

CITY OF KALAMAZOO

WATERMAIN REPLACEMENT

BALCH STREET - PARK TO BURDICK

Kalamazoo County, MI
05/26/23

OWNER

City of Kalamazoo
415 E Stockbridge Ave.
Kalamazoo, MI 49001

PLANS PREPARED BY:



hurley & stewart, llc
2800 s. 11th street
kalamazoo, michigan 49009
269.552.4960 fax 269.552.4961
www.hurleystewart.com

UTILITY CONTACTS:

CHARTER COMMUNICATIONS, 4176 COMMERCIAL AVENUE PORTAGE, MI 49002 (269) 459-8746 BRYAN.LONGCORE2@CHARTER.COM	CABLE	Q3 TECHNOLOGIES, LLC, 1005 FOSTER AVENUE KALAMAZOO, MI 49048 (269) 377-1308, TROY QUAKENBUSH TQUAKENBUSH@Q3-TECH.COM	
CONSUMERS ENERGY, 2500 EAST CORK STREET KALAMAZOO, MI 49001 (269) 337-2245, MR. ANDRE TAYLOR ANDRE.TAYLOR@CMSENERGY.COM	ELECTRIC	CTS TELECOM, 13800 EAST MICHIGAN AVENUE GALESBURG, MI 49053 (269) 746-3232, MR. TOM CADY TCADY@CTSTELECOM.COM	
CONSUMERS ENERGY, 2500 EAST CORK STREET KALAMAZOO, MI 49001 (26) 337-2366, MR. KYLE OAK KYLE.OAK@CMSENERGY.COM	GAS	CITY OF KALAMAZOO, 415 STOCKBRIDGE AVENUE KALAMAZOO, MI 49001 (269) 337-8558, DEBBIE JUNG JUNG@KALAMAZOOCITY.ORG	WATER
AT&T, 2919 MILLCORK STREET KALAMAZOO, MI 49001 (269) 384-4475, MR. TODD BERGHUIS TB1973@ATT.COM	TELEPHONE	CITY OF KALAMAZOO, 1415 NORTH HARRISON STREET KALAMAZOO, MI 49007 (269) 337-8551, MR. RYAN STOUGHTON STOUGHTONR@KALAMAZOOCITY.ORG	SEWER
CITY OF KALAMAZOO, 415 STOCKBRIDGE AVENUE KALAMAZOO, MI 49001 (269) 337-8601, MR. RON RIDENOUR RIDENOURR@KALAMAZOOCITY.ORG	FIBER OPTIC		

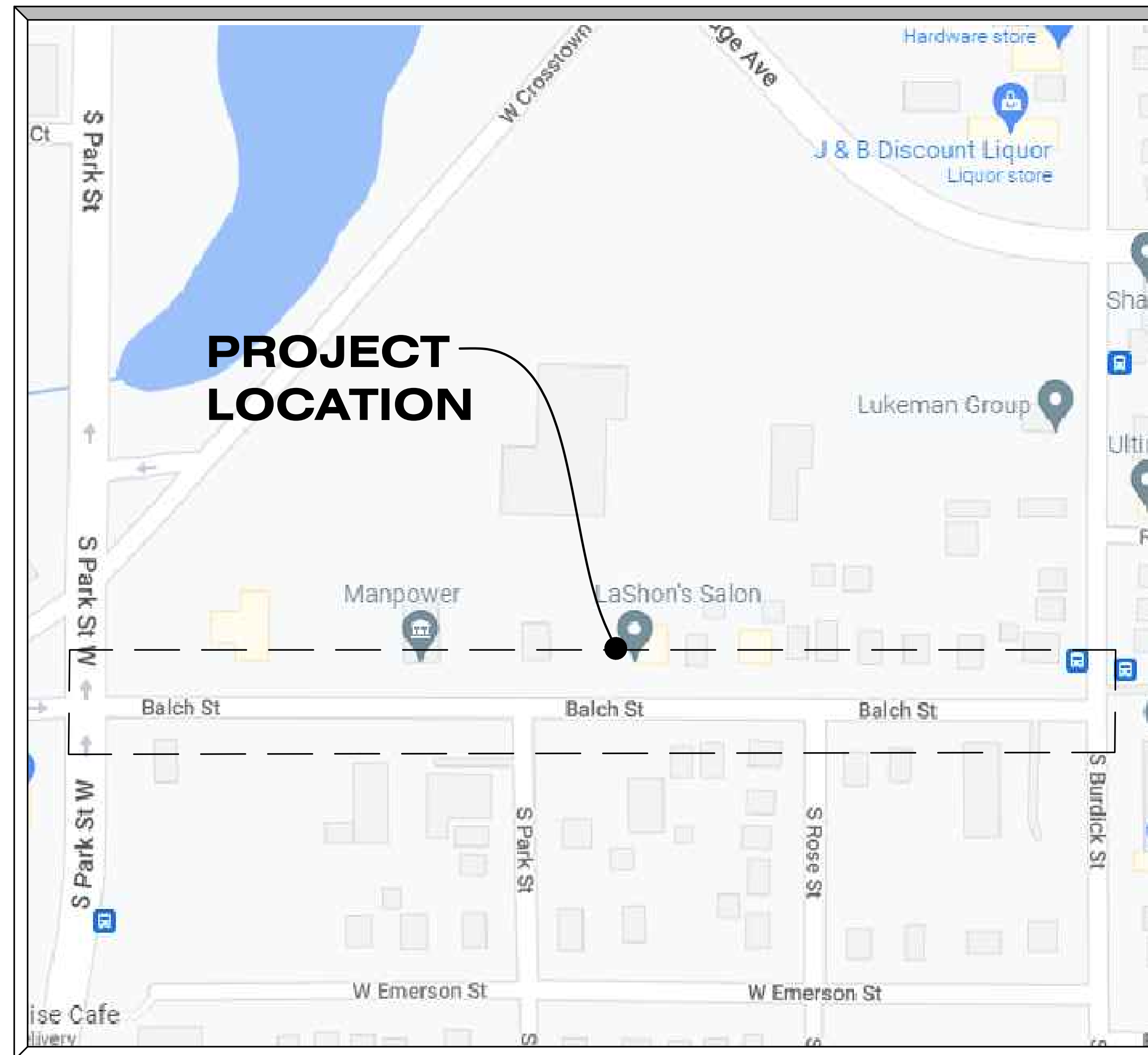
CONTACT FOR ROAD IMPROVEMENTS

IMPROVEMENTS TO KALAMAZOO WATER MAIN. CONSTRUCTION SERVICES FOR INSTALLATION OF 24" WATER MAIN IN PUBLIC RIGHT-OF-WAY, INSTALLATION AND CONNECTION OF PRIVATE SERVICES, LEAD SERVICE REMOVAL, EXISTING WATER MAIN REMOVAL, AND ABANDONMENT OF EXISTING WATER MAIN. PAVEMENT, DRIVEWAY, SIDEWALK, AND CURB REPLACEMENTS. ALL WATER MAIN AND SERVICE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF KALAMAZOO STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE INSTALLATION 2021.



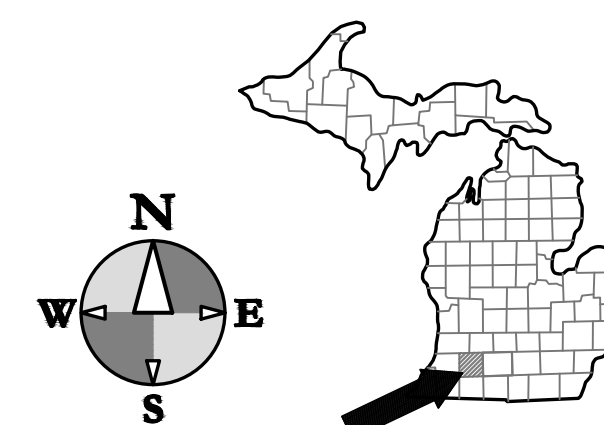
CITY OF KALAMAZOO
BALCH STREET
KALAMAZOO, MI 49001

DEBBIE JUNG SENIOR CIVIL ENGINEER
WATER RESOURCES DIVISION
DATE



SITE LOCATION MAP

SCALE NOT SET

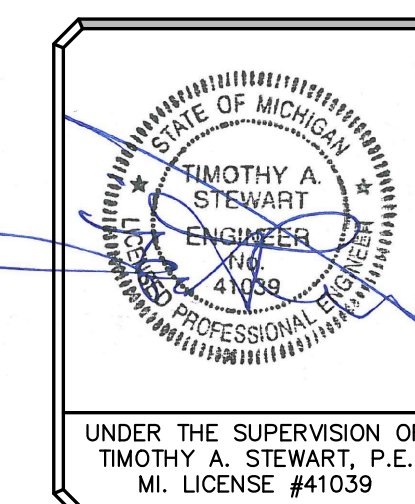


DRAWING INDEX

SHT # DESCRIPTION

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- C-4 - CONSTRUCTION PLAN & PROFILE POB - STA 6+00
- C-5 - CONSTRUCTION PLAN & PROFILE STA 6+00 - POE
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- C-7 - CONSTRUCTION PLAN
- C-8 - SIDE STREET PROFILES
- C-9 - PHASE 1 & 3 MAINTENANCE OF TRAFFIC PLAN
- C-10 - PHASE 2 MAINTENANCE OF TRAFFIC PLAN

PRE-PURCHASED MATERIAL PROJECT
SEE SPECIAL PROVISION FOR PRE-PURCHASED
WATER MAIN MATERIALS FOR DETAILS.



EXISTING TOPOGRAPHY PROVIDED BY HURLEY & STEWART, LLC. ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.

ISSUED FOR:
ADDENDUM #1
05/26/23

TOPOGRAPHIC SURVEY

LEGEND

	BENCH MARK		RISER
	SET MONUMENT		PIPE MARKER COMMUNICATIONS
	FOUND MONUMENT		PIPE MARKER FIBEROPTICS
	SET CAPPED IRON LIC. # 57885		PIPE MARKER ELECTRIC
	FOUND IRON		PIPE MARKER GAS
	SET CHISELED "X"		SIGN (SINGLE/DOUBLE)
	FOUND CHISELED "X"		MAILBOX
	CONTROL POINT		PARKING METER (SINGLE/DOUBLE)
	PLATTED		POST
	DESCRIBED		SOIL BORING
	MEASURED		FLAG
	RECORD		COLUMB
	CALCULATED		BOLLARD
	CURB CATCH BASIN		CONTOUR HIGHLIGHTED
	SQUARE CATCH BASIN		CONTOUR NORMAL
	ROUND CATCH BASIN		POWER LINE
	MANHOLE STORM		OVERHEAD UTILITY
	DOWN SPOUT		COMMUNICATION
	YARD DRAIN		ELECTRIC
	FLARED END SECTION		FIBEROPTIC
	MANHOLE SANITARY		GAS
	SANITARY CLEANOUT		SANITARY SEWER
	FIRE HYDRANT		STORMWATER
	FIRE DEPARTMENT CONNECTION		TELEPHONE
	WATER VALVE		WATER
	WATER METER		WETLAND MARKER
	WELL HEAD		UNKNOWN
	SPRINKLER CONTROL VALVE		TREE LINE
	SPRINKLER HEAD		FENCE
	MONITOR WELL		GUARD RAIL
	POST INDICATOR VALVE		DECIDUOUS TREE
	SPIGOT		CONIFEROUS TREE
	TRANSFORMER		BUSH
	YARD LIGHT		PAVEMENT
	HAND HOLE (ELECTRIC)		CONCRETE SURFACE
	LIGHT POLE		DETECTABLE WARNING
	(UTILITY, GUY, POWER) POLE		GRAVEL
	GUY WIRE		LANDSCAPING
	ELECTRIC MANHOLE		PAVERS
	ELECTRIC METER		
	AIR CONDITIONER		
	GAS METER		
	GAS VALVE		
	TELEPHONE MANHOLE		
	COMMUNICATION MANHOLE		

STRUCTURE DATA

1. STM MH RIM = 765.76	11. 4.0' CONCRETE STM MH RIM = 769.10 INV. 12" E CLAY = 760.94 WATER = 760.84 SUMP = 760.39	21. SAN MH RIM = 769.64 INV. 8" E INV. E = 758.24± INV. W = 758.24±	31. SAN MH RIM = 765.38
2. STM CB RIM = 765.88 INV. = 761.08 TOP OF PIPE = 762.68 (VERTICAL PIPE)	12. 4.0' CONCRETE STM MH RIM = 766.54 INV. 12" W CLAY = 760.79 INV. 12" E CLAY = 760.84± INV. 12" S CLAY = 760.89 BOTTOM = 760.82±	22. SAN MH RIM = 769.46 INV. 30" E RCP = 754.61 INV. 30" W RCP = 754.71 INV. 8" W = 755.96	32. SAN MH RIM = 766.45 INV. 12" E RCP = 761.35± INV. 12" W RCP = 761.35 WATER = 761.70 SEDIMENT = 761.30
3. 2.0' BLOCK STM CB RIM = 766.10 NO PIPES VISIBLE WATER = 768.43 SUMP = 758.20	13. SAN MH RIM = 766.88 INV. 30" E RCP = 755.33 INV. 30" W RCP = 755.43 INV. 8" SW CLAY = 759.38	23. SAN MH RIM = 769.03 INV. 30" E RCP = 754.98 INV. 30" W RCP = 755.08 INV. S = 755.68	33. SAN MH RIM = 764.98
4. STM MH RIM = 766.77 INV. 36" N OBLONG PIPE = 757.97 INV. 42" S RCP = 758.17 INV. 12" E CLAY = 758.17± WATER = 758.17 SUMP = 758.07	14. 6.0' CONCRETE STM MH RIM = 766.41 INV. 12" N RCP = 762.36 INV. 12" S RCP = 760.61 INV. E = 760.81± INV. 12" W CLAY = 760.91 WATER = 760.98 SUMP = 760.41	24. SAN MH RIM = 769.27 INV. 12" W = 763.67 WATER = 763.52 SEDIMENT = 763.12	34. SAN MH RIM = 764.96
5. SQUARE BLOCK UNKNOWN MH RIM = 767.18 SUMP = 759.98	15. 2.0' BLOCK STM CB RIM = 766.25 INV. 12" N RCP = 760.40 INV. 4" W-SE (UNDERDRAIN) INV. 6" SE PVC = 763.65± WATER = 761.05 SUMP = 760.15	25. 2.0' BLOCK STM CB RIM = 769.38 SEDIMENT = 767.58	35. STM MH RIM = 764.97 INV. 24" N CLAY = 760.57 INV. 12" S CLAY = 761.37 INV. 12" W CLAY = 761.52 INV. 24" S CLAY = 760.77 INV. 12" E-W = 760.77 (ENCLOSED) SEDIMENT = 760.62
6. WATER MH RIM = 766.68	16. 2.0' BLOCK STM CB RIM = 766.10	26. 2.0' BLOCK STM CB RIM = 769.71 INV. 12" E RCP = 764.11 WATER = 764.06 SEDIMENT = 763.26	36. STM CB RIM = 765.14 INV. 6" N CPP = 763.49 INV. 6" S CPP = 763.49 INV. 10" VERTICAL PVC = 761.24
7. 6.0' BRICK STM MH RIM = 766.68 INV. 12" W = 760.73 INV. 12" SE CLAY = 760.53 INV. 4" N = 761.88 WATERMAIN E-W IRON TOP OF PIPE = 763.83 SEDIMENT = 760.48	17. STM CB RIM = 766.41	27. 6.0' BRICK STM MH RIM = 768.84 WATERMAIN E-W IRON TOP OF PIPE = 766.44 INV. 12" W RCP = 763.64 INV. 12" E RCP = 763.54 SEDIMENT = 763.54	
8. 4.0' BRICK STM MH RIM = 766.68 INV. E-W COP PLUGGED INV. 12" NW CLAY = 760.74 WATER = 760.84 SUMP = 757.98	18. SAN MH RIM = 768.32 INV. 30" E RCP = 755.02 INV. 30" W RCP = 755.12 INV. 15" N PVC = 755.92		
9. STM CB RIM = 766.35 INV. = 759.80± TOP OF PIPE = 763.75 (VERTICAL PIPE)	19. 2.0' BLOCK STM CB RIM = 769.02 INV. 12" E RCP = 764.52 SEDIMENT = 764.52		
10. UNKNOWN MH RIM = 767.54			

SURVEY CONTROL

CP 1 N = 285262.92	E = 12793135.26	EL = 766.79
CP 2 N = 285251.04	E = 12793511.92	EL = 769.01
CP 3 N = 285243.48	E = 12793833.65	EL = 770.40
CP 4 N = 285200.93	E = 12794231.07	EL = 765.46

BENCHMARKS

ELEVATIONS OF THIS SURVEY ARE BASED ON NAVD 88 AS DERIVED FROM GPS

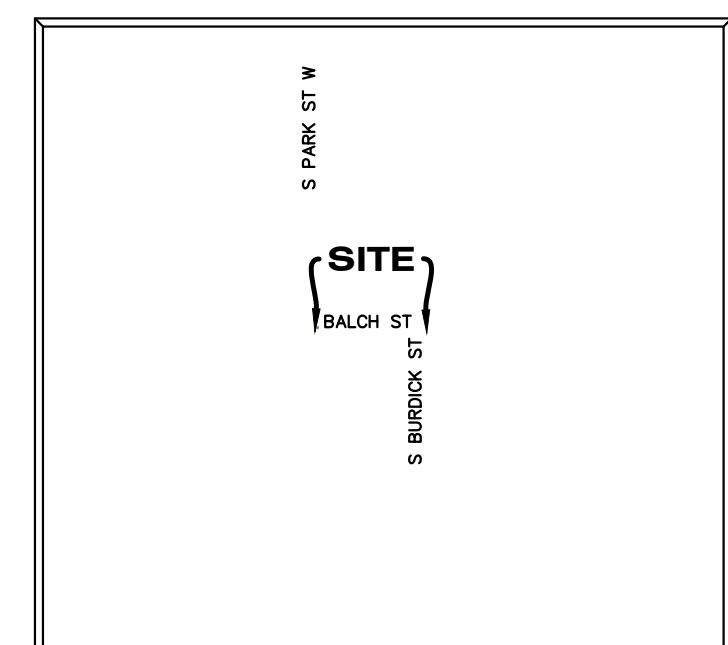
BM 1 EL = 768.14
RAILROAD SPIKE IN NORTH FACE OF UTILITY POLE ON THE SOUTH SIDE OF BALCH ST 120'± EAST OF S PARK ST

BM 2 EL = 771.02
CHISELED X IN NORTH BOLT ON HYDRANT ON THE NORTHWEST CORNER OF BALCH ST AND S PARK ST INTERSECTION

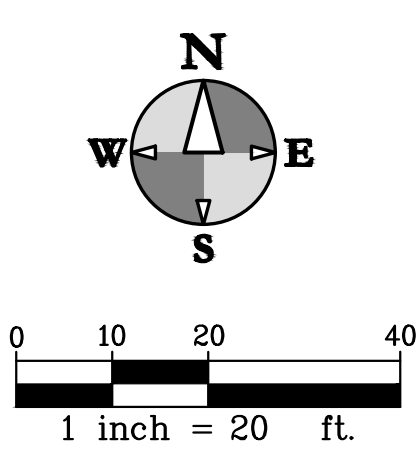
BM 3 EL = 770.01
MAG NAIL IN NORTHEAST FACE OF UTILITY POLE ON THE NORTHWEST CORNER OF BALCH ST AND S PARK ST INTERSECTION

BM 4 EL = 771.82
FOUND SPIKE IN SOUTH FACE OF UTILITY POLE ON THE NORTH SIDE OF BALCH ST 90'± WEST OF S ROSE ST

BM 5 EL = 766.30
SPIKE IN SOUTHEAST FACE OF UTILITY POLE ON THE NORTHEAST CORNER OF BALCH ST AND S BURDICK ST.



