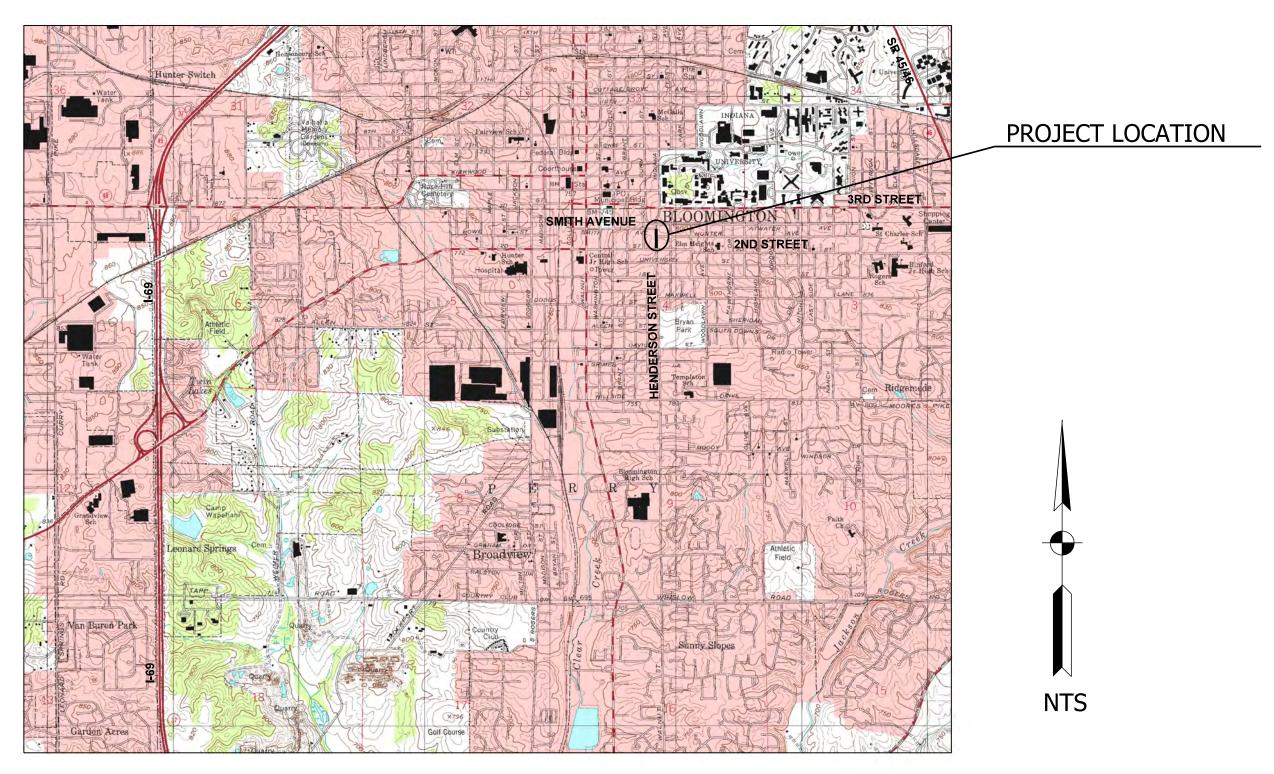
# CITY OF BLOOMINGTON DEPARTMENT OF ENGINEERING



# HENDERSON STREET IMPROVEMENT 2ND STREET TO SMITH AVENUE

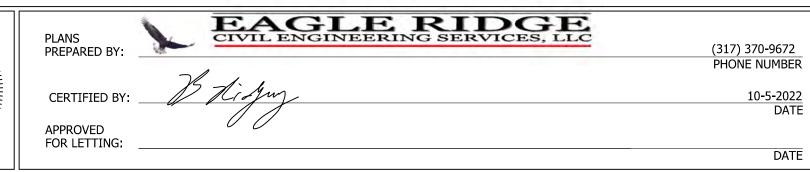


PROJECT LOCATION MAP CITY OF BLOOMINGTON, MONROE COUNTY

INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS CURRENT EDITION TO BE USED WITH THESE PLANS.

PREPARED BY:





dewayne.hamilton@centurylink.com

	GENERAL NOTES						
1	ALL REMOVAL AND EXCAVATION ITEMS ARE TO BE PAID AS CLEARING,						
2	ALL RADII ARE TO BACK OF CURB LINE.						
3	USE OF INDOT STANDARD SPECIFICATIONS: UNLESS OTHERWISE PROVIDED IN THESE PLANS OR THE TECHNICAL SPECIFICATIONS, MATERIALS AND WORKMANSHIP OF THE WORK SHALL BE AS REQUIRED BY THE CURRENT EDITION OF THE INDOT STANDARD SPECIFICATIONS.						
4	<u>USE OF PROPERTY:</u> NO MATERIALS OR EQUIPMENT SHALL BE STORED IN A LOCATION OR MANNER WHICH PRESENTS A HAZARD TO THE PUBLIC OR THE ENVIRONMENT. THE SAFEGUARD OF MATERIALS REMAINING IN THESE AREAS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.						
5	PRESENCE OF UTILITIES: MOST OF THIS PROJECT IS PRESENTED ON A GIS BASE MAP AND UTILITIES ARE NOT SHOWN. EXISTING UTILITIES THAT ARE SHOWN ON PLANS ARE APPROXIMATED IN ACCORDANCE WITH AVAILABLE RECORDSLOCATOR'S MARKINGS, AND PHYSICAL EVIDENCE. OTHER UTILITIES MAY ALSO BE PRESENT. EXACT LOCATIONS AND ELEVATIONS ARE TO BE DETERMINED BY CONTRACTOR.						
6	<u>UTILITY LOCATIONS:</u> CONTRACTOR IS REQUIRED BY LAW TO NOTIFY INDIANA UNDERGROUND LOCATION SERVICE AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING ANY EXCAVATION WORK. CONTACT NUMBER IS 811. OTHER LOCAL UTILITIES MAY NOT BE SUBSCRIBERS AND MUST BE CONTACTED INDIVIDUALLY FOR LOCATE REQUESTS.						
7	INCIDENTAL WORK: ALL WORK SHOWN OR SPECIFIED IN THE CONTRACT DOCUMENTS AND OTHER WORK WHICH MAY BE INCIDENTAL TO THE DENOTED WORK SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICES ITEMS OF THE CONTRACT						
8	STAKING: CONTRACTOR SHALL BE RESPONSIBLE FOR ALL STAKING.						

