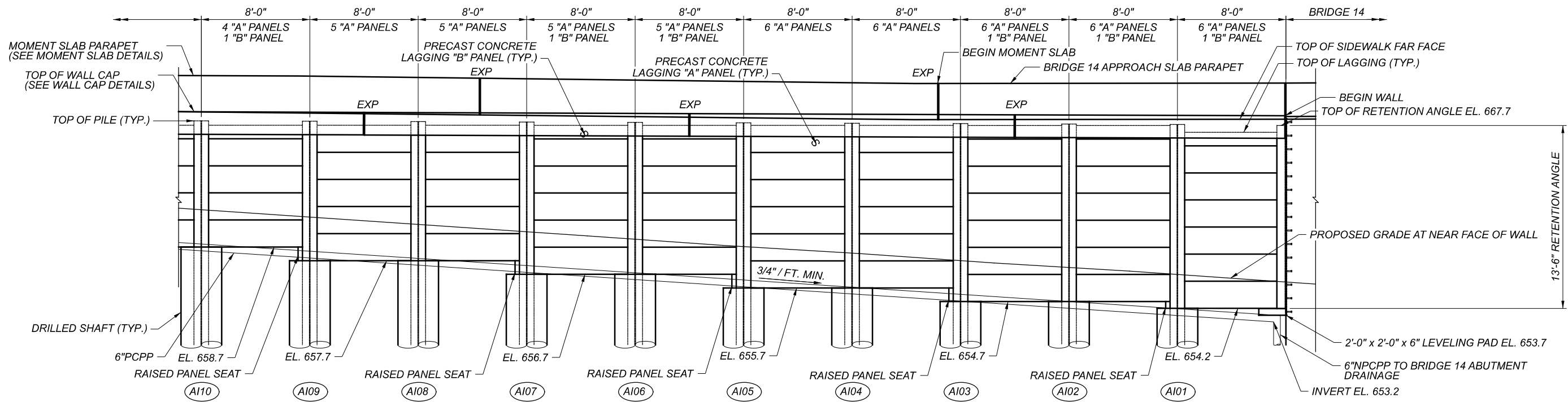
FOUNDATION PLAN  
 WALL AI  
 ALONG NORTH SIDE OF CARNEGIE AVE.

SFN	--NA--
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	MKB
CHECKER	YC
REVIEWER	LPC
DATE	7/06/22
PROJECT ID	82382
SUBSET	6
TOTAL	12
SHEET	1067
TOTAL	2338



**ELEVATION**

(DIMENSIONS GIVEN ALONG # CONST. WALL AI)



**ELEVATION**

(DIMENSIONS GIVEN ALONG # CONST. WALL AI)

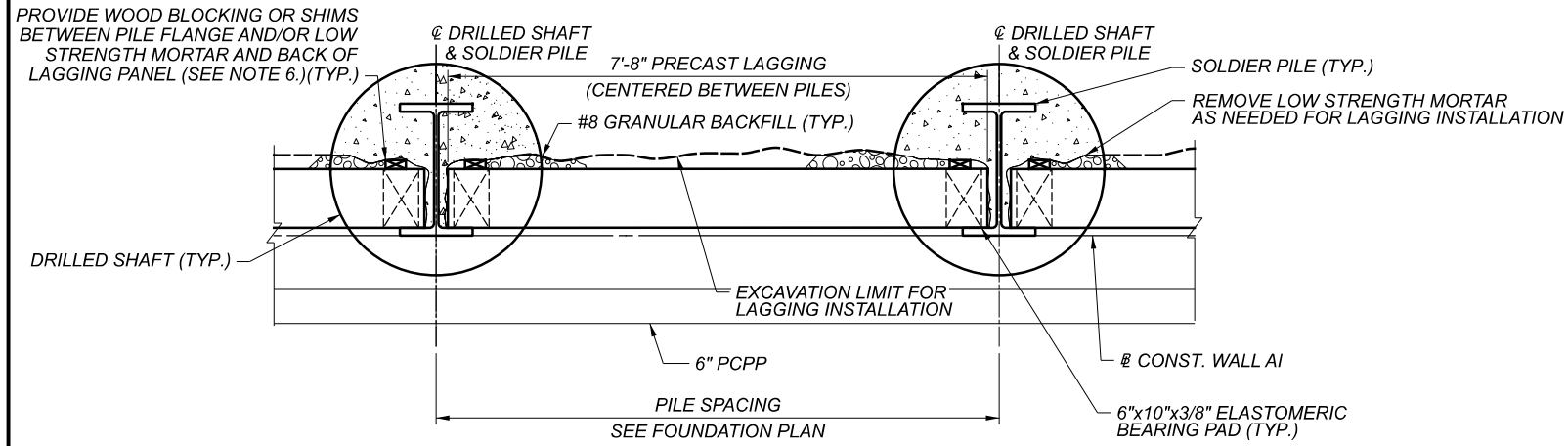
**LEGEND:**

# - DENOTES SOLDIER PILE NUMBER

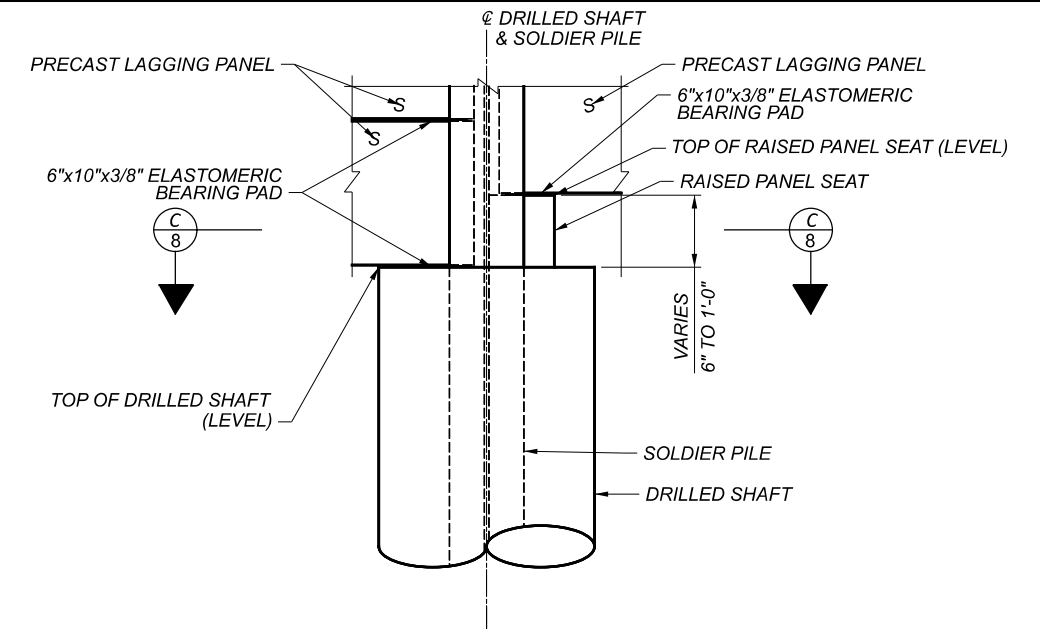
EXP - EXPANSION JOINT

WALL ELEVATION  
WALL AI  
ALONG NORTH SIDE OF CARNEGIE AVE.

