

# COLONNADE - SECTION 3B

SECTION 25, TOWNSHIP 17N, RANGE 5E,  
VERNON TOWNSHIP, HANCOCK COUNTY, CR W 700 N & CR N 600W  
ZONED: PUD

PLANS PREPARED FOR:  
COLONNADE DEVELOPER, LLC  
ATTN.: TIMOTHY J. WALTER, P.E.  
VICE PRESIDENT - DEVELOPMENT  
9757 WESTPOINT DRIVE, SUITE 600  
INDIANAPOLIS, IN 46256  
PH.: 317-863-2057  
EMAIL: TWALTER@PLATINUM-PROPERTIES.COM



VICINITY MAP  
NO SCALE



LOCATION MAP  
NO SCALE

## OPERATING AUTHORITIES & AREA UTILITIES

<b>GAS</b> CITIZENS ENERGY GROUP 2150 Dr. Martin Luther King Jr St Indianapolis, IN 46200 317-927-4684 Richard Miller, Jr.	<b>SANITARY, STORM, &amp; WATER</b> MCCORDSVILLE PUBLIC WORKS 5759 W. Broadway McCordsville, IN 46055 317-335-3604 Mark Wilsman	<b>CABLE TELEVISION</b> BRIGHT HOUSE NETWORKS 3030 Roosevelt Ave Indianapolis, IN 46218 317-632-9077 Jason Kirkman
<b>GAS</b> CENTERPOINT ENERGY 16000 Allisonville Road Noblesville, Indiana 46061 317-776-5532 Sandra Casey	<b>TELEPHONE</b> AT&T - DISTRIBUTION 240 N. Meridian St., Room 1791 Indianapolis, IN 46204 317-295-3050 Matt Spindler	<b>WATER</b> CITIZENS ENERGY GROUP - WATER CWA Authority, Inc. 2150 Dr. Martin Luther King, Jr. Street Indianapolis, IN 46202 317-927-4351 Attn.: Brad Hostetler
<b>ELECTRIC</b> INDIANAPOLIS POWER & LIGHT COMPANY 317-261-5203 Rhonda Williams	<b>TELEPHONE</b> NINE STAR CONNECT 2243 E. Main St Greenfield, IN 46140 317-323-2074 Eric Meyer	<b>SCHOOL DISTRICT</b> MT. VERNON COMM. SCH. CORP. 1806 West State Road 234 Fortville, IN 46040 Dr. Shane Robbins
<b>FIRE DEPARTMENT</b> MCCORDSVILLE FIRE STATION 7580 Form Street McCordsville, IN 46055 317-335-2268 Attn.: Tom Alexander	<b>POLICE</b> MCCORDSVILLE POLICE DEPT. 6280 West CR 800 North McCordsville, IN 46055 317-335-2612	<b>CABLE TELEVISION</b> COMCAST CABLEVISION 5330 East 65th Street Indianapolis, IN 46220 317-774-3384 Matt Stringer

SITE MAP  
1"=200'



SHEET INDEX	
SHEET NO	DESCRIPTION
C100	TITLE SHEET
C101	OVERALL PLAN
C110	EXISTING TOPOGRAPHY
C120	SIDEWALK STREET LIGHT, AND SIGN PLAN
C130-131	GRADING AND DRAINAGE PLAN
C140	OVERFLOW PLAN
C150	SSD PLAN
C200	STREET PLAN & PROFILE
C220	INTERSECTION DETAILS
C300	SANITARY SEWER PLAN
C301	SANITARY SEWER PLAN & PROFILES
C310-312	CULVERT PLAN (By Others)
C320	WATER MAIN PLAN (CITIZENS WATER)
C400	INITIAL EROSION CONTROL PLAN
C410	FINAL EROSION CONTROL PLAN
C420-C421	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
C500	EROSION CONTROL DETAILS
C503	STORM DETAILS
C525	CITIZENS WATER DETAILS
L1	LANDSCAPING PLAN (By Others)
1-2	PLAT
1-10	TOWN OF MCCORDSVILLE STANDARDS

REVISIONS		
NUMBER	DESCRIPTION	DATE
1	Revision per TAC Comments	06/07/22
2	Revision to Water Plan	09/09/22
3	Revision per TAC Comments	01/30/23
4	Revision per CCBEL Comments	02/24/23

## SECTION 3A STREET NAME CHART

STREET	NAME	STREET LENGTH
F	CLOISTER LANE	260.6'
G	PORTICO LANE	130.7'

## PROJECT SUMMARY

TOTAL AREA OF SECTION 3B:	4.35 ACRES ±
NUMBER OF LOTS:	5
TOTAL AREA OF LOTS:	1.67 ACRES ±
NUMBER OF COMMON AREAS:	2
TOTAL AREA OF COMMON AREAS:	2.08 ACRES ±
TOTAL LENGTH OF STREETS:	391.3 L.F. OR .07 MILES
TOTAL AREA OF DEDICATED RIGHT-OF-WAY:	0.60 ACRES ±

## CONSTRUCTION DOCUMENTS

PROJECT MANAGER: \_\_\_\_\_ DATE: \_\_\_\_\_

THESE PLANS ARE NOT TO BE CONSIDERED FINAL OR TO BE UTILIZED FOR CONSTRUCTION UNLESS SIGNED AND DATED BY THE APPROPRIATE BANNING ENGINEERING PROJECT MANAGER.

THESE PLANS ARE NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT.

## PLANS PREPARED BY:

**BANNING ENGINEERING**  
853 COLUMBIA ROAD, SUITE #101  
PLAINFIELD, IN 46168  
BUS: (317) 707-3700, FAX: (317) 707-3800  
E-MAIL: [Banning@BanningEngineering.com](mailto:Banning@BanningEngineering.com)  
WEB: [www.BanningEngineering.com](http://www.BanningEngineering.com)

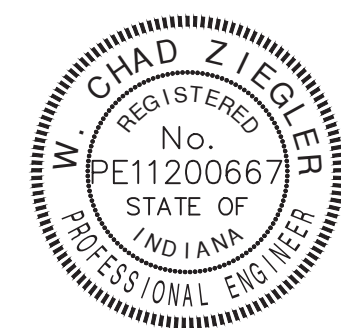
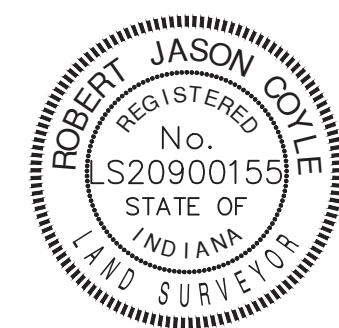
CONTACT: ROBERT "JASON" COYLE

MULTIPLE PROFESSIONALS ARE IN RESPONSIBLE CHARGE FOR THE PREPARATION AND DESIGN OF THIS PLAN SET. BELOW IS A LIST OF THE PROFESSIONALS INVOLVED WITH THIS PROJECT AND THE DISCIPLINES THEY ARE IN RESPONSIBLE CHARGE OF. EACH OF THE PLAN SHEETS BEARS THE SEAL AND SIGNATURE OF THE PROFESSIONAL IN RESPONSIBLE CHARGE FOR THAT SHEET.

- ROBERT JASON COYLE, PROFESSIONAL SURVEYOR, STATE OF INDIANA, PS # LS20900155  
SUBDIVISION LAYOUT, STREETS, GRADING AND EROSION CONTROL
- W. CHAD ZIEGLER, PROFESSIONAL ENGINEER, STATE OF INDIANA, PE # PE11200667  
SANITARY SEWER, STORM SEWER, DRAINAGE CALCULATIONS AND REPORTS, AND WATER MAIN

*Robert Jason Coyle*  
CERTIFIED: 04-22-2022

*W. Chad Ziegler*  
CERTIFIED: 04-22-2022



Date: 04-22-22  
Project No: 21177P-S3B  
Sheet No:

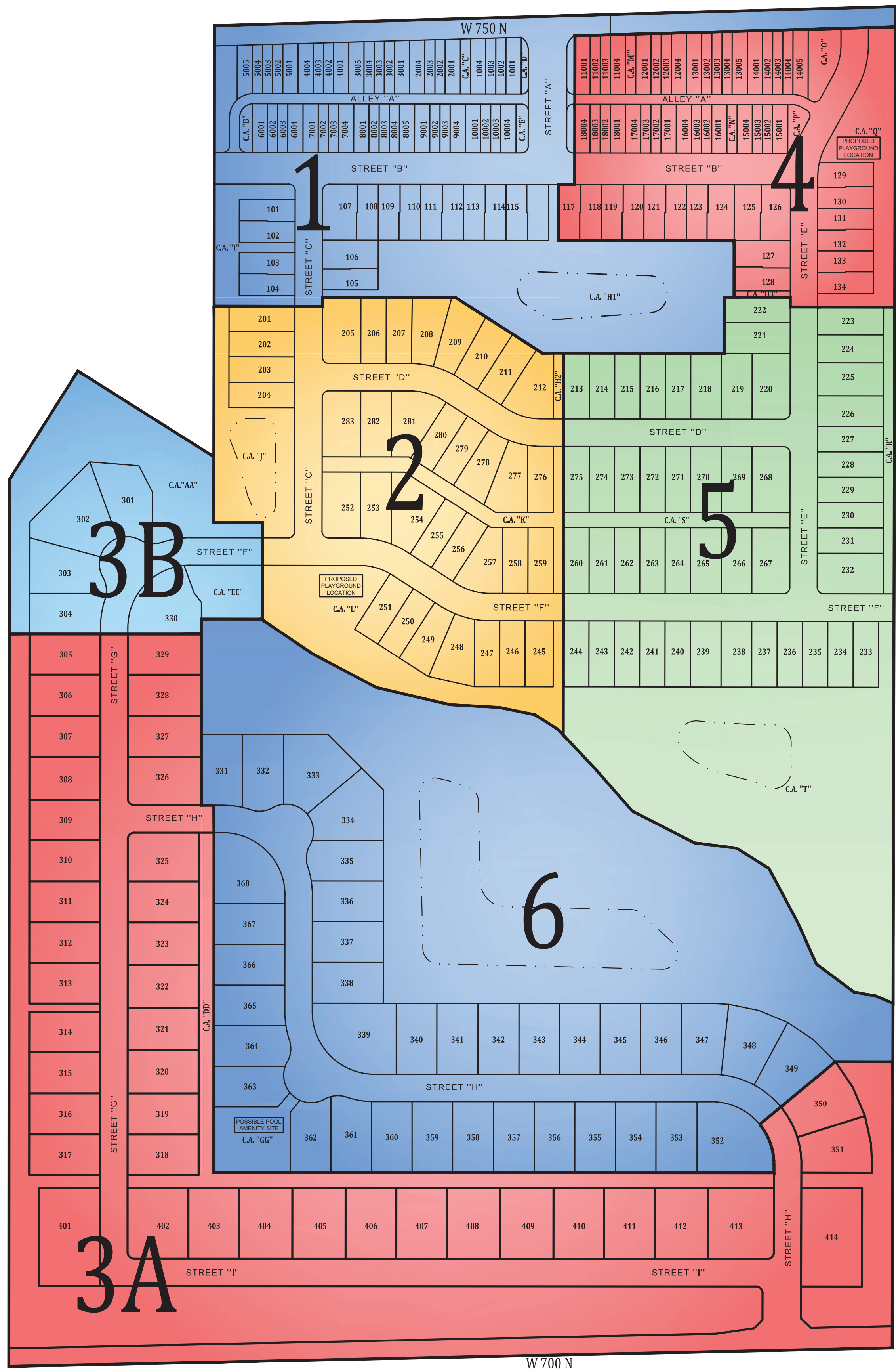
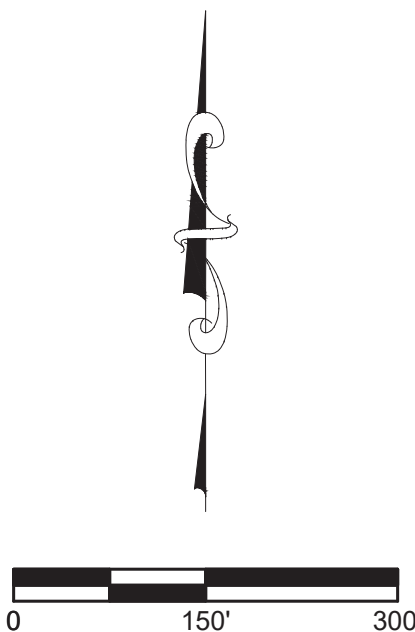
C100



