ADDENDUM No. 1

ITB No. 4626

2020 UTILITY IMPROVEMENTS

Bids Due: Tuesday, May 12, 2020 at 10:00AM (Local Time)

The information contained herein shall take precedence over the original documents and all previous addenda (if any) and is appended thereto. **This Addendum includes twenty two (22) pages.**

Bidder is to acknowledge receipt of this Addendum No. 1, including all attachments (if any) in its Bid by so indicating on page ITB-1 of the Invitation to Bid Form. Bids submitted without acknowledgment of receipt of this addendum may be considered nonconforming.

The following forms provided within the ITB document must be included in submitted bids:

- **City of Ann Arbor Prevailing Wage Declaration of Compliance**
- **City of Ann Arbor Living Wage Ordinance Declaration of Compliance**
- **Vendor Conflict of Interest Disclosure Form**
- **City of Ann Arbor Non-Discrimination Ordinance Declaration of Compliance**

Bids that fail to provide these forms listed above upon bid opening may be rejected as non-responsive and may not be considered for award.

I. CORRECTIONS/ADDITIONS/DELETIONS

Changes to the Bid document which are outlined below are referenced to a page or Section in which they appear conspicuously. The Bidder is to take note in its review of the documents and include these changes as they may affect work or details in other areas not specifically referenced here.

Section/Page(s)	Change
Plan Sheets	3 Pages – Sheets 8, 12, 13 revised as noted
As-Builts	3 Pages – Packard Rd utility drawings
Photo	1 Page – Huron St. lateral sewer
Soil Borings	6 Pages – Soil boring on South Blvd
BF-1 to BF-3	3 Pages – Items added for permits and hand patching
Bid Forms	Separate Excel File

II. QUESTIONS AND ANSWERS

The following Questions have been received by the City. Responses are being provided in accordance with the terms of the ITB. Bidders are directed to take note in their review of the documents of the following questions and City responses as they affect work or details in other areas not specifically referenced here.

Question 1: Please confirm all pavement removal, aggregate base, and proposed pavement will be paid for separately and not included in the cost of utility construction.
Answer 1: **Those items are paid separately.**

Question 2: Will all survey layout and aggregate/density testing be performed by the city?
Answer 2: **Staking/Testing will be performed by the City/its consultant.**

Question 3: Is there any available soil boring information located in the vicinity of the South Boulevard/Packard Road intersection? If so, can they please be provided?
Answer 3: **A South Blvd boring is available and is included in Addendum #1.**

Question 4: Can the pre-construction video be performed for all of the streets at the same time/mobilization or do they need to be performed within two weeks prior to the start of each individual work area.
Answer 4: **Yes**

Question 5: Can you please clarify how the limits of payment for machine grading modified will be paid? Based on the measurement and payment subsection of the detailed specification it is to be measured along the road centerline which appears to be measurement by station instead of SY.
Answer 5: **Measurement is in SYD of road paving areas; not along centerline stationing.**

Question 6: Will the pavement removal, aggregate base and asphalt for the line stops be paid separately or are they to be included in the price of the line stop?
Answer 6: **Pavement removal, Aggregate, and Asphalt will be paid separately. A hand-patching item has be added for this work.**

Question 7: Can consideration be given to make separate pay items for topsoil, seeding, mulch, and fertilizer instead of having it as a combined in the lump sum item of work, restoration special. Assumptions would have to be made by the contractor that could unnecessary increase the cost of the project for the owner
Answer 7: **The amount of grass restoration is minimal as the utility construction is generally within pavement areas. The bid item will remain as is.**

Question 8: Construction note 20 on plan sheet two states that a plumbing permit for the sanitary service leads are required. Please confirm the limits of the proposed sanitary sewer inspection that will be handled by the engineering department and that which will be handled by the building department. Will the contractor be responsible for the fees for will they be waived by the city. If the fees are to be paid by the contractor what are the costs for the permits.
Answer 8: **A permit fee allowance item has been added to the contract. Any permit costs to the contractor will be paid from this item.**

Question 9: Will filter fabric be required around the 6A bedding for the PVC sanitary?

Answer 9: **Yes, filter fabric will be required around the 6A bedding for the sewer installation to keep the different bedding and backfill materials separate. This has been clarified on the plan sheet detail.**

Question 10: Can flow rates please be provided on the sanitary sewer that is called to be bypass pumped? The flows are needed to correctly size bypass pumping necessary to facilitate the necessary construction? What item of work is the bypass pumping to be included in? Can a separate pay item be set up for by bass pumping?

Answer 10: **The bypass pumping rates are relatively low, and shall be included in the cost of the sanitary sewer pipe. The sewer serves only the houses on John Street. Approximate maximum peak flow is 15 gpm downstream of 315 John Street.**

Question 11: If the 6" lead to 315 John Street is considered a service will the City of Ann Arbor Service department be required to core the MH or will the contractor be allowed perform the tap?

Answer 11: **The contractor will be allowed to install the tap.**

Question 12: Will a doghouse structure be allowed for structure S1 on sheet 15 to maintain the existing services that are connected upstream from the proposed structure?

Answer 12: **The doghouse structure could be considered if the contractor wishes to pursue that method of construction. Details would need to be worked out with the construction engineer to ensure that the manhole is constructed properly.**

Question 13: Sanitary service for 617 S Fifth Ave (101+15) will need to be tied into as the proposed sewer installed. Please confirm air testing will not be required for this section.

Answer 13: **Air testing will not be required.**

Question 14: It is likely that the existing sanitary service leads for 335 and 339 John Street will have to be removed to install the proposed 8" sanitary sewer from S1 to S2. Will the contractor be allowed to tie-in as it is installed?

Answer 14: **Yes. Services may be tied in as construction proceeds.**

Question 15: Please confirm the sanitary air/televising/mandrill testing that will be required for this project.

Answer 15: **Air testing is not required. Cleaning/televising/mandrill testing are required.**

Question 16: The progress schedule allows for 14 calendar days to complete the work on John Street. Due to the nature of work, weather, testing, inspection/coordination of sanitary services with the plumbing department, curing of concrete, coordination of subs, and abandonment the existing main I would anticipate more time is needed to complete the contract work. Can consideration be given to add an additional two weeks to facilitate proposed work?

Answer 16: **The Utility construction is to be completed in 14 days. All work including paving and restoration is to be completed by August 22.**

Question 17: Plan sheet 16 calls out 315 Johns driveway to be restored with 67 SYD of CON6-IC but is depicted as asphalt. Please clarify the desired restoration of the driveway.

Answer 17: **Driveways shall be repaved with 6-inches of concrete.**

Question 18: Please provide a typical section for 315 and 333 Johns street driveway depicting where the integral curb is to be installed.

Answer 18: **The integral curb will be placed adjacent to the 315 sidewalk and in the same location where removed on the east side of 333; as a 4-inch straight curb.**

Question 19: Please clarify if all of the proposed work is within a City of Ann Arbor ROW or easement and the contractor will not need individual agreements with home owners to access their property.

Answer 19: **All access agreements will be obtained by the City.**

Question 20: The progress schedule only allows for a 7 day closure/detour of Packard Road to perform pavement removal, water main installation, and road restoration/paving. Additional time will be needed to perform the proposed utility work and road restoration work (minimum additional 7 days).

