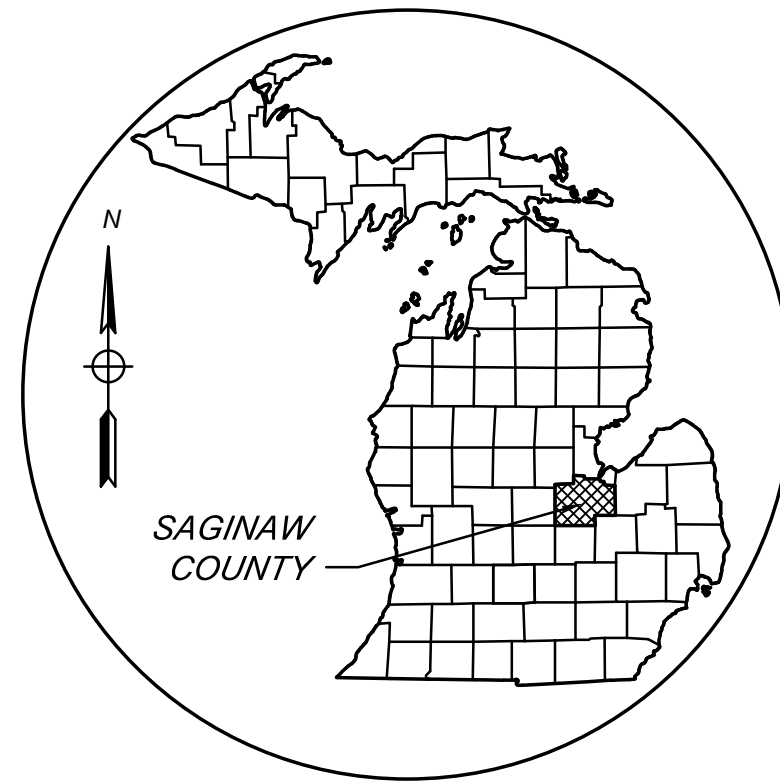
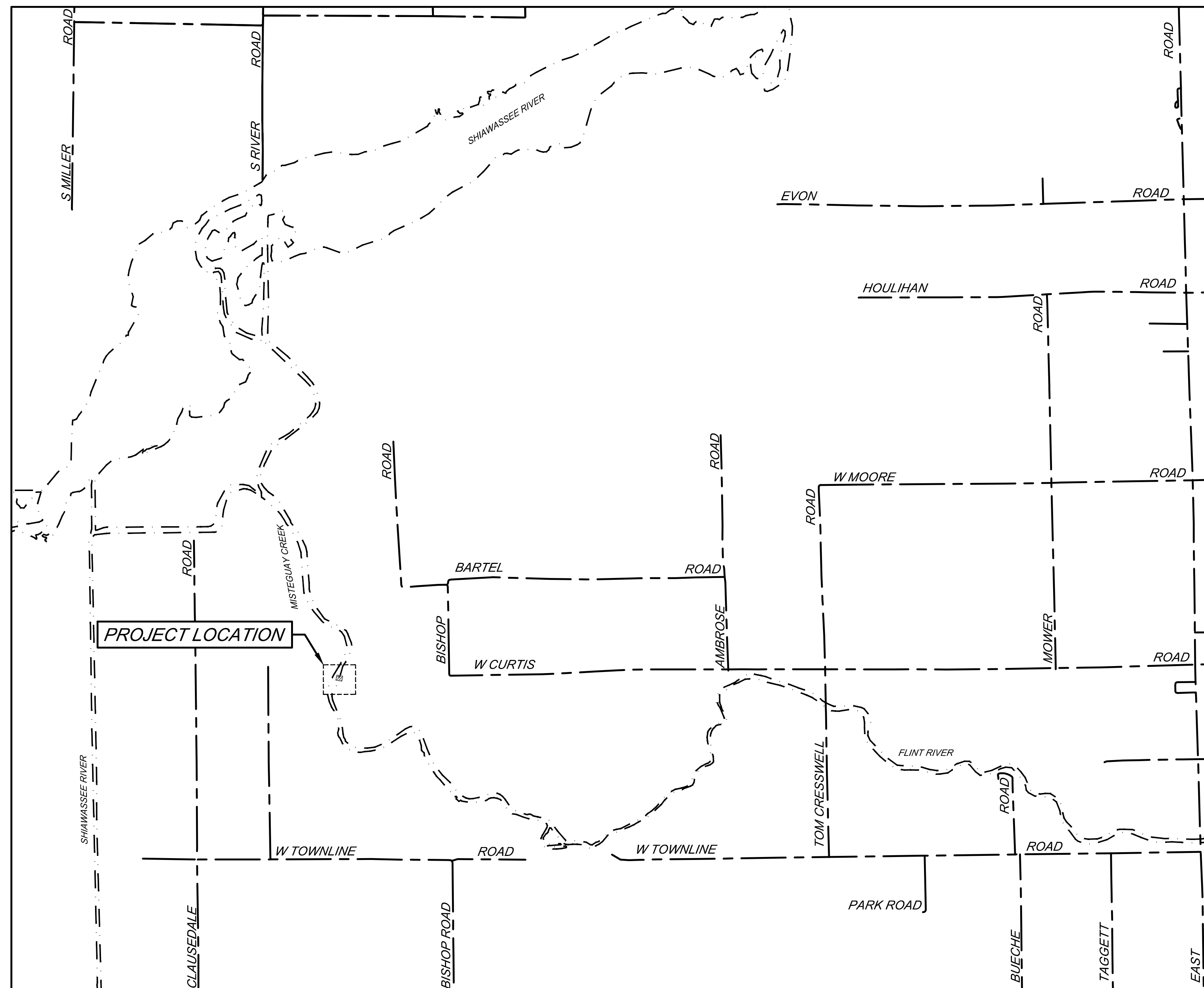


EASTWOOD DRAIN PUMP STATION PUMP STATION - DIVISION I

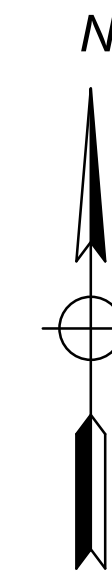
SAGINAW COUNTY PUBLIC WORKS COMMISSIONER - BRIAN J. WENDLING



AREA MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE



SECTIONS 19-20, 28-33, T11N-R04E,
SPAULDING TOWNSHIP,
SAGINAW COUNTY, MICHIGAN

PLAN INDEX

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DR-4266-02	CONTACTS, GENERAL NOTES, LINE TYPE LEGEND, AND SESC MEASURE LEGEND	T2
DR-4266-03	SOIL EROSION AND SEDIMENTATION CONTROL PLAN	T3
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BY	MARK	REVISIONS	DATE
<small>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</small>			
EASTWOOD DRAIN PUMP STATION SAGINAW COUNTY, MICHIGAN			
COVER SHEET			
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4777 Fax: 989-754-4440 www.SpicerGroup.com</small>	
DE BY:	POC/NDC	CH BY:	NDC
DR BY:	CBS	APP BY:	RBH
		PROJECT NO. 126405SG2018	
STDS.	SHEET 01 OF 13		T
DATE	APRIL 2023	FILE NO.	DR-4266-01
SCALE	NOT TO SCALE		1

GENERAL NOTES

ALL WORK WITHIN THE ROAD RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND GENERAL SPECIFICATIONS OF THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

RESTORE ALL LAWN AREAS WITH 4" OF TOPSOIL AND SEED AND MULCH.

CONTRACTOR SHALL NOTIFY ENGINEER 72 HOURS PRIOR TO START OF CONSTRUCTION.

CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES A MINIMUM OF 72 HOURS PRIOR TO START OF CONSTRUCTION.

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

REMOVE, REPLACE, AND RESTORE ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS THAT ARE AFFECTED BY THIS CONSTRUCTION AS DIRECTED BY ENGINEER.

CONTRACTOR SHALL CALL "MISS DIG" (1-800-482-7171) A MINIMUM OF 3 WORKING DAYS PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL CONFORM TO THE SOIL EROSION AND SEDIMENTATION CONTROL ACT, PART 91 OF ACT 451 OF 1994.

THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES ON THE PROJECT. COST SHALL BE INCLUDED IN THE PAY ITEMS TRAFFIC CONTROL. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS. CONTRACTOR TO COORDINATE ROAD CROSSINGS WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION.

ALL DRAIN SIDE SLOPES SHALL BE 2H:1V OR FLATTER, UNLESS SPECIFIED OTHERWISE.

BROKEN CONCRETE AND DEBRIS SHALL BE CONSIDERED WASTE AND SHALL BE DISPOSED OF BY THE CONTRACTOR OFF SITE. COST SHALL BE INCLUDED IN THE OTHER PAY ITEMS OF THE PROJECT.

THE CONTRACTOR SHALL AS DIRECTED BY THE ENGINEER REMOVE, REPLACE, REINSTALL AND MAINTAIN MAILBOXES, & SIGNS. MAILBOX POSTS SHALL BE REPLACED AS NEEDED FOR CONSTRUCTION. ALL COSTS SHALL BE INCLUDED IN CLEANUP AND RESTORATION.

NO WORK SHALL BE PERFORMED BEFORE 7:00 AM OR AFTER 7:00 PM MONDAY THROUGH SATURDAY. NO WORK SHALL HAPPEN ON SUNDAYS OR HOLIDAYS.

HAND SEED, FERTILIZE, AND MULCH DITCH BANKS AND SPOILS DAILY.

CONTRACTOR TO CLEAR TREES NECESSARY TO CONSTRUCT PROJECT.

WHEN RELOCATING UTILITIES AS REQUIRED FOR CONSTRUCTION OF DRAIN IMPROVEMENTS A MINIMUM CLEARANCE OF 36" BELOW THE BOTTOM OF PROPOSED UTILITY MUST BE ACHIEVED.

AT ALL ROAD CROSSINGS CONTRACTOR IS REQUIRED TO LOCATE ALL EXISTING UTILITIES AND COORDINATE WITH ENGINEER TO VERIFY EXISTING UTILITY ELEVATIONS PRIOR TO INSTALLING PROPOSED UTILITY. COST INCLUDED IN PRICE FOR PROPOSED UTILITY UNLESS STATED OTHERWISE IN CONTRACT DOCUMENTS.

ALL DRIVING SURFACES ARE TO BE RESTORED TO IN KIND DEPTH AND MATERIAL UNLESS OTHERWISE SPECIFIED ON THE PLANS.

GENERAL NOTES

CONTACT THE ENGINEER 48 HOURS PRIOR FOR CONSTRUCTION STAKING AND INSPECTION.

CONTRACTOR SHALL COORDINATE LOCATION OF ANY ACCESS ROADS WITH THE LANDOWNER AND THE ENGINEER. ANY ACCESS ROAD SHALL BE REPAIRED TO THE LANDOWNERS AND THE PUBLIC WORKS COMMISSIONER'S APPROVAL.

ALL JOINTS AT INTERSECTION APPROACHES AND DRIVEWAYS SHALL BE SAW-CUT WITH BUTT-JOINTS.

FOR OPEN CUT PAVEMENT REMOVAL, CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT FULL DEPTH PRIOR TO REMOVAL.

ALL CONSTRUCTION UNDER EXISTING UTILITIES SHALL BE COMPLETELY BACKFILLED WITH SAND. COST TO BE INCLUDED IN THE UNIT PRICE FOR UTILITY BEING INSTALLED.

THE EXISTING UTILITIES ON THESE DRAWINGS HAVE BEEN SHOWN ACCORDING TO THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES AND NOTIFY THE ENGINEER WHERE POSSIBLE CONFLICT EXISTS PRIOR TO BEGINNING CONSTRUCTION.

ELECTRIC, GAS AND TELEPHONE UTILITIES LOCATED IN THE ROAD AND DRAIN RIGHT-OF-WAYS WILL BE RELOCATED BY OTHERS.

CONTRACTOR TO PROVIDE DUST CONTROL AND SWEEP ROADS DAILY. COST TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR CLEAN UP AND SITE RESTORATION.

ABBREVIATIONS

- BC = BACK OF CURB
- BM = BENCH MARK
- CB = CATCH BASIN
- C/C = CENTER TO CENTER
- CJ = CONSTRUCTION JOINT
- CL = CENTERLINE
- CMP = CORRUGATED METAL PIPE
- CONC = CONCRETE
- CORR = CORRUGATED
- CSP = CORRUGATED STEEL PIPE
- DI = DUCTILE IRON PIPE
- EF = EACH FACE
- ELEC = ELECTRIC
- EL OR ELEV = ELEVATION
- EOM = EDGE OF METAL
- EOP = EDGE OF PAVEMENT
- EQ/SP = EQUALLY SPACED
- ESMT = EASEMENT
- EW = EACH WAY
- EX OR EXIST = EXISTING
- FES = FLARED END SECTION
- FF = FINISH FLOOR
- FG = FINISH GROUND
- FL = FLOW LINE
- FS = FINISH SURFACE
- FT = FEET
- GALV = GALVANIZED
- G = GUTTER
- GA = GAUGE
- HDC = HOT DIP GALVANIZED
- HDPE = HIGH DENSITY POLYETHYLENE
- HMA = HOT MIX ASPHALT
- HOR = HORIZONTAL
- HP = HIGH POINT
- HYD = HYDRANT
- INV = INVERT
- LP = LOW POINT
- OC = ON CENTER
- OH = OVERHEAD
- MH = MANHOLE
- MIN = MINIMUM
- MON = MONUMENT
- NFL = NOT FIELD LOCATED
- NTS = NOT TO SCALE
- PROP = PROPOSED
- PVC = POLYVINYL CHLORIDE
- RCP = REINFORCED CONCRETE PIPE
- ROW = RIGHT OF WAY
- SAN = SANITARY
- SB = SOIL BORING
- SS = STAINLESS STEEL
- STA = STATION
- STM = STORM
- SWR = SEWER
- T/B = TOP AND BOTTOM
- TC = TOP OF CURB
- TOB = TOP OF BANK
- TOS = TOE OF SLOPE
- TELE = TELEPHONE
- TRW = TOP OF RETAINING WALL
- TW = TOP OF WALK
- UG = UNDERGROUND
- UNO = UNLESS NOTED OTHERWISE
- VERT = VERTICAL
- WM = WATER MAIN
- WSEL = WATER SURFACE ELEVATION

LINE TYPE LEGEND

- - - - - EXISTING ROAD CENTERLINE
- - - - - EXISTING WATER MAIN
- - - - - EXISTING SANITARY SEWER OR FORCEMAIN
- - - - - EXISTING STORM SEWER
- - - - - EXISTING TELEPHONE CABLE
- - - - - EXISTING GAS MAIN
- - - - - EXISTING ELECTRIC
- - - - - EXISTING DRAINS (OTHER)
- - - - - PROPOSED UTILITY
- - - - - EXISTING CURB & GUTTER
- - - - - PROPOSED CURB & GUTTER
- - - - - FENCE LINE
- - - - - OVERHEAD UTILITY
- - - - - RAILROAD TRACKS
- - - - - STATION LINE
- - - - - LIMITS OF RIGHT OF WAY
- - - - - EASEMENT
- - - - - SILT FENCE
- - - - - REVERSE PAN CURB & GUTTER
- - - - - TREE LINE
- - - - - EXISTING CONTOURS
- - - - - PROPOSED CONTOURS

SYMBOL LEGEND

EXISTING SYMBOLS

- - MANHOLE
- ⊕ - CATCH BASIN
- ⊞ - CURB CATCH BASIN
- ⊕ - FIRE HYDRANT
- ⊕ - GAS VALVE
- ⊕ - WATER VALVE
- ⊕ - TELEPHONE PEDESTAL
- - POWER POLE
- ⊕ - TELEPHONE POLE
- ⊕ - POWER AND TELEPHONE POLE
- ⊕ - LIGHT POLE
- ⊕ - GUY ANCHOR AND POLE
- - MAIL BOX
- ⊕ - WATER METER
- ⊕ - TELEPHONE MANHOLE
- ⊕ - ELECTRIC MANHOLE
- ⊕ - MONITORING WELL
- ⊕ - HAND HOLE
- ⊕ - TRANSFORMER
- ⊕ - ELECTRICAL PEDESTAL
- ⊕ - BARRIER FREE PARKING
- ⊕ - SPRINKLER
- ⊕ - RAILROAD SIGNAL
- ⊕ - ANTENNA
- ⊕ - SATELLITE DISH
- ⊕ - AIR CONDITIONING UNIT
- ⊕ - SOIL BORING
- ⊕ - BENCH MARK
- ⊕ - FOUND SURVEY CORNER
- - SET 1/2" IRON ROD
- ⊕ - 1/4 SECTION CORNER
- ⊕ - BREAK IN LINE
- ⊕ - EXISTING SIGN-1 POST
- ⊕ - EXISTING SIGN-2 POST
- ⊕ - STUMP
- ⊕ - WETLANDS
- ⊕ - PINE
- ⊕ - BUSH
- ⊕ - TREE

PROPOSED SYMBOLS


- - MANHOLE
- ⊞ - CATCHBASIN
- ⊕ - FIRE HYDRANT
- ⊕ - WATER VALVE
- ⊕ - BARRIER FREE PARKING
- ⊕ - LIGHT POLES
- ⊕ - DRAINAGE FLOW
- ⊕ - SPOT ELEVATION LABELS
- ⊕ - G = GUTTER
- ⊕ - TW = WALK
- ⊕ - TC = TOP OF CURB
- ⊕ - FS = FINISH SURFACE

PROJECT NOTES

THE EASTWOOD DRAIN PROJECT IS BEING BID IN TWO DIVISIONS. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE WORK AMONGST DIVISIONS AS NECESSARY.

CONTACTS

- SAGINAW COUNTY PUBLIC WORKS COMMISSIONER OWNER
ATT: BRIAN J. WENDLING
111 S MICHIGAN AVENUE
SAGINAW, MI 48602
(989) 790-5258
- SPICER GROUP, INC. ENGINEER
ATT: LUKE O'BRIEN, P.E.
230 S WASHINGTON AVENUE
SAGINAW, MI 48605
(989) 754-4717
- SAGINAW COUNTY ROAD COMMISSION ROAD COMMISSION
ATT: WALEY SHEPHERD
3020 SHERIDAN AVENUE
SAGINAW, MI 48601
(989) 752-6140
- SPAULDING TOWNSHIP DPW
ATT: DANIEL KROSS
5025 EAST ROAD
SAGINAW, MI 48601
(989) 777-2733
- AT&T CABLE
ATT: KATHY HENDERSON
309 S WASHINGTON AVENUE
SAGINAW, MI 48607
(248) 425-1859
- CONSUMERS ENERGY ELECTRIC
ATT: MIKE TODD
530 S WILLOW STREET
LANSING, MI 48906
(989) 293-7057

PROJECT DATUM			
HORIZONTAL:	STATE PLANE SOUTH MI 83 2143		
VERTICAL:	NORTH AMERICAN VERTICAL DATUM 1985		
BY	MARK	REVISIONS	DATE
THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.			
EASTWOOD DRAIN PUMP STATION SAGINAW COUNTY, MICHIGAN			
CONTACTS, GENERAL NOTES, LINE TYPE LEGEND, AND SESC MEASURE LEGEND			
		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com	
DE. BY: POC/MDC	CH. BY: NDC	PROJECT NO. 126405SG2018	
DR. BY: CBS	APP. BY: RBH		
STDS.	SHEET 02 OF 13	T	
DATE: APRIL 2023	FILE NO. DR-4266-02	2	
SCALE: NOT TO SCALE			

EROSION CONTROL MEASURES

1	Seeding		When bare soil exposed, temporarily or permanently, to erosive forces from wind and or water on flat areas, mild slopes, grassed waterways, diversion ditches and dikes, borrow and stockpile areas and spoil piles.
2	Mulch		On flat areas, slopes, grassed waterways and spillways, diversion ditches and dikes, borrow and stockpile areas, and spoil piles when areas are subject to raindrop impact, and erosive forces from wind or water.
15	Riprap		Along drain banks, shorelines, or where concentrated flows occur. Slows velocity, reduces erosion and sediment load.
16	Riprap Toe of Slope		Riprap toe of slope protection is used in areas where velocities are causing drain bank erosion and are too high to stabilize using other methods.
28	Stone Construction Access		At locations where construction equipment will enter and exit the drain easement and tracking of soil is anticipated.

SAGINAW COUNTY	
SOIL CLASS	SOIL COMPOSITION
69	Sloan silt loam, rarely flooded
95	Sloan-Careasco complex, rarely flooded
ZwakaA	Ziwaaukee and Mistegway silty clays, 0 to 1 percent slopes, rarely flooded
W	Water

MAINTENANCE PROGRAM FOR SESC MEASURES

GENERAL MAINTENANCE

- CONTRACTOR SHALL MAINTAIN ALL PERMANENT SESC MEASURES FOR A PERIOD OF 1 YEAR FOLLOWING THEIR INSTALLATION.
- TEMPORARY SESC MEASURES MUST BE INSTALLED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.
- TEMPORARY MEASURES MUST BE MAINTAINED AND IN PLACE UNTIL AREAS ARE PERMANENTLY STABILIZED.
- PERMANENT MEASURES MUST BE INSTALLED AND MAINTAINED BY THE CONTRACTOR UNTIL FINAL COMPLETION.
- DAILY MAINTENANCE IS THE CONTRACTOR'S RESPONSIBILITY.
- TEMPORARY SESC MEASURES MUST BE REMOVED AT THE END OF THE PROJECT ONCE PERMANENT MEASURES ARE ESTABLISHED.
- TEMPORARY SESC MEASURES MUST BE INSTALLED PRIOR TO OR AT THE TIME OF EARTH DISTURBANCE.
- INSPECT WEEKLY AND AFTER EACH RAIN EVENT UNTIL VEGETATION HAS BEEN ESTABLISHED.
- IF NECESSARY, REPAIR AND RE-SEED OR REPLANT ERODED AREAS IMMEDIATELY.

