

REVISION:

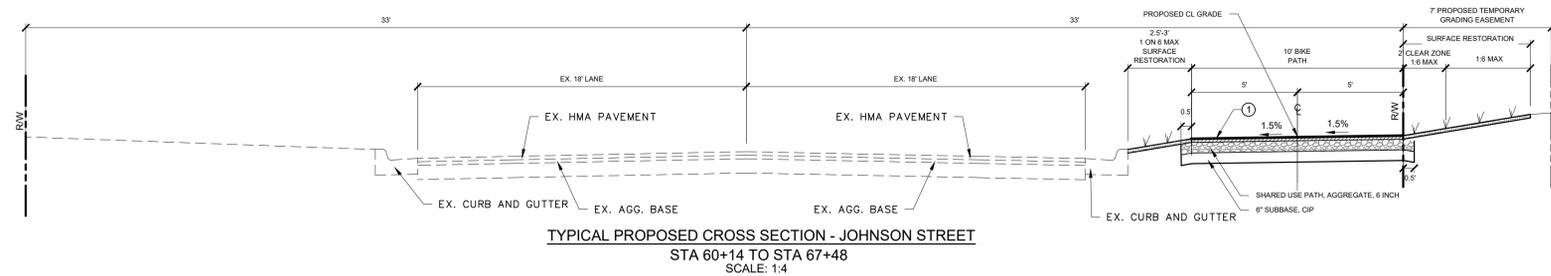
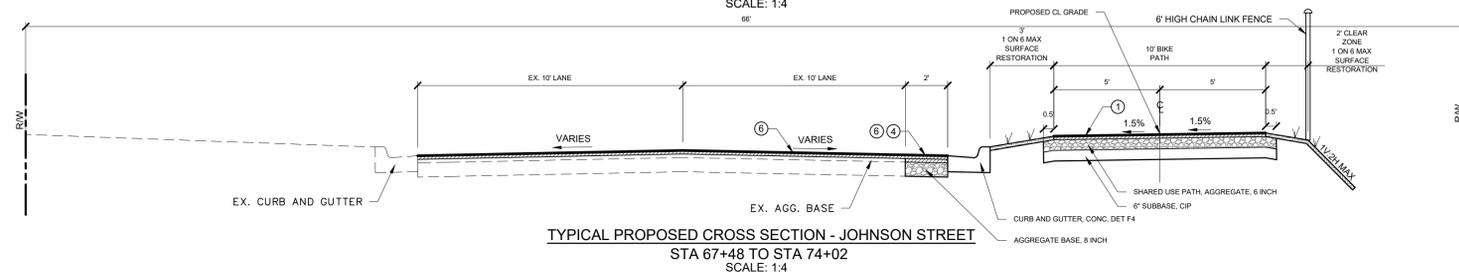
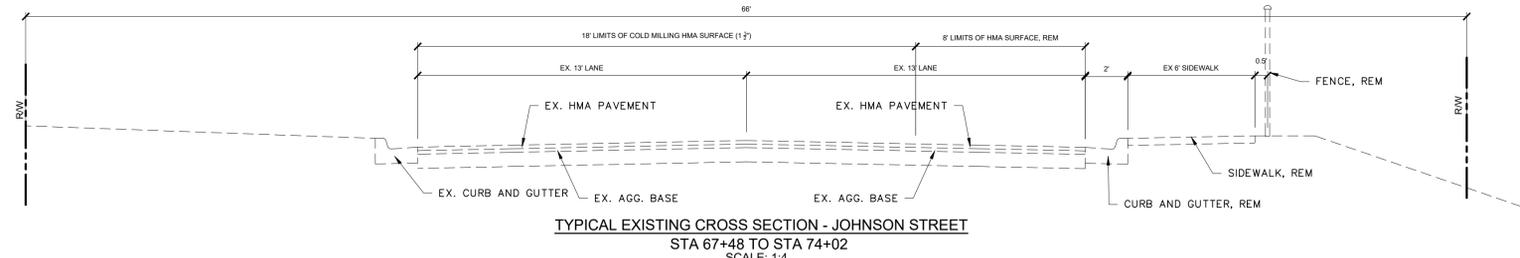
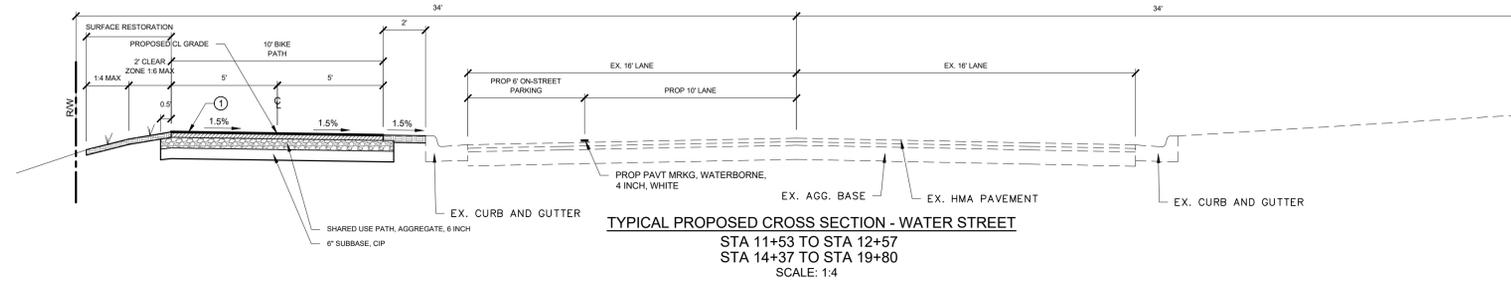
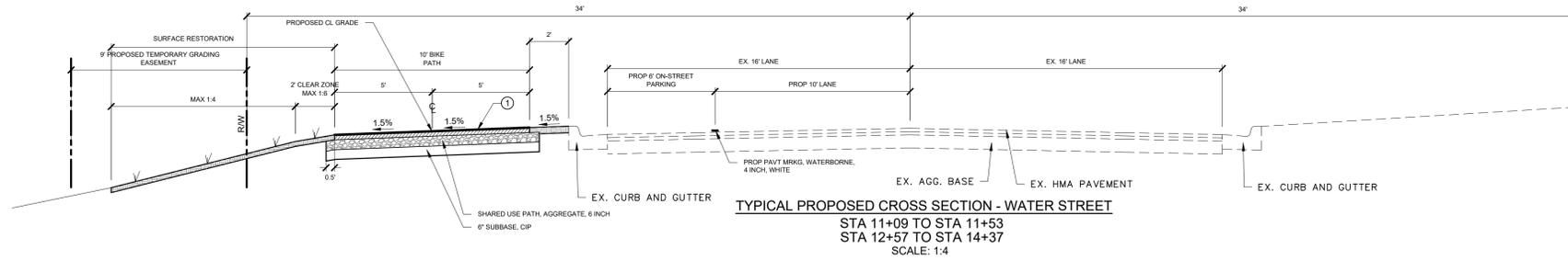
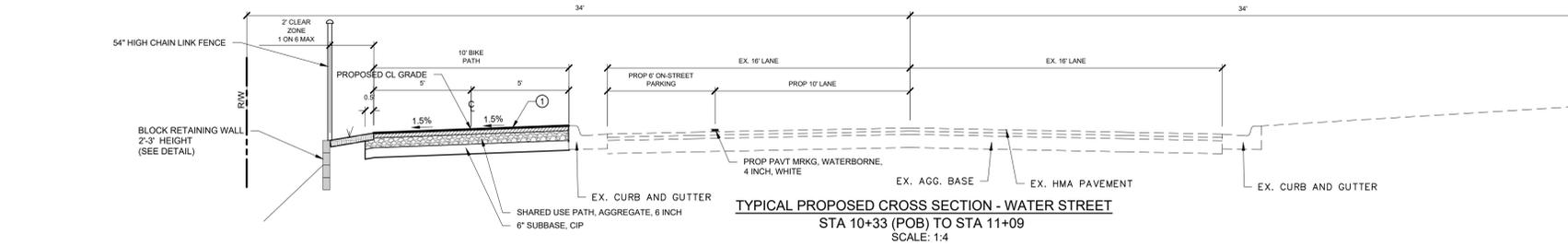
CITY OF HART
OCEANA COUNTY
SAFE ROUTES TO SCHOOL
TYPICAL CROSS SECTIONS

DESIGN TEAM: PROJ MGR: LSH
DESIGNED BY: PMT
DRAWN BY: PMT
CHECK BY:

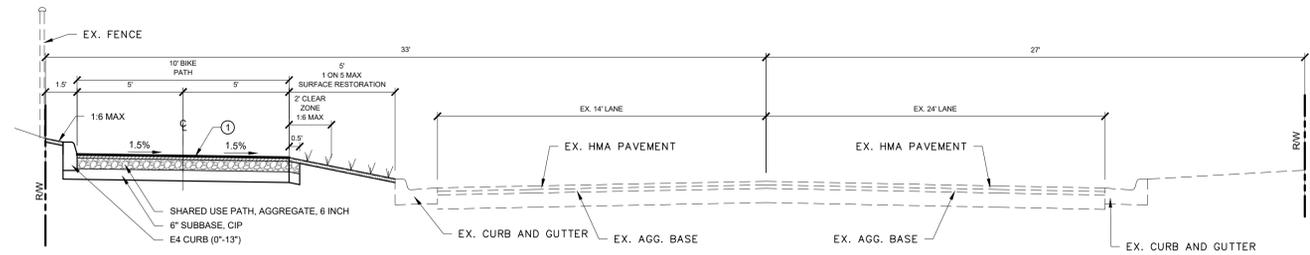
DRAWING INFORMATION:
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052824 petert

JULY 2025

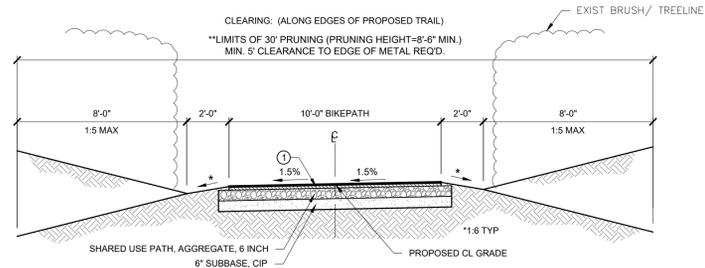
FAV PROJECT NO.
853030



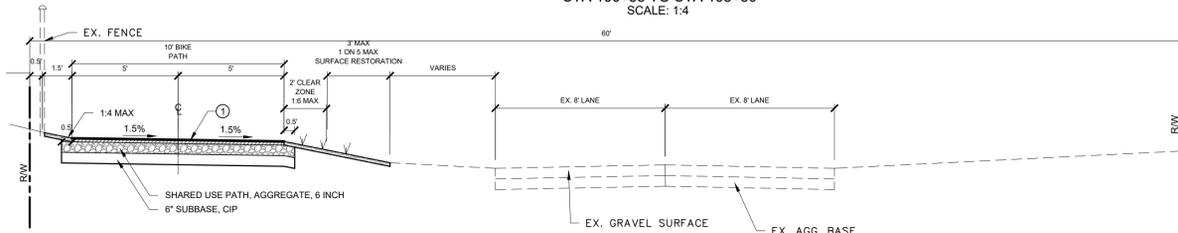
HMA APPLICATION TABLE						
COURSE	TYPE	PAY ITEM	EST. YIELD	BINDER GRADE	AWI	REMARKS
①	SHARED USE PATH	SHARED USE PATH, HMA	220 LBS/SYD	PG 58-28	-	HMA, SEL
②	DRIVEWAY BASE	HMA APPROACH	165 LBS/SYD	PG 58-28	-	HMA, SEL
③	DRIVEWAY TOP	HMA APPROACH	220 LBS/SYD	PG 58-28	-	HMA, SEL
④	HAND PATCHING BASE	HAND PATCHING	165 LBS/SYD	PG 58-28	-	HMA, SEL
⑤	HAND PATCHING TOP	HAND PATCHING	165 LBS/SYD	PG 58-28	-	HMA, SEL
⑥	SURFACE	HMA, SEL	165 LBS/SYD	PG 58-28	260	



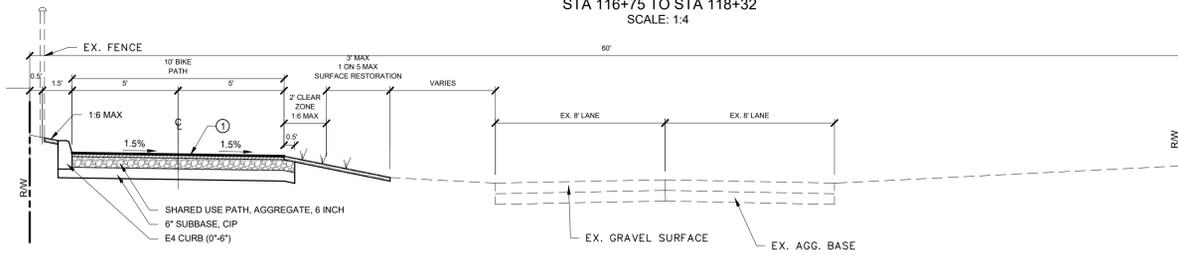
TYPICAL PROPOSED CROSS SECTION - PEACH STREET
 STA 80+97 TO STA 82+51
 SCALE: 1:4



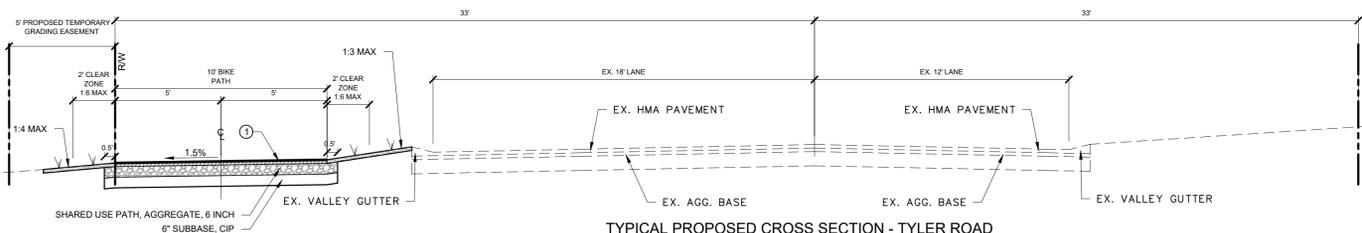
PEACH AVENUE TO PLUM STREET
 STA 100+55 TO STA 108+50
 SCALE: 1:4



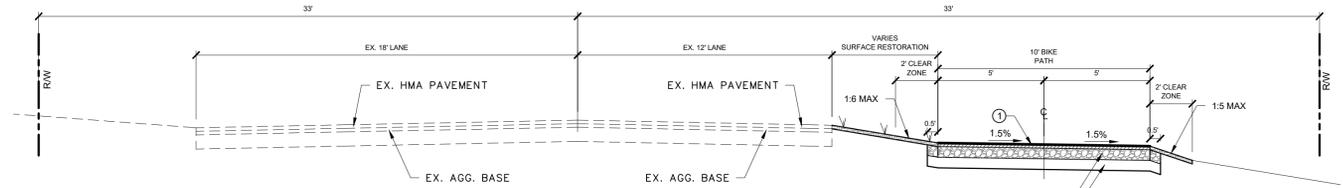
TYPICAL PROPOSED CROSS SECTION - PLUM STREET
 STA 108+50 TO STA 114+25
 STA 116+75 TO STA 118+32
 SCALE: 1:4



TYPICAL PROPOSED CROSS SECTION - PLUM STREET
 STA 114+25 TO STA 116+75
 SCALE: 1:4



TYPICAL PROPOSED CROSS SECTION - TYLER ROAD
 STA 120+00 TO STA 132+00
 SCALE: 1:4



TYPICAL PROPOSED CROSS SECTION - TYLER ROAD
 STA 128+75 TO STA 131+80
 SCALE: 1:4

REVISION:

