

S:\333\4832-Rolesville_Site_Storage\DWG\SheetCD\54832-333-CD-0-COVER.dwg | Plotted on 4/5/2023 3:15 PM | by Jalin Hayes

SITE PLAN REVIEW DRAWINGS:
FOR
JONES DAIRY STORAGE FACILITY

0 JONES DAIRY RD
ROLESVILLE, NC 27587

SITE PLAN#: SDPXX-XX
REZONING CASE #: MA-22-09

#1 - Update:
SDP-23-03

SDP-23-03
V1

SITE DATA TABLE	
PROJECT NAME:	JONES DAIRY STORAGE FACILITY
SITE PLAN NUMBER	(TBD)
PROPERTY OWNER/ DEVELOPER:	WARD, SUZANNE SHOAF 10925 ENCHANTED HOLLOW WAY RALEIGH, NC 27614
PIN ID:	0162697
PIN:	1850608722
DEED ACRES:	5.50 ACRES
PROPERTY ADDRESS:	0 JONES DAIRY RD, ROLESVILLE NC 27587
PROPERTY ZONING:	GI-CU
CURRENT USE:	VACANT
PROPOSED USE:	SELF STORAGE (COMMERCIAL)
DISTURBED AREA:	4.70 ACRES
CURRENT IMPERVIOUS:	0 ACRES
PROPOSED IMPERVIOUS:	2.83 ACRES
TREE COVERAGE SUMMARY:	10% SAVE : .60 ACRES
PARKING SUMMARY:	
REQUIRED VEHICULAR SPACES:	
PROVIDED VEHICULAR SPACES:	9 SPACES
ADA PARKING SUMMARY:	
REQUIRED VEHICULAR SPACES:	
PROVIDED VEHICULAR SPACES:	1 SPACE
BUILDING HEIGHT:	15 FT
BUILDING SQUARE FOOTAGE(S):	CLIMATE CONTROLLED BUILDING: 62,120 STORAGE BUILDING(S): 1800 SQFT (2), 3600 SQFT (2), 6600 SQFT
BUILDING/STRUCTURE SETBACKS:	
	FRONT: 30-FT
	SIDE: 15-FT
	REAR: 35-FT
LANDSCAPE BUFFERS:	
	ADJACENT PROPERTY: 50' TYPE "4" BUFFER
	ADJACENT PROPERTY: 10' TYPE "1" BUFFER
WATERSHED:	NEUSE RIVER
RIVER BASIN:	SANFORD CREEK (NEUSE)
SURFACE WATER CLASSIFICATION:	NONE



VICINITY MAP
SCALE 1"=100'

PROJECT TEAM

LAND OWNER

CONTACT: SUZANNE SHOAF WARD
PHONE: N/A
10925 ENCHANTED HOLLOWAY
RALEIGH NC, 27614

DEVELOPER

RIVERCREST REALTY INVESTORS
CONTACT: BRIAN HOLDER
PHONE: (919) 846-4046
8816 SIX FORKS ROAD , SUITE 201
RALEIGH, NC 27615

CIVIL ENGINEER

TIMMONS GROUP
CONTACT: GARRETT FRANK, PLA, PE
PHONE: (919) 866-4503
5410 TRINITY ROAD, SUITE 102
RALEIGH, NC 27607

Sheet List Table	
Sheet Number	Sheet Title
C0.0	COVER
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C3.1	STORM SEWER PROFILES
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W1.0	HYDRAULIC ANALYSIS LAYOUT AND RESULTS
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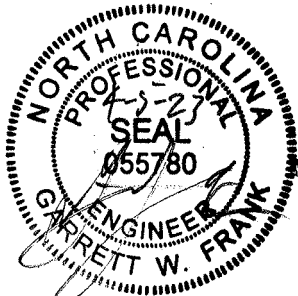
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CITY OF RALEIGH DEVELOPMENT APPROVAL
RALEIGH WATER REVIEW OFFICER

PRELIMINARY PLANS

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REVISION DESCRIPTION

DATE

DATE

04/05/2023

DRAWN BY

J. HAYES

DESIGNED BY

G. FRANK

CHECKED BY

G. FRANK

SCALE

AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

COVER

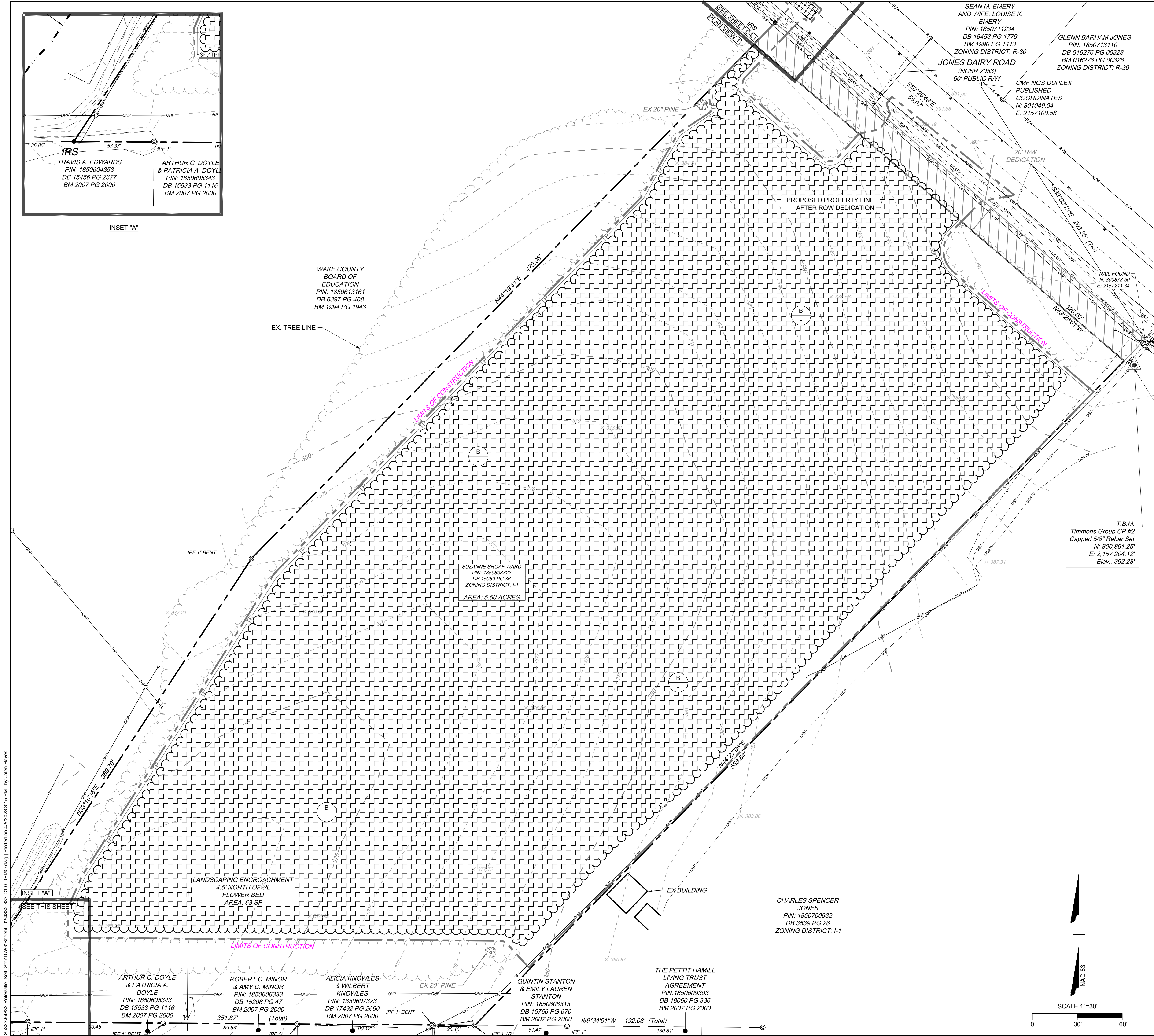
JOB NO.