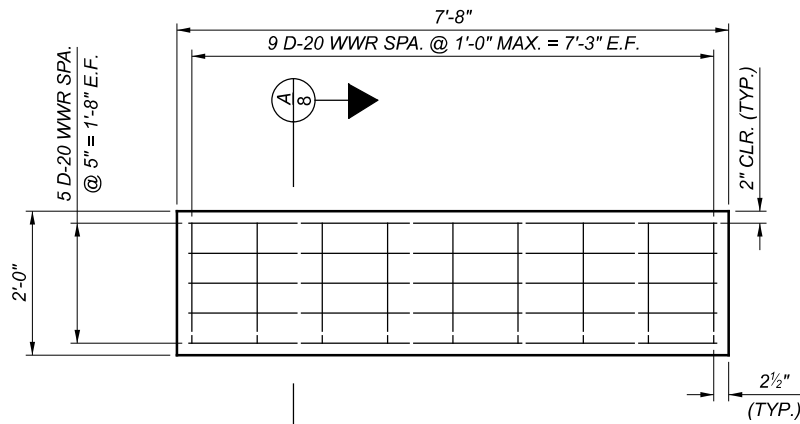
SFN	---NA---
DESIGN AGENCY	
DESIGNER	MKB
CHECKER	YC
REVIEWER	LPC
DATE	7/06/22
PROJECT ID	82382
SUBSET	7
TOTAL	12
SHEET	1068
TOTAL	2338