**CITY OF HART
 OCEANA COUNTY
 SAFE ROUTES TO SCHOOL
 TYPICAL CROSS SECTIONS**

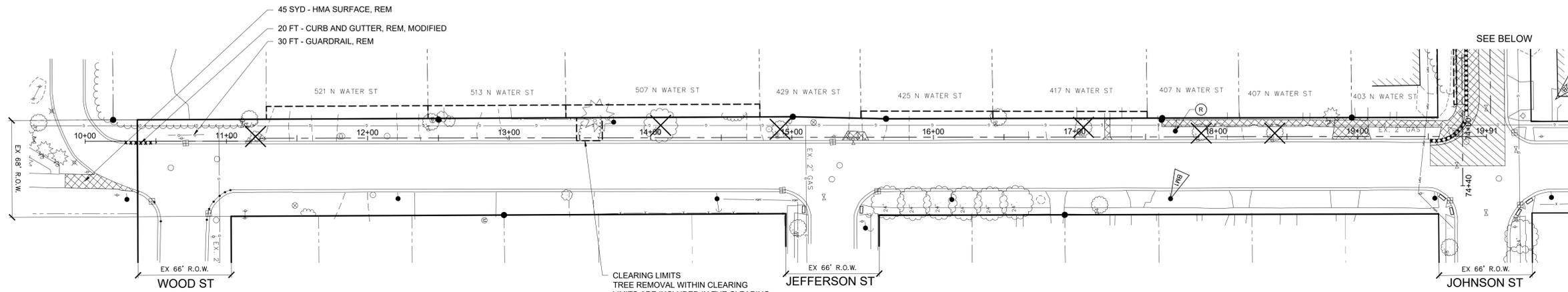
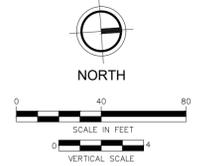
DESIGN TEAM: PROJ MGR: LBH
 DESIGNED BY: PMT
 DRAWN BY: PMT
 CHECK BY:

DRAWING INFORMATION:
 853030_3
 052824 petert

JULY 2025

FAV PROJECT NO.
 853030

BM #1 EL. 658.66'
 SET SPIKE IN W SIDE OF POWER POLE
 224' S OF WATER AND JOHNSON
 223' N OF WATER AND JEFFERSON



DRIVE QUANTITIES (THIS SHEET)		
STA	PAVT, REM	SIDEWALK, REM
15+45 LT	15	
17+23 LT		10
19+02 LT	30	
TOTALS	45	10

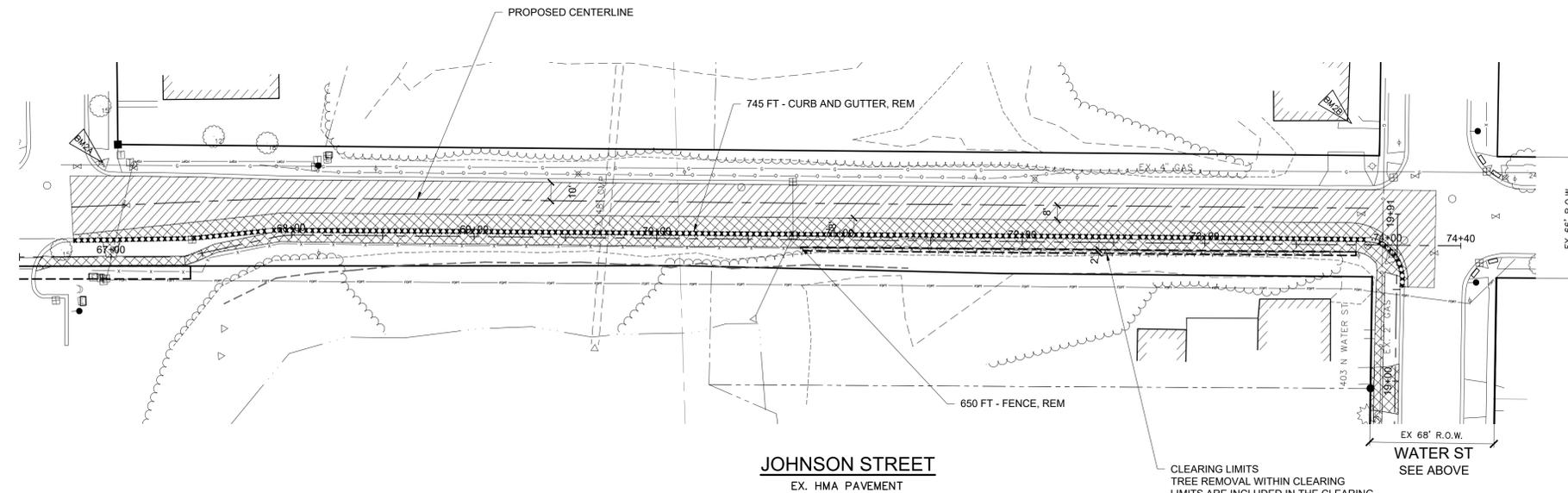
CLEARING LIMITS
 TREE REMOVAL WITHIN CLEARING
 LIMITS ARE INCLUDED IN THE CLEARING
 PAY ITEM AND WILL NOT BE PAID FOR
 INDIVIDUALLY.

WATER STREET
 EX. HMA PAVEMENT

REMOVAL QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
625	SYD	HMA SURFACE, REM
1675	SYD	COLD MILLING HMA SURFACE
545	SYD	SIDEWALK, REM
5	EA	STUMP, REM, 6 TO 18 INCH
1	EA	STUMP, REM, 19 INCH TO 36 INCH
0.25	ACRE	CLEARING

LEGEND

- RELOCATE EXISTING ITEM (BY OTHERS)
- PAVT, REM, SIDEWALK, REM & HMA SURFACE, REM
- COLD MILLING HMA SURFACE
- TREE STUMP REMOVAL
- REMOVE EXISTING CURB AND GUTTER



JOHNSON STREET
 EX. HMA PAVEMENT

CLEARING LIMITS
 TREE REMOVAL WITHIN CLEARING
 LIMITS ARE INCLUDED IN THE CLEARING
 PAY ITEM AND WILL NOT BE PAID FOR
 INDIVIDUALLY.

REVISION:

CITY OF HART
 OCEANA COUNTY
 SAFE ROUTES TO SCHOOL
 REMOVALS

DESIGN TEAM: PROJ MGR: LBT
 DESIGNED BY: PHT
 DRAWN BY: PHT
 CHECK BY:

DRAWING INFORMATION:
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JULY 2025

REV PROJECT NO.
 853030



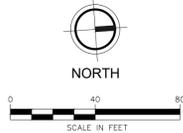
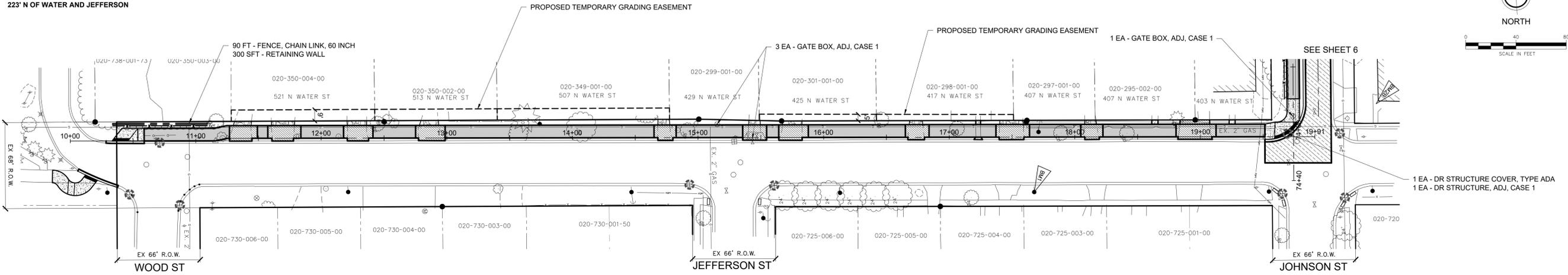
Know what's below.
 Call before you dig.

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316 Morris Avenue, Suite 230
 Muskegon, MI 49440
 P: 231.726.1000
 F: 231.726.2200

BM #1 EL. 658.66'
 SET SPIKE IN W SIDE OF POWER POLE
 224' S OF WATER AND JOHNSON
 223' N OF WATER AND JEFFERSON

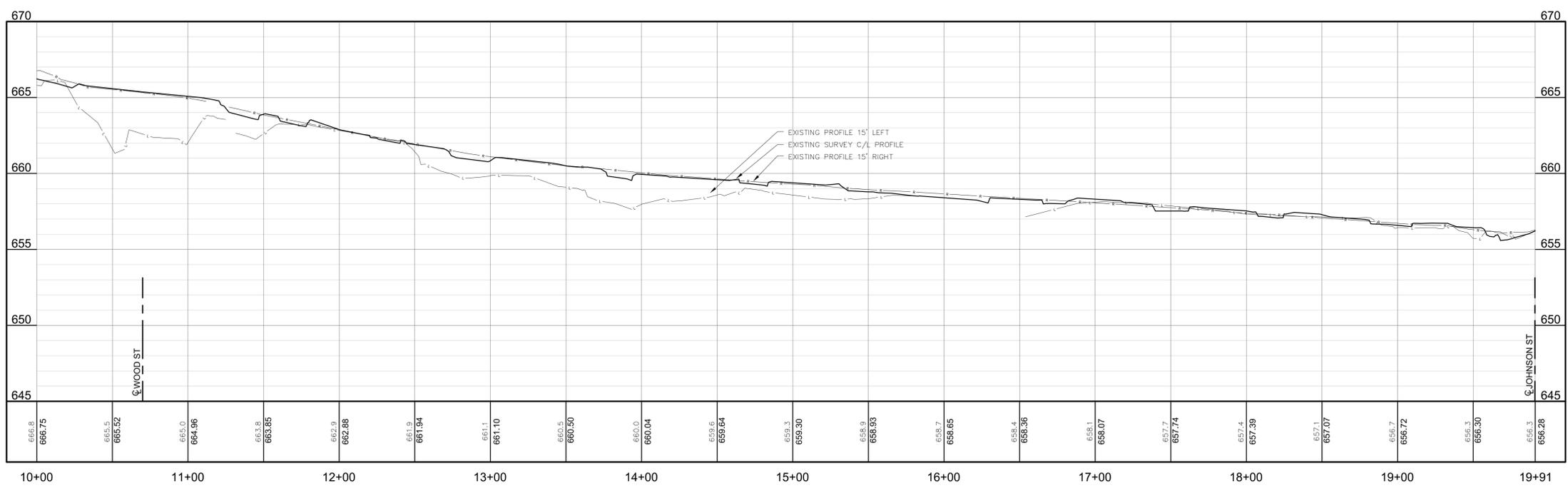


DRIVE QUANTITIES (THIS SHEET)					
STA	APPROACH CL I, 6 INCH	APPROACH CL II, 6 INCH	SUBBASE, CIP	HMA, APPROACH	SIDEWALK, CONC, 4 INCH
	SYD	SYD	CYD	TON	SFT
11+37 LT	30	10	5	10	
11+69 LT	35	10	10	10	
12+27 LT	30	10	5	10	
12+86 LT	35	10	10	10	
14+73 LT	25	5	5	5	
15+45 LT	30	10	5	10	
15+73 LT	35	10	10	10	
16+74 LT	25	5	5	5	
17+23 LT			5		5
17+51 LT	35	10	10	10	
18+13 LT	25	5	5	5	
18+64 LT			5		5
19+02 LT	50		10	10	
19+25 LT			5		5
TOTALS	355	85	95	95	15

WATER STREET
 EX. HMA PAVEMENT

MAINLINE QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
940	FT	SHARED USE PATH, GRADING
800	SYD	SHARED USE PATH, AGGREGATE, 6 INCH
90	TON	SHARED USE PATH, HMA
160	CYD	SUBBASE, CIP
1060	SFT	CURB RAMP, CONC, 6 INCH
50	FT	CURB AND GUTTER, CONC, DET F4
65	FT	CURB RAMP OPENING, CONC
50	FT	DETECTABLE WARNING SURFACE, DI
5	TON	HAND PATCHING
25	SYD	AGGREGATE BASE, 8 INCH
4	EA	POST, MAILBOX
10	EA	EROSION CONTROL, INLET PROTECTION, FABRIC DROP

- LEGEND**
- REMOVE CONCRETE & PLACE SHARED USE PATH, HMA OR HMA APPROACH
 - SIDEWALK, CONC, 4 INCH
 - HMA DRIVEWAY APPROACH
 - CURB AND GUTTER, CONC, DET F4
 - EROSION CONTROL, INLET PROTECTION, FABRIC DROP
 - DETECTABLE WARNING SURFACE, DI



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REVISION:

CITY OF HART
OCEANA COUNTY
SAFE ROUTES TO SCHOOL
PLAN AND PROFILE

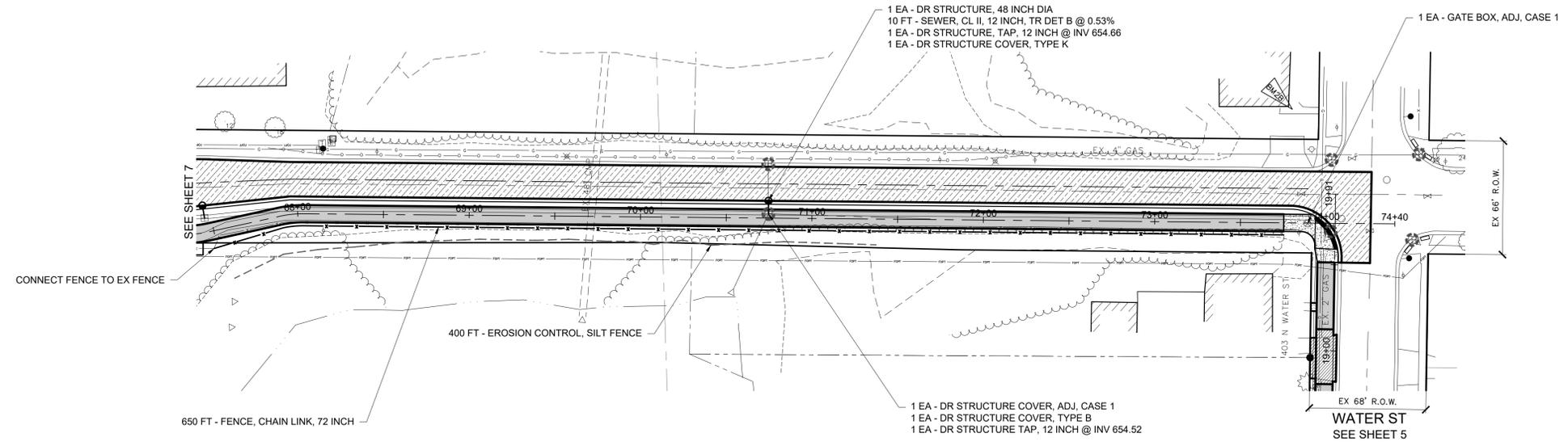
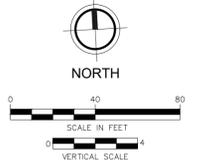
DESIGN TEAM: PROJ MGR: LBN
 DESIGNED BY: PMT
 DRAWN BY: PMT
 CHECK BY:

DRAWING INFORMATION:
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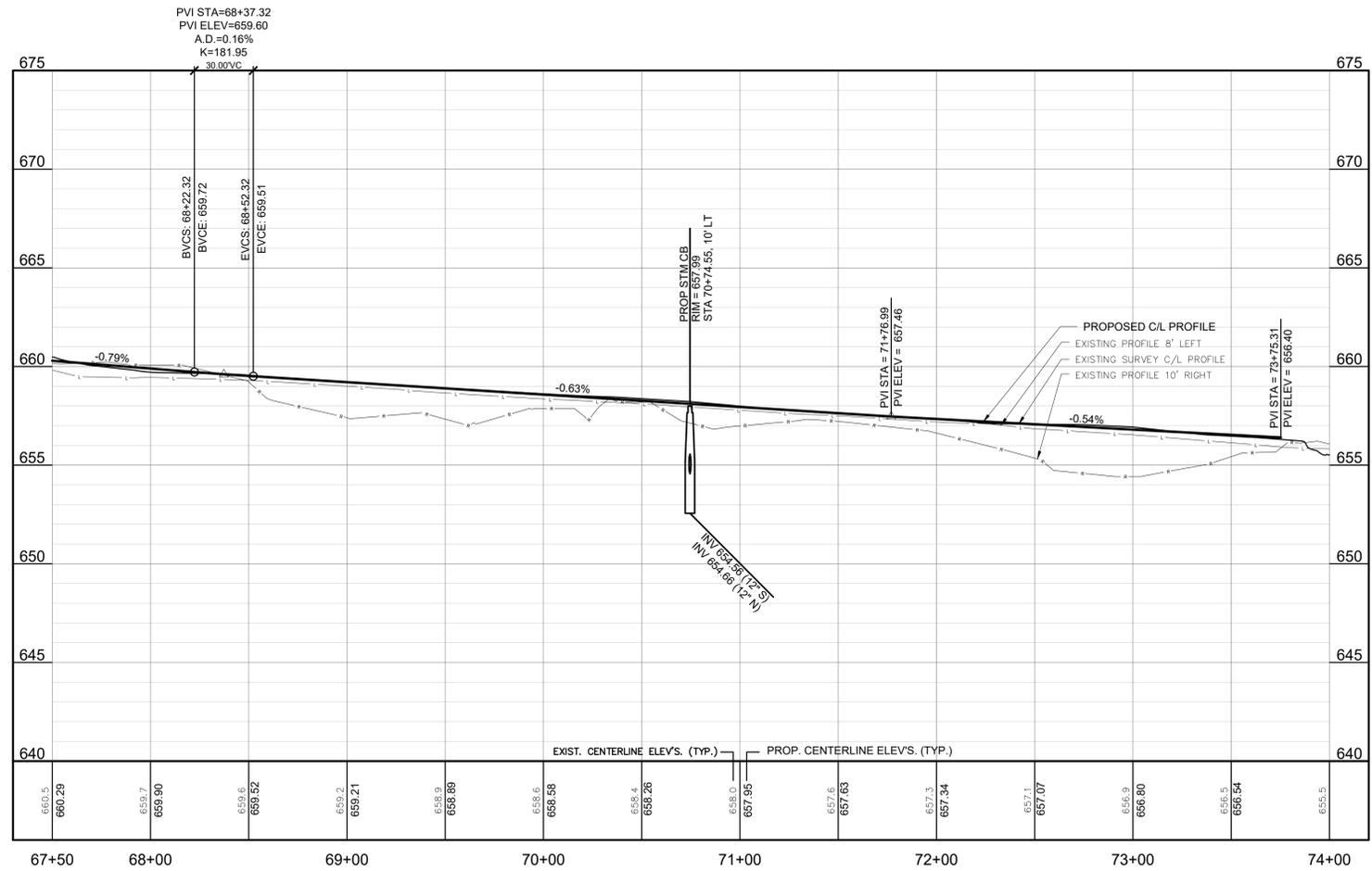
JULY 2025
 REV PROJECT NO.
 853030

BM #28 EL. 656.39'
 SET MARK IN CONCRETE
 @ NW QUAD OF WATER AND JOHNSON
 37.2' NW OF CBSQ



JOHNSON STREET
 EX. HMA PAVEMENT

MAINLINE QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
650	FT	SHARED USE PATH, GRADING
770	SYD	SHARED USE PATH, AGGREGATE, 6 INCH
85	TON	SHARED USE PATH, HMA
130	CYD	SUBBASE, CIP
630	FT	CURB AND GUTTER, CONC, DET F4
15	TON	HAND PATCHING
155	SYD	AGGREGATE BASE, 8 INCH
150	TON	HMA, SEL
3	EA	EROSION CONTROL, INLET PROTECTION, FABRIC DROP



LEGEND

- PLACE SHARED USE PATH, HMA
- PLACE SURFACE HMA
- PLACE CONCRETE
- CURB AND GUTTER, CONC, DET F4
- EROSION CONTROL, INLET PROTECTION, FABRIC DROP
- DETECTABLE WARNING SURFACE, DI
- FENCE, CHAIN LINK, 72 INCH
- EROSION CONTROL, SILT FENCE

REVISION:

CITY OF HART
 OCEANA COUNTY
 SAFE ROUTES TO SCHOOL
 PLAN AND PROFILE

DESIGN TEAM: PROJ MGR: LHM; DESIGNED BY: PHT; DRAWN BY: PHT; CHECK BY:

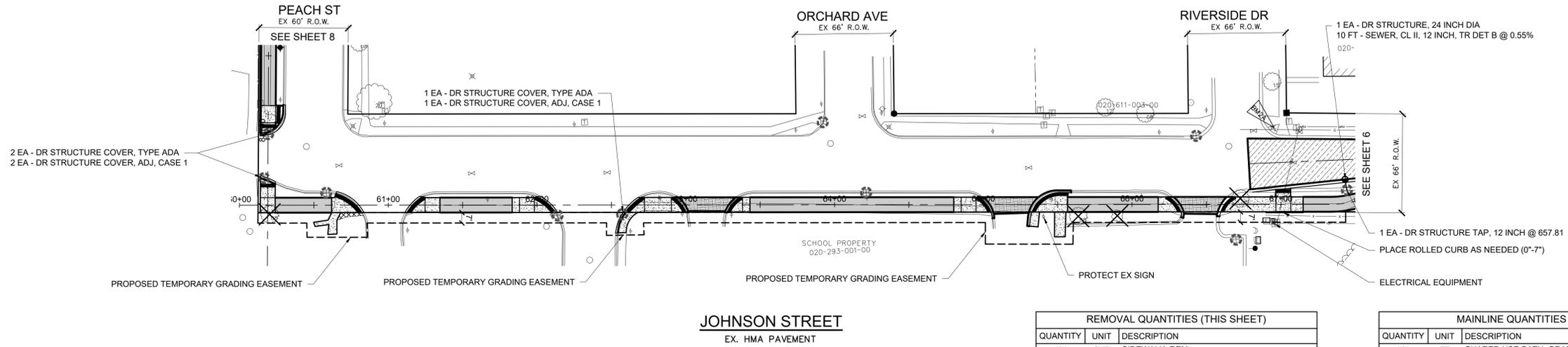
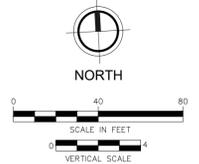
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JULY 2025
 REV PROJECT NO. 853030

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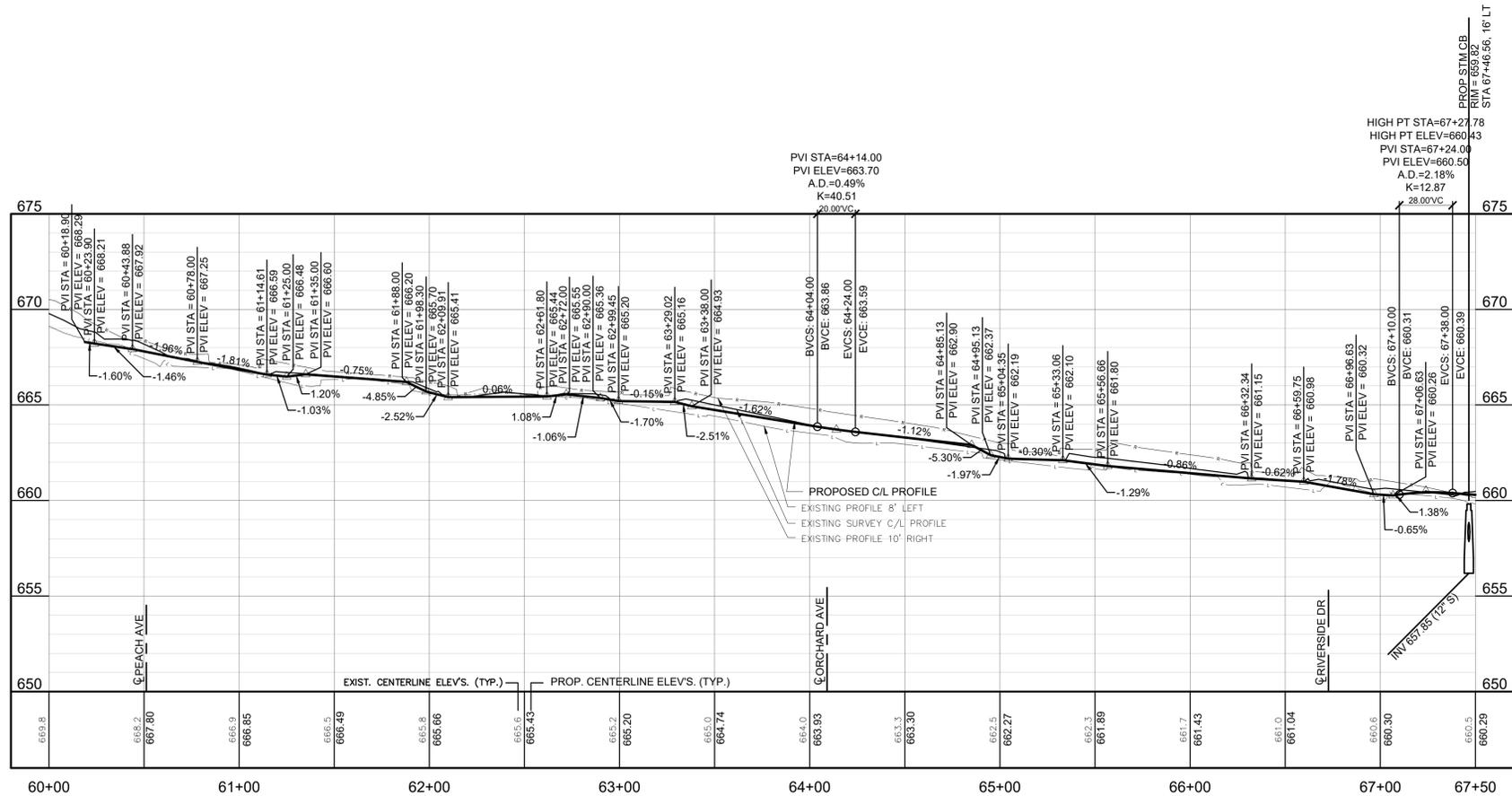
BM #2A EL. 661.04'
 SET MARK ON E SIDE OF LIGHT POLE
 @ NE QUAD OF JOHNSON AND RIVERSIDE
 31' S OF 15" TREE



JOHNSON STREET
 EX. HMA PAVEMENT

REMOVAL QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
430	SYD	SIDEWALK, REM
3	EA	STUMP, REM, 6 TO 18 INCH
280	FT	CURB AND GUTTER, REM, MODIFIED

MAINLINE QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
320	FT	SHARED USE PATH, GRADING
400	SYD	SHARED USE PATH, AGGREGATE, 6 INCH
50	TON	SHARED USE PATH, HMA
250	CYD	SUBBASE, CIP
100	FT	CURB AND GUTTER, CONC, DET F4
250	FT	CURB RAMP OPENING, CONC
25	TON	HMA, 5EL
30	TON	HAND PATCHING
165	SYD	AGGREGATE BASE, 8 INCH
3000	SFT	CURB RAMP, CONC, 6 INCH
215	FT	DETECTABLE WARNING SURFACE, DI
10	EA	EROSION CONTROL, INLET PROTECTION, FABRIC DROP



- LEGEND**
- REMOVE CONCRETE & PLACE SHARED USE PATH, HMA
 - SIDEWALK, REM & PLACE AGGREGATE BASE, 8 INCH & HAND PATCHING
 - PLACE CURB RAMP, CONC, 6 INCH
 - CURB AND GUTTER, CONC, DET F4
 - RELOCATE EXISTING ITEM (BY OTHERS)
 - REMOVE EXISTING CONCRETE/ ASPHALT
 - TREE STUMP REMOVAL
 - EROSION CONTROL, INLET PROTECTION, FABRIC DROP
 - DETECTABLE WARNING SURFACE, DI

REVISION:

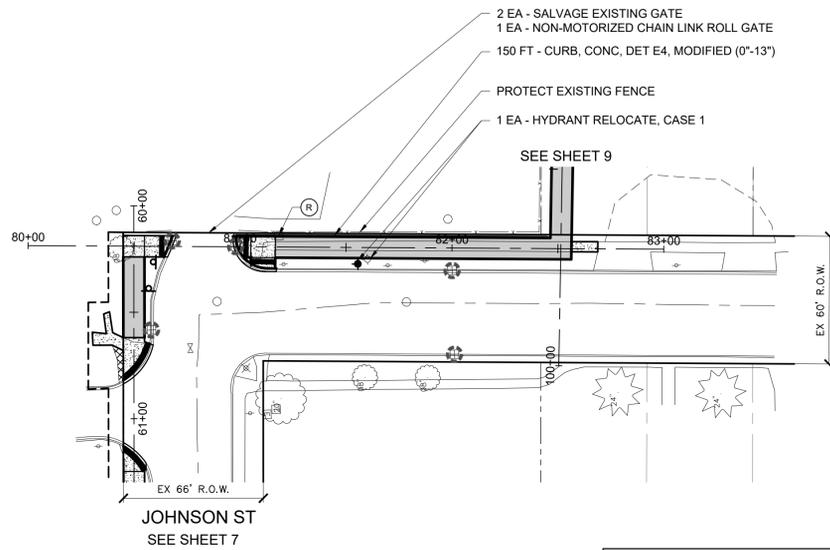
CITY OF HART
 OCEANA COUNTY
 SAFE ROUTES TO SCHOOL
 PLAN AND PROFILE

DESIGN TEAM: PROJ MGR: LBN
 DESIGNED BY: PHT
 DRAWN BY: PHT
 CHECK BY:

DRAWING INFORMATION:
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 082524 p01.rvt



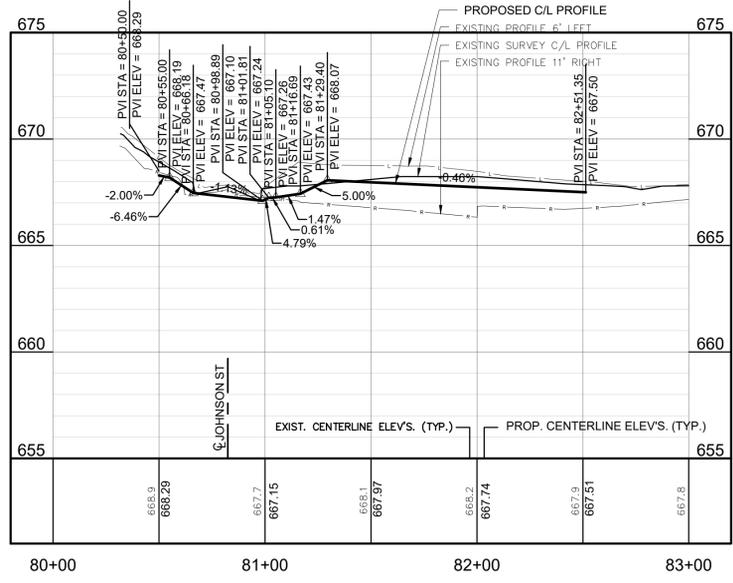
JULY 2025
 REV PROJECT NO.
 853030



PEACH AVENUE
EX. HMA PAVEMENT

REMOVAL QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
90	SYD	SIDEWALK, REM

MAINLINE QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
140	FT	SHARED USE PATH, GRADING
175	SYD	SHARED USE PATH, AGGREGATE, 6 INCH
25	TON	SHARED USE PATH, HMA
30	CYD	SUBBASE, CIP
60	SFT	SIDEWALK, CONC, 4 INCH
2	EA	EROSION CONTROL, INLET PROTECTION, FABRIC DROP



LEGEND

- REMOVE CONCRETE & PLACE SHARED USE PATH, HMA
- PLACE CONCRETE
- CURB AND GUTTER, CONC, DET F4
- RELOCATE EXISTING ITEM (BY OTHERS)
- REMOVE EXISTING CONCRETE/ ASPHALT
- TREE STUMP REMOVAL
- EROSION CONTROL, INLET PROTECTION, FABRIC DROP
- DETECTABLE WARNING SURFACE, DI

REVISION:
CITY OF HART
OCEANA COUNTY
SAFE ROUTES TO SCHOOL
PLAN AND PROFILE

DESIGN TEAM	PROJ MGR:	LEAD
	DESIGNED BY: PHT	
	DRAWN BY: PHT	
	CHECK BY:	

DRAWING INFORMATION:
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053024 pht/rt