INDEX					
SHEET NO.	DRAWINGS INDEX				
1	TITLE SHEET				
2	INDEX / GENERAL NOTES / LEGEND / UTILITY DATA				
3	TYPICAL DETAILS / SIGN TABLE				
4 - 5	GREENWAY PLANS - HENDERSON STREET				
6 - 7	STREET DETAILS				
8	MAINTENANCE OF TRAFFIC PLANS				

### GENERAL LEGEND (EXISTING SCREENED, PROPOSED IN BOLD)

	<b>\( \)</b>	LIGHT POLE	(WM)	WATER METER
		WATER VALVE		GAS VALVE
		INLETS	GM	GAS METER
	(FH)	HYDRANT	B	BOLLARD
5			$DS_{\odot}$	DOWNSPOUT
		TREES	Is	STORM
		SIGN	——————————————————————————————————————	UNDERGROUND ELECTRIC
		SIGN	——————————————————————————————————————	UNDERGROUND TELEPHONE
	$\varnothing$	POWER POLE		OVERHEAD UTILITY
	ST SA	MANHOLE (STORM, SANITARY)		WATERMAINS/WATER LINES
	PH	TELECOM MANHOLES		GAS MAINS/LINE
				GUARDRAIL
	[AC]	AIR CONDITIONER	×	WOOD FENCE
	Tel. Rsr.	TELE. RISER		

ELEC. RISER

PARKING METER

MAILBOX

TELECOM MANHOLES

#### MAINTENANCE OF TRAFFIC AND EROSION CONTROL ITEMS

INDOT STANDARD DRUM

WITH STEADY BURN LIGHTS

TEMPORARY CONSTRUCTION FENCING, 48" MESH, ORANGE, ON TEMPORARY STANDS

BARRICADE (TYPE III)

CONSTRUCTION SIGNS (SHAPE PER MUTCD)

#### PROPOSED ITEMS

CONCRETE CURB, VERTICAL, ALL PROFILES

MODIFIED CURB AND GUTTER, B

NURSERY SODDED AREA - INCLUDED UP TO 6" TOPSOIL UNLESS OTHERWISE NOTED

24" WHITE LINES FOR CROSSWALKS OR STOP BARS, THERMOPLASTIC

ARROW, THERMOPLASTIC

4" YELLOW, SOLID LINE, THERMOPLASTIC

4" YELLOW, SKIP LINE (3' LINE, 9' GAP) (SEE PLANS FOR MODIFIED AREAS) THERMOPLASTIC

BIKE SYMBOLS, THERMOPLASTIC

WHITE CHEVRONS (PAIR), THERMOPLASTIC

WHITE CHEVRONS ON GREEN BACKGROUND, THERMOPLASTIC

12" YELLOW CROSSHATCH ON 20' CENTERS, THERMOPLASTIC

RESET EXISTING SIGN ON NEW TYPE 1 POST WITH UNREINFORCED ANCHOR BASE

NEW SIGN ON TYPE 1 POST WITH UNREINFORCED ANCHOR BASE

AC ADJUST CASTING TO GRADE

PCCP FOR APPROACHES, 9" ON

6" COMPACTED AGGREGATE NO. 53s, IN TWO LIFTS

CONSTRUCTION LIMITS

CAST STEEL DETECTABLE WARNING PLATES (ON RADIUS, IF RADIUS LABELLED)

CONCRETE SIDEWALK, 4" ON

4" COMPACTED AGGREGATE No. 53s

FURNISH CASTING AND ADJUST TO GRADE, INLET

CONCRETE SIDEWALK, 6" ON 4" COMPACTED AGGREGATE NO. 53s

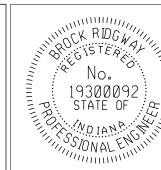
PCCP FOR PATCHING, 12", COVERED WITH 1.5" HMA SURFACE

RAMP, CONCRETE INCLUDING STEEL DETECTABLE WARNING PLATES 6" THÍCK ON 4" COMPACTED AGGREGATE BASE NO. 53s

TURNING SPACE (TYP. 1.5%, MAX. 2.0% IN ALL DIRECTIONS)

CARPINUS CAROLINIANA (AMERICAN HORNBEAM), OVER 2 INCH TO 2.5 INCH CALIPER

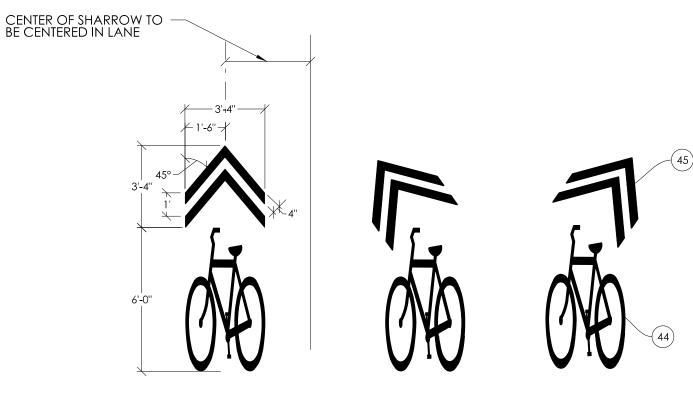
AMELANCHIER X GRANDIFLORA (CROSS OF ALLEGHENY SERVICEBERRY AND DOWNY SERVICEBERRY) OVER 2 INCH TO 2.5 INCH CALIPER (THESE SPECIES SHALL BE SOUGHT, THOUGH IN THE EVENT OF LIMITED AVAILABILITY, ALTERNATES MAY BE APPROVED FROM THE CITY UDO'S PERMITTED STREET TREE SPECIES LIST OF SMALL STREET TREES)



