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DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	KJM
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	TOTAL
2	2696

LEGEND:

EXISTING

- (A) ASPHALT PAVEMENT
- (B) CONCRETE PAVEMENT
- (C) BRICK PAVERS
- (D) AGGREGATE BASE
- (E) SANDSTONE
- (F) BALLAST

PROPOSED

- ① ITEM 442 - 1-1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M
- ② ITEM 441 - 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M
- ③ ITEM 407 - NON-TRACKING TACK COAT
- ④ ITEM 442 - 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)
- ⑤ ITEM 441 - 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
- ⑥ ITEM 452 - 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
- ⑦ ITEM 302 - 9" ASPHALT CONCRETE BASE, PG64-22 (TWO 4.5" LIFTS)
- ⑧ ITEM 304 - 6" AGGREGATE BASE
- ⑨ ITEM 204 - SUBGRADE COMPACTION
- ⑩ ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
- ⑪ ITEM 609 - CURB, TYPE 6
- ⑫ ITEM 609 - CURB, TYPE 2-A
- ⑬ ITEM 609 - CURB, TYPE 4-A
- ⑭ ITEM 609 - CURB, TYPE 4-C
- ⑮ ITEM 622 - PORTABLE BARRIER, UNANCHORED, AS PER PLAN
- ⑯ ITEM 441 - 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (449), PG64-22
- ⑰ ITEM 452 - 8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
- ⑱ ITEM 304 - 8" AGGREGATE BASE
- ⑲ ITEM 608 - 6" CONCRETE WALK, AS PER PLAN
- ⑳ ITEM 606 - GUARDRAIL, TYPE MGS
- ㉑ ITEM 609 - CURB, TYPE 10-B
- ㉒ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C
- ㉓ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN
- ㉔ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN
- ㉕ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D

EXISTING ROAD	EXISTING PAVEMENT THICKNESS			
	ASPHALT	CONCRETE	BRICK	AGGREGATE BASE
CARNEGIE AVENUE	3" ±	12" ±		6" ±
CEDAR AVENUE	3" ±	9" ±		6" ±
CENTRAL AVENUE	3" ±	9" ±		6" ±
COMMUNITY COLLEGE AVENUE	3.25" ±	9" ±		4" ±
E. 9TH STREET	3" ±	9" ±		6" ±
E. 14TH STREET	3" ±	8" ±	4" ±	4" ±
E. 18TH STREET	3" ±	8" ±		
E. 19TH STREET	3" ±	9" ±		
E. 22ND STREET	3" ±	9" ±		2" ±
RAMP B5		9" ±		6" ±
RAMP E-10	3" ±	9" ±		6" ±
RAMP E-11	3" ±	9" ±		6" ±
RAMP E-13	3" ±	9" ±		6" ±
RAMP E-17	3" ±	9" ±		6" ±
I-77	5" ±	9" ±		
I-90 (EAST LIMITS)		10" ±		6" ±
I-90 (WEST LIMITS)		10" ±		6" ±

- ⑳ ITEM 609 - CONCRETE MEDIAN
- ㉑ ITEM 659 - SEEDING AND MULCHING
- ㉒ ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")
- ㉓ ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
- ㉔ ITEM 202 - REMOVAL, MISC.: BURIED TRACK
- ㉕ ITEM 305 - 9" CONCRETE BASE, CLASS QC 1P, AS PER PLAN
- ㉖ ITEM 441 - 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), AS PER PLAN, PG64-22
- ㉗ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE B1
- ㉘ ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1
- ㉙ ITEM 452 - 4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P
- ㉚ ITEM 203 - EMBANKMENT, AS PER PLAN
- ㉛ ITEM 451 - 12" REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN
- ㉜ ITEM 608 - WALKWAY MISC.: PAVERS OVER CONCRETE (SEE LANDSCAPING PLANS FOR TYPE)
- ㉝ ITEM 203 - ROADWAY, MISC.: REINFORCED TURF
- ㉞ ITEM SPECIAL - LOW DENSITY CELLULAR CONCRETE FILL, CLASS II
- ㉟ ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3.25")
- ㊱ ITEM 204 - EXCAVATION OF SUBGRADE
- ㊲ ITEM 204 - GRANULAR MATERIAL, TYPE B
- ㊳ ITEM 204 - GEOTEXTILE FABRIC
- ㊴ ITEM 206 - CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP
- ㊵ ITEM 441 - 1-1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)
- ㊶ ITEM 441 - 1-3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), (DRIVEWAYS)
- ㊷ ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T-17"), AS PER PLAN
- ㊸ ITEM 204 - PROOF ROLLING
- ㊹ ITEM 301 - 6" ASPHALT CONCRETE BASE, PG64-22, (449)

TYPICAL SECTION LEGEND

DESIGN AGENCY	
Michael Baker INTERNATIONAL	
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REVIEWER	KGJ 05/22/24
PROJECT ID	82382
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16	2696

DRAINAGE (CONT.)

- ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, AS PER PLAN**
- ITEM 605 - 6" DEEP PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, AS PER PLAN**

WHEN PERFORMING EXCAVATIONS BELOW THE WATER TABLE, PROVIDE UNDERDRAINS IN THE CUT SLOPES TO DRAIN GROUNDWATER THAT MAY BE ENCOUNTERED. INSTALL THE UNDERDRAIN IN A TRENCH AT THE HEAD OF THE PROPOSED EXCAVATION.

PIPE UNDERDRAIN SHALL BE PERFORATED CORRUGATED PLASTIC PIPE PER C&MS 707.31. PIPE UNDERDRAIN WITH PREFABRICATED FABRIC SLEEVES MAY BE USED WITH THE APPROVAL OF THE ENGINEER.

PLACE OBSERVATION WELL AND CLEANOUT AT GRADE BREAKS AND AT UNDERDRAIN OUTLET JUNCTIONS AS APPROVED AND DIRECTED BY THE ENGINEER. CONNECT THE OBSERVATION WELL AND CLEANOUT TO THE PERFORATED UNDERDRAIN WITH THE APPROPRIATE MANUFACTURED CONNECTIONS. EXTEND THE OBSERVATION WELL AND CLEANOUT 4 INCHES ABOVE THE SURFACE ELEVATION. CAP THE OBSERVATION WELL AND CLEANOUT WITH A THREADED SCREW CAP. CAP THE ENDS OF PERFORATED UNDERDRAIN PIPES NOT TERMINATING IN AN OBSERVATION WELL AND CLEANOUT OR CONNECTED TO OTHER CONDUITS.

PIPE UNDERDRAINS IN TRENCHES 50 INCHES OR SHALLOWER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN, AS PER PLAN. PIPE UNDERDRAINS IN TRENCHES GREATER THAN 50 INCHES AND UP TO 96 INCHES IN DEPTH SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 605 - 6" DEEP PIPE UNDERDRAIN, AS PER PLAN. THESE PRICES SHALL INCLUDE THE COST FOR MATERIALS, LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO INSTALL THE UNDERDRAINS.

GROUNDWATER MANAGEMENT

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF ALL EXCAVATED SLOPES. PERFORM ALL EXCAVATIONS IN ACCORDANCE WITH OSHA REQUIREMENTS.

AS PART OF THE CONTRACTOR'S MEANS AND METHODS, CONTRACTOR SHALL STABILIZE THE EXISTING SUBGRADE, DIRECT SURFACE RUNOFF AWAY FROM EXCAVATION, AND DEWATER EXCAVATIONS TO THE EXTENT NECESSARY FOR CONSTRUCTION. GROUNDWATER AND STORMWATER RUNOFF SHALL ALSO BE MANAGED BY THE CONTRACTOR, INCLUDING BUT NOT LIMITED TO THE SIGNIFICANT EXCAVATIONS FOR THE LOWERING OF I.R. 90 BETWEEN E. 22ND STREET AND CARNEGIE AVENUE AND CONSTRUCTION OF BRIDGE 13, BRIDGE 14, AND ADJACENT RETAINING WALLS.

GROUNDWATER LEVELS WERE RECORDED FOR 18 MONTHS (BETWEEN MARCH 2021 AND AUGUST 2022) USING VIBRATING WIRE PIEZOMETERS AT SIX LOCATIONS IN THE PROJECT AREA ALONG I.R. 90 WHERE EXCAVATIONS BELOW THE OBSERVED GROUNDWATER LEVEL ARE PROPOSED. SEE DATA IN TABLE TO THE RIGHT.

ADDITIONAL DETAILS OF THE GROUNDWATER LEVEL OBSERVATIONS IN THE PROJECT AREA CAN BE FOUND IN SUBGRADE EXPLORATION AND STRUCTURE FOUNDATION EXPLORATION REPORTS AVAILABLE FROM THE DISTRICT 12 PROJECT ENGINEER.

GROUNDWATER LEVELS FLUCTUATE SEASONALLY AS A FUNCTION OF PRECIPITATION AND OTHER HYDROLOGICAL FACTORS. THEREFORE, THERE MAY BE CONSIDERABLE CHANGE IN THE WATER TABLE OR THE PRESENCE OF WATER WHERE NOT PREVIOUSLY ENCOUNTERED.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE IN MANAGING GROUNDWATER INCLUDING PERCHED WATER AND FOR USE IN INTERCEPTING GROUNDWATER SEEPAGE AT CUT SLOPES AS DIRECTED BY THE ENGINEER:

- ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, AS PER PLAN 3,700 FT**
- ITEM 605 - 6" DEEP PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, AS PER PLAN 5,200 FT**

4

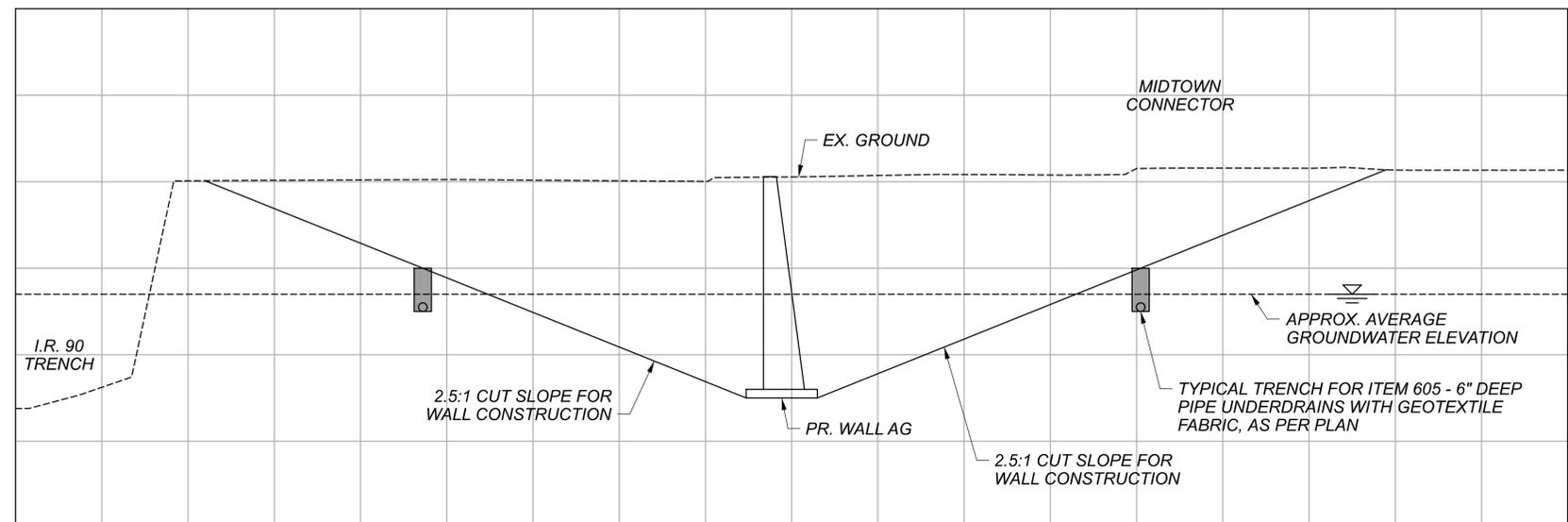
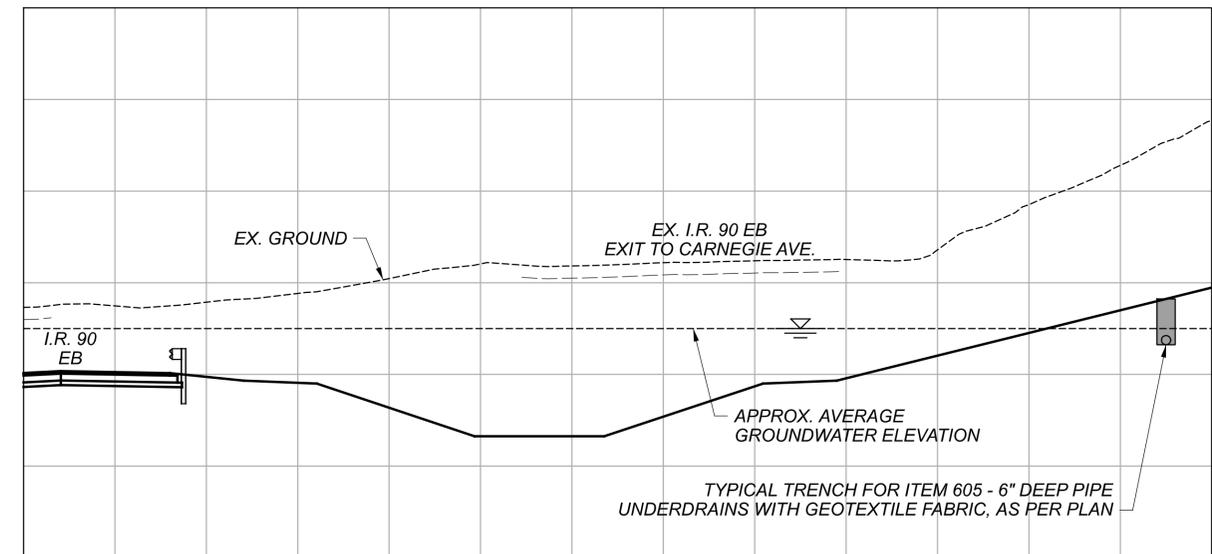
UNRECORDED SEWER CONNECTION

FURNISH A CONTINUANCE FOR ALL UNRECORDED SEWER CONNECTIONS DISTURBED BY THE WORK. FURNISH A CONTINUANCE BY CONNECTING A CONDUIT INTO A DRAINAGE STRUCTURE. THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING CONNECTION WILL BE DETERMINED BY THE ENGINEER. ALL SUCH CONTINUANCE REQUIRES RIGHT OF WAY USE PERMIT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE. PAYMENT FOR COMPLETED AND ACCEPTED QUANTITIES SHALL BE MADE AT THE CONTRACT UNIT PRICE BID:

- ITEM 202 - PIPE REMOVED, 24" DIAMETER AND UNDER 200 FT**
- ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN 2, 706.08 & 706.12 400 FT**
- ITEM 611 - 6" CONDUIT, TYPE E 400 FT**

PIEZOMETER ID	ADJACENT BORING ID	GROUNDWATER READINGS (FT)			SHEET REFERENCES	
		MAXIMUM ELEVATION	MINIMUM ELEVATION	AVERAGE ELEVATION	BORING LOGS	BORING PLANS
P-001	B-085-3-20	648.3	646.7	647.6	2528	2440, 2469, 2483
P-002	B-085-4-20	647.1	645.5	646.4	2529	2440, 2469, 2470, 2483, 2484
P-003	B-085-1-20	646.2	644.6	645.6	2523	2440, 2469, 2470, 2473, 2483
P-004	B-086-1-20	644.7	642.8	643.7	2530, 2531, 2532	2408, 2409, 2416, 2417, 2469, 2470, 2473, 2483
P-005	B-169-4-20	641.2	639.6	640.6	2648, 2649	2410, 2418, 2474, 2475, 2481, 2485, 2486
P-006	B-170-3-20	645.8	644.0	645.1	2663, 2664, 2665	2410, 2411, 2463, 2464, 2474, 2475, 2487, 2488



DESIGN AGENCY

Michael Baker INTERNATIONAL

DESIGNER
JTH

REVIEWER
KGJ 05/10/24

PROJECT ID
82382

SHEET TOTAL
79 2696

DRAINAGE (CONT.)

ITEM SPECIAL - MISCELLANEOUS METAL
 EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL - MISCELLANEOUS METAL 10,000 LB

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS AND CARRIED TO THE GENERAL SUMMARY.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

MANUFACTURED WATER QUALITY STRUCTURE

THIS PLAN UTILIZES MANUFACTURED WATER QUALITY STRUCTURES FOR WATER QUALITY TREATMENT. AREAS HAVE BEEN SHOWN IN THE PLANS FOR PLACEMENT OF AN OFF-LINE SYSTEM. PAYMENT FOR THESE DEVICES SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 895, MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4.

EXTENDED DETENTION BASIN

THIS PLAN UTILIZES EXTENDED DETENTION BASIN(S) FOR FLOW RESTRICTION. DETENTION BASINS MAY BE USED AS SEDIMENT CONTROL DEVICES DURING CONSTRUCTION. FOLLOWING STABILIZATION OF THE TRIBUTARY AREA, FINAL GRADING OF THE DETENTION BASIN MUST MATCH THE PLANS. THE DETENTION BASIN OUTLET STRUCTURE FOR CONSTRUCTION SEDIMENT CONTROL MUST BE REMOVED AND THE OUTLET STRUCTURE MUST BE MADE TO MATCH THE DESIGN SHOWN IN THE PLANS.

ITEM SPECIAL - GAS VALVE BOX ADJUSTED TO GRADE

ADJUST GAS OR OTHER UTILITY VALVES, INCLUDING MONITORING WELLS, TO GRADE. COORDINATE WITH UTILITY OWNER PRIOR TO PERFORMING WORK. REPLACE DAMAGED CASTINGS IN KIND.

THIS ITEM IS PAID ON A UNIT PRICE BASIS AND INCLUDES ALL LABOR AND MATERIALS TO PERFORM THE WORK AS DESCRIBED.

SURFACE DRAINAGE CONTINGENCY

EVERY EFFORT HAS BEEN MADE TO PROVIDE FOR ADEQUATE CURB INLETS AND PIPE TO PROPERLY ACCOUNT FOR THE SURFACE DRAINAGE. IN THE EVENT THAT ISOLATED LOW AREAS DEVELOP DURING CONSTRUCTION OF THE PROJECT, THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER:

- ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN 2, 706.08 & 706.12 2,000 FT**
- ITEM 611 - 15" CONDUIT, TYPE B, AS PER PLAN 2, 706.08 & 706.12 200 FT**
- ITEM 611 - CATCH BASIN, NO. 2-2B, AS PER PLAN 4 EACH**
- ITEM 611 - CATCH BASIN, NO. 3A, AS PER PLAN 4 EACH**
- ITEM 611 - MANHOLE, NO. 3, AS PER PLAN 4 EACH**

PAVEMENT

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1. CONSTRUCT LONGITUDINAL JOINTS PER CMS 401.08(D).

MEDIAN AND/OR CURBING ON APPROACH SLABS

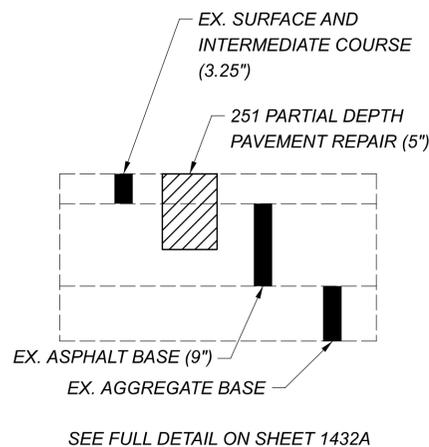
WITHIN THE LIMITS OF THE APPROACH SLAB, TRANSITION THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442)

THE PLANS CALL FOR RESURFACING THE I.R. 90 PAVEMENT BETWEEN THE INNERBELT BRIDGES AND THE ONTARIO STREET BRIDGES AND BETWEEN THE ONTARIO STREET BRIDGES AND THE EAST 9TH STREET BRIDGES. QUANTITIES HAVE BEEN PROVIDED IN THE PAVEMENT SUBSUMMARY FOR THIS WORK.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER TO REPAIR ANY PAVEMENT DEFICIENCIES IN THESE AREAS. SEE DETAIL BELOW FOR A TYPICAL PAVEMENT BUILDUP. THE QUANTITY IS BASED ON AN ASSUMED DEPTH OF FIVE (5) INCHES. FINAL DEPTH IS TO BE DETERMINED BY THE ENGINEER.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442) 180 CY



SEE FULL DETAIL ON SHEET 1432A

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN A

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN B

THIS ITEM SHALL CONSIST OF REPLACING EXISTING PAVEMENT PER ITEM 255 AND THE NOTES BELOW AND DETAILS ON SHEET 1432A.

EXISTING CONCRETE PAVEMENT THICKNESS MAY VARY FROM THAT SHOWN ON THE TYPICAL SECTIONS BY PLUS TWO INCHES OR MINUS ONE INCH. NO ADJUSTMENT IN PAYMENT FOR THIS ITEM SHALL BE MADE PROVIDING THAT THE AVERAGE PAVEMENT THICKNESS IS WITHIN ONE INCH OF THE THICKNESS SHOWN ON THE TYPICAL SECTIONS. ADDITIONAL COMPENSATION SHALL BE MADE BY CHANGE ORDER FOR THE MATERIAL COST OF CONCRETE ONLY WHEN THE AVERAGE THICKNESS EXCEEDS THE ONE INCH MAXIMUM TOLERANCE ABOVE. THE VOLUME OF CONCRETE PAID FOR SHALL BE BASED UPON THE AMOUNT OF CONCRETE ADDITIONAL ABOVE THE ONE INCH TOLERANCE LIMIT.

THE CONTRACTOR SHALL SAW THROUGH THE REMAINING ASPHALT OVERLAY AFTER THE PAVEMENT PLANING OPERATION. THE CONTRACTOR SHALL REMOVE THE EXISTING OVERLAY AND RIGID PAVEMENT WITH CARE SO AS TO NOT DISTURB THE ADJACENT REMAINING CONCRETE PAVEMENT AND OVERLAY.

IF, AFTER REMOVAL OF THE RIGID PAVEMENT THE ENGINEER DETERMINES THAT THE SUBBASE OR SUBGRADE HAS FAILED OR IS PUMPING, THE ENGINEER WILL DIRECT THE CONTRACTOR TO EXCAVATE THE UNSUITABLE MATERIAL AND REPLACE IT WITH COMPACTED 304 AGGREGATE. QUANTITIES OF ITEM 203 - EXCAVATION AND ITEM 304 - AGGREGATE BASE HAVE BEEN PROVIDED TO REPAIR SAID FAILED SUBBASE OR SUBGRADE AREAS.

PAVEMENT REPAIR LESS THAN OR EQUAL TO TEN (10) FEET IN LENGTH SHALL BE PAID FOR UNDER "FULL DEPTH RIGID PAVEMENT REMOVAL AND REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN, A". PAVEMENT REPAIRS GREATER THAN TEN (10) FEET IN LENGTH SHALL BE PAID FOR UNDER "FULL DEPTH RIGID PAVEMENT REMOVAL AND REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN B".

ITEM	UNIT	DESCRIPTION
255	SY	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN A
255	SY	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN B
255	FT	FULL DEPTH PAVEMENT SAWING
203	CY	EXCAVATION
304	CY	AGGREGATE BASE

FOR ESTIMATED QUANTITIES, SEE SHEET 167

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN C

ALL REQUIREMENTS OF C&MS 255 SHALL APPLY EXCEPT THE DOWEL BARS, DEFORMED BARS, AND TIEBARS SHALL BE INSTALLED PER THE DETAILS SHOWN ON CITY OF CLEVELAND SCD CONC 1.

IN ADDITION TO THE REQUIREMENTS ABOVE, APPLY THE OTHER REQUIREMENTS FOR ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN A AND B.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN

THIS ITEM IS INTENDED FOR USE AS DIRECTED BY THE ENGINEER FOR PARTIAL DEPTH PAVEMENT REPAIRS TO CITY STREETS. QUANTITIES WERE DEVELOPED BASED ON AN ASSUMED DEPTH OF THREE (3) INCHES. FINAL DEPTH IS TO BE DETERMINED BY THE ENGINEER.

PAVEMENT REPAIRS SHALL BE COMPLETED USING THE FOLLOWING ITEMS:
 ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M
 ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

**ITEM 305 - 9" CONCRETE BASE, CLASS QC 1P, AS PER PLAN
 ITEM 451 - 12" REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN
 ITEM 452 - 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN**

ALL REQUIREMENTS OF C&MS 305, 451, AND 452 SHALL APPLY EXCEPT THE DOWEL BARS, DEFORMED BARS, AND TIEBARS SHALL BE INSTALLED PER THE DETAILS SHOWN ON CITY OF CLEVELAND SCD CONC 1.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL CONSIST OF A BLEND OF 60% MIN. AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE.

ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), AS PER PLAN, PG64-22

PAVING BETWEEN THE MEDIAN BARRIERS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN FROM THE HIGH SIDE BARRIER TO LOW SIDE BARRIER.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO A BLEND OF AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO AND LIMESTONE. THE CONTRACTOR SHALL USE A MINIMUM 60% OF ACBFS OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE. AT LEAST 50% OF FINE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO ACBFS OR TRAP ROCK FROM ONTARIO.

TABLE 442.02-2 APPLIES EXCEPT NO. 4 SIEVE REQUIREMENTS ARE 52 TO 60 TOTAL PERCENT PASSING. FOR THE NO. 4 SIEVE DO NOT EXCEED 63 IN PRODUCTION.

WHEN ACBFS IS USED FOR A FRACTION OF THE COARSE AGGREGATE, PROVIDE A TOTAL ASPHALT BINDER CONTENT GREATER THAN OR EQUAL TO 6.2 PERCENT. IF ACBFS MAKES UP 100% OF THE COARSE AGGREGATE, APPLY THE BINDER CONTENT REQUIREMENTS OF C&MS 442.

ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE B

THIS ITEM SHALL MEET ALL THE SPECIFICATIONS OF ITEM 451. SEE SCD AS-2-15 AND SCD BP-2.4 FOR DETAILS.

CITY STREET CONTINGENCY

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDE FOR USED AS DIRECTED BY THE ENGINEER FOR ANY UNANTICIPATED WORK ALONG CITY STREETS:

ITEM 452 - 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN	775 SY
ITEM 608 - 6" CONCRETE WALK, AS PER PLAN	4,500 SF
ITEM 608 - CURB RAMP, AS PER PLAN	475 SF
ITEM 609 - CURB, TYPE 6	750 FT

DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	JTH
REVIEWER	KGJ 05/10/24
PROJECT ID	82382
SHEET	TOTAL
80	2696

4

MAINTENANCE OF TRAFFIC GENERAL NOTES (CONTINUED)
LANE VALUE CONTRACT WITH PRORATES

THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE FOR EACH UNIT OF TIME THE DESCRIBED CRITICAL LANE/RAMP IS RESTRICTED FROM FULL USE BY THE TRAVELING PUBLIC WITHIN THE RESTRICTED TIME PERIOD. THE LANE VALUE CONTRACT TABLE IS LOCATED BELOW. THE DISINCENTIVES WILL BE ASSESSED FOR ALL RESTRICTIONS OF THE CRITICAL WORK.

CRITICAL WORK IS SHOWN IN THE CRITICAL WORK TABLE.

CRITICAL WORK IS DEFINED AS HAVING THE DESIGNATED SECTIONS OPEN TO UNRESTRICTED TRAFFIC AS SHOWN IN THE TABLE, OR THE ENTIRE PROJECT IF NOT OTHERWISE LISTED.

UNRESTRICTED TRAFFIC IS DEFINED AS ALL TRAFFIC LANES BEING AVAILABLE FOR USE WITH SPECIFIED STRIPING AND SAFETY FEATURES IN PLACE.

DISINCENTIVES WITHIN THE FIRST HOUR AFTER THE LANE VALUE CONTRACT TABLE'S RESTRICTED TIME PERIOD WILL BE PRORATED. THOSE PRORATES WILL BE AS FOLLOWS:

MINUTES AFTER RESTRICTED TIME PERIOD, T*	PRORATE APPLIED TO MAXIMUM DISINCENTIVE, P*
0 - 30	0.25
31-60	0.75
61+	1.00

*THE MAXIMUM DISINCENTIVE IS DETERMINED BY THE LANE VALUE CONTRACT TABLE LOCATED IN THE PLAN GENERAL NOTES. ONLY ONE PRORATE WILL BE APPLIED PER EVENT. FOR ANY CONTRACTOR RESTRICTIONS PRIOR TO THE LANE VALUE CONTRACT TABLE'S RESTRICTED TIME PERIOD, THE CONTRACTOR WILL BE ASSESSED THE MAXIMUM DISINCENTIVES. FOR A SINGLE EVENT, THE TOTAL DISINCENTIVE WILL BE CALCULATED AS SUCH:

$$TD = P \times T \times LV \times L$$

WHERE:

TD = TOTAL DISINCENTIVE, \$
 T = TIME EXCEEDING RESTRICTED TIME PERIOD, MIN
 LV = LANE VALUE MAXIMUM DISINCENTIVE, \$/MIN/LANE
 L = NUMBER OF LANES RESTRICTED, LANE

DISINCENTIVES WILL NOT BE ASSESSED FOR DELAYS OUTSIDE THE CONTRACTOR'S CONTROL OR RESPONSIBILITY, SUCH AS PRIVATE MOTORIST ACCIDENTS, EQUIPMENT BREAKDOWNS, CIVIL DISTURBANCES, OR ENGINEER-ORDERED REVISIONS TO THE WORK. THE DEPARTMENT RESERVES THE RIGHT TO ASSESS THE MAXIMUM DISINCENTIVE WITHOUT PRORATION IF THERE HAVE BEEN THREE OR MORE EVENTS ON THE PROJECT INCLUDING, BUT NOT LIMITED TO, THREE OR MORE EQUIPMENT BREAKDOWNS OR OTHER INCIDENTS WHICH THE CONTRACTOR'S INACTIONS/ACTIONS CONTRIBUTED TO THE EVENT.

PRIOR TO ASSESSING ANY SINGLE DISINCENTIVE AMOUNT EXCEEDING \$50,000, THE RESTRICTION EVENT AND THE PROPOSED DISINCENTIVE WILL BE EVALUATED BY THE MAINTENANCE OF TRAFFIC EXECUTIVE COMMITTEE (MOTEC) TO CONFIRM APPLICABILITY, CALCULATION, AND JUSTIFICATION OF THE ASSESSMENT.

LANE VALUE CONTRACT TABLE

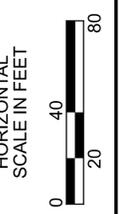
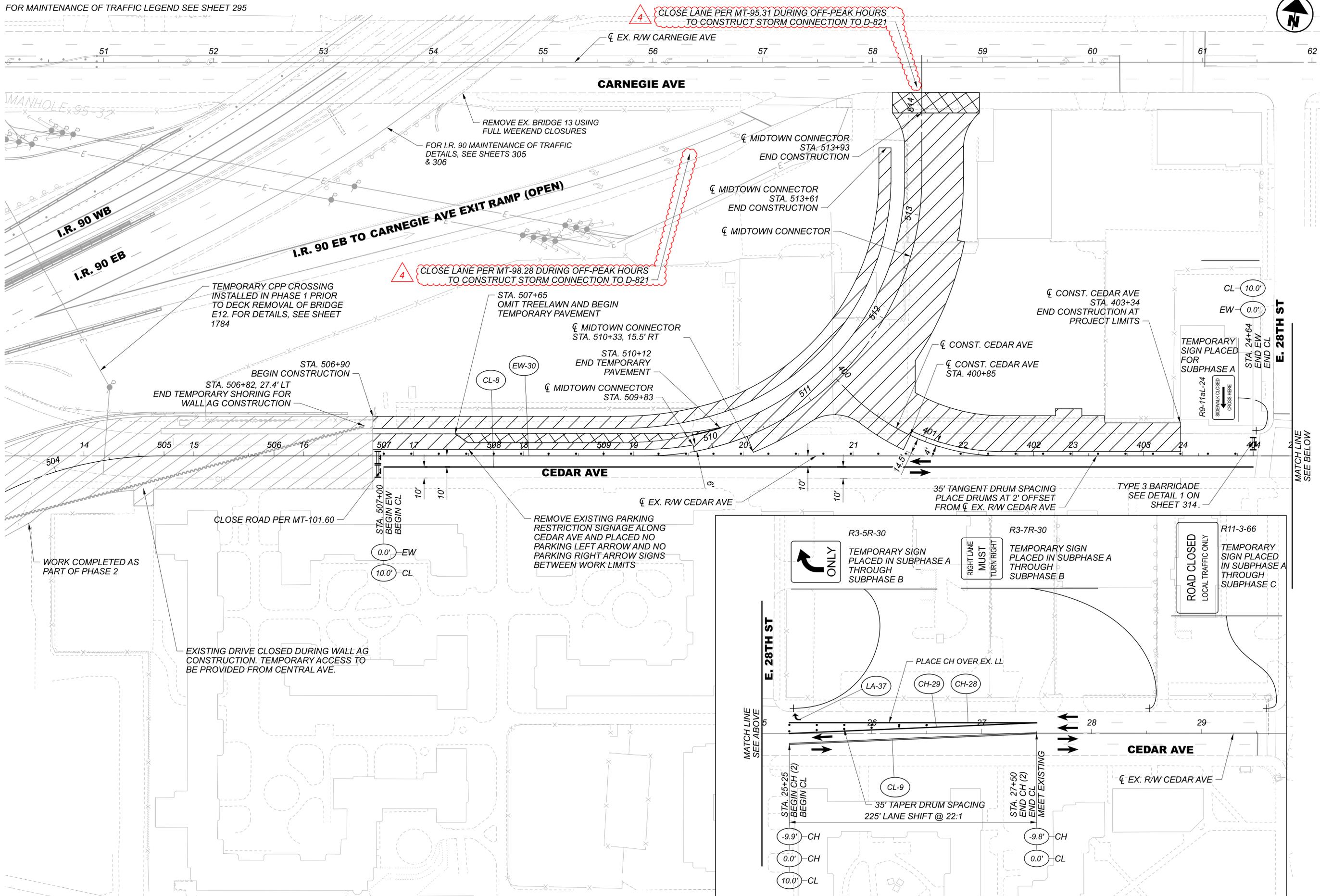
LOCATION	DIRECTION	LANES	1 LANE CLOSED	2 LANES CLOSED	DISINCENTIVE AMOUNTS PER MINUTE PER LANE
I.R. 90					
I.R. 77 TO INNERBELT CURVE	EB/WB	4	8:00 AM MON TO 2:00 PM MON	7:00 PM MON TO 6:00 AM TUE	\$365
			5:30 PM MON TO 7:00 AM TUE		
			8:00 AM TUE TO 2:00 PM TUE	7:00 PM TUE TO 6:00 AM WED	
			5:30 PM TUE TO 7:00 AM WED		
			8:00 AM WED TO 2:00 PM WED	7:30 PM WED TO 6:00 AM THU	
			5:30 PM WED TO 7:00 AM THU		
			8:00 AM THU TO 2:00 PM THU	7:30 PM THU TO 6:00 AM FRI	
			5:30 PM THU TO 7:00 AM FRI		
			8:00 AM FRI TO 2:00 PM FRI	7:30 PM SAT TO 10:30 AM SUN	
			5:30 PM FRI TO 7:00 AM MON		
I.R. 77					
SR-422 UNDERPASS TO I.R. 90 EB	NB	2	10:00 AM MON TO 2:30 PM MON	NA	\$295
			6:00 PM MON TO 6:00 AM TUE		
			10:00 AM TUE TO 2:30 PM TUE		
			6:00 PM TUE TO 6:00 AM WED		
			10:00 AM WED TO 2:30 PM WED		
			6:00 PM WED TO 6:00 AM THU		
			10:00 AM THU TO 2:30 PM THU		
			6:00 PM THU TO 6:00 AM FRI		
			10:00 AM FRI TO 2:30 PM FRI		
			6:00 PM FRI TO 3:30 PM SAT		
			6:00 PM SAT TO 6:00 AM MON		
			8:30 AM MON TO 1:00 PM MON		
			6:30 PM MON TO 7:00 AM TUE		
			8:30 AM TUE TO 1:00 PM TUE		
6:30 PM TUE TO 7:00 AM WED					
8:30 AM WED TO 1:00 PM WED					
6:30 PM WED TO 7:00 AM THU					
8:30 AM THU TO 1:00 PM THU					
6:30 PM THU TO 7:00 AM FRI					
8:30 AM FRI TO 1:00 PM FRI					
6:30 PM FRI TO 7:00 AM MON					
I.R. 90 WB TO CROTON AVE UNDERPASS	SB	2	8:30 AM MON TO 1:00 PM MON	NA	\$295
			6:30 PM MON TO 7:00 AM TUE		
			8:30 AM TUE TO 1:00 PM TUE		
			6:30 PM TUE TO 7:00 AM WED		
			8:30 AM WED TO 1:00 PM WED		
			6:30 PM WED TO 7:00 AM THU		
			8:30 AM THU TO 1:00 PM THU		
			6:30 PM THU TO 7:00 AM FRI		
			8:30 AM FRI TO 1:00 PM FRI		
			6:30 PM FRI TO 7:00 AM MON		

CRITICAL WORK TABLE

DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	PHASE	RESTRICTED TIME PERIOD	TIME UNIT	AADT	DISINCENTIVE \$ PER TIME UNIT
I.R. 90 EB & WB (CONCURRENTLY) (BETWEEN E. 22ND ST. AND CARNEGIE AVE.)	2, 4, & 7	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	138,000	\$25,100.00
I.R. 90 WB (BETWEEN E. 22ND ST. AND CARNEGIE AVE.)	1, 2, & 7	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	71,760	\$13,052.00
I.R. 90 EB (BETWEEN E. 22ND ST. AND CARNEGIE AVE.)	1, 2, & 7	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	66,240	\$12,048.00
E. 14TH ST. (BETWEEN COMMUNITY COLLEGE AVE. AND CARNEGIE AVE.)	1	90 DAYS	PER HOUR	17,200	\$625.00
E. 14TH ST. (BETWEEN ORANGE AVE. AND COMMUNITY COLLEGE AVE.)	1	150 DAYS	PER HOUR	17,200	\$625.00
COMMUNITY COLLEGE AVE. (BETWEEN E. 14TH ST. AND E. 22ND ST.)	1	90 DAYS	PER HOUR	17,200	\$625.00
I.R. 77 NB TO E. 14TH ST. / E. 22ND ST. EXIT RAMP (EXIT RAMP 162B)	1	150 DAYS	PER HOUR	5,215	\$315.00
E. 22ND ST. (BETWEEN CARNEGIE AVE. AND CENTRAL AVE.)	1 & 2	365 DAYS	PER HOUR	13,400	\$732.00
CEDAR AVE. (BETWEEN E. 28TH ST. AND E. 22ND ST.)	1 & 2	365 DAYS	PER HOUR	8,300	\$732.00
I.R. 90 EB TO E. 9TH ST. EXIT RAMP (EXIT RAMP 172A)	2	120 DAYS	PER HOUR	10,357	\$188.00
CARNEGIE AVE. (BETWEEN E. 22ND ST. AND E. 28TH ST.)	2 - 8	1,200 DAYS	PER HOUR	25,700	\$535.00
PROSPECT AVE. TO I.R. 90 EB RAMP	3 - 8	1,200 DAYS	PER HOUR	3,392	\$68.00
PROSPECT AVE. TO I.R. 90 WB ENTRANCE RAMP	3 - 8	1,200 DAYS	PER HOUR	7,308	\$291.00
E. 21ST ST. TO I.R. 77 SB ENTRANCE RAMP	3 & 4	420 DAYS	PER HOUR	5,600	\$606.00
I.R. 90 EB (BETWEEN E. 9TH ST. AND E. 14TH ST.)	1, 2, & 7	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	66,240	\$1,500.00
I.R. 90 WB (BETWEEN E. 9TH ST. AND E. 14TH ST.)	1, 2, & 7	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	71,760	\$3,251.00
E. 14TH ST. (BETWEEN COMMUNITY COLLEGE AVE. AND CARNEGIE AVE.)	4, 5, 7, & 8	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	17,200	\$625.00
I.R. 77 NB TO E. 22ND ST. EXIT RAMP (EXIT RAMP 162B)	6	30 DAYS	PER HOUR	3,700	\$57.00
I.R. 90 EB TO E. 9TH ST. NB EXIT RAMP (EXIT RAMP 172A)	8	30 DAYS	PER HOUR	7,600	\$156.00

MAINTENANCE OF TRAFFIC NOTES

FOR MAINTENANCE OF TRAFFIC LEGEND SEE SHEET 295



MAINTENANCE OF TRAFFIC - PHASE 2 - CEDAR SUBPHASE A
CEDAR AVE - BEGIN TO END

DESIGN AGENCY

Michael Baker INTERNATIONAL

DESIGNER
CRK

REVIEWER
GSH 05/22/24

PROJECT ID
82382

SHEET TOTAL
310 2696

SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
427	435	470	471	489	1399							01/IMS /04	02/IMS /10	03/IMS /08								
LS												LS				201	11000	LS		CLEARING AND GRUBBING		
				133744								133744				202	23000	133744	SY	PAVEMENT REMOVED		
				101667								101667				202	30000	101667	SF	WALK REMOVED		
				509								509				202	30600	509	SY	CONCRETE MEDIAN REMOVED		
1510				4595								6105				202	30700	6105	FT	CONCRETE BARRIER REMOVED		
				714								714				202	30800	714	SY	TRAFFIC ISLAND REMOVED		
				23863								23863				202	32000	423863	FT	CURB REMOVED		
	200	4		7065								7265				202	35100	7265	FT	PIPE REMOVED, 24" DIAMETER AND UNDER		
				609								609				202	35200	609	FT	PIPE REMOVED, OVER 24" DIAMETER		
				6379								6379				202	38000	6379	FT	GUARDRAIL REMOVED		
				1								1				202	42000	1	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A		
				2								2				202	42010	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE E		
				7								7				202	42040	7	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T		
				2								2				202	42050	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE B		
				6								6				202	47000	6	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED		
				1								1				202	47001	1	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED, AS PER PLAN	74	
				2								2				202	47800	2	EACH	IMPACT ATTENUATOR REMOVED		
				15								15				202	58000	15	EACH	MANHOLE REMOVED	78	
				63								63				202	58100	63	EACH	CATCH BASIN REMOVED	78	
				21								21				202	58200	21	EACH	INLET REMOVED	78	
				11								11				202	58400	11	EACH	INLET ABANDONED	78	
				21								21				202	58500	21	EACH	CATCH BASIN ABANDONED	78	
				9								9				202	58700	9	EACH	MANHOLE ABANDONED	78	
				2317								2317				SPECIAL	202E70000	2317	FT	FILL AND PLUG EXISTING CONDUIT (12" AND UNDER)	78	
				1186								1186				SPECIAL	202E70000	1186	FT	FILL AND PLUG EXISTING CONDUIT (15")	78	
				510								510				SPECIAL	202E70000	510	FT	FILL AND PLUG EXISTING CONDUIT (18")	78	
				51								51				SPECIAL	202E70000	51	FT	FILL AND PLUG EXISTING CONDUIT (21")	78	
				255								255				SPECIAL	202E70000	255	FT	FILL AND PLUG EXISTING CONDUIT (24")	78	
				334								334				SPECIAL	202E70000	334	FT	FILL AND PLUG EXISTING CONDUIT (27")	78	
				48								48				SPECIAL	202E70000	48	FT	FILL AND PLUG EXISTING CONDUIT (30")	78	
				361								361				SPECIAL	202E70000	361	FT	FILL AND PLUG EXISTING CONDUIT (36")	78	
				475								475				SPECIAL	202E70000	475	FT	FILL AND PLUG EXISTING CONDUIT (66")	78	
				349								349				SPECIAL	202E70000	349	FT	FILL AND PLUG EXISTING CONDUIT (NO. 8 BR)	78	
				10915								10915				202	75000	10915	FT	FENCE REMOVED		
				13								13				202	75250	13	EACH	GATE REMOVED		
				2								2				202	98100	2	EACH	REMOVAL MISC.: BILLBOARD	74	
				26								26				202	98100	26	EACH	REMOVAL MISC.: BOLLARD	74	
				2								2				202	98100	2	EACH	REMOVAL MISC.: CONCRETE STRUCTURES	74	
				1								1				202	98100	1	EACH	REMOVAL MISC.: PAY BOX	74	
				1								1				202	98100	1	EACH	REMOVAL MISC.: UTILITY POLE	74	
1000												1000				202	98200	1000	FT	REMOVAL MISC.: BURIED TRACK	74	
				266								266				202	98200	266	FT	REMOVAL MISC.: DELINEATOR CURB	74	
				264								264				202	98200	264	FT	REMOVAL MISC.: PORTABLE BARRIER	74	
				345447								345447				203	10000	345447	CY	EXCAVATION		
				34789								34789				203	10001	34789	CY	EXCAVATION, AS PER PLAN	75	
				86656								86656				203	20000	86656	CY	EMBANKMENT		
				27322								27322				203	20001	27322	CY	EMBANKMENT, AS PER PLAN	75	
				99839								99839				203	98000	99839	CY	ROADWAY, MISC.: EPS GEOFOAM FILL	75	
				110	84							194				203	98100	4 194	SY	ROADWAY, MISC.: REINFORCED TURF	75	
				70757								70757				204	10000	70757	SY	SUBGRADE COMPACTION	74	
3100												3372				204	13000	3372	CY	EXCAVATION OF SUBGRADE		
3100				272								3372				204	30010	3372	CY	GRANULAR MATERIAL, TYPE B		
				80								80				204	45000	4 80	TON	PROOF ROLLING	74	
9300				556								9856				204	50000	9856	SY	GEOTEXTILE FABRIC		
				1855								1855				206	10500	1855	TON	CEMENT		
				75578								75578				206	11000	75578	SY	CURING COAT		
				75866								75866				206	15010	75866	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	74	
												LS				206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS		
8772.2												8772.2				606	15050	8772.2	FT	GUARDRAIL, TYPE MGS		

SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
120	427	428	429	435	459	470	1806	1839					01/IMS /04	02/IMS /10	03/IMS /08							
				5									5			606	26050	5	EACH	ANCHOR ASSEMBLY, MGS TYPE B (MASH 2016)	76	
				10									10			606	26150	10	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	76	
				15									15			606	26550	15	EACH	ANCHOR ASSEMBLY, MGS TYPE T		
				13									13			606	35002	13	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1		
				9									9			606	35102	9	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2		
				1									1			606	35103	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2, AS PER PLAN	76	
				1									1			606	60022	1	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) (MASH 2016) (50 MPH, 69" WIDE)	76	
				3									3			606	60022	3	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL) (MASH 2016) (50 MPH, 90" WIDE)	76	
				4477									4477			607	23000	4477	FT	FENCE, TYPE CLT		
				415									415			607	35000	415	FT	FENCE REMOVED AND REBUILT		
				2									2			607	61200	2	EACH	GATE, TYPE CLT		
4500							82160						2994			608	13001	2994	SF	6" CONCRETE WALK, AS PER PLAN	76	
2994													2994			608	21200	2994	SF	TEMPORARY ASPHALT CONCRETE WALK		
	475												9102			608	52001	9102	SF	CURB RAMP, AS PER PLAN	76	
													935			608	52001	935	SF	CURB RAMP, AS PER PLAN 2	76	
		500											2095			622	10100	2095	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1		
													311			622	10120	311	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C		
													108			622	10121	108	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C, AS PER PLAN	76	
													2752			622	10140	2752	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1		
													31			622	10141	31	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN	39	
		1010											2827			622	10160	2827	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D		
													2			622	10200	2	EACH	BARRIER TRANSITION		
													1			622	24841	1	EACH	CONCRETE BARRIER END SECTION, TYPE B, AS PER PLAN	1434	
													2			622	25000	2	EACH	CONCRETE BARRIER END SECTION, TYPE D		
													17			622	25006	17	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE B1		
													5			622	25008	5	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C		
													1			622	25009	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN	1435	
													34			622	25014	34	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1		
													30			622	25050	30	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D		
													2			622	25051	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	1436	
													1			622	25051	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN 2	76	
		45											45			623	12010	45	EACH	PRIMARY PROJECT CONTROL MONUMENT, TYPE B		
		60											60			623	40900	60	EACH	MONUMENT, MISC.: CLEVELAND MONUMENT ASSEMBLY	76	
			40										40			SPECIAL	690E98000	40	EACH	UTILITY TEST HOLE	77	
			LS										LS			SPECIAL	690E98400	LS		PERMITS	77	
													321			SPECIAL	690E98700	321	CY	LOW DENSITY CELLULAR CONCRETE FILL, CLASS II	76	
													14			601	21050	14	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT		
													234			601	21060	234	SY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT		
													642			601	32200	642	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER		
													4563			601	32301	4563	CY	ROCK CHANNEL PROTECTION, TYPE D WITH FILTER, AS PER PLAN	1798	
													104			601	37501	104	FT	PAVED GUTTER, TYPE 1-2, AS PER PLAN	1163	
													10			659	00100	10	EACH	SOIL ANALYSIS TEST		
													15613			659	00301	15613	CY	TOPSOIL, AS PER PLAN	1804	
													37446			659	00501	37446	SY	SEEDING AND MULCHING, CLASS 1, AS PER PLAN	1797	
													62566			659	00511	62566	SY	SEEDING AND MULCHING, CLASS 2, AS PER PLAN	1797	
													38510			659	00581	38510	SY	SEEDING AND MULCHING, CLASS 5B, AS PER PLAN	1797	
													7033			659	14000	7033	SY	REPAIR SEEDING AND MULCHING		
													7033			659	15000	7033	SY	INTER-SEEDING		
													19.62			659	20000	19.62	TON	COMMERCIAL FERTILIZER		
													29.06			659	31000	29.06	ACRE	LIME		
													779			659	35000	779	MGAL	WATER		
													316			659	40000	316	MSF	MOWING		
													19901			670	00500	19901	SY	SLOPE EROSION PROTECTION		
													1262			670	00720	1262	SY	DITCH EROSION PROTECTION MAT, TYPE B		
													LS			832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN		
													LS			832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS		
													LS			832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE		

DESIGN AGENCY
Michael Baker INTERNATIONAL
 DESIGNER
 KJM
 REVIEWER
 KGJ 05/22/24
 PROJECT ID
 82382
 SHEET TOTAL
 404 2696

SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET		
122	427	429	442	447	457	459							01/IMS /04	02/IMS /10	03/IMS /08									
													2400000				832	30000	2400000	EACH	EROSION CONTROL (CONT.)			
						31							31				836	10000	31	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1			
																						ENVIRONMENTAL/REMEDICATION		
													755					690E65000	755	TON	WORK INVOLVING NON-REGULATED MATERIALS		78	
												7550						690E65016	7550	TON	WORK INVOLVING PETROLEUM CONTAMINATED SOIL		78	
												105000						690E65022	105000	GAL	WORK INVOLVING NON-REGULATED WATER		78	
												42000						690E65024	42000	GAL	WORK INVOLVING REGULATED WATER		78	
												LS						690E98400	LS		WORK INVOLVING ASBESTOS CONTAINING MATERIALS (CARNEGIE AVENUE, CUY-90-1692, SFN 1807897)		77	
												LS						690E98400	LS		WORK INVOLVING ASBESTOS CONTAINING MATERIALS (E, 22ND STREET, CUY-90-1676, SFN 1807838)		77	
												LS						690E98400	LS		WORK INVOLVING ASBESTOS CONTAINING MATERIALS (E5, CUY-90-1640, SFN 1807773)		77	
												LS						690E98400	LS		WORK INVOLVING ASBESTOS CONTAINING MATERIALS (E6, CUY-77-1593, SFN 1806939)		77	
												LS						690E98400	LS		WORK INVOLVING ASBESTOS CONTAINING MATERIALS (E7, CUY-77-1597L, SFN 1807919)		77	
												LS						690E98400	LS		WORK INVOLVING ASBESTOS CONTAINING MATERIALS (E8, CUY-90-1651L, SFN 1807900)		77	
												LS						690E98400	LS		WORK INVOLVING ASBESTOS CONTAINING MATERIALS (E9, CUY-90-1651R, SFN 1807803)		77	
												LS						690E98400	LS		WORK INVOLVING ASBESTOS CONTAINING MATERIALS (E10, CUY-E14TH-0002SN, SFN 1806912)		77	
																						DRAINAGE		
							8.5						8.5					602	20000	8.5	CY	CONCRETE MASONRY		
												25609						605	11110	25609	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC		
												3700						605	11111	3700	FT	6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, AS PER PLAN		79
												5200						605	12211	5200	FT	6" DEEP PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC, AS PER PLAN		79
												2236						605	13300	2236	FT	6" UNCLASSIFIED PIPE UNDERDRAINS		
												40888						605	14020	40888	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC		
												400						611	01400	400	FT	6" CONDUIT, TYPE E		
												3620						611	01500	3620	FT	6" CONDUIT, TYPE F		
												3579						611	04400	4 3579	FT	12" CONDUIT, TYPE B		
												5831						611	04401	4 5831	FT 3	12" CONDUIT, TYPE B, AS PER PLAN 2, 706.08 & 706.12		1163
												240						611	04401	4 240	FT 3	12" CONDUIT, TYPE B, AS PER PLAN 2, 748.01		1163
												5						611	04600	4 5	FT	12" CONDUIT, TYPE C		
												184						611	04601	4 184	FT 3	12" CONDUIT, TYPE C, AS PER PLAN 2, 706.08 & 706.12		1163
												46						611	04900	46	FT	12" CONDUIT, TYPE D		
												2913						611	05900	2913	FT	15" CONDUIT, TYPE B		
												193						611	05900	193	FT	15" CONDUIT, TYPE B, 706.02, CLASS V		
												774						611	05901	774	FT 3	15" CONDUIT, TYPE B, AS PER PLAN		1163
												982						611	05901	1182	FT	15" CONDUIT, TYPE B, AS PER PLAN 2, 706.08 & 706.12		1163
												30						611	05901	30	FT	15" CONDUIT, TYPE B, AS PER PLAN 2, 748.01		1163
												2566						611	06100	2566	FT	15" CONDUIT, TYPE C		
												51						611	06101	4 51	FT	15" CONDUIT, TYPE C, AS PER PLAN		1163
												108						611	06101	4 108	FT 3	15" CONDUIT, TYPE C, AS PER PLAN 2, 706.08 & 706.12		1163
												134						611	06700	134	FT	15" CONDUIT, TYPE F, 707.05 TYPE C, 707.21, OR 707.33		
												742						611	07400	742	FT	18" CONDUIT, TYPE B		
												19						611	07400	19	FT	18" CONDUIT, TYPE B, 707.35		
												228						611	07600	228	FT	18" CONDUIT, TYPE C		
												138						611	08200	138	FT	18" CONDUIT, TYPE F, 707.05 TYPE C, 707.21, OR 707.33		
												484						611	08900	489	FT	21" CONDUIT, TYPE B		
												511						611	10400	511	FT	24" CONDUIT, TYPE B		
												225						611	10400	225	FT	24" CONDUIT, TYPE B, 706.02, CLASS V		
												5						611	10401	5	FT 3	24" CONDUIT, TYPE B, AS PER PLAN 2, 706.08 & 706.12		1163
												257						611	10600	257	FT	24" CONDUIT, TYPE C		
												65						611	11900	65	FT	27" CONDUIT, TYPE B		
												147						611	13400	147	FT	30" CONDUIT, TYPE B		
												197						611	13600	197	FT	30" CONDUIT, TYPE C		
												626						611	25201	626	FT 3	66" CONDUIT, TYPE B, AS PER PLAN 2, 706.02 & 706.11		1163
												472						611	52902	472	FT	34" X 53" CONDUIT, TYPE B, 706.04		
												90						611	96600	90	FT	CONDUIT, BORED OR JACKED, 15" TYPE B		78
												90						611	96600	90	FT	CONDUIT, BORED OR JACKED, 66" TYPE B, 706.02 & 706.11		78
												246						611	96600	246	FT	CONDUIT, BORED OR JACKED, 66" TYPE C, 706.02 & 706.11		78
												7						611	98150	7	EACH	CATCH BASIN, NO. 3		
												33						611	98151	33	EACH	CATCH BASIN, NO. 3, AS PER PLAN		1169

CUY-90-16.28 (CCG3A)

MODEL: Sheet03 PAPER SIZE: 34x22 (in.) DATE: 10/3/2025 TIME: 3:16:49 PM USER: Joseph.Hogan
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GENERAL SUMMARY - 3

DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
REVIEWER	KJM
PROJECT ID	KGJ 05/22/24
SHEET TOTAL	82382 / 405 2696

SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET	
427	428	443	470	1399	1839								01/IMS /04	02/IMS /10	03/IMS /08								
																					PAVEMENT (CONT.)		
14303		4	25922										4	40225			407	20000	40225	GAL	NON-TRACKING TACK COAT		
1340			1262											2602			441	50101	2602	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M	80	
1870			1773											3643			441	50300	43643	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)		
		4	12										4	12			441	70000	12	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22		
			76											76			441	70201	76	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), AS PER PLAN, PG64-22	80	
			40											40			441	70500	40	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), (DRIVEWAYS)		
			55											55			441	70700	55	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), (DRIVEWAYS)		
			7043											7043			442	00100	7043	CY	ANTI-SEGREGATION EQUIPMENT		
2330			3971											6301			442	10001	6301	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M	80	
2720			4756											7476			442	10100	7476	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)		
64														64			442	22101	464	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449), AS PER PLAN, PG70-22M	85	
		4	715										4	715			451	16011	715	SY	12" REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN	80	
					676									676			451	20000	676	SY	REINFORCED CONCRETE PAVEMENT, MISC.: INTEGRALLY COLORED CONCRETE CROSSWALK	1825	
			61.00											61.00			SPECIAL	451E31000	61.00	FT	PRESSURE RELIEF JOINT, TYPE B	80	
			337											337			452	09010	337	SY	4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		
			1231											1231			452	12010	41231	SY	8" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		
		4	15565										4	15565			452	14010	15565	SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P		
775			775											775			452	14011	775	SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN	80	
1000														1000			452	19200	1000	SY	NON-REINFORCED CONCRETE PAVEMENT, MISC.: SURCHARGE FOR CLASS MS CONCRETE	87	
			51											51			609	12000	51	FT	COMBINATION CURB AND GUTTER, TYPE 2		
		4	2172										4	2172			609	14000	2172	FT	CURB, TYPE 2-A		
			67											67			609	24000	67	FT	CURB, TYPE 4-A		
			1766											1766			609	24510	41766	FT	CURB, TYPE 4-C		
750		4	14577										4	15327			609	26000	15327	FT	CURB, TYPE 6		
			46											46			609	33200	46	FT	CURB, TYPE 10-B		
			366											366			609	72000	366	SY	CONCRETE MEDIAN		
	1.28													1.28			618	40600	1.28	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	76	
																					WATER WORK		
														3666			202	98200	3666	FT	REMOVAL MISC.: WATER MAIN REMOVED 24" AND UNDER	1376	
														476			202	98200	476	FT	REMOVAL MISC.: WATER MAIN REMOVED OVER 24"	1376	
		71												71			638	06713	71	FT	30" STEEL PIPE ENCASEMENT, OPEN CUT, AS PER PLAN	1163	
			15											15			638	10701	15	EACH	FIRE HYDRANT REMOVED AND DISPOSED OF, AS PER PLAN	1376	
			49											49			638	10801	49	EACH	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN	1384	
			1											1			638	11201	1	EACH	METER, SETTING, STOP AND CHAMBER, AS PER PLAN (CLEVELAND WATER)	1428	
			909											909			SPECIAL	638E20172	909	FT	12" WATER MAIN DIP CLASS 52 BOLTLESS RESTRAINED JOINTS AND FITTINGS (CLEVELAND WATER)	1376	
			427											427			SPECIAL	638E20174	427	FT	12" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS (CLEVELAND WATER)	1376	
			289											289			SPECIAL	638E20292	289	FT	24" WATER MAIN DIP CLASS 52 BOLTLESS RESTRAINED JOINTS AND FITTINGS (CLEVELAND WATER)	1378	
			252											252			SPECIAL	638E20294	252	FT	24" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS (CLEVELAND WATER)	1378	
			291											291			SPECIAL	638E20336	291	FT	30" WATER MAIN DIP CLASS 52 BOLTLESS RESTRAINED JOINTS AND FITTINGS (CLEVELAND WATER)	1378	
			1225											1225			SPECIAL	638E20338	1225	FT	30" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS (CLEVELAND WATER)	1378	
			40											40			SPECIAL	638E20480	40	FT	48" STEEL PIPE ENCASEMENT, BORED OR JACKED (CLEVELAND WATER)	1385	
			2											2			SPECIAL	638E20580	2	EACH	10" CUTTING IN SLEEVE (CLEVELAND WATER)	1383	
			5											5			SPECIAL	638E20586	5	EACH	12" GATE VALVE WITH VALVE BOX (CLEVELAND WATER)	1381	
			4											4			SPECIAL	638E20596	4	EACH	12" CUTTING IN SLEEVE (CLEVELAND WATER)	1383	
			3											3			SPECIAL	638E20598	3	EACH	12" CUTTING IN SLEEVE, VALVE WITH VALVE BOX (CLEVELAND WATER)	1383	
			3											3			SPECIAL	638E20746	3	EACH	2" AIR RELEASE VALVE WITH VALVE BOX (CLEVELAND WATER)	1383	
			14											14			SPECIAL	638E20750	14	EACH	6" FIRE HYDRANT, COMPLETE (CLEVELAND WATER)	1383	
			1											1			SPECIAL	638E20762	1	EACH	FIRE HYDRANT SERVICE LINE EXTENDED AND ADJUSTED TO GRADE (CLEVELAND WATER)	1419	
			177											177			SPECIAL	638E20770	177	FT	1" COPPER WATER SERVICE LINE (CLEVELAND WATER)	1384	
			587											587			SPECIAL	638E20794	587	FT	REMOVE WATER SERVICE CONNECTION (CLEVELAND WATER)	1376	
			10											10			SPECIAL	638E20842	10	FT	EXTEND 1-1/2" COPPER WATER SERVICE CONNECTION (CLEVELAND WATER)	1418	
			31											31			SPECIAL	638E20844	31	FT	INSTALL 1-1/2" COPPER WATER SERVICE CONNECTION (CLEVELAND WATER)	1384	
			4											4			SPECIAL	638E20894	4	EACH	1" CORPORATION STOP (CLEVELAND WATER)	1384	
			2											2			SPECIAL	638E20896	2	EACH	1-1/2" CORPORATION STOP (CLEVELAND WATER)	1384	
			1											1			SPECIAL	638E21002	1	EACH	INSTALL 1" METER SETTING, COMPLETE (CLEVELAND WATER)	1384	
			3											3			638	98000	3	EACH	WATER WORK, MISC.: 12" EXPANSION VALVE (BRIDGE)	1378	
			2											2			638	98000	2	EACH	WATER WORK, MISC.: 24" EXPANSION VALVE (BRIDGE)	1380	
			3											3			638	98000	3	EACH	WATER WORK, MISC.: 24" VALVE ASSEMBLY COMPLETE (CLEVELAND WATER)	1381	