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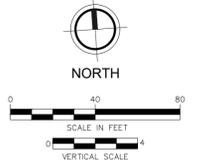
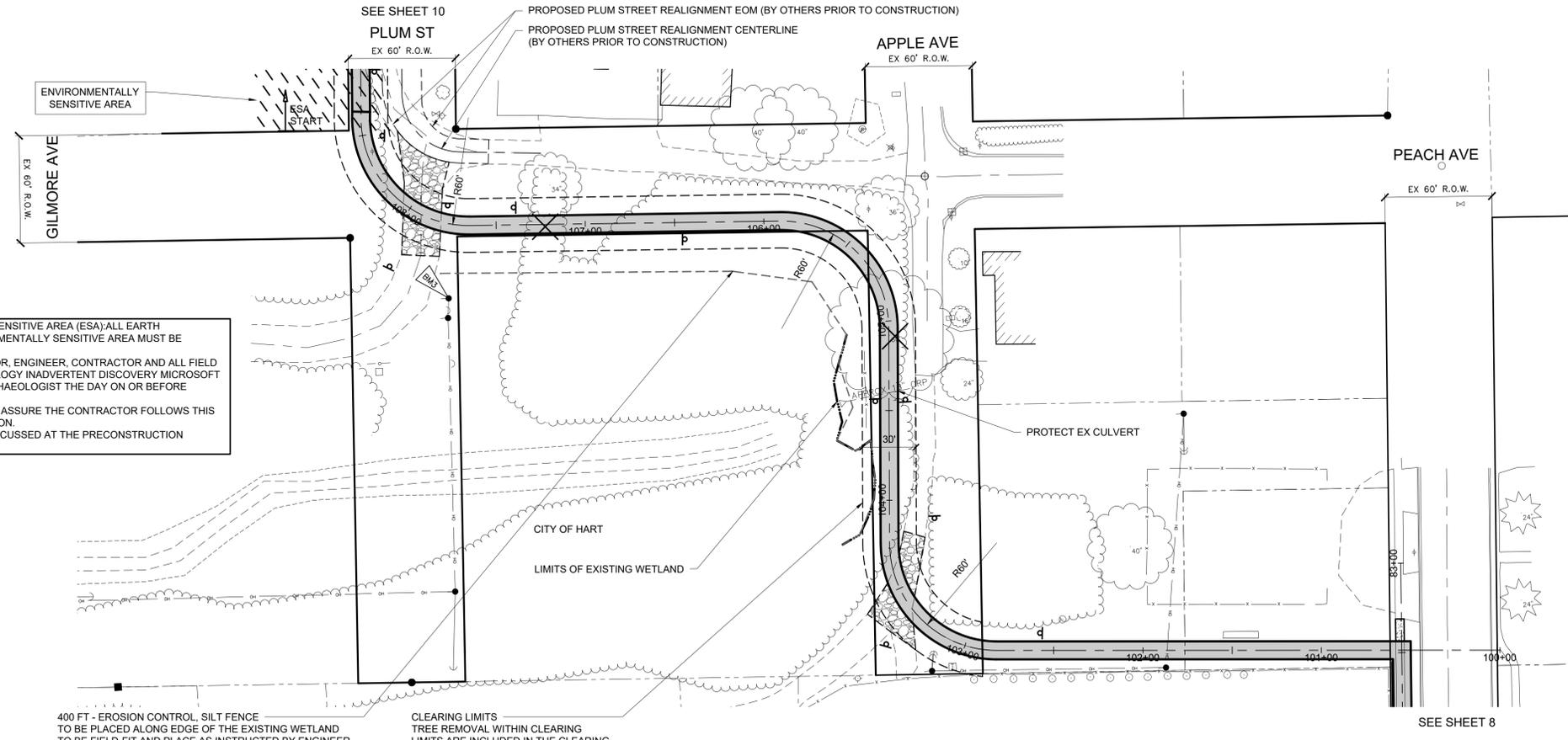
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F&V PROJECT NO.
853030

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316 Morris Avenue, Suite 230
Muskegon, MI 49440
P: 231.726.1000
F: 231.726.2200

BM #3 EL. 669.84'
 SET NAIL IN W SIDE OF POWER POLE
 @ SE QUAD OF CHERRY AND GILMORE
 72' S OF GILMORE & 11.5' E OF CHERRY



1. NOTE: CAUTION!!! ENVIRONMENTAL SENSITIVE AREA (ESA): ALL EARTH DISTURBANCE ACTIVITIES IN THE ENVIRONMENTALLY SENSITIVE AREA MUST BE MONITORED AT ALL TIMES.
2. LOCAL AGENCY PERSONNEL, MONITOR, ENGINEER, CONTRACTOR AND ALL FIELD PERSONNEL MUST ATTEND THE ARCHAEOLOGY INADVERTENT DISCOVERY MICROSOFT TEAMS MEETING WITH THE MDOT LAP ARCHAEOLOGIST THE DAY ON OR BEFORE CONSTRUCTION STARTS.
3. THE CONSTRUCTION ENGINEER WILL ASSURE THE CONTRACTOR FOLLOWS THIS WORK RESTRICTION DURING CONSTRUCTION.
4. THE WORK RESTRICTION WILL BE DISCUSSED AT THE PRECONSTRUCTION MEETING.

400 FT - EROSION CONTROL, SILT FENCE
 TO BE PLACED ALONG EDGE OF THE EXISTING WETLAND
 TO BE FIELD-FIT AND PLACE AS INSTRUCTED BY ENGINEER

CLEARING LIMITS
 TREE REMOVAL WITHIN CLEARING
 LIMITS ARE INCLUDED IN THE CLEARING
 PAY ITEM AND WILL NOT BE PAID FOR
 INDIVIDUALLY.

PEACH AVENUE TO PLUM STREET
 EX. GRASS

REMOVAL QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
0.50	ACRE	CLEARING

MAINLINE QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
810	FT	SHARED USE PATH, GRADING
990	SYD	SHARED USE PATH, AGGREGATE, 6 INCH
110	TON	SHARED USE PATH, HMA
170	CYD	SUBBASE, CIP
200	SYD	APPROACH, CL II, 6 INCH

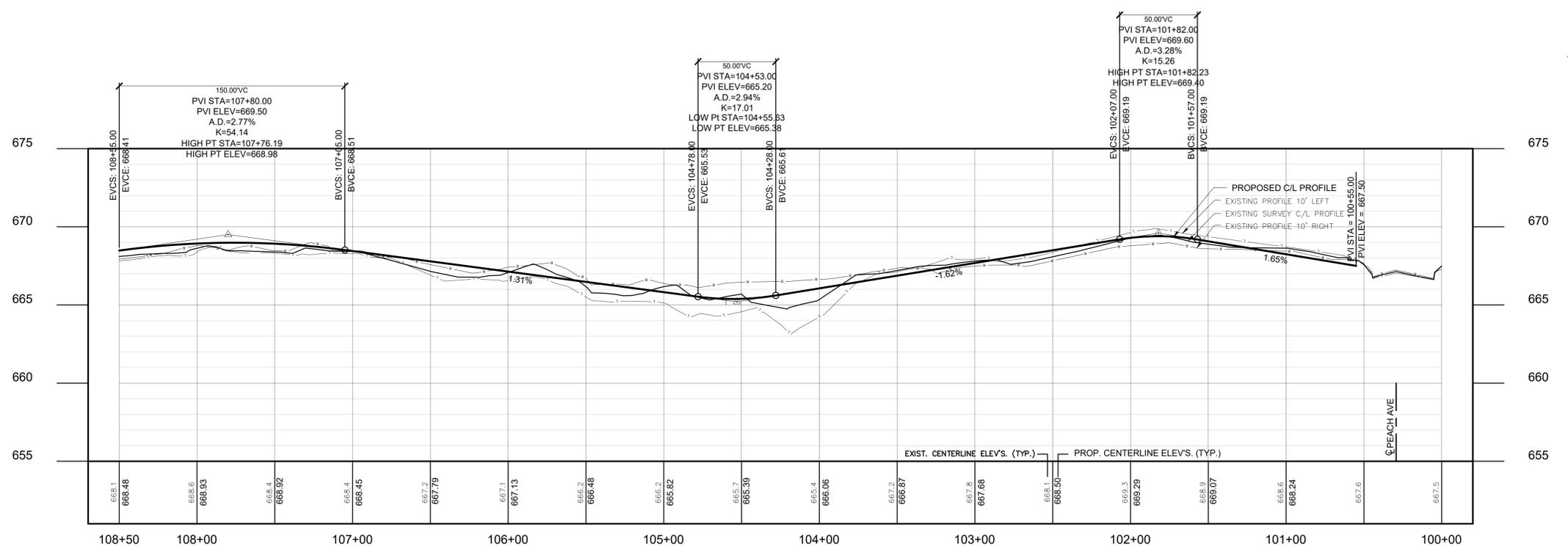
REVISION:

CITY OF HART
 OCEANA COUNTY
SAFE ROUTES TO SCHOOL
 PLAN AND PROFILE

DESIGN TEAM: PROJ MGR: LKH
 DESIGNED BY: PHT
 DRAWN BY: PHT
 CHECK BY:

DRAWING INFORMATION:
 853030_9
 071125 payton.cousins

JULY 2025
 REV PROJECT NO:
 853030



- LEGEND**
- REMOVE CONCRETE & PLACE SHARED USE PATH, HMA
 - PLACE CONCRETE
 - CURB AND GUTTER, CONC. DET F4
 - RELOCATE EXISTING ITEM (BY OTHERS)
 - REMOVE EXISTING CONCRETE/ASPHALT
 - TREE STUMP REMOVAL
 - EROSION CONTROL, INLET PROTECTION, FABRIC DROP
 - DETECTABLE WARNING SURFACE, DI
 - ENVIRONMENTALLY SENSITIVE AREA

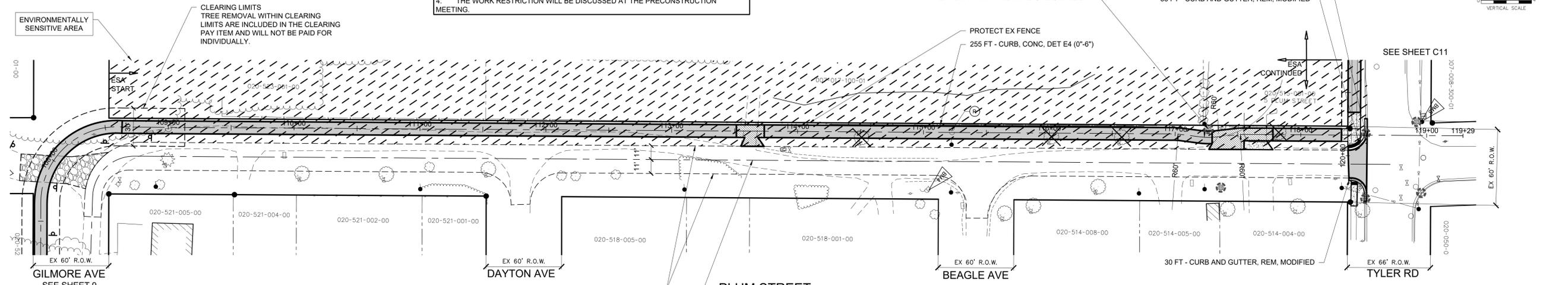
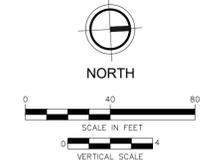


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BM #4 EL. 680.38'
NE BOLT OF FIRE HYDRANT
@ SE QUAD OF CHERRY AND BEAGLE
30' S OF BEAGLE

BM #5 EL. 675.99'
SET NAIL IN SE SIDE OF POWER POLE
@ NW QUAD OF CHERRY AND MAIN
4.5' N OF MANHOLE

- NOTE: CAUTION!!! ENVIRONMENTAL SENSITIVE AREA (ESA): ALL EARTH DISTURBANCE ACTIVITIES IN THE ENVIRONMENTALLY SENSITIVE AREA MUST BE MONITORED AT ALL TIMES.
- LOCAL AGENCY PERSONNEL, MONITOR, ENGINEER, CONTRACTOR AND ALL FIELD PERSONNEL MUST ATTEND THE ARCHAEOLOGY INADVERTENT DISCOVERY MICROSOFT TEAMS MEETING WITH THE MDOT LAP ARCHAEOLOGIST THE DAY ON OR BEFORE CONSTRUCTION STARTS.
- THE CONSTRUCTION ENGINEER WILL ASSURE THE CONTRACTOR FOLLOWS THIS WORK RESTRICTION DURING CONSTRUCTION.
- THE WORK RESTRICTION WILL BE DISCUSSED AT THE PRECONSTRUCTION MEETING.



- LEGEND**
- REMOVE CONCRETE & PLACE SHARED USE PATH, HMA
 - PLACE CONCRETE
 - CURB AND GUTTER, CONC, DET F4
 - RELOCATE EXISTING ITEM (BY OTHERS)
 - REMOVE EXISTING CONCRETE/ ASPHALT
 - TREE STUMP REMOVAL
 - EROSION CONTROL, INLET PROTECTION, FABRIC DROP
 - DETECTABLE WARNING SURFACE, DI
 - ENVIRONMENTALLY SENSITIVE AREA

PROPOSED PLUM STREET REALIGNMENT EOM (BY OTHERS PRIOR TO CONSTRUCTION)

PROPOSED PLUM STREET REALIGNMENT CENTERLINE (BY OTHERS PRIOR TO CONSTRUCTION)

EX. GRAVEL

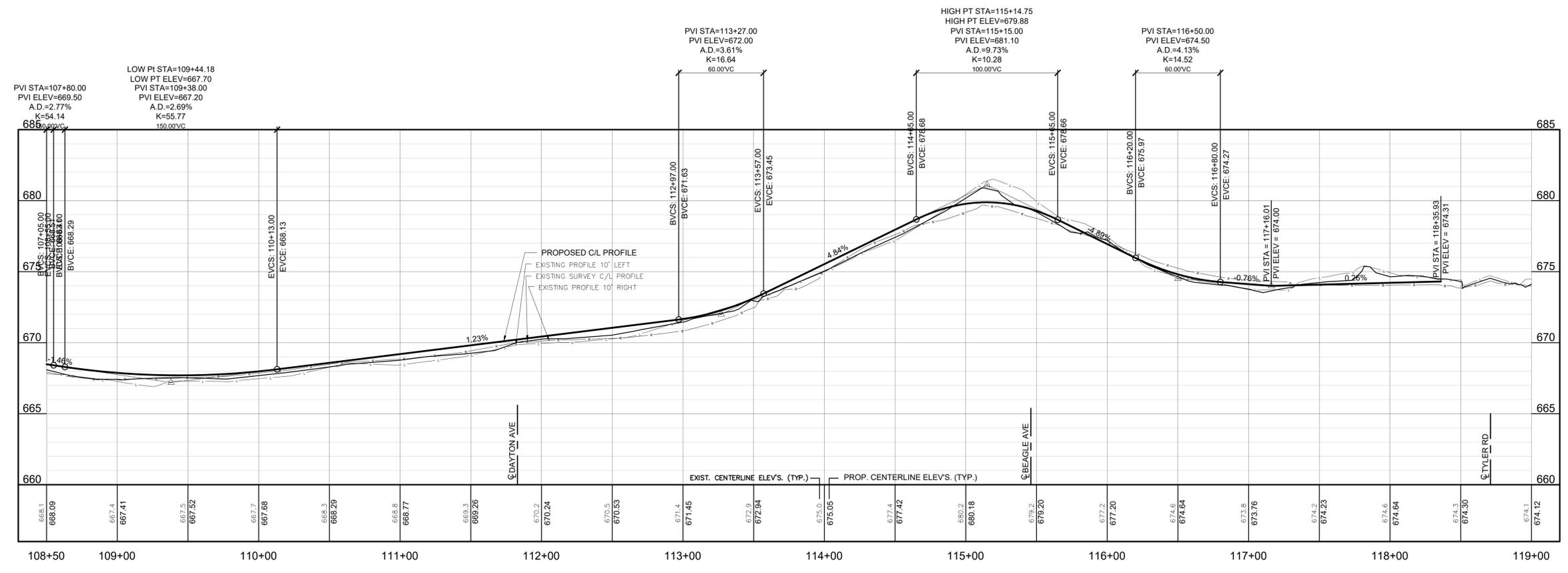
DRIVE QUANTITIES (THIS SHEET)						
STA	APPROACH CL I, 6 INCH	APPROACH CL II, 6 INCH	HMA, APPROACH	DRIVEWAY, NONREINF CONC, 6 INCH	SUBBASE, CIP	PAVT, REM
	SYD	SYD	TON	SYD	CYD	SYD
113+64 LT	40	10	10		10	
117+45 LT	30	10	10		10	
117+64 LT	40		10	20	10	25
TOTALS	110	20	30	20	30	25