## Section 3B

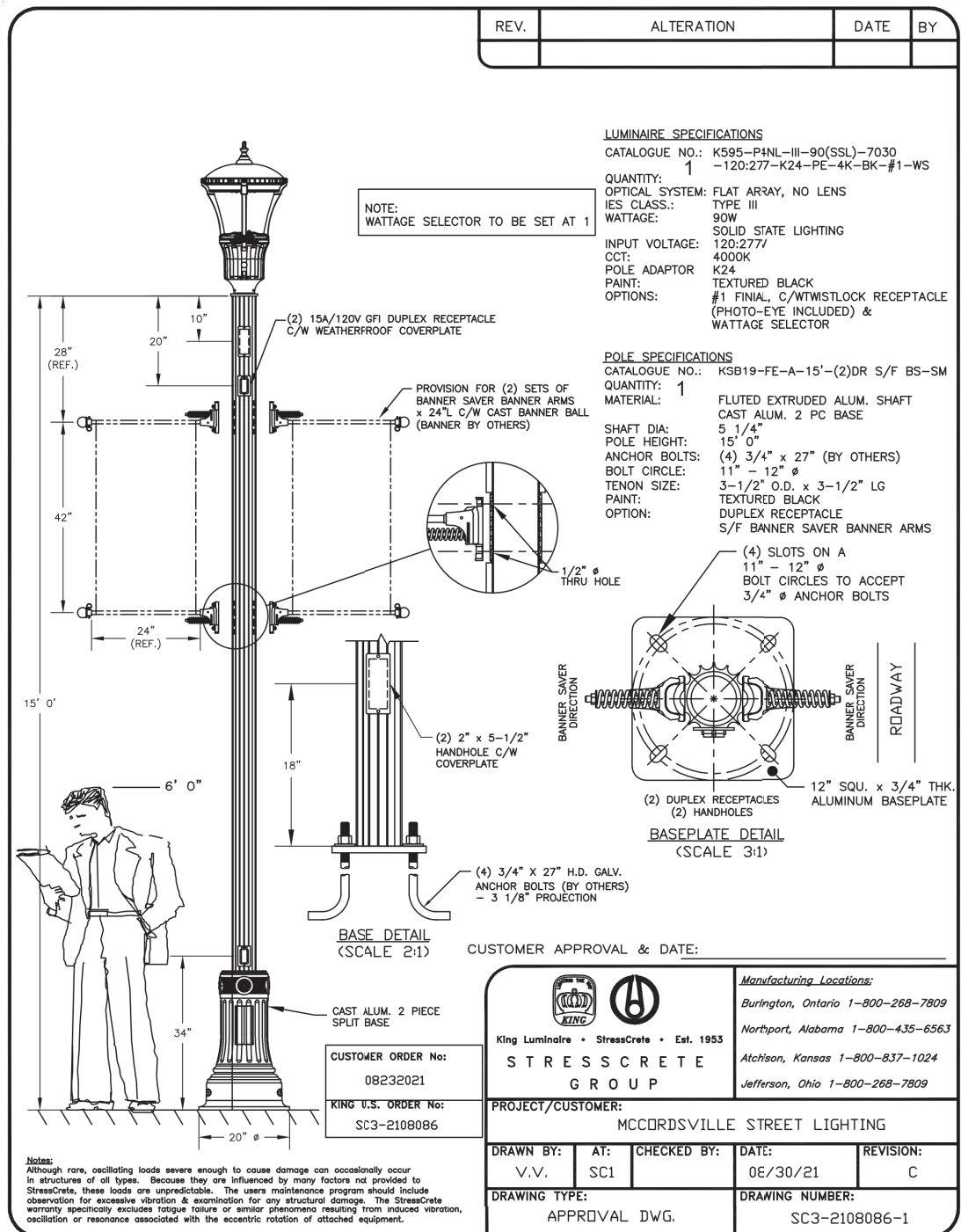
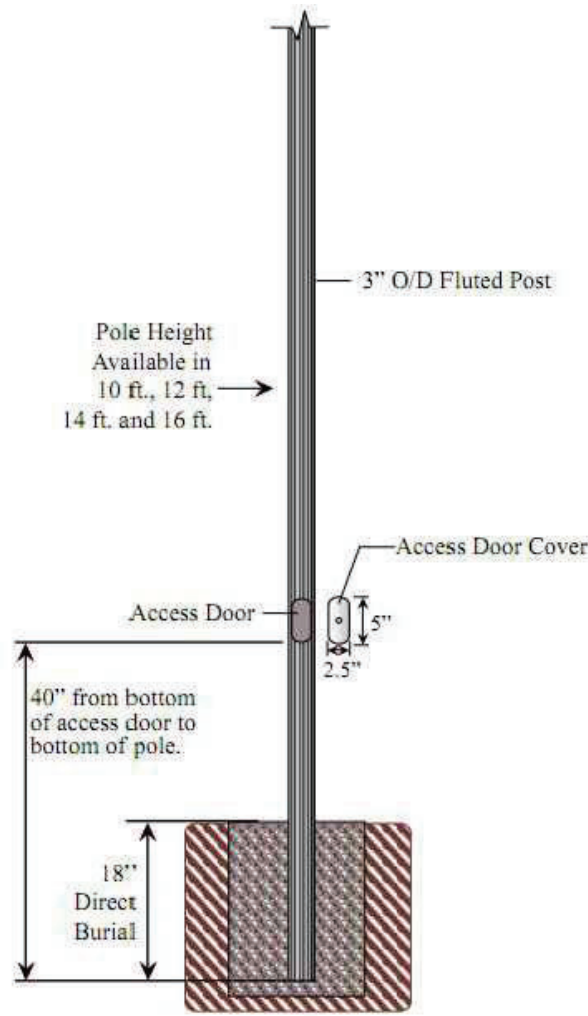
COMMENCING at a PK nail marking the Northwest corner of the East Half of said Southwest Quarter; thence South 00 degrees 05 minutes 02 seconds West along the west line of said East Half 849.78 feet to the POINT OF BEGINNING, said point being marked by a 5/8 inch rebar with cap stamped "Banning Eng Firm #0060" (hereinafter referred to as capped rebar) and also being the southeast corner of Lot 1 in Dammann's Minor Subdivision per plat thereof recorded as Instrument Number 030005842 in the Office of the Recorder of said County; thence continue South 00 degrees 05 minutes 02 seconds West along said west line 129.78 feet to a capped rebar; thence South 89 degrees 54 minutes 58 seconds East 96.54 feet to a capped rebar; thence South 00 degrees 05 minutes 02 seconds West 190.19 feet to a capped rebar; thence North 89 degrees 58 minutes 13 seconds West 120.62 feet to a capped rebar; thence South 00 degrees 01 minute 47 seconds West 29.60 feet to a capped rebar; thence North 89 degrees 58 minutes 13 seconds West 379.00 feet to a capped rebar on the east line of the land of Mt. Vernon Community School Corp. as described in Instrument Number 06029899452 in the Office of the Recorder of Hancock County; thence North 00 degrees 01 minute 47 seconds East along the east line of said land of Mt. Vernon Community School Corp. land 304.22 feet to a capped rebar; thence North 32 degrees 16 minutes 36 seconds East 253.46 feet to the south line of said Lot 1 in Dammann's Minor Subdivision, passing through a capped rebar at 235.64 feet; thence South 57 degrees 45 minutes 37 seconds East along said south line 316.91 feet to the POINT OF BEGINNING, containing 4.353 acres, more or less.

STREET	NAME
ALLEY A	
A	COLONNADE PARKWAY
B	ARCADE BLVD
C	CELLA LANE
D	PALAZZO LANE
E	PERISTYLE LANE
F	CLOISTER LANE
G	PORTICO LANE
H	BELVEDERE LANE
I	CUPOLA LANE





