

ADDENDUM NO. 1
MAY 28, 2025

EAST CHINA TOWNSHIP, MICHIGAN
DPW SERVICE BUILDING

The following changes, additions, and/or clarifications to the Contract Documents and Specifications shall be incorporated in said documents and shall be allowed for in the unit prices bid by the Bidder such that the unit prices indicated in the Bid Form and Agreement shall represent the conditions as set forth in the Contract Documents and Specifications as modified in this addendum. The Bidder shall acknowledge receipt of this addendum on Page 1 of 6 of the Bid Form and shall staple this addendum to the Bid Form.

Addendum No. 1 contains the following items:

1. REVISED ADVERTISEMENT- Bid date extended to 2:00 PM, June 11, 2025
2. ANSWERS TO CONTRACTOR QUESTIONS 5-28-25

Contractor questions and Engineers answers attached (3 pages). Supplemented with soil field data sheet (1 page), KSI 1500-gallon oil interceptor specifications (10 pages), swing gate drawing (1 sheet), and sliding gate drawing (1 sheet).
3. DRAWING SHEET C-1 REISSUED: to show existing tree line and approximate area of tree removal
4. DRAWING SHEET C-2 REISSUED- to add 1500-gallon oil interceptor
5. DRAWING SHEET A-101 REISSUED- to identify 2021 MBC requirements

REVISED-ADVERTISEMENT FOR BIDS EAST CHINA TOWNSHIP, MICHIGAN DPW SERVICE BUILDING

Sealed bids will be received by East China Township, at the township offices, 5111 River Road, East China, MI 48054, until 2:00 p.m., prevailing local time, Wednesday June 11, 2025, at which time bids will be publicly opened and read aloud. Bids must be submitted on contract document forms and contained in a sealed envelope addressed to EAST CHINA TOWNSHIP, clearly marked: "BID FOR DPW SERVICE BUILDING".

Major items of work and approximate quantities are as follows:

- Complete Building Construction- 6600 SF Pole Barn Style with Mezzanine & partitions
1800 SF -Office/Locker room
4800 SF-4 Service bays
Foundation, Concrete, Insulation, Plumbing, Heating, Electrical & Mechanical
Doors, Cabinets, Lockers, Hardware & all Finishes
- Site Earthwork, Tree Clearing, Utilities, Soil Erosion, Fencing & Restoration
- Paved Parking lot, Gravel Parking Area, Drive approaches & Site Lighting
- Together with all miscellaneous work required for a complete & functional facility.

Bidding documents may be obtained through the Michigan Inter-Government Trade Network (MITN) by registering as a vendor at www.bidnetdirect.com.

Bid security in the form of a certified check, bank check, or satisfactory bid bond for a sum of not less than five percent (5%) of the total bid, payable to East China Township, shall be submitted with each bid.

The Township of East China reserves the right to accept or reject any or all bids, either in whole or in part, to waive any irregularities, and to make the award in any manner considered by the Township to be in its best interest.

Questions regarding this solicitation should be sent in writing to Dwyane Loper at loperd@eastchinatownship.org no later than 4:00 pm on May 23, 2025. All questions will be addressed by May 28, 2025.

A pre-bid meeting will be held on May 28, 2025, at 9:00 am at the Township Offices located at 5111 River Road, East China, MI 48054.

No bid may be withdrawn for a period of 60 calendar days after the date and time of bid opening.

East China Township
Cynthia Paparelli, Township Manager

**EAST CHINA TOWNSHIP, MICHIGAN
DPW SERVICE BUILDING
ANSWERS TO CONTRACTORS' QUESTIONS PRIOR TO BIDDING 5-28-25**

"In review of the documents that have been provided for this project, we have noticed that the following specifications were not provided. Please provide the following spec sections".

Item #1: Division #3- Concrete
Item #2: Division #4- Masonry
Item #3: Division #5- Metals
Item #4: Division #6- Wood & Plastics
Item #5: Division #7- Thermal & Moisture Protection
Item #6: Division #8- Doors & Windows
Item #7: Division #9 – Finishes
Item #8: Division #10- Specialties
Item #9: Division # 21- Fire Suppression- If the project requires.
Item #10: Division # 22- Plumbing
Item #11: Division #23- HVAC
Item #12: Division # 31- Earthwork
Item #13: Division #33- Site Utilities

ANSWER: SPECIFICATIONS ARE INCLUDED ON THE DRAWINGS; NO ADDITIONAL SPECIFICATION SECTIONS WILL BE ISSUED.

Question #1: Please clarify if an oil separator is required; if required, please provide a specification.

ANSWER: AN OIL INTERCEPTOR IS REQUIRED. DRAWING SHEET C-2 IS REISSUED TO SHOW THE PROPOSED 1500 GALLON OIL INTERCEPTOR, INSTALLED OUTSIDE OF THE BUILDING. OIL INTERCEPTOR SPECIFICATION SHEETS (10 PAGES) HAVE ALSO BEEN ATTACHED.

Question #2: Please provide the geotechnical data and soil boring report.

ANSWER- THERE IS NO FORMAL SOILS REPORT- ATTACHED ARE FIELD SOIL BORING LOG DATA SHEET (1 PAGE)

Question #3: Please provide specifications for the Coat Rack.

ANSWER: PROFESSIONAL STRENGTH, MODULAR WALL MOUNTED COAT RACK WITH SHELF INCLUDING SOLID ALUMINUM HANGERS

**- GLARO PRODUCTS -OR EQUAL
EMAIL: GLARO-PRODUCTS.COM
- 48" LENGTH, 8 HANGERS
- FINISH: SATIN ALUMINUM**

Question #4: Please provide specifications for Metal Lockers

**ANSWER:
- LEGACY LOCKERS - OR EQUAL
4433 BRONZE WAY, DALLAS TX 75236 / PH 866.937.1088
- CONFIGURATION 'A1' (SINGLE DOOR, UPPER SHELF, COAT ROD, COAT HOOKS & LOWER SHELF
- DOOR STYLE: PLASTIC LAM FACE ; WHITE BACK
- LOCKER INTERIOR: WHITE MELAMINE
- DIGILOCK AXIS KEYPAD LOCK TYPE
HARDWARE: POLISHED CHROME
- 4" BASE BY LOCKER MFR**

Question #5: Please provide specifications for Overhead Doors

ANSWER:

INSULATED ROLLING SERVICE DOOR:

- **ELECTRIC OPERATED OVERHEAD INSULATED ROLLING DOORS**
- **MEET WINDLOADING REQUIREMENTS OF LOCAL BUILDING CODE**
- **AS MANUFACTURED BY CLOPAY BUILDING PRODUCTS, COOKSON COMPANY, OVERHEAD DOOR CORP -OR EQUAL**
- **CYCLE LIFE: 20 CYCLES PER DAY MAX, OVERALL MAX OF 50,000 OPERATING CYCLES FOR LIFE OF DOOR**
- **WEATHER SEALS @ BOTTOM BAR, GUIDES & LINTEL**
- **MOTOR OPERATOR CAPABLE OF DRIVING DOOR AT A SPEED OF UP TO 9" PER SECOND OR AS RECOMMENDED FOR DOOR SIZE**
- **CONTROL STATION: SURFACE MOUNTED "OPEN/CLOSE/STOP" PUSH BUTTONS; NEMA 1**
- **CONTROL OPERATION: MOMENTARY CONTACT TO CLOSE: FAIL-SAFE UL325-2010**
- **COMPLIANT ENTRAPMENT PROTECTION FOR MOTOR OPERATION**
- **BAKED ENAMEL OR POWDER COAT FINISH, COLOR AS SELECTED BY OWNER FROM MFR FULL RANGE**
- **INSULATED TO MEET MI ENERGY CODE 2021**
- **HOOD TO MATCH MATERIAL & FINISH OF CURTAIN**

Question #6: Please clarify if a Fire Alarm System is required; if required, please provide a specification.

ANSWER: AN ALARM SYSTEM IS NOT REQUIRED

Question #7: Please clarify if a Fire Suppression System is required; if required, please provide a specification.

ANSWER; FIRE SUPPRESSION IS NOT REQUIRED

Question #8: Please provide a specification for the Chain Link Fencing.

ANSWER: SEE ATTACHED DETAILS FOR THE SWING GATE & SLIDING GATE

Question # 9: Please provide a sequence of operations for the HVAC Controls.

ANSWER: NO SEQUENCE OF OPERATION HAS BEEN CREATED, CONTROLS ARE INTEGRAL WITH EQUIPMENT.

Question #10: Please clarify the scope of work that is required for the security system.

ANSWER: NO SECURITY SYSTEM PROPOSED

Question #11: Please clarify the scope of work that is required for the communication system

ANSWER: NO COMMUNICATION SYSTEM PROPOSED

Question #12: Please clarify who is responsible for the Special Testing/ Construction Testing.

ANSWER: THE OWNER WILL PROVIDE TESTING

Questions #13: Please clarify if the Permit Fees will be waived, or we are required to include that cost in our bid.

ANSWER: PERMIT FEES ARE NOT WAIVED. COSTS TO BE INCLUDED IN BID.

Question #14: Is there currently power at the site that can be used for power for the Construction Trailer and construction of the building, until permanent power is established at the site?

ANSWER: THE OWNER WILL ARRANGE FOR TEMPORARY POWER AND PROVIDE AN ALLOWANCE FOR THE CONTRACTOR TO COORDINATE PERMANENT POWER WITH THE UTILITY.

Question #15: Has there been any communication with the utility companies by the owner, and are we to assume the owner will pay for the utility fees, or will an allowance be established for the utilities?

ANSWER: THE OWNER WILL ESTABLISH AN ALLOWANCE FOR UTILITIES.

Question #16: Is this building designed under the 2015 MBC or the 2021 MBC?

ANSWER: THE DRAWINGS WERE ORIGINALLY DESIGNED UNDER 2015 MBC. DRAWING SHEET A-101 HAS BEEN REISSUED TO COMPLY WITH 2021 MBC

Question #17: Please clarify the following load criteria information:

- Occupancy Classification (assuming type II Standard Building)
- Roof Live Load (20 PSF)
- Snow Exposure Coefficient (assumed 1.0 Partially Exposed)
- Wind Exposure Category (assumed category C)
- Seismic Information (Ss - 0.88 S1 - .044 based on ASCE website)
- Site Class (assumed D – Stiff Soil)

ANSWER: SEE SHEET A-101 FOR CODE INFORMATION, CONSTRUCTION TYPE, USE AND OCCUPANCY INFORMATION.