REMOVAL QUANTITIES (THIS SHEET)

QUANTITY	UNIT	DESCRIPTION
15	SYD	SIDEWALK, REM
8	EA	STUMP, REM, 6 INCH TO 18 INCH
2	EA	STUMP, REM, 19 INCH TO 36 INCH

MAINLINE QUANTITIES (THIS SHEET)

QUANTITY	UNIT	DESCRIPTION
1000	FT	SHARED USE PATH, GRADING
1100	SYD	SHARED USE PATH, AGGREGATE, 6 INCH
125	TON	SHARED USE PATH, HMA
425	SFT	CURB RAMP, CONC, 6 INCH
50	FT	CURB AND GUTTER, CONC, DET F4
20	FT	CURB RAMP OPENING, CONC
20	FT	DETECTABLE WARNING SURFACE, DI
5	TON	HAND PATCHING
10	SYD	AGGREGATE BASE, 8 INCH
200	CYD	SUBBASE, CIP
6	EA	EROSION CONTROL, INLET PROTECTION, FABRIC DROP



REVISION:

CITY OF HART
OCEANA COUNTY
SAFE ROUTES TO SCHOOL
PLAN AND PROFILE

DESIGN TEAM: PROJ MGR: LBN
DESIGNED BY: PMT
DRAWN BY: PMT
CHECK BY:

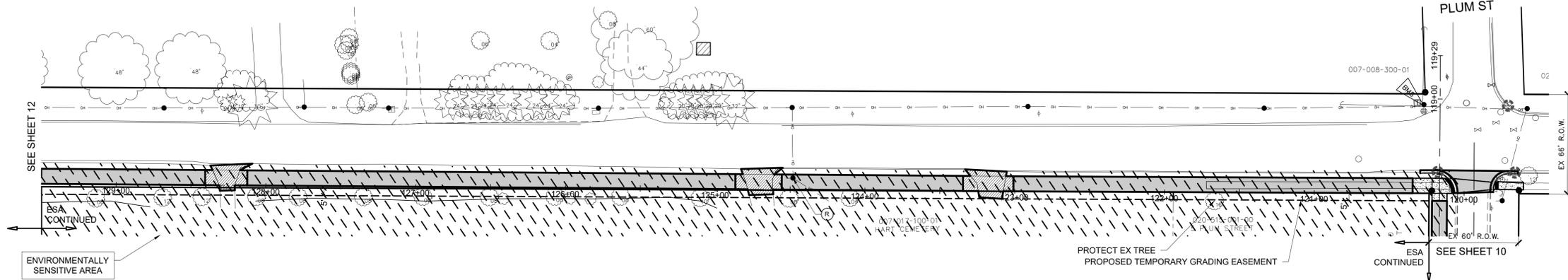
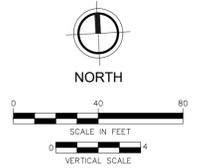
DRAWING INFORMATION:
853030_10
072225 payton.cousins



JULY 2025
REV PROJECT NO.
853030

BM #5 EL. 675.99'
 SET NAIL IN SE SIDE OF POWER POLE
 @ NW QUAD OF CHERRY AND MAIN
 4.5' N OF MANHOLE

- NOTE: CAUTION!!! ENVIRONMENTAL SENSITIVE AREA (ESA): ALL EARTH DISTURBANCE ACTIVITIES IN THE ENVIRONMENTALLY SENSITIVE AREA MUST BE MONITORED AT ALL TIMES.
- LOCAL AGENCY PERSONNEL, ENGINEER, CONTRACTOR AND ALL FIELD PERSONNEL MUST ATTEND THE ARCHAEOLOGY INADVERTENT DISCOVERY MICROSOFT TEAMS MEETING WITH THE MDOT L&P ARCHAEOLOGIST THE DAY ON OR BEFORE CONSTRUCTION STARTS.
- THE CONSTRUCTION ENGINEER WILL ASSURE THE CONTRACTOR FOLLOWS THIS WORK RESTRICTION DURING CONSTRUCTION.
- THE WORK RESTRICTION WILL BE DISCUSSED AT THE PRECONSTRUCTION MEETING.



LEGEND

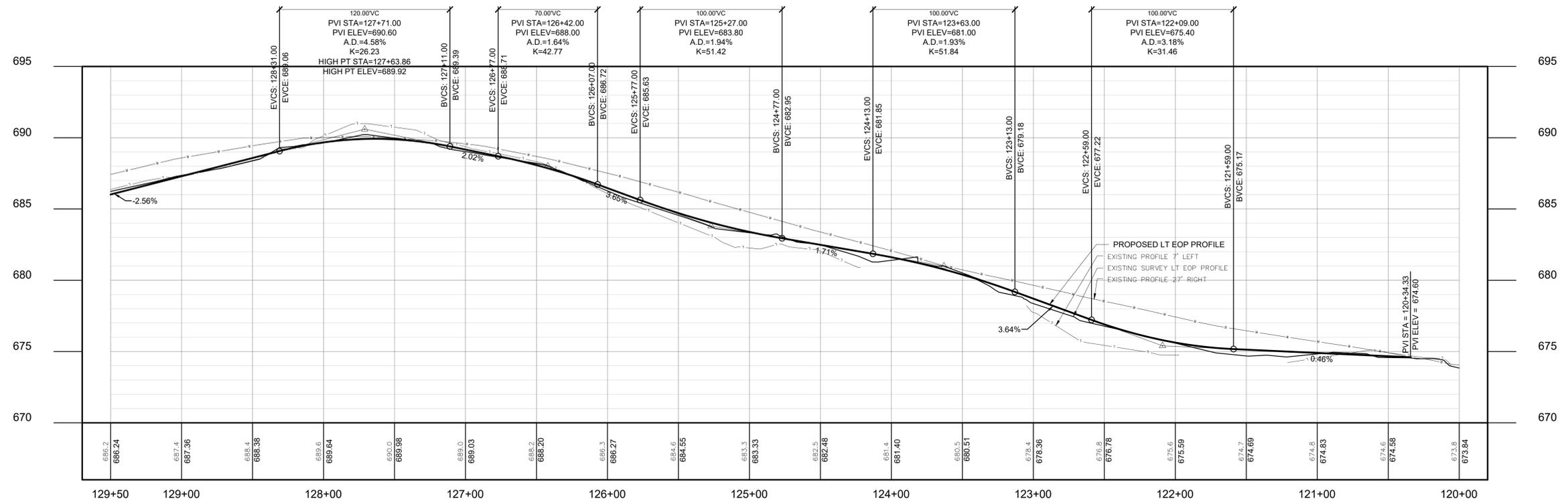
- REMOVE CONCRETE & PLACE SHARED USE PATH, HMA
- PLACE CONCRETE
- CURB AND GUTTER, CONG. DET F4
- RELOCATE EXISTING ITEM (BY OTHERS)
- REMOVE EXISTING CONCRETE/ASPHALT
- TREE STUMP REMOVAL
- EROSION CONTROL, INLET PROTECTION, FABRIC DROP
- DETECTABLE WARNING SURFACE, DI
- HMA DRIVEWAY APPROACH
- ENVIRONMENTALLY SENSITIVE AREA

DRIVE QUANTITIES (THIS SHEET)				
STA	APPROACH CL I, 6 INCH	SUBBASE, CIP	HMA, APPROACH	PAVT, REM
	SYD	SYD	TON	SYD
123+16 LT	60	10	15	45
124+69 LT	55	10	15	40
123+16 LT	45	10	10	30
TOTALS	160	30	40	115

TYLER ROAD
 EX. HMA PAVEMENT

REMOVAL QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
85	SYD	SIDEWALK, REM

MAINLINE QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
950	FT	SHARED USE PATH, GRADING
1010	SYD	SHARED USE PATH, AGGREGATE, 6 INCH
115	TON	SHARED USE PATH, HMA
170	CYD	SUBBASE, CIP



REVISION:

CITY OF HART
 OCEANA COUNTY
SAFE ROUTES TO SCHOOL
 PLAN AND PROFILE

DESIGN TEAM: PROJ MGR: LBN
 DESIGNED BY: PMT
 DRAWN BY: PMT
 CHECK BY:

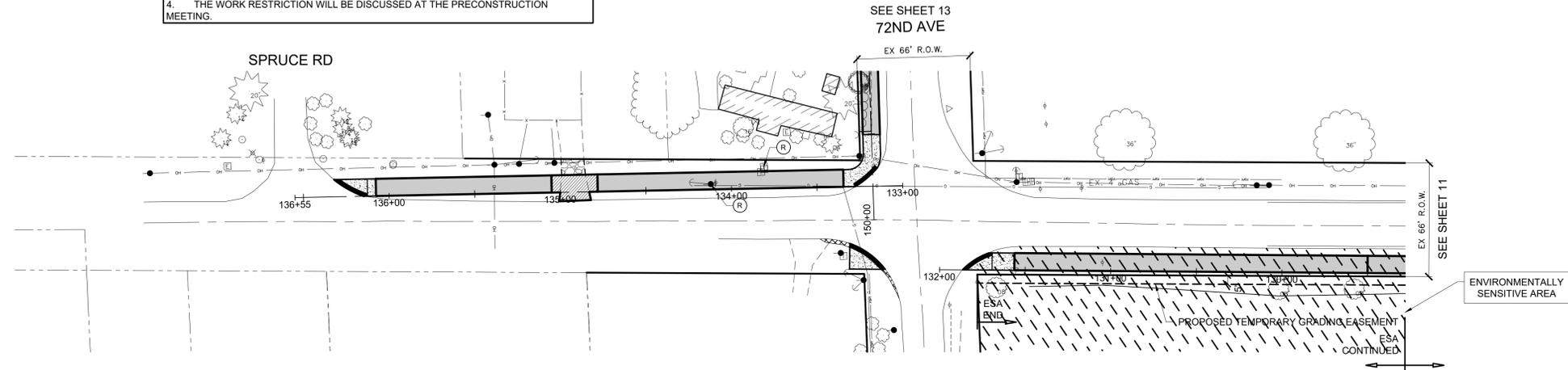
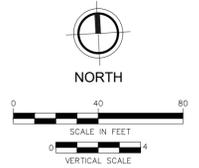
DRAWING INFORMATION:
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 072225 payton.cousins



JULY 2025
 REV PROJECT NO.
 853030

BM #5 EL. 675.99'
 SET NAIL IN SE SIDE OF POWER POLE
 @ NW QUAD OF CHERRY AND MAIN
 4.5' N OF MANHOLE

- NOTE: CAUTION!!! ENVIRONMENTAL SENSITIVE AREA (ESA): ALL EARTH DISTURBANCE ACTIVITIES IN THE ENVIRONMENTALLY SENSITIVE AREA MUST BE MONITORED AT ALL TIMES.
- LOCAL AGENCY PERSONNEL, MONITOR, ENGINEER, CONTRACTOR AND ALL FIELD PERSONNEL MUST ATTEND THE ARCHAEOLOGY INADVERTENT DISCOVERY MICROSOFT TEAMS MEETING WITH THE MDOT LAP ARCHAEOLOGIST THE DAY ON OR BEFORE CONSTRUCTION STARTS.
- THE CONSTRUCTION ENGINEER WILL ASSURE THE CONTRACTOR FOLLOWS THIS WORK RESTRICTION DURING CONSTRUCTION.
- THE WORK RESTRICTION WILL BE DISCUSSED AT THE PRECONSTRUCTION MEETING.



TYLER ROAD
 EX. HMA PAVEMENT

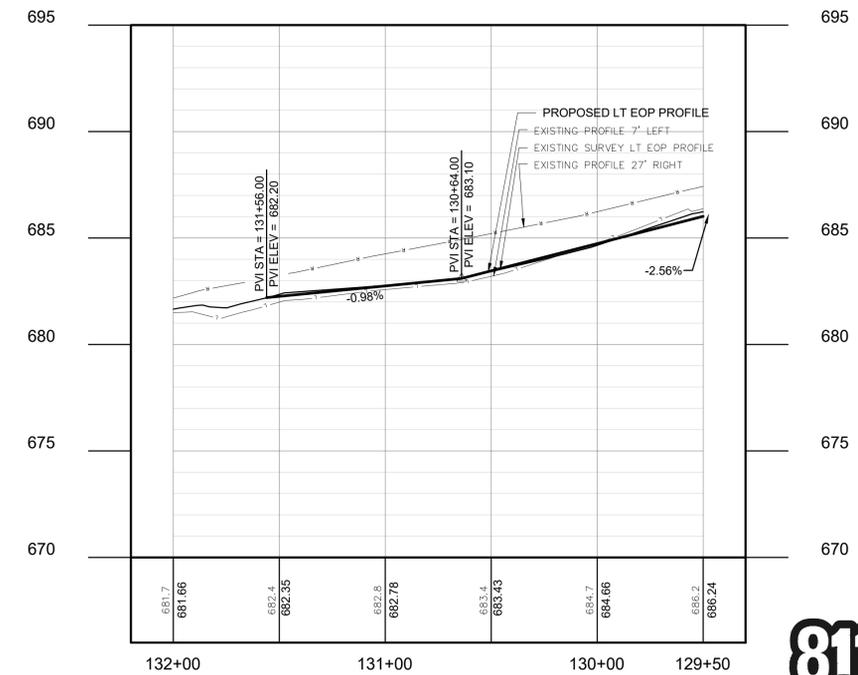
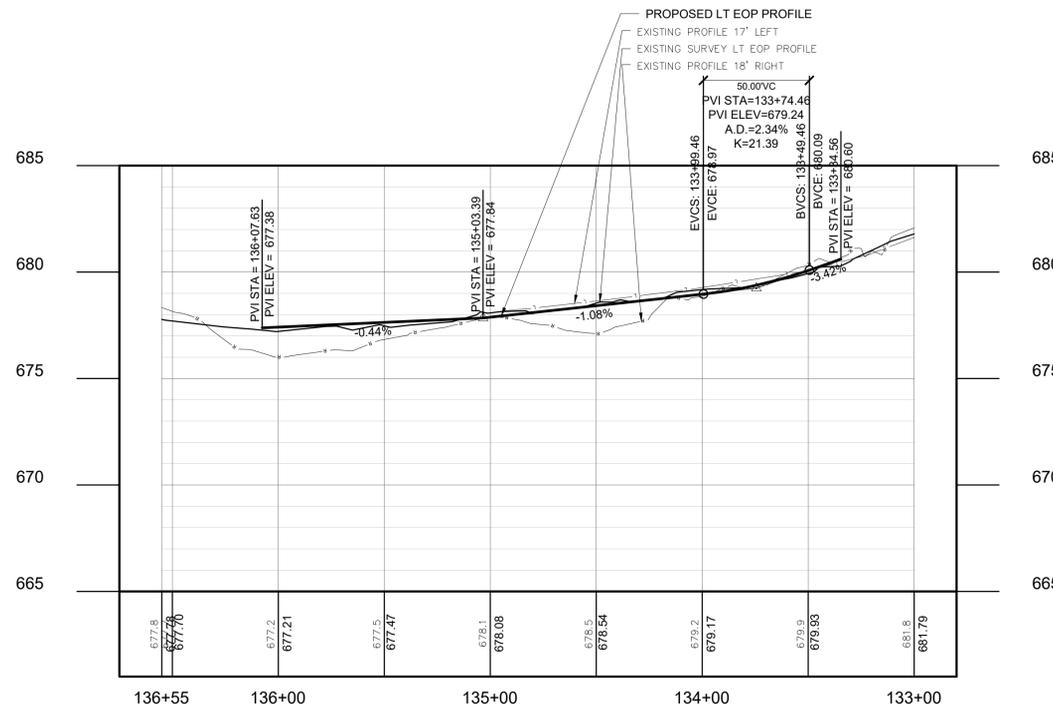
DRIVE QUANTITIES (THIS SHEET)				
STA	APPROACH CL 1, 6 INCH	APPROACH CL 1, 6 INCH	SUBBASE, CIP	HMA, APPROACH
134+90 RT	SYD	SYD	CYD	TON
	40	15	10	10
TOTALS	40	15	10	10

REMOVAL QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
15	SYD	HMA SURFACE, REM

MAINLINE QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
525	FT	SHARED USE PATH, GRADING
560	SYD	SHARED USE PATH, AGGREGATE, 6 INCH
60	TON	SHARED USE PATH, HMA
150	CYD	SUBBASE, CIP
950	SFT	CURB RAMP, CONC, 6 INCH
60	FT	DETECTABLE WARNING SURFACE, DI

LEGEND

- REMOVE CONCRETE & PLACE SHARED USE PATH, HMA
- PLACE CONCRETE
- CURB AND GUTTER, CONC, DET F4
- RELOCATE EXISTING ITEM (BY OTHERS)
- REMOVE EXISTING CONCRETE/ ASPHALT
- TREE STUMP REMOVAL
- EROSION CONTROL, INLET PROTECTION, FABRIC DROP
- DETECTABLE WARNING SURFACE, DI
- ENVIRONMENTALLY SENSITIVE AREA



Know what's below.
 Call before you dig.