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DEMOLITION NOTES

- ALL UTILITIES OR STRUCTURES NOT INDICATED FOR REMOVAL OR MODIFICATION ARE TO REMAIN AND BE PROTECTED FROM DAMAGE.
- ALL WASTE MATERIAL GENERATED FROM CLEARING AND DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS. CONTRACTOR SHALL SALVAGE ALL SIGNAGE, METERS, ETC. TO OWNER. COORDINATE WITH OWNER PRIOR TO DEMOLITION.
- CLEAR AND GRUB AS NEEDED WITHIN CONSTRUCTION LIMITS PER SPECIFICATIONS AND DRAWINGS. EXISTING TREES, SHRUBS OR OTHER LANDSCAPE MATERIAL WHICH WILL CONFLICT WITH NEW CONSTRUCTION SHALL BE REMOVED (WHETHER OR NOT SHOWN ON THE DRAWINGS) FOLLOWING APPROVAL OF ENGINEER. BY SUBMITTING A BID, CONTRACTOR ACKNOWLEDGES THAT THE SITE HAS BEEN INVESTIGATED TO DETERMINE TYPE, SIZE AND QUANTITY OF CLEARING REQUIRED FOR CONSTRUCTION.
- ALL PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM JOINT WITH NEW CONSTRUCTION. ANY EXISTING PAVEMENT, SIDEWALK, CURB & GUTTER, ETC. THAT MUST BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE REMOVED AND REPAIRED PER THE SPECIFICATIONS AND DETAILS OR TO MATCH EXISTING CONDITIONS (WHETHER OR NOT SHOWN ON THE DRAWINGS TO BE REMOVED). UTILITY INSTALLATIONS MAY UTILIZE OPEN CUT OF PAVEMENTS UNLESS INDICATED OTHERWISE. TRENCH IN EXISTING ASPHALT SHALL BE PATCHED PER PAVEMENT REPAIR DETAIL.
- PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNER'S FACILITIES. SHOULD DAMAGES OCCUR, NOTIFY ENGINEER IMMEDIATELY.
- THE CONTRACTOR SHALL EMPLOY A QUALIFIED UTILITY LOCATOR SERVICE TO LOCATE ALL UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO ELECTRICAL, TELEPHONE, GAS, CABLE, FIBER OPTIC) WITHIN THE LIMITS OF CONSTRUCTION.
- VERIFY ALL ILLUSTRATED KNOWN UNDERGROUND ELEMENTS. EXERCISE REASONABLE EFFORTS TO PROTECT ANY UNKNOWN UNDERGROUND ELEMENTS. NOTIFY THE ENGINEER IMMEDIATELY IF UNKNOWN ELEMENTS ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE PROPOSED DESIGN.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND OSHA REGULATIONS.
- EXISTING MANHOLES, VALVE BOXES, VAULTS, CLEANOUTS, UTILITY POLES ETC. TO REMAIN WITHIN THE GRADING LIMITS SHALL BE ADJUSTED AS NEEDED TO FUNCTION PROPERTY WITH THE PROPOSED FINISHED GRADES (WHETHER OR NOT INDICATED TO BE MODIFIED). ANY AND ALL LANDSCAPING AND EXISTING TREES & SHRUBS TO REMAIN WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR UTILIZING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- PROTECT EXISTING SITE FURNISHINGS AND PLAYGROUNDS DURING CONSTRUCTION. REPLACE AT NO COST TO THE OWNER IF DAMAGED.
- IN REGARDS TO TREE SURVEY, AND TOTAL TREE SAVE. PLEASE CONTACT STEVEN BALL AT 919-846-5900.

KEY NOTES

- REMOVE ASPHALT PAVEMENT AND STONE BASE
- REMOVE TREE CLEARING

EXISTING CONDITIONS LEGEND

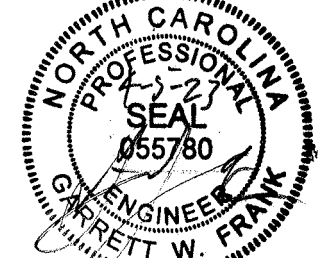
- EX. CONSTRUCTION LIMITS
- EX. STORM PIPE
- EX. FENCE
- EX. GAS LINE
- EX. POWER LINE
- EX. TELEPHONE LINE
- EX. WATER LINE
- EX. SANITARY SEWER FORCE MAIN
- EX. SANITARY SEWER LINE
- EX. CABLE TV LINE
- EX. FIBER OPTIC LINE
- EX. TREE LINE
- LIGHT POLE
- SITE BOLLARD
- UTILITY POLE
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- CLEANOUT (SANITARY OR STORM)
- DROP INLET
- FIRE HYDRANT
- WATER VALVE
- TELECOM BOX
- GROUND MOUNTED SIGN

TREE DISTURBANCE LEGEND

- PN
- PINE

PRELIMINARY PLANS

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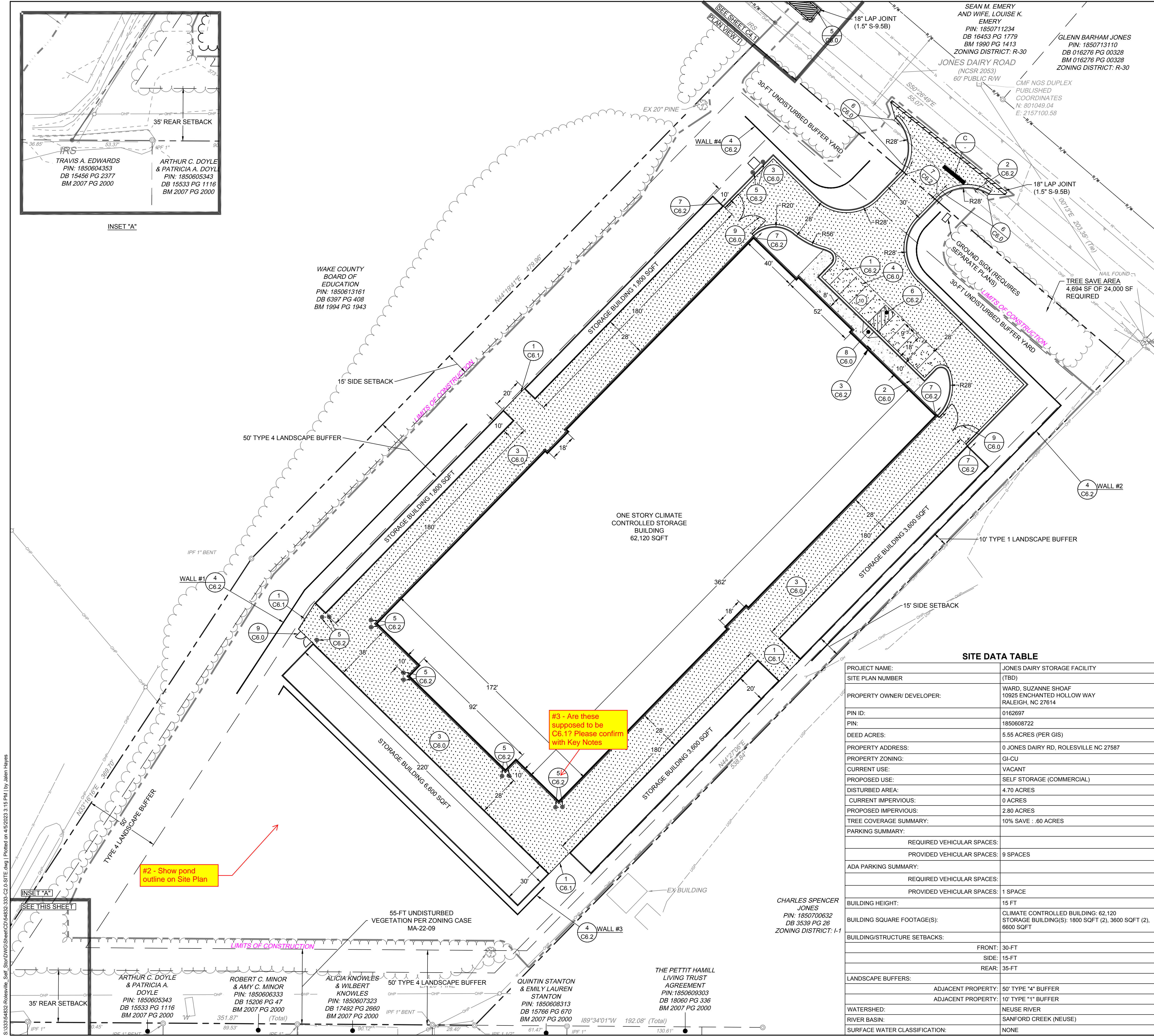
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	04/05/2023
DRAWN BY	J. HAYES
DESIGNED BY	G. FRANK
CHECKED BY	G. FRANK
SCALE	AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652
JONES DAIRY STORAGE FACILITY
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
EXISTING CONDITIONS & DEMOLITION PLAN