Question #18: Can a topographic survey of existing conditions be provided, so the area of tree removal can be calculated.

ANSWER: THE SITE PLAN SHEET # C-1 HAS BEEN REISSUED WITH THE EXISTING TREE OUTLINE AND REMOVAL AREA CALCULATION

Question #19: In reviewing the bid set, would you consider a pre-engineered metal building as an option?

ANSWER: YES, AS LONG AS ALL OTHER SPECIFICATIONS ARE MET.

22-168

East China
APW

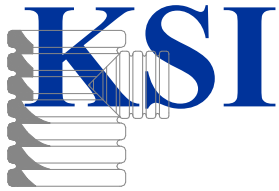
FIELD LOG

DRILLER:	KD. BA / JP
DRILLING RIG:	Camera Vam
DATE:	3/27 - 3/28

PROJECT #:	22-168	BORING #:	
PROJECT:		OFFSET:	
LOCATION:	Pointe D.A. / Recor. Rd.	REMARKS:	

SAMPLE	DEPTH		DRILL METHOD	SAMPLE METHOD	HAMMER METHOD	BLOW COUNTS			REC.	Qp	SAMPLE DESCRIPTION
	From	To				0-6"	6-12"	12-18"			
B1	0	2.5	H/A	✓	DCP		8				5 to set ground water
	2.5	5	H/A	✓	DCP		8				5 to set
	5	7.5	H/A	✓	DCP		11				6 to set
	7.5	10	H/A	✓	DCP		10	13			8 to set
B2	0	2.5	H/A	✓	DCP		6				3 to set ground water
	2.5	5	H/A	✓	DCP		11				4 to set ground water
	5	7.5	H/A	✓	DCP			20			6 to set
	7.5	10	H/A					15			10 to set
B3	0	2.5	H/A	✓	DCP		9				6 to set ground water
	2.5	5	H/A	✓	DCP			26			11 to set
	5	7.5	H/A	✓	DCP			21			8 to set
	7.5	10	H/A	✓	DCP			21			12 to set
B4	0	2.5	H/A	✓	DCP		8				6 to set ground water
	2.5	5	H/A	✓	DCP		10				5 to set
	5	7.5	H/A	✓	DCP			15			9 to set
	7.5	10	H/A	✓	DCP			19	19		14 to set
B5	0	2.5	H/A	✓	DCP		6				5 to set ground water
	2.5	5	H/A	✓	DCP		9				7 to set
	5	7.5	H/A	✓	DCP		12				9 to set
	7.5	10	H/A	✓	DCP			13			10 to set

BACKFILL METHOD:	Shave	WATER LEVEL:	Ground water
CASING:		WHILE DRILLING:	
COMMENTS:		WATER LEVEL	
		AFTER BORING:	



Kennedy Solutions, Inc.

Mailing/Billing: 10051 Bergin Road, Howell MI 48843

Phone: 517.225.8338

Email: sales@kennedysolutionsinc.com

www.kennedysolutionsinc.com

Specializing in Storm Water Management and F.O.G. Management

Product Submittal Package For KSI HDPE Gravity Oil/Grit Separator

APPROVED BY: _____

DATE: _____

Prepared by Kennedy Solutions, Inc.
Prepared on December 19, 2024

Kennedy Solutions Inc.

General Specification

HDPE Gravity Oil/Grit Separator

The KSI HDPE Gravity Oil/Grit Separator (OS) unit shall be as manufactured by KSI (Kennedy Solutions, Inc.) (517) 225-8338.

The OS shall remove oil, grit and grease from the sanitary sewer line prior to discharge. The OS shall be installed underground as part of the sanitary sewer system and be structurally designed for (min. HS-25) traffic loading at the surface. The OS shall be maintainable from the surface via access points.

The OS shall be circular and constructed from HDPE material. The OS shall be designed and manufactured by KSI. Applicable specifications are AASHTO M294, ASTM 2306, ASTM F894 and ASTM F2649. Fusion welded joints shall be oil resistance, virtually watertight and meet the design criteria of DVS 2207. The OS unit shall be tested hydrostatically, air, or vacuum pressure for water tightness.

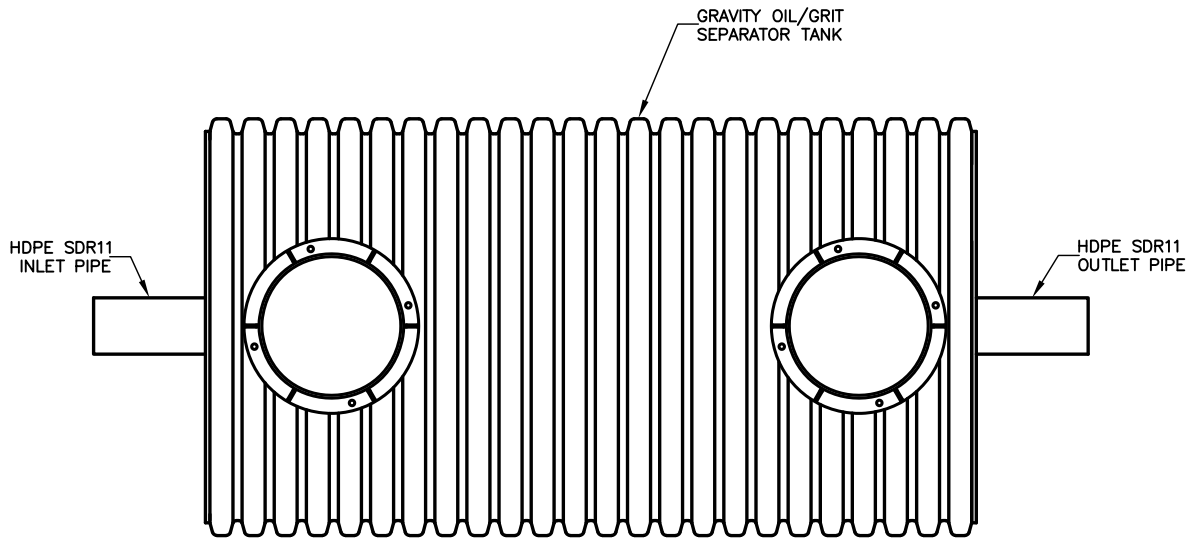
The difference between the inlet pipe elevation to the OS and the outlet pipe elevation from the OS should be minimized to allow installations into existing systems. The footprint of the OS shall be minimized to prevent conflicts with other piping and utilities.

The OS is capable of containing floatable substances such as free oil and settleable solids (grit) and not be compromised by temporary backwater conditions. The capabilities of the selected OS must be documented with scientific studies and reports.

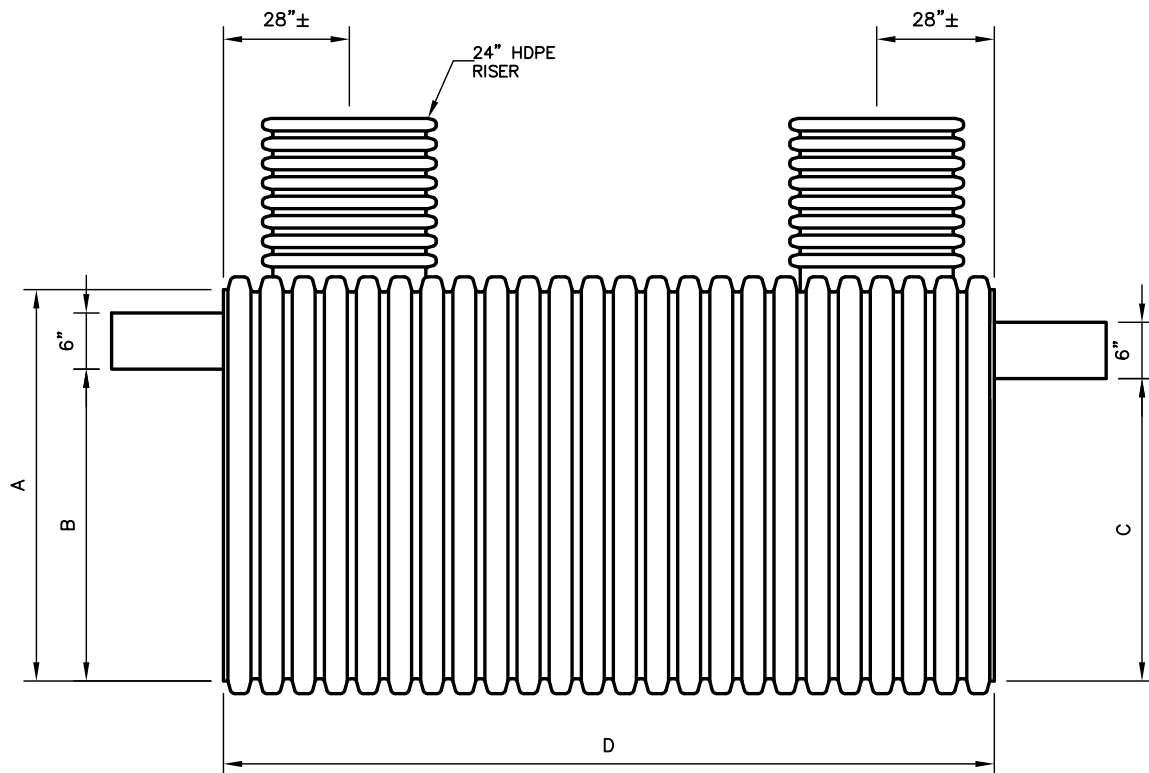
KSI will provide a manufacturers certificate of compliance for each gravity oil/grit separator (owner, design engineer & municipal engineer/inspectors).

Installation of the oil separator tank shall be in accordance with ASTM D2321, KSI tank installation detail and KSI installation and maintenance detail.