SEEDING AND MULCHING

- SEEDING PRACTICES INCLUDE TOPSOIL (AS DIRECTED BY ENGINEER), SEED, POLYMER, AND MULCH OR MULCH MATTING (AS DIRECTED BY ENGINEER OR WHERE SHOWN ON PLANS).
- WHERE NECESSARY, APPROPRIATE MULCH MUST BE APPLIED BASED ON SLOPE AND GROWING CONDITIONS AS APPROVED BY THE PROJECT ENGINEER.
- ALL SLOPES AND HIGHLY ERODIBLE AREAS MUST BE SEEDED, POLYMER APPLIED AND MULCHED AS NEEDED WHEN CONSTRUCTION ACTIVITY IS NOT TAKING PLACE.
- SEED AND MULCH IS TO BE INSPECTED DAILY FOLLOWING EACH RAIN EVENT TO DETERMINE IF CONCENTRATED FLOWS ARE PRESENT.
- IN THE EVENT THAT SEED AND MULCH ARE REMOVED BY ERODIBLE RUNOFF, REPAIRS ARE TO BE MADE IMMEDIATELY.
- ALL AREAS DURING CONSTRUCTION MUST BE PERMANENTLY STABILIZED WITHIN 72 HOURS OF FINAL GRADE (GRADE LISTED ON PLAN).

STABILIZED CONSTRUCTION ACCESS

- INSPECT WEEKLY AND AFTER EACH RAINFALL.
- WHEN CONSTRUCTION ACCESS IS NO LONG EFFECTIVE, SCRAPE THE TOP LAYER AND ADD 2" OF AGGREGATE.

COMPLIANCE WITH PART 91 OF PA 451

- RESPOND IMMEDIATELY TO STORMWATER OPERATOR AND/OR SOIL EROSION AND SEDIMENTATION CONTROL INSPECTOR CONCERNS. MAKE CORRECTIVE MEASURES AS REQUIRED IMMEDIATELY AS DETAILED BY THE APPROVED APA MANUAL(S).

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

- INSTALL AND MAINTAIN ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE APPROVED PLAN PRIOR TO COMMENCEMENT OF CONSTRUCTION OR MASS GRADING. ALL SESC MEASURES MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE BELL CREEK DRAIN SESC PLAN AND PROJECT SPECIFICATIONS.
- SOIL EROSION CONTROL MEASURES MUST BE INSPECTED BY A STATE CERTIFIED INSPECTOR AFFILIATED WITH THE COUNTY DRAIN COMMISSIONER'S OFFICE PRIOR TO COMMENCEMENT OF CONSTRUCTION OR MASS GRADING.
- DAILY INSPECTION AND MAINTENANCE MUST BE MADE TO ENSURE ALL EROSION CONTROL MEASURES ARE FUNCTIONING PROPERLY AND INTACT. NECESSARY REPAIRS MUST BE PERFORMED WITHIN 24 HOURS.
- ADDITIONAL SOIL EROSION CONTROL MEASURES MUST BE PROVIDED THROUGHOUT CONSTRUCTION ACTIVITY AS NEEDED AND DETERMINED BY THE APA/ENGINEER. THE SOIL EROSION AND SEDIMENTATION CONTROL PLAN IS TO BE AMENDED TO INCLUDE ADDITIONAL EROSION CONTROL MEASURES IMPLEMENTED ON-SITE.
- SEDIMENT FROM WORK ON THIS SITE IS TO BE CONTAINED ON THE SITE AND IS NOT TO BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, PONDS, AND WETLANDS.
- ALL VISUAL TRACKING INCLUDING MUD, DIRT, AND DEBRIS TRACKED ONTO EXISTING ROADWAYS MUST BE IMMEDIATELY REMOVED NO LESS THAN ON A DAILY BASIS BY SCRAPING AND SWEEPING AND/OR AS DIRECTED BY THE ENGINEER.
- DUST CONTROL MUST BE EXERCISED AT ALL TIMES DURING THE PROJECT AND AS DIRECTED BY THE ENGINEER OR APA. APPLY DUST SUPPRESSANT TO SURFACES USING A PRESSURE TYPE WATER DISTRIBUTOR TRUCK EQUIPPED WITH A SPRAY SYSTEM.
- ALL PERMANENT SOIL EROSION CONTROL MEASURES MUST BE IN PLACE WITHIN 24 HOURS OF FINAL GRADING (GRADE LISTED ON PLANS). THIS INCLUDES ALL VEGETATIVE STABILIZATION. VEGETATIVE STABILIZATION WILL BE ONGOING. TOPSOIL, FERTILIZER, SEED, POLYMER, SILT STOP (OR EQUAL), MULCH AND OR RIPRAP MUST BE IN PLACE BEFORE PROCEEDING TO THE NEXT WORK AREA. ALL TEMPORARY MEASURES SUCH AS SILT FENCE AND INLET PROTECTION BAGS ARE TO BE REMOVED ONCE PERMANENT SESC MEASURES ARE IN PLACE AND VEGETATION IS ESTABLISHED. REMOVAL OF TEMPORARY MEASURES, FOLLOWING ACCEPTANCE OF THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- PRIOR TO WINTER CONSTRUCTION, ALL EXPOSED SOILS MUST BE STABILIZED WITH A COMBINATION OF SILT STOP 705 POLYMER BLEND, NORTH AMERICAN GREEN EROSION CONTROL BLANKETS, MULCH, OR OTHER APPROVED METHOD IF VEGETATION COULD NOT BE ESTABLISHED DURING THE GROWING SEASON AS DETERMINED BY THE APA OR ENGINEER.
- WORK AREAS MUST BE STABILIZED WITH TOPSOIL, SEED, FERTILIZER, AND MULCH WITHIN 24 HOURS FOLLOWING CONSTRUCTION. VEGETATIVE STABILIZATION IS ONGOING THROUGHOUT THE PROJECT.
- ALL SOIL EROSION CONTROL MEASURES MUST BE INSPECTED DAILY. THE STORM WATER OPERATOR IS TO MAKE A WEEKLY INSPECTION OR INSPECT AFTER EACH RAIN EVENT THAT RESULTED IN A DISCHARGE TO ENSURE PROPER MAINTENANCE OF THE SOIL EROSION CONTROL MEASURES. ANY DEFICIENCIES OR REPAIRS TO SOIL EROSION CONTROL MEASURES MUST BE CORRECTED IMMEDIATELY. INLET PROTECTION MEASURES, DANDY BAG II (OR EQUAL), FLEX STORM (OR EQUAL), MUST BE INSTALLED IN CATCHBASINS BEFORE ANY STORMWATER RUNOFF IS ALLOWED TO ENTER THE TOP OF THE STRUCTURES. THE SILT AND SEDIMENT MUST BE REMOVED FROM INLET PROTECTION MEASURES AS NEEDED TO ENSURE PROPER FUNCTION OF THE BAGS.
- THE NEED FOR TEMPORARY MEASURES SUCH AS SILT FENCE AND DANDY BAG II (OR EQUAL), FLEX STORM (OR EQUAL) FOR EXISTING OR NEW CATCHBASINS MUST BE ASSESSED ON A DAILY BASIS. PIPES ARE TO BE CAPPED AT THE END OF EACH WORKDAY. AT NO TIME SHOULD SEDIMENT COLLECT IN A CATCHBASIN OR AN OFF-SITE AREA. TEMPORARY MEASURES MUST BE REMOVED ONCE PERMANENT MEASURES ARE IN PLACE AND VEGETATION IS ESTABLISHED.
- IF DEWATERING IS NECESSARY, CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO THE APA FOR APPROVAL.
- THE NOTICE OF COVERAGE (IF REQUIRED), SOIL EROSION AND SEDIMENTATION CONTROL PLAN, AND STORMWATER OPERATOR LOGS MUST BE LOCATED ON SITE AT ALL TIMES.
- ALL RESTORATION TO OCCUR WITHIN 24 HOURS OF FINAL GRADING.

ROUTINE MAINTENANCE ACTIVITIES

KEY	BEST MANAGEMENT PRACTICE	SESC PLAN
A	Debris Removal	NO
B	Sediment Removal	> 100 FEET
C	Stormwater Basin Maintenance	NO
D	Drain Crossing Maintenance	NO
E	Enclosed Drain Maintenance	NO

DETAILED DRAWINGS AND SPECIFICATIONS ARE LOCATED IN THE MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS SOIL EROSION AND SEDIMENTATION CONTROL AUTHORIZED PUBLIC AGENCY PROCEDURES MANUAL.

SYMBOLS FOR INSERTION INTO CONSTRUCTION DRAWINGS:

- = PERMANENT MEASURE
- = TEMPORARY MEASURE

GENERAL TIMING & SEQUENCE

ALL PROPOSED CHANNEL EXCAVATION ACTIVITIES FOR THIS PROJECT MUST ADHERE TO THE FOLLOWING SEQUENCE.

- CONTRACTOR MUST CLEAR THE DRAIN CHANNEL AND RIGHT-OF-WAY AS NOTED PLANS. THIS INCLUDES ALL DEBRIS AND STUMP REMOVAL AS NOTED ON PLANS. CONTRACTOR MUST VERIFY WITH ENGINEER THAT CLEARING REQUIREMENTS HAVE BEEN MET PRIOR TO MOVING FORWARD WITH EXCAVATION.
- DRAIN EXCAVATION STAKES WILL BE PLACED FOLLOWING APPROVAL OF SITE CLEARING.
- CONTRACTOR IS TO PERFORM PROPOSED EXCAVATION ACTIVITIES REQUIRED TO OBTAIN PROPOSED GRADES AND SIDE SLOPES AS DESIGNATED ON PLANS.
- CONTRACTOR MUST PERFORM DAILY RAKING, SEEDING, AND MULCHING OF DRAIN BANKS AND SPOILS.
- ENGINEER WILL STAKE ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES ALONG PORTIONS OF DRAIN THAT HAVE BEEN EXCAVATED DURING ROUTINE INSPECTIONS.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING SOIL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE ENTIRE PROJECT.
- FINAL PAYMENT WILL BE MADE ONCE ALL DRAIN BANKS, SPOILS, AND DISTURBED AREAS HAVE ESTABLISHED VEGETATION GROWING. ALL LAWN AREAS MUST BE RESTORED TO IN KIND CONDITIONS PRIOR TO FINAL PAYMENT.

GENERAL TIMING & SEQUENCE
INSTALL TEMPORARY CONTROL MEASURES
SITE CLEARING
UPDATE PER CONSTRUCTION TYPE example: (OPEN CHANNEL CONSTRUCTION)
RESTORATION
INSTALL AND ESTABLISH PERMANENT CONTROL MEASURES
REMOVE TEMPORARY CONTROL MEASURES

CONTINUED MAINTENANCE PROGRAM FOR PERMANENT SESC MEASURES	
RESPONSIBLE PARTY:	SAGINAW COUNTY PUBLIC WORKS COMMISSIONER
PERMANENT SESC MEASURE	MAINTENANCE PROCEDURE
SEEDING:	REPAIR BARE AREAS, APPLYING SUPPLEMENTAL SEED, MULCH, AND WATER AS NEEDED. MOWING CAN BE USED PERIODICALLY TO DISCOURAGE WEEDS.
RIPRAP:	REPAIR AREAS WHERE ROCK HAS BEEN DISPLACED. EXPAND RIPRAP AREA IF NEEDED.

SOIL EROSION & SEDIMENTATION CONTROL PLAN

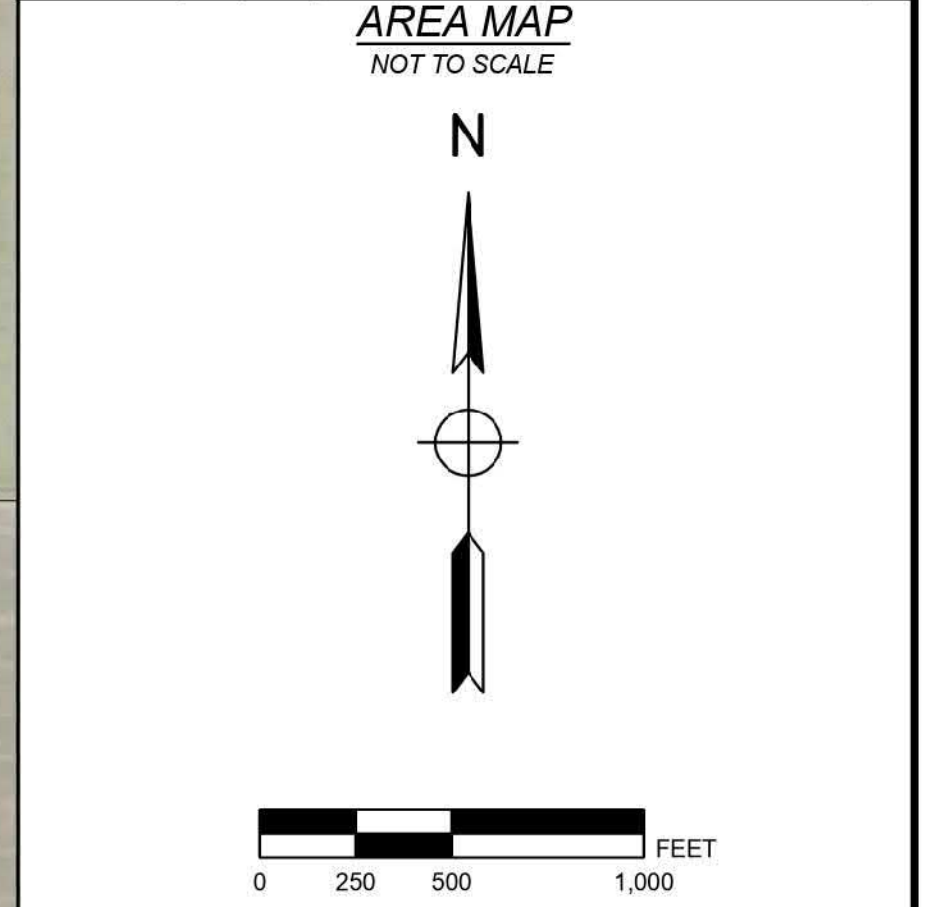
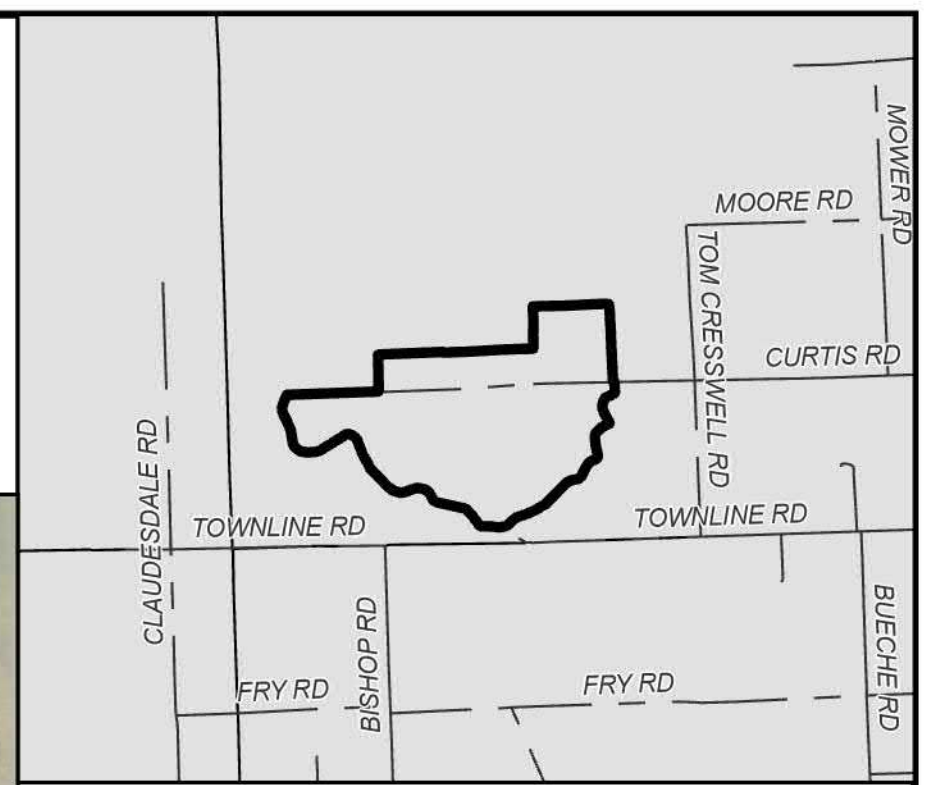
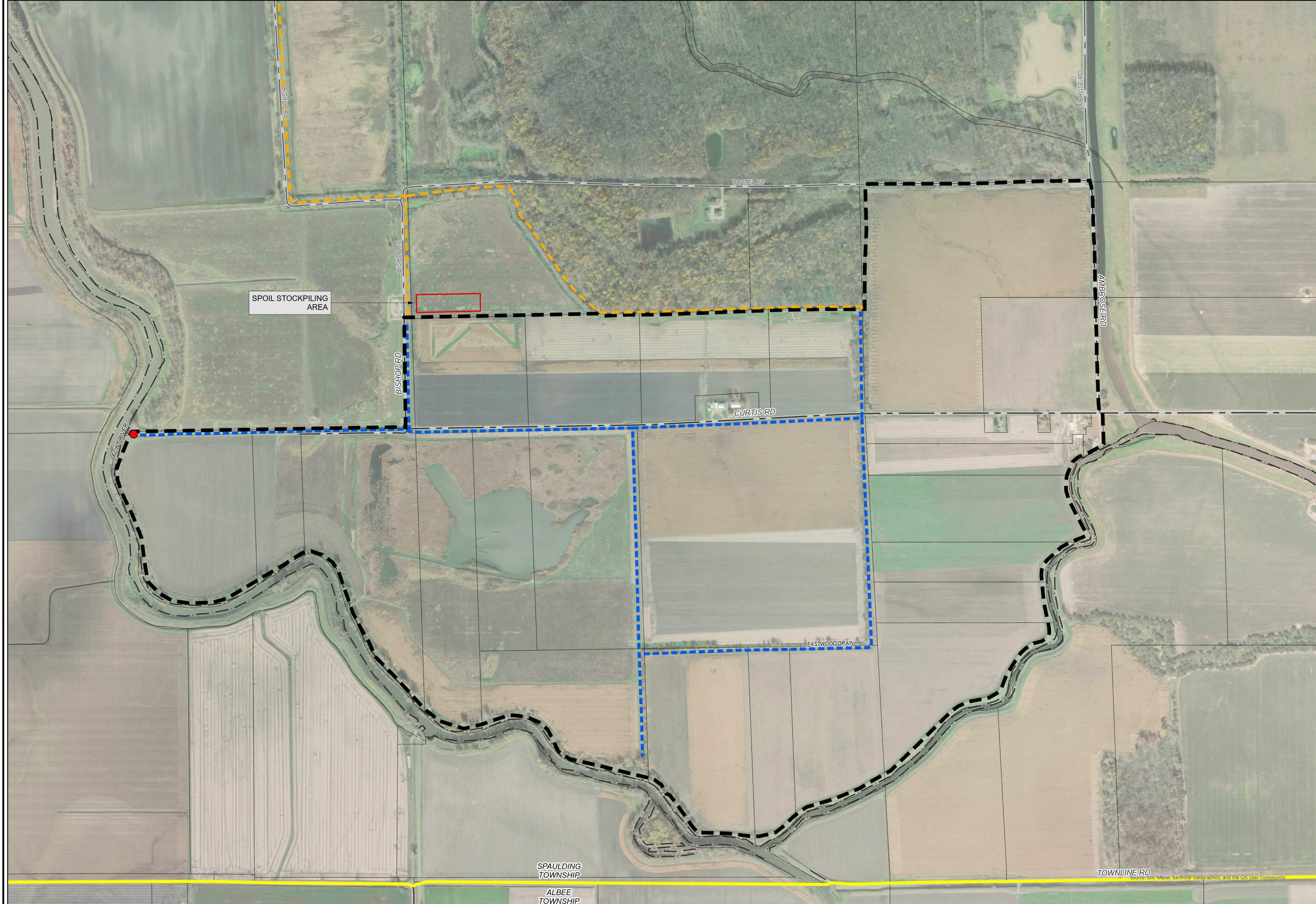
IN COMPLIANCE WITH SECTION 323.1703 OF PART 91, SOIL EROSION AND SEDIMENTATION CONTROL OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT, 1994 PA 451, AS AMENDED.

EASTWOOD DRAIN PUMP STATION SAGINAW COUNTY, MICHIGAN			
SOIL EROSION AND SEDIMENTATION CONTROL PLAN			
		DUNDEE OFFICE 125 Heile Blvd, Suite 2 Dundee, MI 48131 Tel: 734-423-3389 www.SpicerGroup.com	
DE BY: POC/NDC	CH BY: NDC	PROJECT NO. 126405SG2018	
DR BY: CBS	APP BY: RBH		
STDS.	SHEET 03 OF 13	T	
DATE: APRIL 2023	FILE NO. DR-4266-03	3	
SCALE: NOT TO SCALE			



EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN

BRIAN J. WENDLING. - SAGINAW COUNTY PUBLIC WORKS COMMISSIONER



- LEGEND**
- EASTWOOD DRAIN PUMP STATION
 - DRAIN TO BE ABANDONED
 - APPROXIMATE DRAIN LOCATION
 - APPROXIMATE LOCATION OF OUTLET WATERCOURSE
 - SPOIL STOCKPILING AREA
 - DRAINAGE DISTRICT BOUNDARY
 - STATE ROADS
 - COUNTY ROADS
 - LOCAL ROADS
 - PARCELS
 - MUNICIPALITY BOUNDARY

DRAINAGE DISTRICT BREAKDOWN

SPAULDING TOWNSHIP	1,088.64 AC.
TOTAL ACREAGE IN DISTRICT	
1,088.64 AC.	
LENGTH OF DRAIN	
EASTWOOD DRAIN	19,669.7 FT.

BY	MARK	REVISIONS	DATE
THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREIN IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.			