Answer 20: **The contractor will need to schedule their operations to complete the work in 7 days. Consideration will be given to extending allowable work hours within the 7-day period, if necessary.**

Question 21: Please describe the envisioned sequence of work for the proposed 8" water main testing, water service transfers, and existing water main abandonment for the work on South Boulevard and Packard Street. Will pressure/bacteria testing be waived from V2 to 10+25? Are we to temporality tie-into the existing 4" water main prior to the Packard Street work to facilitate testing of the new main and service transfers west of the intersection of Packard/South Boulevard (Please consider moving V2 farther west). Will all of the proposed water main work in the Packard Road ROW be considered a tie-in?

Answer 21: **It is envisioned that the contractor would construct and test the water main on South Blvd up to V2; tie into the 4-inch water main; and transfer services. The contractor would then construct the water main in Packard Road as a tie-in, swabbing the pipe prior to installation. When completed, the new main would be completely connected, and the 4-inch main abandoned.**

Question 22: Field-Loc restrained joints are historically incidental to the installation of water main to restrain the pipe. How is item 402 to be measured for payment? If additional field loc restrained joints are installed due to vertical bends for sanitary leads or the dead line at South Boulevard will we be paid under this item of work?

Answer 22: **The plans identify the section of pipe including the work in Packard Road as needing restrained joints, and shall be paid as item 402. The other water main pay item 401 is for push on joints, and thrust blocks at bends. If the contractor requests and is allowed to use restrained joints in lieu of thrust blocks, this would still be paid at no additional cost, as item 401. This would be a field determination.**

Question 23: Is there any available as built information/televising of the existing 18" sanitary and 66" storm pipe located in Packard Street?

Answer 23: **As-built information of the existing 18" sanitary and 66" storm sewer pipes located in Packard Street is included in Addendum #1. We do not have of video of these pipes on record.**

Question 24: I believe Huron Street is within the MDOT ROW. Has a permit been issued for the proposed work? If not who will be responsible for the permits and fees if a DOT permit is required? What is the anticipated cost of the fee the contractor is to procure the permit if needed?

Answer 24: **A permit fee allowance item has been added to the contract. Any permit costs**

to the contractor will be paid from this item.

Question 25 Is there an Engineers Estimate?
Answer 25: **$1,000,000**

Question 26: Is the contractor required to pull plumbing permit to connect to existing sanitary sewer leads? If yes will it be no cost to the contractor?
Answer 26: **The contractor shall pull plumbing permits. If there is any cost to the Contractor it will be paid from the permit allowance item.**

Question 27: Reviewing the work to be done on Huron St. We will be under the Rail Road Bridge and be inside the Rail Road ROW. Will we need a Rail Road ROW permit? Is there any other requirements? Will the City pick up any cost that occurs?
Answer 27: **It is not anticipated that a railroad permit will be required to work on the street. If a permit is required and there is any cost to the Contractor it will be paid from the permit allowance item.**

Question 28: Will the City specification for 21AA Limestone (less than 8% loss by wash) be enforced on this project?
Answer 28: **The 21AA will need to meet MDOT specifications.**

Question 29: Are pay items Sand Subbase Course CL II – C.I.P, 21AA Limestone and 6A Crushed Limestone used for Undercut Backfill?
Answer 29: **Sand subbase is to be used under sidewalk. 6A crushed limestone is to be used on rear yard parking areas on John Street. 21AA is undercut backfill.**

Question 30: Can we have a pay item for Line Stop Rental?
Answer 30: **All costs shall be included in the contractor's price for item 290.**

Question 31: I assume the existing water main will be abandoned in place (without grout), unless otherwise specified on the plans, correct?
Answer 31: **The ends shall be grouted, but the pipe will not be flow filled.**

Question 32: What is the depth for the Cold Milling on John St?
Answer 32: **John Street will have HMA removal for sewer installation, followed by HMA removal for resurfacing. This has been clarified on the plan sheets. HMA removal is all paid as item 222. There is no cold milling.**

Question 33: Are we to place 8" of 21AA for aggregate base for the two alleyways? If so is the aggregate base paid for separately or is it part of the 6" Concrete with integral curb pay item?
Answer 33: **21AA will be placed and paid separately.**

Question 34: What is the size of the abandoned lateral to be bulk headed in Huron St?
Answer 34: **It appears to be a 4-inch or 6-inch. A photograph of the lateral conflicting with the existing storm pipe is included in Addendum #1.**

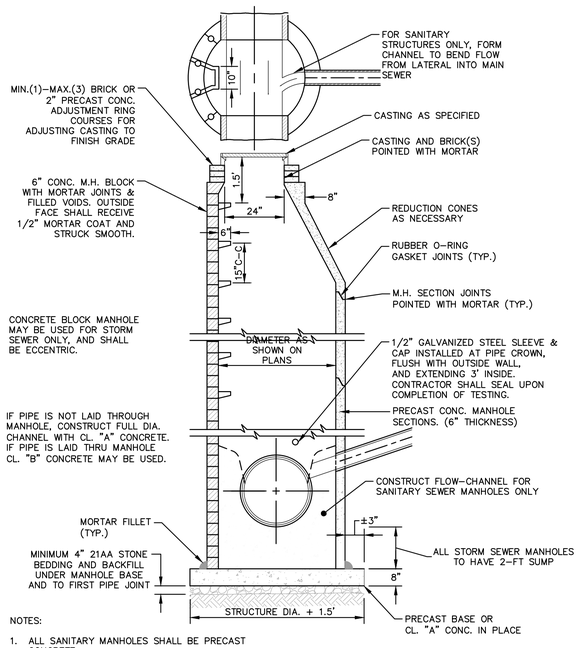
Question 35: What is the existing depth of HMA on Huron St?
Answer 35: **MDOT 2009 plans indicate approximately .5 Ft of HMA. It is not clear if that may be on concrete.**

Question 36: Where is pay item 223 - HMA and Concrete Surface Removal located at on the plans? What is the depth of HMA and depth of Concrete Surface?
Answer 36: **HMA over Concrete may be found on Huron Street. If so, that and any other**

project areas where HMA is found over concrete will also be paid as this item.

Question 37: Would it be possible to also provide an excel spreadsheet of the bid form to use.
Answer 37: **Yes. An excel spreadsheet with items and quantities has been published with Addendum 1 as a separate Excel file. It shall be the contractor's responsibility to include any formulas necessary to extend unit prices and tabulate totals.**

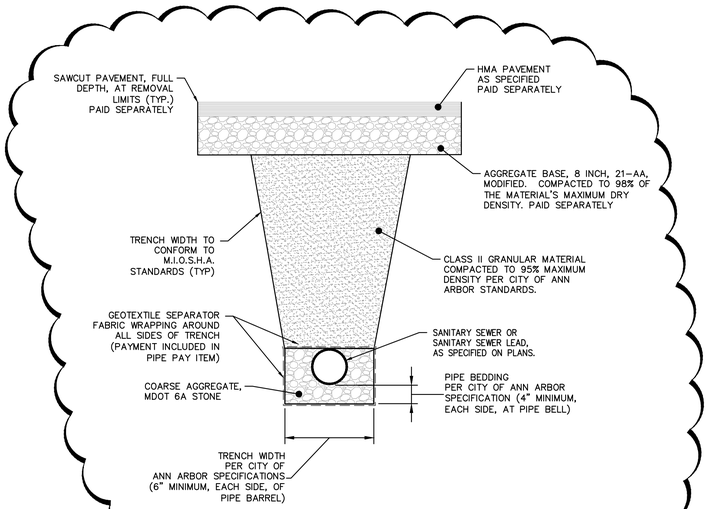
Bidders are responsible for any conclusions that they may draw from the information contained in the Addendum.