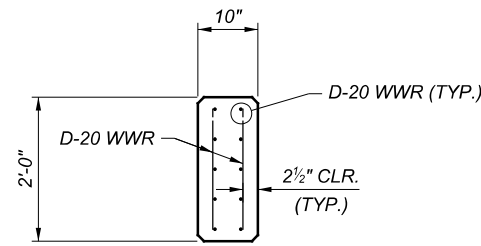
TYPICAL PLAN



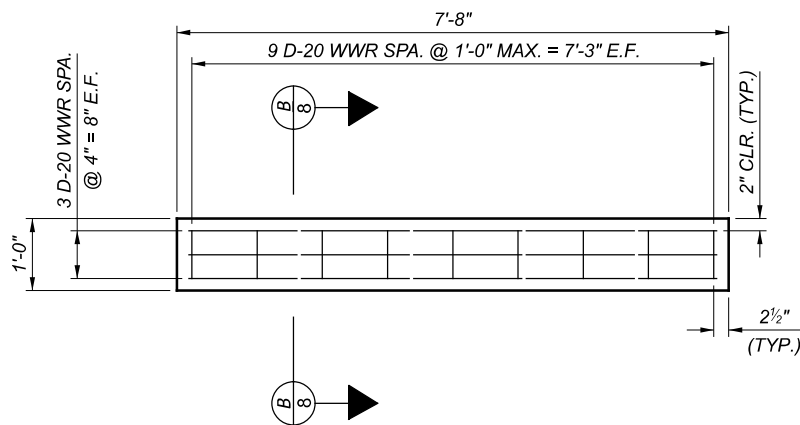
RAISED PANEL SEAT DETAIL  
 LOW STRENGTH MORTAR NOT SHOWN FOR CLARITY



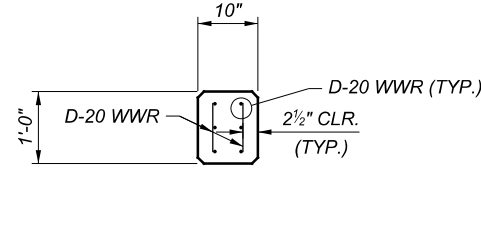
TYPE "A" PRECAST LAGGING ELEVATION



