ADDENDUM No. 4

ITB No. 4665

Wheeler Facility Pond Dredging

Bids Due: March 30, 2021 at 10:00 A.M. (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 fourteen (14) pages.**

Bidder is to acknowledge receipt of this Addendum No. 4, 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 should 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. 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: I need a clarification on "Compacted Topsoil/Compost" I am unable to locate this item in the provided print or a detailed specification. Can you please provide more information on this line item.
- Answer 1: On the Bid form, there is a line item bid for compacted topsoil or compost. On page 01270/7, #16 contains a description of what the compacted topsoil/compost is to consist of and how it will be paid.
- Question 2a: Please indicate how the "Wetland Plants" as shown in plan view on sheet 4 and in detail on sheet B are to be paid for.
- Answer 2a: Wetland plants are no longer part of the project and are not on the bid sheet. In lieu of wetland plants, we are specifying a wetland seed mix. Please see updated plan set provided herein.
- Question 2b: Are these wetland plants to be paid as part of the "Live Stake Shrubs Plugs" pay item?

Answer 2b: No, please see answer to #2a

Question 2c: If so, you have a GIGANTIC quantity bust (there are roughly 8,100 plugs required

for the specified area, see below).

Answer 2c: See answer to 2a and 2b above

Question 2d: Please clarify the note below the "Wetland Plants" schedule on sheet B. The way

I interpret this note is that 25 plants of three different species per 100 SF of the indicated area are required (75 plants / 100 SF). Is this interpretation correct?

Answer 2d: See answer to 2a and 2b above

Question 3a: Does the project NEED to take place according to the revised schedule as

indicated?

Answer 3a: No

Question 3b: Based on the new time frame, soils will not be able to be transported to the landfill

facility during seasonal weight restrictions (+/- March, 2022). This limits the ability

to perform work during this time period.

Could we come to a mutually agreeable schedule after the bid?

Answer 3b: Yes

Question 4: Who is responsible for testing the excavated soil for landfill disposal

purposes? The Type II landfill will require soil analytical information from each

location (this would require +/- 6 samples for testing).

Answer 4: Soil samples have been taken and can be provided to the successful contractor

prior to start of construction.

Question 5a: Can silt fence be used in lieu of the silt sock product?

Answer 5a: Yes

Question 5b: If silt sock is required, is a single row acceptable? The detail shows installations

where the silt sock is stacked and requires +/- 3 "socks" per LF of

installation. Please advise.

Answer 5b: Yes

Question 6: Do you really want 6' chain link fence as indicated in the plans and

specifications? As this is a gated facility, this seems like overkill. Please advise.

Answer 6: Yes

Question 7: Is there any plant maintenance or guarantee required for this project?

Answer 7: Please see #34 on page 01960/7 of the specifications.

Question 8: Where does the 700 cy of compost go? into the shrub beds or is it to be mixed with

the topsoil to be respread?

Answer 8: The 700 Cy of compacted topsoil/compost is to be utilized through out the project

restoration if there is not adequate stripped topsoil to respread as well as utilized

in areas where shrubbery is specified to be planted.

- Question 9: Once we leave the Wheeler Facility are there certain roads we have to follow?
- Answer 9: Sheet 1 of the plans shows the access route in and out of the Wheeler Facility. More detailed information of proposed changes can be discussed with the successful bidder at the time of the preconstruction meeting.
- Question 10: The wetland plants shown on the drawings for the transfer station pond are not indicated in the bid proposal, are these part of the project?
- Answer 10: Wetland plants have been removed from the project and replaced with a wetland seed mix. Please see updated plan set provided herein.
- Question 11: There is no item for hardwood mulch, but it is shown on the details for the planting beds. Do we provide and install that material as part of the 708 live stake shrubs to be installed?
- Answer 11: Yes, the hardwood mulch is to be part of the overall cost of the shrub and installation.
- Question 12: Please verify quantities on bid form.
- Answer 12: Please see updated page BF-1 herein. Revised quantities are in red.

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

BID FORM

Section 1 – Schedule of Prices

Company:	
Proiect:	ITB# 4665 - Wheeler Facility Pond Dredging

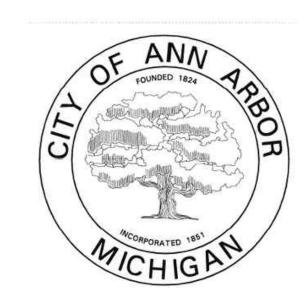
<u>Unit Price Bid –</u>

Bas	Base Bid						
	Item	Estimated Quantity	Unit	Unit Price		Total Cost	
1.	Mobilization, Max 5%	1	LS		=		
2.	Construction Fence, As Needed	200	Ft		=		
3.	Silt Sock	8,310	Ft		=		
4.	Stone Filter	4	EA		=		
5.	Sediment Removal and Earth Excavation	14,400	CY		=		
6.	Sediment Disposal - Landfill	14,400	CY		=		
7.	Hydric Soils, Stockpile	4,500	CY		=		
8.	Level Spreader Rip-Rap	8	CY		=		
9.	15" N-12 Pipe	30	Ft		=		
10.	Trench undercut and Refill	20	CY				
11.	Live Stake Shrubs Plugs	708	EA		=		
12.	Seed Mix A	3.50	Acre		=		
13.	Seed Mix B	2.42	Acre		=		
14.	Seed Mix C	0.67	Acre		=		
15.	Erosion Blanket	286,713	SF				
16.	Compacted Topsoil/Compost	700	CY		=		
17.	Light Storm Sewer Cleaning (12"-24")	103	FT		=		
18.	Light Storm Sewer Cleaning (30"-60")	311	FT		=		
19	Heavy Storm Sewer Cleaning (12'-24")	103	FT		=		
20.	Heavy Storm Sewer Cleaning (30"-60")	311	FT				
21.	Relocation and Replacement of Concrete Pads	3	EA				
22.	Topsoil Stripping and Stockpile	14,955	SY		=		
	PROJECT TOTAL						

ESTIMATED TOTAL	\$	
-----------------	----	--

WHEELER FACILITY POND DREDGING

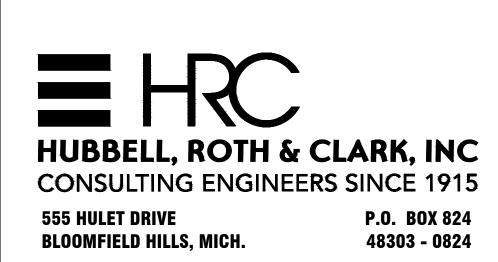
4170 PLATT ROAD CITY OF ANN ARBOR WASHTENAW COUNTY, MICHIGAN



CITY OF ANN ARBOR PUBLIC WORKS

4251 STONE SCHOOL ROAD ANN ARBOR, MI 48108 PHONE: (734) 794-6350

WEB SITE: https://www.a2gov.org/departments/public-works/Pages/default.aspx



PHONE: (248) 454-6300 FAX (1st. Floor): (248) 454-6312 FAX (2nd. Floor): (248) 338-2592

WEB SITE: http://www.hrc-engr.com



OTE:

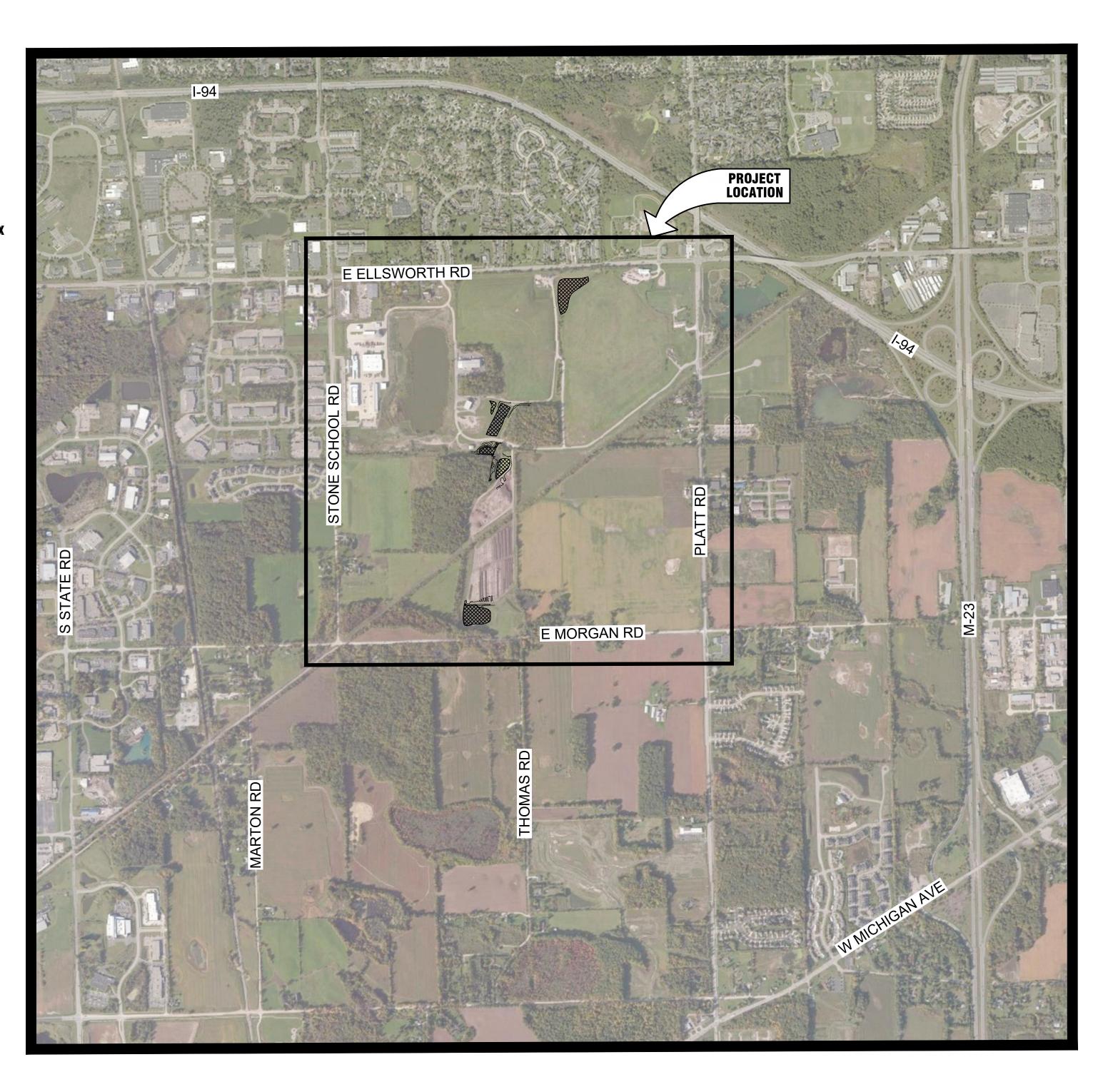
ALL EXISTING UTILITIES SHOWN ON THIS TOPOGRAPHICAL SURVEY HAVE BEEN TAKEN FROM VISUAL OBSERVATION, AND RECORD MAPPING WHERE AVAILABLE. NO GUARANTEE IS MADE, OR SHOULD BE ASSUMED, AS TO THE COMPLETENESS OR ACCURACY OF THE UTILITIES SHOWN ON THIS DRAWING. PARTIES UTILIZING THIS INFORMATION SHALL FIELD VERIFY THE ACCURACY AND COMPLETENESS PRIOR TO CONSTRUCTION ACTIVITIES.



CALL811.COM

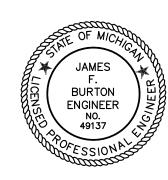
CALL MISS DIG
72 HOURS
(3 WORKING DAYS)
BEFORE YOU DIG
1-800-482-7171
ig. OR 811

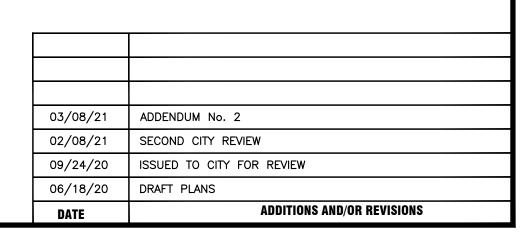
(TOLL FREE)



SHEET INDEX

DESCRIPTION	SHEET NO.
COVER	
PROJECT NOTES	A
PROJECT DETAILS	В
PROJECT DETAILS	C
SOIL EROSION & SEDIMENT CONTROL DETAILS	D
OVERALL SITE PLAN	1
SOUTH COMPOST PAD POND	2
NORTH COMPOST PAD POND & MAINTENANCE P	OND 3
FOREBAY & TRANSFER POND	4
LANDFILL POND	5





GENERAL NOTES

COOPERATION BY THE CONTRACTOR: NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO MATERIAL SHORTAGES OR REASONABLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE PROPOSAL OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OF EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.

LIMITATIONS ON PRIVATE WORK: DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT WITHOUT PRIOR OWNER CONSENT. WORK MAY BE ALLOWED WHEN REQUESTED, BUT ONLY WITH WRITTEN CONSENT.

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER TO COMPLY WITH ALL FEDERAL, STATE, AND LOCAL CODES FOR NOISE LEVELS, VIBRATIONS, OR ANY OTHER RESTRICTIONS WHILE PERFORMING ANY CONSTRUCTION OPERATIONS WITHIN THIS CONTRACT, COSTS TO BE INCLUDED IN THE RESPECTIVE ITEM OF WORK.

THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE CITY OF ANN ARBOR FIRE & POLICE DEPARTMENTS, POST OFFICE, AND THE CITY 24 HOURS IN ADVANCE OF PROPOSED ROAD CLOSURES, OR TEMPORARY TRAFFIC CONTROL MEASURES.

THE CONTRACTOR SHALL, BEFORE EACH DAY'S WORK, OR WHEN MOVING TO A NEW AREA OF WORK, DETERMINE AND EVALUATE THE LOCATION OF ALL UNDERGROUND FACILITIES IN THE AREA. IF LOCATION STAKES HAVE BEEN MOVED OR DO NOT APPEAR CORRECT, THE CONTRACTOR SHALL NOT EXCAVATE UNTIL ALL UTILITIES HAVE HAD AN OPPORTUNITY TO CHECK OR RESTAKE THEIR LOCATIONS. ANY DELAYS INCURRED, DUE TO THE CHECKING OR RESTAKING OF UTILITIES SHALL NOT BE A BASIS FOR ADDITIONAL COMPENSATION.

THERE WILL BE NO ADJUSTMENT IN THE CONTRACT UNIT PRICE REGARDLESS OF THE PERCENTAGE OF INCREASE OR DECREASE ABOVE OR BELOW THE CONTRACT QUANTITY FOR ANY ITEM OF WORK.

IT IS THE INTENT THAT ALL GOVERNMENT CORNERS ON THIS PROJECT BE PRESERVED AND THAT, WHERE NECESSARY, MONUMENT BOXES BE PLACED OR ADJUSTED, AT THE CONTRACTORS EXPENSE WHETHER SHOWN OR NOT.

THE LOCATION OF ALL PUBLIC UTILITIES SHOWN ON THESE PLANS IS TAKEN FROM THE BEST AVAILABLE DATA. THE OWNER & HUBBELL, ROTH AND CLARK, INC. WILL NOT BE HELD RESPONSIBLE FOR ANY OMISSION OR VARIATIONS FROM THE LOCATIONS SHOWN. PURSUANT TO ACT 53 OF THE PA OF 1974 AS A CONDITION OF THIS CONTRACT NOTICE SHALL BE GIVEN TO MISS DIG PRIOR TO UNDERGROUND WORK TO BE PERFORMED IN ACCORDANCE WITH THIS CONTRACT. PHONE (800)-482-7171 OR 647-7344.

CONTRACTOR TO SUBMIT DETAILED CONSTRUCTION SEQUENCE AT THE PRECONSTRUCTION MEETING NOTING ALL CHANGES TO PROPOSED SCHEDULE OF WORK PROPOSED OR WORK PROPOSED TO OCCUR CONCURRENTLY WITH OTHER ITEMS OF WORK.

CONSTRUCTION NOTES:

DRIVEWAYS AND ENTRANCES TO BUILDINGS, REAL PROPERTY AND THE LIKE SHALL NOT BE BLOCKED EXCEPT FOR SHORT DURATIONS AND ONLY WHEN APPROVED BY THE ENGINEER. VEHICULAR ACCESS SHALL BE MAINTAINED AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL NECESSARY DRIVEWAY CLOSURES WITH THE COMPOST FACILITY OPERATOR IN THE AREAS OF CONSTRUCTION.

THE LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LEADS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

LOCATION AND DEPTH OF UTILITIES AS DEPICTED ON THE PLANS IS APPROXIMATE AND SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE AHEAD AND ADJUST DEPTH OF UTILITIES IN CONFLICT ACCORDINGLY. AND DAMAGE TO UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY TO AVOID AND/OR REPAIR AS NECESSARY.

DURING NON-WORKING HOURS, NO MORE THAN 25 FEET OF TRENCH SHALL REMAIN OPEN. ANY OPEN TRENCH SHALL BE PROPERLY SECURED WITH PROTECTIVE FENCING. THIS WORK SHALL NOT BE PAID SEPARATELY BUT INCLUDED IN THE COST OF THE PROJECT.

ALL TRENCHES SHALL BE EXCAVATED TO MIOSHA REQUIREMENTS, INCLUDING ANY REQUIRED

THE CONTRACTOR SHALL BACKFILL TRENCHES IN ACCORDANCE WITH TRENCH DETAILS SPECIFIED ON THE PLANS. CONCRETE REMOVALS AND REPLACEMENTS REQUIRED FOR THIS WORK WILL BE PAID SEPARATELY.

POSTAL DELIVERY AND REFUSE PICKUP SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR.

WHEN STREET CURBS ARE UNDERMINED DUE TO CONSTRUCTION ACTIVITIES, THEY SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER.

ALL CURB, SIDEWALK AND DRIVEWAY APPROACH REMOVALS SHALL BE APPROVED BY THE

ENGINEER PRIOR TO THE WORK BEING COMPLETED.

SAWED SEWER PIPE CONNECTIONS SHALL BE COUPLED WITH A FERNCO FLEXIBLE COUPLING AND A STAINLESS STEEL SHEAR RING.

THE LOCATION OF MATERIAL STOCKPILES AND ONSITE STAGING AREAS SHALL BE APPROVED BY

ALL STRUCTURES RECEIVING NEW CASTINGS AS DIRECTED BY THE ENGINEER, AS SPECIFIED BY THE CASTING SCHEDULE. THE EXISTING CASTINGS SHALL BECOME THE PROPERTY OF THE CITY OF

PAYMENT FOR DRAINAGE STRUCTURE SUMPS, WHERE SPECIFIED, SHALL BE INCLUDED IN THE PAYMENT FOR THE VARIOUS DRAINAGE STRUCTURE SIZE AND/OR TYPES.

WHERE SEWER PIPES OF DIFFERENT SIZES OR MATERIALS ARE JOINED, FERNCO FLEXIBLE COUPLINGS WITH STAINLESS STEEL SHEAR RINGS SHALL BE USED. THE CONTRACTOR'S PURCHASE PRICE FOR THESE DEVICES, INCLUDING SHIPPING, SHALL BE PAID AS AN EXTRA. PRIOR TO PAYMENT OF THIS ITEM, THE CONTRACTOR SHALL SUBMIT RECEIPTS FOR THE ENGINEER'S REVIEW AND APPROVAL. ALL OTHER COSTS ASSOCIATED WITH THE INSTALLATION OF THESE DEVICES SHALL BE INCLUDED IN THE PAYMENT OF THE SEWER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE SLOPE STAKE LINE, INCLUDING EXISTING FENCING, LAWN, TREES AND SHRUBBING.

TRAFFIC MAINTENANCE & CONTROL

ON-SITE TRAFFIC SHALL BE MAINTAINED SO AS TO NOT INTERFERE OR INTERRUPT THE OPERATIONS OF THE COMPOSTING FACILITY OPERATIONS. CONTRACTOR TO COORDINATE WITH SITE OPERATIONS MANAGER AND PUBLIC WORKS OPERATIONS PRIOR TO START OF CONSTRUCTION

TRAFFIC MAINTENANCE & CONTROL REQUIRED SHALL BE INCIDENTAL TO DREDGING OPERATIONS

ALL CONSTRUCTION TRAFFIC SHALL USE THE PLATT ROAD ENTRANCE

SITE ACCESS & OPERATIONS SHALL BE COORDINATED WITH THE CITY AND SITE OPERATIONS MANAGER FROM "WE CARE"

DREDGING

THE ENGINEER.

ANN ARBOR.

DREDGING IS BASED ON SURVEYED CROSS-SECTIONS AND PROFILES. ACTUAL ELEVATIONS TO BE STAKED IN THE FIELD.

CONSTRUCTION STAKING:

GRADING LIMITS, ELEVATIONS, AND LOCATIONS OF STRUCTURES AND BANK TREATMENTS SHALL BE STAKED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE OF STAKING NEEDS PRIOR TO WORK COMMENCING. THE CONTRACTOR SHALL MAINTAIN ALL STAKING THROUGH THE DURATION OF THE PROJECT.

THE FOLLOWING UTILITY COMPANIES MAY HAVE FACILITIES WITHIN THE PROJECT LIMITS:

UTILITY CONTACT INFORMATION						
PUBLIC UTILITIES OWNER CONTACT						
FORESTRY		MATT WALDSMITH 734-794-6350 mwaldsmith@a2gov.org				
SANITARY SEWER	CITY OF ANN APPOD	TRAVIS CONLEY 734-277-2090 tconley@a2gov.org				
STORM SEWER	CITY OF ANN ARBOR PUBLIC WORKS UNIT W.R. WHEELER SERVICE CENTER 4251 STONE SCHOOL ROAD ANN	KEVIN SCHNEIDER 517-449-5654 kschneider@a2gov.org				
TRAFFIC SIGNS & SIGNALS	ARBOR, MI 48108	CHUCK FOJTIK 734-794-6350 X43322 cfojtik@a2gov.org				
WATER SYSTEM		DAN WOODEN 734-794-6350 X43324 dcwooden@a2gov.org				
PRIVATE UTILITIES OWNER		CONTACT				
GAS	DTE 17150 ALLEN ROAD MELVINDALE, MI 48122	LAURIE FORRESTER 313-389-7261 laura.forrester@dteenergy.com				
ELECTRIC	DTE WESTERN WAYNE CENTER 8001 HAGGERTY RD BELLEVILLE, MI 48111	ANTHONY IGNASIAK 734-397-4447 anthony.ignasiak@dteenergy.com				
PHONE	AT&T METRO WEST LEGAL MANDATES 550 S. MAPLE RD, 2ND FLOOR ANN ARBOR, MI 48103	JEFF LEHMAN SR. 734-730-2013 jl4582@att.com				
CABLE	COMCAST 25626 TELEGRAPH RD SOUTHFIELD, MI 48033	DARYL WOOD daryl_wood@cable.comcast.com				
ITC	ITC 27175 ENERGY WAY NOVI, MI 48377	PAUL BELZAK pbelzak@itctransco.com				
FIBER OPTIC	MCI 2800 N. GLENFILLE ROAD RICHARDSON, TX 75082	DEAN BOYERS (972) 729-6016				

ALL UTILITIES WITHIN ZONE OF INFLUENCE OF PROPOSED WORK ARE TO BE FIELD LOCATED AND HAND DUG INCLUDED IN THE UNIT BID PRICES FOR APPROPRIATE ITEMS.

ALL GAS FACILITIES SHALL BE PROTECTED AND SUPPORTED PER DTE STANDARDS AS APPLICABLE

PRIOR TO WORK ON FACILITIES BELONGING TO THE ABOVE AGENCIES, A MINIMUM OF 72 HOURS NOTICE MUST BE GIVEN IN ORDER TO INSURE PROPER INSPECTION BY THE RESPECTIVE AGENCIES.

CONCRETE, GRADE S3, SHALL BE USED TO ENCASE UTILITIES THAT ARE IN CLOSE PROXIMITY TO THE PROPOSED CONSTRUCTION ONLY AS DIRECTED BY THE ENGINEER.

ALL EXPLORATORY WORK REQUIRED FOR LOCATING EXISTING UTILITIES SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE CONSTRUCTION OF THE PROJECT.

THE EXISTING UTILITIES LISTED HEREIN AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED FROM SURVEYS AND FROM UTILITY RECORD MAPS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO SATISFY HIMSELF AS TO THEIR ACCURACY OR OF HIS RESPONSIBILITY IN CASE UTILITIES HAVE BEEN CONSTRUCTED, RELOCATED OR REMOVED. OWNERS OF PRIVATE UTILITIES WILL NOT BE REQUIRED TO MOVE ADDITIONAL POLES AND STRUCTURES THAT ARE NOT SPECIFICALLY INDICATED AS SUCH ON THE PLANS.

THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK, AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO INSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.

FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL DIAL 800-482-7171 A MINIMUM OF 3 WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS AND HOLIDAYS, PRIOR TO EXCAVATING IN THE VICINITY OF UTILITY LINES. ALL "MISS DIG" PARTICIPATING WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE 'MISS DIG' ALERT SYSTEM.

STAGING AREA NOTES

STAGING AREA FOR PROJECT SHALL BE LIMITED TO THE AREA SHOWN ON THE PLAN SHEETS.

IF THE CONTRACTOR WOULD LIKE TO PROPOSE ANOTHER STAGING AREA LOCATION, THE LOCATION MUST BE SUBMITTED IN WRITING TO BE APPROVED BY THE ENGINEER.

TOPSOIL/COMPOST AND IS PAID AS PART OF THOSE ITEMS

RESTORATION OF THE STAGING AREAS IS INCLUDED IN THE QUANTITIES OF SEED AND

CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING DAMAGED PAVEMENT CAUSED BY ACTIVITIES OUTSIDE THE WORK AREA AND DESIGNATED HAUL ROUTE.

THE STAGING AREA MUST BE FENCED OFF FROM THE PUBLIC, AND ONLY CONSTRUCTION RELATED TRAFFIC WILL BE PERMITTED WITHIN ITS LIMITS.