RECOMMENDED FOR APPROVAL	B Li	Juy DESTEN ENGINEER	10-5-2022 DATE	
DESIGNED:	BR	DRAWN:	RBA	
CHECKED:	МТ	CHECKED:	BR	

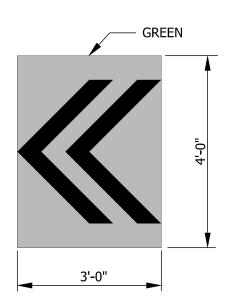
	HORIZONTAL SCALE	ERCES PROJECT NUMBER
CITY OF BLOOMINGTON		240
DEPARTMENT OF ENGINEERING	VERTICAL SCALE	
INDEX / GENERAL NOTES / LEGEND /	N/A	SHEET NUMBER
UTILITY DATA		3

				SHE	ET SIGN	SUMI	MARY	TABI	LE							
	SIGN DATA															
201220						Z	N (6u)		b			SIGN POST		OST		
LOCATION						S S S S S S S S S S S S S S S S S S S	REMOVE SIGN (Paid as Clearing)	NEW SIGN	METAL THICKNESS (in.)			TYPE 1 2.25" x 2.25" x 12 ga.			REMARKS	
		WEST	SIGN DESCRIPTION	SIGN CODE	SIGN SIZE					(111.)		UNREINFORCED ANCHOR BASE				
BLOCK	EAST	8				EACH			0.080	0.100	0.125	POST	LENG	TH (FT)		
					(in. x in.)		EACH		SFT	SFT	SFT	1	2	TOTAL		
North of 2nd St - NW Corner		X	STOP	R1-1	30 x 30	- 11		1	6.25		11 1	12		12		
North of 2nd St - NVV Corner		X	ALL WAY	R1-3P	18 x 6			11	0.75						Mount with Stop	
North of 2nd, (~10+60)		X	Existing Begin one Way	Existing	Existing	1			100			12		12	Reset sign to new post to add sign under it	
		X	EXCEPT BICYCLES	Custom	18 x 12			1	1.50						Add under Begin One Way	
~11+70	17.3	X	EXCEPT BICYCLES	Custom	18 x 12			1	1.50						Add under east-facing One Way	
~11+80	X		EXCEPT BICYCLES	Custom	18 x 12			1	1.50						Add under east-facing One Way	
~12+25		X	EXCEPT BICYCLES	Custom	18 x 12			1	1.50						Add under west-facing One Way	
~12+40	X		EXCEPT BICYCLES	Custom	18 x 12			1	1.50						Add under west-facing One Way	
~12+95	X		Combination Bike and Ped Crossing	W11-15	30 x 30			1	6.25			12		12		
12+95	X		Down Arrow Left	W16-7P	24 x 12			1	2.00						Mount with Combination Bike/Ped Crossing	
~13+50, NE Corner at Hunter	X		Existing Stop	Existing	Existing	1						12		12	Reset Stop and One Way together	
~15+50, NE Comer at Hunter	X		Existing One Way	Existing	Existing	1									Reset Stop and One Way together	
~13+50, 30' east of Hunter	X		BIKE ROUTE	D11-1	24 x 18			1	3.00			12		12		
13+30, 30 east of Hunter	X		Arrow Right	M6-1	12 x 9			1	0.75						Mount with Bike Route	
~13+65		X	BIKE ROUTE	D11-1	24 x 18	1 10		1	3.00			12		12		
~13+03		X	Arrow Left	M6-1	12 x 9			1	0.75						Mount with Bike Route	
~15+00		X	BIKE ROUTE	D11-1	24 x 18			1	3.00			12		12		
-13+00		X	Arrow Left	M6-1	12 x 9			1	0.75						Mount with Bike Route	
~15+15, 50' west of Henderson		X	BIKE ROUTE	D11-1	24 x 18			1	3.00			12		12		
10+10, 50 West of Henderson		X	Arrow Right	M5-1	12 x 9			1	0.75						Mount with Bike Route	
		X	USE SIDEWALK	Custom	18 x 12			1	1.50						Mount with Bike Route, White on Green Background	
OTALS						3	0		39.3					96		
PAY UNIT						EACH	EACH		SFT		+ +			LFT		

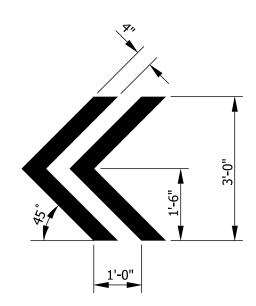


SHARED LANE MARKINGS AND CHEVRON DIMENSIONS

NOT TO SCALE



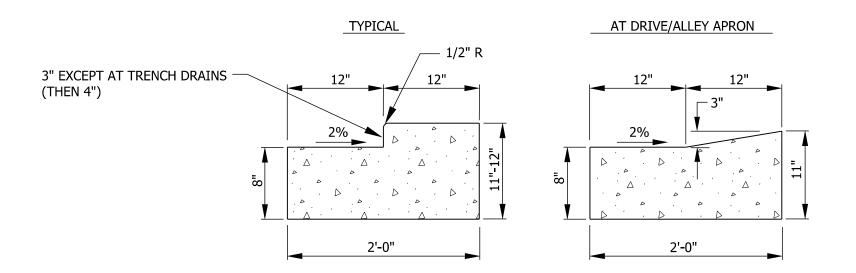




WHITE DETAIL

NOT TO SCALE





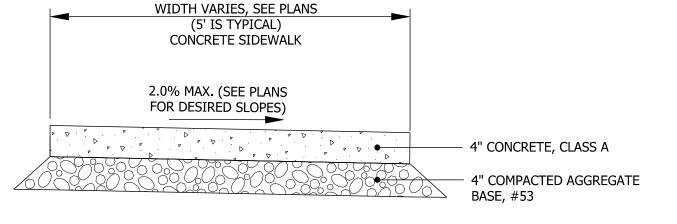
MODIFIED COMBINED
CONCRETE CURB AND GUTTER, TYPE B
NOT TO SCALE

#### TRENCH DRAIN REQUIREMENTS:

- 1. SUBMIT THE PROPOSED CASTING FOR ENGINEER APPROVAL.
- 2. TRENCH DRAINS ARE TO INCLUDE A REINFORCED CONCRETE TRENCH WITH A COMPATIBLE ADA GRATE.
- 3. TRENCH DRAIN CASTING TO BE EAST JORDAN MODEL V-7382 ADA, NEENAH MODEL R-4990-BX WITH TYPE "P" GRATES OR AN APPROVED EQUAL.
- 4. EACH LOCATION WILL REQUIRE A CAST-IN-PLACE TRENCH WITH A FIELD-SHAPED CAST-IN-PLACE TRANSITION FROM DRAIN PIPE TO CONCRETE TRENCH THAT FORCES WATER TO SPREAD INTO THE TRENCH AND NOT OVERTOP THE SIDEWALK AND TRENCH GRATE CASTING. A PVC DOWNSPOUT TRANSITION OR OTHER STAY-IN-PLACE FORM PIECE MAY BE USED FOR THIS PURPOSE.
- 5. TRENCH SHALL PROVIDE AN OPEN WATERWAY OF 8" WIDE TRENCH TO BE TOTAL 4" DEEP WITH CASTING TO OCCUPY 1.5" SEAT DEPTH (RESULTING OPENING 2.5" BELOW GRATE).