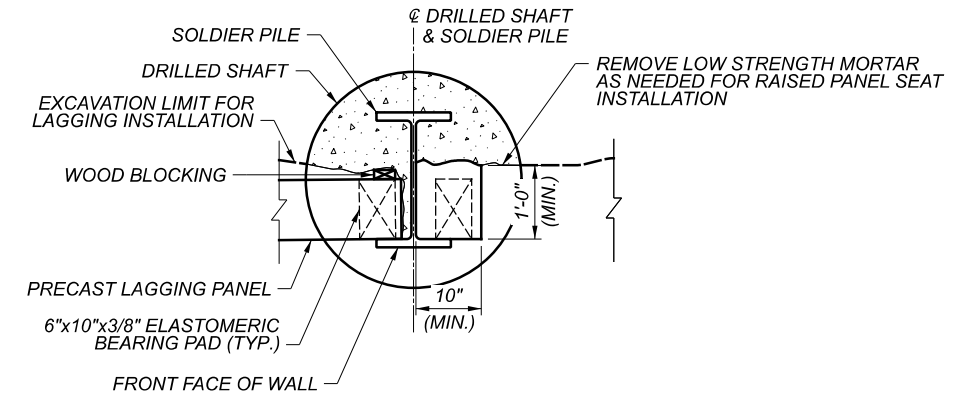
SECTION A



TYPE "B" PRECAST LAGGING ELEVATION



SECTION B



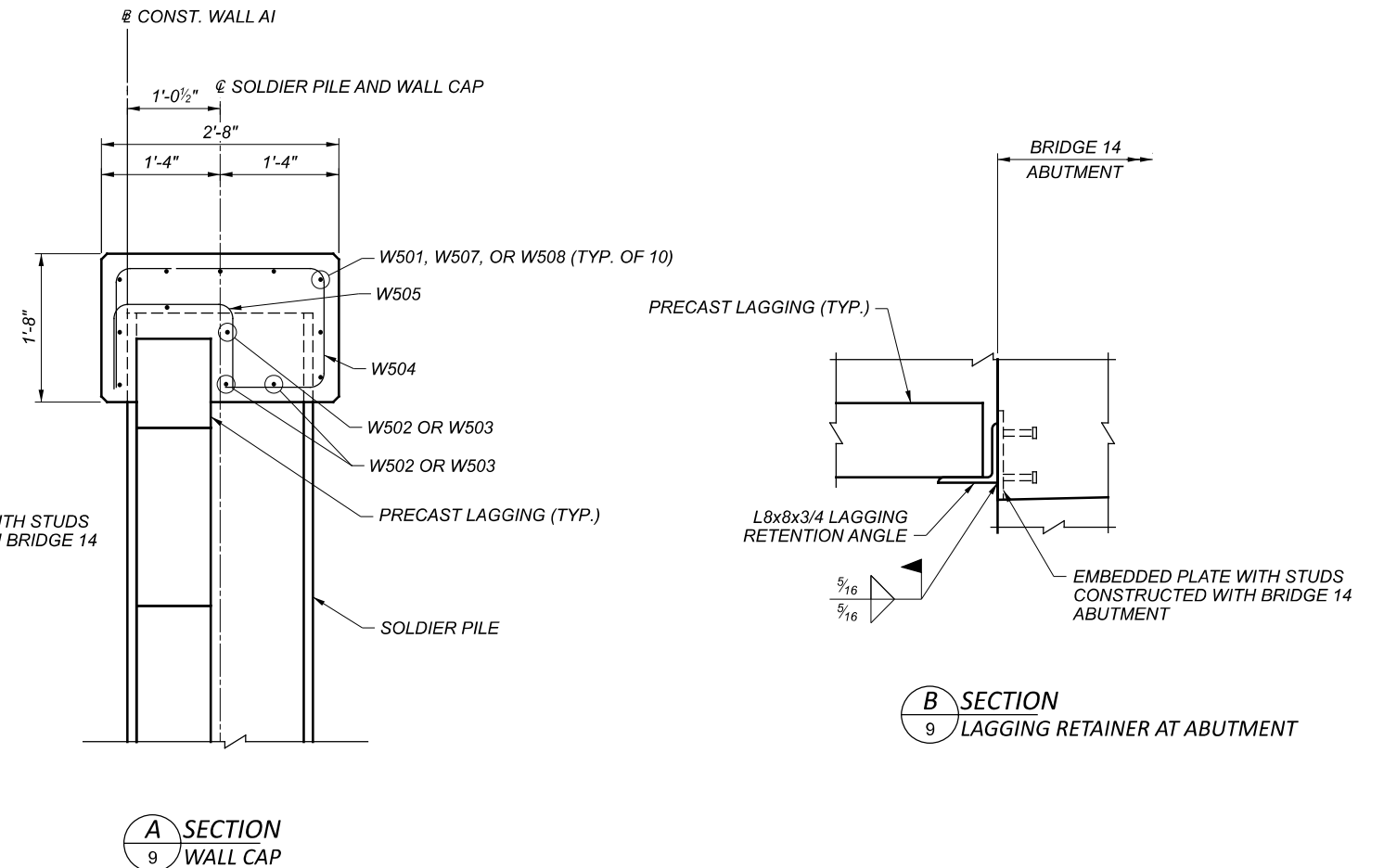
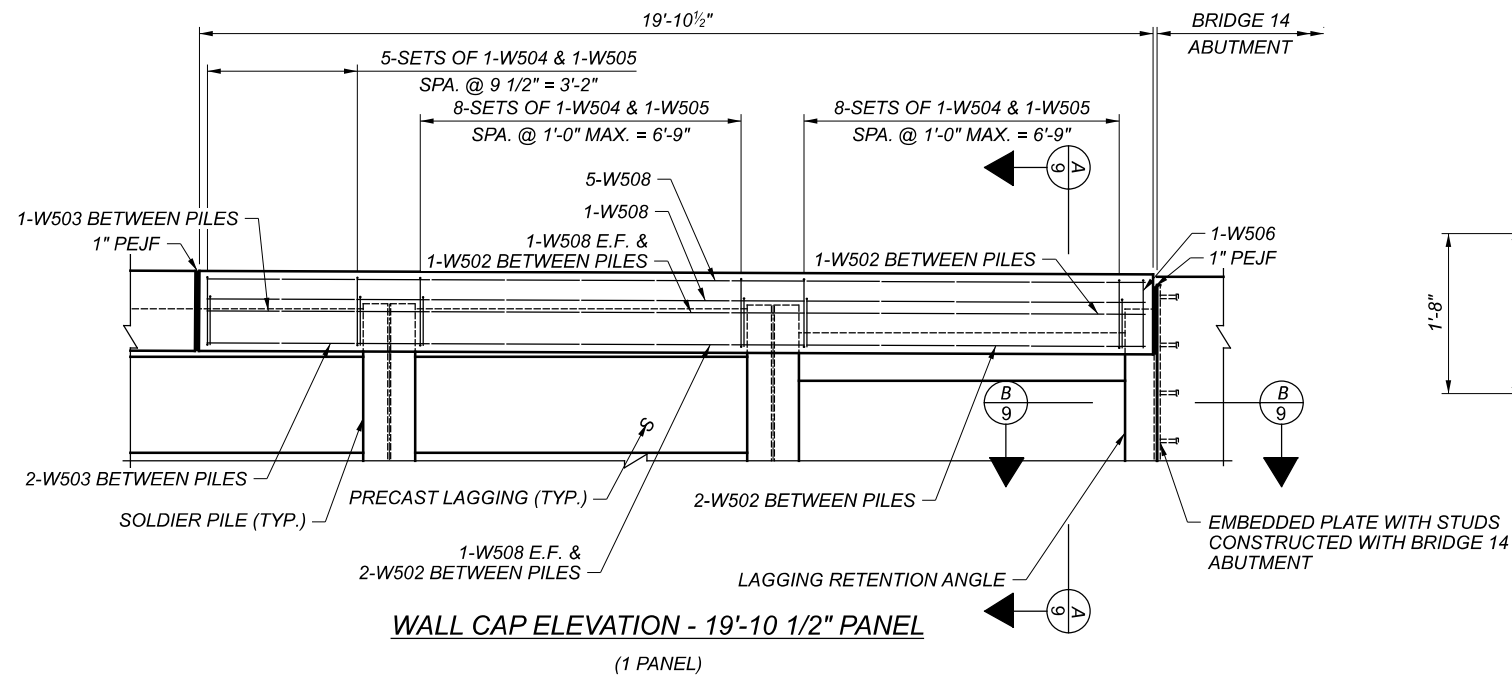
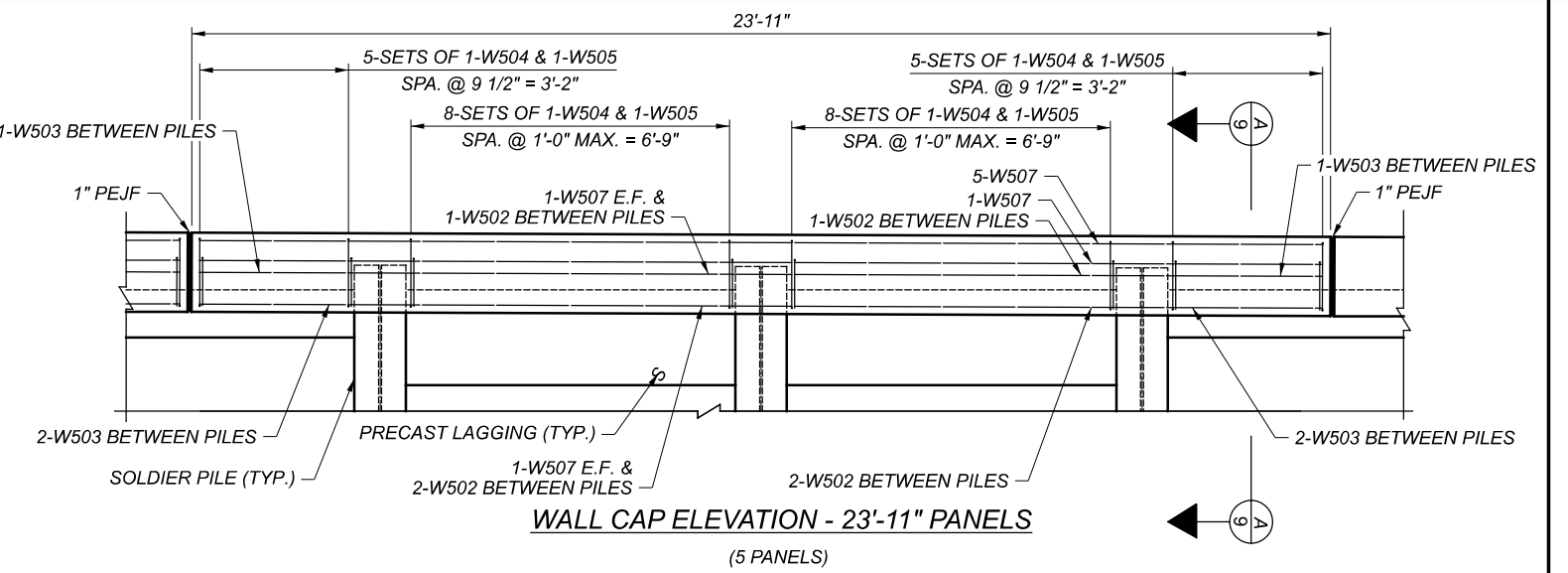
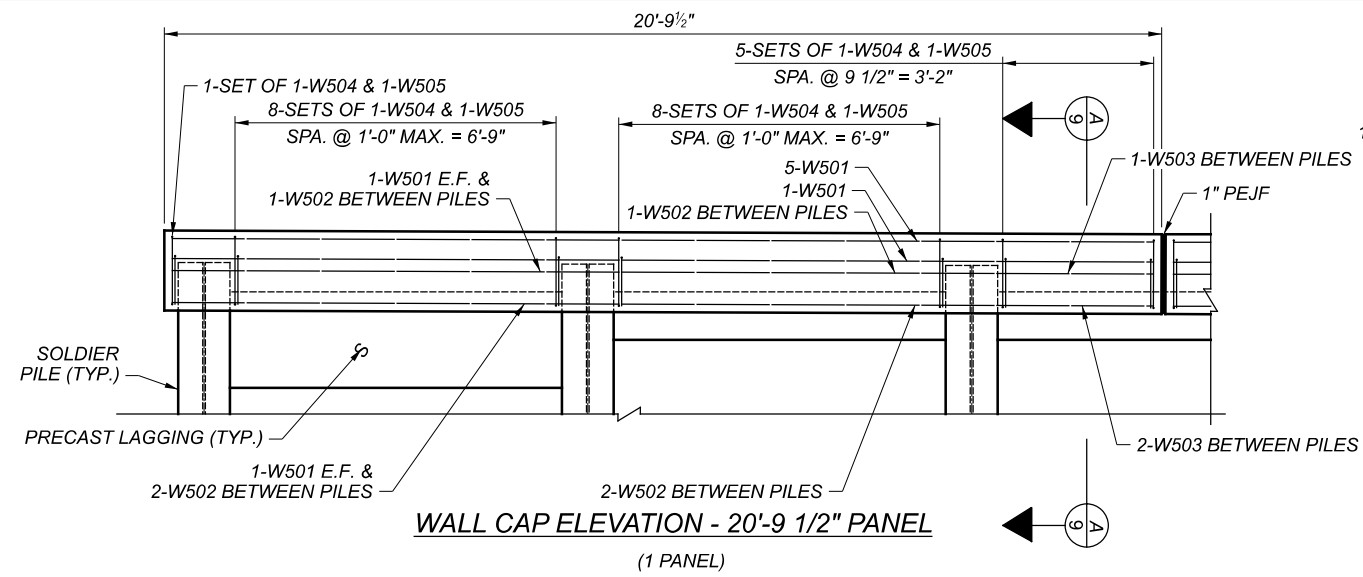
SECTION C