SESC MEASURES REQUIRED AT STAGING AREAS ARE INCLUDED IN QUANTITIES

HEAVY EQUIPMENT ACCESS AND OPERATION

THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF CONSTRUCTION AND MINIMIZE THE AREA AND DURATION OF DISTURBANCE AT ALL TIMES. ALL OTHER TREE CLEARING NECESSARY TO CONSTRUCT THE PROJECT PER THE PLANS AND FOR SITE ACCESS SHALL BE MINIMIZED TO THE EXTENT POSSIBLE, AND APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL USE REASONABLE MEASURES TO AVOID SOIL COMPACTION BY HEAVY

CONTRACTOR SHALL USE EQUIPMENT SUITABLE FOR WORK IN THE PONDS. THE INSPECTOR RESERVES THE RIGHT TO EXCLUDE ANY EQUIPMENT DEEMED UNACCEPTABLE TO ENTER THE PONDS DUE TO LEAKING FLUIDS, ACCUMULATED SEDIMENT OR OTHER POTENTIAL HAZARDS TO WATER QUALITY. TEMPORARY RIP RAP OR OTHER MEANS AS NECESSARY SHALL BE USED TO PROTECT THE BANKS WHEN ENTERING OR EXITING THE PONDS. THE ACCESS PATH WILL BE GRADED AND STABILIZED BY THE CONTRACTOR TO SUPPORT OPERATIONS WHILE MINIMIZING DISRUPTION AND RESTORATION. THE CONTRACTOR SHALL PROVIDE ACCESS PLANS AND DETAILS FOR REVIEW AT THE PRECONSTRUCTION MEETING. ALL COSTS ASSOCIATED WITH THE CONTRACTOR'S CHOSEN MEANS OF ACCESS SHALL BE INCIDENTAL TO THE PROJECT AND INCLUDED IN OTHER LINE ITEMS AS NECESSARY. THE CONTRACTOR WILL NOT BE COMPENSATED FOR EXCESS CLEARING, GRADING, OR RESTORATION DUE TO THE CONTRACTOR'S OPERATIONS SELECTED.

ALL EQUIPMENT ENTERING THE SITE SHALL COMPLY WITH THE SPECIAL PROVISION PREVENT SPREADING OF INVASIVE SPECIES CONTROL MEASURES.

MISCELLANEOUS

FOR PROPOSED WORK IN AREAS CLOSE TO UTILITY POLES, NO EXCAVATIONS WITHIN TEN (10) FEET AND NO BORES WITHIN (3) FEET FROM THE UTILITY POLES ARE ALLOWED.

CONTRACTOR RESPONSIBLE TO REPAIR OR REPLACE ANY EXISTING TRAFFIC SIGNS DAMAGED BY OPERATION DURING CONSTRUCTION. SIGNS TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MMUTCD.

ACCESS TO AREAS OUTSIDE OF PROJECT LIMITS TO BE APPROVED BY THE ENGINEER PRIOR TO START OF CONSTRUCTION.

CONTRACTOR TO COORDINATE CONSTRUCTION ACTIVITIES WITH OTHER CONTRACTORS WORKING IN AREA.

ANY DEWATERING NECESSARY TO CONSTRUCT THIS PROJECT SHALL BE CONSIDERED INCIDENTAL AND ALL COSTS ASSOCIATED SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE AFFECTED UTILITY INSTALLATION.

ALL UTILITY CROSSINGS TO HAVE A MINIMUM OF 18" VERTICAL CLEARANCE TYPICAL.

NO RAP (RECYCLED ASPHALT PRODUCTS) WILL BE ALLOWED IN ANY WEARING COURSE.

NO BROKEN CONCRETE IN ANY RIP RAP WILL BE ALLOWED ON THIS PROJECT.

RESTORATION

RESTORATION OF THE SITE SHALL BE IN ACCORDANCE WITH THE FOLLOWING AND SHALL BE PAID FOR AS INDICATED BELOW:

1. ALL DISTURBED AREAS SHALL BE RESTORED WITH SPECIFIED SEED MIX.

REMOVE ALL CONSTRUCTION EQUIPMENT. EXCESS MATERIALS. DEBRIS. ETC.. ESTABLISH FINE GRADE, AND RESTORE (PER PLANS AND SPECIFICATIONS). ALL COSTS FOR THE LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN UNIT PRICE BID FOR GRADING.

REMOVE ANY HAUL ROADS OR ACCESS ROADS, MATERIAL STOCKPILES, AND CONSTRUCTION FENCING. THIS SHALL BE CONSIDERED INCIDENTAL TO PROJECT ITEM.

ALL PAVEMENT DAMAGED DURING CONTRACTOR OPERATIONS SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR TO THE CITY OF ANN ARBOR SPECIFICATIONS.

WATER REQUIRED FOR SOD AND SEEDING SHALL BE INCLUDED IN THE CONTRACT COST FOR THESE ITEMS. WATER REQUIRED FOR COMPACTION SHALL BE INCLUDED IN THE COST OF CONSTRUCTION FOR THIS PROJECT. CONTRACTOR SHALL WATER THE PLANTINGS AND SEEDED AREAS DAILY FOR A MINIMUM OF 14 DAYS WITH AN ADDITIONAL FOUR (4) WATERING EVENTS IN THE FOLLOWING TWO WEEKS AFTER THE DAILY WATERING, OR AS NECESSARY TO MAINTAIN GROWTH. WATERING SHALL NOT OCCUR ON SATURDAYS, SUNDAYS, OR IMMEDIATELY AFTER RAIN EVENTS. ALL EXCEPTIONS SHALL BE APPROVED BY THE PROJECT ENGINEER. WATER CAN BE TAKEN FROM THE RIVER FOR THE PLANTINGS. WARRANTY FOR PLANTINGS/SEED IS ONE YEAR FOLLOWING ACCEPTANCE.

ALL AREAS DISTURBED BY THE CONTRACTOR AND/OR HIS SUBCONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE RESTORED AS SPECIFIED OR DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT OR COMPENSATION WILL BE ALLOWED FOR THIS ACTIVITY. THIS INCLUDES RESTORATION TO ALL MATERIAL STORAGE OR STAGING AREAS.

SPRINKLER SYSTEMS SHALL NOT BE COVERED WHEN PLACING TOPSOIL AND SOD.

ALL DISTURBED AREAS TO BE RESTORED WITHIN SEVEN (7) DAYS OF COMPLETION.

CONTRACTOR TO CHECK ON SEED AND SHRUB/PLUG GROWTH & SUPPLEMENT AS NEEDED. COSTS FOR RESEEDING AND PLANTINGS TO BE INCLUDED IN THE UNIT PRICE FOR SEEDING AND SHRUB/PLUGS.

GENERAL NOTES

CONTRACTOR'S EXPENSE.

CONTRACTOR SHALL OBTAIN ALL LOCAL AND STATE PERMITS REQUIREMENT TO WORK WITHIN THE UTILITY, ROAD, AND DRAIN RIGHT-OF-WAYS UNLESS OTHERWISE PROVIDED

CONTRACTOR SHALL CONFORM TO THE SOIL EROSION AND SEDIMENTATION CONTROL

ACT. PA 451. AMENDED 2001. CITY OF ANN ARBOR STANDARDS. AND MACDC STANDARDS

CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND SHALL NOTIFY THE ENGINEER IF POSSIBLE CONFLICT EXISTS.

ANY UTILITIES ENCOUNTERED DURING CONSTRUCTION SHALL BE IDENTIFIED AND BROUGHT TO THE ATTENTION OF THE ENGINEER

PROTECT ALL BITUMINOUS ROADS, DRIVES, OR PARKING AREAS NOT SPECIFIED TO BE REMOVED DURING CONSTRUCTION. REPAIR ANY UNAUTHORIZED DAMAGE AT

WORK HOURS ARE 7 AM TO 7 PM MONDAY THROUGH SATURDAY. SATURDAY ACCESS WILL HAVE TO BE COORDINATED WITH SITE MANAGER. WORK ON SUNDAYS AND HOLIDAYS IS

ALL RIP RAP SHALL BE NATURAL TYPE MATERIAL AS APPROVED BY THE ENGINEER UNLESS OTHERWISE DIRECTED. SUBMIT SAMPLES TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION. OWNER AND ENGINEER RESERVES THE RIGHT TO REJECT ANY AND ALL

CONTRACTORS SHALL FINISH GRADE, SEED, FERTILIZE, AND MULCH DAILY ON ALL DISTURBED AREAS AS DESCRIBED IN THE SPECIFICATIONS. ALL AREAS TO RECEIVE LANDSCAPE SEEDING SHALL HAVE 4" TOPSOIL PLACED AS DETAILED IN THE SPECIFICATIONS. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE AS TOPSOIL SURFACE AS DIRECTED BY THE ENGINEER

UNDERGROUND UTILITIES/MISS DIG

NOT PERMITTED WITHOUT OWNER APPROVAL.

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 174, 2013, THE CONTRACTOR SHALL DIAL 1-800-482-7171 OR 811 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 THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM

CONTRACTOR SHALL RESTORE INCIDENTAL DAMAGES ON THE PROJECT AS DIRECTED BY OWNER AND ENGINEER

ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

GRADING AROUND MANHOLES/CATCH BASINS, FLARED END SECTIONS, AND OTHER INLETS DETERMINED BY THE ENGINEER PROPERLY SHALL BE SMOOTH AND SHAPED TO PROVIDE POSITIVE DRAINAGE INTO THE INLETS.

ALL FLARED END SECTIONS UNDER 8" IN DIAMETER SHALL HAVE FACTORY SUPPLIED ANIMAL GUARD

CONSTRUCTION

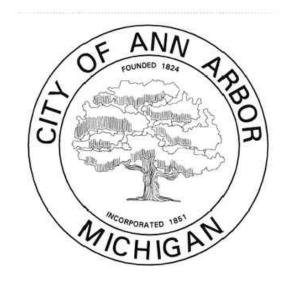
TOPSOIL, RAKE, SEED, AND MULCH ALL DISTURBED GRASS AREAS. FOR FARM AREAS, REPLACE TOPSOIL, RAKE, AND FINISH GRADE. CONTRACTOR SHALL DEEP RIP ANY AREAS THAT ARE COMPACTED DUE TO CONSTRUCTION ACTIVITIES PRIOR TO PLACING TOPSOIL/COMPOST.

CONTRACTOR SHALL MAINTAIN DRAINAGE DURING CONSTRUCTION.

CONTRACTOR SHALL COORDINATE INSTALLATION OF EROSION CONTROL STRUCTURES WITH ENGINEER PRIOR TO CONSTRUCTION. LOCATIONS, QUANTITIES, OR TYPES MAY VARY BASED ON FIELD DECISIONS.

CONTRACTOR TO HAUL ALL WOODY DEBRIS AS PART OF DREDGING OPERATION.

THE CONTRACTOR SHALL PROTECT ALL ROADWAY AND DRIVEWAY DITCH SLOPES DURING CONSTRUCTION. COST SHALL BE INCIDENTAL TO THE PROJECT

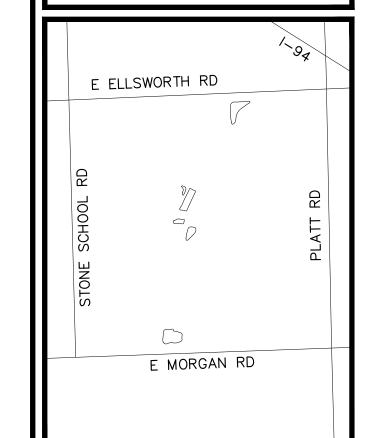


HUBBELL, ROTH & CLARK, INC CONSULTING ENGINEERS SINCE 1915 555 HULET DRIVE BLOOMFIELD HILLS, MICH. 48303 - 0824

PHONE: (248) 454-6300 FAX (1st. Floor): (248) 454-6312 FAX (2nd. Floor): (248) 454-6359 WEB SITE: http://www.hrcengr.com

03/08/21 | ADDENDUM No. 2 02/08/21 | SECOND CITY REVIEW 09/24/20 | ISSUED TO CITY FOR PERMITS 06/18/20 DRAFT PLANS ADDITIONS AND/OR REVISIONS DESIGNED D.HURRISH CHECKED J.BALINT, A.GROAT

APPROVED J.BALINT, A.GROAT



WHEELER FACILITY POND DREDGING

PROJECT NOTES

HRC JOB NO. SCALE NTS 20190818 April 2020

LANE CLOSURE PERMIT* CITY OF ANN ARBOR ENGINEERING WETLAND PERMIT CITY OF ANN ARBOR WETLAND PERMIT PITTSFIELD TOWNSHIP GRADING/SOIL EROSION & SEDIMENTATION PITTSFIELD TOWNSHIP CONTROL PERMIT * **EGLE PERMIT*** STATE OF MICHIGAN * NO COST TO CONTRACTOR

PERMITS TO BE OBTAINED BY THE CONTRACTOR

PRIOR TO THE BEGINNING OF CONSTRUCTION

PERMIT

GRADING/SOIL EROSION & SEDIMENTATION

CONTROL PERMIT

NOTE: ALL PERMITS WILL BE APPLIED FOR OR ISSUED AT TIME OF BID. THERE WILL BE NO COST TO THE CONTRACTOR. CONTRACTOR MAY BE REQUIRED TO PICK UP PERMITS AND SUPPLY REQUIRED DOCUMENTATION UPON ISSUANCE OF PERMITS.