# RECOMMENDED 10-5-2022 DESIGN ENGINEER DATE DESIGNED: BR DRAWN: RBA CHECKED: MT CHECKED: BR



# F TYPICAL SIDEWALK DETAIL NOT TO SCALE

#### SIDEWALK JOINT NOTES:

- 1. INSTALL 1/2" PREFORMED JOINT FILLER BETWEEN SIDEWALKS AND ANY OTHER FIXED FEATURES (CURBS, STEPS, RAMPS, BUILDINGS, ETC.)
- 2. IN EACH SIDEWALK SEGMENT, SAW CONSTRUCTION JOINTS AT EVEN SPACING BUT NO MORE THAN 6' MAXIMUM APART. INSTALL AN EXPANSION JOINT WITH 1/2" PREFORMED JOINT FILLER AT A MAXIMUM SPACING EVERY 30' IN SIDEWALKS, AND AT EACH SIDEWALK CONNECTION TO OTHER SIDEWALKS, AT CURBS, AND AT RAMPS.
- CONTRACTION AND EXPANSION JOINTS SHALL BE INSTALLED BY SAWING, BUT FINAL SURFACE SHALL BE BROOM FINISHED. NO "WINDOW-PANE" OR SIMILAR TOOLING SHALL BE USED.

#### CONCRETE SLAB JOINT NOTES:

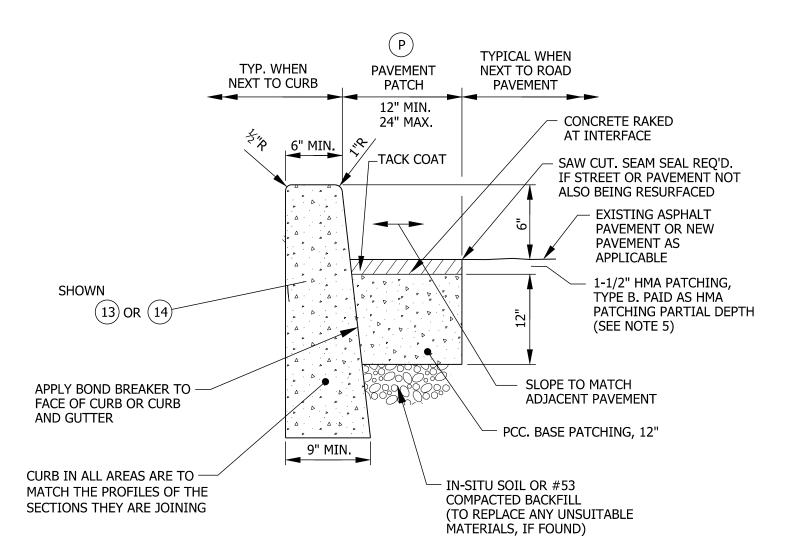
1. CONCRETE SLAB CONSTRUCTION AND EXPANSION JOINTS SHALL BE IN ACCORDANCE WITH INDOT STANDARDS.

#### **CURB JOINT NOTES:**

- 1. ALL CURBS SHALL RECEIVE A FULL DEPTH EXPANSION JOINT FORMED WITH 1/2" PREFORMED JOINT FILLER AT THE FOLLOWING LOCATIONS:
- EVERY EXPANSION JOINT IN ADJACENT SIDEWALKS OR MEDIAN BUFFER STRIP
- AT EACH RADIUS POINT
- ON EITHER SIDE OF CURB INLETS OR OTHER CASTINGS
   AT SAWCUT, LIMITS OF REMOVAL TO ANY EXISTING CURB
- AT SAWCUT, LIMITS OF REMOVAL TO ANY EXISTING CURB - AT 100' MAXIMUM INTERVALS, IF NO OTHER JOINTS NEEDED
- 2. CURBS & COMBINED CURB AND GUTTER SHALL RECEIVE A SAWED CONTRACTION JOINT AT 20' MAXIMUM SPACING.

#### CURB RAMPS AND TRUNCATED DOMES:

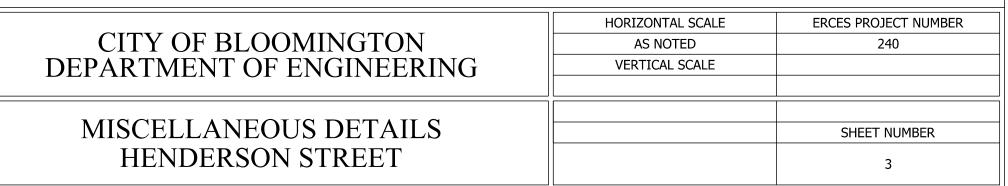
1. RAMPS TO BE CONSTRUCTED AT A MAXIMUM 12:1 SLOPE TO A LANDING AREA FOR ENTRY ONTO ROADWAY PER PLANS.