JOB NO.	54832
SHEET NO.	C1.0

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- SITE LAYOUT NOTES**
- ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE ROLESVILLE, WAKE COUNTY, NCDOT AND OSHA STANDARDS AND SPECIFICATIONS.
 - ALL DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVEMENT, BUILDING WALL FACE OR PROPERTY LINE, UNLESS OTHERWISE NOTED.
 - ALL RADII ARE DIMENSIONED FROM BACK OF CURB. IF NOT STATED, RADII DIMENSION IS 5'.
 - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, UTILITIES AND GRADES PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO COMMENCING ANY RELATED CONSTRUCTION.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL WASTE MATERIALS GENERATED DURING CONSTRUCTION AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
 - CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES DURING CONSTRUCTION AND SHALL MAKE REPAIRS AT NO EXPENSE TO THE OWNER.
 - AT LEAST 72 HOURS PRIOR TO CONSTRUCTION OR EXCAVATION THE CONTRACTOR SHALL NOTIFY "NORTH CAROLINA ONE CALL" (811) OR (1-800-632-4949) TO HAVE EXISTING UTILITIES LOCATED. ALL PRIVATE UTILITIES SHALL BE LOCATED AS NEEDED BY A PRIVATE UTILITY LOCATE COMPANY EMPLOYED BY THE CONTRACTOR.
 - ALL CURB AND GUTTER OFFSITE SHALL BE 30" WIDE UNLESS NOTED OTHERWISE.
 - ALL DISTURBED CURB & GUTTER AND ASPHALT SHALL BE REPLACED PER PROJECT DETAILS AND NCDOT STANDARDS AND SPECIFICATIONS.
 - RAISE ALL STRUCTURES AT NO ADDITIONAL COST TO THE OWNER SO THAT THE TOP OF THE STRUCTURE EQUALS THE FINISH GRADE OF THE NEW ASPHALT.
 - COORDINATE THE PROJECT SCHEDULE WITH THE CIVIL ENGINEER AND OWNER IN ACCORDANCE WITH THE OWNER'S ONGOING ONSITE OPERATIONS. ANY UTILITY INTERRUPTIONS SHALL BE COORDINATED WITH THE OWNER AT LEAST 72 HOURS PRIOR TO THE INTERRUPTION.
 - PROVIDE A SMOOTH TRANSITION BETWEEN NEW ASPHALT AND EXISTING ASPHALT SURFACES.
 - ALL SIDEWALKS ARE TO HAVE NO MORE THAN A 1:20 (5.0%) SLOPE FOR THE LENGTH OF THE SIDEWALK AND NO MORE THAN A 1:50 (2.0%) SLOPE FOR THE WIDTH OF THE SIDEWALK. NOTIFY ENGINEER IF THIS CANNOT BE ACHIEVED.

- KEY NOTES**
- | | | |
|-----------|----------------------------------|--|
| 1
C6.0 | HEAVY DUTY CONCRETE PAVEMENT | |
| 2
C6.0 | STANDARD DUTY CONCRETE PAVEMENT | |
| 3
C6.0 | HEAVY DUTY ASPHALT PAVEMENT | |
| 4
C6.0 | STANDARD DUTY ASPHALT PAVEMENT | |
| 5
C6.0 | NCDOT ASPHALT PAVEMENT | |
| 6
C6.0 | NCDOT 30" CONCRETE CURB & GUTTER | |
| 7
C6.0 | CURB ENDING TAPER | |
| 8
C6.0 | ACCESSIBLE CURB RAMP | |
| 9
C6.0 | 8-FT CHAIN LINK SWING GATE | |
| 1
C6.1 | 8-FT CHAIN LINK FENCE | |
| 4
C6.2 | RETAINING WALL | |
| 5
C6.1 | BOLLARD TYP. | |
| 7
C6.1 | 24" CONCRETE CURB & GUTTER | |

- TRAFFIC CONTROL NOTES**
- ALL SITE SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
 - ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
 - ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
 - ALL SIGNAGE SHALL HAVE HIGH INTENSITY PRISMATIC SHEETING.
 - SIGNS SHALL BE FABRICATED FROM ALUMINUM ALLOY SHEETS.
 - ALL MOUNTING HARDWARE SHALL BE GALVANIZED.
 - "VAPS" ON PLANS DENOTES VAN ACCESSIBLE PARKING SIGN. INSTALL R7-8A, R7-8D, & R7-8P.
 - "APS" ON PLANS DENOTES ACCESSIBLE PARKING SIGN. INSTALL R7-8A & R7-8D ONLY.

STRIPING KEY NOTES

	NCDOT STD.	WIDTH	COLOR
6 C6.2	ACCESSIBLE PARKING LAYOUT		
1 C6.2	PARKING STALL AND TRAFFIC STRIPE	1205.07 (STD)	4-IN WHITE
- C6.2	STOP BAR	-	24-IN WHITE

SIGNAGE KEY NOTES

	MUTCD
2 C6.2	STOP SIGN R1-1 (PER PLAN & DETAIL)
3 C6.2	ACCESSIBLE PARKING SIGN R7-8P, R7-8A, R7-8D (PER PLAN & DETAIL)

SITE DATA TABLE

PROJECT NAME:	JONES DAIRY STORAGE FACILITY
SITE PLAN NUMBER:	(TBD)
PROPERTY OWNER/ DEVELOPER:	WARD, SUZANNE SHOAF 10925 ENCHANTED HOLLOW WAY RALEIGH, NC 27614
PIN ID:	0162697
PIN:	1850608722
DEED ACRES:	5.55 ACRES (PER GIS)
PROPERTY ADDRESS:	0 JONES DAIRY RD, ROLESVILLE NC 27587
PROPERTY ZONING:	GI-CU
CURRENT USE:	VACANT
PROPOSED USE:	SELF STORAGE (COMMERCIAL)
DISTURBED AREA:	4.70 ACRES
CURRENT IMPERVIOUS:	0 ACRES
PROPOSED IMPERVIOUS:	2.80 ACRES
TREE COVERAGE SUMMARY:	10% SAVE : .60 ACRES
PARKING SUMMARY:	
REQUIRED VEHICULAR SPACES:	
PROVIDED VEHICULAR SPACES:	9 SPACES
ADA PARKING SUMMARY:	
REQUIRED VEHICULAR SPACES:	
PROVIDED VEHICULAR SPACES:	1 SPACE
BUILDING HEIGHT:	15 FT
BUILDING SQUARE FOOTAGE(S):	CLIMATE CONTROLLED BUILDING: 62,120 STORAGE BUILDING(S): 1800 SQFT (2), 3600 SQFT (2), 6600 SQFT
BUILDING/STRUCTURE SETBACKS:	
FRONT:	30-FT
SIDE:	15-FT
REAR:	35-FT
LANDSCAPE BUFFERS:	
ADJACENT PROPERTY:	50' TYPE "4" BUFFER
ADJACENT PROPERTY:	10' TYPE "1" BUFFER
WATERSHED:	NEUSE RIVER
RIVER BASIN:	SANFORD CREEK (NEUSE)
SURFACE WATER CLASSIFICATION:	NONE

PRELIMINARY PLANS
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DESIGNED BY
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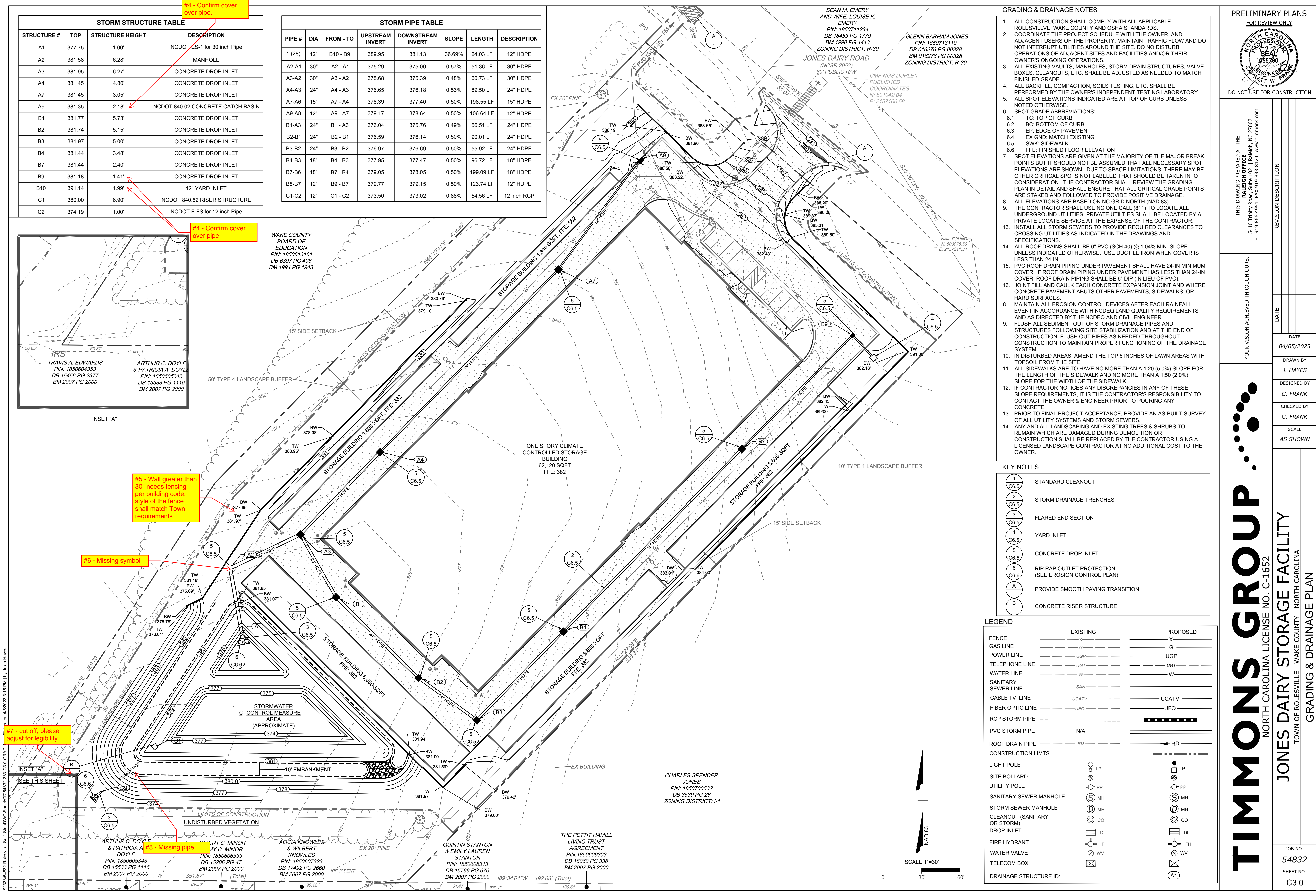
JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE PLAN

