

CLEARING, PAVING, GRADING, STORM DRAINAGE  
 WATER DISTRIBUTION & SANITARY SEWER

# EFFINGHAM REC COMPLEX NEW GYM

EFFINGHAM COUNTY, GEORGIA

FOR

EFFINGHAM COUNTY BOC

601 NORTH LAUREL STREET  
 SPRINGFIELD, GEORGIA 31329  
 PHONE No. (912) 754-2123

JULY 26, 2019

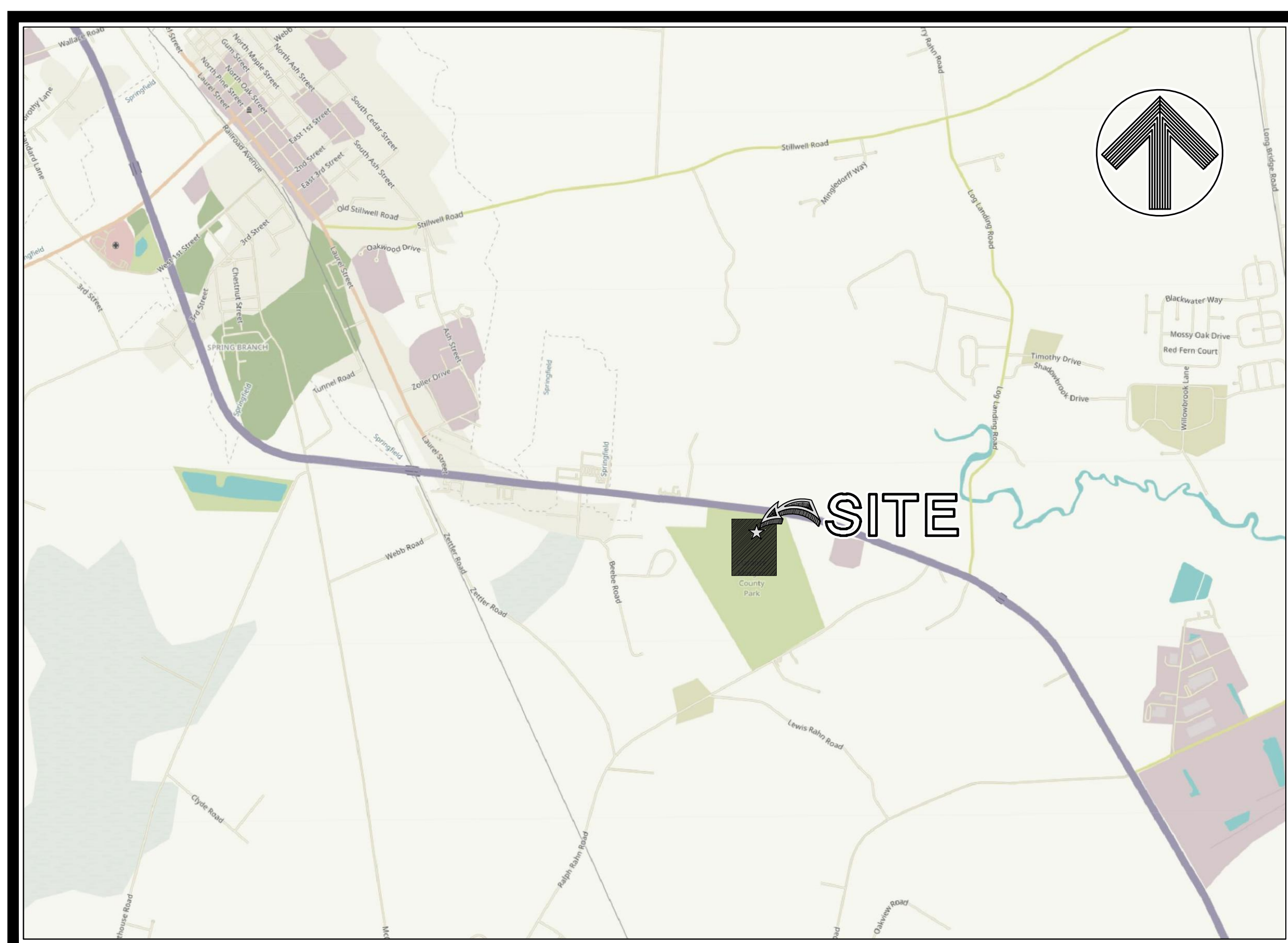


**HUSSEY GAY BELL**

Established 1958

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CONSTRUCTION EXIT  
 LATITUDE: 32.3474° N  
 LONGITUDE: 81.2815° W



**VICINITY MAP**  
 SCALE: 1"=2000'

SHEET NO.	DESCRIPTION
C01.01	COVER SHEET, VICINITY MAP AND SCHEDULE OF DRAWINGS
C02.01	CONSTRUCTION NOTES AND LEGEND
C03.01	TOPOGRAPHIC SURVEY PLAN
C04.01	DEMOLITION PLAN
C05.01	STAKING & TRAFFIC CONTROL PLAN
C06.01	PAVING, GRADING AND DRAINAGE PLAN
C07.01	SANITARY SEWER AND WATER DISTRIBUTION PLAN PLAN
C08.01	CONSTRUCTION DETAILS
C08.02	CONSTRUCTION DETAILS
C09.01	EROSION AND SEDIMENT CONTROL NOTES
C09.02	EROSION AND SEDIMENT CONTROL NOTES
C10.01	EROSION AND SEDIMENT CONTROL PLAN - INITIAL PHASE
C10.02	EROSION AND SEDIMENT CONTROL PLAN - INTERMEDIATE PHASE
C10.03	EROSION AND SEDIMENT CONTROL PLAN - FINAL PHASE
C11.01	EROSION AND SEDIMENT CONTROL DETAILS

**SCHEDULE OF DRAWINGS**

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 December 14, 2018 9:56 AM  
 Printed By: cheroke  
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# CONSTRUCTION NOTES & LEGEND

## GENERAL NOTES:

- ALL ELEVATIONS ARE BASED ON NAVD 1988 DATUM.
- THE CONTRACTOR SHALL NOT BEGIN CONSTRUCTION UNTIL THE PROPER PERMITS HAVE BEEN ISSUED AND A PRECONSTRUCTION MEETING IS HELD WITH EFFINGHAM COUNTY ENGINEERING DEPARTMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES AND FOR AVOIDING ALL CONFLICTS WITH SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL COMPLETELY CLEAR AND GRUB ALL AREAS WITHIN THE LIMITS OF DISTURBANCE UNLESS INDICATED OTHERWISE.
- ORDINANCES, STANDARDS AND SPECIFICATIONS AND DETAILS FOR EFFINGHAM COUNTY WILL PREVAIL IN THE EVENT OF CONFLICT WITH ANY SPECIFICATIONS SHOWN BY THE ENGINEER.
- TOPOGRAPHIC SURVEY COMPLETED BY HUSSEY GAY BELL.

## STAKING NOTES:

- LAYOUT FOR MANHOLES, INLETS, ETC., ARE NOT SHOWN ON THIS PLAN. COORDINATES FOR SUCH STRUCTURES CAN BE PROVIDED TO THE SELECTED CONTRACTOR UPON REQUEST.
- THE CONTRACTOR SHALL UTILIZE EXISTING BENCHMARKS SHOWN ON THE PLANS TO ESTABLISH VERTICAL CONTROL ON THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THESE BENCHMARKS DURING THE CONSTRUCTION PROJECT AND FOR BEARING ANY EXPENSE RESULTING FROM UNAUTHORIZED REMOVAL OR REPLACEMENT OF BENCHMARKS. WHEN A PERMANENT BENCHMARK IS LOCATED SUCH THAT IT MUST BE REMOVED TO COMPLETE THE PROJECT, THE CONTRACTOR SHALL ESTABLISH SUCH TEMPORARY BENCHMARKS AS HE MAY REQUIRE PRIOR TO REMOVING THE PERMANENT BENCHMARK. THE CONTRACTOR SHALL PROVIDE THE LOCATION, IDENTIFICATION AND ELEVATION OF ANY TEMPORARY BENCHMARK ESTABLISHED TO THE OWNER AND ENGINEER.

## PAVING, GRADING AND DRAINAGE NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES AND FOR AVOIDING ALL CONFLICTS WITH SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- CONTOURS SHOWN ON THIS SHEET ARE FOR GENERAL GUIDANCE AND INFORMATIONAL PURPOSES. THE CONTRACTOR SHALL GRADE THE SITE IN ACCORDANCE WITH ELEVATIONS SHOWN, IN CASES OF CONFLICT BETWEEN SPOT ELEVATIONS AND CONTOURS THE SPOT ELEVATIONS SHALL GOVERN.
- LOAD BEARING AND STRUCTURAL FILLS SHALL BE APPROVED SUITABLE MATERIAL AS DEFINED IN THE PROJECT SPECS. WASTE MATERIALS MAY BE USED FOR FLUSHING OF SHOULDER OR CONSTRUCTION OF PEDESTRIAN OR LANDSCAPED AREAS IF THEY CAN BE STABILIZED AND SHALL SUPPORT PLANT GROWTH AND MEET THE REQUIRED DEGREE OF COMPACTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING PROPER DRAINAGE OF ANY AREAS WHICH ARE FIELD ADJUSTED DURING CONSTRUCTION.
- SEE SPECIFICATIONS FOR REQUIREMENTS FOR CONTROL, CONSTRUCTION AND EXPANSION JOINTS IN CONCRETE SIDEWALKS AND CURB AND GUTTER.
- STANDARD CURB AND GUTTER SHALL BE USED WHERE THE DRAWINGS INDICATE THAT THE GUTTER IS TO CARRY WATER. PITCHED CURB AND GUTTER SHALL BE USED WHERE THE DRAWINGS INDICATE THE WATER SHALL DRAIN AWAY FROM THE GUTTER. TRANSITIONS BETWEEN THE TWO CONDITIONS SHALL BE MADE AS SMOOTHLY AS POSSIBLE, USUALLY THROUGH A RADIUS.

## SIGNAGE AND STRIPING NOTES:

- ALL TRAFFIC CONTROL MEASURES SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE MANUAL IDENTIFICATION AND DIMENSIONS ARE SHOWN ON STAKING SHEETS FOR EACH REQUIRED SIGN. THE ORIENTATION OF EACH SIGN FROM AN APPROACHING DRIVER'S POINT OF VIEW IS ALSO SHOWN. SIGN AND SUPPORT POST MATERIAL AND INSTALLATION SHALL CONFORM TO THE PERTINENT SECTIONS OF THE CURRENT EDITION OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- ALL PAVEMENT MARKINGS (EXCLUDING PARKING STRIPES AND H/C PARKING) SHALL BE THERMOPLASTIC. MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE WITH GEORGIA DOT SPECIFICATIONS, LATEST EDITION.

## WATER AND SEWER PLAN NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES AND FOR AVOIDING ALL CONFLICTS WITH SAME. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND DETAILS FOR WATER AND SEWERAGE SYSTEM IMPROVEMENTS, AND SHALL MEET EFFINGHAM COUNTY REQUIREMENTS.
- ALL 8" WATER DISTRIBUTION PIPE SHALL BE AWWA C-900 PRESSURE RATED PIPE, PRESSURE CLASS 150, WITH DIMENSION RATIO 18 OR LOWER. ALL PVC WATER MAINS SHALL BE BLUE IN COLOR.
- SANITARY SEWER PIPE SHALL BE P.V.C. ASTM D 3034, SDR 26 OR DUCTILE IRON PIPE CLASS 50 WHERE SHOWN.
- MANHOLE TOP ELEVATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL SET MANHOLE TOPS AS INDICATED ON MANHOLE DETAIL, RELATIVE TO FINISHED GRADE.
- SEE DETAIL SHEETS FOR THRUST RESTRAINT DETAILS.
- ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 3 FEET AND A MAXIMUM COVER OF 4 FEET MEASURED FROM FINISHED GRADE. WHERE THE WATER MAIN CROSSES OTHER UTILITY LINES, THE WATER MAIN SHALL BE INSTALLED 18" (PIPE TO PIPE) BELOW THE OTHER UTILITY LINES IF REQUIRED TO AVOID CONFLICTS AND MAINTAIN COVER (SEE DETAIL).
- MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 10 FEET BETWEEN WATER AND SEWER LINES UNLESS OTHERWISE SHOWN.
- WHEN PIPE LAYING IS NOT IN PROGRESS, A MECHANICAL JOINT PLUG OR CAP WILL BE USED TO FORM A WATER TIGHT SEAL AT BOTH ENDS OF THE LINE BEING INSTALLED.
- THE FOLLOWING PROCEDURE SHALL BE FOLLOWED DURING FLUSHING OF THE LINES PRIOR TO CONNECTION TO THE CITY WATER SYSTEM: FLUSH THE WATER MAINS USING A FULL SIZE FLUSH HAVING A MINIMUM VELOCITY OF 2.5 FEET PER SECOND. CONTINUE FLUSHING FOR A MINIMUM TIME PERIOD OF THIRTY MINUTES OR UNTIL WATER LINE IS PURGED OF FOREIGN MATTER AND WATER RUNS CLEAR.
- ALL WATER USED FOR CONSTRUCTION, IF OBTAINED FROM AN UNMETERED LINE, MUST BE METERED THROUGH AN APPROVED FIRE HYDRANT METER WITH A BACKFLOW PREVENTION DEVICE OBTAINED FROM EFFINGHAM COUNTY WATER OPERATIONS DEPARTMENT (748-4800).
- WATER DISTRIBUTION PIPE SHALL HAVE A #12 GAUGE COPPER TRACING WIRE INSTALLED ALONG ITS LENGTH, INCLUDING LATERALS UP TO THE METER OR BACKFLOW PREVENTER.
- ALL FIRE AND POST-TYPE HYDRANTS SHALL HAVE A #12 GAUGE COPPER TRACING WIRE INSTALLED ALONG THE BARREL, WRAPPED AROUND THE BOTTOM FLANGE, AND ATTACHED TO THE WIRE ON THE WATER MAIN.
- ALL WATER VALVE MANHOLES SHALL HAVE A #12 GAUGE COPPER TRACING WIRE ATTACHED TO THE MANHOLE FRAME/RING AND ATTACHED TO THE WIRE ON THE WATER MAIN.
- ALL CONNECTIONS OF THE #12 GAUGE SOLID COPPER TRACING WIRE SHALL BE MADE WITH 3M BRAND SPLICE KITS AS REQUIRED BY THE EFFINGHAM COUNTY.
- WATER AND SEWER LATERALS SHALL END AT RIGHT-OF-WAY LINE AND SHALL NOT ENCR OACH INTO THE UTILITY EASEMENT.
- WATER LATERAL SHALL BE 1" POLYETHYLENE, SEWER LATERALS SHALL BE 4" PVC (SEE DETAILS).
- ALL WATER AND SEWER MAINS AND LATERALS SHALL BE INSTALLED WITHIN THE ROAD RIGHT-OF-WAY AND SHALL NOT ENCR OACH OUTSIDE OF THE RIGHT-OF-WAY. FITTINGS SHALL BE USED, AS NECESSARY, TO KEEP WATER LINES WITHIN THE RIGHT-OF-WAY.
- A CONTINUOUS RUN OF DETECTABLE MARKING TAPE SHALL BE INSTALLED ABOVE THE TOP OF PVC PIPE USED FOR SEWER MAINS AT APPROXIMATELY 12" TO 18" BELOW FINISHED GRADE. MARKING TAPE SHALL CONSIST OF A METABOLIZED FOIL LAMINATED BETWEEN TWO LAYERS OF COLOR CODED INERT PLASTIC FILM SUITABLE FOR LASTING AS LONG AS THE PIPE AND SHALL BE RESISTANT TO ALKALIS, ACIDS, AND OTHER DESTRUCTIVE AGENTS FOUND IN THE SOIL. THE PLASTIC FILM SHALL BE IMPRINTED WITH A CONTINUOUS MESSAGE: "CAUTION SEWER LINE BURIED BELOW". MESSAGE SHALL BE IN PERMANENT INK. MARKING TAPE SHALL BE A MINIMUM OF 2" WIDE AND 5.5 MIL. THICK AND STRENGTH OF AT LEAST 120 GRAMS PER 1.5 MIL. TAPE SHALL BE TYPE THAT CAN BE LOCATED BY ANY STANDARD ELECTRONIC PIPE LOCATOR. LOCATOR POST SHALL BE PLACED A MAXIMUM OF 500' SIGHT DISTANCE AND SHALL BE LOCATED AT EVERY HORIZONTAL DIRECTIONAL CHANGE FOR FORCE MAINS. LOCATOR POST SHALL BE 2 1/2" WIDE FIBER - REINFORCED COMPOSITE MATERIAL, APPROXIMATELY 66" LONG. POST SHALL BE LABELED WITH UV STABLE " NO PVC" AND COLOR CODED BLUE. POST SHALL BE INSTALLED IN VERTICAL PLANE ABOVE PIPE AND ANCHORED 18" TO 24".
- ALL SEWER SERVICES SHALL BE PROPERLY MARKED ON THE FACE OF THE CURB WITH AN EMBOSSED "S". THE LETTER SHALL BE A MINIMUM OF 3" TALL.

## WATER AND SEWER NOTES.(CONT.)

- A CONTINUOUS RUN OF DETECTABLE MARKING TAPE SHALL BE INSTALLED ABOVE THE TOP OF PVC PIPE USED FOR WATER MAINS AT APPROXIMATELY 12" TO 18" BELOW FINISHED GRADE. MARKING TAPE SHALL CONSIST OF A METABOLIZED FOIL LAMINATED BETWEEN TWO LAYERS OF COLOR CODED INERT PLASTIC FILM SUITABLE FOR LASTING AS LONG AS THE PIPE AND SHALL BE RESISTANT TO ALKALIS, ACIDS, AND OTHER DESTRUCTIVE AGENTS FOUND IN THE SOIL. THE PLASTIC FILM SHALL BE IMPRINTED WITH A CONTINUOUS MESSAGE: "CAUTION WATER LINE BURIED BELOW". MESSAGE SHALL BE IN PERMANENT INK. MARKING TAPE SHALL BE A MINIMUM OF 2" WIDE AND 5.5 MIL. THICK AND STRENGTH OF AT LEAST 120 GRAMS PER 1.5 MIL. TAPE SHALL BE TYPE THAT CAN BE LOCATED BY ANY STANDARD ELECTRONIC PIPE LOCATOR. LOCATOR POST SHALL BE PLACED A MAXIMUM OF 500' SIGHT DISTANCE AND SHALL BE LOCATED AT EVERY HORIZONTAL DIRECTIONAL CHANGE. LOCATOR POST SHALL BE 2 1/2" WIDE FIBER - REINFORCED COMPOSITE MATERIAL, APPROXIMATELY 66" LONG. POST SHALL BE LABELED WITH UV STABLE " NO PVC" AND COLOR CODED BLUE. POST SHALL BE INSTALLED IN VERTICAL PLANE ABOVE PIPE AND ANCHORED 18" TO 24".
- ALL WATER SERVICES SHALL BE PROPERLY MARKED ON THE FACE OF THE CURB WITH AN EMBOSSED "W". THE LETTER SHALL BE A MINIMUM OF 3" TALL.
- ALL SANITARY SEWER MANHOLES WITH TOP ELEVATIONS BELOW THE 100-YEAR FLOOD PLAIN ELEVATION SHOULD BE WATER TIGHT MANHOLE TOPS.

