

BID PACKAGE 1: HAVERHILL ELEMENTARY UTILITY RELOCATION PORTAGE PUBLIC SCHOOLS Portage, Michigan CONSTRUCTION DOCUMENTS

DESIGN TEAM

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SITE ADDRESS

PORTAGE PUBLIC SCHOOLS
HAVERHILL ELEMENTARY SCHOOL
6633 HAVERHILL AVENUE
PORTAGE, MICHIGAN 49024

REFERENCED CODES

BUILDING: 2015 MICHIGAN BUILDING CODE AND 2012 NFPA 101 LIFE SAFETY CODE
ENERGY: 2015 MICHIGAN ENERGY CODE
PLUMBING: 2018 MICHIGAN PLUMBING CODE
MECHANICAL: 2015 MICHIGAN MECHANICAL CODE
FUEL GAS: (IFGC) 2015 INTERNATIONAL FUEL GAS CODE
ELECTRICAL: 2017 NATIONAL ELECTRICAL CODE WITH MICHIGAN AMENDMENTS
BARRIER-FREE: 2015 MICHIGAN BUILDING CODE AND 2009 ICC & C A117.1
USE GROUP: E
CONSTRUCTION TYPE: IIB
AUTOMATIC SPRINKLERS: FULLY SPRINKLED

PROJECT AREA

TOTAL FINISHED PROJECT: 77,409 SQ. FT.

DRAWING INDEX

GENERAL
G 001 COVER SHEET

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ISSUED FOR DATE

PROJECT TITLE
BID PACKAGE 1:
HAVERHILL
ELEMENTARY UTILITY
RELOCATION

OWNER
PORTAGE PUBLIC
SCHOOLS
Portage, Michigan

DATE
NOVEMBER 11, 2022

SHEET TITLE
COVER SHEET

SHEET NUMBER
G 001
21-237.21

PROJECT NOTES

- ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
- VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES, INCLUDING ANY EXISTING SANITARY LEADS, PRIOR TO ORDERING STRUCTURES AND CONSTRUCTION.
- COORDINATE ALL TRAFFIC CONTROL WITH CITY OF PORTAGE.
- YIELD CALCULATIONS AND DENSITY TESTS OF THE HMA MATERIAL PLACED NEED TO BE PROVIDED. EXTRACTION/GRADATION/ANALYSIS ALSO NEEDS TO BE PROVIDED TO CONFIRM THAT THE MATERIAL PLACED MEETS PROJECT SPECIFICATIONS. THE ENGINEER, TESTING FIRM OR BOTH WILL NEED TO BE PRESENT DURING PAVING OPERATIONS.
- CONTRACTOR TO OBTAIN A RIGHT OF WAY PERMIT FROM THE CITY OF PORTAGE. FEE AND BOND ARE REQUIRED.

REMOVAL NOTES

- 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.
- ALL CURB AND GUTTER REMOVAL AND REPLACEMENT TO EXTEND TO EXISTING JOINT.
- ALL REMOVALS SHALL BE TAKEN OFF-SITE AND DISPOSED.
- COMPLY WITH ALL ASPECTS OF THE SOIL EROSION CONTROL PERMIT AS ISSUED BY CITY OF PORTAGE. ALL TEMPORARY CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING CONSTRUCTION.
- 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.
- REMOVE, STORE, AND RESET ANY EXISTING SIGNS AS DIRECTED BY THE ENGINEER/OWNER.
- 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.
- NO BURNING, BURYING, OR HAULING OUT OF ANY DEBRIS PERMITTED.
- ALL STUMPS SHALL BE REMOVED AT LEAST 1' BELOW FINISHED GRADE ELEVATION.
- REVIEW CLEARING LIMITS WITH OWNER PRIOR TO COMMENCING WORK. PRESERVE TREES WHERE INDICATED.
- 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.
- 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.

SESC NOTES

- ALL WORK WILL COMPLY WITH THE PROVISIONS OF THE SOIL EROSION AND SEDIMENTATION CONTROL ACT (PA 451, PART 91 OF 1994 AS AMENDED) ADMINISTERED BY THE CITY OF PORTAGE.
- SITES WITH DISTURBANCE LARGER THAN 5 ACRES NEED TO FOLLOW THE SOIL EROSION AND SEDIMENTATION CONTROL GUIDEBOOK BY THE STATE OF MICHIGAN DEPARTMENT OF MANAGEMENT AND BUDGET OFFICE OF FACILITIES, DESIGN AND CONSTRUCTION DIVISION.
- AVOID UNNECESSARY DISTURBING OR REMOVING EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE AREAS ACT AS SEDIMENT FILTERS.
- ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL SITE IS ESTABLISHED.
- PROVIDE INSTALL INLET PROTECTION AT ALL STORM SEWER STRUCTURES DURING CONSTRUCTION.
- NO SITE WORK SHALL BEGIN UNTIL THE SILT FENCE AND ACCESS ROAD ARE INSTALLED.
- ALL SOIL PILES SHALL BE SURROUNDED BY SILT FENCE IF ALLOWED TO REMAIN IN PLACE FOR MORE THAN 7 DAYS. TOPSOIL PILES SHALL BE SEED IF ALLOWED TO REMAIN IN PLACE FOR MORE THAN 20 DAYS. SPOIL PILES SHALL NOT BE PLACED WITHIN 50' FROM ANY TEMPORARY OR PERMANENT WATERCOURSE.
- THE CONTRACTOR SHALL COMPLY WITH THE WEEKLY RECOMMENDATIONS OF THE CERTIFIED STORM WATER OPERATOR.
- ALL INLETS IN PAVED AREAS SHALL HAVE INLET PROTECTION DURING CONSTRUCTION.
- COORDINATE TOPSOIL STOCKPILE WITH OWNER.
- PLACE TRACK MATS AT THE ENTRANCE OF SITE TO REDUCE MATERIAL TRACKED OFF SITE.
- COORDINATE THE CLEARING LIMITS WITH THE OWNER PRIOR TO COMMENCING WORK.
- PLACE "DO NOT ENTER CONSTRUCTION ZONE" SIGNS AT ALL ENTRY POINTS TO PROJECT.
- PROVIDE SILT SACKS IN EACH CATCH BASIN UNTIL SITE IS STABILIZED.
- ALL SOIL EROSION MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING WORK.
- PLACE SILT FENCES ALONG THE TOE OF TOPSOIL STOCKPILES AND OTHER FILL AREAS. SEED TOPSOIL STOCKPILE AND MAINTAIN SILT FENCES UNTIL SITE IS STABILIZED.
- MAINTAIN A VEGETATIVE BUFFER WHEREVER POSSIBLE.
- CLEAN ADJACENT ROADWAYS WHEN NECESSARY.
- WATER SITE WHEN NECESSARY TO PREVENT AIR BORNE SEDIMENT TRANSFER.
- CONTRACTOR TO COMPLETE AND SUBMIT A SOIL EROSION AND SEDIMENT CONTROL PERMIT APPLICATION TO THE CITY. THE FEE AND BOND ARE REQUIRED.
- CONTRACTOR TO INSTALL A PERMIT BOX ON SITE AND PLACE WEATHER CARD AND LAMINATED 11X17 REDUCTION OF APPROVED SESC PLANS. CONTRACTOR TO PRINT AND LAMINATE THE 11X17 REDUCTION OF THE APPROVED SESC PLANS.