****optional hydrocarbon pillow is available.**



PLAN VIEW



SIDE VIEW

DESIGN BY: AG / RK	REV: 12-19-24 DATE: 10-10-08	1 OF 1	 KENNEDY SOLUTIONS, INC. 10051 Bergin Road Howell, MI 48843 Ph: 517-225-8338
MANUF. APPROVAL BY: .	SCALE: NTS	SHEET NO.	
DRAWING NO. SEPARATOR TANK VIEWS v25			

KENNEDY SOLUTIONS, INC.
10051 Bergin Road
Howell, MI 48843
Ph: 517-225-8338

KSI HDPE GRAVITY / GRIT SEPARATOR (GOGS) INSTALLATION AND MAINTENANCE GUIDELINES

INSTALLATION GUIDELINES

1. KSI REQUIRES A COMPANY REP TO BE ON SITE TO WITNESS THE INSTALLATION. KSI MUST BE NOTIFIED OF THE INSTALLATION DATE WITH A 3-4 DAY LEAD TIME TO ENSURE HAVING A REP ON SITE. FAILURE TO COMPLY WILL RESULT IN THE WARRANTY BEING NULL & VOID.
2. EXCAVATE AREA FOR KSI HDPE SEPARATORS AND PREPARE TANK/TRENCH BOTTOM PER ASTM D2321, SECTIONS 6 & 7.
3. THE KSI HDPE SEPARATOR TANK SHALL BE INSTALLED ON A BED OF NO LESS THAN 12" MDOT 6A CRUSHED STONE BEDDING MATERIAL COMPACTED TO 95% PROCTOR DENSITY
4. BACKFILL UNIT WITH MDOT 6A CRUSHED STONE PER ASTM D 2321. CLASS I MATERIAL IS RECOMMENDED. BACKFILL SHALL BE COMPACTED TO 95% PROCTOR DENSITY.
5. THE HDPE ACCESS RISERS SHALL BE FIELD CUT TO FINISH GRADE BY THE CONTRACTOR. SEE RISER INSTALLATION OPTIONS PAGE.
6. KSI RECOMMENDS FILLING THE UNIT WITH WATER UPON COMPLETION OF INSTALLATION UP TO THE OUTLET HEIGHT.

MAINTENANCE GUIDELINES

1. ALL SEPARATOR TANKS WILL REQUIRE PERIODIC MAINTENANCE DEPENDING ON SPECIFIC SITE CONDITIONS.
2. KSI RECOMMENDS FREQUENT CLEANING THE SEPARATOR. WEEKLY, MONTHLY, QUARTERLY, ETC, AS DICTATED BY THE ESTABLISHMENTS NEEDS. THIS WILL BE BASED ON THE BUILDING WASTE EFFLUENT DISCHARGE CAPACITY AND CONCENTRATION. MATERIAL IS EASIER TO REMOVE WHEN IT IS REMOVED ON A REGULAR BASIS.
3. DISPOSAL OF MATERIAL FROM THE KSI SEPARATOR ARE SIMILAR TO THAT OF ANY OTHER BEST MANAGEMENT PRACTICES (BMP). LOCAL GUIDELINES SHOULD BE CONSULTED PRIOR TO DISPOSAL OF THE SEPARATOR CONTENTS. WASTE PRODUCTS SHOULD BE REMOVED BY A LICENSED WASTE MANAGEMENT COMPANY.
4. AFTER CLEANING THE UNIT - KSI RECOMMENDS REFILLING THE UNIT WITH WATER.

DESIGN BY: AG / RK	REV: 12-19-24 DATE: 9-24-09	1 OF 1	 KSI	<u>KENNEDY SOLUTIONS, INC.</u> 10051 Bergin Road Howell, MI 48843 Ph: 517-225-8338
MANUF. APPROVAL BY: .	SCALE: NTS			
DRAWING NO. GOGS INSTALL & MAINT.				

KSI TANK INSTALLATION

NOTES:

1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF MDOT 6A CRUSHED STONE AS DEFINED IN ASTM D2321, LATEST EDITION; AS AN ALTERNATIVE TRENCH BOTTOM MAY BE STABILIZED USING A WOVEN GEOTEXTILE FABRIC AND OR A GEOGRID.
2. BEDDING: SUITABLE MATERIAL SHALL BE MDOT 6A CRUSHED STONE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 12" FOR 36"-120"Ø SWTC.
3. HAUNCHING AND INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE MDOT 6A CRUSHED STONE AND INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION, MAXIMUM TEN INCH (10") LIFTS.
4. UNLESS OTHERWISE SPECIFIED BY THE ENGINEER, MIN. TRENCH WIDTHS ARE AS FOLLOWS.

NOMINAL I.D.	NOMINAL O.D.	MINIMUM RECOMM. TRENCH WIDTH
36"	42"	90"
48"	54"	102"
60"	66"	114"
72"	80.5"	129"
96"	105.9"	154"
120"	131.3"	190"

5. MINIMUM COVER: MINIMUM RECOMMENDED COVER FOR VARIOUS LIVE LOADING CONDITIONS ARE AS SUMMARIZED IN THE FOLLOWING TABLE. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE TAKEN FROM THE TOP OF THE SWTC TANK TO THE GROUND SURFACE.

SURFACE LIVE LOAD

HS-25/H25 (FLEXIBLE PAVEMENT)

HS-25/H25 (RIGID PAVEMENT)

E80 RAILWAY

HEAVY CONSTRUCTION

MINIMUM REQUIRED COVER FOR WAYNE COUNTY (ALL SIZES)

MIN. 24" AS MEASURED FROM THE BOTTOM OF THE FLEXIBLE PAVEMENT

MIN. 24" AS MEASURED FROM THE TOP OF THE RIGID PAVEMENT

24"

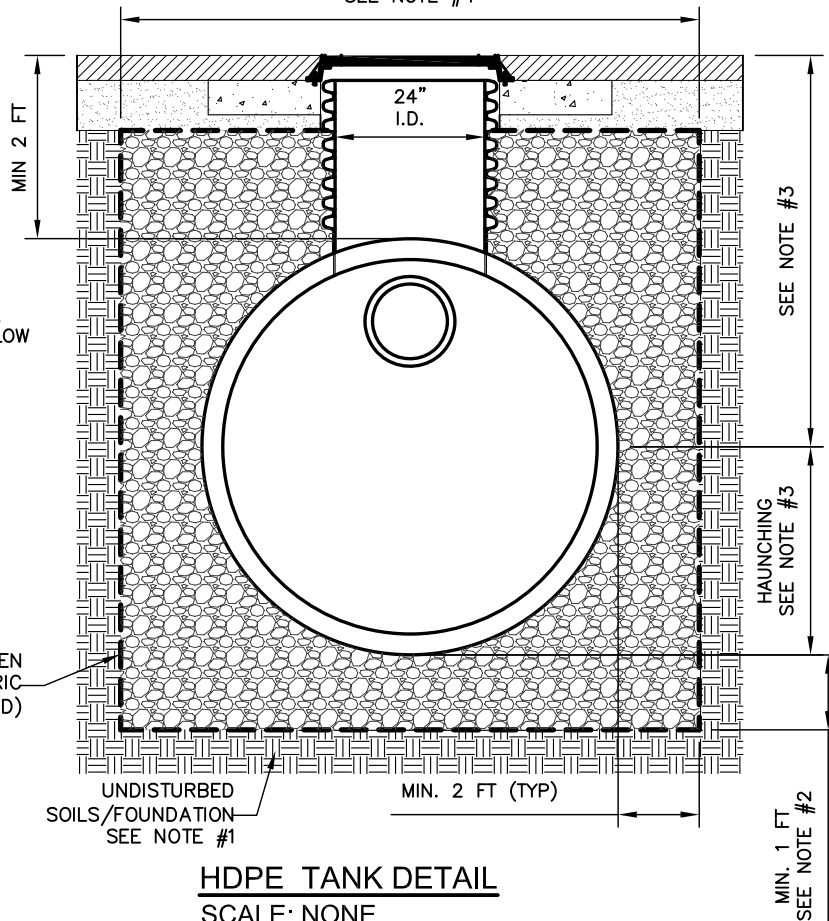
48"

TRENCH WIDTH
SEE NOTE #4

NOTE:
ALSO SEE RISER
INSTALLATION
OPTIONS PAGE

NOTE:
FOR INSTALLATIONS WITH
LESS THAN 2 FT COVER,
CONTACT KSI FOR SHALLOW
BURY ASSISTANCE. SEE
SHALLOW BURY DETAIL

4 OZ NON-WOVEN
GEOTEXTILE FABRIC
(REQUIRED)



HDPE TANK DETAIL

SCALE: NONE

NOTE:
INSTALL UNIT PER ASTM D2321

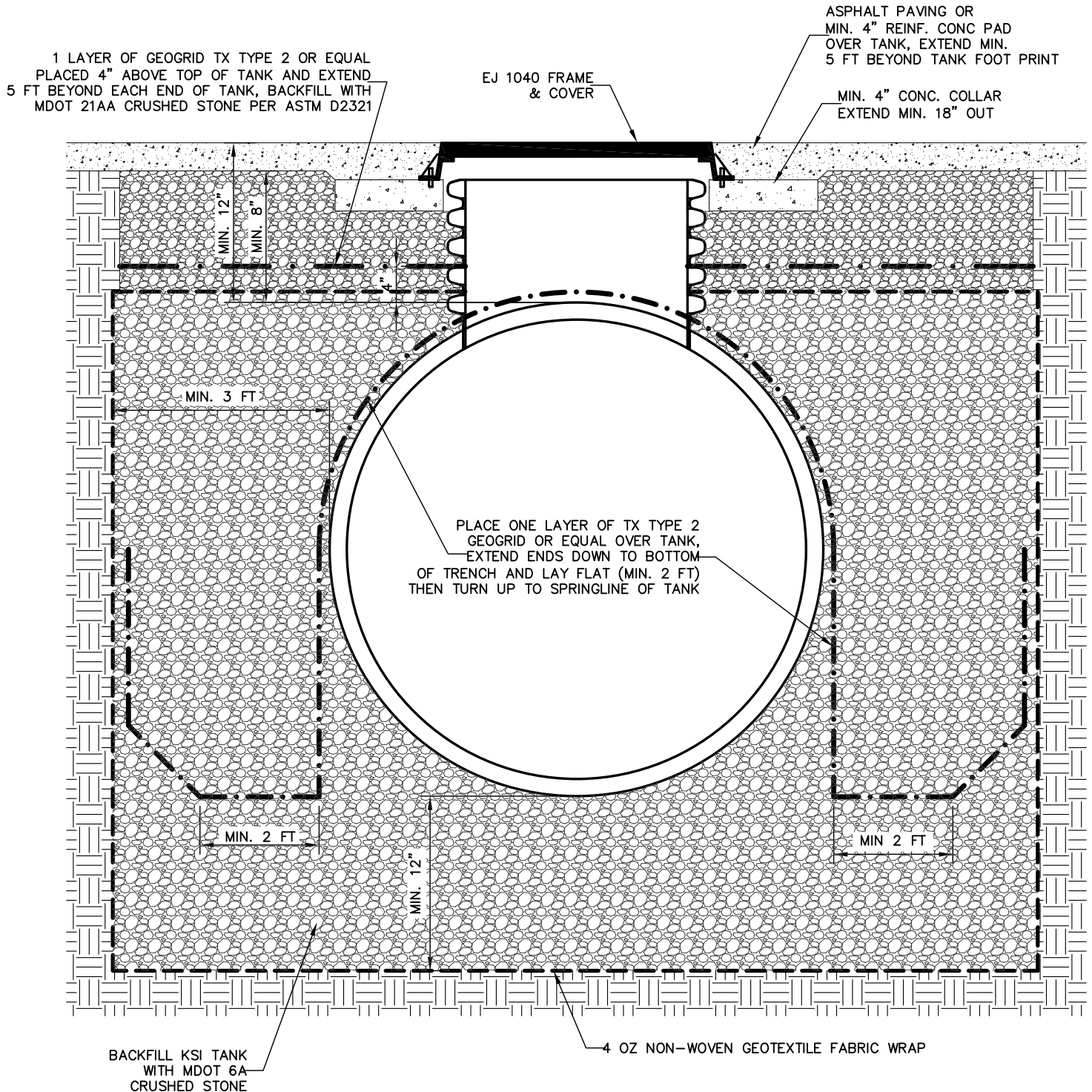
4 OZ NON-WOVEN GEOTEXTILE
FABRIC WRAP REQUIRED

IF WATER TABLE IS AN ISSUE,
PLEASE SEE KSI SPECIAL BURY DETAIL.