REVISION:

CITY OF HART
 OCEANA COUNTY
 SAFE ROUTES TO SCHOOL
 PLAN AND PROFILE

DESIGN TEAM: PROJ MGR: LBN
 DESIGNED BY: PNT
 DRAWN BY: PNT
 CHECK BY:

DRAWING INFORMATION:
 853030_12
 072225 payton.cousins

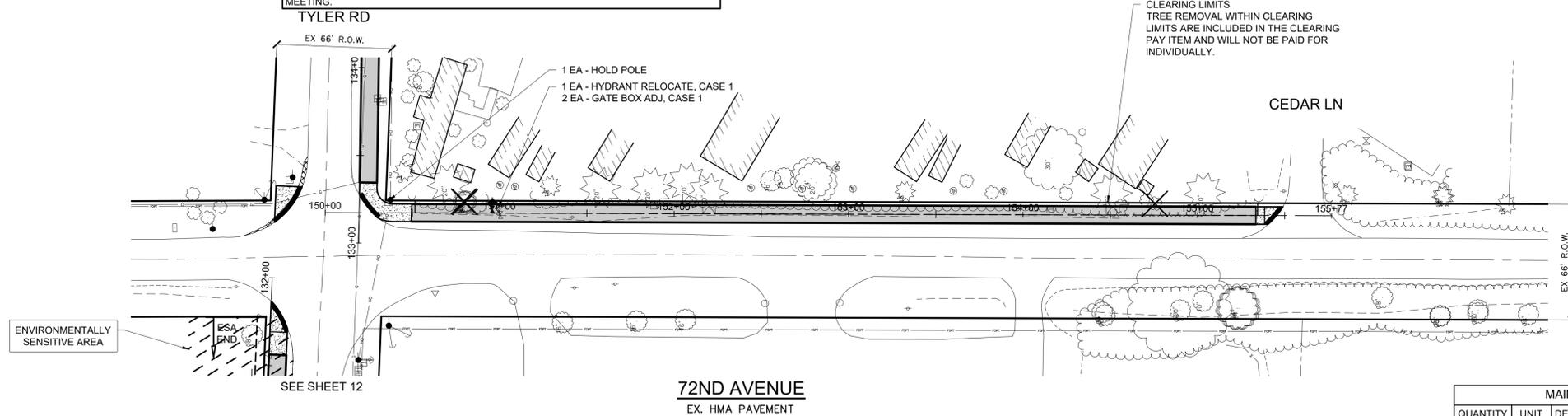
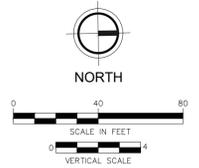
JULY 2025
 REV PROJECT NO.
 853030



316 Morris Avenue, Suite 230
 Muskegon, MI 49440
 P: 231.726.1000
 F: 231.726.2200

BM #5 EL. 675.99'
 SET NAIL IN SE SIDE OF POWER POLE
 @ NW QUAD OF CHERRY AND MAIN
 4.5' N OF MANHOLE

- NOTE: CAUTION!!! ENVIRONMENTAL SENSITIVE AREA (ESA): ALL EARTH DISTURBANCE ACTIVITIES IN THE ENVIRONMENTALLY SENSITIVE AREA MUST BE MONITORED AT ALL TIMES.
- LOCAL AGENCY PERSONNEL, MONITOR, ENGINEER, CONTRACTOR AND ALL FIELD PERSONNEL MUST ATTEND THE ARCHAEOLOGY INADVERTENT DISCOVERY MICROSOFT TEAMS MEETING WITH THE MDOT LAP ARCHAEOLOGIST THE DAY ON OR BEFORE CONSTRUCTION STARTS.
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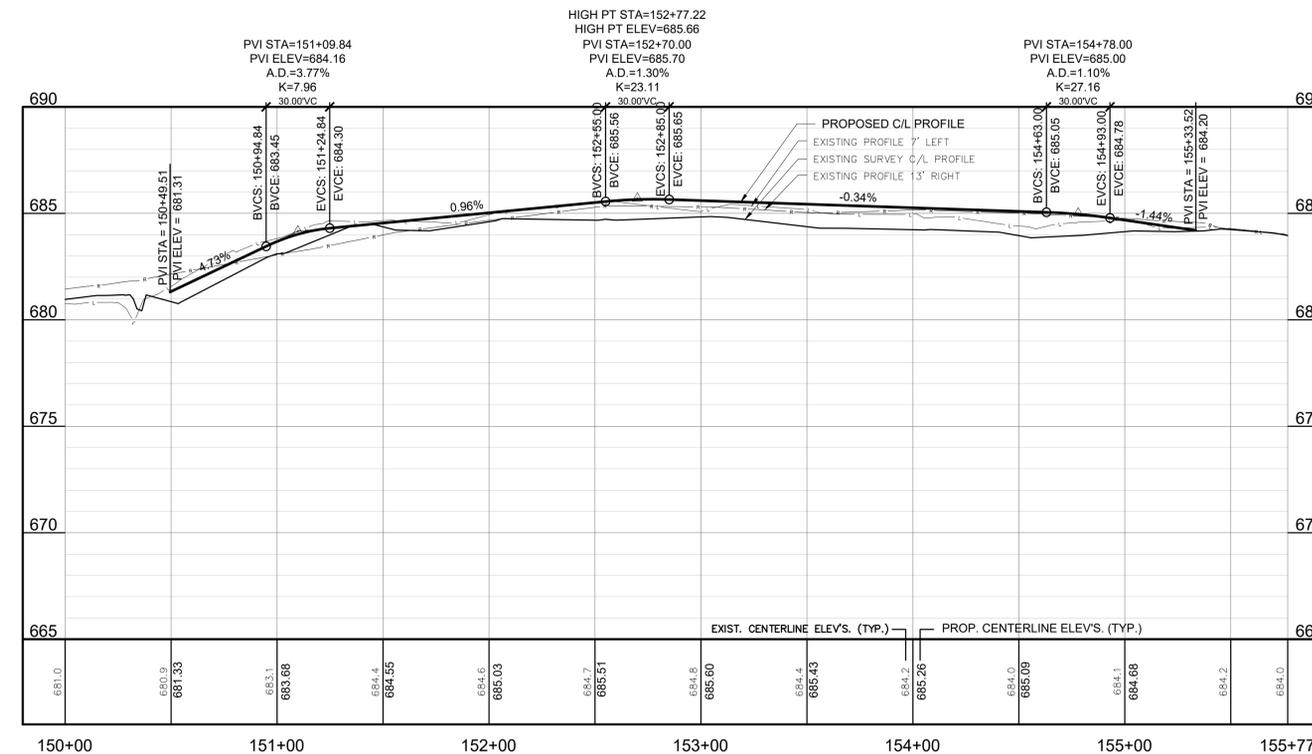
- LEGEND**
- REMOVE CONCRETE & PLACE SHARED USE PATH, HMA
 - PLACE CONCRETE
 - CURB AND GUTTER, CONG, DET F4
 - RELOCATE EXISTING ITEM (BY OTHERS)
 - REMOVE EXISTING CONCRETE/ ASPHALT
 - TREE STUMP REMOVAL
 - EROSION CONTROL, INLET PROTECTION, FABRIC DROP
 - DETECTABLE WARNING SURFACE, DI
 - ENVIRONMENTALLY SENSITIVE AREA

REMOVAL QUANTITIES (THIS SHEET)

QUANTITY	UNIT	DESCRIPTION
0.25	ACRE	CLEARING

MAINLINE QUANTITIES (THIS SHEET)

QUANTITY	UNIT	DESCRIPTION
520	FT	SHARED USE PATH, GRADING
600	SYD	SHARED USE PATH, AGGREGATE, 6 INCH
65	TON	SHARED USE PATH, HMA
100	CYD	SUBBASE, CIP
15	SFT	CURB RAMP, CONG, 6 INCH
15	FT	DETECTABLE WARNING SURFACE, DI



REVISION:

CITY OF HART
 OCEANA COUNTY
 SAFE ROUTES TO SCHOOL
 PLAN AND PROFILE

DESIGN TEAM: PROJ MGR: LBN; DESIGNED BY: PHT; DRAWN BY: PHT; CHECK BY:

DRAWING INFORMATION: 853030_13; 072225 payton.cousins

JULY 2025
 REV PROJECT NO. 853030

REVISION:

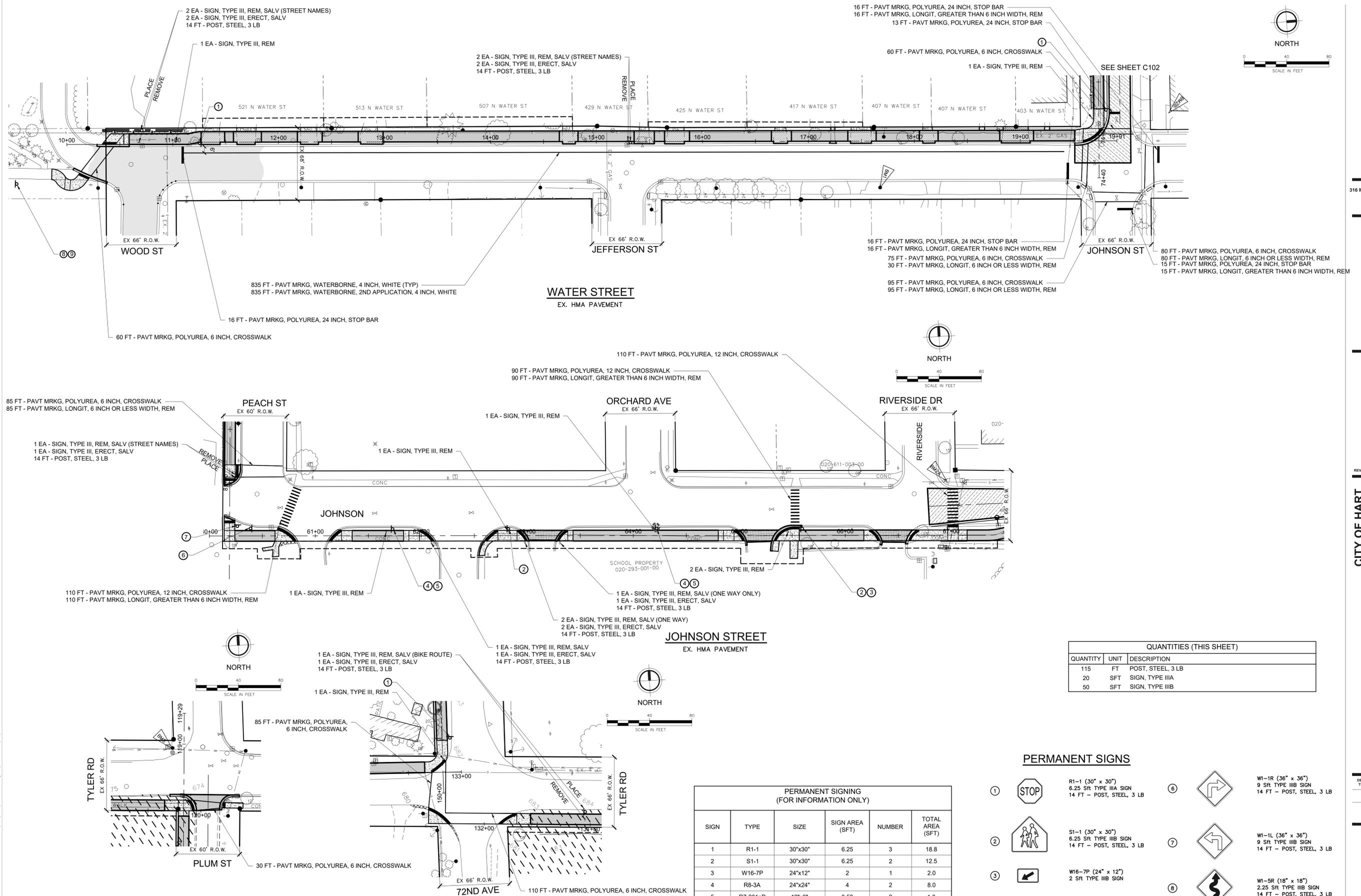
**CITY OF HART
OCEANA COUNTY
SAFE ROUTES TO SCHOOL**

PERMANENT SIGNS & PAVEMENT MARKINGS

DESIGN TEAM: PROJ MGR: LBN
DESIGNED BY: PNT
DRAWN BY: PNT
CHECK BY:

DRAWING INFORMATION:
853030_14
031224 pnt/rt

JULY 2025
F&V PROJECT NO.
853030



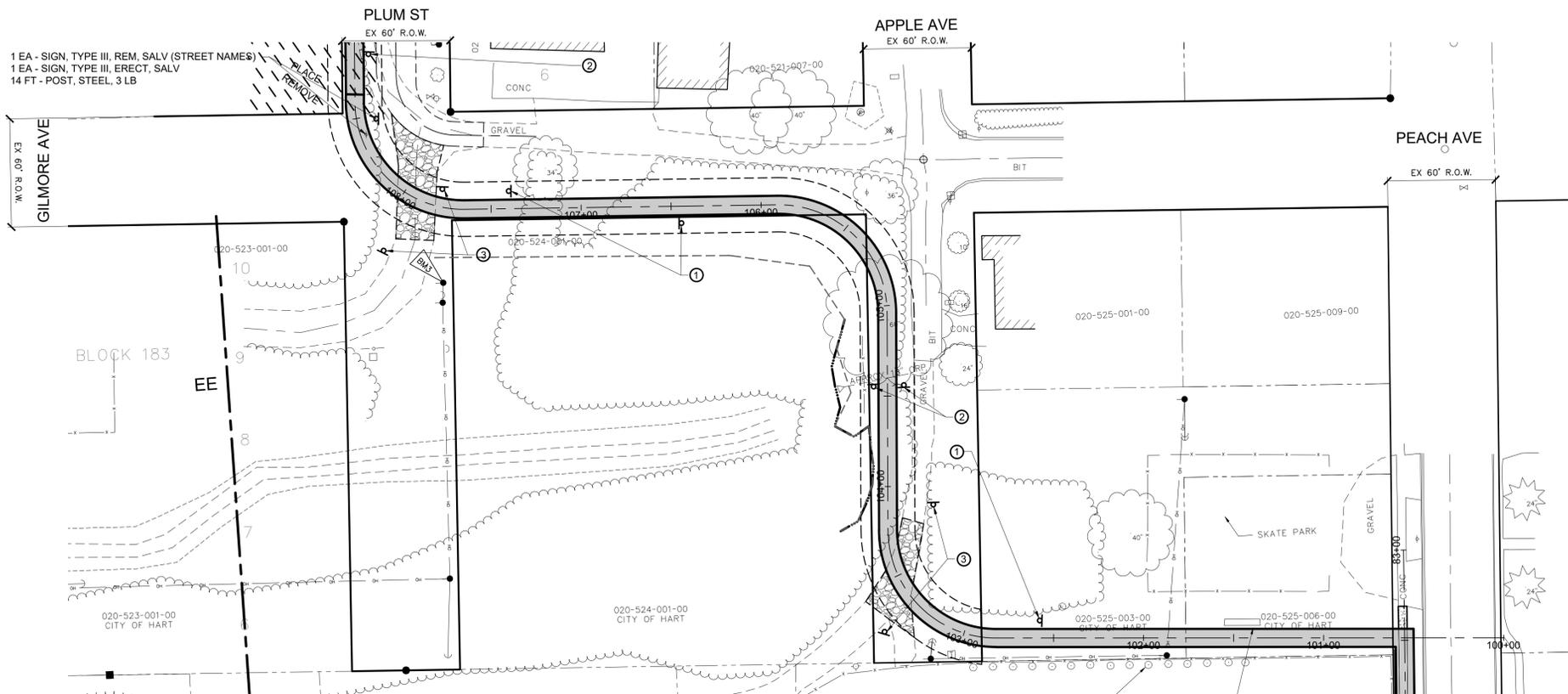
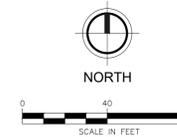
QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
115	FT	POST, STEEL, 3 LB
20	SFT	SIGN, TYPE IIIA
50	SFT	SIGN, TYPE IIIB