SECTION 22 TOWN 02 S, RANGE 11 W,
CITY OF KALAMAZOO, KALAMAZOO COUNTY,
MICHIGAN
BALCH STREET

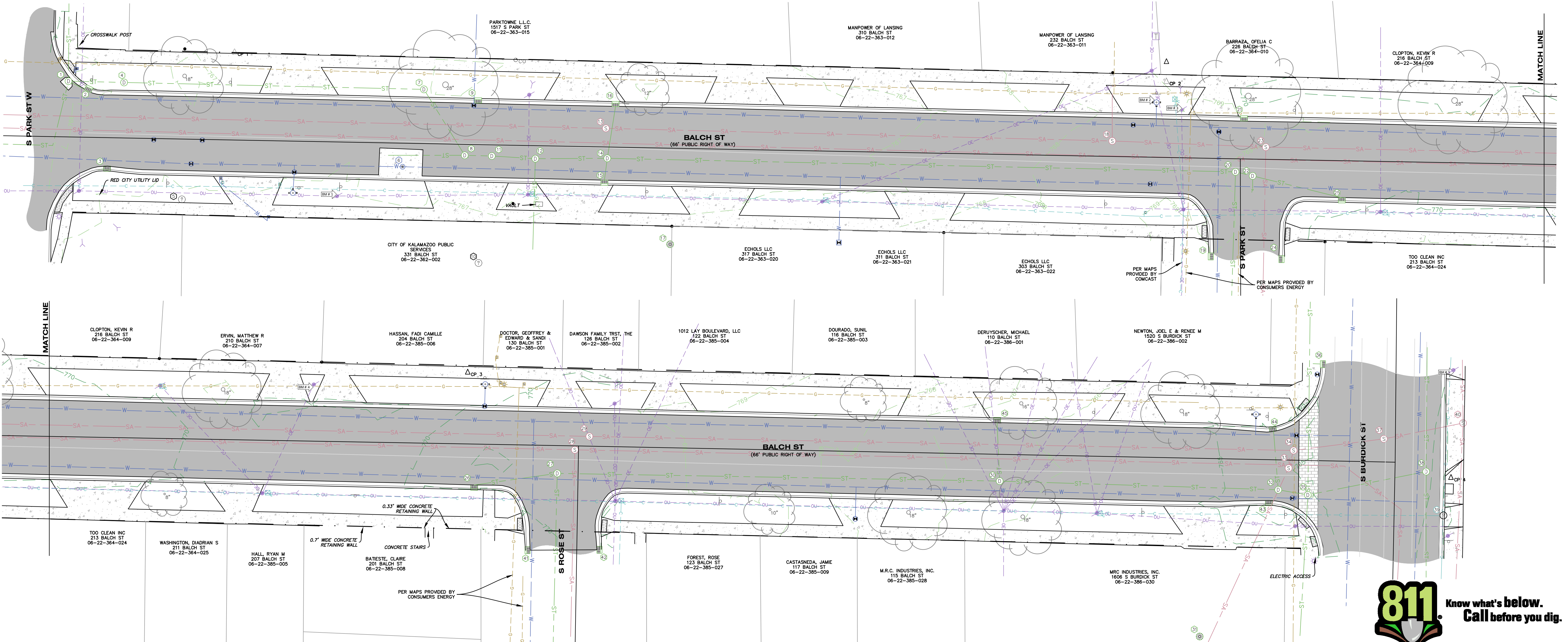


SURVEYOR'S NOTES

1. BASIS OF BEARINGS: MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD 83
2. CONTOUR INTERVAL = 1 FOOT
3. UTILITIES SHOWN ARE BASED ON FIELD LOCATION OF SURFACE EVIDENCE AND RECORDS PROVIDED BY OTHERS. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. ADDITIONAL UTILITIES MAY BE ENCOUNTERED, PRIOR TO ANY EXCAVATION THE CONTRACTOR SHALL CALL MISS DIG AT 1-800-482-7171.
4. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THE LAND DEPICTED IN THIS SURVEY LIES IN ZONE X. MAP 26077C01890, EFFECTIVE DATE 02/17/2010.
5. NO WETLANDS ON SITE PER THE NATIONAL WETLANDS INVENTORY. A DELINEATION OF THE WETLANDS BY A QUALIFIED CONSULTANT WAS NOT PERFORMED AT THE TIME OF SURVEY.
6. THIS IS NOT A BOUNDARY SURVEY. PARCEL LINES WERE TAKEN FROM THE CITY GIS WEBSITE AND ARE APPROXIMATE.
7. AT THE TIME OF SURVEY SNOW WAS COVERING THE GROUND. SNOW COVER AND PLOWED SNOW MAY HAVE OBSTRUCTED SOME SITE FEATURES.

MISS DIG DESIGN TICKET DATA

123.NET, INC. FIBER OPTICS - 248-431-4584 - 03/03/22 - NO RESPONSE
AT&T TELEPHONE - PHILIP BARDOZC 269-384-4476 - 02/21/2022 - MAPS PROVIDED
CHARTER COMMUNICATIONS CABLE TV - 800-778-9140 - 02/17/2022 - MAPS PROVIDED
CHARTER COMMUNICATIONS FIBER OPTICS - 800-778-9140 - 02/17/2022 - MAPS PROVIDED
CLUMAX TELEPHONE (CTS COMMUNICATIONS) FIBEROPTICS - 616-455-9840 - NO RESPONSE
CABLE TV - 855-962-8525 - 03/03/22 - NO RESPONSE
COMCAST FIBER OPTICS - ALESHA BAIBOOK 855-962-8525 - 03/01/22 - MAPS PROVIDED
CONSUMERS ENERGY ELECTRIC - 248-877-7744 - 03/03/22 - NO RESPONSE
CONSUMERS ENERGY GAS - CONSUMERS SIMS WEBSITE - MAPS PROVIDED - 02/28/2022
KALAMAZOO CITY DPS POTABLE WATER - WILL EICHELBERGER 269-337-8727 - 02/24/2022 - MAPS PROVIDED
KALAMAZOO CITY DPS SANITARY SEWER - WILL EICHELBERGER 269-337-8727 - 02/24/2022 - MAPS PROVIDED
KALAMAZOO CITY DPS STORM SEWER - WILL EICHELBERGER 269-337-8727 - 02/24/2022 - MAPS PROVIDED
KALAMAZOO CITY DPS TRAFFIC - WILL EICHELBERGER 269-337-8727 - 02/24/2022 - MAPS PROVIDED



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www.hurleyandstewart.com

hurley & Stewart

Job No: 22-006D P.M.TAK DTL BDE QA/QC 07/01/22
ISSUED FOR REVISIONS:
#1 TOPOGRAPHIC SURVEY 03/03/22
#2 ADDITIONAL TOPO 07/01/22

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TOPOGRAPHIC SURVEY
BALCH ST
CITY OF KALAMAZOO

Sheet Title:
Project:
Client:

07/01/22
Sheet
S-1



LEGEND

<ul style="list-style-type: none"> ◀ BM ## BENCH MARK ■ SET MONUMENT ■ FOUND MONUMENT ● SET CAPPED IRON LIC. # 57885 ○ FOUND IRON ⊗ SET CHISELED "X" ⊗ FOUND CHISELED "X" △ CONTROL POINT P= PLATTED D= DESCRIBED M= MEASURED R= RECORD C= CALCULATED ▣ CURB CATCH BASIN ▣ SQUARE CATCH BASIN ▣ ROUND CATCH BASIN ○ MANHOLE STORM ○ MANHOLE SANITARY ○ SANITARY CLEANOUT ○ FIRE HYDRANT ○ WATER VALVE ○ WATER METER ○ WELL HEAD ○ SPRINKLER CONTROL VALVE ○ SPRINKLER HEAD ○ BOLLARD ○ AIR CONDITIONER ○ FIRE DEPARTMENT CONNECTION ○ DOWN SPOUT ○ COMMUNICATION MANHOLE ○ FLARED END SECTION ○ FLAG ○ COLUMN ○ MONITOR WELL ○ PARK BENCH ○ POST INDICATOR VAVLE ○ PARKING METER ○ POST ○ SOIL BORING ○ SPIGOT ○ PIPE MARKER COMMUNICATIONS ○ PIPE MARKER ELECTRIC ○ PIPE MARKER GAS ○ YARD DRAIN ○ GAS METER ○ GAS VALVE ○ TELEPHONE MANHOLE ○ RISER ○ SIGN ○ MAILBOX ○ TRANSFORMER ○ YARD LIGHT ○ HAND HOLE (ELECTRIC) ○ LIGHT POLE ○ (UTILITY, GUY, POWER) POLE 	<ul style="list-style-type: none"> ○ GUY WIRE ○ ELECTRIC MANHOLE ○ ELECTRIC METER --- CONTOUR HIGHLIGHTED --- CONTOUR NORMAL --- POWER LINE --- MISS DIG COMMUNICATION --- MISS DIG ELECTRIC --- MISS DIG FIBEROPTIC --- MISS DIG GAS --- MISS DIG SANITARY SEWER --- MISS DIG STORMWATER --- MISS DIG TELEPHONE --- MISS DIG WATER --- MISS DIG UNKNOWN --- TREE LINE --- FENCE --- GUARD RAIL --- PAVEMENT --- CONCRETE SURFACE --- DECIDUOUS TREE --- CONIFEROUS TREE --- BUSH --- PROPOSED CONTOUR HIGHLIGHTED --- PROPOSED CONTOUR NORMAL --- PROPOSED SANITARY SEWER --- PROPOSED STORM SEWER --- PROPOSED CATV --- PROP ELEC (OVERHEAD) --- PROP ELEC (UNDERGROUND) --- PROPOSED FIBEROPTIC CABLE --- PROPOSED GAS --- PROPOSED TELEPHONE --- PROPOSED WATER MAIN --- PROPOSED TRENCHLINE --- PROPOSED FENCE --- WATER VALVE IN VAULT --- WATER REDUCER --- TELEPHONE PEDESTAL --- TELEPHONE POLE --- PROPOSED SPOT GRADE --- EXISTING SPOT GRADE --- POST/BOLLARD ○ SOIL BORING
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NOTE: UNLESS OTHERWISE NOTED, SYMBOLS IN THIS LEGEND ARE SHOWN AS EXISTING. PROPOSED SYMBOLS WILL USE THE CORRESPONDING SYMBOL WITH A THICKER LINE.

PROJECT NOTES

1. VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO ORDERING STRUCTURES AND CONSTRUCTION.
2. COORDINATE ALL TRAFFIC CONTROL WITH CITY OF KALAMAZOO.
3. PAYMENT FOR ALL WORK SHALL BE ACCORDING TO THE PAY ITEMS INDICATED. ANY WORK REQUIRED ON THE DRAWINGS BUT OTHERWISE NOT SPECIFICALLY COVERED BY A PAY ITEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
4. PAVEMENT MARKINGS AND SIGNAGE SHALL CONFORM TO THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND MICHIGAN BARRIER FREE CODE.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND CITY OF KALAMAZOO STANDARDS SPECIFICATIONS.
7. FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CALL 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THIS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

BENCHMARKS

- ELEVATIONS OF THIS SURVEY ARE BASED ON NAVD 88 AS DERIVED FROM GPS
- BM 1 EL = 768.14
RAILROAD SPIKE IN NORTH FACE OF UTILITY POLE ON THE SOUTH SIDE OF BALCH ST 120'± EAST OF S PARK ST W.
- BM 2 EL = 771.02
CHISELED X IN NORTH BOLT ON HYDRANT ON THE NORTHWEST CORNER OF BALCH ST AND S PARK ST INTERSECTION.
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- BM 5 EL = 766.30
SPIKE IN SOUTHEAST FACE OF UTILITY POLE ON THE NORTHEAST CORNER OF BALCH ST AND S BURDICK ST.

REMOVAL NOTES

1. REVIEW ALL THE REMOVALS AND PROTECTION WITH OWNER PRIOR TO COMMENCING CONSTRUCTION. INSTALL TEMPORARY SNOW FENCE AROUND ALL TREES REQUIRING PROTECTION. SNOW FENCE SHALL BE PLACED AT EDGE OF DRIP LINE.
2. ALL REMOVALS SHALL BE TAKEN OFF-SITE AND DISPOSED OF. NO STOCKPILE OR BURNING OF DEBRIS IS ALLOWED.
3. COMPLY WITH ALL ASPECTS OF THE SOIL EROSION CONTROL PERMIT AS ISSUED BY CITY OF KALAMAZOO. ALL TEMPORARY CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION.
4. ALL REMOVALS SHALL BE TO THE LIMITS INDICATED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. UNAUTHORIZED REMOVALS AND SUBSEQUENT REPLACEMENT SHALL BE AT THE CONTRACTOR'S EXPENSE.
5. CURB CUTS AND REMOVALS WILL BE DONE TO THE NEAREST EXISTING JOINT.
6. REMOVE, STORE, AND RESET ANY EXISTING SIGNS AS DIRECTED BY THE ENGINEER/CITY.
7. REMOVE ALL TREES TO THE CLEARING LIMITS AS SHOWN. REMOVE ALL EXISTING TREES, STUMPS AND BRUSH FROM THE SITE AS NECESSARY TO CONSTRUCT THE IMPROVEMENTS.

GRADING NOTES

1. ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO MASS GRADING.
2. REMOVE AND REPLACE WITH CONTROLLED FILL ANY AREAS THAT HAVE BEEN SOFTENED BY RAINS, FREEZING, CONSTRUCTION EQUIPMENT, ETC.
3. ALL REQUIRED FILL FOR THIS PROJECT SHALL BE SELECTED EXCAVATED MATERIAL FROM THE SITE APPROVED BY THE ENGINEER OR CLASS II GRANULAR MATERIAL FROM BORROW AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
4. ALL GRANULAR FILL UNDER THE INFLUENCE OF THE ROADWAY AND PROCESSED ROAD GRAVEL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY UNLESS OTHERWISE NOTED.
5. ALL COMPACTION SHALL BE ACCOMPLISHED BY PLACING THE FILL IN 12" LOOSE LIFTS AND MECHANICALLY COMPACTING EACH LIFT TO AT LEAST THE SPECIFIED MINIMUM DRY DENSITY. FIELD DENSITY TESTS SHOULD BE PERFORMED ON EACH LIFT AS NECESSARY TO ENSURE THAT ADEQUATE MOISTURE CONDITIONS AND COMPACTION ARE BEING ACHIEVED.
6. CONTRACTOR SHALL REMOVE AND STOCKPILE ALL TOPSOIL AND BLACK ORGANIC SOILS ON-SITE TO BE USED IN THE REGRADING OF LANDSCAPE AREAS. THIS MATERIAL IS NOT TO BE USED FOR FILL OR PAVEMENT SUBBASE. REMOVAL OF ANY EXCESS SOIL OFF-SITE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

UTILITY NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CITY OF KALAMAZOO STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE INSTALLATION, 2021.
2. THE CONTRACTOR SHALL INSTALL PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
3. ANY UTILITIES REQUIRING DEWATERING SHALL BE INSTALLED TO THE CITY OF KALAMAZOO STANDARDS. CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING NECESSARY TO CONSTRUCT UTILITIES IN THE DRY.
4. DEWATERING MAY BE REQUIRED TO INSTALL OR REMOVE SOME UTILITIES. REFER TO SPECIFICATIONS FOR SPECIFIC REQUIREMENTS.
5. REMOVE ANY ACCUMULATED SEDIMENT FROM ALL STRUCTURES AND REMOVE SILT SACKS ONCE SITE IS ESTABLISHED.
6. PROVIDE 18" WATER MAIN SEPARATION WHEN CROSSING OTHER UTILITIES. DEFLECT UNDER OTHER UTILITIES W/O USING FITTINGS WHENEVER POSSIBLE.