EASTWOOD DRAIN
SAGINAW COUNTY, MICHIGAN

DRAINAGE DISTRICT MAP

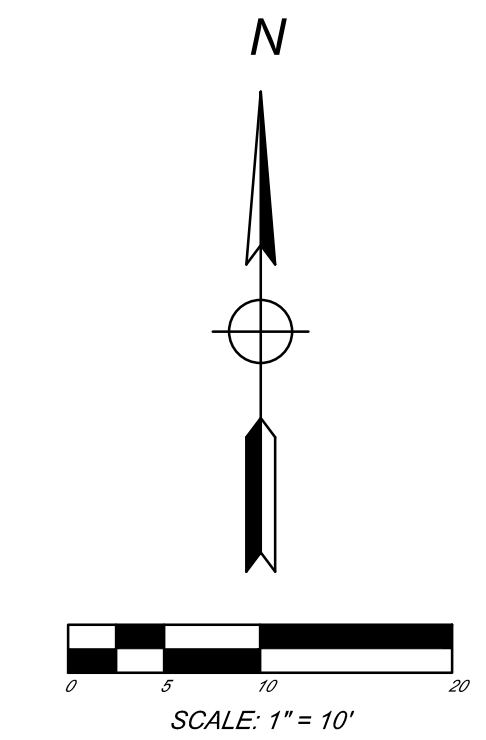
SAGINAW'S OFFICE
230 S Washington Ave
Saginaw, MI 48607
Tel. 989-754-4747
www.SpicerGroup.com

DE BY: TMC	CH BY: LDO	PROJECT NO.
DR BY: MKB	APP BY: NDC	126405SG2018
STDS.	SHEET 4 OF 13	G
DATE: APRIL 2023	FILE NO.	DR-4266-04
SCALE: 1:6,000		01

PATH: C:\USERS\ADMINISTRATOR\DESKTOP\PROJECTS\SPICER GROUP\PROJECTS\MASTER 197\ASSEMBLY\PRINT\DR-4266-04.DWG, PRINTED ON 4/11/2023 BY: MCKENZIE BETHUNE

SPAULDING TOWNSHIP
ALBEE TOWNSHIP

TOWNSHIP RD
Source: Esri, Maxar, Earthstar, GeoGraphics, and the GIS User Community



- CONSTRUCTION NOTES**
1. TYPICAL ELEVATION OF MISTEGAY CREEK IS EL 580.00 - 582.00
 2. SEE BIDDING DOCUMENTS FOR SOIL REPORT AND SOIL BORING LOG.
 3. SITE IS TO BE ACCESSED FROM THE INTERSECTION OF CURTIS ROAD AND BISHOP ROAD ALONG EITHER SIDE OF DRAIN.
 4. ALL SOILS FOR PROJECT LOCATION ARE MAPPED AS (95) SLOAN-CERESCO COMPLEX.

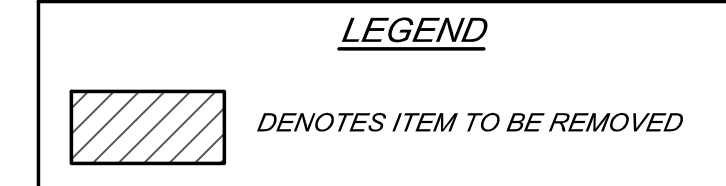
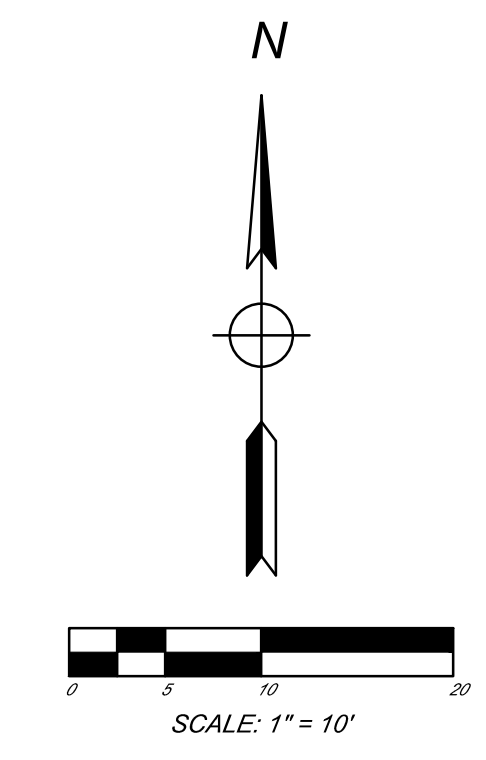
BY	MARK	REVISIONS	DATE
<small>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</small>			
EASTWOOD DRAIN PUMP STATION SAGINAW COUNTY, MICHIGAN			
SITE PLAN - EXISTING			
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com</small>	
DE. BY:	POC/MDC	CH. BY:	NDC
DR. BY:	CBS	APP. BY:	RBH
			PROJECT NO. 126405SG2018
STDS.	SHEET 05 OF 13		G 2
DATE	APRIL, 2023		
SCALE	1" = 10'		FILE NO. DR-4266-05

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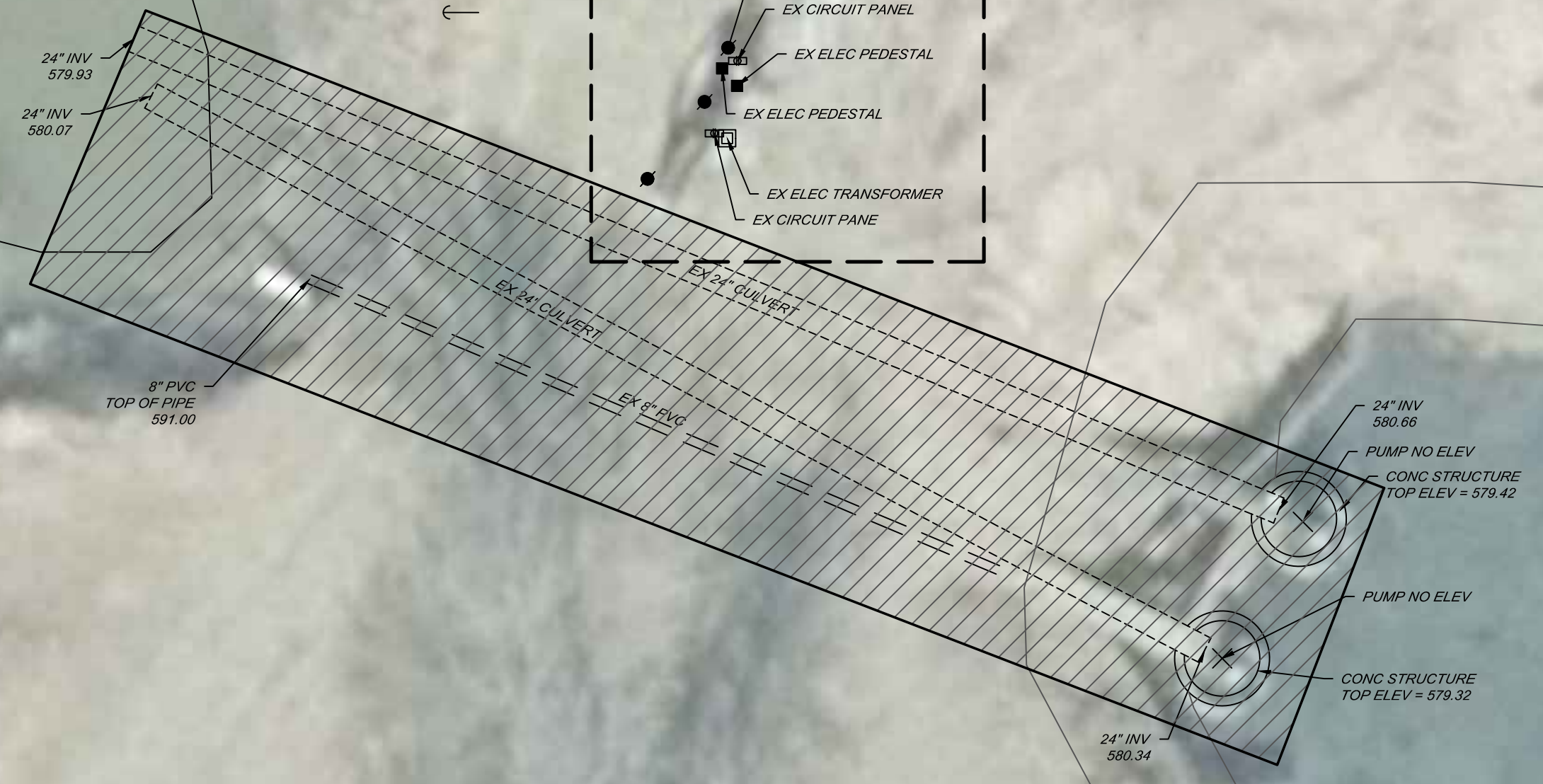
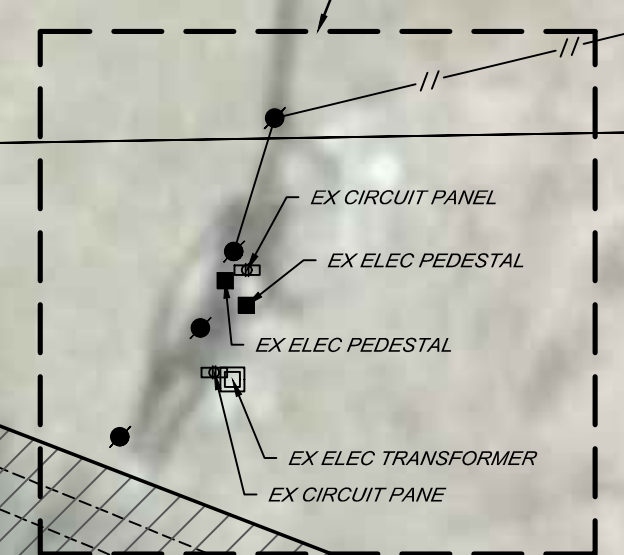
SECTION 30, T11N-R04E,
SPAULDING TOWNSHIP,
SAGINAW COUNTY, MICHIGAN

25-11-4-30-1001-000
UNITED STATES OF AMERICA

MISTEGUAY CREEK INTERCOUNTY DRAIN



SEE SHEET E1 FOR
ELECTRICAL DEMO



DEMOLITION NOTES

- CONTRACTOR TO REMOVE FOLLOWING EXISTING ITEMS:
- PUMPS
 - WET WELLS
 - DISCHARGE PIPES
 - ANY BURIED STRUCTURES IN THE AREA OF EXCAVATION OF THE PROPOSED IMPROVEMENTS. IN SUMMARY COMPLETE REMOVAL OF THE EXISTING PUMP STATION.
- ALL DEBRIS TO BE HAULED OFF SITE. COST TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR DEMOLITION.
- CONTRACTOR TO REMOVE AND SALVAGE EXISTING PUMPS, PIPES, FLAPGATES, AND ELECTRICAL COMPONENTS. SALVAGED ITEMS TO BE DELIVERED TO RC HERITAGE LAND CO. LLC BARN SITE LOCATED ON CURTIS ROAD 3/4 MILE EAST OF BISHOP ROAD. CONTRACTOR RESPONSIBLE FOR LOADING, HAULING, AND UNLOADING OF SALVAGED ITEMS. COST TO BE INCLUDED IN LUMP SUM PRICE BID FOR DEMOLITION. CONTRACTOR TO COORDINATE WITH LANDOWNER PRIOR TO DELIVERY OF SALVAGED ITEMS.
 - CONTRACTOR TO PROVIDE WATER CONTROL TO MAINTAIN WATER LEVEL IN EASTWOOD DRAIN BELOW ELEVATION 578.00.
 - WATER CONTROL PLAN TO BE SUBMITTED FOR REVIEW BY ENGINEER PRIOR TO DEMOLITION OF EXISTING PUMP STATION.

SECTION 31, T11N-R04E,
SPAULDING TOWNSHIP,
SAGINAW COUNTY, MICHIGAN

25-11-4-31-1003-000
SECTION 32 FARMS LLC

150' DRAIN EASEMENT

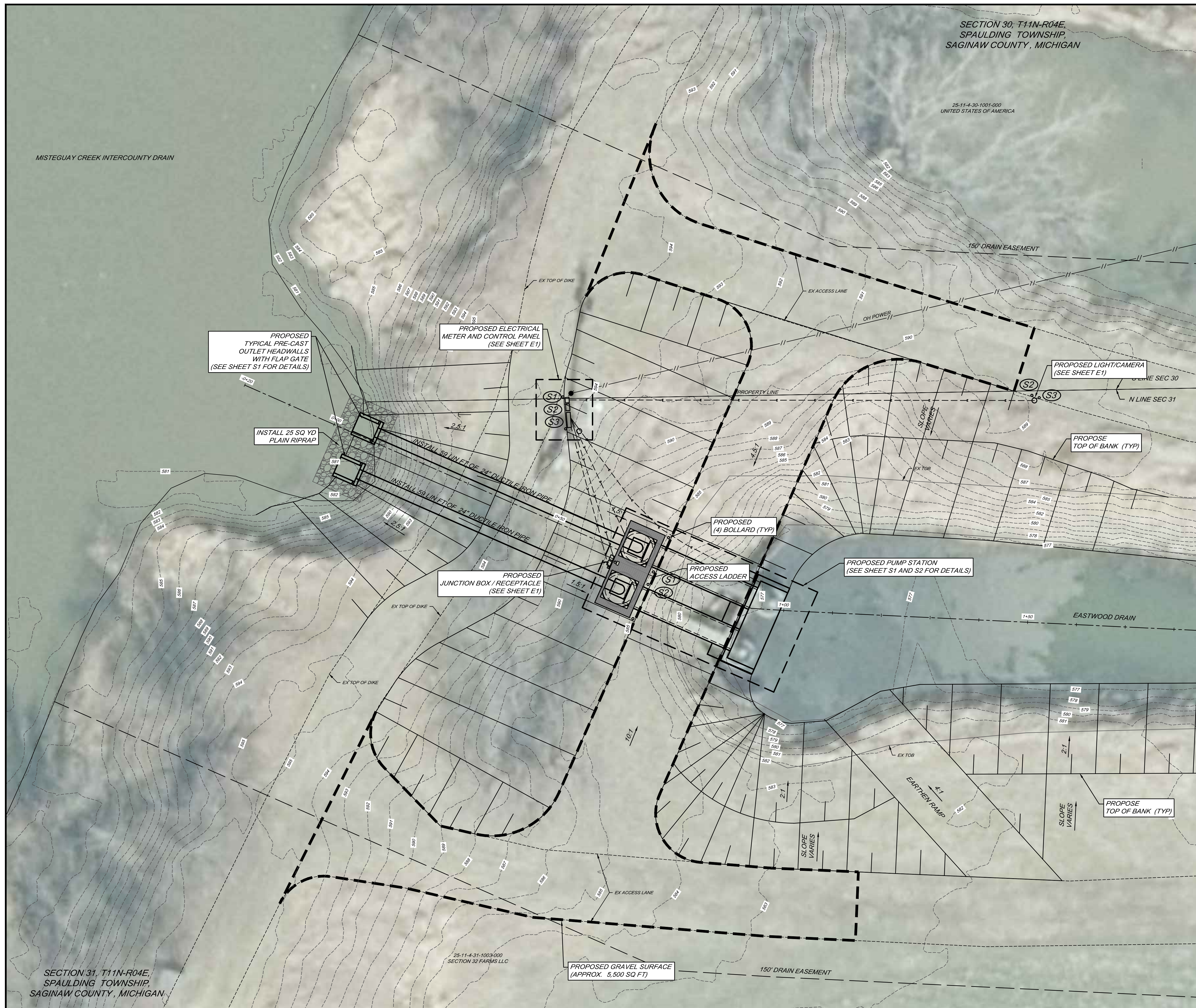
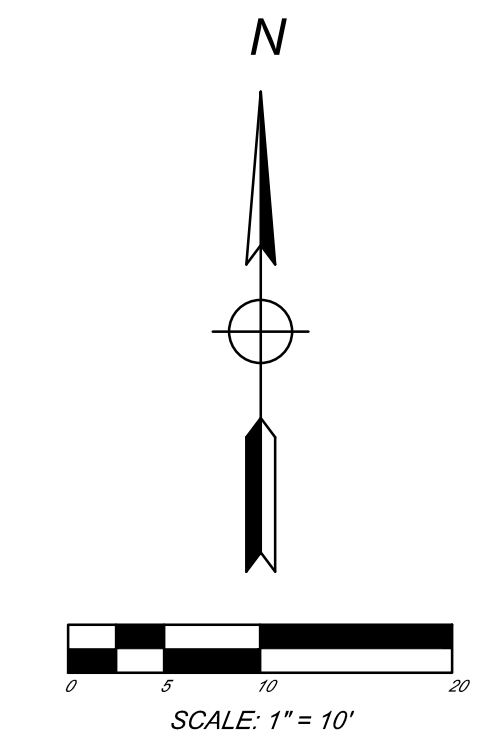
BY	MARK	REVISIONS	DATE
<small>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</small>			
EASTWOOD DRAIN PUMP STATION SAGINAW COUNTY, MICHIGAN			
EXISTING PUMP STATION DEMOLITION DETAIL			
		<small>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com</small>	
DE. BY:	PCC/MDC	CH. BY:	NDC
DR. BY:	CBS	APP. BY:	RBH
			PROJECT NO. 126405SG2018
STDS.	SHEET 06 OF 13		D
DATE	APRIL 2023	FILE NO.	DR-4266-06
SCALE	NOT TO SCALE		1

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SECTION 30, T11N-R04E,
SPAULDING TOWNSHIP,
SAGINAW COUNTY, MICHIGAN

25-11-4-30-1001-000
UNITED STATES OF AMERICA

MISTEGUAY CREEK INTERCOUNTY DRAIN



CONSTRUCTION NOTES:

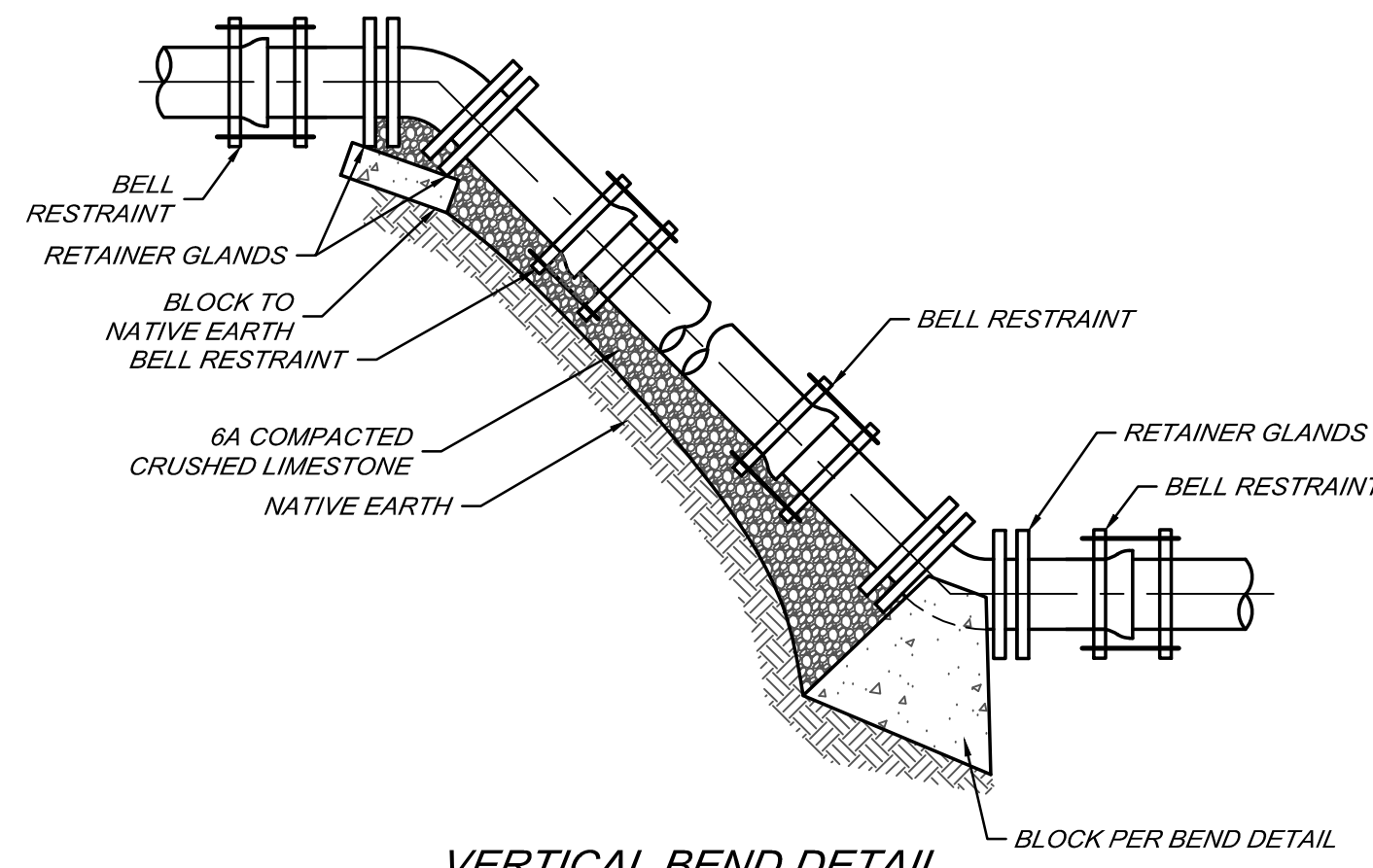
- (S#) DENOTES PROPOSED SIGN. SEE SIGN SCHEDULE SHEET C2.
- INSTALL MIN. 8" OF MDOT 22A CRUSHED LIMESTONE AS SOON ON PLANS.
- ALL PROPOSED SITE WORK AND GRADING SHOWN ON PLANS IS INCLUDED IN THE LUMP SUM BID PRICE FOR SITE WORK AND GRADING UNLESS NOTED OTHERWISE IN THE PROPOSAL.
- SEED AND MULCH ALL DISTURBED ON SITE AREAS NOT BEING PROPOSED AS A GRAVEL SURFACE.
- CONTRACTOR IS RESPONSIBLE FOR WATER CONTROL TO PROVIDE REQUIRED CONDITIONS FOR CONSTRUCTION. THIS MAY INCLUDE COFFER DAM CONSTRUCTION, DEWATERING, BYPASS PUMPING, ETC.
- OUTLET HEADWALL TO BE SIZED FOR OUTLET PIPE DIAMETER AND MUST BE LARGE ENOUGH TO ALLOW FOR ANCHORING OF PROPOSED FLAPGATE INTO PRE-CAST CONCRETE.
- SIGNS LOCATED NEAR LIGHT/CAMERA POLE ARE TO BE MOUNTED ON LIGHT/CAMERA POLE.
- SIGNS LOCATED AT PUMPS ARE TO BE MOUNTED ON WORK PLATFORM HANDRAIL.
- SIGNS LOCATED AT ELECTRICAL CONTROL PANEL ARE TO BE MOUNTED ON POST ADJACENT TO PANEL.
- CONTRACTOR TO EXCAVATE DRAIN BOTTOM AT A GRADUAL SLOPE FROM THE HEADWALL APPROX (EL 569.78) TO STATION 3+00 (EL 570.78). COST TO INCLUDED IN THE PER LINEAR FOOT BID ITEM FOR OPEN CHANNEL EXCAVATION.