NOTES:

1. ALL SANITARY MANHOLES SHALL BE PRECAST CONCRETE.
2. ALL MANHOLES MUST HAVE ECCENTRIC CONES – BOTH STORM AND SANITARY
3. ALL SANITARY SEWER OPENINGS SHALL BE PRECAST WITH RUBBER BOOT CONNECTIONS.
4. 2' SUMP REQUIRED ON ALL DRAINAGE STRUCTURES.

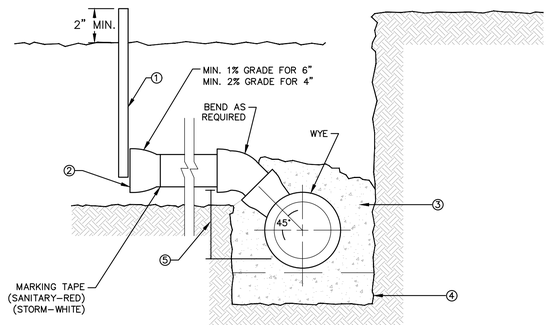
STANDARD MANHOLE (TYPE I)



TRENCH DETAIL - TYPE I, SD-TD-1, MODIFIED

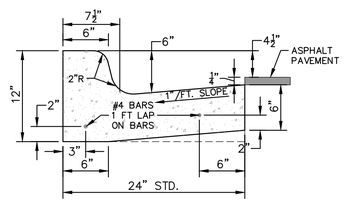
1

1. MIN. 2" X 2" CEDAR TREATED LUMBER, MARKED (SANITARY–RED., STORM–WHITE), SET VERTICALLY.
2. CAP WITH SOLVENT WELDED CAP OR PLUG
3. CLASS "X" CONCRETE TO EXTEND MIN. 1.0' BEYOND TEE OR WYE JOINTS. (D.I.P. TEE OR WYE NOT ENCASED)
4. CLASS II GRANULAR MATERIAL, COMPACTED TO 95% MAXIMUM DENSITY PER CITY OF ANN ARBOR STANDARDS.
5. 8"x 4" TEE INVERT – ADD 0.83' TO MAIN INVERT 8"x 6" TEE INVERT – ADD 0.87' TO MAIN INVERT



NOTES:
TAPS INTO EXISTING SEWERS SHALL BE DONE ONLY BY CITY UTILITIES DEPARTMENT.

SEWER CONNECTION



CURB AND GUTTER, CONC, DET F4, SPECIAL

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
01	ADDENDUM 1	5-1-2020	DF	BS
00	OUT FOR BID	4-15-2020	CC,DP,RB	BS

CITY OF ANN ARBOR
PUBLIC SERVICES
301 E. HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734.794.6410
www.a2gov.org

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

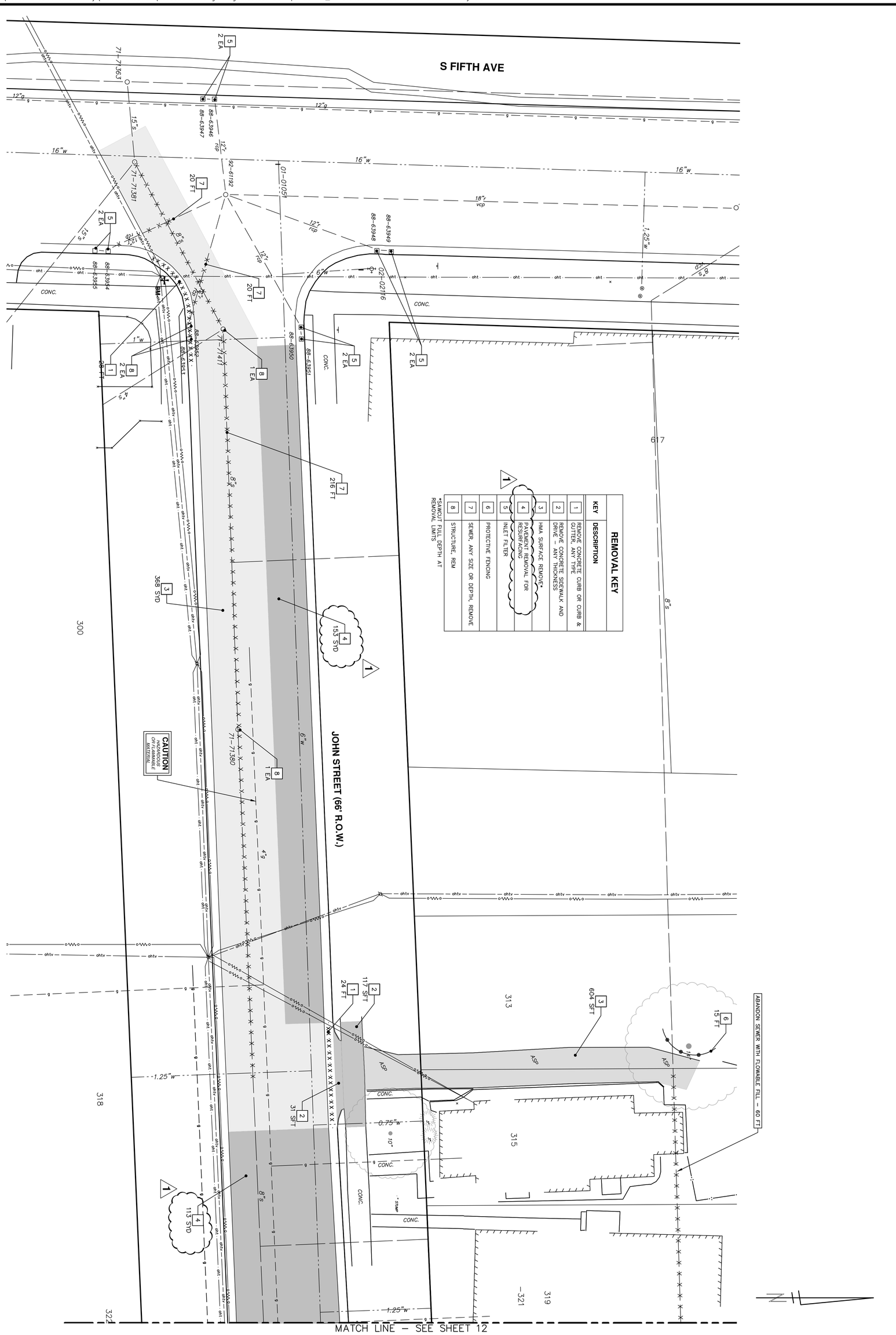
2020 MISC. UTILITY PROJECT

SANITARY SEWER DETAILS

SCALE : NTS

DRAWING No. 2019026-8

SHEET No. 8 OF 28



SHEET No. 12 OF 28

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

SCALE PLAN: 1" = 10'