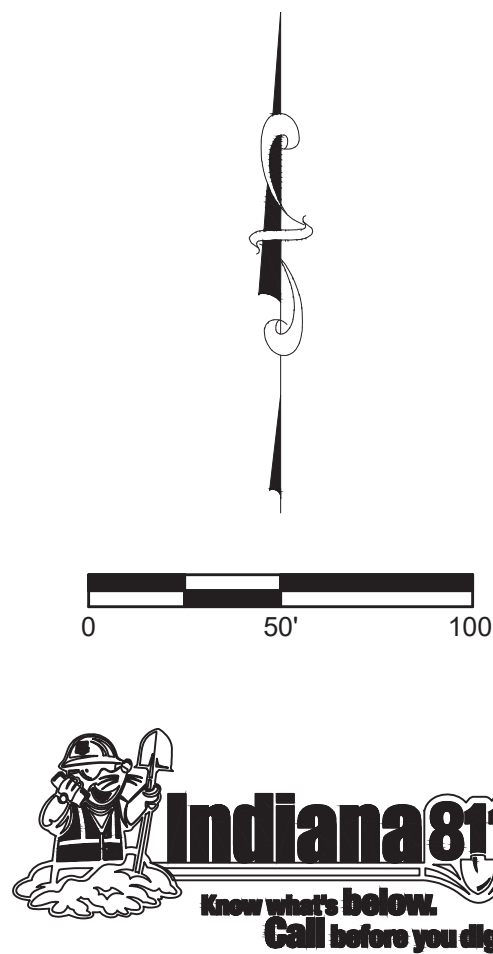
STREET SIGN POLE DETAIL  
NOT TO SCALE



STREET LIGHT DETAIL  
NOT TO SCALE

STREET NAME CHART

STREET	NAME
ALLEY A	
A	COLONNADE PARKWAY
B	ARCADE BLVD
C	CELLA LANE
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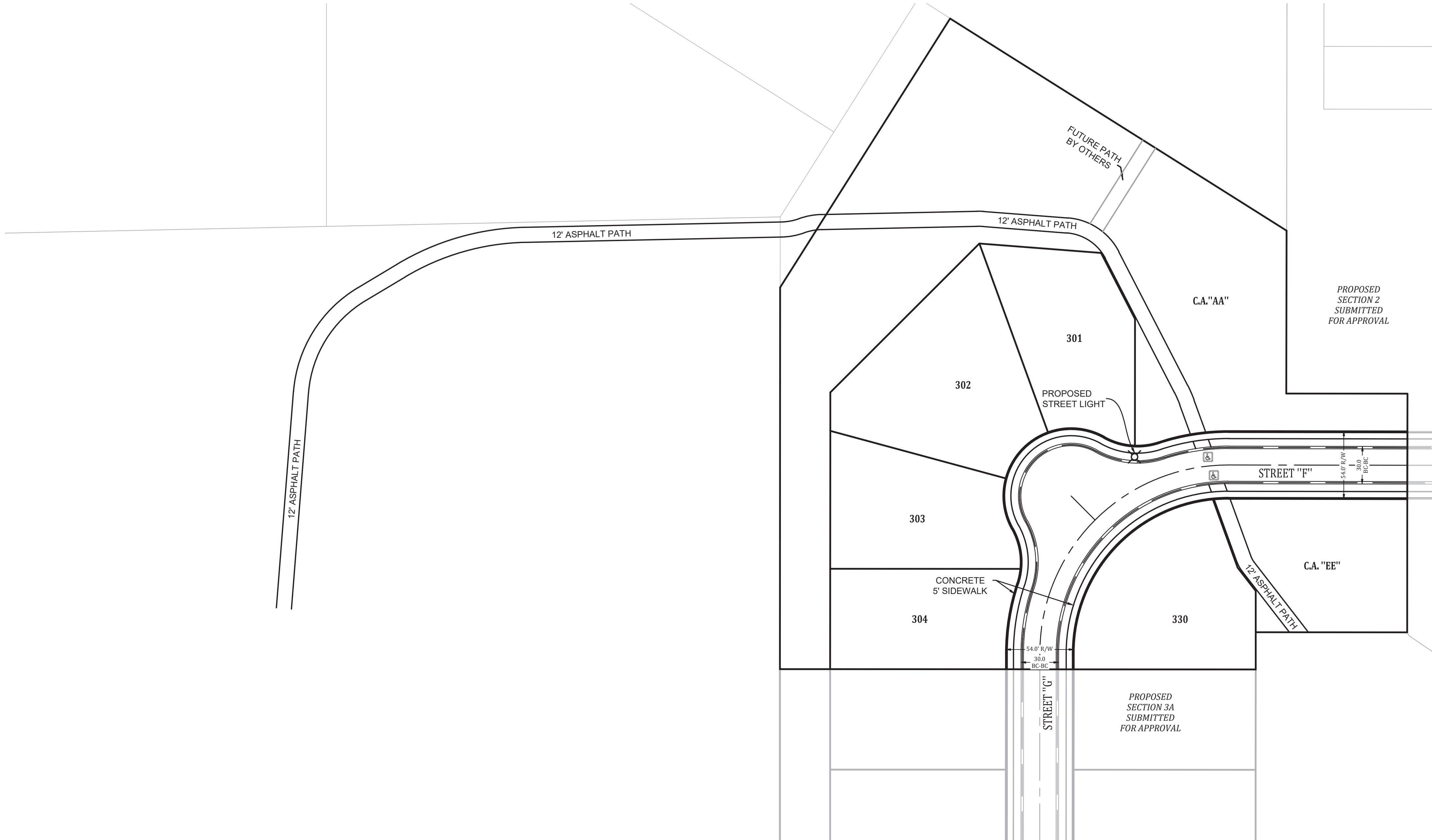


LEGEND

- CURB RAMP LOCATION  
(SEE SHEET 5 OF 10 OF MCCORDSVILLE TOWN STANDARDS  
TACTILE STRIPS SHALL BE BLACK)
- STREET LIGHT (PER TOWN OF MCCORDSVILLE)

NOTES:

- SEE TOWN OF MCCORDSVILLE STANDARDS FOR STANDARD INTERNAL SIDEWALK SPECIFICATIONS.
- REGULATORY / WARNING SIGNS AND PAVEMENT SHALL BE PER TOWN OF MCCORDSVILLE AND MUTCD.
- ANY TREE REMOVAL SHALL BE APPROVED BY DEVELOPER PRIOR TO CONSTRUCTION.
- LANDSCAPING PLAN BY OTHERS
- INSTALL EXTERIOR LIGHTING PER SECTION 6.12 FROM THE TOWN OF MCCORDSVILLE ZONING ORDINANCE

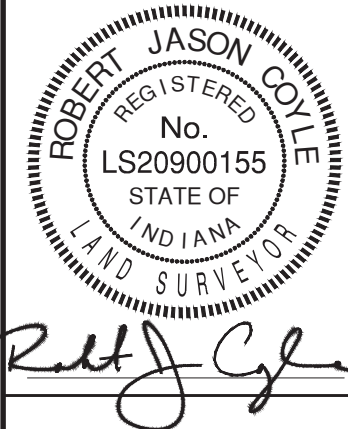


SIDEWALK, SIGNAGE, AND LIGHT PLAN

COLONNADE - SECTION 3B

VERNON TOWNSHIP

HANCOCK COUNTY, INDIANA



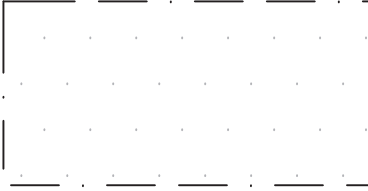
Project No: 21177-S3B  
Sheet No:



Lot Number	Pad Elevation	MLAG
301	860.89	860.3
302	860.63	860.3
303	860.43	860.3
304	860.14	860.3
330	860.08	860.3



ZONE AE (FLOODWAY AREA) - SPECIAL FLOOD HAZARD AREA SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD WITH BASE FLOOD ELEVATIONS DETERMINED AS SCALE PER FLOOD INSURANCE RATE MAP, COMMUNITY NUMBER 180468 0018 D, EFFECTIVE DATE DECEMBER 4, 2007.



ZONE AE - SPECIAL FLOOD HAZARD AREA SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD WITH BASE FLOOD ELEVATIONS DETERMINED AS SCALE PER FLOOD INSURANCE RATE MAP, COMMUNITY NUMBER 180468 0018 D, EFFECTIVE DATE DECEMBER 4, 2007.



ZONE X - OTHER FLOOD AREAS SUBJECT TO INUNDATION BY THE 0.2% ANNUAL CHANCE FLOOD AS SCALE PER FLOOD INSURANCE RATE MAP, COMMUNITY NUMBER 180468 0018 D, EFFECTIVE DATE DECEMBER 4, 2007.

SEE SHEET C140 FOR NOTE REGARDING LOWEST ADJACENT GRADE.

SEE SHEET C150 FOR NOTE FOR SUBSURFACE DRAIN AND TYPICAL SIDE YARD/OVERFLOW SECTION.

NOTE:

ANY TREE REMOVAL SHALL BE APPROVED BY THE DEVELOPER PRIOR TO CONSTRUCTION

STREET NAME CHART

STREET	NAME
ALLEY A	
A	COLONNADE PARKWAY
B	ARCADE BLVD
C	CELLA LANE
D	PALAZZO LANE
E	PERISTYLE LANE
F	CLOISTER LANE
G	PORTICO LANE
H	BELVEDERE LANE
I	CUPOLA LANE

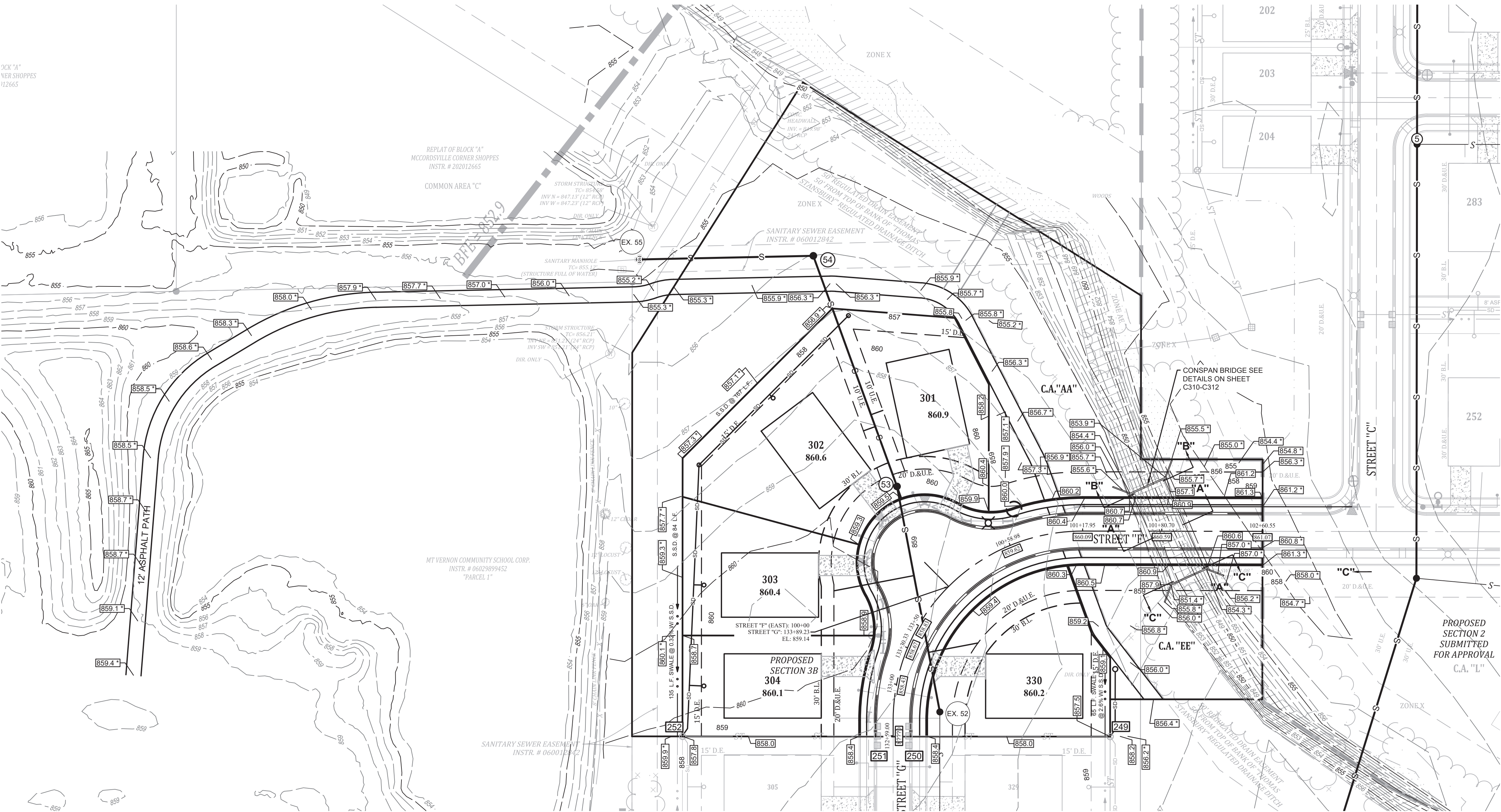


EXISTING LEGEND

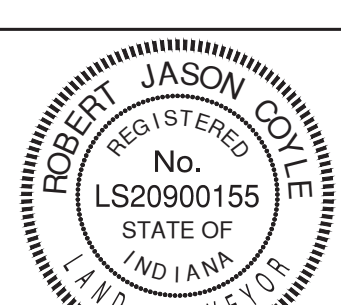
770	EXISTING CONTOUR: MAJOR
789	EXISTING CONTOUR: MINOR
OHU	OVERHEAD UTILITY LINES
■	POWER POLE
×	LIGHT POLE
○	GUY WIRE
□	ELECTRIC METER
□	ELECTRIC TRANSFORMER
□	UNDERGROUND CABLE TV
□	UNDERGROUND FIBER OPTIC
□	UNDERGROUND TELEPHONE
□	TELEPHONE SPLICE BOX
□	WATER LINE
□	FIRE HYDRANT
□	WATER VALVE
□	GAS LINE
□	GAS VALVE
□	SANITARY SEWER LINE
□	SANITARY SEWER MANHOLE
□	CLEAN-OUT
□	STORM PIPE
□	STORM MANHOLE
□	STORM INLETS
□	FLOWLINE
□	FENCELINE
□	SIGN
□	MAILBOX
□	TREELINE / EDGE OF WOODS
□	BOULDER
□	BUSH
□	TREE
□	ASPHALT
□	GRAVEL
□	CONCRETE