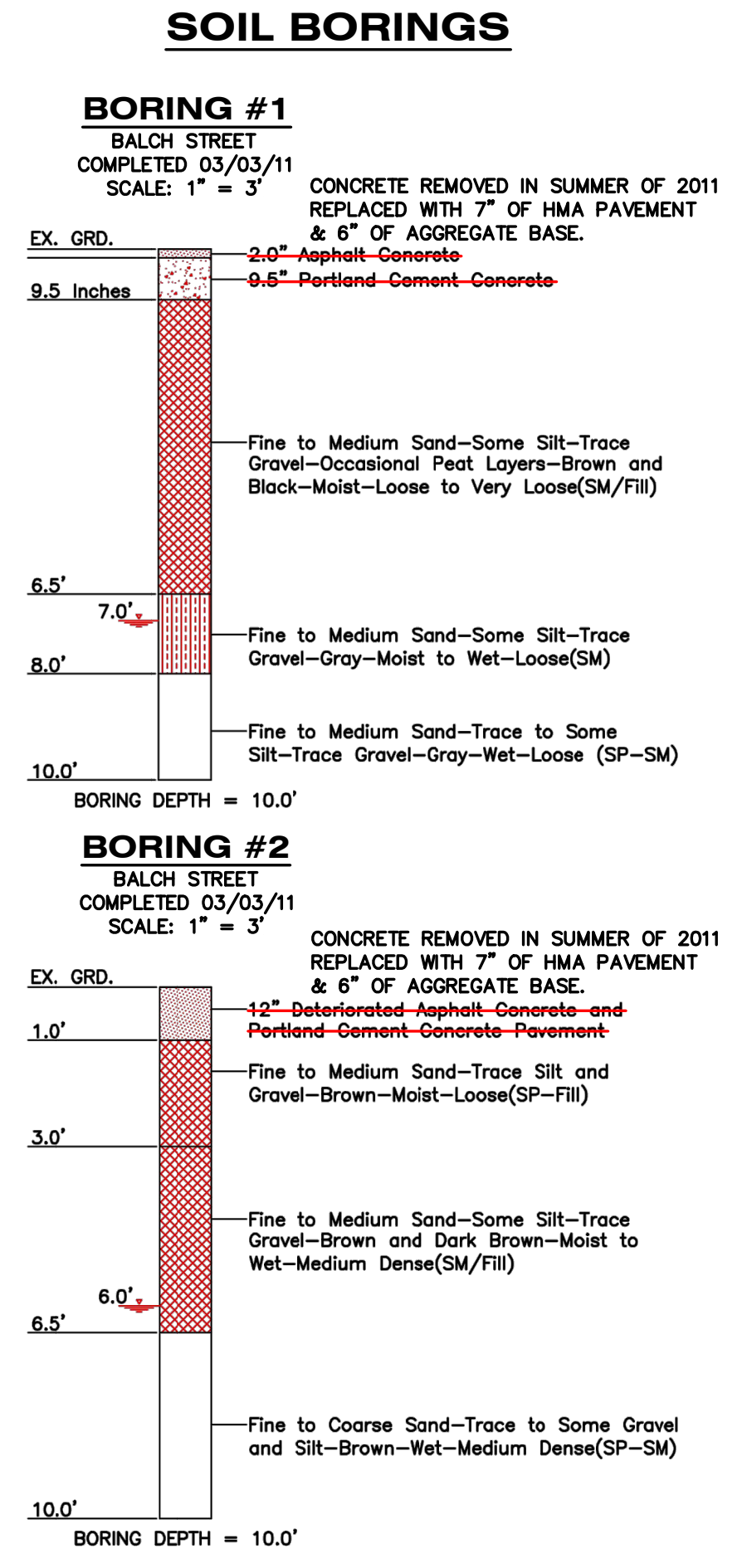
SESC NOTES

1. ALL WORK WILL COMPLY WITH THE PROVISIONS OF THE SOIL EROSION AND SEDIMENTATION CONTROL ACT (PA 347 OF 1972 AS AMENDED) ADMINISTERED BY THE CITY OF KALAMAZOO.
2. AVOID UNNECESSARY DISTURBING OR REMOVING EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE AREAS ACT AS SEDIMENT FILTERS.
3. CONTRACTOR SHALL REFER TO MDOT & DTMB SESC MANUAL FOR INSTALLATION SPECIFICATIONS FOR ALL TEMPORARY SESC MEASURES. TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL SITE IS ESTABLISHED.
4. INSTALL INLET PROTECTION AT ALL STORM SEWER STRUCTURES DURING CONSTRUCTION.
5. NO SITE WORK SHALL BEGIN UNTIL THE SESC MEASURES ARE INSTALLED.
6. THE CONTRACTOR SHALL SERVE AS THE CERTIFIED STORM WATER OPERATOR FOR THE PROJECT AND SHALL PROVIDE COPIES OF ALL INSPECTION REPORTS AND RECOMMENDATIONS TO THE ENGINEER.
7. PROVIDE SILT SACKS IN EACH CATCH BASIN UNTIL SITE IS STABILIZED.
8. CLEAN ADJACENT ROADWAYS AS DIRECTED BY ENGINEER. THIS IS CONSIDERED INCIDENTAL TO THE PROJECT.
9. WATER SITE AS DIRECTED BY ENGINEER TO PREVENT AIR BORNE SEDIMENT TRANSFER. THIS IS CONSIDERED INCIDENTAL TO THE PROJECT.
10. TO PREVENT OFFSITE TRACKING OF SEDIMENT, SWEEP THE ROADWAY AND CURB WEEKLY OR AS DIRECTED BY ENGINEER. IF SWEEPING IS LIKELY TO CREATE EXCESSIVE DUST, WET/DAMPEN SEDIMENTS PRIOR TO SWEEPING.

MICHIGAN SB - 1 / TW-1							
Project Name: City of Kalamazoo		Logged by: Bobby Glasser		Driller: Bobby Glasser		Page 1 of 1	
241 W South Street Kalamazoo, MI 49007		Start Date: 12.20.2022 Completion Date: 12.20.2022		Method: Hand Auger			
Project #: 51819		Surface Elevation: N/A AMSL - Above Mean Sea Level		Top of Casing Elevation: N/A 5' Screen Depth Interval: N/A Groundwater Elevation: N/A			
Depth (ft)	Sample	PID (ppm)	Recovery (%)	Oil-In-Soil Test (+/-)	Graphic	Description	Temp Well
1	SS-1	0	100%	N/A		Top Soil: Sandy Loam, Dark Brown, with abundant grass roots (Surface is Grass Lawn)	
2	SS-2	0	100%	N/A		Sandy Loam: Dark Brown, Moist, with abundant, sizeable tree roots	
3	SS-3	0	100%	N/A			
4	SS-4	0	100%	N/A			
5	SS-5	0	100%	N/A			
6	SS-6	0	100%	N/A		Sand: Brown, Loamy, Fine-Grained, Moist, with occasional tree roots	
7	SS-7	0	100%	N/A			
8	SS-8	0	100%	N/A			
9	SS-9					END OF BORING / REFUSAL ENCOUNTERED AT 8' bgs	
10	SS-10					IMPENETRABLE OBJECT ENCOUNTERED	
11	SS-11					GROUNDWATER NOT ENCOUNTERED	
12	SS-12					NO TEMP WELL INSTALLED	
13	SS-13						
14	SS-14						
15	SS-15						
16							
17							
18							
19							
20							

MICHIGAN SB - 2 / TW-2							
Project Name: City of Kalamazoo		Logged by: Bobby Glasser		Driller: Bobby Glasser		Page 1 of 1	
241 W South Street Kalamazoo, MI 49007		Start Date: 12.20.2022 Completion Date: 12.20.2022		Method: Hand Auger			
Project #: 51819		Surface Elevation: 767.09 AMSL - Above Mean Sea Level		Top of Casing Elevation: 768.44 5' Screen Depth Interval: 8.6' to 13.6' bgs Groundwater Elevation: 756.26			
Depth (ft)	Sample	PID (ppm)	Recovery (%)	Oil-In-Soil Test (+/-)	Graphic	Description	Temp Well
1	SS-1	0	100%	N/A		Top Soil: Sandy Loam, Dark Brown, with abundant grass roots (Surface is Grass Lawn)	
2	SS-2	0	100%	N/A			
3	SS-3	0	100%	N/A		Sandy Loam: Dark Brown, Moist, with occasional tree roots	
4	SS-4	0	100%	N/A			
5	SS-5	0	100%	N/A			
6	SS-6	0	100%	N/A		Sand: Yellow, Uniform, Medium Grained, Loose, Moist	
7	SS-7	0	100%	N/A			
8	SS-8	0	100%	N/A		Silty Clay: Light Brown, Soft, intermixed with gravel and fine sand	
9	SS-9	0	100%	N/A			
10	SS-10	0	100%	N/A		Groundwater Depth = 10.83' bgs	
11	SS-11	0	100%	N/A			
12	SS-12	0	100%	N/A		Sand: Light Brown, Uniform, Coarse Grained, Loose	
13	SS-13	0	100%	N/A			
14	SS-14	0	100%	N/A			
15	SS-15					END OF BORING 14'	
16							
17							
18							
19							
20							

MICHIGAN SB - 3 / TW-3							
Project Name: City of Kalamazoo		Logged by: Bobby Glasser		Driller: Bobby Glasser		Page 1 of 1	
241 W South Street Kalamazoo, MI 49007		Start Date: 12.20.2022 Completion Date: 12.20.2022		Method: Hand Auger			
Project #: 51819		Surface Elevation: 765.48 AMSL - Above Mean Sea Level		Top of Casing Elevation: 768.55 5' Screen Depth Interval: 7.0' to 12.0' bgs Groundwater Elevation: 756.47			
Depth (ft)	Sample	PID (ppm)	Recovery (%)	Oil-In-Soil Test (+/-)	Graphic	Description	Temp Well
1	SS-1	0	100%	N/A		Top Soil: Sandy Loam, Dark Brown, with abundant grass roots (Surface is Grass Lawn)	
2	SS-2	0	100%	N/A			
3	SS-3	0	100%	N/A		Sandy Loam: Dark Brown, Moist, with occasional tree roots	
4	SS-4	0	100%	N/A			
5	SS-5	0	100%	N/A			
6	SS-6	0	100%	N/A		Sand: Tan, Uniform, Fine to Medium Grained, Loose, Moist	
7	SS-7	0	100%	N/A			
8	SS-8	0	100%	N/A			
9	SS-9	0	100%	N/A		Groundwater Depth = 9.01' bgs	
10	SS-10	0	100%	N/A			
11	SS-11	0	100%	N/A		Sand: Orange, Uniform, Coarse Grained, Loose	
12	SS-12	0	100%	N/A			
13	SS-13					END OF BORING 12'	
14	SS-14						
15	SS-15						
16							
17							
18							
19							
20							



PROJECT NOTES & LEGEND
 BALCH STREET - PARK TO BURDICK
 CITY OF KALAMAZOO
 Sheet Title:
 Project:
 Client:
 05/26/23
 Sheet

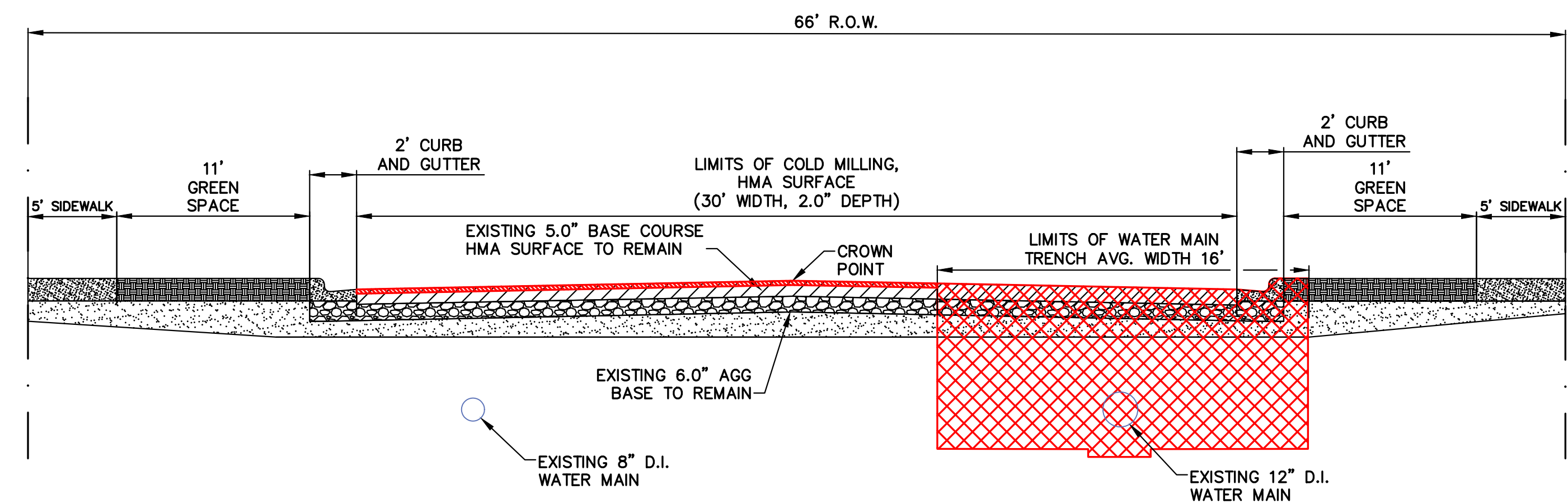
Job No. 22-000D P.M.-ARP Drl.N.R. QA/QC. 05/26/23
 ISSUED FOR REVISIONS:
 3 E.G.L. SUBMITTAL 10/17/22
 4 E.G.L. RESUBMITTAL 12/05/22
 5 IFB 04/06/23
 6 ADDENDUM #1 05/25/23
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 2800 s. 11th street
 Kalamazoo, Michigan 49009
 269.552.4960 fax 269.552.4961
 www.hurleyandstewart.com

DRAWING LOCATION: H:\22-006D\Baldich\watermain\app\mch\FINAL DRAWINGS\C-2 Typical Sections.dwg LAST SAVED BY: WALK ON 1/6/2023

Job No.: 22-006D P.M.-APP. D.H.: N.R. Q.A./Q.C.: 05/26/23
 ISSUED FOR/REVISIONS:
 3 E.G.L.E. SUBMITTAL 10/17/22
 4 E.G.L.E. RESUBMITTAL 12/05/22
 5 IFB 04/06/23
 6 ADDENDUM #1 05/25/23
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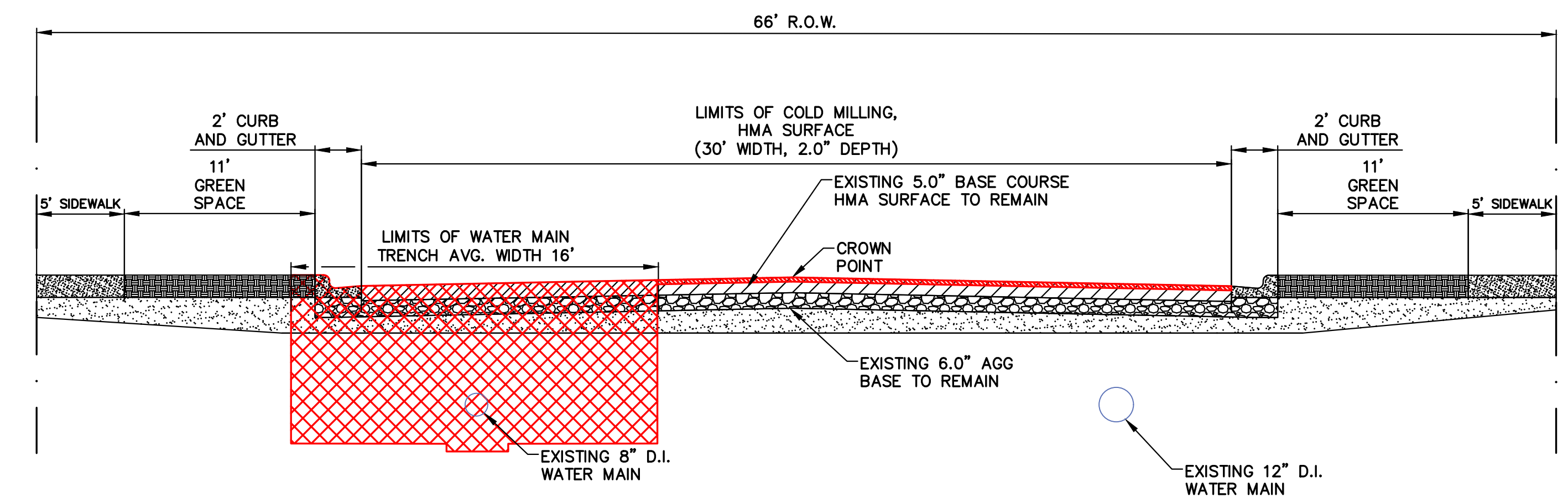
TYPICAL SECTIONS
BALCH STREET - PARK TO BURDICK
CITY OF KALAMAZOO