## AS-BUILT REQUIREMENTS:

- CONTRACTOR SHALL FURNISH AS-BUILT DATA TO THE ENGINEER MEETING THE REQUIREMENTS OF EFFINGHAM COUNTY FOR CLOSE-OUT. THESE REQUIREMENTS ARE SUMMARIZED AS FOLLOWS:
  - WATER SYSTEM - LOCATION AND SIZE OF WATER VALVES, METERS, BACKFLOW PREVENTERS, HYDRANTS, POST INDICATORS, TEES, BENDS AND OTHER WATER SYSTEM FEATURES. TO INCLUDE ELEVATIONS FOR THE TOP OF PIPE AT ALL SUCH FEATURES. FOR WATER MAINS THE LENGTH, SIZE AND PIPE MATERIAL SHALL BE INDICATED ALONG WITH SPOT ELEVATIONS ON THE TOP OF PIPE. ADDITIONALLY, A DISTANCE TO AN ADJACENT PERMANENT FEATURE SHALL BE PROVIDED FOR ALL VALVES.
  - SEWER SYSTEM - LOCATION OF MANHOLES, CLEAN-OUTS, FORCE MAIN AIR RELEASE OR OTHER TYPE VALVES, FORCE MAIN BENDS, AND OTHER SEWER SYSTEM FEATURES. TO INCLUDE ELEVATIONS FOR MANHOLE TOPS AND INVERTS OF THE CONNECTING PIPES, AND THE TOP OF PIPE AT ALL FORCE MAIN FEATURES. FOR SEWER AND FORCE MAINS, THE LENGTH, SIZE AND PIPE MATERIAL SHALL BE INDICATED ALONG WITH SPOT ELEVATIONS ON THE TOP OF FORCE MAIN PIPE. ADDITIONALLY, A DISTANCE TO AN ADJACENT PERMANENT FEATURE SHALL BE PROVIDED FOR ALL VALVES.
  - STORM SYSTEM - LOCATION OF MANHOLES, INLETS, DRAINS, OUTLET CONTROL STRUCTURES, CLEAN-OUTS, TEES AND BENDS, AND OTHER STORM SYSTEM FEATURES. TO INCLUDE ELEVATIONS FOR STRUCTURE TOPS, THROATS, FLOW LINES, AND INVERTS OF THE CONNECTING PIPES. FOR STORM PIPES, THE LENGTH, SIZE AND PIPE MATERIAL SHALL BE INDICATED. FOR OUTLET CONTROLS, THE SIZE AND ELEVATION OF ANY WEIRS, PIPES, ORIFICES, RESTRICTOR PLATES OR OTHER CONTROLLING FEATURE SHALL BE PROVIDED.
  - DETENTION AND WATER QUALITY BASINS - FOR ALL PONDS AND BASINS, LOCATIONS AND ELEVATIONS SHALL BE PROVIDED FOR THE TOP OF BANK, TOE OF SLOPE, BOTTOM, WATER ELEVATION AND ANY OTHER FEATURES AS NECESSARY TO ALLOW THE AS-BUILT VOLUME OF THE BASIN TO BE CALCULATED.
  - PAVEMENT - SPOT ELEVATIONS SHALL BE PROVIDED ON ALL NEW PAVEMENT, WITH THE SPOT ELEVATION POINTS TO BE TAKEN IN THE SAME LOCATIONS AS THE PROPOSED SPOT GRADES SHOWN ON THE PAVING PLAN.

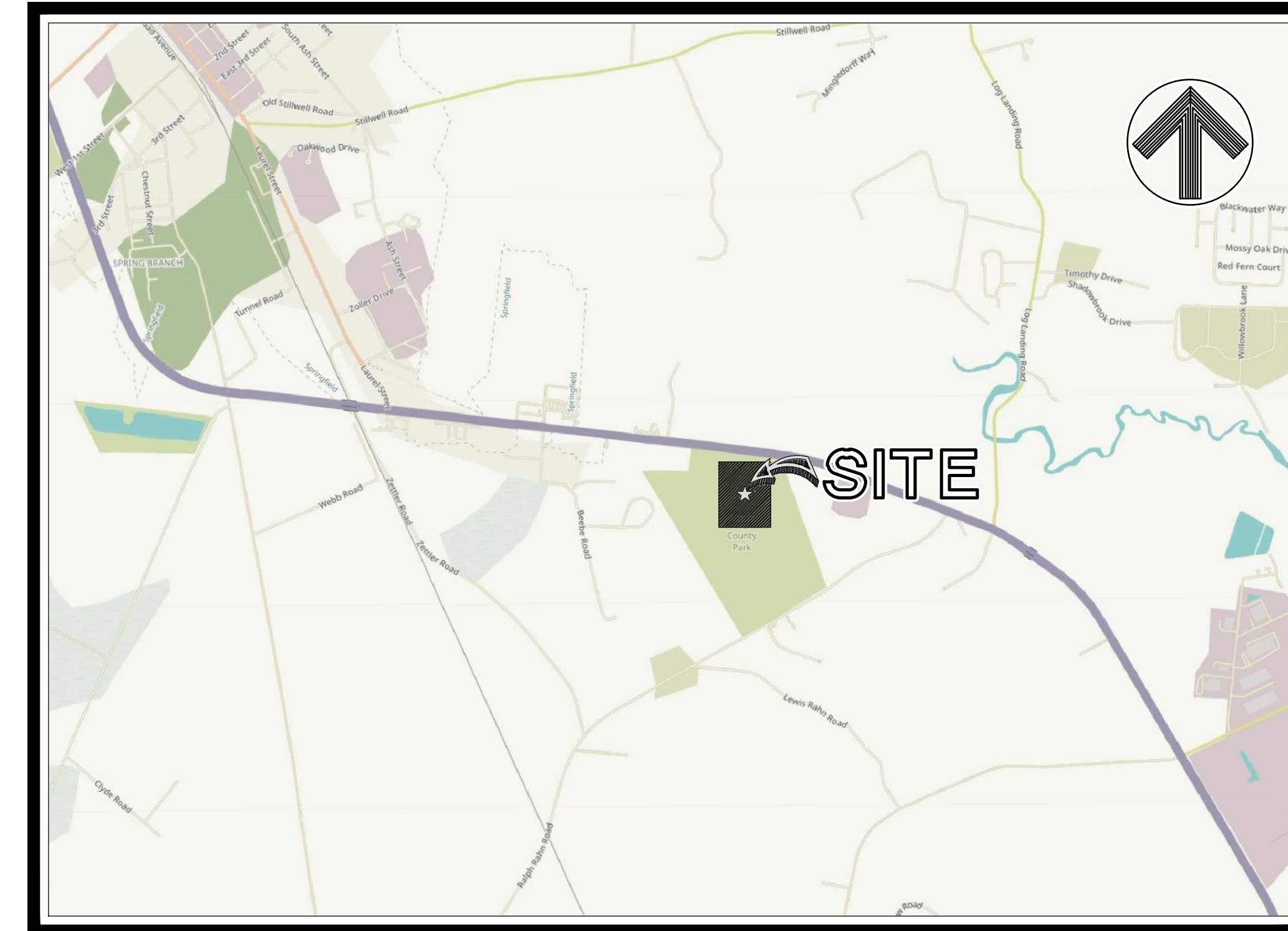
ANY QUESTIONS OR CLARIFICATIONS ON THE ABOVE AS-BUILT INFORMATION THAT IS REQUIRED BY THE COUNTY SHALL BE ADDRESSED TO COUNTY STAFF AT THE MANDATORY EFFINGHAM COUNTY PRE-CONSTRUCTION MEETING.

## SITE DATA

ZONE..... R-1, B-1  
 TOTAL PROJECT ACREAGE..... 119.15 ACRES  
 DISTURBED AREA..... 1.80 ACRES  
 EFFINGHAM COUNTY PIN..... S131-7, S131-9

## FLOOD ZONE NOTE:

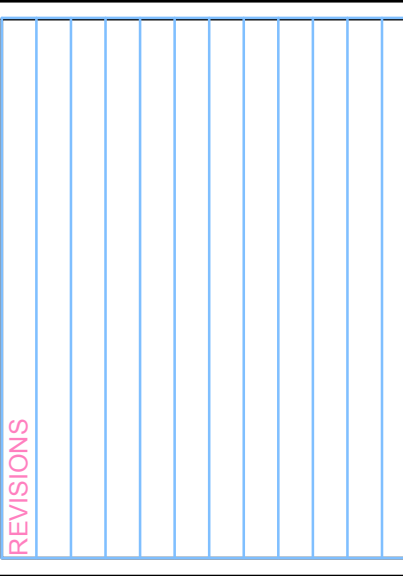
IN MY OPINION, IN ACCORDANCE WITH FIRM MAPS NO. 13103C0256E AND NO. 13103C0257E, EFFECTIVE DATE: MARCH 16, 2015, THIS PROPERTY DOES NOT FALL WITHIN THE LIMITS OF THE 100 - YEAR FLOOD PLAIN. (ZONE "X")



VICINITY MAP  
SCALE 1"=2000'

## LEGEND:

	EXISTING	PROPOSED
ASPHALT PAVEMENT (STANDARD)		
CONCRETE SIDEWALK		
STORM DRAINAGE PIPE		
STORM DRAINAGE INLET		
STORM DRAINAGE MANHOLE		
SANITARY SEWER PIPE		
SANITARY SEWER MANHOLE		
FORCE MAIN		
WATER MAIN		
WATER VALVE		
FIRE HYDRANT		
CONTOURS		
FINISHED GRADE (EARTH)		+ F0225.0
FINISHED GRADE (TOP PAVEMENT)		+ TP224.3
FINISHED GRADE (TOP WALK)		+ TW224.8
DEMO EXISTING TREE		
SOILS		



DESIGNED	DRAWN	CHECKED
C.J.H.	C.J.H.	C.J.C.
DATE: 07/26/2019		
JOB NO. 119273572		
SCALE: AS SHOWN		

EFFINGHAM COUNTY GYMNASIUM  
 CLARENCE E. MORGAN RECREATION COMPLEX  
 1750 GA. HWY 21 S, SPRINGFIELD, GEORGIA 31329  
 CONSTRUCTION NOTES AND LEGEND

DRAWING NUMBER

C02.01

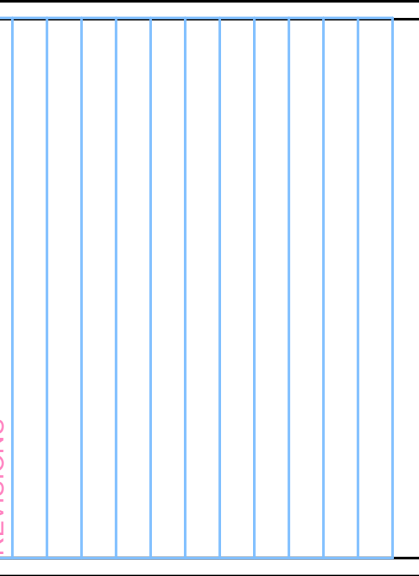








**HUSSEY GAY BELL**  
— Established 1958 —



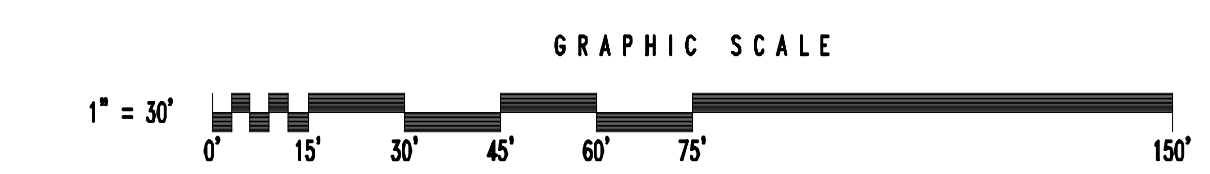
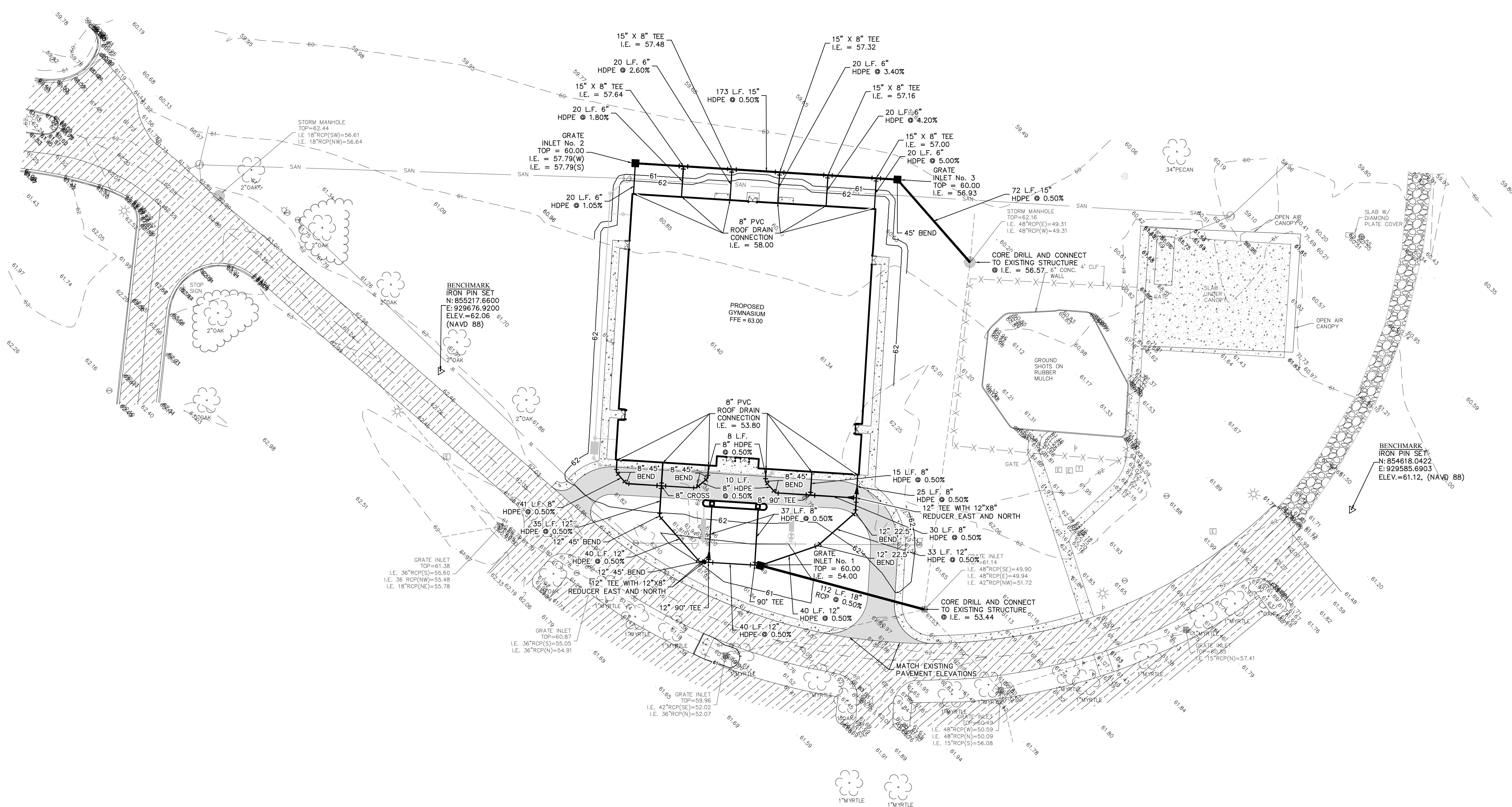
DESIGNED	DRAWN	CHECKED
C.J.H.	C.J.H.	C.J.C.
DATE: 07/26/2019		
JOB NO. 119273572		
SCALE: 1" = 30'		