DESIGN BY: AG / RK	REV: 12-19-24 DATE: 10-10-08	1 OF 1	 KENNEDY SOLUTIONS, INC. 10051 Bergin Road Howell, MI 48843 Ph: 517-225-8338
MANUF. APPROVAL BY: .	SCALE: NTS	SHEET NO.	
DRAWING NO. TANK INSTALLATION DETAIL			

KSI SPECIAL TANK BURY DETAIL

NOTE: GEOGRID & GEOTEXTILE FABRIC BY OTHERS



DESIGN BY: AG / RK	REV: 12-19-24 DATE: 10-2-19	1 OF 1
MANUF. APPROVAL BY: .	SCALE: NTS	SHEET NO.
DRAWING NO. KSI SPECIAL TANK BURY		

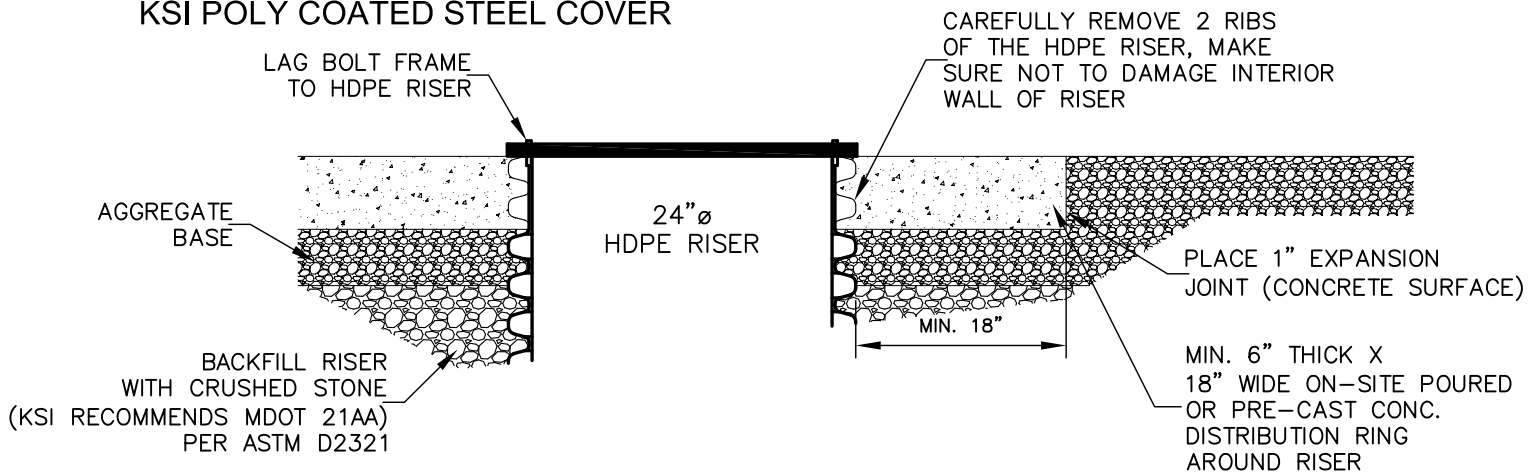


KENNEDY SOLUTIONS, INC.
10051 Bergin Road
Howell, MI 48843
Ph: 517-225-8338

KSI RISER INSTALLATION OPTIONS FOR PAVED SURFACE APPLICATIONS

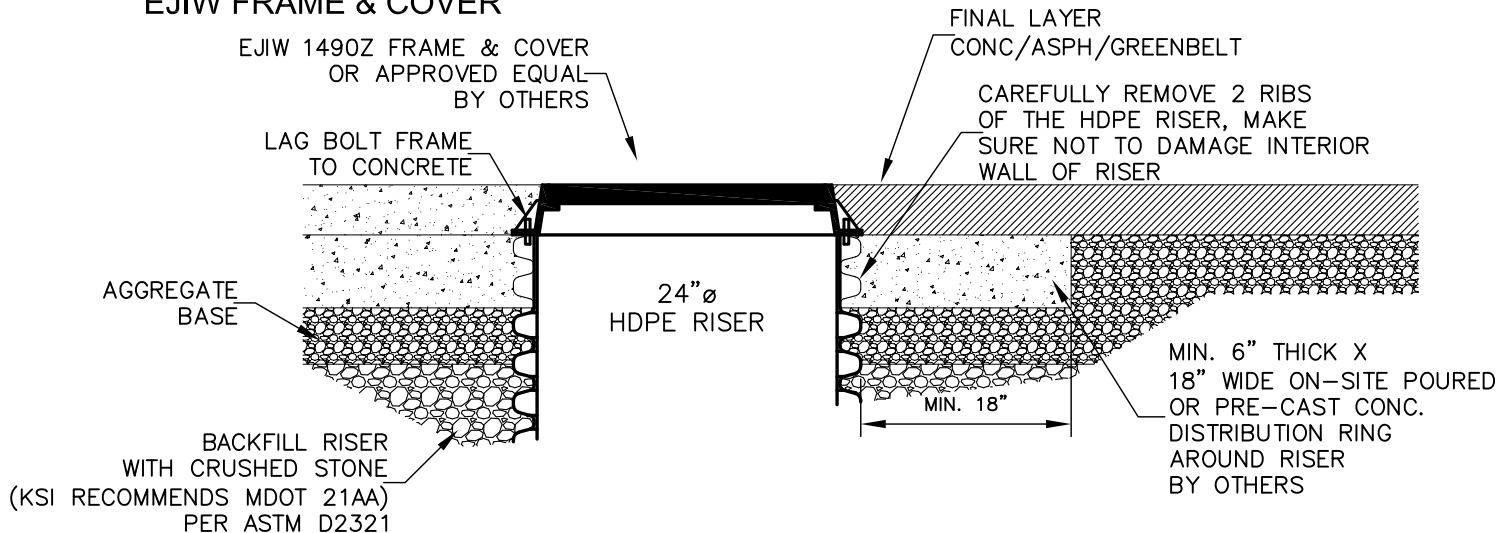
OPTION 1:

KSI POLY COATED STEEL COVER



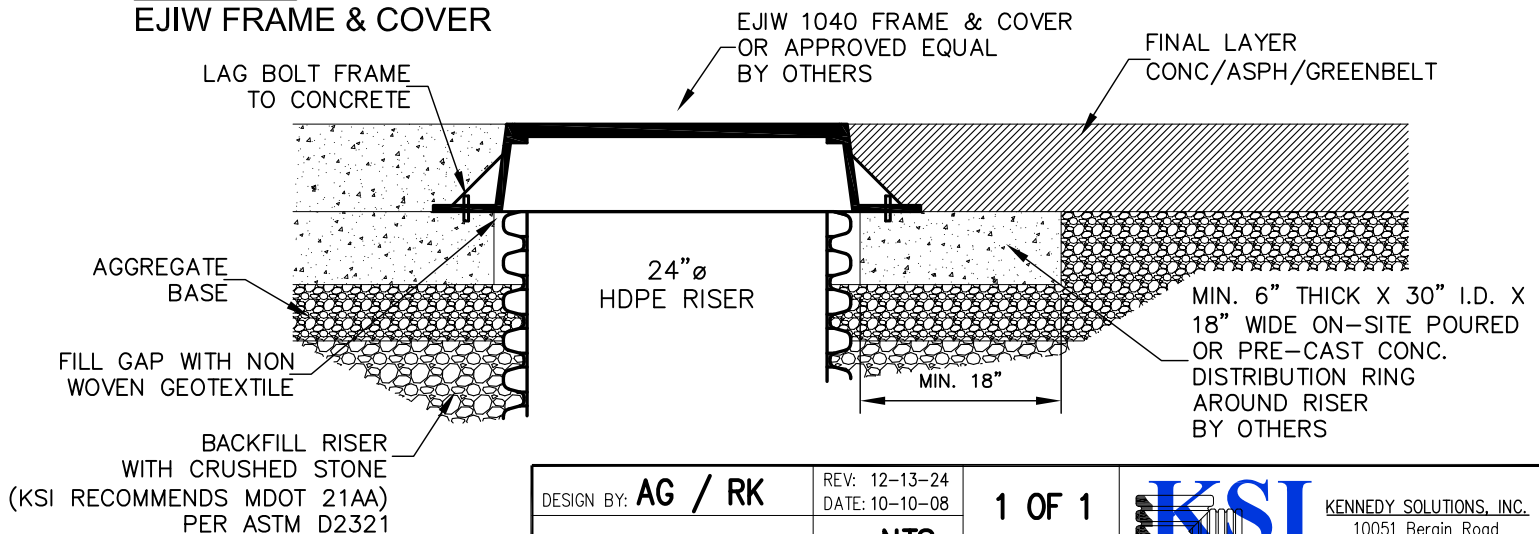
OPTION 2:

EJIW FRAME & COVER



OPTION 3: FROST SITUATION

EJIW FRAME & COVER



DESIGN BY: AG / RK

REV: 12-13-24
DATE: 10-10-08

1 OF 1

MANUF. APPROVAL BY: .