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SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
428	1399	1400	1688	1689								01/IMS /04	02/IMS /10	03/IMS /08								
																		WATER WORK (CONT.)				
	1											1						638 98000 1 EACH	WATER WORK, MISC.: 30" CUTTING IN SLEEVE (CLEVELAND WATER)	1380		
	2											2						638 98000 2 EACH	WATER WORK, MISC.: 30" VALVE ASSEMBLY COMPLETE (CLEVELAND WATER)	1381		
	2											2						638 98000 2 EACH	WATER WORK, MISC.: 36" CUTTING IN SLEEVE (CLEVELAND WATER)	1380		
300000												300000						638 98000 300000 EACH	WATER WORK, MISC.: CLEVELAND WATER DEPARTMENT CHARGES	1374		
	3											3						638 98000 3 EACH	WATER WORK, MISC.: CONCRETE PIER	1426		
	2											2						638 98000 2 EACH	WATER WORK, MISC.: SLEEVE FOR ABUTMENT WALL - 12" DIP LINE (CLEVELAND WATER)	1429		
	2											2						638 98000 2 EACH	WATER WORK, MISC.: SLEEVE FOR ABUTMENT WALL - 24" STEEL LINE (CLEVELAND WATER)	1429		
	2											2						638 98000 2 EACH	WATER WORK, MISC.: STEEL TO DIP TRANSITION (CLEVELAND WATER)	1429		
		507										507						638 98600 507 FT	WATER WORK, MISC.: 12" INSULATION FOR BRIDGE (CLEVELAND WATER)	1381		
		354										354						638 98600 354 FT	WATER WORK, MISC.: 24" INSULATION FOR BRIDGE (CLEVELAND WATER)	1381		
		354										354						638 98600 354 FT	WATER WORK, MISC.: 24" POLYURETHANE COATED CEMENT LINED STEEL	1380		
																			LIGHTING			
			2									2							202 75704 2 EACH	REMOVAL OF EXISTING CONTROL CENTER AND FOUNDATION		
			2									2							202 75800 2 EACH	DISCONNECT EXISTING CIRCUIT		
			12	154								166							625 00450 166 EACH	CONNECTION, FUSED PULL APART		
				77								77							625 00460 77 EACH	CONNECTION, UNFUSED PULL APART		
			15									15							625 00470 15 EACH	CONNECTION, UNFUSED BOLTED		
			123	84								207							625 00480 207 EACH	CONNECTION, UNFUSED PERMANENT		
			4									4							625 10494 4 EACH	LIGHT POLE, LOW MAST, ALM50		
			2									2							625 10494 2 EACH	LIGHT POLE, LOW MAST, ATLM50		
				44								44							625 10500 44 EACH	LIGHT POLE, MISC.: 15' ROUND TAPERED FIBERGLASS STREETLIGHT	1686	
				33								33							625 10500 33 EACH	LIGHT POLE, MISC.: 30' ROUND TAPERED FIBERGLASS STREETLIGHT	1686	
				32								32							625 10614 32 EACH	LIGHT POLE ANCHOR BOLTS ON STRUCTURE		
			1									1							625 13500 1 EACH	LIGHT TOWER, MISC.: BB80 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING	1685	
			2									2							625 13500 2 EACH	LIGHT TOWER, MISC.: BB100 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING	1685	
			1									1							625 13500 1 EACH	LIGHT TOWER, MISC.: BB110 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING	1685	
			2									2							625 13500 2 EACH	LIGHT TOWER, MISC.: BBB80 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING	1685	
			8									8							625 13500 8 EACH	LIGHT TOWER, MISC.: BBB100 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING	1685	
			1									1							625 13500 1 EACH	LIGHT TOWER, MISC.: BBB120 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING	1685	
			1									1							625 13500 1 EACH	LIGHT TOWER, MISC.: BBBB60 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING	1685	
			2									2							625 13500 2 EACH	LIGHT TOWER, MISC.: BBBB90 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING	1685	
			1									1							625 13500 1 EACH	LIGHT TOWER, MISC.: TOWER LIGHTING RING WITH 4 LUMINAIRE MOUNTS	1685	
				58								58							625 14000 58 EACH	LIGHT POLE FOUNDATION, 24" X 6' DEEP		
			2									2							625 14200 2 EACH	LIGHT POLE FOUNDATION, 24" X 10' DEEP		
			4									4							625 14307 4 EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN	1685	
			2									2							625 15000 2 EACH	LIGHT TOWER FOUNDATION, 36" X 15' DEEP		
			10									10							625 15100 10 EACH	LIGHT TOWER FOUNDATION, 36" X 20' DEEP		
			4									4							625 15200 4 EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP		
			1									1							625 15400 1 EACH	LIGHT TOWER FOUNDATION, 42" X 25' DEEP		
			1									1							625 15700 1 EACH	LIGHT TOWER FOUNDATION, MISC.: 42" X 20' DEEP	1685	
			2									2							625 15700 2 EACH	LIGHT TOWER FOUNDATION, MISC.: 48" X 25' DEEP	1685	
			4	41650	16375							4	58025						625 23200 4 FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE		
				49071									49071						625 23304 49071 FT	NO. 8 AWG 600 VOLT DISTRIBUTION CABLE		
				159								159							625 23308 159 FT	DISTRIBUTION CABLE, MISC.: NO. 4 / 0 AWG 2400 VOLT DISTRIBUTION CABLE	1686	
			900									900							625 23400 900 FT	NO. 10 AWG POLE AND BRACKET CABLE		
				4950								4950							625 23410 4950 FT	NO. 12 AWG POLE AND BRACKET CABLE		
			4	13002								4	13002						625 24320 4 FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES		
				1796								1796							625 25012 1796 FT	CONDUIT, 3/4", 725.051		
			1304	1123								2427							625 25300 2427 FT	CONDUIT, 1-1/2", 725.04		
			116									116							625 25404 116 FT	CONDUIT, 2-1/2", 725.04		
				8541								8541							625 25408 8541 FT	CONDUIT, 2", 725.051		
			712									712							625 25504 712 FT	CONDUIT, 3", 725.051		
				43								43							625 25802 43 FT	CONDUIT, CONCRETE ENCASED, 2", 725.051		
				132								132							625 25803 132 FT	CONDUIT, CONCRETE ENCASED, AS PER PLAN (2-2" CONDUIT, 725.051)	1686	
				1974								1974							625 25803 4 FT	CONDUIT, CONCRETE ENCASED, AS PER PLAN (4-2" CONDUIT, 725.051)	1686	
			4	7218								4	7218						625 25902 4 FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"		
				63								63							625 26253 63 EACH	LUMINAIRE, CONVENTIONAL, SOLID STATE (LED), AS PER PLAN (CPP LED COBRA HEAD)	1686	

DESIGN AGENCY
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 82382
 SHEET TOTAL
 408 2696

SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
125	1455	1485	1678	1782								01/IMS /04	02/IMS /10	03/IMS /08								
				1538								1538			632	69350	1538	FT	ELECTRICAL (CONT.) POWER CABLE, MISC.: NO. 2 / 0 AWG CU 15KV OPEN WIRE	1778		
				1								1			632	89300	1	EACH	WOOD POLE (40' CLASS III)			
				1								1			632	89300	1	EACH	WOOD POLE (45' CLASS III)			
				17								17			632	89300	17	EACH	WOOD POLE (50' CLASS III)			
				4								4			632	89300	4	EACH	WOOD POLE (55' CLASS II)			
				3								3			632	89300	3	EACH	WOOD POLE (55' CLASS III)			
				2								2			632	89300	2	EACH	WOOD POLE (70' CLASS H3)			
				2								2			632	89300	2	EACH	WOOD POLE (80' CLASS H6)			
				67								67			632	89401	67	EACH	DOWN GUY, AS PER PLAN	1779		
																			TRAFFIC SURVEILLANCE			
			61									61			625	25408	61	FT	CONDUIT, 2", 725.051			
			8108									8108			625	25410	8108	FT	CONDUIT, 2", 725.052			
			32									32			625	25504	32	FT	CONDUIT, 3", 725.051			
			984									984			625	25908	984	FT	CONDUIT, JACKED OR DRILLED, 725.052, 2"			
			989									989			625	29000	989	FT	TRENCH			
			1									1			625	30700	1	EACH	PULL BOX, 725.08, 18"			
			3									3			625	32000	3	EACH	GROUND ROD			
			989									989			625	36010	989	FT	UNDERGROUND WARNING/MARKING TAPE			
			70									70			632	68300	70	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG			
			500									500			632	69300	500	FT	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG			
			1									1			632	70001	1	EACH	POWER SERVICE, AS PER PLAN 3	1676		
			2									2			633	67100	2	EACH	CABINET FOUNDATION			
			1									1			633	67201	1	EACH	CONTROLLER WORK PAD, AS PER PLAN	1676		
			8									8			809	00530	8	EACH	ITS JUNCTION BOX, 17x24x6 INCHES			
			9									9			809	02000	9	EACH	32" ITS PULL BOX WITH PAD AND STANDARD LID ASSEMBLY, TYPE 2			
			12128									12128			809	23100	12128	FT	MICRO-DUCT INNERDUCT, 14 / 10			
			1									1			809	60000	1	EACH	CCTV IP-CAMERA SYSTEM, PTZ			
			2									2			809	60070	2	EACH	CCTV IP-CAMERA SYSTEM, WRONG WAY DETECTION			
			1									1			809	61090	1	EACH	CCTV LOWERING UNIT			
			350									350			809	64550	350	FT	ETHERNET CABLE, OUTDOOR-RATED			
			2									2			809	65000	2	EACH	ITS CABINET - GROUND MOUNTED			
			1									1			809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL OF EXISTING CCTV AND LOWERING UNIT	1676		
			1									1			809	65990	1	EACH	ITS DEVICE, MISC.: REMOVAL OF EXISTING CCTV POLE	1676		
			4									4			809	65990	4	EACH	ITS DEVICE, MISC.: REMOVAL OF EXISTING POLE-MOUNTED ITS CABINET	1676		
			LS									LS			809	70000	LS		MAINTAINING ITS DURING CONSTRUCTION			
																			TRAFFIC SURVEILLANCE ALTERNATES			
			1									1		X	809	61040	1	EACH	CCTV POLE, 70' TALL, CONCRETE (ALTERNATE 1)			
			1									1		X	809	61040	1	EACH	CCTV POLE, 70' TALL, STEEL (ALTERNATE 2)			
																			TRAFFIC CONTROL			
	44											44			620	00500	44	EACH	DELINEATOR, POST GROUND MOUNTED			
	946											946			621	00100	946	EACH	RPM			
		32										32			625	32000	32	EACH	GROUND ROD			
												38			626	00102	38	EACH	BARRIER REFLECTOR, TYPE 1 (BI-DIRECTIONAL)			
												166			626	00102	166	EACH	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)			
												14			626	00110	14	EACH	BARRIER REFLECTOR, TYPE 2 (BI-DIRECTIONAL)			
												103			626	00110	103	EACH	BARRIER REFLECTOR, TYPE 2 (ONE-WAY)			
												2037.3			630	02100	2037.3	FT	GROUND MOUNTED SUPPORT, NO. 2 POST			
												2479.6			630	03100	2479.6	FT	GROUND MOUNTED SUPPORT, NO. 3 POST			
												491.0			630	04101	491.0	FT	GROUND MOUNTED SUPPORT, NO. 4 POST, AS PER PLAN	1449		
												386.4			630	06400	386.4	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7			
												34.0			630	06500	34.0	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W6X9			
												40.0			630	07000	40.0	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W8X18			
	48.6											103.4			630	07500	103.4	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X22			
												176.2			630	07600	176.2	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W10X12			
												1.0			630	08002	1.0	FT	ONE WAY SUPPORT, NO. 2 POST			
	12.5											12.5			630	08004	12.5	FT	ONE WAY SUPPORT, NO. 3 POST			
												36.1			630	08100	36.1	FT	ONE WAY SUPPORT, NO. 4 POST			
												148			630	08600	148	EACH	SIGN POST REFLECTOR			
												2			630	09000	2	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION			

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SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
120	125	1455	1468	1485	1493							01/IMS /04	02/IMS /10	03/IMS /08								
				4								4			630	72340	4	EACH	TRAFFIC CONTROL (CONT.)			
				6								6			630	72410	6	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 12			
				6								6			630	72420	6	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 1			
				1								1			630	72430	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 2			
				1								1			630	72550	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-15.116, DESIGN 3			
	26			61								87			630	75000	87	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-16.22, DESIGN 13			
				2								2			630	79100	2	EACH	SIGN ATTACHMENT ASSEMBLY			
				112								112			630	79500	112	EACH	SIGN HANGER ASSEMBLY, MAST ARM			
				18								18			630	79604	18	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED			
	146.0			4044.7								4190.7			630	80100	4190.7	SF	SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, TYPE 2			
				899.5								899.5			630	80200	899.5	SF	SIGN, FLAT SHEET			
	1026.0			7235.5								8261.5			630	80224	8261.5	SF	SIGN, GROUND MOUNTED EXTRUSHEET			
	781.3											781.3			630	80300	781.3	SF	SIGN, OVERHEAD EXTRUSHEET			
				6								6			630	80501	6	EACH	SIGN, TEMPORARY OVERLAY			
				5								5			630	84010	5	EACH	SIGN, DOUBLE FACED, STREET NAME, AS PER PLAN	1449		
																			CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50			
	2			4								6			630	84500	6	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION			
				27								27			630	84510	27	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION			
	1				229							230			630	84900	230	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL			
					5							5			630	85000	5	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE			
					2							2			630	85100	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION			
					14							14			630	85400	14	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL			
					198							198			630	86002	198	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL			
					2							2			630	86010	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL			
	2				28							30			630	86102	30	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION			
					1							1			630	86270	1	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL			
																			REMOVAL OF GROUND MOUNTED PIPE SUPPORT AND STORAGE			
	5											5			630	87000	5	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND STORAGE			
	5											5			630	87100	5	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION			
	20				69							89			630	87400	89	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL			
					248							248			630	87500	248	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL			
					1							1			630	87510	1	EACH	REMOVAL OF POLE MOUNTED SIGN AND STORAGE			
					3							3			630	87520	3	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION			
					18							18			630	89702	18	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL			
					1							1			630	89804	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115			
	33											33			630	89894	33	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-15.115			
	4											4			630	89898	4	EACH	REMOVAL OF TEMPORARY OVERLAY SIGN AND DISPOSAL			
																			REMOVAL OF TEMPORARY OVERLAY SIGN AND STORAGE			
95970												95970			642	30000	95970	FT	REMOVAL OF PAVEMENT MARKING			
70												70			642	30020	70	EACH	REMOVAL OF PAVEMENT MARKING			
			1.33									1.33			644	00100	1.33	MILE	EDGE LINE, 4"			
1.96		7.62										9.58			644	00104	9.58	MILE	EDGE LINE, 6"			
0.46			2.04									2.50			644	00200	2.50	MILE	LANE LINE, 4"			
												5.89			644	00204	5.89	MILE	LANE LINE, 6"			
												1.77			644	00300	1.77	MILE	CENTER LINE			
												5882			644	00400	5882	FT	CHANNELIZING LINE, 8"			
												10173			644	00404	10173	FT	CHANNELIZING LINE, 12"			
												1161			644	00500	1161	FT	STOP LINE			
												4401			644	00620	4401	FT	CROSSWALK LINE, 12"			
												1219			644	00621	1219	FT	CROSSWALK LINE, 12", AS PER PLAN	1449		
												4153			644	00700	4153	FT	TRANSVERSE/DIAGONAL LINE			
	74											1573			644	00720	1573	FT	CHEVRON MARKING			
												581			644	00900	581	SF	ISLAND MARKING			
												2960			644	01200	2960	FT	PARKING LOT STALL MARKING			
	16											162			644	01300	162	EACH	LANE ARROW			
												2			644	01350	2	EACH	LANE REDUCTION ARROW			
												11			644	01360	11	EACH	WRONG WAY ARROW			
												2			644	01370	2	EACH	TWO WAY LEFT TURN ARROW			
	257											3310			644	01500	3310	FT	DOTTED LINE, 4"			
	2449											4869			644	01510	4869	FT	DOTTED LINE, 6"			
												1448			644	01514	1448	FT	DOTTED LINE, 8"			
												1365			644	01520	1365	FT	DOTTED LINE, 12"			

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1455	1468	1642										01/IMS /04	02/IMS /10	03/IMS /08								
										TRAFFIC CONTROL (CONT.)												
	6											6			644	01630	6	EACH	BIKE LANE SYMBOL MARKING			
	4											4			644	19000	4	EACH	SHARED LANE MARKING			
	38											38			644	50300	38	FT	PAVEMENT MARKING, MISC.: BIKE LANE CROSSWALK	1449		
	1034											1034			644	60000	1034	SF	GREEN COLORED PAVEMENT FOR BIKE LANES			
	0.14											0.14			646	10000	0.14	MILE	EDGE LINE, 4"			
1.90												1.90			646	10010	1.90	MILE	EDGE LINE, 6"			
	0.42											0.42			646	10100	0.42	MILE	LANE LINE, 4"			
1.48												1.48			646	10110	1.48	MILE	LANE LINE, 6"			
	0.35											0.35			646	10200	0.35	MILE	CENTER LINE			
	241											241			646	10300	241	FT	CHANNELIZING LINE, 8"			
3018												3018			646	10310	3018	FT	CHANNELIZING LINE, 12"			
	33											33			646	10400	33	FT	STOP LINE			
	56											56			646	10510	56	FT	CROSSWALK LINE, 12"			
310	188											498			646	10600	498	FT	TRANSVERSE/DIAGONAL LINE			
222												222			646	10620	222	FT	CHEVRON MARKING			
	5											5			646	20300	5	EACH	LANE ARROW			
2687												2687			646	20504	2687	FT	DOTTED LINE, 6"			
	4											4			646	20600	4	EACH	BIKE LANE SYMBOL MARKING			
	2											2			646	20650	2	EACH	SHARED LANE MARKING			
	876											876			646	60100	876	SF	GREEN COLORED PAVEMENT FOR BIKE LANES			
										TRAFFIC SIGNALS												
	4											4			625	00480	4	EACH	CONNECTION, UNFUSED PERMANENT			
	756											756			625	25408	756	FT	CONDUIT, 2", 725.051			
	448											448			625	25504	448	FT	CONDUIT, 3", 725.051			
	152											152			625	25604	152	FT	CONDUIT, 4", 725.051			
	4010											4010			625	25802	4010	FT	CONDUIT, CONCRETE ENCASED, 4", 725.051			
	675											675			625	25910	675	FT	CONDUIT CLEANED AND CABLES REMOVED			
	2824											2824			625	29000	2824	FT	TRENCH			
	447											447			625	29400	447	FT	TRENCH IN PAVED AREA			
	12											12			625	30510	12	EACH	PULL BOX, 725.06, SIZE 4			
	28											28			625	30530	28	EACH	PULL BOX, 725.06, SIZE 18			
	65											65			625	32000	65	EACH	GROUND ROD			
	3271											3271			625	36011	3271	FT	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	1638		
	58											58			630	79101	58	EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	1638		
	4											4			630	79500	4	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED			
	254.0											254.0			630	80100	254.0	SF	SIGN, FLAT SHEET			
	30											30			630	80511	30	EACH	SIGN, STREET NAME, AS PER PLAN	1638		
	4											4			632	04000	4	EACH	VEHICULAR SIGNAL HEAD, MISC.: (LED), 3-SECTION, 8" LENS, 1-WAY, POLYCARBONATE, YELLOW (BICYCLE)	1640		
	87											87			632	05006	87	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, YELLOW			
	12											12			632	05086	12	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, YELLOW			
	56											56			632	20731	56	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	1640		
	62											62			632	20750	62	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON			
	103											103			632	25000	103	EACH	COVERING OF VEHICULAR SIGNAL HEAD			
	56											56			632	25010	56	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD			
	8775											8775			632	40300	8775	FT	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG			
	8775											8775			632	40500	8775	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG			
	10250											10250			632	40700	10250	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG			
	30											30			632	64010	30	EACH	SIGNAL SUPPORT FOUNDATION			
	28											28			632	64020	28	EACH	PEDESTAL FOUNDATION			
	8											8			632	64950	8	EACH	TEST HOLE PERFORMED			
	450											450			632	68200	450	FT	POWER CABLE, 2 CONDUCTOR, NO. 6 AWG			
	450											450			632	69200	450	FT	POWER CABLE, 2 CONDUCTOR, NO. 4 AWG			
	7											7			632	70001	7	EACH	POWER SERVICE, AS PER PLAN 2	1639		
	9											9			632	70200	9	EACH	CONDUIT RISER, 1" DIAMETER			
	10											10			632	72111	10	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4, AS PER PLAN	1640		
	8											8			632	72131	8	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12, AS PER PLAN	1640		
	8											8			632	72141	8	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 13, AS PER PLAN	1640		
	2											2			632	72151	2	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14, AS PER PLAN	1640		
	2											2			632	86121	2	EACH	STRAIN POLE, TYPE TC-81.11, DESIGN 8, AS PER PLAN	1640		

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SHEET	412
TOTAL	2696

SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET
429	1642	1806	1839									01/IMS /04	02/IMS /10	03/IMS /08								
										TRAFFIC SIGNALS (CONT.)												
	14											14			632	89901	14	EACH	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN	1640		
	14											14			632	90010	14	EACH	PEDESTAL, MISC.: PEDESTAL 15', TRANSFORMER BASE	1640		
	8											8			632	90101	8	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	1638		
	7											7			633	65511	7	EACH	CABINET, TYPE TS-2, AS PER PLAN	1641		
	7											7			633	67100	7	EACH	CABINET FOUNDATION			
	6											6			633	67200	6	EACH	CONTROLLER WORK PAD			
	7											7			809	69123	7	EACH	ATC CONTROLLER, AS PER PLAN	1641		
										TRAFFIC SIGNALS ALTERNATES 1												
	7											7			X	633	45001	7	EACH	GPS (GLOBAL POSITIONING SYSTEM) CLOCK ASSEMBLY, AS PER PLAN (GENERIC) (ALTERNATE 1)	1641	
	7											7			X	633	45001	7	EACH	GPS (GLOBAL POSITIONING SYSTEM) CLOCK ASSEMBLY, AS PER PLAN (ELTEC) (ALTERNATE 2)	1641	
										TRAFFIC SIGNALS ALTERNATES 2												
	20											20			X	809	69101	20	EACH	STOP LINE RADAR DETECTION, AS PER PLAN (GENERIC) (ALTERNATE 1)	1638	
	20											20			X	809	69101	20	EACH	STOP LINE RADAR DETECTION, AS PER PLAN (ITERIS) (ALTERNATE 2)	1638	
										LANDSCAPING												
			75									75				511	53010	75	CY	CLASS QC1 CONCRETE, MISC.: GATEWAY MONUMENT SIGN	1827	
			LS									LS				607	98200	LS		FENCE, MISC.: BRIDGE 13 SCREEN WALL PANELS	1832-1835	
			LS									LS				607	98200	LS		FENCE, MISC.: GATEWAY MONUMENT SIGN SCREEN WALL PANELS	1832	
			961									961				608	98000	961	SF	WALKWAY, MISC.: PAVERS OVER CONCRETE (BRICK 1)	1825	
			743									743				608	98000	743	SF	WALKWAY, MISC.: PAVERS OVER CONCRETE (BRICK 2)	1825	
			110									110				608	98000	110	SF	WALKWAY, MISC.: PAVERS OVER CONCRETE (BRICK 3)	1825	
			1847									1847				608	98000	1847	SF	WALKWAY, MISC.: PAVERS OVER CONCRETE (BRICK 4)	1825	
		243										243				661	00501	243	CY	MULCH, AS PER PLAN	1804	
		48400										48400				661	31000	48400	GAL	LANDSCAPE WATERING		
		9										9				661	40100	9	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, AMERICAN SYCAMORE (POC)		
		5										5				661	40100	5	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, BUR OAK (QMA)		
		7										7				661	40100	7	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, CHINESE ELM (ULM)		
		15										15				661	40100	15	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, CHINKAPIN OAK (QMU)		
		11										11				661	40100	11	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, GREEN VASE ZELKOVA (ZSE)		
		18										18				661	40100	18	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, KENTUCKY COFFEETREE (GDI)		
		1										1				661	40100	1	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, LITTLELEAF LINDEN (TCO)		
		19										19				661	40100	19	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, OHIO BUCKEYE (AGL)		
		18										18				661	40100	18	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, SCARLET OAK (QCO)		
		12										12				661	40100	12	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, SOMERSET RED MAPLE (ARS)		
		10										10				661	40100	10	EACH	DECIDUOUS TREE, 2-1/2" CALIPER, THORNLESS HONEYLOCUST (GTR)		
		6										6				661	50160	6	EACH	EVERGREEN TREE, 8' HEIGHT, AMERICAN HOLLY (IOK)		
		26										26				661	50160	26	EACH	EVERGREEN TREE, 8' HEIGHT, AMERICAN HOLLY (IOP)		
		72										72				661	50160	72	EACH	EVERGREEN TREE, 8' HEIGHT, EASTERN REDCEDAR (JVI)		
		58										58				661	50160	58	EACH	EVERGREEN TREE, 8' HEIGHT, PITCH PINE (PRI)		
		53										53				661	99900	53	EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, CRABAPPLE SP. (MAL)	1824	
		128										128				661	99900	128	EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, EASTERN REDBUD (CCN)	1824	
		43										43				661	99900	43	EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, FLOWERING DOGWOOD (CFL)	1824	
		90										90				661	99900	90	EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, GREEN HAWTHORN (CVI)	1824	
		33										33				661	99900	33	EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, IVORY SILK JAPANESE TREE LILAC (SRE)	1824	
		36										36				661	99900	36	EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, KWANZAN FLOWERING CHERRY (PSE)	1824	
		88										88				661	99900	88	EACH	PLANTING, MISC.: FLOWERING TREE, 6-8' HEIGHT, AUTUMN BRILLIANCE SERVICEBERRY (ACA)	1824	
		14										14				661	99900	14	EACH	PLANTING, MISC.: FLOWERING TREE, 6-8' HEIGHT, COMMON WITCH HAZEL (HVI)	1824	
		196										196				661	99900	196	EACH	PLANTING, MISC.: SHRUB, 3 GALLON, SHORE JUNIPER (JCB)	1824	
			9									9				SPECIAL	680E14550	9	EACH	TRASH RECEPTACLE	1826	
			1									1				SPECIAL	680E43100	1	EACH	COMPLETE IRRIGATION SYSTEM	1836	
												2				SPECIAL	690E98000	2	EACH	BRICK 1 PAVER MOCK UP	1826	
												2				SPECIAL	690E98000	2	EACH	BRICK 2 PAVER MOCK UP	1826	
												2				SPECIAL	690E98000	2	EACH	BRICK 3 PAVER MOCK UP	1826	
												2				SPECIAL	690E98000	2	EACH	BRICK 4 PAVER MOCK UP	1826	
												1				SPECIAL	690E98000	1	EACH	BRIDGE 13 ARCHITECTURAL CONCRETE MIX MOCK UP	1829	
												1				SPECIAL	690E98000	1	EACH	BRIDGE 13 PLANTER MOCK UP	1831	
												1				SPECIAL	690E98000	1	EACH	BRIDGE 13 SCREEN WALL MOCK UP	1833	
												1				SPECIAL	690E98000	1	EACH	GATEWAY MONUMENT SIGN ARCHITECTURAL CONCRETE MIX MOCK UP	1829	
												1				SPECIAL	690E98000	1	EACH	GATEWAY MONUMENT SIGN SCREEN WALL MOCK UP	1833	

DESIGN AGENCY
Michael Baker INTERNATIONAL
 DESIGNER
 KJM
 REVIEWER
 KGJ 05/22/24
 PROJECT ID
 82382
 SHEET TOTAL
 413 2696

SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET		
120	427	428	429	435	489	1839							01/IMS /04	02/IMS /10	03/IMS /08									
						21							21				SPECIAL	690E98000	21	EACH	LANDSCAPING (CONT.)		1827	
			2										2				SPECIAL	690E98000	2	EACH	INTEGRALLY COLORED CONCRETE CROSSWALK MOCK UP		1825	
						24							24				SPECIAL	690E98000	24	EACH	PARK BENCH		1826	
						159							159				SPECIAL	690E98000	159	EACH	SCREEN WALL COVER PLATE		1826	
						70							70				SPECIAL	690E98000	70	EACH	SKATE GUARD		1826	
			9										9				SPECIAL	690E98000	9	EACH	TREE PROTECTION		1798	
			320										320				SPECIAL	690E98100	320	FT	AIR KNIFE EXCAVATION		1798	
						1118							1118				SPECIAL	690E98100	1118	FT	METAL EDGING		1826	
			LS										LS				SPECIAL	690E98400	LS		CLEVELAND PLANTING		1804	
						LS							LS				SPECIAL	690E98400	LS		PLANTER WATERPROOFING SYSTEM		1830	
						29							29				SPECIAL	690E98700	29	CY	PLANTING SOIL FOR BRIDGE 13 PARAPET PLANTERS		1799	
						174							174				SPECIAL	690E98700	174	CY	PLANTING SOIL FOR BRIDGE 13 TREE PLANTERS		1799	
																						RETAINING WALLS		
																						RETAINING WALL AC ESTIMATED QUANTITIES		1178
																						RETAINING WALL AD ESTIMATED QUANTITIES		1195
																						RETAINING WALL AE ESTIMATED QUANTITIES		1210
																						RETAINING WALL AF ESTIMATED QUANTITIES		1221
																						RETAINING WALL AG ESTIMATED QUANTITIES		1233
																						RETAINING WALL AH ESTIMATED QUANTITIES		1244
																						RETAINING WALL AI ESTIMATED QUANTITIES		1253
																						RETAINING WALL AJ ESTIMATED QUANTITIES		1265
																						RETAINING WALL N ESTIMATED QUANTITIES		1274
																						RETAINING WALL S ESTIMATED QUANTITIES		1286
																						RETAINING WALL T ESTIMATED QUANTITIES		1303
																						RETAINING WALL Y ESTIMATED QUANTITIES		1313
																						RETAINING WALL Z ESTIMATED QUANTITIES		1322
																						RAMP A3 BARRIER MOMENT SLAB ESTIMATED QUANTITIES		1335
																						MEDIAN BARRIER MOMENT SLAB ESTIMATED QUANTITIES		1342
																						RAMP A2 OVERHEAD SIGN TRUSS ESTIMATED QUANTITIES		1356
																						RAMP B6 OVERHEAD SIGN TRUSS ESTIMATED QUANTITIES		1362
																						STRUCTURE REMOVED		
																						PORTIONS OF STRUCTURE REMOVED		
																						BUILDING DEMOLITION		
																						BUILDING DEMOLISHED (103-13-019 / 320-WL)		74
			LS																			BUILDING DEMOLISHED, AS PER PLAN (103-26-003 / 303)		74
																						STRUCTURE OVER 20 FOOT SPAN		
																						STRUCTURE CUY-77-1587 (SFN-1806910 BRIDGE 9) ESTIMATED QUANTITIES		1884
																						STRUCTURE CUY-90-1653L (SFN-1807901 BRIDGE 10) ESTIMATED QUANTITIES		2041
																						STRUCTURE CUY-90-1653R (SFN-1807804 BRIDGE 11) ESTIMATED QUANTITIES		2090
																						STRUCTURE CUY-90-1652S (SFN-1807806 BRIDGE 12) ESTIMATED QUANTITIES		2134
																						STRUCTURE CUY-90-1678 (SFN-1807839 BRIDGE 13) ESTIMATED QUANTITIES		2188-2189
																						STRUCTURE CUY-90-1696 (SFN-1807898 BRIDGE 14) ESTIMATED QUANTITIES		2291-2292
																						STRUCTURE CUY-90-1640 (SFN-1807773 BRIDGE E5) ESTIMATED QUANTITIES		2371
																						STRUCTURE CUY-77-1593L (SFN-1806939 BRIDGE E6) ESTIMATED QUANTITIES		2378
																						STRUCTURE CUY-E14th-0002SN (SFN-1806912 BRIDGE E10) ESTIMATED QUANTITIES		2381
																						MAINTENANCE OF TRAFFIC		
																						LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		87
																						INCREASED BARRIER DELINEATION		85
																						WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)		84
																						DETOUR SIGNING		
																						WORK ZONE INCREASED PENALTIES SIGN		83
																						REPLACEMENT SIGN		83
																						WORK ZONE CROSSOVER LIGHTING SYSTEM		85
																						WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN		84
																						BARRIER REFLECTOR, TYPE 1 (ONE WAY)		85
																						OBJECT MARKER, ONE WAY		85
																						OBJECT MARKER, TWO WAY		85
																						MAINTAINING TRAFFIC, MISC.: PARTIAL TEMPORARY TRAFFIC SIGNAL		87

DESIGN AGENCY	
Michael Baker	
INTERNATIONAL	
DESIGNER	KJM
REVIEWER	KGJ
PROJECT ID	05/22/24
	82382
SHEET	414
TOTAL	2696



SHEET NUMBER													PARTICIPATION			ALT (X)	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET	
120	428	429	435									01/IMS /04	02/IMS /10	03/IMS /08									
																					MAINTENANCE OF TRAFFIC (CONT.)		
	1											1			614	18000	1	EACH	MAINTAINING TRAFFIC, MISC.: TEMPORARY TRAFFIC SIGNAL	85			
	200											200			614	18601	200	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	83			
1.04	0.50											1.54			614	20000	1.54	MILE	WORK ZONE LANE LINE, CLASS I, 4"				
8.75	2.50											11.25			614	20010	11.25	MILE	WORK ZONE LANE LINE, CLASS I, 6"				
2.03	0.50											2.53			614	21000	2.53	MILE	WORK ZONE CENTER LINE, CLASS I				
3.39	1.00											4.39			614	22000	4.39	MILE	WORK ZONE EDGE LINE, CLASS I, 4"				
18.26	4.50											22.76			614	22010	22.76	MILE	WORK ZONE EDGE LINE, CLASS I, 6"				
2864	650											3514			614	23000	3514	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8"				
34686	8750											43436			614	23010	43436	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12"				
14515	3650											18165			614	24000	18165	FT	WORK ZONE DOTTED LINE, CLASS I				
581	150											731			614	25000	731	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS I				
706	175											881			614	26000	881	FT	WORK ZONE STOP LINE, CLASS I				
657	175											832			614	27010	832	FT	WORK ZONE CROSSWALK LINE, CLASS I, 12"				
92	25											117			614	30000	117	EACH	WORK ZONE ARROW, CLASS I				
1	1											2			614	31000	2	EACH	WORK ZONE WORD ON PAVEMENT, 72", CLASS I				
4	1											5			614	98200	5	EACH	WORK ZONE PAVEMENT MARKING, MISC.: SHARED LANE MARKING	84			
												LS			615	10000	LS		ROADS FOR MAINTAINING TRAFFIC				
30133												30133			615	20000	30133	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	84			
	2285											2285			616	10000	2285	MGAL	WATER				
	150											150			616	20000	150	TON	CALCIUM CHLORIDE				
57669												57669			622	41011	57669	FT	PORTABLE BARRIER, 50", AS PER PLAN	84			
3												3			622	41060	3	EACH	DUAL PORTABLE BARRIER TRANSITION/TERMINATION				
			1150									1150			622	41101	1150	FT	PORTABLE BARRIER, UNANCHORED, AS PER PLAN	76			
2054												2054			622	41111	2054	FT	PORTABLE BARRIER, ANCHORED, AS PER PLAN	84			
			190									190			622	41111	190	FT	PORTABLE BARRIER, ANCHORED, AS PER PLAN 2	76			
		64										64			829	00100	64	SNMT	WORK ZONE EGRESS WARNING SYSTEM	84			
		648										648			896	00010	648	SNMT	PORTABLE NON-INTRUSIVE TRAFFIC SENSOR, CLASS I				
		216										216			896	00020	216	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN				
																					INCIDENTALS		
												LS			108	10000	LS		CPM PROGRESS SCHEDULE				
												21000			SPECIAL	111E10100	21000	EACH	DEPARTMENTS SHARE FACILITATED PARTNERING COSTS	PN 111			
												LS			614	11000	LS		MAINTAINING TRAFFIC	81			
	72											72			619	16021	72	MNTH	FIELD OFFICE, TYPE C, AS PER PLAN	80A			
												LS			623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING				
												LS			624	10000	LS		MOBILIZATION				

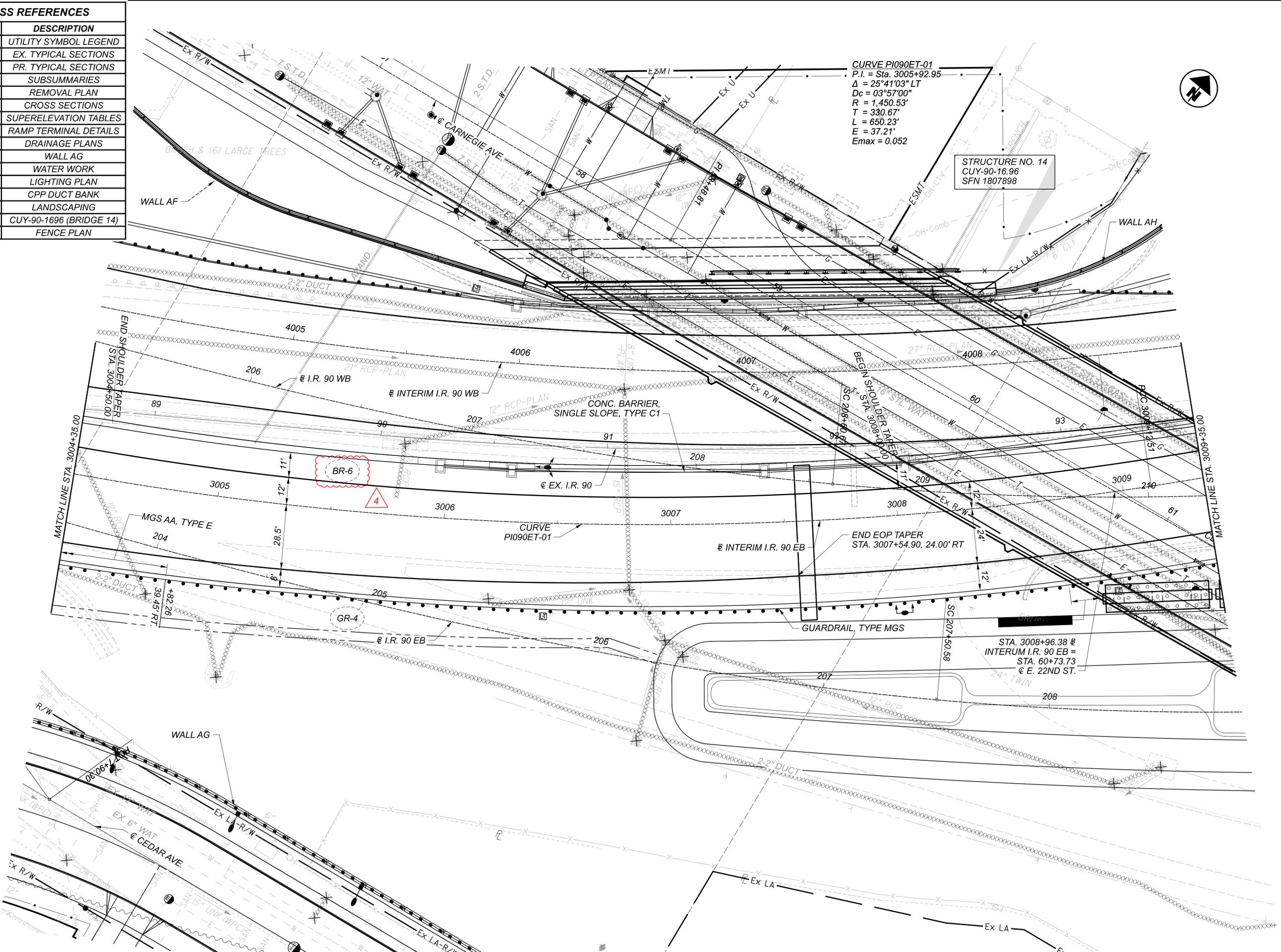
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	KJM
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	415
TOTAL	2696

SHEET NO.	201	202	202	202	202	204	204	204	251	251	254	254	254	255	255	255	255	407	441	441	442	442	442	452	452	605	605	608	608	609	611	611	611	611	611	611	614	614	614								
	LS	FT	FT	LS	FT	CY	CY	SY	CY	CY	SY	SY	SY	SY	SY	SY	SY	GAL	CY	CY	CY	CY	CY	SY	SY	FT	FT	SF	SF	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT						
73	LS																																														
74				LS	1000																																										
76						3100	3100	9300																																							
77																																															
78																																															
79			200																																												
80									180																																						
83		1510																																													
84										63255																																					
85										1531								123																													
87									300	400		38540	56010	2800	2800	3850	14180	1340	1870	2330	2720				1000																						
1371																																															
1798																																															
1804																																															
1825																																															
1826																																															
1829																																															
1831																																															
1833																																															
TOTALS CARRIED TO GENERAL SUMMARY	LS	1510	200	LS	1000	3100	3100	9300	480	400	64786	38540	56010	2800	2800	3850	14303	1340	1870	2330	2720	64	775	1000	3700	5200	4500	475	750	400	2400	200	4	4	4	10000	5000	10555	62								

DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	KJM
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	427
TOTAL	2696

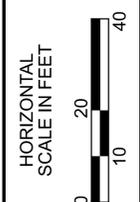
REF NO.	SHEET NO.	STATION		SIDE	AREA	203	204	204	204	206	206	252	254	301	302	304	305	407	441	441	441	441	441	441	442	442	451	451	452	452	452	608	608	608	609	609	609	609	609	609	690									
		FROM	TO			SF	SY	SY	HOUR	SY	TON	SY	SY	FT	SY	CY	CY	CY	9" CONCRETE BASE, CLASS QC 1P, AS PER PLAN	GAL	CY	6Y	FT	SY	SY	SY	SF	SF	SF	FT	FT	FT	FT	FT	FT	SY	CY													
		CARNEGIE AVE. (CONT.)																																																
DR-7	636	66+97.82		RT	370	4	41								4	9		1																																
SW-29	636	67+06.82	68+20.36	RT	1455																																													
CR-34	636	68+13.68	68+24.71	RT	97																																													
SW-30	636	68+13.70	68+24.20	RT	141																																													
C-74	636	68+24.70	68+24.71	RT																																														
DR-8	636	68+26.88		LT	259		29																																											
SW-31	636	68+35.88	69+25.00	LT	1180																																													
C-75	636	68+52.70	68+52.71	RT																																														
CR-35	636	68+52.71	68+63.72	RT	97																																													
SW-32	636	68+53.20	68+63.70	RT	142																																													
C-76	636	68+56.70	69+25.00	RT																																														
SW-33	636	68+57.07	68+88.77	RT	211																																													
DR-9	636	69+01.27		RT	830	4	92																																											
SW-34	636	69+13.77	69+25.00	RT	67																																													
		MIDTOWN CONNECTOR																																																
C-77	638	500+14.21	508+27.07	CL	30084		3619	2																																										
C-78	638	500+14.94	500+23.48	RT																																														
SW-35	638	500+20.07	500+26.39	LT																																														
CR-36	638	500+20.48	500+59.14	LT	509																																													
CR-37	638	500+23.43	500+38.82	RT	128																																													
CR-37	638	500+26.39	500+41.53	LT	115																																													
C-79	638	500+38.83	507+77.00	RT																																														
C-80	638	500+41.53	507+99.50	LT																																														
SW-36	638	500+45.18	502+90.00	RT	3157																																													
	638	500+53.56	501+09.05	LT	401																																													
SW-37	638	500+58.28	508+90.75	LT	9792	4																																												
DR-100	638	503+00.00		RT	355		39																																											
SW-38	638	503+10.00	504+69.97	RT	1518																																													
DR-101	638	504+81.49		RT	501	4	56																																											
SW-39	638	504+89.81	510+87.86	RT	7145																																													
C-81	640	507+77.00	507+99.50	RT																																														
	640	507+77.00	508+97.00	RT	1500	4	180	1																																										
CR-38	640	507+99.50	508+14.50	LT	93																																													
CR-39	640	507+99.50	508+14.50	RT	93																																													
C-82	640	508+14.50	508+27.00	LT																																														
C-83	640	508+14.50	508+97.00	RT																																														
C-84	640	508+27.00	509+46.27	LT																																														
	640	508+27.00	509+47.00	LT	1492	4	179	1																																										
DR-102A	640	508+85.75	509+15.75	LT	1048																																													
C-85	640	508+97.00	510+92.70	RT																																														

CROSS REFERENCES	
SHEET	DESCRIPTION
73	UTILITY SYMBOL LEGEND
19	EX. TYPICAL SECTIONS
36	PR. TYPICAL SECTIONS
430 - 489	SUBSUMMARIES
679 - 710	REMOVAL PLAN
736 - 749	CROSS SECTIONS
1014 - 1015	SUPERELEVATION TABLES
1030 - 1039	RAMP TERMINAL DETAILS
1092 - 1120	DRAINAGE PLANS
1229 - 1230	WALL AG
1411 - 1412	WATER WORK
1716 - 1723	LIGHTING PLAN
1784 & 1788	CPP DUCT BANK
1807 - 1817	LANDSCAPING
2281 - 2282	CUY-90-1696 (BRIDGE 14)
2383 - 2386	FENCE PLAN



CURVE PI090ET-01
 P.I. = Sta. 3005+92.95
 $\Delta = 25^\circ 41' 03''$ LT
 $D_c = 03^\circ 57' 00''$
 $R = 1,450.53'$
 $T = 330.67'$
 $L = 650.23'$
 $E = 37.21'$
 $E_{max} = 0.052$

STRUCTURE NO. 14
 CUY-90-16.96
 SFN 1807898



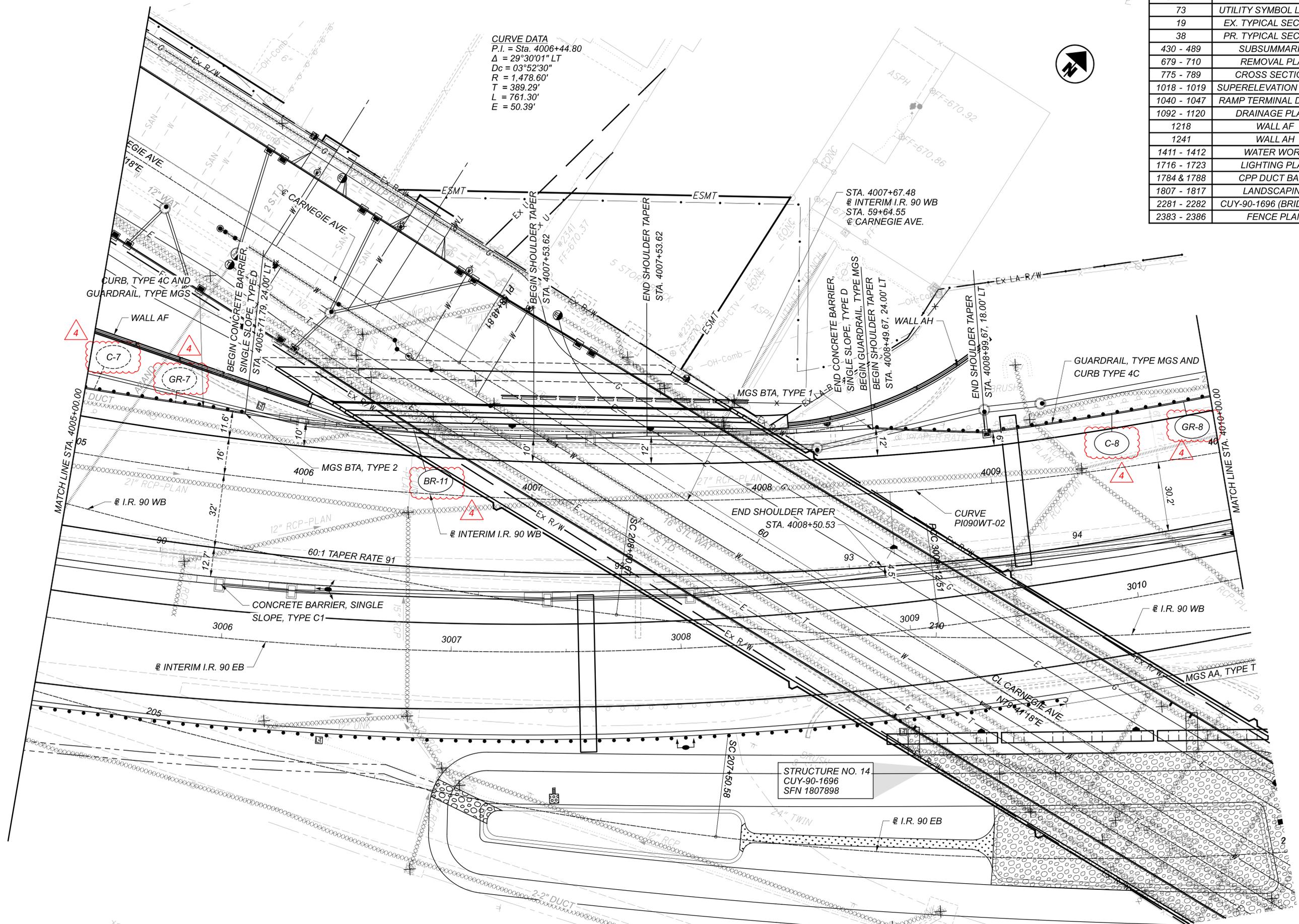
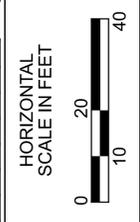
PLAN - INTERIM I.R. 90 EB
 STA. 3004+35.00 TO STA. 3009+35.00

DESIGN AGENCY



DESIGNER	AJS
REVIEWER	MRT
PROJECT ID	05/01/24
SHEET	82382
TOTAL	2696

CROSS REFERENCES	
SHEET	DESCRIPTION
73	UTILITY SYMBOL LEGEND
19	EX. TYPICAL SECTIONS
38	PR. TYPICAL SECTIONS
430 - 489	SUBSUMMARIES
679 - 710	REMOVAL PLAN
775 - 789	CROSS SECTIONS
1018 - 1019	SUPERELEVATION TABLES
1040 - 1047	RAMP TERMINAL DETAILS
1092 - 1120	DRAINAGE PLANS
1218	WALL AF
1241	WALL AH
1411 - 1412	WATER WORK
1716 - 1723	LIGHTING PLAN
1784 & 1788	CPP DUCT BANK
1807 - 1817	LANDSCAPING
2281 - 2282	CUY-90-1696 (BRIDGE 14)
2383 - 2386	FENCE PLAN



PLAN - INTERIM I.R. 90 WB
 STA. 4005+00.00 TO STA. 4010+00.00

DESIGN AGENCY

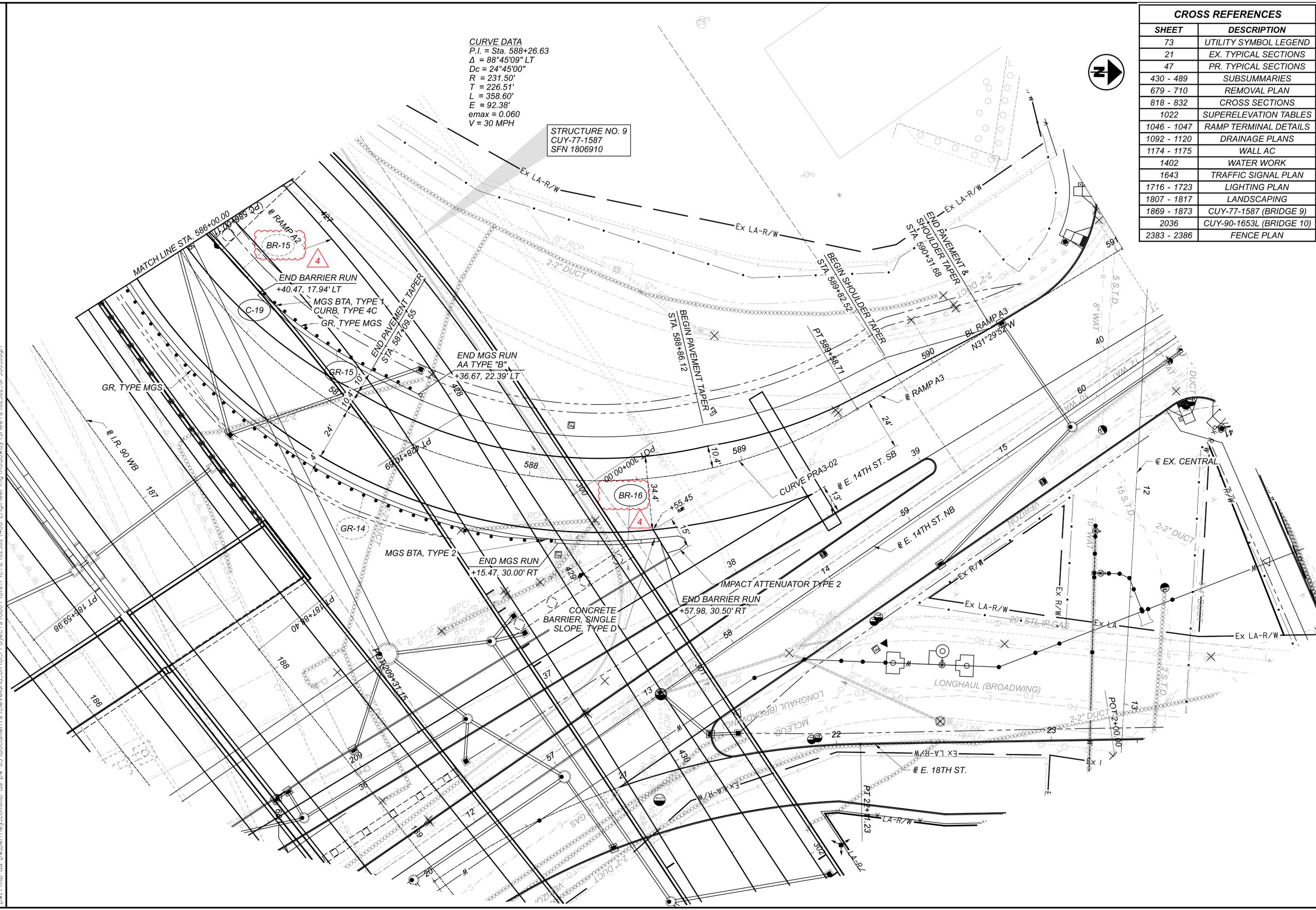
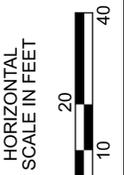


DESIGNER	AJS
REVIEWER	MRT
PROJECT ID	05/01/24
	82382
SHEET	TOTAL
536	2696

CURVE DATA
 P.I. = Sta. 588+26.63
 $\Delta = 88^\circ 45' 09''$ LT
 $D_c = 24^\circ 45' 00''$
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 $T = 226.51'$
 $L = 358.60'$
 $E = 92.38'$
 $e_{max} = 0.060$
 $V = 30$ MPH

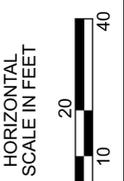
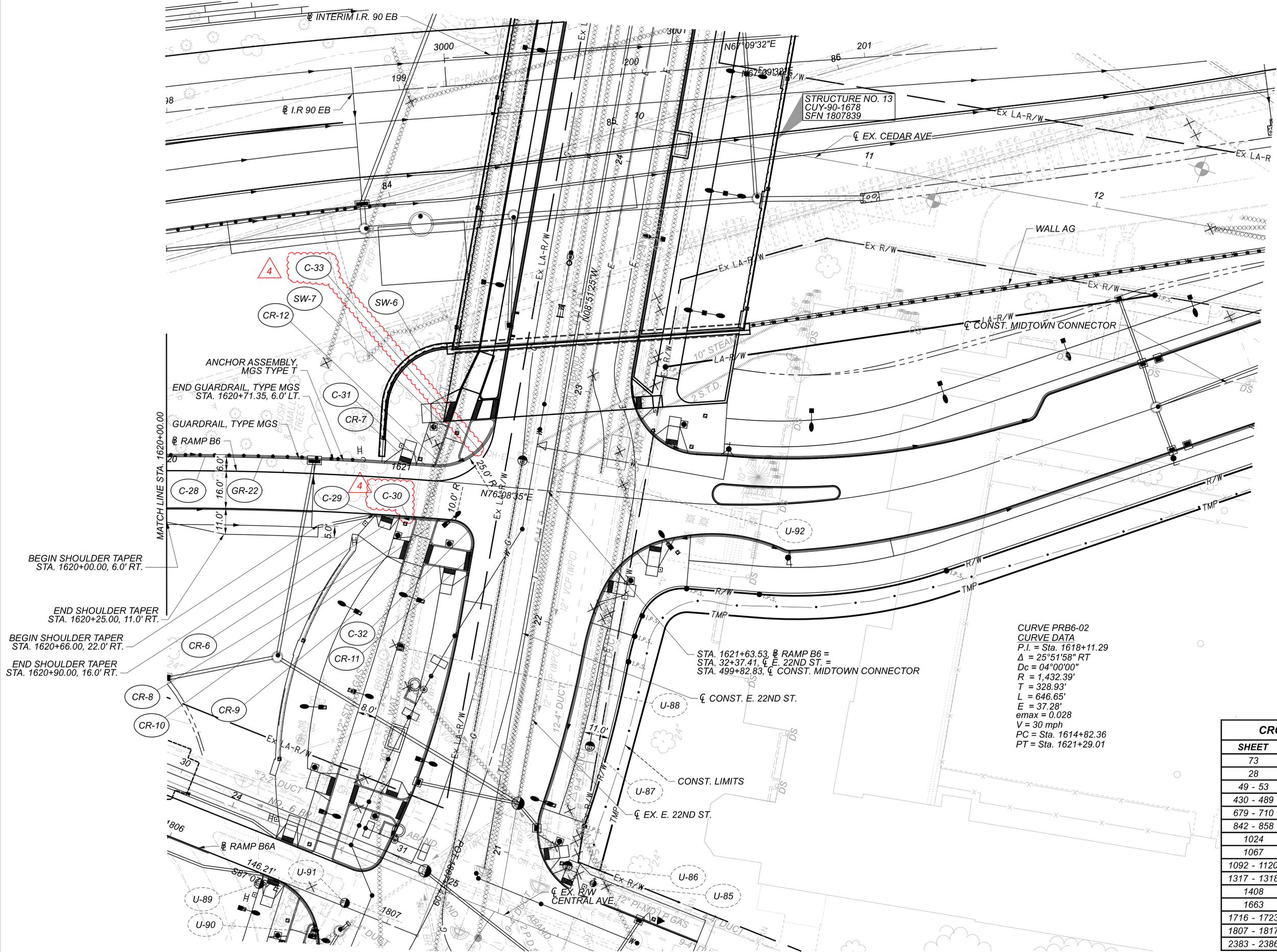
STRUCTURE NO. 9
 CUY-77-1587
 SFN 1806910

CROSS REFERENCES	
SHEET	DESCRIPTION
73	UTILITY SYMBOL LEGEND
21	EX. TYPICAL SECTIONS
47	PR. TYPICAL SECTIONS
430 - 489	SUBSUMMARIES
679 - 710	REMOVAL PLAN
818 - 832	CROSS SECTIONS
1022	SUPERELEVATION TABLES
1046 - 1047	RAMP TERMINAL DETAILS
1092 - 1120	DRAINAGE PLANS
1174 - 1175	WALL AC
1402	WATER WORK
1643	TRAFFIC SIGNAL PLAN
1716 - 1723	LIGHTING PLAN
1807 - 1817	LANDSCAPING
1869 - 1873	CUY-77-1587 (BRIDGE 9)
2036	CUY-90-1653L (BRIDGE 10)
2383 - 2386	FENCE PLAN



PLAN - RAMP A3
 STA. 586+00.00 TO END

DESIGN AGENCY	B&N burgessniple.com
DESIGNER	AJS
REVIEWER	MRT 5/1/24
PROJECT ID	82382
SHEET	570
TOTAL	2696



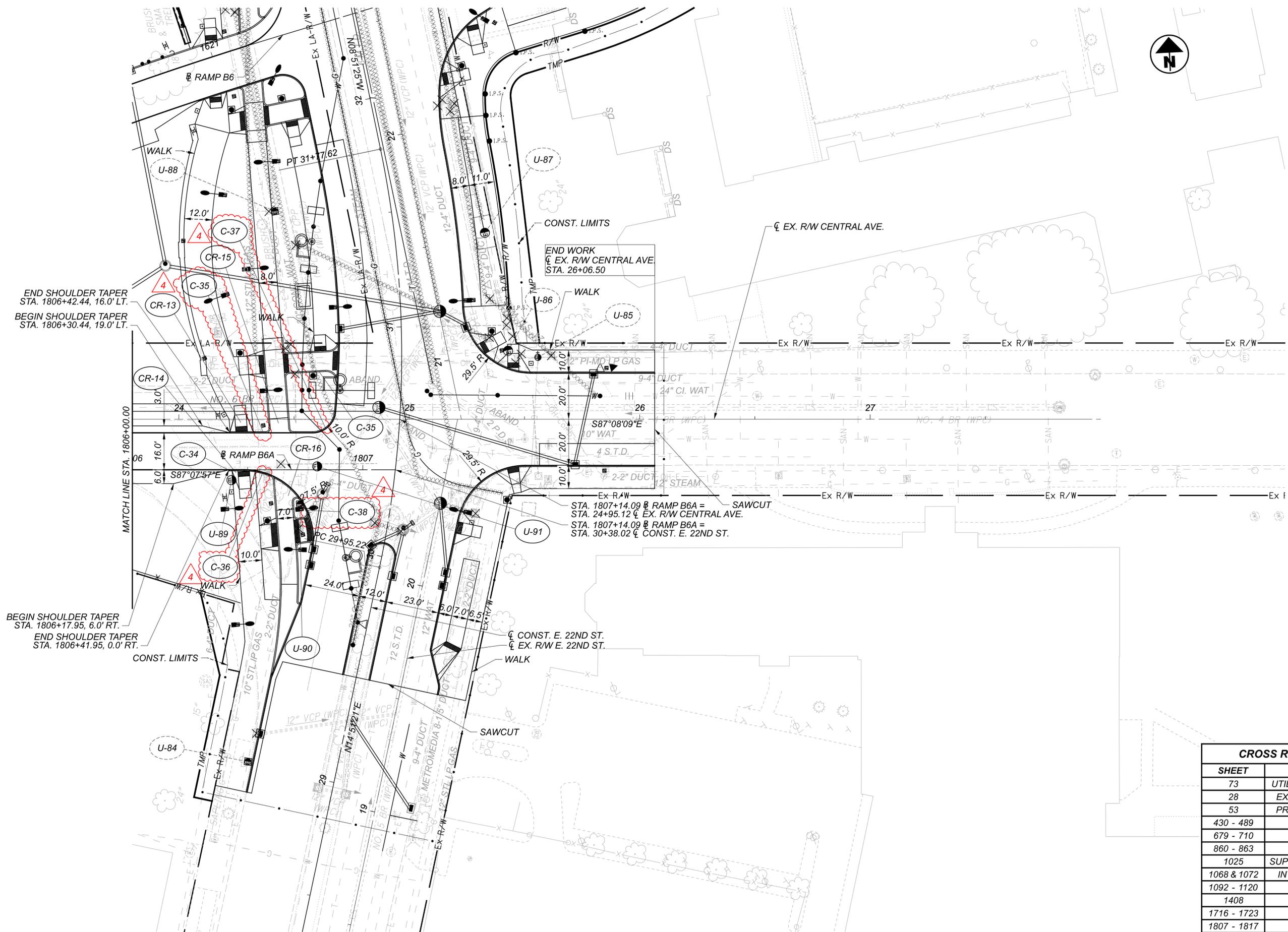
CURVE PRB6-02
 CURVE DATA
 P.I. = Sta. 1618+11.29
 $\Delta = 25^{\circ}51'58''$ RT
 $D_c = 04^{\circ}00'00''$
 $R = 1,432.39'$
 $T = 328.93'$
 $L = 646.65'$
 $E = 37.28'$
 $e_{max} = 0.028$
 $V = 30$ mph
 $PC = \text{Sta. } 1614+82.36$
 $PT = \text{Sta. } 1621+29.01$

STA. 1621+63.53, B RAMP B6 =
 STA. 32+37.41, C E 22ND ST. =
 STA. 499+82.83, C CONST. MIDTOWN CONNECTOR

CROSS REFERENCES	
SHEET	DESCRIPTION
73	UTILITY SYMBOL LEGEND
28	EX. TYPICAL SECTIONS
49 - 53	PR. TYPICAL SECTIONS
430 - 489	SUBSUMMARIES
679 - 710	REMOVAL PLAN
842 - 858	CROSS SECTIONS
1024	SUPERELEVATION TABLES
1067	INTERSECTION DETAIL
1092 - 1120	DRAINAGE PLANS
1317 - 1318	WALL Z
1408	WATER WORK
1663	TRAFFIC SIGNAL PLAN
1716 - 1723	LIGHTING PLAN
1807 - 1817	LANDSCAPING
2383 - 2386	FENCE PLAN

PLAN - RAMP B6
 STA. 1620+00.00 TO END

DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	KJM
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	588
TOTAL	2696



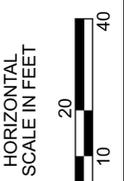
END SHOULDER TAPER
 STA. 1806+42.44, 16.0' LT.
 BEGIN SHOULDER TAPER
 STA. 1806+30.44, 19.0' LT.

BEGIN SHOULDER TAPER
 STA. 1806+17.95, 6.0' RT.
 END SHOULDER TAPER
 STA. 1806+41.95, 0.0' RT.

END WORK
 CL EX. R/W CENTRAL AVE.
 STA. 26+06.50

STA. 1807+14.09 CL RAMP B6A =
 STA. 24+95.12 CL EX. R/W CENTRAL AVE.
 STA. 1807+14.09 CL RAMP B6A =
 STA. 30+38.02 CL CONST. E. 22ND ST.