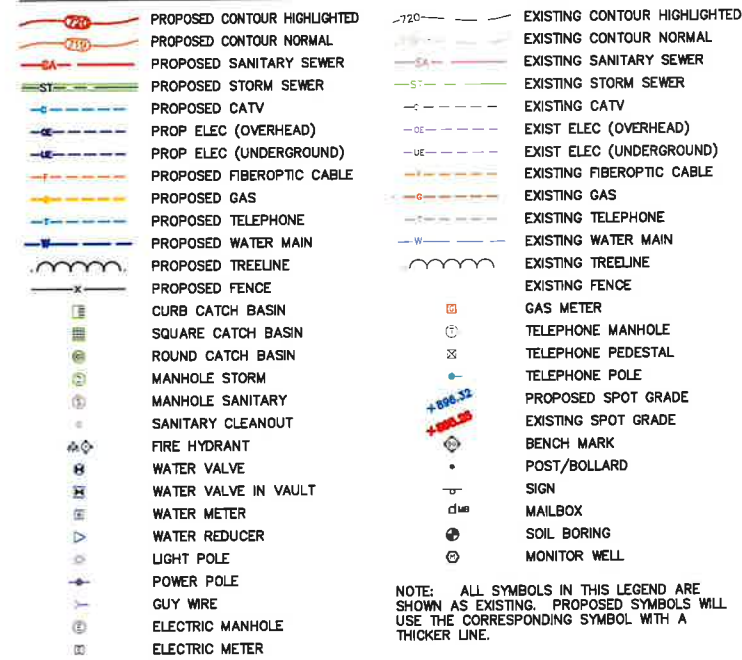
UTILITY NOTES

- ALL STRUCTURE CASTINGS TO BE EAST JORDAN IRON WORKS OR APPROVED EQUAL CASTINGS SHOULD FOLLOW SPEC 207.3.2.6 OF THE CITY OF PORTAGE GENERAL SPECIFICATION MANUAL, EXCEPT COVERS SHALL NOT BE VENTED. ALL CASTINGS TO HAVE CITY OF PORTAGE LOGO. SEE STRUCTURE TABLE FOR SPECIFIC CASTING AT EACH STRUCTURE.
- ALL WATER MAINS AND THEIR APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF PORTAGE SPECIFICATIONS AND AWWA STANDARD C600.
- WATER MAIN FLUSHING SHALL PROVIDE A MINIMUM WATER VELOCITY OF 3.0 FEET PER SECOND IN ACCORDANCE WITH AWWA STANDARD C651.
- ALL WATER MAIN SHALL BE POLY WRAPPED. THE PLY WRAP SHALL CONFORM TO AWWA STANDARD C105.
- ALL SANITARY SEWERS AND THEIR APPURTENANCES SHALL BE IN ACCORDANCE WITH THE CITY OF PORTAGE SPECIFICATIONS.
- ALL STORM SEWER SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF PORTAGE SPECIFICATIONS.
- STORM SEWERS SHALL BE REINFORCED CONCRETE PIPE (RCP), ASTM C76-III, WITH PREMIUM JOINTS INSTALLED PER THE REQUIREMENTS OF THE CITY OF PORTAGE. STORM SEWER SHALL BE TELEVIEWED TO CHECK FOR MISALIGNMENT, INFILTRATION, DEFECTIVE PIPE OR JOINTS, AND DEBRIS. INCLUDE TELEVIEWING STORM SEWER IN SPECIFICATIONS SEE CITY OF PORTAGE 208.2.6.
- THE CONTRACTOR SHALL INSTALL PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
- ANY UTILITIES REQUIRING DEWATERING SHALL BE INSTALLED TO THE CITY OF PORTAGE STANDARDS AND INCLUDED IN THE INSTALLATION COSTS. CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING NECESSARY TO CONSTRUCT UTILITIES IN THE DRY.
- 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.
- DEWATERING MAY BE REQUIRED TO INSTALL OR REMOVE SOME UTILITIES. REFER TO SPECIFICATIONS FOR SPECIFIC REQUIREMENTS.
- REMOVE ANY ACCUMULATED SEDIMENT FROM ALL STRUCTURES AND REMOVE SILT SACKS ONCE SITE IS ESTABLISHED.
- PROVIDE 18" WATER MAIN SEPARATION WHEN CROSSING OTHER UTILITIES. DEFLECT PER DETAIL ON SHEET C 501.
- CONTRACTOR TO CLEAN THE EXISTING STORM SEWER FROM COULTER TO MANHATTAN AND TO VIDEO THE EXISTING STORM SEWER AFTER THE STORM SEWER HAS BEEN CLEANED. TO BE CONSIDERED INCIDENTAL TO THE PROJECT.
- SANITARY AND WATER LEAD LOCATIONS AND ELEVATIONS ARE SHOWN BASED ON CITY LEAD CARDS AND RECORD DATA. THE CONTRACTOR SHALL EXCAVATE ALL LEADS TO LOCATE AND VERIFY THIS INFO PRIOR TO ANY MASS EXCAVATION OR TEMPORARY SEWER CONSTRUCTION. PROVIDE FIELD GATHERED LEAD INFORMATION TO THE ENGINEER FOR DESIGN VERIFICATION.

GRADING NOTES

- MATCH EXISTING GRADES AROUND PERIMETER WITH SLOPES AS SHOWN. MATCH AT 1' ON 4' IF NOT LABELED.
- THE CONTRACTOR SHALL INSTALL PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
- ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO MASS GRADING.
- ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
- REMOVE AND REPLACE WITH CONTROLLED FILL ANY AREAS THAT HAVE BEEN SOFTENED BY RAINS, FREEZING, CONSTRUCTION EQUIPMENT, ETC.
- 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.
- ALL GRANULAR FILL UNDER THE INFLUENCE OF THE ROADWAY AND PROCESSED ROAD GRAVEL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
- ALL COMPACTION SHALL BE ACCOMPLISHED BY PLACING THE FILL IN 6" 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.
- SITE 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.
- CONTRACTOR RESPONSIBLE FOR VERIFYING EARTHWORK CALCULATIONS PRIOR TO COMMENCING WORK. NO EXTRA EARTHWORK WILL BE PAID FOR ONCE EARTHWORK HAS BEGUN. ANY DISCREPANCIES WITH THE EARTHWORK CALCULATIONS SHALL BE REVIEWED WITH THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION.
- 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.

LEGEND

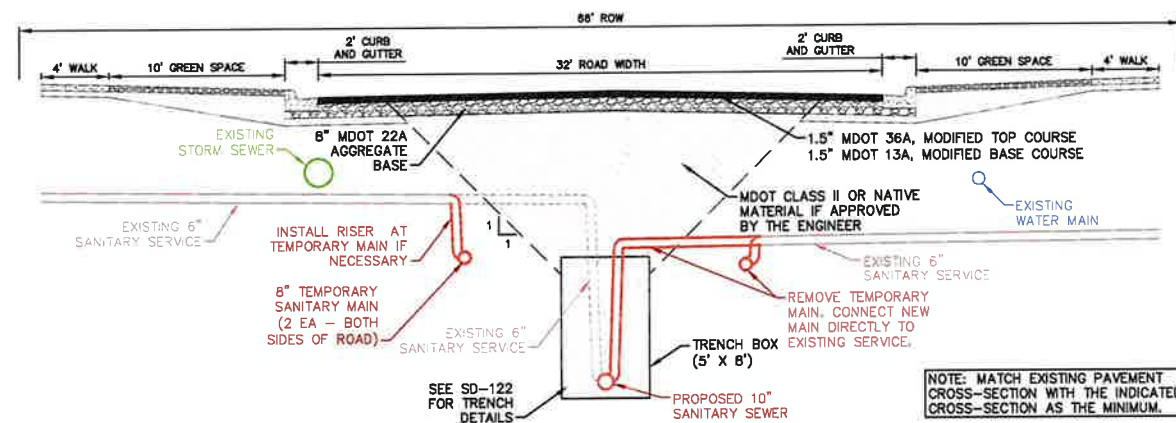


CITY OF PORTAGE STANDARD DETAILS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE MDT STANDARD PLAN GIVEN BELOW UNLESS OTHERWISE INDICATED.

STANDARD DESIGN	TITLE
SD-105	STANDARD MANHOLE
SD-106	SANITARY SEWER STANDARD MANHOLE CASTING
SD-108	STANDARD MANHOLE STEP
SD-110	STANDARD HOUSE CONNECTIONS
SD-113	STANDARD CURB
SD-117	RESIDENTIAL DRIVEWAY APPROACH WITH CURBED STREET
SD-122	STANDARD TRENCH DETAIL
SD-144	TYPICAL FIRE HYDRANT ASSEMBLY
SD-154	STANDARD VALVE BOX
SD-164	VALVE EXTENSION STEM
SD-165*	PAVEMENT REPLACEMENT DETAIL
SD-168	STANDARD TRENCH DETAIL FOR DUCTILE IRON WATER MAIN

* PAVEMENT RESTORATION TO BE IN ACCORDANCE WITH THE REPLACEMENT DETAIL WITH THE FOLLOWING EXCEPTIONS:
 - WEARING COURSE REPLACEMENT TO EXTEND FROM THE WESTERN CURB AND GUTTER TO THE EASTERN CURB AND GUTTER AND FROM THE MOST NORTHERLY SAW CUT TO THE MOST SOUTHERLY SAW CUT.
 - THE PAVEMENT RESTORATION CROSS-SECTION IN MANHATTAN ST TO MATCH THE EXISTING PAVEMENT CROSS-SECTION WITH THE PAVEMENT REPLACEMENT CROSS-SECTION FOR A LOCAL ROAD LISTED ON SD-165 INDICATED AS THE MINIMUM CROSS-SECTION.