SCALE: NTS

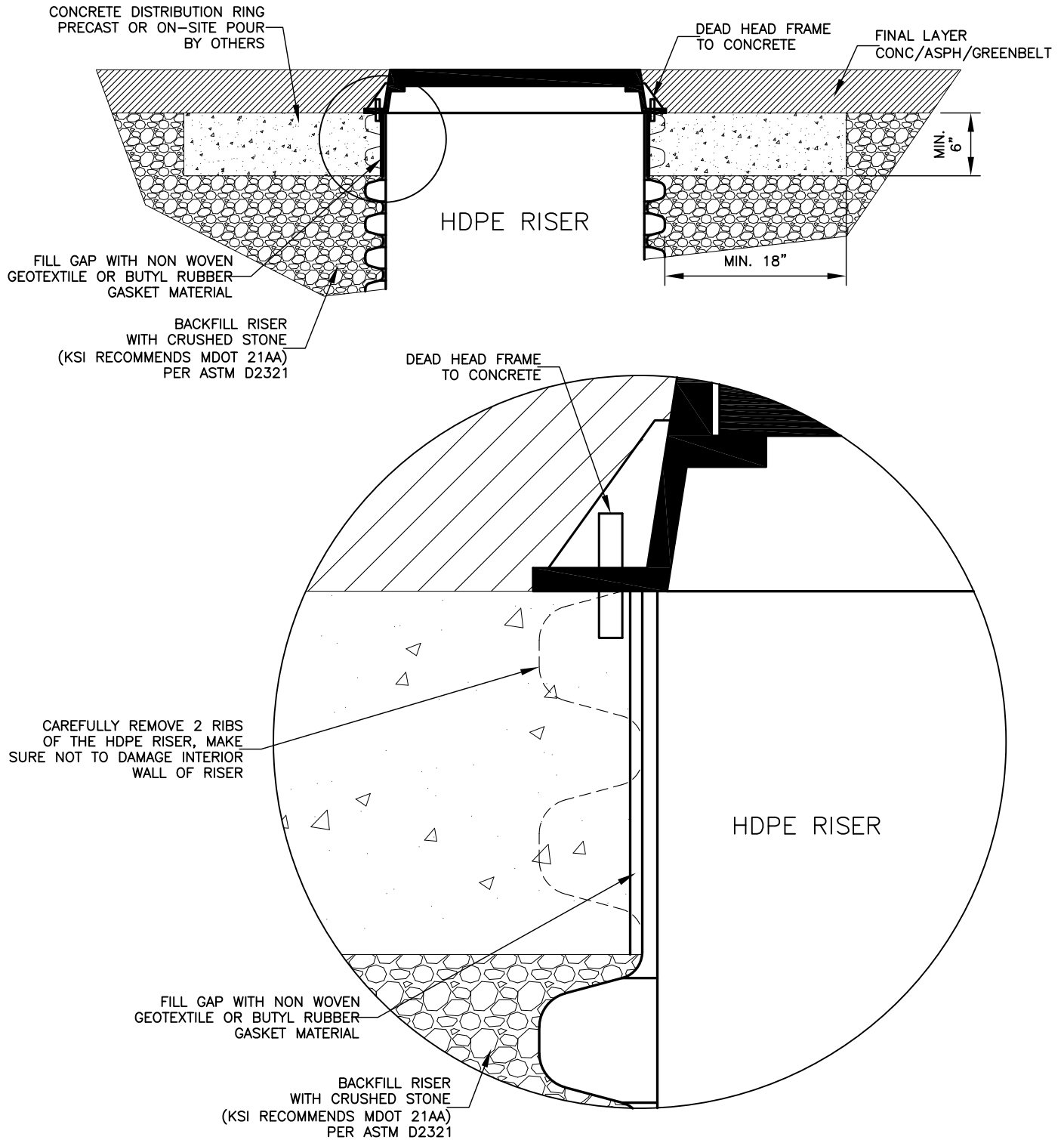
SHEET NO.

DRAWING NO. RISER INSTALLATION



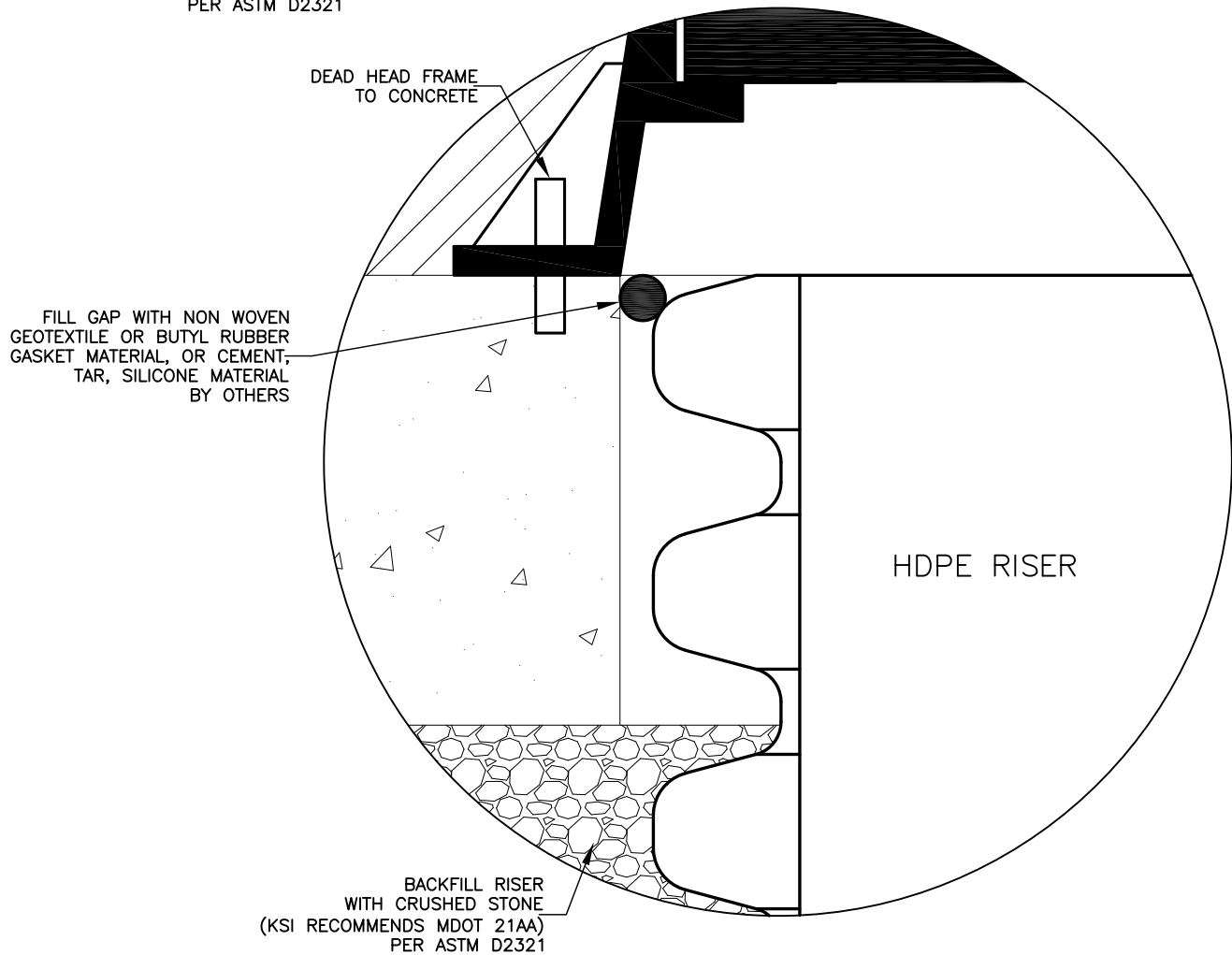
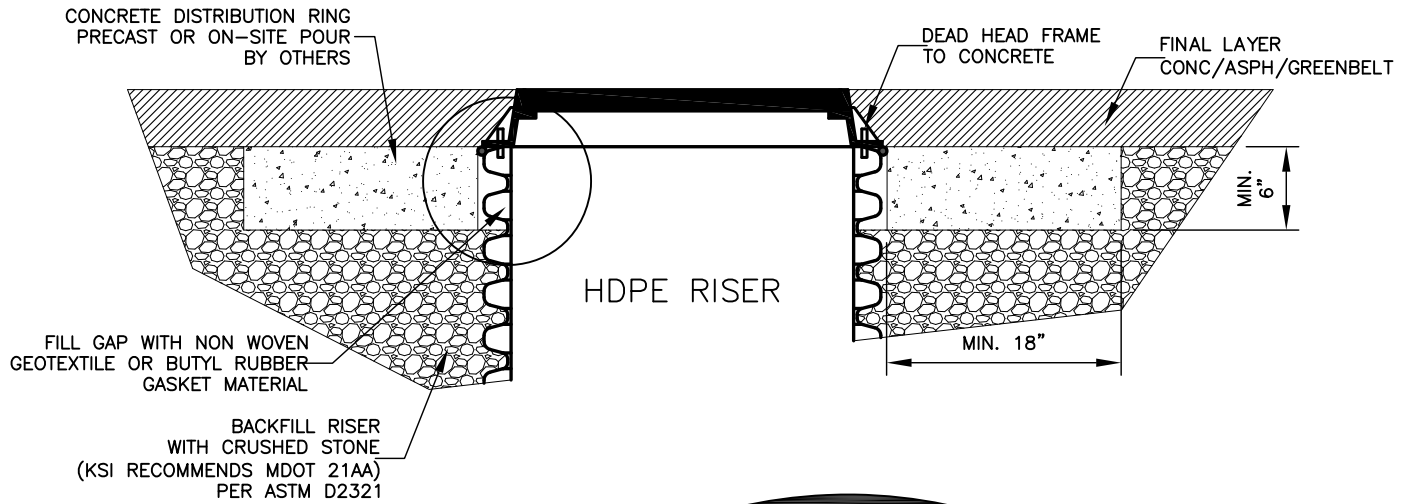
KENNEDY SOLUTIONS, INC.
10051 Bergin Road
Howell, MI 48843
Ph: 517-225-8338

OPTION 2 SCHEMATIC EJIW / RISER INSTALLATION

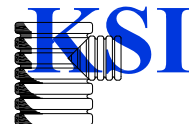


DESIGN BY: AG / RK	REV: 12-13-24 DATE: 5-1-12	1 OF 1	 KSI	<u>KENNEDY SOLUTIONS, INC.</u> 10051 Bergin Road Howell, MI 48843 Ph: 517-225-8338
MANUF. APPROVAL BY: .	SCALE: NTS			
DRAWING NO. EJIW-RISER CONC INSTALL				