BY	MARK	REVISIONS	DATE
<p><i>EASTWOOD DRAIN</i> SAGINAW COUNTY, MICHIGAN</p> <p>SITE PLAN - CONSTRUCTION</p>			
<p>DE. BY: POC/MDC DR. BY: CBS</p>		<p>CH. BY: NDC APP. BY: RBH</p>	
<p>STDS.</p>		<p>PROJECT NO. 126405SG2018</p>	
<p>DATE: APRIL 2023 SCALE: 1" = 10'</p>		<p>SHEET 07 OF 15 FILE NO. DR-4189-07</p>	
		<p>C 1</p>	

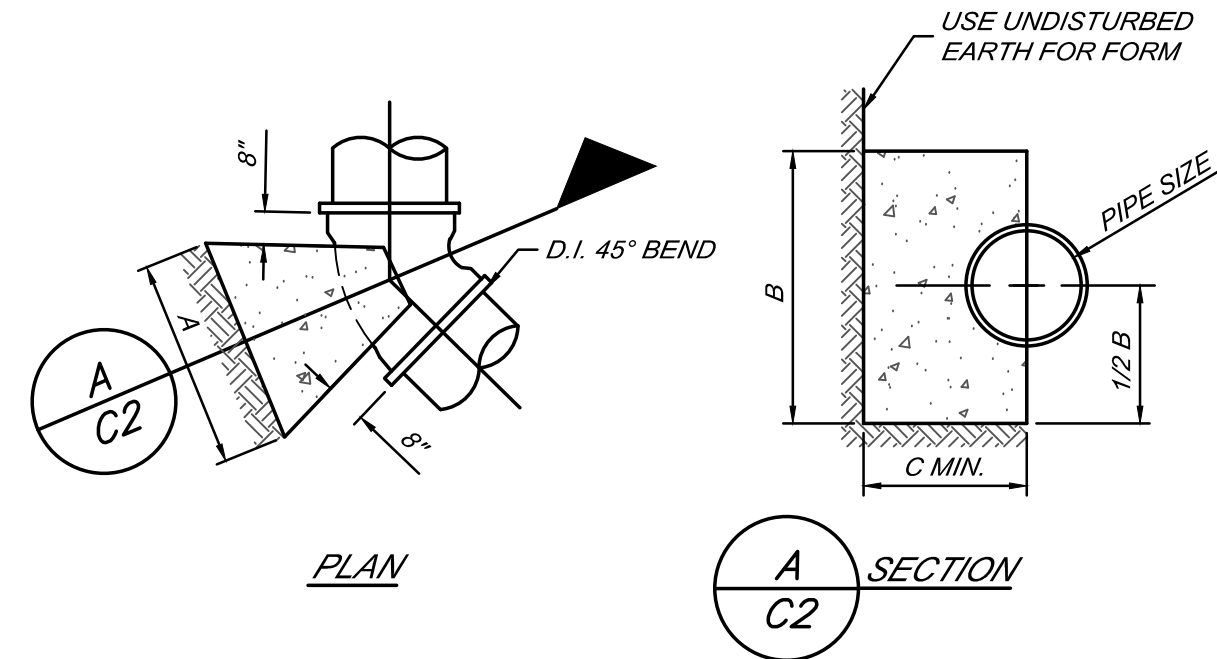
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PIPE SIZE	90° BEND OR TEE				45° BEND				22 1/2° BEND				11 1/4° BEND				PLUG			
	A	B	C	Q	A	B	C	Q	A	B	C	Q	A	B	C	Q	A	B	C	Q
6", 8" & 10"	3'-0"	2'-0"	1'-3"	0.3	2'-0"	1'-6"	1'-3"	0.1	1'-6"	1'-0"	1'-3"	0.1	1'-0"	1'-0"	1'-3"	0.1	2'-0"	2'-0"	1'-6"	0.2
12"	3'-0"	2'-6"	1'-6"	0.4	2'-0"	1'-6"	1'-6"	0.2	2'-0"	1'-0"	1'-6"	0.1	1'-0"	1'-0"	1'-6"	0.1	2'-0"	2'-6"	1'-6"	0.3
16"	4'-0"	3'-0"	2'-0"	0.9	3'-0"	3'-0"	2'-0"	0.5	2'-0"	2'-0"	2'-0"	0.2	1'-0"	2'-0"	2'-0"	0.1	3'-0"	3'-6"	1'-9"	0.7
20"	5'-0"	4'-6"	2'-6"	1.23	4'-0"	3'-0"	2'-6"	0.82	3'-0"	2'-6"	2'-6"	0.58	2'-0"	1'-10"	2'-6"	0.3	4'-0"	4'-0"	2'-6"	1.45
24"	6'-0"	5'-6"	3'-0"	2.74	4'-0"	4'-0"	3'-0"	1.21	3'-0"	3'-0"	3'-0"	0.8	2'-6"	2'-2"	3'-0"	0.42	5'-0"	5'-0"	3'-0"	2.78
30"	7'-0"	7'-0"	3'-9"	5.39	5'-6"	5'-0"	3'-9"	2.14	4'-0"	3'-0"	3'-9"	1.35	3'-0"	2'-8"	3'-9"	0.98	6'-0"	6'-0"	3'-9"	4.96
36"	8'-0"	7'-6"	4'-6"	8.12	6'-0"	4'-6"	4'-6"	4.03	5'-0"	4'-0"	4'-6"	2.77	3'-0"	3'-2"	4'-6"	1.36	8'-0"	6'-0"	4'-6"	8.00
42"	9'-0"	8'-0"	5'-3"	11.58	7'-0"	5'-3"	6'-3"	6.43	5'-0"	5'-0"	5'-3"	3.85	4'-0"	3'-9"	5'-3"	2.17	8'-0"	8'-0"	5'-3"	12.44

DETAIL TABLE FOR PIPE SIZES FOR BENDS AND PLUGS



VERTICAL BEND DETAIL
NOT TO SCALE



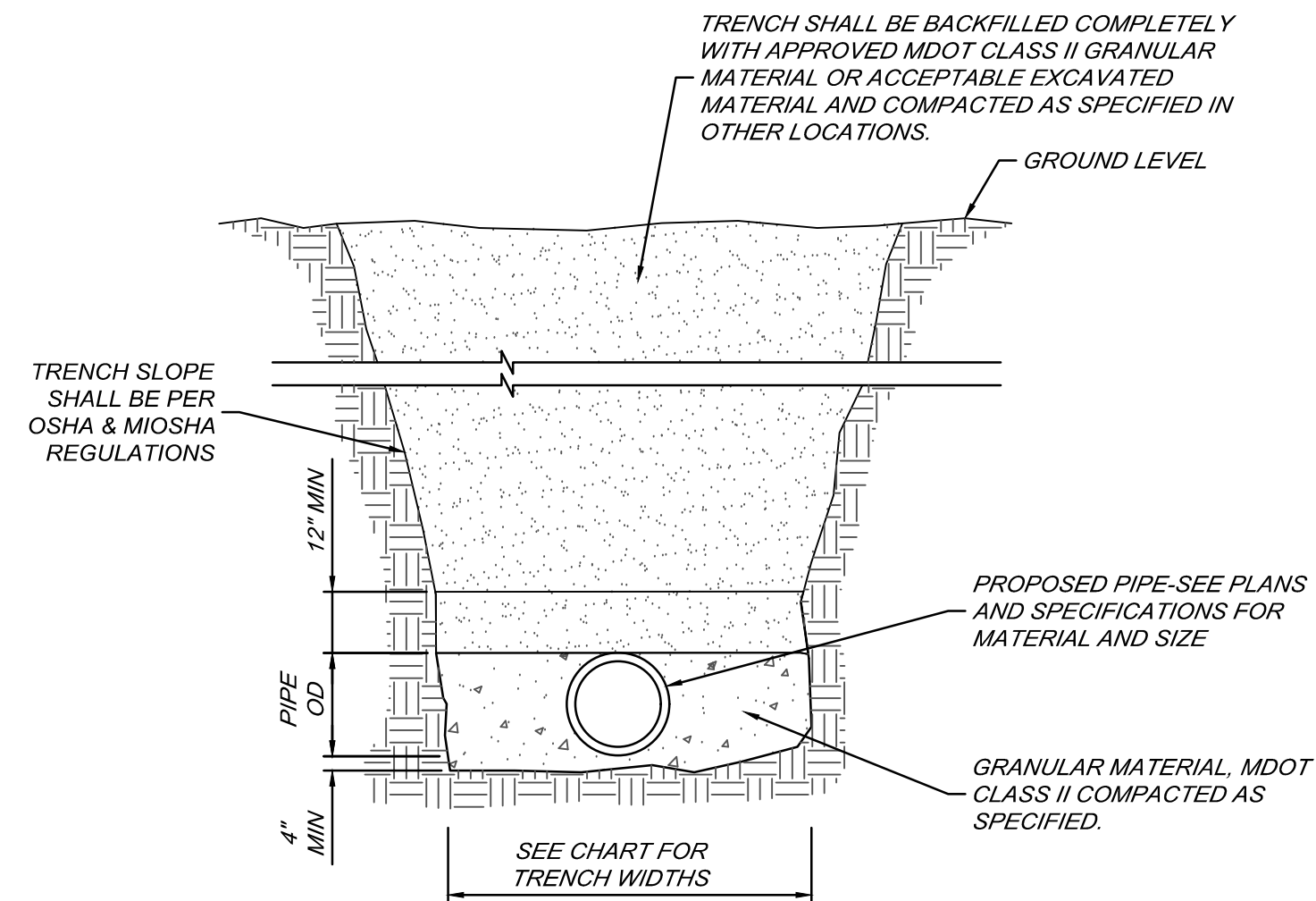
DETAIL OF BLOCK FOR 45° BEND

Q - MIN. CU. YD. CONCRETE PER BLOCK
NOT TO SCALE

TRENCH WIDTH CHART

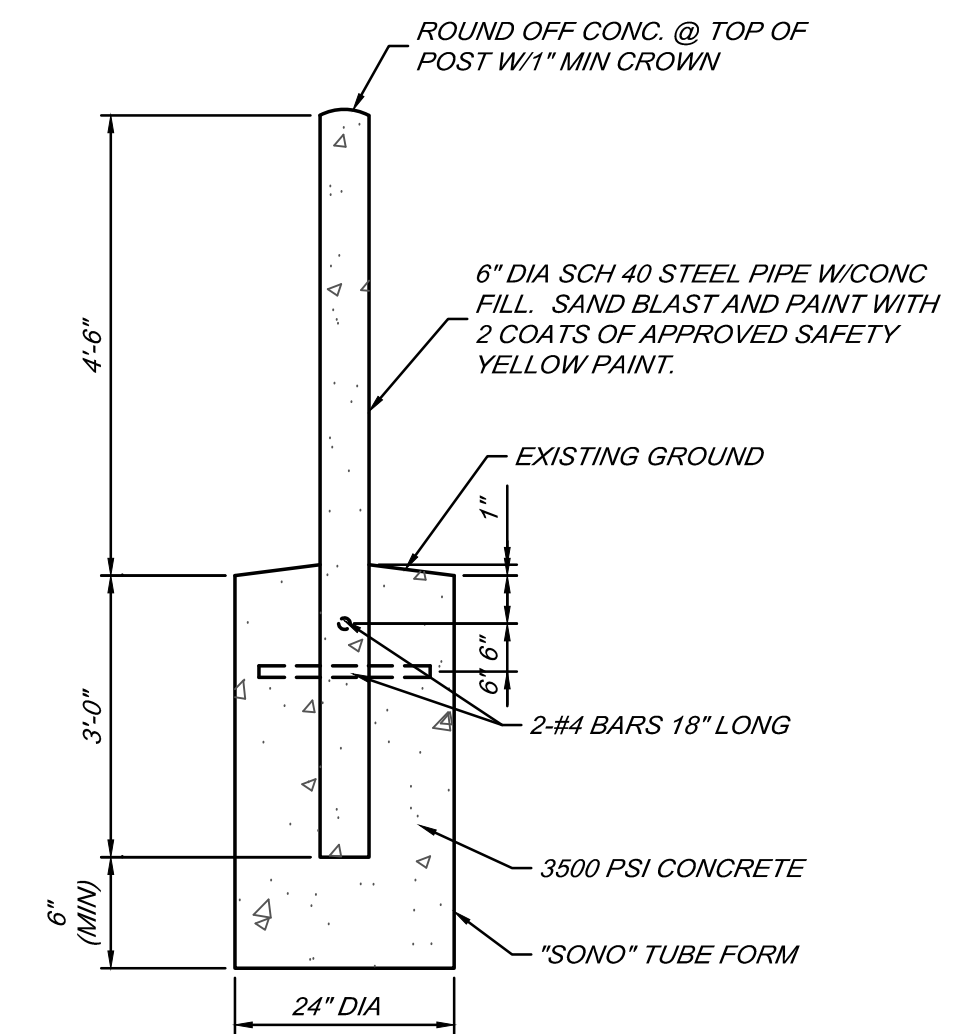
PIPE SIZE	MINIMUM	MAXIMUM
6"	18"	24"
8" & 10"	24"	30"
12" & 15"	30"	36"
18"	34"	40"
21"	38"	42"
24"	42"	46"
27"	45"	49"
30"	49"	53"
36"	56"	60"
LARGER THAN 36"	I.D. +20"	I.D. +24"

NOTE: CONTRACTOR SHALL USE APPROPRIATE MEASURES, APPROVED BY THE ENGINEER, TO PROVIDE A SEALED CONNECTION.



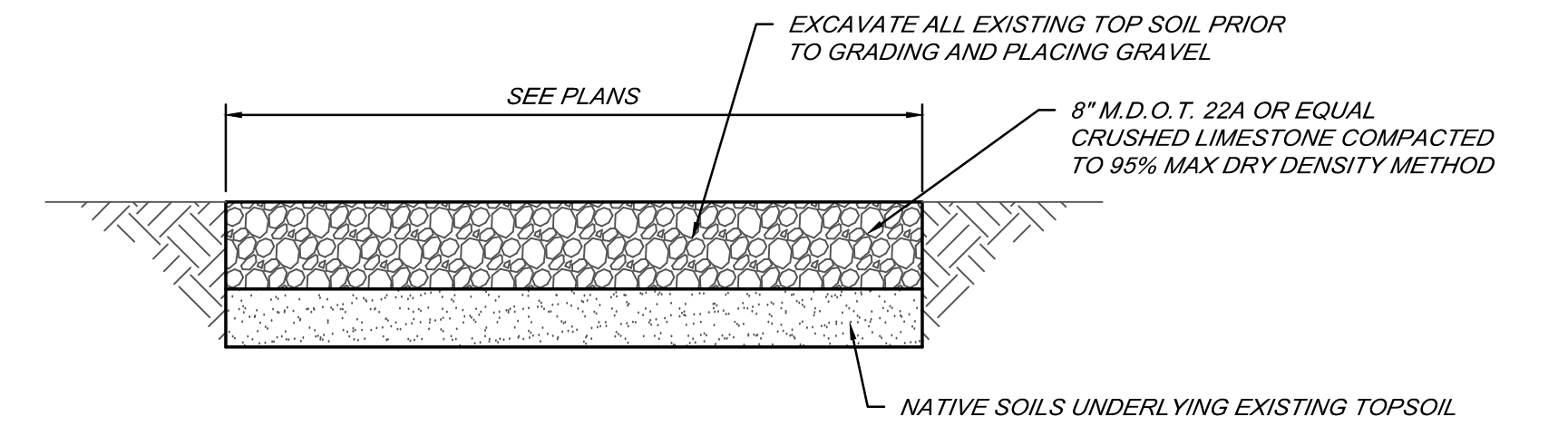
DUCTILE IRON PIPE TRENCH DETAIL

NOT TO SCALE



TYPICAL BOLLARD DETAIL

NOT TO SCALE



TYPICAL GRAVEL SURFACE CROSS SECTION

NOT TO SCALE

SIGN SCHEDULE

(S1) **DANGER**
EQUIPMENT STARTS AUTOMATICALLY

(S2) **WARNING**
NO TRESPASSING

(S3) EASTWOOD DRAIN PUMP STATION
SAGINAW COUNTY PUBLIC WORKS COMMISSIONER
(989) 790-5258

NOT TO SCALE

ALL SIGNS PER OSHA STANDARDS & SUPPLIED WITH MOUNTING HOLES AS SHOWN.

MATERIAL - 0.063" THICK REFLECTIVE ALUMINUM
SIZE - 18" x 12" (U.N.O.)

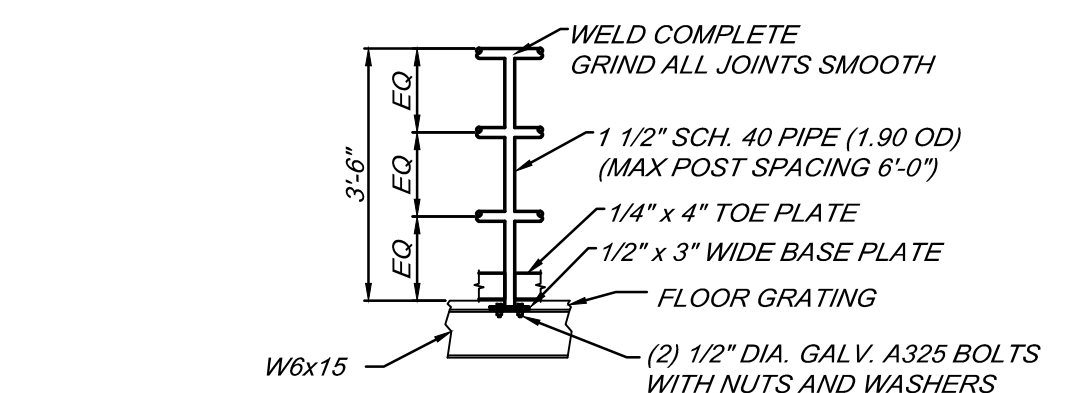
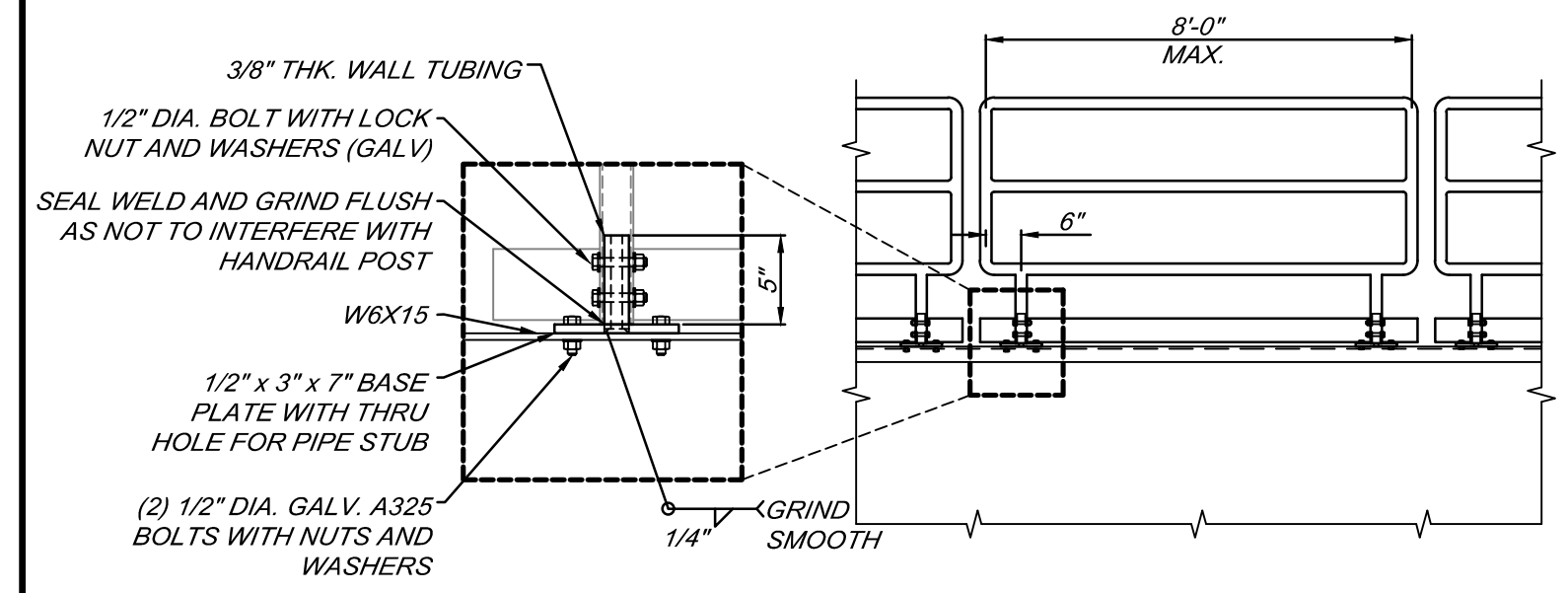
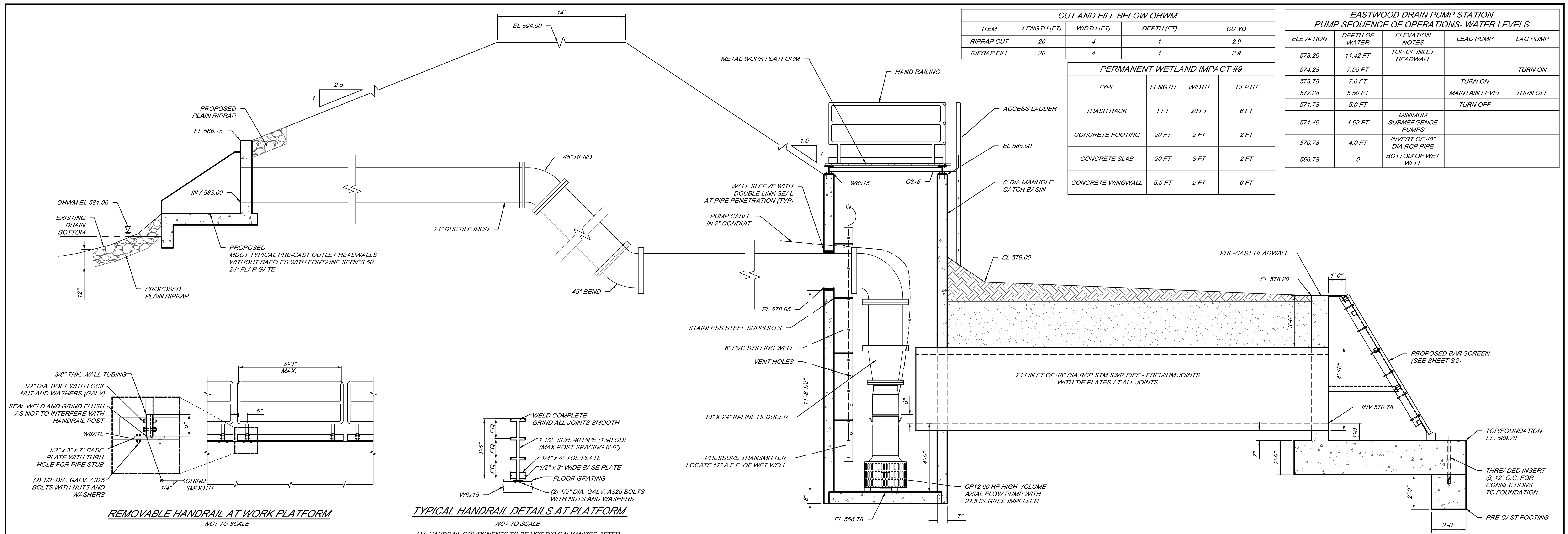
COST FOR SIGNS ARE INCLUDED IN LUMP SUM BID FOR SITEWORK AND GRADING