JOB NO.
54832

SHEET NO.
C2.0



STORM STRUCTURE TABLE			
STRUCTURE #	TOP	STRUCTURE HEIGHT	DESCRIPTION
A1	377.75	1.00'	NCDOT ES-1 for 30 inch Pipe
A2	381.58	6.28'	MANHOLE
A3	381.95	6.27'	CONCRETE DROP INLET
A4	381.45	4.80'	CONCRETE DROP INLET
A7	381.45	3.05'	CONCRETE DROP INLET
A9	381.35	2.18'	NCDOT 840.02 CONCRETE CATCH BASIN
B1	381.77	5.73'	CONCRETE DROP INLET
B2	381.74	5.15'	CONCRETE DROP INLET
B3	381.97	5.00'	CONCRETE DROP INLET
B4	381.44	3.48'	CONCRETE DROP INLET
B7	381.44	2.40'	CONCRETE DROP INLET
B9	381.18	1.41'	CONCRETE DROP INLET
B10	391.14	1.99'	12" YARD INLET
C1	380.00	6.90'	NCDOT 840.52 RISER STRUCTURE
C2	374.19	1.00'	NCDOT F-FS for 12 inch Pipe

STORM PIPE TABLE							
PIPE #	DIA	FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DESCRIPTION
1 (28)	12"	B10 - B9	389.95	381.13	36.69%	24.03 LF	12" HDPE
A2-A1	30"	A2 - A1	375.29	375.00	0.57%	51.36 LF	30" HDPE
A3-A2	30"	A3 - A2	375.68	375.39	0.48%	60.73 LF	30" HDPE
A4-A3	24"	A4 - A3	376.65	376.18	0.53%	89.50 LF	24" HDPE
A7-A6	15"	A7 - A4	378.39	377.40	0.50%	198.55 LF	15" HDPE
A9-A8	12"	A9 - A7	379.17	378.64	0.50%	106.64 LF	12" HDPE
B1-A3	24"	B1 - A3	376.04	375.76	0.49%	56.51 LF	24" HDPE
B2-B1	24"	B2 - B1	376.59	376.14	0.50%	90.01 LF	24" HDPE
B3-B2	24"	B3 - B2	376.97	376.69	0.50%	55.92 LF	24" HDPE
B4-B3	18"	B4 - B3	377.95	377.47	0.50%	96.72 LF	18" HDPE
B7-B6	18"	B7 - B4	379.05	378.05	0.50%	199.09 LF	18" HDPE
B8-B7	12"	B9 - B7	379.77	379.15	0.50%	123.74 LF	12" HDPE
C1-C2	12"	C1 - C2	373.50	373.02	0.88%	54.56 LF	12 inch RCP

- GRADING & DRAINAGE NOTES
- ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE ROLESVILLE, WAKE COUNTY AND OSHA STANDARDS.
 - COORDINATE THE PROJECT SCHEDULE WITH THE OWNER, AND ADJACENT USERS OF THE PROPERTY. MAINTAIN TRAFFIC FLOW AND DO NOT INTERRUPT UTILITIES AROUND THE SITE. DO NOT DISTURB OPERATIONS OF ADJACENT SITES AND FACILITIES AND/OR THEIR OWNER'S ONGOING OPERATIONS.
 - ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, VALVE BOXES, CLEANOUTS, ETC. SHALL BE ADJUSTED AS NEEDED TO MATCH FINISHED GRADE.
 - ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNER'S INDEPENDENT TESTING LABORATORY.
 - ALL SPOT ELEVATIONS INDICATED ARE AT TOP OF CURB UNLESS NOTED OTHERWISE.
 - SPOT GRADE ABBREVIATIONS:
 - TC: TOP OF CURB
 - BC: BOTTOM OF CURB
 - EP: EDGE OF PAVEMENT
 - EX GND: MATCH EXISTING
 - SWK: SIDEWALK
 - FFE: FINISHED FLOOR ELEVATION
 - SPOT ELEVATIONS ARE GIVEN AT THE MAJORITY OF THE MAJOR BREAK POINTS BUT IT SHOULD NOT BE ASSUMED THAT ALL NECESSARY SPOT ELEVATIONS ARE SHOWN. DUE TO SPACE LIMITATIONS, THERE MAY BE OTHER CRITICAL SPOTS NOT LABELED THAT SHOULD BE TAKEN INTO CONSIDERATION. THE CONTRACTOR SHALL REVIEW THE GRADING PLAN IN DETAIL AND SHALL ENSURE THAT ALL CRITICAL GRADE POINTS ARE STAKED AND FOLLOWED TO PROVIDE POSITIVE DRAINAGE.
 - ALL ELEVATIONS ARE BASED ON NC GRID NORTH (NAD 83).
 - THE CONTRACTOR SHALL USE NC ONE CALL (811) TO LOCATE ALL UNDERGROUND UTILITIES. PRIVATE UTILITIES SHALL BE LOCATED BY A PRIVATE LOCATE SERVICE AT THE EXPENSE OF THE CONTRACTOR.
 - INSTALL ALL STORM SEWERS TO PROVIDE REQUIRED CLEARANCES TO CROSSING UTILITIES AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
 - ALL ROOF DRAINS SHALL BE 6" PVC (SCH 40) @ 1.04% MIN. SLOPE UNLESS INDICATED OTHERWISE. USE DUCTILE IRON WHEN COVER IS LESS THAN 24-IN.
 - PVC ROOF DRAIN PIPING UNDER PAVEMENT SHALL HAVE 24-IN MINIMUM COVER. IF ROOF DRAIN PIPING UNDER PAVEMENT HAS LESS THAN 24-IN COVER, ROOF DRAIN PIPING SHALL BE 6" DIP (IN LIEU OF PVC).
 - JOINT FILL AND CAULK EACH CONCRETE EXPANSION JOINT AND WHERE CONCRETE PAVEMENT ABUTS OTHER PAVEMENTS, SIDEWALKS, OR HARD SURFACES.
 - MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT IN ACCORDANCE WITH NCDEQ LAND QUALITY REQUIREMENTS AND AS DIRECTED BY THE NCDEQ AND CIVIL ENGINEER.
 - FLUSH ALL SEDIMENT OUT OF STORM DRAINAGE PIPES AND STRUCTURES FOLLOWING SITE STABILIZATION AND AT THE END OF CONSTRUCTION. FLUSH OUT PIPES AS NEEDED THROUGHOUT CONSTRUCTION TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM.
 - IN DISTURBED AREAS, AMEND THE TOP 6 INCHES OF LAWN AREAS WITH TOPSOIL FROM THE SITE.
 - ALL SIDEWALKS ARE TO HAVE NO MORE THAN A 1:20 (5.0%) SLOPE FOR THE LENGTH OF THE SIDEWALK AND NO MORE THAN A 1:50 (2.0%) SLOPE FOR THE WIDTH OF THE SIDEWALK.
 - IF CONTRACTOR NOTICES ANY DISCREPANCIES IN ANY OF THESE SLOPE REQUIREMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNER & ENGINEER PRIOR TO POURING ANY CONCRETE.
 - PRIOR TO FINAL PROJECT ACCEPTANCE, PROVIDE AN AS-BUILT SURVEY OF ALL UTILITY SYSTEMS AND STORM SEWERS.
 - ANY AND ALL LANDSCAPING AND EXISTING TREES & SHRUBS TO REMAIN WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR USING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

- KEY NOTES
- 1 C6.5 STANDARD CLEANOUT
 - 2 C6.5 STORM DRAINAGE TRENCHES
 - 3 C6.5 FLARED END SECTION
 - 4 C6.5 YARD INLET
 - 5 C6.5 CONCRETE DROP INLET
 - 6 C6.5 RIP RAP OUTLET PROTECTION (SEE EROSION CONTROL PLAN)
 - A PROVIDE SMOOTH PAVING TRANSITION
 - B CONCRETE RISER STRUCTURE

LEGEND		
	EXISTING	PROPOSED
FENCE	---	X
GAS LINE	---	G
POWER LINE	---	UGP
TELEPHONE LINE	---	UGT
WATER LINE	---	W
SANITARY SEWER LINE	---	SAN
CABLE TV LINE	---	UCATV
FIBER OPTIC LINE	---	UFO
RCP STORM PIPE	---	---
PVC STORM PIPE	N/A	---
ROOF DRAIN PIPE	RD	RD
CONSTRUCTION LIMITS	---	---
LIGHT POLE	LP	LP
SITE BOLLARD	BP	BP
UTILITY POLE	PP	PP
SANITARY SEWER MANHOLE	MH	MH
STORM SEWER MANHOLE	MH	MH
CLEANOUT (SANITARY OR STORM)	CO	CO
DROP INLET	DI	DI
FIRE HYDRANT	FH	FH
WATER VALVE	WV	WV
TELECOM BOX	XB	XB
DRAINAGE STRUCTURE ID:		A1