NOTES:

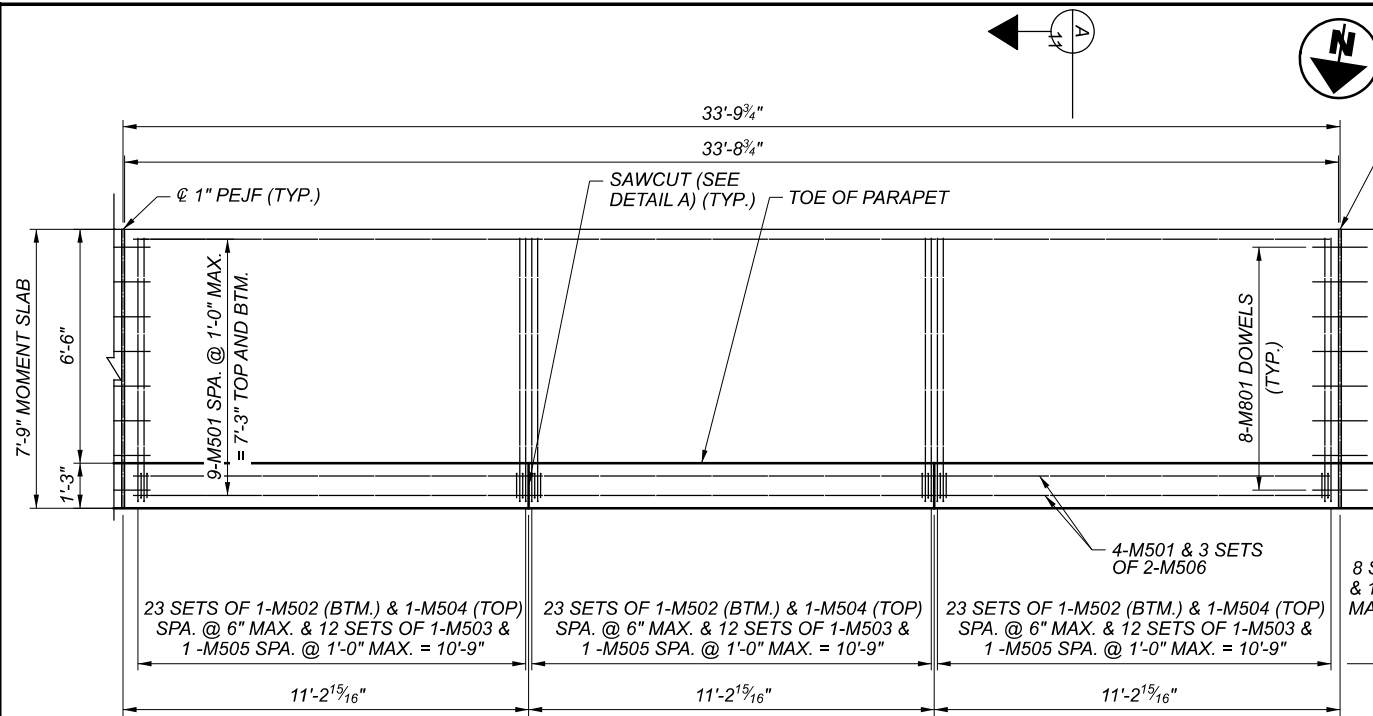
- ELASTOMERIC BEARING PADS SHALL BE PROVIDED AT ALL BOTTOM PANELS BETWEEN THE PANEL AND TOP OF CONCRETE DRILLED SHAFT AND/OR RAISED PANEL SEAT. THEY SHALL ALSO BE PROVIDED AT EACH END OF EACH PANEL BETWEEN PANELS.
- ELASTOMERIC BEARING PADS SHALL BE NEOPRENE ELASTOMERIC PADS HAVING DUROMETER HARDNESS OF 55 ± 5, HIGH DENSITY POLYETHYLENE PADS WITH A MINIMUM DENSITY OF 59 LB/FT<sup>3</sup> (0.946 G/CM<sup>3</sup>) OR EQUIVALENT. SUPPLY CERTIFIED TEST DATA TO THE ENGINEER UPON DELIVERY OF THE MATERIAL TO THE PROJECT. BEARING PADS WILL BE PAID FOR UNDER ITEM 516 ELASTOMERIC BEARING PAD, MISC.: 6"x10"x 3/8" THICK.
- REINFORCEMENT IN PRECAST LAGGING PANELS SHALL INCLUDED WITH ITEM 610 - RETAINING WALL MISC.: PRECAST CONCRETE LAGGING FOR PAYMENT.
- PROVIDE 1" x 1" CHAMFER AT EXPOSED TOP AND BOTTOM OF LAGGING PANELS.
- CENTER LAGGING PANELS BETWEEN PILE WEBS.
- CONTRACTOR HAS THE OPTION TO REMOVE LOW STRENGTH MORTAR AS NEEDED FOR LAGGING INSTALLATION. USE WOOD BLOCKING AND/OR SHIMS TO ENSURE LAGGING PANEL REMAINS FLUSH AGAINST BACK OF SOLDIER PILE FLANGE AT THE FRONT FACE OF WALL.

SFN	--NA--	
DESIGN AGENCY		
DESIGNER	MKB	YC
CHECKER		
REVIEWER	LPC	7/06/22
PROJECT ID	82382	
SUBSET	8	TOTAL 12
SHEET	1069	TOTAL 2338