BY	MARK	REVISIONS	DATE
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EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN			
SITE CONSTRUCTION TYPICAL DETAILS			
Spicer Group		SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com	
DE. BY: POC/NDC	CH. BY: NDC	PROJECT NO. 126405SG2018	
DR. BY: CBS	APP. BY: RBH		
STDS.	SHEET 08 OF 15	C	
DATE: APRIL 2023	FILE NO. DR-4189-08	2	
SCALE: AS SHOWN			

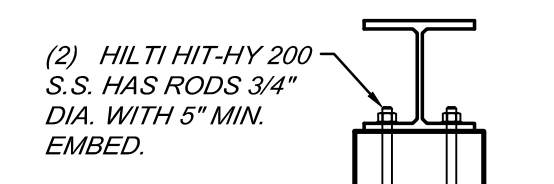
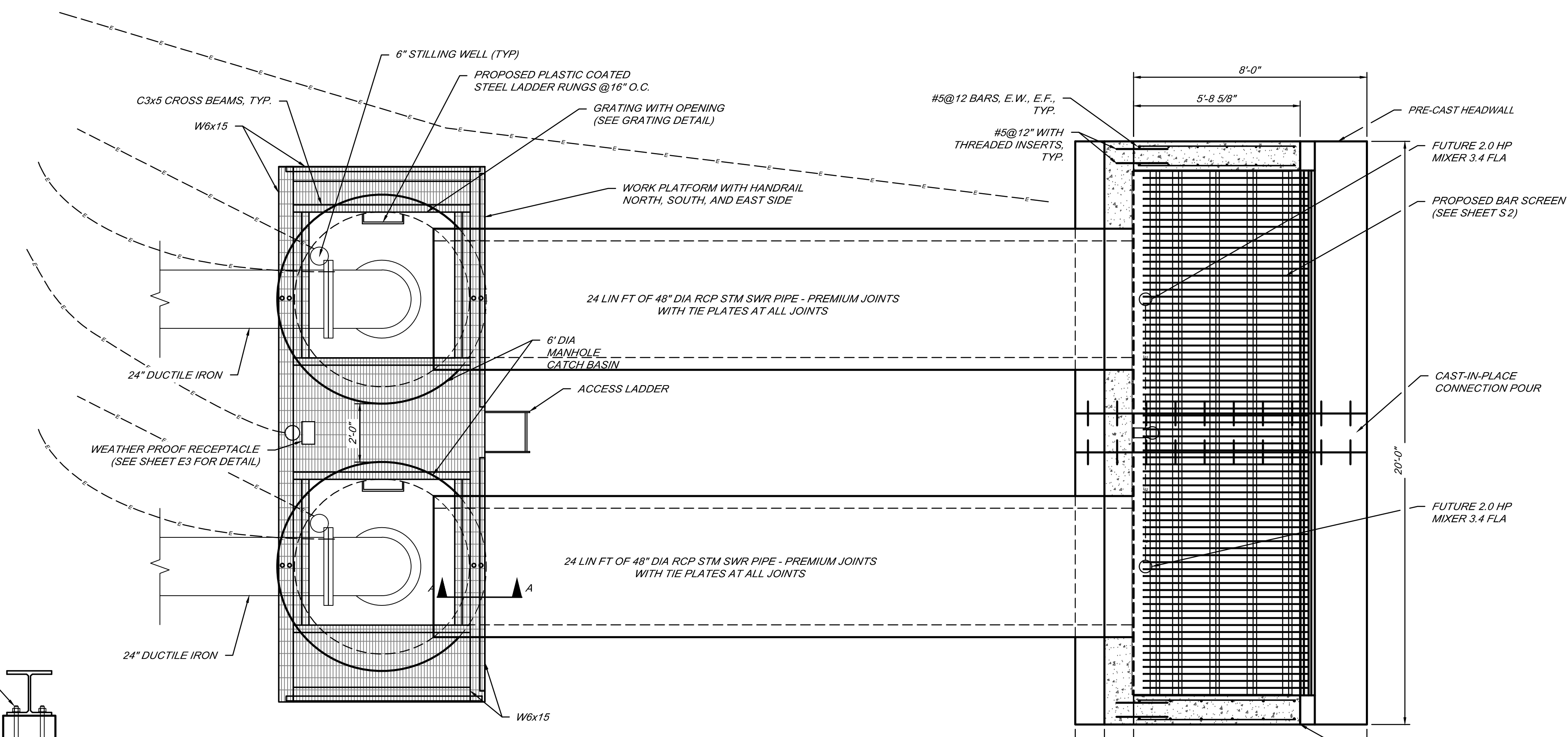
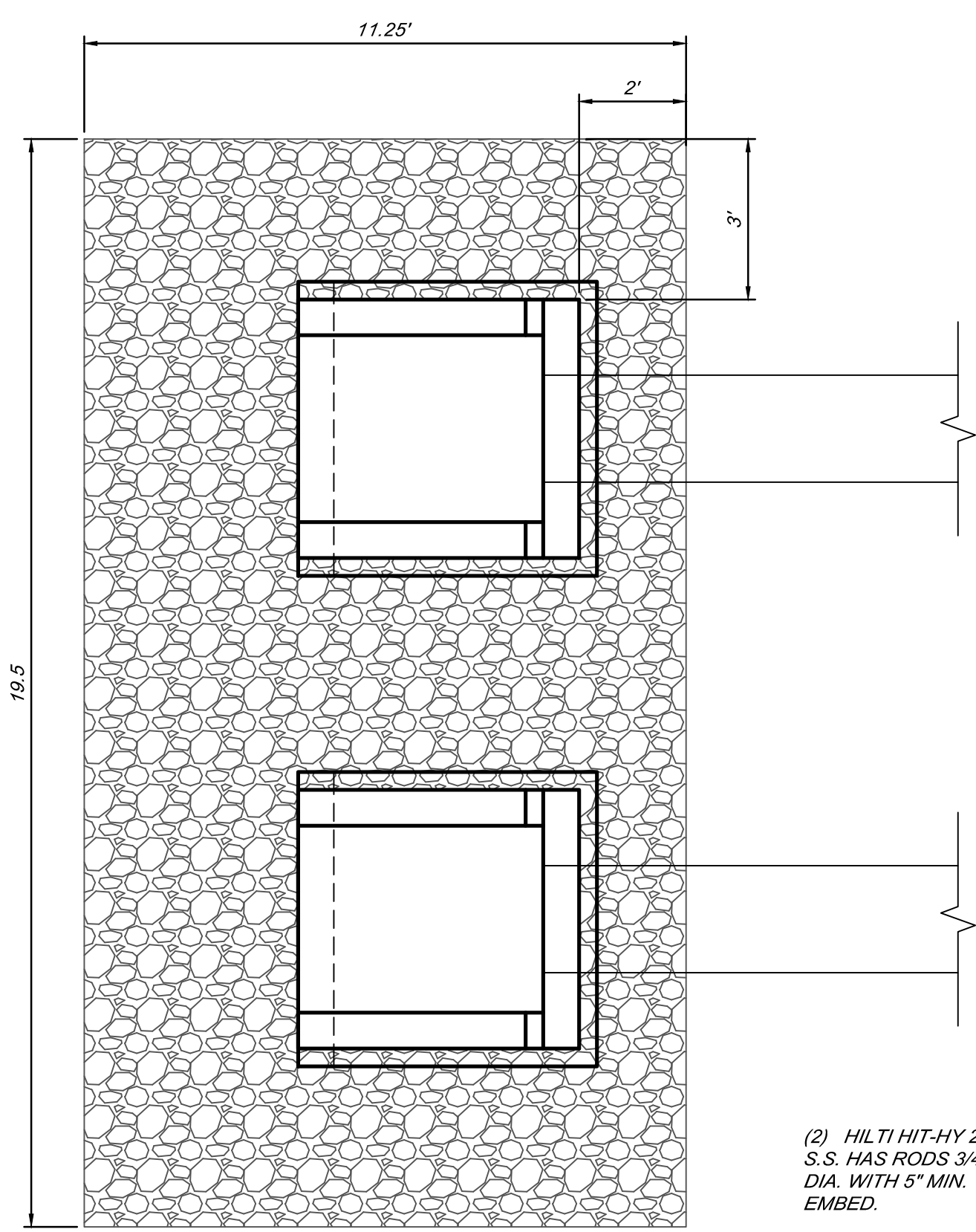
CUT AND FILL BELOW OHWM				
ITEM	LENGTH (FT)	WIDTH (FT)	DEPTH (FT)	CU YD
RIPRAP CUT	20	4	1	2.9
RIPRAP FILL	20	4	1	2.9

EASTWOOD DRAIN PUMP STATION PUMP SEQUENCE OF OPERATIONS- WATER LEVELS				
ELEVATION	DEPTH OF WATER	ELEVATION NOTES	LEAD PUMP	LAG PUMP
578.20	11.42 FT	TOP OF INLET HEADWALL		
574.28	7.50 FT			TURN ON
573.78	7.0 FT		TURN ON	
572.28	5.50 FT		MAINTAIN LEVEL	TURN OFF
571.78	5.0 FT		TURN OFF	
571.40	4.62 FT	MINIMUM SUBMERGENCE PUMPS		
570.78	4.0 FT	INVERT OF 48" DIA RCP PIPE		
566.78	0	BOTTOM OF WET WELL		

PERMANENT WETLAND IMPACT #9			
TYPE	LENGTH	WIDTH	DEPTH
TRASH RACK	1 FT	20 FT	6 FT
CONCRETE FOOTING	20 FT	2 FT	2 FT
CONCRETE SLAB	20 FT	8 FT	2 FT
CONCRETE WINGWALL	5.5 FT	2 FT	6 FT



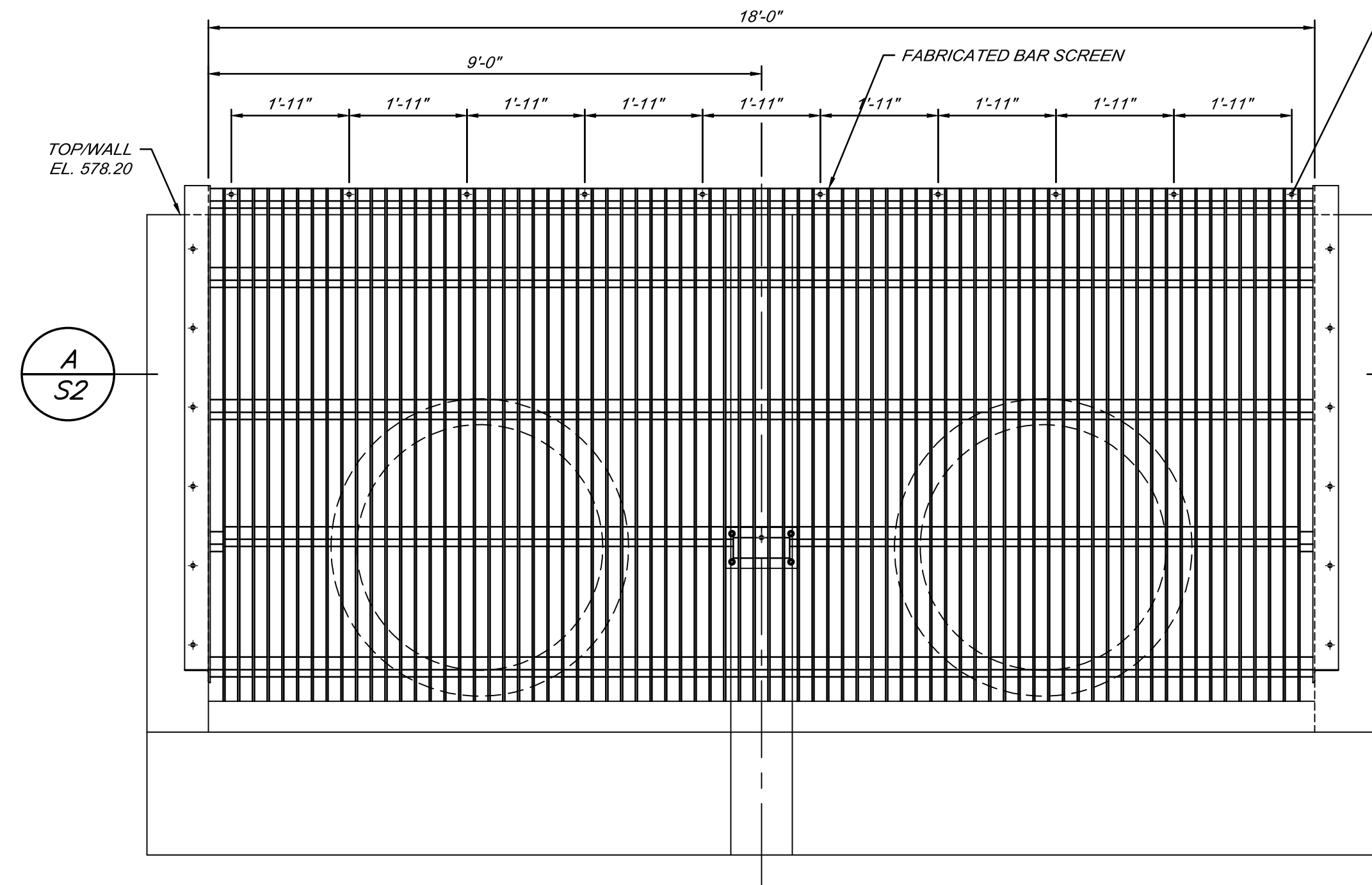
- CONSTRUCTION NOTES**
- ALL RCP STORM SEWER PIPE JOINTS SHALL HAVE JOINT TIES AT TWO POINTS. TIES SHALL BE 3"x18"x3/8" STEEL PLATE WITH 3/4" ANCHOR BOLT EMBEDDED 2.5".
 - FLAPGATE ANCHORS NOT SUPPLIED BY MANUFACTURE. FLAPGATES TO BE ANCHORED PER MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY ENGINEER.
 - CONTRACTOR SHALL SECURE ALL MECHANICAL JOINT FITTINGS WITH RETAINER GLANDS IN ADDITION TO THRUST BLOCKING. RETAINER GLANDS SHALL BE MEGA-LUG AS MANUFACTURED BY EBAA IRON OR APPROVED EQUAL.
 - ALL BURIED FITTINGS SHALL BE RESTRAINED MECHANICAL JOINTS AND SHALL HAVE THRUST BLOCKS INSTALLED PER DETAIL.
 - ALL BELLS AND SPIGOT JOINTS SHALL BE RESTRAINED.
 - ALL JOINTS IN WET WELL SHALL BE FLANGED.
 - ALL HARDWARE FOR JOINTS SHALL BE STAINLESS.
 - WRAP ALL FITTINGS, VALVES, HYDRANTS, AND ALL DUCTILE IRON PIPE IN 8 MIL POLYETHYLENE SHEET.
 - THE CONCRETE USED FOR BLOCKING SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI IN 28 DAYS.



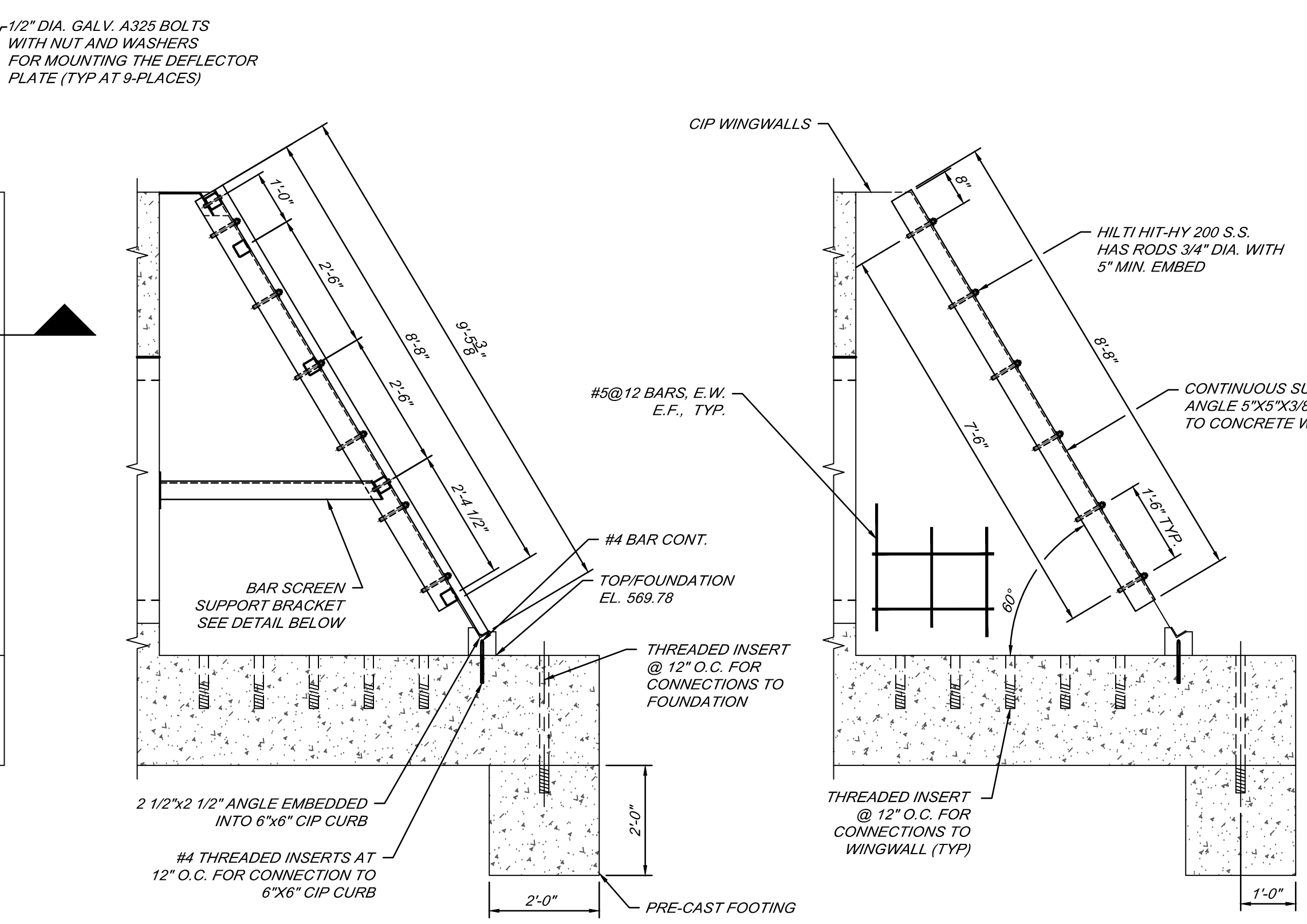
BY	MARK	REVISIONS	DATE
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<p>EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN</p>			
<p>PUMP STATION PLAN</p>			
<p>DE. BY: POC/MDC DR. BY: CBS</p>		<p>CH. BY: NDC APP. BY: RBH</p>	
		<p>PROJECT NO. 126405SG2018</p>	
STDS.		SHEET 09 OF 15	
DATE: APRIL 2023		FILE NO. DR-4189-09	
SCALE: AS SHOWN		<p style="font-size: 2em; font-weight: bold;">S</p> <p style="font-size: 2em; font-weight: bold;">1</p>	