ISSUING AUTHORITY

CITY OF ANN ARBOR SPU

SEED MIX A

SPECIES	COMMON NAME	RATE (LBS./AC.
Agrostis alba palustris	Bent Grass	6.000
Alisma subcordatum	Common Water Plantain	0.375
Asclepias incarnata	Swamp Milkweed	0.062
Aster nova-angliae	New England Aster	0.062
Aster simplex	Panicled Aster	0.031
Bidens cernua	Nodding Bur Marigold	0.312
Bidens frondosa	Common Beggar's Tick	0.125
Boltonia latisquama	False Aster	0.188
Carex bebbii	Bebb's Sedge	0.125
Carex comosa	Bottlebrush Grass	0.125
Carex lupuliformis	Knobbed Hop Sedge	0.062
Carex stipata	Awl-fruited Sedge	0.125
Carex scoparia	Pointed Broom Sedge	0.125
Carex vulpinoidea	Fox Sedge	0.500
Eleocharis species	Spike Rush Species	0.062
Elymus virginicus	Virginia Wild Rye	1.500
Eupatorium maculatum	Spotted Joe Pye Weed	0.125
Glyceria striata	Fowl Manna Grass	0.125
Helenium autumnale	Sneezeweed	0.250
Iris virginica	Southern Blue Flag	0.188
Juncus species	Rush Species	0.062
Leersia oryzoides	Rice Cut Grass	0.188
Ludwigia polycarpa	False Loosestrife	0.001
Mimulus ringens	Monkeyflower	0.031
Onoclea sensibilis	Sensitive Fern	0.031
Penthorum sedoides	Ditch Stonecrop	0.001
Polygonum hydropiperoides	Mild Water Pepper	0.750
Rudbeckia laciniata	Green Coneflower	0.125
Sagittaria latifolia	Duck Potato	0.062
Scirpus atrovirens	Dark Green Rush	1.250
Scirpus fluviatilis	River Bulrush	0.125
Scirpus pendulus	Red Bulrush	0.031
Scirpus validus	Soft Stem Bulrush	0.031
Sparganium eurycarpum	Common Bur-Reed	0.062
Verononia fasciculata	Common Ironweed	0.062
Verbena hastata	Blue Vervain	0.125

SPECIES Cover Crop

Avena sativa Agrostis gigantes Lolium multiflorum

Seed Oats Red Top Grass Annual Rye

13.404

RATE (25 LBS./AC.)

33%

33%

33%

Seed mix to be broadcast over the wetland creation and enhancement areas as indicated on the plans.

COMMON NAME

This is Geneisi Nursery's Sedge Ghetto--The Next Generation seed mix modified for use in Michigan.

A total of 109.91 pounds needed for ± 8.20 acres of wetland mitigation and enhancement.

___ 2"x 2" STAKES TO

18" MIN. BELOW GRADE

— 2"x 2" STAKES

RIBBON, TYP.

← 60 lb. TEST

— PINK OR ORANGE MYLAR

MONOFILAMENT LINE

TOTAL:

Paid for as "Seed Mix A" per acre.

NORMAL WATER LEVEL — 60 Ib. TEST MONOFILAMENT LINE

MYLAR RIBBON -

SEED MIX B

SPECIES	COMMON NAME Little Bluestem	RATE (LBS/AC.)
Andropogon scoparius Avena sativa		
	Seed Oats	20.000
Elymus virginicus	Virginia Wild Rye	1.000
Asclepias syriaca	Common Milkweed	0.063
Aster ericoides	Heath Aster	0.031
Aster nova-angliae	New England Aster	0.250
Desmodium canadense	Showy Tick Trefoil	0.031
Echinacea pallida	Pale Purple Coneflower	0.063
Echinacea purpurea	Purple Coneflower	0.375
Heliopsis helianthodes	False Sunflower	0.125
Lespedeza capitata	Roundheaded Bush Clover	0.125
Liatris spicata	Spiked Gayfeather	0.125
Monarda fistulosa	Bergamot	0.031
Parthenium integrifolium	Wild Quinine	0.375
Penstemon digitalis	Foxglove Beardtongue	0.063
Petalostemum purpureum	Purple Prairie Clover	0.250
Ratibida pinnata	Yellow Coneflower	0.250
Rudbeckia hirta	Black-eyed Susan	0.375
Rudbeckia subtomentosa	Sweet Coneflower	0.063
Solidago rigida	Rigid Goldenrod	0.375
	TOTAL:	26.970

Seed mix to be broadcast over upland areas for meadow. This is Genesis Nursery's Lo pro prairie for clay soils.

SPECIES	COMMON NAME	RATE (LBS/A
Bromus latiglumis	Ear-Leafed Brome	0.125
Bromus pubescense	Woodland Brome	0.031
Elymus canadensis	Canada Wild Rye	1.000
Glyceria striata	Fowl Manna Grass	0.062
Hystrix patula	Bottlebrush Grass	0.062
Anemone virginiana	Tall anemone	0.031
Aquilegia canadensis	Columbine	0.006
Aster drummondii	Drummond's Aster	0.031
Aster lateriflorus	Side-flowering Aster	0.031
Aster sagittifolius	Arrow-leafed Aster	0.062
Clematis virginiana	Virgin's Bower	0.031
Pycnanthemum pilosum	Hairy Mt. Mint	0.016
Smilacina racemosa	Feathery False Solomon's Seal	0.016
Solidago flexicaulis	Zig Zag Goldenrod	0.031
Solidago juncea	Early Goldenrod	0.031
	TOTAL:	1.566

SPECIES COMMON NAME RATE (25 LBS./AC.)

Cover Crop Avena sativa

33% Seed Oats Agrostis gigantes Lolium multiflorum Red Top Grass Annual Rye

NOTES:

Seed mix to be broadcast over woodland edges and interior areas with thin canopy. This is Genesis Nursery's Mesic to Dry Open Woodland seed mix.

Seed mix to be covered with North American Green C125bn erosion control blanket or equivalent installed in compliance with manufacturer's specifications on all slope areas exceeding 1 on 3. No plastic shall be used.

Paid for as "Seed Mix B" per acre.

SEED MIX C

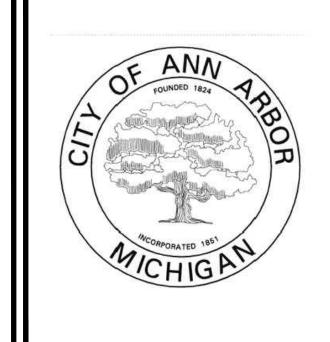
SPECIES	COMMERCIAL NAME	RATE (LBS/AC.)
Turf type tall fescue	Rebel, Apache or equal	250
Perrenial rye grass	K-31, Pennington or equal	250
Kentucky bluegrass	Glade, Palmer II or equal	250

TOTAL: 750 NOTES:

Seed mix to be covered with North American Green C125bn erosion control blanket or equivalent installed in compliance with manufacturer's specifications on all slope areas exceeding 1 on 3.

Seed mix to be broadcast over all lawn areas disturbed by construction activities not specifically designated to be seeded by another mix specified on the sheet or on the plans.

Paid for as "Seed Mix C" per acre





FAX (1st. Floor): (248) 454-6312 FAX (2nd. Floor): (248) 454-6359

03/08/21 | ADDENDUM No. 2 02/08/21 | SECOND CITY REVIEW 09/24/20 ISSUED TO CITY FOR PERMITS 06/18/20 DRAFT PLANS ADDITIONS AND/OR REVISIONS

DESIGNED D.HURRISH

DRAWN D.HURRISH

CHECKED J.BALINT, A.GROAT

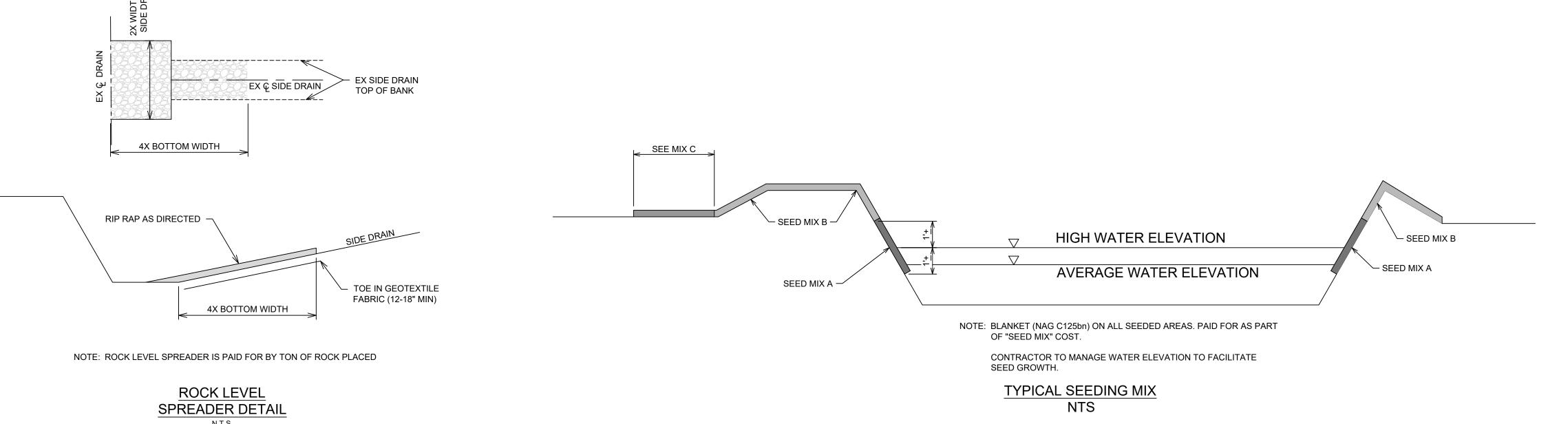
APPROVED J.BALINT, A.GROAT

-	ELLSWORTH RD	1-94	\
	ELLSWORTH RE		
STONE SCHOOL RD		PLATT RD	
			+
	E MORGAN RD		

WHEELER FACILITY POND DREDGING

PROJECT DETAILS

HRC JOB NO. 20190818	SCALE NTS
DATE April 2020	SHEET NO. B



ORIGINAL PLOT SIZE: ARCH FULL BLEED D (36.00 X 24.00 INCHES)

NTS

GOOSE GRID DETAIL

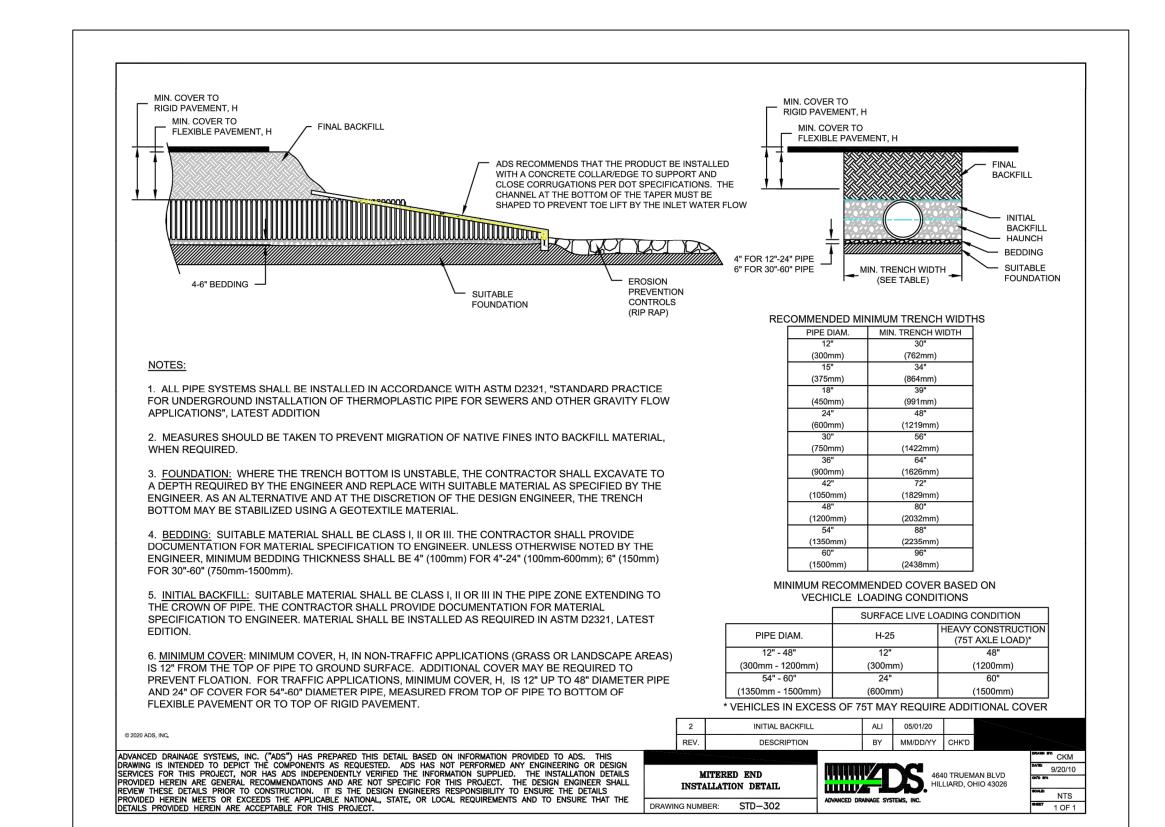
1. STAGGER MONOFILAMENT LINE HEIGHT AT 6" AND 12" ABOVE