DRAWING No. 2019026-12

2020 MISC. UTILITY PROJECT

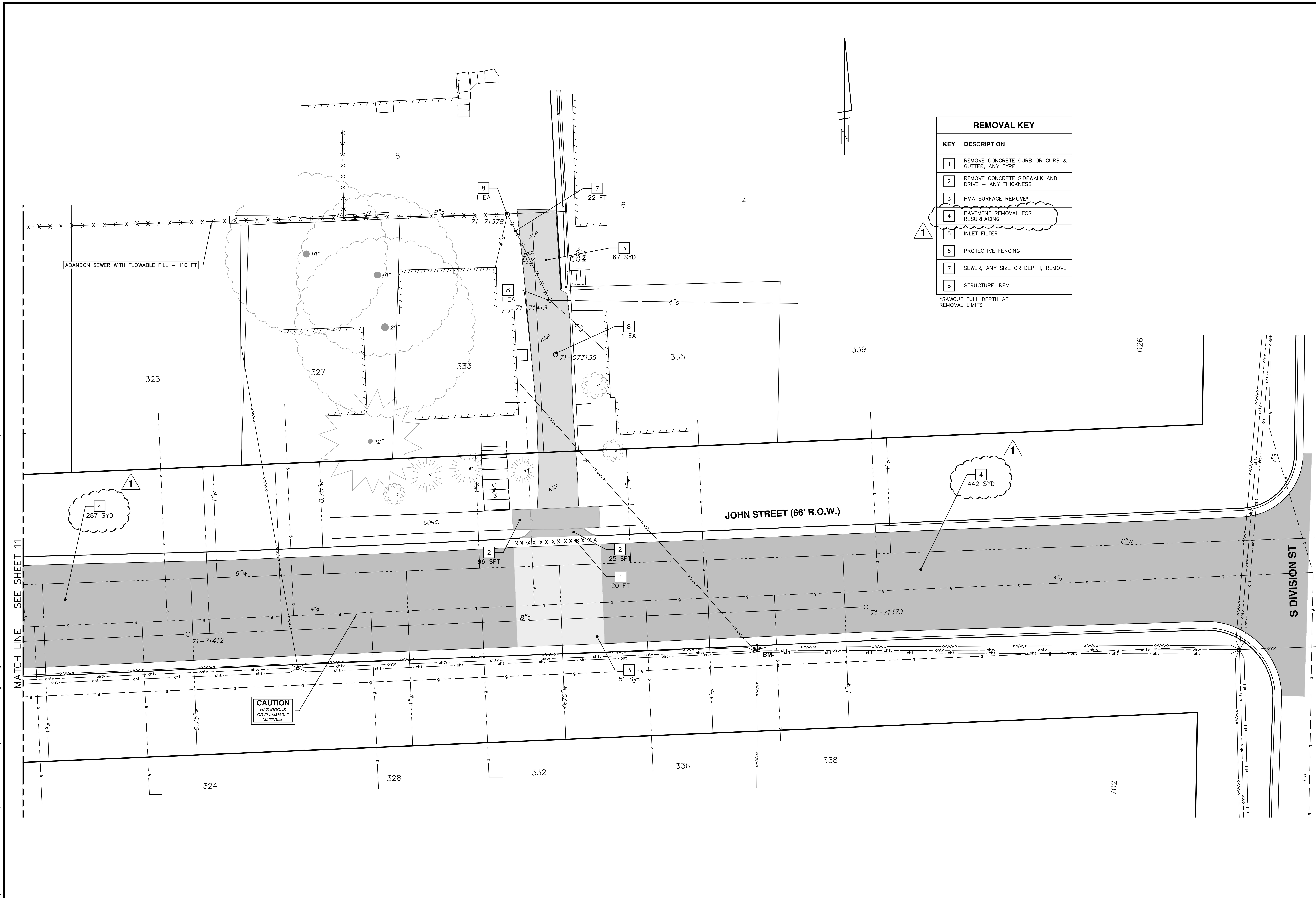
JOHN STREET

REMOVAL PLAN - 315 JOHN STREET AND JOHN STREET

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734-794-6410
www.a2gov.org

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
01	ADDENDUM 1	5-1-2020	DF	BS
00	OUT FOR BID	4-15-2020	CC,DF,RB	BS

811 Know what's below. Call before you dig.



REMOVAL KEY

KEY	DESCRIPTION
1	REMOVE CONCRETE CURB OR CURB & GUTTER, ANY TYPE
2	REMOVE CONCRETE SIDEWALK AND DRIVE - ANY THICKNESS
3	HMA SURFACE REMOVE*
4	PAVEMENT REMOVAL FOR RESURFACING
5	INLET FILTER
6	PROTECTIVE FENCING
7	SEWER, ANY SIZE OR DEPTH, REMOVE
8	STRUCTURE, REM

*SAWCUT FULL DEPTH AT REMOVAL LIMITS

REV.	DESCRIPTION	DATE	DRAWN	CHECKED
01	ADDENDUM 1	5-1-2020	DF	BS
00	OUT FOR BID	4-15-2020	CC,DF,KB	BS

811 Know what's below. Call before you dig.

CITY OF ANN ARBOR
PUBLIC SERVICES
301 EAST HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647
734-794-6410
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CITY OF ANN ARBOR MICHIGAN