PERMANENT SIGNING (FOR INFORMATION ONLY)					
SIGN	TYPE	SIZE	SIGN AREA (SFT)	NUMBER	TOTAL AREA (SFT)
1	R1-1	30"x30"	6.25	3	18.8
2	S1-1	30"x30"	6.25	2	12.5
3	W16-7P	24"x12"	2	1	2.0
4	R8-3A	24"x24"	4	2	8.0
5	R7-201aP	12"x6"	0.50	2	1.0
6	W1-1R	36"x36"	9	1	9.0
7	W1-1L	36"x36"	9	1	9.0
8	W1-5R	18"x18"	2.25	1	2.3
9	SPEC	24"x18"	3.00	1	3.0
TOTAL:					65.5

PERMANENT SIGNS

①		R1-1 (30" x 30") 6.25 Sft TYPE IIIA SIGN 14 FT - POST, STEEL, 3 LB	⑥		W1-1R (36" x 36") 9 Sft TYPE IIIB SIGN 14 FT - POST, STEEL, 3 LB
②		S1-1 (30" x 30") 6.25 Sft TYPE IIIB SIGN 14 FT - POST, STEEL, 3 LB	⑦		W1-1L (36" x 36") 9 Sft TYPE IIIB SIGN 14 FT - POST, STEEL, 3 LB
③		W16-7P (24" x 12") 2 Sft TYPE IIIB SIGN	⑧		W1-5R (18" x 18") 2.25 Sft TYPE IIIB SIGN 14 FT - POST, STEEL, 3 LB
④		R8-3A (24" x 24") 4 Sft TYPE IIIB SIGN 14 FT - POST, STEEL, 3 LB	⑨		W1-5R (24" x 18") 3 Sft TYPE IIIB SIGN
⑤		R7-201aP (12" x 6") 0.5 Sft TYPE IIIB SIGN			

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 Site Routes to School 2021\04\01\853030_14.dwg - printed on 7/22/2025 11:29 AM



1 EA - SIGN, TYPE III, REM, SALV (STREET NAMES)
 1 EA - SIGN, TYPE III, ERECT, SALV
 14 FT - POST, STEEL, 3 LB

QUANTITIES (THIS SHEET)		
QUANTITY	UNIT	DESCRIPTION
140	FT	POST, STEEL, 3 LB
100	SFT	SIGN, TYPE IIIB

PERMANENT SIGNING (FOR INFORMATION ONLY)					
SIGN	TYPE	SIZE	SIGN AREA (SFT)	NUMBER	TOTAL AREA (SFT)
1	W1-1R	36"x36"	9	3	27
2	W1-1L	36"x36"	9	3	27
3	SPEC	36"x36"	9	4	36
TOTAL:					90

PERMANENT SIGNS

- ① W1-1R (36" x 36")
9 SR TYPE IIIB SIGN
14 FT - POST, STEEL, 3 LB
- ② W1-1L (36" x 36")
9 SR TYPE IIIB SIGN
14 FT - POST, STEEL, 3 LB
- ③ SPEC (36" x 36")
9 SR TYPE IIIB SIGN
14 FT - POST, STEEL, 3 LB

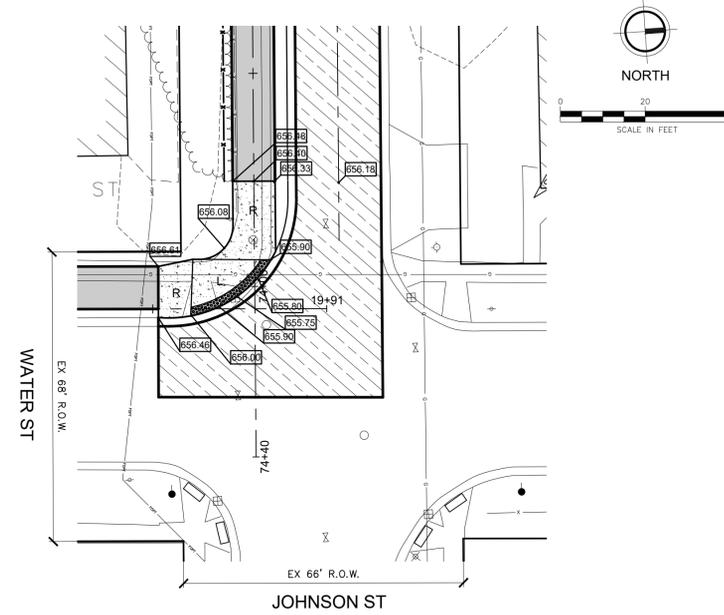
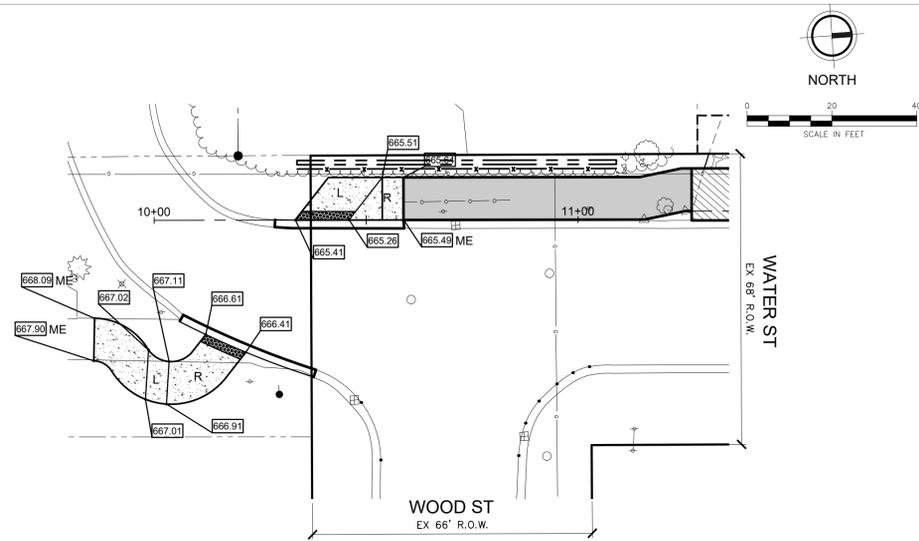
REVISION:
 CITY OF HART
 OCEANA COUNTY
 SAFE ROUTES TO SCHOOL

PERMANENT SIGNS & PAVEMENT MARKINGS

DESIGN TEAM: PROJ MGR: LBT
 DESIGNED BY: PHT
 DRAWN BY: PHT
 CHECK BY:

DRAWING INFORMATION:
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 031224 pht/rt

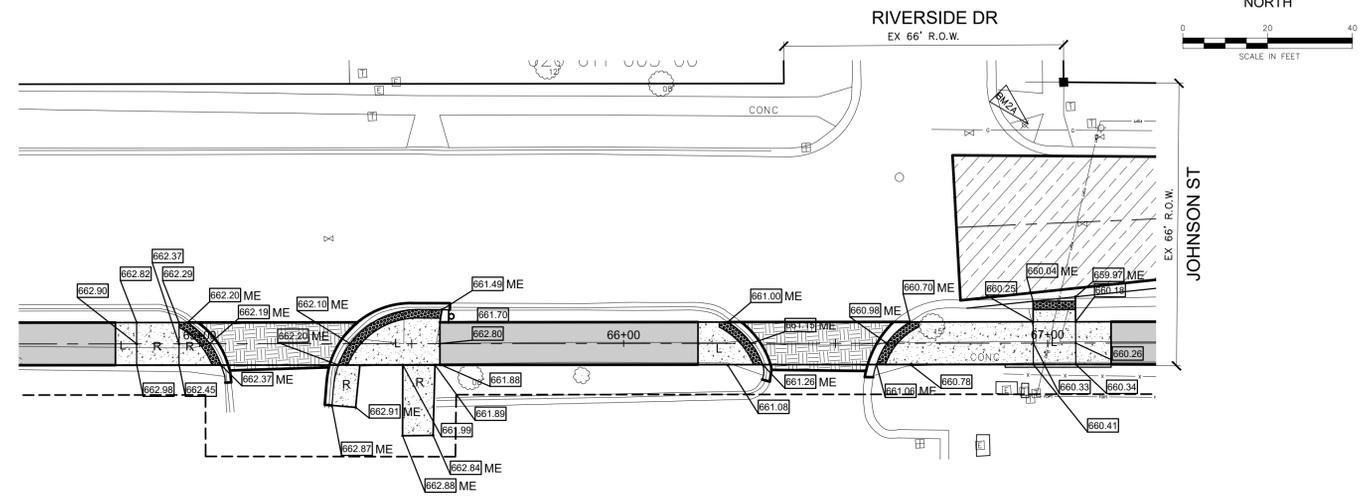
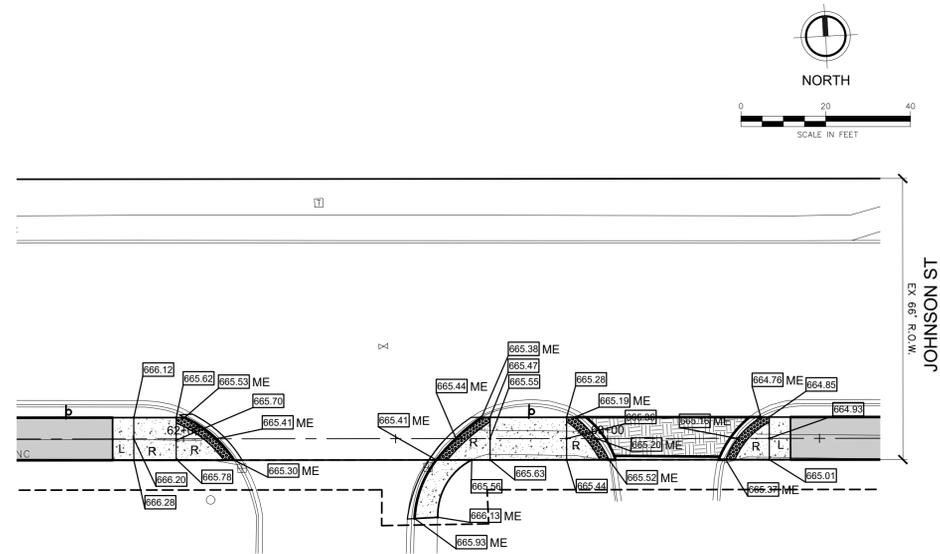
JULY 2025
 P&V PROJECT NO.
 853030



LEGEND

- DETECTABLE WARNING SURFACE
- SPOT ELEVATION
- MATCH EXISTING
- LANDING
- RAMP

NOTE: ALL RAMPS SHALL MEET MDOT SIDEWALK RAMP DETAILS R-28-J SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS.



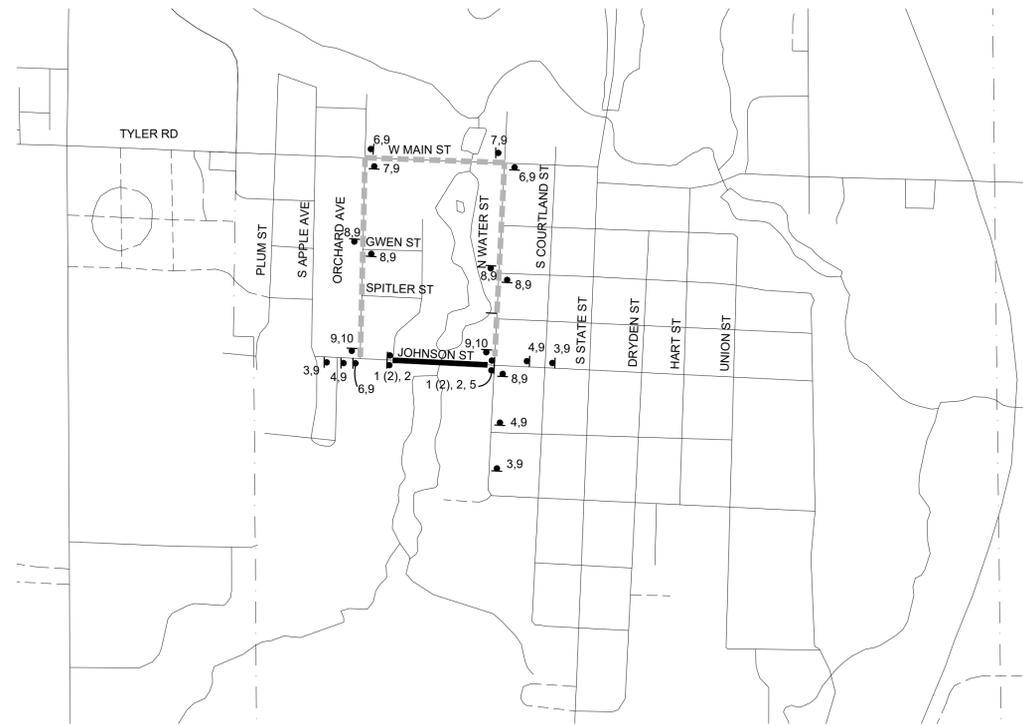
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REVISION:

DESIGN TEAM: PROJ MGR: LBT
DESIGNED BY: PNT
DRAWN BY: PNT
CHECK BY:

DRAWING INFORMATION:
533030_16
013123 pnt.rvt

JULY 2025
F&V PROJECT NO.
853030



DETOUR ROUTE

LEGEND

- DETOUR ROUTE
- PROJECT LOCATION
- ▼ SIGN
- ▼ BARRICADE, TYPE III, HIGH INTENSITY, LIGHTED

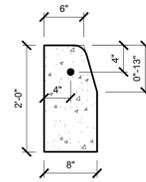
MISCELLANEOUS QUANTITIES THIS SHEET		
QUANTITY	UNIT	DESCRIPTION
100	EA	CHANNELIZING DEVICE, 42 INCH, FLUORESCENT, FURN
100	EA	CHANNELIZING DEVICE, 42 INCH, FLUORESCENT, OPER
2	EA	LIGHTED ARROW, TYPE C, FURN
2	EA	LIGHTED ARROW, TYPE C, OPER
4	EA	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED, FURN
4	EA	BARRICADE, TYPE III, HIGH INTENSITY, DOUBLE SIDED, LIGHTED, OPER
15	EA	PEDESTRIAN TYPE II BARRICADE, TEMP
315	SFT	SIGN, TYPE B, TEMP, PRISMATIC, FURN
315	SFT	SIGN, TYPE B, TEMP, PRISMATIC, OPER
60	SFT	SIGN, TYPE B, TEMP, PRISMATIC, SPEC, FURN
60	SFT	SIGN, TYPE B, TEMP, PRISMATIC, SPEC, OPER
1	LSUM	TRAF REGULATOR CONTROL
1	LSUM	MINOR TRAF DEVICES