PROPOSED LEGEND

□	CURB W/ UNDERDRAIN
□	STORM SEWER PIPE
□	STORM SEWER MANHOLE
□	STORM SEWER INLETS
□	STORM SEWER CURB INLET
□	STORM SEWER END-SECTION
□	SUBSURFACE DRAIN
□	SSD LATERAL
□	SANITARY FORCEMAIN
□	SANITARY SEWER PIPE
□	SANITARY SEWER MANHOLE
□	WATER LINE - PROPOSED
□	BEND
□	BLOWOFF ASSEMBLY
□	CROSS, TEE
□	FIRE HYDRANT W/ VALVE
□	KICKER BLOCK
□	REDUCER
□	AIR RELEASE VALVE
□	WATER METER
□	WATER STOP
□	WATER VALVE
□	LOT NUMBER
□	PAD ELEVATION
□	GRADE BOX
□	GRADE BOX - MATCH EXISTING
□	GRADE BOX - MATCH EXISTING PAVEMENT
□	GRADE BOX - MATCH NEW PAVEMENT/SHOULDER
□	EMERGENCY FLOOD ROUTING
□	PONDING AREAS
□	EMERGENCY FLOOD ROUTE



GRADING & DRAINAGE PLAN  
COLONNADE - SECTION 3B  
VERNON TOWNSHIP  
HANCOCK COUNTY, INDIANA



Robert Jason Covey

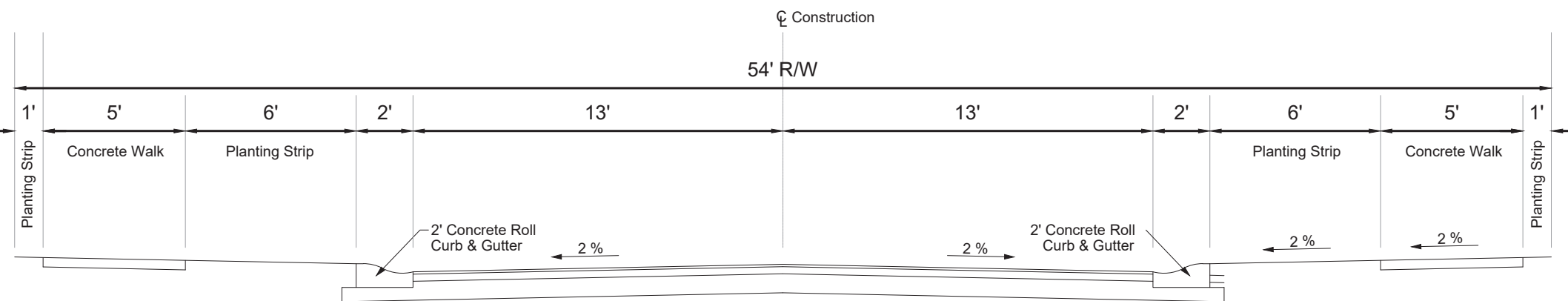
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Project No: 21177-S3B  
Sheet No:

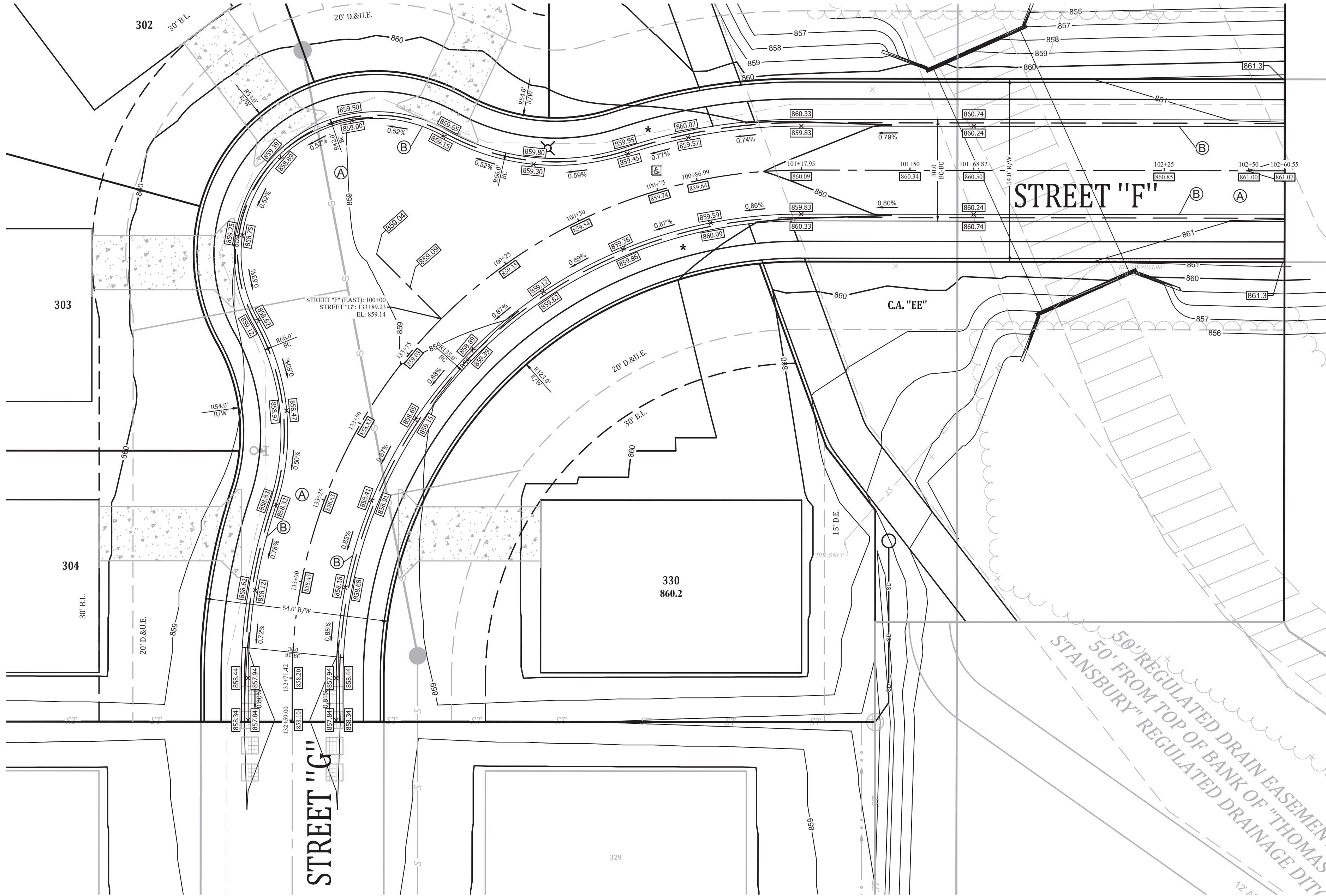


EXISTING LEGEND	
	EXISTING CONTOUR: MAJOR
	EXISTING CONTOUR: MINOR
	OVERHEAD UTILITY LINES
	POWER POLE
	LIGHT POLE
	GUY WIRE
	ELECTRIC METER
	ELECTRIC TRANSFORMER
	UNDERGROUND CABLE TV
	UNDERGROUND FIBER OPTIC
	UNDERGROUND TELEPHONE
	TELEPHONE SPLICE BOX
	WATER LINE
	FIRE HYDRANT
	WATER VALVE
	GAS LINE
	GAS VALVE
	SANITARY SEWER LINE
	SANITARY SEWER MANHOLE
	CLEAN-OUT
	STORM PIPE
	STORM MANHOLE
	STORM INLETS
	FLOWLINE
	FENCELINE
	SIGN
	MAILBOX
	TREELINE / EDGE OF WOODS
	BOULDER
	BUSH
	TREE
	ASPHALT
	GRAVEL
	CONCRETE

PROPOSED LEGEND	
	CURB W/UNDERDRAIN
	STORM SEWER PIPE
	STORM SEWER MANHOLE
	STORM SEWER INLETS
	STORM SEWER CURB INLET
	STORM SEWER END-SECTION
	SUBSURFACE DRAIN
	SSD LATERAL
	SANITARY FORCEMAIN
	SANITARY SEWER PIPE
	SANITARY SEWER MANHOLE
	WATER LINE - PROPOSED
	BEND
	BLOWOFF ASSEMBLY
	CROSS TEE
	FIRE HYDRANT W/ VALVE
	KICKER BLOCK
	REDUCER
	AIR RELEASE VALVE
	WATER METER
	WATER STOP
	WATER VALVE
	LOT NUMBER
	PAD ELEVATION
	GRADE BOX
	GRADE BOX - MATCH EXISTING
	GRADE BOX - MATCH EXISTING PAVEMENT
	GRADE BOX - MATCH NEW PAVEMENT/SHOULDER
	EMERGENCY FLOOD ROUTING
	PONDING AREAS
	EMERGENCY FLOOD ROUTE



**TYPICAL LOCAL ROAD CROSS SECTION**  
NO SCALE



**"STREET G" AND "STREET F" EYEBROW DETAIL**

**STREET NAME CHART**

STREET	NAME
ALLEY A	
A	COLONNADE PARKWAY
B	ARCADE BLVD
C	CELLA LANE
D	PALAZZO LANE
E	PERISTYLE LANE
F	CLOISTER LANE
G	PORTICO LANE
H	BELVEDERE LANE
I	CUPOLA LANE

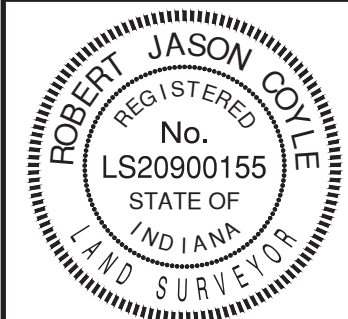
**PLAN NOTES:**

- Ⓐ LOCAL ROAD PAVEMENT SECTION D=12" SEE TOWN OF MCCORDSVILLE STANDARDS ON SHEET 2 OF 10
- Ⓑ 2' CONCRETE ROLL CURB & GUTTER SEE TOWN OF MCCORDSVILLE STANDARDS ON SHEET 2 OF 10
- Ⓐ CURB RAMP LOCATION (SEE SHEET 5 OF 10 OF MCCORDSVILLE TOWN STANDARDS TACTILE STRIPS SHALL BE BLACK)
- \* TC ELEVATION SHOWN IN THIS LOCATION IS FOR A TYPICAL CURB. ACTUAL ELEVATION WILL BE LOWER FOR DEPRESSED HANDICAP RAMP AT THIS POINT. FLOW LINE ELEVATION SHALL BE CALCULATED FROM TC SHOWN.