CITY OF ANN ARBOR - PUBLIC SERVICES - ENGINEERING

2020 MISC. UTILITY PROJECT

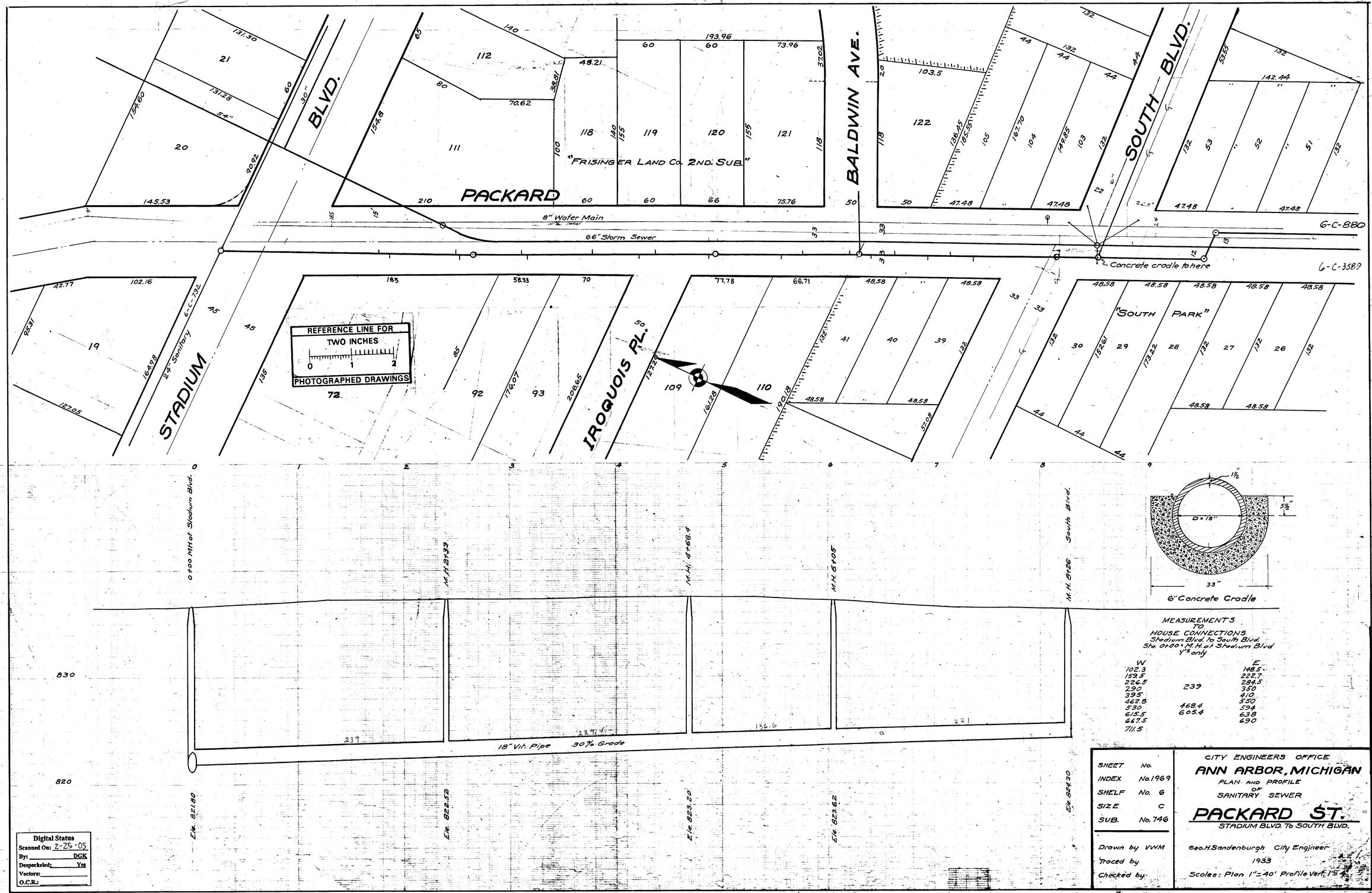
JOHN STREET
REMOVAL PLAN - ALLEY AND JOHN STREET

SCALE PLAN: 1" = 10'

DRAWING No.
2019026-13

SHEET No.
13 OF 28

R:\2019026 John St Sanitary\Plan Production\2019026Rem.dwg Dwg Created: 30-Apr-20 - _a2 standard bw.stb - Plot Date: 1-May-20



SHEET No.	
INDEX No.	1969
SHELF No.	6
SIZE	C
SUB. No.	746
Drawn by	VWM
Traced by	
Checked by	

CITY ENGINEERS OFFICE
ANN ARBOR, MICHIGAN
PLAN AND PROFILE OF SANITARY SEWER
PACKARD ST.
STADIUM BLVD. To SOUTH BLVD.
Geo. H. Sandenburgh City Engineer
1933
Scales: Plan 1"=40' Profile Vert. 1"=4'

Digital Status
Scanned On: 2-25-05
By: DGK
Despeckeled: Yes
Vectors:
O.C.R.:

POST 27819

SOUTH BOULEVARD 66'

BROCKMAN BLVD 66'

ANDERSON AVE. 60'

CRESTLAND DR.

PACKARD STREET

COLER RD. 66'

JORN COURT 50'

HARPST ST. 50'

ROSEWOOD ST. 50'

PACKARD STREET COUNTY MAIN BRANCH 66"R DRAIN

PACKARD ST. COUNTY DRAIN BRANCH 3

66" CONC PIPE

18" VIT. PIPE

6" WRAPPED PLASTIC EDGEDRAIN

6" WRAPPED PLASTIC E.D.

6" EDGEDRAIN

30" CONC PIPE

8"C-200 VIT. PIPE

INLET

REFERENCE LINE FOR TWO INCHES
0 1 2
PHOTOGRAPHED DRAWINGS

Digital Status
Scanned On: 6-15-05
By: D&K
Despeckeled: YES
Vectorm
O.C.R.:

LEGEND:
UNDERGROUND UTILITIES — PROFILES
EXISTING SANITARY — PROPOSED SANITARY — EXISTING STORM — PROPOSED STORM — EXISTING GAS — EXISTING WATER
CENTER LINE — LEFT PROPERTY LINE — RIGHT PROPERTY LINE

REFERENCES:
BENCH MARK
DRAWINGS 6-C-747, 746, 880, 955, 1127, 1841
6-C-3030, Packard St. County Drain
PROFILES BY
FIELD BOOK

DR. BY DON	DATE 12-65	SHEET NO.	
TR. BY D.		INDEX NO. 5745	
CH. BY		SHELF NO.	
REVISIONS EDGEDRAIN R.L.W. 1/88		6-C-3589	
		SCALE: HORIZONTAL 1"=40' VERTICAL 1"=4'	

SANITARY AND STORM SEWERS
PACKARD STREET
SOUTH BOULEVARD TO CRESTLAND DRIVE
FREDRICK A. MAMMEL — SUPERINTENDENT OF PUBLIC WORKS
PUBLIC WORKS DEPARTMENT — ANN ARBOR, MICHIGAN

JOB ____ DIST. ____
JOB ____ DIST. ____
JOB ____ DIST. ____
JOB DIST.

PREPARED BY ____
APPROVED BY ____

WASHTENAW COUNTY MICHIGAN.
PITTSFIELD AND ANN ARBOR TOWNSHIPS.
PACKARD STREET DRAIN.
PLAN AND PROFILE
ON HARPST AND PACKARD STREETS.
SCALE: HORIZONTAL 1 INCH = 100 FEET. VERTICAL 1 INCH = 10 FEET.
OCTOBER 1927
MENEFEE AND DODGE, ENGINEERS. ANN ARBOR, MICHIGAN.
①

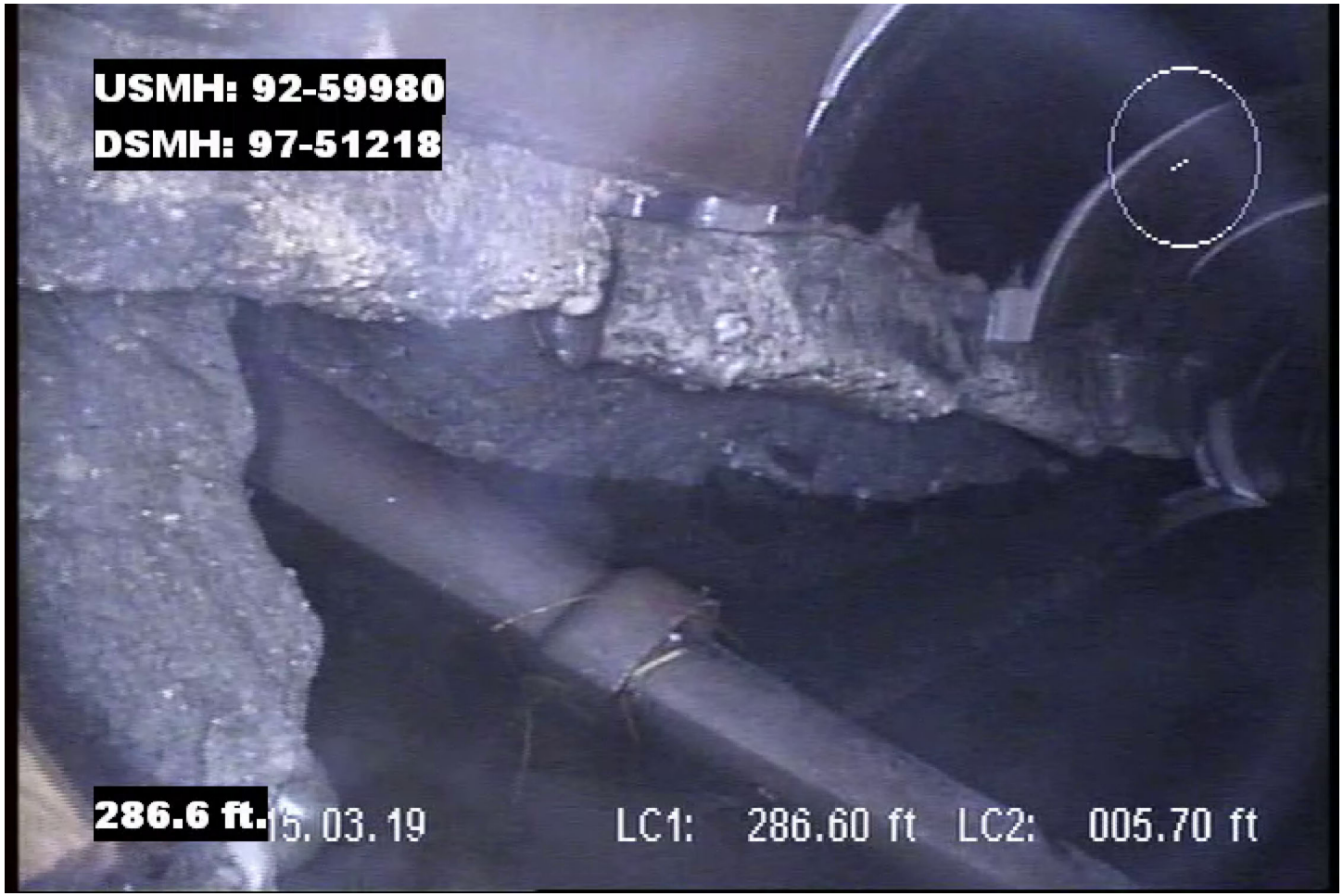
Digital Status
Scanned On: 6/28/05
By: LS