MANHATTAN ST TYPICAL SECTION



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 FIELD WORK PERFORMED BY:
 DRIESENGA & ASSOCIATES, LLC



ISSUED FOR DATE

PROJECT TITLE
**BID PACKAGE 1:
 HAVERHILL
 ELEMENTARY UTILITY
 RELOCATIONS**

OWNER
**PORTAGE PUBLIC
 SCHOOLS**

Portage, Michigan

DATE
NOVEMBER 11, 2022

SHEET TITLE
PROJECT NOTES

SHEET NUMBER
**C 100
 21-237.21**

CONSTRUCTION SEQUENCING

1. INSTALL TEMPORARY TRAFFIC CONTROL MEASURES.
2. INSTALL BYPASS PUMPING FROM EXISTING MH-J TO EXISTING MH-K
3. REMOVE EXISTING PAVEMENT IN MANHATTAN ST. WITHIN PROJECT LIMITS. PROTECT EXISTING ADJACENT CURB AND GUTTER.
4. INSTALL PROPOSED TEMPORARY SANITARY SEWER MAINS FROM EXISTING MH-K TO THE NORTH.
 - 4.1. CORE TEMPORARY MAINS INTO EXISTING MH-K.
 - 4.2. DISCONNECT EXISTING SERVICES FROM EXISTING MAIN. CONNECT SERVICES TO TEMPORARY MAINS.
 - 4.3. ALL EXISTING SERVICES SHALL BE CONNECTED TO TEMPORARY MAIN BEFORE REMOVING EXISTING MAIN.
 - 4.4. INSTALL WESTERN TEMPORARY MAIN FROM MH-K THROUGH 6726 MANHATTAN ST SERVICE.
 - 4.5. INSTALL EASTERN TEMPORARY MAIN FROM MH-K THROUGH 6717 MANHATTAN ST SERVICE.
 - 4.6. PROTECT EXISTING WATER AND GAS SERVICE LATERALS. REMOVE AND REPLACE CROSSING STORM SEWER AT TWO LOCATIONS PER PLANS.
 - 4.7. EXCAVATED MATERIAL SHALL BE STORED ON SCHOOL PROPERTY TO THE NORTH. MATERIAL CAN BE TRUCKED TO THE SOUTH END OF THE WORK AREA VIA COULTER AVE., MARLOW ST., AND GREENVIEW AVE. AS NEEDED. CONTRACTOR TO BE RESPONSIBLE FOR ALL DAMAGE DONE TO THE STREETS AS A RESULT OF HAULING THE MATERIAL. CONTRACTOR TO VIDEO STREETS PRIOR TO CONSTRUCTION AND PROVIDE A COPY OF THE VIDEO TO THE CITY OF PORTAGE PRIOR TO START OF CONSTRUCTION.
 - 4.8. MATERIAL CAN BE STOCKPILED ON SCHOOL PROPERTY TO BE USED AS BACKFILL PROVIDED IT MEETS THE BACKFILL REQUIREMENTS. RESIDENTS TO BRING CURBSIDE TRASH CANS TO SOUTHERN END OF CONSTRUCTION ZONE FOR PICKUP.
 - 4.9. PROPERLY INSTALL TRENCH BACKFILL TO THE TOP OF AGGREGATE BASE. INSTALL AGGREGATE RAMPS AS NECESSARY TO EXISTING DRIVEWAYS.
5. REMOVE EXISTING AND INSTALL PROPOSED SANITARY SEWER FROM EXISTING MH-K NORTHERLY TO PROPOSED SMH-1.
 - 5.1. INSTALL SERVICE WYES AND RISERS NEAR EXISTING CONNECTIONS. PLUG SERVICES FOR FUTURE CONNECTION.
 - 5.2. PROTECT EXISTING WATER AND GAS SERVICE LATERALS. REPLACE WATER SERVICE WITH CONTINUOUS SECTION OF PIPE (WITHOUT ANY JOINTS) FROM CORP STOP TO CURB STOP. REMOVE AND REPLACE CROSSING STORM SEWER AT TWO LOCATIONS PER PLANS.
 - 5.3. EXCAVATED MATERIAL SHALL BE STORED ON SCHOOL PROPERTY TO THE NORTH. MATERIAL CAN BE TRUCKED TO THE SOUTH END OF THE WORK AREA VIA COULTER AVE., MARLOW ST., AND GREENVIEW AVE. AS NEEDED. CONTRACTOR TO BE RESPONSIBLE FOR ALL DAMAGE DONE TO THE STREETS AS A RESULT OF HAULING THE MATERIAL. CONTRACTOR TO VIDEO STREETS PRIOR TO CONSTRUCTION AND PROVIDE A COPY OF THE VIDEO TO THE CITY OF PORTAGE PRIOR TO START OF CONSTRUCTION.
 - 5.4. INSTALL PROPOSED SMH-1.
 - 5.5. PROPERLY INSTALL TRENCH BACKFILL TO THE TOP OF AGGREGATE BASE. INSTALL AGGREGATE RAMPS AS NECESSARY TO EXISTING DRIVEWAYS.
 - 5.6. AIR TEST PROPOSED MAIN FROM EXISTING MH-K NORTHERLY TO PROPOSED SMH-1 IN ACCORDANCE WITH SECTION 208.2.5 OF THE CITY OF PORTAGE CONTRACT CONDITIONS AND SPECIFICATIONS.
 - 5.7. MANDREL TESTING AND TELEVISION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 208.2 OF THE CITY OF PORTAGE CONTRACT CONDITIONS AND SPECIFICATIONS.
6. ONCE CONSTRUCTION AND TESTING OF PROPOSED MAIN IS COMPLETED, REMOVE TEMPORARY MAIN AND CONNECTION EXISTING SERVICES TO NEW SANITARY SEWER SERVICES.
 - 6.1. REMOVE TEMPORARY MAINS FROM NORTHERN END TO MH-K.
 - 6.2. PLUG CORES AND CLEAN MH-K.
 - 6.3. HMA SHALL BE PLACED WITHIN 5 DAYS OF REMOVAL OF TEMPORARY MAINS IS COMPLETE.
7. REMOVE TEMPORARY TRAFFIC CONTROL MEASURES.
8. RECONFIGURE BYPASS PUMPING TO BE FROM EXISTING MH-J TO PROPOSED SMH-1.
9. INSTALL PROPOSED SANITARY SEWER FROM PROPOSED SMH-1 NORTHERLY TO PROPOSED SMH-3.
 - 9.1. INSTALL SMH-2 AND DOGHOUSE SMH-3.
 - 9.2. AIR TEST, MANDREL TEST, AND TELEVISION IN ACCORDANCE WITH SECTION 208.2 OF THE CITY OF PORTAGE CONTRACT CONDITIONS AND SPECIFICATIONS.
10. REMOVE EXISTING SANITARY SEWER FROM SMH-3 TO EXISTING MH-G.
11. INSTALL WATER MAIN PER PLAN. TEST IN ACCORDANCE WITH SECTION 208.1 OF THE CITY OF PORTAGE CONTRACT CONDITIONS AND SPECIFICATIONS.
12. REMOVE WATER MAIN PER PLAN.

SOIL EROSION CONTROL MAINTENANCE TASKS AND SCHEDULE

DURING CONSTRUCTION
 TO BE PERFORMED BY CONTRACTOR

TASKS	COMPONENTS	PAVED AREAS	STORM DRAINAGE SYSTEM	CATCH BASIN SUMPS	CATCH BASIN INLET CASTINGS	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION	X	X	X	X	X	WEEKLY
REMOVAL OF SEDIMENT ACCUMULATION	X	X				AS NEEDED* AND PRIOR TO TURNOVER
INSPECT FOR FLOATABLES AND DEBRIS	X	X	X			QUARTERLY
CLEANING FOR FLOATABLES AND DEBRIS	X	X	X			QUARTERLY AND AT TURNOVER
INSPECTION FOR EROSION					X	WEEKLY
REESTABLISH PERMANENT VEGETATION ON ERODED SLOPES					X	AS NEEDED AND PRIOR TO TURNOVER
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY A PROFESSIONAL ENGINEER REPORTING TO THE OWNER)	X					ANNUALLY AND AT TURNOVER
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED	X				X	AS NEEDED

* "AS NEEDED" MEANS WHEN SEDIMENT HAS ACCUMULATED TO A MAXIMUM OF ONE FOOT DEPTH

PRELIMINARY CONSTRUCTION SCHEDULE						
	MARCH	APRIL	MAY	JUNE	JULY	
INSTALL TEMPORARY MEASURES	X					
PERFORM EARTHWORK		X				
INSTALL PERMANENT MEASURES		X				
RESTORATION			X			
SUBSTANTIAL COMPLETION			X	X		
FINAL COMPLETION				X	X	

MAINTENANCE AFTER CONSTRUCTION:

1. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY THE CONTRACTOR ONLY AFTER THE ENTIRE SITE HAS BEEN RESTORED.
2. CITY OF PORTAGE SHALL MAINTAIN STORM DRAINAGE IMPROVEMENTS.

PERMANENT MAINTENANCE
 TO BE PERFORMED BY THE DEPARTMENT OF TRANSPORTATION AND UTILITIES

TASKS	COMPONENTS	PAVED AREAS	STORM DRAINAGE SYSTEM	CATCH BASIN SUMPS	CATCH BASIN INLET CASTINGS	SCHEDULE
INSPECT FOR SEDIMENT ACCUMULATION			X	X		SEMI-ANNUALLY AS NEEDED*
REMOVAL OF SEDIMENT ACCUMULATION			X	X		ANNUALLY AS NEEDED*
INSPECT FOR FLOATABLES AND DEBRIS			X	X	X	ANNUALLY
CLEANING FOR FLOATABLES AND DEBRIS			X	X	X	ANNUALLY
INSPECTION FOR EROSION						ANNUALLY
REESTABLISH PERMANENT VEGETATION ON ERODED SLOPES						AS NEEDED
CLEAN DRIVES AND PARKING LOTS	X					SEMI-ANNUALLY
INSPECT STRUCTURAL ELEMENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS (BY A PROFESSIONAL ENGINEER REPORTING TO THE OWNER)			X			SEMI-ANNUALLY
MAKE ADJUSTMENTS OR REPLACEMENTS AS DETERMINED BY ANNUAL WET WEATHER INSPECTION			X			ANNUALLY
OWNER TO HAVE A PROFESSIONAL ENGINEER CARRY OUT EMERGENCY INSPECTIONS UPON IDENTIFICATION OF SEVER PROBLEMS			X	X	X	AS NEEDED

* "AS NEEDED" MEANS WHEN SEDIMENT HAS ACCUMULATED TO A MAXIMUM OF ONE FOOT DEPTH



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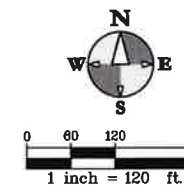
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OWNER
**PORTAGE PUBLIC
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 Portage, Michigan

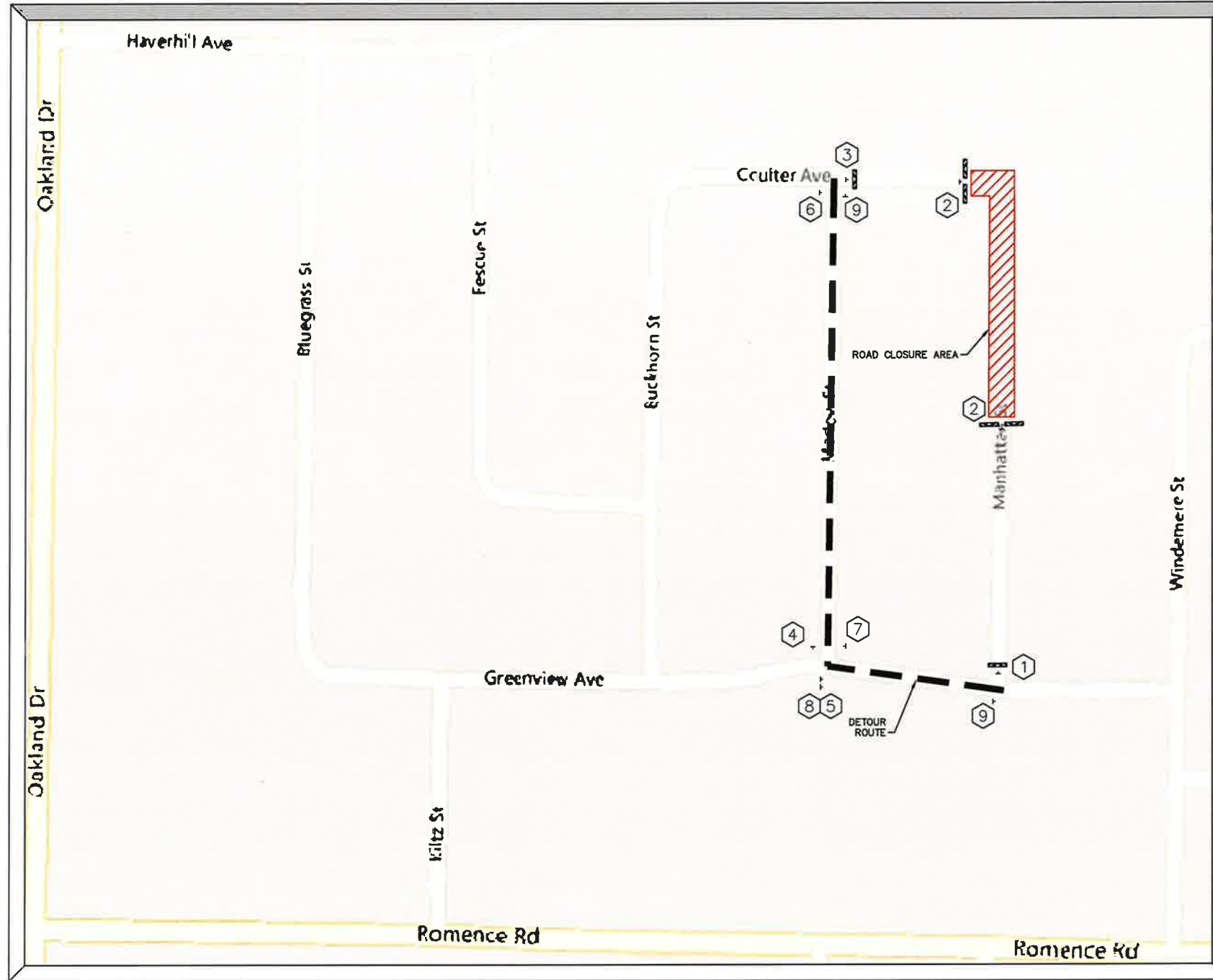
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C 101
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 kalamazoo, michigan 49009
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 www.hurleystewart.com