**NOTES:**

- ALL CONSTRUCTION ACTIVITY ON THIS SITE TO BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. STANDARDS FOR WORKER SAFETY.
- IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY ALL UTILITIES BEFORE CONSTRUCTION BEGINS.
- FOR 30' WIDE STREET (BC-BC) THE BACK OF CURB GRADE IS .03' HIGHER THAN THE PROFILE GRADE.
- SLOPES ACROSS CURB RAMPS SHALL BE LESS THAN 2%.

INTERSECTION DETAILS  
COLONNADE - SECTION 3B  
VERNON TOWNSHIP  
HANCOCK COUNTY, INDIANA



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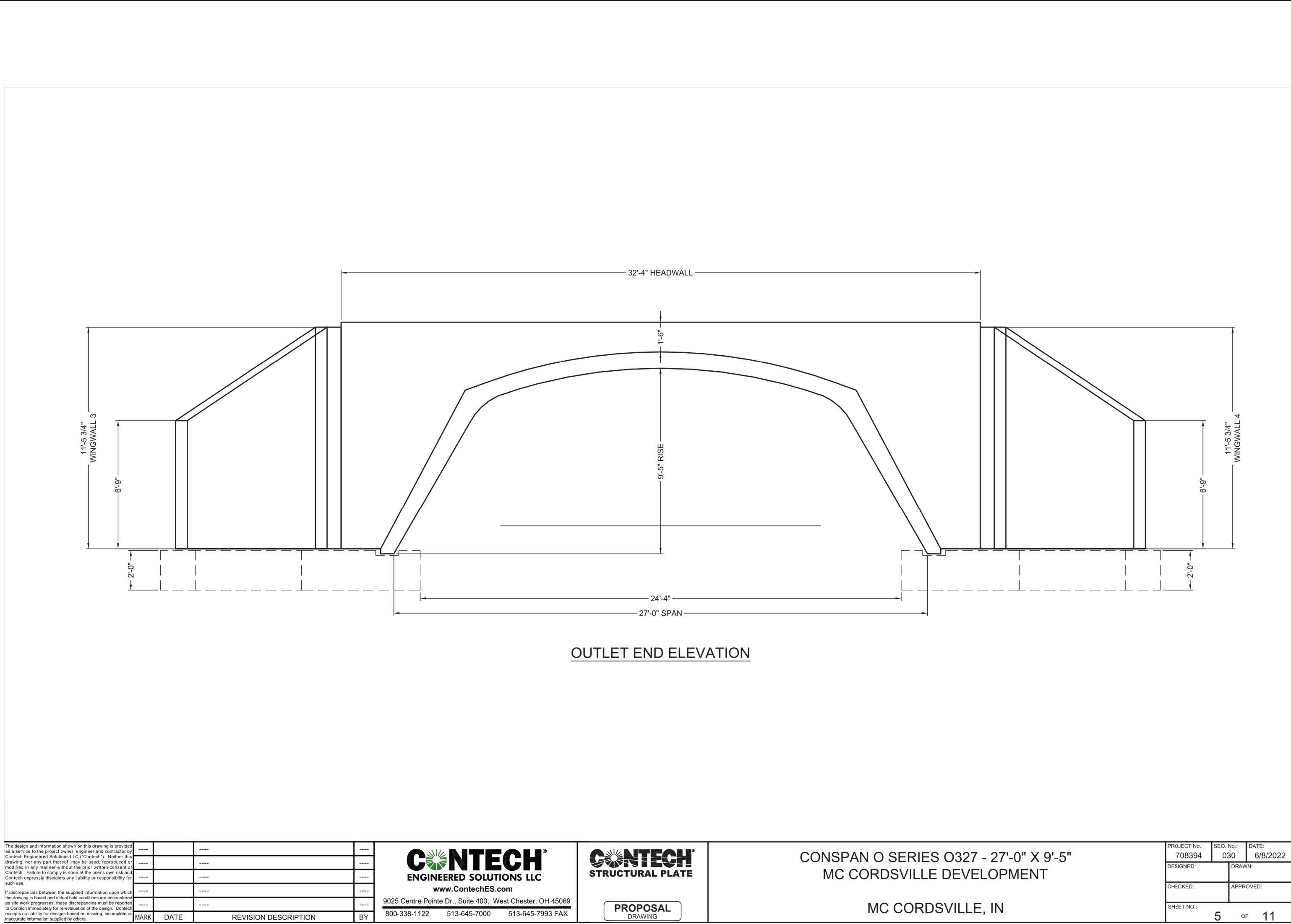
Project No: 21177-S3B  
Sheet No:







Baldwin, P. 2023/11/17/21177-S3B-Engineering Coord Sheet Title: 21177-S3B-STORM PP.dwg Mar 06, 2023 - 1:22pm



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www.ContechES.com

9025 Centre Points Dr., Suite 400, West Chester, OH 45069

800-338-1122 513-645-7000 513-645-7993 FAX

PROPOSAL DRAWING

CONTECH STRUCTURAL PLATE

CONSPAN O SERIES Q327 - 27'-0" X 9'-5" MC CORDSVILLE DEVELOPMENT

MC CORDSVILLE, IN

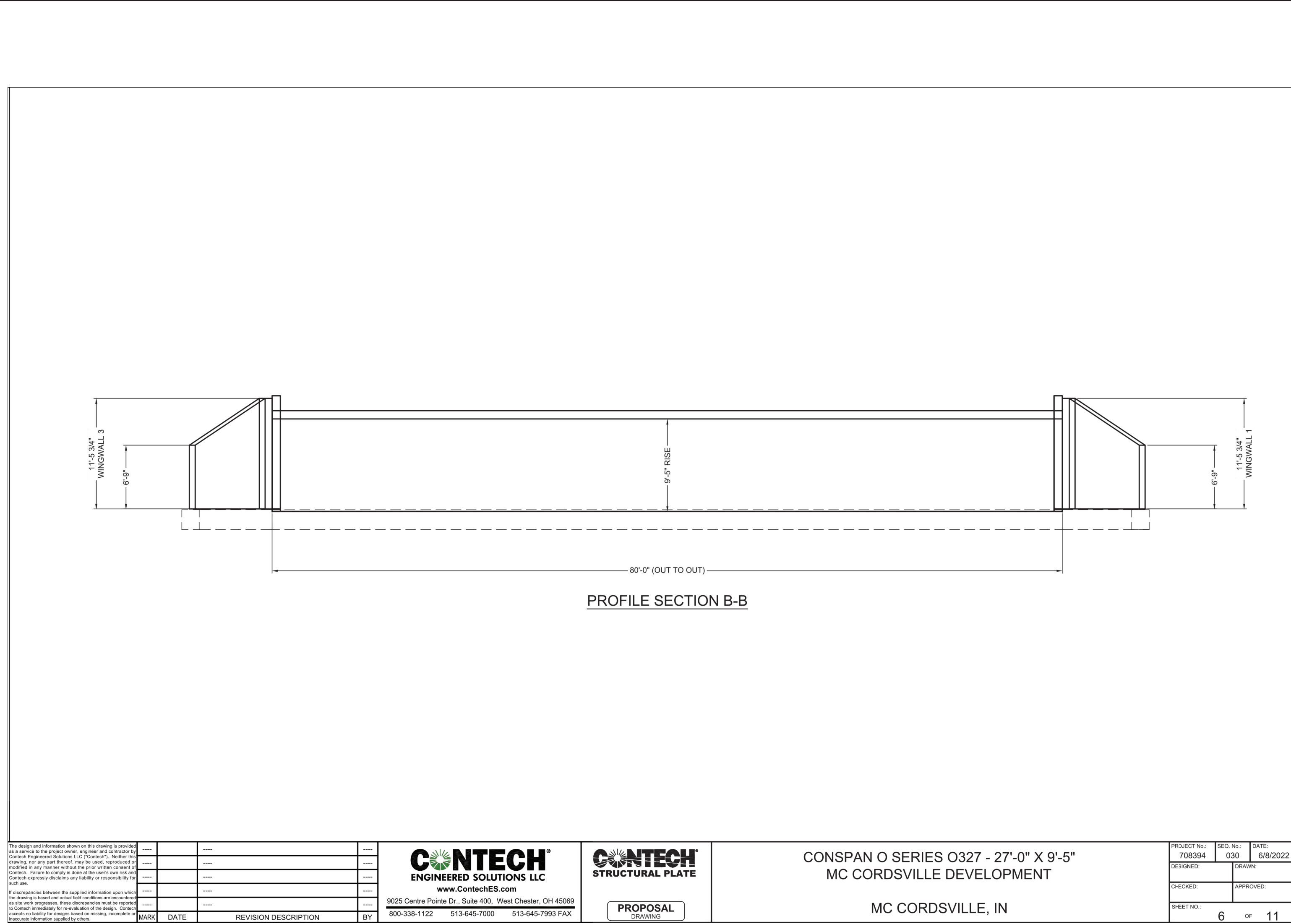
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PROPOSAL DRAWING