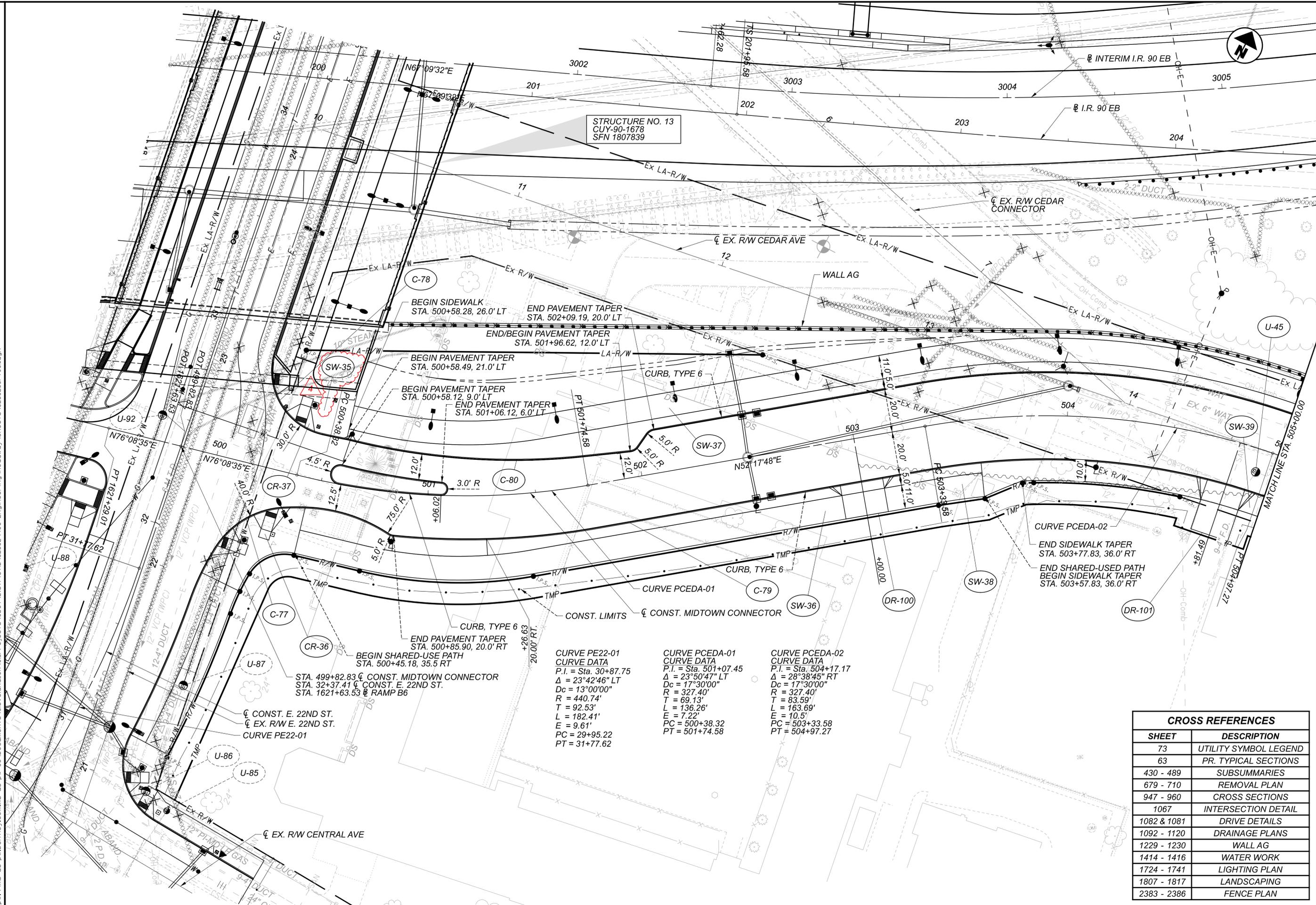
CL CONST. E. 22ND ST.
 CL EX. R/W E. 22ND ST.



PLAN RAMP B6A
 STA. 1806+00.00 TO END

CROSS REFERENCES	
SHEET	DESCRIPTION
73	UTILITY SYMBOL LEGEND
28	EX. TYPICAL SECTIONS
53	PR. TYPICAL SECTIONS
430 - 489	SUBSUMMARIES
679 - 710	REMOVAL PLAN
860 - 863	CROSS SECTIONS
1025	SUPERELEVATION TABLES
1068 & 1072	INTERSECTION DETAIL
1092 - 1120	DRAINAGE PLANS
1408	WATER WORK
1716 - 1723	LIGHTING PLAN
1807 - 1817	LANDSCAPING
2383 - 2386	FENCE PLAN

DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	KJM
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	592
TOTAL	2696

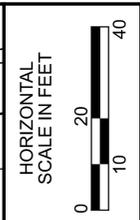


CURVE PE22-01
 CURVE DATA
 P.I. = Sta. 30+87.75
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 $D_c = 13^\circ 00' 00''$
 $R = 440.74'$
 $T = 92.53'$
 $L = 182.41'$
 $E = 9.61'$
 $PC = 29+95.22$
 $PT = 31+77.62$

CURVE PCEDA-01
 CURVE DATA
 P.I. = Sta. 501+07.45
 $\Delta = 23^\circ 50' 47''$ LT
 $D_c = 17^\circ 30' 00''$
 $R = 327.40'$
 $T = 69.13'$
 $L = 136.26'$
 $E = 7.22'$
 $PC = 500+38.32$
 $PT = 501+74.58$

CURVE PCEDA-02
 CURVE DATA
 P.I. = Sta. 504+17.17
 $\Delta = 28^\circ 38' 45''$ RT
 $D_c = 17^\circ 30' 00''$
 $R = 327.40'$
 $T = 83.59'$
 $L = 163.69'$
 $E = 10.5'$
 $PC = 503+33.58$
 $PT = 504+97.27$

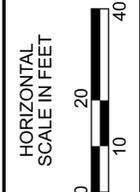
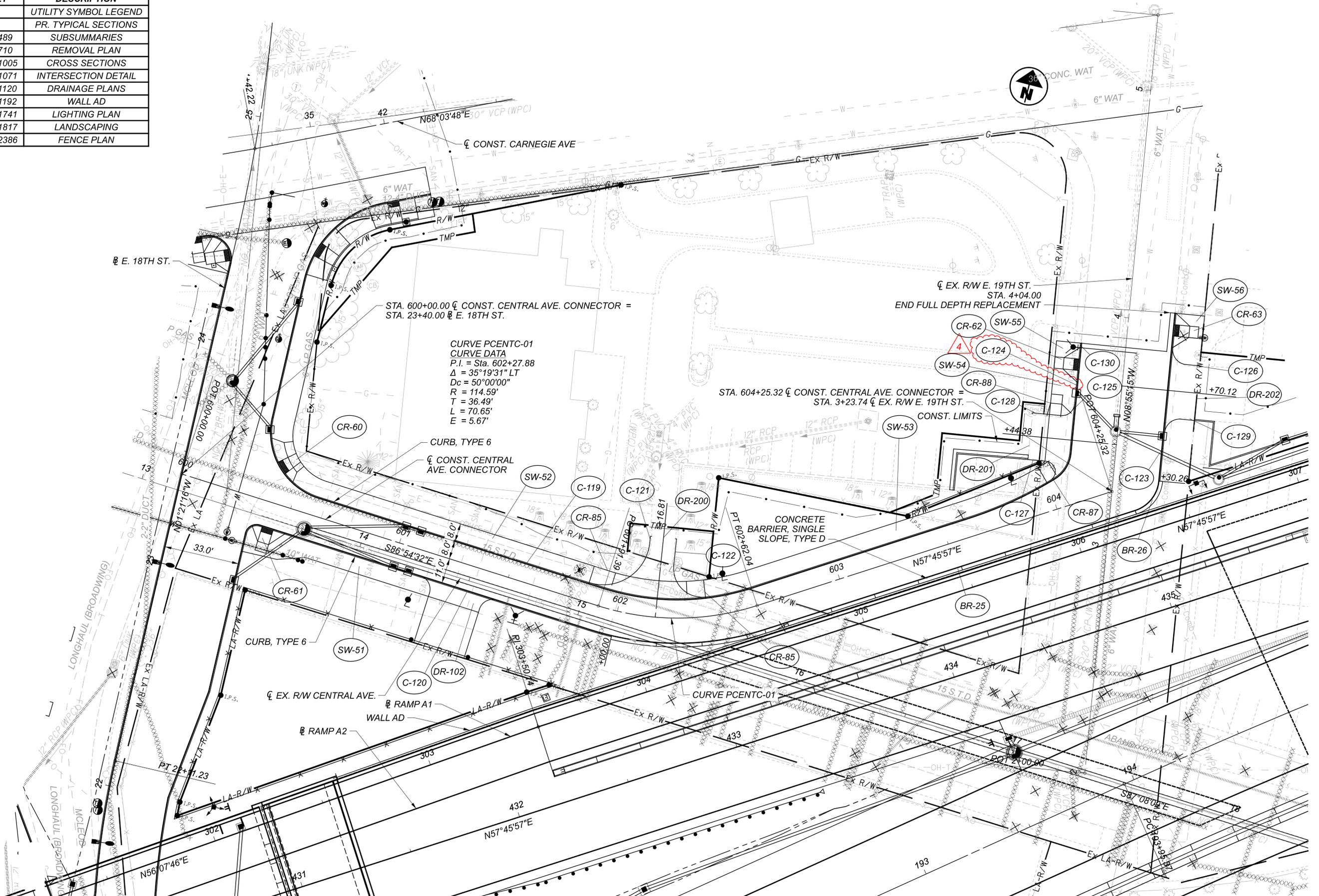
CROSS REFERENCES	
SHEET	DESCRIPTION
73	UTILITY SYMBOL LEGEND
63	PR. TYPICAL SECTIONS
430 - 489	SUBSUMMARIES
679 - 710	REMOVAL PLAN
947 - 960	CROSS SECTIONS
1067	INTERSECTION DETAIL
1082 & 1081	DRIVE DETAILS
1092 - 1120	DRAINAGE PLANS
1229 - 1230	WALL AG
1414 - 1416	WATER WORK
1724 - 1741	LIGHTING PLAN
1807 - 1817	LANDSCAPING
2383 - 2386	FENCE PLAN



PLAN - MIDTOWN CONNECTOR
 BEGIN TO STA. 505+00.00

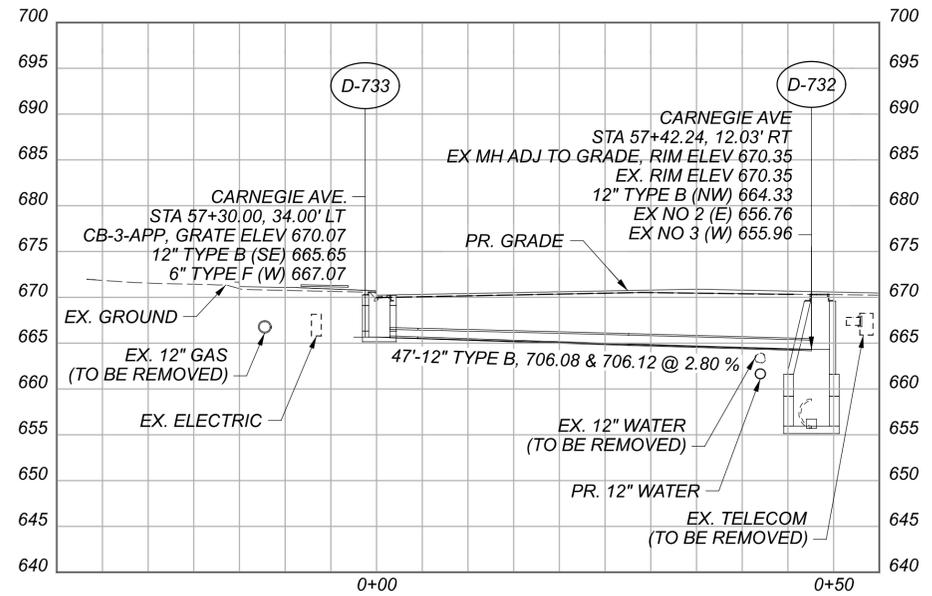
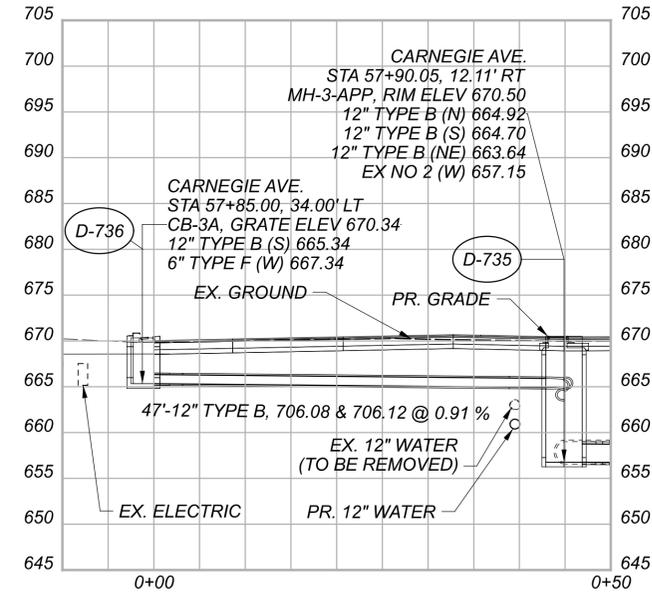
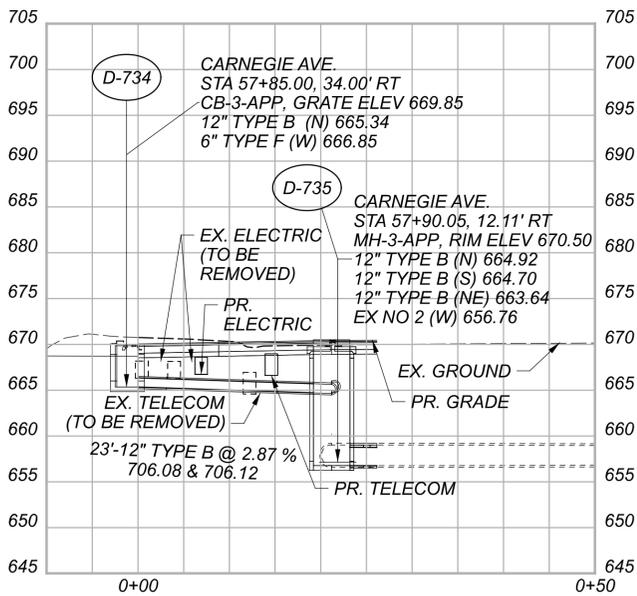
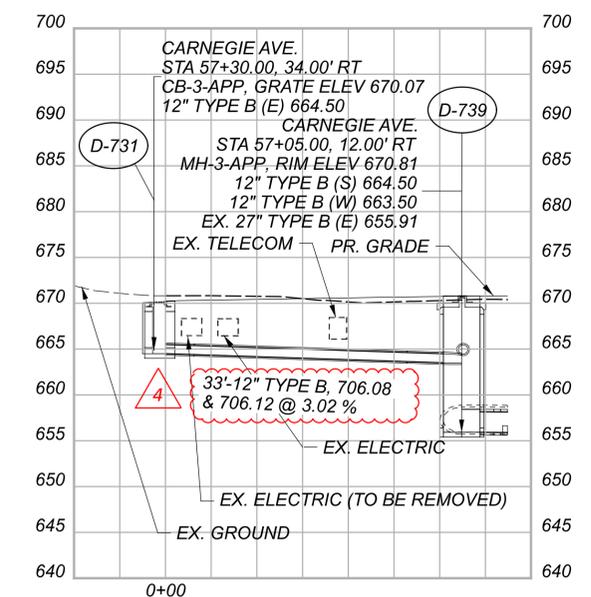
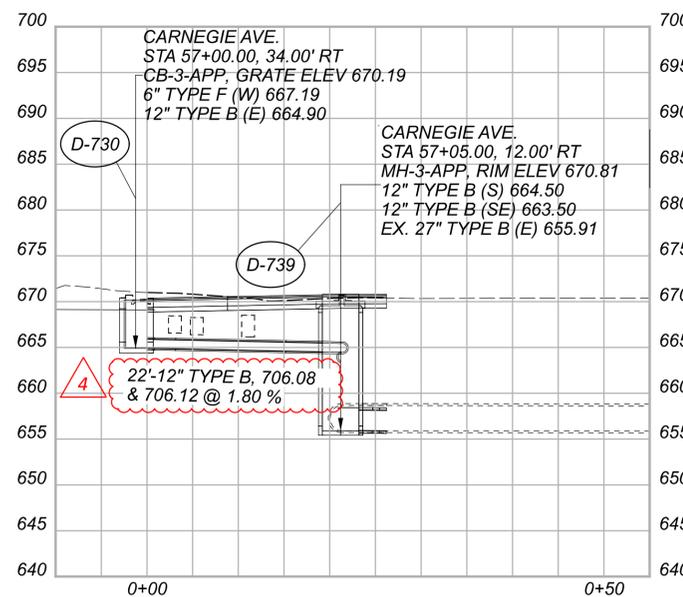
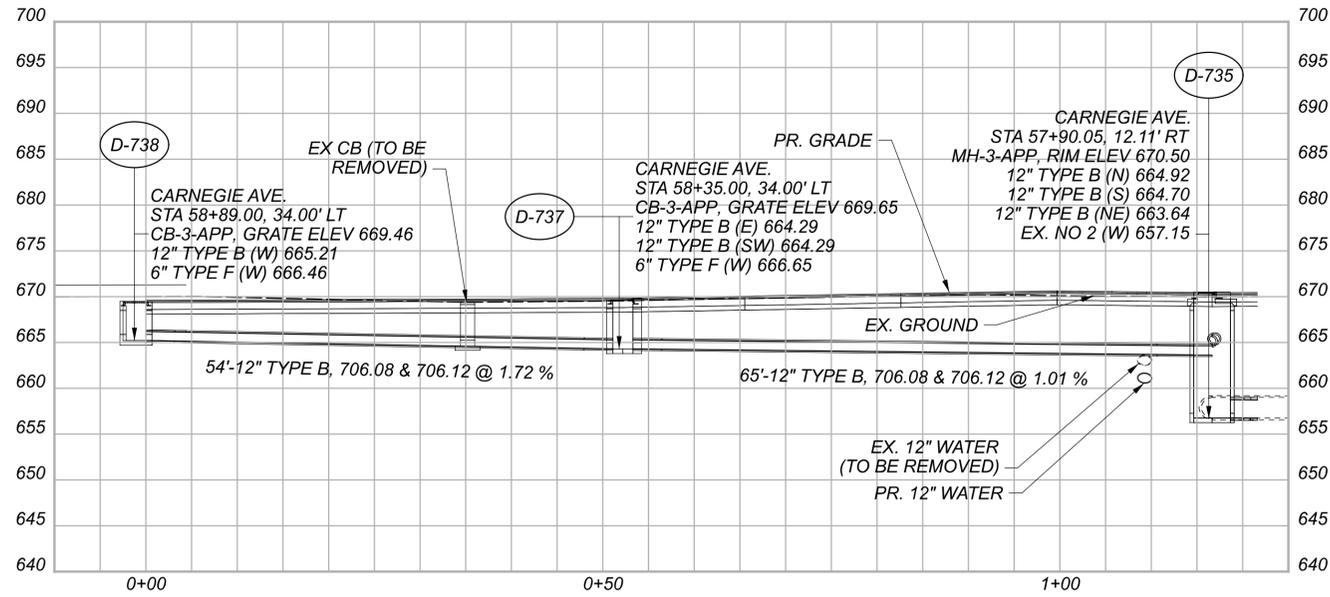
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	KJM
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	638
TOTAL	2696

CROSS REFERENCES	
SHEET	DESCRIPTION
73	UTILITY SYMBOL LEGEND
70	PR. TYPICAL SECTIONS
430 - 489	SUBSUMMARIES
679 - 710	REMOVAL PLAN
1003 - 1005	CROSS SECTIONS
1070 - 1071	INTERSECTION DETAIL
1092 - 1120	DRAINAGE PLANS
1191 - 1192	WALL AD
1724 - 1741	LIGHTING PLAN
1807 - 1817	LANDSCAPING
2383 - 2386	FENCE PLAN



PLAN - CENTRAL AVE. CONNECTOR
 BEGIN TO END

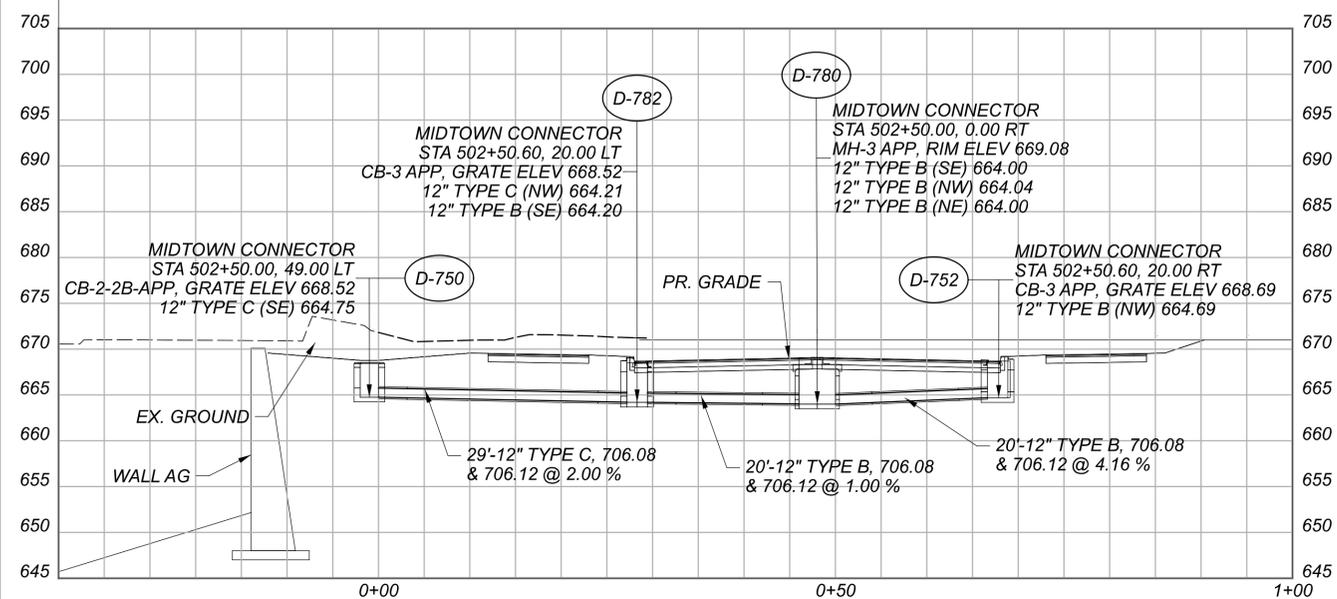
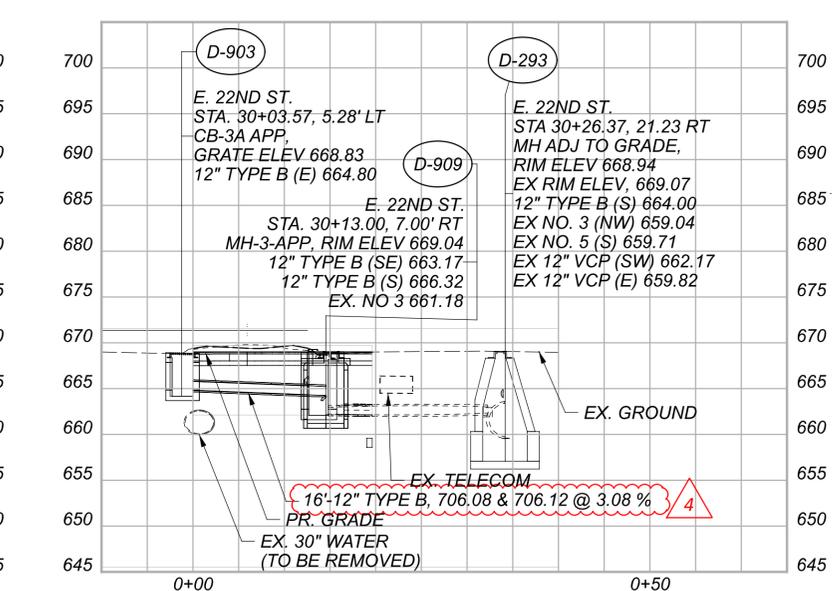
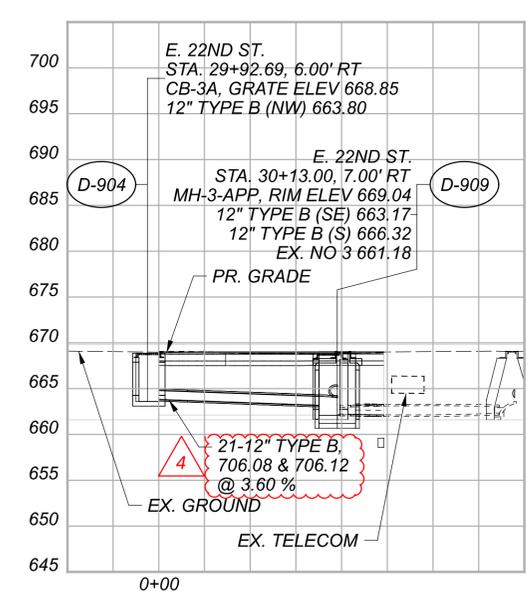
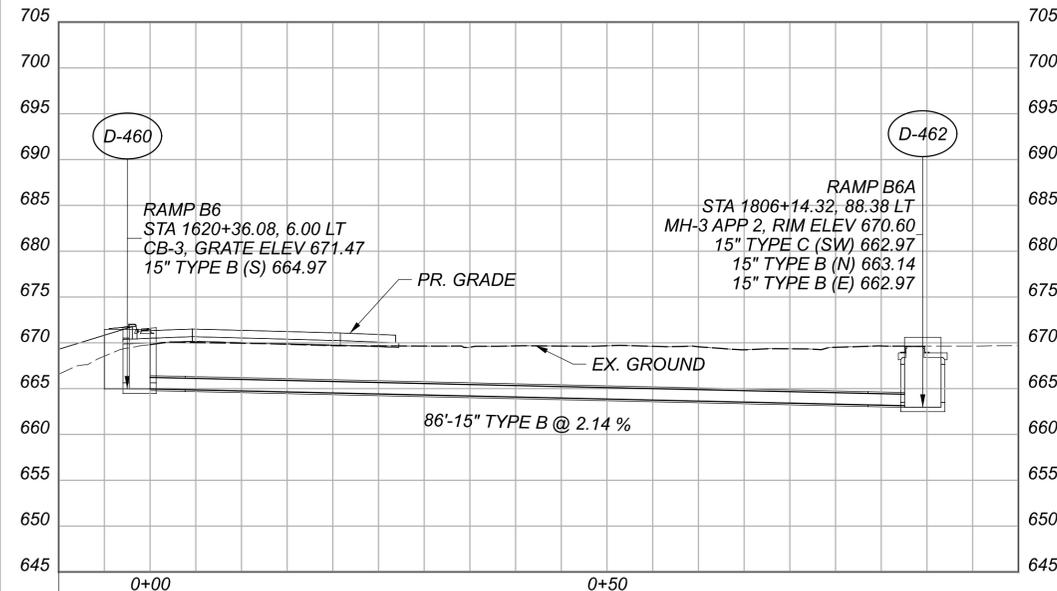
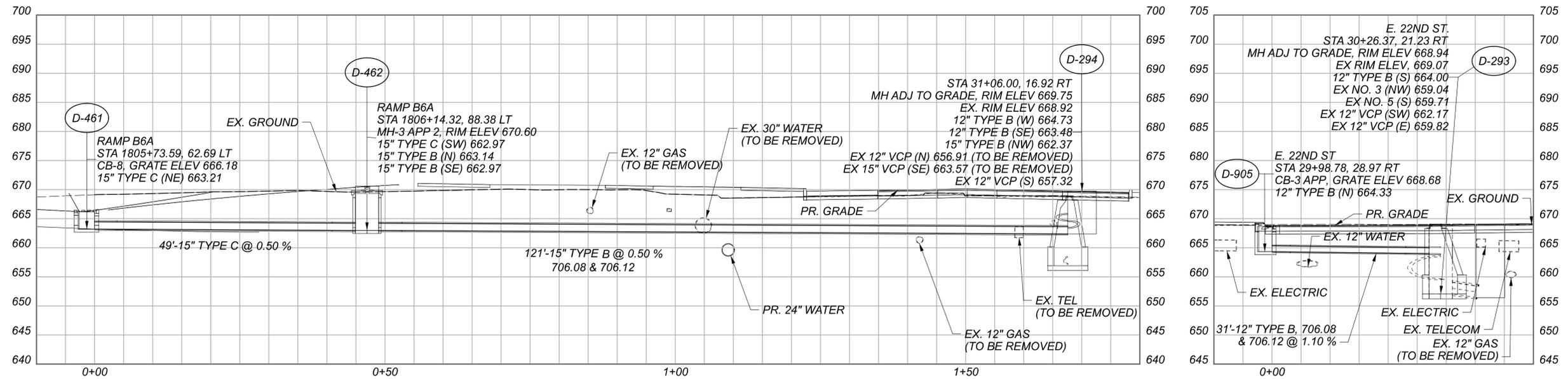
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	KJM
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	TOTAL
671	2696



STORM SEWER PROFILES
CARNEGIE AVE

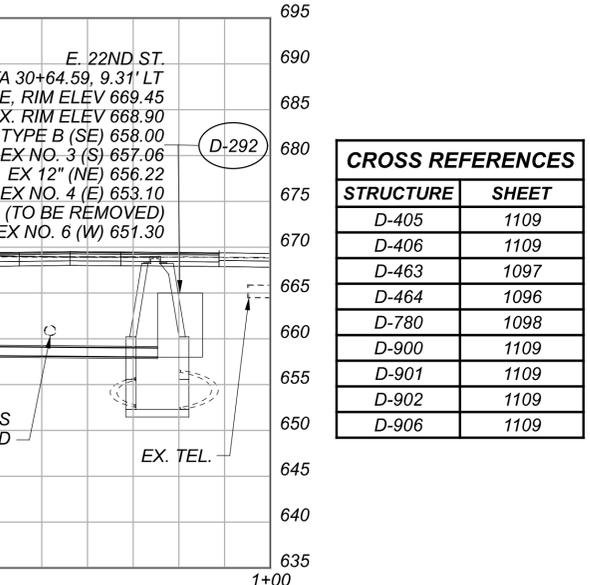
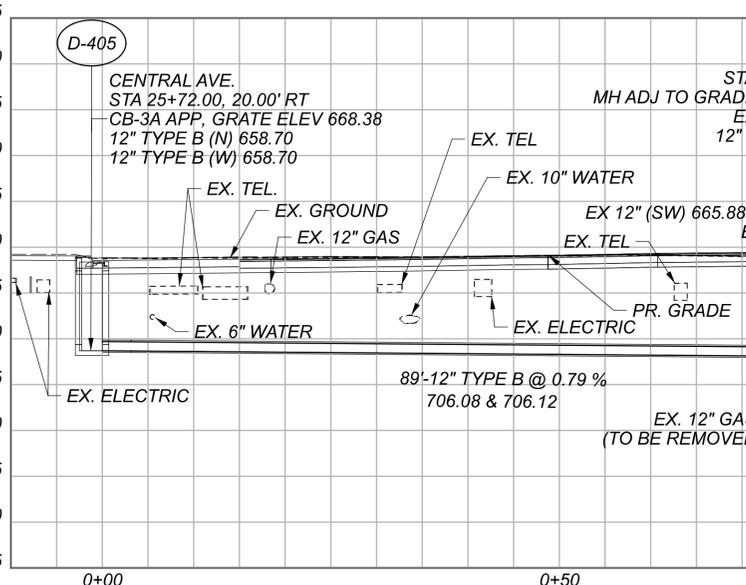
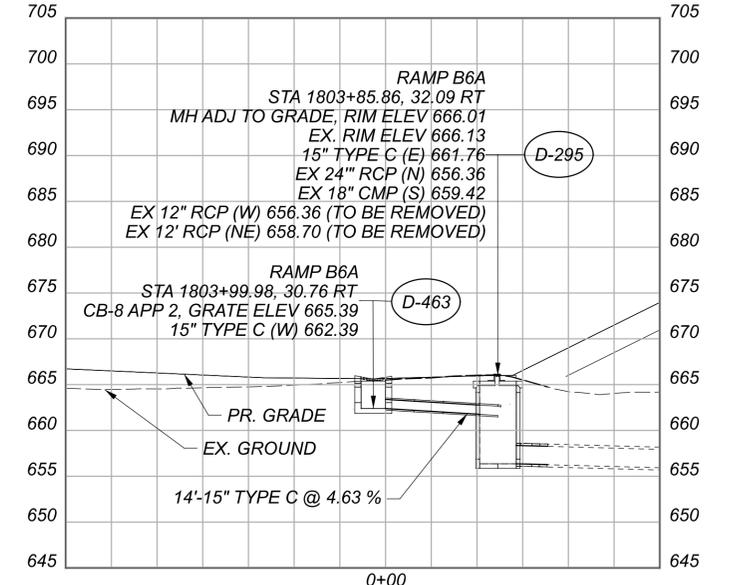
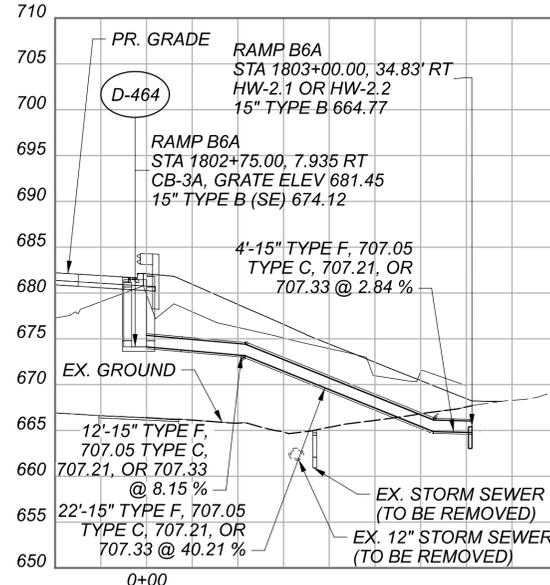
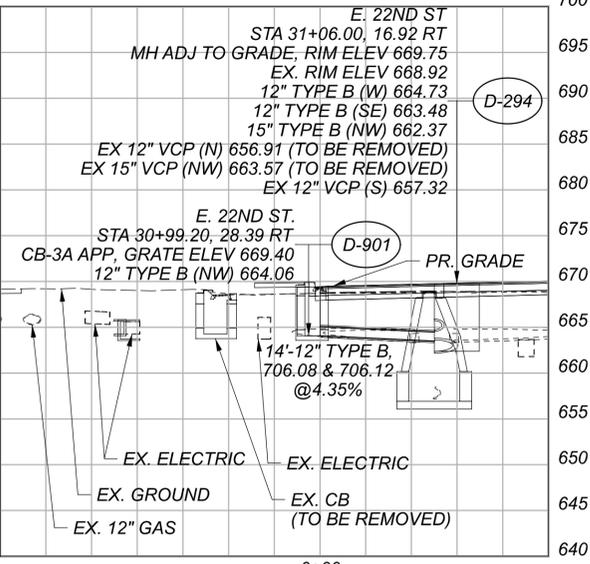
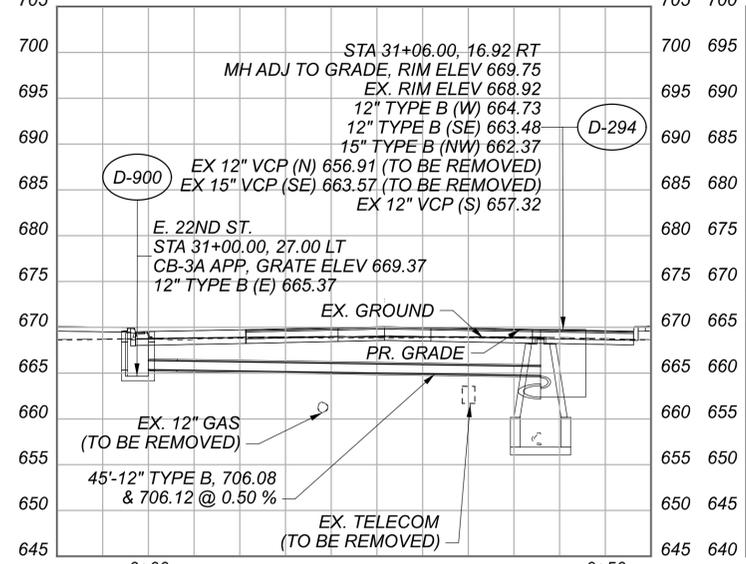
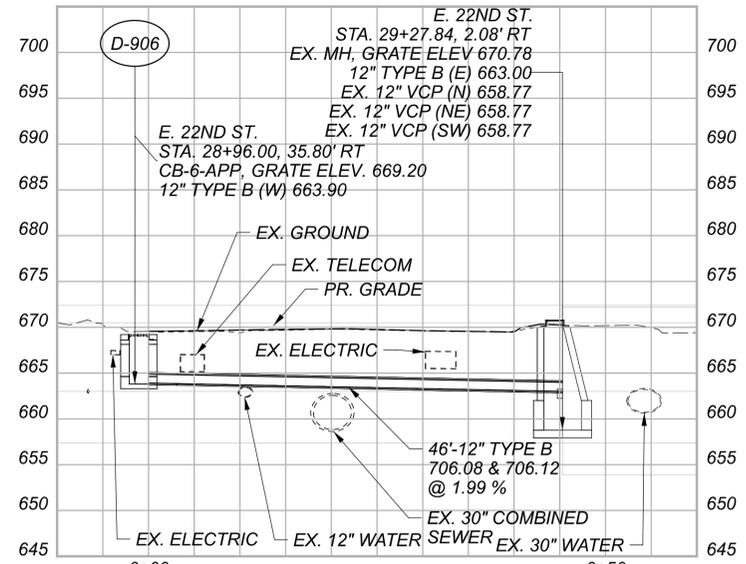
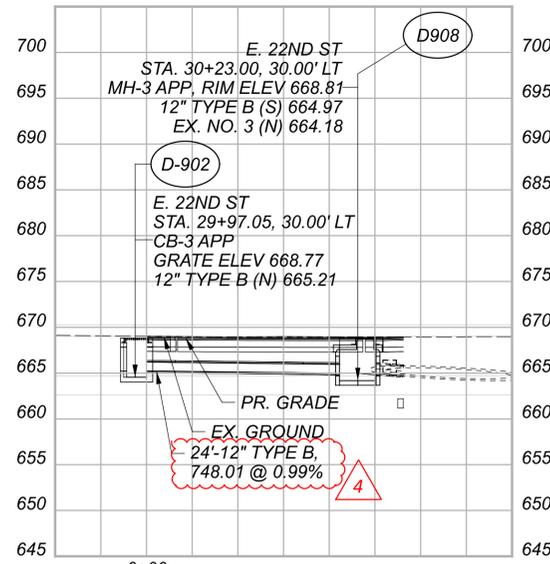
CROSS REFERENCES	
STRUCTURE	SHEET
D-730	1098
D-731	1098
D-733	1099
D-734	1099
D-736	1099
D-737	1099
D-738	1099

DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	CRK
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	TOTAL
1145	2696

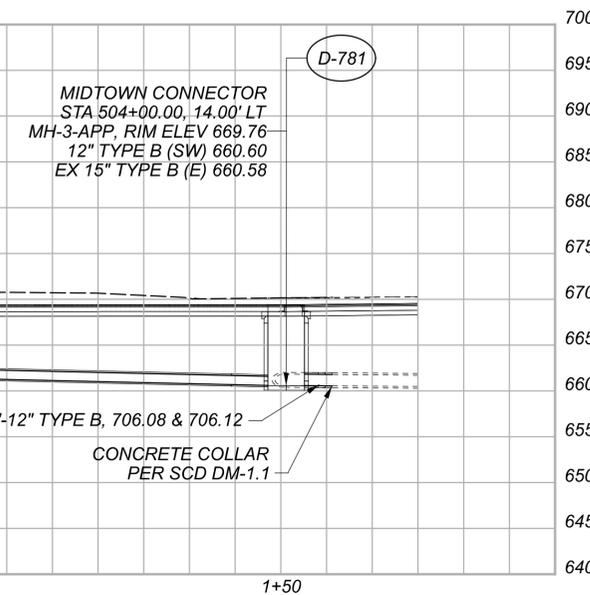
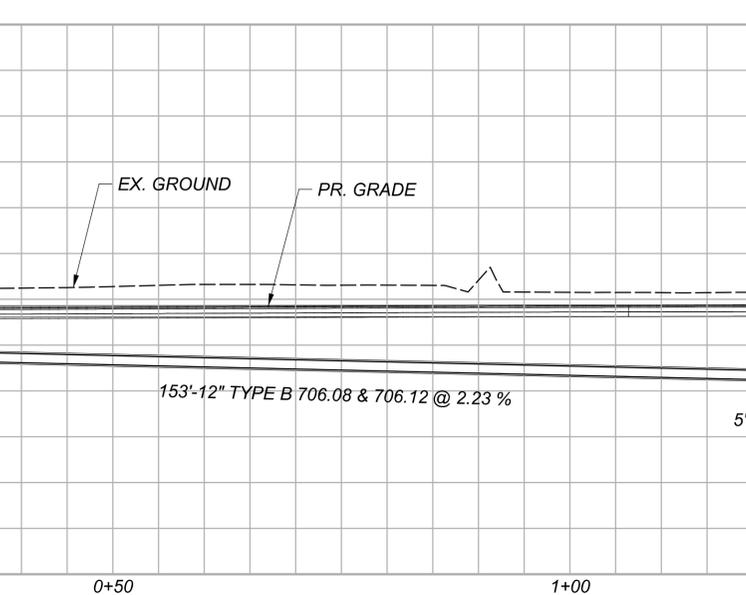
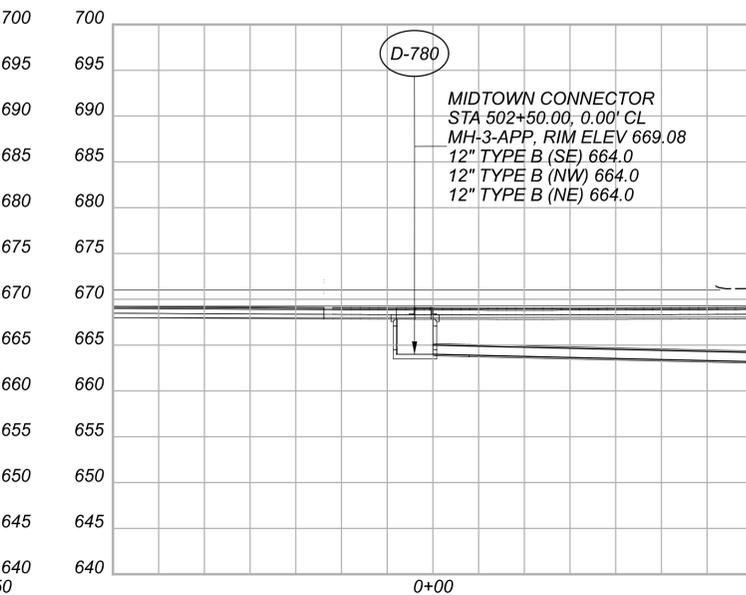
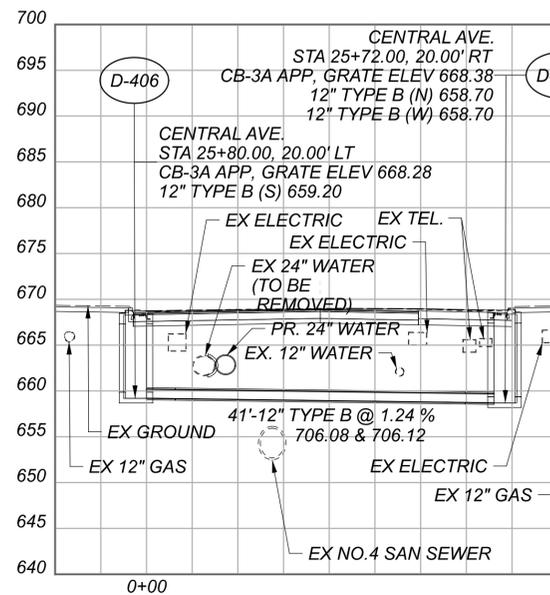


CROSS REFERENCES	
STRUCTURE	SHEET
D-460	1097
D-461	1097
D-462	1097
D-750	1098
D-752	1098
D-782	1098
D-903	1109
D-904	1109
D-905	1109
D-909	1109

DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	BJT
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	TOTAL
1157	2696



CROSS REFERENCES	
STRUCTURE	SHEET
D-405	1109
D-406	1109
D-463	1097
D-464	1096
D-780	1098
D-900	1109
D-901	1109
D-902	1109
D-906	1109



STORM SEWER PROFILES
 RAMP B6A & E. 22ND AVE. & MIDTOWN CONNECTOR

DESIGN AGENCY	
DESIGNER	BJT
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	1158
TOTAL	2696

PROPOSED WORK:
 THE PROPOSED WORK CONSISTS OF CONSTRUCTING RETAINING WALLS AND MOMENT SLABS WITH PARAPETS ALONG THE LEFT SIDE OF I.R.90 WB. THE EAST PORTION OF THE WALL IS TOP DOWN CONSTRUCTION CONSISTING OF SOLDIER PILES, ANCHORS, TIMBER LAGGING AND CAST IN PLACE CONCRETE FACING. THE WEST PORTION OF THE WALL IS BOTTOM UP CONSTRUCTION UTILIZING MSE TYPE WALLS.

REFER TO THE FOLLOWING STANDARD DRAWINGS:
 SBR-1-20 DATED 7-19-24

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
 800 DATED SEE TITLE SHEET 840 DATED 7-21-23
 866 DATED 4-21-17

AND THE FOLLOWING SUPPLEMENT:
 1083 DATED 1-20-17

DESIGN SPECIFICATIONS:
 THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA:
 CONCRETE CLASS QC1 WITH QC/QA - COMPRESSIVE STRENGTH 4.0 KSI (CAST IN PLACE WALL FACING AND COPING)
 CONCRETE CLASS QC5 - COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFTS)
 CONCRETE CLASS QC2 WITH QC/QA - COMPRESSIVE STRENGTH 4.0 KSI (MOMENT SLAB AND PARAPETS)
 REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI
 STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI
 STEEL H-PILES - ASTM A572 - YIELD STRENGTH 50 KSI

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN
 THIS WORK CONSISTS OF EXCAVATION NECESSARY TO INSTALL THE TEMPORARY TIMBER LAGGING AND ANY EMBANKMENT/EXCAVATION REQUIRED TO INSTALL A DRILLING BENCH TO INSTALL THE SOLDIER PILES. THE EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH C&MS 503, EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

THE SOLDIER PILE WALL SHALL BE CONSTRUCTED IN A TOP-DOWN MANNER. EXCAVATION FOR THE WALL SHALL BE MINIMIZED UNTIL ALL SOLDIER PILES ARE INSTALLED. DO NOT EXCAVATE MORE THAN 3 FEET OF THE EXISTING GRADE FOR INSTALLATION OF THE SOLDIER PILES.

REMOVE LOW STRENGTH MORTAR FROM THE PILE AS THE EXCAVATION PROGRESSES, SUFFICIENT TO PLACE THE TIMBER LAGGING AGAINST THE PILE FLANGE. FOLLOW THE EXCAVATION CLOSELY WITH PLACEMENT OF THE TIMBER LAGGING. LIMIT HEIGHT OF UNSUPPORTED, EXPOSED FACE OF SOIL TO 3 FEET OR LESS AS REQUIRED BY LOCAL SITE CONDITIONS DURING EXCAVATION.

CAREFULLY PERFORM EXCAVATION FOR THE INSTALLATION OF LAGGING TO MINIMIZE THE FORMATION OF VOIDS. BACKPACK VOIDS BETWEEN SOIL AND LAGGING WITH NUMBER 57 STONE PER C&MS TABLE 703.01-1 OR APPROVED EQUAL TO THE SATISFACTION OF THE ENGINEER.

EXCAVATION SHALL PROCEED AT A PACE THAT PREVENTS MOVEMENT OF THE WALL AND LOSS OF GROUND. WHEN UNSTABLE MATERIAL IS ENCOUNTERED DURING EXCAVATION, TAKE NECESSARY ACTIONS TO STABILIZE THE MATERIAL AND PREVENT GROUND DISPLACEMENT.

BEFORE PLACING LAGGING, SMOOTH THE SOIL FACE TO CREATE A CONTACT SURFACE FOR THE LAGGING. FLOWABLE FILL SHALL BE PLACED TO FILL LARGE VOIDS BEHIND THE LAGGING. MAINTAIN A GAP OF 1/4 INCH TO 1/2 INCH BETWEEN EACH HORIZONTAL LAGGING BOARD FOR DRAINAGE BETWEEN ADJACENT LAGGING TIMBERS.

PAYMENT FOR LABOR, EQUIPMENT AND MATERIALS FOR THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 503 UNCLASSIFIED EXCAVATION, AS PER PLAN.

ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES HP14X73
 THIS WORK CONSISTS OF FURNISHING AND PLACING STEEL SOLDIER PILES INTO DRILLED HOLES AND INCLUDES MONITORING PLUMBNESS. FURNISH SOLDIER PILES CONSISTING OF STRUCTURAL STEEL MEMBERS THAT MEET THE REQUIREMENTS AND CONFORM TO ASTM A572 GRADE 50. DO NOT FIELD WELD OR SPLICE STEEL SOLDIER PILES. THE ANCHOR DETAIL WHERE THE TIE BACK ANCHOR PASSES THROUGH THE FLANGES AND WEB SHALL BE SHOP FABRICATED AND NOT BE WELDED ON SITE.

MEASUREMENT FOR PAYMENT WILL BE THE DISTANCE FROM THE TOP OF THE PILE TO THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER. PAYMENT IS FULL COMPENSATION FOR FURNISHING AND PLACING THE SOLDIER PILES AND MONITORING THEIR PLUMBNESS UNTIL PLACEMENT OF THE CONCRETE FACING HAS BEGUN. THE DEPARTMENT WILL PAY FOR SOLDIER PILES AT THE CONTRACT UNIT PRICE PER FOOT OF ITEM 507 - STEEL PILES, MISC., SOLDIER PILES HP14X73.

ITEM 511 - CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN
 THIS ITEM CONSISTS OF CONSTRUCTING A CAST IN PLACE REINFORCED CONCRETE WALL ON THE FRONT SIDE OF THE SOLDIER PILES TO SERVE AS PERMANENT FACING OVER THE TEMPORARY TIMBER LAGGING.

HORIZONTAL JOINTS ARE PROHIBITED IN THE CAST IN PLACE CONCRETE FACING.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE CAST IN PLACE FACING, INCLUDING 1/2 INCH AND 1 INCH PREFORMED EXPANSION JOINT FILLER, CONCRETE COPING, DOWELS AT JOINTS, BOND BREAKER AT DOWELS AT EXPANSION JOINTS, NON-BITUMINOUS JOINT SEALER AT THE JOINTS AND FORM LINERS.

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

ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE MOMENT SLABS WITH PARAPETS ALONG THE RETAINING WALL SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET WITH QC/QA. ALL STEEL AND GFRP REINFORCING EMBEDDED IN THE MOMENT SLAB AND WITHIN THE PARAPET SHALL BE INCLUDED IN THE APPROPRIATE ITEM 509 QUANTITY FOR PAYMENT. QUALITY CONTROL MEETING THE REQUIREMENTS OF C&MS 455 AND 511.04 SHALL BE INCLUDED.

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 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

APPLY A PERMANENT GRAFFITI COATING MEETING THE REQUIREMENTS OF SUPPLEMENT 1083. THE GRAFFITI COATING MUST BE COMPATIBLE WITH THE UNDERLYING CONCRETE SEALER. APPLY THE GRAFFITI COATING ACCORDING TO THE MANUFACTURE'S REQUIREMENTS. 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 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

APPLY SEALER TO ALL EXPOSED SURFACES INCLUDING THE CAST IN PLACE CONCRETE FACING AND COPING, MOMENT SLAB PARAPET, 2 INCH HORIZONTAL SURFACE ON THE TOP OF THE MOMENT SLAB FOOTING, MSE WALL PANELS, MSE WALL COPING AND THE 6 INCH THICK CONCRETE SLAB BETWEEN THE MSE COPING AND THE PARAPET. 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 512 - TYPE 2 WATERPROOFING, AS PER PLAN

TYPE 2 WATERPROOFING SHALL BE ATTACHED TO THE WOOD LAGGING, CENTERED AT ALL EXPANSION AND CONTRACTION JOINTS VERTICALLY FROM THE TOP OF THE TIMBER LAGGING DOWN TO THE TOP OF THE POROUS BACKFILL. TYPE 2 WATERPROOFING SHALL ALSO BE ATTACHED TO THE BACK SIDE OF THE CAST IN PLACE CONCRETE FACING AND COPING ABOVE THE TIMBER LAGGING AT ALL EXPANSION AND CONTRACTION JOINTS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIAL FOR THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE PAYMENT PER SQUARE YARD CONTRACT PRICE FOR ITEM 512, TYPE 2 WATERPROOFING, AS PER PLAN.

ITEM 513 - WELDED STUD SHEAR CONNECTORS, AS PER PLAN

STEEL STUDS SHALL BE WELDED ACCORDING TO C&MS 513.22 AND AS SHOWN ON THE PLANS TO THE FRONT FLANGES OF THE SOLDIER PILES FOR CONNECTION OF THE REINFORCED CONCRETE FACING. STUDS SHALL BE SPACED AT 12 INCHES VERTICALLY STARTING 6 INCHES BELOW THE TOP OF THE PILE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL WELDED AND ACCEPTED STEEL STUDS AGAINST DAMAGE UNTIL THE PERMANENT CAST IN PLACE REINFORCED CONCRETE FACING IS CAST. ALL DAMAGED STUDS SHALL BE REPLACED AT NO EXTRA COST TO THE DEPARTMENT.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIAL FOR THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE PAYMENT PER EACH CONTRACT PRICE FOR ITEM 513, WELDED STUD SHEAR CONNECTORS, AS PER PLAN.

ITEM 516 - JOINT SEALER, AS PER PLAN
 HOT APPLIED JOINT SEALER SHALL BE PLACED ABOVE THE 1 INCH PREFORMED EXPANSION JOINT FILLER THAT IS PLACED BETWEEN THE MOMENT SLAB AND THE ROADWAY ASPHALT. JOINT SEALER SHALL MEET THE REQUIREMENTS OF C&MS 705.04.

ITEM 518 - PREFABRICATED GEOCOMPOSITE DRAIN

THIS WORK CONSISTS OF FURNISHING AND PLACING PREFABRICATED GEOCOMPOSITE DRAIN (PGD) AGAINST THE TIMBER LAGGING OR AGAINST THE CONCRETE WALL FACING WHERE THE TIMBER LAGGING IS NOT PRESENT.

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 D5199	0.4 INCH
	COMPRESSIVE STRENGTH	ASTM D1621	13,650 PSF MIN.
	FLOW RATE	ASTM D4716	9 TO 25 GPM/FT.
FABRIC	APPARENT OPENING SIZE	ASTM D4751	0.3 MM MAX.
	FLOW RATE	ASTM D4491	40 GPM/SQ.FT. MIN.
	GRAB TENSILE STRENGTH	ASTM D4632	90 LBS MIN.
	CBR PUNCTURE	ASTM D6241	65 LBS MIN.

PLACE PGD BETWEEN THE SOLDIER PILES, INCLUDING THE CANTILEVERED PORTION AT THE END OF THE WALL. PLACE THE SIDE FACED WITH THE 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 ITS EDGES 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 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.

IF TIMBER LAGGING IS NOT REQUIRED BECAUSE THE PORTION OF THE WALL IS ABOVE THE EXISTING GROUND, ATTACH THE PGD TO THE BACK FACE OF THE CONCRETE WALL FACING UNTIL BACKFILL IS PLACED.

SFN	N/A
DESIGN AGENCY	
B&N burgessniple.com	
DESIGNER	CHECKER
CAS	ODW
REVIEWER	
DWL 06/22/22	
PROJECT ID	
82382	
SUBSET	TOTAL
3	17
SHEET	TOTAL
1176	2696

PARTICIPATION	ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	REF. SHEET
ANCHORED SOLDIER PILE WITH LAGGING WALL						
01/IMS/04	503	21301	1	LS	UNCLASSIFIED EXCAVATION, AS PER PLAN	3/17
01/IMS/04	507	00400	1455	FT	STEEL PILES, MISC.: SOLDIER PILES HP14X73	3/17
01/IMS/04	509	10000	22971	LB	EPOXY COATED STEEL REINFORCEMENT	
01/IMS/04	511	46013	276	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	3/17
01/IMS/04	511	71200	5325	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT	3/17
01/IMS/04	512	10001	266	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)	3/17
01/IMS/04	512	10101	646	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	3/17
01/IMS/04	512	33001	40	SY	TYPE 2 WATERPROOFING, AS PER PLAN	3/17
01/IMS/04	513	20001	663	EACH	WELDED STUD SHEAR CONNECTORS, AS PER PLAN	3/17
01/IMS/04	518	20000	570	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
01/IMS/04	518	21200	20	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
01/IMS/04	518	40000	250	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
01/IMS/04	518	40010	20	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
01/IMS/04	524	94603	775	FT	DRILLED SHAFTS, 30" DIAMETER ABOVE BEDROCK, AS PER PLAN	4/17
01/IMS/04	SPECIAL	530E51020	5225	SF	RETAINING WALL, TIMBER LAGGING	4/17
01/IMS/04	866	00100	9	EACH	GROUND ANCHOR, 122 KIP MAX TEST LOAD	
01/IMS/04	866	00100	22	EACH	GROUND ANCHOR, 113 KIP MAX TEST LOAD	
01/IMS/04	866	00100	9	EACH	GROUND ANCHOR, 100 KIP MAX TEST LOAD	
01/IMS/04	866	00100	22	EACH	GROUND ANCHOR, 77 KIP MAX TEST LOAD	
01/IMS/04	866	00100	22	EACH	GROUND ANCHOR, 73 KIP MAX TEST LOAD	
01/IMS/04	866	00300	1	LS	INVESTIGATIVE ANCHOR PULLOUT TESTS	
01/IMS/04	866	00400	5	EACH	PERFORMANCE TEST	
01/IMS/04	866	00500	2	EACH	EXTENDED CREEP TEST	
MSE WALL						
01/IMS/04	203	20000	120	CY	EMBANKMENT	
01/IMS/04	203	35120	213	CY	GRANULAR MATERIAL, TYPE C	
01/IMS/04	512	10001	329	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)	3/17
01/IMS/04	512	10101	570	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	3/17
01/IMS/04	601	11000	28	SY	RIPRAP, TYPE D	
01/IMS/04	840	20001	5365	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	4/17
01/IMS/04	840	21000	1330	CY	WALL EXCAVATION	
01/IMS/04	840	22000	638	SY	FOUNDATION PREPARATION	
01/IMS/04	840	23000	2631	CY	SELECT GRANULAR BACKFILL	
01/IMS/04	840	25010	810	FT	6" DRAINAGE PIPE, PERFORATED	
01/IMS/04	840	26000	381	FT	CONCRETE COPING	
01/IMS/04	840	26050	4300	SF	AESTHETIC SURFACE TREATMENT	
01/IMS/04	840	27000	5	DAY	ON SITE ASSISTANCE	
01/IMS/04	840	28000	1	LS	SGB INSPECTION AND COMPACTION TESTING	
MOMENT SLAB AND PARAPET						
01/IMS/04	509	10000	65531	LB	EPOXY COATED STEEL REINFORCEMENT	
01/IMS/04	509	30020	9490	FT	NO. 4 GFRP DEFORMED BARS	
01/IMS/04	511	53012	387	CY	CLASS QC2 CONCRETE, MISC.: CONCRETE MOMENT SLAB AND BARRIER WITH QC/QA	3/17
01/IMS/04	512	10101	570	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	3/17
01/IMS/04	516	31001	634	FT	JOINT SEALER, AS PER PLAN	3/17

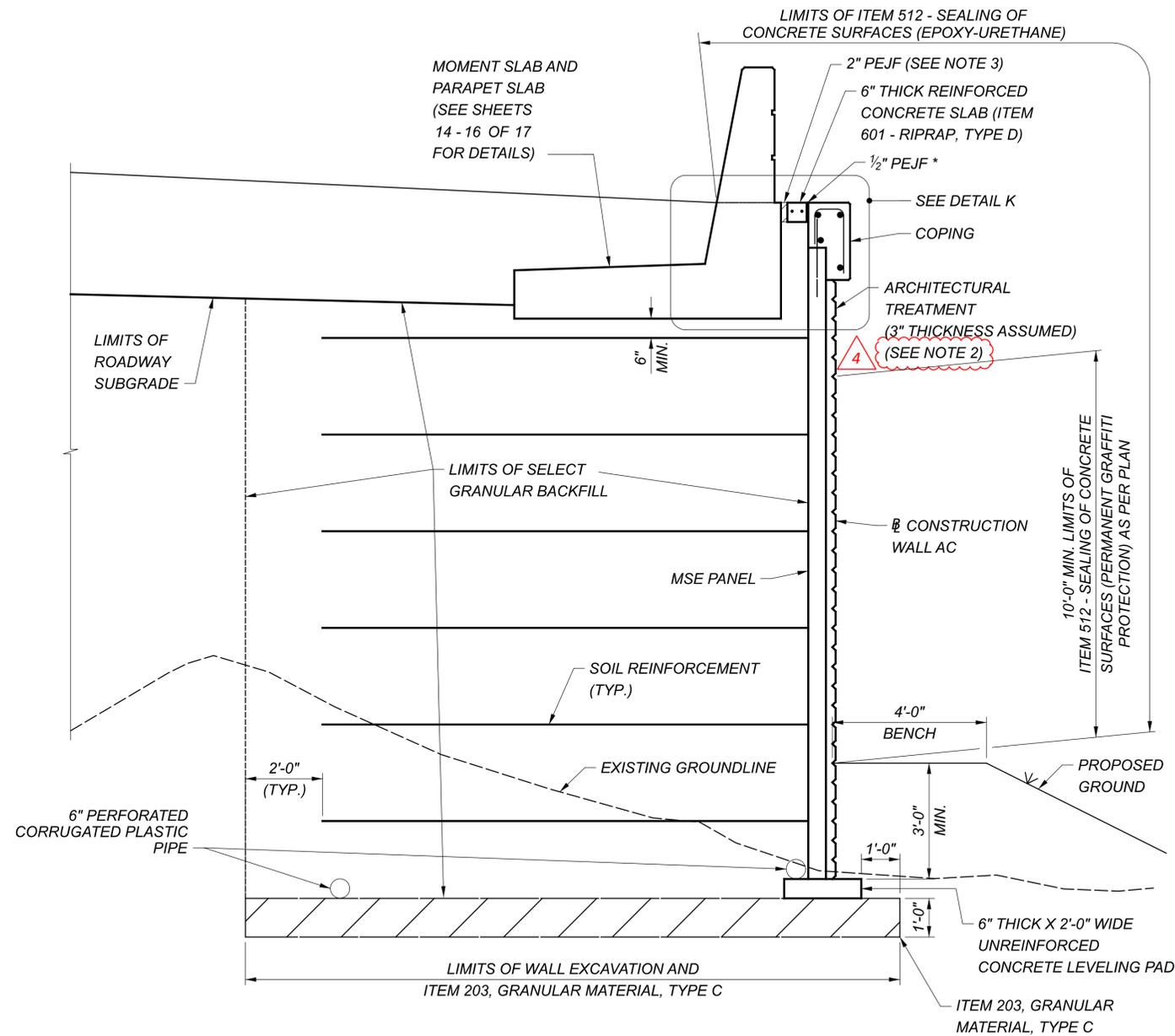
ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

- | | |
|---|--|
| ABUT. - ABUTMENT
APPR. - APPROACH
@ - BASELINE
BOT. - BOTTOM
BRG. - BEARING
BRGS. - BEARINGS
BTA - BRIDGE TERMINAL ASSEMBLY
@ - CENTERLINE
C/C - CENTER TO CENTER
CIP - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CLR. - CLEARANCE
CP - COMPLETE PENETRATION BUTT WELD
C&MS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. - CONCRETE
CONST. - CONSTRUCTION
C.P.P. - CORRUGATED PLASTIC PIPE
CS - INDICATES BUTT WELD SUBJECT TO COMPRESSIVE STRESSES ONLY
CU YD - CUBIC YARD
CVN - CHARPY V-NOTCH TESTING
DIA. - DIAMETER
E.F. - EACH FACE
ELEV., EL. - ELEVATION
EQ. - EQUAL
EX. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F.F. - FAR FACE
F/F - FACE TO FACE
F.S. - FIELD SPLICE
FT/FT - FOOT PER FOOT
FTG. - FOOTING
FWD. - FORWARD
GEN. - GENERAL
INT. - INTEGRAL
LF - LEFT FORWARD
LT. - LEFT
MAX. - MAXIMUM
M.E. - MATCH EXISTING
MIN. - MINIMUM
MISC. - MISCELLANEOUS
MOT - MAINTENANCE OF TRAFFIC | NPCPP - NONPERFORATED CORRUGATED PLASTIC PIPE
N.F. - NEAR FACE
NO./# - NUMBER
O/O - OUT TO OUT
P.C.P.P - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PGL - PROFILE GRADE LINE
PROP. - PROPOSED
PT - POINT OF TANGENCY
PVC - POINT OF VERTICAL CURVATURE
PVI - POINT OF VERTICAL INTERSECTION
PVT - POINT OF VERTICAL TANGENCY
R. - RADIUS
R.A. - REAR ABUTMENT
RCP - ROCK CHANNEL PROTECTION
RF - RIGHT FORWARD
RT. - RIGHT
R/W - RIGHT OF WAY
SAN. - SANITARY
SER. - SERIES
SHLDR. - SHOULDER
SHT. - SHEET
S.O. - SERIES OF
SPA. - SPACES OR SPACING
SR - STATE ROUTE
STA. - STATION
STD. - STANDARD
STM. - STORM
STR. - STRAIGHT
TBM - TEMPORARY BENCH MARK
TEMP. - TEMPORARY
T.O.S. - TOE OF SLOPE
T/PARAPET - TOE OF PARAPET
T/T - TOE TO TOE
TYP. - TYPICAL
U.G. - UNDERGROUND
U.N.O - UNLESS NOTED OTHERWISE
VAR. - VARIES
VC - VERTICAL CURVE
VERT. - VERTICAL
W/O - WITHOUT |
|---|--|

ESTIMATED QUANTITIES
 WALL AC
 ALONG NORTH SIDE OF I-90 WB

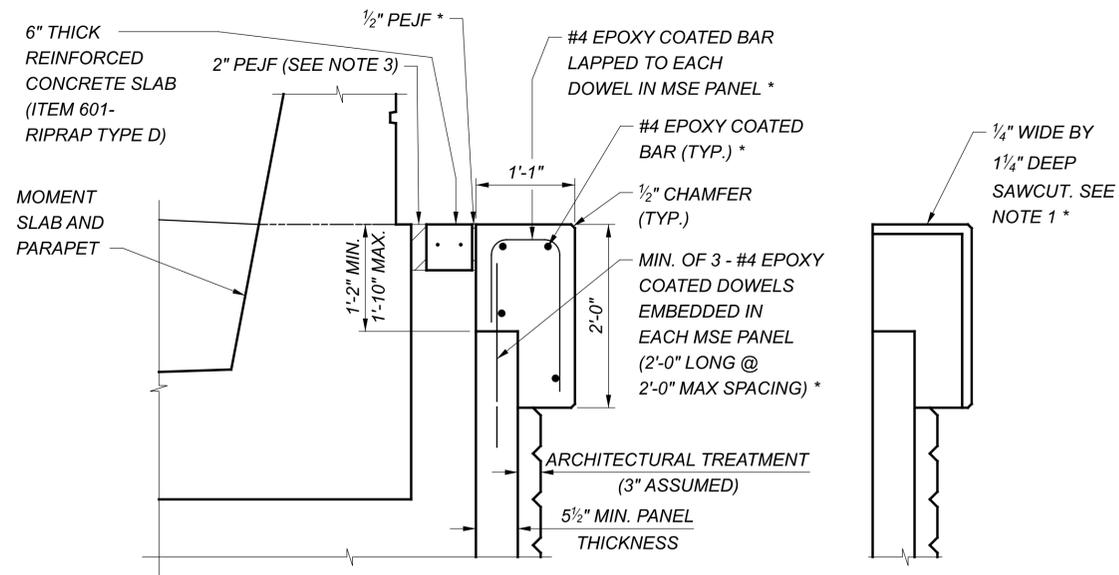
SFN	N/A
DESIGN AGENCY	
B&N burgessniple.com	
DESIGNER	CAS
CHECKER	ODW
REVIEWER	DWL 06/22/22
PROJECT ID	82382
SUBSET	TOTAL
5	17
SHEET	TOTAL
1178	2696



SECTION J-J

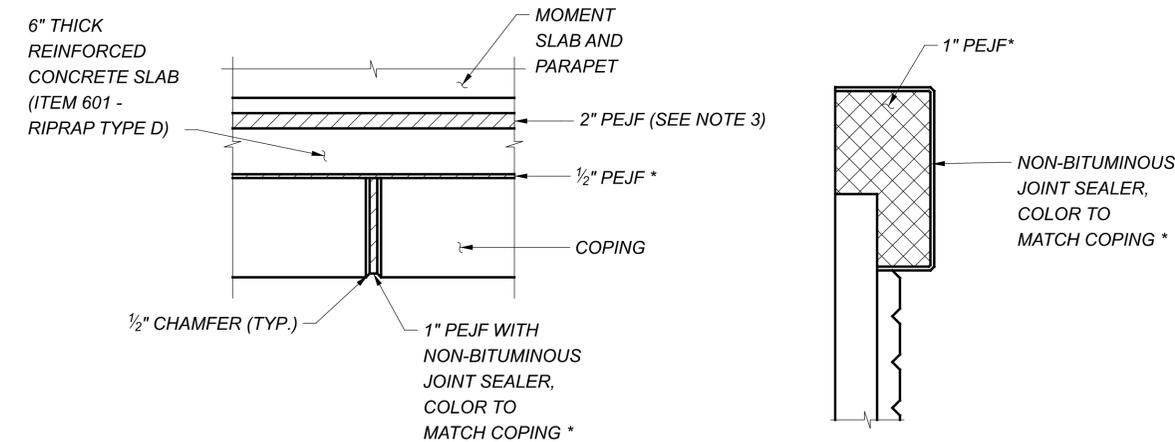
LEGEND:

* = INCLUDE WITH ITEM 840 - CONCRETE COPING, FOR PAYMENT



DETAIL K

SECTION COPING CONTRACTION JOINT



PLAN COPING EXPANSION JOINT

SECTION COPING EXPANSION JOINT

NOTES:

1. CONTRACTION JOINT: SAWCUT 1/4" DEEP CONTROL JOINTS ALONG THE PERIMETER AS SHOWN ON THIS SHEET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

USE AN EDGE GUIDE, FENCE OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE AND ALIGNED ON FACES OF THE MSE COPING. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4".

SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF 1" WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO C920, TYPE S. LEAVE THE BOTTOM 1/2" OF THE OUTSIDE FACES OF THE COPING UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE. COLOR TO MATCH CONCRETE COPING.

2. SEE SHEET 1865 FOR ARCHITECTURAL TREATMENT (AESTHETIC PATTERNS) ON FACE OF MSE PANELS.

3. 2" PEJF IS INCLUDED WITH CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET WITH QC/QA FOR PAYMENT.

4. SEE SHEETS 1 AND 2 OF 17 FOR LOCATIONS OF SECTION J-J.

SECTIONS AND DETAILS - MSE WALL
 WALL AC
 ALONG NORTH SIDE OF I-90 WB

SFN	N/A
DESIGN AGENCY	
DESIGNER	CAS
CHECKER	ODW
REVIEWER	DWL
DATE	06/22/22
PROJECT ID	82382
SUBSET	12
TOTAL	17
SHEET	1185
TOTAL	2696



STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:
 SBR-1-20 REVISED 07-19-24

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:
 800 DATED SEE TITLE SHEET

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

ABBREVIATIONS:

FOR LIST OF ABBREVIATIONS SEE THE QUANTITY SHEET.

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (MOMENT SLAB AND PARAPET)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (CAST-IN-PLACE WALL)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

GFRP - C&MS 705.28 (MODULUS = 8700 KSI)

FOUNDATION BEARING RESISTANCE:

FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LIMIT STATE BEARING PRESSURE OF 2.80 KSF AND A MAXIMUM STRENGTH LIMIT STATE BEARING PRESSURE OF 4.49 KSF. THE FACTORED BEARING RESISTANCE IS 7.6 KSF.

UTILITY LINES:

THE UTILITY(IES) SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

WALL EXCAVATION:

LIMITS OF WALL EXCAVATION SHOWN IN WALL SECTION ON THIS SHEET IS FOR QUANTITY PURPOSES ONLY. CONTRACTOR HAS THE OPTION TO USE AN EXCAVATED SLOPE OR SUPPORTED EXCAVATION, SEE MAINTENANCE OF TRAFFIC PLANS FOR ANY REQUIRED WORK ZONE SHEETING.

MAINTENANCE OF TRAFFIC:

REFER TO THE OVERALL PROJECT MAINTENANCE OF TRAFFIC FOR ADDITIONAL INFORMATION WITH RESPECT TO MAINTENANCE OF TRAFFIC.

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



ITEM 511, CLASS QC2 CONCRETE, MISC.: MOMENT SLAB WITH QC/QA

ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE MOMENT SLABS ALONG THE RETAINING WALLS SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE. 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 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN:

SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) SHALL BE APPLIED TO ALL EXPOSED SURFACES OF THE CONCRETE PARAPET AND RETAINING WALL AS SHOWN ON THE PLANS. THE COST OF SEALING THE ADDITIONAL SURFACE AREA OF THE AESTHETIC TREATMENT WILL BE CONSIDERED INCIDENTAL TO THIS ITEM. THE COLOR OF THE SEALANT TO BE USED IS SPECIFIED IN THE AESTHETIC PORTION OF THE PLANS.

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. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

SEALING LIMITS TO MATCH THAT OF THE EPOXY-URETHANE SEALER.

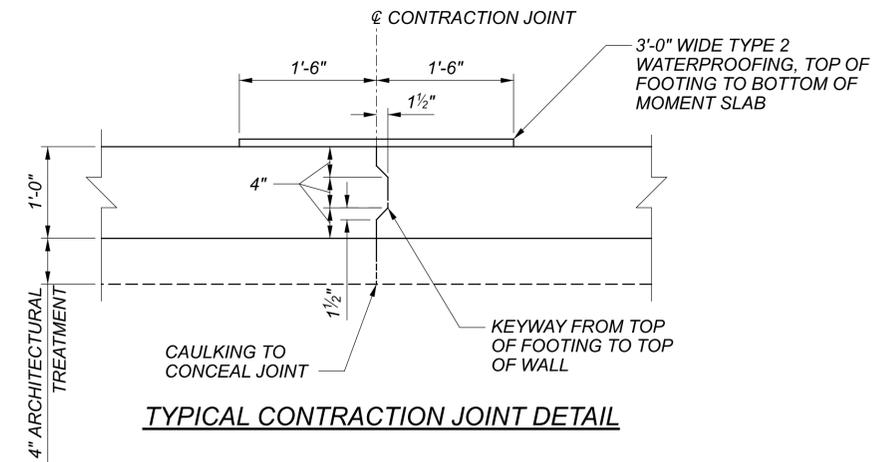
ITEM 516 - JOINT SEALER, AS PER PLAN:

HOT APPLIED JOINT SEALER SHALL BE APPLIED ABOVE THE 1" PREFORMED EXPANSION JOINT FILLER THAT IS PLACED BETWEEN THE MOMENT SLAB AND ROADWAY ASPHALT. JOINT SEALER SHALL MEET THE REQUIREMENTS OF ODOT CMS 705.04.

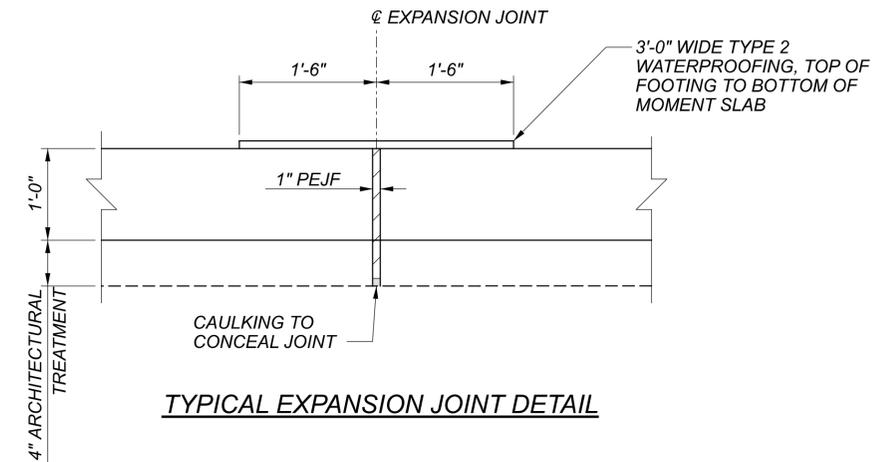
ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN:

SEAL ALL RETAINING WALL EXPANSION JOINTS WITH NON-SAG POLYURETHANE SEALANT CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM 1/2" UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

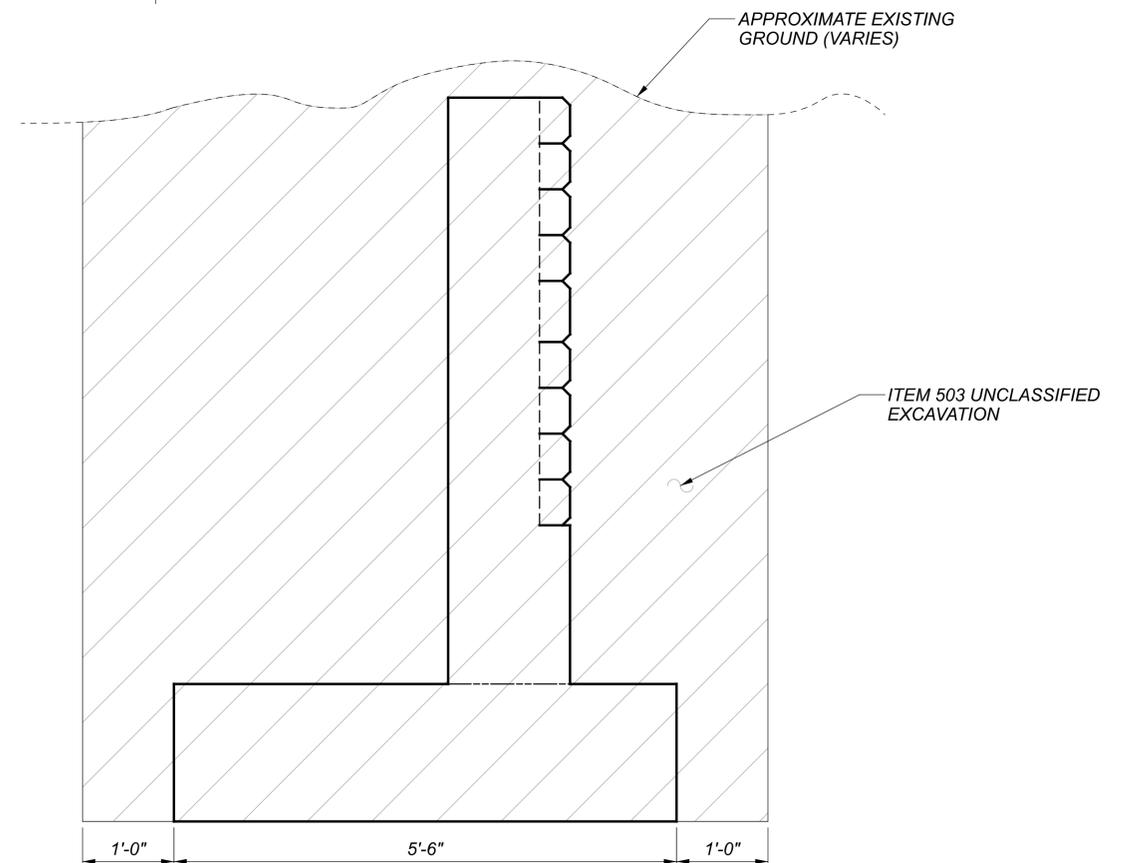
THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO THE PEJF AND JOINT SEAL NECESSARY TO FORM AND PLACE THE RETAINING WALL EXPANSION JOINTS. PAYMENT FOR THIS ITEM SHALL INCLUDE ALL OTHER NECESSARY MATERIAL, LABOR, AND EQUIPMENT AND SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 516 - 1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN.



TYPICAL CONTRACTION JOINT DETAIL



TYPICAL EXPANSION JOINT DETAIL



TYPICAL UNCLASSIFIED EXCAVATION SECTION

WALL GENERAL NOTES
 WALL AE
 ALONG SOUTH SIDE OF RAMP A1

SFN	N/A
DESIGN AGENCY	
B&N burgessniple.com	
DESIGNER	CHECKER
JFM	JMK
REVIEWER	
DWL 06/16/22	
PROJECT ID	
82382	
SUBSET	TOTAL
2	10
SHEET	
TOTAL	
1209	2696

ESTIMATED QUANTITIES						
PARTICIPATION	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REFERENCE
01/IMS/04	503	11100	1	LS	COFFERDAMS AND EXCAVATION BRACING	
01/IMS/04	503	21101	559	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	2/10
01/IMS/04	509	10000	30805	LB	EPOXY COATED STEEL REINFORCEMENT	
01/IMS/04	509	30020	2846	FT	NO. 4 GFRP DEFORMED BARS	
01/IMS/04	511	34450	28	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)	
01/IMS/04	511	46012	75	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING	4
01/IMS/04	511	46512	68	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	
01/IMS/04	511	53012	85	CY	CLASS QC2 CONCRETE, MISC.: MOMENT SLAB WITH QC/QA	2/10
01/IMS/04	511	71200	800	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT	2/10
01/IMS/04	512	10001	261	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, PERMANENT GRAFFITI PROTECTION	2/10
01/IMS/04	512	10101	261	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	2/10
01/IMS/04	512	33000	12	SY	TYPE 2 WATERPROOFING	
01/IMS/04	516	31001	209	FT	JOINT SEALER, AS PER PLAN	2/10
01/IMS/04	516	13601	224	SF	1" PREFORMED EXPANSION JOINT FILLER, AS PER PLAN	2/10
01/IMS/04	516	13900	469	SF	2" PREFORMED EXPANSION JOINT FILLER	
01/IMS/04	518	21200	78	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
01/IMS/04	518	40000	212	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
01/IMS/04	518	40010	12	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

- | | |
|---|--|
| ABUT. - ABUTMENT
APPR. - APPROACH
- BASELINE
BOT. - BOTTOM
BRG. - BEARING
BRGS. - BEARINGS
BTA - BRIDGE TERMINAL ASSEMBLY
@ - CENTERLINE
C/C - CENTER TO CENTER
CIP - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CLR. - CLEARANCE
CP - COMPLETE PENETRATION BUTT WELD
C&MS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. - CONCRETE
CONST. - CONSTRUCTION
C.P.P. - CORRUGATED PLASTIC PIPE
CS - INDICATES BUTT WELD SUBJECT TO COMPRESSIVE STRESSES ONLY
CU YD - CUBIC YARD
CVN - CHARPY V-NOTCH TESTING
DIA. - DIAMETER
E.F. - EACH FACE
ELEV., EL. - ELEVATION
EQ. - EQUAL
EX. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F.F. - FAR FACE
F/F - FACE TO FACE
F.S. - FIELD SPLICE
FT/FT - FOOT PER FOOT
FTG. - FOOTING
FWD. - FORWARD
GEN. - GENERAL
INT. - INTEGRAL
LF - LEFT FORWARD
LT. - LEFT
MAX. - MAXIMUM
M.E. - MATCH EXISTING
MIN. - MINIMUM
MISC. - MISCELLANEOUS
MOT - MAINTENANCE OF TRAFFIC | N.F. - NEAR FACE
NO./# - NUMBER
O/O - OUT TO OUT
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PGL - PROFILE GRADE LINE
PROP. - PROPOSED
PT - POINT OF TANGENCY
PVC - POINT OF VERTICAL CURVATURE
PVI - POINT OF VERTICAL INTERSECTION
PVT - POINT OF VERTICAL TANGENCY
R. - RADIUS
R.A. - REAR ABUTMENT
RCP - ROCK CHANNEL PROTECTION
RF - RIGHT FORWARD
RT. - RIGHT
R/W - RIGHT OF WAY
SAN. - SANITARY
SER. - SERIES
SHLDR. - SHOULDER
SHT. - SHEET
S.O. - SERIES OF
SPA. - SPACES OR SPACING
SR - STATE ROUTE
STA. - STATION
STD. - STANDARD
STM. - STORM
STR. - STRAIGHT
TBM - TEMPORARY BENCH MARK
TEMP. - TEMPORARY
T.O.S. - TOE OF SLOPE
T/PARAPET - TOE OF PARAPET
T/T - TOE TO TOE
TYP. - TYPICAL
U.G. - UNDERGROUND
U.N.O - UNLESS NOTED OTHERWISE
VAR. - VARIES
VC - VERTICAL CURVE
VERT. - VERTICAL
W/O - WITHOUT |
|---|--|

ESTIMATED QUANTITIES
 WALL AE
 ALONG SOUTH SIDE OF RAMP A1

SFN	N/A
DESIGN AGENCY	
B&N burgessniple.com	
DESIGNER	CHECKER
DBH	BCS
REVIEWER	
DWL	06/16/22
PROJECT ID	82382
SUBSET	TOTAL
3	10
SHEET	TOTAL
1210	2696

ESTIMATED QUANTITIES

CALCULATED BY: ZES DATE: 04/24/24

CHECKED BY: SSW DATE: 05/14/24

PARTICIPATION	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SHEET REF.
01/IMS/04	503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN	3
01/IMS/04	509	10000	38,614	LB	EPOXY COATED STEEL REINFORCEMENT	
01/IMS/04	510	10000	58	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
01/IMS/04	511	44113	281	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	3
01/IMS/04	511	46013	190	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING, AS PER PLAN	3
01/IMS/04	511	71200	5,490	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT	3
01/IMS/04	512	10001	308	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)	2
01/IMS/04	512	10101	731	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	2
01/IMS/04	513	20000	1,062	EACH	WELDED STUD SHEAR CONNECTORS	
01/IMS/04	516	13600	82	SF	1" PREFORMED EXPANSION JOINT FILLER	
01/IMS/04	518	20000	590	SY	PREFABRICATED GEOCOMPOSITE DRAIN	
01/IMS/04	518	21200	139	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
01/IMS/04	518	40000	554	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	
01/IMS/04	518	40010	60	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	
01/IMS/04	524	94801	1,489	FT	DRILLED SHAFTS, 42" DIAMETER, AS PER PLAN	2
01/IMS/04	524	94900	498	FT	DRILLED SHAFTS, 48" DIAMETER	
01/IMS/04	524	94901	4,194	FT	DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN	2
01/IMS/04	524	95100	1	EACH	DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT	3
01/IMS/04	607	39911	277	FT	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC, AS PER PLAN	3
01/IMS/04	894	10000	7	EACH	THERMAL INTEGRITY PROFILING (TIP) TEST	

ESTIMATED QUANTITIES

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
SW/GZ JC/SD

REVIEWER
LPC 05-09-24

PROJECT ID
82382

SUBSET	TOTAL
4	11

SHEET	TOTAL
1221	2696

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD CONSTRUCTION DRAWINGS:

- VPF-1-90 REVISED 7/21/2023
- DM-1.1 REVISED 1/17/2025

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

- 800 DATED SEE TITLE SHEET

REFER TO THE FOLLOWING SUPPLEMENTS:

- 1073 DATED 4/21/2023
- 1083 DATED 1/20/2017

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 07-21-23).

DESIGN DATA:

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

SEQUENCE OF CONSTRUCTION:

CONSTRUCT WALL S DURING MOT PHASE 4.

SEE MAINTENANCE OF TRAFFIC NOTES FOR ADDITIONAL PHASES AND INFORMATION.

ITEM 507 - STEEL PILES, MISC.: W36X262, 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 S01-S06 AND S37-S42 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.: W36X262, FURNISHED.

ITEM 509 - WALL FACING REINFORCEMENT

THE CONTRACTOR MAY REPLACE THE REINFORCING BARS IN THE RETAINING WALL FACING WITH EPOXY COATED WELDED WIRE FABRIC CONFORMING TO C&MS 709.14. THE EPOXY COATED WELDED WIRE FABRIC MUST PROVIDE AN EQUIVALENT AREA OF STEEL IN EACH DIRECTION AS THE REINFORCING BARS SHOWN IN THE PLANS.

ITEM 512 - TYPE 2 WATERPROOFING, AS PER PLAN

PLACE WATERPROOFING MEMBRANE AT THE LOCATIONS OF THE PROPOSED JOINTS IN THE CONCRETE WALL FACING. PLACE THE WATERPROOFING MEMBRANE OVER THE PREFABRICATED GEOCOMPOSITE DRAIN AND SECURELY ATTACH TO THE TIMBER LAGGING WITH SCREWS AND 1-INCH OUTER DIAMETER FENDER WASHERS. PLACE THE MEMBRANE SO THAT THE ADHESIVE SIDE FACES THE CAST-IN-PLACE CONCRETE. THE SURFACE PREPARATION DESCRIBED IN C&MS 512.08 IS NOT REQUIRED.

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

SEAL SURFACES OF THE CONCRETE FACING AND THE PRECAST CONCRETE LAGGING AS SHOWN IN THE PLANS WITH AN EPOXY-URETHANE SEALER ACCORDING TO C&MS 512. THE FOLLOWING COLORS SHALL BE USED FOR PAINTING AND SEALING STRUCTURAL ELEMENTS:

FACING AND LAGGING SEALER: "ALABASTER" 7008

ALL COLOR NAME AND NUMBER REFERENCES ARE TAKEN FROM THE SHERWIN WILLIAMS COLOR PALATE. THE CONTRACTOR MAY SUBSTITUTE SIMILAR COLORS FROM ALTERNATIVE SUPPLIER'S COLOR PALATE.

ITEM 513 - WELDED STUD SHEAR CONNECTORS

SOLDIER PILES WHICH REQUIRE HEADED STUDS ARE SHOWN IN THE TABLE ON THE TYPICAL SECTION SHEETS FOR EACH WALL. WELD HEADED STEEL STUDS TO THE FLANGES OF THE SOLDIER PILE IN ORDER TO CONNECT THE CONCRETE WALL FACING TO THE SOLDIER PILE. ATTACH HEADED STUDS ACCORDING TO C&MS 513.22 AND AS SHOWN IN THE PLANS. THE CONTRACTOR MAY ATTACH THE STUDS EITHER BEFORE PLACING THE SOLDIER PILE IN THE DRILLED HOLE OR AFTER EXCAVATING IN FRONT OF THE WALL. PROTECT THE HEADED STUDS FROM DAMAGE UNTIL THE CONCRETE WALL FACING IS POURED. REPAIR OR REPLACE DAMAGED HEADED STUDS AT NO EXPENSE TO THE DEPARTMENT.

ITEM 524 - DRILLED SHAFTS, 48" DIAMETER, ABOVE BEDROCK, AS PER PLAN

THIS WORK CONSISTS OF FURNISHING AND INSTALLING DRILLED SHAFTS FOR SOLDIER PILE 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 ACCORDING TO C&MS 524 EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

EXCAVATE THE HOLE FOR THE DRILLED SHAFT WITHIN 3 INCHES OF THE PLAN LOCATION. PLACE THE SOLDIER PILE WITHIN THE HOLE SO IT IS VERTICAL. 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 QC5 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. FILL THE HOLE ABOVE THE CONCRETE TO THE EXISTING GROUND SURFACE WITH ITEM 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. 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 SPECIAL - RETAINING WALL, 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 1/4-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 ALABASTER 7008 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 AND THE DAMAGE SURVEY REPORT FOR ALL WALL PANELS.

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

- DEFECTS THAT INDICATE IMPERFECT MOLDING.
- DEFECTS THAT INDICATE HONEYCOMBED OR OPEN TEXTURE CONCRETE.
- DEFECTS IN THE PHYSICAL CHARACTERISTICS OF THE CONCRETE, OR DAMAGE TO THE AESTHETIC SURFACE TREATMENTS.
- CONCRETE CHIPS OR SPALLS THAT ARE LARGER THAN 4 INCHES WIDE OR 2 INCHES DEEP. REPAIR ALL CHIPS AND SPALLS THAT ARE SMALLER.
- STAINED FORM FACES, DUE TO FORM OIL, CURING OR OTHER CONTAMINANTS.
- SIGNS OF AGGREGATE SEGREGATION.
- 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.
- PANELS THAT DO NOT MEET THE SPECIFIED DIMENSIONAL TOLERANCES.
- UNUSABLE LIFTING INSERTS.
- EXPOSED REINFORCING STEEL.
- 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 SPECIAL - RETAINING WALL, PRECAST CONCRETE LAGGING.

CUY-90-16.28 (CCG3A)

MODEL: Sheet (1 of 2) | PAPER SIZE: 34x22 (in.) | DATE: 10/3/2025 3:19:10 PM | USER: Shane.Weiss | pvc:\mb-us-pw-bentley.com\mb-us-pw-03\Documents\Cleveland_OH101_1\Projects\ODOT\District12\28232400-Engineering\Structures\WALL_S\Sheets\282382_S_WN001.dgn

WALL GENERAL NOTES (1 OF 2)
WALL S
ALONG SOUTH SIDE OF I.R. 77

SFN	N/A
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	CHECKER
SSW	YC
REVIEWER	
LPC	05-09-24
PROJECT ID	82382
SUBSET	TOTAL
2	13
SHEET	TOTAL
1284	2696

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD CONSTRUCTION DRAWINGS:

- F-1.1 REVISED 7/19/2013
- DM-1.1 REVISED 1/17/2025

REFER TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

- 800 DATED SEE TITLE SHEET
- 840 DATED 7/21/2023

REFER TO THE FOLLOWING SUPPLEMENTS:

- 1073 DATED 4/21/2023
- 1083 DATED 1/20/2017

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 07-21-23).

DESIGN DATA:

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI
 (CONCRETE FACING, LEVELING PAD, LOAD DISTRIBUTION SLAB, GRADE BEAM)
 CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (MOMENT SLAB)
 REINFORCING STEEL / WELDED WIRE REINFORCEMENT - MINIMUM YIELD STRENGTH 60 KSI
 RETAINED SOIL UNIT WEIGHT, $\gamma = 120 \text{ pcf}$
 ANGLE OF INTERNAL FRICTION, $\phi = 30^\circ$

SEQUENCE OF CONSTRUCTION:

CONSTRUCT WALL Z DURING MOT PHASE 10.

SEE MAINTENANCE OF TRAFFIC NOTES FOR ADDITIONAL PHASES AND INFORMATION.

MSE WALL DESIGN PARAMETERS:

THE MINIMUM SOIL REINFORCEMENT LENGTH IS AT LEAST 8 FEET OR 70% OF THE WALL HEIGHT, WHICHEVER IS GREATER. FOR WALL SECTIONS AROUND ABUTMENTS, THE STRAP LENGTH WILL NEED TO BE 70% OF THE DISTANCE BETWEEN THE TOP OF THE LEVELING PAD AND THE TOP OF THE PAVEMENT.

FACTORED BEARING RESISTANCE = 16.8 ksf

PROPRIETARY RETAINING WALL DATA:

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH SS840 TO RETAIN EARTH FILL FOR RAMP B6.

THE PROPRIETARY WALL SUPPLIER SHALL PROVIDE SLIP JOINTS LOCATED AS REQUIRED TO ACCOUNT FOR LONG TERM SETTLEMENT AS DESCRIBED IN THE STAGE 2 GEOTECHNICAL REPORT FOR THIS WALL. REFER TO "CUY-90-1652S_WallY-Z_SFE_062022_Stage2.pdf".

ITEM 509 - WALL FACING REINFORCEMENT

THE CONTRACTOR MAY REPLACE THE REINFORCING BARS IN THE RETAINING WALL FACING WITH EPOXY COATED WELDED WIRE FABRIC CONFORMING TO C&MS 709.14. THE EPOXY COATED WELDED WIRE FABRIC MUST PROVIDE AN EQUIVALENT AREA OF STEEL IN EACH DIRECTION AS THE REINFORCING BARS SHOWN IN THE PLANS.

ITEM 511 - CLASS QC1 CONCRETE MISC.: LOAD DISTRIBUTION SLAB WITH QC/QA

ALL PORTIONS OF THE LOAD DISTRIBUTION SLAB SHALL BE PAID FOR UNDER THIS ITEM, UNLESS NOTED OTHERWISE. THIS INCLUDES, BUT IS NOT LIMITED TO LOAD DISTRIBUTION SLAB CONCRETE, JOINT SEALER, COMPACTION AND PREPARATION OF SOIL UNDERNEATH THE SLAB, FASTENERS AND UNISTRUT (OR EQUIVALENT) CHANNEL CONNECTORS, AND ANY OTHER INCIDENTALS REQUIRED TO COMPLETE THE LOAD DISTRIBUTION SLAB.

PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT BID PRICE PER CUBIC YARD FOR ITEM 511 - CLASS QC1 CONCRETE, MISC.: LOAD DISTRIBUTION SLAB WITH QC/QA.

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

ALL PORTIONS OF THE BARRIER MOMENT SLAB SHALL BE PAID FOR UNDER THIS ITEM, UNLESS NOTED OTHERWISE. THIS INCLUDES, BUT IS NOT LIMITED TO MOMENT SLAB CONCRETE, BARRIER CONCRETE, PEJF, SAWCUTTING, JOINT SEALER, SLEEVED DOWELS, TRANSVERSE AND LONGITUDINAL JOINT TREATMENT ADJACENT TO ROADWAY PAVEMENT AND SHOULDERS, COMPACTION AND PREPARATION OF SOIL UNDERNEATH THE SLABS, AND ANY OTHER INCIDENTALS REQUIRED TO COMPLETE THE BARRIER MOMENT SLABS.

PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT BID PRICE PER CUBIC YARD FOR ITEM 511 - CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND BARRIER WITH QC/QA.

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

SEAL SURFACES OF THE MSE WALL PANELS, AND COPING AS SHOWN IN THE PLANS WITH AN EPOXY-URETHANE SEALER ACCORDING TO C&MS 512. THE FOLLOWING COLORS SHALL BE USED FOR PAINTING AND SEALING STRUCTURAL ELEMENTS:

COPING SEALER: "DOVETAIL" 7018
 SUBSTRUCTURE SEALER: "ALABASTER" 7008

ALL COLOR NAME AND NUMBER REFERENCES ARE TAKEN FROM THE SHERWIN WILLIAMS COLOR PALATE. THE CONTRACTOR MAY SUBSTITUTE SIMILAR COLORS FROM ALTERNATIVE SUPPLIER'S COLOR PALATE.

ITEM 512 - TYPE 2 WATERPROOFING, AS PER PLAN

TYPE 2 WATERPROOFING SHALL BE ATTACHED TO THE WOOD LAGGING, CENTERED AT ALL EXPANSION AND CONTRACTION JOINTS VERTICALLY FROM THE TOP OF THE TIMBER LAGGING DOWN TO THE TOP OF THE POROUS BACKFILL. TYPE 2 WATERPROOFING SHALL ALSO BE ATTACHED TO THE BACK SIDE OF THE CAST IN PLACE CONCRETE FACING AND THE TIMBER LAGGING AT ALL EXPANSION AND CONTRACTION JOINTS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIAL FOR THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE PAYMENT PER SQUARE YARD CONTRACT PRICE FOR ITEM 512, TYPE 2 WATERPROOFING, AS PER PLAN.

ITEM 840 - MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN: WIRE FACED WALL

GENERAL:

THIS WORK CONSISTS OF DESIGNING THE INTERNAL STABILITY OF THE WALL; PREPARING SHOP DRAWINGS; AND FABRICATING AND CONSTRUCTING THE WIRE FACED MSE WALLS.

ALL MSE WALL DESIGN, FABRICATION, ERECTION AND CONSTRUCTION SHALL CONFORM TO ODOT SUPPLEMENTAL SPECIFICATION 840 "MECHANICALLY STABILIZED EARTH WALLS" EXCEPT AS MODIFIED BELOW, AND AS SHOWN IN THE PLANS.

MATERIALS:

MATERIALS SHALL COMPLY WITH 840.03 EXCEPT THAT WIRE FACING AND SOIL RETENTION FABRIC SHALL BE PROVIDED INSTEAD OF PRECAST CONCRETE FACING PANELS.

- A. WIRE FACING
THE WIRE FACING SHALL BE WELDED WIRE FABRIC (WWF) SATISFYING THE REQUIREMENTS OF CMS 709.10.
- B. SOIL RETENTION FABRIC
THE INSIDE OF THE WIRE FACED MSE WALL SHALL HAVE RETENTION OR FILTER FABRIC PLACED WITHIN THE REINFORCED FILL AS SHOWN IN THE PLANS. RETENTION FABRIC SHALL BE A WOVEN POLYPOPYLENE FABRIC.

ITEM 840 - MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN: 2 STAGE MSE WALL

GENERAL:

THIS WORK CONSISTS OF DESIGNING THE INTERNAL STABILITY OF THE WALL; PREPARING SHOP DRAWINGS; AND FABRICATING AND CONSTRUCTING THE 2 STAGE MSE WALLS.

ALL MSE WALL DESIGN, FABRICATION, ERECTION AND CONSTRUCTION SHALL CONFORM TO ODOT SUPPLEMENTAL SPECIFICATION 840 "MECHANICALLY STABILIZED EARTH WALLS" EXCEPT AS MODIFIED BELOW, AND AS SHOWN IN THE PLANS. AESTHETIC TREATMENT SHALL BE AS DEPICTED IN THE PLANS.

MATERIALS:

MATERIALS SHALL COMPLY WITH 840.03 EXCEPT THAT WIRE FACING AND SOIL RETENTION FABRIC SHALL BE PROVIDED INSTEAD OF PRECAST CONCRETE FACING PANELS.

- A. WIRE FACING
THE WIRE FACING SHALL BE WELDED WIRE FABRIC (WWF) SATISFYING THE REQUIREMENTS OF CMS 709.10. THE DESIGN SHALL PROVIDE POSITIVE ANCHORAGE OF THE CAST IN PLACE REINFORCED CONCRETE FACING TO THE SOIL REINFORCEMENT.
- B. SOIL RETENTION FABRIC
THE INSIDE OF THE WIRE FACED MSE WALL SHALL HAVE RETENTION OR FILTER FABRIC PLACED WITHIN THE REINFORCED FILL AS SHOWN IN THE PLANS. RETENTION FABRIC SHALL BE A WOVEN POLYPOPYLENE FABRIC.
- C. LEVELING PAD
THE CONCRETE LEVELING PAD SHALL BE CONSTRUCTED PER THE REQUIREMENTS OF 840.03 EXCEPT THAT THE PAD SHALL BE REINFORCED AS SHOWN IN THESE PLANS.
- D. CAST-IN-PLACE FACING
THE CAST-IN-PLACE CONCRETE FACING SHALL BE CONSTRUCTED ON THE FRONT SIDE OF THE WELDED WIRE FABRIC TO SERVE AS A PERMANENT FACING OVER THE WELDED WIRE WALL.

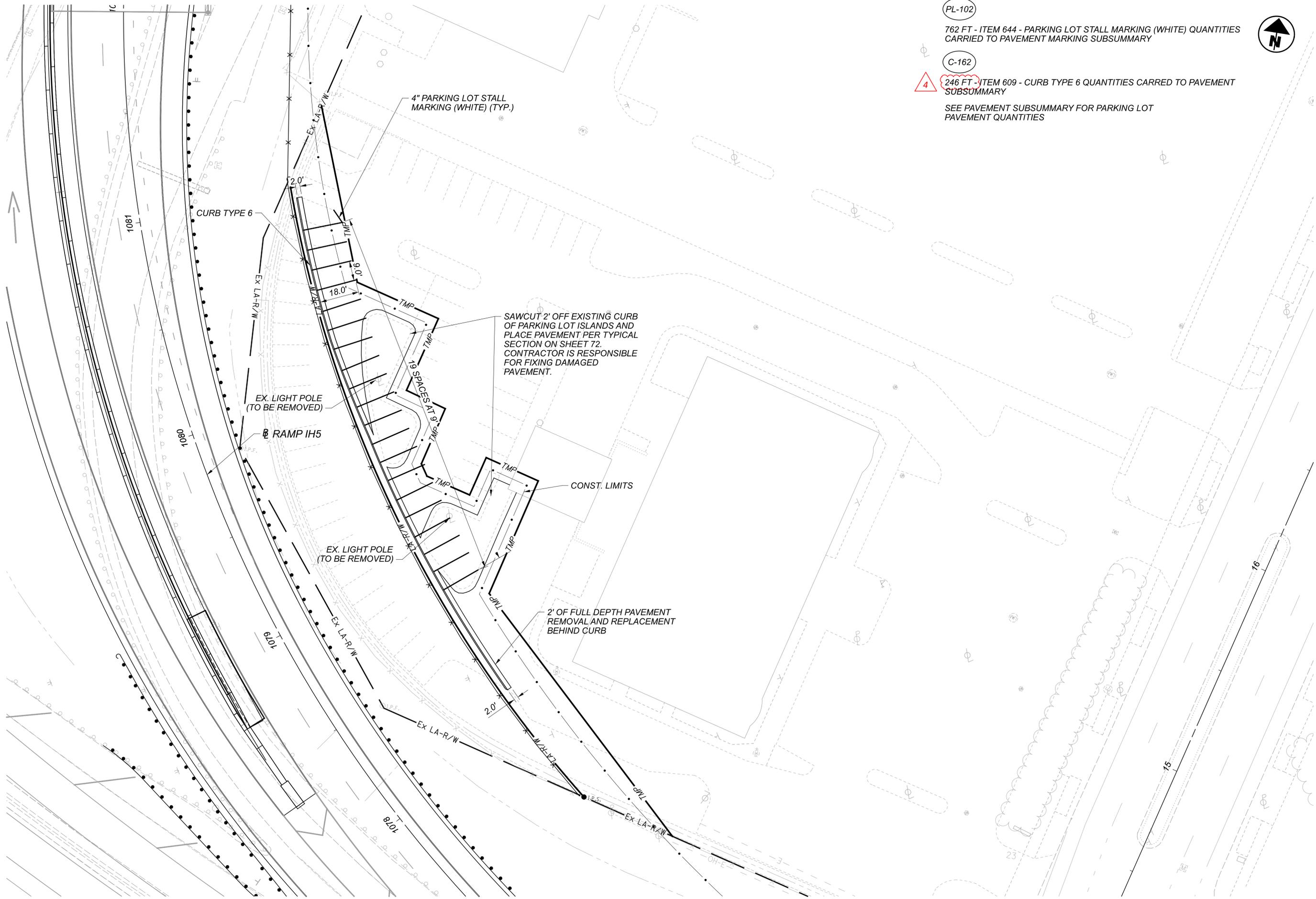


HORIZONTAL JOINTS ARE PROHIBITED IN THE CAST-IN-PLACE CONCRETE FACING.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE CAST-IN-PLACE FACING. THIS INCLUDES, BUT IS NOT LIMITED TO NON-BITUMINOUS JOINT SEALER AT JOINTS AND FORM LINERS. .

GENERAL NOTES (1 OF 2)
WALL Z
ALONG NORTH SIDE OF RAMP B6

SFN	N/A
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	CHECKER
SSW	MKB
REVIEWER	
LPC	05-09-24
PROJECT ID	82382
SUBSET	TOTAL
4	17
SHEET	TOTAL
1320	2696



PL-102

762 FT - ITEM 644 - PARKING LOT STALL MARKING (WHITE) QUANTITIES CARRIED TO PAVEMENT MARKING SUBSUMMARY

C-162

4

246 FT - ITEM 609 - CURB TYPE 6 QUANTITIES CARRIED TO PAVEMENT SUBSUMMARY

SEE PAVEMENT SUBSUMMARY FOR PARKING LOT PAVEMENT QUANTITIES



PARKING DETAIL
2554 E. 22 ST.

DESIGN AGENCY

Michael Baker
INTERNATIONAL

DESIGNER
KJM

REVIEWER
KGJ 05/22/24

PROJECT ID
82382

SHEET TOTAL
1447 2696

LIGHTING ITEMS

ALL MATERIAL AND CONSTRUCTION METHODS FURNISHED FOR FREEWAY / RAMP LIGHTING WORK SHALL COMPLY WITH ODOT C&MS 625.

EXISTING PLANS AND CONSTRUCTION PROJECT NUMBER

CUY / GEA - LG - FY2019

PADLOCKS AND KEYS

PADLOCKS FURNISHED SHALL BE EITHER BRASS OR BRONZE, EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNAN 660A, AND SHALL BE KEYPED IN ACCORDANCE WITH C&MS 631.06. PAYMENT SHALL BE INCLUDED IN THE BID FOR THE ITEM(S) BEING LOCKED.

LABELING LIGHT POLES / TOWER

PRIOR TO THE CONCLUSION OF THE PROJECT, THE CONTRACTOR SHALL PROVIDE LIGHT POLE / TOWER LABELS ON ALL LIGHT POLES / TOWERS REFERENCED IN THE PLAN PACKAGE. THE LABELS SHALL BE CREATED AND APPLIED IN CONFORMANCE WITH ODOT SCD HL-10.12.

PAYMENT FOR THIS ITEM OF WORK IS INCIDENTAL TO THE INSTALLATION OF THE LIGHT POLE / TOWER

ITEM 625 - LIGHT TOWER FOUNDATION, MISC.: 42" X 20' DEEP

LIGHT TOWER FOUNDATION SHALL ADHERE TO THE REQUIREMENTS OF ODOT C&MS 625 AND ODOT SCD HL-20.21 AND SHALL HAVE A DIAMETER OF 42" AND A DEPTH OF 20'.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ODOT C&MS ITEM 625 - LIGHT TOWER FOUNDATION, MISC.: 42" X 20' DEEP, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LIGHT TOWER FOUNDATION, MISC.: 48" X 25' DEEP

LIGHT TOWER FOUNDATION SHALL ADHERE TO THE REQUIREMENTS OF ODOT C&MS 625 AND ODOT SCD HL-20.21 AND SHALL HAVE A DIAMETER OF 48" AND A DEPTH OF 25'.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ODOT C&MS ITEM 625 - LIGHT TOWER FOUNDATION, MISC.: 48" X 25' DEEP, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LIGHT TOWER, MISC.: TOWER LIGHTING RING WITH 4 LUMINAIRE MOUNTS

THIS ITEM OF WORK SHALL INCLUDE FURNISHING AND INSTALLING A NEW LIGHT TOWER RING ON THE EXISTING LIGHT TOWER LOCATED INSIDE THE LOOP OF RAMP 4 AT INTERIM I.R. 90 EASTBOUND STATION 3013+30, 127' RIGHT. THE NEW TOWER LIGHTING RING SHALL HAVE 4 MOUNTS FOR HIGH MAST LUMINAIRES SPACED AT 90 DEGREE INTERVALS.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE FOR ODOT C&MS ITEM 625 - LIGHT TOWER, MISC.: TOWER LIGHTING RING WITH 4 LUMINAIRE MOUNTS, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN

FOUNDATIONS FOR MEDIAN MOUNTED LOW MAST LIGHT POLES SHALL ADHERE TO THE REQUIREMENTS OF ODOT C&MS 622 AND 625 AND ODOT SCD HL-20.13 EXCEPT AS MODIFIED HEREIN.

MEDIAN LIGHT POLE FOUNDATIONS SHALL BE MODIFIED TO BE COMPATIBLE WITH SINGLE SLOPE, TYPE C1 CONCRETE BARRIER AS SPECIFIED IN ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN. REFER TO THE ROADWAY GENERAL NOTES FOR ADDITIONAL DETAIL REGARDING ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE C1, AS PER PLAN.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ODOT C&MS ITEM 625 - MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN FOR EACH MEDIAN MOUNTED LOW MAST LIGHT POLE INCLUDED IN THE PLANS, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (480V)

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 625 & 725, LUMINAIRES SHALL BE ONE OF THE FOLLOWING PRODUCTS:

HOLOPHANE HMLD4-P3-30K-XVOLT-HGR-AW
GE EVOLVE ERHM-03-5-70-VW-7-30-N-1-4B-GRAY-R
COOPER STREETWORKS CELESTEON CST-CA8-430-730-8-T5-AP

ALL FIXTURES SHALL COMPLY WITH ODOT SUPPLEMENTAL SPECIFICATION 813 AND 913.

ITEM 625 - LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN (480V)

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 625 & 725, LUMINAIRES SHALL BE ONE OF THE FOLLOWING PRODUCTS:

FOR ASYMMETRIC FIXTURES:
HOLOPHANE HMLD4-P3-30K-XVOLT-HGR-AW-HMLD4D180
GE EVOLVE ERHM-03-5-40-C6-7-30-N-1-4B-GRAY-R
COOPER STREETWORKS CELESTEON CST-CA8-330-730-8-T3-AP

FOR SYMMETRIC FIXTURES:
HOLOPHANE HMLD4-P3-30K-XVOLT-HGR-AW
GE EVOLVE ERHM-03-5-70-VW-7-30-N-1-4B-GRAY-R
COOPER STREETWORKS CELESTEON CST-CA8-430-730-8-T5-AP

ALL FIXTURES SHALL COMPLY WITH ODOT SUPPLEMENTAL SPECIFICATION 813 AND 913.

ITEM 625 - LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (480V)

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 625 & 725, UNDERPASS LUMINAIRES SHALL BE ONE OF THE FOLLOWING PRODUCTS:

HOLOPHANE W4GLE-10C1000-30K-T3S-480-SPD
GE EVOLVE EWAS-01-5-B3-AW-7-30-N-1-FM-GRAY-F
COOPER STREETWORKS WAL-PAK-WKP-6B-LED-E-8-GL-AP-10K-7030-B

ALL FIXTURES SHALL COMPLY WITH ODOT SUPPLEMENTAL SPECIFICATION 813 AND 913.

ITEM 625 - LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (480V, CROSS FRAME MOUNTED)

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 625 & 725, THE UNDERPASS LUMINAIRE MOUNTED ON THE CROSS FRAME OF BRIDGE 14 (CARNEGIE AVE) SHALL BE ELECTRO-MATIC LE3T2M090GF2G02S-OH OR EQUAL AS APPROVED BY THE ENGINEER. THE FIXTURE SHALL COMPLY WITH ODOT SUPPLEMENTAL SPECIFICATION 813 AND 913.

PAYMENT FOR UNDERPASS LUMINAIRE SHALL ALSO INCLUDE COST FOR FURNISHING AND INSTALLING THE MOUNTING PLATE, A MOUNTING BRACKET TO ORIENT THE LUMINAIRE AS NOTED ON SHEET 2339 AND ALL NECESSARY EQUIPMENT, LABOR AND MATERIALS. THIS ITEM SHALL ALSO INCLUDE GALVANIZING OF THE LUMINAIRE MOUNTING BRACKET AND ATTACHMENT HARDWARE AS DETAILED IN THE PLANS AND ANY FASTENERS, ANCHORS AND BRACKETS NECESSARY BASED ON THE MANUFACTURER'S REQUIREMENTS.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER ODOT C&MS ITEM 625 - LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (480V, CROSS FRAME MOUNTED) FOR EACH LUMINAIRE, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES

IN ADDITION TO THE QUANTITY CALCULATED IN THE LIGHTING SUBSUMMARY SHEETS, THE FOLLOWING CONTINGENCY QUANTITY HAS BEEN CARRIED TO THE LIGHTING GENERAL SUMMARY FOR THIS ITEM:

ITEM 625 - 1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES 175 FT

ITEM 625 - PULL BOX REMOVED, AS PER PLAN

THIS ITEM OF WORK SHALL INCLUDE THE REMOVAL OF AN EXISTING PULL BOX AND PROPER DISPOSAL OFF OF THE PROJECT SITE. THE RESULTANT OPENING SHALL BE BACKFILLED TO GRADE WITH SUITABLE COMPACTED SOIL AND RESTORED TO MATCH THE SURROUNDING AREA.

WHERE A PROPOSED PULL BOX WILL BE PLACED IN THE SAME AREA AS AN EXISTING PULL BOX, THE REMOVAL COST OF THE EXISTING PULL BOX WILL BE INCIDENTAL TO ITEM 625 - PULLBOX.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE FOR ODOT C&MS ITEM 625 - PULL BOX REMOVED, AS PER PLAN, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - PULL BOX, 725.08, 48", TYPE 1, AS PER PLAN

THE CONTRACTOR SHALL FURNISH AND INSTALL A 48" ROUND PULL BOX, TYPE 1, WITH CONCRETE PAD PER ODOT SCD ITS-14.20.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE UNDER ODOT C&MS ITEM 625 - PULL BOX, 725.08, 48", TYPE 1, AS PER PLAN FOR EACH 48" PULL BOX PROPOSED IN THE PLANS, WHICH SHALL INCLUDE FULL COMPENSATION FOR ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - PULL BOX, MISC.: 18" PULL BOX ADJUSTED TO GRADE

THIS ITEM OF WORK SHALL INCLUDE THE ADJUSTMENT TO GRADE OF THE EXISTING PULL BOX LOCATED IN THE GORE OF I-90 AND RAMP 4 (PROSPECT AVENUE TO I-90 EASTBOUND) AT INTERIM I.R. 90 EASTBOUND STATION 3013+05, 39' RIGHT.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE FOR ODOT C&MS ITEM 625 - PULL BOX, MISC.: 18" PULL BOX ADJUSTED TO GRADE, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LIGHTING, MISC.: RELOCATE EX. CONTROL CENTER

THIS ITEM OF WORK SHALL CONSIST OF RELOCATING THE EXISTING CONTROL CENTER "CAR" AT INTERIM I.R. 90 EASTBOUND STATION 3010+87, 106' RIGHT TO THE PROPOSED LOCATION AT INTERIM I.R. 90 EASTBOUND STATION 3012+77, 326' RIGHT, AS INDICATED ON THE PLANS. THIS WORK SHALL BE PERFORMED WHILE MAINTAINING LIGHTING TO REMAIN ON THE EXISTING CONTROL CENTER. SEE CUY / GEA - LG - FY2019 RECORD PLANS FOR CIRCUIT SCHEMATICS AND A PLAN LAYOUT FOR CONTROL CENTER "CAR".

INSTALL A NEW FOUNDATION AT THE PROPOSED LOCATION FOR CONTROL CENTER "CAR" PER ODOT SCD HL-40.20. FEED AND CONNECT NEW CONDUIT AND NO. 4 AWG CIRCUIT WIRE TO RE-ESTABLISH THE PORTIONS OF THE EXISTING CIRCUITS TO REMAIN.

ITEMS REMOVED, WITH THE EXCEPTION OF EXISTING CONTROL CENTER "CAR", SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF THE PROJECT SITE.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE FOR ODOT C&MS ITEM 625 - LIGHTING, MISC.: RELOCATION OF EXISTING CONTROL CENTER AND FOUNDATION, WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 LIGHTING, MISC: FAA TYPE L-810 OBSTRUCTION LIGHTING, LED (120V)

THIS ITEM CONSISTS OF THE INSTALLATION AND TESTING OF A DOUBLE FAA L-810 COMPLAINT OBSTRUCTION LIGHTING FIXTURE, STEPDOWN 480V-120V TRANSFORMER, AND A FUSED DISCONNECT SWITCH. THE PURPOSE OF THIS ITEM IS TO MARK HIGH MAST LIGHTING TOWERS. LOCATION AND WIRING SHALL BE AS SHOWN IN THE LIGHTING PLANS.

EACH OBSTRUCTION LAMP SHALL UTILIZE LIGHT EMITTING DIODES (LEDS). THE OBSTRUCTION LAMP SHALL HAVE A WRITTEN MINIMUM 5-YEAR MANUFACTURER WARRANTY. THE LAMP SHALL BE ETL VERIFIED TO FAA ADVISORY CIRCULAR AC150/5345-43J, TYPE L-810 AND SHALL BE ONE OF THE FOLLOWING OR APPROVED EQUAL.

- 1. FLIGHT LIGHT FL-810LVN
- 2. POINT LIGHTING POL-21006

THE OBSTRUCTION LAMP SHALL OPERATE CONTINUOUSLY TWENTY-FOUR (24) HOURS PER DAY, WITH NO INTERVENING PHOTOCCELL CONTROL.

THE CONTRACTOR SHALL FULLY TEST THE SYSTEM AND ARRANGE FOR ACCEPTANCE INSPECTION OF THE OBSTRUCTION LIGHTING INSTALLATION BY ODOT DISTRICT SIGNAL MAINTENANCE PERSONNEL AFTER THE SYSTEM IS OPERATIONAL. DURING ACCEPTANCE INSPECTION, THE CONTRACTOR SHALL DEMONSTRATE THE PROPER OPERATION OF ALL LAMPS. CONTRACTOR SHALL PROVIDE WRITTEN MANUFACTURER WARRANTY AND ALL OPERATING MANUALS FOR OBSTRUCTION LIGHTING LAMP TO ODOT DISTRICT SIGNAL MAINTENANCE PERSONNEL AT THE TIME OF INSPECTION.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER ODOT C&MS ITEM 625-LIGHTING, MISC: FAA TYPE L-810 OBSTRUCTION LIGHTING, LED, AS PER PLAN (120V) FOR EACH INDIVIDUAL SYSTEM WHICH INCLUDED DOUBLE OBSTRUCTION LIGHTING FIXTURES, STEP DOWN TRANSFORMER, DISCONNECT, AND MISCELLANEOUS MOUNTING HARDWARE.

- ITEM 625 LIGHT TOWER, MISC.: BB80 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
- ITEM 625 LIGHT TOWER, MISC.: BB100 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
- ITEM 625 LIGHT TOWER, MISC.: BB110 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
- ITEM 625 LIGHT TOWER, MISC.: BBB80 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
- ITEM 625 LIGHT TOWER, MISC.: BBB100 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
- ITEM 625 LIGHT TOWER, MISC.: BBB120 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
- ITEM 625 LIGHT TOWER, MISC.: BBBB60 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
- ITEM 625 LIGHT TOWER, MISC.: BBBB90 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
- ITEM 625 LIGHT TOWER, MISC.: BBBB100 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING

ALL LIGHT TOWERS SHALL ADHERE TO ODOT C&MS 625 & 725 AS WELL AS STANDARD CONSTRUCTION DRAWINGS HL-10.31 AND HL-60.21 EXCEPT AS MODIFIED HEREIN.

THIS ITEM OF WORK SHALL INCLUDE FURNISHING AND INSTALLING A NEW LIGHT TOWER RING WITH REQUIRED LUMINAIRE MOUNTS AND 1 DUAL OBSTRUCTION LUMINAIRE MOUNT. OBSTRUCTION LIGHT WIRING IS TO BE ROUTED WITHIN THE LIGHT TOWER, AND BE RAISED/LOWER WITH THE OTHER LIGHTING CIRCUITS VIA THE LUMINAIRE LOWERING DEVICES PROCURED BY THE CONTRACTOR.