 QTY: 1 SIZE: 60"x30" (13 SFT) TOTAL AREA: 13 SFT DESIGNATION: R11-4	 QTY: 2 SIZE: 48"x30" (10 SFT) TOTAL AREA: 20 SFT DESIGNATION: R11-2	 QTY: 1 SIZE: 48"x30" (10 SFT) TOTAL AREA: 10 SFT DESIGNATION: R11-2	 QTY: 1 SIZE: 36"x12" (3 SFT) TOTAL AREA: 9 SFT DESIGNATION: W20-12P	 QTY: 1 SIZE: 36"x12" (3 SFT) TOTAL AREA: 6 SFT DESIGNATION: W20-12P	 QTY: 1 SIZE: 36"x12" (3 SFT) TOTAL AREA: 6 SFT DESIGNATION: W20-12P	 QTY: 1 SIZE: 36"x12" (3 SFT) TOTAL AREA: 6 SFT DESIGNATION: W20-12P	 QTY: 1 SIZE: 36"x12" (3 SFT) TOTAL AREA: 6 SFT DESIGNATION: W20-12P	 QTY: 2 SIZE: 24"x18" (3 SFT) TOTAL AREA: 6 SFT DESIGNATION: M4-BA	 QTY: 6 BARRICADE, HIGH INTENSITY, LIGHTED DESIGNATION: TYPE III
 SIZE: 48"x18" (6 SFT) TOTAL AREA: 6 SFT DESIGNATION: M4-10L		 SIZE: 48"x18" (6 SFT) TOTAL AREA: 6 SFT DESIGNATION: M4-10R	 SIZE: 30"x24" (5 SFT) TOTAL AREA: 15 SFT DESIGNATION: M4-9L	 SIZE: 30"x24" (5 SFT) TOTAL AREA: 15 SFT DESIGNATION: M4-9L	 SIZE: 30"x24" (5 SFT) TOTAL AREA: 10 SFT DESIGNATION: M4-9R	 SIZE: 30"x24" (5 SFT) TOTAL AREA: 10 SFT DESIGNATION: M4-9R	 SIZE: 30"x24" (5 SFT) TOTAL AREA: 10 SFT DESIGNATION: M4-9R		



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 FIELD WORK PERFORMED BY:
 DRIESEN & ASSOCIATES, LLC

ISSUED FOR: _____ DATE: _____

PROJECT TITLE:
 BID PACKAGE 1:
 HAVERHILL
 ELEMENTARY UTILITY
 RELOCATIONS

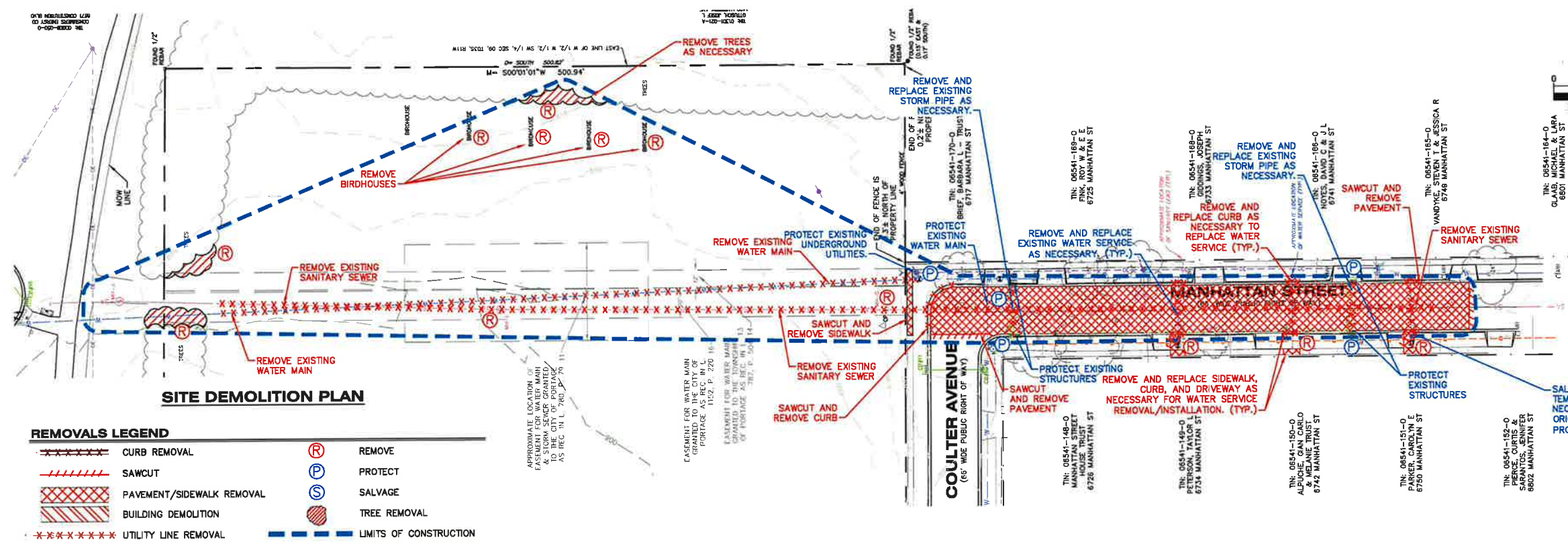
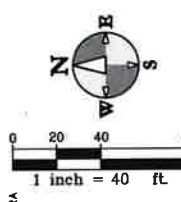
OWNER:
 PORTAGE PUBLIC
 SCHOOLS
 Portage, Michigan

SHEET TITLE:
 MAINTENANCE OF
 TRAFFIC PLAN

DATE:
 NOVEMBER 11, 2022

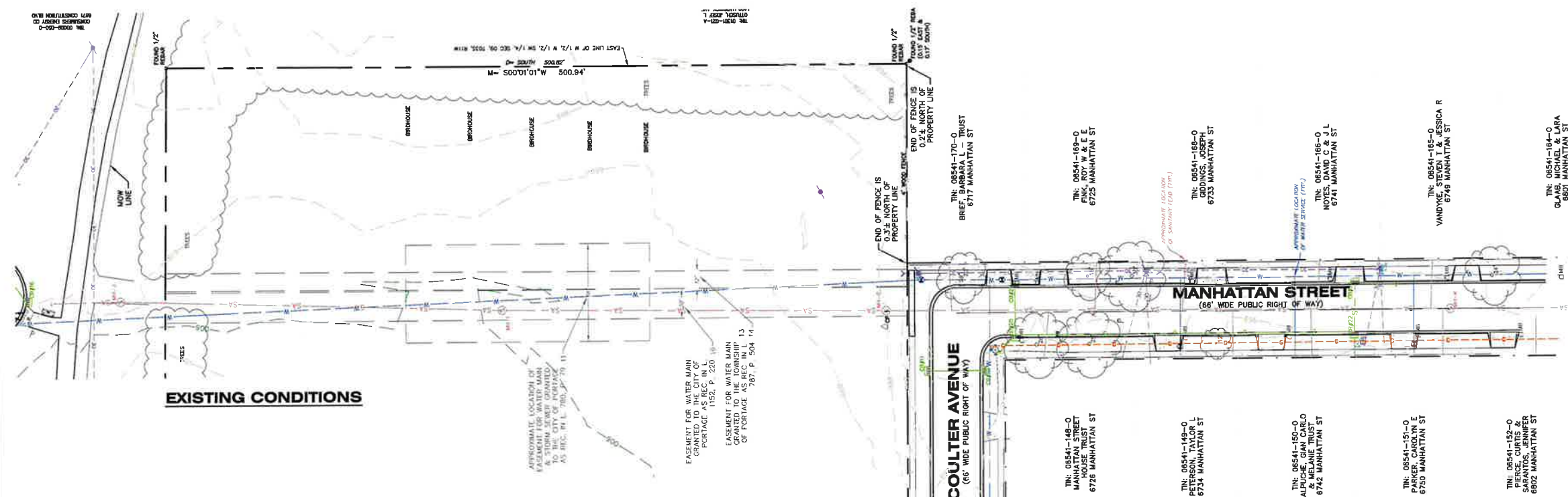
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 21-237.21

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REMOVALS LEGEND

-----	CURB REMOVAL	(R)	REMOVE
////	SAWCUT	(P)	PROTECT
XXXXXX	PAVEMENT/SIDEWALK REMOVAL	(S)	SALVAGE
	BUILDING DEMOLITION	(T)	TREE REMOVAL
-----	UTILITY LINE REMOVAL	---	LIMITS OF CONSTRUCTION