Sheet Title:
 Project:
 Client:
 05/26/23
 Sheet



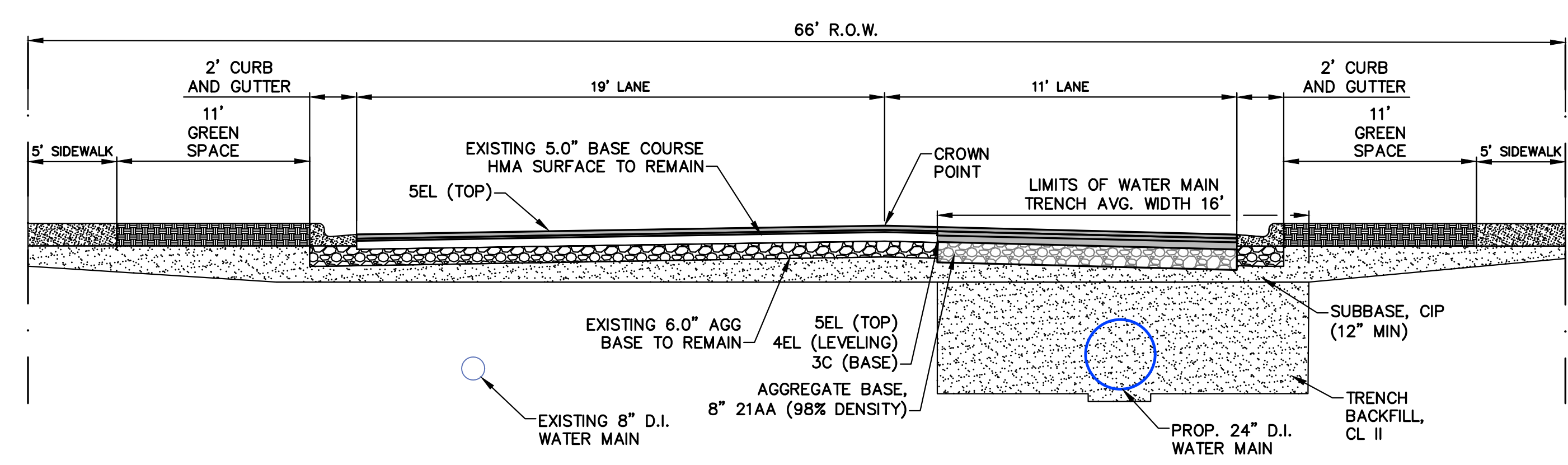
TYPICAL EXISTING AND REMOVALS SECTION

NO SCALE
 APPLIES:
 POB TO STA. 1+25



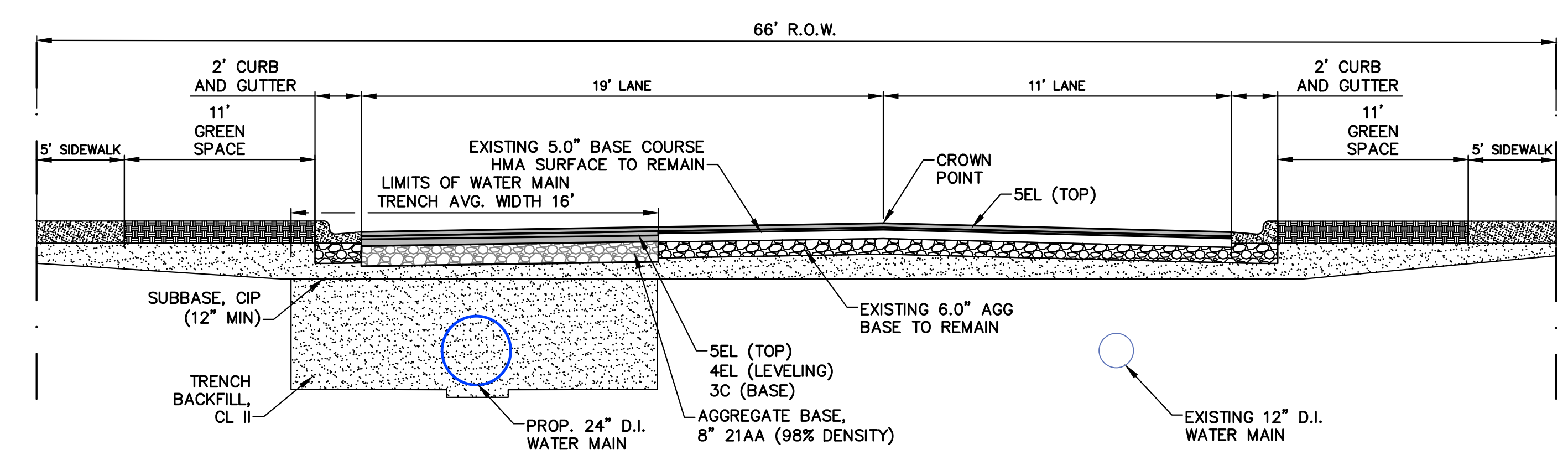
TYPICAL EXISTING AND REMOVALS SECTION

NO SCALE
 APPLIES:
 STA. 1+25 TO POE



TYPICAL PROPOSED SECTION

NO SCALE
 APPLIES:
 POB TO STA. 1+25



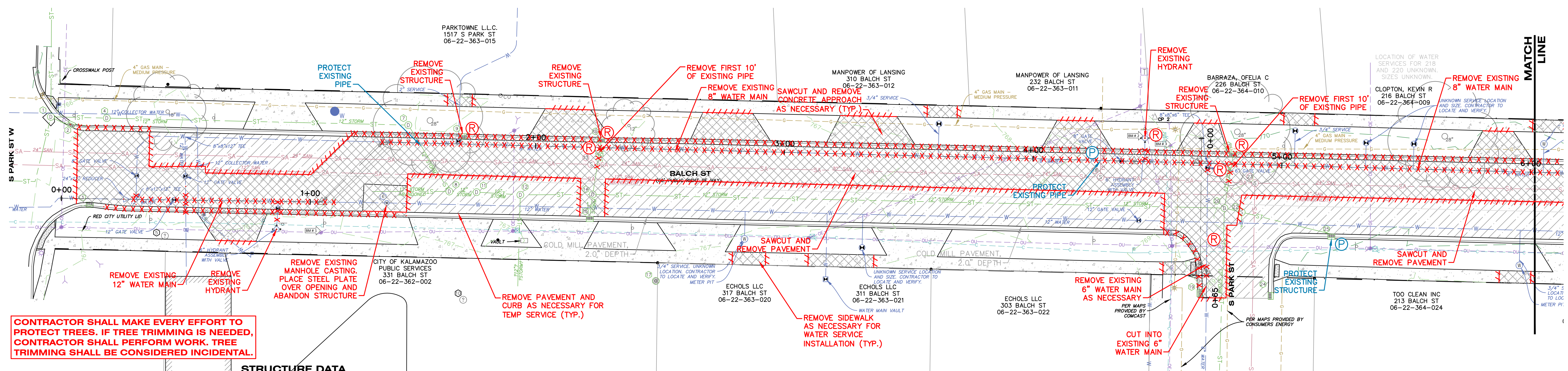
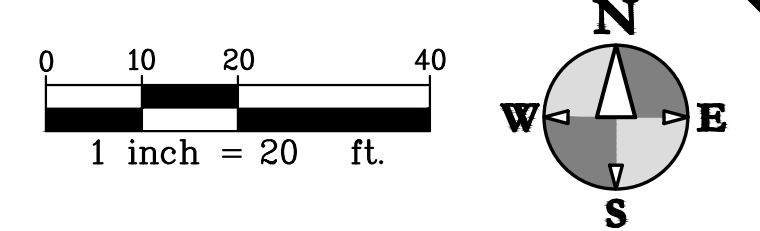
TYPICAL PROPOSED SECTION

NO SCALE
 APPLIES:
 STA. 1+25 TO POE

HMA APPLICATION ESTIMATE

IDENT NO.	ITEM	RATE PER SYD	PERFORMANCE GRADE	REMARKS
5EL	HMA, 5EL	220 LB	PG 64-28	TOP COURSE
4EL	HMA, 4EL	220 LB	PG 64-28	LEVELING COURSE
3C	HMA, 3C	275 LB	PG 64-28	BASE COURSE
SS-1H	* BOND COAT, SS-1H	0.10 GAL		FULL COVERAGE

* FOR INFORMATION ONLY



CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT TREES. IF TREE TRIMMING IS NEEDED, CONTRACTOR SHALL PERFORM WORK. TREE TRIMMING SHALL BE CONSIDERED INCIDENTAL.

STRUCTURE DATA

1. STM MH RIM = 765.76	8. 4.0' BRICK STM MH RIM = 766.69 INV. 12" N RCP = 762.36 INV. 12" W CLAY = 763.00 WATER = 760.84 SUMP = 757.98	14. 6.0' CONCRETE STM MH RIM = 766.41 INV. 12" N RCP = 762.36 INV. 12" W CLAY = 763.00 WATER = 760.84 SUMP = 760.41	20. 6.0' BRICK STM MH RIM = 769.10 INV. 12" W CLAY = 763.00 WATER = 763.52 SEDIMENT = 763.12	26. 2.0' BLOCK STM CB RIM = 769.27 INV. 12" W = 763.67 WATER = 763.52 SEDIMENT = 763.12	32. STM MH RIM = 766.45 INV. 12" E RCP = 761.35± INV. 12" W RCP = 761.35 INV. 12" N WATER = 761.70 SEDIMENT = 761.30	38. STM CB RIM = 765.14 INV. 6" N CPP = 763.49 INV. 6" S CPP = 763.49 INV. 10" VERTICAL PVC = 761.24	44. 2.0' BLOCK STM CB RIM = 764.73 INV. NE DROP = 761.03± TOP OF PIPE = 763.18
2. STM CB RIM = 765.88 INV. = 761.08 TOP OF PIPE = 762.68 (VERTICAL PIPE)	9. STM CB RIM = 766.35 INV. = 759.80± TOP OF PIPE = 763.75 (VERTICAL PIPE)	15. 2.0' BLOCK STM CB RIM = 766.25 INV. 12" N RCP = 760.40 INV. 4" W-SE (UNDERDRAIN) WATER = 760.91 SUMP = 760.41	21. 2.0' BLOCK STM CB RIM = 768.70 INV. 12" W RCP = 765.75 WATER = 765.70 SEDIMENT = 765.10	27. 2.0' BLOCK STM CB RIM = 768.71 WATER = 764.06 SEDIMENT = 763.26	33. STM CB RIM = 764.73	39. 5.0' BRICK STM MH RIM = 765.07 INV. 30" N = 759.77 INV. 30" S = 759.77 INV. 12" SW PLUGGED WATER = 763.25 SEDIMENT = 763.00	45. 2.0' BLOCK STM CB RIM = 764.75 INV. = 761.10 TOP OF PIPE = 763.50 (VERTICAL PIPE)
3. 2.0' BLOCK STM CB RIM = 764.43 WATER = 758.20 TOP OF PIPE = 762.68	10. UNKNOWN MH RIM = 767.54	16. STM CB RIM = 766.10	22. 6.0' CONCRETE STM MH RIM = 769.12 INV. 30" S RCP = FULL OF SEDIMENT INV. 12" W CLAY = 762.87± INV. 12" E RCP = 762.99 WATER = 762.99 SEDIMENT = 762.77	28. SAN MH RIM = 769.64 INV. 8" E INV. E = 758.24± INV. W = 758.24±	34. SAN MH RIM = 764.98	40. 2.0' BLOCK STM CB RIM = 765.38	46. 4.0' BLOCK STM MH (NOT SHOWN) RIM = 767.01 INV. 24" N RCP = 760.01 INV. 24" S RCP = 760.01 INV. 15" E CLAY = 761.01
4. 2.0' BLOCK STM CB RIM = 764.77 INV. 36" N OBLONG PIPE = 757.97 INV. 42" S RCP = 758.17 INV. 12" E CLAY = 758.17± WATER = 758.17 SUMP = 758.07	11. 4.0' CONCRETE STM MH RIM = 766.84 INV. 12" W CLAY = 760.94 WATER = 760.84 SUMP = 760.39	17. STM CB RIM = 766.41	23. SAN MH RIM = 769.03 INV. 24" E RCP = 754.98 INV. 24" W RCP = 755.08 INV. S = 755.68	29. SAN MH RIM = 769.46 INV. 27" E RCP = 754.61 INV. 24" W RCP = 754.71 INV. 8" W = 755.96	35. SAN MH RIM = 764.96	41. 2.0' BLOCK STM CB RIM = 770.17 INV. = 764.52 TOP OF PIPE = 768.02 (VERTICAL PIPE)	
5. STM MH RIM = 766.77 INV. 36" N OBLONG PIPE = 757.97 INV. 42" S RCP = 758.17 INV. 12" E CLAY = 758.17± WATER = 758.17 SUMP = 758.07	12. 4.0' CONCRETE STM MH RIM = 766.54 INV. 12" W CLAY = 760.79 INV. 12" E CLAY = 760.84± INV. 12" W RCP = 760.89 BOTTOM = 760.82±	18. SAN MH RIM = 766.32 INV. 24" E RCP = 755.02 INV. 24" W RCP = 755.12 INV. 15" N PVC = 755.92	24. 2.0' BLOCK STM CB RIM = 769.38 INV. 12" E RCP = 764.52 SEDIMENT = 764.52	30. STM MH RIM = 764.97 INV. 24" N CLAY = 760.57 INV. 12" E CLAY = 761.37 INV. 12" W CLAY = 761.52 INV. 24" S CLAY = 760.77 INV. 12" E-W = 760.77 (ENCLOSED) SEDIMENT = 760.62	36. SAN MH RIM = 764.98	42. 2.0' BLOCK STM CB RIM = 769.74 INV. E-W = 764.94± TOP OF PIPE = 766.94 (VERTICAL PIPE)	
6. 6.0' BRICK STM MH RIM = 766.68 INV. 12" W = 760.73 INV. 24" E RCP = 760.53 INV. 4" N = 761.88 WATERMAIN E-W IRON TOP OF PIPE = 763.83 SEDIMENT = 760.48	13. SAN MH RIM = 766.38 INV. 24" E RCP = 755.33 INV. 24" W CLAY = 755.43 INV. 8" SW CLAY = 759.38	19. 2.0' BLOCK STM CB RIM = 769.02 INV. 12" E RCP = 764.52 SEDIMENT = 764.52			37. SAN MH RIM = 765.67		

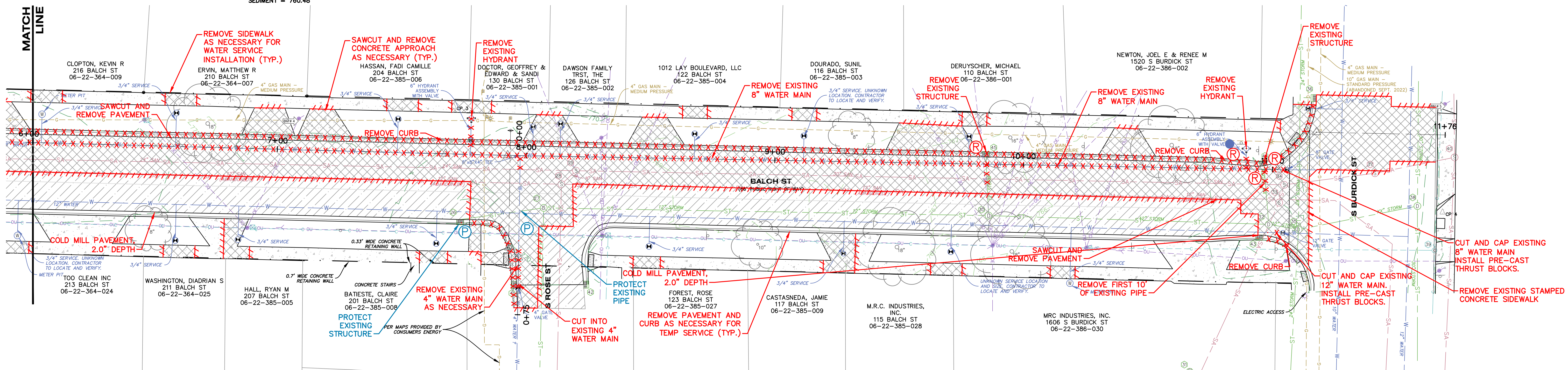
REMOVALS LEGEND

- XXXXXX CURB REMOVAL
- ////// SAWCUT
- 2.0" COLD MILLING
- FULL DEPTH PAVEMENT/
SIDEWALK REMOVAL
- UTILITY LINE REMOVAL
- TREE REMOVAL
- (R) REMOVE
- (P) PROTECT
- (S) SALVAGE
- BM #xx BENCHMARK



ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.

FIELD WORK PERFORMED BY:
HURLEY & STEWART, LLC



CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT TREES. IF TREE TRIMMING IS NEEDED, CONTRACTOR SHALL PERFORM WORK. TREE TRIMMING SHALL BE CONSIDERED INCIDENTAL.

hurley & stewart, llc
2800 s. 11th street
kalamazoo, michigan 49009
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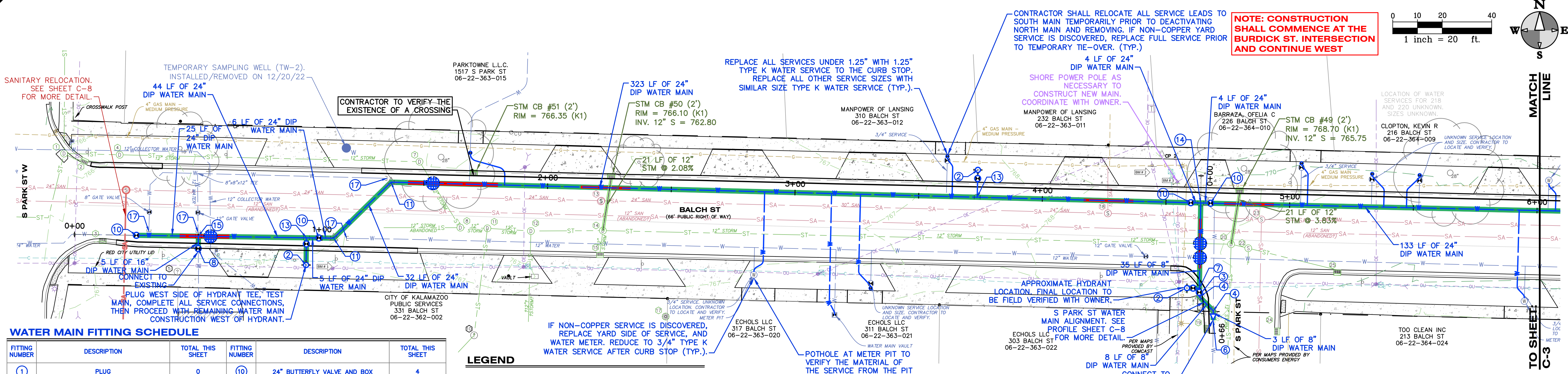
ISSUED FOR/REVISIONS:
3. E-FILE SUBMITTAL 10/17/22
4. E-FILE RESUBMITTAL 12/05/22
5. IFB 04/06/23
6. ADDENDUM #1 05/25/23

Job No.: 22-006D P.M.-APP. D.R.H.-N.R. O.A./C.C. 05/26/23

Sheet Title: **REMOVAL PLAN - PARK TO BURDICK**
Project: **BALCH STREET - PARK TO BURDICK**
Client: **CITY OF KALAMAZOO**

Sheet: **C-3**
Date: 05/26/23

DRAWING LOCATION: H:\22-0068 (Balch St Watermain Replacement)\FINAL DRAWINGS\4-Construction Plan & Profile.dwg - Date: 04/09/2023 - 10:50:00 AM - User: JST



WATER MAIN FITTING SCHEDULE

FITTING NUMBER	DESCRIPTION	TOTAL THIS SHEET	FITTING NUMBER	DESCRIPTION	TOTAL THIS SHEET
1	PLUG	0	10	24" BUTTERFLY VALVE AND BOX	4
2	FIRE HYDRANT ASSEMBLY W/ 6" VALVE	3	11	24" 45" BEND	2
3	8" GATE VALVE AND BOX	1	12	24" X 12" REDUCER	0
4	8" 45" BEND	2	13	24" X 24" X 6" TEE	2
5	8" X 4" REDUCER	0	14	24" X 24" X 8" TEE	1
6	8" X 6" REDUCER	1	15	24" X 24" X 16" TEE	1
7	8" X 8" X 6" TEE	1	16	24" X 24" X 24" TEE	0
8	16" BUTTERFLY VALVE AND BOX	1	17	CUT AND PLUG	4
9	12" TAPPING SLEEVE W/ VALVE	0	18	AIR RELEASE VALVE	0

LEGEND

- POLYETHYLENE WATERMAIN ENCASEMENT
- CENTER FULL STICK OF PIPE TO EXISTING UTILITY WHEN CROSSING OR PASSING (TYP.)
- DEFLECT WATER MAIN UNDER/OVER PIPE CONFLICT (SEE DETAIL)
- LOWER WATER MAIN UNDER CONFLICT, MAINTAIN MIN 6" VERT. CLEARANCE

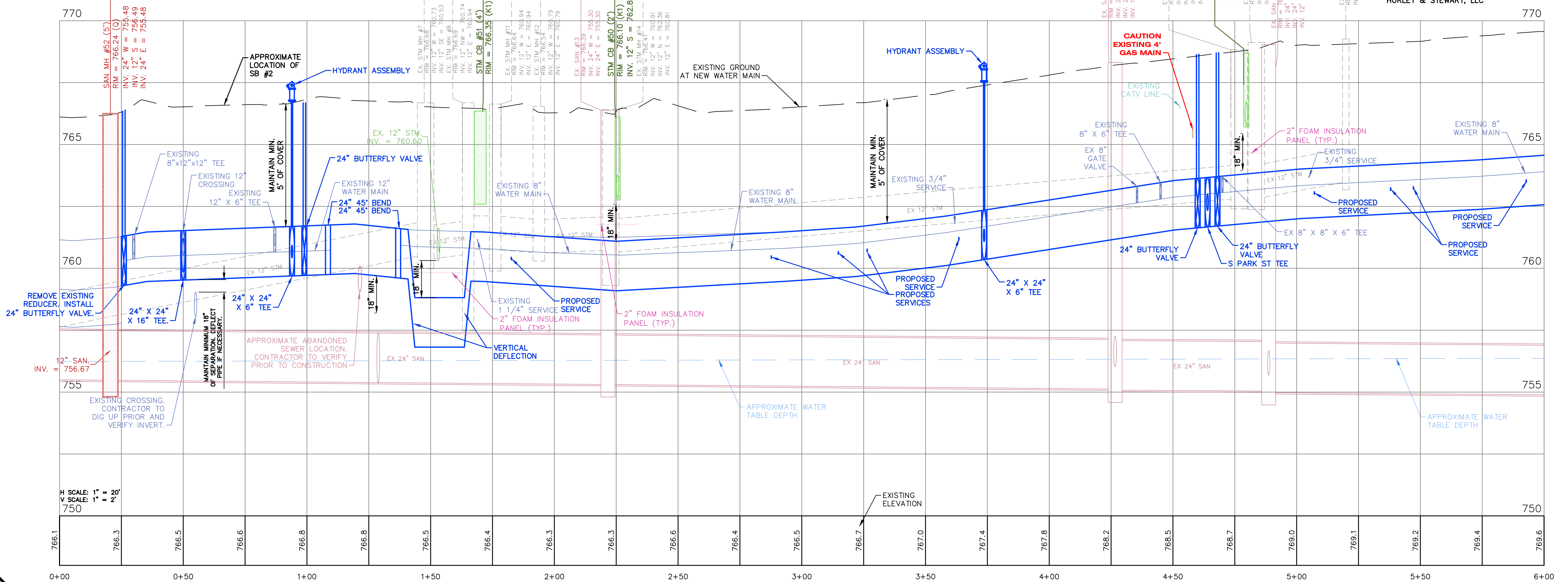
NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING FITTINGS. AMOUNTS DO NOT TAKE INTO CONSIDERATION VERTICAL DEFLECTIONS.