REFERENCE LINE FOR
TWO INCHES
0 1 2
PHOTOGRAPHED DRAWINGS

WASHTENAW COUNTY MICHIGAN.
PITTSFIELD AND ANN ARBOR TOWNSHIPS.
PACKARD STREET DRAIN.
PLAN AND PROFILE.
FROM PACKARD STREET TO WELLS STREET.
SCALE HORIZONTAL 1 INCH = 100 FEET. VERTICAL 1 INCH = 10 FEET.
OCTOBER 1927.
MENEFEE AND DODGE, ENGINEERS. ANN ARBOR, MICHIGAN.
②

7030
6-C-4680

Lateral Pipe in Huron Street Storm Sewer



Memo

To: Ms. Anne Warrow – City of Ann Arbor
From: Katherine C. Hennicken, P.E. – TTL Associates, Inc.
Date: March 25, 2019
Re: Geotechnical Bundle #2

TTL has completed the soil borings and pavement cores associated with Geotechnical Bundle #2 in Ann Arbor, Michigan. This memo provides a brief description the encountered pavement, as well as crushed stone thicknesses.

Twenty-four soil borings, each of which contained associated pavement cores, were performed by TTL during the period from December 27, 2018 through January 7, 2019, as well as March 11 and 12, 2019. Additionally, ten pavement cores without borings were performed on December 14 and 15, 2018. The soil borings are designated B- and the pavement cores are designated PC-. The soil borings and pavement core locations were located in the field by the City of Ann Arbor.

The encountered pavement thicknesses are summarized in the tables below.

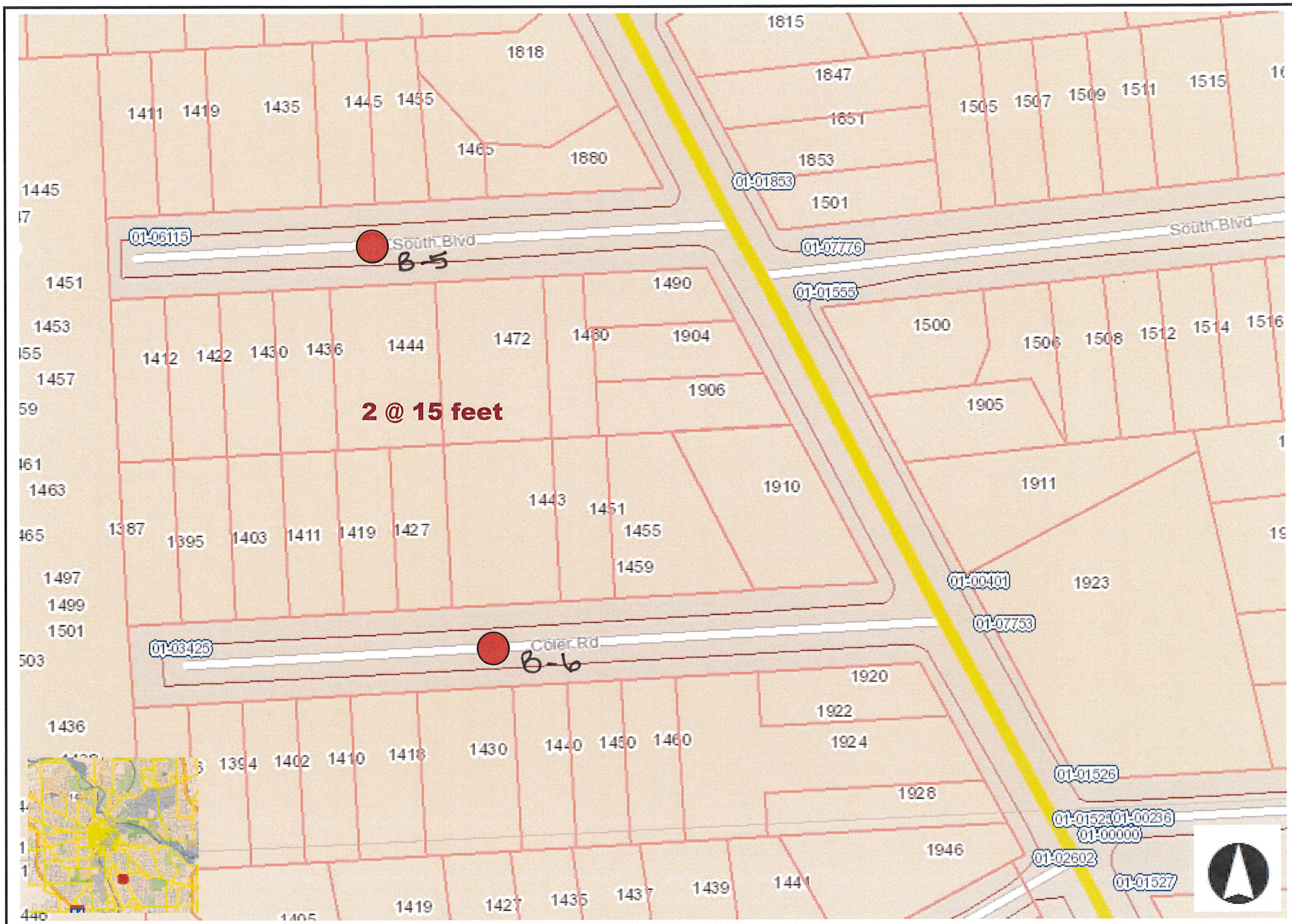
Nearest Address	Soil Boring Number	Pavement Thickness		Subgrade AASHTO Lab Class	Recommended Resilient Modulus (psi)
		Asphalt (inches)	Crushed Stone (inches)		
216 Bucholz Court	Bucholz B-1	3½	8½	A-3	12,550
1000 Cedar Bend Drive	Cedar Bend B-2	3¼	5¾	A-4	11,850
1430 Coler Road	Coler B-6	2	9	A-6	8,050
1410 Dicken Drive	Dicken B-3	5¼	6	A-6	8,050
1815 Dunmore	Dunmore B-10	4	12	A-7-6	6,200
1715 Dunmore	Dunmore B-14	6½	5¾		
520 Eighth Street	Eighth Street B-4	3¾	12½	A-7-6	12,550
704 Granger	Granger B-1	2¼	6½*		10,450
820 Granger	Granger B-2	5	9*		
1006 Granger	Granger B-3	3¼	6¾*	A-7-6	
1119 Granger	Granger B-4	3¾	7¼*		
1204 Granger	Granger B-5	3½	6*		
1301 Granger	Granger B-6	3	9*		
Hartford	Hartford B-11	5	4¼	A-6	7,150
1509 Maywood	Maywood B-12	3½	4½	A-6	7,150
1405 Maywood	Maywood B-13	4	6		