**EFFINGHAM COUNTY GYMNASIUM**  
CLARENCE E. MORGAN RECREATION COMPLEX  
1750 GA. HWY 21 S. SPRINGFIELD, GEORGIA 31329

**PAVING, GRADING AND DRAINAGE PLAN**

DRAWING NUMBER

**C06.01**



**NOTE: ALL ELEVATIONS ARE NAVD 1988.**

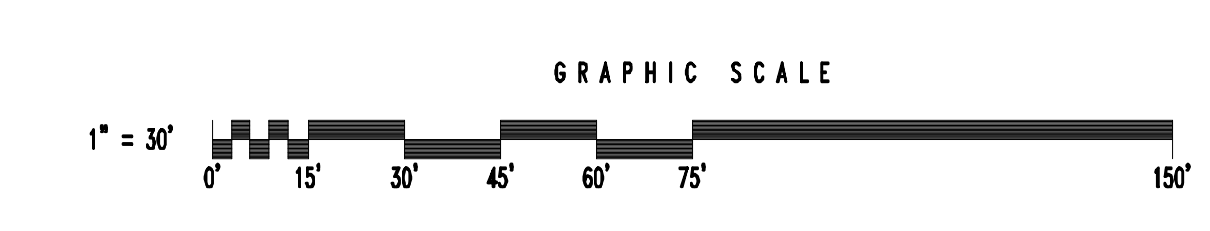
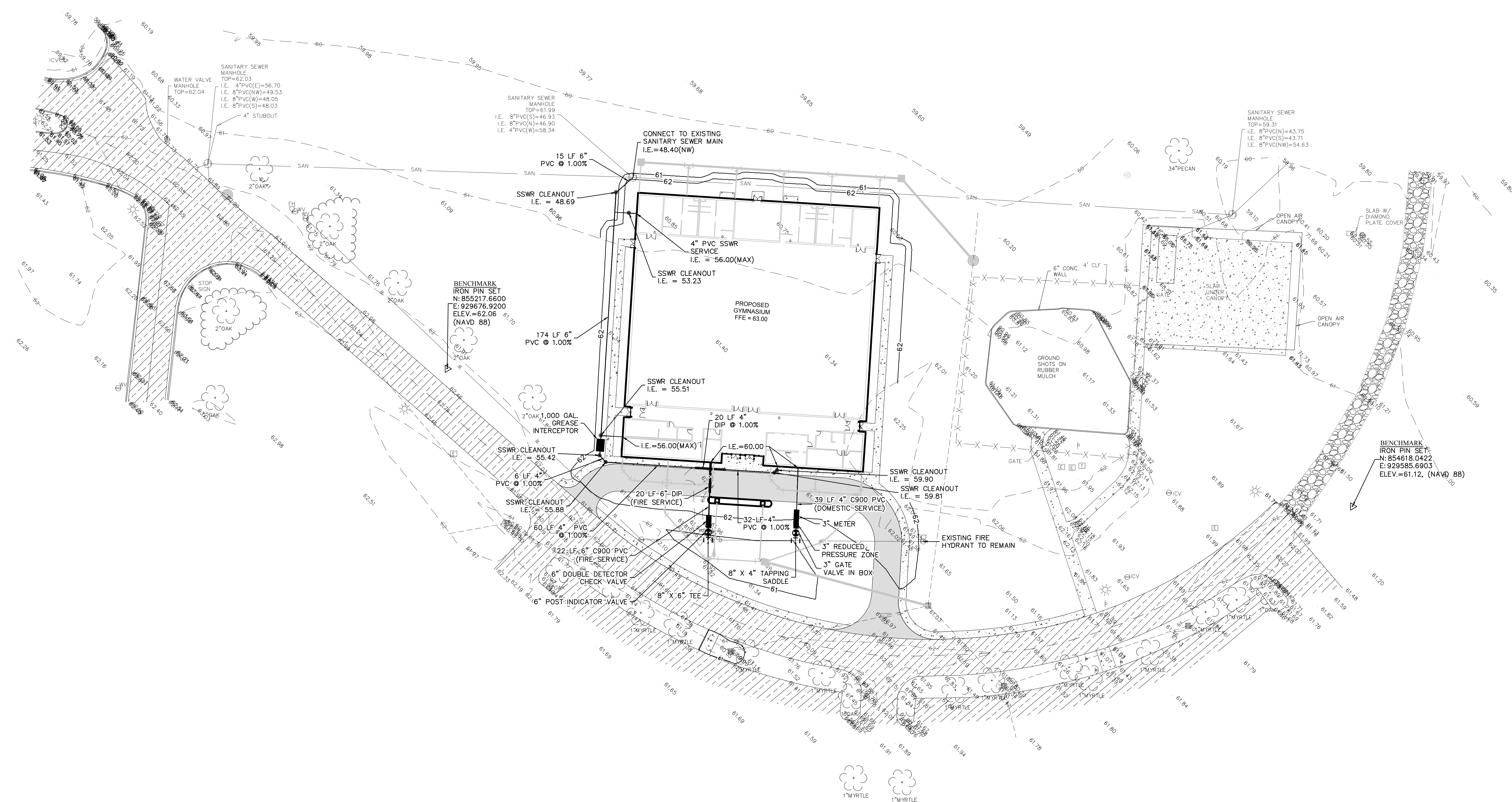


**HUSSEY GAY BELL**  
— Established 1958 —

DESIGNED	DRAWN	CHECKED
C.J.H.	C.J.H.	C.J.C.
DATE: 07/26/2019		
JOB NO. 119273572		
SCALE: 1" = 30'		

**EFFINGHAM COUNTY GYMNASIUM**  
CLARENCE E. MORGAN RECREATION COMPLEX  
1750 GA. HWY 21 S. SPRINGFIELD, GEORGIA 31329  
**SANITARY SEWER AND WATER**  
DISTRIBUTION PLAN PLAN

DRAWING NUMBER  
**C07.01**



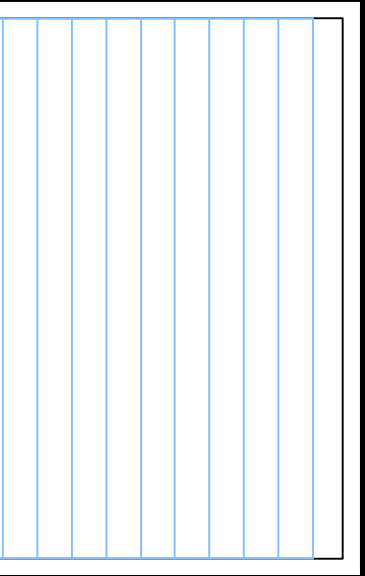
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**HUSSEY GAY BELL**  
Established 1958

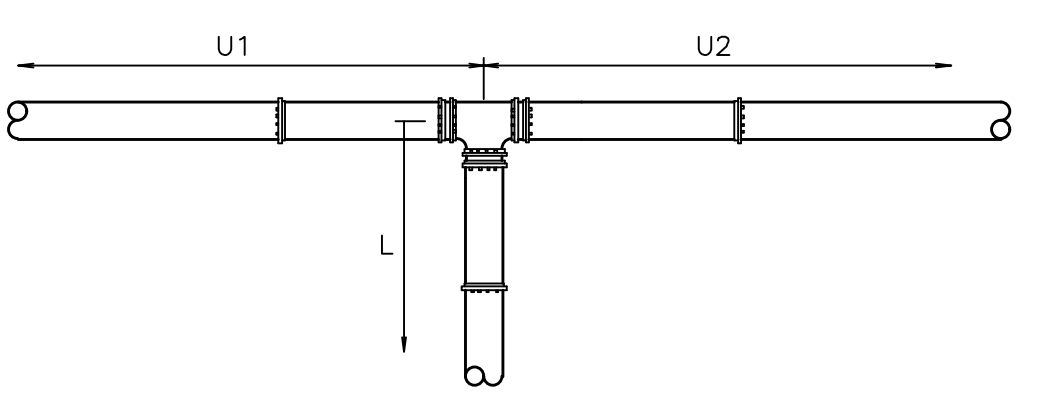
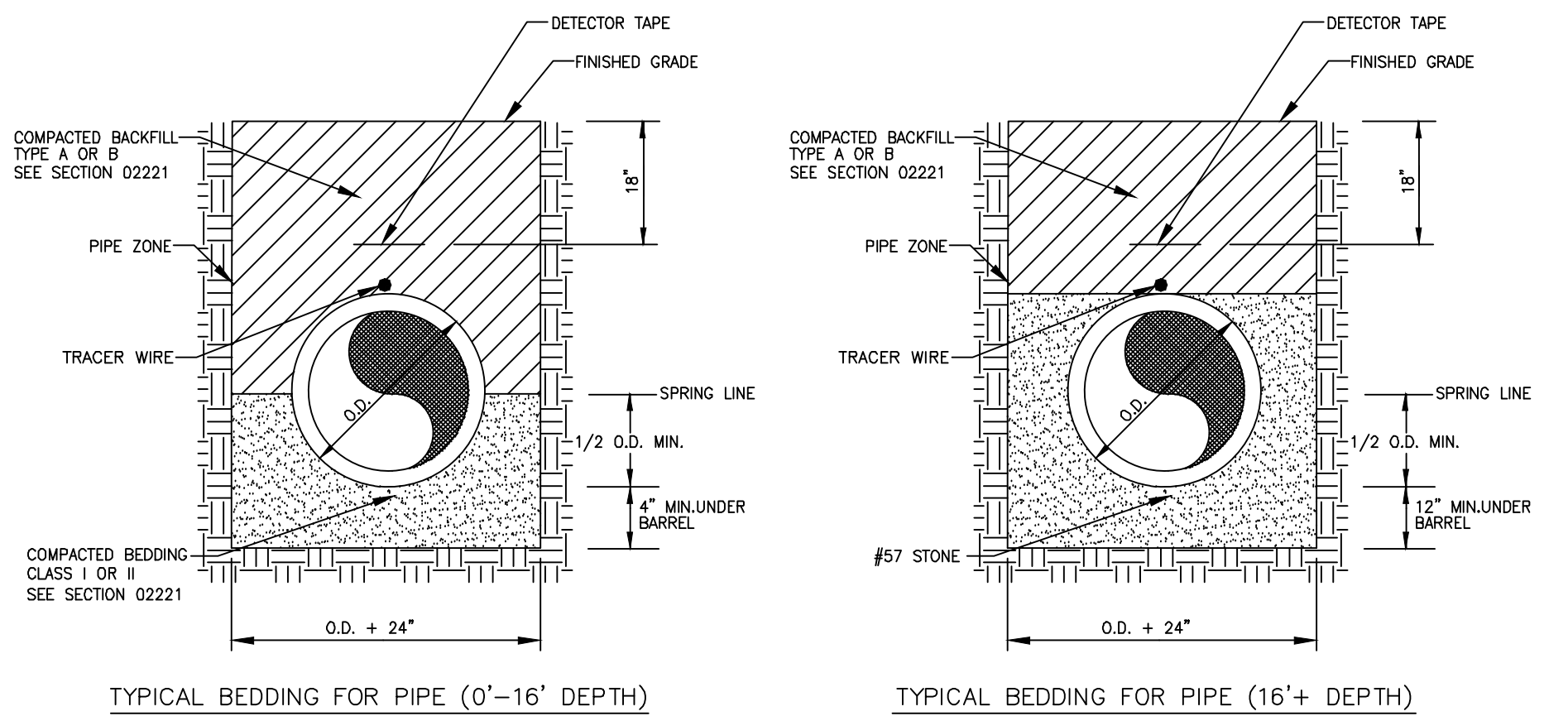
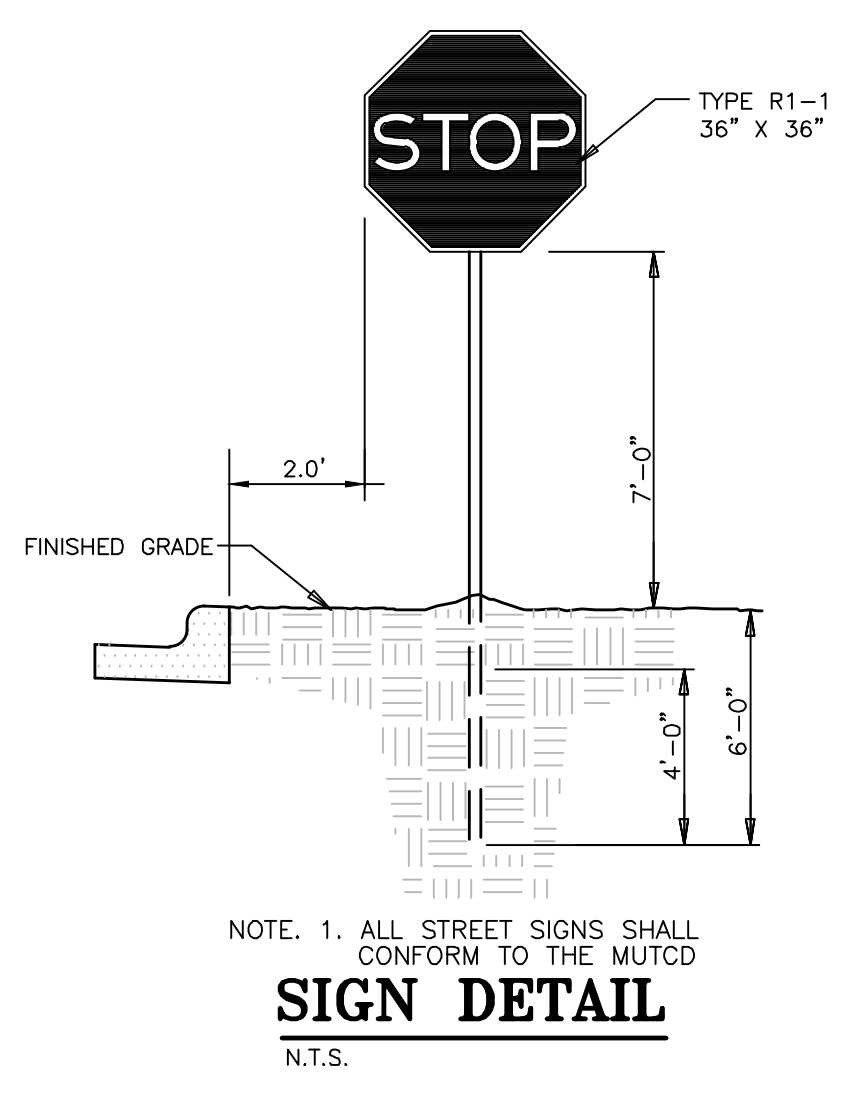
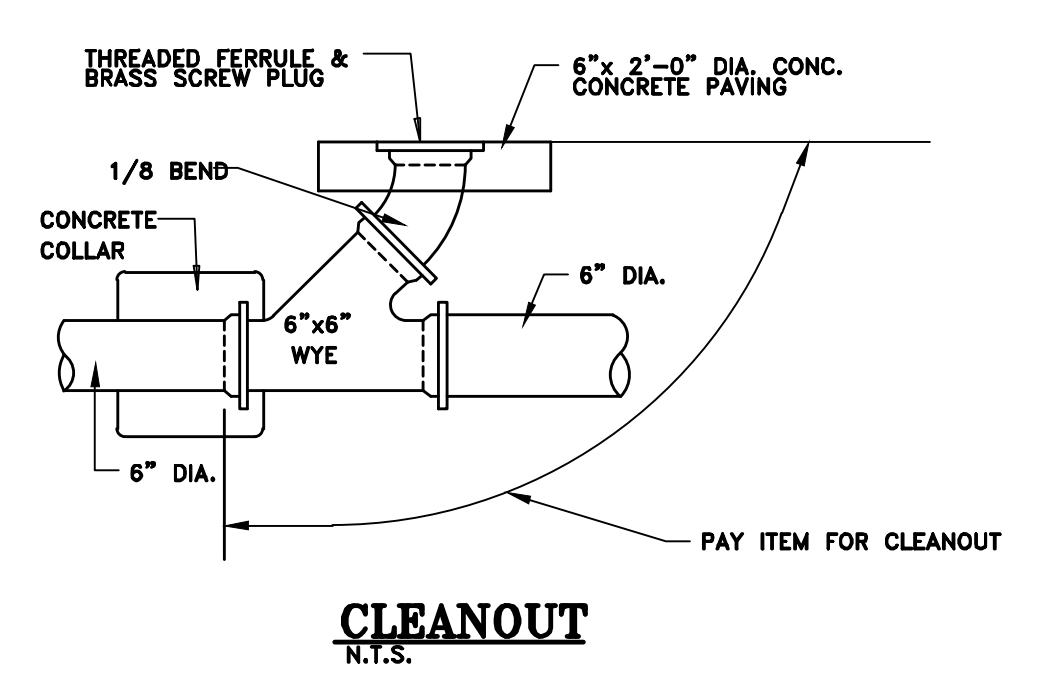
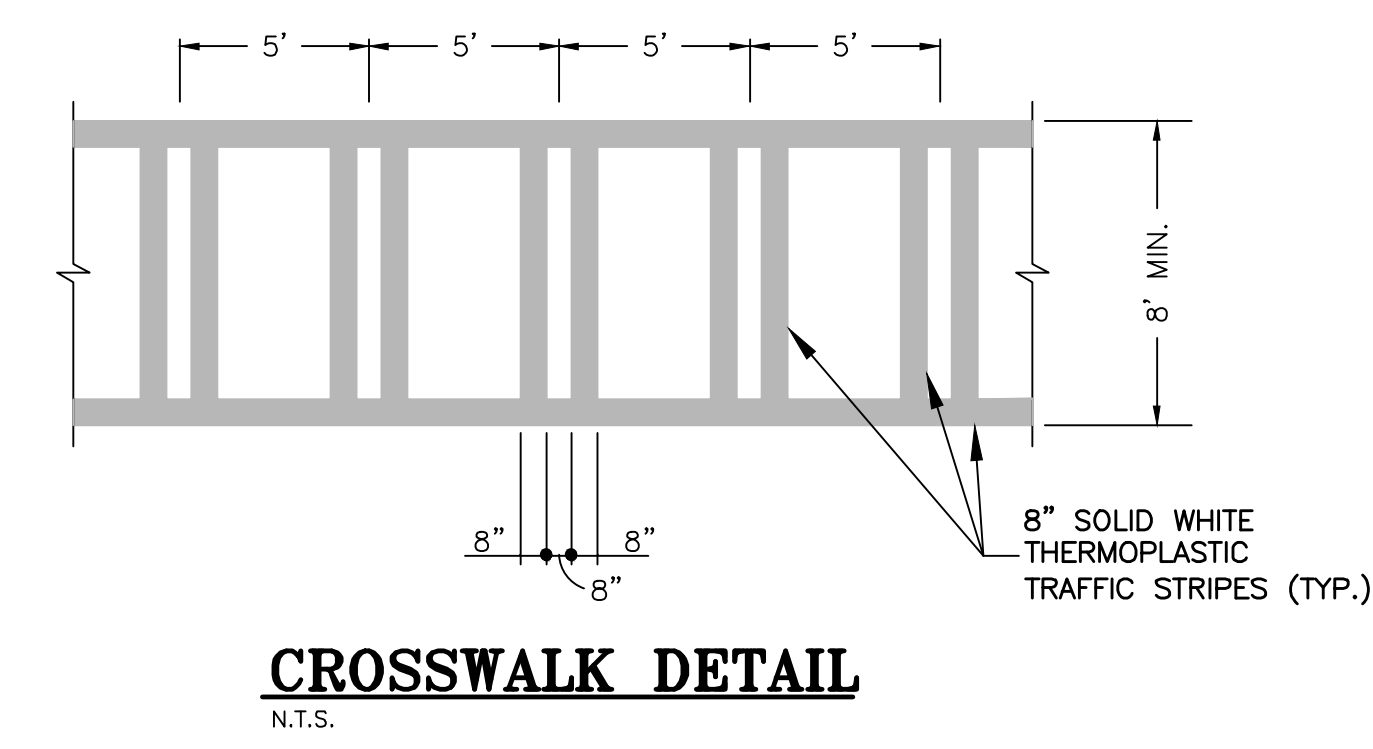
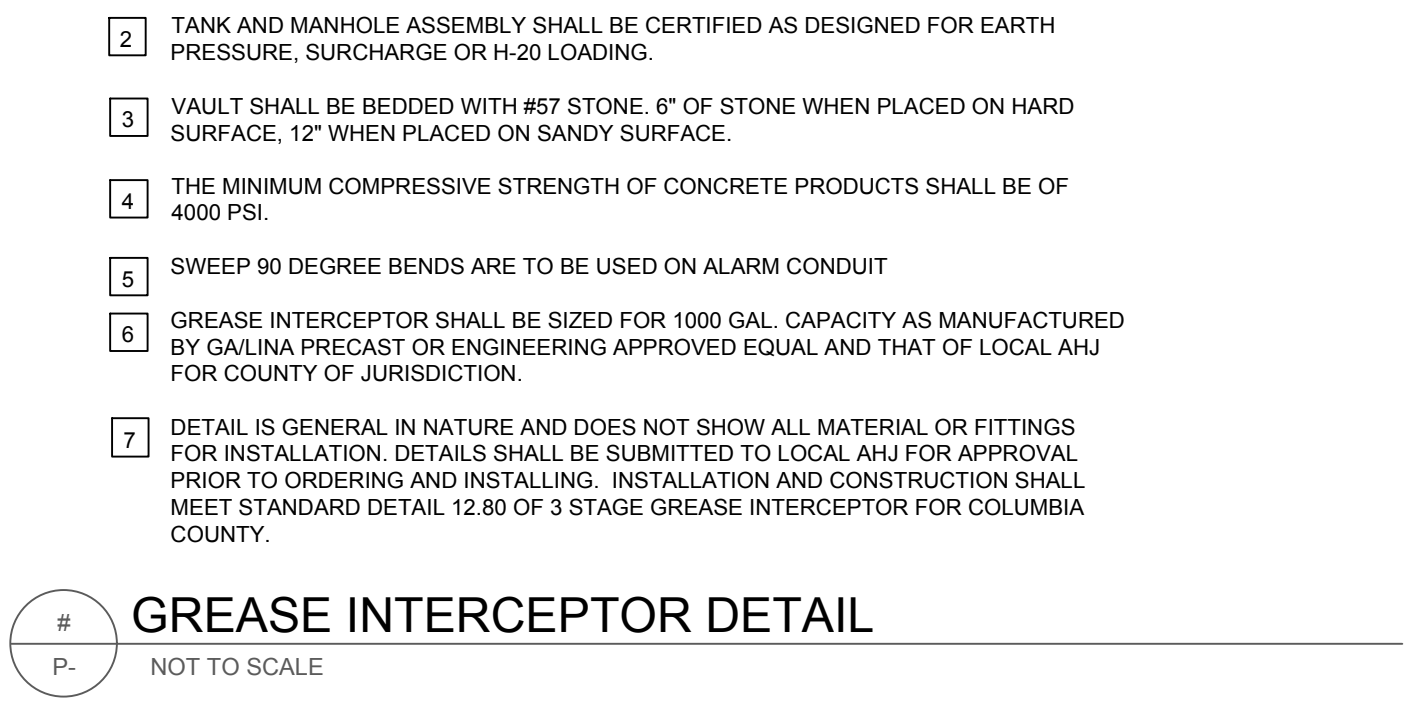
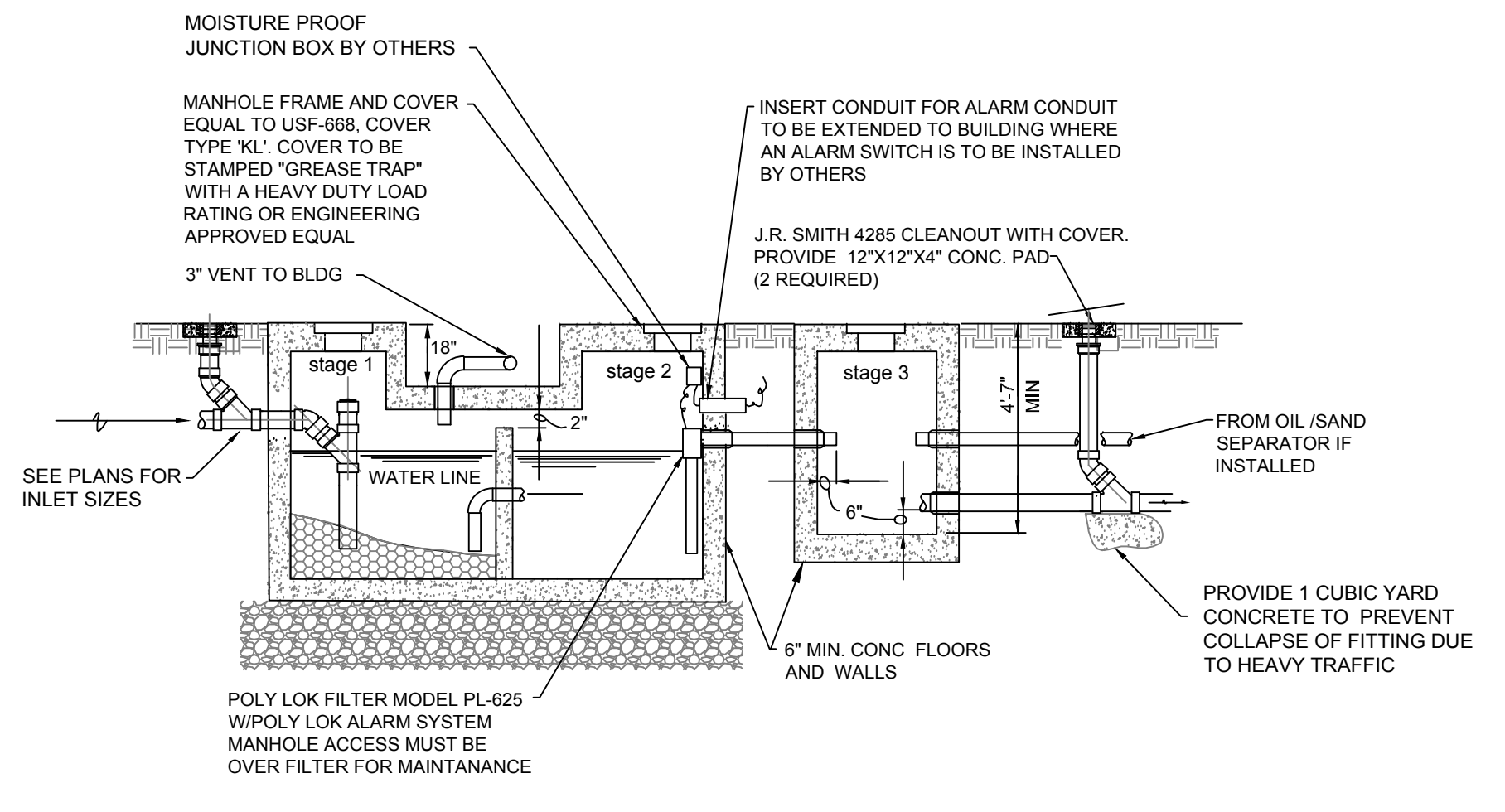
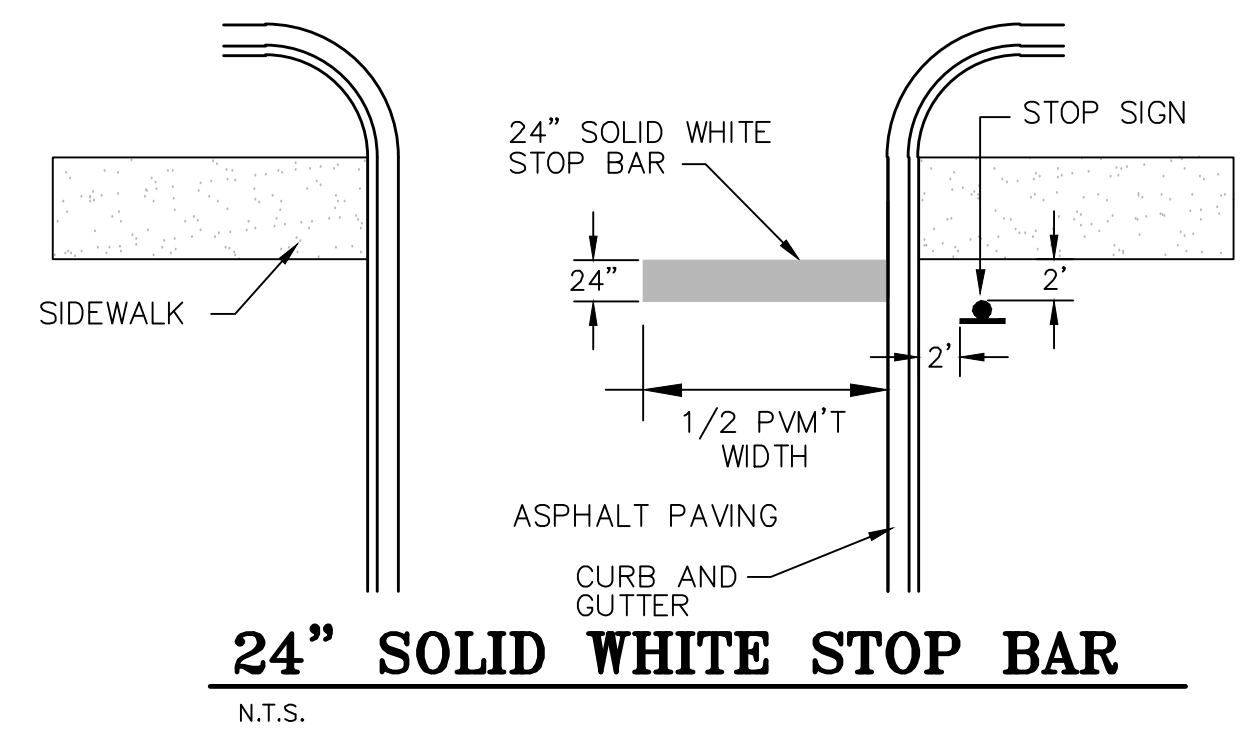
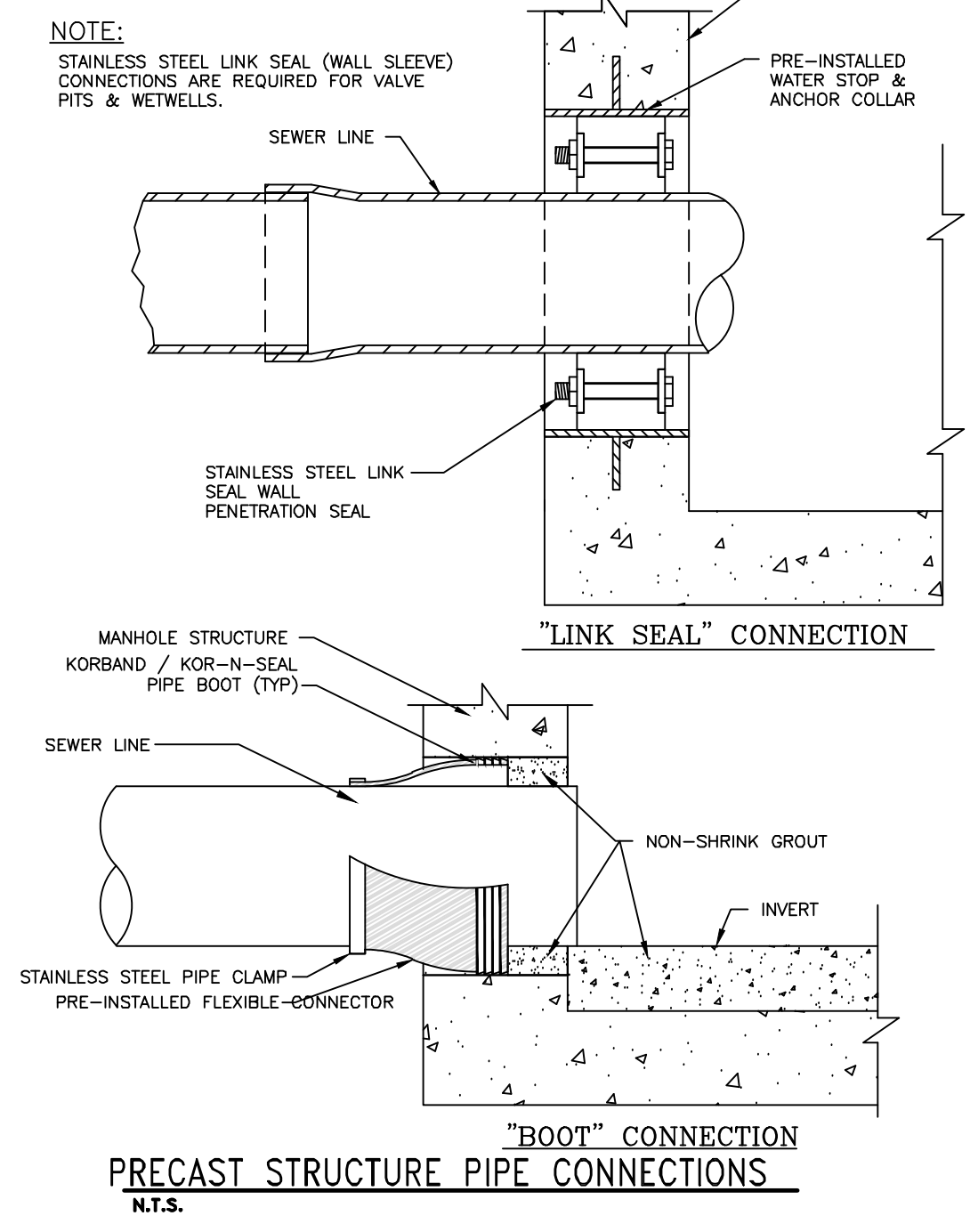