PRELIMINARY PLANS

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DESIGNED BY

G. FRANK

CHECKED BY

G. FRANK

SCALE

AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

GRADING & DRAINAGE PLAN

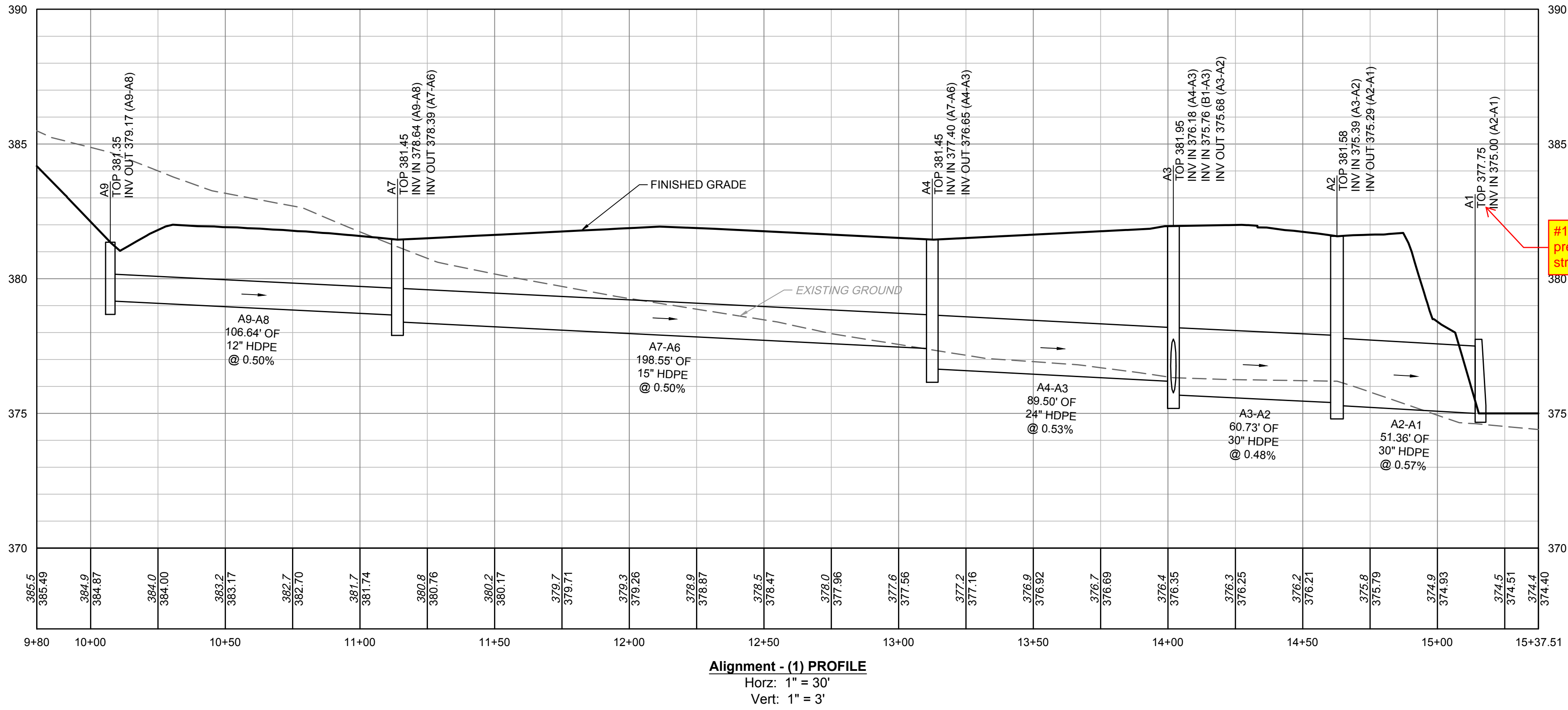
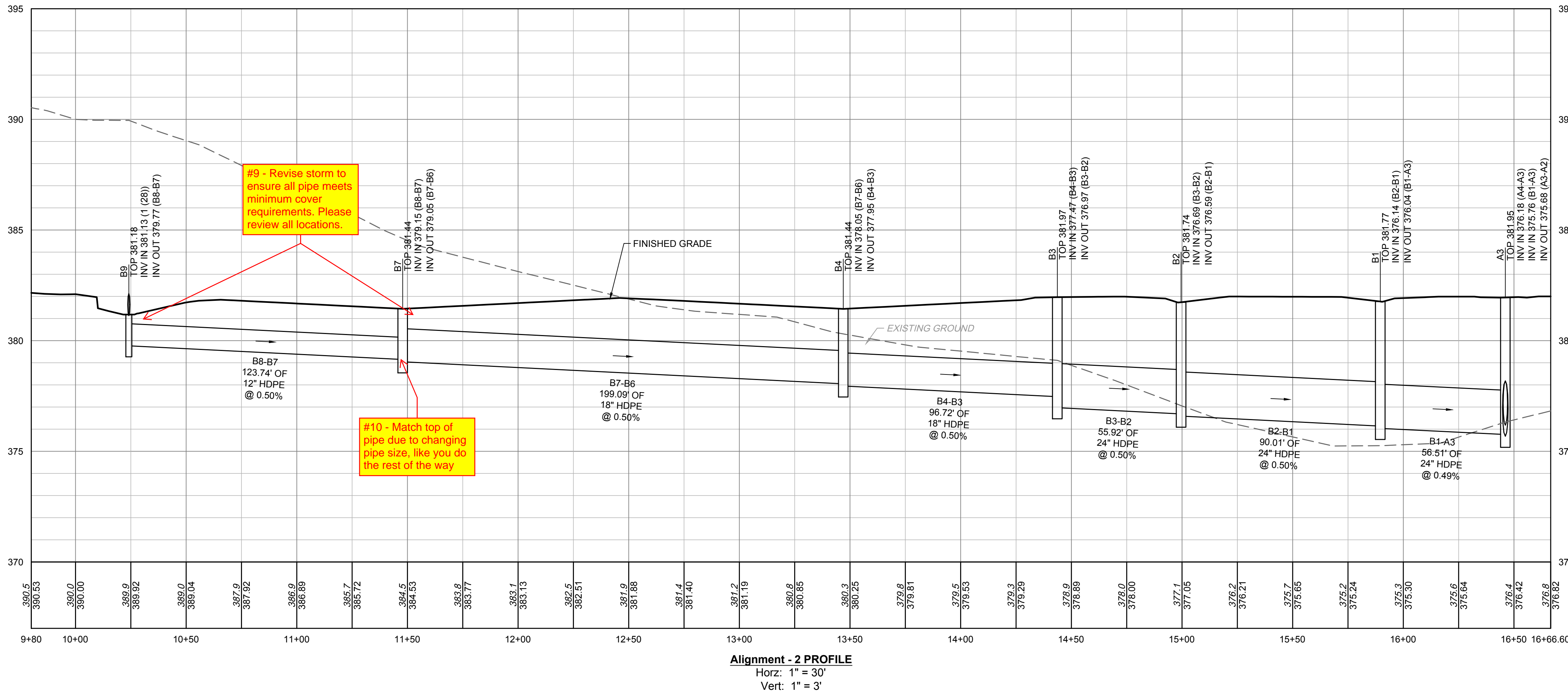
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54832

SHEET NO.