Spicer Group
SAGINAW OFFICE
230 S. Washington Ave.
Saginaw, MI 48607
Tel: 989-754-4717
Fax: 989-754-4440
www.SpicerGroup.com

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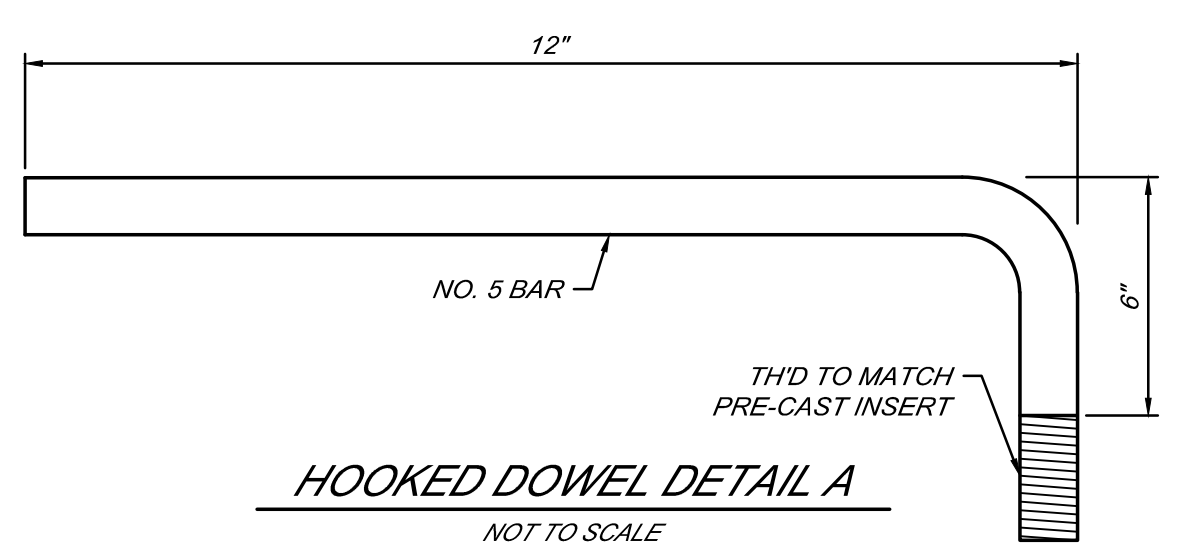


BAR SCREEN - ELEVATION
SCALE: 1/2" = 1'-0"

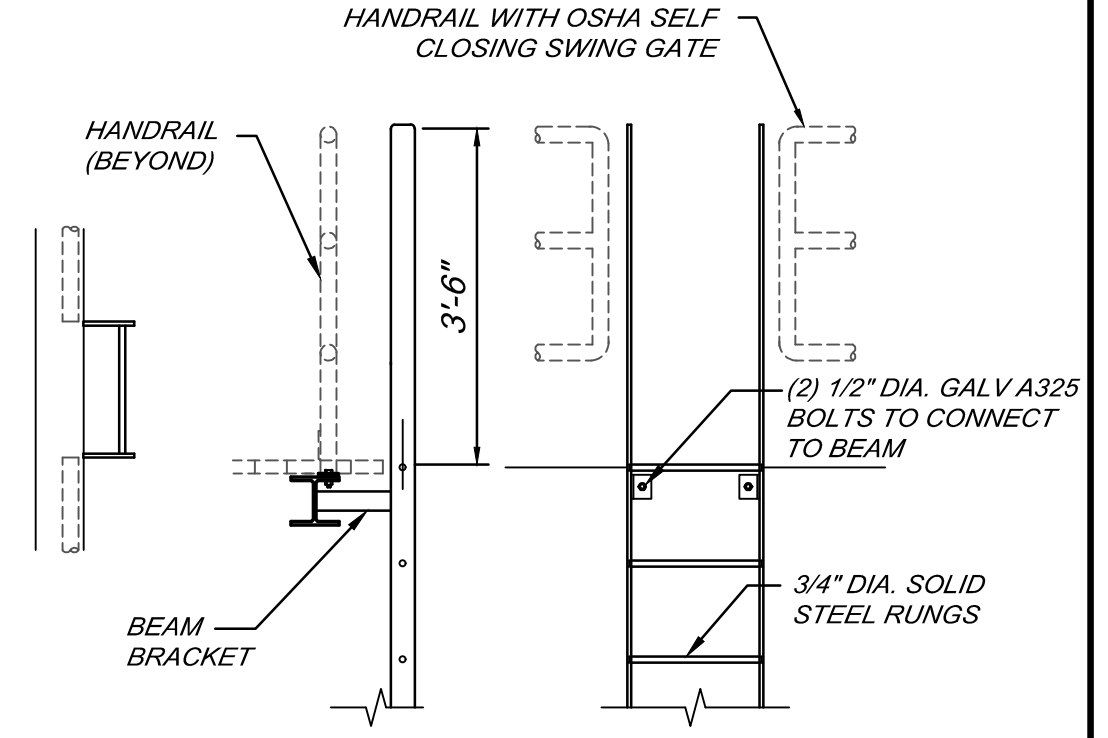


BAR SCREEN - TYP. SECTION
SCALE: 1/2" = 1'-0"

BAR SCREEN - SUPPORT ANGLE
SCALE: 1/2" = 1'-0"

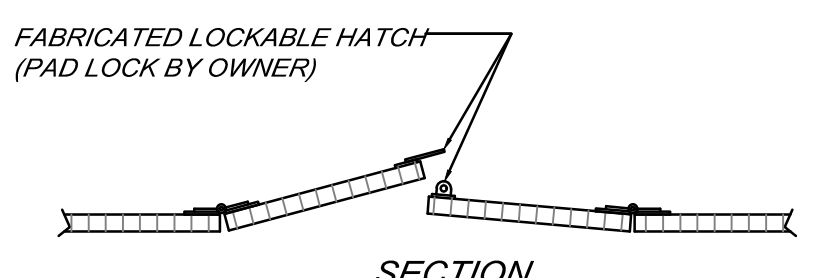


HOOKED DOWEL DETAIL A
NOT TO SCALE

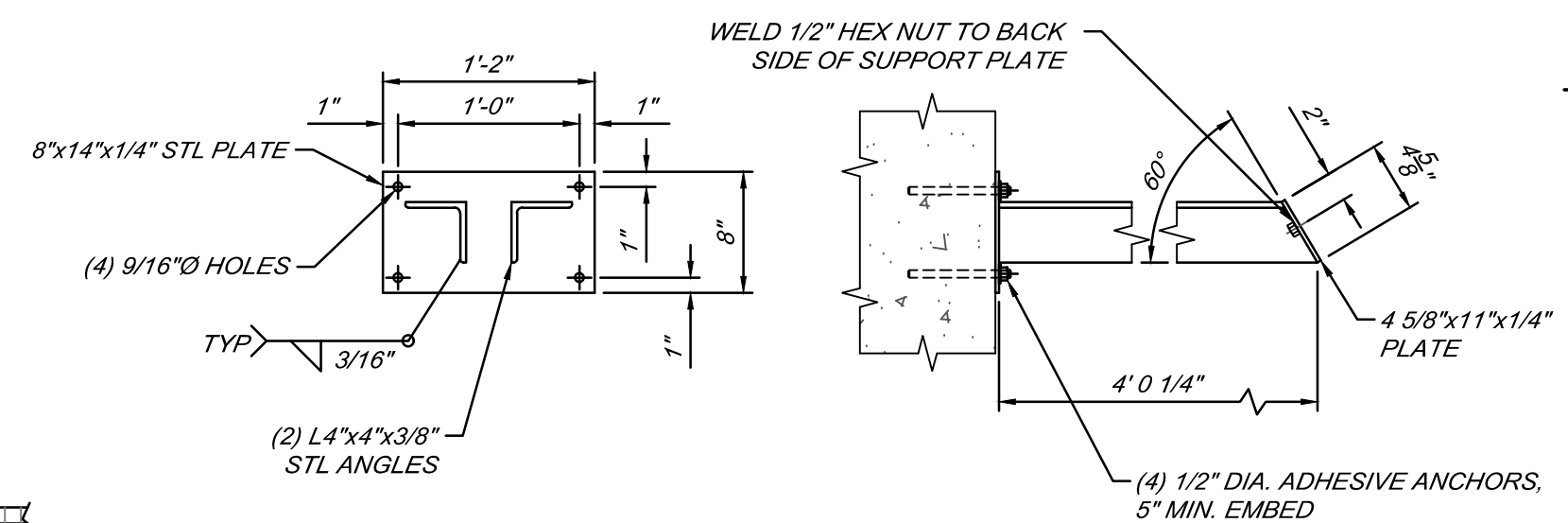


TYPICAL STEEL LADDER DETAILS
NOT TO SCALE

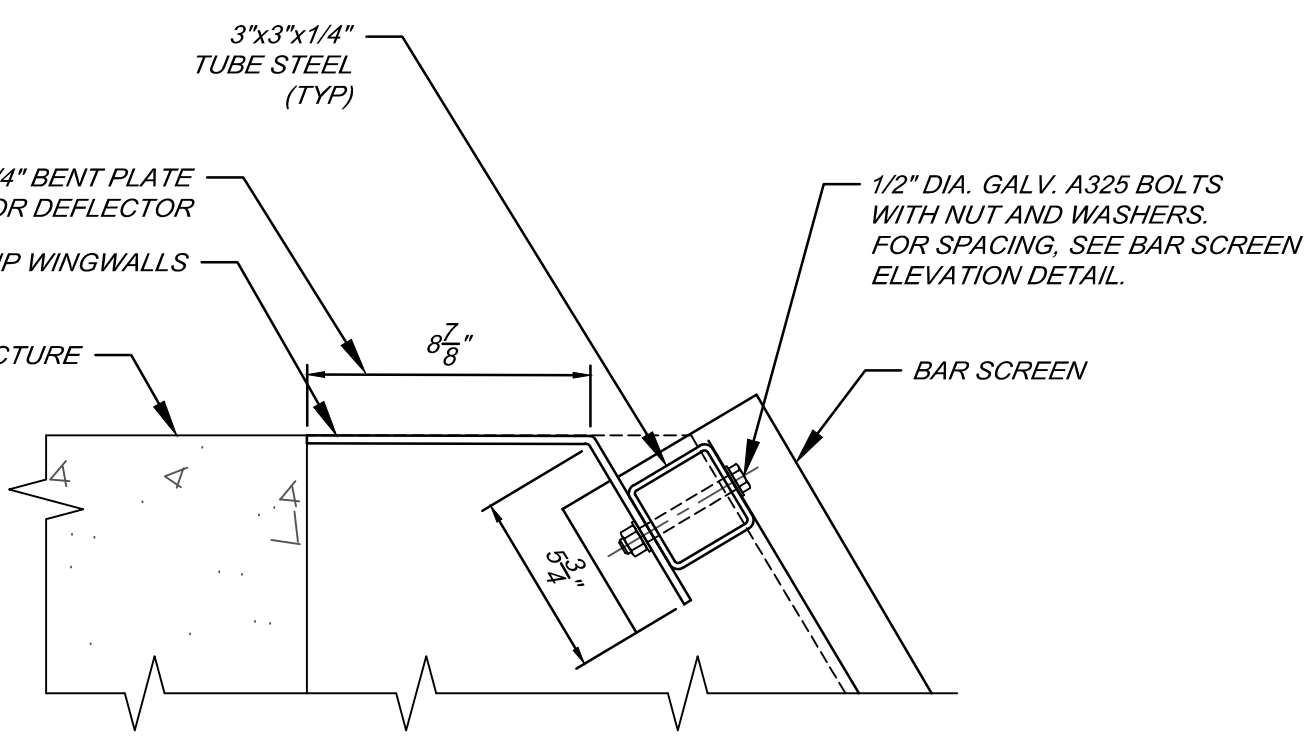
COMPLETE ASSEMBLY TO BE HOT DIP GALVANIZED AFTER FABRICATION



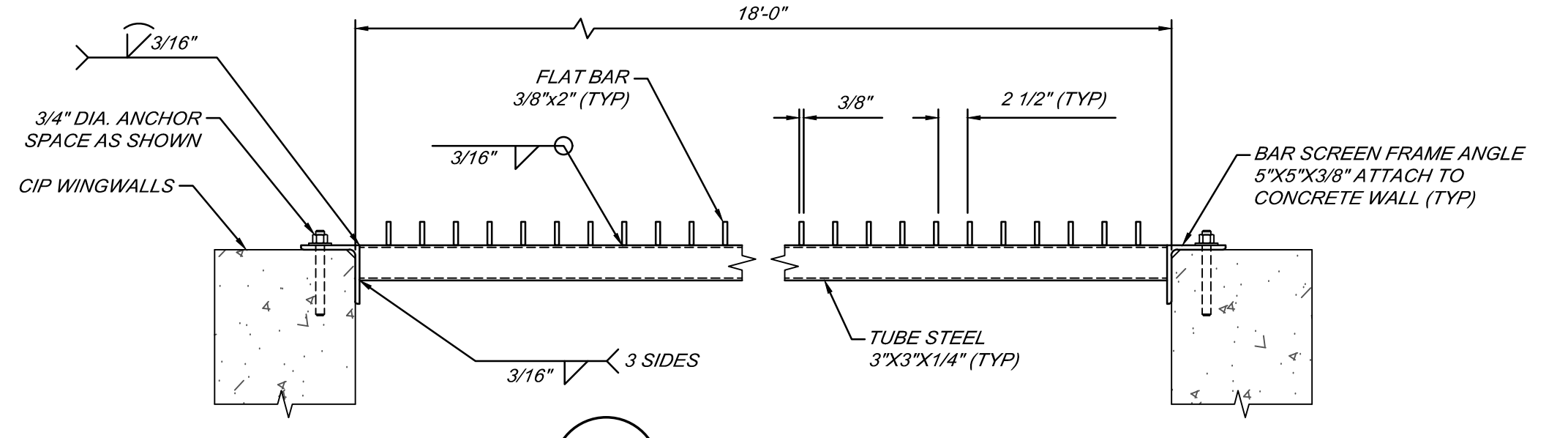
SECTION
7'-0 3/4"



SUPPORT BRACKET DETAIL
SCALE: 1" = 1'-0"
- HOT DIP GALVANIZE AFTER FABRICATION



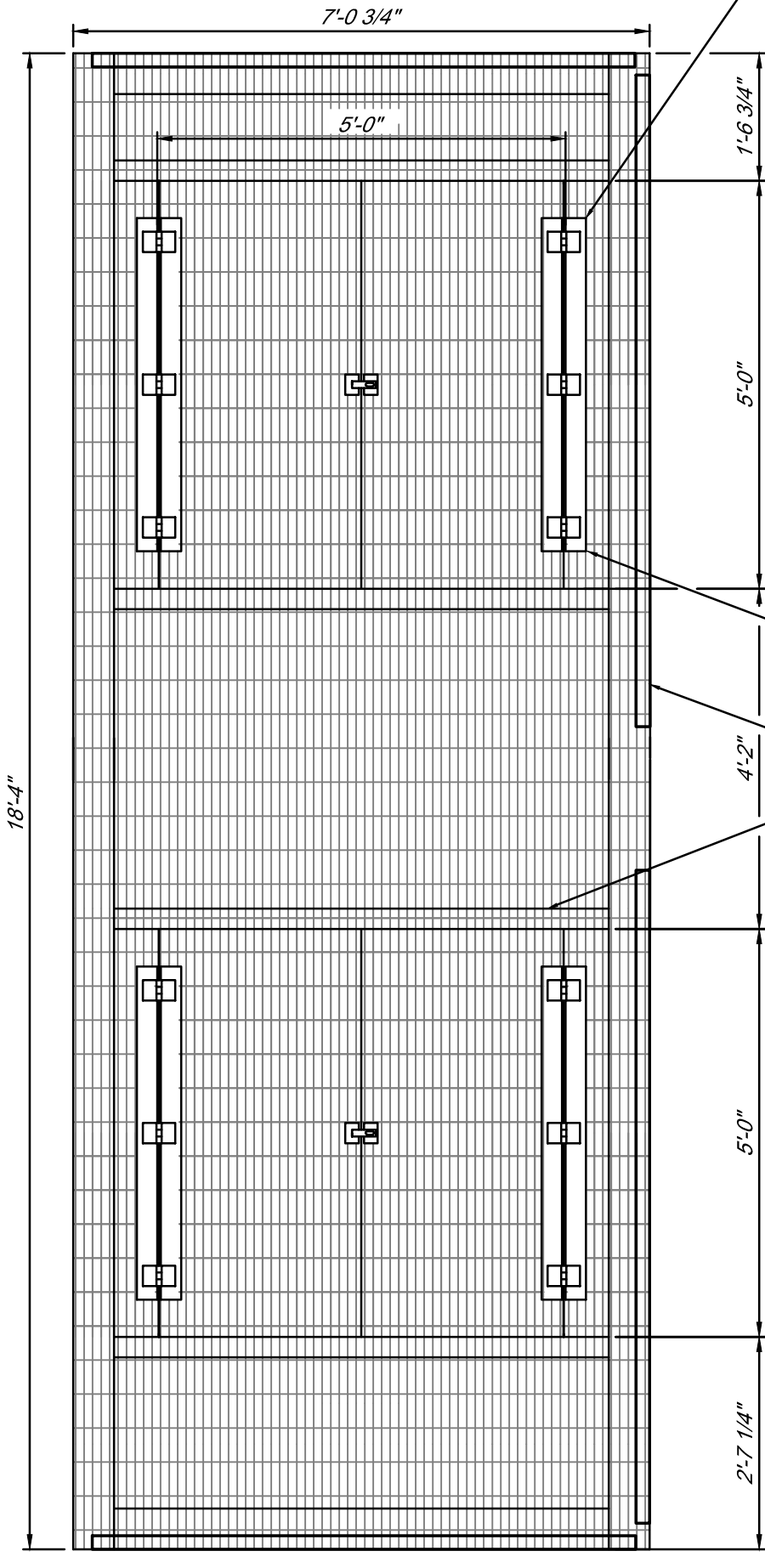
DEFLECTOR CONNECTION DETAIL
SCALE: 2" = 1'-0"



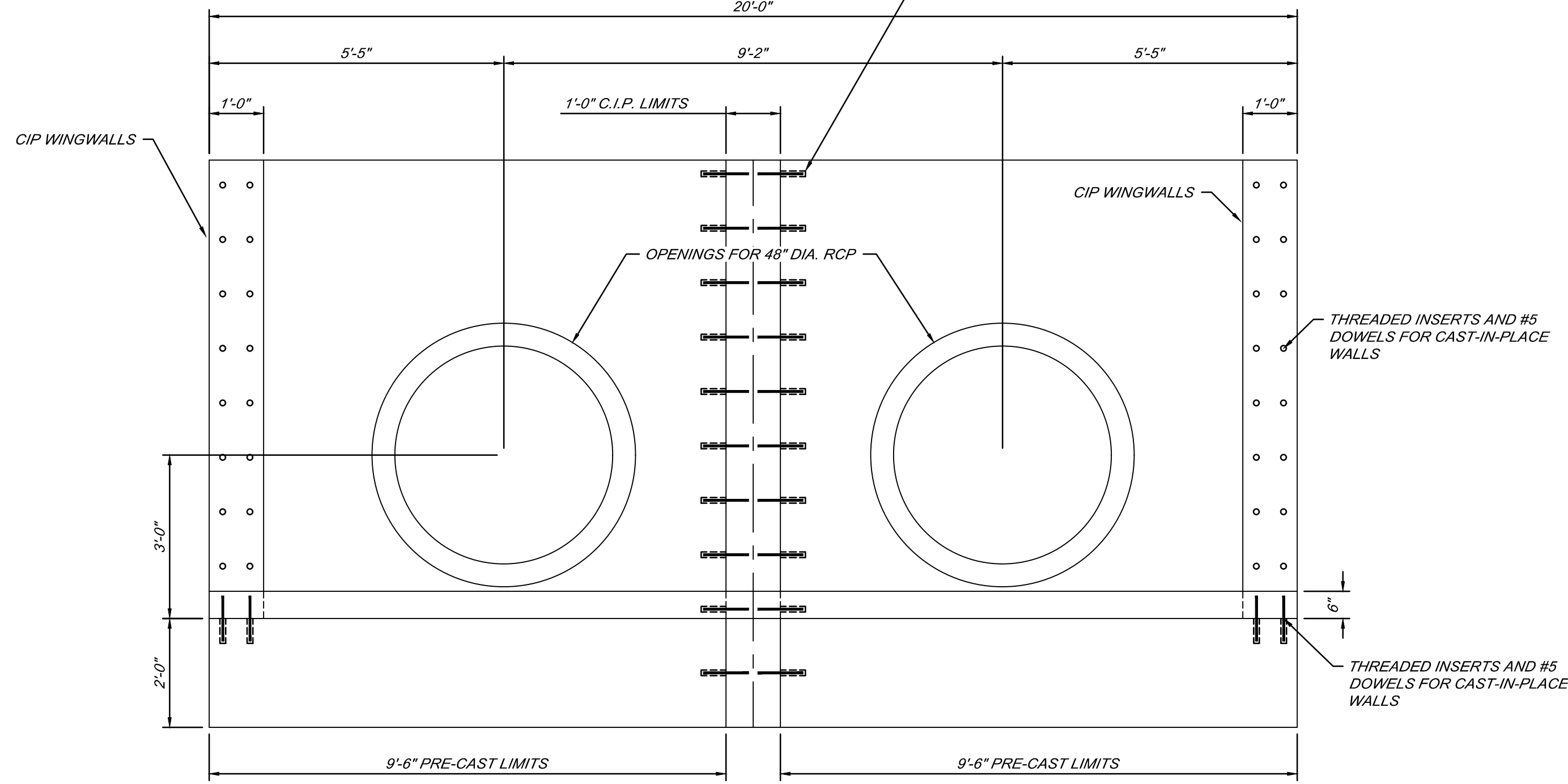
SECTION
SCALE: 1" = 1'-0"

GRATING SCHEDULE					
LOCATION	MATERIAL	SIZE	TYPE	FINISH	SURFACE
PLATFORM	STEEL	BEARING BARS - 1 1/4" x 1/8" @ 1 3/16" C/C CROSS BARS - 4" C/C	WELDED	GALV	PLAIN

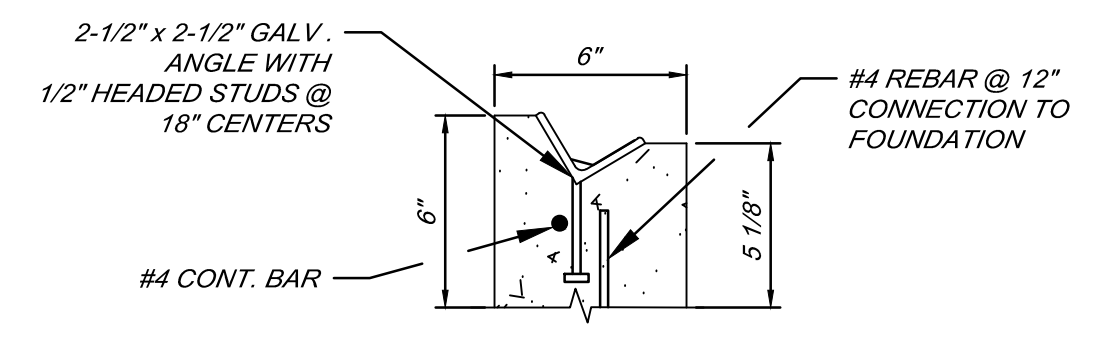
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL GRATING SYSTEMS TO ENGINEER FOR APPROVAL
- 4 GRATING TIE-DOWN SADDLE CUPS REQUIRED FOR GRATING PANEL.