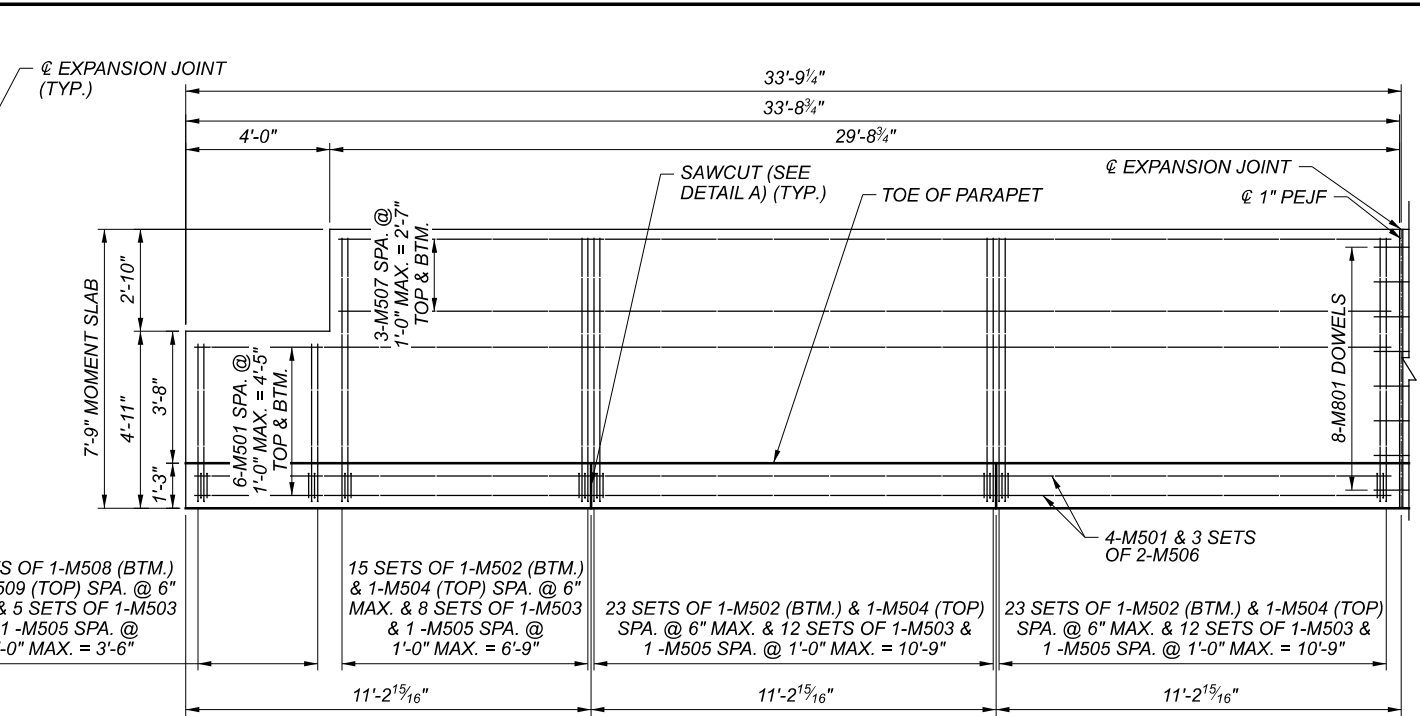




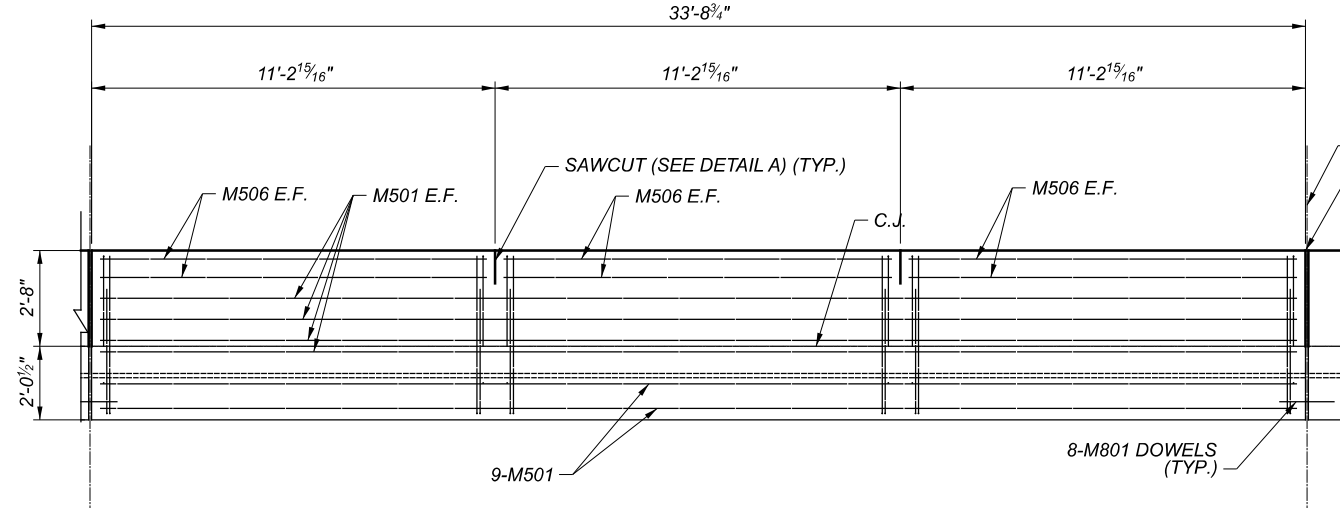
SFN	N/A
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	MKB
CHECKER	YC
REVIEWER	LPC
DATE	7/06/22
PROJECT ID	82382
SUBSET	9
TOTAL	12
SHEET	1070
TOTAL	2338



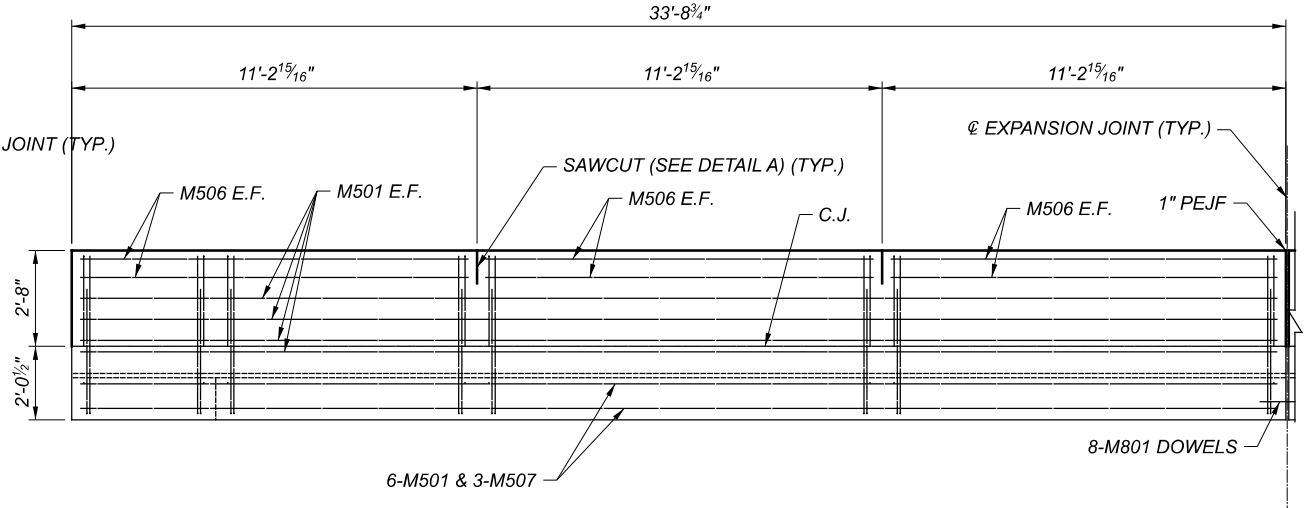
MOMENT SLAB PLAN - 33'-8 3/4" PANELS  
(3 PANELS)



MOMENT SLAB PLAN - 33'-8 3/4" END PANEL  
(1 PANEL)



MOMENT SLAB ELEVATION - 33'-8 3/4" PANELS  
(3 PANELS)