NOTE: CONSTRUCTION SHALL COMMENCE AT THE BURDICK ST. INTERSECTION AND CONTINUE WEST

CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT TREES. IF TREE TRIMMING IS NEEDED, CONTRACTOR SHALL PERFORM WORK. TREE TRIMMING SHALL BE CONSIDERED INCIDENTAL.



ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.
FIELD WORK PERFORMED BY:
HURLEY & STEWART, LLC

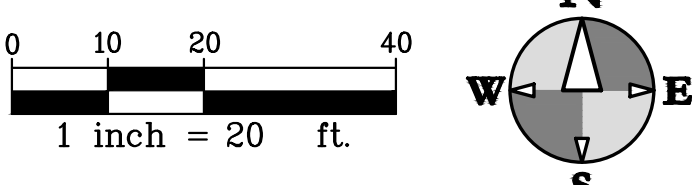
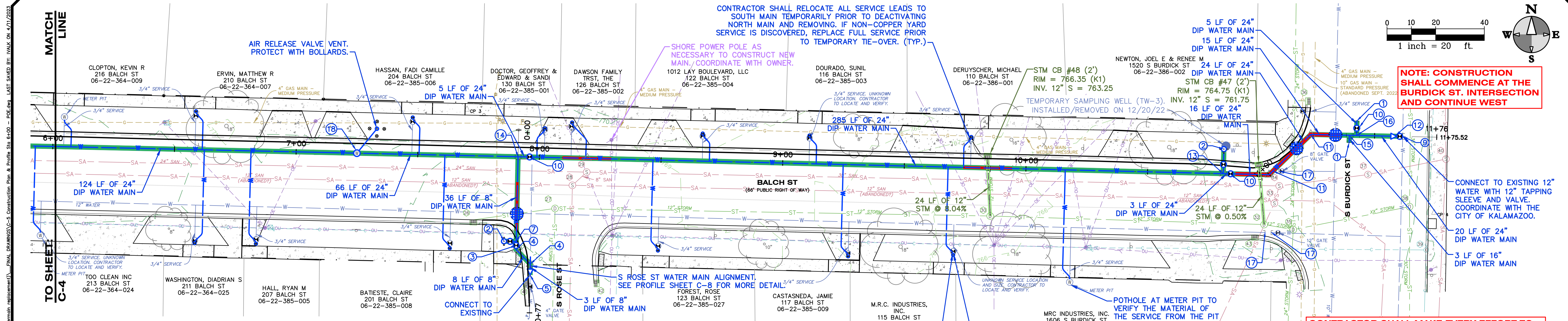


Job No.: 22-0068 P.M.A.B.P. D.H.N.R. O.A./C.C. 05/26/23
 ISSUED FOR PRELIMINARY: 10/17/22
 3 E.C.L.E. SUBMITTAL: 12/05/22
 4 E.C.L.E. RESUBMITTAL: 04/06/23
 5 IFB: 05/25/23
 6 ADDENDUM #1: 05/25/23
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Sheet Title: **CONSTRUCTION PLAN & PROFILE POB - STA 6+00**
 Project: **BALCH STREET - PARK TO BURDICK**
 Client: **CITY OF KALAMAZOO**
 Date: 05/26/23
 Sheet: **C-4**

hurley & stewart, llc
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 kalamazoo, michigan 49009
 269.552.4960 fax 269.552.4961
 www.hurleyandstewart.com





NOTE: CONSTRUCTION SHALL COMMENCE AT THE BURDICK ST. INTERSECTION AND CONTINUE WEST

CONNECT TO EXISTING 12" WATER WITH 12" TAPPING SLEEVE AND VALVE. COORDINATE WITH THE CITY OF KALAMAZOO.

20 LF OF 24" DIP WATER MAIN

3 LF OF 16" DIP WATER MAIN

CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT TREES. IF TREE TRIMMING IS NEEDED, CONTRACTOR SHALL PERFORM WORK. TREE TRIMMING SHALL BE CONSIDERED INCIDENTAL.



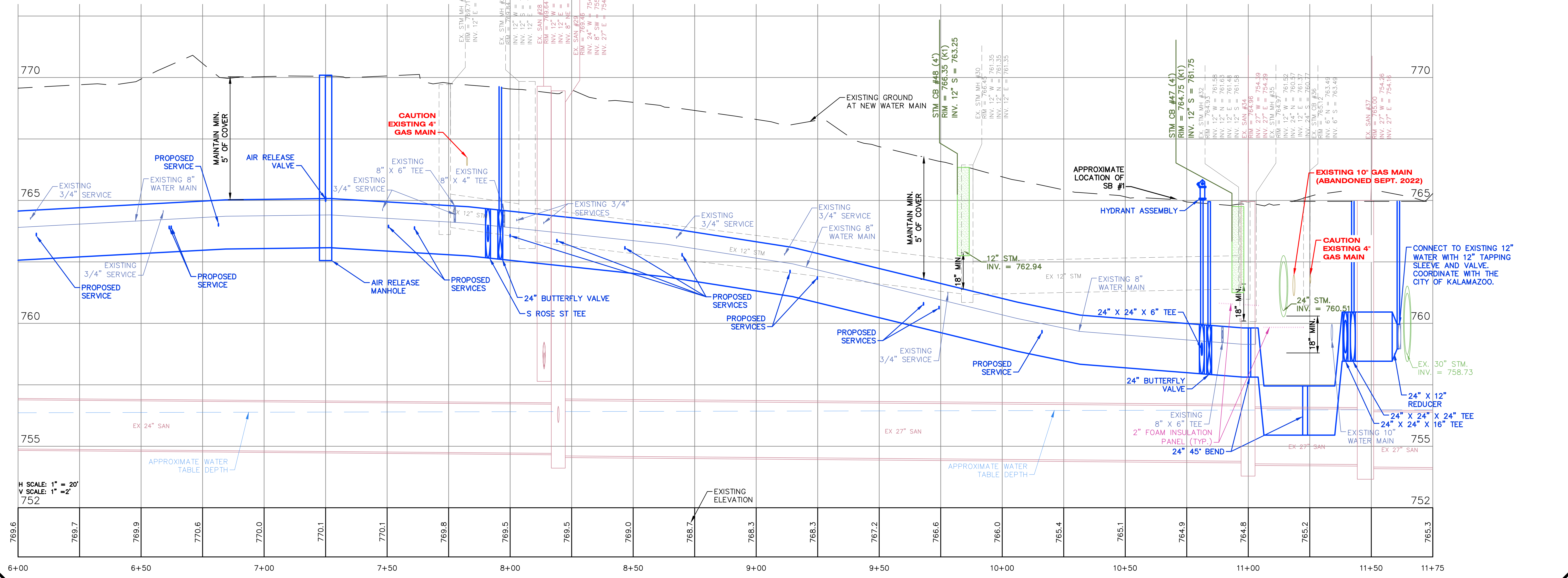
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FIELD WORK PERFORMED BY:
HURLEY & STEWART, LLC

WATER MAIN FITTING SCHEDULE

FITTING NUMBER	DESCRIPTION	TOTAL THIS SHEET	FITTING NUMBER	DESCRIPTION	TOTAL THIS SHEET
1	PLUG	2	10	24" BUTTERFLY VALVE AND BOX	3
2	FIRE HYDRANT ASSEMBLY W/ 6" VALVE	2	11	24" 45° BEND	2
3	8" GATE VALVE AND BOX	1	12	24" X 12" REDUCER	1
4	8" 45° BEND	2	13	24" X 24" X 6" TEE	1
5	8" X 4" REDUCER	1	14	24" X 24" X 8" TEE	1
6	8" X 6" REDUCER	0	15	24" X 24" X 16" TEE	1
7	8" X 8" X 6" TEE	1	16	24" X 24" X 24" TEE	1
8	12" BUTTERFLY VALVE AND BOX	0	17	CUT AND PLUG	3
9	12" TAPPING SLEEVE W/ VALVE	1	18	AIR RELEASE VALVE	1

- LEGEND**
- POLYETHYLENE WATERMAIN ENCASEMENT
 - CENTER FULL STICK OF PIPE TO EXISTING UTILITY WHEN CROSSING OR PASSING (TYP)
 - DEFLECT WATER MAIN UNDER/OVER PIPE CONFLICT (SEE DETAIL)
 - LOWER WATER MAIN UNDER CONFLICT, MAINTAIN MIN 6" VERT. CLEARANCE
- NOTE:
CONTRACTOR RESPONSIBLE FOR VERIFYING FITTINGS. AMOUNTS DO NOT TAKE INTO CONSIDERATION VERTICAL DEFLECTIONS.



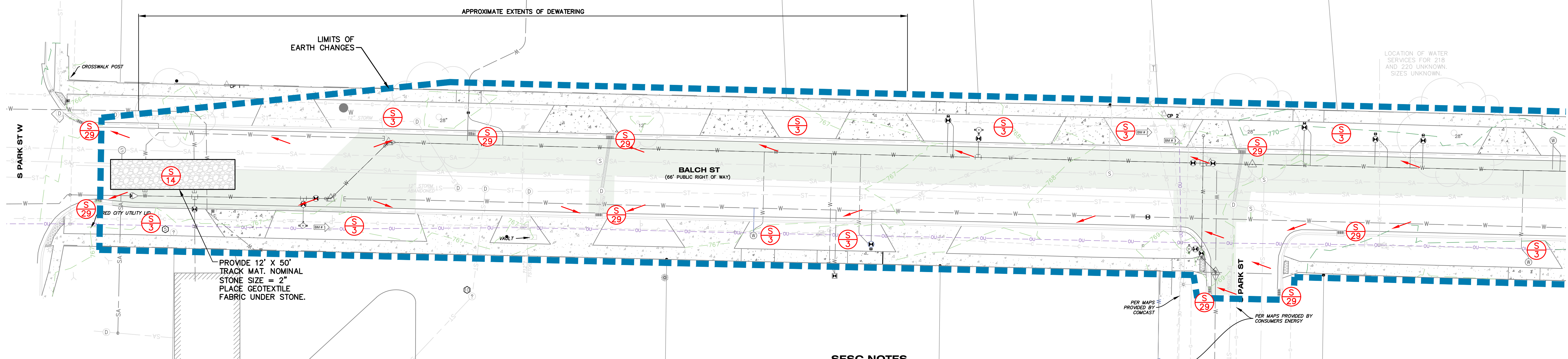
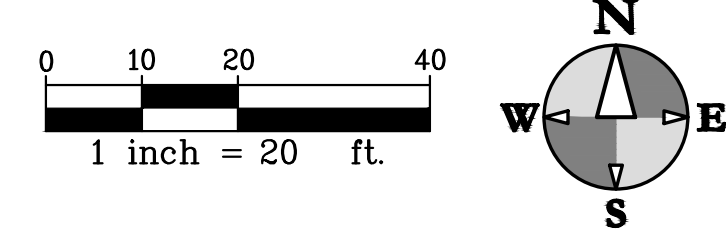
Job No. 22-006D P.M.-APP. Ditch: N.R. OA/QC: 05/26/23
 ISSUED FOR PREVISIONS: 10/17/22
 3. E.G.L. SUBMITTAL 12/05/22
 4. E.G.L. RESUBMITTAL 04/06/23
 5. IFB 05/25/23
 6. ADDENDUM #1

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Sheet Title: **CONSTRUCTION PLAN & PROFILE STA 6+00 - POE**
 Project: **BALCH STREET - PARK TO BURDICK**
 Client: **CITY OF KALAMAZOO**

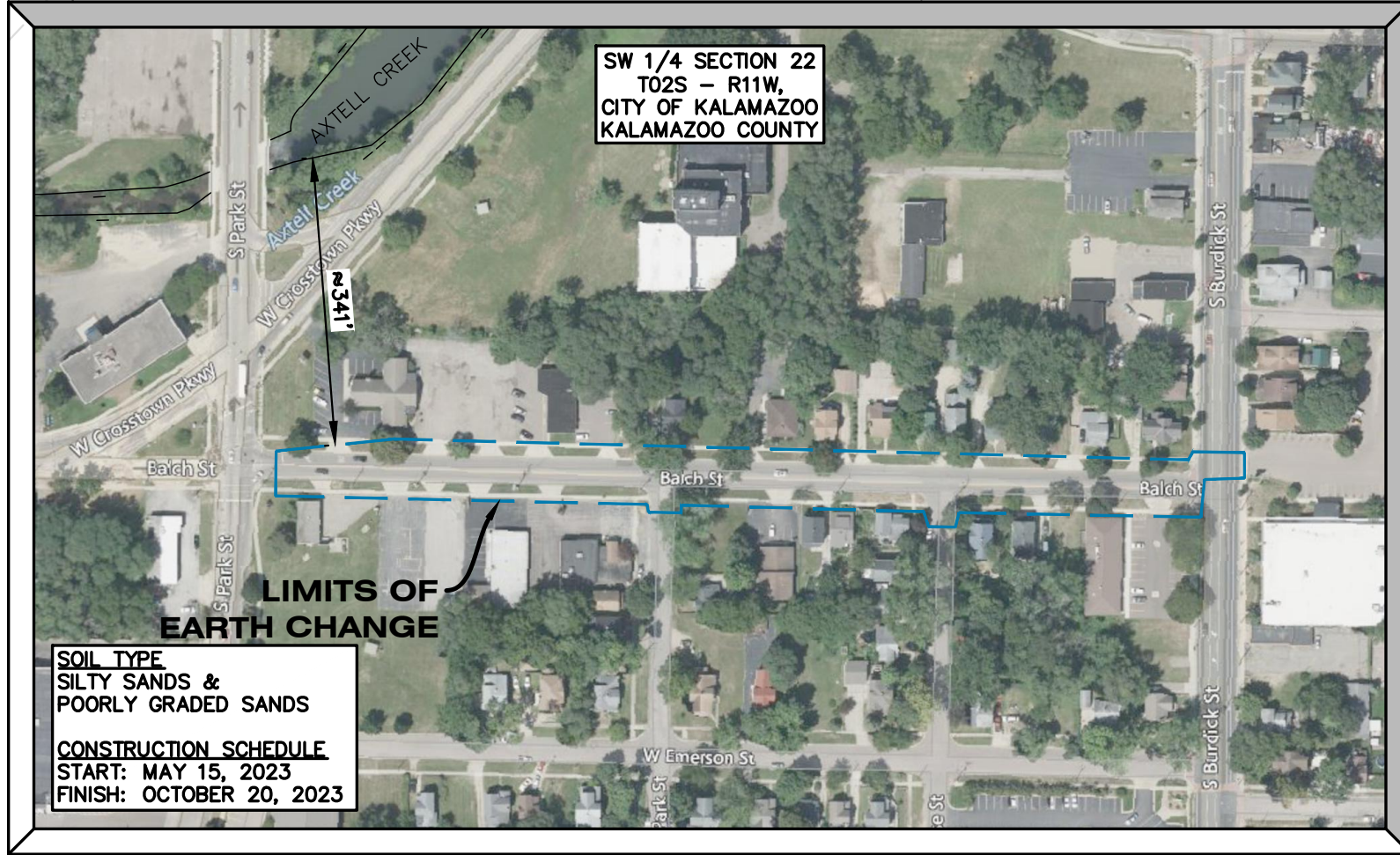
05/26/23
 Sheet **C-5**

DRAWING LOCATION: N:\22-006D\Kalamazoo\watermain_replacement\FINAL DRAWINGS\ESC-8 SESC Measures LAST SAVED BY: WALK ON 1/17/2023



SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
3	PERMANENT SEEDING		Stabilization method utilized on sites where earth change has been completed (final grading attained).
14	STABILIZED CONSTRUCTION ACCESS		Used at every point where construction traffic enters or leaves a construction site.
26	SILT FENCE		Use adjacent to critical areas, to prevent sediment laden sheet flow from entering these areas.
29	INLET PROTECTION FABRIC DROP		Use at stormwater inlets, especially at construction sites.