DESIGNED C.J.H.	DRAWN C.J.H.	CHECKED C.J.C.
DATE: 07/26/2019		
JOB NO. 119273572		
SCALE: N.T.S.		

**EFFINGHAM COUNTY GYMNASIUM**  
CLARENCE E. MORGAN RECREATION COMPLEX  
1750 GA. HWY 21 S. SPRINGFIELD, GEORGIA 31229

DRAWING NUMBER

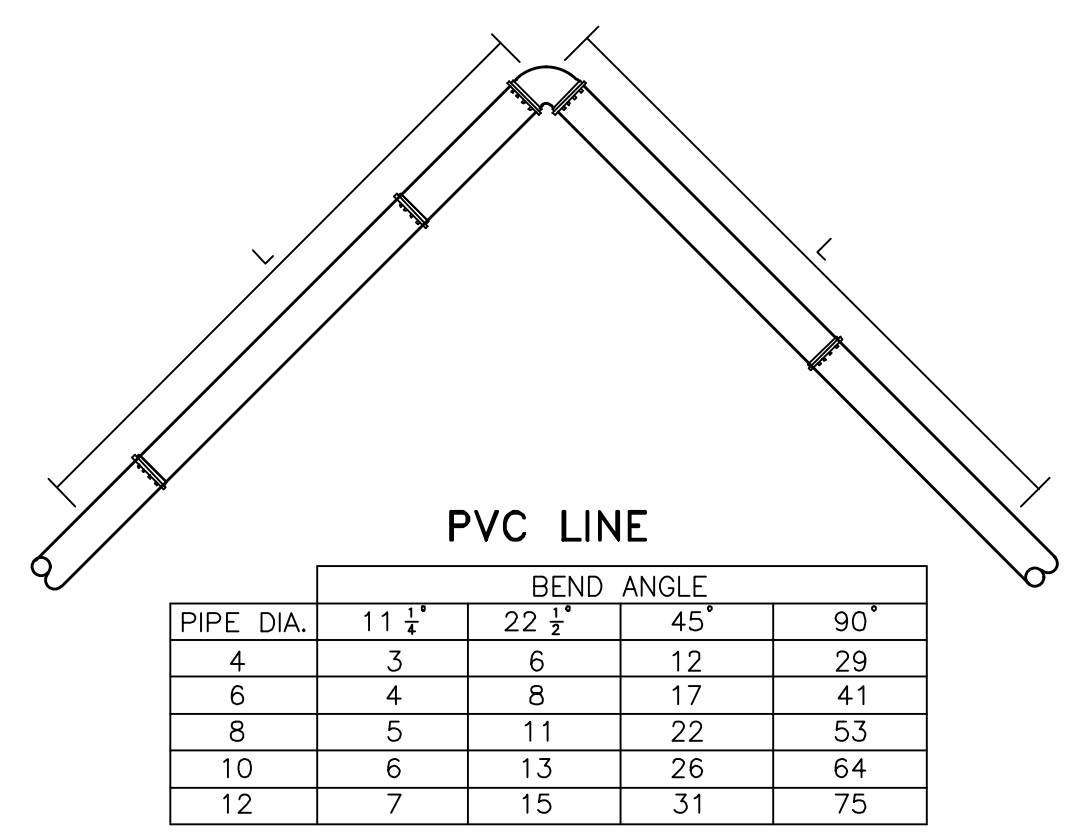
**C08.02**



- NOTES:**
- LENGTH OF RESTRAINT SHOWN IS IN FEET.
  - WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
  - U1 AND U2 = UNINTERRUPTED STRAIGHT RUNS OF PIPE IN EACH DIRECTION.
  - Ur = THE SMALLER OF U1 OR U2
  - L = MINIMUM RESTRAINED LENGTH ALONG THE BRANCH.
  - WHERE Ur IS LESS THAN 5', RESTRAIN TEE AS A 90° HORIZONTAL BEND.