HINGED GRATING DETAILS
SCALE: 1/2" = 1'-0"
GRATING ASSEMBLY AND SUPPORT BEAMS HOT DIP GALVANIZED



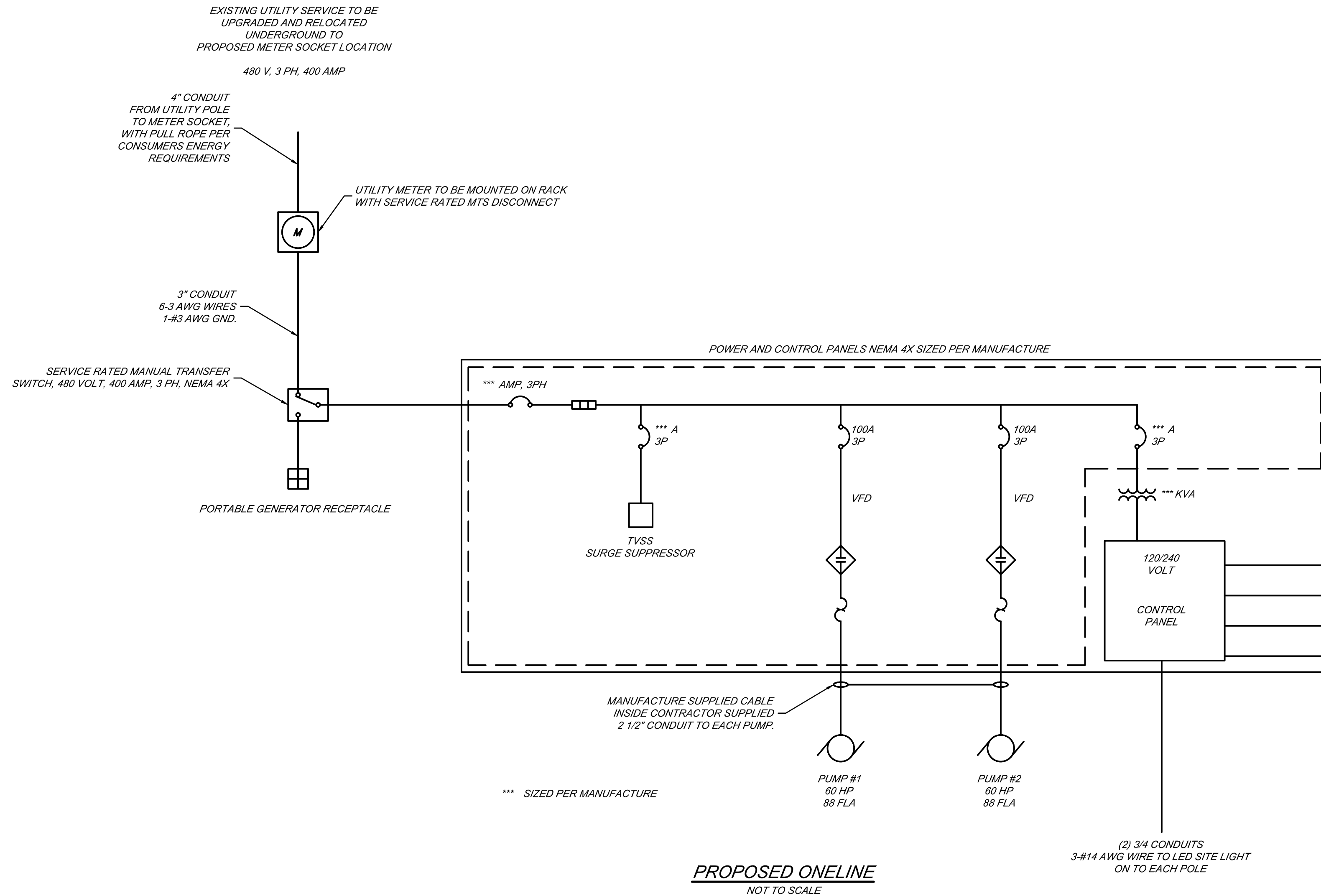
PRE-CAST HEADWALL DETAIL
SCALE: 1/2" = 1'-0"



CURB DETAIL
NOT TO SCALE

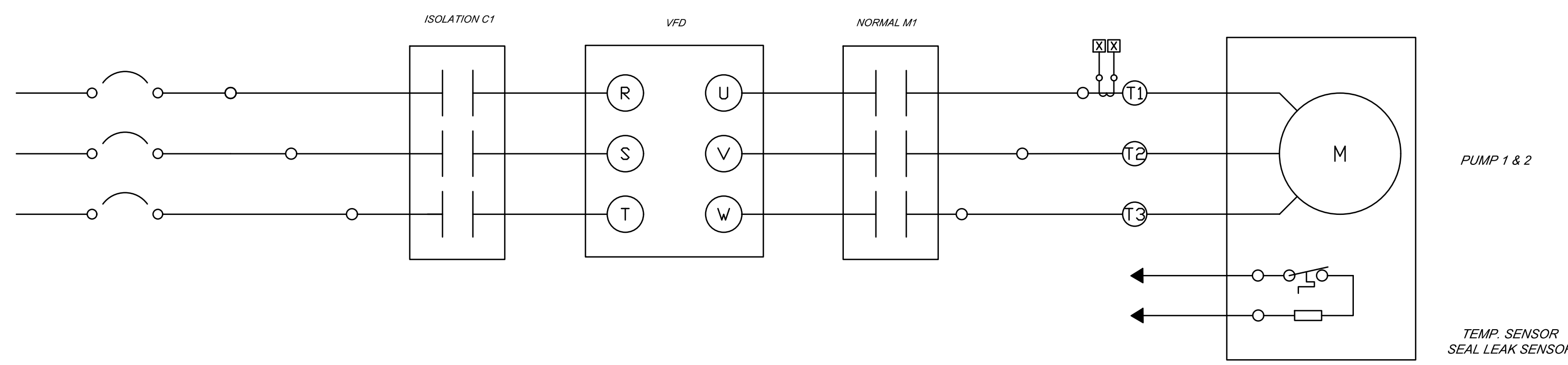
BY	MARK	REVISIONS	DATE
<p>THE WORK REPRESENTED BY THIS DRAWING WAS DESIGNED BY THE ENGINEER FOR THIS SPECIFIC APPLICATION AND SPECIFIC LOCATION DESCRIBED HEREON IN ACCORDANCE WITH THE CONDITIONS PREVALENT AT THE TIME THE DESIGN WAS DONE. THE ENGINEER DOES NOT GUARANTEE AND WILL NOT BE LIABLE FOR ANY OTHER LOCATION, CONDITION, DESIGN OR PURPOSE.</p>			
<p>EASTWOOD DRAIN SAGINAW COUNTY, MICHIGAN</p>			
<p>BAR SCREEN DETAILS</p>			
<p>Spicer Group</p>		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com</p>	
DE. BY:	POC/MDC	CH. BY:	NDC
DR. BY:	CBS	APP. BY:	RBH
PROJECT NO.		126405SG2018	
STDS.	SHEET 10 OF 15	<p style="text-align: right;">S 2</p>	
DATE	APRIL 2023		
SCALE	AS SHOWN	FILE NO.	DR-4189-10

C:\p2018\126405SG2018 - Eastwood Drainage Pump Station\DWG\2018-11-15-15.dwg, 4/13/2023 9:46:15 AM, rshc

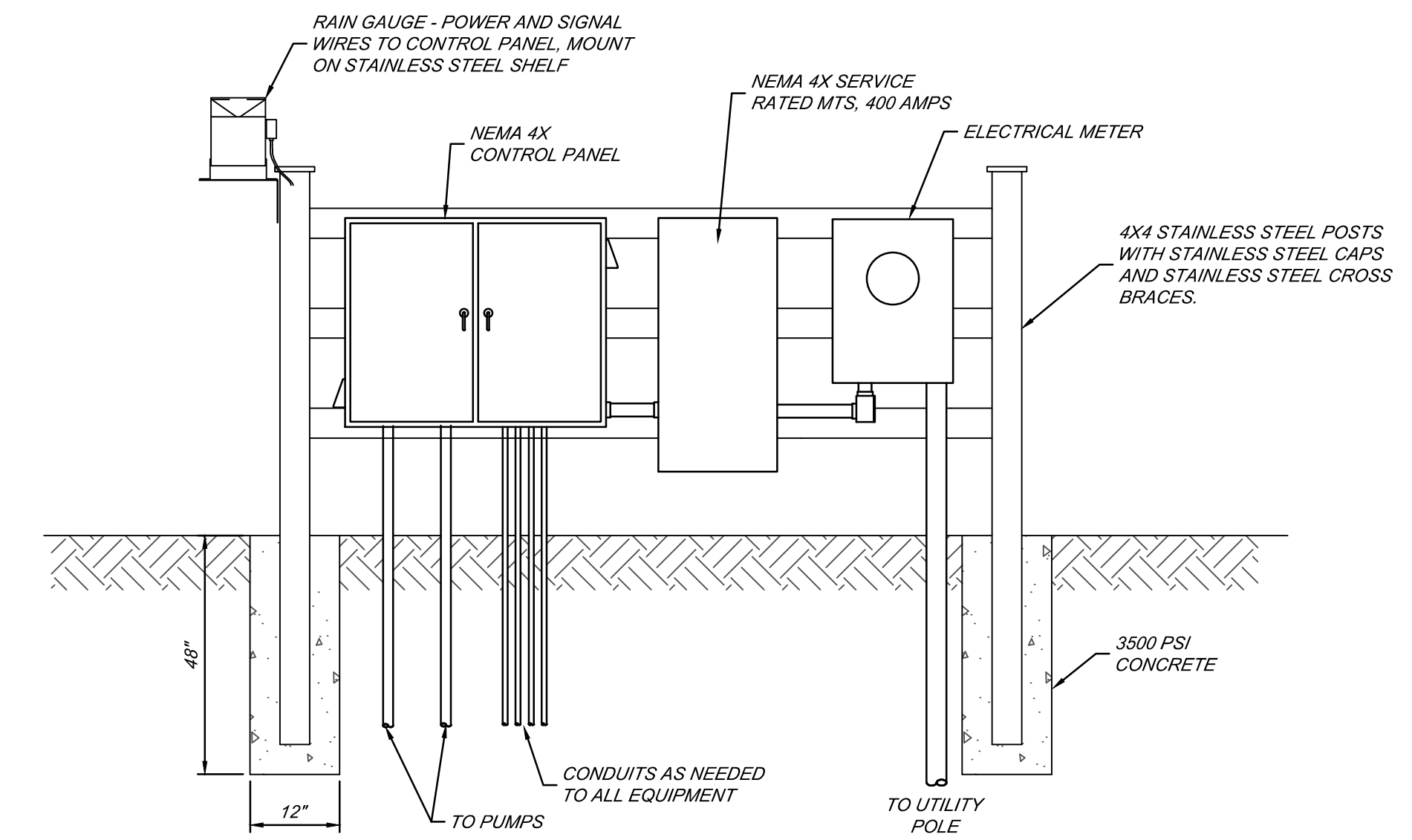


PROPOSED ONELINE
NOT TO SCALE

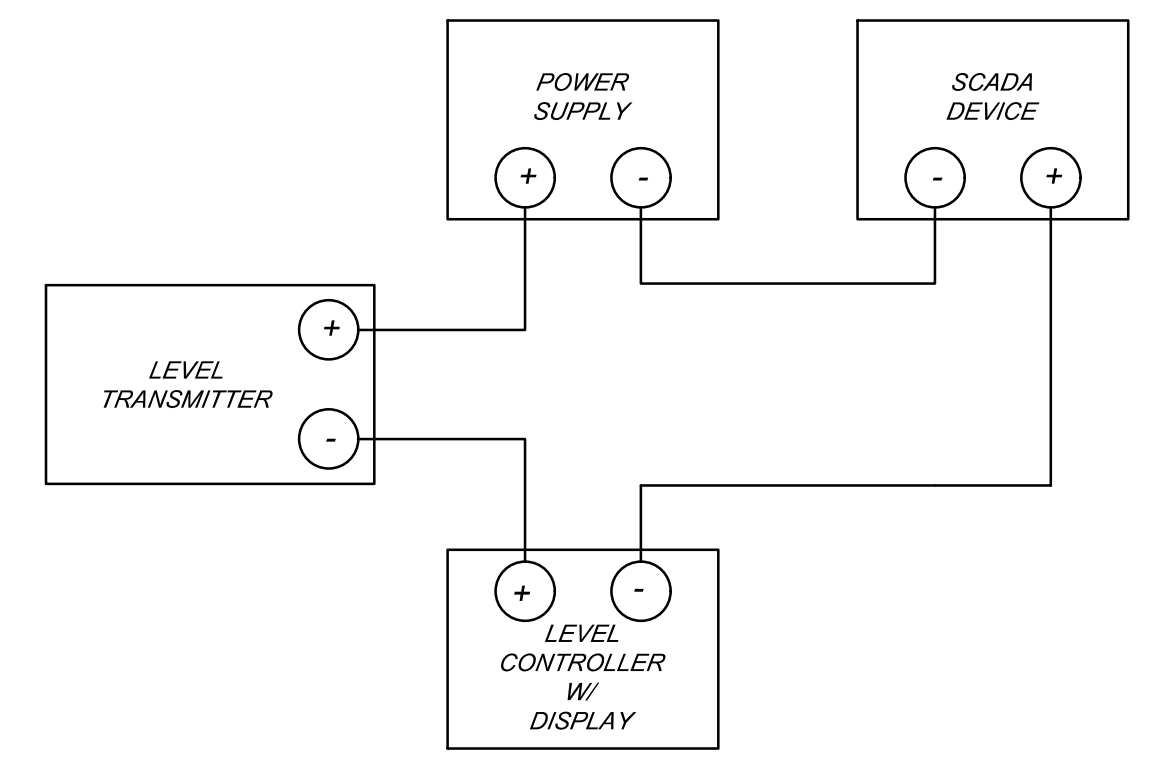
- NOTES:**
- EXTERIOR PANEL SHALL BE LOCKABLE.
 - ACTUAL PANEL LAYOUT MAY VARY.
 - ATTACH ALL EXTERIOR EQUIPMENT WITH STAINLESS STEEL HARDWARE.
 - PROVIDE STAINLESS STEEL STRAIN RELIEF DEVICES FOR ALL PUMP CORDS IN WET WELL.
 - INSTALL SEAL OFF AND INTRINSICALLY SAFE BARRIERS PER CODE TO ISOLATE HAZARDOUS.
 - NOT ALL CONDUITS ARE SHOWN, CONTRACTOR REQUIRED TO INSTALL ALL CONDUITS AS NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM.
 - SEE SITE PLANS FOR ELECTRICAL SERVICE LOCATION.
 - *** SIZE PER MANUFACTURERS RECOMMENDATIONS.
 - ALL EXTERIOR PANELS SHALL BE STAINLESS STEEL.