SITE LOCATION MAP
SCALE: 1" = 200'

SESC NOTES

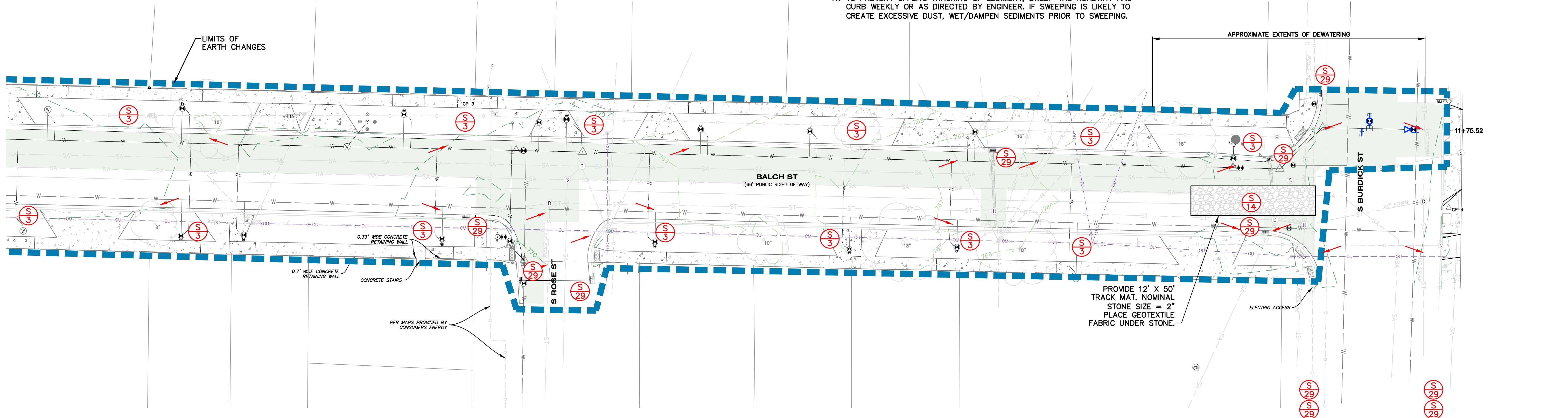
- ALL WORK WILL COMPLY WITH THE PROVISIONS OF THE SOIL EROSION AND SEDIMENTATION CONTROL ACT (PA 347 OF 1972 AS AMENDED) ADMINISTERED BY THE CITY OF KALAMAZOO.
- AVOID UNNECESSARY DISTURBING OR REMOVING EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE AREAS ACT AS SEDIMENT FILTERS.
- CONTRACTOR SHALL REFER TO MDT SESC MANUAL FOR INSTALLATION SPECIFICATIONS FOR ALL TEMPORARY SESC MEASURES. TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL SITE IS ESTABLISHED.
- DIRECT ALL DEWATERING DISCHARGE TO EXISTING CATCH BASINS. ENSURE INLET PROTECTION IS IN PLACE PRIOR TO DEWATERING.
- INSTALL INLET PROTECTION AT ALL STORM SEWER STRUCTURES DURING CONSTRUCTION.
- NO SITE WORK SHALL BEGIN UNTIL THE SESC MEASURES ARE INSTALLED.
- THE CONTRACTOR SHALL SERVE AS THE CERTIFIED STORM WATER OPERATOR FOR THE PROJECT AND SHALL PROVIDE COPIES OF ALL INSPECTION REPORTS AND RECOMMENDATIONS TO THE ENGINEER.
- PROVIDE SILT SACKS IN EACH CATCH BASIN UNTIL SITE IS STABILIZED.
- CLEAN ADJACENT ROADWAYS AS DIRECTED BY ENGINEER. THIS IS CONSIDERED INCIDENTAL TO THE PROJECT.
- WATER SITE AS DIRECTED BY ENGINEER TO PREVENT AIR BORNE SEDIMENT TRANSFER. THIS IS CONSIDERED INCIDENTAL TO THE PROJECT.
- TO PREVENT OFFSITE TRACKING OF SEDIMENT, SWEEP THE ROADWAY AND CURB WEEKLY OR AS DIRECTED BY ENGINEER. IF SWEEPING IS LIKELY TO CREATE EXCESSIVE DUST, WET/DAMPEN SEDIMENTS PRIOR TO SWEEPING.

SESC PLAN LEGEND

- DRAINAGE DIRECTION
- PROPOSED SILT FENCE
- BENCH MARK
- SOIL EROSION MEASURE
- SEDIMENT CONTROL MEASURE
- LIMITS OF CONSTRUCTION



ALL UTILITIES AS SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS AND AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATION NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THE AREA.
FIELD WORK PERFORMED BY:
HURLEY & STEWART, LLC



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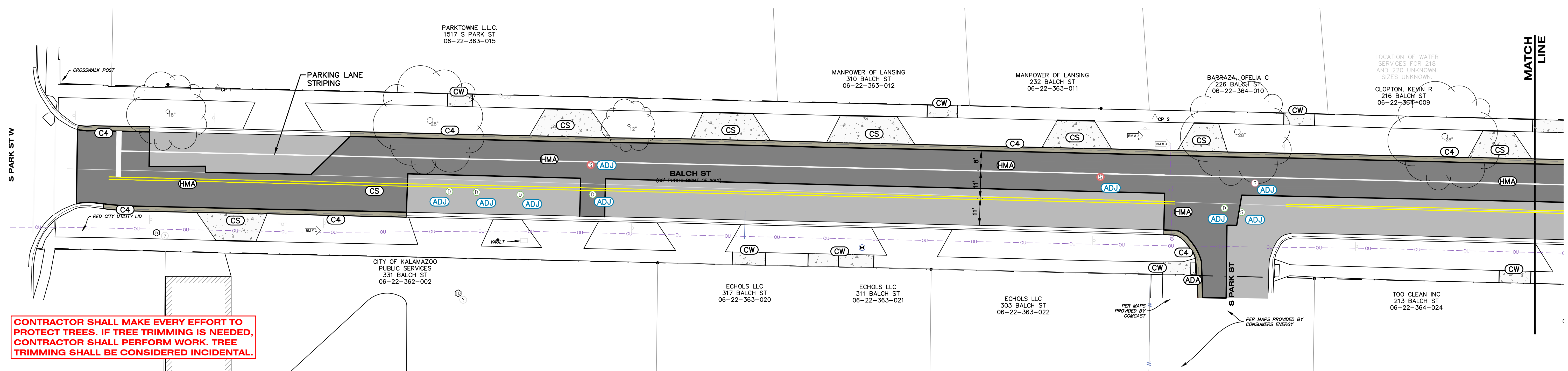
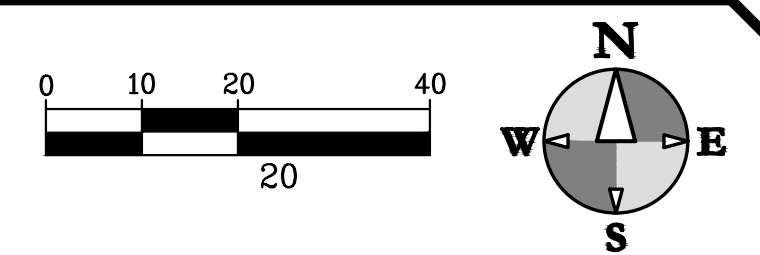


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SESC PLAN
BALCH STREET - PARK TO BURDICK
CITY OF KALAMAZOO

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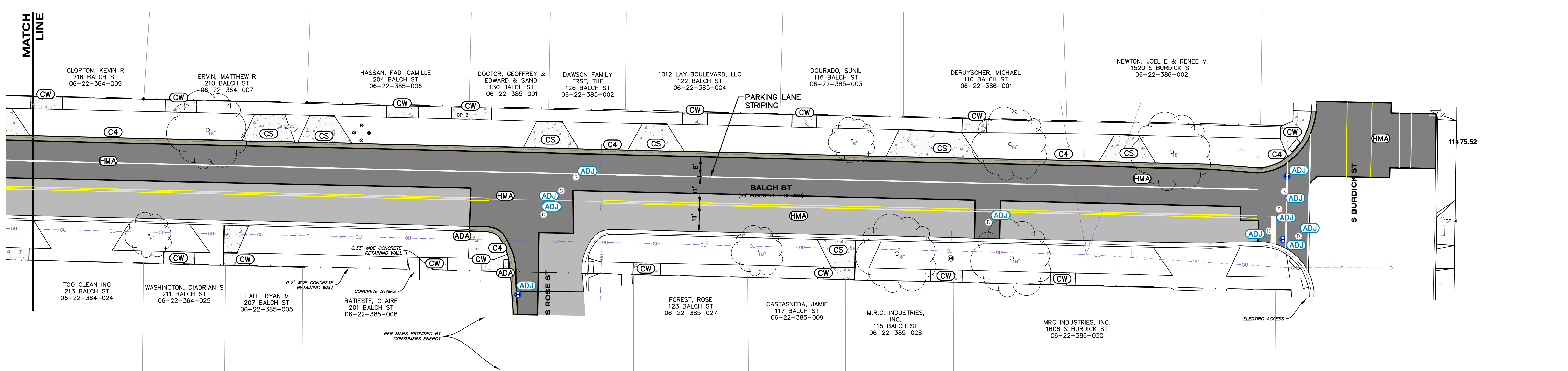


CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT TREES. IF TREE TRIMMING IS NEEDED, CONTRACTOR SHALL PERFORM WORK. TREE TRIMMING SHALL BE CONSIDERED INCIDENTAL.

- LEGEND**
- HMA 2" TOP COURSE (SEE TYPICAL SECTIONS)
 - HMA FULL DEPTH PAVEMENT (SEE TYPICAL SECTIONS)
 - C4 C4 CONCRETE CURB AND GUTTER
 - CW CONCRETE WALK
 - CS CONCRETE SURFACE
 - PAVEMENT STRIPING (SEE MAINTAINING TRAFFIC SPEC)
 - ADA ADA RAMP (SEE DETAIL)
 - ADJ-X ADJUST COVER. CASTING TYPE FOLLOWS DASH.



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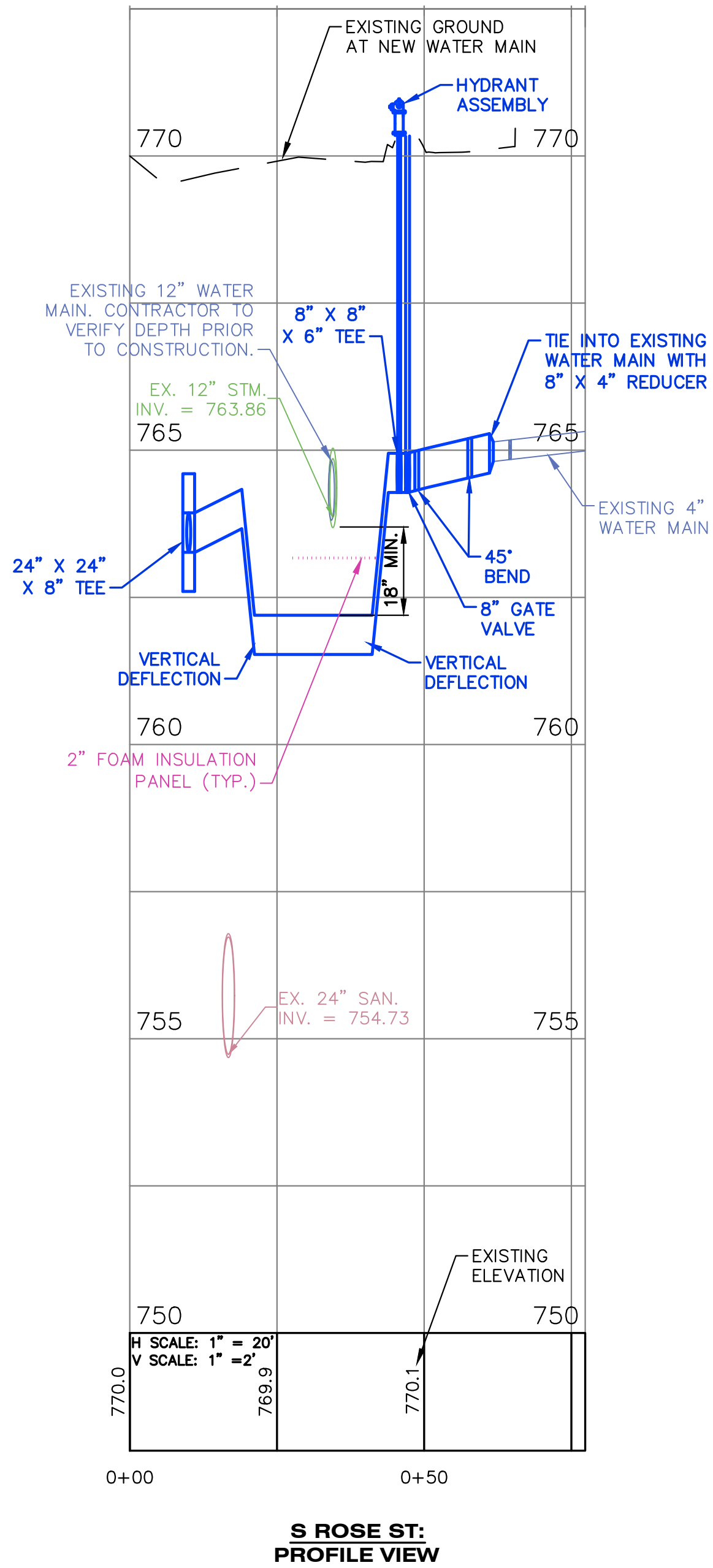
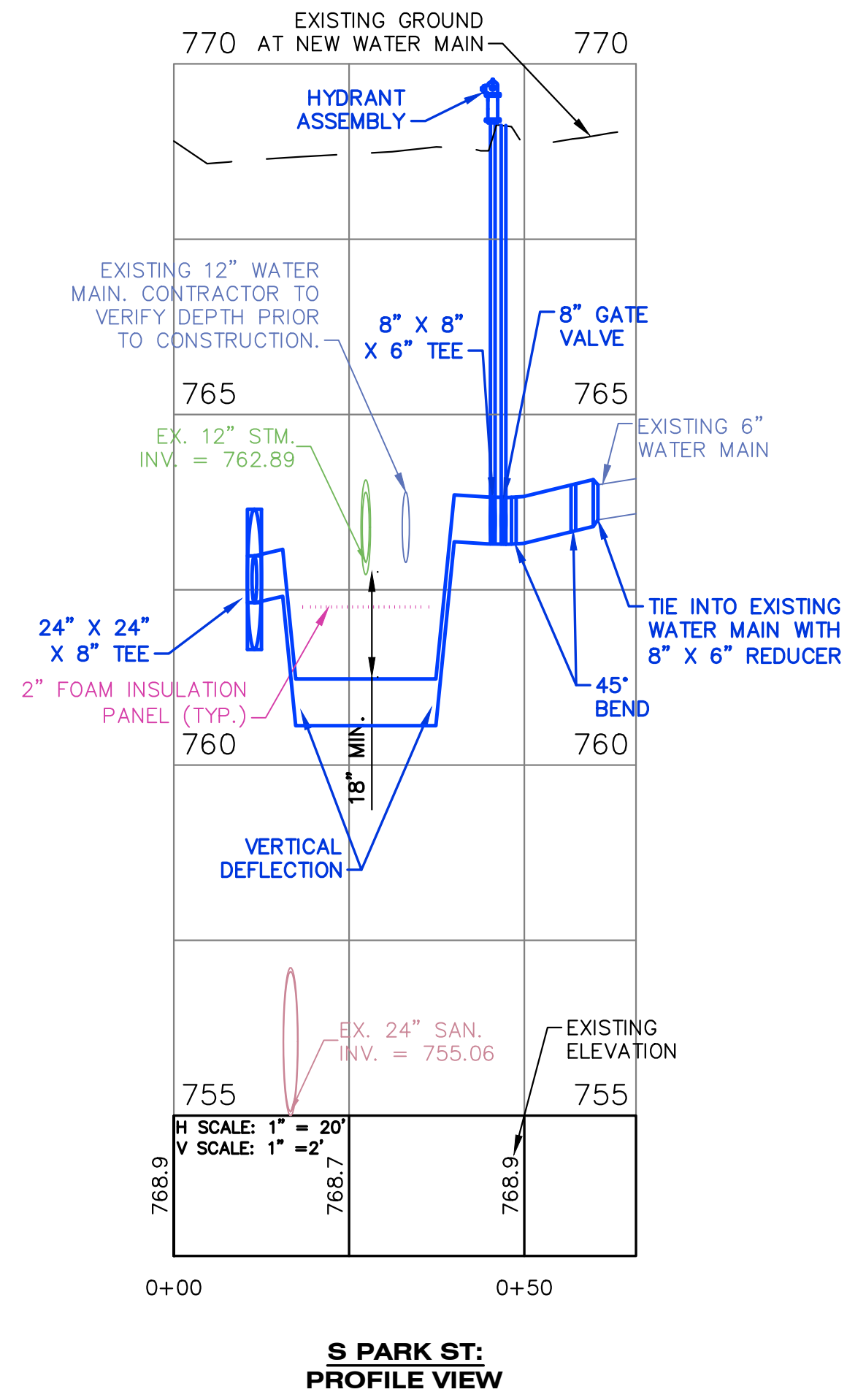
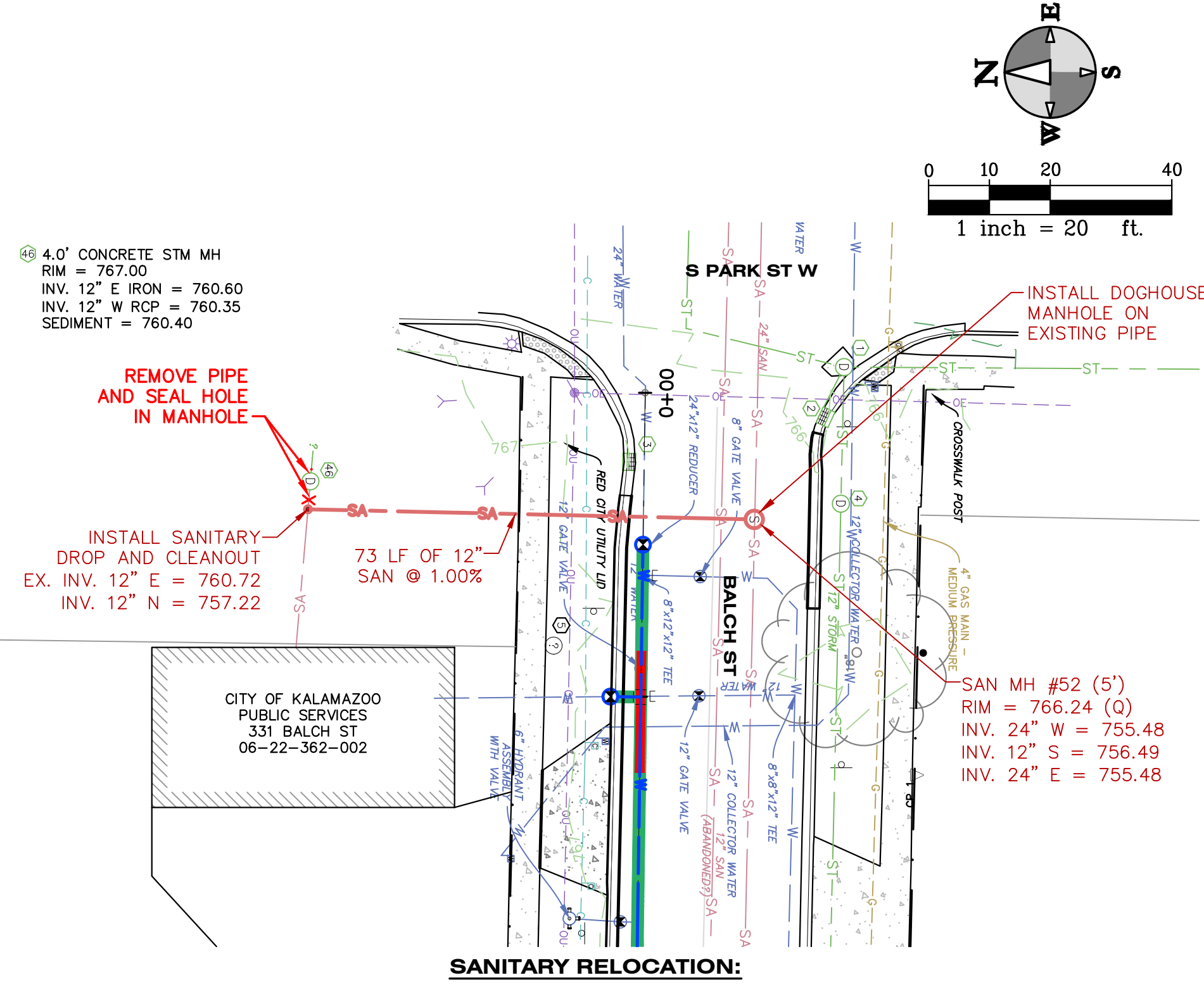
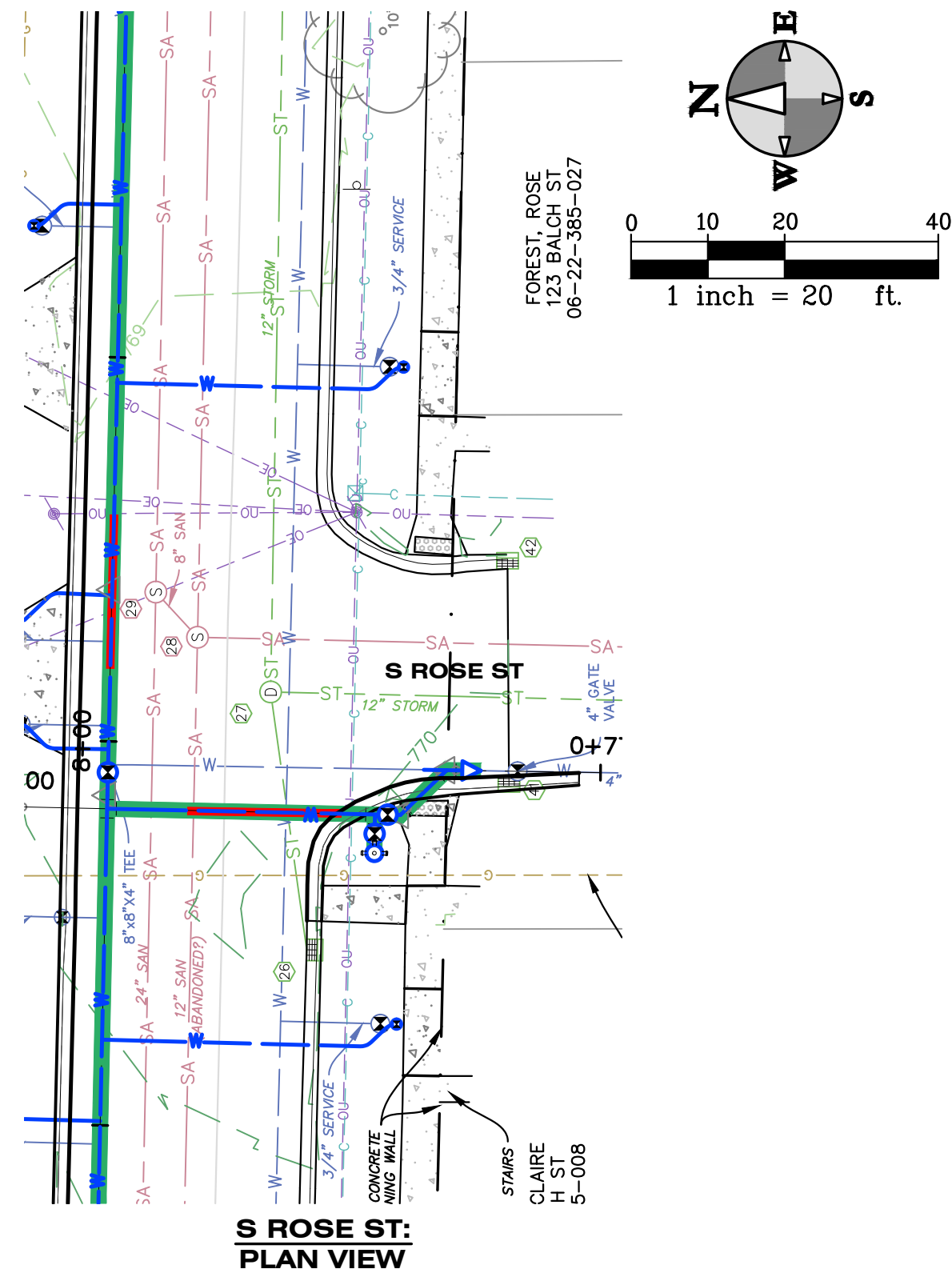
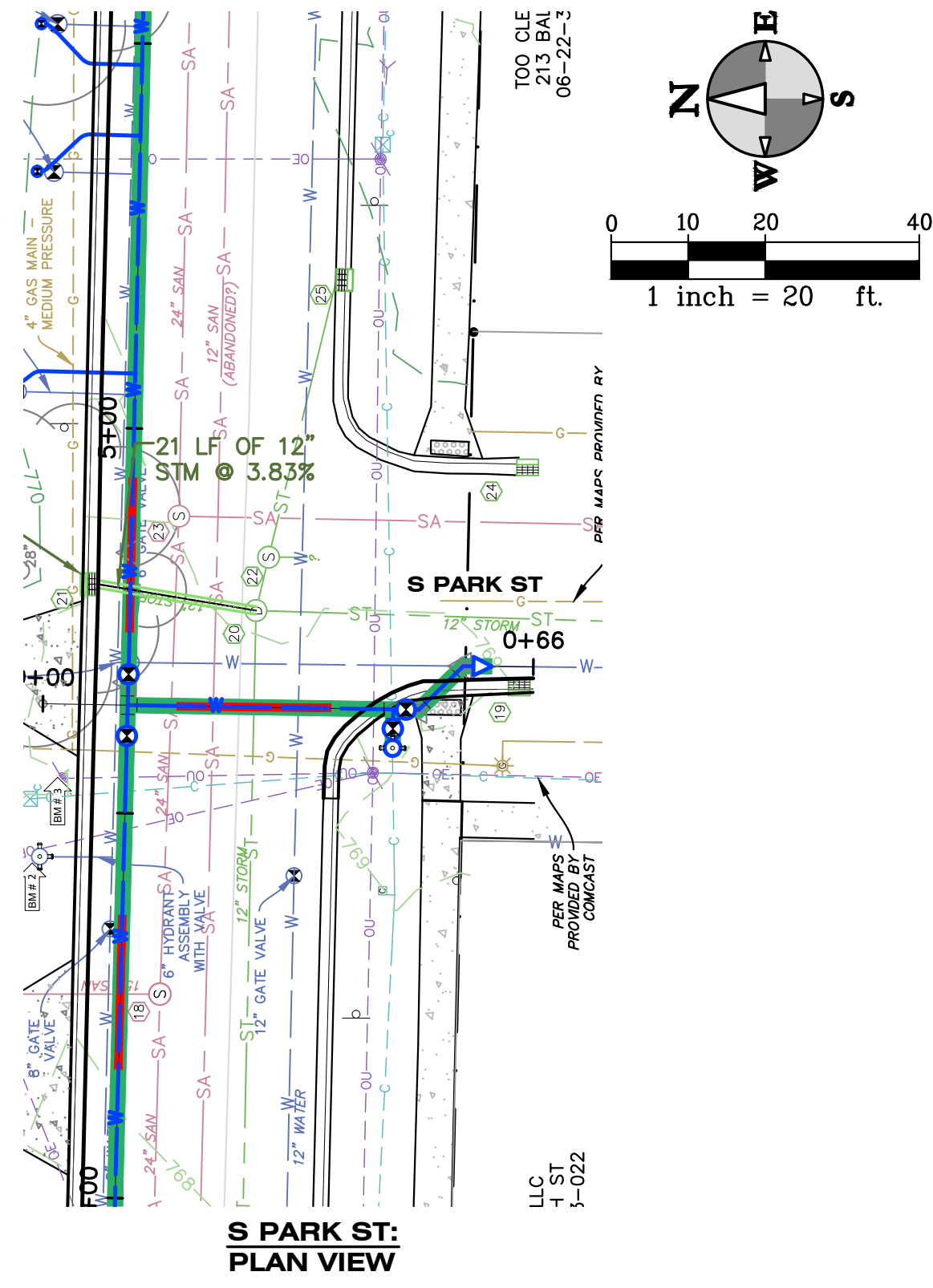
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CONSTRUCTION PLAN
BALCH STREET - PARK TO BURDICK
CITY OF KALAMAZOO