Nearest Address	Soil Boring Number	Pavement Thickness		Subgrade AASHTO Lab Class	Recommended Resilient Modulus (psi)
		Asphalt (inches)	Crushed Stone (inches)		
2400 Platt Road	Platt B-1	5½	7½	A-4	8,050
2275 Platt Road	Platt B-2	5	9		
2203 Platt Road	Platt B-3	5	11		
3319 Platt Road	Platt B-4	4¾	12¼		
1444 South Boulevard	South B-5	4¾	6½	A-2-4	12,550
1706 Waverly	Waverly B-8	3¾	N.E.	A-6	8,050
1732 Waverly	Waverly B-9	3½	N.E.		
1814 Weldon	Weldon B-7	4¾	N.E.	A-6	8,050
828 Greene Street		5	N.E.	N.E.	Pavement Core Only
1008 Greene Street		5	N.E.	N.E.	
200 Hill Street		7	N.E.	N.E.	
Eastbound Hill Street		11¾	N.E.	N.E.	
142 Hoover Street		4	N.E.	N.E.	
323 Hoover Street		4½	N.E.	N.E.	
500 Hoover Street		4¾	N.E.	N.E.	
319 Mosley Street		4	N.E.	N.E.	
620 Third Street		8	N.E.	N.E.	
1304 Geddes B-1		8½	4		12,550
1335 Geddes B-2		7	4	A-1-b	
2291 Dhu Varren B-1		3	N.E.	A-3	12,550
712 Liberty B-1		6¼	3¾		8,050
821 Liberty B-2		6	N.E.		
1832 Liberty B-3		6	4		
1484 Liberty B-4		5	5	A-6	
1213 Liberty B-5		3¼	11*		
Bird B-1		Soil Borings Offroad			
Bird B-2					

*Indicates concrete pavement encountered instead of crushed stone aggregate base
N.E. – Not Encountered

Photographs of the pavement cores from each of the borings are attached to this report.

Please let us know if you have any questions or comments at this time.



Scale is 11,200

South Blvd Water and Sanitary

10/9/2018

TTL Associates, Inc.
1915 N 12th Street
Toledo, Ohio 43624
Telephone: 419-324-2222
Fax: 419-241-1808

BORING NUMBER Coler B-6

CLIENT City of Ann Arbor
PROJECT NAME Geotechnical Bundle #2
PROJECT NUMBER 1504703
PROJECT LOCATION Ann Arbor, MI
DRILLING CONTRACTOR TTL Associates CW JP
RIG NO. 844
GROUND ELEVATION
DRILLING METHOD Pavement Coring with 3 in. SSA
GROUND WATER LEVELS:
DATE STARTED 12/27/18 **COMPLETED** 12/27/18
AT TIME OF DRILLING None
LOGGED BY KKC **CHECKED BY** KCH
AT END OF DRILLING None
NOTES 1430 Coler Road
0hrs AFTER DRILLING Backfilled w/Cuttings and Patch

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	UNCONF. COMP. STR. (tsf)	DRY UNIT WT. (pcf)	PL MC LL / SPT N VALUE
	0.0		ASPHALT - 2 Inches						
			0.2'						
			CRUSHED STONE - 9 Inches						
			0.9'						
			FILL - Moist Medium Dense Brown SILTY SAND w/Gravel and Trace Organics	SS 1	89	6-7-9 (16)	NP		
	2.5		3.0'						
			Moist Stiff Gray SANDY LEAN CLAY w/Trace Gravel (CL)	SS 2	100	3-4-5 (9)	1.25		20
	5.0		5.0'	SS 3	100	5-9-12 (21)	NP		
			Moist Medium Dense Gray POORLY GRADED SAND w/Gravel and Trace Silt (SP)						
	7.5		8.0'						
			Moist Medium Dense Gray SILTY SAND (SM)	SS 4	89	8-12-12 (24)	NP		
	10.0		@10': w/Trace Gravel	SS 5	94	7-11-12 (23)	NP		
	12.5		12.5'						
			Moist Dense Gray SILTY SAND (SM)	SS 6	89	9-15-16 (31)	NP		
			14.5'						
	15.0		Moist Dense Gray COBBLES w/Sand	SS 7	89	19-20-22 (42)	NP		
			15.5'						
			Bottom of hole at 15.5 feet.						

TTL Associates, Inc.
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Toledo, Ohio 43624
Telephone: 419-324-2222
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BORING NUMBER South B-5

CLIENT City of Ann Arbor
PROJECT NAME Geotechnical Bundle #2
PROJECT NUMBER 1504703
PROJECT LOCATION Ann Arbor, MI
DRILLING CONTRACTOR TTL Associates CW JP
RIG NO. 844
GROUND ELEVATION
DRILLING METHOD Pavement Coring with 3 in. SSA
GROUND WATER LEVELS:
DATE STARTED 12/27/18 **COMPLETED** 12/27/18
AT TIME OF DRILLING None
LOGGED BY KKC **CHECKED BY** KCH
AT END OF DRILLING None
NOTES 1444 South Boulevard
0hrs AFTER DRILLING Backfilled w/Cuttings and Patch

ELEVATION (ft)	DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	UNCONF. COMP. STR. (tsf)	DRY UNIT WT. (pcf)	PL MC LL / SPT N VALUE
	0.0		ASPHALT - 4.75 Inches						
			0.4' CRUSHED STONE - 6.5 Inches						
			0.9' Moist Medium Dense Brown SILTY SAND w/Trace Gravel (SM)	SS 1	89	5-7-5 (12)	NP		▲
	2.5		3.0' Moist Medium Dense Brown POORLY GRADED SAND w/Gravel and Trace Silt (SP)	SS 2	100	5-10-11 (21)	NP		▲
	5.0			SS 3	100	6-11-11 (22)	NP		▲
	7.5			SS 4	100	12-14-13 (27)	NP		▲
			9.5' @9.5': Auger Refusal						
			Bottom of hole at 9.5 feet.						