CONTECH STRUCTURAL PLATE

CONSPAN O SERIES Q327 - 27'-0" X 9'-5" MC CORDSVILLE DEVELOPMENT

MC CORDSVILLE, IN

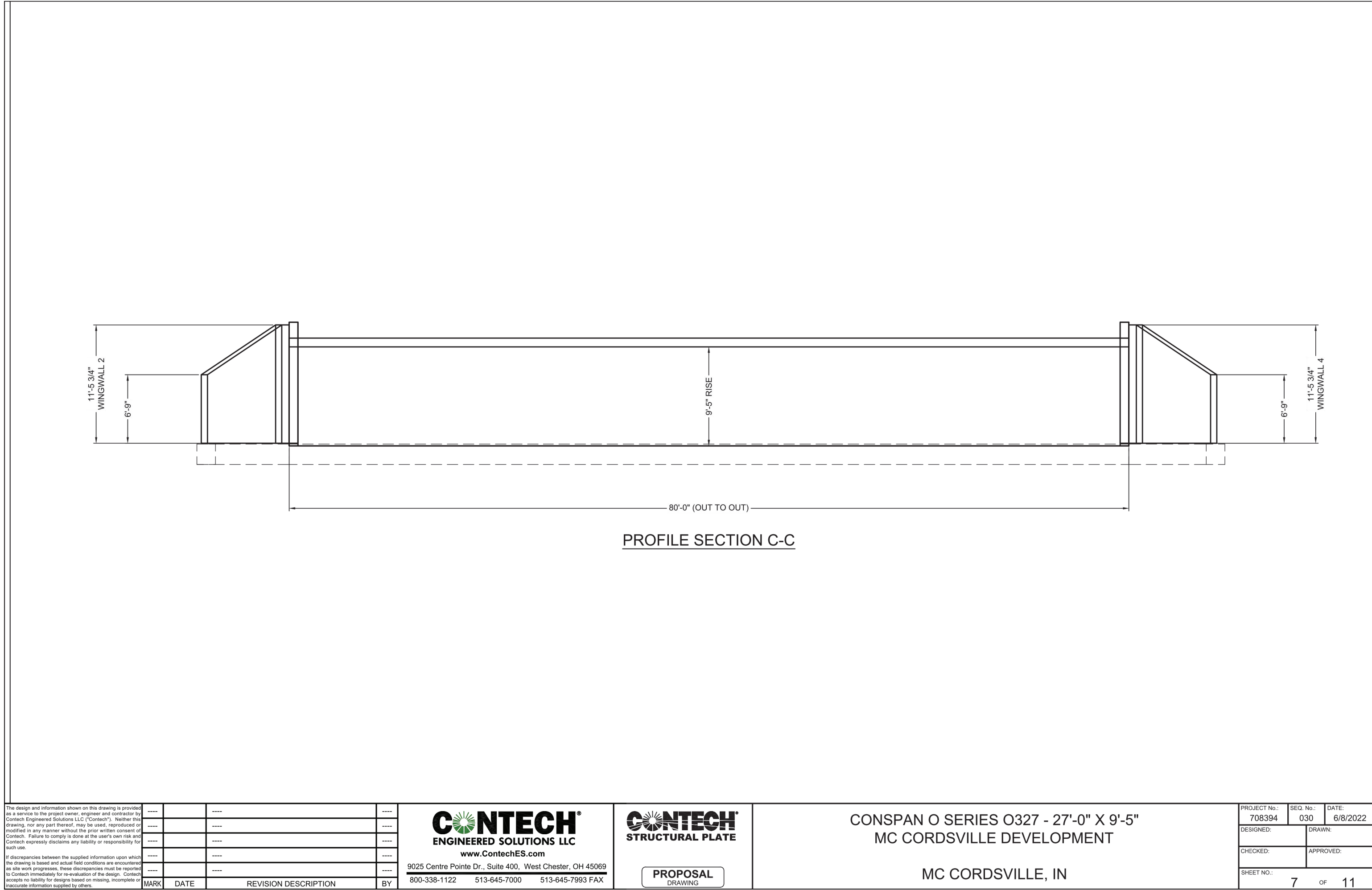
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PROPOSAL DRAWING

CONTECH STRUCTURAL PLATE

CONSPAN O SERIES Q327 - 27'-0" X 9'-5" MC CORDSVILLE DEVELOPMENT

MC CORDSVILLE, IN

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PROPOSAL DRAWING



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PROPOSAL DRAWING

CONTECH STRUCTURAL PLATE

CONSPAN O SERIES Q327 - 27'-0" X 9'-5" MC CORDSVILLE DEVELOPMENT

MC CORDSVILLE, IN

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PROPOSAL DRAWING

Project No: 21177-S3B

Sheet No: C311

Revisions

Date	Revisions	Design	Drawn	Checked	Scale	Date
06/07/2022	1	Revision per TAC Comments	JOB	2	1" = 50'	04-22-2022
09/09/2022	2	Revisions to Water Plan	JOB	3		
01/30/2023	3	Revision Per TAC Comments	JOB	4		
02/24/2023	4	Revision Per CBEL Comments	JOB	4		

Scale: 1" = 50'

Date: 04-22-2022

CULVERT PLAN

COLONNADE - SECTION 3B

VERNON TOWNSHIP

HANCOCK COUNTY, INDIANA

W. Chad Ziegler

REGISTERED PROFESSIONAL ENGINEER

No. PE1200667

STATE OF INDIANA

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PLAINFIELD, IN 46169

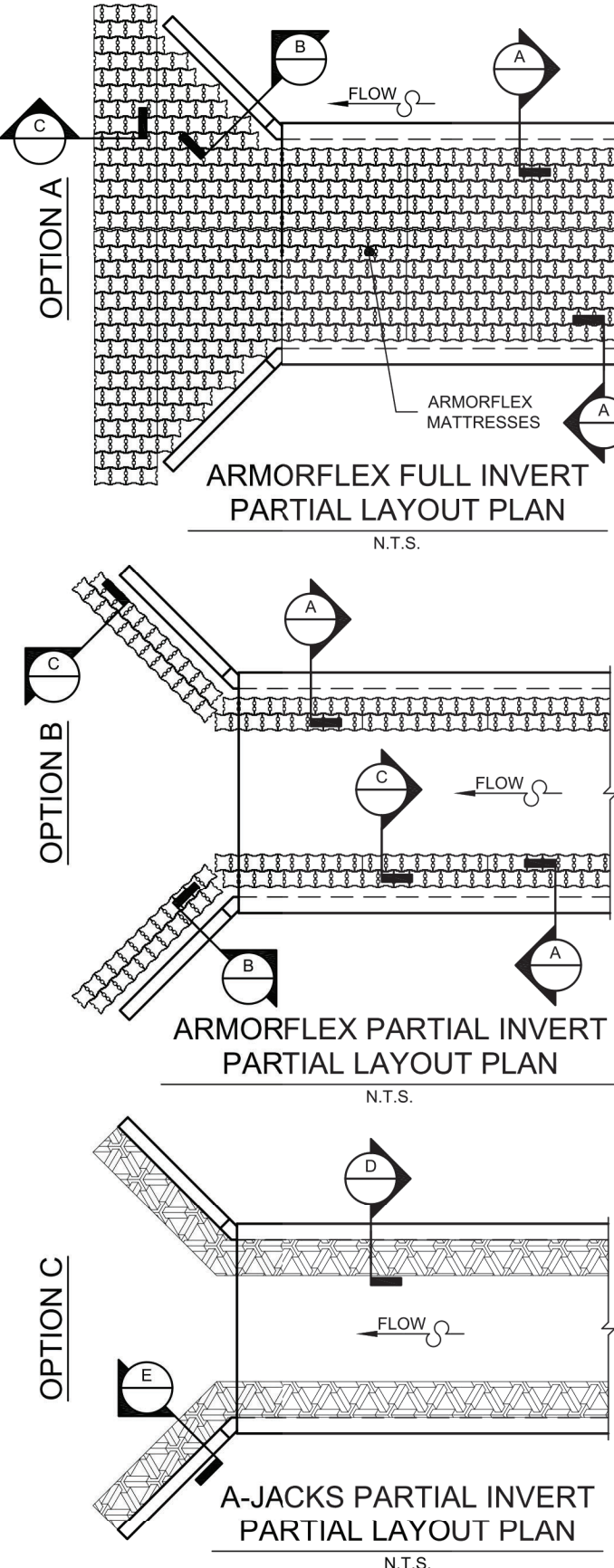
BUS: (317) 707-3700 FAX: (317) 707-3800

E-MAIL: Banning@BanningEngineering.com

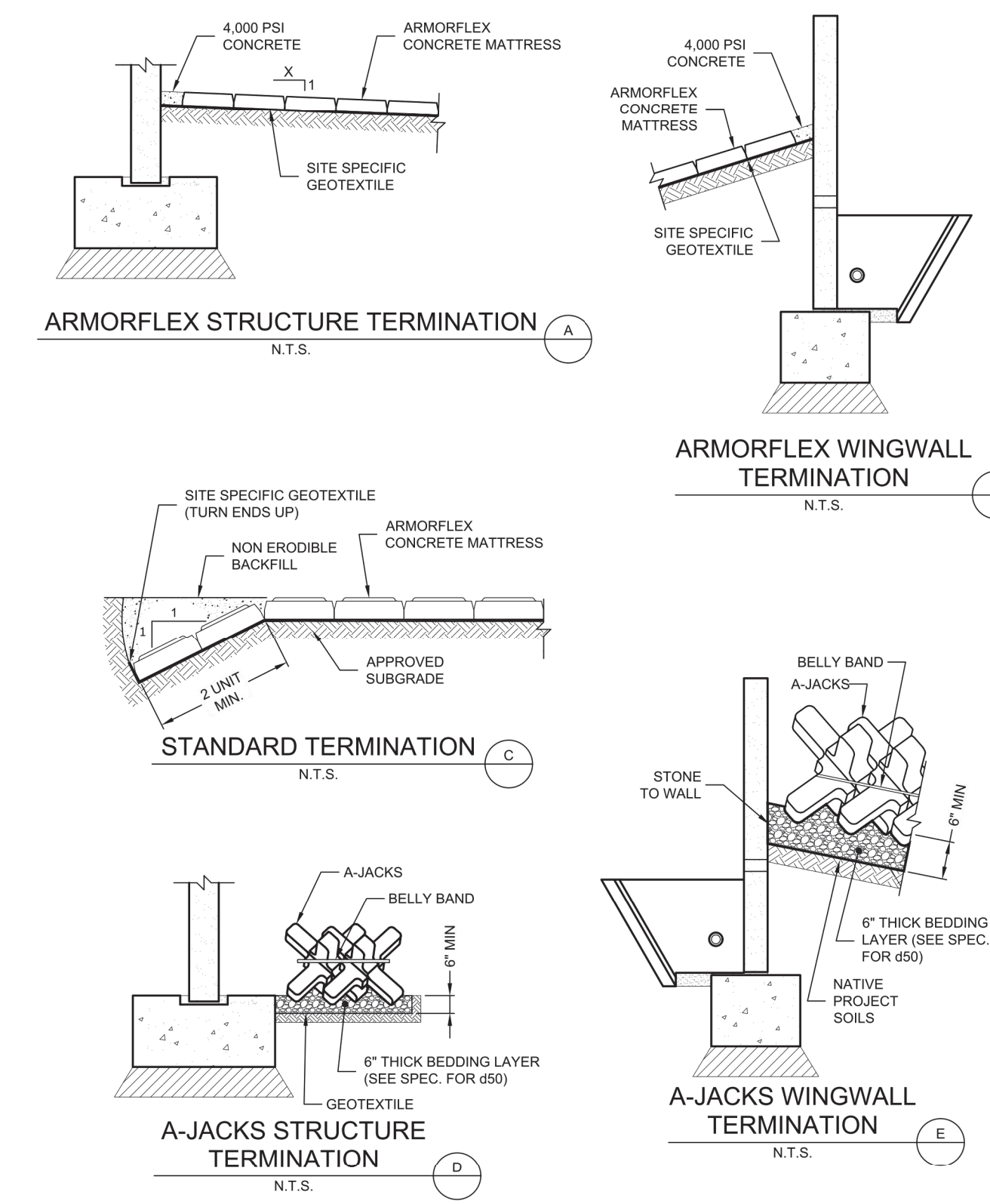
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SAMPLE DRAWING ONLY



### CONSIDER A COMPLETE SYSTEM WITH ARMORTEC REVETMENT



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**CNTECH**  
STRUCTURAL PLATE