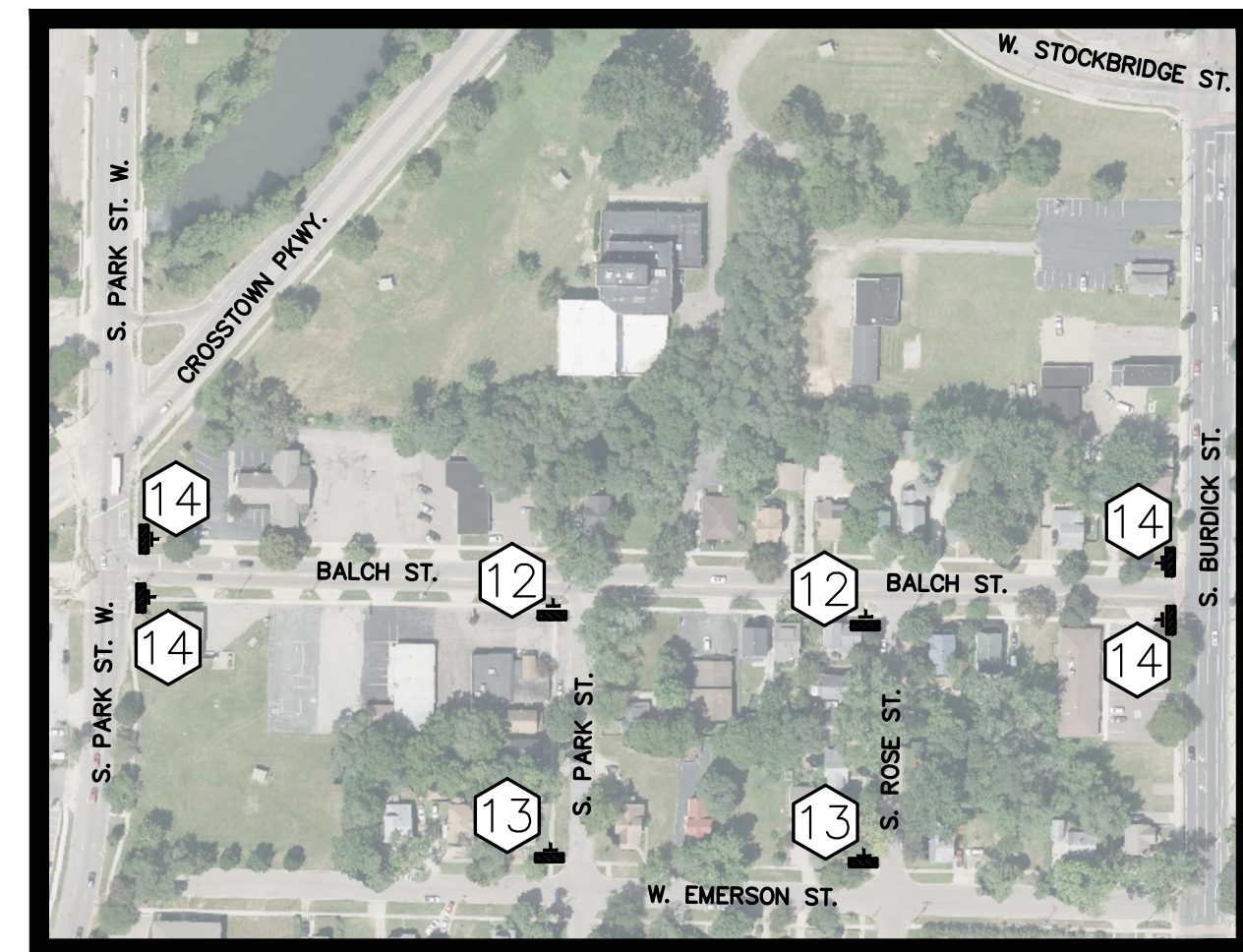
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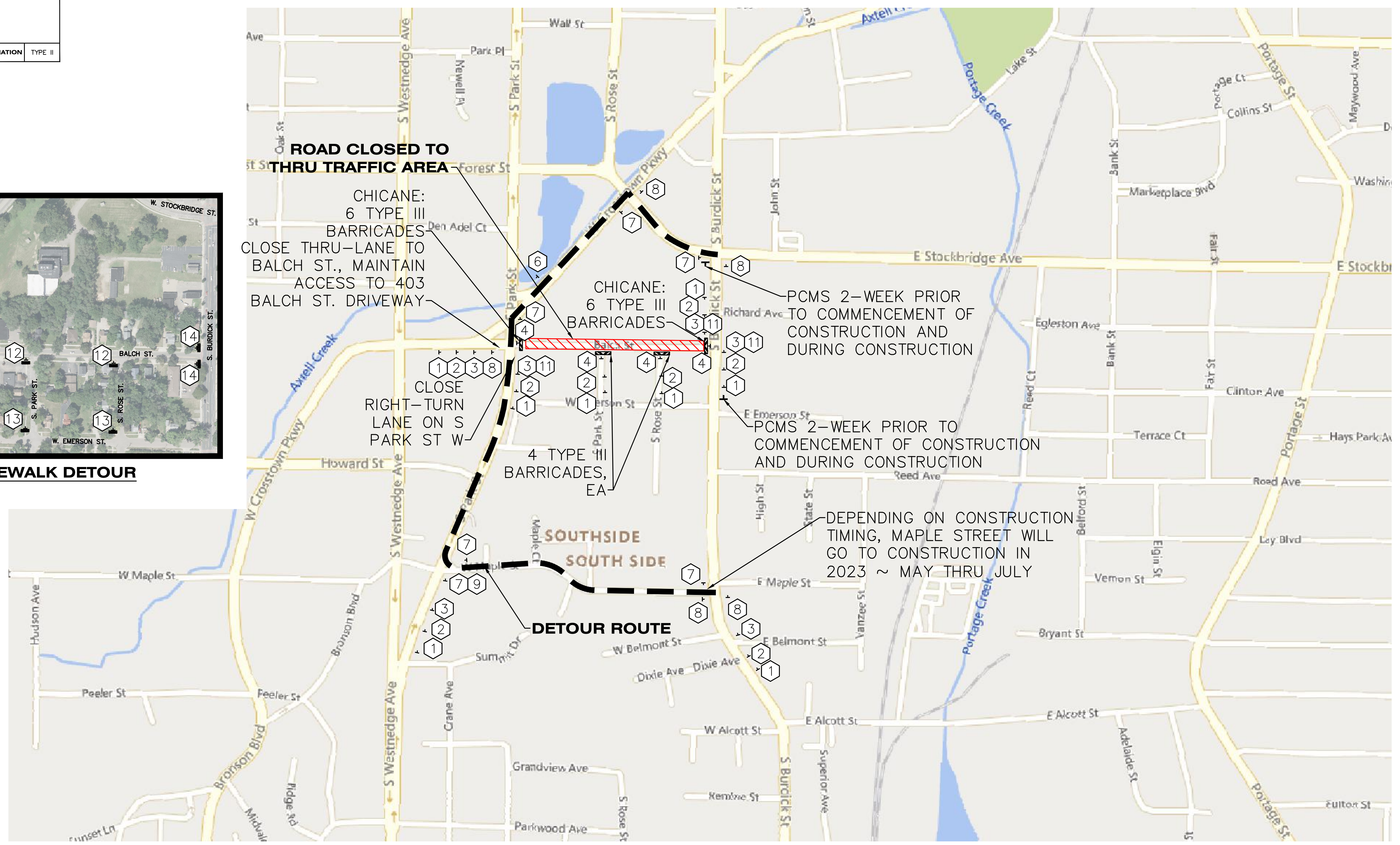


DRAWING LOCATION: 14-122-0066 (North St. Watermain Rehabilitation) - FINAL DRAWINGS - C-9 Phase 1 & 3 Maintenance of Traffic Plan - LAST SAVED BY: WALK ON 3/14/2023