CONSTRUCTION SIGNING (FOR INFORMATION ONLY)					
SIGN	TYPE	SIZE	SIGN AREA (SFT)	NUMBER	TOTAL AREA (SFT)
1	TYPE III BARRICADE		NA	4	-
2	R11-2	48"x30"	10.0	2	20.0
3	W20-3	48"x48"	16.0	3	48.0
4	W20-2	48"x48"	16.0	3	48.0
5	M4-10R	48"x18"	6.0	1	6.0
6	M4-9L	30"x24"	5.0	2	10.0
7	M4-9R	30"x24"	5.0	2	10.0
8	M4-9	30"x24"	5.0	5	25.0
9	D3-1	36"x12"	3.0	18	54.0
10	M4-8a	24"x12"	2.0	2	4.0
11	122-NFW-SHL-(R)	-	-	-	131.0
				TOTAL:	356.0

DETOUR SIGNAGE

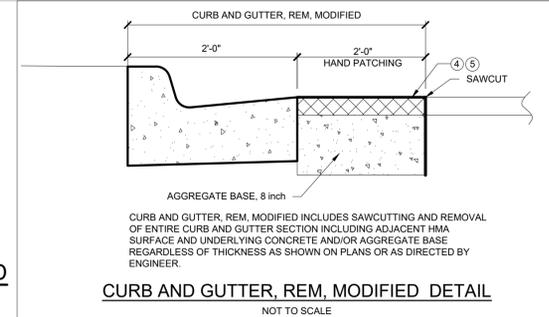
- 1 BARRICADE, TYPE III, LIGHTED
- 2 ROAD CLOSED
R11-2 (48" x 30")
10 SFT TYPE IIB SIGN
MOUNT ON SEPARATE POSTS ABOVE AND BEHIND BARRICADE
- 3 ROAD CLOSED AHEAD
W20-3 (48" x 48")
16 SFT TYPE IIB SIGN
- 4 DETOUR AHEAD
W20-2 (48" x 48")
16 SFT TYPE IIB SIGN
- 5 DETOUR
M4-10R (48"x18")
6 SFT TYPE IIB SIGN
- 6 DETOUR
M4-9L (30" x 24")
5 SFT TYPE IIB SIGN
- 7 DETOUR
M4-9R (30" x 24")
5 SFT TYPE IIB SIGN
- 8 DETOUR
M4-9 (30" x 24")
5 SFT TYPE IIB SIGN
- 9 JOHNSON ST
D3-1 (36" x 12")
3 SFT TYPE IIB SIGN
- 10 DETOUR ENDS
M4-8a (24" x 12")
2 SFT TYPE IIB SIGN

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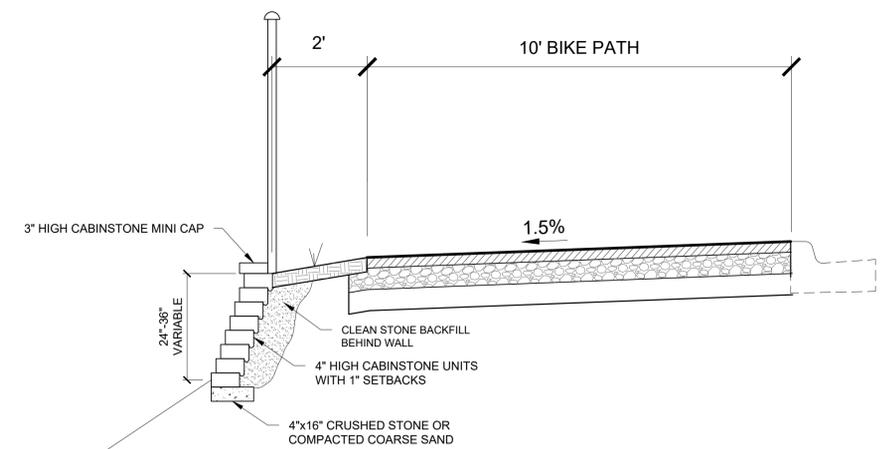
CURB, CONC, DET E4, MODIFIED

NOT TO SCALE



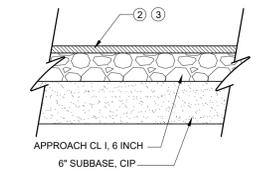
CURB AND GUTTER, REM, MODIFIED DETAIL

NOT TO SCALE



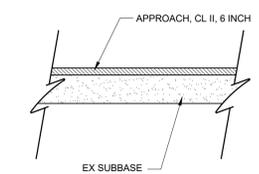
RETAINING WALL DETAIL

*NOTE - INSTALL RETAINING WALL AND RELATED WORK IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS



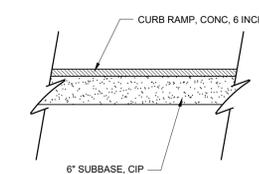
TYPICAL HMA APPROACH SECTION

NOT TO SCALE



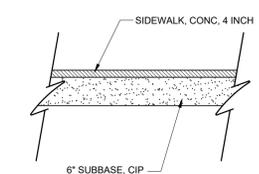
TYPICAL GRAVEL DRIVE APPROACH SECTION

NOT TO SCALE



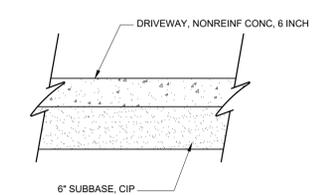
TYPICAL CONC RAMP, CONC, 6 INCH SECTION

NOT TO SCALE



TYPICAL SIDEWALK SECTION

NOT TO SCALE



TYPICAL CONCRETE DRIVEWAY SECTION

NOT TO SCALE

CONSTRUCTION NOTES

SOIL EROSION CONTROL MEASURES
TO PROTECT SLOPES AND DITCHES, SOIL OR SEED / MULCH SHOULD BE PLACED AS SOON AS POSSIBLE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE UTILIZED DURING CONSTRUCTION IN ACCORDANCE WITH THE MDOT STANDARD PLANS.

PLAN ELEVATIONS
ELEVATIONS SHOWN IN THESE PLANS ARE BASED ON USGS DATUM.

UNDERGROUND UTILITIES
FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL DIAL 1-800-482-7171 A MINIMUM OF THREE WORKING DAYS EXCLUDING SATURDAYS, SUNDAYS & HOLIDAYS PRIOR TO EXCAVATING IN THE VICINITY OF UTILITY LINES. ALL "MISS DIG" PARTICIPATING MEMBERS WILL BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING THE UTILITY OWNERS WHO MAY NOT BE PART OF THE "MISS DIG" ALERT SYSTEM.

DRIVEWAYS
CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS DURING CONSTRUCTION WITH 22A AGGREGATE OR BITUMINOUS MILLINGS, INCLUDED IN MAINTENANCE GRAVEL, LM PAY ITEM.

LAWN SPRINKLER SYSTEMS AND LANDSCAPING IN ROW
OWNERS OF EXISTING LAWN SPRINKLER SYSTEMS AND/OR LANDSCAPING SHALL BE NOTIFIED (IN WRITING WITH A COPY SENT TO THE ENGINEER) BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF ANY WORK TO BE DONE THAT WILL AFFECT THOSE SYSTEMS AND/OR LANDSCAPING. IF THE PROPERTY OWNER FAILS TO RELOCATE THE LAWN SPRINKLER SYSTEM PRIOR TO THE CONTRACTOR BEGINNING WORK, AND IF THE CONTRACTOR CUTS THE SYSTEM DURING THE CONSTRUCTION, THE CONTRACTOR SHALL CAP THE SYSTEM PIPE AND WITNESS THE LOCATION OF THE CAP WITH A WOODEN STAKE FOR THE PROPERTY OWNERS USE. THE CONTRACTOR SHALL PLACE THE SALVAGED SPRINKLER HEADS ON THE PROPERTY OWNER'S PROPERTY. IF THE PROPERTY OWNER FAILS TO RELOCATE THE LANDSCAPING PRIOR TO THE CONTRACTOR BEGINNING WORK, THE CONTRACTOR SHALL CAREFULLY SALVAGE THE LANDSCAPING ITEMS AND STOCKPILE THEM ON THE PROPERTY OWNER'S PROPERTY FOR THE PROPERTY OWNER. ANY OTHER MODIFICATION TO THE LAWN SPRINKLER SYSTEMS AND/OR LANDSCAPING, IS THE RESPONSIBILITY OF THE OWNER AND IS NOT PART OF THIS CONTRACT. THIS WORK IS INCLUDED IN OTHER ITEMS OF THE PROJECT.

MISCELLANEOUS QUANTITIES

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THIS PROJECT. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN AND PROFILE SHEETS:

QUANTITY	UNIT	DESCRIPTION
1	LSUM	MOBILIZATION, MAX
100	FT	EROSION CONTROL, SILT FENCE
5	EA	POST, MAILBOX
125	CYD	MAINTENANCE GRAVEL, LM
6600	SYD	SURFACE RESTORATION
3300	SYD	MULCH BLANKET
3300	SYD	MULCH BLANKET, HIGH VELOCITY
100	CYD	SUBGRADE UNDERCUTTING, TYPE II

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REVISION:

**CITY OF HART
OCEANA COUNTY
SAFE ROUTES TO SCHOOL
SPECIAL DETAILS**

DESIGN TEAM: PROJ MGR: LSH
DESIGNED BY: PMT
DRAWN BY: PMT
CHECK BY:

DRAWING INFORMATION:
853030_20
031224 petert

JULY 2025
FAV PROJECT NO.
853030

* MAXIMUM LANDING SLOPE IS 2.1% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS: 7' x 5'. SEE NOTES.
* MAXIMUM RAMP CROSS SLOPE IS 2.1% RUNNING SLOPE 0% - 7% (0.5% MAXIMUM). SEE NOTES.

CURB RAMP TYPE D
(DEPRESSED CORNER)
USE ONLY WHEN INDEPENDENT DIRECTIONAL RAMPS CAN NOT BE CONSTRUCTED FOR EACH CROSSING DIRECTION

STANDARD PLAN FOR CURB RAMP AND DETECTABLE WARNING DETAILS
R-28-K SHEET 4 OF 7

* MAXIMUM LANDING SLOPE IS 2.1% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS: 7' x 5'. SEE NOTES.
* MAXIMUM RAMP CROSS SLOPE IS 2.1% RUNNING SLOPE 0% - 7% (0.5% MAXIMUM). SEE NOTES.

CURB RAMP TYPE P
(PARALLEL RAMP)
DO NOT USE IN AREAS WHERE FLOODING MAY OCCUR

CURB RAMP TYPE C
(COMBINATION RAMP)

CURB RAMP TYPE M
(MEDIAN SLANT)

STANDARD PLAN FOR CURB RAMP AND DETECTABLE WARNING DETAILS
R-28-K SHEET 3 OF 7

* MAXIMUM LANDING SLOPE IS 2.1% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS: 7' x 5'. SEE NOTES.
* MAXIMUM RAMP CROSS SLOPE IS 2.1% RUNNING SLOPE 0% - 7% (0.5% MAXIMUM). SEE NOTES.

CURB RAMP TYPE RF
(ROLLED/FLARED SIDES)

SECTION A-A
TRANSITION ADJACENT GUTTER PAN CROSS SECTION TO PROVIDE 3/8\"/>

CURB TYPE	MAXIMUM RISE (INCHES)	A	B
R1	1/2	1	1
R2	3/4	1	1
R3	1	1	1
R4	1 1/4	1	1
R5	1 1/2	1	1
R6	1 3/4	1	1
R7	2	1	1
R8	2 1/4	1	1
R9	2 1/2	1	1
R10	2 3/4	1	1
R11	3	1	1
R12	3 1/4	1	1
R13	3 1/2	1	1
R14	3 3/4	1	1
R15	4	1	1
R16	4 1/4	1	1
R17	4 1/2	1	1
R18	4 3/4	1	1
R19	5	1	1

FOR CURB TYPES SEE STANDARD PLAN R-30-SERIES

STANDARD PLAN FOR CURB RAMP AND DETECTABLE WARNING DETAILS
R-28-K SHEET 2 OF 7

* MAXIMUM LANDING SLOPE IS 2.1% IN EACH DIRECTION OF TRAVEL. LANDING MINIMUM DIMENSIONS: 7' x 5'. SEE NOTES.
* MAXIMUM RAMP CROSS SLOPE IS 2.1% RUNNING SLOPE 0% - 7% (0.5% MAXIMUM). SEE NOTES.

CURB RAMP TYPE R
(ROLLED SIDES)

CURB RAMP TYPE F
(FLARED SIDES, TWO RAMPS SHOWN)

STANDARD PLAN FOR CURB RAMP AND DETECTABLE WARNING DETAILS
R-28-K SHEET 1 OF 7

DETECTABLE WARNING DETAILS

NOTES:
DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION OR ALTERATION OF STREETS, CURBS OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.
CURB RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT MARKED AND/OR SIGNALIZED MEDIAN CROSSINGS.
SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOKING, TRANSVERSE TO THE RUNNING SLOPE.
SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.
CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP WHERE CONDITIONS PERMIT. IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.
RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SHOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.
WHEN 5' MINIMUM WIDTHS ARE NOT FEASIBLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND LANDINGS TO NOT LESS THAN 4' x 4'.
CURB RAMPS WITH A RUNNING SLOPE 0.5% DO NOT REQUIRE A TOP LANDING. HOWEVER, ANY CONTIGUOUS SIDEWALK OR REGISTRATION ROUTE CROSSING THROUGH OR INTERSECTING THE CURB RAMP MUST INDEPENDENTLY MAINTAIN A CROSS SLOPE NOT GREATER THAN 2.1% PERPENDICULAR TO ITS OWN DIRECTION(S) OF TRAVEL.
DETECTABLE WARNING SURFACE COVERAGE IS 24\"/>

FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2.1% FOR ALTERNATIONS TO EXISTING ROADWAYS. THE CROSS SLOPE MAY BE TRANSITIONED TO MEET AN EXISTING ROADWAY GRADE. THE CROSS SLOPE TRANSITION SHALL BE APPLIED UNIFORMLY OVER THE FULL LENGTH OF THE RAMP.
THE MAXIMUM RUNNING SLOPE OF 0.5% IS RELATIVE TO A FLAT (0%) REFERENCE. HOWEVER, IT SHALL NOT REQUIRE ANY RAMP OR SERIES OF RAMPS TO EXCEED 15 FEET IN LENGTH NOT INCLUDING LANDINGS OR TRANSITIONS.
DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. THE LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER THE LOCATION OF THE DRAINAGE STRUCTURE. WHERE EXISTING DRAINAGE STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A MANUFACTURED ADA COMPLIANT GRATE. OPENINGS SHALL NOT BE GREATER THAN 1/2\"/>

THE TOP OF THE JOINT FILLER, FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.
CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
FLARED SIDES WITH A SLOPE OF 1% MAXIMUM, MEASURED ALONG THE ROADSIDE CURB LINE, SHALL BE PROVIDED WHERE AN UNOBSTRUCTED CIRCULATION PATH LATERALLY CROSSES THE CURB RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE RAMP IS BORDERED BY LANDSCAPING, IMPAVED SURFACE OR PERMANENTLY FIXED OBJECTS WHERE THEY ARE NOT REQUIRED, FLARED SIDES CAN BE CONSIDERED IN ORDER TO AVOID SHARP CURB RETURN AT RAMP OPENINGS.
DETECTABLE WARNING PLATES MUST BE INSTALLED USING FABRICATED OR FIELD CUT UNITS CAST AND/OR ANCHORED IN THE PAVEMENT TO RESIST SHIFTING OR MOVING.

STANDARD PLAN FOR CURB RAMP AND DETECTABLE WARNING DETAILS
R-28-K SHEET 7 OF 7

SECTION B-B
CURB RAMP ORIENTATION

STANDARD PLAN FOR CURB RAMP AND DETECTABLE WARNING DETAILS
R-28-K SHEET 6 OF 7

* THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE RAIL CROSSING IS 2' MINIMUM AND 12' MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL. DO NOT PLACE DETECTABLE WARNING ON PAVED CROSSING MATERIAL.

DETECTABLE WARNING AT RAILROAD CROSSING

* THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE SHOULDER IS 2' MINIMUM FROM THE SHOULDER.

DETECTABLE WARNING AT FLUSH SHOULDER OR ROADWAY

STANDARD PLAN FOR CURB RAMP AND DETECTABLE WARNING DETAILS
R-28-K SHEET 5 OF 7