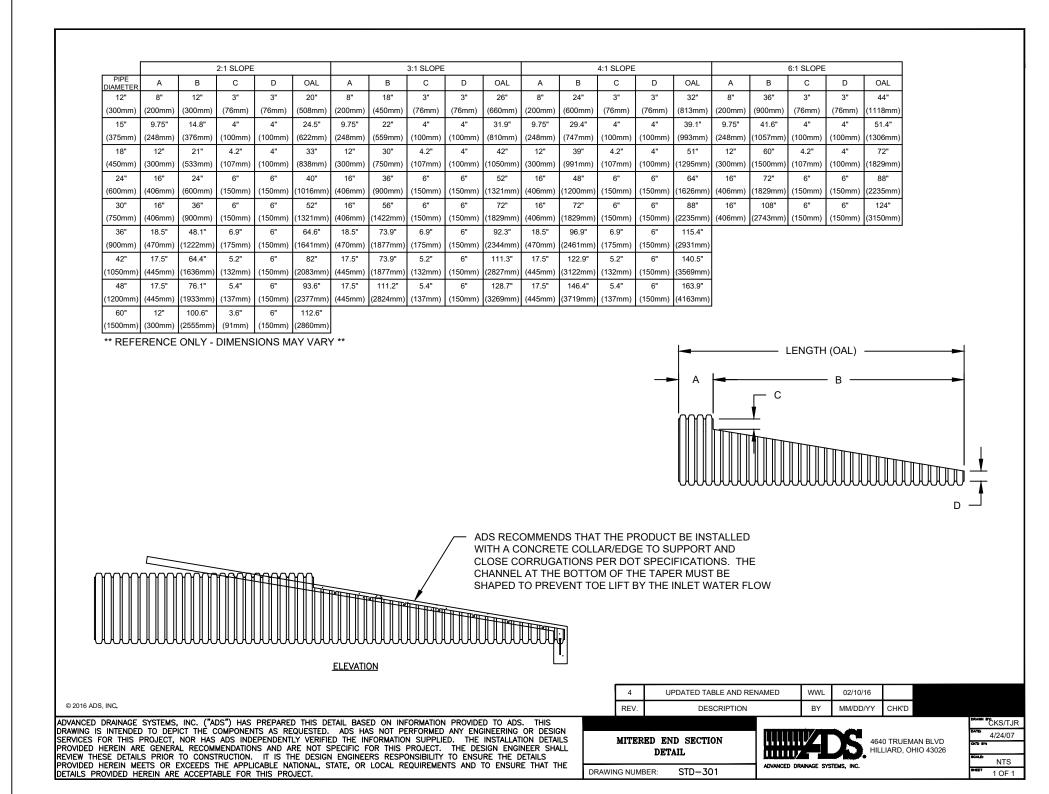
WATER LEVEL IN PERPENDICULAR DIRECTIONS ACROSS GRID.

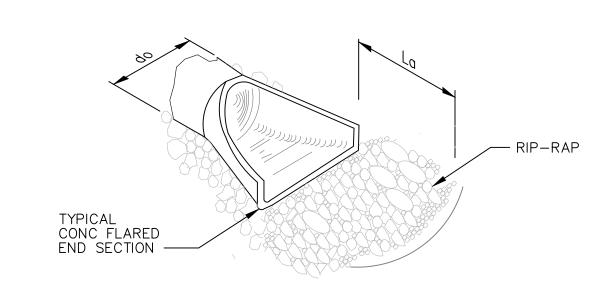
2. EXTEND GRID 2.5' MIN. BEYOND VEGETATION TO BE PROTECTED

3. TO INSTALLED W/ SHRUB OR PLUG PLANTS AND PAID AS

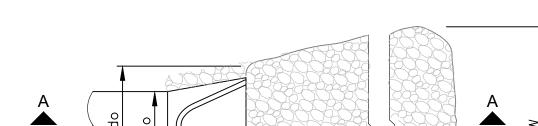
INCIDENTAL TO SHRUB/PLUG PAY ITEM

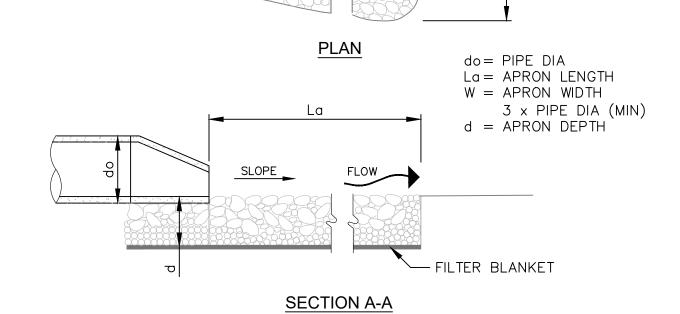






ISOMETRIC VIEW





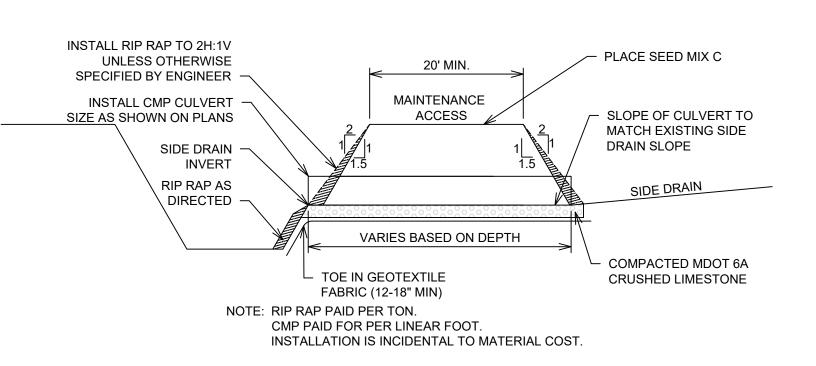
1. SEE SITE PLAN, DETAILS AND/OR SCHEDULE FOR DIMENSIONS.

2. La = THE LENGTH OF THE RIP-RAP APRON.

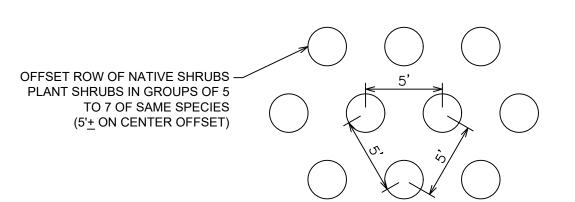
3. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".

4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIP—RAP AND SOIL FOUNDATION.

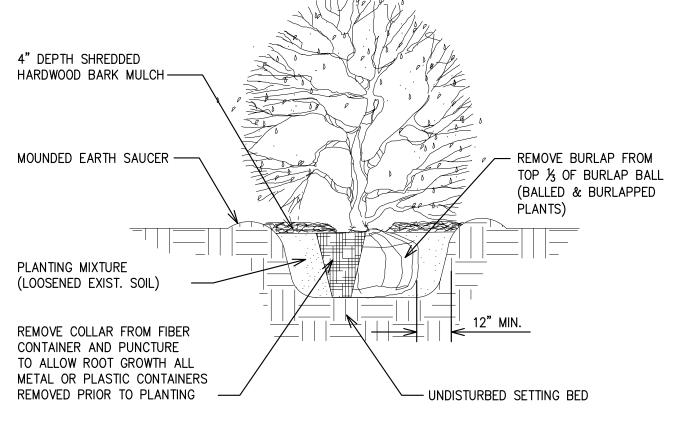
RIP-RAP APRON - OUTLET CHANNEL DETAIL NOT TO SCALE



CULVERT DETAIL



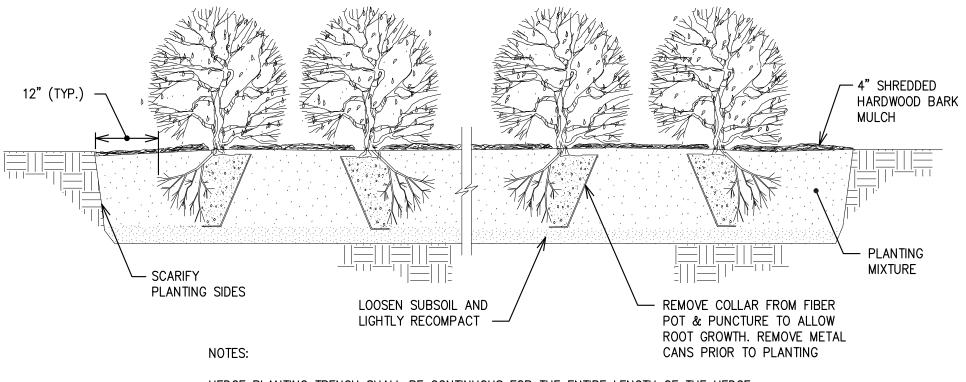
TYPICAL SHRUB PLUG LAYOUT PLAN NTS



SHRUB SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT DID TO PREVIOUS EXISTING GRADE. PAID FOR AS "LIVE STAKE SHRUBS" PER PLANT

SHRUB PLANTING

NO SCALE



HEDGE PLANTING TRENCH SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF THE HEDGE.

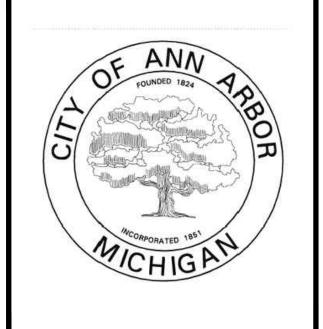
REMOVE BURLAP FROM TOP 1/3 OF ROOTBALL ON B&B SHRUBS.

SHRUBS SHALL BEAR SAME RELATION TO FINISH GRADE AS THEY DID TO NURSERY GRADE.

PAID FOR AS "LIVE STAKE SHRUBS" PER PLANT

MASSED SHRUB PLANTING

NO SCALE



HUBBELL, ROTH & CLARK, INC CONSULTING ENGINEERS SINCE 1915 555 HULET DRIVE P.O. BOX 824 BLOOMFIELD HILLS, MICH. 48303 - 0824

PHONE: (248) 454-6300 FAX (1st. Floor): (248) 454-6312 FAX (2nd. Floor): (248) 454-6359

WEB SITE: http://www.hrcengr.com

03/08/21 ADDENDUM No. 2

02/08/21 | SECOND CITY REVIEW

09/24/20 ISSUED TO CITY FOR PERMITS 06/18/20 DRAFT PLANS ADDITIONS AND/OR REVISIONS DATE DESIGNED D.HURRISH DRAWN D.HURRISH CHECKED J.BALINT, A.GROAT APPROVED J.BALINT, A.GROAT E ELLSWORTH RD

> WHEELER FACILITY POND DREDGING

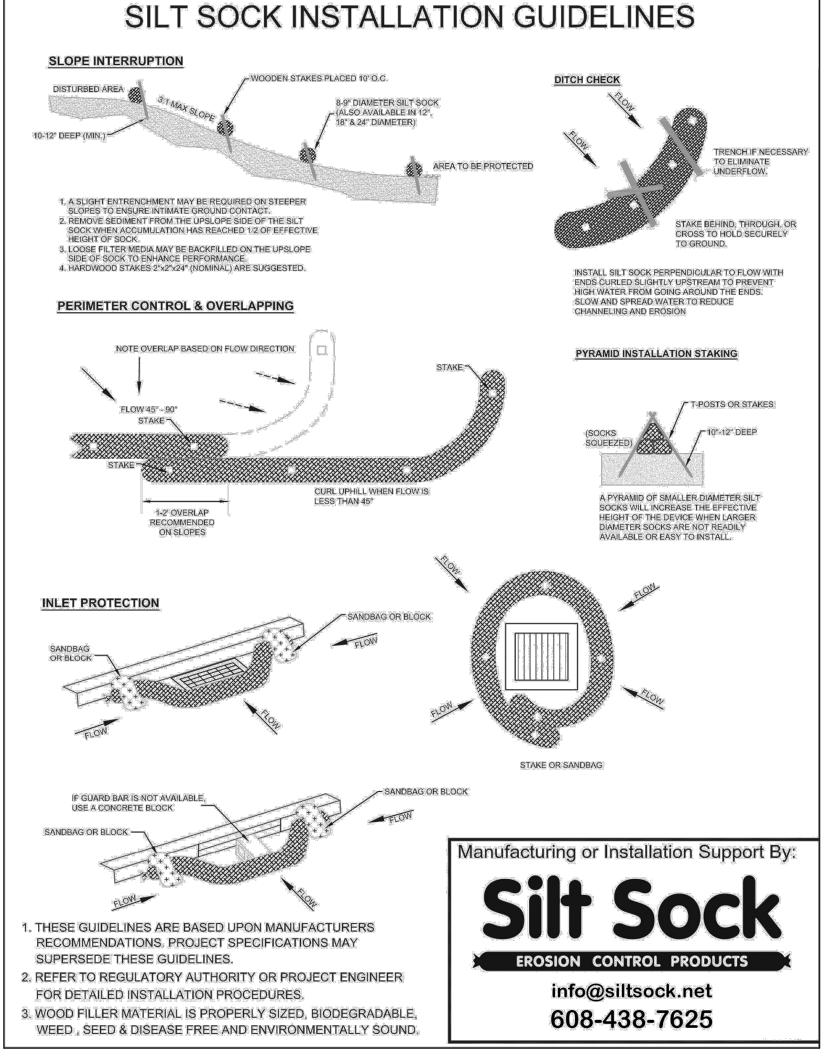
E MORGAN RD

PROJECT DETAILS

HRC JOB NO. SCALE NTS 20190818 April 2020

© 2020 Hubbell, Roth & Clark, Inc. All Rights Reserved

ORIGINAL PLOT SIZE: ARCH FULL BLEED D (36.00 X 24.00 INCHES)