DESIGN AGENCY

Michael Baker INTERNATIONAL

DESIGNER JLD

REVIEWER SM 05/22/24

PROJECT ID 82382

SHEET TOTAL 1685 2696

SHEET NUMBER														ITEM	CARRIED TO GENERAL SUMMARY	UNIT	DESCRIPTION				
1684	1685	1692	1693	1694	1695	1696	1697	1698	1699	1700	1701	1702	1703								
				1		1												202	2	EACH	LIGHTING
				1		1												202	2	EACH	REMOVAL OF EXISTING CONTROL CENTER AND FOUNDATION
						2		8		2								625	12	EACH	DISCONNECT EXISTING CIRCUIT
		3				6		6										625	15	EACH	CONNECTION, FUSED PULL APART
		24		33		12		12		27		15						625	123	EACH	CONNECTION, UNFUSED BOLTED
						1		3										625	4	EACH	CONNECTION, UNFUSED PERMANENT
								1										625	2	EACH	LIGHT TOWER, LOW MAST, ALM50
								1										625	2	EACH	LIGHT TOWER, LOW MAST, ATLM50
													1					625	1	EACH	LIGHT TOWER, MISC.: BB80 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
				1		1							1					625	2	EACH	LIGHT TOWER, MISC.: BB100 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
																		625	1	EACH	LIGHT TOWER, MISC.: BB110 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
		1																625	2	EACH	LIGHT TOWER, MISC.: BBB80 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
		2																625	3	EACH	LIGHT TOWER, MISC.: BBB100 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
				1		1		2		1								625	8	EACH	LIGHT TOWER, MISC.: BBB100 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
																		625	1	EACH	LIGHT TOWER, MISC.: BBB120 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
																		625	1	EACH	LIGHT TOWER, MISC.: BBB60 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
																		625	1	EACH	LIGHT TOWER, MISC.: BBBB90 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
																		625	2	EACH	LIGHT TOWER, MISC.: BBBB100 MODIFIED FOR FAA TYPE L-810 OBSTRUCTION LIGHTING
																		625	1	EACH	LIGHT TOWER, MISC.: TOWER LIGHTING RING WITH 4 LUMINAIRE MOUNTS
								1		1								625	2	EACH	LIGHT POLE FOUNDATION, 24" X 10' DEEP
						1		3										625	4	EACH	MEDIAN LIGHT POLE FOUNDATION, 10' DEEP, AS PER PLAN
		2																625	2	EACH	LIGHT TOWER FOUNDATION, 36" X 15' DEEP
																		625	10	EACH	LIGHT TOWER FOUNDATION, 36" X 20' DEEP
																		625	4	EACH	LIGHT TOWER FOUNDATION, 36" X 25' DEEP
																		625	1	EACH	LIGHT TOWER FOUNDATION, 42" X 25' DEEP
																		625	1	EACH	LIGHT TOWER FOUNDATION, MISC.: 42" X 20' DEEP
																		625	2	EACH	LIGHT TOWER FOUNDATION, MISC.: 48" X 25' DEEP
																		625	4	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE
																		625	900	FT	NO. 10 AWG POLE AND BRACKET CABLE
		175																625	4	FT	1-1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES
																		625	1304	FT	CONDUIT, 1-1/2", 725.04
																		625	116	FT	CONDUIT, 2-1/2", 725.04
																		625	712	FT	CONDUIT, 3", 725.051
																		625	4	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"
																		625	2	EACH	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (480V)
																		625	6	EACH	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN (480V)
																		625	23	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (480V)
																		625	1	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (480V, CROSS FRAME MOUNTED)
																		625	20	EACH	LUMINAIRE, MISC.: FAA TYPE L-810 OBSTRUCTION LIGHTING, LED (120V)
																		625	5990	FT	TRENCH
																		625	4	EACH	MEDIAN JUNCTION BOX
																		625	26	EACH	PULL BOX, 725.08, 18"
																		625	8	EACH	PULL BOX, 725.08, 24"
																		625	4	EACH	PULL BOX, 725.08, 48", TYPE 1, AS PER PLAN
																		625	17	EACH	PULL BOX REMOVED, AS PER PLAN
																		625	1	EACH	PULL BOX, MISC.: 18" PULL BOX ADJUSTED TO GRADE
																		625	46	EACH	GROUND ROD
																		625	6	EACH	STRUCTURE GROUNDING SYSTEM
																		625	2	EACH	POWER SERVICE, AS PER PLAN
																		625	2	EACH	CONTROL CENTER CABINET, COMPLETE
																		625	5990	FT	UNDERGROUND WARNING/MARKING TAPE
																		625	11	EACH	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN
LS																		SPECIAL	LS		MAINTAIN EXISTING LIGHTING
20																		SPECIAL	20	EACH	REPLACEMENT OF EXISTING LIGHTING UNIT
																		625	21	EACH	LIGHT TOWER REMOVED
																		625	2	EACH	POWER SERVICE REMOVED
																		625	21	EACH	LIGHT TOWER FOUNDATION REMOVED
																		625	1	EACH	LIGHTING, MISC.: RELOCATE EX. CONTROL CENTER
																		625	4	EACH	LIGHTING, MISC.: TEST NEW CIRCUIT

COMBINED ODOT LIGHTING SUBSUMMARY

DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
REVIEWER	JLD
PROJECT ID	SM 05/22/24
SHEET	82382
TOTAL	1688 2696

SHEET NO.	STATION				SIDE	POLE/PULL BOX NO.	ITEMS																												
	FROM		TO				CONDUIT, 1-1/2", 725.04	CONDUIT, 2-1/2", 725.04	CONDUIT, 3", 725.051	CONDUIT, JACKED OR DRILLED, 725.04, 3"	LUMINAIRE, HIGH MAST, SOLID STATE (LED), AS PER PLAN (480V)	LUMINAIRE, LOW MAST, SOLID STATE (LED), AS PER PLAN (480V)	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (480V)	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (480V)	LUMINAIRE, UNDERPASS, SOLID STATE (LED), AS PER PLAN (480V, CROSS FRAME MOUNTED)	LUMINAIRE, MISC.: FAA TYPE L-810 OBSTRUCTION LIGHTING, LED (120V)	TRENCH	MEDIAN JUNCTION BOX	PULL BOX, 725.08, 18"	PULL BOX, 725.08, 24"	PULL BOX, 725.08, 48", TYPE 1, AS PER PLAN	PULL BOX REMOVED, AS PER PLAN	PULL BOX, MISC.: 18" PULL BOX ADJUSTED TO GRADE	GROUND ROD	STRUCTURE GROUNDING SYSTEM	POWER SERVICE, AS PER PLAN	CONTROL CENTER CABINET, COMPLETE	UNDERGROUND WARNING/MARKING TAPE	SERVICE TO UNDERPASS LIGHTING, AS PER PLAN	LIGHT TOWER REMOVED	POWER SERVICE REMOVED	LIGHT TOWER FOUNDATION REMOVED	LIGHTING, MISC.: RELOCATE EX. CONTROL CENTER	LIGHTING, MISC.: TEST NEW CIRCUIT	
	FT	FT	FT	FT			EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH
1717	I.R. 90 EB	187+92	RAMP IH6	1188+48	RT/LT	PB-CR1 TO PB-CR2			4	600																									
1717	I.R. 90 EB	188+88			RT	PB-CR3											1																		
1717	I.R. 90 EB	188+88	I.R. 90 EB	188+95	RT	PB-CR3 TO CR1-4	32																												
1717	I.R. 90 EB	188+88	I.R. 90 EB	191+69	RT	PB-CR3 TO PB-CR12																													
1717	I.R. 90 EB	188+95			RT	CR1-4						1																							
1717	I.R. 90 EB	188+95	I.R. 90 EB	188+99	RT	CR1-4 TO CR1-5	6																												
1717	I.R. 90 EB	188+99			RT	CR1-5						1																							
1717	I.R. 90 EB	188+99	I.R. 90 EB	189+08	RT	CR1-5 TO CR1-6	30																												
1717	I.R. 90 EB	189+08			RT	CR1-6						1																							
1717	I.R. 90 EB	191+69			RT	PB-CR12											1																		
1717	I.R. 90 EB	191+69	I.R. 90 EB	191+81	RT	PB-CR12 TO PB-CR4			4	110																									
1717	I.R. 90 EB	191+81			RT	PB-CR4																													
1717	I.R. 90 EB	191+81	I.R. 90 EB	192+53	RT	PB-CR4 TO CR1-3																													
1717	I.R. 90 EB	192+53			RT	CR1-3 & CR4-3			4																										
1717	I.R. 90 EB	192+53	I.R. 90 EB	193+76	RT	CR1-3 & CR4-3 TO PB-CR5					3			1																					
1717	I.R. 90 EB	193+76			RT	PB-CR5																													
1717	I.R. 90 EB	193+76	I.R. 90 EB	196+10	RT	PB-CR5 TO PB-CR13																													
1717	I.R. 90 WB					CUY-90-1653L																													
1717	I.R. 90 EB	186+91			RT	RL-10																													
1717	I.R. 90 EB	187+19			RT	RL-11																													
1717	I.R. 90 EB	187+76			RT	RL-12																													
1717	I.R. 90 EB	188+25			RT	RL-13																													
1717	I.R. 90 EB	192+38			RT	RL-14																													
1717	I.R. 90 EB	192+84			LT	RL-15																													
1717	I.R. 90 EB	192+96			LT	RL-16																													
1717	I.R. 90 WB	187+36			LT	RL-17																													
1717	I.R. 90 WB	188+79			LT	RL-18																													
1718	I.R. 90 EB	196+10			LT	PB-CR6																													
1718	I.R. 90 EB	196+10			RT	PB-CR13																													
1718	I.R. 90 EB	196+10	I.R. 90 EB	196+10	RT/LT	PB-CR13 TO PB-CR6			4	205																									
1718	I.R. 90 EB	196+10	I.R. 90 EB	196+50	RT	PB-CR13 TO CR1-2 & CR4-2			4	240																									
1718	I.R. 90 EB	196+10	I.R. 90 EB	197+73	LT	PB-CR6 TO PB-CR7																													
1718	I.R. 90 EB	196+50			RT	CR1-2 & CR4-2			4																										
1718	I.R. 90 EB	197+73			LT	PB-CR7																													
1718	I.R. 90 EB	197+73	I.R. 90 WB	199+50	LT	PB-CR7 TO CR1-1			4	200																									
1718	I.R. 90 EB	197+73	I.R. 90 EB	199+58	LT	PB-CR7 TO PB-CR8																													
1718	I.R. 90 EB	199+58			LT	PB-CR8																													
1718	I.R. 90 EB	199+58	I.R. 90 EB	199+74	RT/LT	PB-CR8 TO CR1-11	17																												
1718	I.R. 90 EB	199+58	I.R. 90 EB	201+30	LT	PB-CR8 TO CR2-1																													
1718	I.R. 90 EB	199+58	I.R. 90 WB	201+56	LT/RT	PB-CR8 TO CR1-13	44																												
1718	I.R. 90 EB	199+74			LT	CR1-11																													
1718	I.R. 90 EB	199+74	I.R. 90 EB	200+24	LT	CR1-11 TO CR1-12	50																												
1718	I.R. 90 EB	200+24			LT	CR1-12																													
1718	I.R. 90 EB	201+30			LT	CR2-1																													
1718	I.R. 90 EB	201+30	INTERIM I.R. 90 EB	3004+20	LT	CR2-1 TO CR2-2																													
TOTALS CARRIED TO GENERAL SUMMARY							179	-	-	1675	6	1	5	-	2	755	3	5	-	-	5	-	5	1	-	-	755	2	3	1	3	-	-		

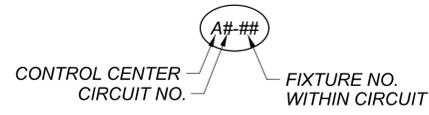
ODOT LIGHTING SUBSUMMARY - 3R

DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	CRK
REVIEWER	SED 05/22/24
PROJECT ID	82382
SHEET TOTAL	1697 2696

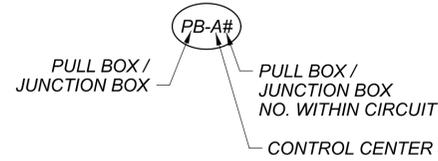
PLAN LEGEND (ODOT - MAINLINE & RAMPS)

EX.	PR.	ITEM
		LIGHT POLE OR TOWER, EXISTING
		HIGH MAST UNIT W/ 2, 3 OR 4 LED LUMINAIRES (SYMMETRIC), SEE PLANS FOR HEIGHT
		LOW MAST UNIT W/ 1 LED LUMINAIRE, 50' HEIGHT, MOUNTED ON MEDIAN BARRIER WITH ANCHOR BOLTS, (SYMMETRIC)
		LOW MAST UNIT W/ 1 LED LUMINAIRE, 50' HEIGHT, ALUMINUM TRANSFORMER, (ASYMMETRIC)
		UNDERPASS LED LUMINAIRE
		CONTROL CENTER
		PULL BOX / JUNCTION BOX (SEE PLANS)
		CONDUIT (REFER TO CONDUIT CODE FOR ADDITIONAL DETAIL)
		1 1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT CABLES (REFER TO DUCT CABLE CODE FOR ADDITIONAL DETAIL)
		STRUCTURE GROUND
		LIGHT POLE / TOWER TO BE REMOVED
		PULL BOX / JUNCTION BOX TO BE REMOVED

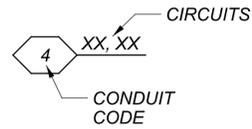
LIGHT FIXTURE IDENTIFICATION NO.



PULL BOX / JUNCTION BOX IDENTIFICATION NO.



TYPICAL CONDUIT CALL-OUTS



CIRCUIT NOTES:

ALL DISTRIBUTION CABLE IN CONDUIT SHALL BE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE, UNLESS NOTED OTHERWISE.

ALL ODOT CIRCUITS SHALL BE 3-WIRE, 3-CONDUCTOR, 240/480V/GROUNDED NEUTRAL, UNLESS NOTED OTHERWISE.

ALL CPP CIRCUITS SHALL BE 3-WIRE, 3-CONDUCTOR, 240V/120V/GROUNDED NEUTRAL, UNLESS NOTED OTHERWISE.

ALL PROPOSED ODOT CONTROL CENTERS SHALL BE METERED SERVICE.

PLAN LEGEND (CITY STREETS)

EX.	PR.	ITEM
		WOOD POLE, EXISTING W/ 1 NEW LED LUMINAIRE, 30' HEIGHT
		WOOD POLE W/ 1 LED LUMINAIRE, 30' HEIGHT
		BRONZE SHOEBOX POLE W/ 1 LED LUMINAIRE, SEE PLANS FOR HEIGHT
		BRONZE SHOEBOX POLE W/ 2 LED LUMINAIRES, SEE PLANS FOR HEIGHT
		UNDERPASS LED LUMINAIRE
		CONTROL CENTER / TRANSFORMER
		PULL BOX / JUNCTION BOX (SEE PLANS)
		CONDUIT (REFER TO CONDUIT CODE FOR ADDITIONAL DETAIL)
		LIGHT POLE TO BE REMOVED
		PULL BOX / JUNCTION BOX TO BE REMOVED

CONDUIT CODE

	1 1/2" CONDUIT, 725.04, STRUCTURE MOUNTED (ODOT LIGHTING)		1-3/4" CONDUITS, (CPP/PED LIGHTING)		1-2" CONDUITS, CONCRETE ENCASED (CPP/PED LIGHTING)
	2 1/2" CONDUIT, 725.04, STRUCTURE MOUNTED (ODOT LIGHTING)		2-3/4" CONDUITS, (CPP/PED LIGHTING)		1-2" CONDUITS, (CPP/PED LIGHTING)
	3" CONDUIT, 725.051, IN 24" MIN. DEEP TRENCH (ODOT LIGHTING)		3-3/4" CONDUITS, (CPP/PED LIGHTING)		2-2" CONDUITS, (CPP/PED LIGHTING)
	3" CONDUIT, 725.04, JACK OR DRILLED (ODOT LIGHTING)		4-3/4" CONDUITS, (CPP/PED LIGHTING)		2-2" CONDUITS, CONCRETE ENCASED (CPP/PED LIGHTING)
	4" CONDUIT, 725.051 IN BARRIER (ODOT LIGHTING)		5-3/4" CONDUITS, (CPP/PED LIGHTING)		3-2" CONDUITS, (CPP/PED LIGHTING)
			OVERHEAD POWER CABLE, 3 CONDUCTOR, NO. 4 AWG (CPP/PED LIGHTING)		4-2" CONDUITS, (CPP/PED LIGHTING)
			1 1/2" CONDUIT, 725.04, STRUCTURE MOUNTED (CPP/PED LIGHTING)		4-2" CONDUITS, CONCRETE ENCASED (CPP/PED LIGHTING)
					6-2" CONDUITS, (CPP/PED LIGHTING)
					6-2" CONDUITS, CONCRETE ENCASED (CPP/PED LIGHTING)

DUCT CABLE CODE

	1 - 1 1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
	2 - 1 1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
	3 - 1 1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
	4 - 1 1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES
	5 - 1 1/2" DUCT CABLE WITH THREE NO. 4 AWG 2400 VOLT DISTRIBUTION CABLES

ABBREVIATIONS

PB = PULL BOX
JB = JUNCTION BOX
UP = UNDERPASS
PED = PEDESTRIAN



DESIGN AGENCY

Michael Baker
INTERNATIONAL

DESIGNER

JLD

REVIEWER

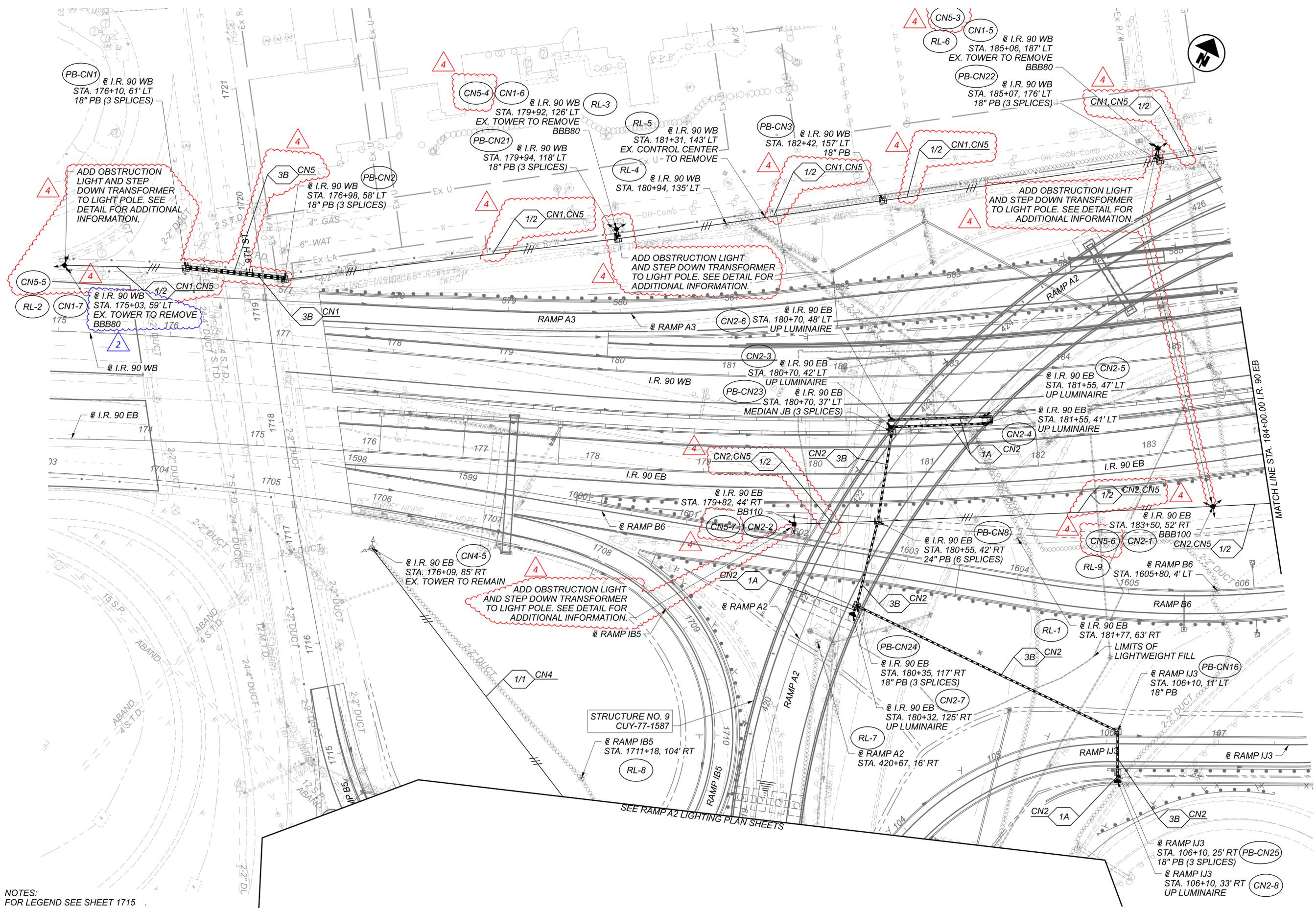
SM 05/22/24

PROJECT ID

82382

SHEET TOTAL

1715 | 2696



NOTES:
 1. FOR LEGEND SEE SHEET 1715



ODOT LIGHTING PLAN - I.R. 90 EB
 BEGIN TO STA. 184+00.00

DESIGN AGENCY

Michael Baker
 INTERNATIONAL

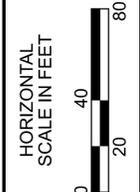
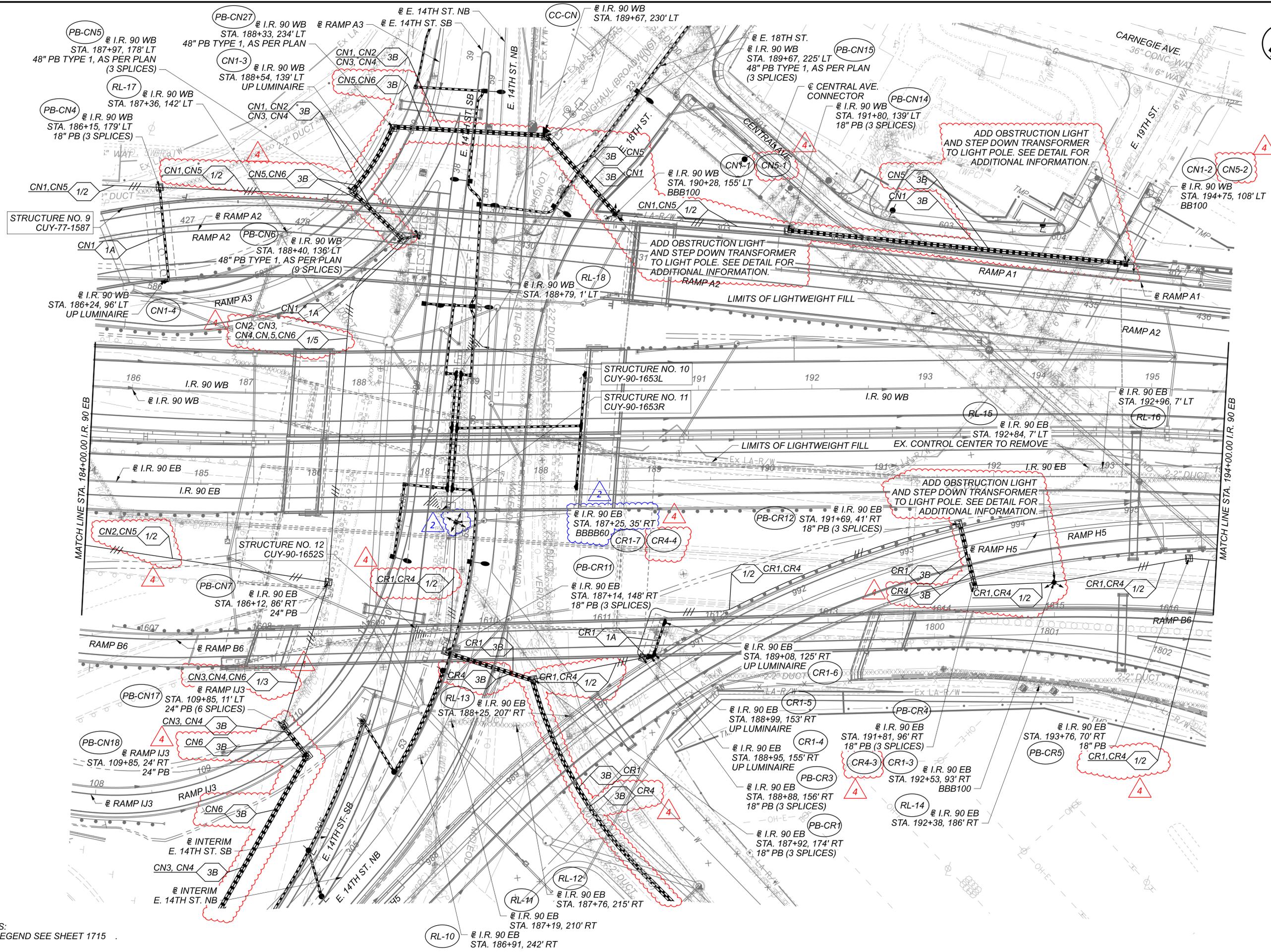
DESIGNER
 JLD

REVIEWER
 SM 05/22/24

PROJECT ID
 82382

SHEET TOTAL
 1716 2696

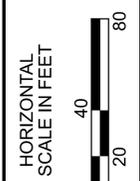
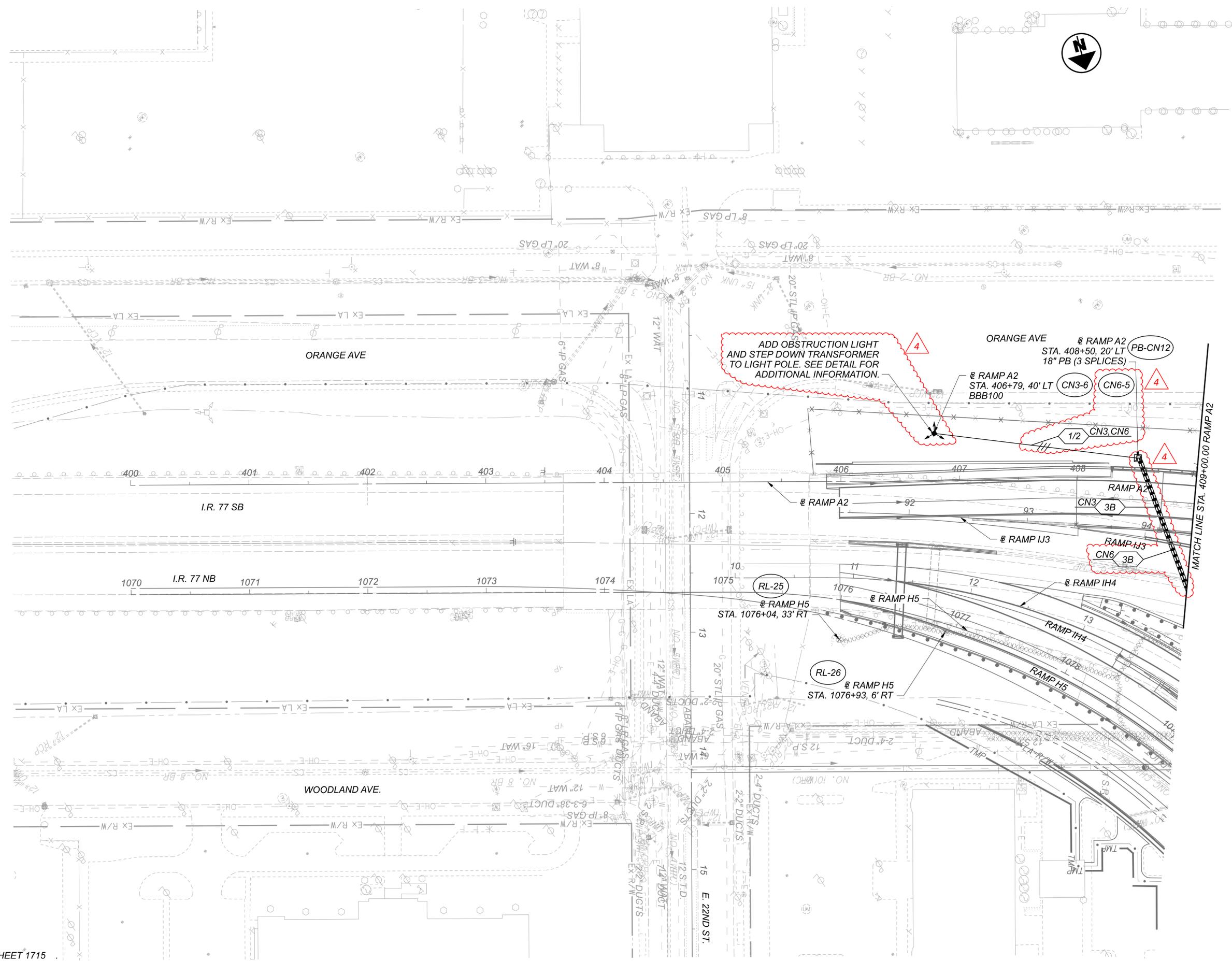
NOTES:
1. FOR LEGEND SEE SHEET 1715



ODOT LIGHTING PLAN - I.R. 90 EB
STA. 184+00.00 TO STA. 194+00.00

DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	JLD
REVIEWER	SM 05/22/24
PROJECT ID	82382
SHEET	1717
TOTAL	2696

NOTES:
1. FOR LEGEND SEE SHEET 1715



ODOT LIGHTING PLAN - RAMP A2
BEGIN TO STA. 409+00.00

DESIGN AGENCY

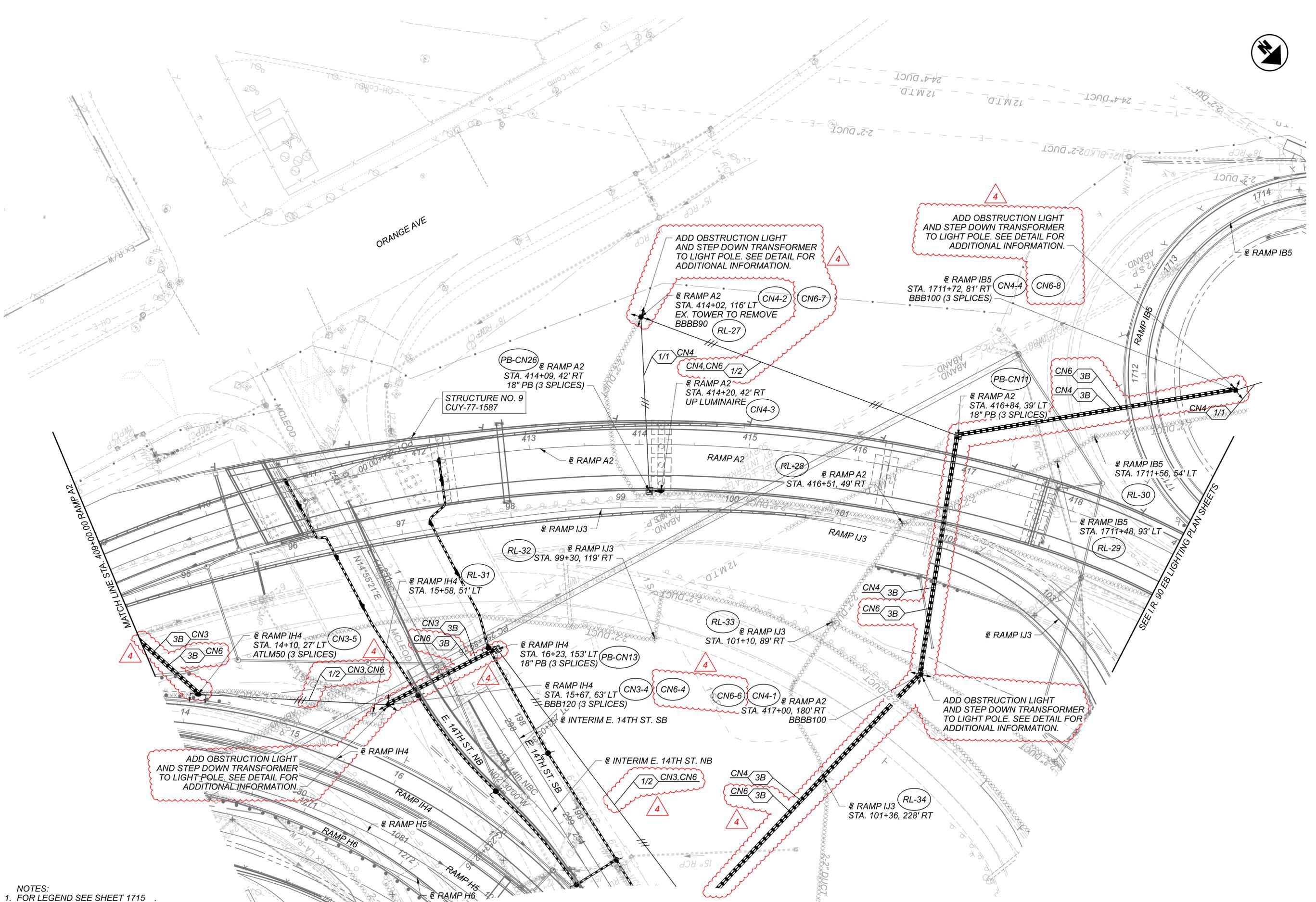
Michael Baker INTERNATIONAL

DESIGNER
JLD

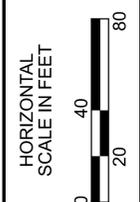
REVIEWER
SM 05/22/24

PROJECT ID
82382

SHEET	TOTAL
1721	2696



NOTES:
1. FOR LEGEND SEE SHEET 1715



ODOT LIGHTING PLAN - RAMP A2
STA. 409+00.00 TO END

DESIGN AGENCY

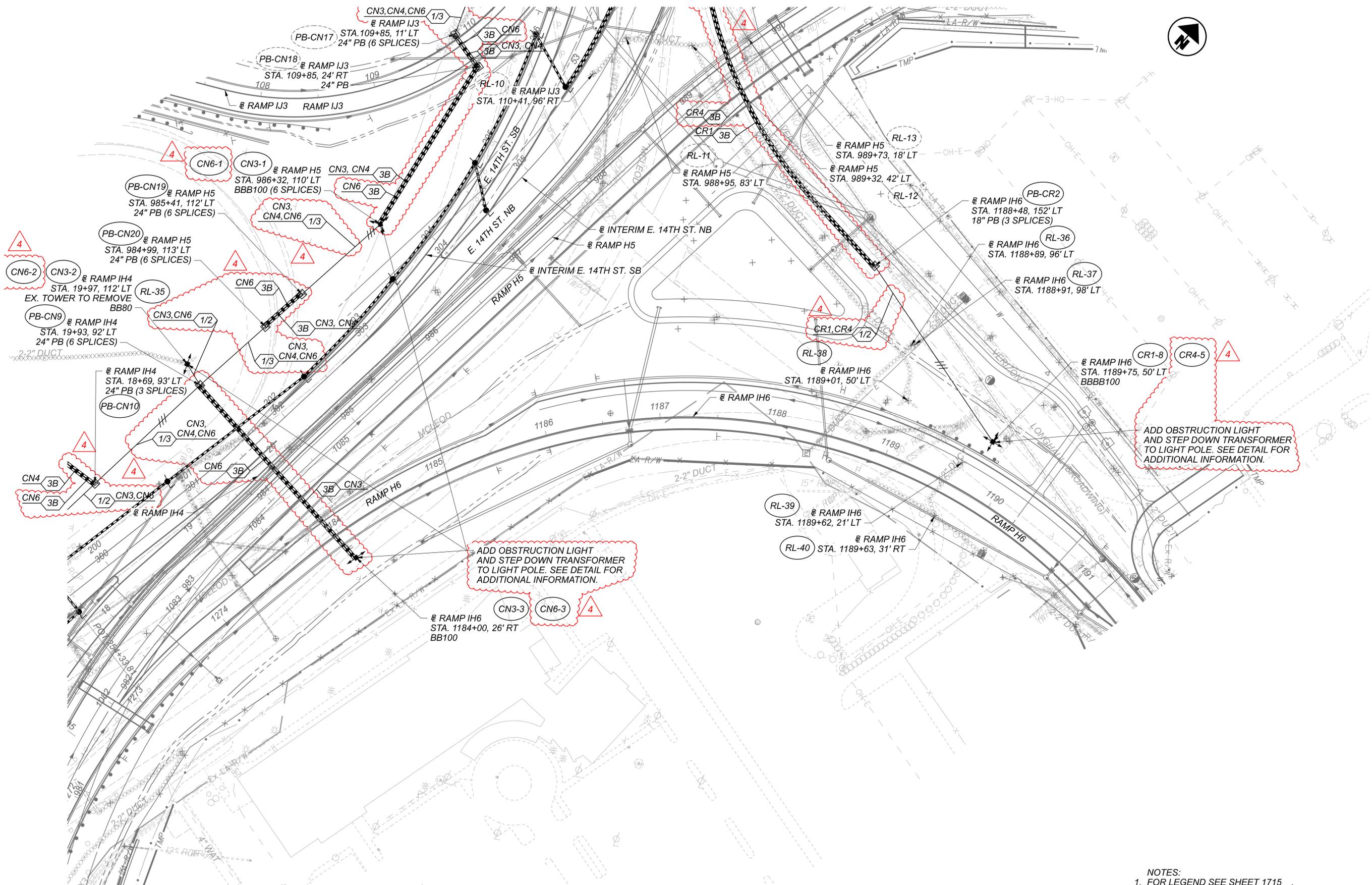
Michael Baker
INTERNATIONAL

DESIGNER
JLD

REVIEWER
SM 05/22/24

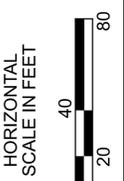
PROJECT ID
82382

SHEET TOTAL
1722 2696



ADD OBSTRUCTION LIGHT AND STEP DOWN TRANSFORMER TO LIGHT POLE. SEE DETAIL FOR ADDITIONAL INFORMATION.

ADD OBSTRUCTION LIGHT AND STEP DOWN TRANSFORMER TO LIGHT POLE. SEE DETAIL FOR ADDITIONAL INFORMATION.



ODOT LIGHTING PLAN - RAMP H6
BEGIN TO END

DESIGN AGENCY

Michael Baker
INTERNATIONAL

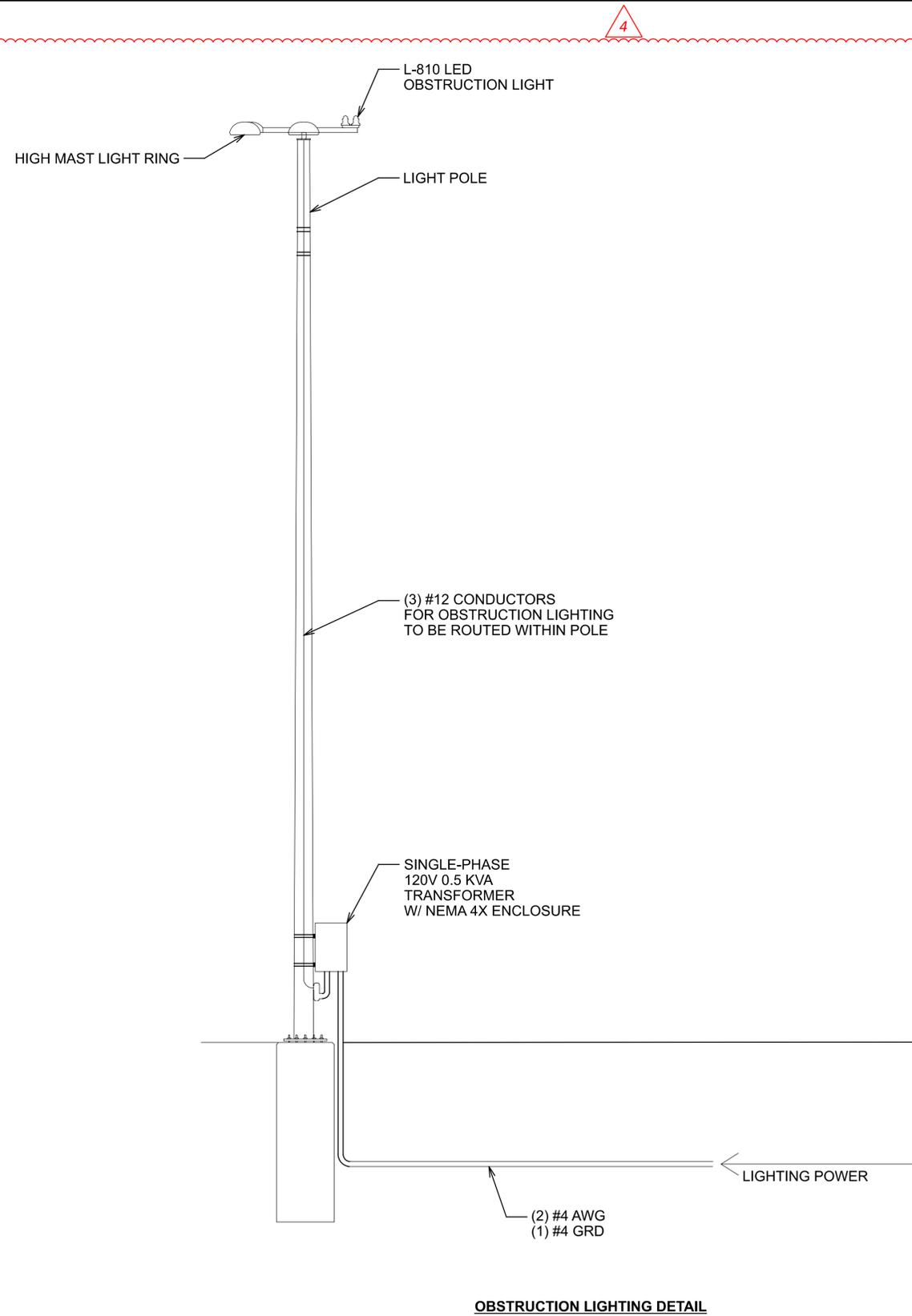
DESIGNER
JLD

REVIEWER
SM 05/22/24

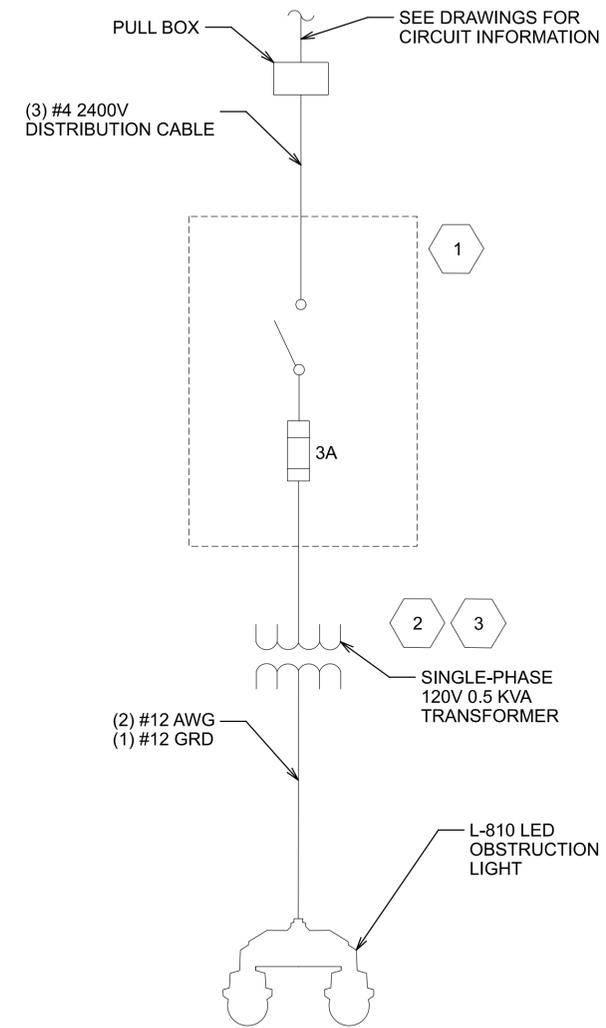
PROJECT ID
82382

SHEET	TOTAL
1723	2696

NOTES:
1. FOR LEGEND SEE SHEET 1715



OBSTRUCTION LIGHTING DETAIL



OBSTRUCTION LIGHTING SINGLE LINE

- KEYNOTES**
1. SUPPLY A 2P, 3A FUSED DISCONNECT WHICH MUST BE LOCATED WITHIN SIGHT OF THE TRANSFORMER.
 2. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ENGINEER APPROVAL.
 3. MOUNT TRANSFORMER TO SIGN STRUCTURE UPRIGHT OR LIGHT POLE AS NOTED IN PLANS.

DESIGN AGENCY

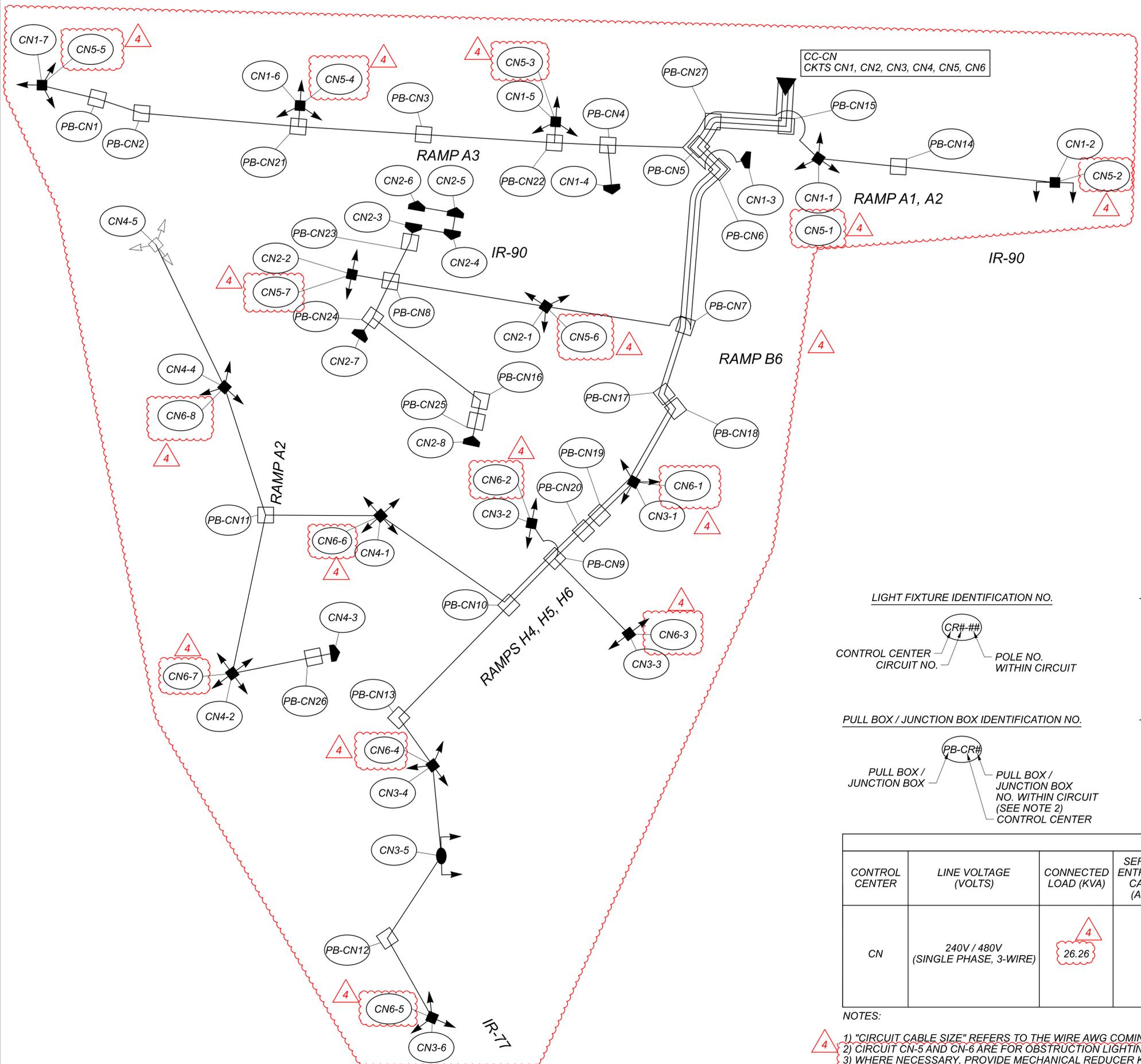
Michael Baker
INTERNATIONAL

DESIGNER
JP

REVIEWER
MC 09/29/25

PROJECT ID
82382

SHEET TOTAL
1759A | 2696



CIRCUIT SCHEMATIC & CONTROL CENTER DATA - CONTROL CENTER CN

LEGEND:

- HIGH MAST TOWER WITH 2 LED SYMMETRIC LUMINAIRES
- HIGH MAST TOWER WITH 2 LED SYMMETRIC LUMINAIRES WITH 180 DEGREE SHIELDS
- HIGH MAST TOWER WITH 3 LED SYMMETRIC LUMINAIRES
- HIGH MAST TOWER WITH 4 LED SYMMETRIC LUMINAIRES
- LOW MAST POLE WITH 1 LED SYMMETRIC LUMINAIRE
- LOW MAST POLE WITH 1 LED SYMMETRIC LUMINAIRE WITH 180 DEGREE SHIELDS
- UNDERPASS LED WALLPACK FIXTURE
- CONTROL CENTER
- PULL BOX / JUNCTION BOX
- DISTRIBUTION CABLE

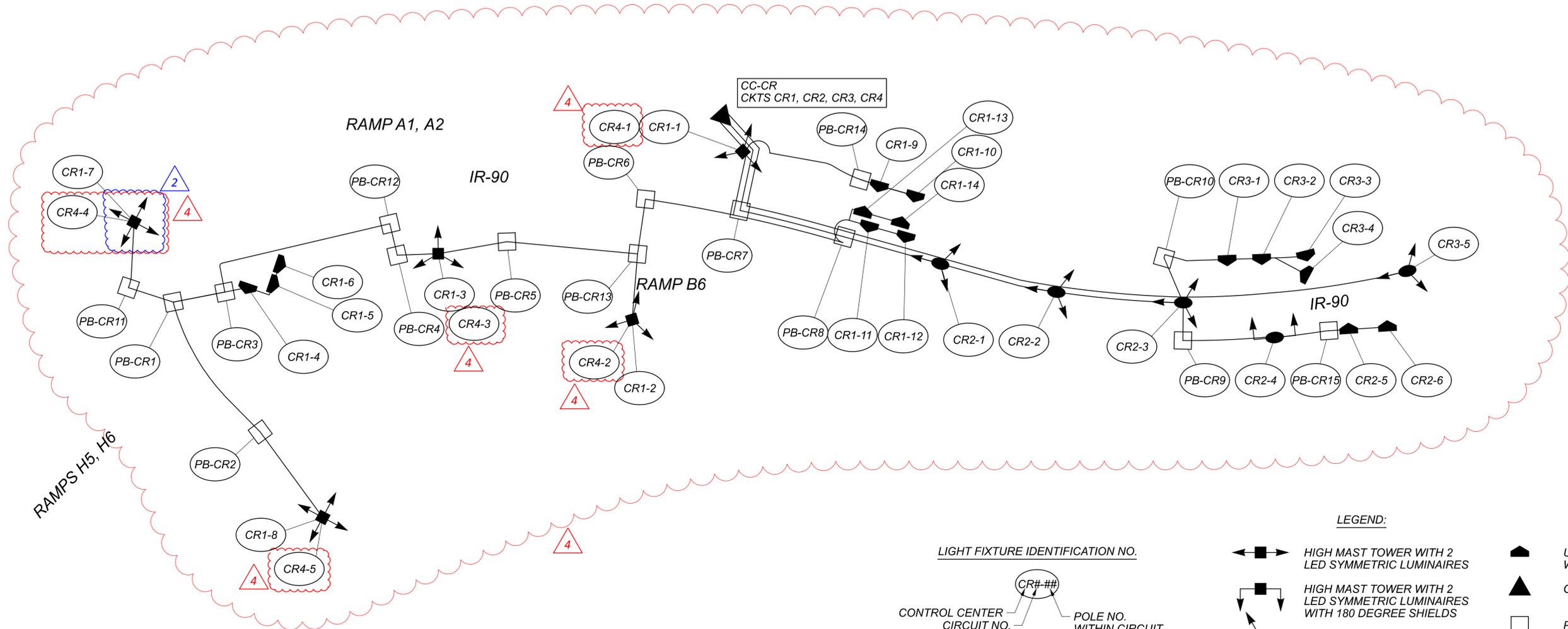
LIGHT FIXTURE IDENTIFICATION NO.
 CR#-##
 CONTROL CENTER CIRCUIT NO. POLE NO. WITHIN CIRCUIT

PULL BOX / JUNCTION BOX IDENTIFICATION NO.
 PB-CR#
 PULL BOX / JUNCTION BOX NO. WITHIN CIRCUIT (SEE NOTE 2) CONTROL CENTER

CONTROL CENTER DATA									
CONTROL CENTER	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CABLE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
CN	240V / 480V (SINGLE PHASE, 3-WIRE)	26.26	2	100	1	16.10	25	4	ODOT
					2	6.67	20	4	
					3	15.75	20	4	
					4	15.92	20	4	
					5	0.14	20	4	
					6	0.16	20	4	

NOTES:

- 1) "CIRCUIT CABLE SIZE" REFERS TO THE WIRE AWG COMING OUT OF THE CONTROL CENTER FOR EACH CIRCUIT.
- 2) CIRCUIT CN-5 AND CN-6 ARE FOR OBSTRUCTION LIGHTING ONLY.
- 3) WHERE NECESSARY, PROVIDE MECHANICAL REDUCER KIT AND HEAT SHRINK FOR LARGE CONDUCTORS TO BE ABLE TO LAND ON BREAKERS. MANUFACTURER SHALL BE EQUAL TO BURNDY.



LEGEND:

LIGHT FIXTURE IDENTIFICATION NO.
 CR# ##
 CONTROL CENTER CIRCUIT NO. POLE NO. WITHIN CIRCUIT

PULL BOX / JUNCTION BOX IDENTIFICATION NO.
 PB-CR#
 PULL BOX / JUNCTION BOX NO. WITHIN CIRCUIT (SEE NOTE 2) CONTROL CENTER

LEGEND:

- High Mast Tower with 2 LED Symmetric Luminares
- High Mast Tower with 2 LED Symmetric Luminares with 180 Degree Shields
- High Mast Tower with 3 LED Symmetric Luminares
- High Mast Tower with 4 LED Symmetric Luminares
- Low Mast Pole with 1 LED Symmetric Luminaire
- Low Mast Pole with 1 LED Symmetric Luminaire with 180 Degree Shields
- Underpass LED Wallpack Fixture
- Control Center
- Pull Box / Junction Box
- Distribution Cable

CONTROL CENTER DATA									
CONTROL CENTER	LINE VOLTAGE (VOLTS)	CONNECTED LOAD (KVA)	SERVICE ENTRANCE CABLE (AWG)	ENCLOSURE RATING (AMPS)	CIRCUIT NO.	CIRCUIT LOAD (AMPS)	CIRCUIT FUSE SIZE (AMPS)	CIRCUIT CABLE SIZE (AWG)	MAINTAINING AGENCY
CR	240V / 480V (SINGLE PHASE, 3-WIRE)	13.13	4	60	1	20.7	30	4	ODOT
					2	4.85	20	4	
					3	1.81	20	4	
					4	.10	20	4	

- NOTES:**
- "CIRCUIT CABLE SIZE" REFERS TO THE WIRE AWG COMING OUT OF THE CONTROL CENTER FOR EACH CIRCUIT.
 - CIRCUIT CR-4 IS FOR OBSTRUCTION LIGHTING ONLY.
 - WHERE NECESSARY, PROVIDE MECHANICAL REDUCER KIT AND HEAT SHRINK FOR LARGE CONDUCTORS TO BE ABLE TO LAND ON BREAKERS. MANUFACTURER SHALL BE EQUAL TO BURNDY.

SHEET NO.	LOCATION	SIDE	601	659	659	659	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661		
			ROCK CHANNEL PROTECTION, TYPE D WITH FILTER, AS PER PLAN CY	SEEDING AND MULCHING, CLASS 1, AS PER PLAN SY	SEEDING AND MULCHING, CLASS 2, AS PER PLAN SY	SEEDING AND MULCHING, CLASS 5B, AS PER PLAN SY	MULCH, AS PER PLAN CY	LANDSCAPE WATERING GAL	DECIDUOUS TREE, 2-1/2" CALIPER, AMERICAN SYCAMORE (POC) EACH	DECIDUOUS TREE, 2-1/2" CALIPER, BUR OAK (QMA) EACH	DECIDUOUS TREE, 2-1/2" CALIPER, CHINESE ELM (ULM) EACH	DECIDUOUS TREE, 2-1/2" CALIPER, CHINKAPIN OAK (QMU) EACH	DECIDUOUS TREE, 2-1/2" CALIPER, GREEN VASE ZELKOVA (ZSE) EACH	DECIDUOUS TREE, 2-1/2" CALIPER, KENTUCKY COFFEETREE (GDI) EACH	DECIDUOUS TREE, 2-1/2" CALIPER, LITTLELEAF LINDEN (TCO) EACH	DECIDUOUS TREE, 2-1/2" CALIPER, OHIO BUCKEYE (AGL) EACH	DECIDUOUS TREE, 2-1/2" CALIPER, SCARLET OAK (QCO) EACH	DECIDUOUS TREE, 2-1/2" CALIPER, SOMERSET RED MAPLE (ARS) EACH	DECIDUOUS TREE, 2-1/2" CALIPER, THORNTREE HONEYLOCUST (GTR) EACH	EVERGREEN TREE, 8' HEIGHT, AMERICAN HOLLY (IOK) EACH	EVERGREEN TREE, 8' HEIGHT, AMERICAN HOLLY (IOP) EACH	EVERGREEN TREE, 8' HEIGHT, EASTERN RED CEDAR (JV) EACH	EVERGREEN TREE, 8' HEIGHT, PITCH PINE (PRI) EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, CRABAPPLE SP. (MAL) EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, EASTERN REDBUD (CCN) EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, FLOWERING DOGWOOD (CFL) EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, GREEN HAWTHORN (CVI) EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, IVORY SILK JAPANESE TREE LILAC (SRE) EACH	PLANTING, MISC.: FLOWERING TREE, 2-1/2" CALIPER, KWANZAN FLOWERING CHERRY (PSE) EACH	PLANTING, MISC.: FLOWERING TREE, 6-8' HEIGHT, AUTUMN BRILLIANCE SERVICEBERRY (ACA) EACH	PLANTING, MISC.: FLOWERING TREE, 6-8' HEIGHT, COMMON WITCH HAZEL (HVI) EACH	PLANTING, MISC.: SHRUB, 3 GALLON, SHORE JUNIPER (JCB) EACH				
1808	CARNEGIE	LT		423			1	200								3																				
1808	CARNEGIE	RT		82																																
1808	I.R. 90 WB - RAMP A1 - CARNEGIE - E 22ND	INFIELD		2077	164	649	14	2700					3		3	5		2	2	18							9				12					
1808	RAMP A1	LT		91																																
1809	CARNEGIE	LT		545			3	650																												
1809	I.R. 90 EB	RT			240	27																														
1809	I.R. 90 WB - CARNEGIE - E 22ND	INFIELD		1501	1178	1011	9	1850					5		2	8											4	4	4	4	6					
1810	BRIDGE 13	RT					50	10050						5																					196	
1810	CENTRAL	LT		25																																
1810	E 22ND	RT		159			1	200																											4	
1810	I.R. 90 EB	RT			302	387																														
1810	I.R. 90 WB - RAMP A1 - CARNEGIE - E 22ND	INFIELD			180																															
1810	MIDTOWN CONNECTOR	LT		484			2	450	1																											
1810	MIDTOWN CONNECTOR	RT		129																																
1810	RAMP B6 - RAMP B6A - E 22ND	INFIELD		820	537		1	250					3																							
1810	RAMP H5 - RAMP B6 - E 22ND	INFIELD		31	509	548	4	750							1																					
1811	CENTRAL	RT		21																																
1811	E 22ND	RT		13																																
1811	RAMP B6A	RT		450			2	350					2																						3	2
1812	BRIDGE 14	UNDER																																		
1812	I.R. 90 EB	RT		56	2151	6737	16	3150																												
1812	MIDTOWN CONNECTOR	LT		479																																
1813	CARNEGIE	RT		93																																
1813	MIDTOWN CONNECTOR	LT		316			1	200	2																											
1813	MIDTOWN CONNECTOR	RT		169																																
1814	I.R. 90 EB	RT			1230	4175	13	2500																												
1814	MIDTOWN CONNECTOR	LT		869			8	1600	3																											
1814	MIDTOWN CONNECTOR	RT		573			2	300																												
1815	CEDAR	LT		78																																
1815	CEDAR	RT		339			2	350	2																											
1815	I.R. 90 EB	RT				1760		800																												
1815	MIDTOWN CONNECTOR	LT		2603			1	250																												
1815	MIDTOWN CONNECTOR	RT		1040			5	950	1				4																							
1816	CEDAR	LT		49																																
1816	CEDAR	RT		90																																
1817	I.R. 90 WB - RAMP A1 - CARNEGIE - E 22ND	INFIELD			860	499																														
1817	RAMP A1	LT		506																																
1817	RAMP H5 - RAMP B6 - E 22ND	INFIELD			1234	471	6	1200																												
1818	I.R. 90 EB - RAMP H5 - E 14TH NB	INFIELD			58																															
1818	RAMP B6 - RAMP B6A - E 22ND	INFIELD			1826																															
1818	RAMP B6A	RT		2323			8	1650																												
1818	RAMP H5 - RAMP B6 - E 22ND	INFIELD			2489		6	1100																												
1819	BRIDGE 9	UNDER																																		
1819	I.R. 90 WB - RAMP A3 - E 14TH SB	INFIELD			509																															
1819	RAMP A3	LT			2022	2113																														
TOTALS CARRIED TO SHEET			1806	399	16434	15489	18377	155	31500	9	-	7	15	4	11	-	11	15	12	10	2	18	15	27	21	48	19	64	33	36	43	14	196			

DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	BDC
REVIEWER	JCF 05/22/24
PROJECT ID	82382
SHEET	TOTAL
1805	2696

ITEM 607 FENCE, MISC.: BRIDGE 13 SCREEN WALL PANELS
ITEM 607 FENCE, MISC.: GATEWAY MONUMENT SIGN
SCREEN WALL PANELS

1.0 SUMMARY:

THIS SECTION INCLUDES THE FOLLOWING:

- A. INTERNALLY ILLUMINATED SCREEN WALL SYSTEM CAPABLE OF MEETING ALL APPLICABLE STANDARDS FOR WIND, LATERAL, DEAD LOADS, WITH EXTERIOR RATED LIGHT FIXTURES AND ELECTRICAL COMPONENTS.

1.1 METHOD OF MEASUREMENT:

- A. SCREEN WALL SYSTEM SHALL BE MEASURED BY LUMP SUM FOR EACH AREA INCLUDING:
 - ITEM 607 FENCE, MISC.: BRIDGE 13 SCREEN WALL PANELS
 - ITEM 607 FENCE, MISC.: GATEWAY MONUMENT SIGN SCREEN WALL PANELS

1.2 BASIS OF PAYMENT:

- A. ALL COSTS FOR WORK IN THIS SECTION ARE TO BE INCLUDED IN THE LUMP SUM PRICE FOR EACH SCREEN WALL SYSTEM. COST SHALL INCLUDE ALL CONDUIT AND WIRING BEGINNING AT FIRST PULL BOX ON THE BRIDGE OR PULLBOX NEAREST THE GATEWAY MONUMENT WALL.

1.3 SUBMITTALS:

- A. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA; INCLUDE PRODUCT DESCRIPTION, FABRICATION INFORMATION, AND COMPLIANCE WITH SPECIFIED PERFORMANCE REQUIREMENTS.
- B. SUBMIT PRODUCT TEST REPORTS FROM A QUALIFIED INDEPENDENT 3RD PARTY TESTING AGENCY INDICATING EACH TYPE AND CLASS OF PANEL SYSTEM COMPLIES WITH THE PROJECT PERFORMANCE REQUIREMENTS, BASED ON COMPREHENSIVE TESTING OF CURRENT PRODUCTS. PREVIOUSLY COMPLETED TEST REPORTS WILL BE ACCEPTABLE IF FOR CURRENT MANUFACTURER AND INDICATIVE OF PRODUCTS USED ON THIS PROJECT. TEST REPORTS REQUIRED SHALL INCLUDE SPECIFIED MATERIAL PROPERTIES LISTED BELOW.
- C. SHOP DRAWINGS: INCLUDE PLANS, ELEVATIONS, SECTIONS, PANEL DIMENSIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK.
- D. SAMPLES FOR INITIAL SELECTION: SUBMIT MINIMUM 4-INCH BY 4-INCH SAMPLES. INDICATE FULL COLOR, TEXTURE AND PATTERN VARIATION. SAMPLES FOR VERIFICATION: SUBMIT MINIMUM 8-INCH BY 8-INCH SAMPLE FOR EACH TYPE, TEXTURE, PATTERN, AND COLOR OF SOLID PLASTIC FABRICATION.
- E. WARRANTY: MANUFACTURER'S SPECIAL WARRANTY ON PLASTIC FABRICATIONS: MANUFACTURER'S STANDARD FORM AGREEING TO REPAIR OR REPLACE UNITS THAT FAIL IN MATERIAL OR WORKMANSHIP WITHIN THE SPECIFIED WARRANTY PERIOD.
- F. SCREEN WALL SYSTEM MAINTENANCE AND OPERATING BINDERS SHALL INCLUDE: TABLE OF CONTENTS, WRITTEN DESCRIPTION OF SYSTEM, SYSTEM DRAWINGS: ONE (1) COPY OF THE ORIGINAL PLAN; ONE (1) COPY OF THE RECORD DRAWING INCLUDING LOCATIONS OF AS-BUILT CONDUITS, AND PULL BOXES; ONE (1) COPY OF THE APPROVED SHOP DRAWINGS, WIRING DIAGRAM, LISTING OF MANUFACTURERS, PART NUMBER AND ANY OTHER REFERENCE NEEDED TO ORDER PARTS INCLUDING BUT NOT LIMITED TO TRANSFORMERS, LIGHT FIXTURES, AND LENSES, "APPROVED" SUBMITTALS OF ALL EQUIPMENT, OPERATION INSTRUCTION, MAINTENANCE INSTRUCTION, COMPLETE TROUBLESHOOTING CHARTS, PARTS LIST, AND WARRANTY DATA. O & M MANUALS SHALL BE PROVIDED AT SUBSTANTIAL COMPLETION TO ALLOW FOR PROJECT ENGINEER REVIEW PRIOR TO FINAL ACCEPTANCE.
- G. SCREEN WALL SYSTEM SPARE PARTS AND TOOLS: PROVIDE OWNER TWO (2) SETS PER BRIDGE OF SPECIALTY TOOLS TO OPEN SCREEN WALL ASSEMBLY AND SERVICE PANELS. PROVIDE TEN PERCENT OF EXPENDABLE COMPONENTS (INCLUDING LIGHTS, TRANSFORMERS, FUSES, ETC.) AT SUBSTANTIAL COMPLETION.

ITEM 607 FENCE, MISC.: BRIDGE 13 SCREEN WALL PANELS
ITEM 607 FENCE, MISC.: GATEWAY MONUMENT SIGN
SCREEN WALL PANELS (CONT.)

1.4 QUALITY ASSURANCE:

- A. MOCK UPS: BUILD MOCK UPS PER: ITEM SPECIAL - BRIDGE 13 SCREEN WALL MOCK UP AND ITEM SPECIAL - GATEWAY MONUMENT SIGN SCREEN WALL MOCK UP.
- B. MANUFACTURERS QUALIFICATIONS: MATERIALS AND SYSTEMS SHALL BE MANUFACTURED BY A COMPANY CONTINUOUSLY AND REGULARLY EMPLOYED IN THE MANUFACTURE OF SPECIFIED MATERIALS FOR A PERIOD OF AT LEAST THREE (3) CONSECUTIVE YEARS AND WHICH CAN SHOW EVIDENCE OF THOSE MATERIALS BEING SATISFACTORILY USED ON AT LEAST THREE (3) PROJECTS OF SIMILAR SIZE, SCOPE AND LOCATION. AT LEAST ONE (1) OF THE PROJECTS SHALL HAVE BEEN SUCCESSFUL FOR USE ONE YEAR OR LONGER. MANUFACTURER MUST OFFER A DOCUMENTED RECLAIM PROCESS THAT WILL TAKE BACK, AT THE MANUFACTURERS COST, PANELS THAT ARE AT THEIR END-OF LIFE CYCLE. MANUFACTURER MUST HAVE DOCUMENTED TRAINING AND QUALIFICATION PROGRAM FOR FABRICATION AND INSTALLATION OF PLASTIC FABRICATIONS.
- C. INSTALLER: A FIRM WHICH HAS AT LEAST FIVE (5) YEARS EXPERIENCE IN WORK OF THE TYPE AND SIZE REQUIRED BY THIS SECTION AND WHICH IS ACCEPTABLE TO THE PROJECT ENGINEER.
- D. REFERENCES: THE CONTRACTOR MUST SUPPLY THREE REFERENCES FOR WORK OF THIS TYPE AND SIZE WITH THEIR BID INCLUDING NAMES AND PHONE NUMBERS OF CONTACT PERSON(S).
- E. THE PROJECT ENGINEER WILL BE ON SITE AT VARIOUS TIMES TO OBSERVE THE WORK BEING INSTALLED ACCORDING TO THE SPECIFICATIONS AND DRAWINGS.

1.5 SUMMARY:

4 CONDUCT VIRTUAL PREINSTALLATION CONFERENCE INCLUDING INSTALLER, FABRICATOR, AND PROJECT ENGINEER.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. DELIVER PLASTIC FABRICATIONS, SYSTEMS AND SPECIFIED ITEMS IN MANUFACTURER'S STANDARD PROTECTIVE PACKAGING.
- B. DO NOT DELIVER PLASTIC FABRICATIONS, SYSTEM, COMPONENTS AND ACCESSORIES TO PROJECT SITE UNTIL AREAS ARE READY FOR INSTALLATION.
- C. STORE MATERIALS IN A FLAT ORIENTATION IN A DRY PLACE THAT IS NOT EXPOSED TO EXTERIOR ELEMENTS.
- D. HANDLE MATERIALS TO PREVENT DAMAGE TO FINISHED SURFACES.
- E. PROVIDE PROTECTIVE COVERINGS TO PREVENT DAMAGE OR STAINING FOLLOWING INSTALLATION FOR DURATION OF PROJECT.