**DUCTILE IRON LINE**

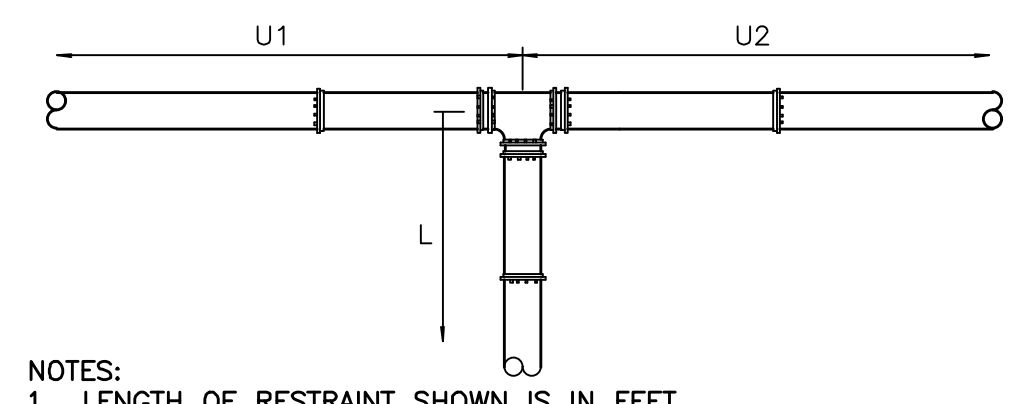
TEE	Ur	5'-10'	11'-20'	21'-35'	36'-50'	50'-75'	75'-100'
4X4	23	15	2	*	*	*	*
6X4	21	9	*	*	*	*	*
6X6	35	27	14	*	*	*	*
8X4	18	3	*	*	*	*	*
8X6	33	23	5	*	*	*	*
8X8	47	39	26	6	*	*	*
10X4	16	*	*	*	*	*	*
10X6	31	18	*	*	*	*	*
10X8	46	36	19	*	*	*	*
10X10	57	49	36	17	*	*	*
12X4	13	*	*	*	*	*	*
12X6	30	14	*	*	*	*	*
12X8	44	32	13	*	*	*	*
12X10	56	47	31	7	*	*	*
12X12	68	60	47	28	*	*	*
16X6	26	4	*	*	*	*	*
16X8	41	25	*	*	*	*	*



**DUCTILE IRON LINE**

TEE	Ur	5'-10'	11'-20'	21'-35'	36'-50'	50'-75'	75'-100'
16X10	54	41	20	*	*	*	*
16X12	66	56	38	*	*	*	*
16X16	69	61	38	*	*	*	*
20X6	22	*	*	*	*	*	*
20X8	38	18	*	*	*	*	*
20X10	51	35	8	*	*	*	*
20X12	64	51	28	*	*	*	*
20X16	87	77	60	35	10	*	*
20X20	108	100	87	67	48	*	*
24X6	18	*	*	*	*	*	*
24X8	35	10	*	*	*	*	*
24X10	49	29	*	*	*	*	*
24X12	62	45	17	*	*	*	*
24X16	86	73	53	22	*	*	*
24X20	107	97	81	57	33	*	*
24X24	127	119	106	86	66	33	*

**MINIMUM RESTRAINED LENGTH (L)**  
\*RESTRAIN AT TEE ONLY.

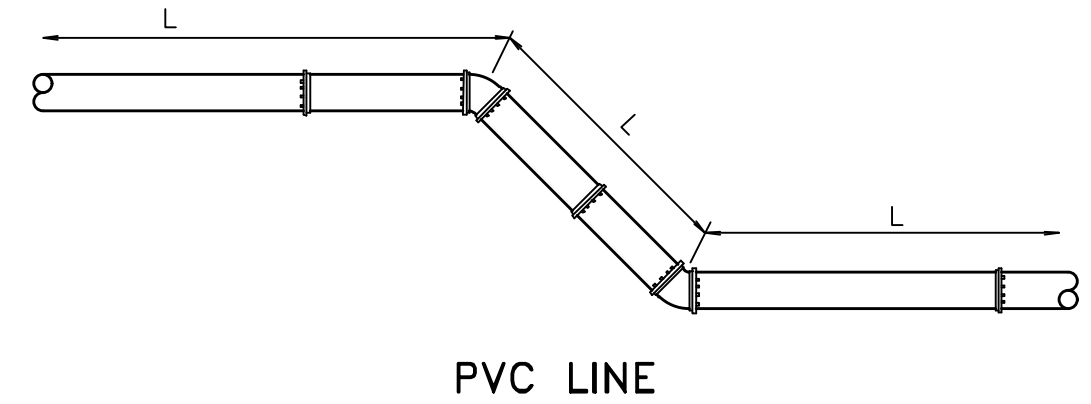


- NOTES:**
- LENGTH OF RESTRAINT SHOWN IS IN FEET.
  - WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.
  - U1 AND U2 = UNINTERRUPTED STRAIGHT RUNS OF PIPE IN EACH DIRECTION.
  - Ur = THE SMALLER OF U1 OR U2
  - L = MINIMUM RESTRAINED LENGTH ALONG THE BRANCH.
  - WHERE Ur IS LESS THAN 5', RESTRAIN TEE AS A 90° HORIZONTAL BEND.

**PVC LINE**

TEE	Ur	5'-10'	11'-20'	21'-35'	> 35'
4X4	43	28	4	*	*
6X4	38	17	*	*	*
6X6	64	49	25	*	*
8X4	34	6	*	*	*
8X6	61	42	10	*	*
8X8	87	72	48	12	*
10X4	29	*	*	*	*
10X6	58	34	*	*	*
10X8	84	66	35	*	*
10X10	106	91	67	31	*
12X4	24	*	*	*	*
12X6	54	26	*	*	*
12X8	82	60	23	*	*
12X10	104	86	57	13	*
12X12	126	112	87	51	*

**MINIMUM RESTRAINED LENGTH (L)**  
\*RESTRAIN AT TEE ONLY.



**DUCTILE IRON LINE**

TEE	Ur	5'-10'	11'-20'	21'-35'	> 35'
4X4	43	28	4	*	*
6X4	38	17	*	*	*
6X6	64	49	25	*	*
8X4	34	6	*	*	*
8X6	61	42	10	*	*
8X8	87	72	48	12	*
10X4	29	*	*	*	*
10X6	58	34	*	*	*
10X8	84	66	35	*	*
10X10	106	91	67	31	*
12X4	24	*	*	*	*
12X6	54	26	*	*	*
12X8	82	60	23	*	*
12X10	104	86	57	13	*
12X12	126	112	87	51	*

**MINIMUM RESTRAINED LENGTH (L)**  
\*RESTRAIN AT TEE ONLY.

**DUCTILE IRON LINE**

PIPE DIA.	L
4	28
6	40
8	52
10	62
12	73
16	94
20	114
24	132

**PVC LINE**

PIPE DIA.	L
4	52
6	74
8	96
10	115
12	136

**MINIMUM RESTRAINED LENGTH (L)**  
\*RESTRAIN AT TEE ONLY.

- NOTES:**
- LENGTH OF RESTRAINT SHOWN IS IN FEET.
  - WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.

**DEAD END RESTRAINT**  
N.T.S.



# EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES:

2 GSWCC Level II Design Professional Cert. #0000061303



31 STORMWATER SAMPLING SHALL BE CONDUCTED AT THE POINTS AS INDICATED WITHIN THIS ESOPC.

**SAMPLING FREQUENCY**

- (1). THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITTEE SHALL SAMPLE AT THE BEGINNING OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN IN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE.
- (2). HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE.
- (3). SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING QUALIFYING EVENTS:
  - (A). FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;
  - (B). IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AS DEFINED IN THIS PERMIT EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO SUBMITTAL OF A NOT, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST;
  - (C). AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BUMPS IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BUMPS ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED;
  - (D). WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS REQUIRED BUT NOT POSSIBLE (OR NOT REQUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV.D.4.A.(6), MUST INCLUDE A WRITTEN JUSTIFICATION IN THE INSPECTION REPORT OF WHY SAMPLING WAS NOT PERFORMED, PROVIDING THIS JUSTIFICATION DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSEQUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE; AND
  - (E). EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.

\*NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

**REPORTING**

1. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.
  - A. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.
2. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:
  - A. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;
  - B. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
  - C. THE DATE(S) ANALYSES WERE PERFORMED ;
  - D. THE TIME(S) ANALYSES WERE INITIATED ;
  - E. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;
  - F. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
  - G. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;
  - H. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU," AND
  - I. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.
3. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL IS PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED ELECTRONICALLY. IF REQUIRED, A PAPER COPY MUST ALSO BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL OR SIMILAR SERVICE.

32 RETENTION OF RECORDS

1. THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:
  - A. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
  - B. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
  - C. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
  - D. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
  - E. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;
  - F. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
  - G. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT.
2. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

33 STORMWATER SAMPLING

STORM WATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT. EPA 833-B-92-001."

STORM WATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATION. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING 75. THE VALUE THAT WAS SELECTED FROM APPENDIX B IN PERMIT NO. GAR 100003. THIS NTU IS BASED UPON THE DISTURBED ACREAGE OF 1.8. FOR THE PROJECT SITE AND THE SURFACE WATER DRAINAGE AREA OF LESS THAN 5 SQUARE MILES, AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES.

**APPENDIX B**  
Nephelometric Turbidity Unit (NTU) Tables

Warm Water (Supporting Warm Water Fisheries)  
Surface Water Drainage Area, Square Miles

	0-4.99	5-9.99	10-24.99	24-49.99	50-99.99	100-249.99	250-499.99	500+
Site Size Acres	75	150	200	400	750	750	750	750
10.01-25	50	100	100	200	300	500	750	750
24.01-50	50	50	100	100	200	300	750	750
50.01-100	50	50	50	100	100	150	300	600
100.01+	50	50	50	50	50	100	200	100

To use these tables, select the size (acres) of the facility or common development. Then, select the surface water drainage area (square miles). The NTU matrix value arrived at from the above tables is one to use in Part

35 SEE PAGES 12 - 14 FOR SAMPLING POINT LOCATIONS, PERENNIAL AND INTERMITTENT STREAM AND OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED.

36 SEE PAGES 12 - 14 & 15. FOR A DESCRIPTION OF APPROPRIATE CONTROLS AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE.

41 APPLICABLE 25-FOOT OR 50-FOOT UNDISTURBED BUFFERS ADJACENT TO STATE WATERS AND ANY ADDITIONAL BUFFERS AS REQUIRED BY THE LOCAL ISSUING AUTHORITY ARE SHOWN IF APPLICABLE. AREAS OF IMPACT ARE SHOWN AND LABELED ON THE PLAN IF REQUIRED.

42 ON SITE WETLANDS AND WATERS OF THE STATE ARE NOT LOCATED ON OR WITHIN 200 FEET OF THE PROJECT SITE.



**DRAINAGE BASIN MAP**  
SCALE: 1" = 2000'

43 THE PEAK DISCHARGE RATES FOR THE SITE PRIOR TO AND AFTER COMPLETION OF CONSTRUCTION ACTIVITIES ARE:

PEAK DISCHARGE (25 YR) "PRE" = 5 CFS  
PEAK DISCHARGE (25 YR) "POST" = 13 CFS

46 REFER TO EROSION AND SEDIMENT CONTROL PLAN SHEETS FOR WEIR VELOCITIES WITH APPROPRIATE OUTLET PROTECTION AND THE LOCATION OF ALL STORM WATER DISCHARGE POINTS.

47 SOIL TYPE: FuA - FUQUAY LOAMY SAND (HSG A)  
SEE PAGES 12 - 14 FOR DELINEATION.

48 REFER TO EROSION AND SEDIMENT CONTROL PLAN SHEETS FOR THE LIMITS OF DISTURBANCE FOR EACH PHASE OF CONSTRUCTION.

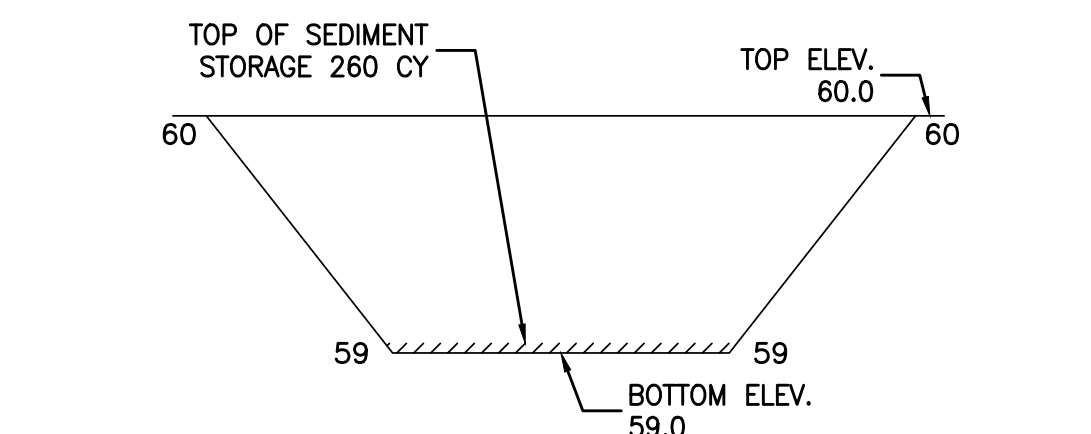
49 **TEMPORARY SEDIMENT STORAGE.**  
THE DISTURBED AREA FOR THIS PROJECT IS 1.8 ACRES. THEREFORE, THE REQUIRED SEDIMENT STORAGE VOLUME IS 1.8 ACRES X 67 CY PER ACRE = 121. CY OF STORAGE REQUIRED.

**PROVIDED SEDIMENT STORAGE COMPUTATIONS**

ESOP PHASE	STORAGE METHOD	VOLUME
INITIAL	TEMPORARY SEDIMENT POND	73 C.Y.
INTERMEDIATE	INLET SEDIMENT TRAP	39.5 CY/EA X 3 = 118.5 C.Y.
FINAL	TEMPORARY SEDIMENT STORAGE ALONG SILT FENCE	100 LF. X 0.19 = 19 C.Y.

**POND STAGE-STORAGE**

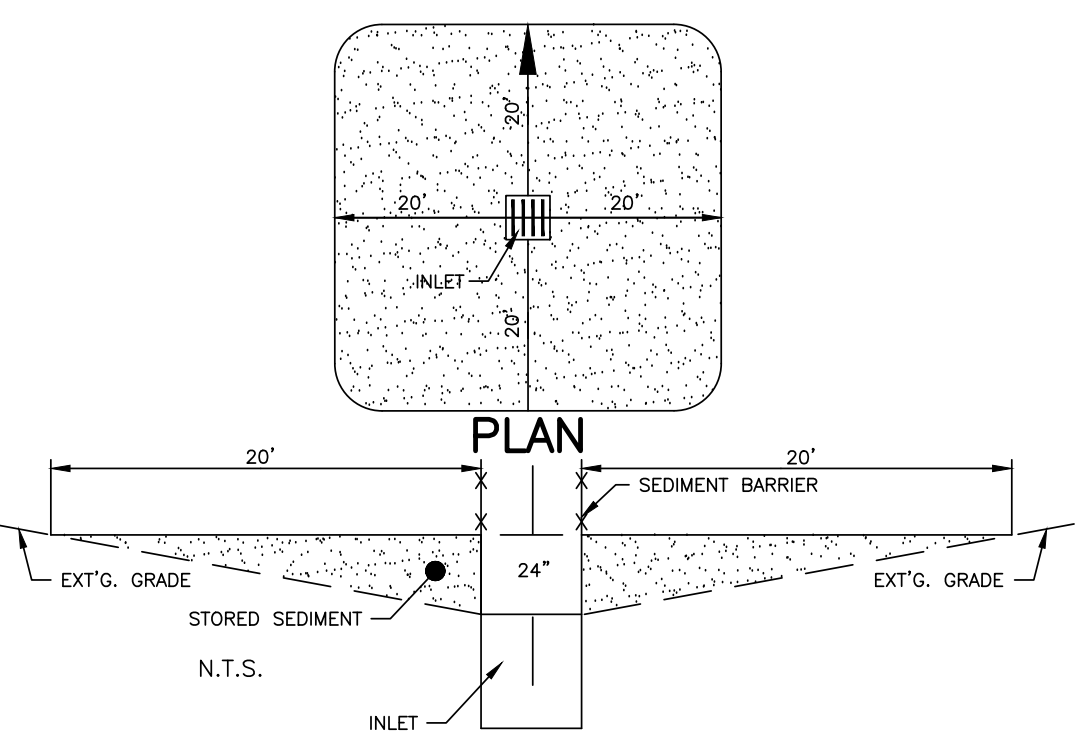
ELEVATION	AREA (S.F.)	CUMULATIVE VOLUME (C.Y.)
59.0	1,492	0
60.0	2,465	73



**TEMPORARY SEDIMENT POND**  
N.T.S.

INLET SEDIMENT TRAP	3 EA X 39.5 CY/EA = 118.5 CY
---------------------	------------------------------

DRAINAGE AREA PER EACH (AC.) = 0.60 +/- ACRES  
REQUIRED SEDIMENT STORAGE = 121 CY  
ASSUMED EXCAVATION DEPTH = 2'  
ASSUMED SIDE SLOPES = 10:1  
AVAILABLE CALCULATED VOLUME =  
V = 1/3bh  
V = 1/3(40'x40')2  
V = 1067 CF  
V = 39.5 CY/INLET SEDIMENT TRAP



**EXCAVATED INLET SEDIMENT TRAP**  
N.T.S.

51 REFER TO EROSION AND SEDIMENT CONTROL PLAN SHEETS FOR SPECIFIED LOCATIONS.

**LEGEND:**

- CONSTRUCTION EXIT
- DUST CONTROL ON DISTURBED AREAS
- DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)
- DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)
- DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)
- TEMPORARY SEDIMENT SINGLE BARRIER - SILT FENCE, TYPE "NON-SENSITIVE"
- TEMPORARY SEDIMENT DOUBLE BARRIER - SILT FENCE, TYPE "SENSITIVE"
- INLET SEDIMENT TRAP
- SLOTTED BOARD DAM WITH STONE FILTER
- STORM DRAINAGE OUTLET PROTECTION
- DIVERSIONS
- STONE CHECK DAM
- TEMPORARY SEDIMENT TRAP
- STORM WATER DISCHARGE SAMPLING POINT
- TREE PROTECTION BARRICADE
- SOILS
- LIMITS OF DISTURBANCE & STORMWATER MANAGEMENT AREA
- SILT FENCE PROTECTION (SINGLE)
- SILT FENCE PROTECTION (DOUBLE)

51 REFER TO EROSION AND SEDIMENT CONTROL DETAIL SHEETS FOR DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES.

**52 VEGETATIVE METHODS:**

- A. A VEGETATIVE COVER SHALL BE ESTABLISHED AND MAINTAINED OVER ALL FINAL GRADING AND OTHER DISTURBED AREAS OF THE SITE. SEE COASTAL PLAIN VEGETATIVE COVERS FOR AN OUTLINE OF THE ESTABLISHMENT OF VEGETATIVE COVERS.
- B. WEEKLY INSPECTION OF THE GRASS COVER SHALL BE PERFORMED TO IDENTIFY AREAS REQUIRING RE-ESTABLISHMENT OF GRASS.
- C. LIME RATE: 1 TO 2 TONS/ACRE.  
FERTILIZER: 1500 LBS. OF 6-12-12 PER ACRE.

**COASTAL PLAIN VEGETATIVE COVERS**

MONTH OF PLANTING	TEMPORARY GRASS	RATE	MONTH OF PLANTING	PERMANENT GRASS	RATE
MARCH - JUNE	SUDANGRASS	60 Lbs./Ac	MARCH - JUNE	COMMON BERMUDA (HULLED)	10 Lbs./Ac
APRIL - AUGUST	BROWN TOP MILLET	40 Lbs./Ac	JULY - AUGUST	COMMON BERMUDA (HULLED) & BROWN TOP MILLET	6 Lbs./Ac 10 Lbs./Ac
SEPTEMBER - FEBRUARY	RYE GRASS	40 Lbs./Ac	SEPTEMBER - FEBRUARY	COMMON BERMUDA (UNHULLED) & TALL FESCUE	6 Lbs./Ac 30 Lbs./Ac

**MULCH:**

MULCH, IF REQUIRED, SHALL BE UNCHOPPED, UNROTTED, DRY STRAW, HAY, OR WOOD WASTE SHALL BE APPLIED TO A DEPTH OF 2-3 INCHES PROVIDING COMPLETE SOIL COVERAGE. IN AREAS TO BE EVENTUALLY COVERED BY PERENNIAL VEGETATION THE CONTRACTOR SHALL APPLY 20-30 POUNDS OF NITROGEN/AC. IN ADDITION TO THE NORMAL AMOUNT.