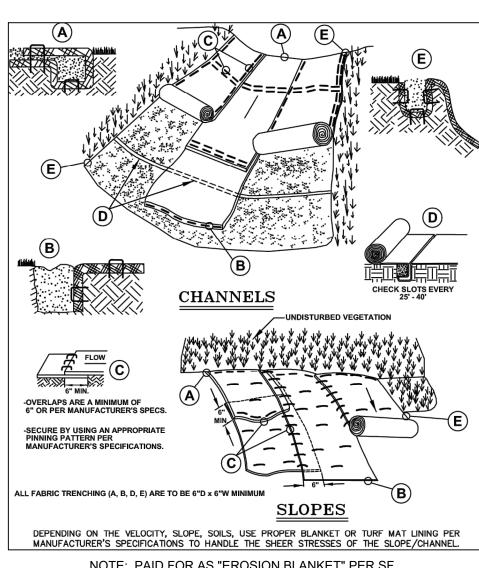


NOTE: PAID FOR AS "SILT SOCK/EROSION CONTROL FENCING" PER LINEAR FOOT

SEQUENCE OF CONSTRUCTION - SOIL EROSION CONTROL

- THE CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO COMMENCEMENT OF DREDGING OPERATIONS. MEASURES TO BE INSTALLED AS DIRECTED ON PERMITS FROM CITY OF ANN ARBOR AND PITTSFIELD TOWNSHIP.
- STRIP AND STOCKPILE TOPSOIL IN DESIGNATED STAGING AREAS. PLAN SHEETS
 DESIGNATE MAXIMUM AREA OF DISTURBANCE. EFFORTS SHALL BE MADE TO
 MINIMIZE DISTURBANCE.
- 3. BEGIN DREDGING OPERATION
- 4. CHECK AND MAINTAIN SOIL EROSION CONTROL MEASURES DAILY. ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE IN PLACE AND THE AREA IS STABILIZED.
- 5. COMPLETE CONSTRUCTION.
- 6. RESTORE ALL DISTURBED AREAS AS SPECIFIED HEREIN. PERMANENT SOIL EROSION AND SEDIMENTATION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES OR ANY DISTURBED AREA SHALL BE INSTALLED WITHIN FIVE (5) CALENDAR DAYS AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED.
- 7. CONTRACTOR TO MAINTAIN TEMPORARY SEDIMENT CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT UNTIL GRASS IS ESTABLISHED, THEN THE CONTRACTOR IS TO REMOVE THEM.

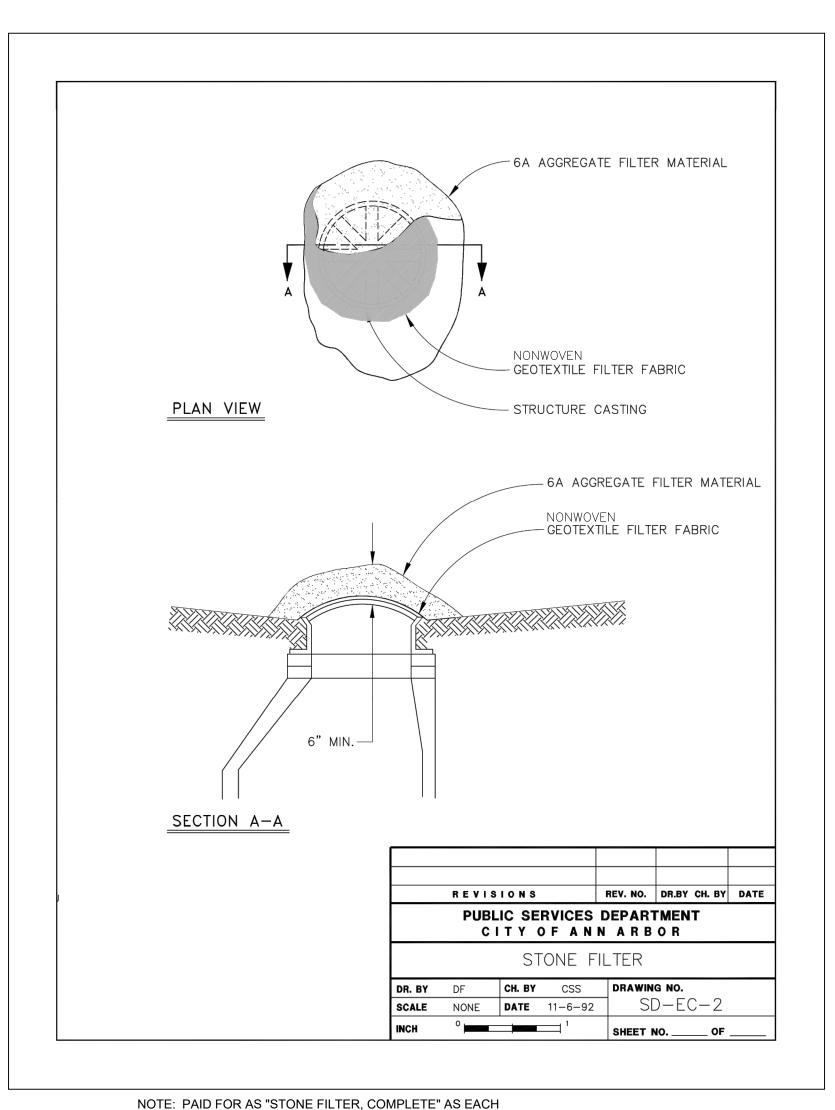
SOIL EROSION CONTROL MEASURES ARE ITEMIZED AND WILL BE PAID FOR BY UNIT/FT ETC.. QUANTITIES ARE ESTIMATED AND MAY BE MORE OR LESS THAN WHAT IS SHOWN ON PLANS.

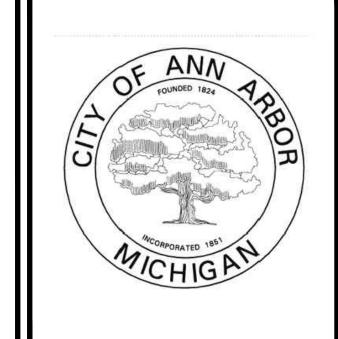


NOTE: PAID FOR AS "EROSION BLANKET" PER SF

EROSION BLANKET DETAIL

ITS





HUBBELL, ROTH & CLARK, INC CONSULTING ENGINEERS SINCE 1915 555 HULET DRIVE P.O. BOX 824 BLOOMFIELD HILLS, MICH. 48303 - 0824

PHONE: (248) 454-6300 FAX (1st. Floor): (248) 454-6312 FAX (2nd. Floor): (248) 454-6359

03/08/21 | ADDENDUM No. 2

06/18/20 DRAFT PLANS

DESIGNED D.HURRISH
DRAWN D.HURRISH

02/08/21 | SECOND CITY REVIEW

09/24/20 ISSUED TO CITY FOR PERMITS

ADDITIONS AND/OR REVISIONS

WEB SITE: http://www.hrce

E ELLSWORTH RD

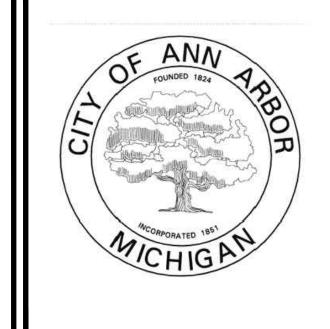
E MORGAN RD

WHEELER FACILITY POND DREDGING

SOIL EROSION & SEDIMENT CONTROL DETAILS

HRC JOB NO. SCALE NTS

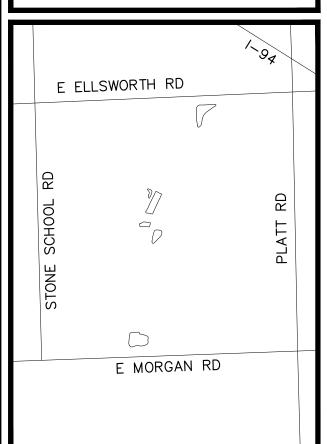
DATE SHEET NO. D



HUBBELL, ROTH & CLARK, INC CONSULTING ENGINEERS SINCE 1915 555 HULET DRIVE BLOOMFIELD HILLS, MICH.

PHONE: (248) 454-6300 FAX (1st. Floor): (248) 454-6312 FAX (2nd. Floor): (248) 454-6359

03/08/21 | ADDENDUM No. 2 02/08/21 SECOND CITY REVIEW 09/24/20 ISSUED TO CITY FOR PERMITS 06/18/20 DRAFT PLANS ADDITIONS AND/OR REVISIONS DESIGNED D.HURRISH



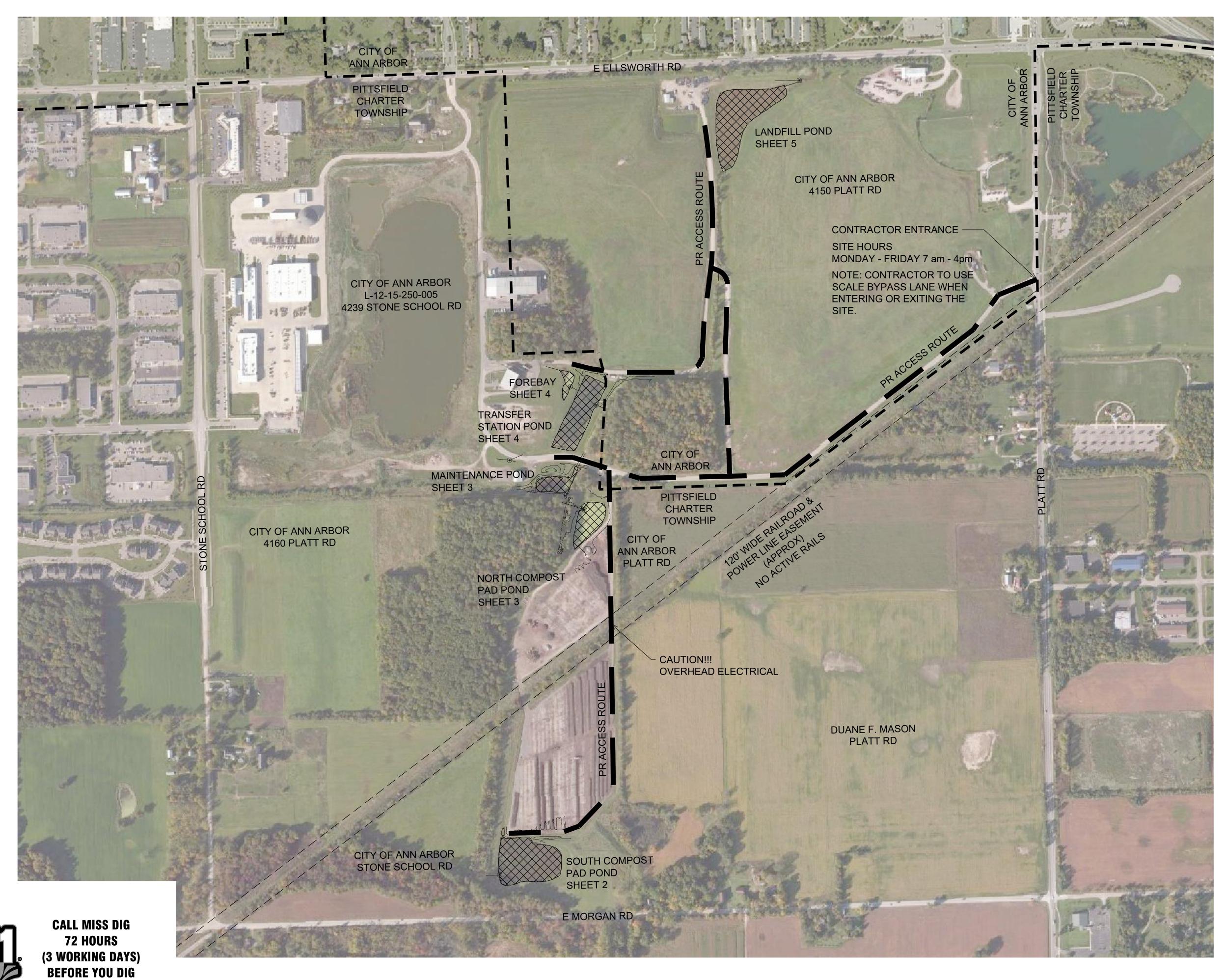
CHECKED J.BALINT, A.GROAT

APPROVED J.BALINT, A.GROAT

WHEELER FACILITY POND DREDGING

OVERALL SITE PLAN

нкс јов no. 20190818	scale 1"=300'
DATE April 2020	SHEET NO. 1



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

1-800-482-7171

OR 811

(TOLL FREE)

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

OR 811

(TOLL FREE)

© 2020 Hubbell, Roth & Clark, Inc. All Rights Reserved

HRC JOB NO.