C3.0

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#11 - Does not match previous sheet for structure height

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DRAWN BY		DATE 04/05/2023	

	<i>J. HAYES</i>
	DESIGNED BY <i>G. FRANK</i>
	CHECKED BY <i>G. FRANK</i>
	SCALE <i>AS SHOWN</i>

TIMMONS GROUP

JONES DAIRY STORAGE FACILITY

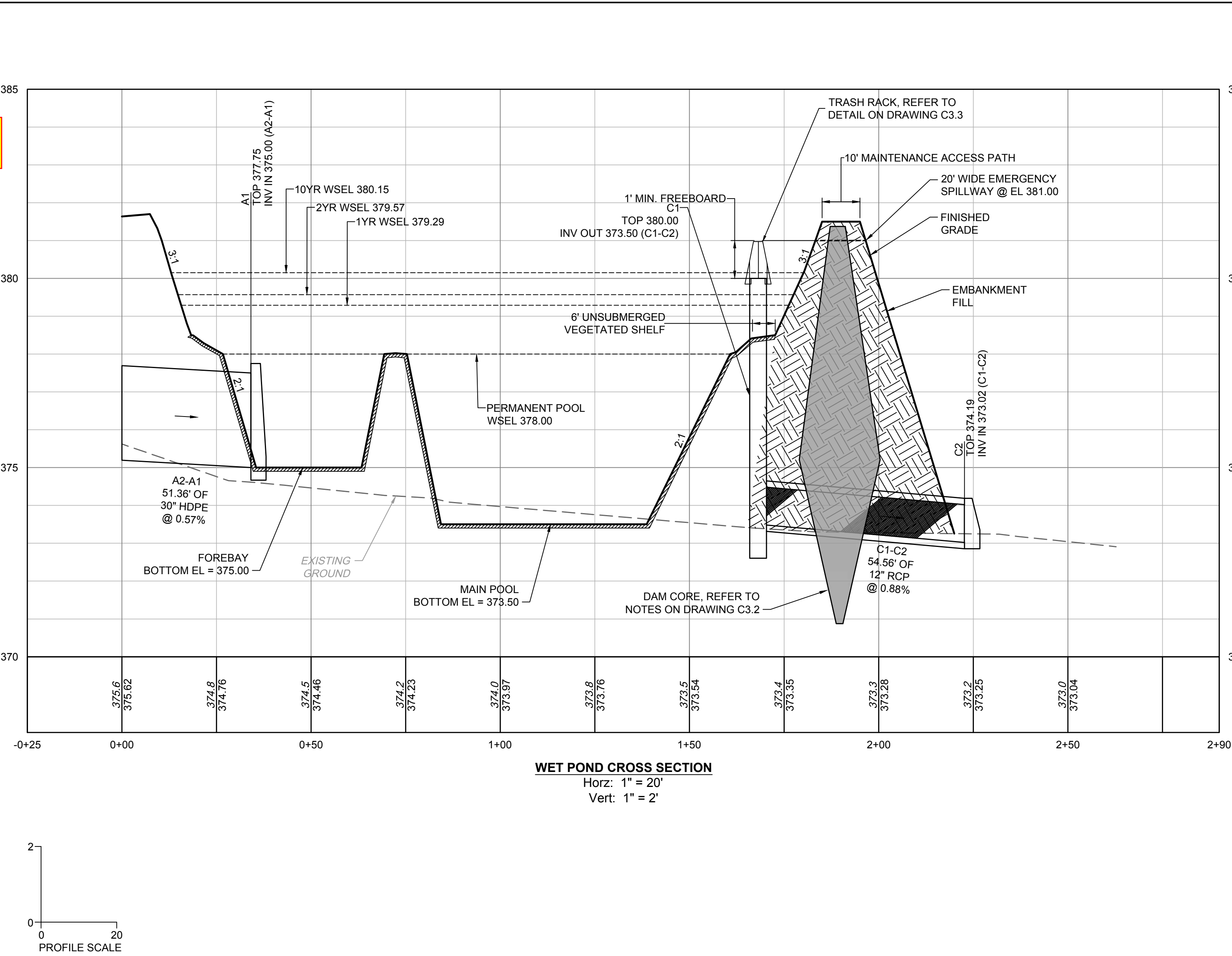
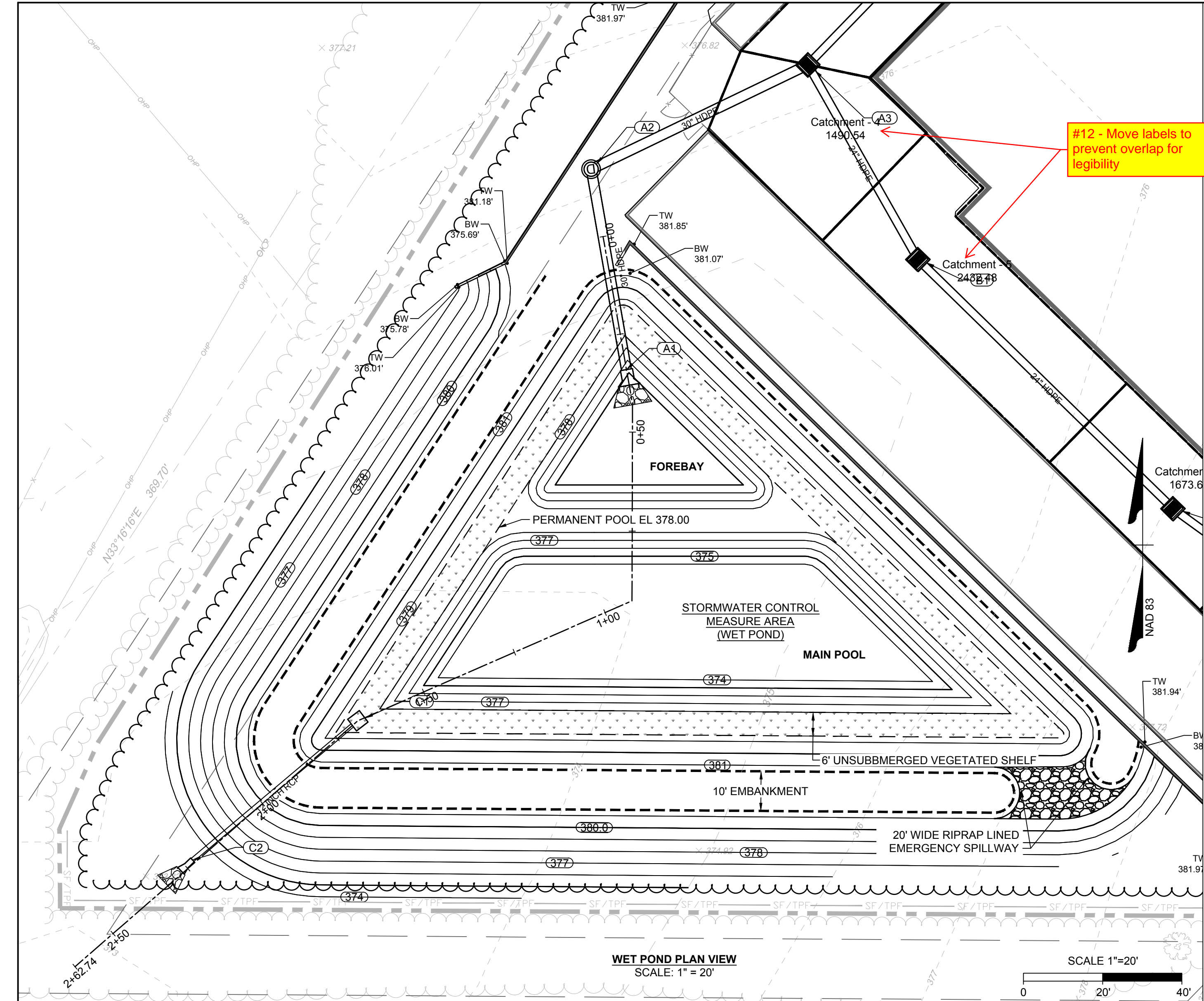
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STORM SEWER PROFILES

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AS-BUILT SURVEY REQUIREMENTS

NOTE: CONTRACTOR SHALL PROVIDE AS-BUILT TOPOGRAPHIC SURVEY PERFORMED BY A PROFESSIONAL LAND SURVEYOR CERTIFYING WET DETENTION POND AREA DIMENSIONS AND ELEVATIONS OF THE FOLLOWING:

1. TOPOGRAPHIC SURVEY OF THE WET POND AND EMBANKMENT
2. OUTLET STRUCTURE TOPS AND INVERTS
3. OUTLET STRUCTURE DIMENSIONS
4. ORIFICE DIAMETERS
5. BARREL PIPE SIZES AND INVERTS
6. EMERGENCY SPILLWAY ELEVATION AND DIMENSIONS.

OUTLET STRUCTURE NOTES

1. CAST-IN-PLACE CONCRETE RISER IS REQUIRED WITHOUT EXCEPTION.
2. CLASS "A" (3,000 PSI) CONCRETE TO BE USED.
6. ALL MORTAR JOINTS ARE 1/2" ± 1/8".
7. GROUT SHALL BE NON-SHRINK (ASTM-C1107)
8. ALL STRUCTURES OVER 3'-6" IN DEPTH TO BE PROVIDED WITH STEPS 1'-2" ON CENTERS. STEPS SHALL BE IN ACCORDANCE WITH STANDARD 840.66.
9. LOCATE MANHOLE OVER STEPS.