TYPICAL MOTOR CONNECTIONS
NOT TO SCALE



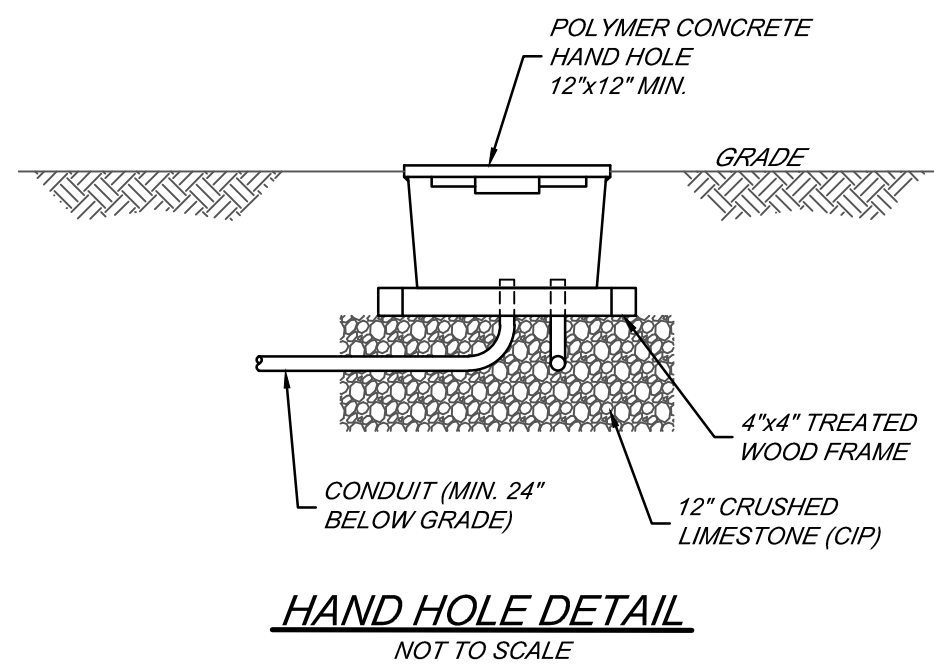
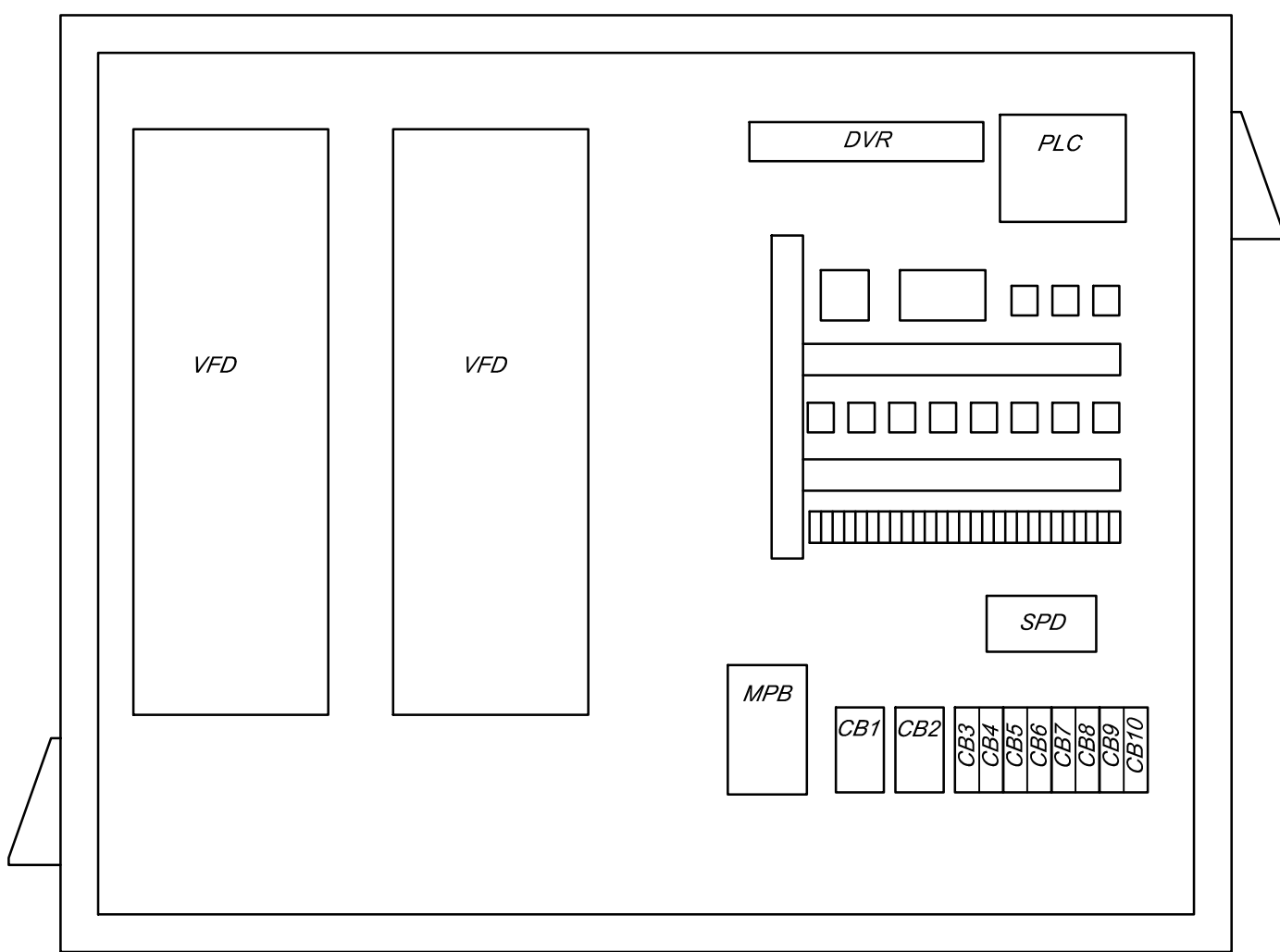
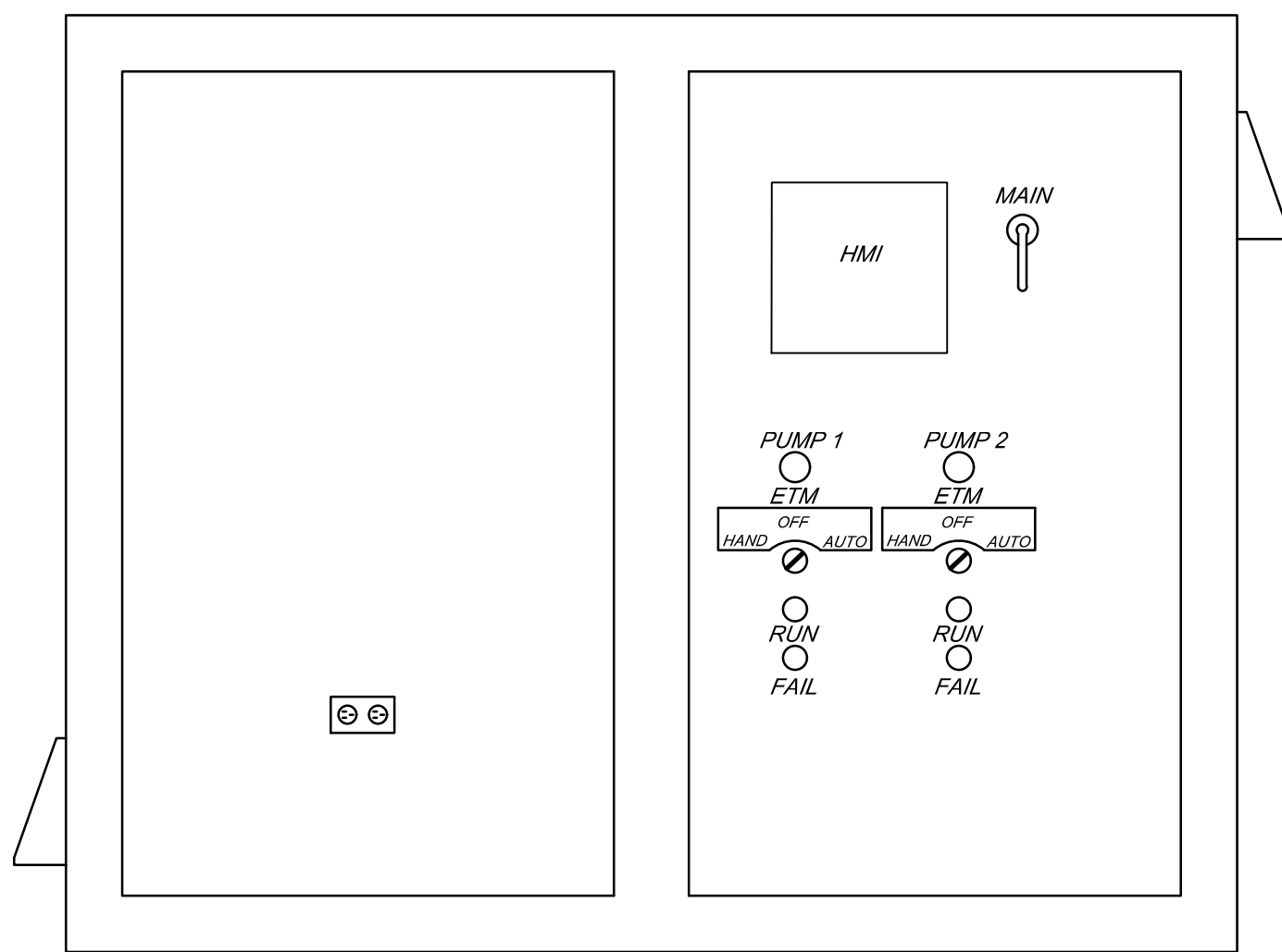
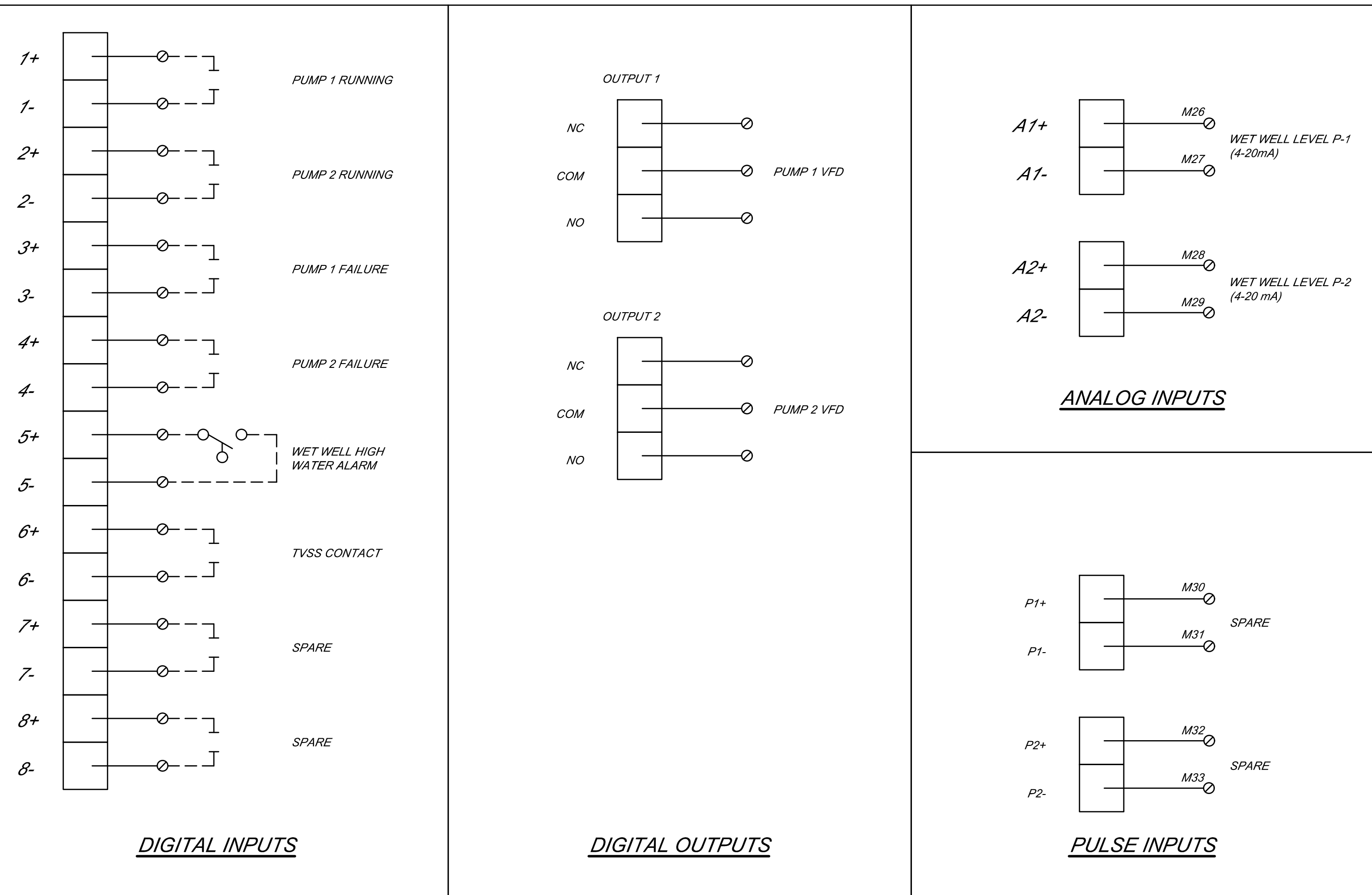
POWER EQUIPMENT DETAIL
NOT TO SCALE



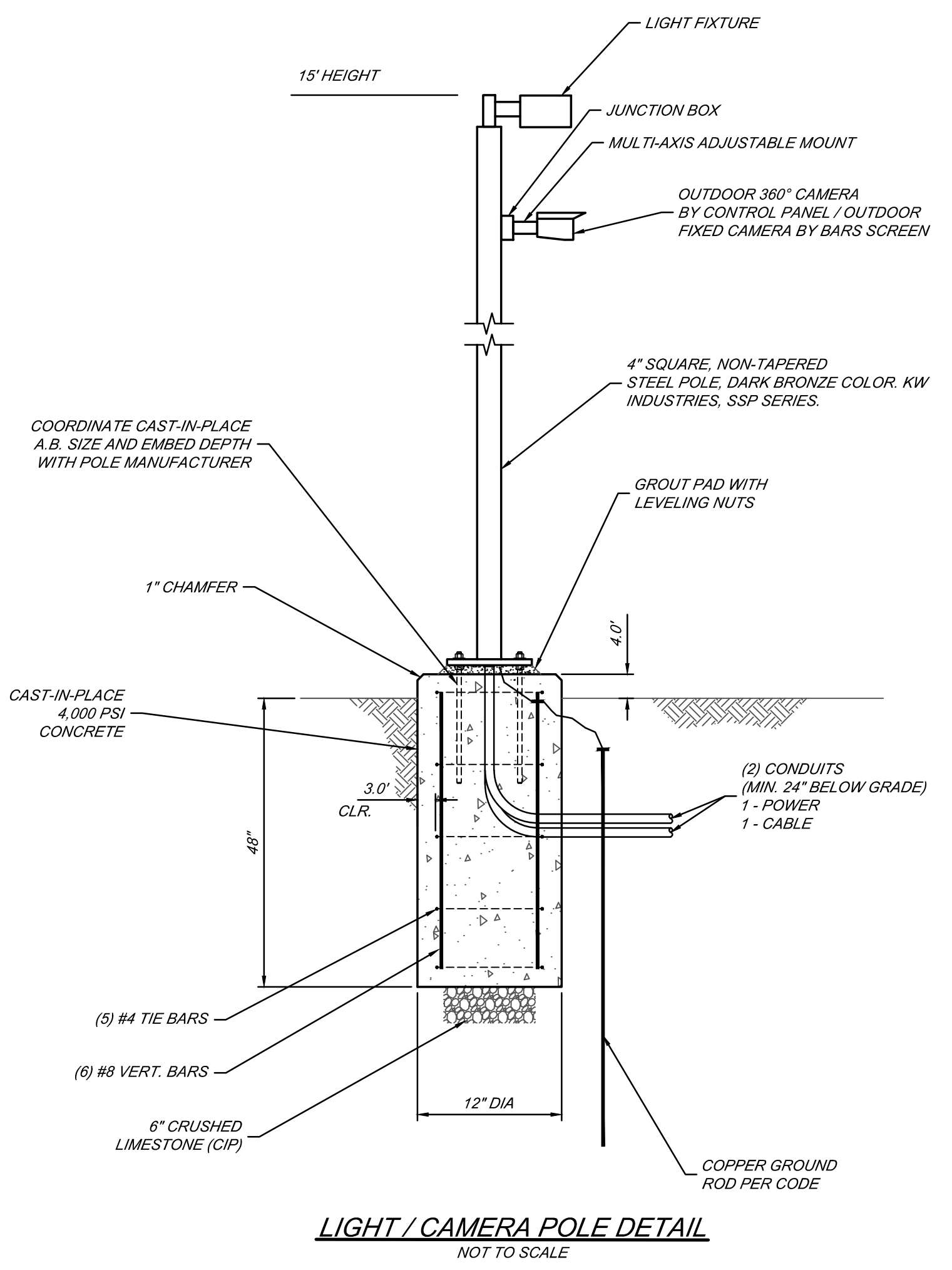
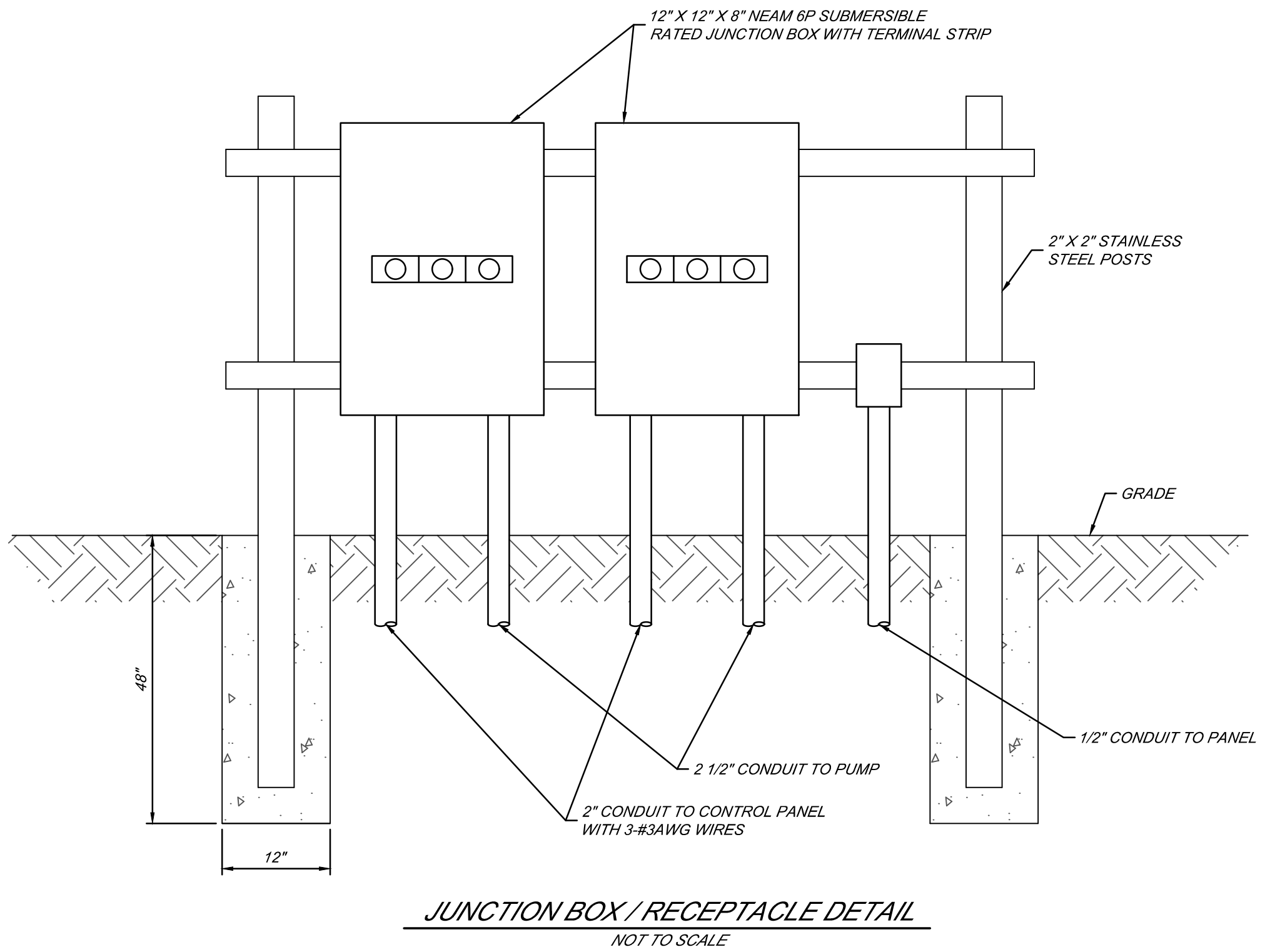
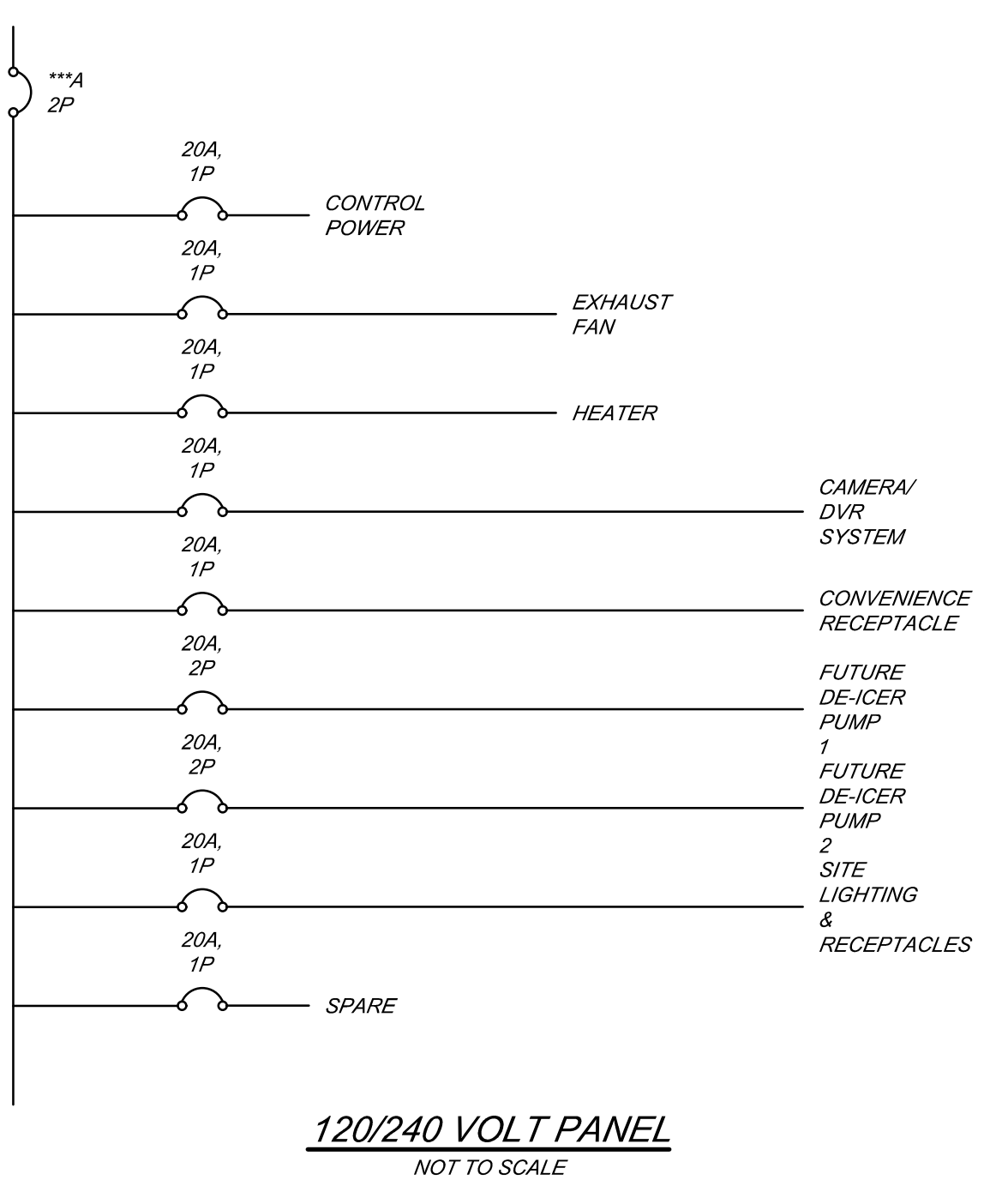
ANALOG LOOP WIRING (TYPICAL)
NOT TO SCALE

- CONTRACTOR TO INSTALL ANALOG SIGNAL LOOP ISOLATORS WHERE NECESSARY TO PROVIDE A COMPLETE OPERATIONAL SYSTEM
- ANY PROPOSED SELF-POWERED ANALOG LOOP DEVICE SHALL HAVE A DETAILED WIRING DIAGRAM INCLUDED DURING SHOP DRAWING SUBMITTALS.

BY	MARK	REVISIONS	DATE
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<p>EASTWOOD DRAIN PUMP STATION SAGINAW COUNTY, MICHIGAN</p>			
<p>PROPOSED ONELINE</p>			
<p>Spicer Group</p>		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 989-754-4717 Fax 989-754-4440 www.SpicerGroup.com</p>	
DE. BY: BML	CH. BY: NDC	PROJECT NO. 126405SG2018	
DR. BY: BML	APP. BY: RBH		
STDS.	SHEET 12 OF 13	<p>E 2</p>	
DATE: APRIL 2023	FILE NO. DR-4266-12		
SCALE: AS SHOWN			



- NOTES:**
- ALL SCADA DEVICE CONFIGURATIONS SHALL BE COORDINATED AND VERIFIED WITH OWNER.
 - ALL SCADA DEVICE WIRING SHALL BE LANDED ON THE CORRESPONDING TERMINAL ON DEDICATED TERMINAL STRIP, PROVIDED BY CONTROL PANEL MANUFACTURER.
 - THIS INCLUDES ALL USED AND UNUSED SCADA TERMINALS.
 - 20% SPARE TERMINALS SHALL BE PROVIDED. (A MINIMUM OF 5)
 - CAMERAS SHALL BE CONNECTED TO SCADA AND DVR.
 - REMOTE COMPUTER TO BE INSTALLED IN PANEL FOR SCADA AND TO VIEW CAMERAS.



BY	MARK	REVISIONS	DATE
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<p>EASTWOOD DRAIN PUMP STATION SAGINAW COUNTY, MICHIGAN</p>			
<p>ELECTRICAL/CONTROLS DETAILS</p>			
		<p>SAGINAW OFFICE 230 S. Washington Ave. Saginaw, MI 48607 Tel: 989-754-4717 Fax: 989-754-4440 www.SpicerGroup.com</p>	
DE. BY: BML	CH. BY: NDC	PROJECT NO. 126405SG2018	
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STDS.	SHEET 13 OF 13	E 3	
DATE SCALE	APRIL 2023 AS SHOWN	FILE NO.	DR-4266-13