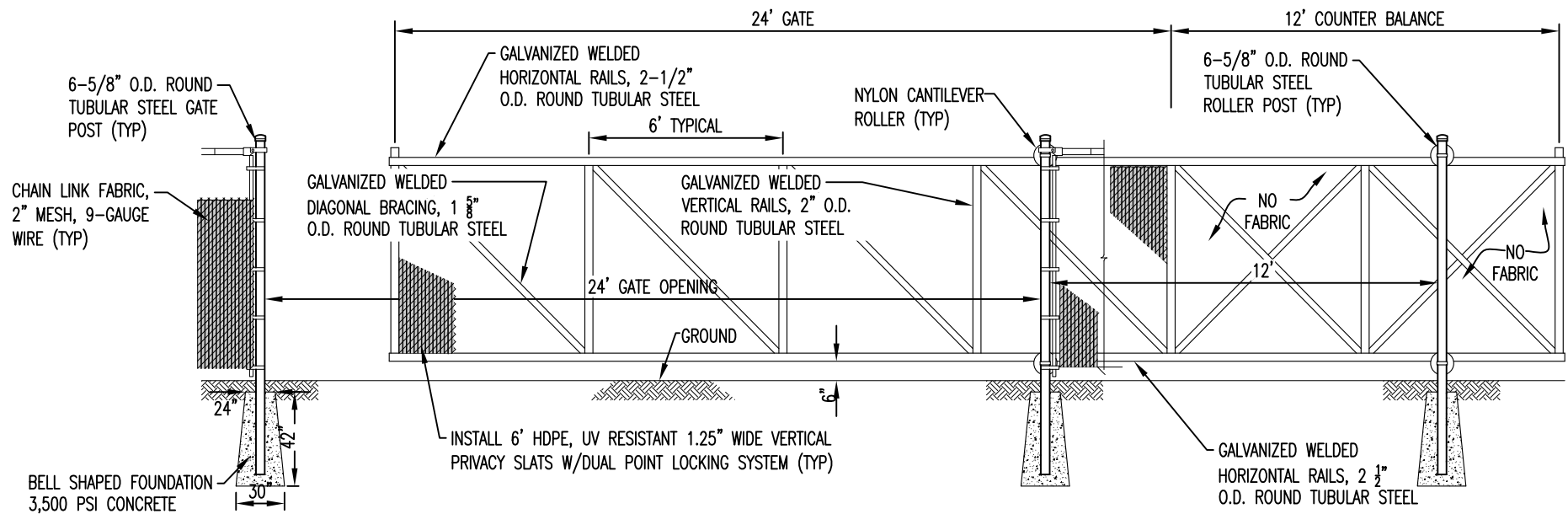
OPTION 3 SCHEMATIC EJIW / RISER INSTALLATION



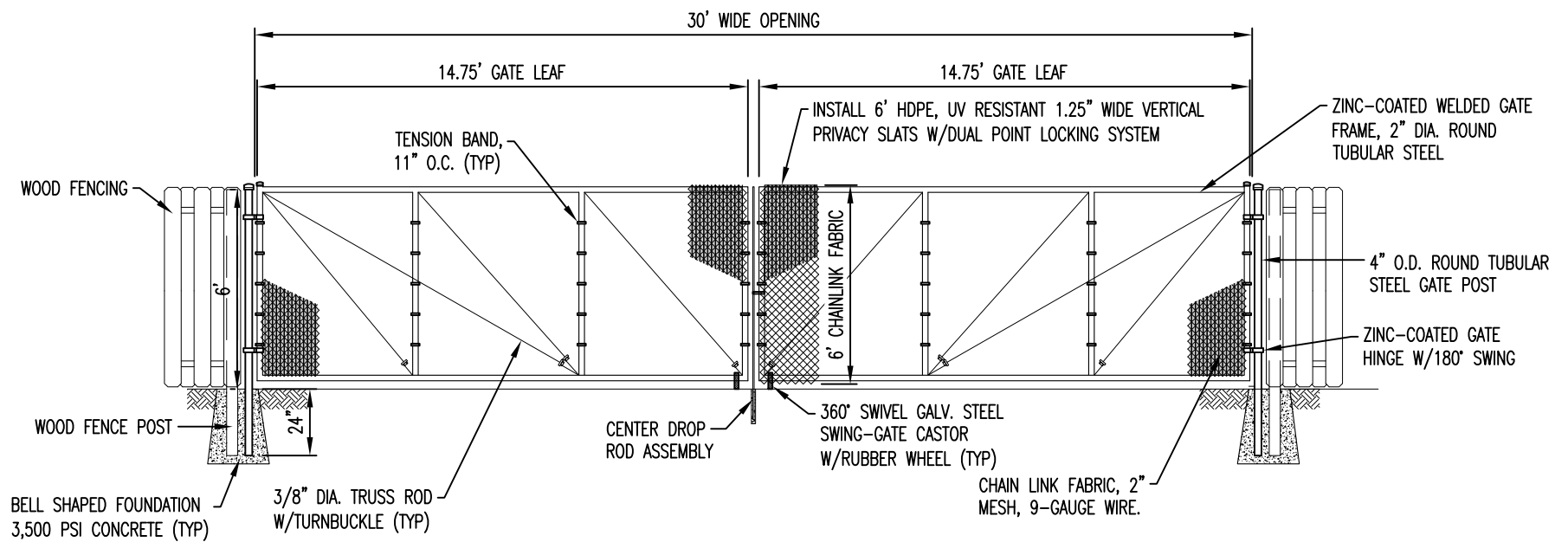
DESIGN BY: AG / RK	REV: 12-13-24 DATE: 5-1-12	1 OF 1
MANUF. APPROVAL BY: .	SCALE: NTS	SHEET NO.
DRAWING NO. EJIW-RISER CONC INSTALL		



KENNEDY SOLUTIONS, INC.
10051 Bergin Road
Howell, MI 48843
Ph: 517-225-8338



SLIDING GATE DETAIL
NO SCALE



DOUBLE SWING GATE DETAIL

NO SCALE

	SANITARY M.H.
	CLEAN OUT
	CATCH BASIN
	CATCH BASIN
	STORM M.H.
	HYDRANT
	GATE VALVE & WELL
	SHUT OFF

	STORM

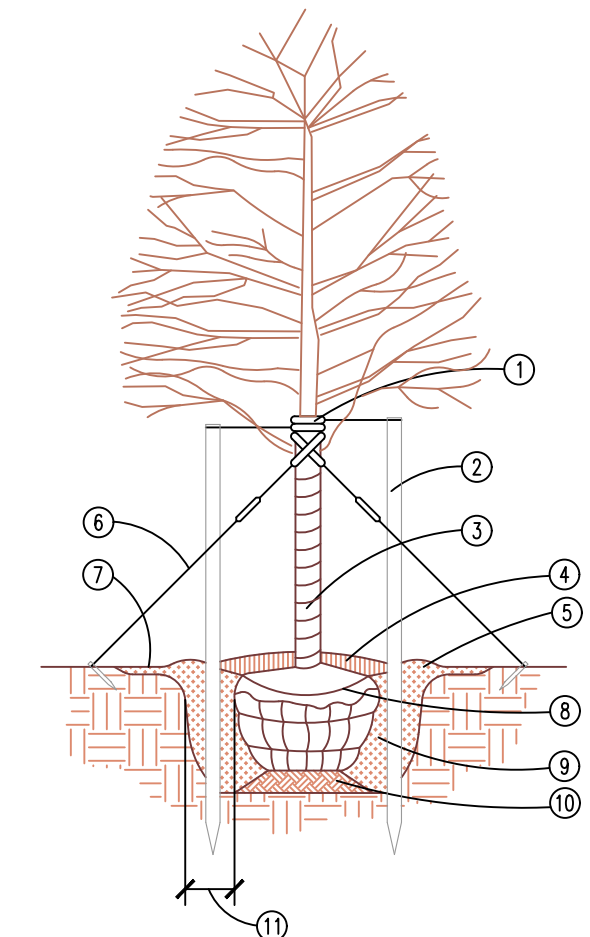
	SANITARY

	WATERMAIN
	PR. ELEVATION
	FG FINISH GRADE
	FF FINISH FLOOR
	IE INVERT ELEVATION
	TC TOP OF CURB
	GU GUTTER

	BENCHMARK
	TRAVERSE POINT
	MONUMENT
	IRON PIPE
	IRON ROD
	SANITARY M.H.
	CLEAN OUT
	CATCH BASIN
	CATCH BASIN
	STORM M.H.
	HYDRANT
	GATE VALVE & WELL
	SHUT OFF
	TELEPHONE MANHOLE
	GAS VALVE
	UTILITY POLE

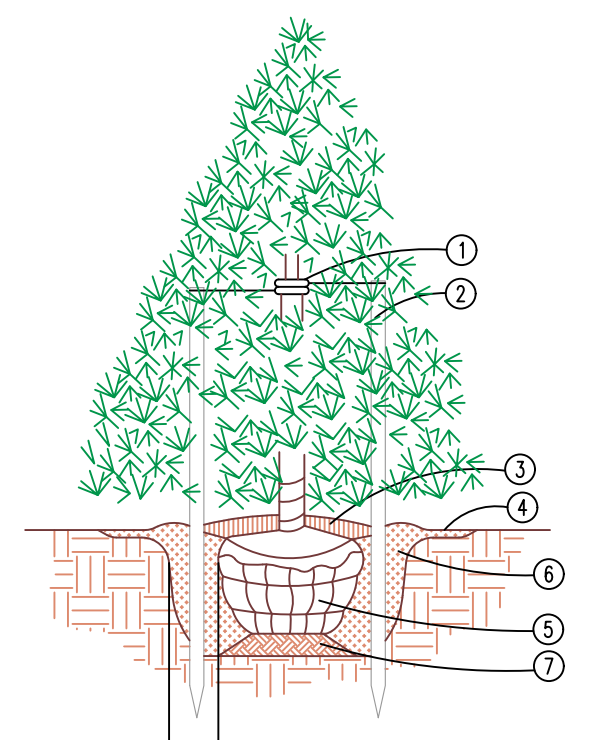
	LIGHT POLE
	SIGN
	MAILBOX
	DECIDUOUS TREE
	CONIFEROUS TREE
	CONIFEROUS BUSH
	DECIDUOUS BUSH
	TREE LINE
	CHAINLINK FENCE
	WOOD FENCE
	WALL
	STONE OR BLOCK
	OVERHEAD UTILITIES
	STORM
	SANITARY