CONSPAN O SERIES Q327 - 27'-0" X 9'-5"  
MC CORDSVILLE DEVELOPMENT  
MC CORDSVILLE, IN

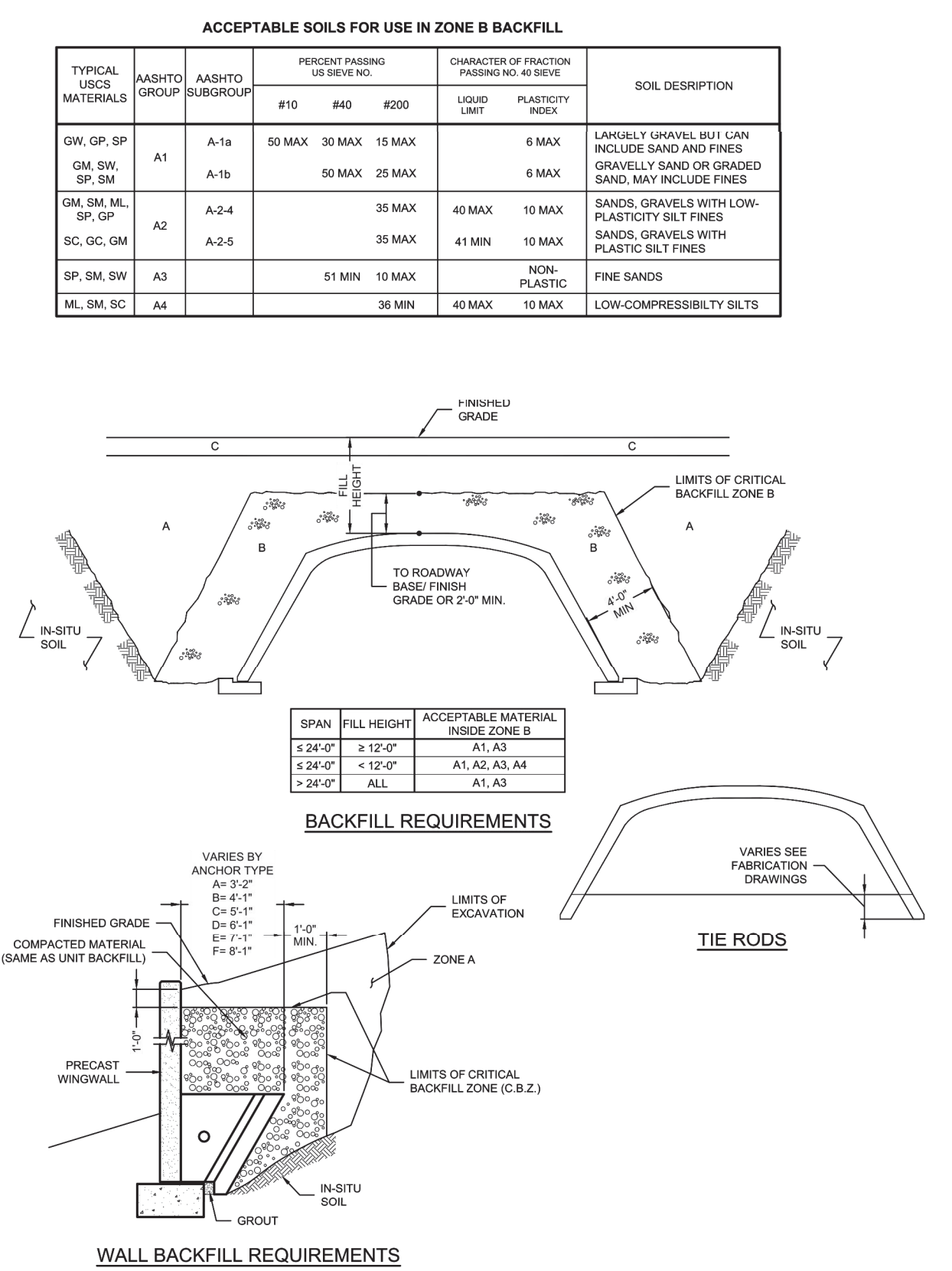
PROJECT NO: 708394  
DESIGNED: 030  
DATE: 6/8/2022  
CHECKED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_  
SHEET NO: 11 OF 11

### SPECIFICATIONS FOR MANUFACTURE AND INSTALLATION OF CON/SPAN® O-SERIES BRIDGE SYSTEMS (CONT'D)

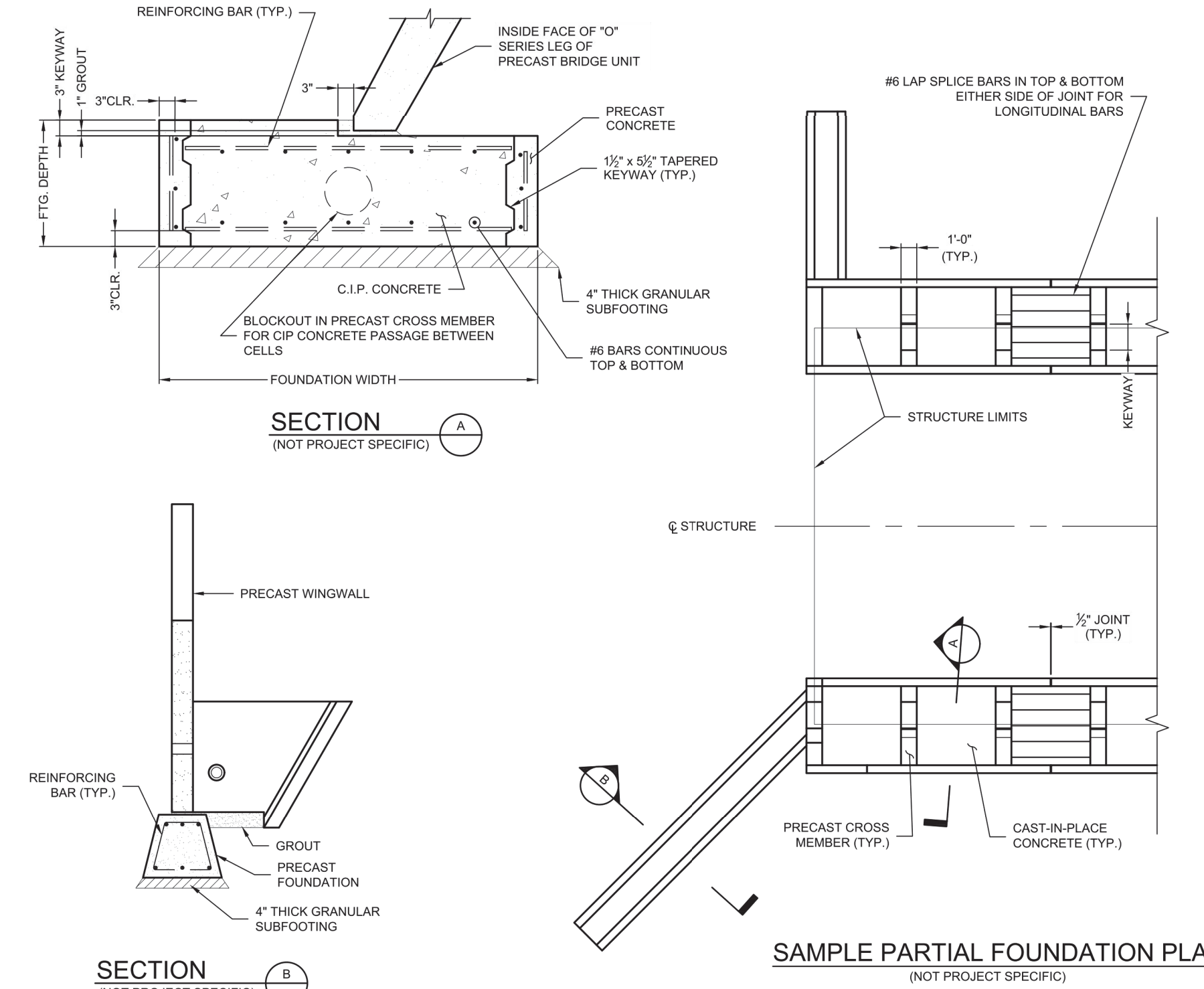
11. MARKING  
EACH BRIDGE UNIT SHALL BE CLEARLY MARKED BY WATERPROOF PAINT. THE FOLLOWING SHALL BE SHOWN ON THE INSIDE OF THE VERTICAL LEG OF THE BRIDGE SECTION:  
BRIDGE SPAN / BRIDGE RISE  
DATE OF MANUFACTURE  
NAME OR TRADEMARK OF THE MANUFACTURER
12. INSTALLATION PREPARATION  
TO BE COMPLETED PRIOR TO INSTALLATION OF THE PRECAST CONCRETE BRIDGE UNITS AND WINGWALLS. THE BRIDGE UNITS AND WINGWALLS SHALL BE SET ON HARDWOOD SHIMS CONFORMING TO ASTM D1037 OR PLASTIC SHIM DOWNS IN SPACING OF 24" MIN. OR APPROVED EQUAL MEASURING BY 4" MINIMUM, UNLESS SHOWN OTHERWISE ON THE PLANS. A MINIMUM GAP OF 2" SHALL BE PROVIDED BETWEEN THE FOOTING AND THE BOTTOM OF THE BRIDGES.
13. INSTALLATION  
13.1. GENERAL - THE INSTALLATION OF THE PRECAST CONCRETE BRIDGE UNITS AND WINGWALLS SHALL BE IN ACCORDANCE WITH THE CONSPAN BRIDGE SYSTEMS INSTALLATION HANDBOOK.  
13.1.1. LIFTING - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT A CRANE OF THE CORRECT LIFTING CAPACITY IS AVAILABLE TO HANDLE THE PRECAST CONCRETE UNITS. THIS CAN BE ACCOMPLISHED BY USING THE WEIGHTS GIVEN FOR THE PRECAST CONCRETE COMPONENTS AND BY DETERMINING THE LIFTING REACH FOR EACH UNIT. THE PRECAST CONCRETE UNITS MUST BE CHECKED WELL IN ADVANCE OF SHIPPING TO ENSURE PROPER CRANE LOCATION AND TO AVOID ANY LIFTING RESTRICTIONS. THE LIFT ANCHORS OR HOLES PROVIDED IN EACH UNIT ARE THE ONLY MEANS TO BE USED TO LIFT THE ELEMENTS. THE PRECAST CONCRETE ELEMENTS MUST NOT BE SUPPORTED OR RAISED BY OTHER MEANS THAN THOSE GIVEN IN THE MANUALS AND DRAWINGS WITHOUT WRITTEN APPROVAL FROM CNTECH'S ENGINEERING SOLUTIONS.  
13.1.2. CONSTRUCTION EQUIPMENT WEIGHT RESTRICTIONS - IN NO CASE SHALL EQUIPMENT OPERATING IN EXCESS OF THE DESIGN LOAD (HSD) BE PERMITTED OVER THE BRIDGE UNITS UNLESS APPROVED BY CNTECH'S ENGINEERING SOLUTIONS.  
13.1.2.1. IN THE IMMEDIATE AREA OF THE BRIDGE UNITS, THE FOLLOWING RESTRICTIONS FOR THE USE OF HEAVY CONSTRUCTION MACHINERY DURING BACKFILLING OPERATIONS APPLY:  
• NO CONSTRUCTION EQUIPMENT SHALL CROSS THE BARE PRECAST CONCRETE BRIDGE UNIT.  
• AFTER THE COMPACTED FILL LEVEL HAS REACHED A MINIMUM OF 4" OVER THE CROWN OF THE BRIDGE, CONSTRUCTION EQUIPMENT WITH A WEIGHT OF LESS THAN 10 TONS MAY CROSS THE BRIDGE.  
• AFTER THE COMPACTED FILL LEVEL HAS REACHED THE DESIGN LOAD LIMITS FOR THE ROAD MAY CROSS THE PRECAST CONCRETE BRIDGE. CONSTRUCTION EQUIPMENT WITH THE DESIGN LOAD LIMITS FOR THE ROAD MAY CROSS THE PRECAST CONCRETE BRIDGE.  
13.2. LEVELING PROCEDURES - THE BRIDGE UNITS AND WINGWALLS SHALL BE SET ON HARDWOOD SHIMS CONFORMING TO ASTM D1037 OR PLASTIC SHIM DOWNS IN SPACING OF 24" MIN. OR APPROVED EQUAL MEASURING BY 4" MINIMUM, UNLESS SHOWN OTHERWISE ON THE PLANS. A MINIMUM GAP OF 2" SHALL BE PROVIDED BETWEEN THE FOOTING AND THE BOTTOM OF THE BRIDGES.