MULCHING RATE FOR STRAW SHALL BE 2 TONS/AC. AND FOR HAY 2 1/2 TONS/AC. MULCH MATERIAL SHALL BE RELATIVELY FREE FROM ALL KINDS OF WEEDS AND SHALL BE FREE OF PROHIBITED NOXIOUS WEEDS WHICH ARE: CANADA THISTLE, JOHNSONGRASS AND QUACKGRASS. SPREAD MULCH MECHANICALLY OR UNIFORMLY BY HAND; MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER MULCH PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY PEG AND TWINE METHOD, MULCH ANCHORING TOOL, NETTING OR LIQUID MULCH BINDERS.

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DESIGNED	DRAWN	CHECKED
C.J.H.	C.J.H.	C.J.C.
DATE: 07/26/2019		
JOB NO. 119273572		
SCALE: AS SHOWN		

EFFINGHAM COUNTY GYMNASIUM  
CLARENCE E. MORGAN RECREATION COMPLEX  
1750 GA. HWY 21 S. SPRINGFIELD, GEORGIA 31329  
EROSION AND SEDIMENT CONTROL NOTES

DRAWING NUMBER

C09.02



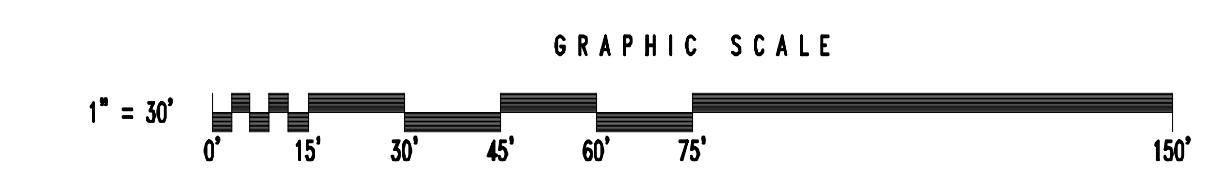
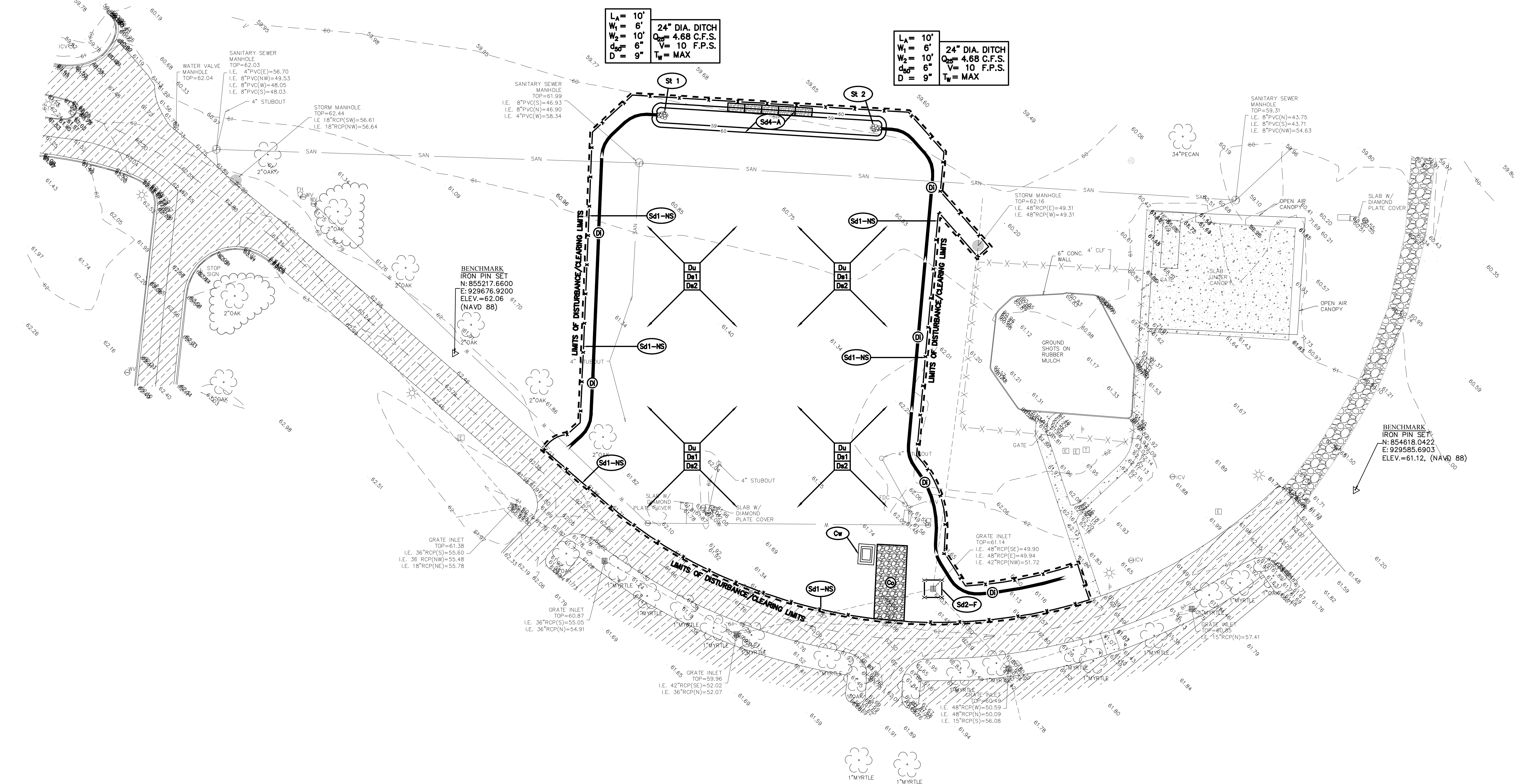
**HUSSEY GAY BELL**  
— Established 1958 —

DESIGNED	DRAWN	CHECKED
C.J.H.	C.J.H.	C.J.C.
DATE: 07/26/2019		
JOB NO. 119273572		
SCALE: 1" = 30'		

**EFFINGHAM COUNTY GYMNASIUM**  
CLARENCE E. MORGAN RECREATION COMPLEX  
1750 GA. HWY 21 S. SPRINGFIELD, GEORGIA 31329  
**EROSION AND SEDIMENT CONTROL PLAN -  
INITIAL PHASE**

DRAWING NUMBER

**C10.01**



**NOTE: ALL ELEVATIONS ARE NAVD 1988.**



**HUSSEY GAY BELL**  
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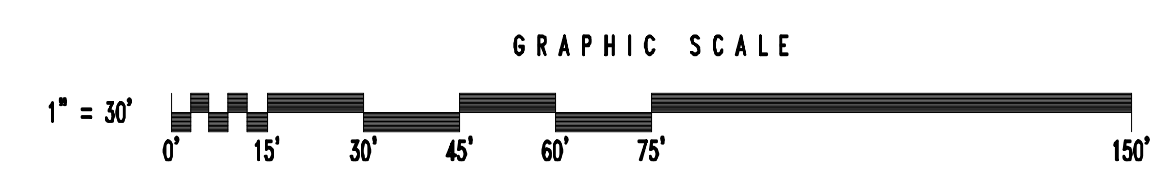
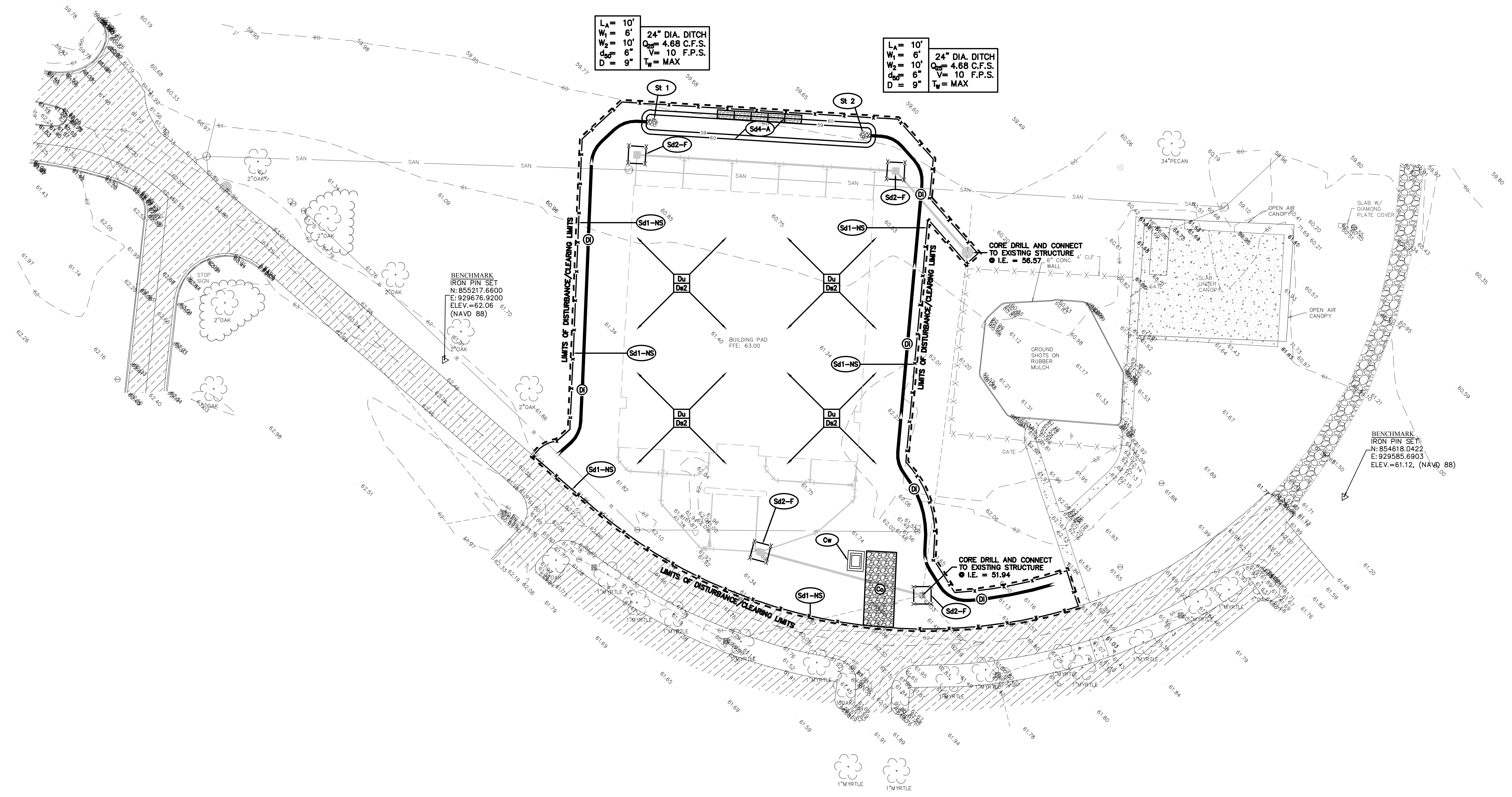
REVISIONS


DESIGNED C.J.H.	DRAWN C.J.H.	CHECKED C.J.C.
DATE: 07/26/2019		
JOB NO. 119273572		
SCALE: 1" = 30'		

**EFFINGHAM COUNTY GYMNASIUM**  
CLARENCE E. MORGAN RECREATION COMPLEX  
1750 GA. HWY 21 S. SPRINGFIELD, GEORGIA 31329  
**EROSION AND SEDIMENT CONTROL PLAN -  
INTERMEDIATE PHASE**

DRAWING NUMBER

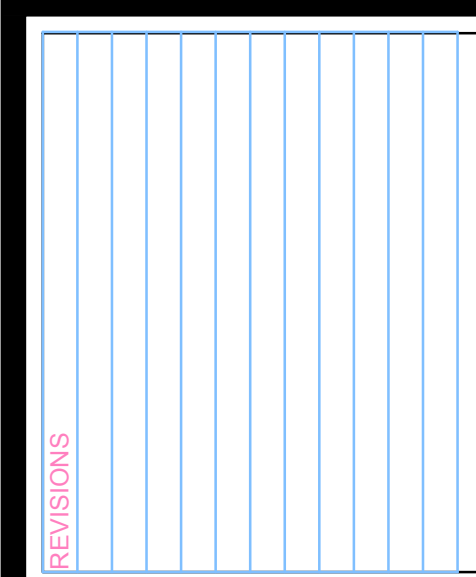
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**NOTE: ALL ELEVATIONS ARE NAVD 1988.**



**HUSSEY GAY BELL**  
— Established 1958 —

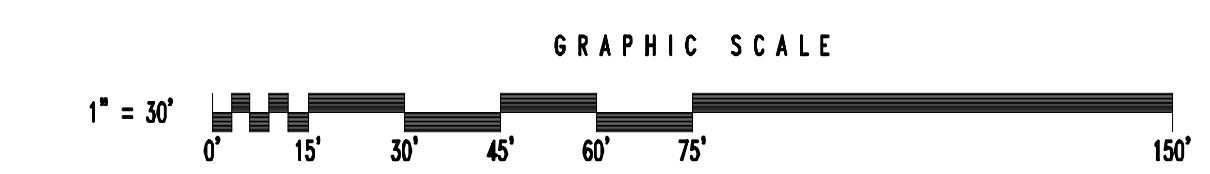
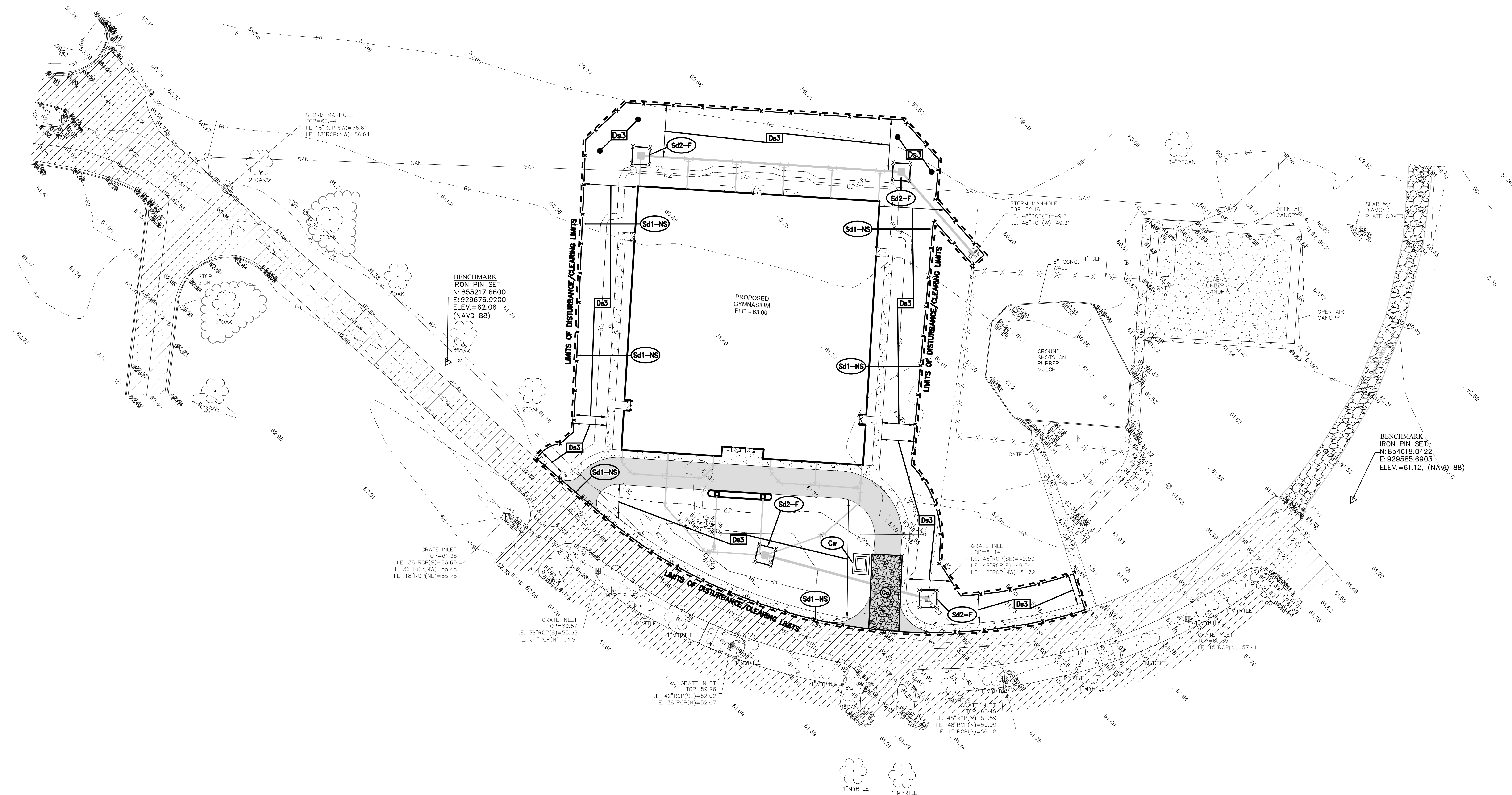


DESIGNED	DRAWN	CHECKED
C.J.H.	C.J.H.	C.J.C.
DATE: 07/26/2019		
JOB NO. 119273572		
SCALE: 1" = 30'		