PL MC LL
20 40 60 80
▲ SPT N VALUE ▲
20 40 60 80

CORE LOG

Project: Geotechnical Bundle #2

TTL Project No. 1504703

Core Dates: December 27, 2018 through January 7, 2019

1444 South Boulevard B-5		1430 Coler Road B-6	
			
Core Thickness	4¾ inches	Core Thickness	2 inches

BID FORM

Section 1 - Schedule of Prices

Project: 2020 Utility Improvements

File # 2019-026 Bid # 4626

Item	Description	Unit	Estimated Quantity	Unit Price	Total Price
	GENERAL ITEMS				
130	Protective Fencing	FT	260	$	$
140	Exploratory Excavation (0 to 10 feet)	EA	5	$	$
201	Project Supervision, Max $20,000.00	LS	1	$	$
202	General Conditions, Max. $25,000.00	LS	1	$	$
203	Minor Traffic Devices, Max $10,000.00	LS	1	$	$
204	Digital Audio Visual Coverage	LS	1	$	$
205	Certified Payroll Compliance and Reporting	LS	1	$	$
206	Clean-Up & Restoration, Special	LS	1	$	$
207	Allowance for Unforeseen Site Conditions	DLR	15000	$ 1.00	$ 15,000.00
207-1	Allowance for Permit Fees	DLR	5000	$ 1.00	$ 5,000.00
209	Inlet Filters	EA	22	$	$
210	"No Parking" Signs	EA	14	$	$
211	Sign, Portable Changeable Message, Furn and Oper	EA	10	$	$
212	Plastic Drum - Lighted, Furnish and Operate	EA	70	$	$
213	Barricade Type III - Lighted, Furnish and Operate	EA	30	$	$
214	Temporary Sign, Type B, Furnish and Operate	SFT	1400	$	$
215	Pedestrian Type II Barricade, Furn and Oper	EA	10	$	$
216	Arrow Board, Furnish and Operate	EA	2	$	$
	ROAD ITEMS				
220	Remove Concrete Curb or Curb and Gutter - Any Type	FT	300	$	$
221	Remove Concrete Sidewalk and Drive - Any Thickness	SFT	2000	$	$
222	HMA Surface Remove	SYD	2900	$	$
223	HMA and Concrete Surface Removal	SYD	150	$	$
224	Concrete Type M Opening - HE	FT	50	$	$
225	6 inch Conc with Integral curb	SFT	1300	$	$
226	Machine Grading, Modified	SYD	3150	$	$
227	Subgrade Undercutting - Type II	CYD	20	$	$
228	Sand Subbase Course, Class II - C.I.P.	CYD	10	$	$
229	21AA Limestone	CYD	50	$	$
	TOTAL THIS PAGE (BF-1) (Also to be entered on Page BF-3)			$	

BID FORM

Section 1 - Schedule of Prices

Project: 2020 Utility Improvements

File # 2019-026 Bid # 4626

Item	Description	Unit	Estimated Quantity	Unit Price	Total Price
	ROAD ITEMS (continued)				
230	Aggregate Base Course, 8-inch - 21AA - C.I.P.	SYD	1550	$ _____	$ _____
231	Aggregate Base Course, 12-inch - 21AA - C.I.P.	SYD	550	$ _____	$ _____
232	6A Crushed Limestone	CYD	3	$ _____	$ _____
233	HMA Pavement Leveling/Top – LVSP	TON	510	$ _____	$ _____
234	HMA Pavement Base/Leveling/Top - 4E3	TON	200	$ _____	$ _____
234-1	Hand Patching	TON	8	$ _____	$ _____
235	Concrete Curb or Curb and Gutter - All Types	FT	200	$ _____	$ _____
236	Concrete Curb or Curb and Gutter - All Types (HE)	FT	25	$ _____	$ _____
237	4 Inch Concrete Sidewalk	SFT	400	$ _____	$ _____
238	6 Inch Concrete Sidewalk or Sidewalk Ramp	SFT	250	$ _____	$ _____
239	6 Inch Concrete Drive - High Early	SFT	150	$ _____	$ _____
240	Detectable Warning, Cast In Place	SFT	20	$ _____	$ _____
241	Integral Sidewalk Retaining Wall, any height	SFT	10	$ _____	$ _____
250	Pavt Mrkg, Polyurea, 12 inch, White	FT	60	$ _____	$ _____
251	Pavt Mrkg, Ovly Cold Plastic, 24 inch, Stop Bar	FT	40	$ _____	$ _____
252	Pavt Mrkg, Ovly Cold Plastic, Direction Arrow, Bike	EA	1	$ _____	$ _____
253	Pavt Mrkg, Ovly Cold Plastic, Bike, Sym	EA	1	$ _____	$ _____
254	Pavt Mrkg, Polyurea, 12 inch, Yellow	FT	60	$ _____	$ _____
255	Pavt Mrkg, Polyurea, 4 inch, Yellow	FT	460	$ _____	$ _____
256	Pavt Mrkg, Polyurea, 6 inch, White	FT	240	$ _____	$ _____
257	Pavt Mrkg Cover, Type R, Black	FT	600	$ _____	$ _____
258	Pavt Mrkg, Wet Reflective, Type R, Tape, 4 inch, Temp	FT	1150	$ _____	$ _____
563	Structure Covers	EA	6	_____	$ _____
566	Adjust Structure Cover	EA	6	$ _____	$ _____
	SEWER ITEMS				
270	Sewer, Any Size or Depth, Remove	FT	374	$ _____	$ _____
271	Structure, Any Size or Depth, Remove	EA	7	$ _____	$ _____
276	Existing Sewer Lead, Connect	EA	5	$ _____	$ _____
277	Sanitary Sewer Cleanout	EA	6	$ _____	$ _____
	TOTAL THIS PAGE (BF-2) (Also to be entered on page BF-3)			$ _____	

BID FORM

Section 1 - Schedule of Prices

Project: 2020 Utility Improvements

File # 2019-026 Bid # 4626

Item	Description	Unit	Estimated Quantity	Unit Price	Total Price
	SEWER ITEMS (continued)				
278	6-Inch Wrapped Underdrain	FT	20	$ _____	$ _____
305	8 inch SDR 26 PVC Sanitary Sewer, Trench Detail I	FT	310	$ _____	$ _____
320	12" CL IV RCP Storm Sewer Pipe, Trench Detail I	FT	40	$ _____	$ _____
321	24" CL IV RCP Storm Sewer Pipe, Trench Detail I	FT	96	$ _____	$ _____
335	SDR 26 PVC Wye, 8" x 6"	EA	3	$ _____	$ _____
354	6 inch SDR 35 PVC Sanitary Lead, Trench Detail I	FT	180	$ _____	$ _____
360	Type I Manhole, 48 inch Dia 0-10' deep)	EA	4	$ _____	$ _____
366	Double Inlet	EA	2	$ _____	$ _____
370	Drop Connection, 8-inch	VF	5	$ _____	$ _____
385	Sewer Pipe Abandonment with Flowable Fill	FT	170	$ _____	$ _____
	WATER ITEMS				
290	Temporary 8 inch Water Main Line Stop	EA	2	$ _____	$ _____
291	Fire Hydrant Assembly	EA	1	$ _____	$ _____
400	6 inch Class 50 DIP w/polywrap, Trench Detail I	FT	20	$ _____	$ _____
401	8 inch Class 50 DIP w/polywrap, Trench Detail I	FT	420	$ _____	$ _____
402	8 inch Class 50 DIP w/restrained jt/wrap, Tr Det I	FT	135	$ _____	$ _____
411	8" 22.5° Bend	EA	1	$ _____	$ _____
412	8" 45° Bend	EA	4	$ _____	$ _____
414	8" x 6" Reducer	EA	1	$ _____	$ _____
430	8" x 8" x 8" Tee	EA	2	$ _____	$ _____
447	8" Gate Valve-in Well	EA	2	$ _____	$ _____
460	Excavate & Backfill for Water Service Tap and Lead	FT	50	$ _____	$ _____
481	Water Main Pipe Abandonment	FT	530	$ _____	$ _____
483	Gate Valve and Well, Removal	EA	1	$ _____	$ _____

TOTAL THIS PAGE (BF-3)	$ _____
TOTAL FROM PAGE BF-1	$ _____
TOTAL FROM PAGE BF-2	$ _____
TOTAL BASE BID	$ _____