<p>1 ROAD WORK AHEAD</p> <p>QTY: 8 SIZE: 48"x48" (16 SFT) TOTAL AREA: 128 SFT</p> <p>DESIGNATION W20-1</p>	<p>2 ROAD CLOSED AHEAD</p> <p>QTY: 8 SIZE: 48"x48" (16 SFT) TOTAL AREA: 128 SFT</p> <p>DESIGNATION W20-3</p>	<p>3 DETOUR AHEAD</p> <p>QTY: 6 SIZE: 48"x48" (16 SFT) TOTAL AREA: 96 SFT</p> <p>DESIGNATION W20-2</p>	<p>4 ROAD CLOSED TO THRU TRAFFIC</p> <p>QTY: 4 SIZE: 60"x30" (13 SFT) TOTAL AREA: 52 SFT</p> <p>DESIGNATION R11-4</p>	<p>5 ROAD CLOSED</p> <p>QTY: 0 SIZE: 48"x30" (10 SFT) TOTAL AREA: 0 SFT</p> <p>DESIGNATION R11-2</p>	<p>6 BALCH ST</p> <p>QTY: 1 SIZE: 36"x12" (3 SFT) TOTAL AREA: 3 SFT</p> <p>DESIGNATION W20-12P</p>	<p>7 DETOUR</p> <p>QTY: 7 SIZE: 30"x24" (5 SFT) TOTAL AREA: 35 SFT</p> <p>DESIGNATION M4-9R</p>	<p>8 DETOUR</p> <p>QTY: 5 SIZE: 30"x24" (5 SFT) TOTAL AREA: 25 SFT</p> <p>DESIGNATION M4-9L</p>	<p>9 DETOUR</p> <p>QTY: 3 SIZE: 30"x24" (5 SFT) TOTAL AREA: 15 SFT</p> <p>DESIGNATION M4-9U</p>	<p>10 ROAD CLOSED AHEAD</p> <p>QTY: 0 SIZE: 48"x48" (16 SFT) TOTAL AREA: 0 SFT</p> <p>DESIGNATION W20-3</p>	
<p>11 BALCH ST</p> <p>QTY: 8 SIZE: 36"x12" (3 SFT) TOTAL AREA: 24 SFT</p> <p>DESIGNATION W20-12P</p>	<p>12 DETOUR</p> <p>QTY: 4 SIZE: 48"x18" (6 SFT) TOTAL AREA: 24 SFT</p> <p>DESIGNATION M4-10 (L OR R)</p>	<p>13 END DETOUR</p> <p>QTY: 1 SIZE: 24"x18" (3 SFT) TOTAL AREA: 3 SFT</p> <p>DESIGNATION M4-8A</p>	<p>14 BALCH ST</p> <p>QTY: 7 SIZE: 36"x12" (3 SFT) TOTAL AREA: 21 SFT</p> <p>DESIGNATION W20-12P</p>	<p>15 BALCH ST</p> <p>QTY: 5 SIZE: 36"x12" (3 SFT) TOTAL AREA: 15 SFT</p> <p>DESIGNATION W20-12P</p>	<p>16 BALCH ST</p> <p>QTY: 3 SIZE: 36"x12" (3 SFT) TOTAL AREA: 9 SFT</p> <p>DESIGNATION W20-12P</p>	<p>17 BALCH ST</p> <p>QTY: 0 SIZE: 36"x12" (3 SFT) TOTAL AREA: 0 SFT</p> <p>DESIGNATION W20-12P</p>	<p>18 BALCH ST</p> <p>QTY: 0 SIZE: 36"x12" (3 SFT) TOTAL AREA: 0 SFT</p> <p>DESIGNATION W20-12P</p>	<p>19 BALCH ST</p> <p>QTY: 0 SIZE: 36"x12" (3 SFT) TOTAL AREA: 0 SFT</p> <p>DESIGNATION W20-12P</p>	<p>20 BALCH ST</p> <p>QTY: 0 SIZE: 36"x12" (3 SFT) TOTAL AREA: 0 SFT</p> <p>DESIGNATION W20-12P</p>	
<p>21 SIDEWALK CLOSED</p> <p>QTY: 20 BARRICADE, HIGH INTENSITY, LIGHTED</p> <p>DESIGNATION TYPE III</p>	<p>22 SIDEWALK CLOSED</p> <p>QTY: 3 SIZE: 24"x24" (4 SFT) TOTAL AREA: 12 SFT</p> <p>DESIGNATION R3-1 R3-2</p>	<p>23 SIDEWALK CLOSED AHEAD</p> <p>QTY: 2 SIZE: 30"x18" (3.75 SFT) TOTAL AREA: 7.5 SFT</p> <p>DESIGNATION W20-3</p>	<p>24 SIDEWALK CLOSED AHEAD</p> <p>QTY: 2 SIZE: 24"x12" (2 SFT) TOTAL AREA: 4 SFT</p> <p>DESIGNATION R9-11 (L OR R)</p>	<p>25 SIDEWALK CLOSED AHEAD</p> <p>QTY: 4 SIZE: 24"x12" (2 SFT) TOTAL AREA: 8 SFT</p> <p>DESIGNATION R9-11A (L OR R)</p>	<p>26 BARRICADE, HIGH INTENSITY, LIGHTED</p> <p>QTY: 8 BARRICADE, HIGH INTENSITY, LIGHTED</p> <p>DESIGNATION TYPE II</p>					



SIDEWALK DETOUR



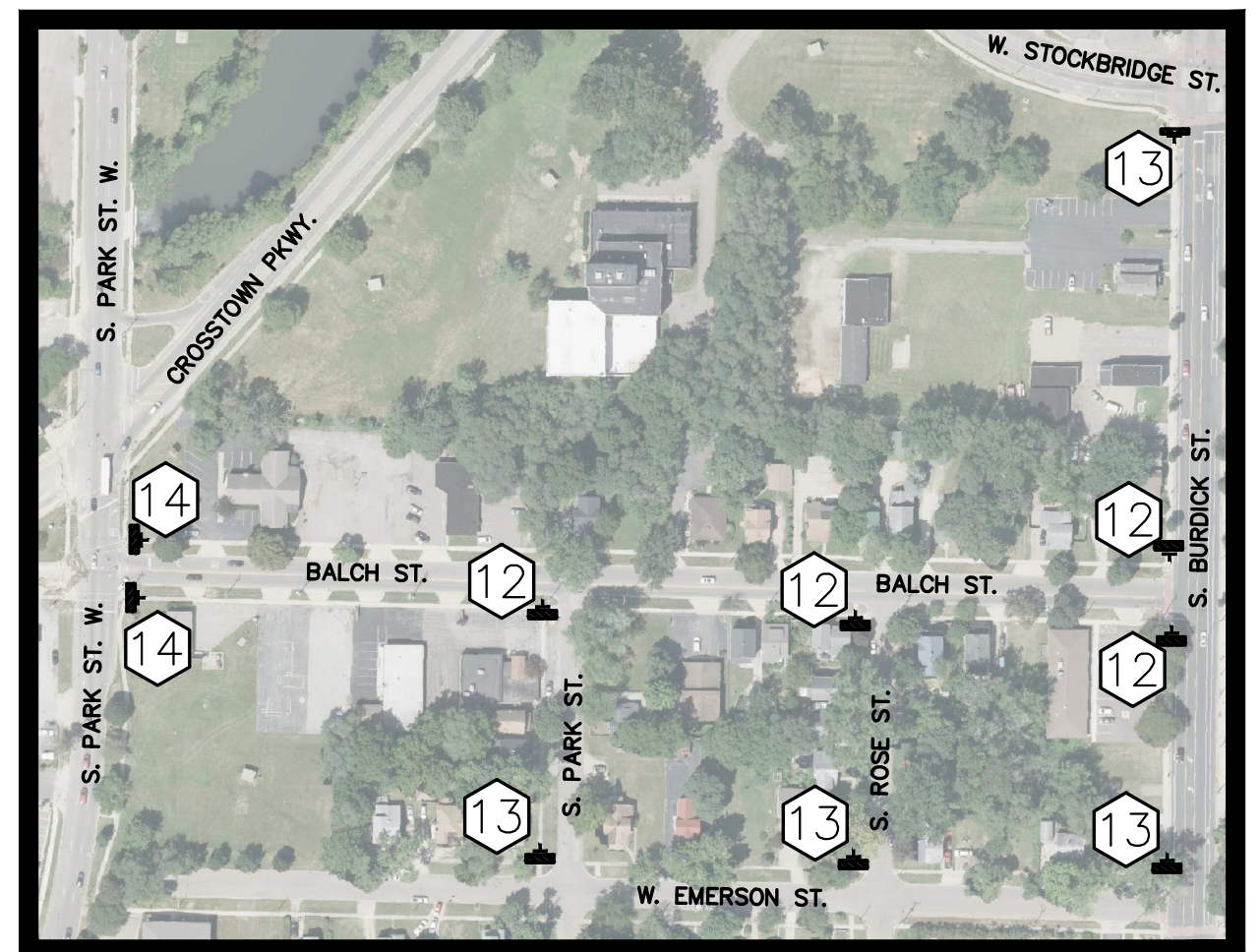
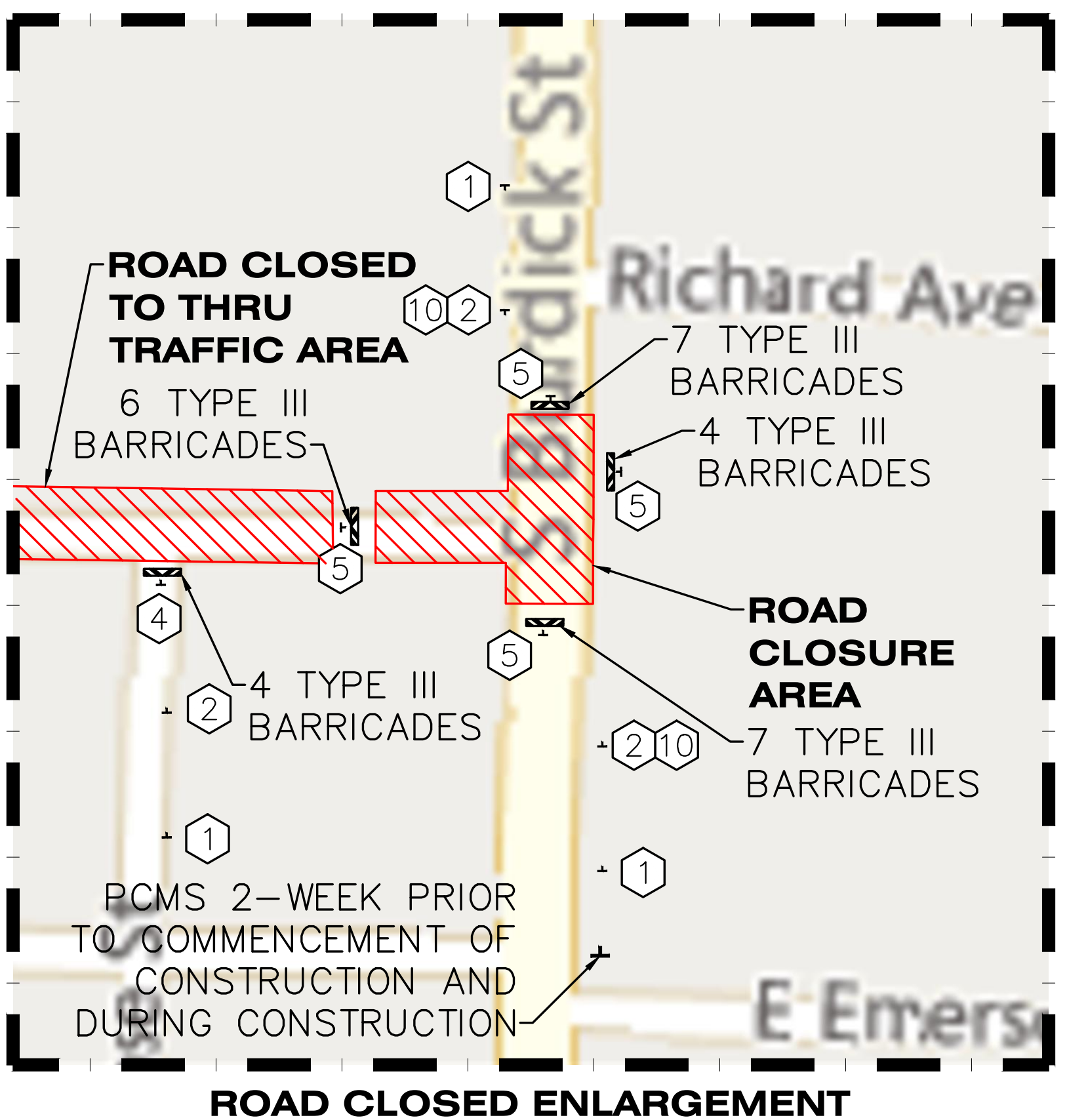
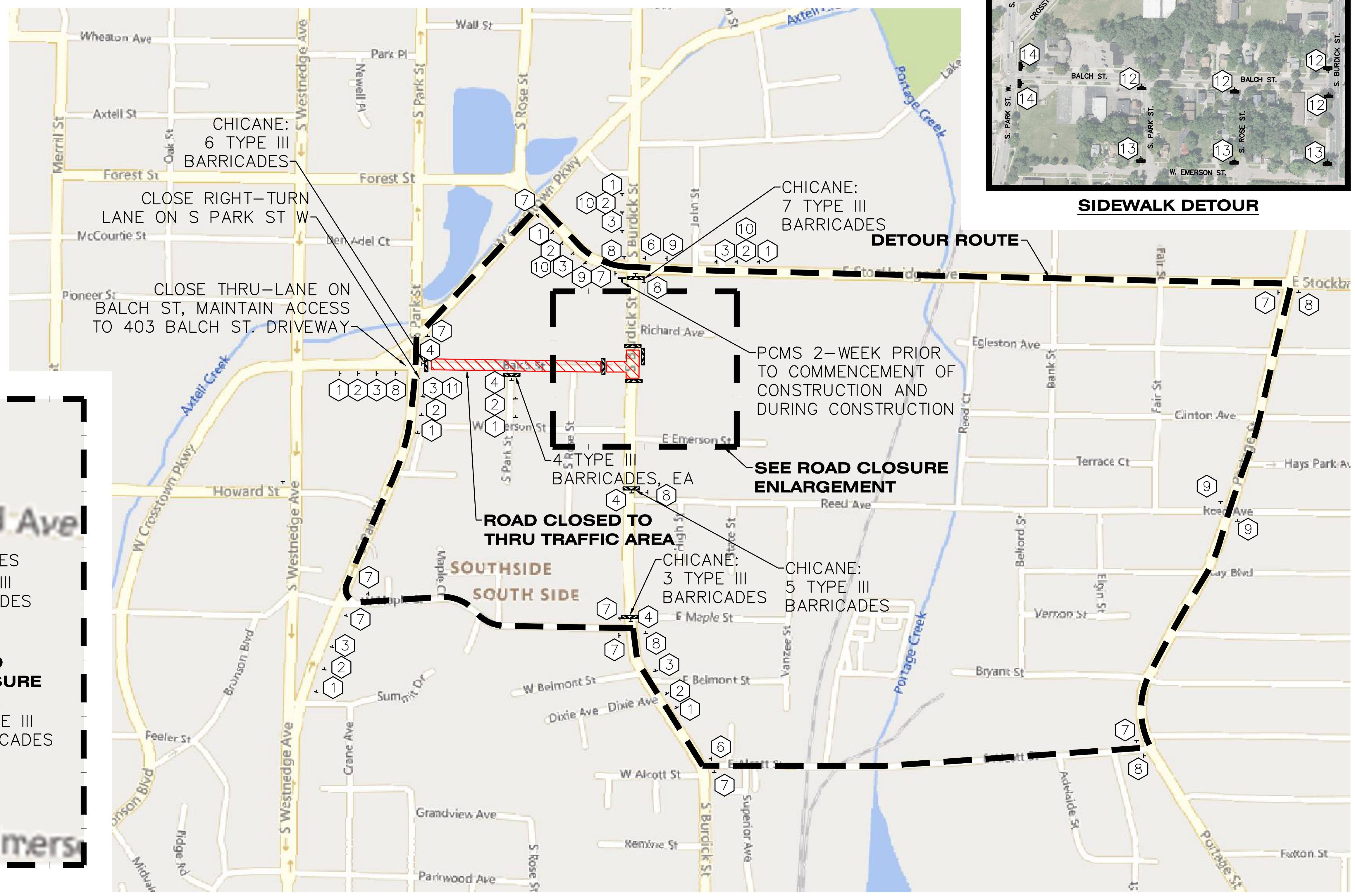
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Sheet Title: **PHASE 1 & 3 MAINTENANCE OF TRAFFIC PLAN**
Project: **BALCH STREET - PARK TO BURDICK**
Client: **CITY OF KALAMAZOO**

DRAWING LOCATION: N-122-0068 (North of watermain replacement) FINAL DRAWINGS-C-10 Phase 2 Maintenance of Traffic Plan LAST SAVED BY: WALL ON 3/14/2023

<p>1 ROAD WORK AHEAD QTY: 11 SIZE: 48"x48" (16 SFT) TOTAL AREA: 176 SFT</p> <p>DESIGNATION W20-1</p>	<p>2 ROAD CLOSED AHEAD QTY: 11 SIZE: 48"x48" (16 SFT) TOTAL AREA: 176 SFT</p> <p>DESIGNATION W20-3</p>	<p>3 DETOUR AHEAD QTY: 7 SIZE: 48"x48" (16 SFT) TOTAL AREA: 112 SFT</p> <p>DESIGNATION W20-2</p>	<p>4 ROAD CLOSED TO THRU TRAFFIC QTY: 4 SIZE: 60"x30" (13 SFT) TOTAL AREA: 52 SFT</p> <p>DESIGNATION R11-4</p>	<p>5 ROAD CLOSED QTY: 4 SIZE: 48"x30" (10 SFT) TOTAL AREA: 40 SFT</p> <p>DESIGNATION R11-2</p>	<p>6 END DETOUR QTY: 2 SIZE: 24"x18" (3 SFT) TOTAL AREA: 9 SFT</p> <p>DESIGNATION M4-8A</p>	<p>7 DETOUR QTY: 10 SIZE: 30"x24" (5 SFT) TOTAL AREA: 55 SFT</p> <p>DESIGNATION M4-9R</p>	<p>8 DETOUR QTY: 7 SIZE: 30"x24" (5 SFT) TOTAL AREA: 35 SFT</p> <p>DESIGNATION M4-9L</p>	<p>9 DETOUR QTY: 4 SIZE: 30"x24" (5 SFT) TOTAL AREA: 20 SFT</p> <p>DESIGNATION M4-9U</p>	<p>10 ROAD CLOSED AHEAD QTY: 5 SIZE: 48"x48" (16 SFT) TOTAL AREA: 80 SFT</p> <p>DESIGNATION W20-3</p>
<p>11 BALCH ST QTY: 11 SIZE: 36"x12" (3 SFT) TOTAL AREA: 33 SFT</p> <p>DESIGNATION W20-12P</p>	<p>12 BALCH ST QTY: 4 SIZE: 36"x12" (3 SFT) TOTAL AREA: 12 SFT</p> <p>DESIGNATION W20-12P</p>	<p>13 BALCH ST QTY: 7 SIZE: 36"x12" (3 SFT) TOTAL AREA: 36 SFT</p> <p>DESIGNATION W20-12P</p>	<p>14 BALCH ST QTY: 4 SIZE: 36"x12" (3 SFT) TOTAL AREA: 12 SFT</p> <p>DESIGNATION W20-12P</p>	<p>15 BURDICK ST QTY: 5 SIZE: 36"x12" (3 SFT) TOTAL AREA: 15 SFT</p> <p>DESIGNATION W20-12P</p>					
<p>11 BARRICADE, HIGH INTENSITY, LIGHTED QTY: 51 DESIGNATION TYPE III</p>	<p>11 SIDEWALK CLOSED QTY: 1 SIZE: 24"x24" (4 SFT) TOTAL AREA: 4 SFT</p> <p>DESIGNATION R3-1 R3-2</p>	<p>12 SIDEWALK CLOSED QTY: 4 SIZE: 30"x18" (3.75 SFT) TOTAL AREA: 15 SFT</p> <p>DESIGNATION W20-3</p>	<p>13 SIDEWALK CLOSED AHEAD CROSS HERE QTY: 4 SIZE: 24"x12" (2 SFT) TOTAL AREA: 8 SFT</p> <p>DESIGNATION R9-11 (L OR R)</p>	<p>14 SIDEWALK CLOSED CROSS HERE QTY: 2 SIZE: 24"x12" (2 SFT) TOTAL AREA: 4 SFT</p> <p>DESIGNATION R9-11A (L OR R)</p>					
<p>10 BARRICADE, HIGH INTENSITY, LIGHTED QTY: 10 DESIGNATION TYPE II</p>									



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PHASE 2 MAINTENANCE OF TRAFFIC PLAN
BALCH STREET - PARK TO BURDICK
CITY OF KALAMAZOO

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C-10