000.00
SPOT ELEVATION
FG
FINISH GRADE
FF
FINISH FLOOR
IE
INVERT ELEVATION
TC
TOP OF CURB
GU
GUTTER



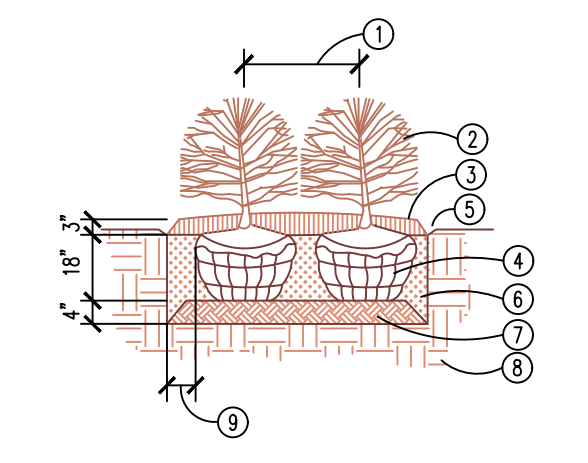
DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE

- ① 1/2" DIA. BLACK RUBBER HOSE W/ GUY CABLE (2)
#11 GALV. WIRE (3 PER TREE) W/ GALV. TURNBUCKLE
- ② 2" x 2" HARDWOOD STAKES TO EXTEND 18" BELOW
TREE PIT IN UNDISTURBED SOIL
- ③ TREE WRAP
- ④ SHREDDED BARK MULCH 3" DEPTH (6" DIA.).
- ⑤ 6" TOPSOIL SAUCER
- ⑥ GUYS AT 60° ANGLE
- ⑦ FIN. GRADE SLOPED AWAY FROM TREE
- ⑧ REMOVE BURLAP AND CUT TWINE FROM TOP 1/3 OF
BALL
- ⑨ PLANT MIX
- ⑩ SCARY TO 4" DEPTH AND RECOMPACT
- ⑪ 12" MIN. BETWEEN ROOTBALL AND EDGE OF PLANT PIT.



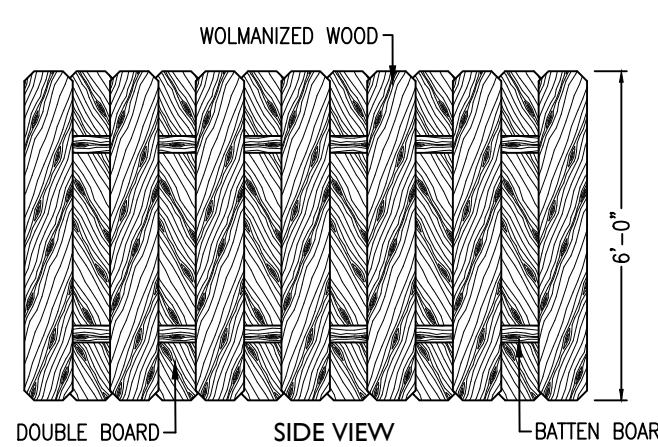
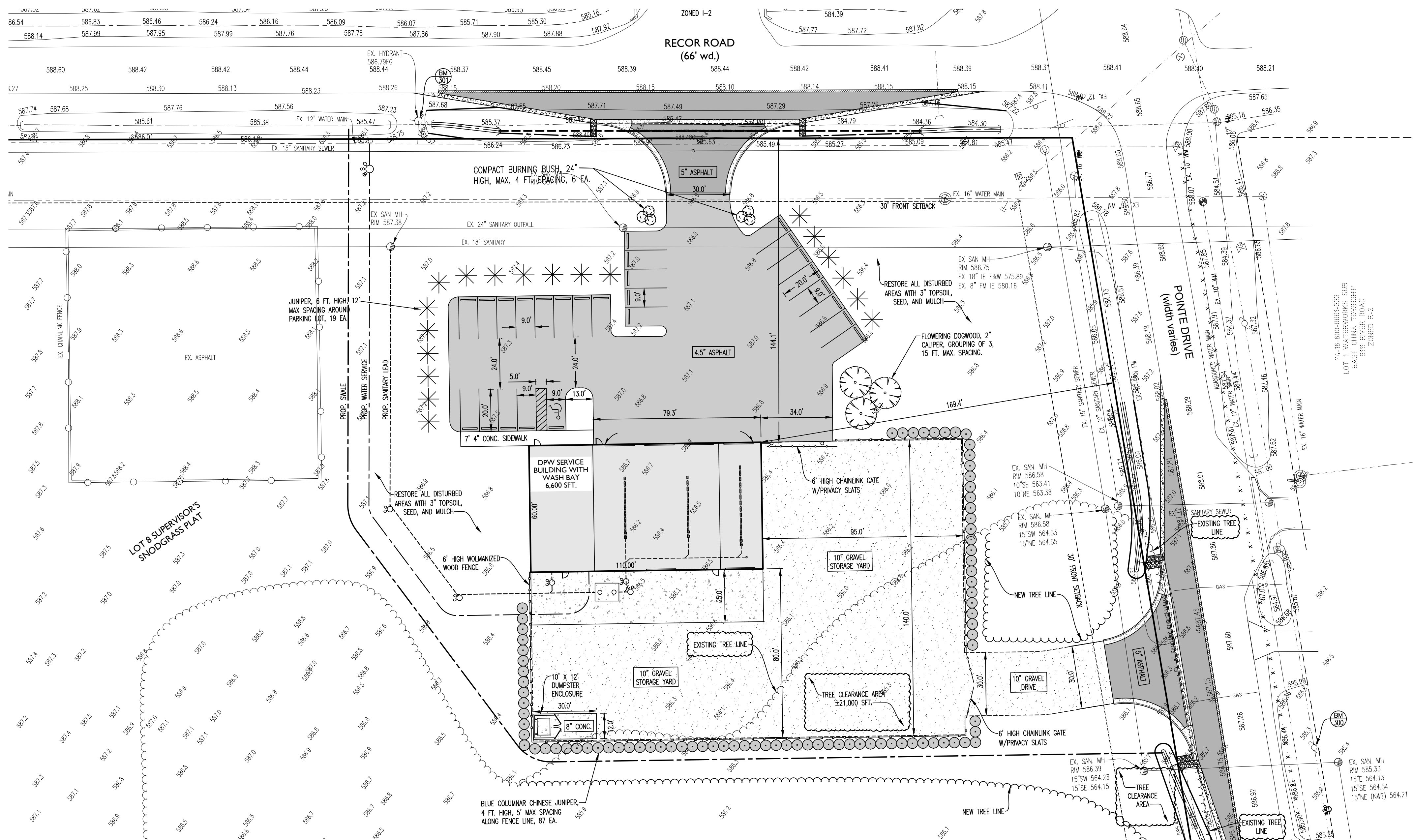
EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

- ① 1/2" DIA. BLACK RUBBER HOSE W/ GUY CABLE (2)
#11 GALV. WIRE (3 PER TREE) W/ GALV. TURNBUCKLE
- ② 2" x 2" HARDWOOD STAKES TO EXTEND 18" BELOW
TREE PIT IN UNDISTURBED SOIL
- ③ SHEDD BARK MULCH 3" DEPTH (6' DIA.). CONNECT
BEDS WHERE POSSIBLE
- ④ FIN. GRADE SLOPED AWAY FORM TREE
- ⑤ SLIT BURLAP AND LEAVE TIED
- ⑥ PLANT MIX
- ⑦ SCARIFY TO 4" DEPTH AND RECOMPACT
- ⑧ 12" MIN. BETWEEN ROOTBALL AND EDGE OF PLANT PIT



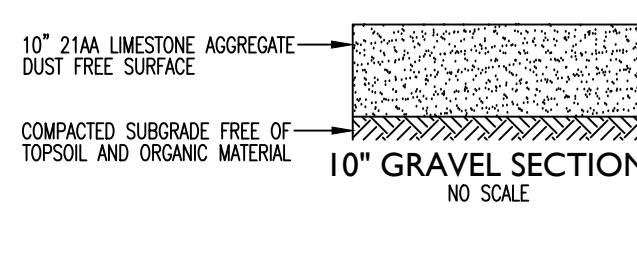
SHRUB PLANTING DETAIL
NOT TO SCALE

- ① SEE PLAN FOR SPACING
- ② SHRUB PLANTS
- ③ SHREDDED BARK MULCH 3" DEPTH TYPICAL
- ④ REMOVE BURLAP AND CUT TWINE FROM TOP 1/3 OF BALL
- ⑤ SHOW CUT EDGE OR ALUM. EDGE, SEE PLAN
- ⑥ EXCAVATE EXISTING SOIL 18" DEEP, FILL WITH PLANT MIX (SEE SPECS.)
- ⑦ 4" SCARIFY RECOMPACT
- ⑧ UNDISTURBED SUBGRADE
- ⑨ 8" MIN. BETWEEN ROOTBALL AND EDGE OF PLANT PIT.



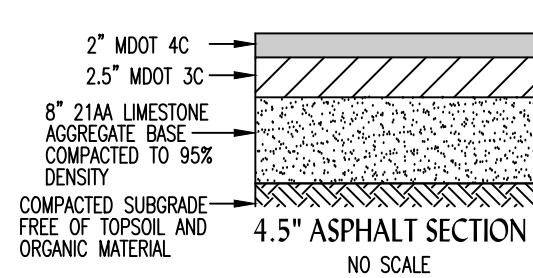
A diagram of a one-dimensional lattice consisting of a horizontal chain of 10 sites. The sites are represented by small rectangles. The sites at positions 1, 3, 5, 7, and 9 (counting from the left) are shaded with diagonal lines. The sites at positions 2, 4, 6, 8, and 10 are unshaded. This represents a bipartite lattice structure.