20190818

April 2020

E MORGAN RD

WHEELER FACILITY

POND DREDGING

SOUTH COMPOST

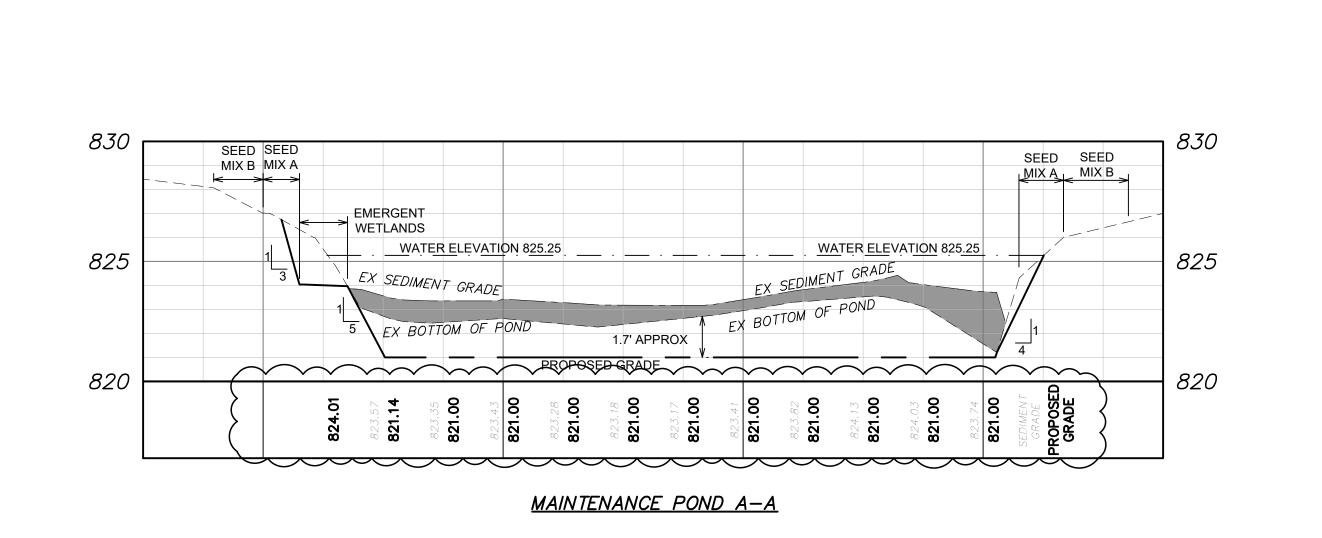
PAD POND

V: 1"=4'

PHONE: (248) 454-6300

SOUTH COMPOST PAD POND B-B

CALL MISS DIG 72 HOURS (3 WORKING DAYS) **BEFORE YOU DIG** 1-800-482-7171 OR 811 (TOLL FREE)



CLEANING - 91 LF

SEE NOTE THIS SHEET

EX 60" INV 823.38 N

POND OUTLET -

INSTALL SILT SOCK

PR STONE FILTER — SEE DETAIL SHEET D

SEE DETAIL SHEET D

LIGHT STORM SEWER

SEE NOTE THIS SHEET

PR STAGING AREA / -

TOPSOIL STOCKPILE

EX 48" BEEHIVE CB CONTRACTOR TO PROTECT

EX 48" BEEHIVE CB

RIM 825.26

EX 12" HDPE END SECTION

COMPOST AREA

STORM STRUCTURES WITH

PROPER PROTECTION FENCE

CLEANING - 91 LF

EX 60" INV 823.24 N

CONTRACTOR TO FIELD LOCATE

AND VERIFY PIPE CONDITION AND

ABILITY TO DREDGE AND CLEAN

PRIOR TO CONSTRUCTION

DISTURBANCE

PR 20' ACCESS -

PR STAGING AREA / ----

LIMITS OF -

DISTURBANCE

TOPSOIL STOCKPILE AREA

MAINTENANCE POND WATER ELEV 825.25 (04/03/2020)

LIGHT STORM SEWER —

CONTRACTOR TO FIELD — LOCATE AND VERIFY PIPE

CONDITION AND ABILITY TO DREDGE AND CLEAN PRIOR

SPREADER (2-3 CYD LIGHT RIP-RAP) TO

GARDEN IN SWALE

CREATE RAIN

LIMITS OF — DISTURBANCE

CLEANING - 129 LF SEE NOTE THIS SHEET

TO CONSTRUCTION

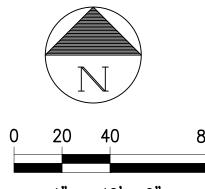
NORTH COMPOST PAD POND QUANTITIES VITEON VINIT Quantity Stone Filter EA 2 Seed Mix A 0.30 0.34 Seed Mix B AC Seed Mix C AC 0.10 **Erosion Blanket** SF Light Storm Sewer Cleaning (30" - 60") Silt Sock 1250 Strip and Stockpile SY 2,130

MAINTAINENCE POND QUANTITIES

•		
→ tte/m	√Unit√	Quantity
Sediment Removal and	CY	1100
Earth Excavation	_ C1	1100
Seed Mix A	AC	0.42
Seed Mix B	AC	0.16
Erosion Blanket	SF	25300
Light Storm Sewer	LF	182
Cleaning (30"- 60")	LF	102
Silt Sock	LF	880
Strip and Stockpile	cv	774
Topsoil	SY	774
Level Spreader Rip-Rap	CY	3

NORTH COMPOST PAD POND POND AREA: 28,900 SF AVG SEDIMENT DEPTH: 0.57 FT 2,300 CY EX POND VOLUME: 3,200 CY PR POND VOLUME: AREA OF DISTURBANCE: 74,500 SF

MAINTENANCE POND POND AREA: 16,380 SF AVG SEDIMENT DEPTH: 0.55 FT 300 CY EX POND VOLUME: 1,100 CY PR POND VOLUME: AREA OF DISTURBANCE: 37,300 SF



- EXISTING AERATORS WILL BE REMOVED FROM PONDS BY FACILITY STAFF - CONTRACTOR WILL REMOVE PHARMGMITES AS

OF WITH DREDGED MATERIAL CONCRETE PADS FOR SOLAR PANELS WILL NEED TO BE RELOCATED BY CONTRACTOR AS NECESSARY. FACILITY STAFF WILL ADDRESS SOLAR PANELS DIRECTLY

PART OF DREDGING OPERATION AND DISPOSE

- MISS DIG STAKING SHALL BE WITNESSED BY CONTRACTOR STORM SEWER TO BE CLEANED AS NOTED ON PLAN. SEE SPECIFICATIONS FOR

REQUIREMENTS CONTRACTOR TO MANAGE WATER ELEVATION

TO FACILITATE SEED GROWTH - CONTRACTOR TO MAINTAIN TRAFFIC ENTERING

AND EXITING COMPOST FACILITY.

PHONE: (248) 454-6300 FAX (1st. Floor): (248) 454-6312 FAX (2nd. Floor): (248) 454-6359 WEB SITE: http://www.hrcengr.com

HUBBELL, ROTH & CLARK, INC

CONSULTING ENGINEERS SINCE 1915

555 HULET DRIVE

BLOOMFIELD HILLS, MICH.

03/08/21 | ADDENDUM No. 2

06/18/20 DRAFT PLANS

CHECKED J.BALINT, A.GROAT APPROVED J.BALINT, A.GROAT

E ELLSWORTH RD

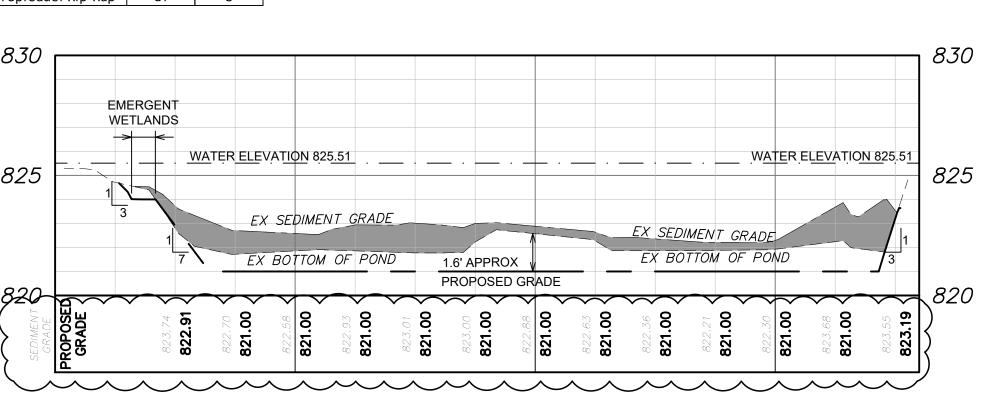
E MORGAN RD

DESIGNED D.HURRISH

02/08/21 | SECOND CITY REVIEW

09/24/20 ISSUED TO CITY FOR PERMITS

ADDITIONS AND/OR REVISIONS



NORTH COMPOST PAD POND A-A

830 INLET FILTER EMERGENT EX CONTOUR WETLANDS PR CONTOUR WATER ELEVATION 825.51 ___ WETLANDS___ 825 STAGING AREA SEED MIX A SEED MIX B SEED MIX C PROPOSED GRADE SHRUB PLUGS

NORTH COMPOST PAD POND B-B

WATER ELEVATION 825.25 _ *825* MAINTENANCE POND B-B

WHEELER FACILITY POND DREDGING

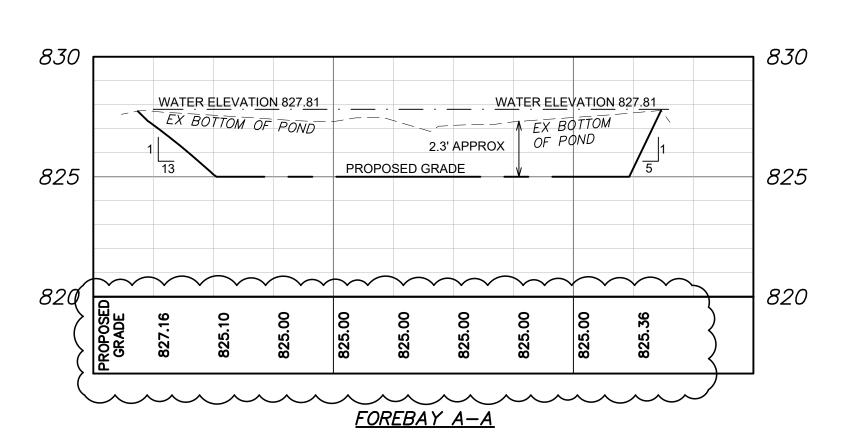
> NORTH COMPOST PAD POND & MAINTENANCE POND

HRC JOB NO. 20190818 V: 1"=4' April 2020

ORIGINAL PLOT SIZE: ARCH FULL BLEED D (36.00 X 24.00 INCHES)