- 13.2.2. NO BACKFILL SHALL BE PLACED AGAINST ANY STRUCTURAL ELEMENTS UNTIL THEY HAVE BEEN APPROVED BY THE ENGINEER.  
13.2.3. BACKFILL SHALL BE COMPACTED AS ALL REPLACEMENT CONCRETE ELEMENTS. THE PRECAST CONSTRUCTION AND MATERIAL SPECIFICATIONS, WHICH INCLUDE THE SPECIFICATIONS FOR EXCAVATION FOR STRUCTURES AND ROADWAY EXCAVATION AND EMBANKMENT CONSTRUCTION, SHALL APPLY EXCEPT AS NOTED IN THIS SECTION.  
13.2.4. IF THE CONSTRUCTION OPERATIONS ARE TO PROCEED WITH THE STRUCTURE SPAN DURING ALL PHASES OF INSTALLATION, DUE TO THE ANCHOR SHAPES, BRIDGE UNITS WILL NEED TO BE SPREAD UNDER SELF WEIGHT. IT IS IMPERATIVE THAT ANY LATERAL SPREADING OF THE BRIDGE BE AVOIDED DURING AND AFTER THEIR PLACEMENT. GENERALLY, HORIZONTAL CABLE TIES OR TIE RODS ARE SHIPPED TO BE USED TO PREVENT THE BRIDGE UNITS FROM MOVING. PREVENTING THIS SPREADING, CABLE TIE RODS ARE SHIPPED TO ASSIST IN PREVENTING THIS SPREADING. CABLE TIE RODS SHALL NOT BE REMOVED UNTIL BRIDGE UNITS ARE GROUTED AND GROUT HAS CURED. IT IS RECOMMENDED THAT TEMPORARY HARDWOOD WEDGES BE USED IN CONJUNCTION WITH THE CABLE TIE RODS TO MAINTAIN SPAN BY POWERING DOWN TO TIE RESTRICTIONS. THESE CABLE TIE RODS MUST BE REMOVED PRIOR TO PLACING GROUT. THE ENGINEER SHALL BE NOTIFIED OF THE REMOVAL OF THE CABLE TIE RODS AND REQUEST A SUGGESTED INSTALLATION PROCEDURE.  
IN ADDITION, IF THE CABLE TIE RODS MUST BE REMOVED PRIOR TO SETTING ARCH UNITS, THE FOLLOWING QUALITY CONTROL PROCEDURE MUST BE FOLLOWED:  
1) FIBRO MEASURED SPAN UPON ARCH UNITS DELIVERY TO SITE. PRIOR TO LIFTING FROM TRUCK AND REMOVING CABLE TIE RODS. MEASURED SPAN SHALL BE THE AVERAGE OF (1) SPAN MEASUREMENTS ALONG THE LAY LENGTH OF THE ARCH UNIT.  
2) AFTER SETTING OF BRIDGE UNIT ON THE FOUNDATION, VERIFY THE SPAN. THIS INSTALLED SPAN MEASUREMENT SHALL NOT EXCEED THE MAXIMUM OF:  
A) THE NOMINAL SPAN ± 2"  
B) THE MEASURED SPAN ± 1"  
IF THE INSTALLED SPAN MEASUREMENT EXCEEDS THIS AMOUNT, THE ARCH UNIT SHALL BE LIFTED AND RESET UNTIL THE INSTALLED SPAN MEASUREMENT MEETS THE LIMITS.  
13.2.5. PLACEMENT OF WINGWALLS, HEADWALLS AND FOUNDATION UNITS  
THE WINGWALLS, HEADWALLS AND FOUNDATIONS SHALL BE PLACED AS SHOWN ON THE PLAN DRAWINGS. SPECIAL CARE SHALL BE TAKEN IN SETTING THE ELEMENTS TO THE TRUE LINE AND GRADE.  
13.2.6. WATERPROOFING/Joint PROTECTION AND SUBSURFACE DRAINAGE  
13.2.6.1. EXTERNAL PROTECTION OF JOINTS - THE BUTT JOINT MADE BY TWO ADJOINING BRIDGE UNITS SHALL BE COVERED WITH A 2" X 24" PREPARED RUBBER JOINT SEALANT AND A MINIMUM OF 1/2" RUBBER JOINT WRAP. THE SURFACE SHALL BE FREE OF JOINT WRAP BEFORE APPLYING THE JOINT MATERIAL. A PRIMER COMPATIBLE WITH THE JOINT WRAP TO BE USED SHALL BE USED.  
13.2.6.2. IN ADDITION TO THE JOINTS BETWEEN BRIDGE UNITS, THE JOINT BETWEEN THE END BRIDGE UNIT AND THE BRIDGE BACKFILL SHALL ALSO BE SEALED AS DESCRIBED ABOVE. IF PRECAST WINGWALLS ARE USED, THE JOINT BETWEEN THE END BRIDGE UNIT AND THE WINGWALL SHALL BE SEALED WITH A 2" STRIP OF FILTER FABRIC. ALSO, IF LIFT HOLES ARE FORMED IN THE BRIDGE UNITS, THEY SHALL BE PRIMED AND COVERED WITH A 2" X 4" SQUARE OF JOINT WRAP.  
13.2.7. DURING THE BACKFILL OPERATION, CARE SHALL BE TAKEN TO KEEP THE JOINT WRAP IN ITS PROPER LOCATION OVER THE JOINT.  
13.2.8. SUBSOIL DRAINAGE SHALL BE AS DIRECTED BY THE ENGINEER.  
13.2.9. GROUTING  
13.2.9.1. GROUTING SHALL NOT BE PERFORMED WHEN TEMPERATURES ARE EXPECTED TO GO BELOW 35° FOR A PERIOD OF 72 HOURS. FILL THE BRIDGE-FOUNDATION KEYWAY WITH CEMENT GROUT (PORTLAND CEMENT AND WATER OR CEMENT MORTAR COMPOSED OF PORTLAND CEMENT, SAND AND WATER) WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI. VERIFY AS REQUIRED TO ENSURE THAT THE ENTIRE JOINT AROUND THE BRIDGE ELEMENT IS COMPLETELY FILLED. IF BRIDGE ELEMENTS MUST BE SET WITH TEMPORARY TIES (CABLES, BARS, ETC.), GROUT MUST ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI BEFORE TIES MAY BE REMOVED.  
13.2.9.2. ALL GROUT SHALL HAVE A MAXIMUM AGGREGATE SIZE OF 1/4".  
13.2.9.3. LIFTING AND ERECTION ANCHOR RECESSES SHALL BE FILLED WITH GROUT.  
13.2.9.4. AFTER GROUT HAS REACHED ITS DESIGN STRENGTH THE TEMPORARY HARDWOOD WEDGES SHALL BE REMOVED AND THEIR HOLES FILLED WITH GROUT.  
13.3. DO NOT PERFORM BACKFILL DURING WET OR FREEZING WEATHER.

ACCEPTABLE SOILS FOR USE IN ZONE B BACKFILL									
TYPICAL USCS MATERIALS	AASHTO GROUP	AASHTO SUBGROUP	PERCENT PASSING (U.S. SIEVE NO.)	#10	#40	#200	CHARACTER OF BRACKFILL (U.S. SIEVE NO.)	PLASTICITY INDEX	SOIL DESCRIPTION
GW, GP, SP, GM, SW, SM, SP, GP	A-1	A-1-10	50 MAX	30 MAX	15 MAX	6 MAX	1. LIKELY GRAVEL BUT CAN INCLUDE SAND AND FINES		
GM, SM, ML, SP, GP	A-2	A-2-4	35 MAX	40 MAX	10 MAX	6 MAX	2. ZONE B FILL THAT IS DIRECTLY ASSOCIATED WITH PRECAST CONCRETE BRIDGE INSTALLATION		
SC, GC, GM, SP, SM, SW	A-2.5		35 MAX	41 MAX	10 MAX	6 MAX	3. SANDS, GRAVELS WITH LOW-PLASTICITY SILT FINES		
SP, SM, SW	A-3		51 MIN	10 MAX	10 MAX	NON-PLASTIC	4. SANDS, GRAVELS WITH PLASTIC SILT FINES		
ML, SM, SC	A-4		36 MIN	40 MAX	10 MAX	LOW-COMPRESSIBILITY SILTS			



SAMPLE DRAWING ONLY



### EXPRESS FOUNDATIONS



**CULVERT PLAN**  
COLONNADE - SECTION 3B  
VERNON TOWNSHIP  
HANCOCK COUNTY, INDIANA

Project No: 21177-SSB  
Sheet No: C312

DESIGNED: 030  
DATE: 6/8/2022  
CHECKED: \_\_\_\_\_  
APPROVED: \_\_\_\_\_  
SHEET NO: 10 OF 11

DESIGNED: JUB  
DRAWN: JUB  
CHECKED: JUB  
SCALE: 1"=50'  
DATE: 04-22-2022

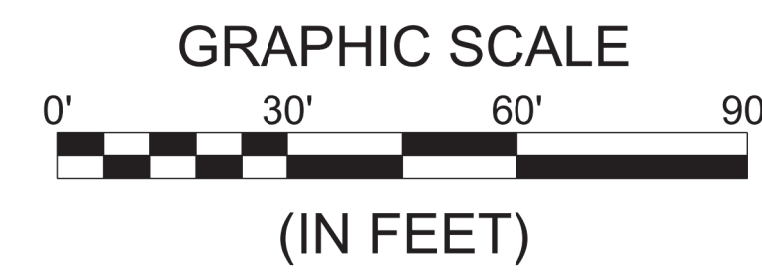
Revisions:  
1. Revision per TAC Comments  
2. Revision to Water Plan  
3. Revision per CCBL Comments  
4. Revision per CCBL Comments

Date: 06/07/2022  
09/09/2022  
01/30/2023  
02/24/2023

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REGISTERED PROFESSIONAL ENGINEER  
No. PE11200667  
STATE OF INDIANA  
W. Chad Ziegler





Tilia tomentosa 'Sterling' - 3  
(Sterling Linden)



<div><p><b>BANNING</b> ENGINEERING 853 COLUMBIA ROAD, SUITE #101 PLAINFIELD, IN 46168 BUS: (317) 707-3700, FAX: (317) 707-3800 E-MAIL: Banning@BanningEngineering.com WEB: www.BanningEngineering.com</p></div>	Project No:		21177P-S1	
	Sheet No:		L-1	
	LANDSCAPE PLAN			
	Designed:	EWS	Sym.	Revisions
	Drawn:	EWS		Date
	Checked:	EWS		
	Scale:	1"=30'		
	Date:	06-09-22		
	COLONNADE - SECTION 3B - DEVELOPMENT PLAN		TOWN OF MCCORDSVILLE      VERNON TWP., HANCOCK CO., INDIANA	