EXISTING STRUCTURE DATA

STM LB #1 - 6" CONCRETE RIM = 900.26 INV (S) 12" CONC = 895.36 SUMP = 891.81	STM CB #5 - 2" BLOCK RIM = 898.52 INV (S) 12" CONC = 895.22 SUMP = 895.07	STM CB #11 - 2" CONCRETE RIM = 897.96 INV (S) 12" CONC = 892.63 SUMP = 893.86	STM CB #16 - 4" CONCRETE RIM = 897.96 INV (NE) 8" CONC = 893.06 SUMP = 893.86	STM MH #20 - 4" BLOCK RIM = 895.10 INV. (NW) 12" CONC = 891.70 INV. (E) 12" CONC = 891.75 INV. (S) 12" CONC = 891.70± WATER = 890.16 SEDIMENT = 889.61	STM MH #23 - 5" BLOCK RIM = 896.16 INV. (S) 15" CONC = 890.16 INV. (W) 15" CONC = 890.16 WATER = 890.16 SEDIMENT = 889.61	SAN MH D - 4" CONCRETE RIM = 902.68 INV (N) 12" CONC = 885.48 INV (S) 12" CONC = 885.53	SAN MH I RIM = 899.58 INV (N) 12" PVC = 881.01 INV (S) 12" PVC = 881.96
STM CB #2 - 4" CONCRETE RIM = 901.18 INV (N) 12" CONC = 897.28 SUMP = 893.13	STM CB #7 - 2" BLOCK RIM = 898.10 INV (SE) 12" CONC = 894.85 SUMP = 894.70	STM LB #12 - 6" CONCRETE RIM = 900.04 INV (NW) 12" CONC = 894.71 SUMP = 894.51	STM LB #17 - 6" CONCRETE RIM = 898.36 INV (SW) 12" CPP = 893.76 INV (N) 12" CPP = 893.48 SUMP = 881.56	STM MH #21 - 4" BLOCK RIM = 895.14 INV. (W) 12" CONC = 892.29 WATER = 892.29 SEDIMENT = 892.14	SAN MH A RIM = 900.32 INV (N) 12" CONC = 886.72 INV (S) 12" CONC = 886.57	SAN MH E - 2" CONCRETE RIM = 901.99 INV (E) 6" PVC = 888.69 INV (SW) 6" PVC = 888.49	SAN MH J RIM = 898.48 INV (N) 12" PVC = 881.63 INV (S) 12" PVC = 881.58
STM CB #3 - 4" CONCRETE RIM = 901.92 INV (SE) 12" CONC = 895.47 SUMP = 893.72	STM CB #8 - 4" CONCRETE RIM = 898.31 INV (NW) 12" CONC = 894.71 SUMP = 894.51	STM LB #13 - 6" CONCRETE RIM = 900.14 INV (NW) 12" CONC = 892.44 SUMP = 891.44	STM LB #18 - 4" CONCRETE RIM = 898.27 INV (S) 12" CPP = 894.67 SUMP = 890.02	STM MH #22 - 5" BLOCK RIM = 896.13 INV. (N) 12" CONC = 890.73± INV. (E) 15" CONC = 890.38± INV. (W) 15" CONC = 890.53± WATER = 890.36 SEDIMENT = 890.23	SAN MH B - 6" CONCRETE RIM = 901.60 INV (WSW) 8" PVC = 892.30 INV (ENE) 8" PVC = 892.30	SAN MH F - 6" CONCRETE RIM = 898.68 INV (S) 12" PVC = 884.08 INV (N) 12" PVC = 884.18	SAN MH K RIM = 896.81 INV (N) 10" CLAY = 878.86 INV (S) 10" CLAY = 878.76
STM CB #4 - 4" CONCRETE RIM = 901.32 INV (SE) 18" CONC = 895.07 INV (N) 12" CONC = 895.32 SUMP = 894.82	STM CB #9 - 4" CONCRETE RIM = 898.42 INV (N) 12" CONC = 844.82 SUMP = 844.62	STM LB #14 - 6" CONCRETE RIM = 900.13 INV (NW) 12" CONC = 892.63 SUMP = 885.63	STM MH #19 - 6" CONCRETE RIM = 903.23 INV (W) 12" PVC = 891.63 SUMP = 891.63	SAN MH C - 6" CONCRETE RIM = 901.26 INV (W) 8" PVC = 895.43 INV (NE) 8" PVC = 895.46	SAN MH G - 4" CONCRETE RIM = 898.22 INV (S) 8" CONC = 880.37 INV (N) 8" CONC = 880.42	SAN MH H - 6" CONCRETE RIM = 899.76 INV (S) 12" PVC = 883.11 INV (N) 12" PVC = 883.16	
STM CB #5 - 2" CONCRETE RIM = 900.86 INV (NE) 8" PVC = 885.31 SUMP = 894.11	STM LB #10 - 4" CONCRETE RIM = 895.88 INV (N) 12" CONC = 892.03 SUMP = 891.88	STM LB #15 - 6" CONCRETE RIM = 900.39 INV (NO PIPES VISIBLE) SUMP = 884.54					

BENCHMARKS

ELEVATIONS OF THIS SURVEY ARE BASED ON NAVD 88 AS DERIVED FROM GPS OBSERVATIONS UTILIZING VRS COORDS 18

BM #1 ELEVATION = 904.66 (NAVD '88)
MAG NAIL IN TOP OF 6"x6" WOOD POST, LOCATED 104'± EAST OF NORTHEAST CORNER OF "HAVERHILL ELEMENTARY SCHOOL" & 88'± SOUTHEAST OF NORTHEAST CORNER OF PARKING LOT

BM #2 ELEVATION = 900.73 (NAVD '88)
FLANGE BOLT UNDER "E" ON HYDRANT, LOCATED 26'± EAST OF CENTERLINE OF BUCKHORN STREET & 28'± SOUTH OF CENTERLINE OF COULTER AVENUE.

BM #3 ELEVATION = 905.01 (NAVD '88)
FLANGE BOLT UNDER "E" ON HYDRANT, LOCATED 84'± NORTHWEST OF "HAVERHILL ELEMENTARY" SIGN & 25'± NORTH OF CENTERLINE OF HAMPTON STREET.



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FIELD WORK PERFORMED BY:
DRIESENGA & ASSOCIATES, LLC

ISSUED FOR: PROJECT TITLE: BID PACKAGE 1: HAVERHILL ELEMENTARY UTILITY RELOCATIONS

OWNER: PORTAGE PUBLIC SCHOOLS

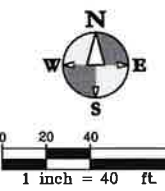
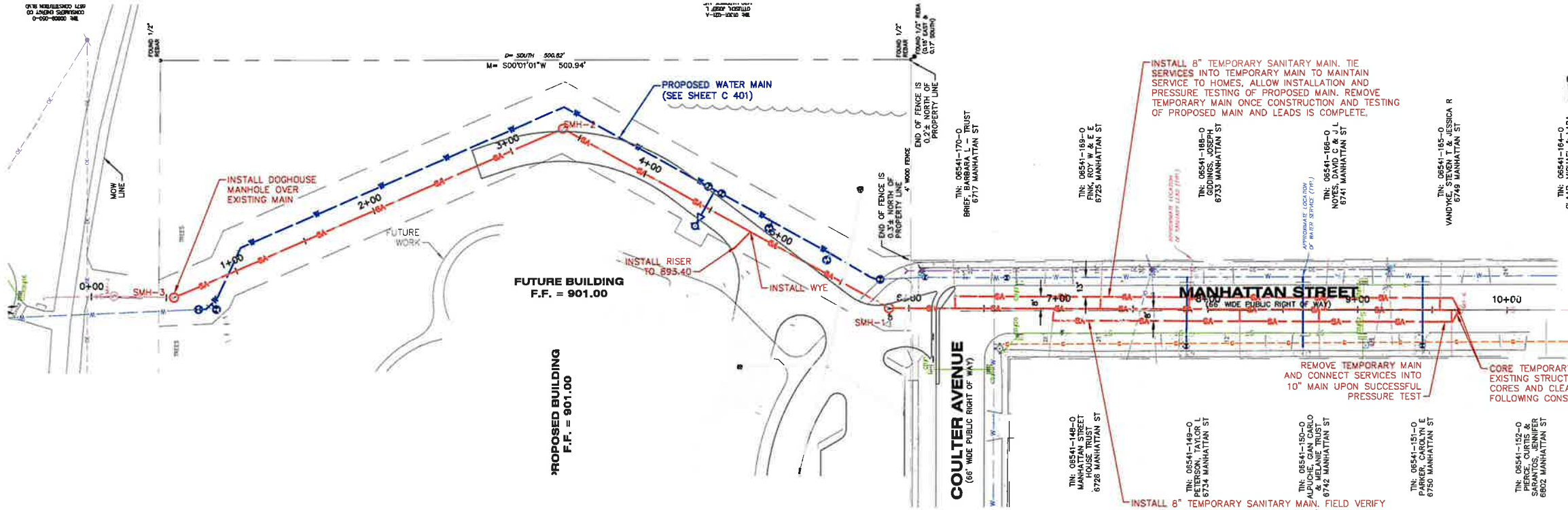
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DATE: NOVEMBER 11, 2022

SHEET TITLE: EX. CONDITIONS & SITE DEMO PLAN

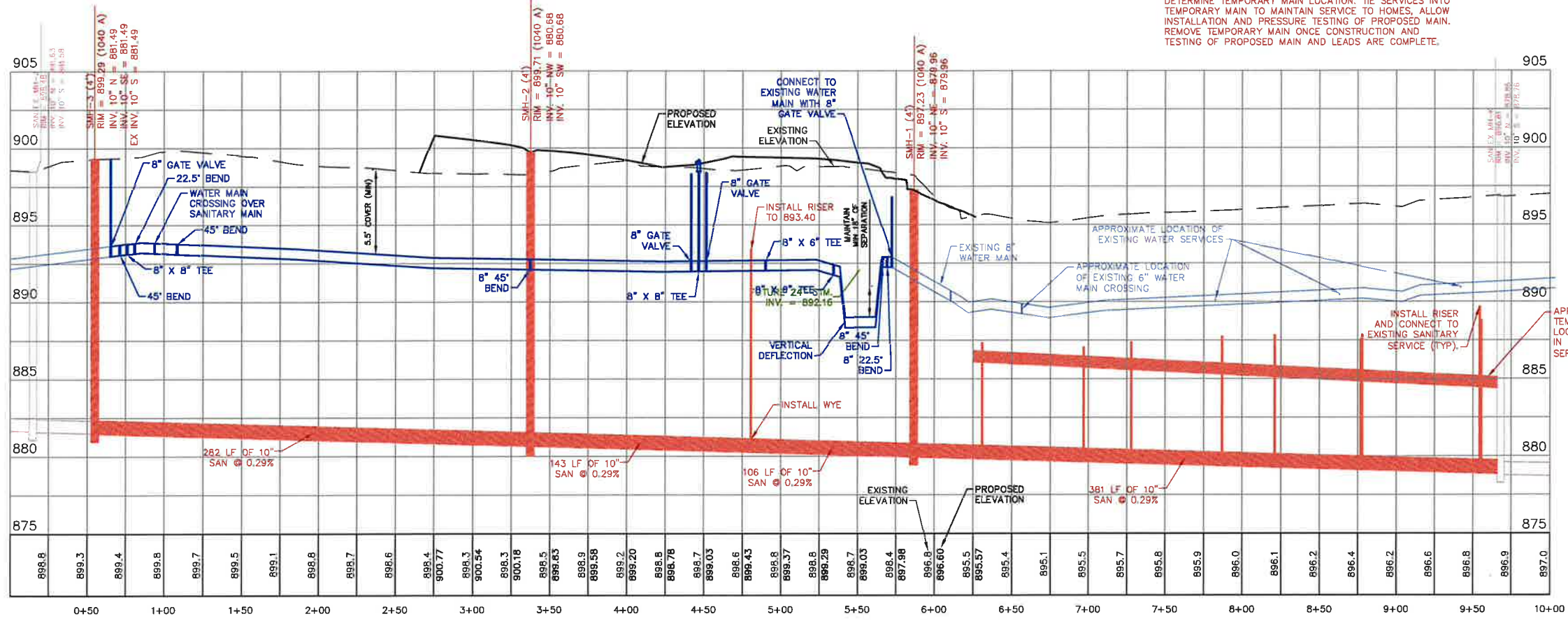
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THE OWNER'S DESIGN SHALL BE THE BASIS FOR THE CONTRACTOR'S DESIGN TO BE SUBMITTED TO THE CITY OF PORTAGE, MICHIGAN.