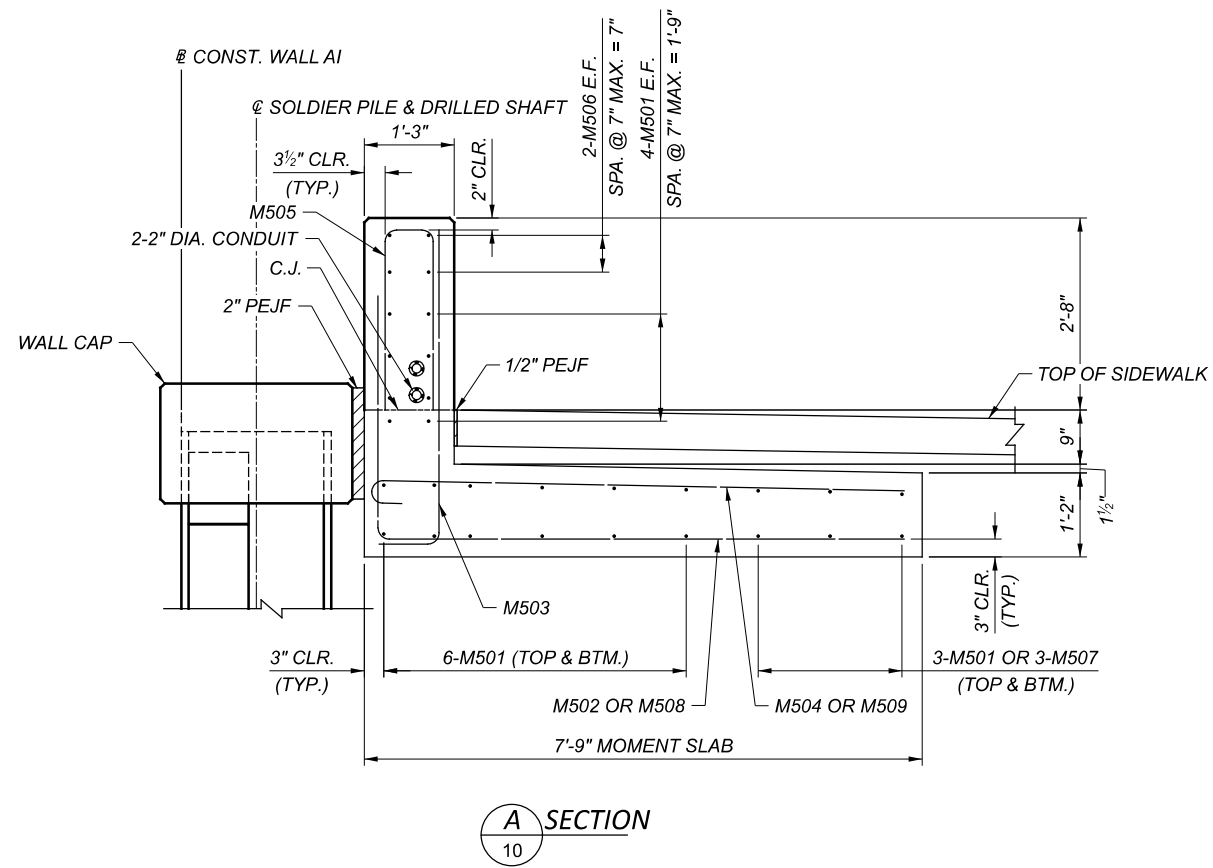
MOMENT SLAB ELEVATION - 33'-8 3/4" END PANEL  
(1 PANEL)

NOTES:

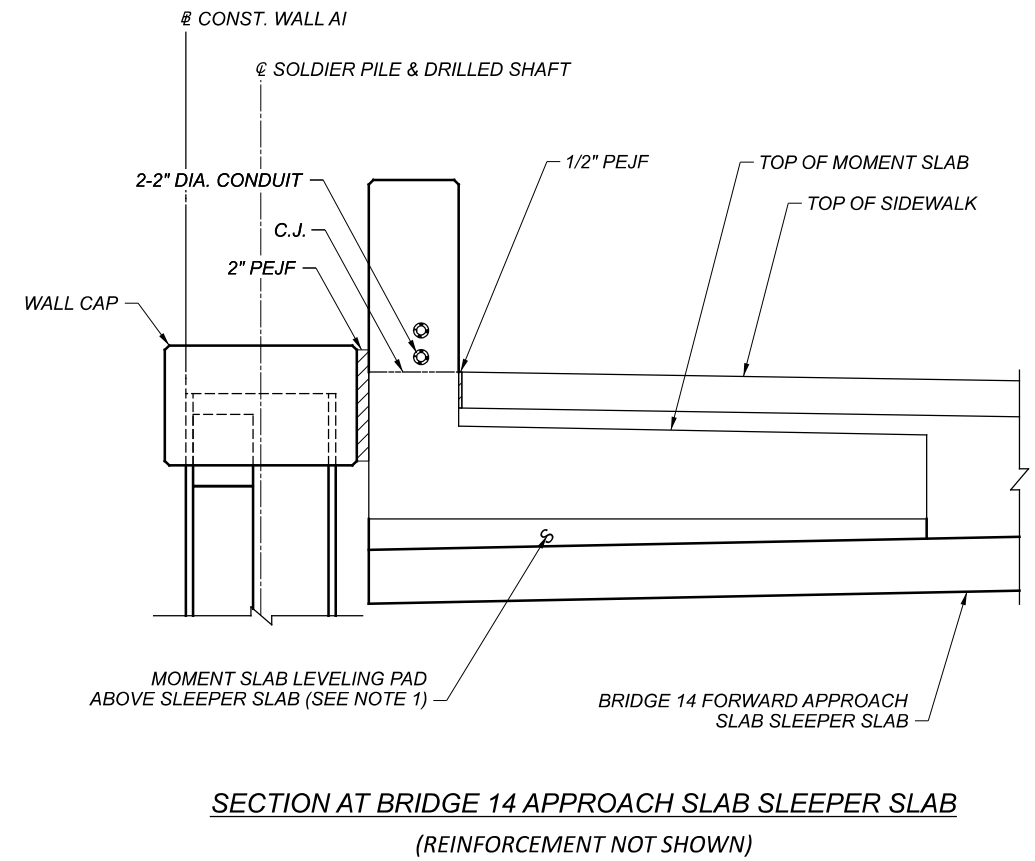
- SEE DETAIL A ON SHEET 11/12 FOR ADDITIONAL SAWCUT INFORMATION.
- SEE ODOT STANDARD DRAWING BR-2-15 FOR ADDITIONAL DETAILS.
- VANDAL PROTECTION FENCE NOT SHOWN. SEE ODOT STANDARD DRAWING VPF-1-90 FOR DETAILS

MOMENT SLAB PLAN AND ELEVATION  
WALL AI  
ALONG NORTH SIDE OF CARNEGIE AVE.