WET DETENTION BASIN MAINTENANCE SCHEDULE			
DESCRIPTION	METHOD	FREQUENCY	SEASON
EMBANKMENT			
INSPECT AND REPAIR EROSION / ANIMAL NESTINGS	VISUAL	ONCE PER YEAR	ALL
INSPECT AND RESEED GRASS COVERAGE	VISUAL	WHENEVER NEEDED	ALL
OUTLET STRUCTURE			
DEBRIS / OBSTRUCTIONS	BY HAND	WHENEVER NEEDED	ALL
OPERATE POND DRAIN VALVE	BY HAND	ONCE PER YEAR	ALL
EROSION AT OUTLET DISCHARGE	VISUAL	ONCE PER YEAR	ALL
FOREBAY / MAIN POOL			
SEDIMENT / DEBRIS	BY HAND	ONCE PER YEAR	ALL
REMOVE TRASH	BY HAND	WHENEVER NEEDED	ALL

DAM CORE, CUTOFF TRENCH, AND EMBANKMENT FILL NOTES:

1. DAM CORE AND CUTOFF TRENCH FILL MATERIAL SHALL CLASSIFY AS ML, MH, CL OR CH PER USCS. THIS MATERIAL MAY CONSIST OF MATERIAL FROM ON-SITE BORROW PITS, OR APPROVED OFF-SITE BORROW SOURCES.
2. EMBANKMENT FILL SOIL MATERIAL SHALL CLASSIFY SM, SC, ML OR CL PER USCS. THIS MATERIAL MAY CONSIST OF MATERIAL FROM ON-SITE EXCAVATIONS, ON-SITE BORROW PITS OR APPROVED OFF-SITE BORROW SOURCES.
3. UNSUITABLE EMBANKMENT FILL IS CLASSIFIED AS GW, GM, GP, GC, SW, SP, OH, OL PER USCS

CLAY LINER NOTES

1. THE CONTRACTOR WILL NEED TO INSTALL A CLAY LINER A MINIMUM OF 1-FOOT BELOW THE LOWEST GRADE. THE CLAY LINER SHALL BE AT LEAST 12" THICK AND MEET THE FOLLOWING SPECIFICATIONS:

- 1.1. UNIFIED SOIL CLASSIFICATION SYSTEM DESIGNATION OF CL, CH, ML
- 1.2. MINIMUM PLASTICITY INDEX OF 12
- 1.3. MINIMUM OF 2 TESTS OF EACH ABOVE PARAMETER SHALL BE COMPLETED BY THE CONTRACTOR ON THE LINER MATERIAL AND PRESENTED TO THE ON-SITE GEOTECHNICAL ENGINEER FOR APPROVAL. SHOULD THESE TESTS NOT MEET THE ABOVE REQUIREMENTS, THE ON-SITE GEOTECHNICAL ENGINEER MAY PROVIDE PERMEABILITY TESTING DEMONSTRATING AN INFILTRATION RATE OF NO MORE THAN 0.01 IN/HR
- 1.4. COMPACTION TO A MINIMUM OF 95% PER ASTM D698 AND WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT (1 COMPACTION DENSITY TEST PER 2500 SQ. FT.)

IF IT IS DETERMINED BY THE ON-SITE GEOTECHNICAL ENGINEER THAT A LINER IS NOT NEEDED, THEN A LETTER TO THE DESIGN ENGINEER CERTIFYING THE INFILTRATION RATE SHALL BE PROVIDED, WHICH WILL BE USED DURING THE AS-BUILT CERTIFICATION PROCESS.

2. THE GRADES SHOWN ON THIS PLAN ARE FINISHED GRADES AND INCLUDE THE CLAY LINER.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE WAKE COUNTY (TOWN OF ROLESVILLE), NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS AND DETAILS.
2. SEE GRADING PLAN FOR MORE INFORMATION ON ENTIRE SITE GRADING.

DAM EMBANKMENT AND SOIL COMPACTION SPECIFICATIONS

1. CONTROLLED FILL, AS SPECIFIED BY THE GEOTECHNICAL ENGINEER, IN THE DAM EMBANKMENT /KEY TRENCH SHALL BE PLACED IN 6-INCH LOOSE LAYERS (3-INCH LOOSE LAYERS WITHIN 3-FEET OF EITHER SIDE OF THE PRINCIPAL SPILLWAY PIPE TO A DEPTH OF 2-FEET OVER THE PIPE) AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR - TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698.
2. ALL VISIBLE ORGANIC DEBRIS SUCH AS ROOTS AND LIMBS SHALL BE REMOVED FROM THE FILL MATERIAL PRIOR TO COMPACTION TO THE REQUIRED DENSITY. SOILS WITH ORGANIC MATTER CONTENT EXCEEDING 5% BY WEIGHT SHALL NOT BE USED. STONES GREATER THAN 3-INCH (IN ANY DIRECTION) SHALL BE REMOVED FROM THE FILL PRIOR TO COMPACTION.
3. FILL MATERIAL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITIES OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED RANGES OR OTHERWISE NOT CONFORMING TO SPECIFIED REQUIREMENTS SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIALS.
4. ANY FILL LAYER THAT IS SMOOTH DRUM ROLLED TO REDUCE MOISTURE PENETRATION DURING A STORM EVENT SHALL BE PROPERLY SCARIFIED PRIOR TO THE PLACEMENT OF THE NEXT SOIL LIFT.
5. SURFACE WATER AND STREAM FLOW SHALL BE CONTINUOUSLY CONTROLLED THROUGHOUT CONSTRUCTION AND THE PLACEMENT OF CONTROLLED FILL.
6. FOUNDATION AREAS MAY REQUIRE UNDERCUTTING OF COMPRESSIBLE AND/OR UNSUITABLE SOILS IN ADDITION TO THAT INDICATED ON THE PLANS. ALL SUCH UNDERCUTTING SHALL BE PERFORMED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND SHALL BE MONITORED AND DOCUMENTED. IN NO CASE SHALL THERE BE AN ATTEMPT TO STABILIZE ANY PORTIONS OF THE FOUNDATION SOILS WITH CRUSHED STONE.
7. TREATMENT OF SEEPAGE AREAS, SUBGRADE PREPARATION, FOUNDATION DEWATERING AND ROCK FOUNDATION PREPARATION (I.E., TREATMENT WITH SLUSH GROUTING, DENTAL CONCRETE, ETC.) MAY BE REQUIRED AT THE DISCRETION OF THE

GEOTECHNICAL ENGINEER. ALL SUCH ACTIVITIES SHALL BE CLOSELY MONITORED AND DOCUMENTED BY THE GEOTECHNICAL ENGINEER.

8. FILL ADJACENT TO THE RISER AND PRINCIPAL SPILLWAY PIPE SHALL BE PLACED SO THAT LIFTS ARE AT THE SAME LEVEL ON BOTH SIDES OF THE STRUCTURES.
9. EARTHWORK COMPACTION WITHIN 3-FEET OF ANY STRUCTURES SHALL BE ACCOMPLISHED BY MEANS OF HAND TAMPERS, MANUALLY DIRECTED POWER TAMPERS OR PLATE COMPACTORS OR MINIATURE SELF-PROPELLED ROLLERS.
10. COMPACTION BY MEANS OF DROP WEIGHTS FROM A CRANE OR HOIST SHALL NOT BE PERMITTED.
11. HEAVY EQUIPMENT SHALL NOT BE ALLOWED TO PASS OVER CAST-IN-PLACE STRUCTURES (INCLUDING THE CRADLE) UNTIL ADEQUATE CURING TIME HAS ELAPSED.
12. TO RE-ESTABLISH VEGETATION AFTER CONSTRUCTION, A 4-INCH LAYER OF TOPSOIL SHALL BE PLACED ON THE DISTURBED EMBANKMENT SURFACE AND THE AREA SEEDED AND MULCHED OR HYDROSEED.

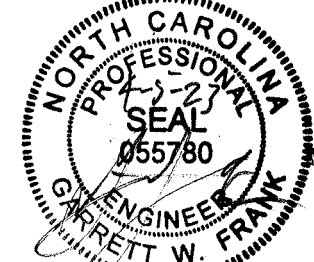
TESTING, OBSERVATION, AND CERTIFICATION

1. TESTS OF THE DEGREE (%) OF COMPACTION OF THE PLACED FILL IN THE DAM /KEY TRENCH SHALL BE PERFORMED AS A PART OF THE PERMITTEE'S NORMAL QUALITY CONTROL PROGRAM FOR THE CONSTRUCTION OF THE DAM. TESTS SHALL BE CONDUCTED CONCURRENT WITH THE INSTALLATION OF THE COMPACTED FILL AND THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF THE DAM SO THAT THE TESTING CAN BE COMPLETED. SHOULD THE RESULTS OF THE TESTS INDICATE THAT THE SPECIFIED DEGREE OF COMPACTION HAS NOT BEEN OBTAINED, THE PORTIONS OF THE DAM REPRESENTED BY SUCH TESTS SHALL BE REWORKED OR REBUILT. ALL PORTIONS OF THE DAM SHALL ACHIEVE THE SPECIFIED MINIMUM DEGREE OF COMPACTION.

CONSTRUCTION OF THE SCM SHALL BE DONE UNDER THE OBSERVATION OF A QUALIFIED GEOTECHNICAL ENGINEER, WHO IS REGISTERED AS A PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA. THE GEOTECHNICAL ENGINEER MUST HAVE EXPERIENCE IN THE DESIGN AND CONSTRUCTION MONITORING OF SCM'S OF THE SIZE AND SCOPE COVERED BY THESE STANDARDS AND GUIDELINES.