HS
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APPROXIMATE LOCATION OF TEMPORARY SANITARY MAINS. LOCATION TO BE DETERMINED IN FIELD FROM EXISTING SEWER SERVICE LOCATION/ELEVATION.

ISSUED FOR: _____ DATE: _____

PROJECT TITLE
**BID PACKAGE 1:
 HAVERHILL
 ELEMENTARY UTILITY
 RELOCATIONS**

OWNER
**PORTAGE PUBLIC
 SCHOOLS**
 Portage, Michigan

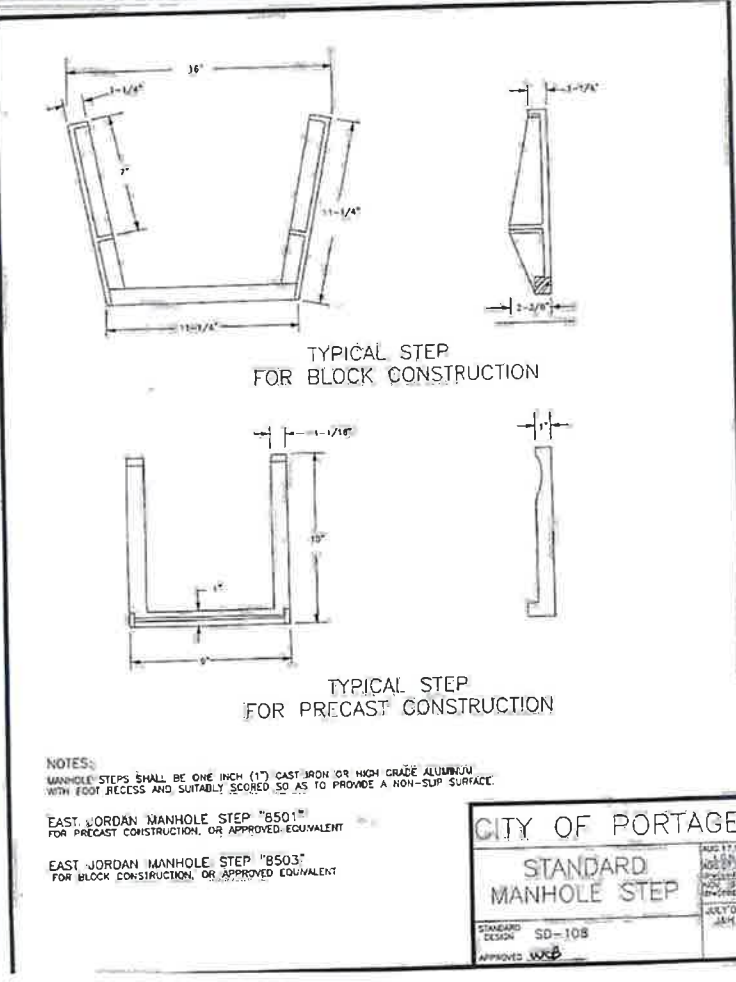
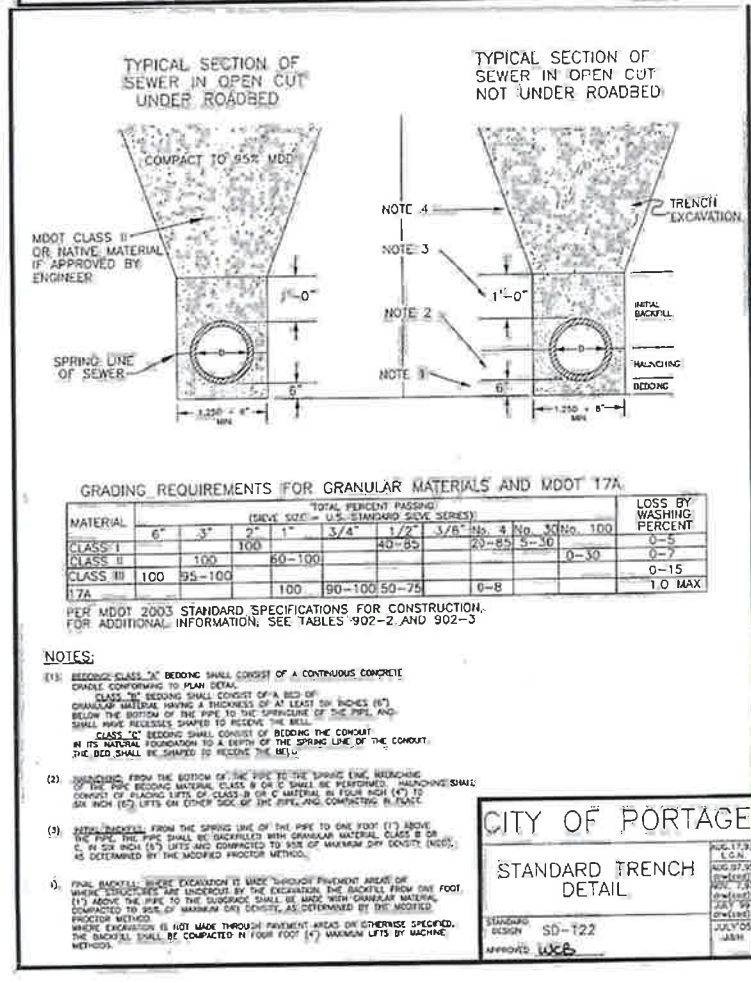
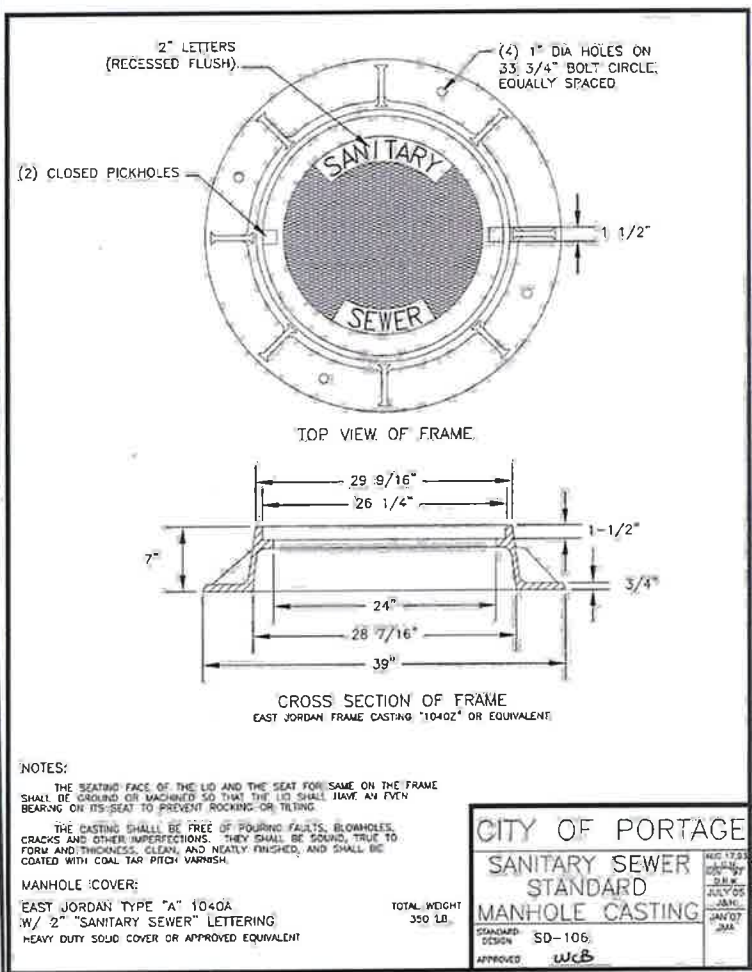
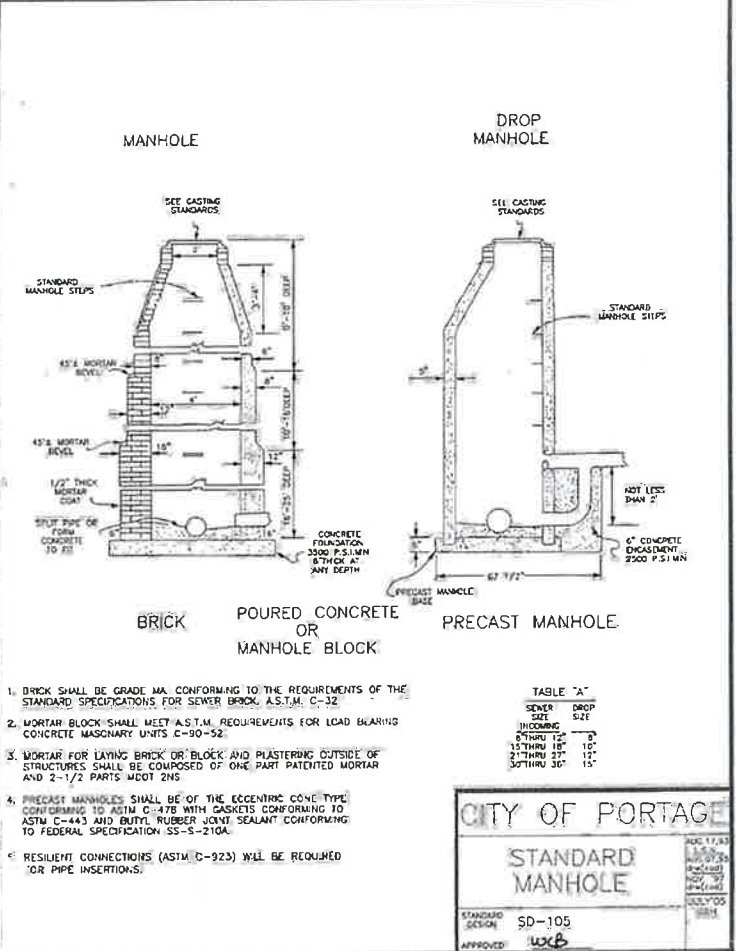
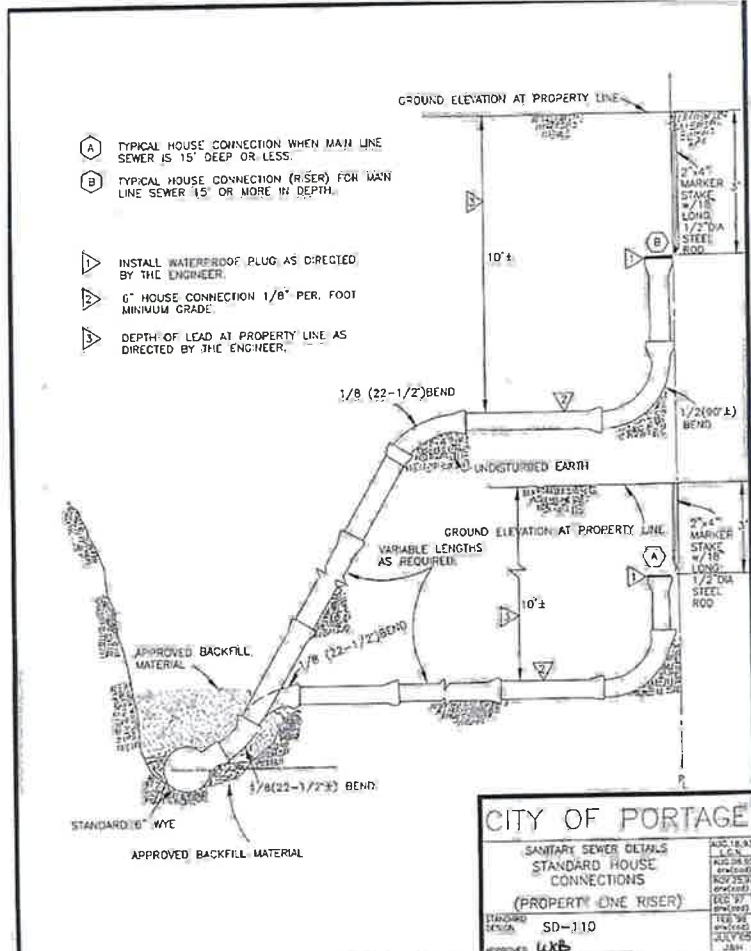
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SANITARY PLAN & PROFILE