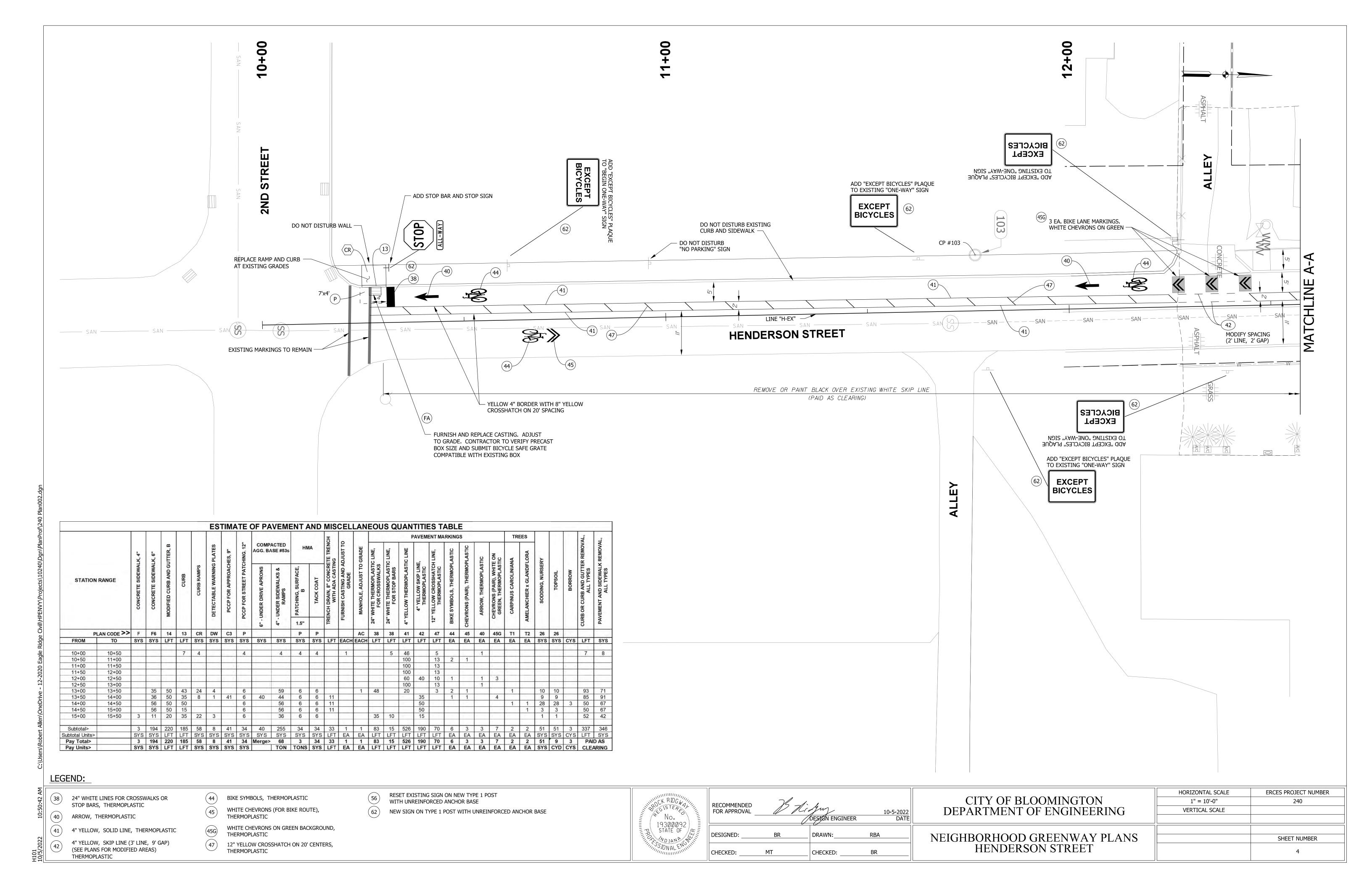


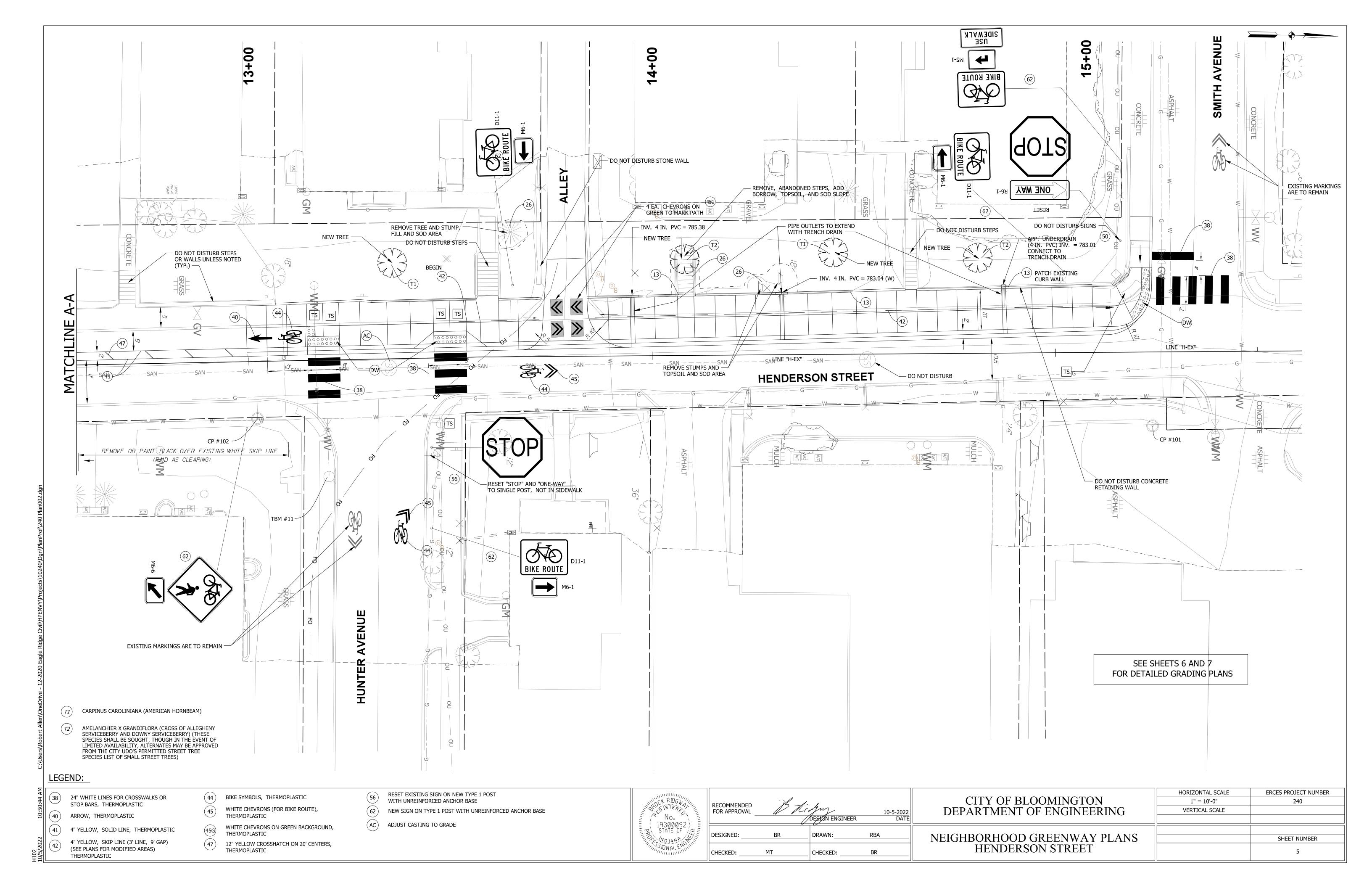
# PAVEMENT PATCH NOT TO SCALE

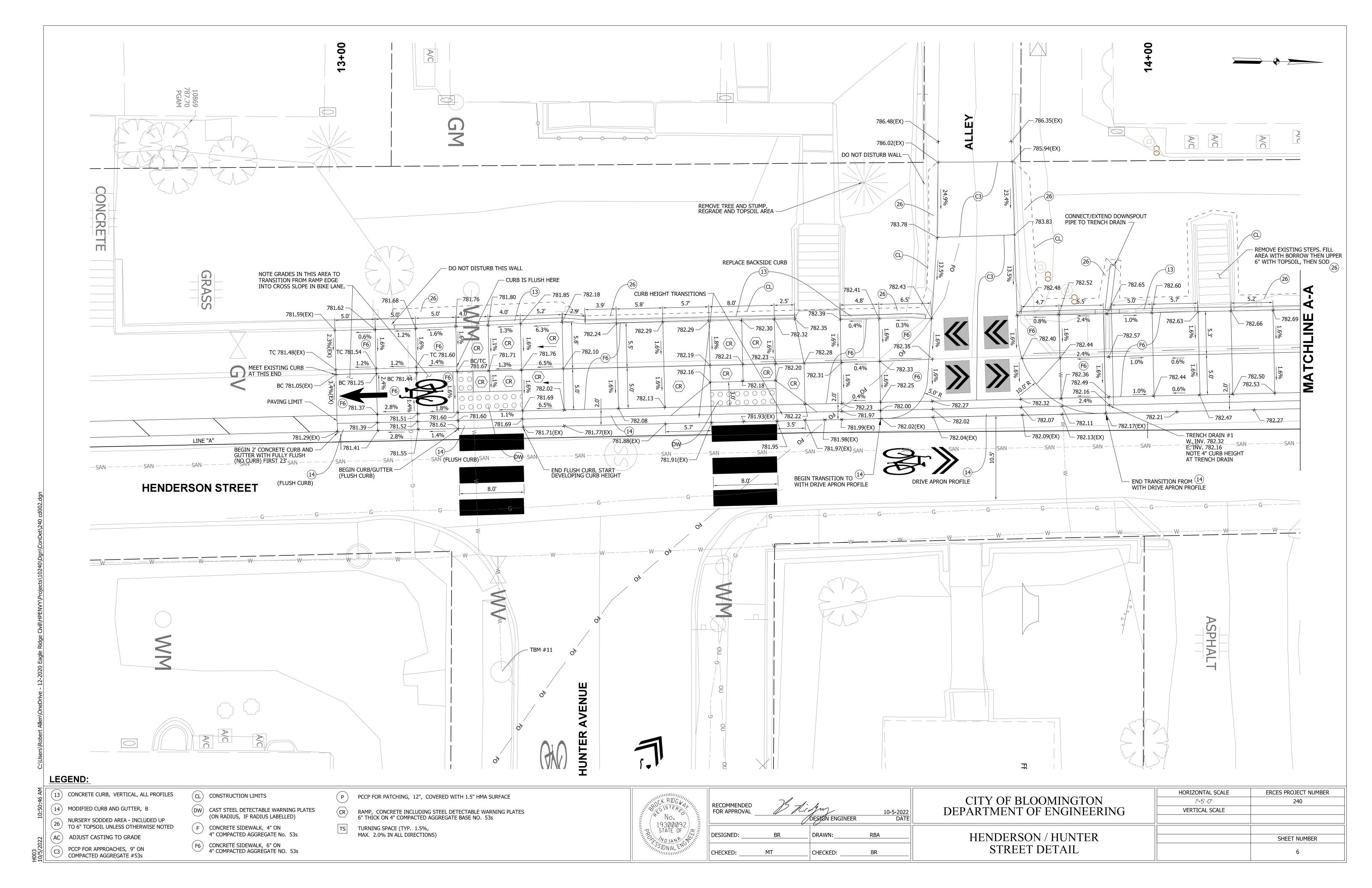
#### NOTES

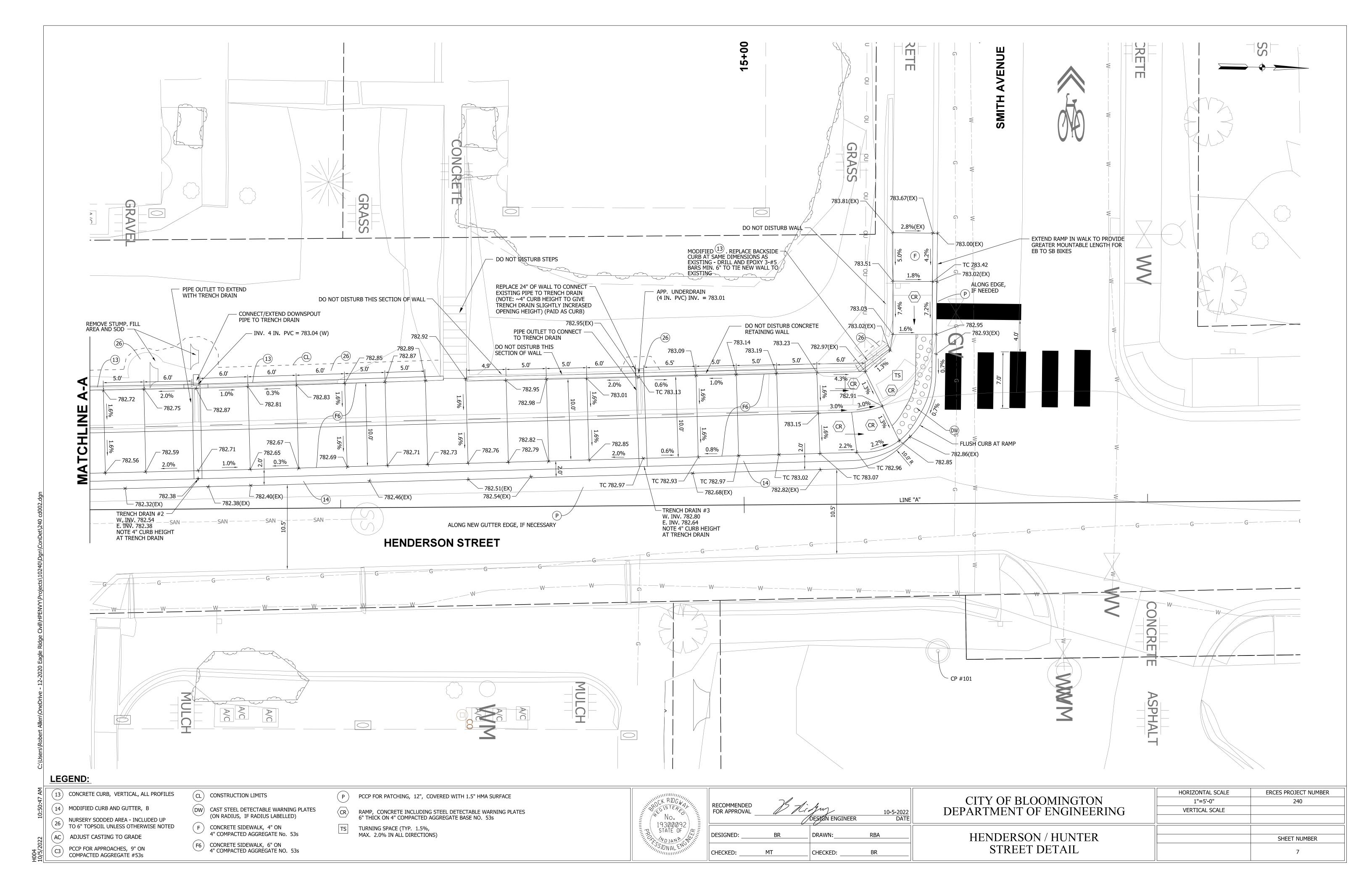
- 1. REFER TO CURB JOINTS NOTES FOR CURB JOINTING.
- PAVEMENT PATCHING MAY NOT BE REQUIRED IF EXISTING PAVEMENT CAN BE REMOVED TO A CLEAN AND STRAIGHT EDGE AT FRONT OF PROPOSED CURB OR GUTTER. OWNER APPROVAL IS REQUIRED.
- 3. PAVEMENT PATCHING REQUIRED WHEREVER PAVEMENT IS CUT FOR PIPE WORK, AND WHERE EXISTING PAVEMENT IS DAMAGED TO COMPLETE THE REQUIRED CURB, DRIVE OR SIDEWALK WORK.
- 4. CONTRACTOR SHALL ASSUME THEY ARE TO PLACE THE ASPHALT OVERLAY ON ALL PATCHED AREAS UNLESS OTHERWISE DIRECTED.