SCREEN FENCE DETAIL

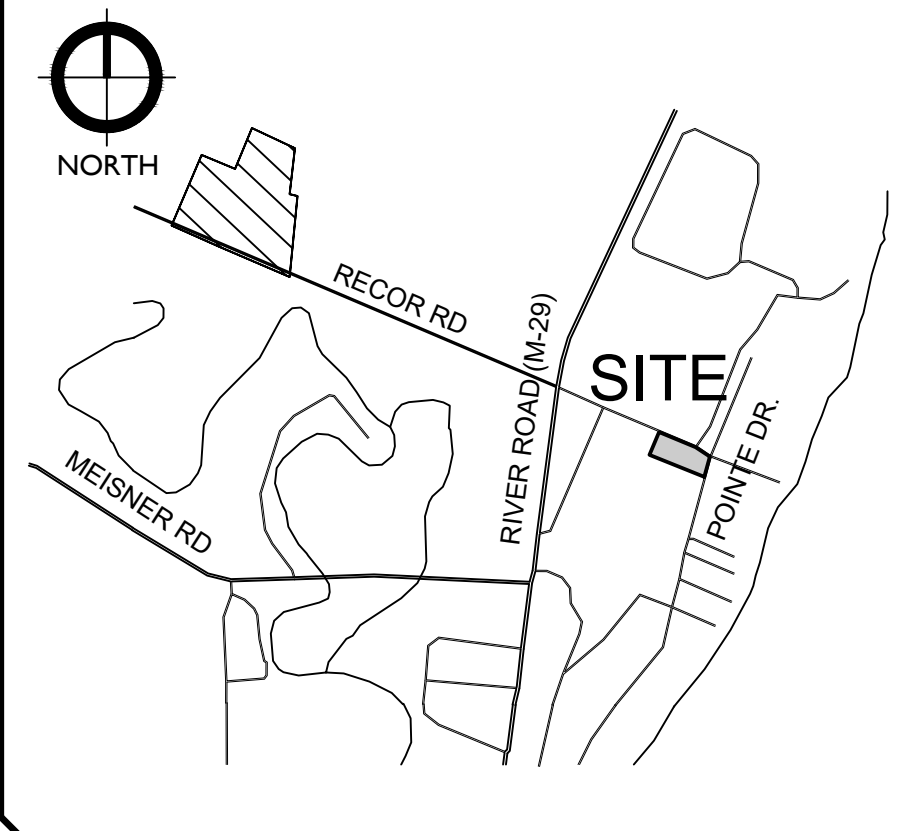


8" MIN. UNIFORM 3500
PSI CONCRETE

8" CONCRETE SECTION



8" CONCRETE SECTION



5111 RIVER ROAD
EAST CHINA,
MICHIGAN 48054
PHONE: 810-765-8879

Project Control Engineering, Inc.
Engineers Surveyors Consultants
P.O. Box 307
2420 Pte. Tremble Road
Algonac, Mi. 48001
Phone 810.794.1931
Fax 810.794.3331
www.pce-eng.com

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**PROJECT CONTROL
ENGINEERING, INC.**

DRAWING STATUS:

☒ PRELIMINARY CONSTRUCTION

☐ FINAL CONSTRUCTION

☐ RECORD DOCUMENTS

SEAL:

STATE OF MICHIGAN
 JOHN T. MONTE
 ENGINEER
 No.
 6201027614
 REGISTERED PROFESSIONAL ENGINEER

DATE: 5-22-2023
REVISION DATE:
6-22-2023 per planning
8-2-2023 per PCE
10-2-2023 per planning
4-29-2024 per SCCRC REVIEW
5-12-2025 per Township
5-28-2025 ADDENDUM #1: TREE CLEARING

SITE PLAN

EAST CHINA TOWNSHIP PROPOSED DPW FACILITY

SHEET TITLE:	PROJECT:
--------------	----------

811 Know what's below
Call before you dig.

JOB NUMBER: 21-102

DRAWN BY: ACG

CHECK BY: ITM, P.E.

DRAWING ID:
21-102_engineering_rev2

SCALE:
1" = 30'

$T = 30$
C_1

SITE DATA - ZONED R-2 1 FAMILY RESIDENTIAL		
ITEM	REQUIRED	PROVIDED
TOTAL PARCEL AREA REQUIRED	10,200 SF.	11.38 ACRES
MINIMUM LOT WIDTH REQUIRED	85.00 FEET	502.12 feet
MAXIMUM LOT COVERAGE	25%	1.1%
MAXIMUM BUILDING HEIGHT (STORES/FT.)	2 STORES/20 FEET	2 STORES/28 FEET
SETBACKS:		
FRONT (FROM RIGHT OF WAY)	30 FT.	144.10 FT.
SIDE	10 FT.	189.40 FT.
REAR- PROPOSED BUILDING	40 FT.	290.6 FT.
PARKING:		
OFFICE: 1 SPACE FOR EVERY 200 SF. OF USABLE FLOOR AREA	PROP. OFFICE AREA 1800/200 = 9 SPACES	26 SPACES
WAREHOUSE: 1 SPACE FOR EVERY 1,700 SF. OF USABLE FLOOR AREA	PROP. WAREHOUSE AREA 4,800/1700 = 3 SPACES	INCLUDING 1 HANDICAP SPACE
	12 SPACES REQUIRED	
LANDSCAPING:		
PARKING LOT TREES: 1/5 SPACES	7 TREES	5 TREES PROP. - WITH 2 EX.
FRONTAGE TREES: 1/30 L.F.	17 TREES	17 TREES

NOTES

PERMITS TO OBTAINED FROM ALL AGENCIES HAVING JURISDICTION OVER THE WORK INCLUDING BUT NOT LIMITED TO:

- ST. CLAIR COUNTY SOIL EROSION
- ST. CLAIR COUNTY ROAD COMMISSION
- EAST CHINA TOWNSHIP

ALL WORK TO BE IN ACCORDANCE WITH STATE AND LOCAL CODES AND ORDINANCES
FIRE LANES SHALL BE UNOBSTRUCTED, AND POSTED "NO PARKING FIRE LANE"
THE STORAGE AND HANDLING OF FLAMMABLE LIQUIDS, LIQUIFIED PETROLEUM, GASES AND EXPLOSIVES MUST COMPLY
WITH STATE RULES AND REGULATIONS AS ESTABLISHED BY PUBLIC ACT NO. 207 OF 1941, AS AMENDED
AND MUST BE APPROVED BY THE IRA TOWNSHIP FIRE DEPARTMENT

PROPERTY DESCRIPTION

LOT 8, SUPERVISOR'S D.M. SNODGRASS PLAT, ST. CLAIR COUNTY RECORDS, L52, P.31.

BENCHMARKS

BM #300	SOUTHWEST CORNER OF WATER DEPARTMENT POWER POLE. BENCH TIE ON POINTE DRIVE. ELEV. 588.44
BM #301	ARROW ON HYDRANT ON THE SOUTHERLY SIDE OF REC'DR ROAD, 300 FT FROM INTERSECTION OF POINTE DRIVE AND REC'DR ROAD. ELEV. 590.12

PAVING QUANTITIES	
ASPHALT	700 TN
CURB & GUTTER	1,000 LF
BASE COURSE	1,000 SF
SUBGRADE	1,000 SF
CONCRETE	1,000 SF
REINFORCEMENT	1,000 LB
FORMWORK	1,000 SF
PAINT	1,000 GAL
TRAFFIC SIGNS	1,000 PC
STREET LIGHTS	1,000 FT
WATER MAINS	1,000 LF
GAS MAINS	1,000 LF
SEWER MAINS	1,000 LF
MANHOLE RINGS	1,000 PC
MANHOLE FRAMES	1,000 PC
MANHOLE COVERS	1,000 PC
MANHOLE ACCESSORIES	1,000 PC
MANHOLE INSTALLATION	1,000 PC
MANHOLE REMOVAL	1,000 PC
MANHOLE REPAIR	1,000 PC
MANHOLE REPLACEMENT	1,000 PC
MANHOLE ENLARGEMENT	1,000 PC
MANHOLE DESTRUCTION	1,000 PC
MANHOLE CONSTRUCTION	1,000 PC
MANHOLE INSULATION	1,000 PC
MANHOLE PROTECTION	1,000 PC
MANHOLE MONITORING	1,000 PC
MANHOLE MAINTENANCE	1,000 PC
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MANHOLE REPAIR REPAIR REPAIR REPAIR REPAIR REPAIR ENLARGEMENT</	

224 ASPHALT	020 TN
CONCRETE, 8 IN.	343 SY
CONCRETE CURB AND GUTTER	204 LF
MISCELLANEOUS QUAN	
FENCING	523 TN

UTILITY STRUCTURE S

- 1 EX. SANITARY MH
RIM 587.15
EX 18" IE SE/NW 576.26±
6" IE SW 582.75 W/INTERNAL
DROP CONNECTION
- 2 CLEANOUT
RIM 588.00
6" IE NE/SE 583.97

3. CLEANOUT
RIM 588.55
6" IE NE/SE 584.50

4. CLEANOUT
RIM 589.45
6" IE NE/SE 585.00

5 RIM 589.40
6" IE NW/NE 585.30

6 CLEANOUT
RIM 589.45
6" IE NE/SE 585.35

7 CATCH BASIN
RIM 590.40

 CATCH BASIN
RIM 589.40
6" IE SW 585.85

 CATCH BASIN
RIM 589.45
6" IE SW 586.05

UTILITY INFORMATION, AS SHOWN, INDICATES APPROXIMATE LOCATIONS AND TYPES OF FACILITIES ONLY, AS DISCLOSED TO THIS FIRM BY THE VARIOUS UTILITY COMPANY'S

PRIOR TO CONSTRUCTION, ALL LOCATION AND DEPTHS OF EXISTING OVERHEAD AND UNDERGROUND UTILITIES (IN CONFLICT WITH THE CONSTRUCTION OF PROPOSED IMPROVEMENTS) SHALL BE VERIFIED IN THE FIELD.

DURING CONSTRUCTION, CONTRACTOR SHALL USE EXTREME CAUTION WHEN OPERATING NEAR

CALL MISS DIG.

4"

1" DIA. HOLES FOR ANCHOR PINS

8"

4"

1-2"

1-2"

12.5'

7'

5 1/2"

1-2"

PRECAST CONCRETE WHEEL STOP DETAIL
MANUFACTURER'S DIMENSIONS MAY VARY

[illegible]

7/6-18-7751-002R-000
STEPHANE M CARTER
218 REDDICH ROAD



NORTH

0 30' 60'

1" = 30"
SCALE IN FEET

1/15/2024	PER SCCRC REVIEW
1/23/2024	PER SCCRC REVIEW
4/16/2024	PER SCCRC REVIEW
4/29/2024	PER SCCRC REVIEW
10/2/2024	GRADING MODIFICATIONS PER PCE
5/12/2025	PER TOWNSHIP
5/28/2025	ADDENDUM #1: ADD OIL INTERCEPTOR

	Know what's below Call before you dig.
JOB NUMBER:	21-102
DRAWN BY:	ACG
CHECK BY:	JTM
DRAWING ID:	21-102 engineering
SCALE:	1" = 30'
	C-2