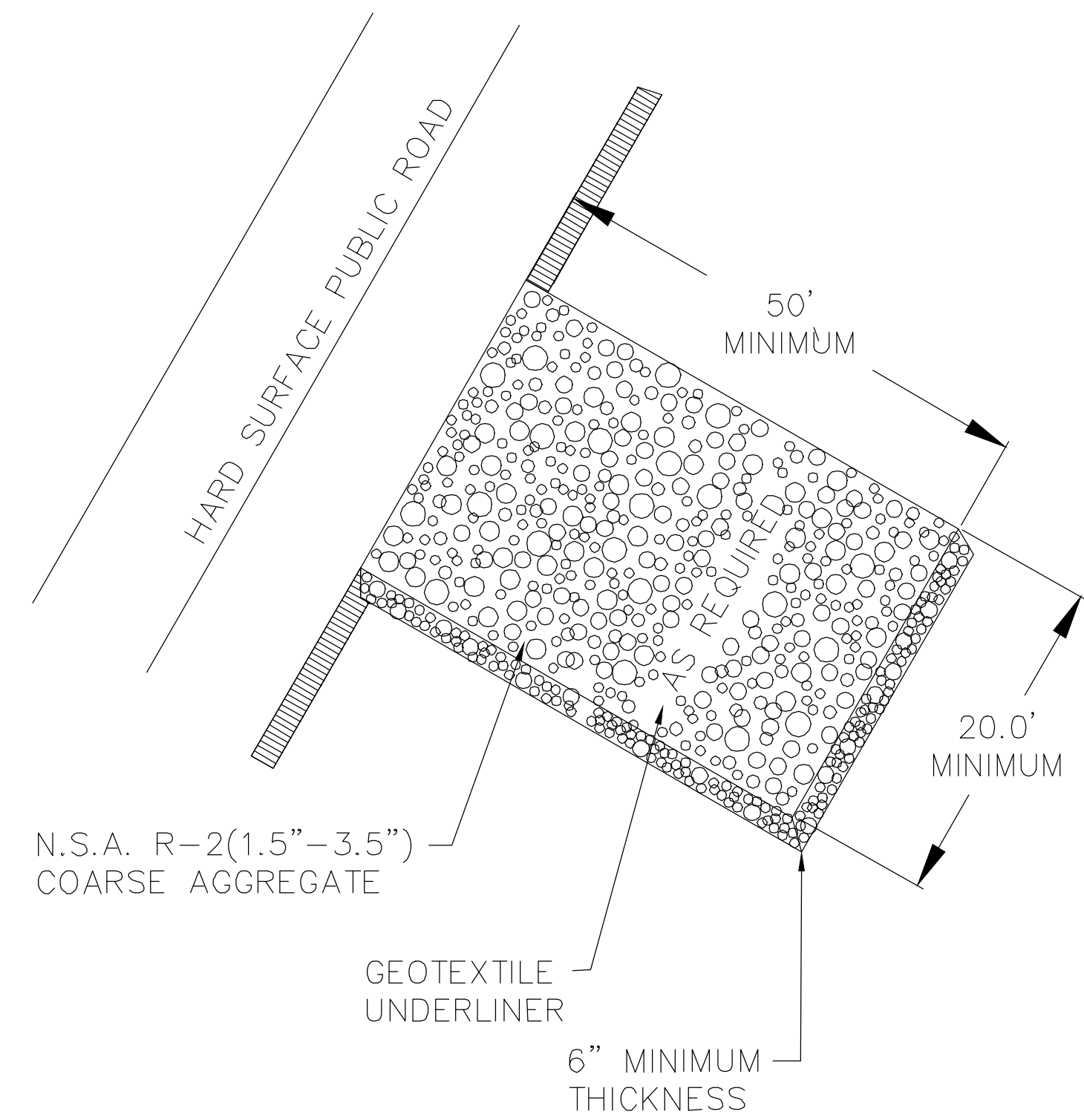
**EFFINGHAM COUNTY GYMNASIUM**  
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**EROSION AND SEDIMENT CONTROL PLAN -  
FINAL PHASE**

DRAWING NUMBER

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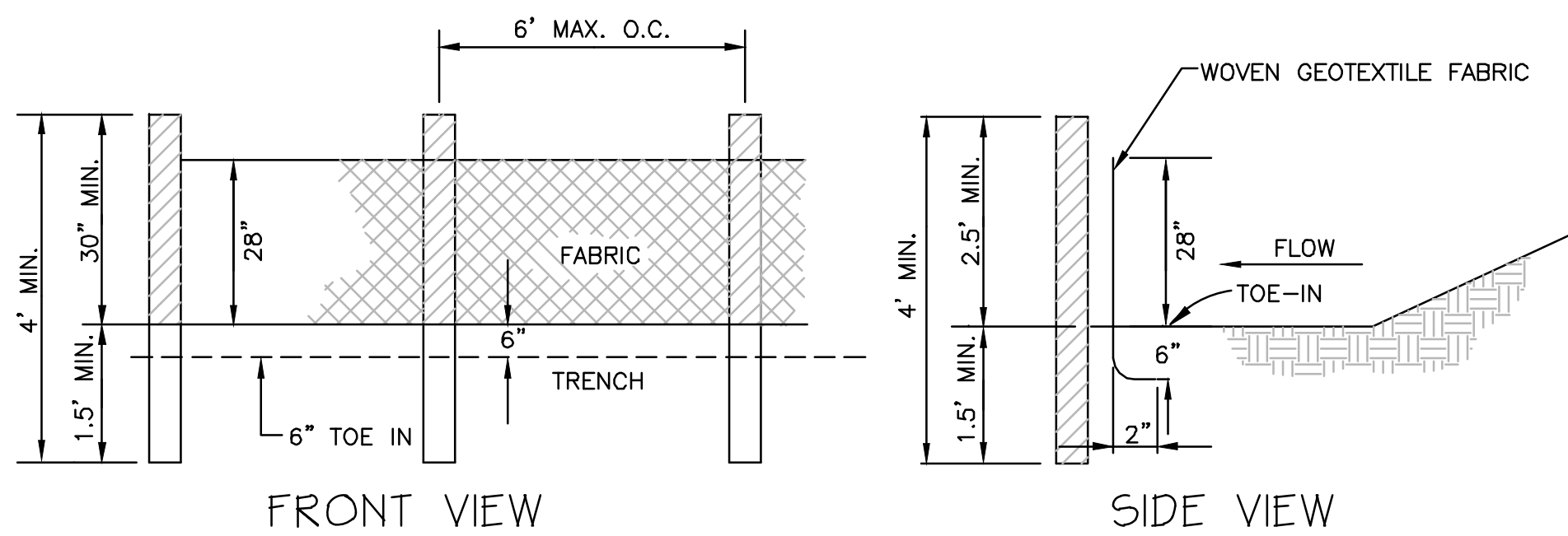


**NOTE: ALL ELEVATIONS ARE NAVD 1988.**



**CONSTRUCTION EXIT**

Co



**TYPE A FABRIC (36)**

USE:  
 1) ON DEVELOPMENTS WHERE THE LIFE OF THE PROJECT IS GREATER THAN OR EQUAL TO 6 MONTHS.  
 2) WHERE THE SLOPE GRADIENT IS STEEPER THAN 3:1.

POST SIZE		FASTENERS FOR WOOD POST (WIRE STAPLES)	
MIN. LENGTH	TYPE OF POST	GALGE	CROWN
4"	2x4" WOOD	17 MIN.	3/4" WIDE
4"	2x4" WOOD	17 MIN.	1/2" LONG
4"	2x4" WOOD	17 MIN.	1/2" LONG
4"	STEEL	14 MIN.	1"

FENCE		FASTENERS FOR WOOD POST (NAILS)	
TENSILE STRENGTH (LBS. MIN.) (1) (ASTM D-4632)	ELONGATION (%MAX.) (ASTM D-4632)	GALGE	LENGTH
WARP-120 FILL-100	40	14 MIN.	1"

TENSILE STRENGTH (LBS. MIN.) (1) (ASTM D-4632)	ELONGATION (%MAX.) (ASTM D-4632)	AOS (APPARENT OPENING SIZE) (MAX. SIEVE SIZE) (ASTM D-4751)	FLOW RATE (GAL./MIN./SQ. FT.) (GDT-87)	ULTRAVIOLET STABILITY (2) (ASTM D-4632 AFTER 300 HOURS WEATHERING IN ACCORDANCE WITH ASTM D-4355)	BURSTING STRENGTH (PSI MIN.) (ASTM D-3786 DIAPHRAGM BURSTING STRENGTH TESTER)	MIN. FABRIC WIDTH (INCHES)
WARP-120 FILL-100	40	#30	25	80	175	36

NOTE: FILTER FABRIC MAY ALSO BE ATTACHED TO THE POST BY WIRE, CORD, AND POCKETS.

(1) MIN. ROLL AVERAGE OF FIVE SPECIMENS.  
 (2) PERCENT OF REQUIRED INITIAL MIN. TENSILE STRENGTH.

**SILT FENCE - TYPE NON-SENSITIVE**

Sd1-NS

**SPRAY ON ADHESIVE REQUIREMENTS**

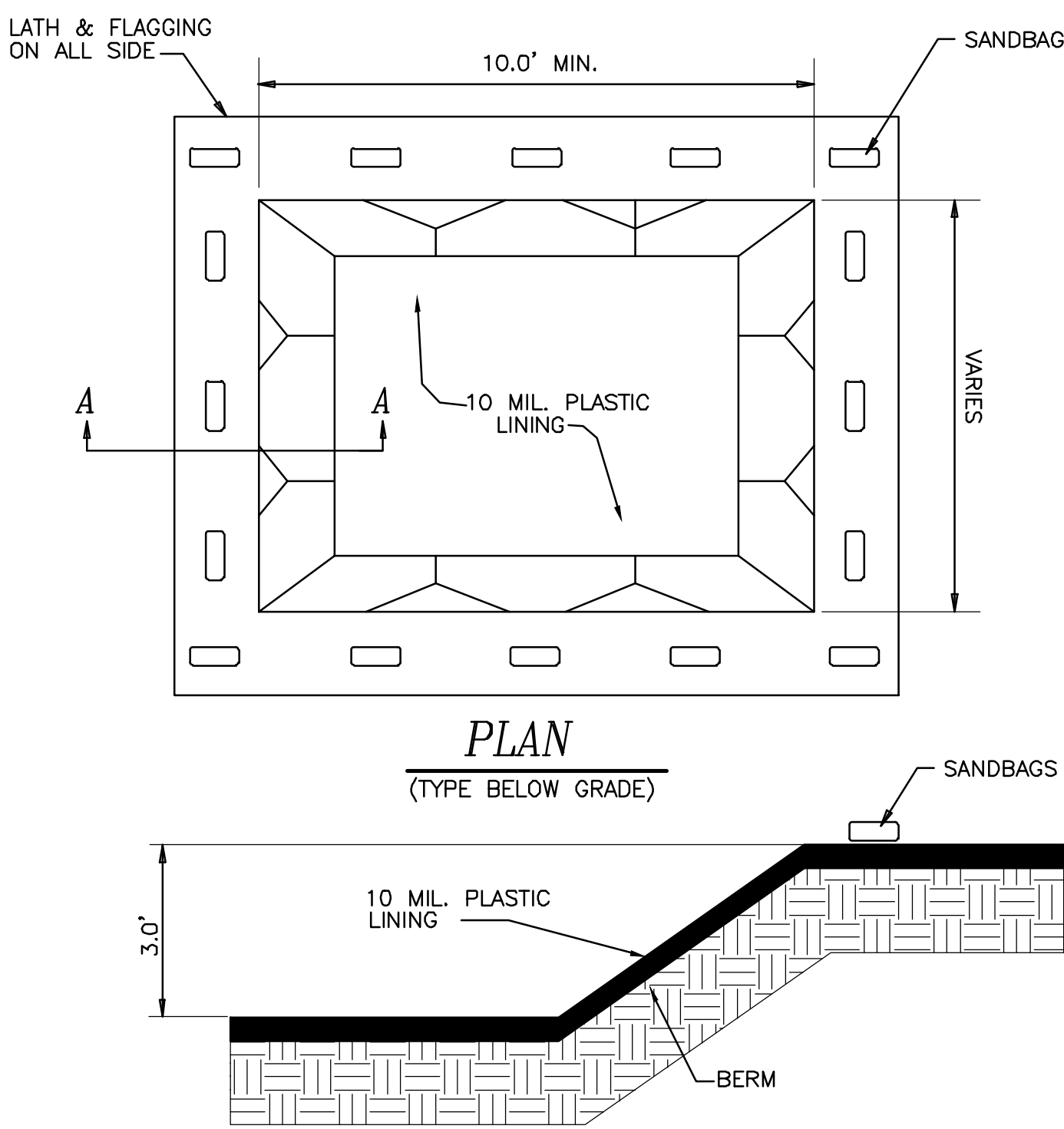
ADHESIVE	WATER DILUTION	NOZZLE TYPE	APPLICATION (GAL./AC.)
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1,200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1	FINE SPRAY	300

- NOTES:**
- TEMPORARY METHODS
    - MULCHES (D81)-DISTURBED AREA STABILIZATION (WITH MULCHING ONLY). SYNTHETIC RESINS MAY BE USED INSTEAD OF ASPHALT TO BIND MULCH MATERIAL. REFER TO STANDARD T6-TACKIFIERS AND BINDERS. RESINS SUCH AS CURASOL OR TERRATAK SHOULD BE USED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
    - VEGETATIVE COVER-DISTURBED AREA STABILIZATION WITH TEMPORARY SEEDING.
    - SPRAY ON ADHESIVES- THESE ARE USED ON MINERAL SOILS (NON EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. REFER TO TACKIFIERS AND BINDERS.
    - TILLAGE-THIS PRACTICE IS DESIGNED TO ROUGHEN AND BRING CLODS TO THE SURFACE. IT IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE WIND EROSION STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
    - IRRIGATION-THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED. F. BARRIERS-SOLID BOARD FENCES, SNOWFENCES, BURLAP FENCES, GRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 15 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION. G. CALCIUM CHLORIDE-APPLY AT A RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.
  - PERMANENT METHODS
    - PERMANENT VEGETATION-DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION). EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
    - TOPSOILING-THIS IS TAIL'S COVERING THE SURFACE WITH LESS EROSION SOIL MATERIAL.
    - STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

**DUST CONTROL ON DISTURBED AREAS**

Du

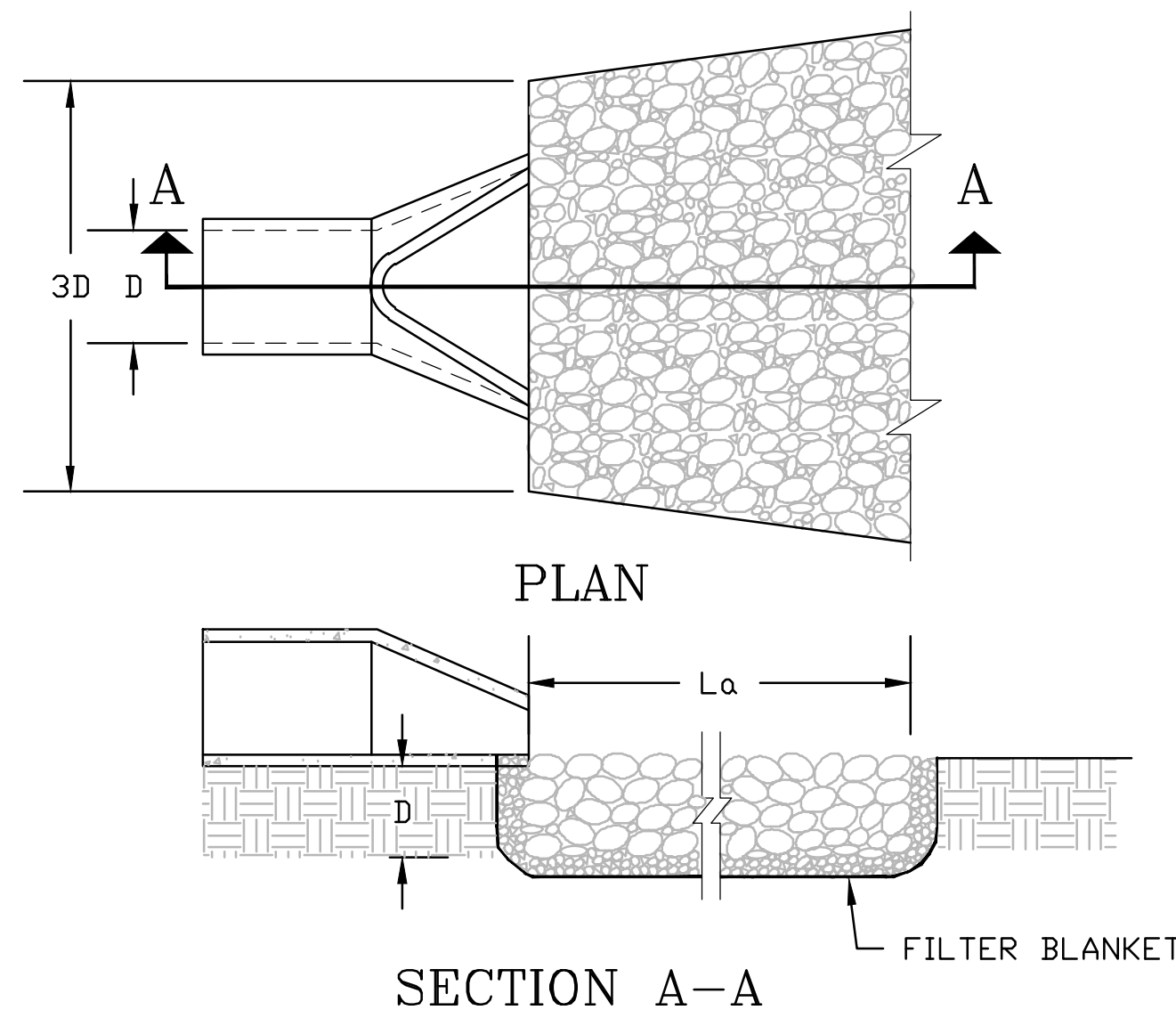
- NOTES:**
- THE CONTRACTOR MUST PROVIDE A DESIGNATED AREA FOR CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS, AND THE REAR OF THE VEHICLES. THIS AREA MUST HAVE A CONCRETE WASHOUT FACILITY AND SHALL BE CONSTRUCTED ACCORDING TO THE DETAIL SHOWN BELOW.
  - THE CONCRETE WASHOUT FACILITY SHALL BE LOCATED A MINIMUM OF 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES.
  - WASH OUT DISCHARGE FROM THE CLEANING OF CONCRETE TRUCKS, TOOLS, AND OTHER EQUIPMENT SHALL NOT BE DISCHARGED INTO STORM DRAINS, OPEN DITCHES, STREETS OR STREAMS.
  - EXCESS CONCRETE SHALL NOT BE DISPOSED OF ON SITE. ALL EXCESS CONCRETE SHALL BE TRANSPORTED OFF-SITE AND DISPOSED OF PROPERLY.
  - IT IS PROHIBITED TO WASH OUT THE MIXING DRUM OF CONCRETE TRUCKS ON-SITE.