DATE
NOVEMBER 11, 2022

SHEET NUMBER
**C 400
 21-237.21**



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PROJECT TITLE
**BID PACKAGE 1:
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 RELOCATIONS**

OWNER
**PORTAGE PUBLIC
 SCHOOLS**

Portage, Michigan

DATE
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SHEET TITLE
SANITARY DETAILS

SHEET NUMBER
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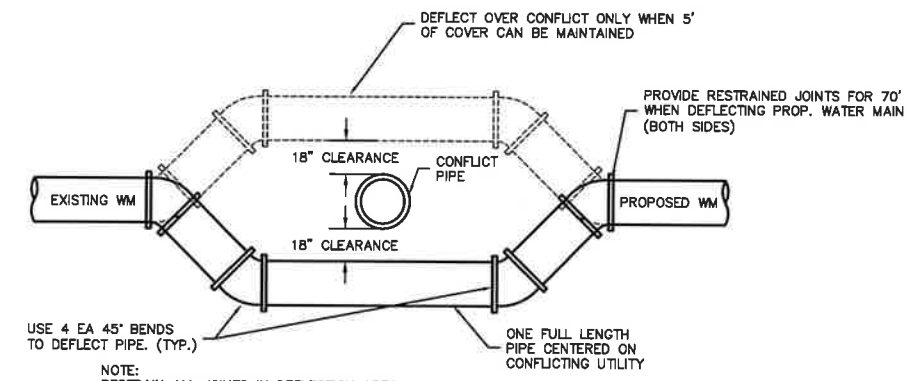
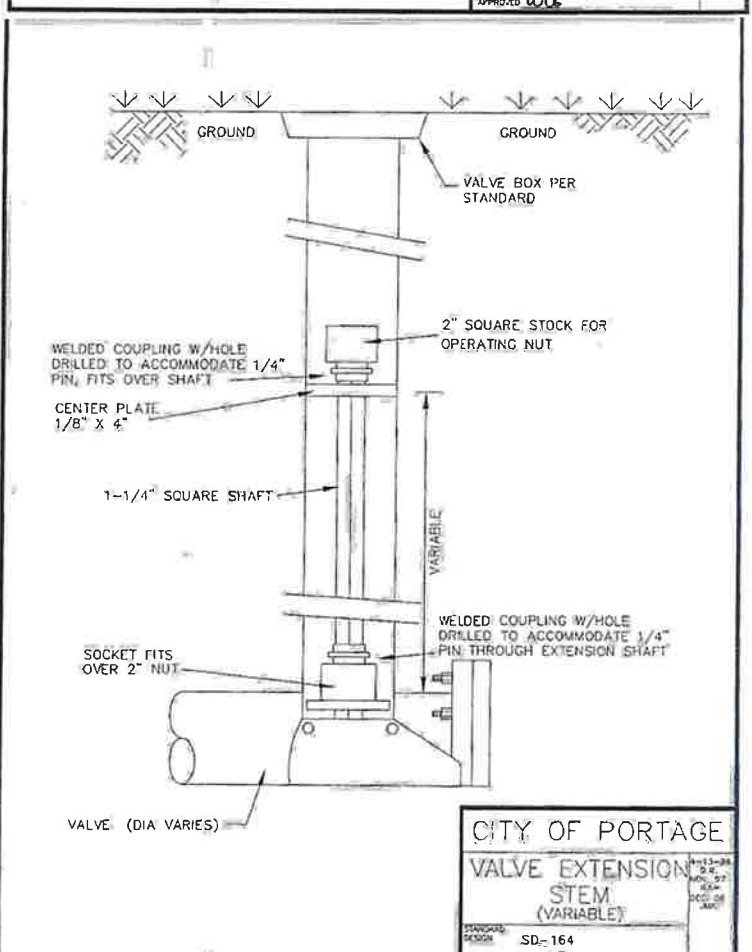
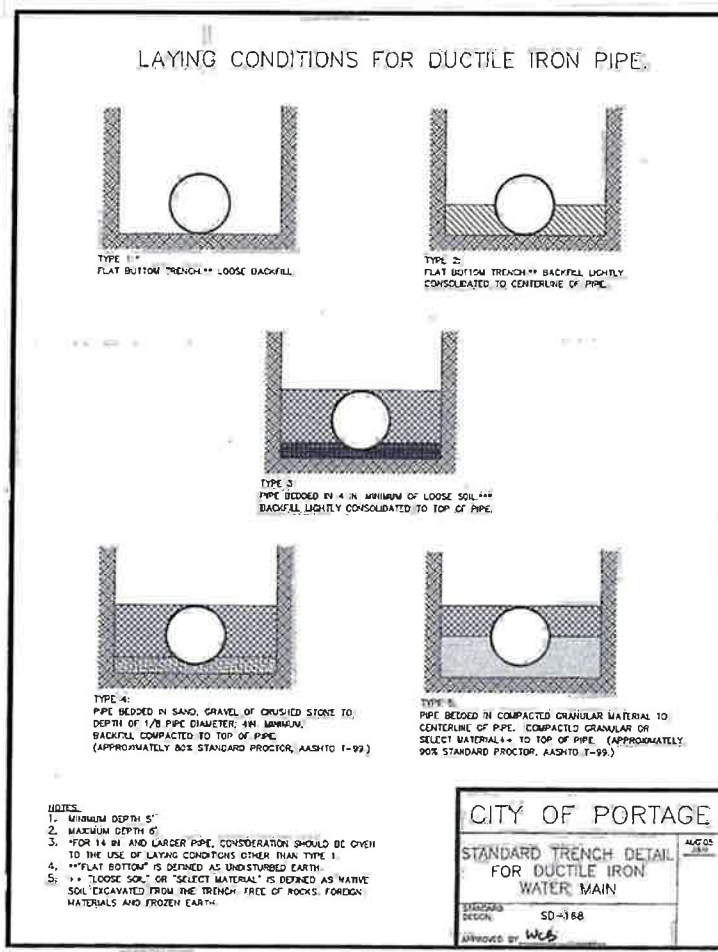
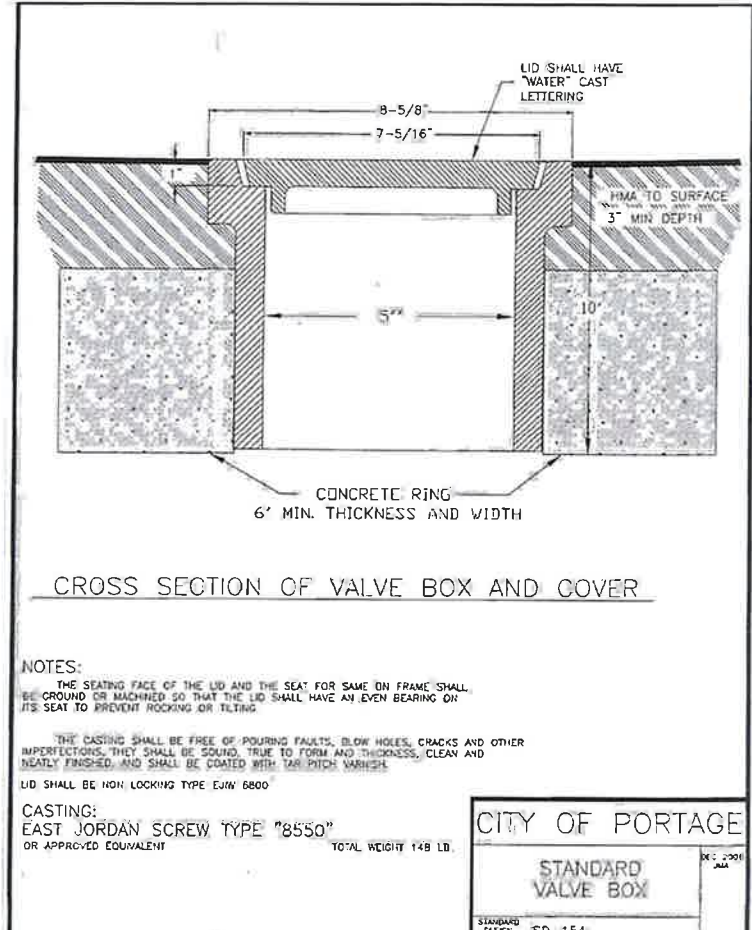
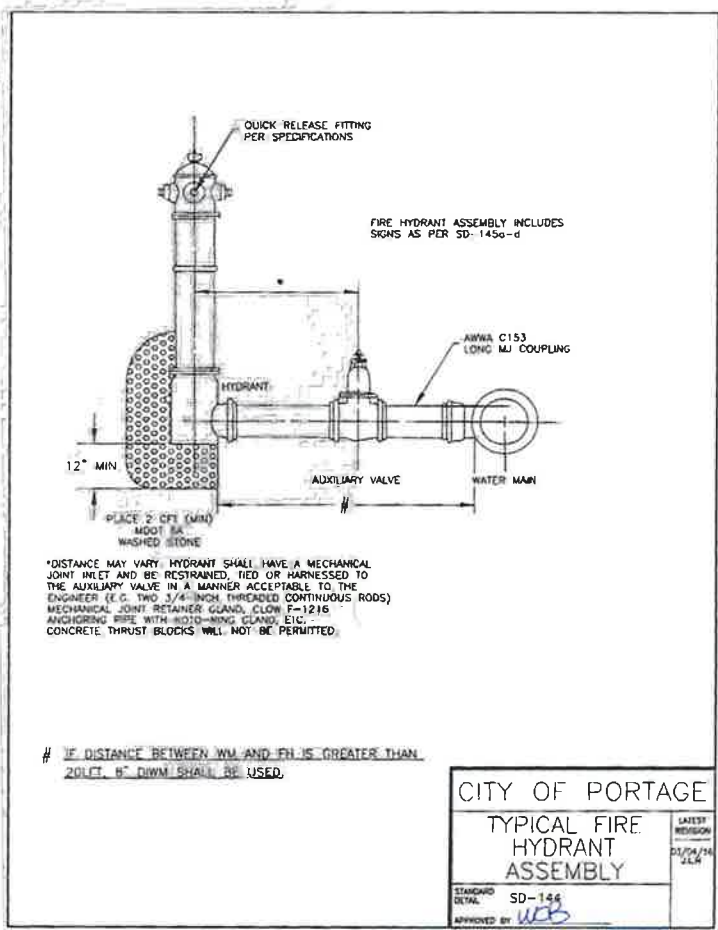
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SHEET TITLE
WATER MAIN DETAILS