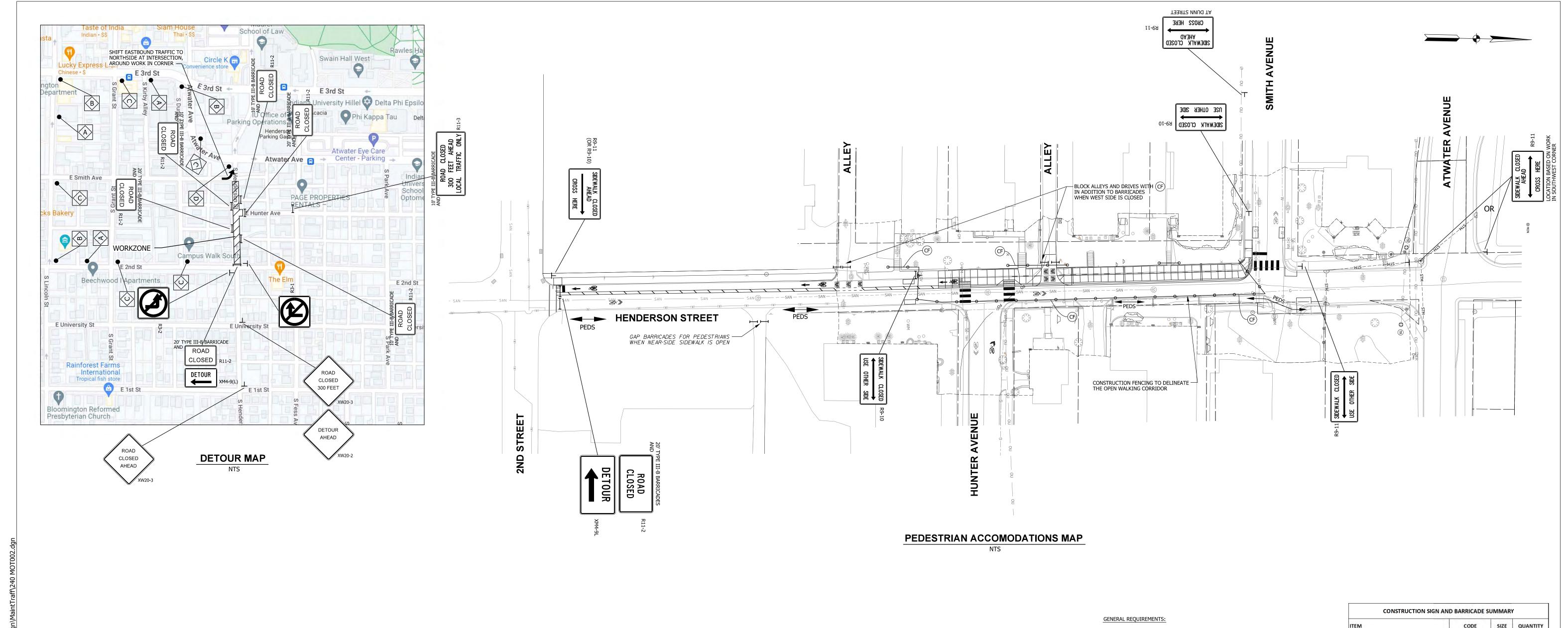












- 1. DUE TO SPACE LIMITATIONS, IT IS ASSUMED THAT THE WORK WILL BE COMPLETED UNDER A VEHICULAR ROAD CLOSURE BETWEEN 2ND STREET AND SMITH AVENUE.
- 2. IF WORK IS TO BE CONDUCTED WITH THE CORRIDOR OPEN TO TRAFFIC, "ROAD CONSTRUCTION AHEAD" (XW20-1) SIGNS SHALL BE POSTED 1 BLOCK FROM THE WORK LIMITS ON HENDERSON, HUNTER AND SMITH, AND AN "END CONSTRUCTION" (XG20-2) POSTED ON HENDERSON NEAR ATWATER AVENUE.
- 3. PEDESTRIANS ARE TO BE ACCOMODATED ON ONE SIDE OF HENDERSON AT ALL TIMES BY COMPLETING THE EAST SIDE RAMP MODOFICATIONS BEFORE CLOSING THE WEST SIDE SIDEWALK.
- 4. FLAGGER OPERATIONS AND TEMPORARY SIGNAGE IN ACCORDANCE WITH INDIANA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES ARE REQUIRED FOR ALL LANE RESTRICTIONS, IF USED.
- 5. ALL SIGNS TO BE MOUNTED ON STANDARDS.
- 6. ALL SIGNS, BARRICADES AND DRUMS TO BE MOUNTED WITH A TYPE C (STEADY BURN) WARNING LIGHT AND MAINTAINED DUSK

ITEM	CODE	SIZE	QUANTITY	
MAINTAINING TRAFFIC	NA	N/A	1 LSUM	
BARRICADE IIIB	NA	10 LFT	100 LFT	
DETOUR ROUTE MARKER ASSEMBLY	See Legend for Types A, B, C, D	N/A	3A, 3B, 5C, 10	
ROAD CLOSURE SIGN ASSEMBLIES:				
ROAD CLOSED	R11-2	48 x 30	6	
ROAD CLOSED XXX FEET AHEAD LOCAL TRAFFIC ONLY	R11-3	48 x 30	1	
CONSTRUCTION SIGNS, A (= OR > 9 SFT		1		
CONSTRUCTION SIGNS, A (= OR > 9 SFT	) XW20-3	36 x 36	1	
		36 x 36 36 x 36	1 1	
ROAD CLOSED AHEAD ROAD CLOSED XXX FEET	XW20-3		_	
ROAD CLOSED AHEAD	XW20-3 XW20-3	36 x 36	1	
ROAD CLOSED AHEAD ROAD CLOSED XXX FEET DETOUR AHEAD	XW20-3 XW20-3 XW20-2	36 x 36 36 x 36	1	
ROAD CLOSED AHEAD ROAD CLOSED XXX FEET DETOUR AHEAD UNDISTRIBUTED / ENGR DIRECTED	XW20-3 XW20-3 XW20-2	36 x 36 36 x 36	1	
ROAD CLOSED AHEAD ROAD CLOSED XXX FEET DETOUR AHEAD UNDISTRIBUTED / ENGR DIRECTED  CONSTRUCTION SIGNS, B (<9 sft)	XW20-3 XW20-3 XW20-2 TBD	36 x 36 36 x 36 TBD	1 1 1	
ROAD CLOSED AHEAD ROAD CLOSED XXX FEET DETOUR AHEAD UNDISTRIBUTED / ENGR DIRECTED  CONSTRUCTION SIGNS, B (<9 sft) DETOUR (L)	XW20-3 XW20-3 XW20-2 TBD	36 x 36 36 x 36 TBD	1 1 1	
ROAD CLOSED AHEAD  ROAD CLOSED XXX FEET  DETOUR AHEAD  UNDISTRIBUTED / ENGR DIRECTED  CONSTRUCTION SIGNS, B (<9 sft)  DETOUR (L)  NO LEFT TURN	XW20-3 XW20-3 XW20-2 TBD XM4-10L R3-2	36 x 36 36 x 36 TBD 48 x 18 24 x 24	1 1 1 1	
ROAD CLOSED AHEAD  ROAD CLOSED XXX FEET  DETOUR AHEAD  UNDISTRIBUTED / ENGR DIRECTED  CONSTRUCTION SIGNS, B (<9 sft)  DETOUR (L)  NO LEFT TURN  NO RIGHT TURN	XW20-3 XW20-3 XW20-2 TBD XM4-10L R3-2 R3-1 R9-10	36 x 36 36 x 36 TBD 48 x 18 24 x 24 24 x 24	1 1 1 1	

#### MAINTENANCE OF TRAFFIC LEGEND

D END

CONFIRMING

**DETOUR ROUTE MARKER CODES:** 

END

DETOUR ROUTE MARKER ASSEMBLY (LETTER DENOTES TYPE) (PER INDOT STANDARDS)

TRAFFIC FLOW DIRECTION

BARRICADE (TYPE III) CONSTRUCTION SIGNS (SHAPE PER MUTCD) CF CONSTRUCTION FENCING

CK RIDGUILL
SISTER
No. No.
19300092
STATE UF
SONALENG
No.  1930092  STATE OF  NOIANA COMMISSIONAL ENGINEERING

RECOMMENDED FOR APPROVAL	B Ni.	Jun DESTON ENGINEER	10-5-2022 DATE	
DESIGNED:	BR	DRAWN:	RBA	
CHECKED:	MT	CHECKED:	BR	

	HORIZONTAL SCALE	ERCES PROJECT NUMBER
CITY OF BLOOMINGTON	NOT TO SCALE	240
DEPARTMENT OF ENGINEERING	VERTICAL SCALE	
DETINCTIVE OF ETICH (EETIC)		
MAINTENANCE OF TRAFFIC		SHEET NUMBER
HENDERSON STREET		8