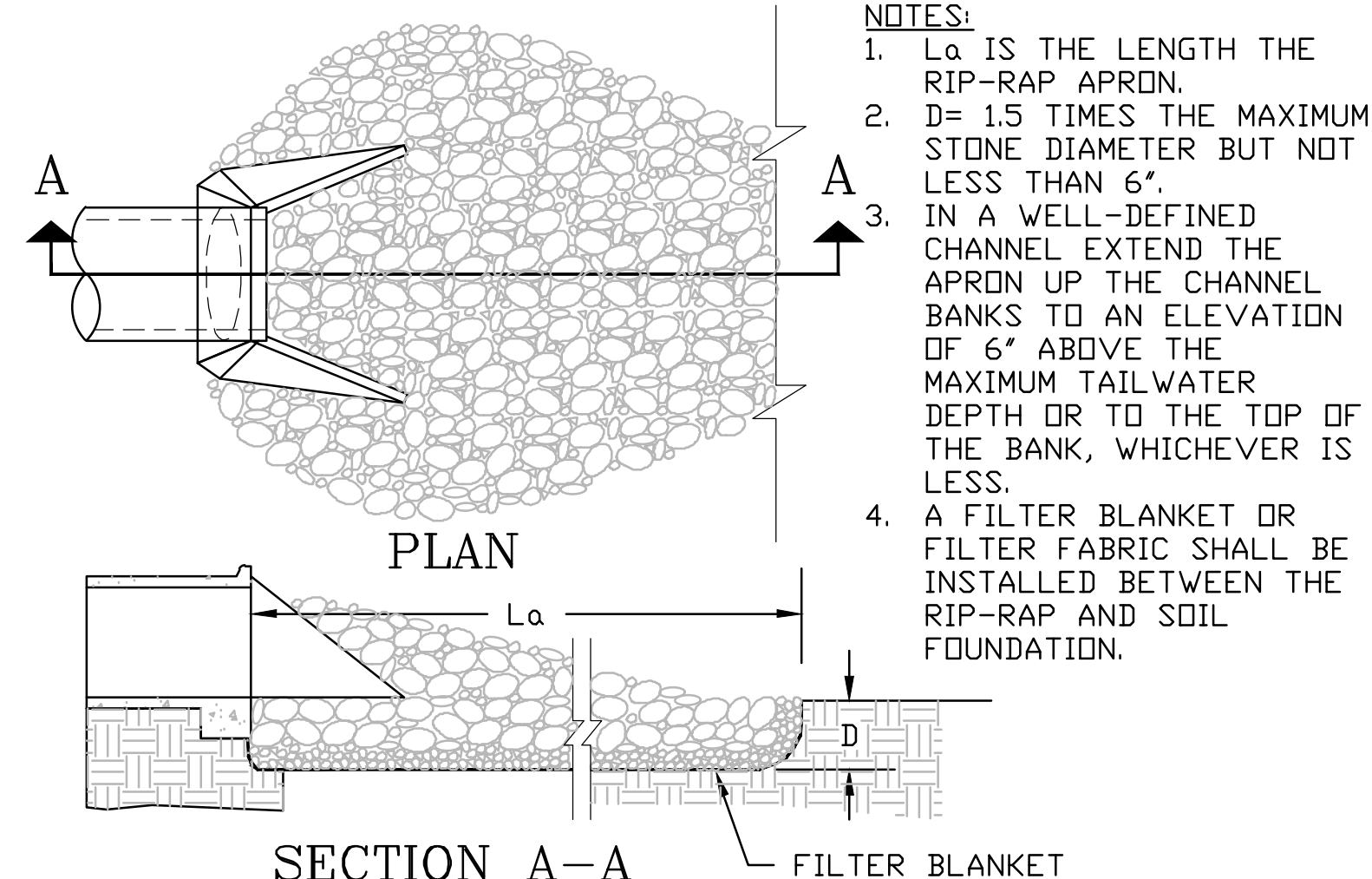
**SECTION A-A CONCRETE WASHDOWN**

Cw

**PIPE OUTLET TO FLAT AREA- NO WELL-DEFINED CHANNEL**

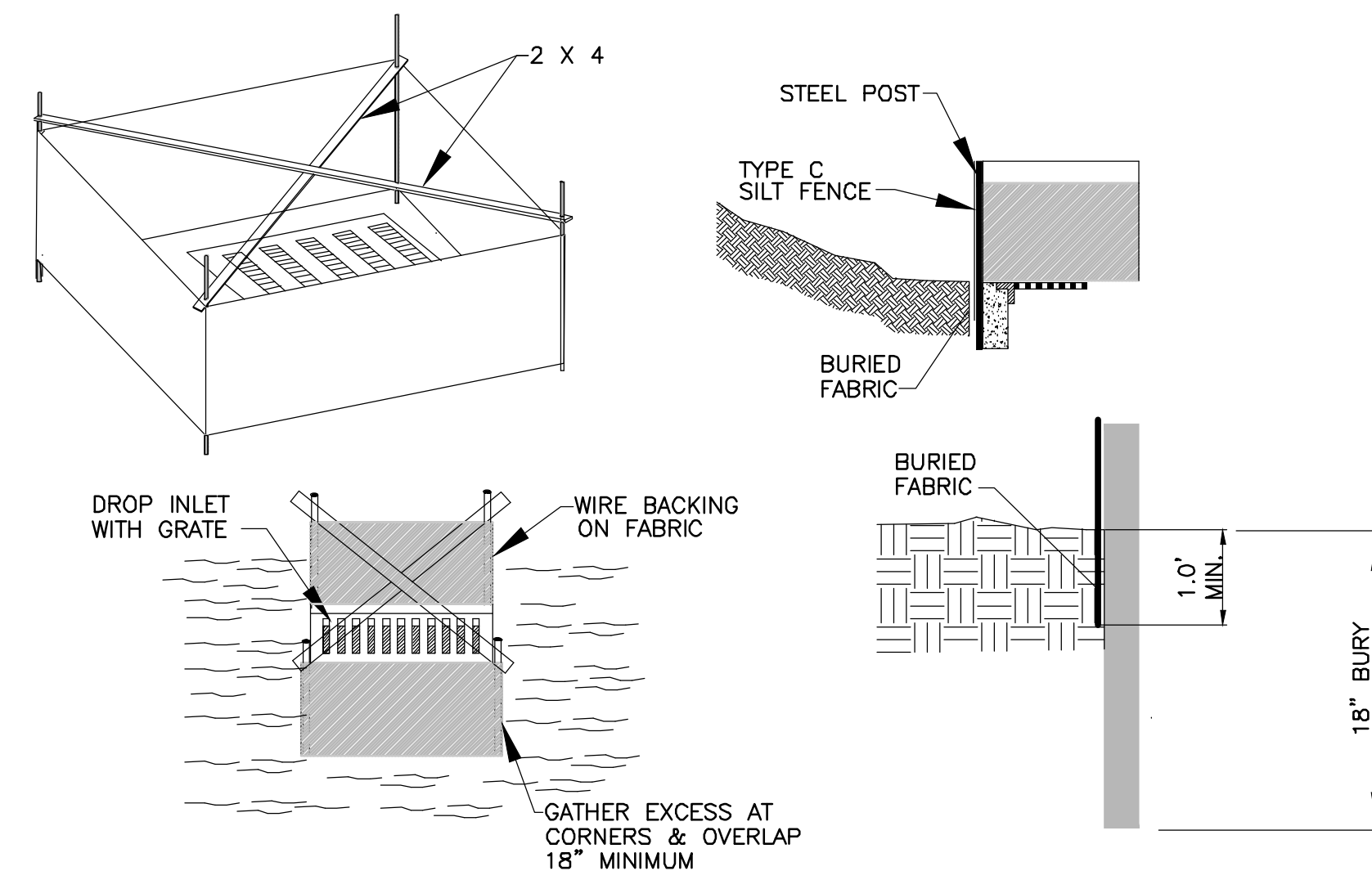


**PIPE OUTLET TO WELL-DEFINED CHANNEL**



**SECTION A-A RIP-RAP OUTLET PROTECTION**

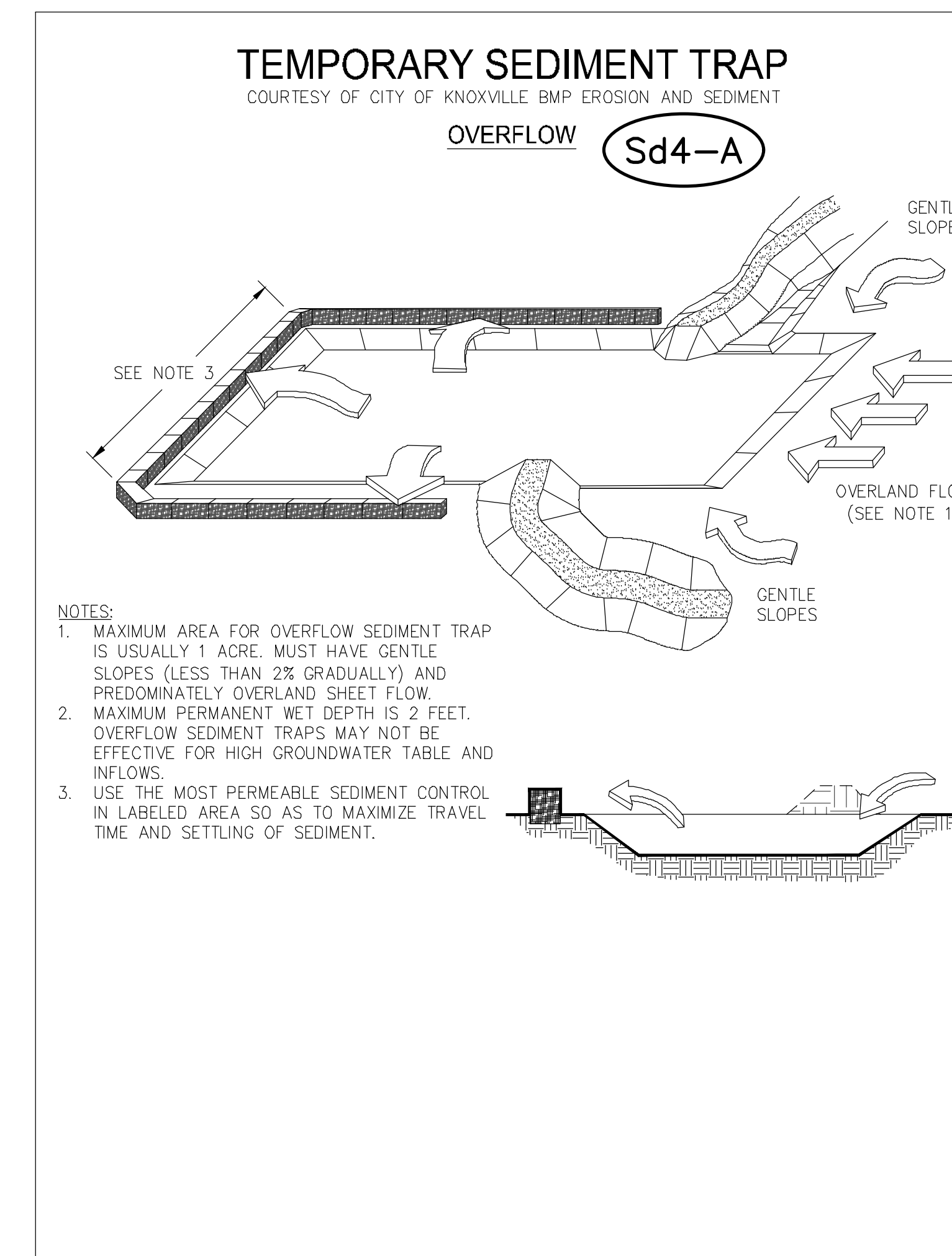
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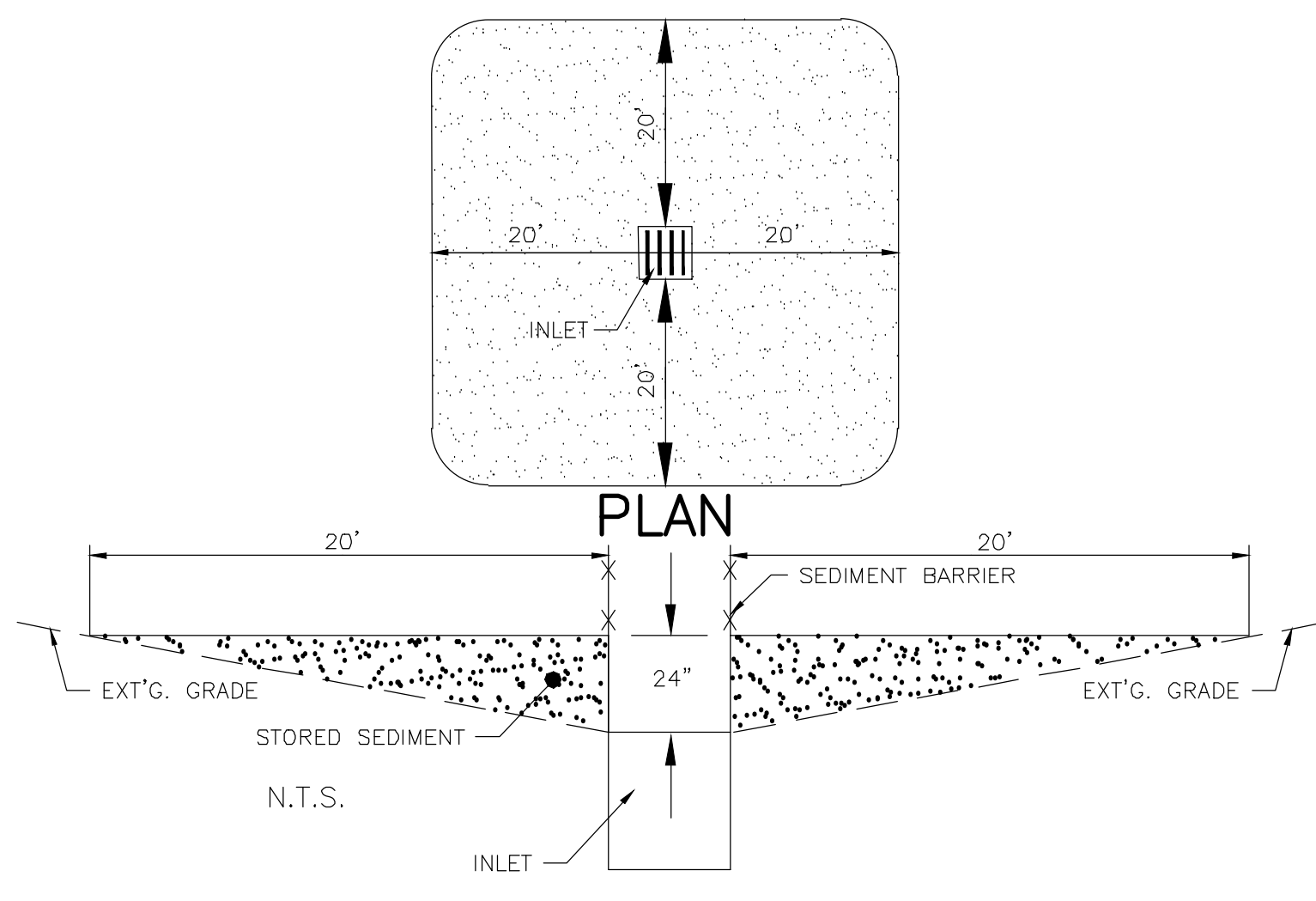
- USE TYPE C (WIRE REINFORCED) SILT FENCE SUPPORTED BY STEEL POSTS, MINIMUM LENGTH 3 FEET.
- SPACE STAKES EVENLY AROUND THE PERIMETER OF THE INLET A MAXIMUM OF 3 FEET APART AND SECURELY DRIVE THEM INTO THE GROUND, APPROXIMATELY 18 INCHES DEEP.
- TO PROVIDE NEEDED STABILITY TO THE INSTALLATION, FRAME WITH 2x4 INCH WOOD STRIPS FROM CORNER TO CORNER ACROSS THE TOP OF THE STEEL FRAME.
- PLACE THE BOTTOM 12 INCHES OF THE FABRIC IN TRENCH AND BACKFILL THE TRENCH WITH AT LEAST 4 INCHES OF CRUSHED STONE OR 12 INCHES OF COMPACTED SOIL.
- FASTEN FABRIC SECURELY TO THE STAKES AND FRAME. JOINTS MUST BE OVERLAPPED TO THE NEXT STAKE.
- THE TOP OF THE FRAME AND FABRIC MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE FROM THE DROP INLET TO KEEP RUNOFF FROM BYPASSING THE INLET. IT MAY BE NECESSARY TO BUILD A TEMPORARY DIKE ON THE DOWN SLOPE SIDE OF THE STRUCTURE TO PREVENT BYPASS FLOW.
- THE INLET SHOULD BE EXCAVATED AS SHOWN IN THE DETAIL "INLET SEDIMENT BARRIER" BELOW.

**EXCAVATED INLET SEDIMENT TRAP DETAIL FILTER FABRIC WITH SUPPORTING FRAME**

Sd2-F



- NOTES:**
- MAXIMUM AREA FOR OVERFLOW SEDIMENT TRAP IS USUALLY 1 ACRE. MUST HAVE GENTLE SLOPES (LESS THAN 2% GRADUALLY) AND PREDOMINATELY OVERLAND SHEET FLOW.
  - MAXIMUM PERMANENT WET DEPTH IS 2 FEET. OVERFLOW SEDIMENT TRAPS MAY NOT BE EFFECTIVE FOR HIGH GROUNDWATER TABLE AND INFLOWS.
  - USE THE MOST PERMEABLE SEDIMENT CONTROL IN LABELED AREA SO AS TO MAXIMIZE TRAVEL TIME AND SETTLING OF SEDIMENT.

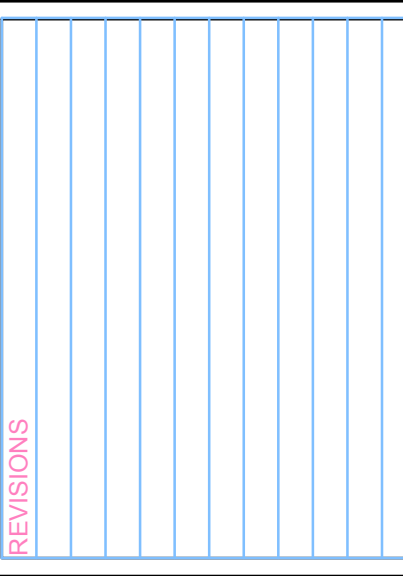


**EXCAVATED INLET SEDIMENT TRAP**

N.T.S.



**HUSSEY GAY BELL**  
 Established 1958



DESIGNED	DRAWN	CHECKED
C.J.H.	C.J.H.	C.J.C.

DATE: 07/26/2019  
 JOB NO. 119273572  
 SCALE: N.T.S.

**EFFINGHAM COUNTY GYMNASIUM**  
 CLARENCE E. MORGAN RECREATION COMPLEX  
 1750 GA. HWY 21 S. SPRINGFIELD, GEORGIA 31329

DRAWING NUMBER

**C11.01**