SHEET NUMBER
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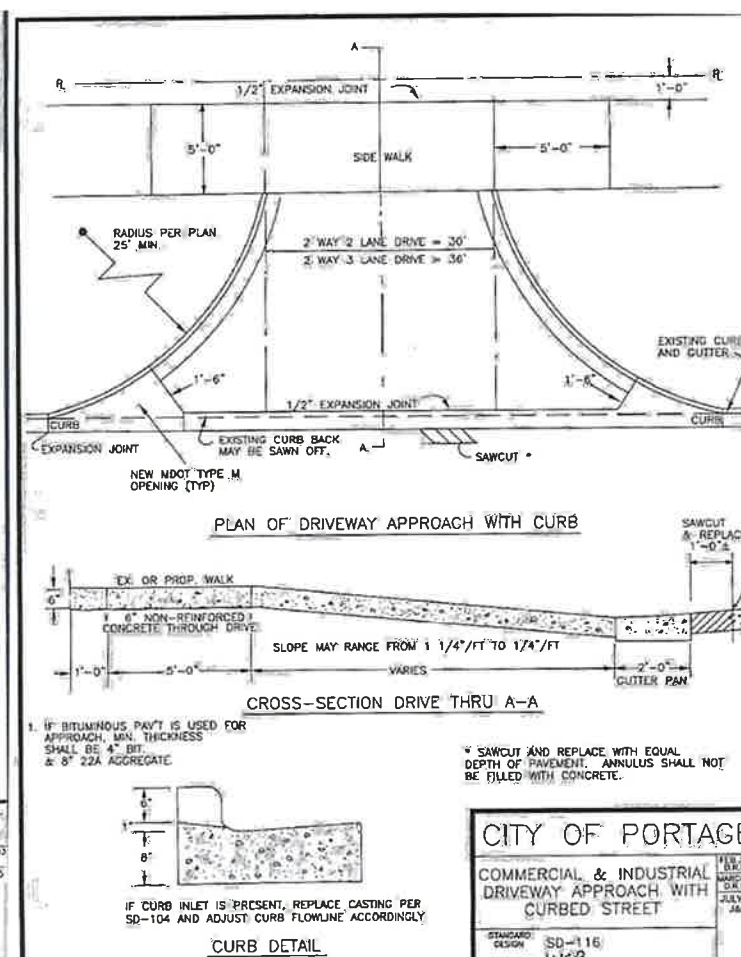
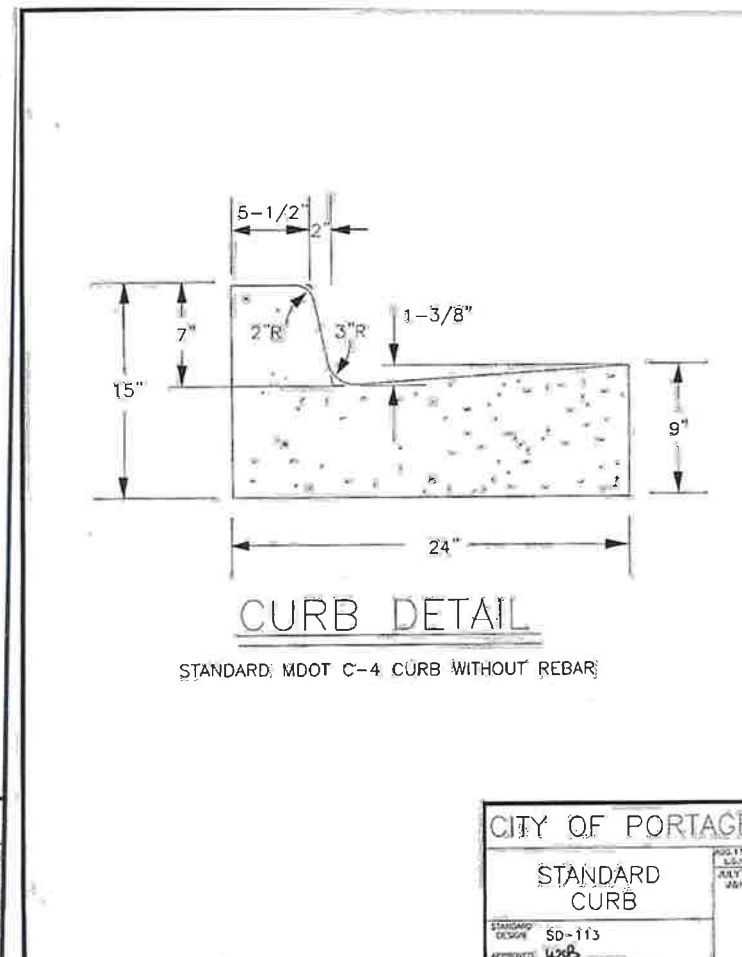
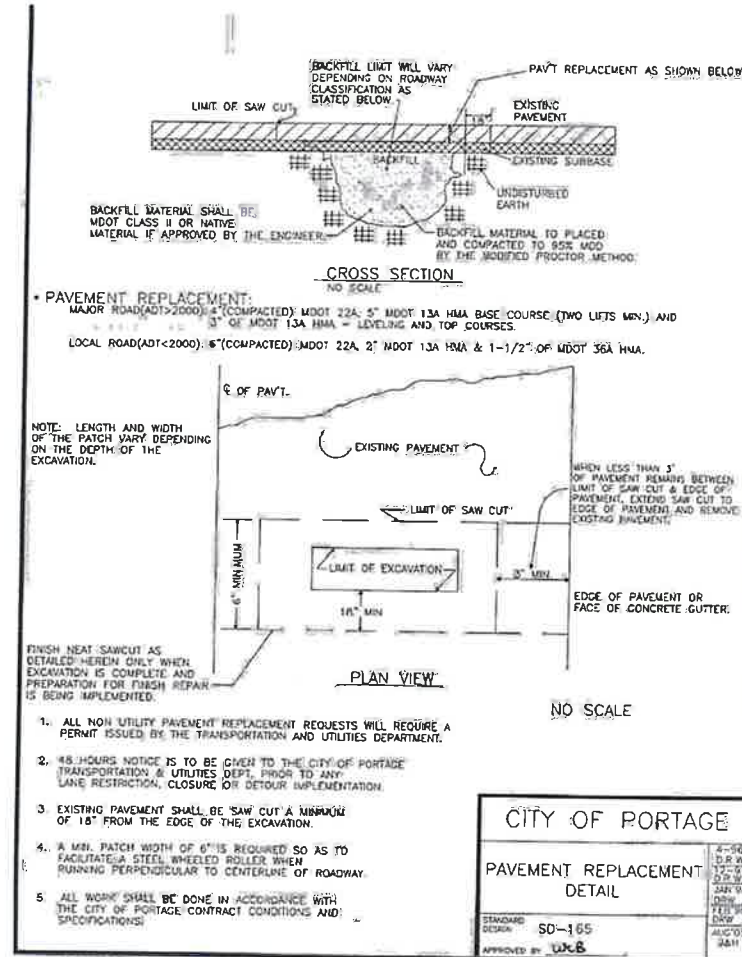
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WATER MAIN DEFLECTION DETAIL
 NO SCALE



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



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PROJECT TITLE
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 RELOCATIONS**

OWNER
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 Portage, Michigan

DATE
NOVEMBER 11, 2022

SHEET TITLE
SITE DETAILS

SHEET NUMBER
C 502
 21-237.21



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