1.7 WARRANTY:

4 MATERIAL SHALL HAVE WARRANTY FOR A PERIOD OF UP TO FIVE YEARS AFTER DELIVERY THAT THE PRODUCT IS FREE FROM MANUFACTURING AND WORKMANSHIP DEFECTS PROVIDED THAT ANY CLAIMS MADE UNDER THIS LIMITED WARRANTY MUST BE SUBMITTED IN WRITING BY NO LATER THAN FIVE YEARS AFTER THE DELIVERY OF THE PRODUCT.

2.0 SYSTEM DESCRIPTION:

TRANSLUCENT (COLOR AND TEXTURE TREATED) EXTERIOR GRADE POLYCARBONATE PANELS. HIGH IMPACT RESISTANT, UV STABLE, AND COLOR FUSED. AS THE PANELS WILL BE UTILIZED FOR AN EXTERIOR TEMPERATE CLIMATE THE PANELS WILL CONTAIN A DURABLE SURFACE FINISH TO RESIST WINDBLOWN DUST AND DEBRIS.

2.1 SCREEN WALL PANEL MATERIAL:

- 4 A. MANUFACTURER: PRODUCT MANUFACTURERS MUST BE SUBMITTED WITH SUPPORTING TECHNICAL DATA, SAMPLES AND ENGINEERING CALCULATIONS FOR WRITTEN ARCHITECTURAL APPROVAL.
- B. MATERIAL: POLYCARBONATE MEETING THE SPECIFIED PROPERTIES.
- C. PANEL SIZES:
 - E. 22ND STREET: 4' W X8' H
 - GATEWAY MONUMENT SIGN: 4' W X4' H
- D. SPECIFIED THICKNESS: 3/8" NOMINAL
- E. SPECIFIED COLORS: TRANSLUCENT WHITE
- F. FINISHES: STUCCO (FRONT) / STUCCO (BACK)

ITEM 607 FENCE, MISC.: BRIDGE 13 SCREEN WALL PANELS
ITEM 607 FENCE, MISC.: GATEWAY MONUMENT SIGN
SCREEN WALL PANELS (CONT.)

2.2 BASIS OF SAMPLE DESIGN:

A BASIS OF DESIGN SAMPLE OF PANEL MATERIAL IS AVAILABLE FOR REVIEW AT PROJECT ENGINEER'S OFFICE.

2.3 PANEL MATERIAL PROPERTIES:

A. PANEL MATERIAL SHALL MEET THE FOLLOWING TESTING REQUIREMENTS:

DESCRIPTION	TEST	UNITS	RESULT
IMPACT RESISTANCE (INSTRUMENTED)	ASTM D 3763	FT-LBS	>40 4
FLAME SPREAD	ASTM D 635-98	-	PASS CC1 RATING (CC1 RATING MATERIAL SELF-EXTINGUISH)
SELF-IGNITION TEMPERATURE	ASTM D 1929-96	°F	PASS >950° VS. 650°F MIN.
TENSILE STRENGTH	ASTM D 638	PSI	9000
COMPRESSIVE STRENGTH	ASTM D 695	PSI	12500
FLEXURAL STRENGTH	ASTM D 790	PSI	13500
FLEXURAL MODULUS	ASTM D 790	PSI	PSI
AMOUNT OF EXPANSION/ CONTRACTION	ASTM D 696	IN/ (IN°-F)	.00004
LARGE MISSILE IMPACT	ASTM D 1886	-	PASS/ NONBREAK
IMPACT STRENGTH UN-NOTCHED (23°C)	ASTM D 256	FT/LB	NONBREAK
HEAT DISTORTION TEMPERATURE (66 PSI)	ASTM D 648	°F	280

B. PANEL MATERIAL SHALL MEET THE FOLLOWING MINIMUM GUIDELINES:

- 1. HEAT RESISTANCE OF GREATER THAN 230°F.
- 2. IMPACT STRENGTH SHALL BE 60 FT-LB (NO FAILURE, UNNOTCHED); >45 FT-LB (PUNCTURE); 14 FT-LB/IN (NOTCHED).
- 3. SELF EXTINGUISHING AS PER ASTM D 635.
- 4. ULTRAVIOLET SCREENS TO PREVENT UV RADIATION FROM TRANSMITTING BELOW 370 MM. PANELS SHALL BE UV STABILIZED ON BOTH THE FIRST AND SECOND SURFACE OF EACH PANEL.
- 5. SUPPLIED BY AN ISO 14001 (ENVIRONMENTAL) CERTIFIED CORPORATION.
- 6. ALL COLOR MUST BE ATTACHED VIA FUSION ATTACHMENT COATINGS OR ADHESIVE APPLIED COLORS ARE NOT ACCEPTABLE.
- 7. MANUFACTURER MUST OFFER MATERIAL TAKE-BACK RECLAIM PROGRAM AT END OF USEFUL LIFE.
- 8. PANELS TO BE MANUFACTURED BY AND BE FROM ALL AMERICAN SOURCING OF MATERIAL, USA-FABRICATED
- 9. PANELS TO BE CERTIFIED GREENGUARD GOLD UL2818-2013 GOLD STANDARD FOR CHEMICAL EMISSIONS FOR BUILDING MATERIALS, FINISHES & FURNISHINGS

2.4 PANEL SUPPORT SYSTEM:

THE SUPPORT SYSTEM FOR THE PANELS SHALL BE A FABRICATED ALUMINUM FRAMEWORK WITH STEEL STRUCTURAL SUPPORTS.

ITEM 607 FENCE, MISC.: BRIDGE 13 SCREEN WALL PANELS
ITEM 607 FENCE, MISC.: GATEWAY MONUMENT SIGN
SCREEN WALL PANELS (CONT.)

2.5 SUPPORT SYSTEM COMPONENTS:

- A. ALUMINUM FRAMEWORK TO BE 6063-T6 WITH HIGHEST RECYCLED CONTENT AVAILABLE FINISHED WITH ARCHITECTURAL TWO-STEP BLACK ELECTROLYTE PLATING IN CHANNEL SHAPE TO CONCEAL RECESSED LED LIGHTING.
- B. STEEL STIFFENERS TO BRACE ALUMINUM FRAMEWORK SHALL BE MILD STEEL HOT DIP GALVANIZED AND POWDERCOATED BLACK SHERWIN WILLIAMS GRAPHITE BLACK RAL 9011 (RBS8-00006).
- C. PANELS SHALL BE FASTENED TO ALUMINUM FRAMEWORK USING CAPS MANUFACTURED FROM 316 STAINLESS STEEL WITH TWO (2) FASTENING HOLES LOCATED AT THE SIDE OF THE CAP FOR USE WITH DRILL MOUNT CAP INSTALLATION TOOL.
- D. STEEL STIFFENER SHALL BE MOUNTED TO CONCRETE PARAPET USING ADHESIVE ANCHORS; ALUMINUM FRAMEWORK SHALL BE BOLTED TO STEEL STIFFENERS AND VISUALLY COVER ANCHORS AT VERTICAL FRONT FACE OF PARAPET.
- E. CONTINUOUS DRIP CAP ALONG TOP OF ASSEMBLIES TO BE 6063-T6 WITH HIGHEST RECYCLED CONTENT AVAILABLE FINISHED WITH ARCHITECTURAL TWO-STEP BLACK ELECTROLYTE PLATING, OVERLAP DRIP CAPS AT SEAMS.
- F. CONTINUOUS T-SLOT TYPE GASKET AMESBURY 32007 IN WHITE COLOR SHALL BE PROVIDED AROUND PANEL EDGES.

2.6 SCREEN WALL LED BACK-LIGHTING

- A. E. 22ND STREET: RGBW DMX CONTROLLED LIGHTING TO BE RGB COLOR CHANGING LIGHT BARS WITH WET LOCATION RATING AND UL EQUIVALENT. SECTIONAL DIMENSION PROPERTIES TO MATCH LOW PROFILE LIGHT BARS.
 - BEAM ANGLE TO BE 25°
 - EACH 4' PANEL ASSEMBLY WITH RGB LIGHTING TO BE PAIRED TO BE PAIRED TO 24VDC 185W DRIVER. DRIVER WILL REQUIRE 120 VOLT INPUT AT EACH PANEL ASSEMBLY.
 - LIGHTING BARS SHALL RECESS IN ALUMINUM STRUCTURE AND MOUNT DIRECTLY TO ALUMINUM STRUCTURE WITH LIGHT BEAM DIRECTED TOWARDS THE CENTER OF THE ASSEMBLY.
 - CAT5 CABLING TO BE PROVIDED FROM BRIDGE MAIN CONTROL TO EACH INDIVIDUAL 4' PANEL ASSEMBLY IN SERIES FOR CONTROL AT DMX/DRIVER STARTER CABLE LOCATION.
 - SUPPLIER TO PROVIDE 185W DRIVER IN EACH 4' ASSEMBLY SUITABLE FOR WET LOCATION OR ENCLOSED IN NEMA 4 OR 4X RATED ENCLOSURE FOR DRIVER AS WELL AS MC CABLING AND PLUG AND PLAY CONNECTIONS FOR JOINING THE ASSEMBLIES ALONG THE SIDE OF THE BRIDGE CONTINUOUSLY.
 - ALL ELECTRICAL COMPONENTS TO BE PRE-ASSEMBLED AND INSTALLED PRIOR TO DELIVERY TO JOB SITE.
 - QUICK DISCONNECT BETWEEN DRIVER AND LINE VOLTAGE TO BE PROVIDED WITHIN THE NEMA ENCLOSURE, OR RATED ACCORDINGLY IF WET LOCATION DRIVER USED. #8 AWG MAINLINE TO BE USED TO PROVIDE POWER TO AREAS BETWEEN PILASTERS, WITH #12 AWG MC TO BE USED FROM MAIN LINE TO INDIVIDUAL ASSEMBLIES BETWEEN PILASTERS.
 - NEMA ENCLOSURES, DRIVERS, AND CABLING SHALL ALL NEST WITHIN RECESSES OF ALUMINUM FRAMEWORK AND NOT SHADOW OR IMPEDE LIGHTING OF PANELS.
 - PROGRAMMING FOR THE DMX TO BE PROVIDED BY DMX PROFESSIONAL ONSITE AFTER INSTALLATION OF ALL SYSTEMS.
 - EACH 4' SECTION TO HAVE TWO INDIVIDUALLY CONTROLLABLE ZONES, ONE PER SIDE.
 - LIGHTING PULL BOXES SHALL BE LABELED "LIGHTING".

DESIGN AGENCY

Michael Baker INTERNATIONAL

DESIGNER

BDC

REVIEWER

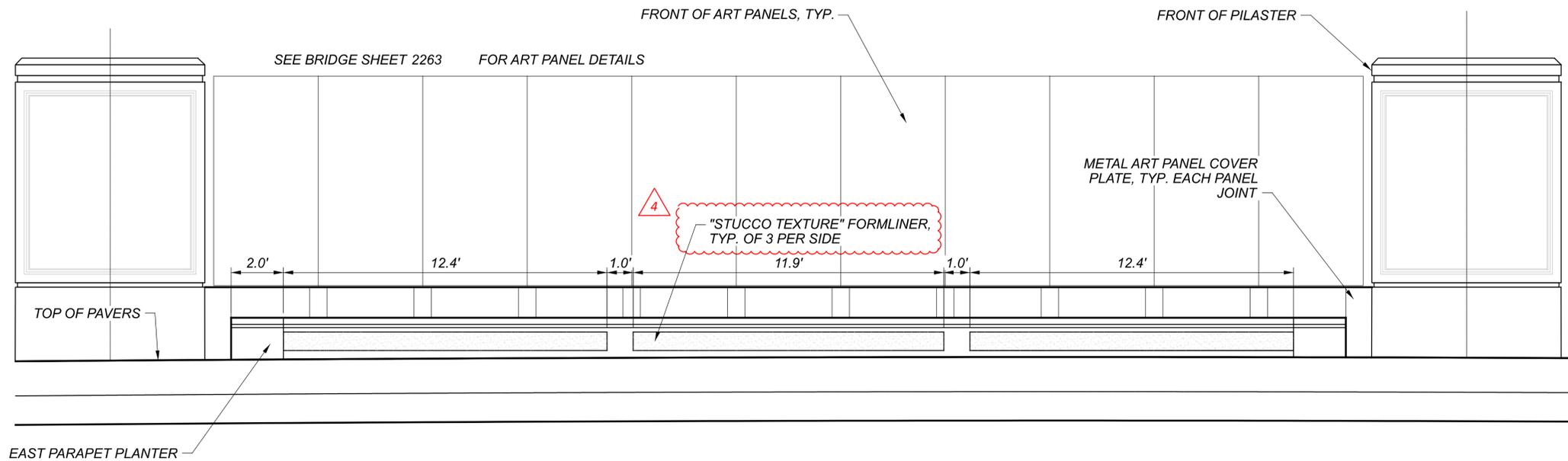
JCF 01/10/24

PROJECT ID

82382

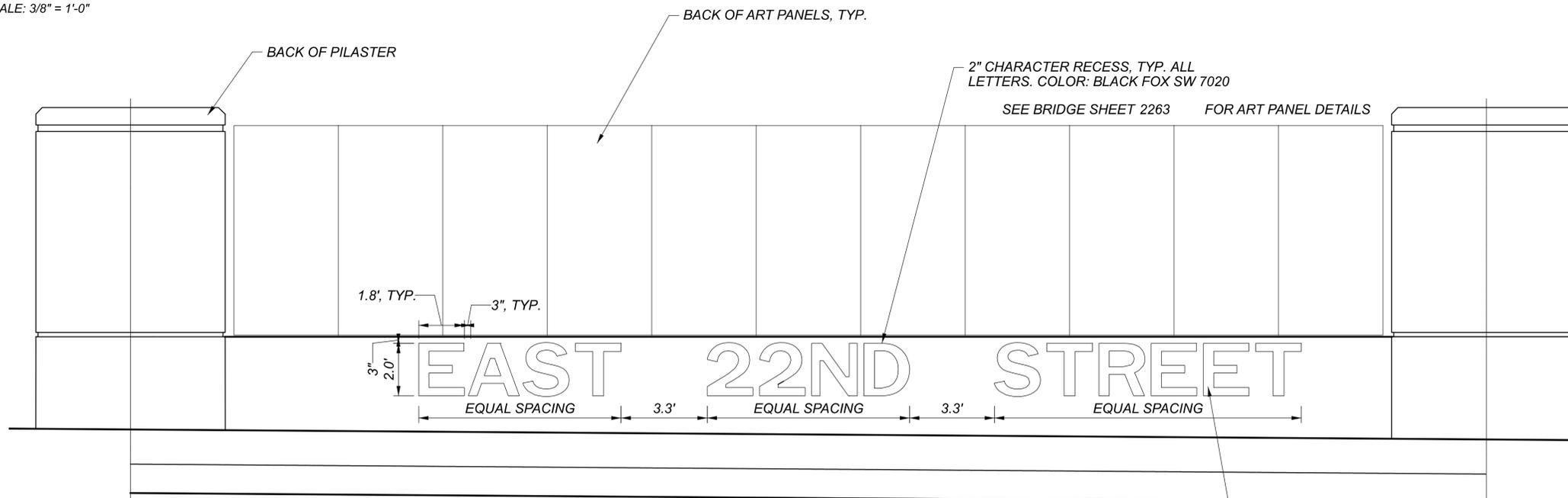
SHEET TOTAL

1832 2696



EAST SECTION SOUTH PLANTER

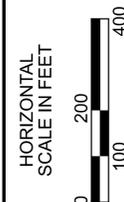
SCALE: 3/8" = 1'-0"

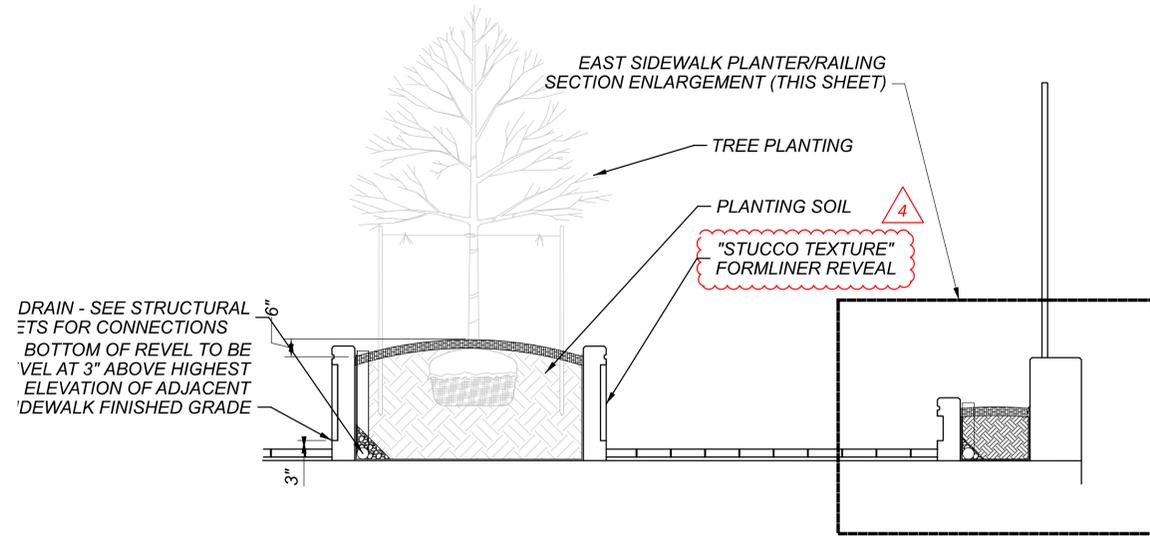


EAST EXTERIOR ELEVATION

SCALE: 3/8" = 1'-0"

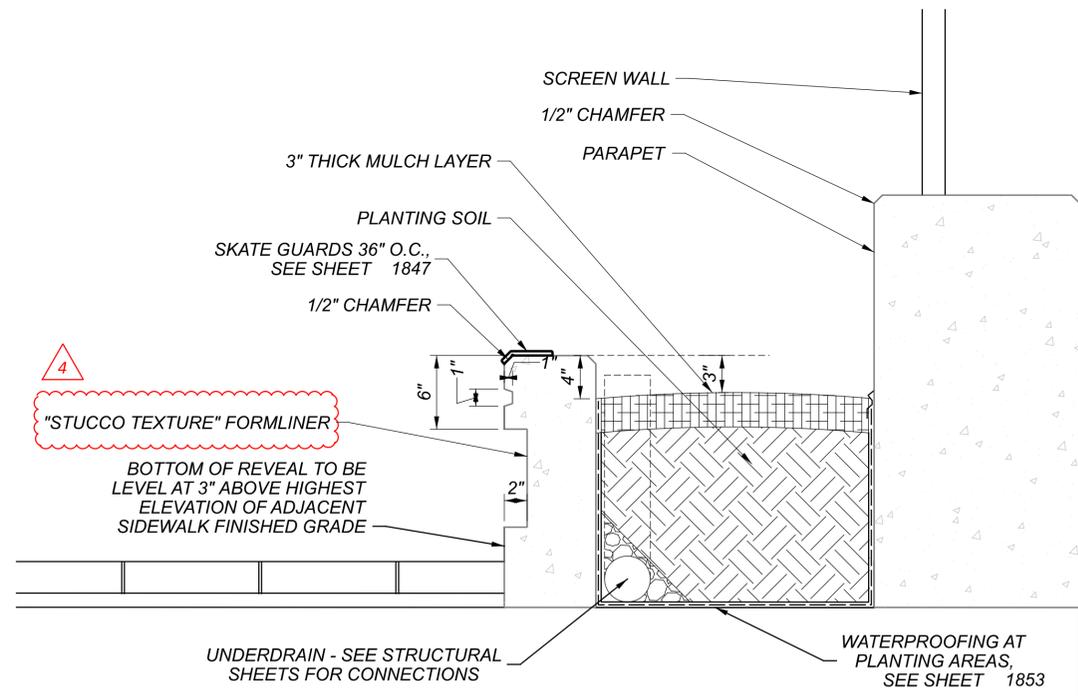
NOTE: THE CITY OF CLEVELAND IS IN THE PROCESS OF DETERMINING CHANGE TO STREET NAME. MINIMUM 90 DAYS PRIOR TO ORDERING FORMLINER. COORDINATE WITH ENGINEER TO REQUEST FINAL STREET NAME FROM CITY OF CLEVELAND.



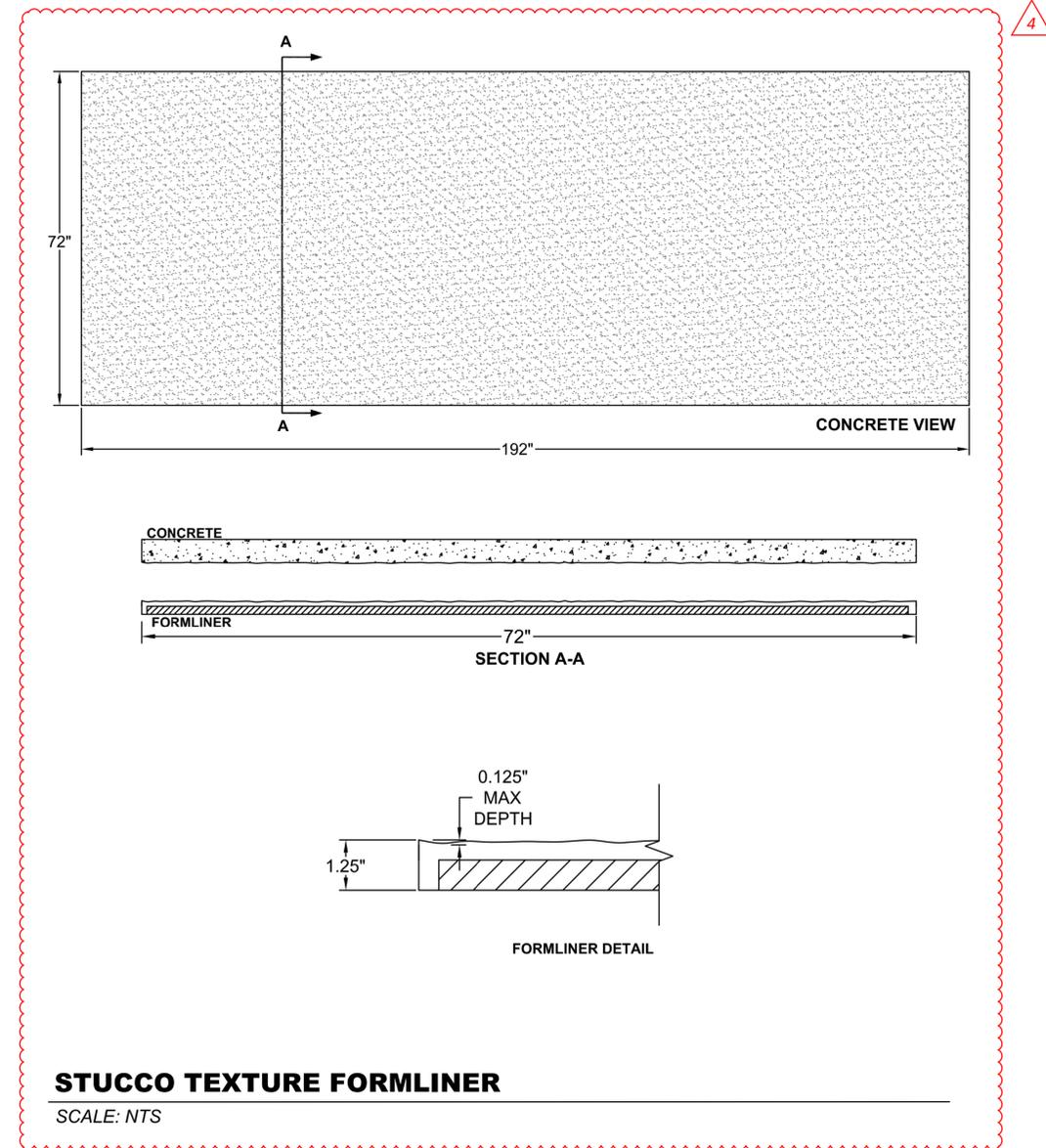


EAST SIDEWALK PLANTER/RAILING SECTION

SCALE: 1/2" = 1'-0"



EAST SIDEWALK PLANTER/RAILING SECTION



STUCCO TEXTURE FORMLINER

SCALE: NTS



DESIGN AGENCY

Michael Baker
INTERNATIONAL

DESIGNER

BDC

REVIEWER

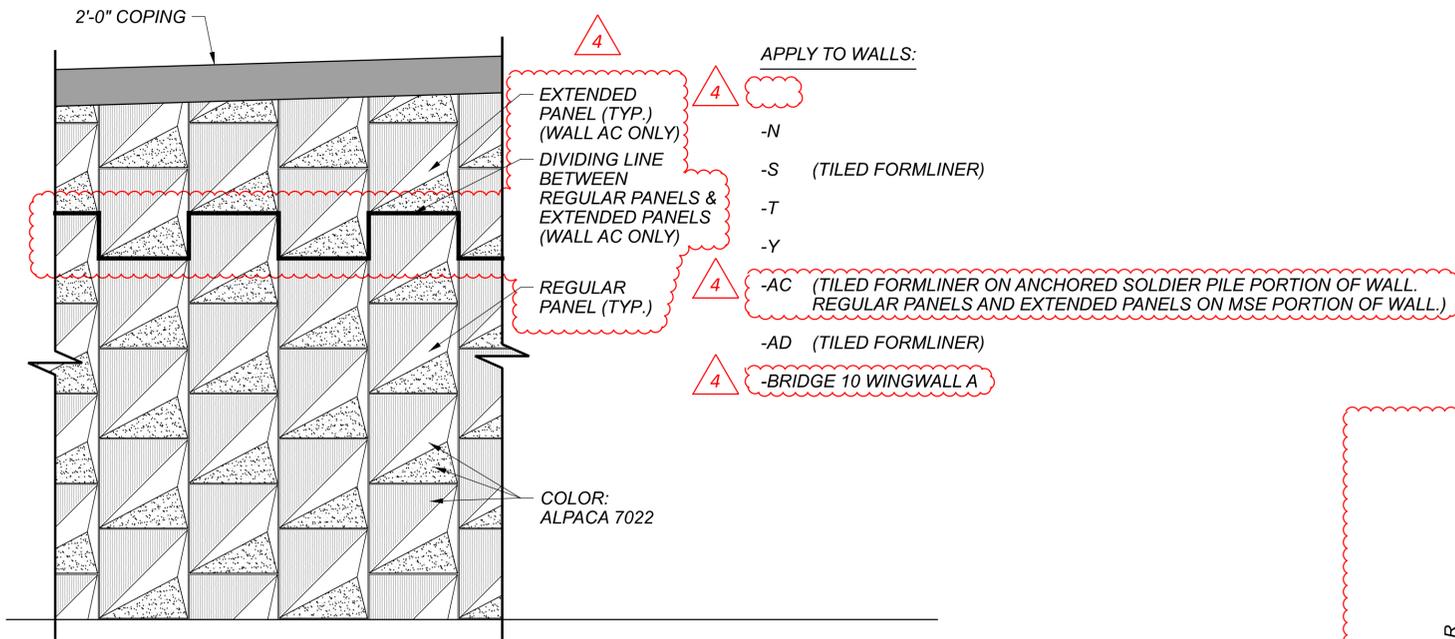
JCF 01/10/24

PROJECT ID

82382

SHEET TOTAL

1852 2696

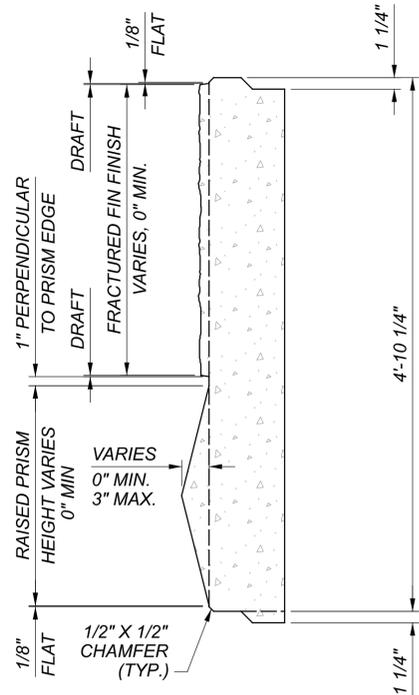


MECHANICALLY STABILIZED EARTH WALL WITH RAISED PRISM ARCHITECTURAL TREATMENT

SCALE: NTS

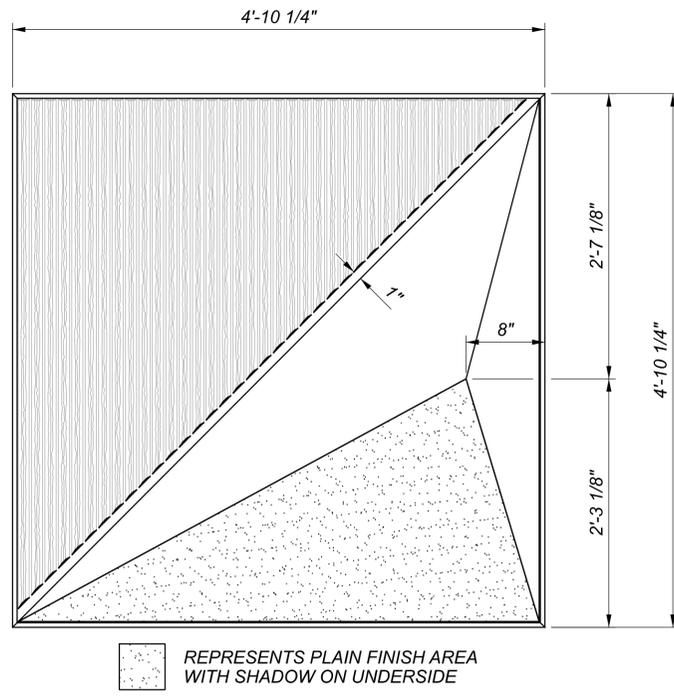
WALL AC NOTES:

1. THE TOP ROW OF PRISM PANELS SHALL BE EXTENDED TO MEET THE COPING PER WALL AC PLANS. TOP PANELS MUST ACCOMMODATE AT LEAST ONE ROW OF SOIL REINFORCEMENT STRAPS BELOW THE MOMENT SLAB.
2. THE ARCHITECTURAL TREATMENT SHALL BE REPLICATED ON THE EXTENDED PANELS. DO NOT ALTER GEOMETRY OR SCALE OF PATTERN.



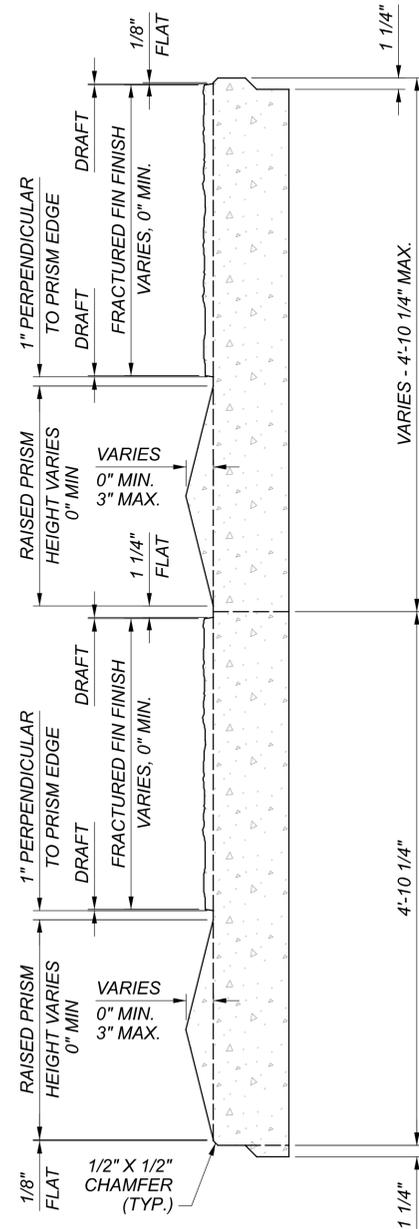
VERTICAL PRISM SECTION: REGULAR PANEL

SCALE: NTS



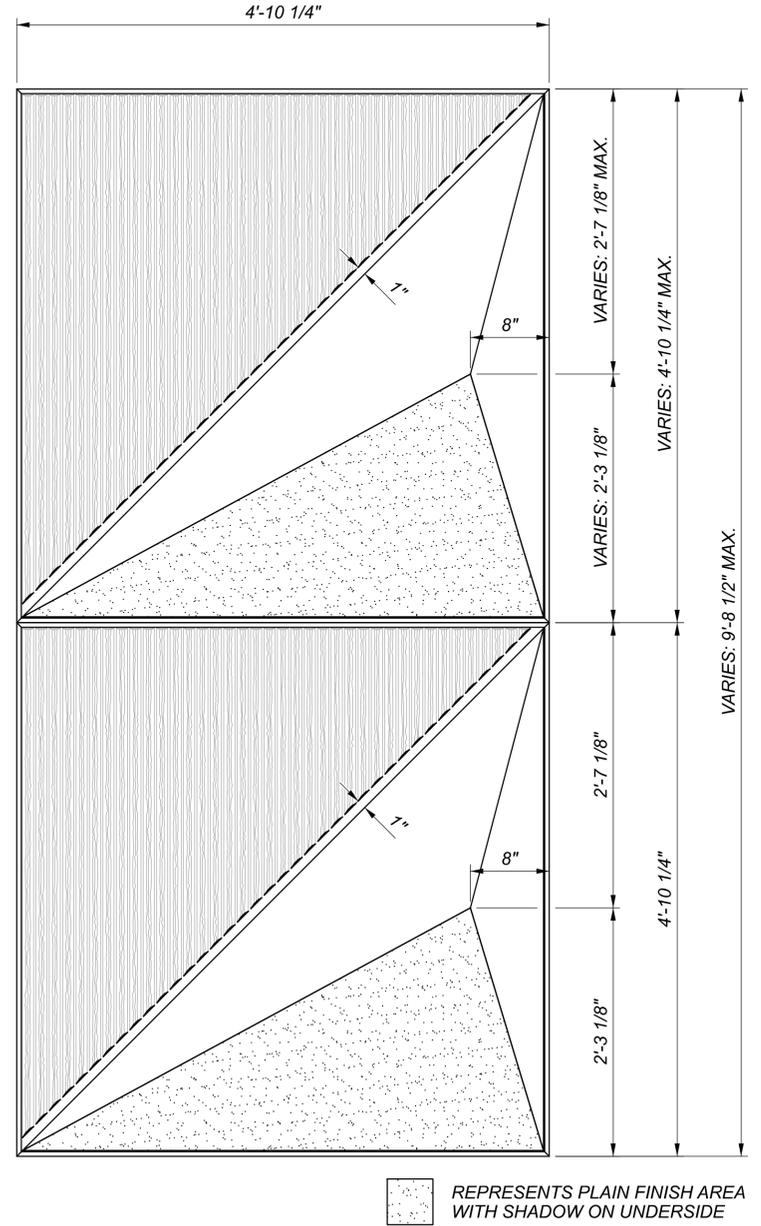
TYPICAL PRISM DETAIL: REGULAR PANEL

SCALE: NTS



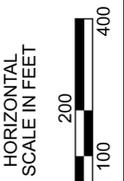
VERTICAL PRISM SECTION: EXTENDED PANEL

SCALE: NTS



TYPICAL PRISM DETAIL: EXTENDED PANEL

SCALE: NTS



WALL AESTHETIC DETAILS SHEET 01

DESIGN AGENCY

Michael Baker INTERNATIONAL

DESIGNER BDC

REVIEWER JCF 01/10/24

PROJECT ID 82382

SHEET TOTAL 1865 2696

STRUCTURE GENERAL NOTES (CONTINUED):

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN:
 THE EXTERIOR FACE OF THE BRIDGE PARAPET SHALL HAVE A GROOVE PATTERN APPLIED THAT MATCHES THE DETAILS SHOWN IN THE PLANS. THIS ITEM SHALL INCLUDE ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO CONSTRUCT THE PARAPET AND THE GROOVE PATTERN. THIS ITEM SHALL ALSO INCLUDE THE PARAPET ON THE APPROACH SLABS AND BULKHEADS.

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

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

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



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

THE ADDITIONAL 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.

TINT SO THE FINAL COLOR IS ALPACA 7022 (SHERWIN WILLIAMS).

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. APPLY THE GRAFFITI COATING IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

ITEM 516 - ARMORLESS PREFORMED JOINT SEAL, AS PER PLAN:

INSTALL SEAL FOR EACH JOINT IN ONE CONTINUOUS PIECE.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN:

THE REQUIREMENTS OF CMS 511.03 AND 511.04 SHALL APPLY TO THIS ITEM OF WORK. THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO THE CONCRETE AND STEEL REINFORCEMENT NECESSARY TO FORM AND PLACE THE APPROACH SLABS AS SHOWN IN THE PLANS. PAYMENT FOR THIS ITEM SHALL ALSO INCLUDE THE ITEMS LISTED ON STANDARD DRAWING AS-1-15 AND ALL OTHER NECESSARY MATERIALS, LABOR, AND EQUIPMENT AND SHALL BE INCLUDED IN THE UNIT PRICE PER SQUARE YARD FOR ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN.

THE COST OF THE PARAPET ON THE APPROACH SLABS SHALL BE INCLUDED WITH ITEM 509 AND ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN.

ITEM 526 - TYPE C INSTALLATION, AS PER PLAN:

THE REQUIREMENTS OF CMS 511.03 AND 511.04 SHALL APPLY TO THIS ITEM OF WORK. THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO THE CONCRETE, STEEL REINFORCEMENT, AND ARMORLESS PREFORMED JOINT SEAL NECESSARY TO FORM AND PLACE THE SLEEPER SLABS AND BULKHEADS AS SHOWN IN THE PLANS. PAYMENT FOR THIS ITEM SHALL ALSO INCLUDE THE ITEMS LISTED ON STANDARD DRAWING AS-2-15 AND ALL OTHER NECESSARY MATERIALS, LABOR, AND EQUIPMENT AND SHALL BE INCLUDED IN THE UNIT PRICE PER FOOT FOR ITEM 526 - TYPE C INSTALLATION, AS PER PLAN.

THE COST OF THE PARAPET ON THE BULKHEADS SHALL BE INCLUDED WITH ITEM 509 AND ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN.

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

- | | |
|--|--|
| ABUT. - ABUTMENT
APPR. - APPROACH
B - BASELINE
BOT. - BOTTOM
BRG. - BEARING
BRGS. - BEARINGS
BTA - BRIDGE TERMINAL ASSEMBLY
C - CENTERLINE
C/C - CENTER TO CENTER
CIP - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CLR. - CLEARANCE
CP - COMPLETE PENETRATION BUTT WELD
CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONC. - CONCRETE
CONST. - CONSTRUCTION
C.P.P. - CORRUGATED PLASTIC PIPE
CS - INDICATES BUTT WELD SUBJECT TO COMPRESSIVE STRESSES ONLY
CU YD - CUBIC YARD
CVN - CHARPY V-NOTCH TESTING
DIA. - DIAMETER
E.F. - EACH FACE
ELEV., EL. - ELEVATION
EQ. - EQUAL
EX. - EXISTING
EXP. - EXPANSION
F.A. - FORWARD ABUTMENT
F.F. - FAR FACE
F/F - FACE TO FACE
F.S. - FIELD SPLICE
FT/FT - FOOT PER FOOT
FTG. - FOOTING
FWD. - FORWARD
GEN. - GENERAL
INT. - INTEGRAL
LF - LEFT FORWARD
LT. - LEFT
MAX. - MAXIMUM
M.E. - MATCH EXISTING
MIN. - MINIMUM
MISC. - MISCELLANEOUS
MOT - MAINTENANCE OF TRAFFIC
N.F. - NEAR FACE
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
PCB - PORTABLE CONCRETE BARRIER
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PGL - PROFILE GRADE LINE
PROP. - PROPOSED
PT - POINT OF TANGENCY
PVC - POINT OF VERTICAL CURVATURE
PVI - POINT OF VERTICAL INTERSECTION
PVT - POINT OF VERTICAL TANGENCY
R. - RADIUS
R.A. - REAR ABUTMENT
RCP - ROCK CHANNEL PROTECTION
RF - RIGHT FORWARD
RT. - RIGHT
R/W - RIGHT OF WAY
SAN. - SANITARY
SER. - SERIES
SHLDR. - SHOULDER
SHT. - SHEET
S.O. - SERIES OF
SPA. - SPACES OR SPACING
SR - STATE ROUTE
STA. - STATION
STD. - STANDARD
STM. - STORM
STR. - STRAIGHT
TBM - TEMPORARY BENCH MARK
TEMP. - TEMPORARY
T.O.S. - TOE OF SLOPE
T/PARAPET - TOE OF PARAPET
T/T - TOE TO TOE
TYP. - TYPICAL
U.G. - UNDERGROUND
U.N.O - UNLESS NOTED OTHERWISE
VAR. - VARIES
VC - VERTICAL CURVE
VERT. - VERTICAL
W/O - WITHOUT |
|--|--|

SFN	1807901
DESIGN AGENCY	
B&N burgessniple.com	
DESIGNER	CHECKER
MAB	BCS
REVIEWER	
DWL 05/24/22	
PROJECT ID	
82382	
SUBSET	TOTAL
5	50
SHEET	
TOTAL	
2040	2696

ESTIMATED QUANTITIES										
PARTICIPATION	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER.	GENERAL	REF. SHEET
02/IMS/10	202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	4/50
02/IMS/10	202	22900	4 485	SY	APPROACH SLAB REMOVED				4 485	
02/IMS/10	202	32800	300	SY	CONCRETE SLOPE PROTECTION REMOVED				300	
02/IMS/10	503	11101	LS	-	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	LS				4/50
02/IMS/10	503	21300	LS	-	UNCLASSIFIED EXCAVATION				LS	
02/IMS/10	505	11100	LS	-	PILE DRIVING EQUIPMENT MOBILIZATION				LS	
02/IMS/10	507	00500	5770	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	5770				
02/IMS/10	507	00550	6095	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	6095				
02/IMS/10	507	00600	3135	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		3135			
02/IMS/10	507	00650	3300	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		3300			
02/IMS/10	509	10000	228033	LB	EPOXY COATED STEEL REINFORCEMENT	35588	27931	164514		
02/IMS/10	509	30020	4453	FT	NO. 4 GFRP DEFORMED BARS			4453		
02/IMS/10	509	30040	4606	FT	NO. 6 GFRP DEFORMED BARS			4606		
02/IMS/10	511	33500	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE	2				
02/IMS/10	511	34446	606	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			606		
02/IMS/10	511	34451	111	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			111		5/50
02/IMS/10	511	41012	2 78	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		2 78			
02/IMS/10	511	44112	119	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	119				
02/IMS/10	511	46512	235	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	168	67			
02/IMS/10	511	71200	470	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT, ABUTMENT	470				5/50
02/IMS/10	512	10001	240	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, PERMANENT GRAFFITI PROTECTION	171	69			5/50
02/IMS/10	512	10101	1005	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	126	191	557	131	5/50
02/IMS/10	512	33000	18	SY	TYPE 2 WATERPROOFING	3			15	
02/IMS/10	513	10280	548522	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4			548522		
02/IMS/10	513	20000	5760	EACH	WELDED STUD SHEAR CONNECTORS			5760		
02/IMS/10	514	00060	29332	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			29332		
02/IMS/10	514	00066	29332	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			29332		
02/IMS/10	516	10011	148	FT	ARMORLESS PREFORMED JOINT SEAL, AS PER PLAN				148	5/50
02/IMS/10	516	13600	100	SF	1" PREFORMED EXPANSION JOINT FILLER				100	
02/IMS/10	516	13900	143	SF	2" PREFORMED EXPANSION JOINT FILLER				143	
02/IMS/10	516	14200	152	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL			152		
02/IMS/10	516	44201	16	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 1'-2" x 1'-5" x 3 1/16", LOAD PLATE: 1'-3" x 1'-6" x 1 1/2" AND 1'-7" x 11" x 1 1/2")	16				28/50
02/IMS/10	516	44201	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (BEARING: 1'-6" x 2'-0 1/2" x 3 3/8", BEVELED LOAD PLATE: 1'-7" x 2'-1 1/2")		8			29/50
02/IMS/10	518	21200	147	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	147				
02/IMS/10	518	40000	197	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	197				
02/IMS/10	518	40010	59	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	59				
02/IMS/10	523	20001	3	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2	1			4/50
02/IMS/10	523	20501	3	EACH	RESTRIKE, AS PER PLAN	2	1			4/50
02/IMS/10	526	30011	504	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN				504	5/50
02/IMS/10	526	90031	152	FT	TYPE C INSTALLATION, AS PER PLAN				152	5/50
02/IMS/10	601	21000	1263	SY	CONCRETE SLOPE PROTECTION	1263				

NOTES:

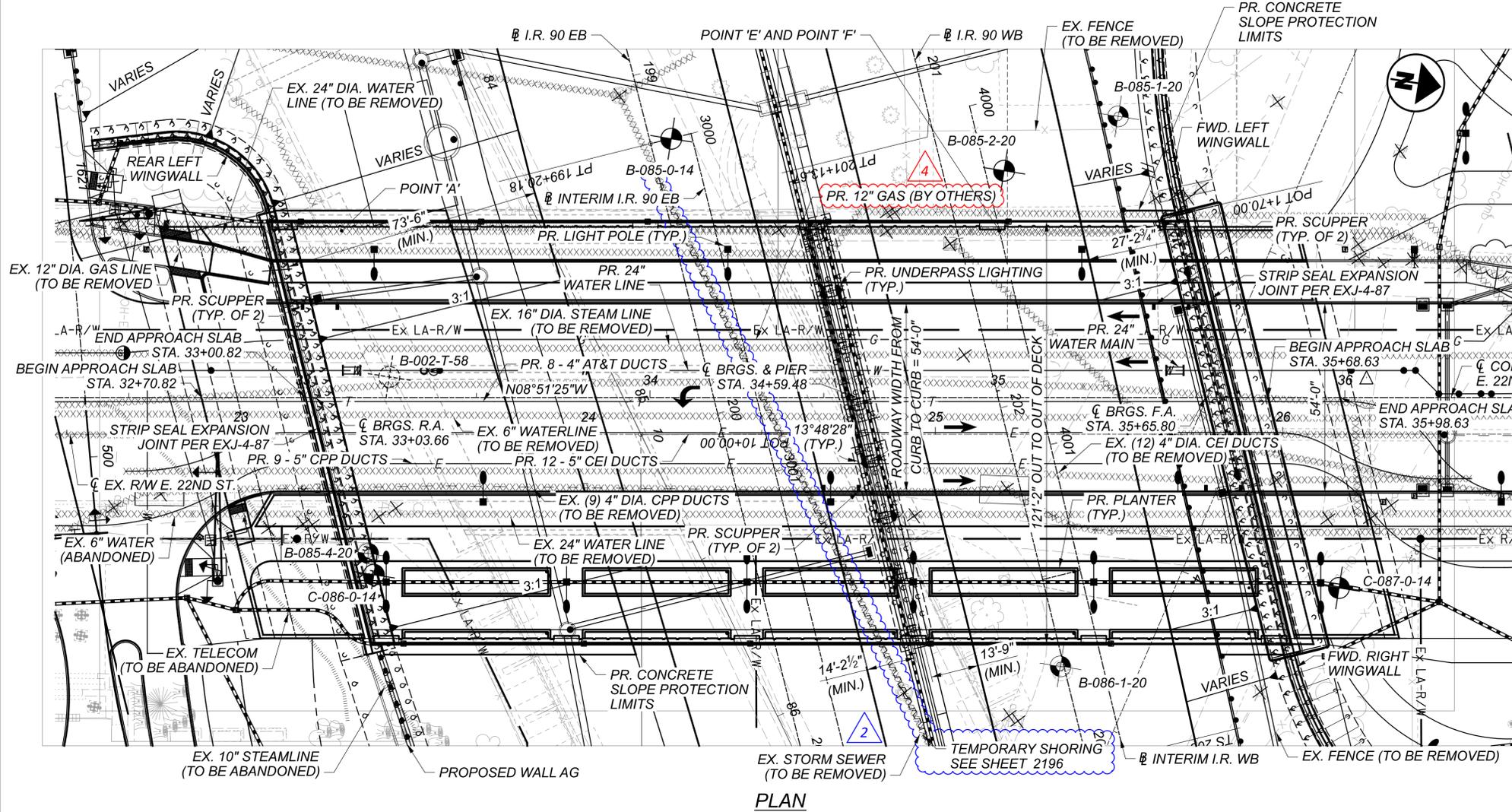
- ITEM 513 STRUCTURAL STEEL MEMBERS, LEVEL 4: THIS TOTAL WEIGHT IS BASED ON THE USE OF TYPE A CROSSFRAMES. PROVIDE THE UNIT COST FOR STRUCTURAL STEEL USING THE TOTAL WEIGHT PROVIDED, REGARDLESS OF ANY CHANGE TO THE TOTAL WEIGHT RESULTING FROM THE SELECTION OF TYPE B OR TYPE C CROSSFRAMES IN LIEU OF TYPE A.

ESTIMATED QUANTITIES
 CUY-90-1653L (BRIDGE 10)
 I.R. 90 WB OVER CR-721 (E. 14TH ST.)

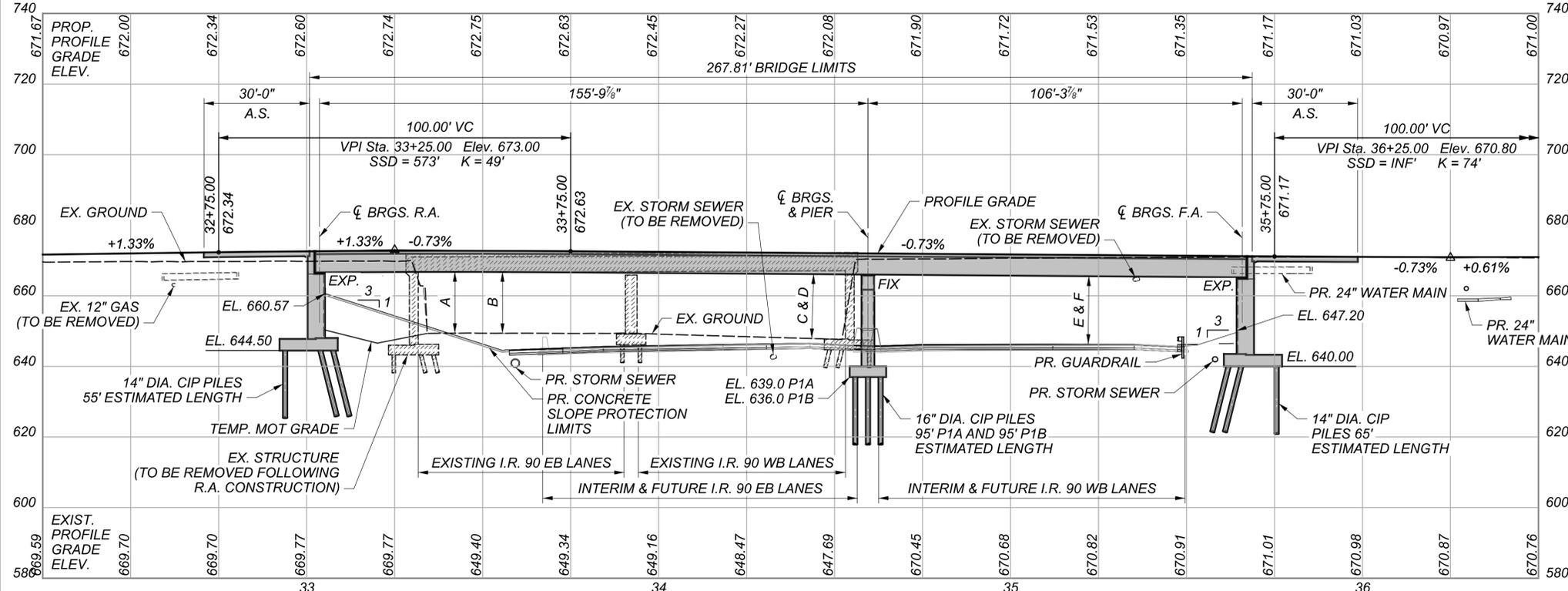
SFN	1807901
DESIGN AGENCY	
B&N	burgessniple.com
DESIGNER	CHECKER
DBH	BCS
REVIEWER	
DWL	05/24/22
PROJECT ID	82382
SUBSET	TOTAL
6	50
SHEET	TOTAL
2041	2696

CUY-90-16.28 (CCG3A)

MODEL: CLP_E 22ND ST - Bridge 13 Plan PAPER SIZE: 34x22 (in.) DATE: 9/27/2025 TIME: 8:06:48 PM USER: Joseph.Hogan
 p:\vmb-us-pw-bentley.com\mb-us-pw-03\Documents\Cleveland_OH\01_Projects\ODOT\District12\28232400-Engineering\Structures\SFN_1807839_SFN_1807839_SFN_1807839_SFN_1807839.dgn



PLAN



PROFILE GRADE ALONG CL CONST. E. 22ND ST.

BENCHMARK DATA

BM #54 STA. 33+03.27	ELEV. 672.54	OFFSET 36.13 RT.	CUT CROSS
BM #62 STA. 35+24.62	ELEV. 672.11	OFFSET 1174.60 LT.	RR SPIKE
BM #72 STA. 23+49.63	ELEV. 674.06	OFFSET 52.19 LT.	CUT CROSS
BM #73 STA. 37+05.22	ELEV. 671.90	OFFSET 407.77 LT.	CUT CROSS

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 4 / 2696

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:

2015 ADT = 13,400 2015 ADTT = 536
 2035 ADT = 15,300 2035 ADTT = 612
 DIRECTIONAL DISTRIBUTION = 0.57

LEGEND

- TO BE REMOVED
 - HISTORIC BORING LOCATION
 - PROJECT BORING LOCATION
 - INSTRUMENTED BORING LOCATION
- VERTICAL CLEARANCES**
- A = M.V.C. EX. STRUCTURE TO EX. I-90
 - B = PR. STRUCTURE TO EX. I-90
 - C = PR. STRUCTURE TO INTERIM I-90
 - D = PR. STRUCTURE TO FUTURE I-90
 - E = M.V.C. PR. STRUCTURE TO INTERIM I-90
 - F = M.V.C. PR. STRUCTURE TO INTERIM I-90

HORIZONTAL CLEARANCE				
LOCATION	R.A.	PIER 1 SOUTH	PIER 1 NORTH	F.A.
REQ'D CLR. ZONE	30'-0"	30'-0"	30'-0"	30'-0"
PROVIDED MIN.	73'-6"	14'-2 1/2"	13'-9"	27'-2 3/4"

* BARRIER PROTECTION REQ'D & PROVIDED

VERTICAL CLEARANCE						
LOCATION	A	B	C	D	E	F
REQUIRED MIN.	-	14'-6"	15'-6"	15'-6"	15'-6"	15'-6"
PROVIDED MIN.	14'-6"	14'-11"	18'-2"	18'-2"	17'-0"	17'-1"

LOCATIONS A, B, C, AND D ARE MEASURED TO EB I-90 LANES
 LOCATIONS E AND F ARE MEASURED TO WB I-90 LANES

EXISTING STRUCTURE

TYPE: CONTINUOUS BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 61'-3"±, 61'-3"± C/C BEARINGS ALONG CL CONSTRUCTION

ROADWAY: 74'-0"±, F/F OF CURBS WITH TWO 8'-0" WALKS

LOADING: CF 2000 (51)

SKEW: 25°51'00" RF

WEARING SURFACE: 2"± CONCRETE OVERLAY

APPROACH SLABS: AS-1-54 (25'± LONG), 1'-6 1/2" THICK

ALIGNMENT: TANGENT

CROWN: 0.0156±

STRUCTURE FILE NUMBER: 1807838

DATE BUILT: 1958

DISPOSITION: TO BE REMOVED

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL PLATE GIRDER WITH COMPOSITE REINFORCED CONCRETE DECK SUPPORTED ON REINFORCED CONCRETE PIER & ABUTMENTS ON PILES

SPANS: 155'-9 7/8" & 106'-3 3/8" C/C BRGS. ALONG CL CONST. E. 22ND ST.

ROADWAY: 54'-0" TOE/TOE CURB WITH 9'-6" AND 22'-2" SIDEWALKS

LOADING: HL93, 60 PSF FUTURE WEARING SURFACE, & SIDEWALK PEDESTRIAN LL

SKEW: 13°48'28" RIGHT FORWARD

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: 30'-0" LONG (AS-1-15, AS-2-15), TYPE A, INSTALLATION, 1'-5" THICK

ALIGNMENT: TANGENT

CROWN: 0.02 FT/FT

DECK AREA: 32,042 SF

STRUCTURE FILE NUMBER: 1807839

COORDINATES: LATITUDE N 41°29'52.40"
 LONGITUDE W 81°40'25.98"

SITE PLAN
 CUY-90-1678 (BRIDGE 13)
 CR-710 (E. 22ND ST.) OVER I.R. 90

SFN	1807839
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER/CHECKER	ZES ETB
REVIEWER	CDC 05/10/24
PROJECT ID	82382
SUBSET	TOTAL
1	99
SHEET	TOTAL
2182	2696

ITEM 506 - STATIC LOAD TEST, AS PER PLAN

AT THE REAR AND FORWARD ABUTMENTS, PERFORM DYNAMIC TESTING ON THE FIRST TWO PRODUCTION PILES. PERFORM THE STATIC LOAD TEST ON EITHER PILE. ALSO PERFORM DYNAMIC TESTING ON TWO OTHER PILES, TO BE USED AS ANCHOR PILES. DRIVE ALL PILES TO THE FULL ESTIMATED LENGTH FOR THE REAR & FORWARD ABUTMENT SUBSTRUCTURE UNITS (55 FT & 65 FT), IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP." OTHER PRODUCTION PILES IN THE SAME SUBSTRUCTURE UNIT MAY BE USED AS ANCHOR PILES. THE STATIC LOAD TEST PILE AND ALL ANCHOR PILES SHALL NOT BE BATTERED. AFTER DRIVING ALL PILES TO THE FULL ESTIMATED LENGTH, CEASE ALL DRIVING OPERATIONS AT THE SUBSTRUCTURE FOR A MINIMUM OF 14 DAYS. AFTER THE WAITING PERIOD, PERFORM THE STATIC LOAD TEST, AND THEN PERFORM PILE RESTRIKES ON THE FOUR DYNAMIC LOAD TEST PILES (TWO RESTRIKE TEST ITEMS). PERFORM A CAPWAP ANALYSIS ON EACH PILE TESTED IN THE SAME SUBSTRUCTURE UNIT FOR EVERY DYNAMIC LOAD TEST AND EVERY RESTRIKE TEST. THE ENGINEER WILL REVIEW THE RESULTS OF THE PILE RESTRIKES AND ESTABLISH THE DRIVING CRITERIA FOR THE PILING IN THE SUBSTRUCTURE IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP." SUBMIT ALL TEST RESULTS TO THE OFFICE OF GEOTECHNICAL ENGINEERING.

IF THE RESTRIKE TEST RESULTS INDICATE THAT ANY OF THE PILES DID NOT ACHIEVE THE REQUIRED UBV, DRIVE THE PILE TO THE ESTABLISHED DRIVING CRITERIA IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP."

THE CONTRACTOR HAS THREE ALTERNATIVES TO PERFORM THE STATIC LOAD TEST, AS PER PLAN:

1. PERFORM THE STATIC LOAD TEST ON A PRODUCTION PILE IN THE REAR ABUTMENT AND FORWARD ABUTMENT SUBSTRUCTURE UNITS AND USE OTHER PRODUCTION PILES IN THE SAME SUBSTRUCTURE UNIT AS ANCHOR PILES, PER THE NOTE ABOVE.
2. PERFORM THE STATIC LOAD TEST ON A PRODUCTION PILE IN THE REAR ABUTMENT AND FORWARD ABUTMENT SUBSTRUCTURE UNITS AND DRIVE SUPPLEMENTAL PILES FOR ANCHOR PILES. STILL DRIVE ALL PILES TO THE FULL ESTIMATED LENGTH FOR THE ABUTMENT SUBSTRUCTURE UNIT. IN THIS CASE, PERFORM DYNAMIC LOAD TESTING AND RESTRIKE TESTING ON THE STATIC LOAD TEST PILE, ONE OTHER PILE IN THE SAME SUBSTRUCTURE UNIT, AND ON TWO OF THE ANCHOR PILES.
3. PERFORM THE STATIC LOAD TEST OFFLINE, ON A SUPPLEMENTAL TEST PILE WITHIN 50 FEET OF BOTH THE REAR ABUTMENT AND FORWARD ABUTMENT AND DRIVE AN ARRAY OF SUPPLEMENTAL PILES AS ANCHOR PILES. STILL DRIVE ALL PILES TO THE FULL ESTIMATED LENGTH FOR THE ABUTMENT SUBSTRUCTURE UNIT. IN THIS CASE, PERFORM DYNAMIC LOAD TESTING AND RESTRIKE TESTING ON THE STATIC LOAD TEST PILE, ONE OF THE ANCHOR PILES, AND ON TWO PRODUCTION PILES IN THE ABUTMENT SUBSTRUCTURE UNIT, IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP."

INCLUDE FOR PAYMENT WITHIN THIS ITEM A QUANTITY OF TWO (2)- ITEM 523 DYNAMIC LOAD TESTING, AS PER PLAN AND TWO (2)- ITEM 523 RESTRIKE, AS PER PLAN, ONE EACH FOR THE REAR AND FORWARD ABUTMENT SUBSTRUCTURE UNITS. EACH OF THESE INCLUDES TESTING ON TWO PILES, IN ACCORDANCE WITH ITEM 523. ANY SUPPLEMENTAL PILES DRIVEN FOR THE STATIC LOAD TEST ARE INCIDENTAL TO ITEM 506 STATIC LOAD TEST, AS PER PLAN.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN:

PROVIDE BUFF WASH FINISH ON EDGES AND BOTTOM OF DECK OVERHANGS AS DETAILED IN THE LANDSCAPE PLANS.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK, AS PER PLAN:

PLACE CONTROL JOINTS PER THE AESTHETIC ENHANCEMENT PLANS. PROVIDE PEJF AND SEALANT AROUND LUMINAIRES AT SIDEWALK PENETRATIONS AS SHOWN IN THESE PLANS.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN:

ALL BRIDGE RAILS (PARAPETS), PILASTERS AND PLANTERS SHALL RECEIVE A BUFF WASH FINISH WITH CLEAR SEALER (NON-EPOXY) PER THE LANDSCAPE PLANS AND DETAILS.

PRIOR TO CONSTRUCTING ANY OF THE CONCRETE PARAPET, INCLUDING THE PILASTERS AND PLANTERS, THE CONTRACTOR SHALL CAST THE PARAPET, PILASTER AND PLANTERS TEST PIECES REQUIRED IN THE LANDSCAPE PLANS AND MEET THE APPROVAL STANDARDS THEREIN.

THE FINAL APPROVED TEST PIECES WILL SERVE AS A JOB SITE STANDARD FROM WHICH THE ACCEPTANCE OF ALL OTHER WORK WILL BE DETERMINED. THOSE PIECES OF WORK DETERMINED BY THE ENGINEER TO BE UNSATISFACTORY IN TERMS OF CONFORMANCE TO THE QUALITY AND REPRESENTATIVE APPEARANCE OF THE JOB STANDARD TEST PIECES WILL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST OF THE PROJECT.

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

FORMLINER FIELD PATTERN ON SHEET 1867

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

FORMLINER FIELD PATTERN ON SHEET 1867

ITEM 511 - CONCRETE, MISC.: ARCHITECTURAL TREATMENT, PLANTER AESTHETIC TREATMENT

SHEET 1850

ITEM 511 - CONCRETE, MISC.: ARCHITECTURAL TREATMENT, RAILING LETTERING

SHEET 1850 AND 1851

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

APPLY A PERMANENT GRAFFITI COATING MEETING THE REQUIREMENTS OF SUPPLEMENT 1083. THE GRAFFITI COATING MUST BE COMPATIBLE WITH THE UNDERLYING CONCRETE SEALER. APPLY THE GRAFFITI COATING ACCORDING TO THE MANUFACTURE'S REQUIREMENTS. 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. PROVIDE A COATING THAT MEETS THE REQUIREMENTS LISTED BELOW.

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.

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).

THE COATING SHALL EMIT LESS THAN 300 G/L (2.5 POUNDS PER GALLON) OF VOLATILE ORGANIC COMPOUNDS (EPA METHOD 24).