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

© 2020 Hubbell, Roth & Clark, Inc. All Rights Reserved



SHRUB PLUGS —

OFF SET ROWS

EX 48" OVERFLOW —

PROTECT AND

SWALE AS PART

OF RESTORATION

SHRUB PLUGS

LIST THIS SHEET

OFF SET ROWS

348 EA SEE PLANT

REESTABLISH

LIGHT STORM SEWER -CLEANING - 51 LF

SEE NOTE THIS SHEET

12" INV 826.99 E

STRUCTURE

RIM 829.97

120 EA

INSTALL — SILT SOCK SEE DETAIL SHEET D

PR STAGING AREA /

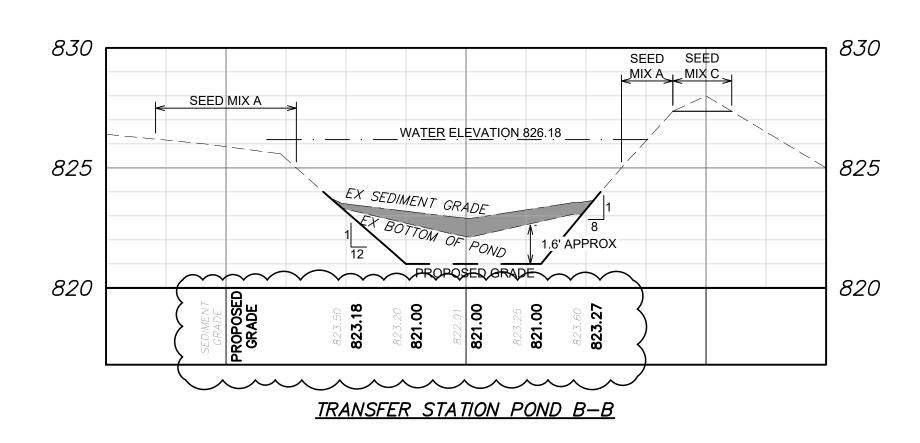
AREA

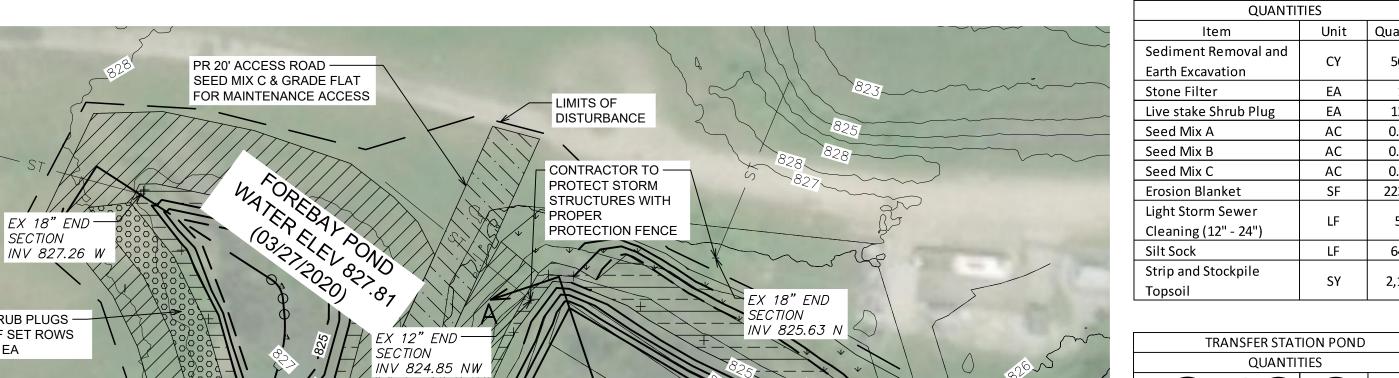
SEED MIX A —

SEE SHEET B

EX 2' SWALE

TOPSOIL STOCKPILE





PR STONE FILTER

SHRUB PLUGS

60 SHRUBS/ROW

EX 60" END SECTION

- INV 823.32 S

SEE DETAIL SHEET D

CONTRACTOR TO PROTECT STORM STRUCTURES WITH

EX 12" END

INV 826.46 W

SECTION

SILT SOCK

~	TRANSFER STATION POND			
	QUANTITIES			
//	Vten	√0nit√	Quantity	
	Sediment Removal and	СУ	2000	١,
2	Earth Excavation	C1	3000	
П	Stone Filter	EA	1	
	Live Stake Shrub Plug	EA	348	
5	Seed Mix A	AC	0.45	
	Seed Mix B	AC	0.05	
	Seed Mix C	AC	0.16	
	Erosion Blanket	SF	29000	
	Light Storm Sewer	LF	52	
	Cleaning (12" - 24")	LF	52	
7	Silt Sock	LF	1420	
ſ,	Strip and Stockpile Topsoil	SY	1,016	
	τομάστι			J

SHRUB PLUGS OFF SET ROWS

280 LF

CONTRACTOR TO PROTECT STORM STRUCTURES WITH

> LIGHT STORM SEWER CLEANING - 52 LF

SEE NOTE THIS SHEET

SOCK SOCK

EX 24" END

24" INV 824.61 W

SECTION

EX 54" OVERFLOW STRUCTURE

PR STONE FILTER

SEE DETAIL SHEET D

- INSTALL SILT SOCK

PR 20' ACCESS ROAD SEED MIX C & GRADE FLAT

EX 60" END SECTION

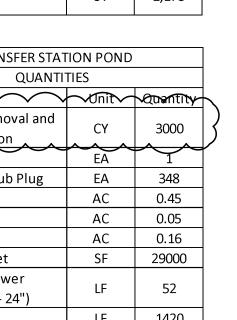
INV 823.16 S

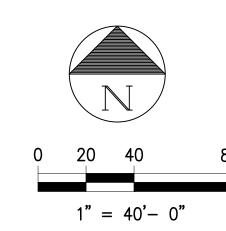
FOR MAINTENANCE ACCESS

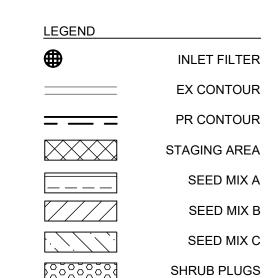
SEE DETAIL SHEET D

RIM 829.22 24" INV 825.09 E ∫ 56 SHRUBS/ROW

FOREB	AY	
QUANTI	TIES	_
Item	Unit	Quantity
Sediment Removal and	CV	F00
Earth Excavation	CY	500
Stone Filter	EA	1
Live stake Shrub Plug	EA	120
Seed Mix A	AC	0.07
Seed Mix B	AC	0.30
Seed Mix C	AC	0.15
Erosion Blanket	SF	22333
Light Storm Sewer	1.5	F4
Cleaning (12" - 24")	LF	51
Silt Sock	LF	640
Strip and Stockpile	cv	2 170
Topsoil	SY	2,178







FOREBAY	
POND AREA:	8,720 SF
EX POND VOLUME:	25 CY
PR POND VOLUME:	525 CY
AREA OF DISTURBANCE	: 42,000 SF

TRANSFER POND	
POND AREA:	47,550 SF
AVG SEDIMENT DEPTH:	0.36 FT
EX POND VOLUME:	1,400 CY
PR POND VOLUME:	3,700 CY
AREA OF DISTURBANCE:	128,200 S

 EXISTING AERATORS WILL BE REMOVED FROM PONDS BY FACILITY STAFF

 CONTRACTOR WILL REMOVE PHARMGMITES AS PART OF DREDGING OPERATION AND DISPOSE OF WITH DREDGED MATERIAL

SPECIFICATIONS FOR

- MISS DIG STAKING SHALL BE WITNESSED BY CONTRACTOR STORM SEWER TO BE CLEANED AS NOTED ON PLAN. SEE

REQUIREMENTS - CONTRACTOR TO MANAGE WATER ELEVATION TO FACILITATE SEED GROWTH

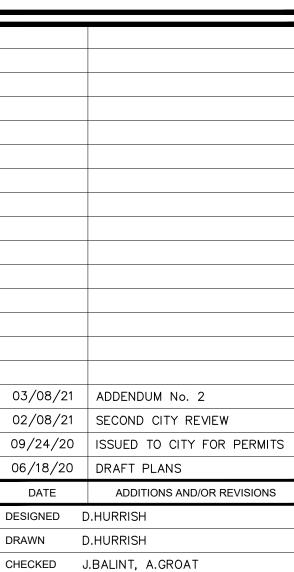
SHRUB PLANT LIST: 117 PLUGS 1 GAL ARONIA ARBUTIFOLIA — RED CHOKEBERRY 1 GAL PHYSOCAMPUS OPULIFOLIUS — COMMON NINEBARK 117 PLUGS 1 GAL VIBURNUM DENTATUM — ARROWWOOD VIBURNUM 117 PLUGS 1 GAL POTENTILLA FRUCTICUS — SHRUBBY CINQUEFOIL

830	SEED	830
	MIX B SEED MIX A SHRUB PLUGS	
	WATER ELEVATION 826.18	
825	EX SEDIMENT GRADE	825
	EX BOTTOM OF POND EX SEDIMENT GRADE	
	2.4' APPROX EX BOTTOM OF POND 11 2.4' APPROX	
820	PROPOSED GRADE PROPOSED PRO	820
020	### ### ### ### ### ### ### ### ### ##	020
'		
	<u>TRANSFER STATION POND A-A</u>	

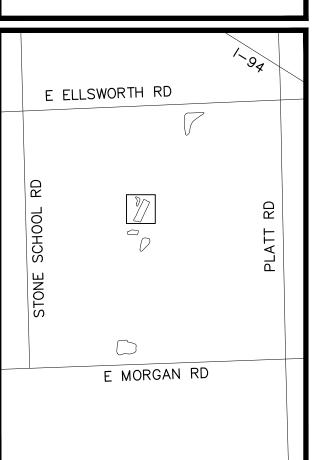
= H3

HUBBELL, ROTH & (CLARK, INC
CONSULTING ENGINEER	RS SINCE 1915
555 HULET DRIVE	P.O. BOX 824
BLOOMFIELD HILLS, MICH.	48303 - 0824
DUONE, (240) 454 6200	

PHONE: (248) 454-6300 FAX (1st. Floor): (248) 454-6312 FAX (2nd. Floor): (248) 454-6359	
WEB SITE: http://www.hrcengr.com	



APPROVED J.BALINT, A.GROAT



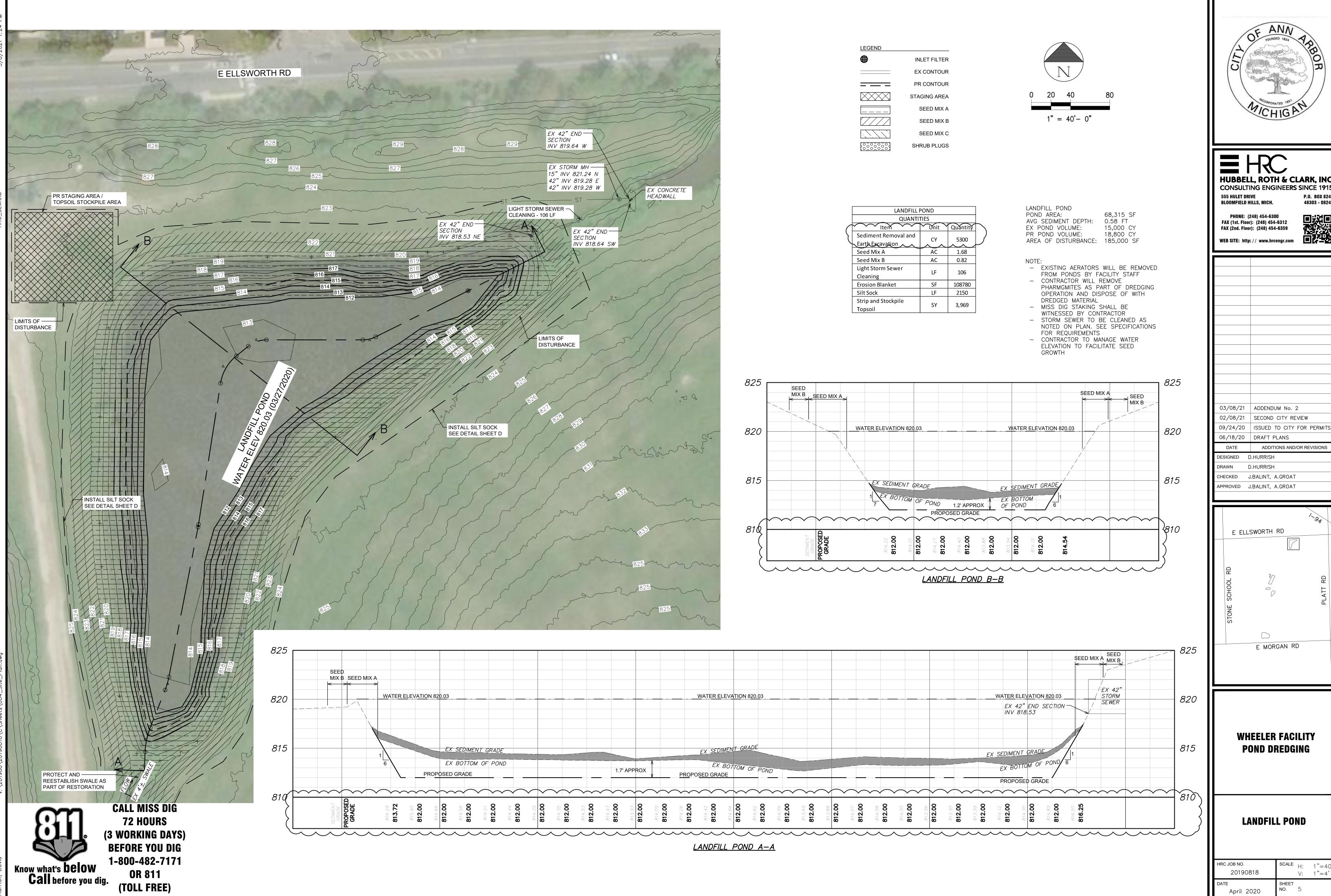
WHEELER FACILITY POND DREDGING

FOREBAY AND TRANSFER STATION **POND**

HRC JOB NO.	SCALE H: 1"=40'	
20190818	V: 1"=4'	
DATE	SHEET	
April 2020	NO. 4	
© 2020 Hubbell, Roth	& Clark, Inc. All Rights Reserved	

72 HOURS (3 WORKING DAYS) **BEFORE YOU DIG** 1-800-482-7171 Know what's **below Call** before you dig. OR 811 (TOLL FREE)

CALL MISS DIG

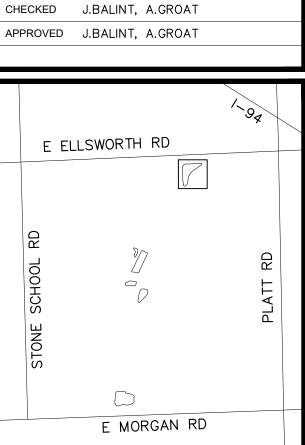




HUBBELL, ROTH & CLARK, INC CONSULTING ENGINEERS SINCE 1915 555 HULET DRIVE BLOOMFIELD HILLS, MICH.

PHONE: (248) 454-6300 FAX (1st. Floor): (248) 454-6312 FAX (2nd. Floor): (248) 454-6359

48303 - 0824 WEB SITE: http://www.hrcengr.com



ADDITIONS AND/OR REVISIONS

WHEELER FACILITY POND DREDGING

LANDFILL POND

SCALE H: 1"=40' HRC JOB NO. 20190818 V: 1"=4' April 2020