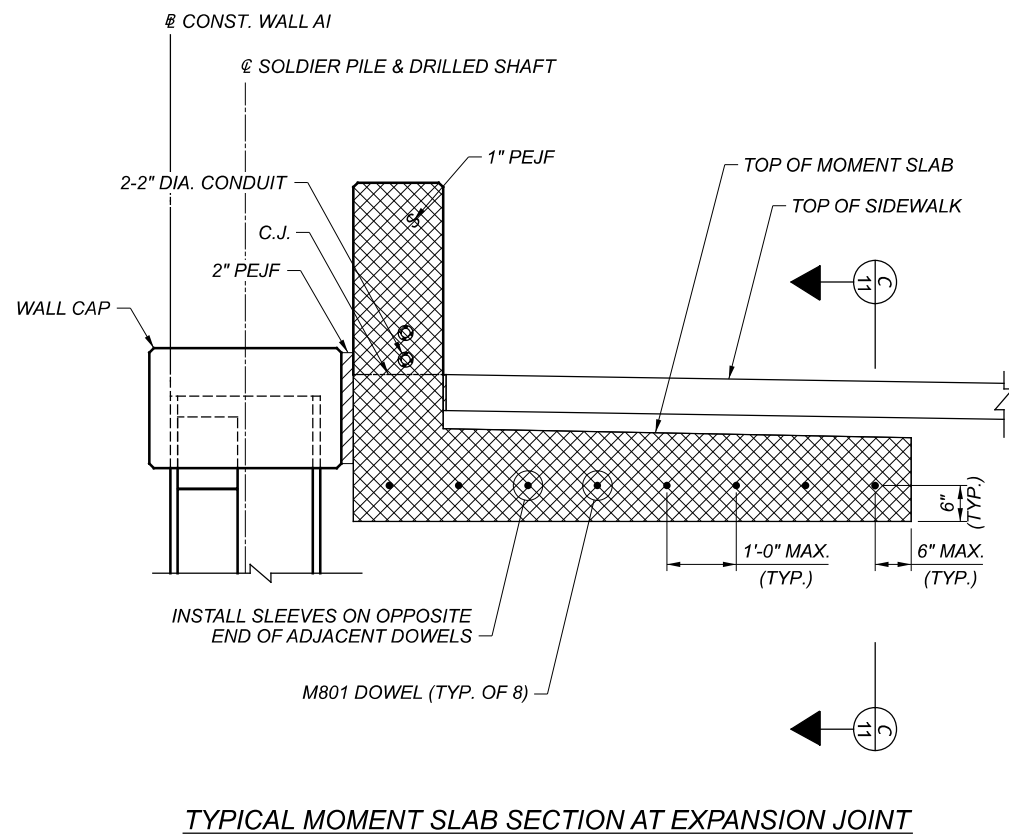
SFN	N/A
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	
REVIEWER	
PROJECT ID	82382
SUBSET	TOTAL
10	12
SHEET	TOTAL
1071	2338



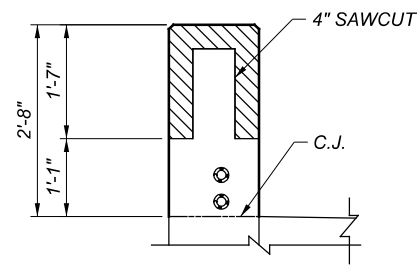
**A SECTION**  
10



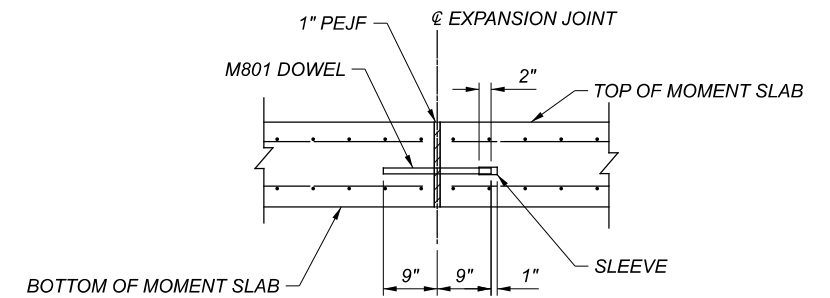
**SECTION AT BRIDGE 14 APPROACH SLAB SLEEPER SLAB**  
(REINFORCEMENT NOT SHOWN)



**TYPICAL MOMENT SLAB SECTION AT EXPANSION JOINT**



**A DETAIL**  
10 (SECTION THROUGH SAWCUT)



**C SECTION**  
11 NOTE

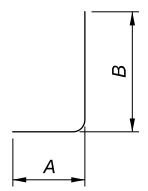
**NOTES:**

1. INCLUDE MOMENT SLAB LEVELING PAD WITH ITEM 511 FOR PAYMENT.
2. SEE SOLDIER PILE AND LAGGING WALL TYPICAL SECTIONS FOR SEALING LIMITS.
3. SEE ODOT STANDARD DRAWING BR-2-15 FOR ADDITIONAL DETAILS.
4. VANDAL PROTECTION FENCE NOT SHOWN. SEE ODOT STANDARD DRAWING VPF-1-90 FOR DETAILS.
5. 1/2" AND 2" PEJF SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE, MISC. MOMENT SLAB AND PARAPET.

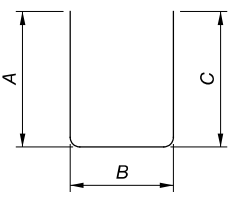
MOMENT SLAB DETAILS  
WALL AI  
ALONG NORTH SIDE OF CARNEGIE AVE.

SFN	N/A
DESIGN AGENCY	
DESIGNER	MKB
CHECKER	YC
REVIEWER	LPC
DATE	7/06/22
PROJECT ID	82382
SUBSET	11
TOTAL	12
SHEET	1072
TOTAL	2338

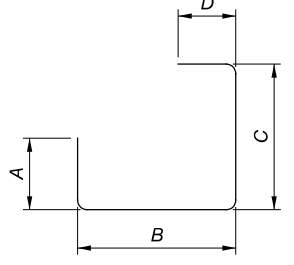
WALL AI MOMENT SLAB AND WALL CAP											
MARK	NUMBER TOTAL	LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
					A	B	C	D	E	R	
		TOTAL:		LBS.							



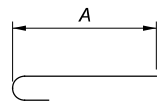
TYPE-1



TYPE-2



TYPE-7



TYPE-16

- NOTES:**
- ALL LISTED BAR DIMENSIONS ARE MEASURED OUT TO OUT UNLESS OTHERWISE NOTED.
  - STANDARD BEND SHALL BE ASSUMED WHEN NO BAR LEG DIMENSION IS LISTED.
  - BAR SIZE AND LOCATION ARE INDICATED BY THE BAR MARK. THE LETTER INDICATES BAR LOCATION, THE FIRST NUMBER OF A THREE DIGIT NUMBER, OR THE FIRST TWO DIGITS OF A FOUR DIGIT NUMBER INDICATES BAR SIZE. THE REMAINING TWO DIGITS INDICATE BAR MARK.
  - ALL REINFORCING STEEL SHALL BE EPOXY COATED.

REINFORCING SCHEDULE  
WALL AI  
ALONG NORTH SIDE OF CARNEGIE AVE.

SFN	—NA—
DESIGN AGENCY	
<b>Michael Baker</b> INTERNATIONAL	
DESIGNER	CHECKER
MKB	YC
REVIEWER	
LPC	7/06/22
PROJECT ID	82382
SUBSET	TOTAL
12	12
SHEET	TOTAL
1073	2338