THE COATING SHALL MEET THE FOLLOWING PERFORMANCE REQUIREMENTS:

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.

GRAFFITI RESISTANCE LESS THAN 7.5 AS PER ASTM D6578 AFTER 2000 HOURS ACCELERATED UV-CONDENSATION EXPOSURE IN ACCORDANCE WITH ASTM D4587.

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.

BREATHABILITY OF 10 PERMS (+/- 3) PER ASTM D1653 USING "WET CUP METHOD".

ELONGATION AT BREAK GREATER THAN 100% AS PER ASTM D412 (USING DIE "D").

ADHESION RATING OF "8 - DIFFICULT TO REMOVE" AS PER ASTM D6677 (ADHESION BY KNIFE).

FINISH COLORS:

ITEM 514 - FIELD PAINTING OF STURCUTRAL STEEL, FINISH COAT, AS PER PLAN

PAINT COLORS SHALL BE AS FOLLOWS:

BLACK FOX (SW 7020) - FASCIA GIRDERS (OUTER FACE AND BOTTOM FLANGE ONLY)

ALABASTER (SW 7008) - INSIDE GIRDERS, BRACING MEMBERS AND INSIDE FACE OF FASCIA GIRDERS

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

CONCRETE SEALER COLORS SHALL BE AS FOLLOWS:

BLACK FOX (SW 7020) - STREET NAME LETTERING ON RAILINGS

ALABASTER (SW 7008) - SUBSTRUCTURE - PIERS, ABUTMENTS AND ABUTMENT WALLS

ALPACA (SW 7022) - ABUTMENT AND WINGWALL ACCENTS

ALL COLOR NAME AND NUMBER REFERENCES ARE TAKEN FROM THE SHERWIN WILLIAMS COLOR PALATE. THE CONTRACTOR MAY SUBSTITUTE SIMILAR COLORS FROM ALTERNATIVE SUPPLIER'S COLOR PALATE.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN

CONSTRUCT REAR APPROACH SLAB AS DETAILED ON SHEET 89. SEE LANDSCAPING PLANS FOR INTEGRALLY COLORED CONCRETE DETAILS.

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

CANTILEVER FENCE PANELS AT CHEEKWALL LOCATIONS TO ENSURE AN OPENING GREATER THAN OR EQUAL TO 1" AND LESS THAN 4" EXISTS BETWEEN THE FENCE AND THE BACK FACE OF THE PILASTER. FENCE FABRIC SHALL BE BLACK.

ITEM 625, LIGHT POLE ANCHOR BOLTS ON STRUCTURE, AS PER PLAN ITEM 625, LIGHTING, MISC.: PEDESTRIAN POLE ANCHORAGE

WHEN A LIGHT POLE OR PEDESTRIAN POLE IS MOUNTED ON A STRUCTURE, THE REQUIRED ANCHOR BOLTS MAY DIFFER IN LENGTH AND/OR SHAPE FROM THOSE REQUIRED WHEN THE POLE IS MOUNTED ON A CAST-IN-PLACE DRILLED SHAFT FOUNDATION. THE COST DIFFERENTIAL FOR FURNISHING SUCH BOLTS IS INCLUDED HEREIN.

IN ADDITION, THERE IS NO FOUNDATION CONSTRUCTION ITEM IN WHICH TO INCLUDE THE SETTING OF ANCHOR BOLTS. THUS, THE SETTING OF THE ANCHOR BOLTS INTO THE STRUCTURE IS ALSO PART OF THIS WORK.

PAYMENT SHALL BE AT THE UNIT PRICE FOR THE ITEM INCLUDING PLATE(S), ANCHOR ASSEMBLY, LABOR, EQUIPMENT, CONNECTIONS, INSPECTIONS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

4 12" GAS LINE INSTALLATION
 ENBRIDGE GAS OHIO WILL INSTALL GAS PIPELINE ON BRIDGE AND WILL INSTALL LINK SEALS, SPACERS AND BOOT SEAL WHEN INSTALLING THE PIPELINE.

ITEM 625 - CONDUIT MISC.: AT&T 4" CONDUIT INSTALLATION

THIS ITEM INCLUDES PAYMENT FOR INSTALLATION OF THE AT&T CONDUIT ON THE STRUCTURE, AS SHOWN IN THE PLANS. MATERIALS WILL BE SUPPLIED TO THE GENERAL CONTRACTOR FOR INSTALLATION. AT&T WILL PROVIDE CONDUIT RACKS, FIBERGLASS CONDUITS TO ENDS OF APPROACH SLAB, FITTINGS AND EXPANSION JOINTS. CONTRACTOR TO INSTALL ALL MATERIALS ON BRIDGE. AT&T WILL INSTALL CONDUITS OUTSIDE OF APPROACH SLABS TO MANHOLES. AT&T WILL COMPLETE THE CABLE WORK.

ITEM 625 - CONDUIT, MISC.: CEI 4" CONDUIT INSTALLATION

THIS ITEM INCLUDES INSTALLATION OF THE CONDUIT ON THE STRUCTURE. CEI WILL PROVIDE ALL MATERIALS. CEI PULLS ALL CABLES. CEI CONTRACTOR WILL COMPLETE WORK UP TO THE OUTSIDE EDGE OF THE APPROACH SLABS (ALL CONDUIT OFF THE BRIDGE). CONTRACTOR WILL INSTALL THE CONDUIT BETWEEN THE OUTSIDE EDGES OF APPROACH SLABS (ALL CONDUIT UNDER APPROACH SLABS, ON THE BRIDGE AND THROUGH THE ABUTMENTS).

ITEM 625 - CONDUIT, MISC.: CPP 4" CONDUIT INSTALLATION

THIS ITEM INCLUDES INSTALLATION OF THE CPP CONDUIT ON THE STRUCTURE, AS SHOWN IN THE PLANS, AND PULLING THE WIRE. CPP WILL MAKE THE FINAL CONNECTION. CONTRACTOR TO PERFORM INTERMEDIATE (DEAD) SPLICING WITH CPP INSPECTION. CPP WILL COMPLETE CUT OVER SPLICING. CPP WILL REQUIRE NOTIFICATION OF SCHEDULE FOR THE PULLING OF CONDUIT. CPP TO INSPECT ALL WORK BEFORE FINAL CONNECTIONS ARE MADE IN MANHOLES.

ITEM 690 - ROLLER SUPPORTS (GAS LINE)

THIS ITEM INCLUDES INSTALLATION OF ALL GAS LINE SUPPORTS ON THE BRIDGE, AS SHOWN IN THE PLANS.

ITEM 690 - UTILITY SUPPORTS (AT&T DUCTS)

THIS ITEM INCLUDES INSTALLATION OF ALL AT&T DUCT SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS. AT&T WILL PROVIDE CONDUIT RACKS, FIBERGLASS CONDUITS TO ENDS OF APPROACH SLAB, FITTINGS AND EXPANSION JOINTS. CONTRACTOR TO INSTALL ALL MATERIALS ON BRIDGE.

ITEM 690 - UTILITY SUPPORTS (CEI DUCTS)

THIS ITEM INCLUDES INSTALLATION OF ALL CEI DUCT SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS. MATERIAL PROVIDED BY CEI FOR THIS WORK INCLUDES UTILITY HANGERS, CONDUIT RACKS, EXPANSION JOINTS AND SLEEVES. STEEL ANGLE SUPPORTS PROVIDED BY CONTRACTOR. CONTRACTOR TO INSTALL HANGERS AND CONDUIT RACKS. CONTRACTOR TO WORK WITH CEI TO GUARANTEE THAT THERE IS A PROPER ARRANGEMENT FOR THE DELIVERY OF MATERIALS.

ITEM 690 - UTILITY SUPPORTS (CPP DUCTS)

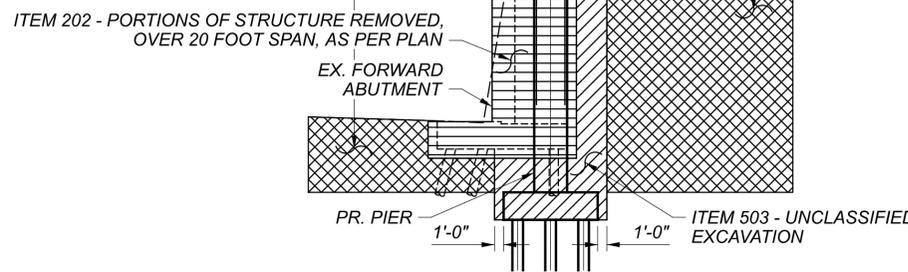
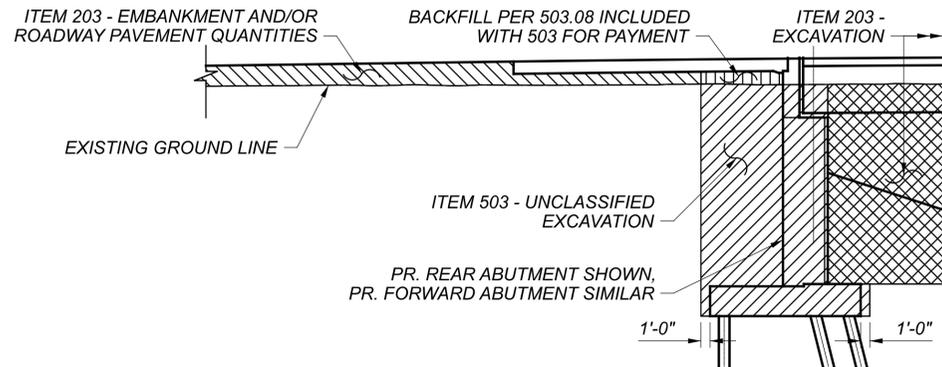
THIS ITEM INCLUDES INSTALLATION OF ALL CPP DUCT SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS.

SFN	1807839
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	CHECKER
ZES	KAG
REVIEWER	
CDC	05/10/24
PROJECT ID	82382
SUBSET	TOTAL
5	99
SHEET	TOTAL
2186	2696

ESTIMATED QUANTITIES

CALCULATED BY: ZES DATE: 03/20/24
 CHECKED BY: DAF DATE: 04/12/24

PARTICIPATION	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTR.	GENERAL	SHEET REF.
02/IMS/10	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	4, 9-14
02/IMS/10	202	11501	8	EACH	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	8				16-17
02/IMS/10	202	22900	678	SY	APPROACH SLAB REMOVED				678	
02/IMS/10	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				LS	4
02/IMS/10	503	21101	11,081	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN				11,081	4
02/IMS/10	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION				LS	
02/IMS/10	506	11101	LS		STATIC LOAD TEST, AS PER PLAN				LS	5
02/IMS/10	507	00600	22,230	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	22,230				
02/IMS/10	507	00650	24,040	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	24,040				
02/IMS/10	507	00700	6,935	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN			6,935		
02/IMS/10	507	00750	7,300	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED			7,300		
02/IMS/10	509	10000	711,695	LB	EPOXY COATED STEEL REINFORCEMENT	272,681	104,588	334,426		
02/IMS/10	511	34447	910	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			910		5
02/IMS/10	511	34451	265	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			265		5
02/IMS/10	511	41012	129	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS	129				
02/IMS/10	511	44112	1,673	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	1,673				
02/IMS/10	511	46512	1,404	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	1,248	156			
02/IMS/10	511	51513	484	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK, AS PER PLAN			484		5
02/IMS/10	511	71200	13,047	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT, ABUTMENT	13,047				5
02/IMS/10	511	71200	3,218	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT, PIER		3,218			5
02/IMS/10	511	71200	1,532	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT, PLANTER AESTHETIC TREATMENT			1,532		5
02/IMS/10	511	71200	295	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT, RAILING LETTERING			295		5
02/IMS/10	512	10001	656	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)	656				5
02/IMS/10	512	10050	3,848	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)			3,336	512	
02/IMS/10	512	10101	1,947	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	1,744	203			5
02/IMS/10	512	33000	32	SY	TYPE 2 WATERPROOFING				32	
02/IMS/10	512	33010	1,727	SY	TYPE 3 WATERPROOFING				1,727	
02/IMS/10	513	10280	1,924,400	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4			1,924,400		
02/IMS/10	513	20000	8,656	EACH	WELDED STUD SHEAR CONNECTORS			8,656		
02/IMS/10	514	00060	87,648	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			87,648		
02/IMS/10	514	00067	87,648	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			87,648		5
02/IMS/10	516	11210	251	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL				251	
02/IMS/10	516	13600	736	SF	1" PREFORMED EXPANSION JOINT FILLER	384	352			
02/IMS/10	516	44101	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (1'-8" W X 0'-10" L X 2.65" T)				14	56-57
02/IMS/10	516	44301	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (1'-8" W X 1'-5" L X 4.09" T)				14	56-57
02/IMS/10	516	44401	14	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (2'-5" W X 2'-2" L X 5.69" T)				14	56-57



ITEM 503 PAY LIMIT DIAGRAM

CUY-90-16.28 (CCG3A)

MODEL: Sheet PAPER/DATE: 3/4/22 (in.) DATE: 10/12/2025 TIME: 4:54:29 PM USER: Joseph.Hogan
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ESTIMATED QUANTITIES (1 OF 2)
 CUY-90-1678 (BRIDGE 13)
 CR-710 (E. 22ND ST.) OVER I.R. 90

SFN	1807839
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	ZES
REVIEWER	KAG
PROJECT ID	82382
SUBSET	7
TOTAL	99
SHEET	2188
TOTAL	2696

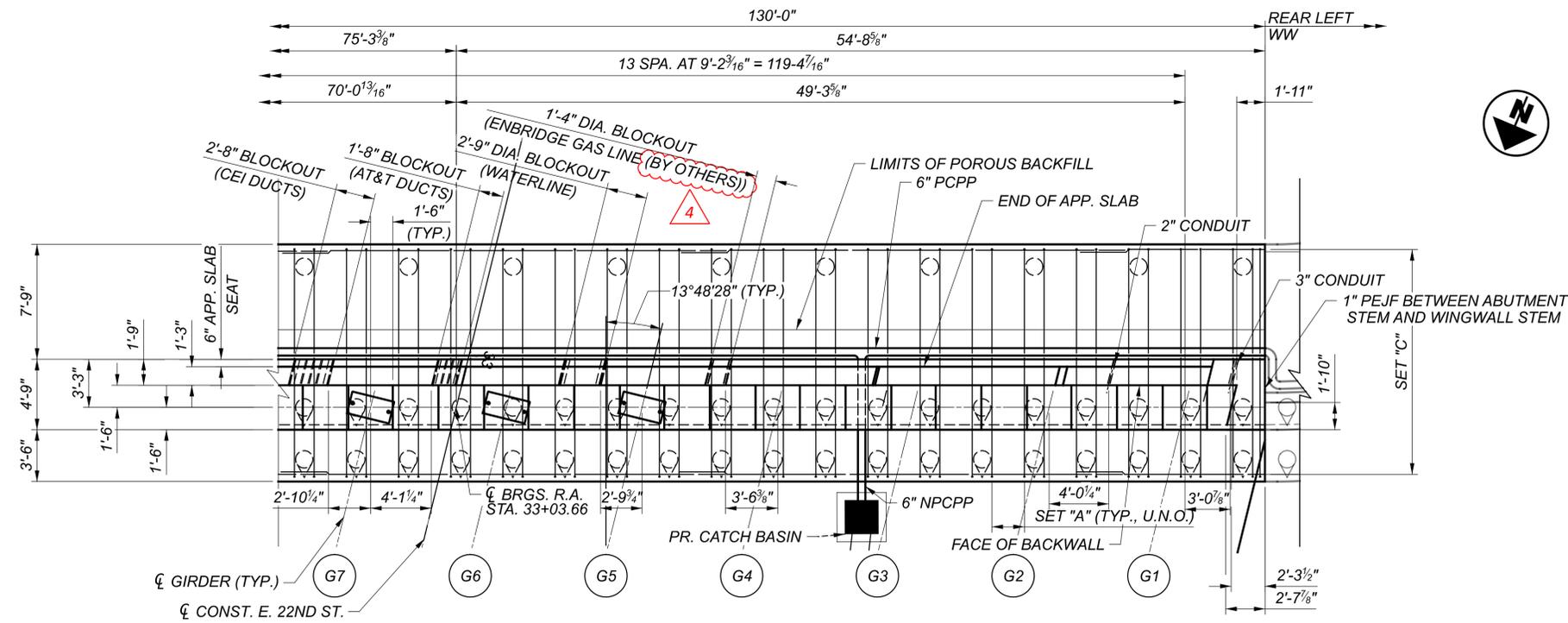
ESTIMATED QUANTITIES

CALCULATED BY: ZES DATE: 03/20/24
 CHECKED BY: DAF DATE: 04/12/24

PARTICIPATION	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTR.	GENERAL	SHEET REF.
02/IMS/10	518	12200	8	EACH	SCUPPERS, INCLUDING SUPPORTS				8	
02/IMS/10	518	21200	1,035	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	1,035				
02/IMS/10	518	40000	697	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	697				
02/IMS/10	518	40011	33	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	33				85
02/IMS/10	518	43301	304	FT	6" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN	66	130	108		85 & 88
02/IMS/10	518	62100	53	FT	STRUCTURE DRAINAGE, MISC.: 4" NON-PERFORATED PVC PIPE, INCLUDING SPECIALS			53		85
02/IMS/10	518	62100	406	FT	STRUCTURE DRAINAGE, MISC.: 4" PERFORATED PVC PIPE			406		85
02/IMS/10	518	62100	176	FT	STRUCTURE DRAINAGE, MISC.: 6" NON-PERFORATED PVC DRAIN PIPE, INCLUDING SPECIALS			176		85
02/IMS/10	523	20001	4	EACH	DYNAMIC LOAD TESTING, AS PER PLAN				4	3
02/IMS/10	523	20501	4	EACH	RESTRIKE, AS PER PLAN				4	3
02/IMS/10	526	30001	394	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN				394	5
02/IMS/10	526	30010	394	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				394	
02/IMS/10	526	90010	244	FT	TYPE A INSTALLATION				244	
02/IMS/10	SPECIAL	530E00200	LS		STRUCTURES: PRECONSTRUCTION CONDITION SURVEY				LS	3
02/IMS/10	SPECIAL	530E00400	280	EACH	STRUCTURES: BOLLARD ANCHORAGE				280	86
02/IMS/10	SPECIAL	530E14000	LS		STRUCTURAL SURVEY AND MONITORING OF VIBRATION				LS	3
02/IMS/10	601	21000	1,092	SY	CONCRETE SLOPE PROTECTION				1,092	
02/IMS/10	607	39911	319	FT	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC, AS PER PLAN				319	5
02/IMS/10	625	10615	28	EACH	LIGHT POLE ANCHOR BOLTS ON STRUCTURE, AS PER PLAN				28	5
02/IMS/10	625	25920	2,144	FT	CONDUIT, MISC.: AT&T 4" CONDUIT INSTALLATION				2,144	5
02/IMS/10	625	25920	3,216	FT	CONDUIT, MISC.: CEI 4" CONDUIT INSTALLATION				3,216	5
02/IMS/10	625	25920	2,412	FT	CONDUIT, MISC.: CPP 4" CONDUIT INSTALLATION				2,412	5
02/IMS/10	625	98000	24	EACH	LIGHTING, MISC.: PEDESTRIAN POLE ANCHORAGE			24		5
02/IMS/10	SPECIAL	690E50600	70	EACH	BOLLARD				70	1826
02/IMS/10	SPECIAL	690E98000	29	EACH	ROLLER SUPPORTS (GAS LINE)			29		5
02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (AT&T DUCTS)			29		5
02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (CEI DUCTS)			29		5
02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (CPP DUCTS)			29		5
02/IMS/10	SPECIAL	690E98000	27	EACH	UTILITY SUPPORTS (WATER LINE)			27		5

ESTIMATED QUANTITIES (2 OF 2)
 CUY-90-1678 (BRIDGE 13)
 CR-710 (E. 22ND ST.) OVER I.R. 90

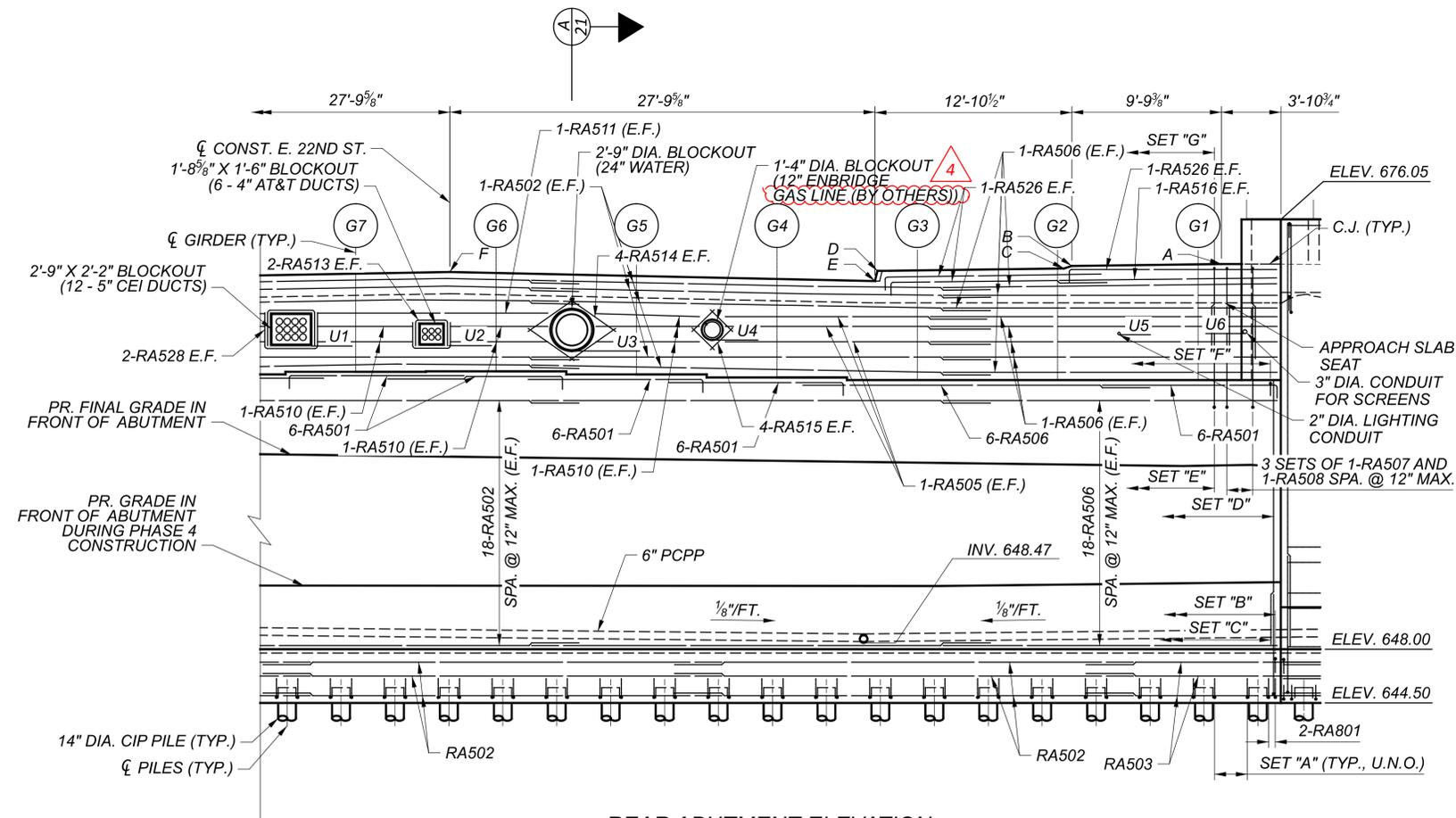
SFN	1807839
DESIGN AGENCY	
Michael Baker	INTERNATIONAL
DESIGNER	CHECKER
ZES	KAG
REVIEWER	
CDC	05/10/24
PROJECT ID	82382
SUBSET	TOTAL
8	99
SHEET	TOTAL
2189	2696



REAR ABUTMENT PLAN
 ONLY BOTTOM OF FOOTING REINFORCEMENT SHOWN FOR CLARITY

REAR ABUTMENT	
POINT	ELEVATION
A	673.12
B	673.01
C	672.85
D	672.70
E	672.03
F	672.62
G1 (AT BEAM SEAT)	665.57
G2 (AT BEAM SEAT)	665.57
G3 (AT BEAM SEAT)	665.57
G4 (AT BEAM SEAT)	665.74
G5 (AT BEAM SEAT)	665.94
G6 (AT BEAM SEAT)	666.14
G7 (AT BEAM SEAT)	666.11

UTILITIES	
POINT	ELEVATION
U1	667.79
U2	667.81
U3	667.47
U4	668.18
U5	668.52
U6	668.60



REAR ABUTMENT ELEVATION

REINFORCING LEGEND

SET "A" = 4-RA801 SPA. @ 12" MAX. (BOT., TYP. BETWEEN PILES U.N.O.), 36 SETS TOTAL

SET "B" = 131-RA601 SPA. @ 12" MAX. (TOP)

SET "C" = 131-RA504 SPA. @ 12" MAX. (N.F.)
 261-RA701 SPA. @ 6" MAX. (F.F.)

SET "D" = 131-RA505 SPA. @ 12" MAX. (N.F.)
 261-RA702 SPA. @ 6" MAX. (F.F.)
 (LAP SET "C" BARS)

SET "E" = 126-RA508 SPA. @ 12" MAX.

SET "F" = 131-RA507 SPA. @ 12" MAX.

SET "G" = 126-RA509 (LAP SET "E" BARS)

MIN. LAP LENGTHS:

- #5 - 3'-1"
- #6 - 3'-7"
- #7 - 4'-8"
- #8 - 5'-4"

LEGEND

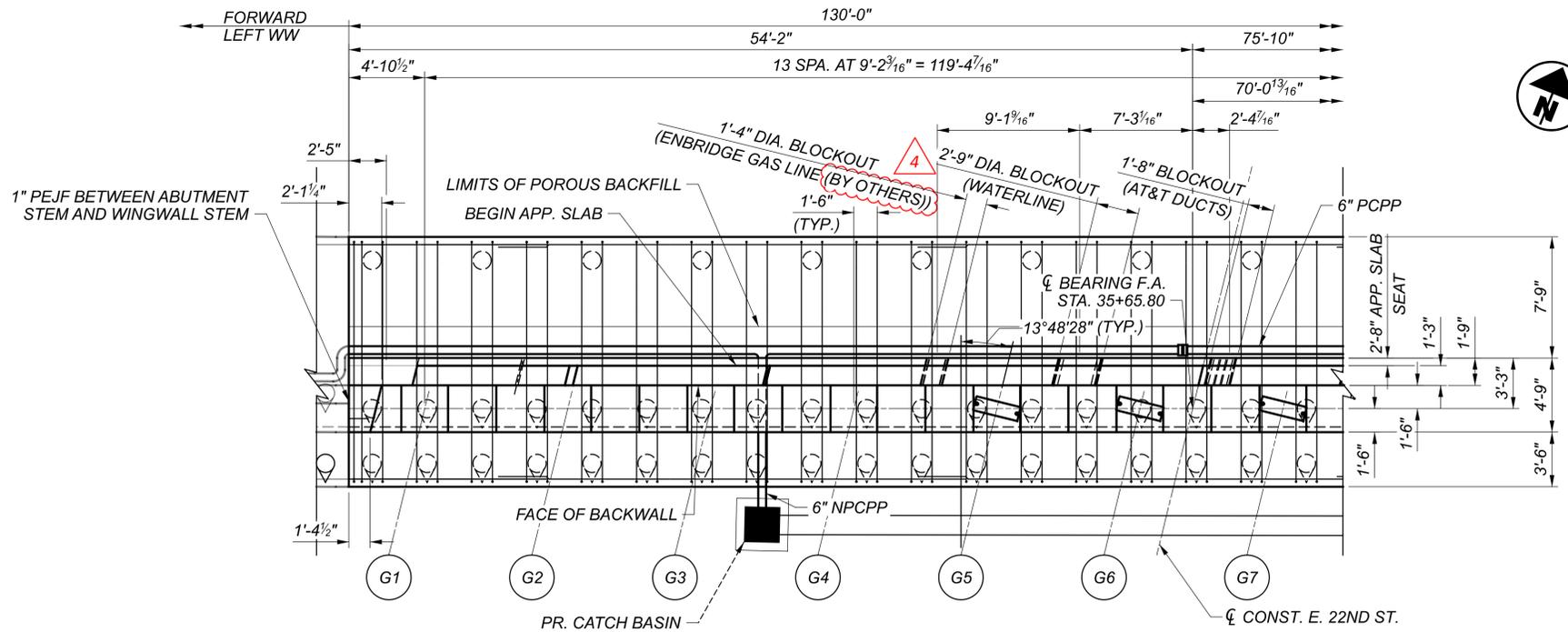
NPCPP - NON-PERFORATED CORRUGATED POLYETHYLENE PIPE (C&MS 707.33, TYPE S)

PCPP - PERFORATED CORRUGATED POLYETHYLENE PIPE (C&MS 707.33, TYPE SP)

NOTES

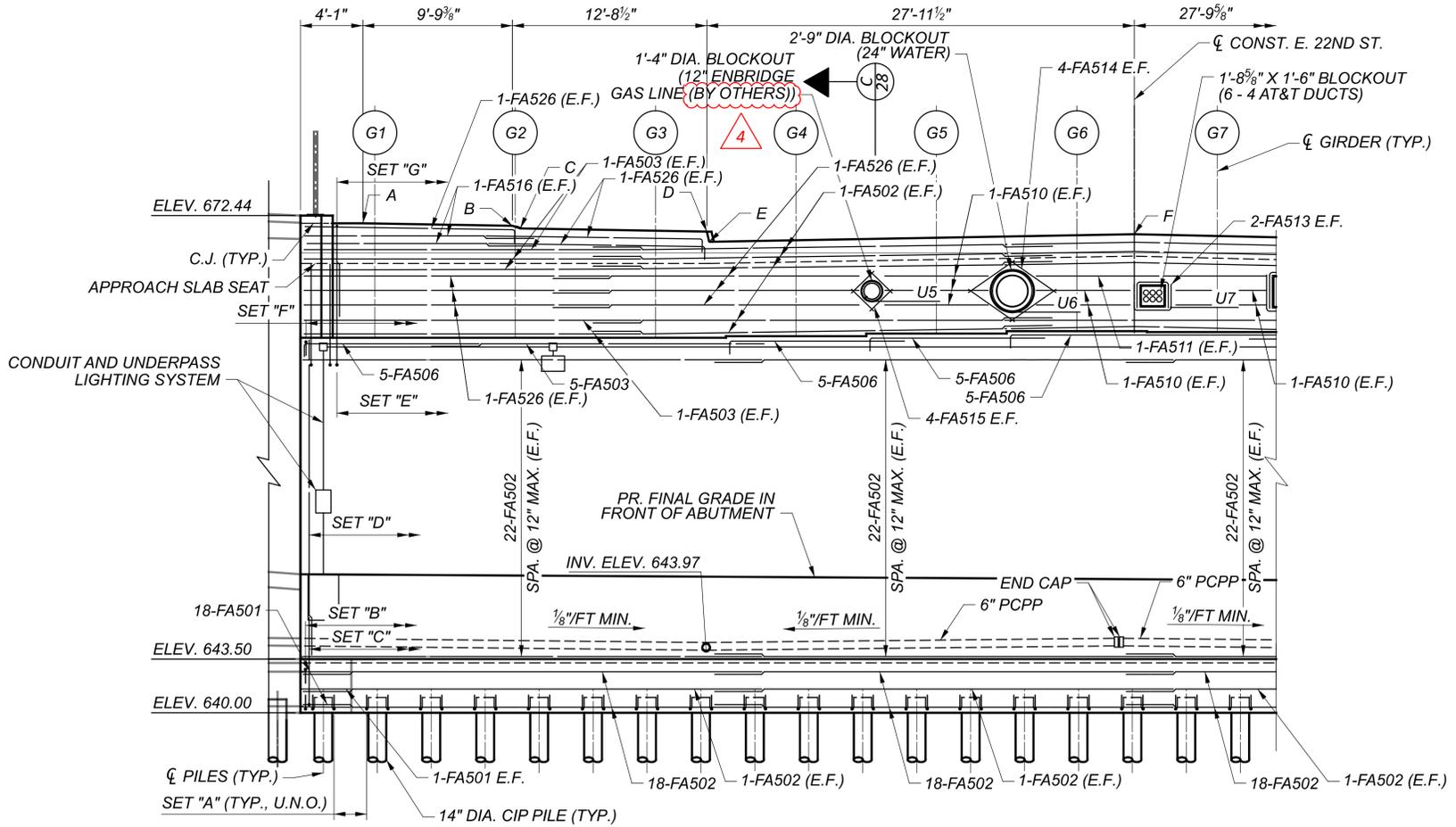
1. FOR ADDITIONAL DETAILS, SEE SHEET 20 & 21 / 99
2. SEE FOUNDATION PLAN FOR PILE LAYOUT.
3. SLOPE 6" NPCPP AND PCPP 1/8" / FT. MIN.
4. CHEEK WALL REINFORCING NOT SHOWN FOR CLARITY. SEE SHEET 21/99 FOR CHEEK WALL REINFORCING DETAILS.
5. IN THE FINAL CONDITION, THE NON-PERFORATED DRAINAGE PIPE SHALL BE OUTLET INTO THE CATCH BASIN. THE PIPE INVERT AT THE CATCH BASIN IS PROVIDED ON THIS SHEET. THE CONTRACTOR SHALL ENSURE THE DRAINAGE PIPE CAN OUTLET PROPERLY IF THE CATCH BASIN IS NOT CONSTRUCTED IN THE SAME PHASE AT THE ABUTMENT. REFER TO DRAINAGE SHEETS FOR CATCH BASIN DETAILS.

SFN	1807839
DESIGN AGENCY	
Michael Baker	
INTERNATIONAL	
DESIGNER/CHECKER	LPC / GZ
REVIEWER	CDC 05/10/24
PROJECT ID	82382
SUBSET	19 / 99
SHEET	2200 / 2696



FORWARD ABUTMENT PLAN

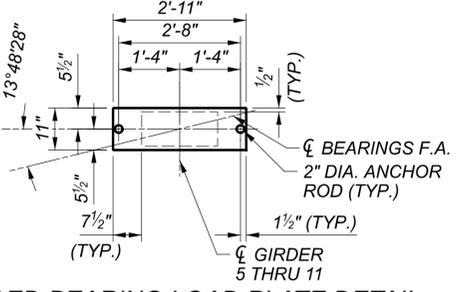
ONLY BOTTOM OF FOOTING REINFORCEMENT SHOWN FOR CLARITY



FORWARD ABUTMENT ELEVATION

FORWARD ABUTMENT	
POINT	ELEVATION
A	671.94
B	671.77
C	671.61
D	671.40
E	670.73
F	671.22
G1 (AT BEAM SEAT)	664.47
G2 (AT BEAM SEAT)	664.47
G3 (AT BEAM SEAT)	664.47
G4 (AT BEAM SEAT)	664.57
G5 (AT BEAM SEAT)	664.74
G6 (AT BEAM SEAT)	664.90
G7 (AT BEAM SEAT)	664.84

UTILITIES	
POINT	ELEVATION
U5	666.84
U6	666.14
U7	666.44



GUIDED BEARING LOAD PLATE DETAIL

REINFORCING LEGEND

- SET "A" = 4-FA801 SPA. @ 12" MAX. (BOT., TYP. BETWEEN PILES U.N.O.), 36 SETS TOTAL
- SET "B" = 260-FA601 SPA. @ 6" MAX. (TOP)
- SET "C" = 131-FA504 SPA. @ 12" MAX. (N.F.)
261-FA701 SPA. @ 6" MAX. (F.F.)
- SET "D" = 131-FA505 SPA. @ 12" MAX. (N.F.)
261-FA702 SPA. @ 6" MAX. (F.F.)
(LAP SET "D" BARS)
- SET "E" = 126-FA508 SPA. @ 12" MAX.
- SET "F" = 131-FA507 SPA. @ 12" MAX.
- SET "G" = 126-FA509 (LAP SET "E" BARS)

MIN. LAP LENGTHS:

- #5 - 3'-1"
- #6 - 3'-7"
- #7 - 4'-8"
- #8 - 5'-4"

LEGEND

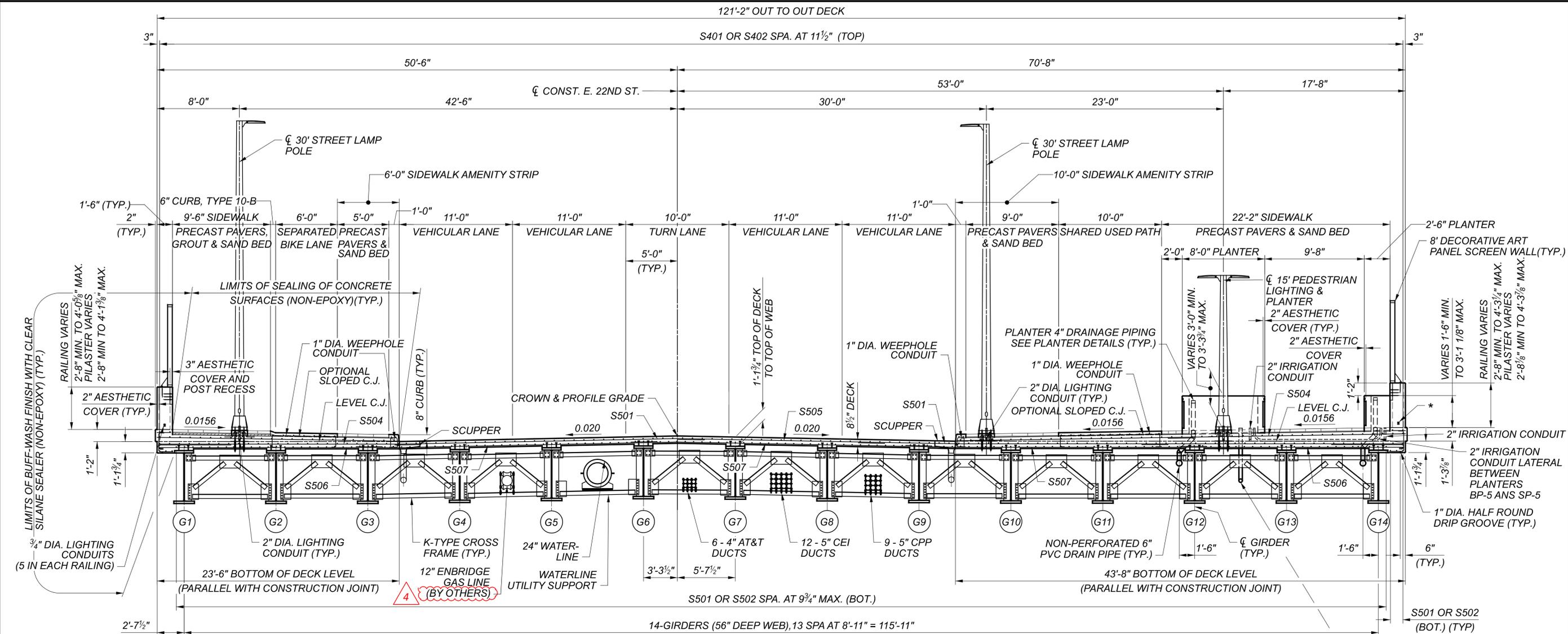
- NPCPP - NON-PERFORATED CORRUGATED POLYETHYLENE PIPE (C&MS 707.33, TYPE S)
- PCPP - PERFORATED CORRUGATED POLYETHYLENE PIPE (C&MS 707.33, TYPE SP)

NOTES

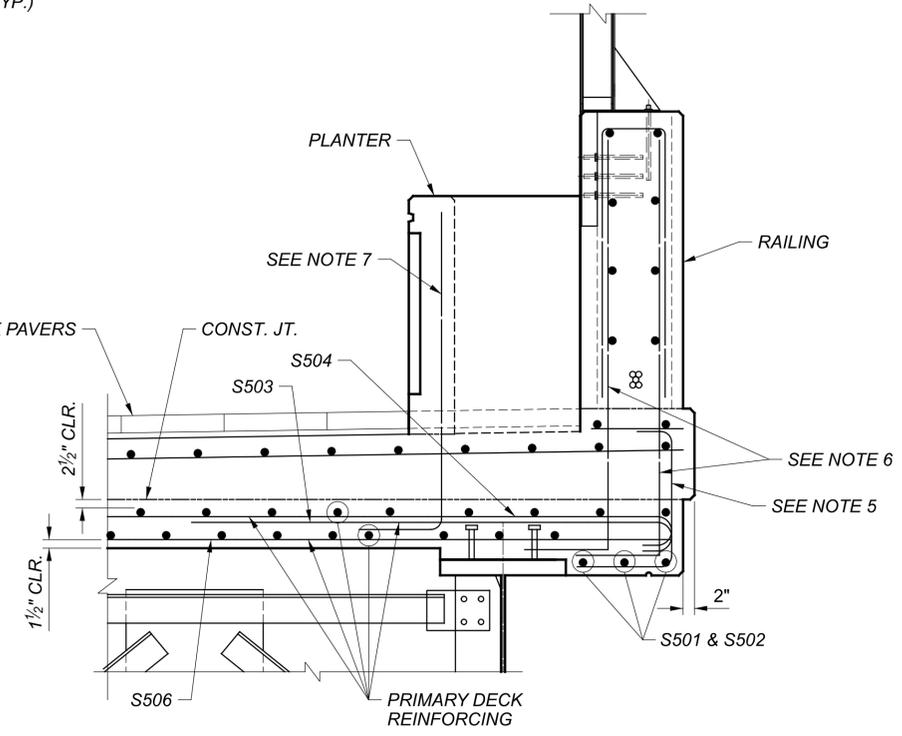
1. FOR ADDITIONAL DETAILS, SEE SHEET 26 & 27 /99
2. SEE FOUNDATION PLAN FOR PILE LAYOUT.
3. SLOPE 6" NPCPP AND PCPP 1/8" / FT. MIN.
4. CHEEK WALL REINFORCING NOT SHOWN FOR CLARITY. SEE SHEET 28/99 FOR CHEEK WALL REINFORCING DETAILS.
5. ACCURATELY PLACE REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE SETTING OF BEARING ANCHORS.
6. FOR UNDERPASS LIGHTING DETAILS, SEE SHEET 1747 / 2696 .

FORWARD ABUTMENT PLAN AND ELEVATION (1 OF 2)
CUY-90-1678 (BRIDGE 13)
CR-710 (E. 22ND ST.) OVER I.R. 90

SFN	1807839
DESIGN AGENCY	
Michael Baker	INTERNATIONAL
DESIGNER/CHECKER	LPC / GZ
REVIEWER	CDC 05/10/24
PROJECT ID	82382
SUBSET	25 / 99
SHEET	2206 / 2696



TRANSVERSE SECTION
 (PILASTERS AND BOLLARDS NOT SHOWN)



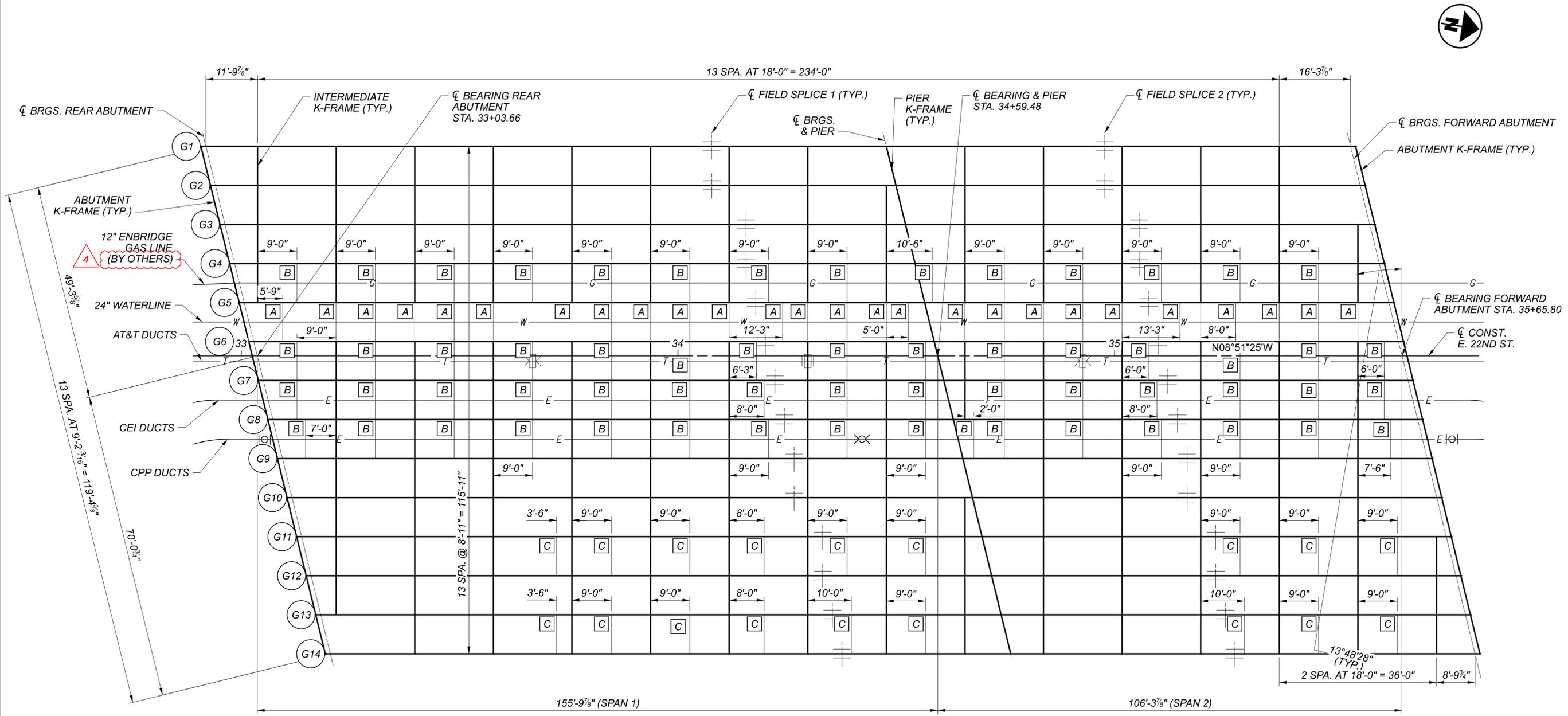
OVERHANG REINFORCING DETAIL

NOTES:

- FOR ANCHORAGE OF LIGHT POLES, COORDINATE WITH MANUFACTURER FOR ANCHOR BOLT MATERIAL SPECIFICATIONS, STRENGTH, DIAMETER, LENGTH AND SPACING.
- PAYMENT FOR LIGHT POLE ANCHORAGE, INCLUDING ALL LABOR, EQUIPMENT, MATERIAL, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LIGHT POLE ANCHORAGE ASSEMBLY AS SHOWN ON THE PLANS, SHALL BE PAID FOR UNDER ITEM 625 - LIGHT POLE ANCHOR BOLTS ON STRUCTURE, AS PER PLAN. FOR PAYMENTS ASSOCIATED WITH LIGHT POLE, SEE LIGHTING PLANS.
- 2" DIA. LIGHTING CONDUITS ARE INCLUDED WITH LIGHTING ITEMS FOR PAYMENT.
- FOR LIGHT POLE DETAILS, REFER TO LIGHTING PLANS.
- FOR SIDEWALK REBAR CAST WITH THE DECK. SEE SHEETS 66 - 70 /99.
- FOR RAILING REBAR CAST WITH THE DECK. SEE SHEETS 71 - 80 /99.
- FOR PLANTER REBAR CAST WITH THE DECK, SEE SHEETS 83 - 84 /99.
- DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM/GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 5 1/4" AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.
- PROVIDE GROUNDING PER STANDARD DRAWING HL-50.21. THE FOLLOWING BRIDGE COMPONENTS SHALL BE CONNECTED TO THE GROUNDING SYSTEM: STRUCTURAL STEEL, SCREEN WALL POSTS, LIGHT POLES, AND ALUMINUM PLANTERS.

TRANSVERSE SECTION
CUY-90-1678 (BRIDGE 13)
CR-710 (E. 22ND ST.) OVER I.R. 90

SFN	1807839
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	ZES
REVIEWER	ETB
PROJECT ID	CDC 05/10/24
SUBSET	82382
TOTAL	41
SHEET	2222
TOTAL	2696



FRAMING PLAN

UTILITY HANGER TABLE			
UTILITY	HOLE DIA.	HOLE QTY.	HOLE SPA.
GAS	1"	2	16 1/8"
AT&T	1 9/16"	4	6 1/2"
CEI	1 9/16"	5	7 1/2"
CPP	1 9/16"	4	7 1/2"

LEGEND

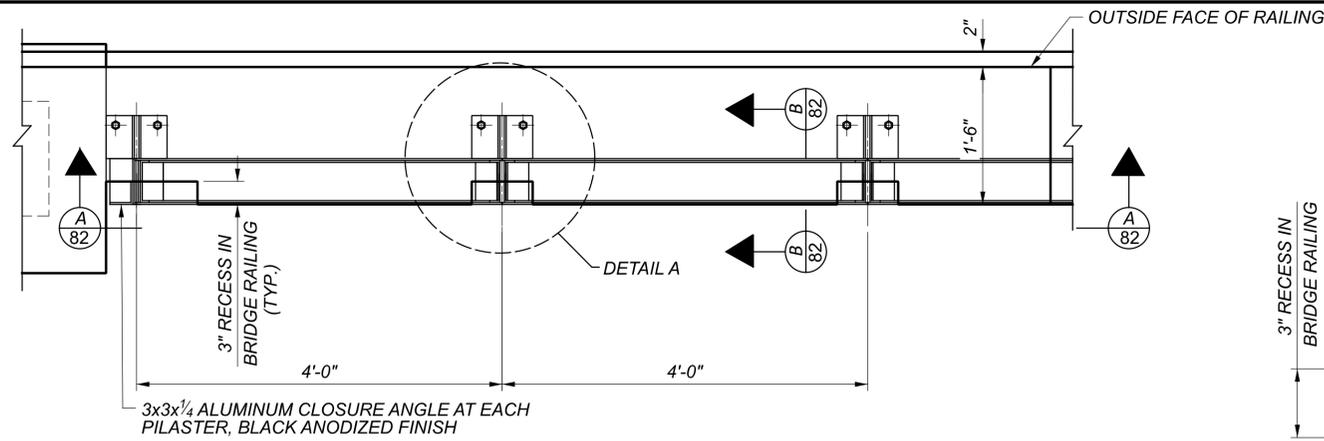
- [A] TYPE A UTILITY SUPPORT
- [B] TYPE B UTILITY SUPPORT
- [C] TYPE C DRAIN PIPE SUPPORT
- [□] AT&T ANCHOR TYPE HANGER WITH STOP RINGS
- [X] AT&T ANCHOR TYPE HANGER WITH O-RING EXPANSION JOINTS
- [|] CPP HANGER WITH FIXED END AT BACKWALL
- [X] CPP HANGER WITH EXPANSION JOINT

NOTES:

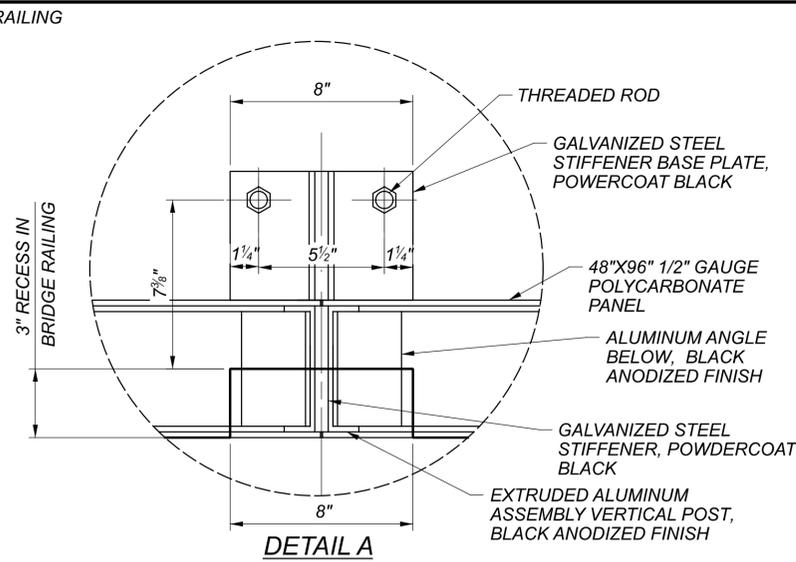
1. ALL UTILITIES ARE CENTERED HORIZONTALLY IN GIRDER BAYS. FOR VERTICAL LOCATION DETAILS REFER TO TRANSVERSE SECTION SHEET 41 / 99.
2. FOR GIRDER ELEVATION DETAILS, SEE SHEET 43 / 99.
3. FOR GIRDER SPLICE DETAILS, SEE SHEET 44 / 99.
4. FOR INTERMEDIATE K-FRAME, UTILITY SUPPORT AND DRAINAGE SUPPORT DETAILS AND ADDITIONAL UTILITY HANGER TABLE INFORMATION, SEE SHEET 52 / 99.
5. FOR PIER K-FRAME AND ABUTMENT K-FRAME DETAILS, SEE SHEETS 54 - 55 / 99.

FRAMING PLAN
 CUY-90-1678 (BRIDGE 13)
 CR-710 (E. 22ND ST.) OVER I.R. 90

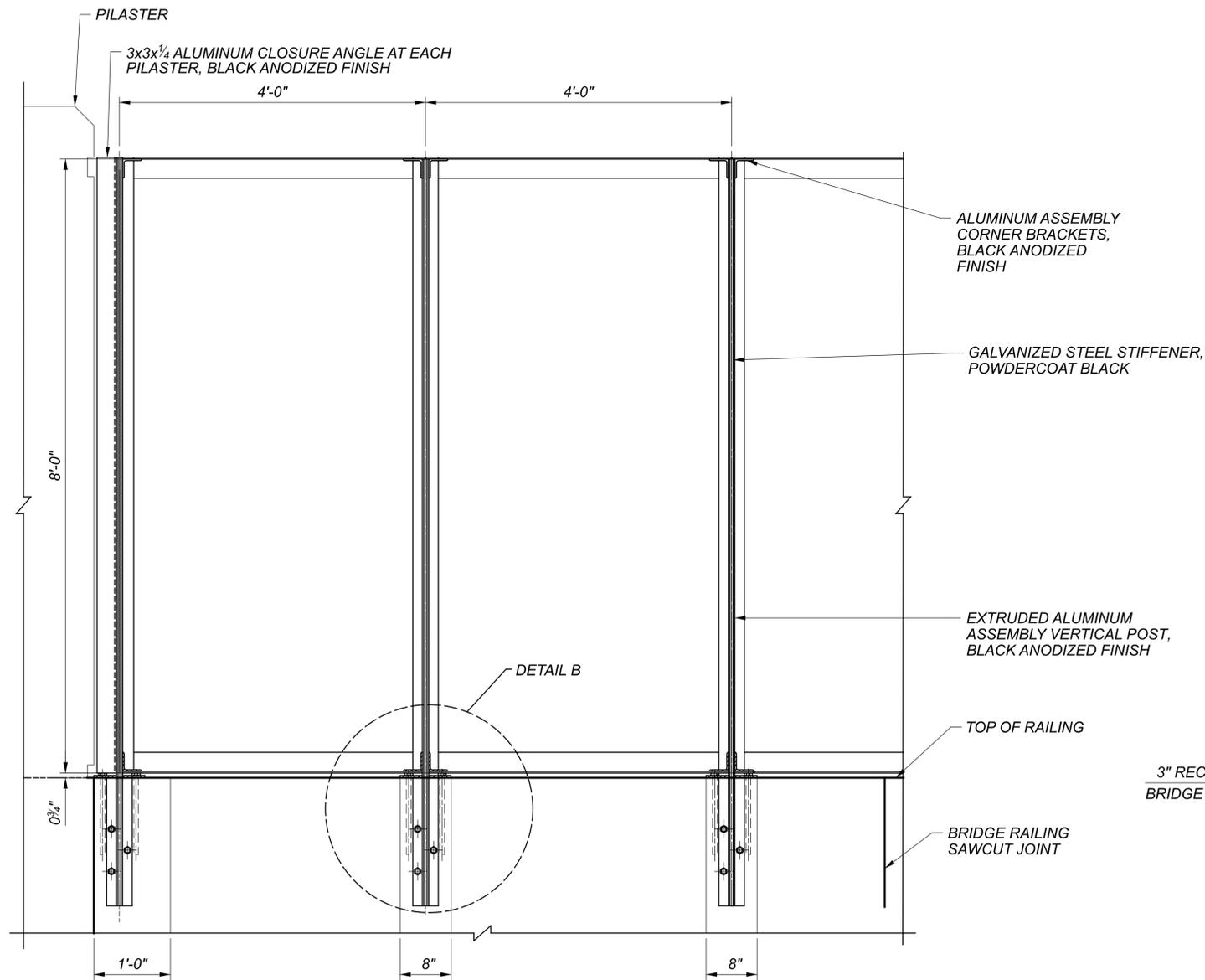
SFN		1807839	
DESIGN AGENCY			
Michael Baker		INTERNATIONAL	
DESIGNER	CHECKER	REVIEWER	
ZES	ETB	CDC 05/10/24	
PROJECT ID			
82382			
SUBSET	TOTAL	SHEET TOTAL	
42	99	2223	2696



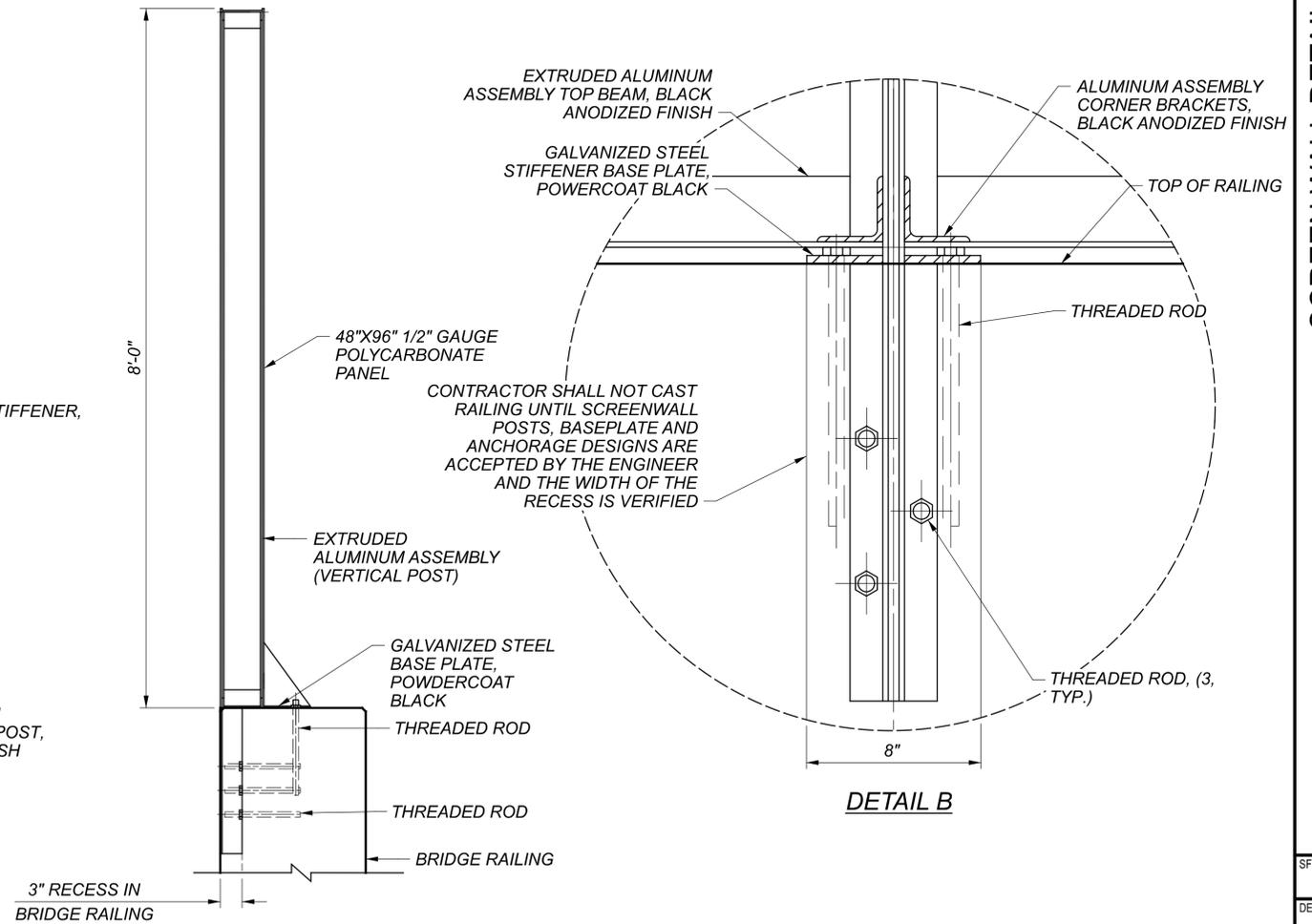
SCREEN WALL FRAMING - TOP PLAN



DETAIL A



SCREEN WALL FRAMING - TYPICAL ELEVATION

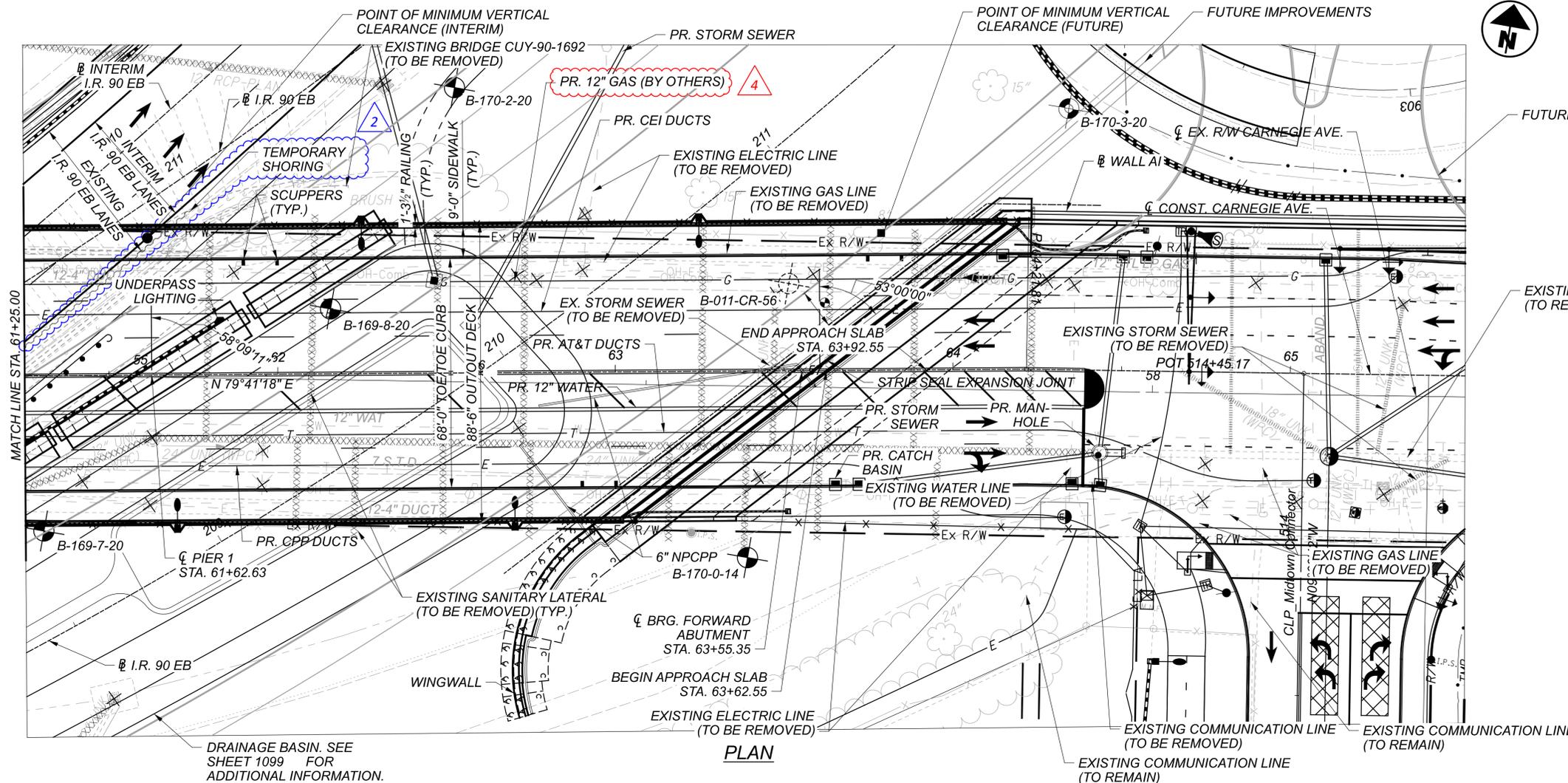


DETAIL B

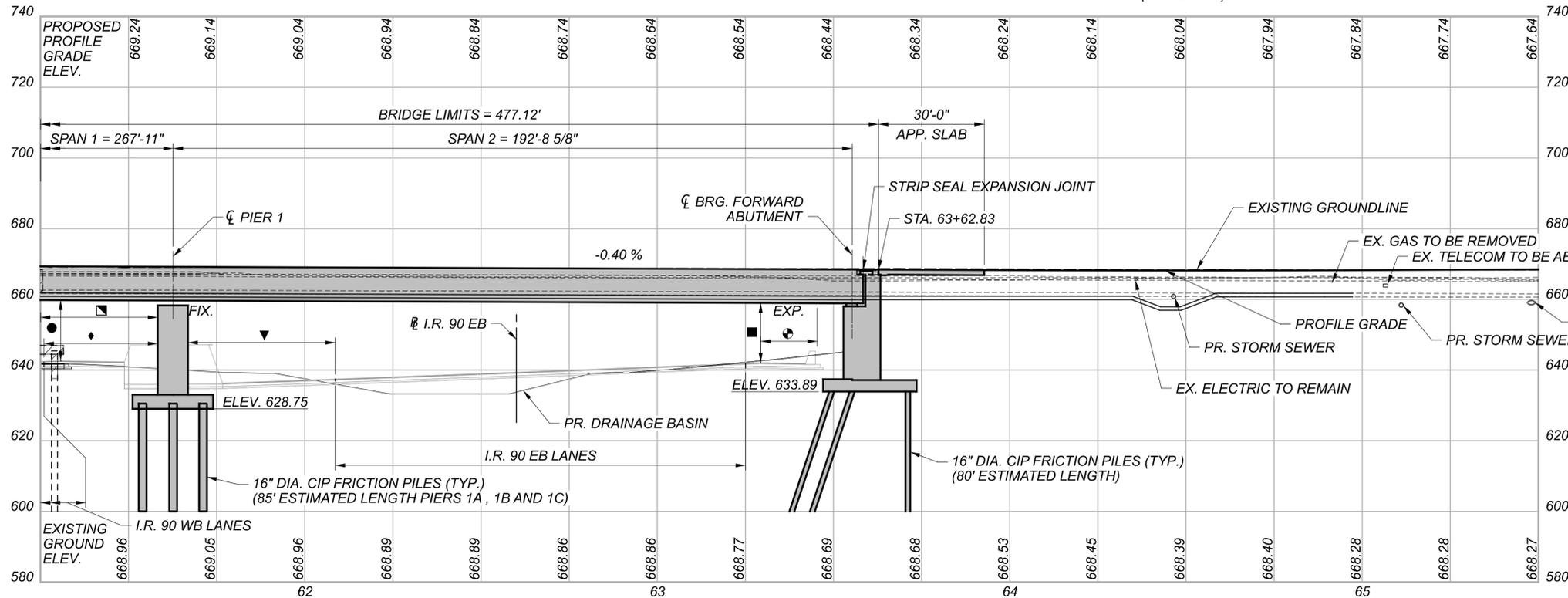
B SCREEN WALL - TYPICAL SECTION

- 82
- NOTES:
1. SCREEN WALL POSTS SHALL BE PLUMB.
 2. FOR ADDITIONAL SCREEN WALL DESIGN NOTES, SEE 4/99.
 3. SEE HARDSCAPING SCREENWALL AESTHETIC LIGHTING DETAILS SHEET 1832 FOR LED STRIP LIGHT SPECIFICATIONS AND ADDITIONAL INFORMATION.
 4. SEE ADDITIONAL LANDSCAPING DETAIL SHEETS FOR ADDITIONAL SCREEN WALL DETAILS AND PAYMENT FOR THIS ITEM.
 5. THREADED ROD DETAILS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ANCHORAGE DESIGN.
 6. THE THREADED RODS SHALL BE DESIGNED AS ADHESIVE ANCHORS PER AASHTO LRFD BRIDGE DESIGN SPECIFICATION SECTION 5.13. SEE THE ADHESIVE ANCHOR/DOWEL SYSTEM ON SHEET 4/99 FOR ADDITIONAL REQUIREMENTS.

SFN	1807839
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	SWB MKB
REVIEWER	CDC 05/10/24
PROJECT ID	82382
SUBSET	82
TOTAL	99
SHEET	2263
TOTAL	2696



PLAN



PROFILE GRADE ALONG C. CONST. CARNEGIE AVE.

LEGEND

- TO BE REMOVED
- HISTORIC BORING LOCATION
- INSTRUMENTED BORING LOCATION
- PROJECT BORING LOCATION
- 15'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
- 16'-0" PREFERRED MINIMUM VERTICAL CLEARANCE
- 15'-7" ACTUAL MINIMUM VERTICAL CLEARANCE (INTERIM)
- 15'-6" REQUIRED MINIMUM VERTICAL CLEARANCE
- 16'-0" PREFERRED MINIMUM VERTICAL CLEARANCE
- 16'-0" ACTUAL MINIMUM VERTICAL CLEARANCE (FUTURE)

HORIZONTAL CLEARANCES			
LOCATION	REQUIRED	ACTUAL	PHASE
	11'-8"	11'-9"	FUTURE
	13'-8"	18'-3"	FUTURE
	13'-8"	18'-6"	FUTURE
	13'-8"	20'-1"	INTERIM

FOR PLAN LOCATIONS OF , AND SEE SITE PLAN 1 OF 2

MINIMUM HORIZONTAL CLEARANCES			
LOCATION	REQUIRED CLEAR ZONE	ACTUAL	PHASE
	30'-0"	20'-8"*	FUTURE
	30'-0"	14'-1"*	INTERIM
	30'-0"	18'-3"*	FUTURE
	30'-0"	18'-6"*	FUTURE
	30'-0"	20'-1"*	INTERIM

* BARRIER PROTECTION REQUIRED FOR PLAN LOCATIONS OF , AND SEE SITE PLAN 1 OF 2

SFN	1807898
DESIGN AGENCY	
DESIGNER/CHECKER	ZES/DBW
REVIEWER	KAG 12/26/23
PROJECT ID	82382
SUBSET	2
TOTAL	90
SHEET	2282
TOTAL	2696

HARDWOOD SHIMMING SHALL BE USED AS NEEDED TO MAINTAIN THE POSITIONING OF THE TIMBER MEMBERS AGAINST THE FLANGE FACE OF THE SOLIDER PILE DURING CONSTRUCTION OF THE RETAINING WALL SYSTEM. NO SHIM SHALL EXTEND BEYOND THE FLANGE OF THE H-PILE MORE THAN ¼ INCH AND NO SHIM SHALL EXTEND BEYOND THE TOP FACE OF THE TOP LAGGING.

THE DEPARTMENT WILL MEASURE THE TEMPORARY HARDWOOD LAGGING BY THE NUMBER OF SQUARE FEET. PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL AND INCIDENTALS (INCLUDING HARDWOOD SHIMMING AND WOOD SPACERS) NECESSARY TO FURNISH AND INSTALL THE TEMPORARY HARDWOOD LAGGING.

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

THIS WORK CONSISTS OF FURNISHING AND INSTALLING DRILLED SHAFTS FOR SOLDIER PILE WALLS. THE DRILLED SHAFTS ARE REINFORCED WITH SOLDIER PILES INSTEAD OF REINFORCING STEEL CAGES. THE SOLDIER PILES EXTEND ABOVE THE TOP OF THE DRILLED SHAFTS. FURNISH AND INSTALL THE DRILLED SHAFTS ACCORDING TO C&MS 524 EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

EXCAVATE THE HOLE FOR THE DRILLED SHAFT WITHIN 3 INCHES OF THE PLAN LOCATION. 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 PILES SO THAT IT DOES NOT MOVE DURING CONCRETE PLACEMENT.

USE CONCRETE CLASS QC SCC, WITH ¾ IN MAX AGGREGATE SIZE ACCORDING TO C&MS 511 TO FILL THE HOLE TO THE TOP OF THE DRILLED SHAFT (ELEVATION "A"). THE CONTRACTOR MAY PLACE CONCRETE USING THE FREE FALL METHOD PROVIDING THE DEPTH OF WATER IN THE SHAFT IS LESS THAN 6 INCHES AND THE CONCRETE FALLS WITHOUT STRIKING THE SIDES OF THE HOLE. POURING THE CONCRETE ALONG THE WEB OF THE SOLDIER PILE IS ACCEPTABLE.

CHECK THE POSITION, THE VERTICAL ALIGNMENT AND THE ORIENTATION OF THE SOLDIER PILE IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO THE ABOVE TOLERANCES. FILL THE HOLE ABOVE THE CONCRETE TO THE EXISTING GROUND SURFACE WITH ITEM 613 LOW STRENGTH MORTAR BACKFILL (LSM).

REMOVE CONCRETE AND LSM AS NECESSARY FROM AROUND THE SOLDIER PILE IN ORDER TO PLACE THE LAGGING. WAIT AT LEAST 12 HOURS AFTER PLACING CONCRETE BEFORE PLACING LAGGING.

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 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, AND REMOVAL OF CONCRETE OR LSM FROM AROUND THE SOLDIER PILE IN ORDER TO PLACE LAGGING.

ASBESTOS NOTIFICATION

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT APPROXIMATELY 225 LINEAR FEET OF ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE WITHIN EXISTING CPP DUCTS. THE CONTRACTOR SHALL VERIFY THE LENGTH OF DUCTS TO BE REMOVED SEE SHEET 1777 OF 2696 FOR ADDITIONAL INFORMATION.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM
 OHIO EPA, DAPC
 P.O. BOX 1049
 COLUMBUS, OH 43216-1049

OR

ASBESTOS PROGRAM
 OHIO EPA, DAPC
 50 W. TOWN ST., SUITE 700
 COLUMBUS, OH 43215

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. THE FORM SHALL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS, OHIO 44125.

BASIS FOR PAYMENT THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE PER SHEET 75 OF THE ENVIRONMENTAL GENERAL NOTES.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN

PROVIDE BUFF WASH FINISH ON EDGES AND BOTTOM OF DECK OVERHANGS AS DETAILED.

LOCATE THE LOWER CONTACT POINT OF THE OVERHANG FALSEWORK A MAXIMUM OF 18 INCHES ± 2 INCHES ABOVE THE TOP OF THE GIRDER'S BOTTOM FLANGE. THE BRACING CONTACT POINT REQUIREMENTS OF C&MS 508 DO NOT APPLY.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK, AS PER PLAN

FINISH SIDEWALKS WITH A BUFF WASH FINISH AND PLACE CONTROL JOINTS PER THE AESTHETIC ENHANCEMENT PLANS. PROVIDE PEJF AND SEALANT AROUND LUMINAIRES AT SIDEWALK PENETRATIONS AS SHOWN IN THESE PLANS.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN

ALL BRIDGE RAILS (PARAPETS) SHALL RECIEVE A BUFF WASH FINISH WITH CLEAR SEALER (NON-EPOXY) PER THE LANDSCAPE PLANS AND DETAILS.

PRIOR TO CONSTRUCTING ANY OF THE CONCRETE PARAPET, INCLUDING THE PILASTERS AND PYLONS, THE CONTRACTOR SHALL CAST THE PARAPET, PILASTER AND PYLON TEST PIECES REQUIRED IN THE PLANS AND MEET THE APPROVAL STANDARDS THEREIN.

THE FINAL APPROVED TEST PIECES WILL SERVE AS A JOB SITE STANDARD FROM WHICH THE ACCEPTANCE OF ALL OTHER WORK WILL BE DETERMINED. THOSE PIECES OF WORK DETERMINED BY THE ENGINEER TO BE UNSATISFACTORY IN TERMS OF CONFORMANCE **ITEM 506 - STATIC LOAD TEST, AS PER PLAN**

AT THE FORWARD ABUTMENT, PERFORM DYNAMIC TESTING ON THE FIRST TWO PRODUCTION PILES. PERFORM THE STATIC LOAD TEST ON EITHER PILE. ALSO PERFORM DYNAMIC TESTING ON TWO OTHER PILES, TO BE USED AS ANCHOR PILES. DRIVE ALL PILES TO THE FULL ESTIMATED LENGTH FOR THE FORWARD ABUTMENT SUBSTRUCTURE UNIT (80 FEET), IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP." OTHER PRODUCTION PILES IN THE SAME SUBSTRUCTURE UNIT MAY BE USED AS ANCHOR PILES. THE STATIC LOAD TEST PILE AND ALL ANCHOR PILES SHALL NOT BE BATTERED. AFTER DRIVING ALL PILES TO THE FULL ESTIMATED LENGTH, CEASE ALL DRIVING OPERATIONS AT THE SUBSTRUCTURE FOR A MINIMUM OF 14 DAYS. AFTER THE WAITING PERIOD, PERFORM THE STATIC LOAD TEST, AND THEN PERFORM PILE RESTRIKES ON THE FOUR DYNAMIC LOAD TEST PILES (TWO RESTRIKE TEST ITEMS). PERFORM A CAPWAP ANALYSIS ON EACH PILE TESTED IN THE SAME SUBSTRUCTURE UNIT FOR EVERY DYNAMIC LOAD TEST AND EVERY RESTRIKE TEST. THE ENGINEER WILL REVIEW THE RESULTS OF THE PILE RESTRIKES AND ESTABLISH THE DRIVING CRITERIA FOR THE PILING IN THE SUBSTRUCTURE IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP." SUBMIT ALL TEST RESULTS TO THE OFFICE OF GEOTECHNICAL ENGINEERING.

IF THE RESTRIKE TEST RESULTS INDICATE THAT ANY OF THE PILES DID NOT ACHIEVE THE REQUIRED UBV, DRIVE THE PILE TO THE ESTABLISHED DRIVING CRITERIA IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP"

THE CONTRACTOR HAS THREE ALTERNATIVES TO PERFORM THE STATIC LOAD TEST, AS PER PLAN:

1. PERFORM THE STATIC LOAD TEST ON A PRODUCTION PILE IN THE FORWARD ABUTMENT SUBSTRUCTURE UNIT AND USE OTHER PRODUCTION PILES IN THE SAME SUBSTRUCTURE UNIT AS ANCHOR PILES, PER THE NOTE ABOVE.
2. PERFORM THE STATIC LOAD TEST ON A PRODUCTION PILE IN THE FORWARD ABUTMENT SUBSTRUCTURE UNIT AND DRIVE SUPPLEMENTAL PILES FOR ANCHOR PILES. STILL DRIVE ALL PILES TO THE FULL ESTIMATED LENGTH FOR THE FORWARD ABUTMENT SUBSTRUCTURE UNIT. IN THIS CASE, PERFORM DYNAMIC LOAD TESTING AND RESTRIKE TESTING ON THE STATIC LOAD TEST PILE, ONE OTHER PILE IN THE SAME SUBSTRUCTURE UNIT, AND ON TWO OF THE ANCHOR PILES.
3. PERFORM THE STATIC LOAD TEST OFFLINE, ON A SUPPLEMENTAL TEST PILE WITHIN 50 FEET OF THE FORWARD ABUTMENT AND DRIVE AN ARRAY OF SUPPLEMENTAL PILES AS ANCHOR PILES. STILL DRIVE ALL PILES TO THE FULL ESTIMATED LENGTH FOR THE FORWARD ABUTMENT SUBSTRUCTURE UNIT. IN THIS CASE, PERFORM DYNAMIC LOAD TESTING AND RESTRIKE TESTING ON THE STATIC LOAD TEST PILE, ONE OF THE ANCHOR PILES, AND ON TWO PRODUCTION PILES IN THE FORWARD ABUTMENT SUBSTRUCTURE UNIT, IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP."

THIS PLAN NOTE INCLUDES AN ADDITIONAL QUANTITY OF ONE ITEM 523 DYNAMIC LOAD TESTING, AS PER PLAN AND ONE ITEM 523 RESTRIKE, AS PER PLAN FOR THE FORWARD ABUTMENT SUBSTRUCTURE UNIT. EACH OF THESE TESTING ON TWO PILES, IN ACCORDANCE WITH ITEM 523. ANY SUPPLEMENTAL PILES DRIVEN FOR THE STATIC LOAD TEST ARE INCIDENTAL TO ITEM 506 STATIC LOAD TEST, AS PER PLAN.



ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN

SIDEWALK AND PARAPET CONCRETE ABOVE APPROACH SLABS SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM AND SHALL BE HELD TO THE SAME STANDARDS APPLIED TO SIDEWALK AND PARAPET CONCRETE WITHIN BRIDGE DECK LIMITS.

SFN	1807898
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	CHECKER
ZES	MKB
REVIEWER	
KAG 12/26/23	
PROJECT ID	
82382	
SUBSET	TOTAL
8	90
SHEET	TOTAL
2288	2696

4

12" GAS LINE INSTALLATION

ENBRIDGE GAS OHIO WILL INSTALL GAS PIPELINE ON BRIDGE AND WILL INSTALL LINK SEALS, SPACERS AND BOOT SEAL WHEN INSTALLING THE PIPELINE.

ITEM 625 - CONDUIT, MISC.: AT&T 4" CONDUIT INSTALLATION

THIS ITEM INCLUDES PAYMENT FOR INSTALLTION OF THE AT&T CONDUIT ON THE STRUCTURE, AS SHOWN IN THE PLANS. MATERIALS WILL BE SUPPLIED TO THE GENERAL CONTRACTOR FOR INSTALLATION. AT&T WILL PROVIDE CONDUIT RACKS, FIBERGLASS CONDUITS TO ENDS OF APPROACH SLAB, FITTINGS AND EXPANSION JOINTS. CONTRACTOR TO INSTALL ALL MATERIALS ON BRIDGE. AT&T WILL INSTALL CONDUITS OUTSIDE OF APPROACH SLABS TO MANHOLES. AT&T WILL COMPLETE THE CABLE WORK.

ITEM 625 - CONDUIT, MISC.: CEI 4" CONDUIT INSTALLATION

THIS ITEM INCLUDES INSTALLATION OF THE CONDUIT ON THE STRUCTURE. CEI WILL PROVIDE ALL MATERIALS. CEI PULLS ALL CABLES. CEI CONTRACTOR WILL COMPLETE WORK UP TO THE OUTSIDE EDGE OF THE APPROACH SLABS (ALL CONDUIT OFF THE BRIDGE). CONTRACTOR WILL INSTALL THE CONDUIT BETWEEN THE OUTSIDE EDGES OF APPROACH SLABS (ALL CONDUIT UNDER APPROACH SLABS, ON THE BRIDGE AND THROUGH THE ABUTMENTS).

ITEM 625 - CONDUIT, MISC.: CPP 4" CONDUIT INSTALLATION

THIS ITEM INCLUDES INSTALLATION OF THE CPP CONDUIT ON THE STRUCTURE, AS SHOWN IN THE PLANS, AND PULLING THE WIRE. CPP WILL MAKE THE FINAL CONNECTION. CONTRACTOR TO PERFORM INTERMEDIATE (DEAD) SPLICING WITH CPP INSPECTION. CPP WILL COMPLETE CUT OVER SPLICING. CPP WILL REQUIRE NOTIFICATION OF SCHEDULE FOR THE PULLING OF CONDUIT. CPP TO INSPECT ALL WORK BEFORE FINAL CONNECTIONS ARE MADE IN MANHOLES.

ITEM 690 - ROLLER SUPPORTS (GAS LINE)

THIS ITEM INCLUDES INSTALLATION OF ALL GAS LINE SUPPORTS ON THE BRIDGE, AS SHOWN IN THE PLANS.

ITEM 690 - UTILITY SUPPORTS (AT&T DUCTS)

THIS ITEM INCLUDES INSTALLATION OF ALL AT&T DUCT SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS. AT&T WILL PROVIDE CONDUIT RACKS, FIBERGLASS CONDUITS TO ENDS OF APPROACH SLAB, FITTINGS AND EXPANSION JOINTS. CONTRACTOR TO INSTALL ALL MATERIALS ON BRIDGE.

ITEM 690 - UTILITY SUPPORTS (CEI DUCTS)

THIS ITEM INCLUDES INSTALLATION OF ALL CEI DUCT SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS. MATERIAL PROVIDED BY CEI FOR THIS WORK INCLUDES UTILITY HANGERS, CONDUIT RACKS, EXPANSION JOINTS AND SLEEVES. STEEL ANGLE SUPPORTS PROVIDED BY CONTRACTOR. CONTRACTOR TO INSTALL HANGERS AND CONDUIT RACKS. CONTRACTOR TO WORK WITH CEI TO GUARANTEE THAT THERE IS A PROPER ARRANGEMENT FOR THE DELIVERY OF MATERIALS.

ITEM 690 - UTILITY SUPPORTS (CPP DUCTS)

THIS ITEM INCLUDES INSTALLATION OF ALL CPP DUCT SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS.

ITEM 690 - UTILITY SUPPORTS (WATER LINE)

THIS ITEM INCLUDES INSTALLATION OF ALL WATER LINE SUPPORT HANGERS ON THE BRIDGE, AS SHOWN IN THE PLANS. CONTRACTOR SHALL PROVIDE ALL MATERIALS AND ELEMENTS SHOWN IN THE PLANS FOR THE WATER LINE.

ITEM 511 - CLASS QC1 CONCRETE, MISC.: CONCRETE FACING

ITEM 511 - CONCRETE, MISC.: ARCHITECHTURAL TREATMENT, ABUTMENT

ITEM 511 - CONCRETE, MISC.: ARCHITECHTURAL TREATMENT, PIER

ITEM 511 - CONCRETE, MISC.: ARCHITECHTURAL TREATMENT, RAILING

FORMLINER FIELD PATTERN ON SHEET 1867

ABBREVIATIONS

- BOT. = BOTTOM
- BRGS. = BEARINGS
- C.J. = CONSTRUCTION JOINT
- CLR. = CLEAR
- CONST. = CONSTRUCTION
- DIA. = DIAMETER
- E.F. = EACH FACE
- ELEV. = ELEVATION
- EX. = EXISTING
- F.A. = FORWARD ABUTMENT
- F.F. = FAR FACE
- HORIZ. = HORIZONTAL
- I.R. = INTERSTATE ROUTE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- N.F. = NEAR FACE
- PR. = PROPOSED
- R.A. = REAR ABUTMENT
- RT = RIGHT
- SER. = SERIES
- S.O. = SERIES OF
- SPA. = SPACED / SPACING / SPACES
- S.R. = STATE ROUTE
- TYP. = TYPICAL
- VERT. = VERTICAL
- W.P. = WORK POINT
- W.W. = WING WALL

SECTION / DETAIL / VIEW CALLOUTS



(SEE SECTION A ON SHEET 10)



(SECTION A CUT FROM SHEET 9)

GENERAL NOTES (6 OF 7)
 CUY-90-1696 (BRIDGE 14)
 CR-722 (CARNEGIE AVE.) OVER I.R. 90

SFN	
1807898	
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	CHECKER
ZES	MKB
REVIEWER	
KAG 12/26/23	
PROJECT ID	
82382	
SUBSET	TOTAL
9	90
SHEET	TOTAL
2289	2696

ESTIMATED QUANTITIES

CALCULATED BY: ZES DATE: 03/20/24
 CHECKED BY: DAF DATE: 05/15/24

PARTICIPATION	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTR.	GENERAL	SHEET REF.
02/IMS/10	202	11003	LS		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	15-18
02/IMS/10	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING				LS	
02/IMS/10	503	21101	10,842	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN	7,516	3,326			6
02/IMS/10	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION				LS	
02/IMS/10	506	11101	LS		STATIC LOAD TEST, AS PER PLAN				LS	8
02/IMS/10	507	00400	490	FT	STEEL PILES, MISC.: SOLIDER PILES HP16x101	490			490	7
02/IMS/10	507	00700	19,355	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	19,355				
02/IMS/10	507	00750	20,530	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	20,530				
02/IMS/10	509	10000	742,913	LB	EPOXY COATED STEEL REINFORCEMENT				742,913	
02/IMS/10	510	10000	800	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT				800	
02/IMS/10	511	34447	1,320	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN			1,320		8
02/IMS/10	511	34451	137	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			137		8
02/IMS/10	511	42012	307	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		307			
02/IMS/10	511	44112	806	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	806				
02/IMS/10	511	45602	794	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA				794	
02/IMS/10	511	46512	738	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	336	290		112	
02/IMS/10	511	51513	242	CY	CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK, AS PER PLAN			242		8
02/IMS/10	511	53010	243	CY	CLASS QC1 CONCRETE, MISC.: CONCRETE FACING	243				9
02/IMS/10	511	71200	13,986	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT, ABUTMENT	13,986				9
02/IMS/10	511	71200	5,945	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT, PIER		5,945			9
02/IMS/10	511	71200	2,851	SF	CONCRETE, MISC.: ARCHITECTURAL TREATMENT, RAILING			2,851		9
02/IMS/10	512	10001	688	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)				688	7
02/IMS/10	512	10050	2,142	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)				2,142	
02/IMS/10	512	10101	2,563	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN				2,563	6
02/IMS/10	513	10201	13,000	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN (SOLDIER PILE STRUT AND WALER)			13,000		7
02/IMS/10	513	10280	4,419,100	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4			4,419,100		
02/IMS/10	513	20000	8,872	EACH	WELDED STUD SHEAR CONNECTORS			8,872		
02/IMS/10	514	00060	157,200	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			157,200		
02/IMS/10	514	00067	157,200	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			157,200		6
02/IMS/10	516	11210	145	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			145		
02/IMS/10	SPECIAL	516E12400	173	FT	MODULAR EXPANSION JOINT			173		79
02/IMS/10	516	42000	130	EACH	ELASTOMERIC BEARING PAD, MISC.: 6" x 9" x 3/8" THICK				130	33
02/IMS/10	518	12200	8	EACH	SCUPPERS, INCLUDING SUPPORTS				8	

CUY-90-16.28 (CCG3A)

MODEL: Sheet PAPER/SIZE: 34x22 (in.) DATE: 10/3/2025 TIME: 2:38:09 PM USER: Joseph.Hogan
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ESTIMATED QUANTITIES (1 OF 2)
 CUY-90-1696 (BRIDGE 14)
 CR-722 (CARNEGIE AVE.) OVER I.R. 90

SFN	1807898
DESIGN AGENCY	
Michael Baker	INTERNATIONAL
DESIGNER	CHECKER
DBW	MKB
REVIEWER	
KAG	12/26/23
PROJECT ID	82382
SUBSET	TOTAL
11	90
SHEET	TOTAL
2291	2696

ESTIMATED QUANTITIES

CALCULATED BY: ZES DATE: 03/20/24
 CHECKED BY: DAF DATE: 05/15/24

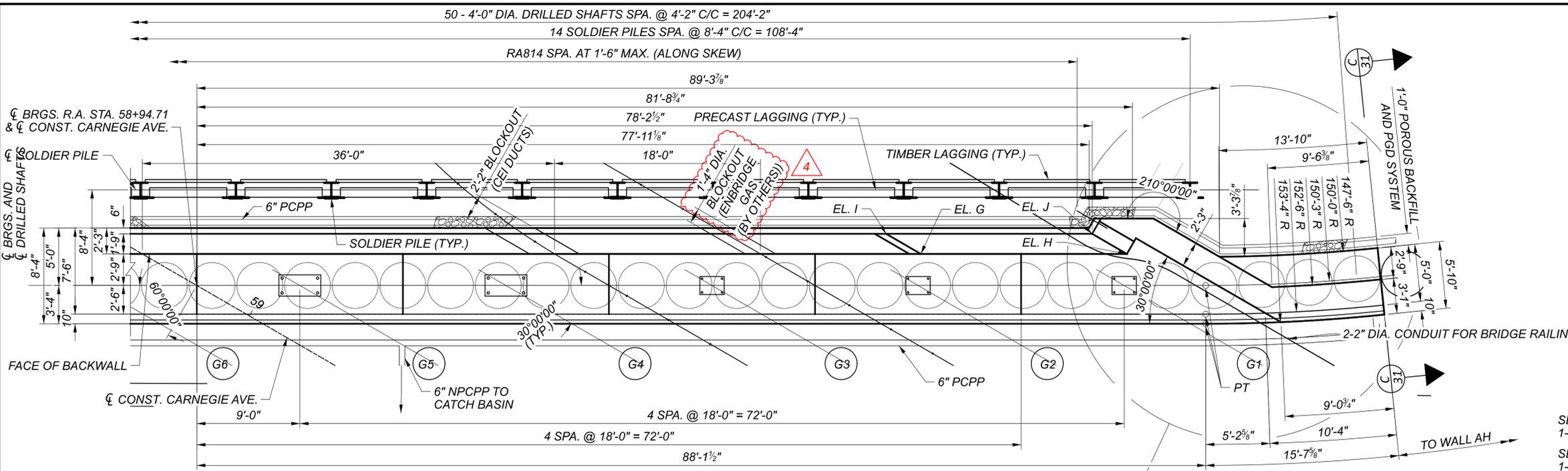
PARTICIPATION	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTR.	GENERAL	SHEET REF.
02/IMS/10	518	20000	888	SY	PREFABRICATED GEOCOMPOSITE DRAIN				888	
02/IMS/10	518	21101	361	CY	POROUS BACKFILL, AS PER PLAN				361	30
02/IMS/10	518	21200	618	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC				618	
02/IMS/10	518	40000	907	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	907				
02/IMS/10	518	40010	658	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	658				
02/IMS/10	518	43300	185	FT	6" PIPE DOWNSPOUT, INCLUDING SPECIALS	101	84			
02/IMS/10	523	20001	4	EACH	DYNAMIC LOAD TESTING, AS PER PLAN				4	4
02/IMS/10	523	20501	2	EACH	RESTRIKE, AS PER PLAN				2	4
02/IMS/10	524	94803	238	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN				238	8
02/IMS/10	524	94901	4,750	FT	DRILLED SHAFTS, 48" DIAMETER, AS PER PLAN				4,750	5
02/IMS/10	524	95100	2	EACH	DRILLED SHAFTS, MISC.: 48" DIAMETER, THROUGH OBSTRUCTIONS				2	5
02/IMS/10	524	95100	2	EACH	DRILLED SHAFTS, MISC.: BI DIRECTIONAL TESTING OF DRILLED SHAFTS				2	7
02/IMS/10	524	95100	1	EACH	DRILLED SHAFTS, MISC.: CSL TESTING, 48" DIA. SHAFT				1	7
02/IMS/10	524	95100	1	EACH	DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT				1	7
02/IMS/10	524	95100	3	EACH	DRILLED SHAFTS, MISC.: HIGH STRAIN DYNAMIC TESTING OF DRILLED SHAFTS				3	7
02/IMS/10	526	30011	592	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN				592	8
02/IMS/10	526	90010	321	FT	TYPE A INSTALLATION				321	
02/IMS/10	SPECIAL	530E00200	LS		STRUCTURES: PRECONSTRUCTION/POST CONSTRUCTION CONDITION SURVEY				LS	4-5
02/IMS/10	SPECIAL	530E00200	LS		STRUCTURES: VIBRATION MONITORING				LS	4
02/IMS/10	SPECIAL	530E00600	1,349	SF	STRUCTURES: PERMANENT SHORING PRECAST CONCRETE LAGGING				1,349	6
02/IMS/10	SPECIAL	530E00600	1,516	SF	STRUCTURES: PERMANENT SHORING TIMBER LAGGING				1,516	7-8
02/IMS/10	607	39910	1,180	FT	VANDAL PROTECTION FENCE, 8' STRAIGHT, COATED FABRIC				1,180	
02/IMS/10	625	25920	2,863	FT	CONDUIT, MISC.: AT&T 4" CONDUIT INSTALLATION			2,863		9
02/IMS/10	625	25920	5,726	FT	CONDUIT, MISC.: CEI 4" CONDUIT INSTALLATION			5,726		9
02/IMS/10	625	25920	5,726	FT	CONDUIT, MISC.: CPP 4" CONDUIT INSTALLATION			5,726		9
02/IMS/10	SPECIAL	690E98000	36	EACH	ROLLER SUPPORTS (GAS LINE)				36	9
02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (AT&T DUCTS)				29	9
02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (CEI DUCTS)				29	9
02/IMS/10	SPECIAL	690E98000	29	EACH	UTILITY SUPPORTS (CPP DUCTS)				29	9
02/IMS/10	SPECIAL	690E98000	31	EACH	UTILITY SUPPORTS (WATER LINE)				31	9
02/IMS/10	846	00110	134	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM				134	
02/IMS/10	866	00101	14	EACH	GROUND ANCHOR, AS PER PLAN, 159 KIP MAX LOAD TEST (SOLIDER PILE AND LAGGING WALL)				14	10
02/IMS/10	866	00101	100	EACH	GROUND ANCHOR, AS PER PLAN, 159 KIP MAX LOAD TEST (TANGENT WALL)				100	10
02/IMS/10	866	00400	6	EACH	PERFORMANCE TEST				6	
02/IMS/10	866	00500	6	EACH	EXTENDED CREEP TEST				6	
02/IMS/10	869	00100	30	EACH	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS				30	

ESTIMATED QUANTITIES (2 OF 2)
 CUY-90-1696 (BRIDGE 14)
 CR-722 (CARNEGIE AVE.) OVER I.R. 90

SFN	1807898
DESIGN AGENCY	
Michael Baker	INTERNATIONAL
DESIGNER	CHECKER
DBW	MKB
REVIEWER	
KAG	12/26/23
PROJECT ID	82382
SUBSET	TOTAL
12	90
SHEET	TOTAL
2292	2696

CUY-90-16.28 (CCG3A)

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REAR ABUTMENT PARTIAL PLAN

ABUTMENT BACKWALL ELEVATIONS (FT.)	
LOCATION	ELEVATION
G	669.37
H	670.15
I	669.38
J	TBD

ABUTMENT BEAM SEAT ELEVATIONS (FT.)	
LOCATION	ELEVATION
G5	659.80
G4	659.56
G3	659.32
G2	659.07
G1	658.96

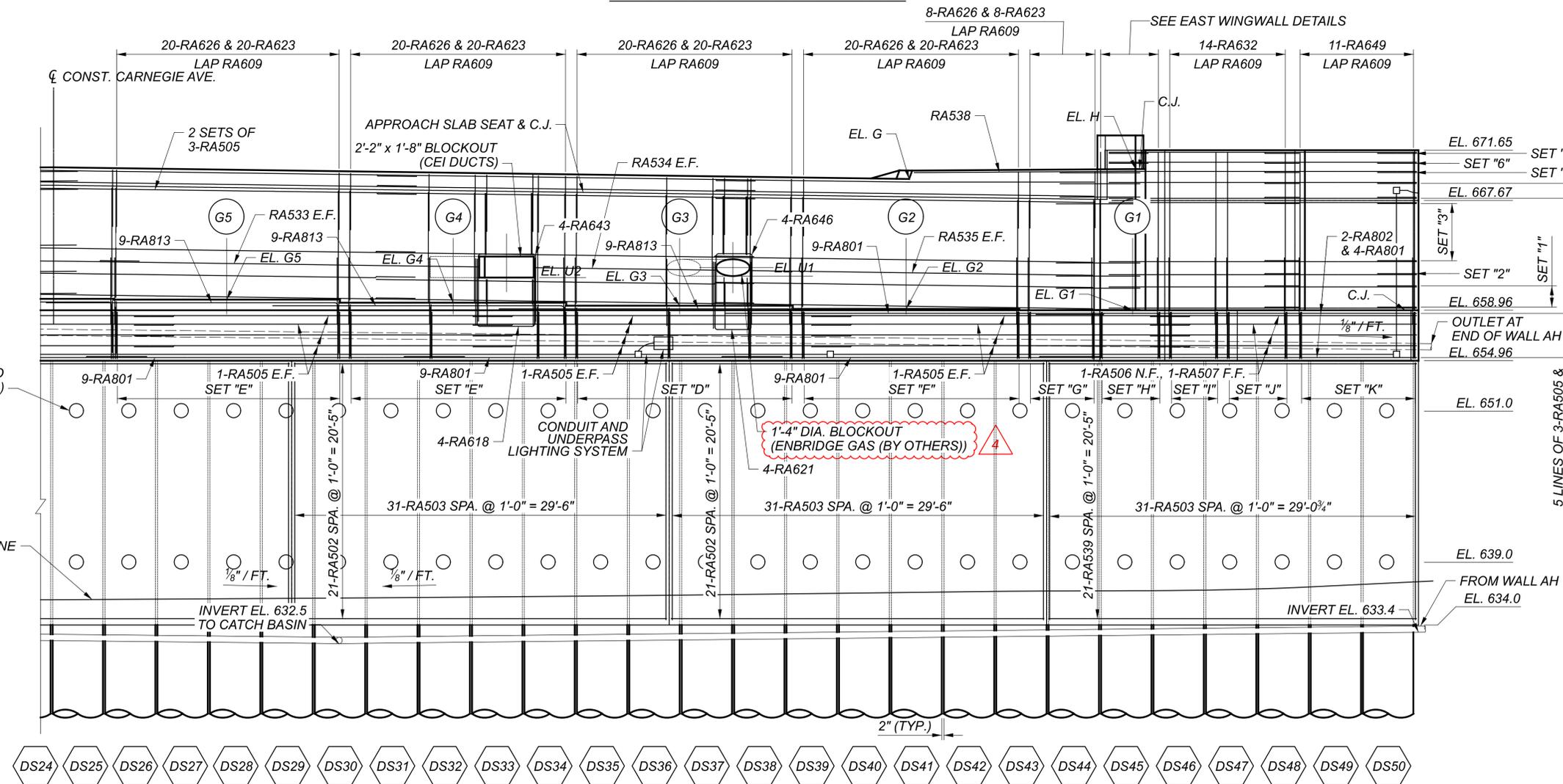
UTILITY BLOCKOUT ELEVATIONS (FT.)	
LOCATION	ELEVATION
U1	661.67
U2	661.55

- SET "E" = 20-SETS OF 1-RA501, 2-RA603 & 1-RA609 SPA. @ 11"
 - SET "D" = 20-SETS OF 1-RA501, 2-RA602 & 1-RA609 SPA. @ 11"
 - SET "F" = 20-SETS OF 1-RA501, 2-RA604 & 1-RA609 SPA. @ 11"
 - SET "G" = 8-SETS OF 1-RA501, 2-RA605 & 1-RA609 SPA. @ 11"
 - SET "H" = 6-SETS OF 1-RA501, 2-RA606 & SPA. @ 11"
 - SET "I" = 5-SETS OF 1-RA501 SPA. @ 11"
 - SET "J" = 6-SETS OF 1-RA501, 2-RA608 & SPA. @ 11"
 - SET "K" = 11-SETS OF 1-RA501, 2-RA608 & 1-RA609 SPA. @ 11"
- BACKWALL SETS TO SPLICE AT \bar{C} CONST. CARNEGIE AVE.:
- SET "1" = 3 SETS 3-RA505 E.F., 1-RA525, 1-RA523, 1-RA519, 1-RA518, 1-RA522, 1-RA524, 1-RA526
 - SET "2" = 1 SET OF 1-RA533 E.F., 1-RA534 E.F., 1-RA535 E.F., 1-RA525, 1-RA523, 1-RA519, 1-RA518, 1-RA522, 1-RA524, 1-RA526
 - SET "3" = 6 SETS OF 3-RA505 E.F., 1-RA525, 1-RA523, 1-RA519, 1-RA518, 1-RA522, 1-RA524, 1-RA526
 - SET "4" = 2 SETS OF 3-RA505 E.F., 1-RA525, 1-RA523, 1-RA519, 1-RA518, 1-RA522, 1-RA524, 1-RA540, 1-RA538
 - SET "5" = 1 SET OF 1-RA525, 1-RA523, 1-RA519, 1-RA518, 1-RA522, 1-RA524, 1-RA540, 4-RA538
 - SET "6" = 1 SET OF 1-RA525, 1-RA523, 1-RA519, 1-RA518, 1-RA522, 1-RA524, 1-RA540, 1-RA528
 - SET "7" = 1 SET OF 1-RA525, 2-RA523, 1-RA519, 1-RA520, 1-RA521, 1-RA518, 1-RA522, 1-RA524, 1-RA526, 1-RA528



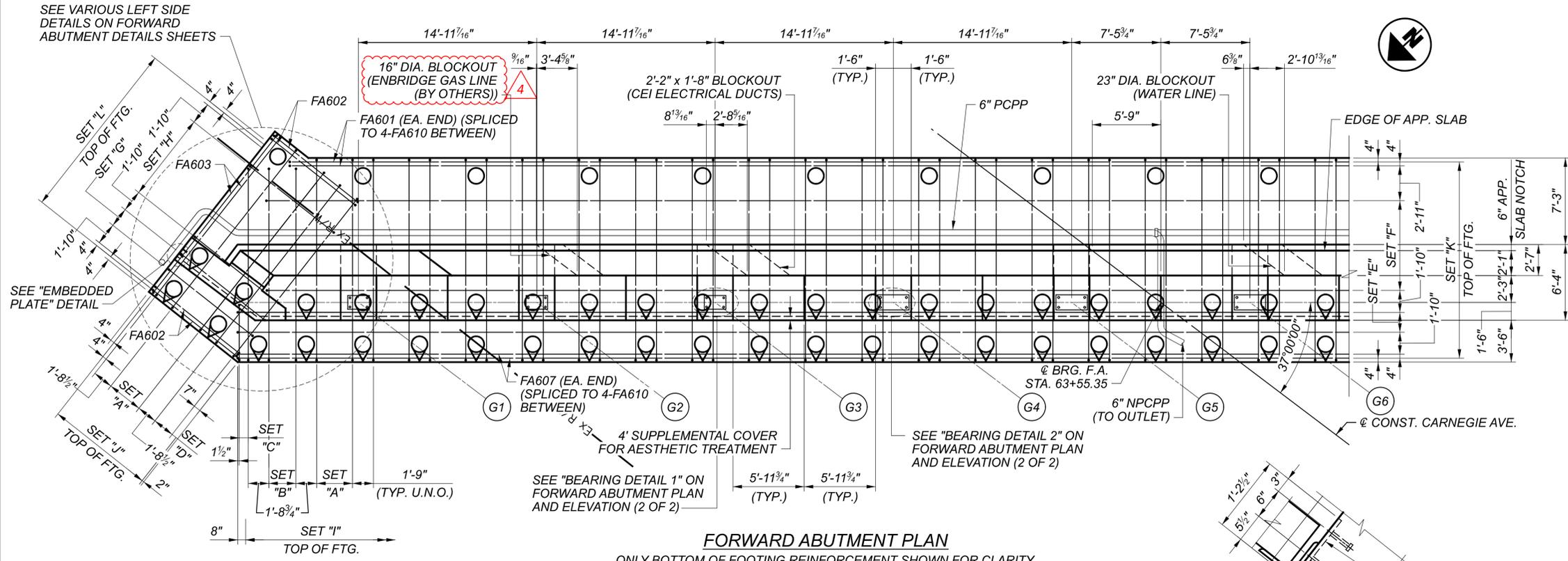
REAR ABUTMENT PLAN & ELEVATION (2 OF 2)
 CUY-90-1696 (BRIDGE 14)
 CR-722 (CARNEGIE AVE.) OVER I.R. 90

SFN	1807898
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	JML
REVIEWER	KAG
PROJECT ID	82382
SUBSET	29
TOTAL	90
SHEET	2309
TOTAL	2696

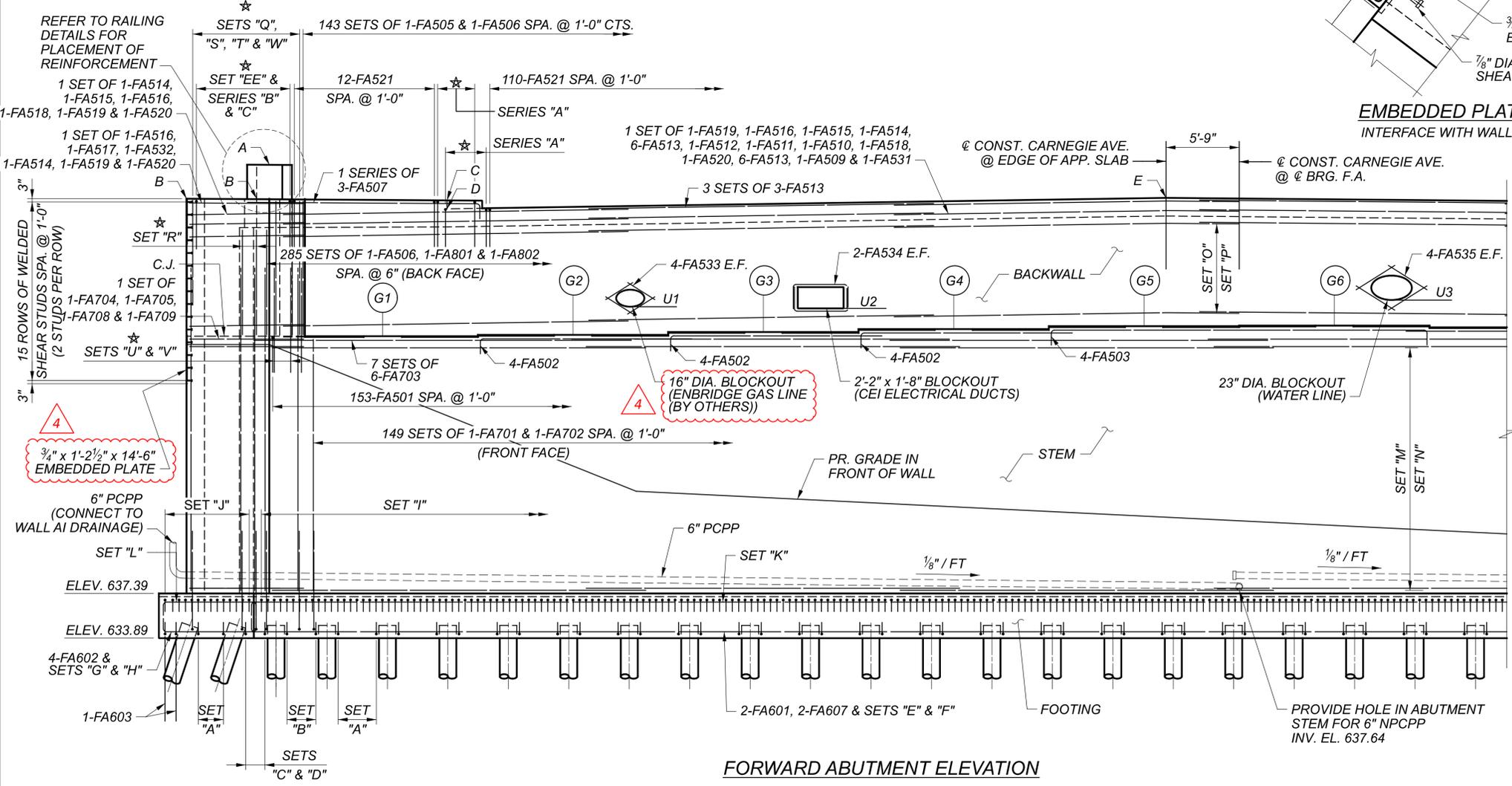


REAR ABUTMENT PARTIAL ELEVATION

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FORWARD ABUTMENT PLAN
 ONLY BOTTOM OF FOOTING REINFORCEMENT SHOWN FOR CLARITY



FORWARD ABUTMENT ELEVATION

FORWARD ABUTMENT	
POINT	ELEVATION
A	670.99
B	668.32
C	668.19
D	667.53
E	668.39
G1	657.55
G2	657.65
G3	657.88
G4	658.11
G5	658.33
G6	658.38

UTILITIES	
POINT	ELEVATION
U1	659.86
U2	659.73
U3	660.09

BOTTOM OF FOOTING REINFORCEMENT SETS:
 SET "A" = 7-FA603 SPA. @ 6" MAX. (TYP. BETWEEN PILES UNLESS NOTED OTHERWISE, 32 SETS TOTAL)
 SET "B" = 6-FA605 SPA. @ 5 1/2" MAX.
 SET "C" = 3-FA604 SPA. @ 4 1/2" MAX.
 SET "D" = 5-FA603 SPA. @ 5 1/2" MAX.
 SET "E" = 3 SETS OF 2-FA607 & 4-FA610 (FA607 PLACED AT ENDS) SPA. @ 10" MAX.
 SET "F" = 13 SETS OF 2-FA606 & 4FA610 (FA606 PLACED AT ENDS) SPA. @ 10" MAX.
 SET "G" = 3-FA602 SPA. @ 10" MAX.
 SET "H" = 10-FA602 SPA. @ 10" MAX.

TOP OF FOOTING REINFORCEMENT SETS:
 SET "I" = 308-FA603 SPA. @ 6" MAX.
 SET "J" = 19-FA603 SPA. @ 6" MAX.
 SET "K" = 1 SET OF 19 RUNS (EA. RUN = FA608 EA. END SPLICED TO 4-FA610 BETWEEN) SPA. @ 11" MAX.
 SET "L" = 19-FA609 SPA. @ 11" MAX.

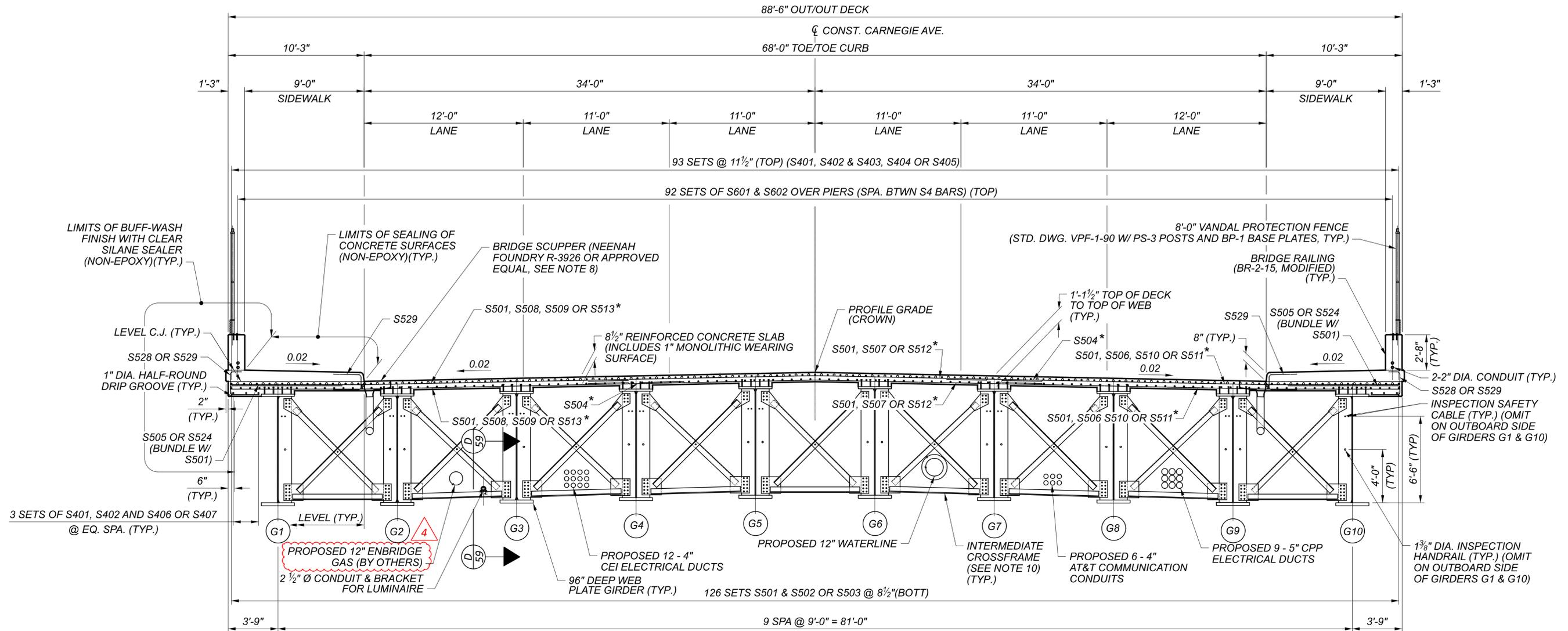
STEM REINFORCEMENT SETS:
 SET "M" = 20 SETS OF 1-FA704, 1-FA705, 6-FA706 & 1-FA707 SPA. @ 1'-0" MAX. (SIDE & FRONT FACES OF STEM)
 SET "N" = 20 SETS OF 1-FA708, 1-FA709, 6-FA710, 1-FA711 & 1-FA712 SPA. @ 1'-0" MAX. (BACK FACE OF STEM)

BACKWALL REINFORCEMENT SETS:
 SET "O" = 8 SETS OF 1-FA519, 1-FA516, 1-FA515, 1-FA514, 6-FA513, 1-FA512, 1-FA511 & 1-FA510 SPA. @ 1'-0" MAX. (SIDE & FRONT FACES OF BACKWALL)
 SET "P" = 8 SETS OF 1-FA518, 1-FA520, 6-FA508 & 1-FA509 SPA. @ 1'-0" MAX. (BACK FACE OF BACKWALL)

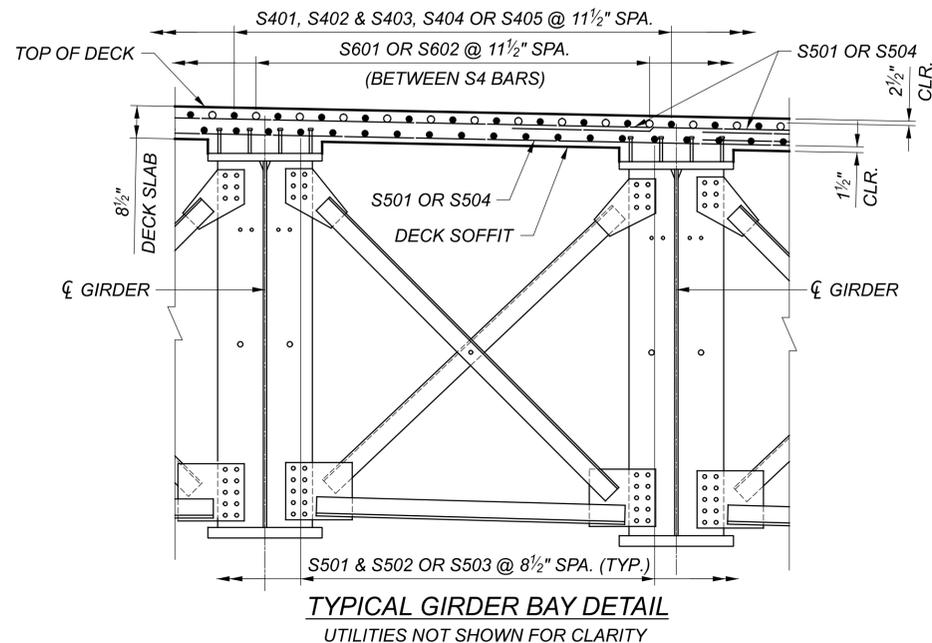
★ SEE REINFORCEMENT SETS AND SERIES ON FORWARD ABUTMENT DETAILS SHEET (2 OF 2)

NOTES:
 1. BRIDGE SEAT REINFORCEMENT, SETTING ANCHORS: ACCURATELY PLACE BRIDGE CONCRETE REINFORCEMENT IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.

SFN	1807898
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER/CHECKER	TMG/AHS
REVIEWER	LPC
PROJECT ID	82382
SUBSET	34
TOTAL	90
SHEET	2314
TOTAL	2696



TRANSVERSE SECTION
 (SIDEWALK AND RAILING REINFORCING NOT SHOWN FOR CLARITY)



MINIMUM LAP LENGTHS:

- NO. 4 BARS = 1'-11"
- NO. 5 BARS = 3'-0"
- NO. 6 BARS = 3'-7"

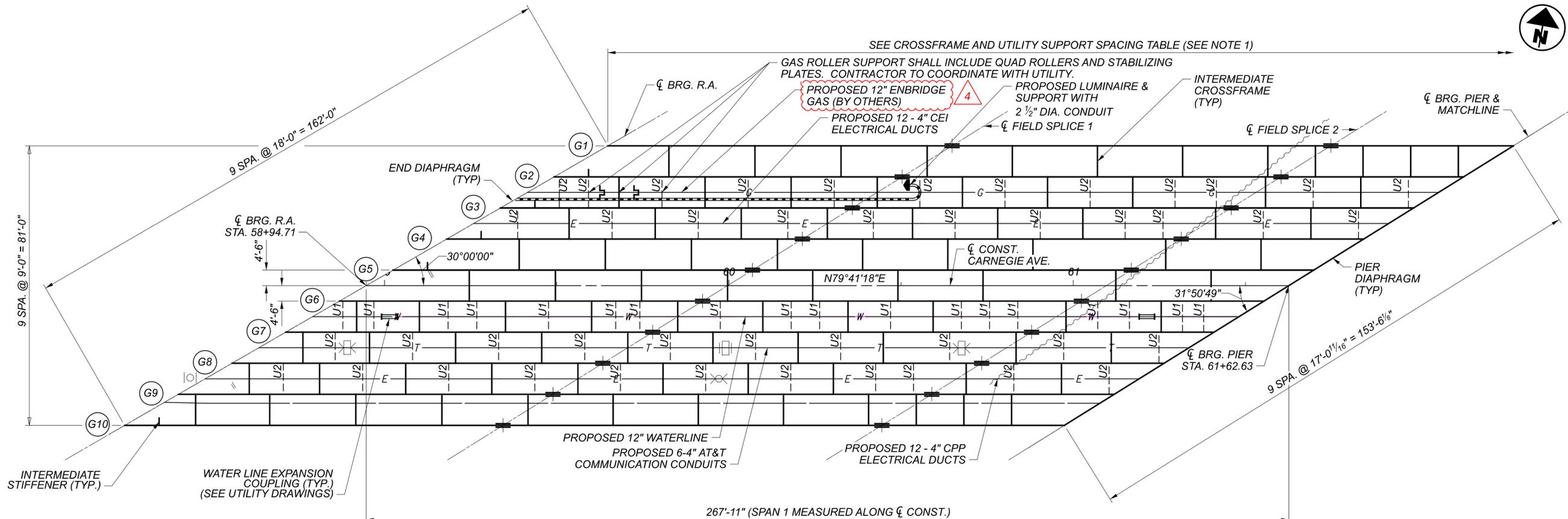
LEGEND:

* ALTERNATE LOCATIONS OF S5XX IN TOP & BOTTOM MATS

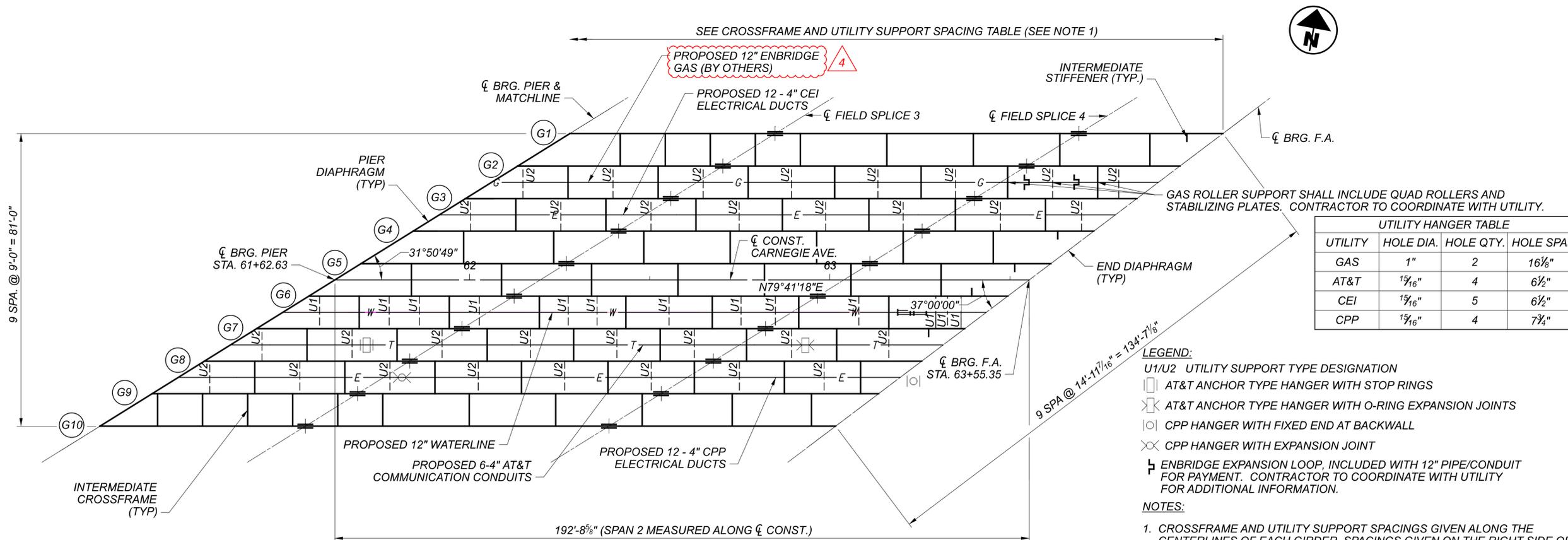
NOTES:

1. FOR DECK PLANS, SEE SHEETS 63 & 64 / 90.
2. FOR RAILING DETAILS, SEE SHEETS 73 - 76 / 90.
3. FOR FRAMING PLANS, SEE SHEETS 47 & 48 / 90.
4. REINFORCING MAY BE FIELD-BENT OR SHOP-BENT TO CONFORM TO DECK CROSS SLOPES. PAYMENT SHALL BE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL.
5. FOR GIRDER CAMBER DEFLECTION TABLES, SEE SHEETS 53-56 / 90.
6. FOR SIDEWALK DETAILS, SEE SHEETS 65 & 66 / 90.
7. FOR SCUPPER AND DOWNSPOUTING DETAILS, SEE SHEET 82 / 90.
8. ADJUST DECK REINFORCING TO CLEAR DECK SCUPPERS AND SHEAR STUDS. MAINTAIN A MINIMUM OF 2" CLEAR TO DECK OBSTRUCTIONS.
9. FOR ADDITIONAL DECK PLACEMENT NOTES, SEE GENERAL NOTES AND DECK PLANS.
10. INTERMEDIATE CROSSFRAME MEMBERS VARY BY GIRDER BAY. SEE CROSSFRAME AND UTILITY SUPPORT DETAILS ON SHEETS 57 - 60 / 90.
11. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 5 INCHES AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.
12. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.
13. PROVIDE GROUNDING PER STANDARD DRAWING HL-50.21. THE FOLLOWING BRIDGE COMPONENTS SHALL BE CONNECTED TO THE GROUNDING SYSTEM: STRUCTURAL STEEL AND LIGHT POLES.

SFN	1807898
DESIGN AGENCY	
DESIGNER	ABC
CHECKER	BWC
REVIEWER	
PROJECT ID	82382
SUBSET	46
TOTAL	90
SHEET	2326
TOTAL	2696



FRAMING PLAN SPAN 1



FRAMING PLAN SPAN 2

UTILITY HANGER TABLE			
UTILITY	HOLE DIA.	HOLE QTY.	HOLE SPA.
GAS	1"	2	16 1/8"
AT&T	1 3/16"	4	6 1/2"
CEI	1 3/16"	5	6 1/2"
CPP	1 3/16"	4	7 1/4"

- LEGEND:**
- U1/U2 UTILITY SUPPORT TYPE DESIGNATION
 - AT&T ANCHOR TYPE HANGER WITH STOP RINGS
 - ⊗ AT&T ANCHOR TYPE HANGER WITH O-RING EXPANSION JOINTS
 - CPP HANGER WITH FIXED END AT BACKWALL
 - ⊗ CPP HANGER WITH EXPANSION JOINT
 - ⊔ ENBRIDGE EXPANSION LOOP, INCLUDED WITH 12" PIPE/CONDUIT FOR PAYMENT. CONTRACTOR TO COORDINATE WITH UTILITY FOR ADDITIONAL INFORMATION.
- NOTES:**
- CROSSFRAME AND UTILITY SUPPORT SPACINGS GIVEN ALONG THE CENTERLINES OF EACH GIRDER. SPACINGS GIVEN ON THE RIGHT SIDE OF EACH GIRDER, LOOKING STATIONS AHEAD. SEE SHEET 48/90 FOR CROSSFRAME AND UTILITY SUPPORT SPACING TABLE.
 - SEE SHEETS 57 - 60/90 FOR CROSSFRAME AND UTILITY SUPPORT DETAILS.

SFN	1807898
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	ABC
CHECKER	BWC
REVIEWER	LPC
PROJECT ID	82382
SUBSET	47
TOTAL	90
SHEET	2327
TOTAL	2696