PRELIMINARY PLANS

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G. FRANK

CHECKED BY
G. FRANK

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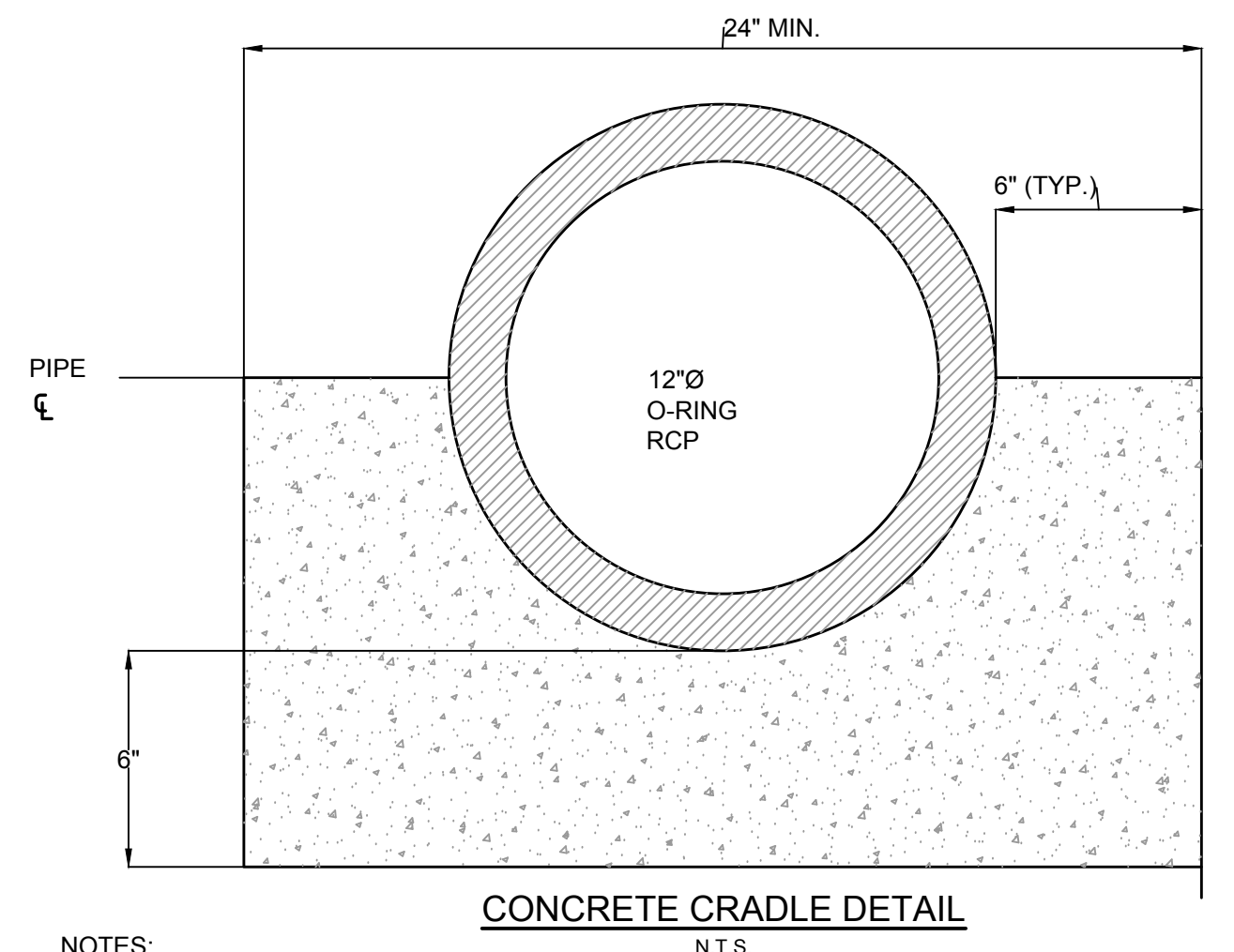
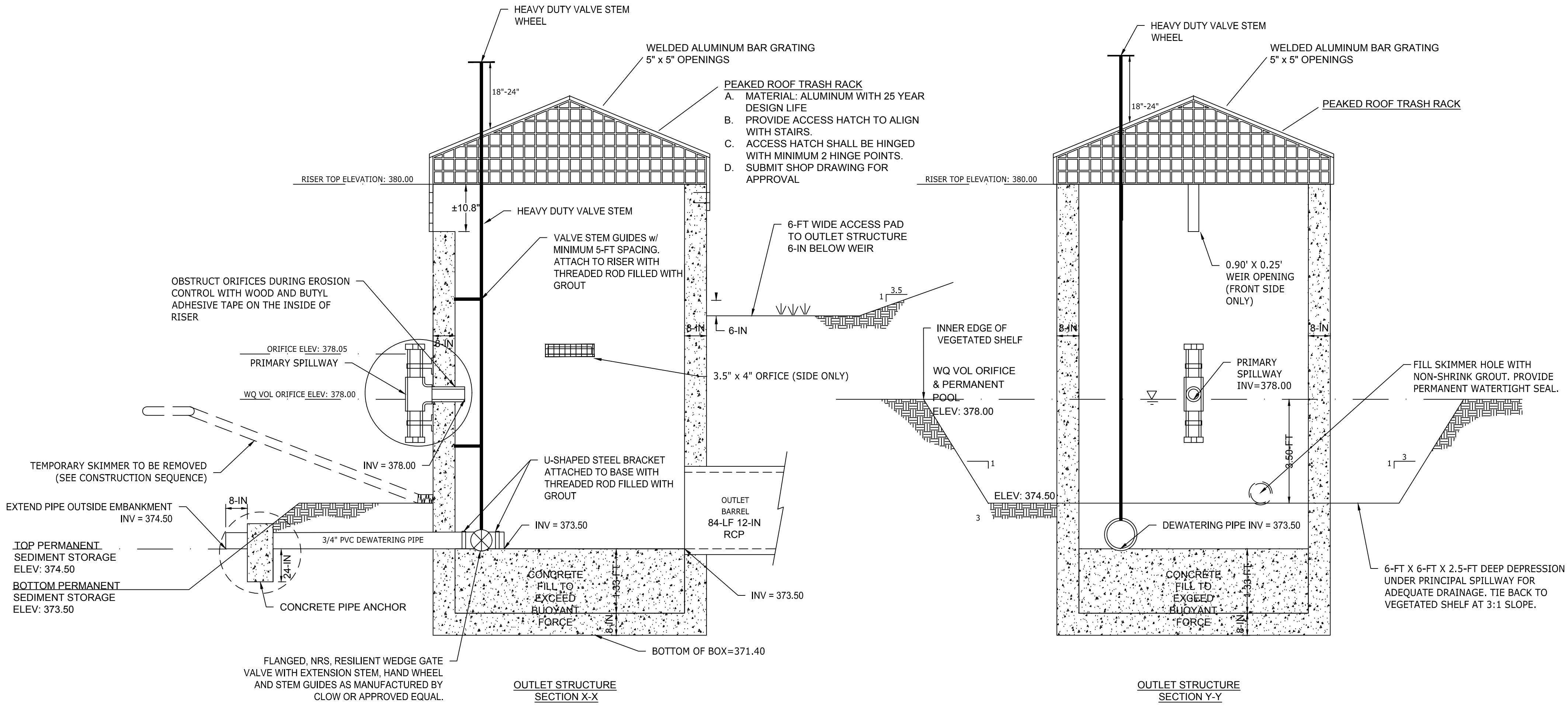
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JONES DAIRY STORAGE FACILITY
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SCM PLAN AND PROFILE

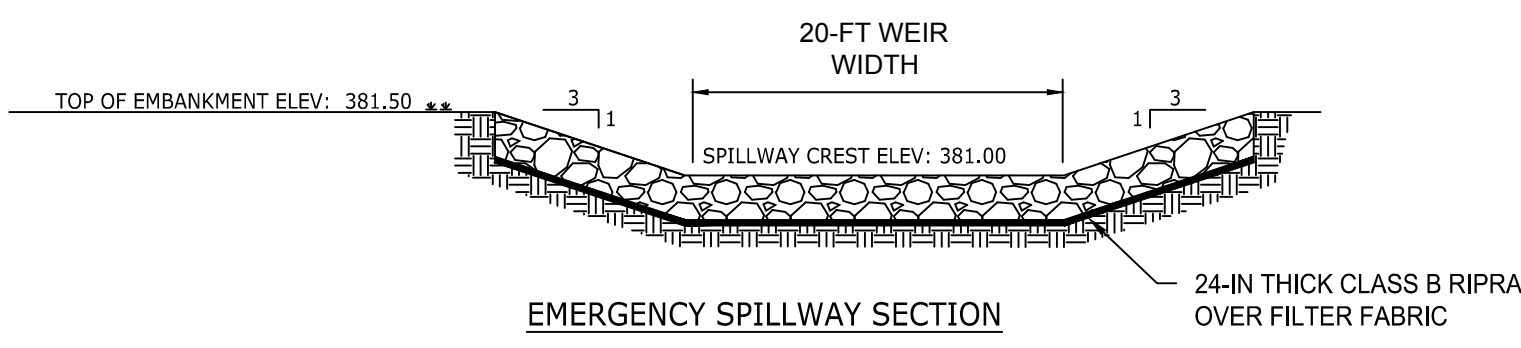
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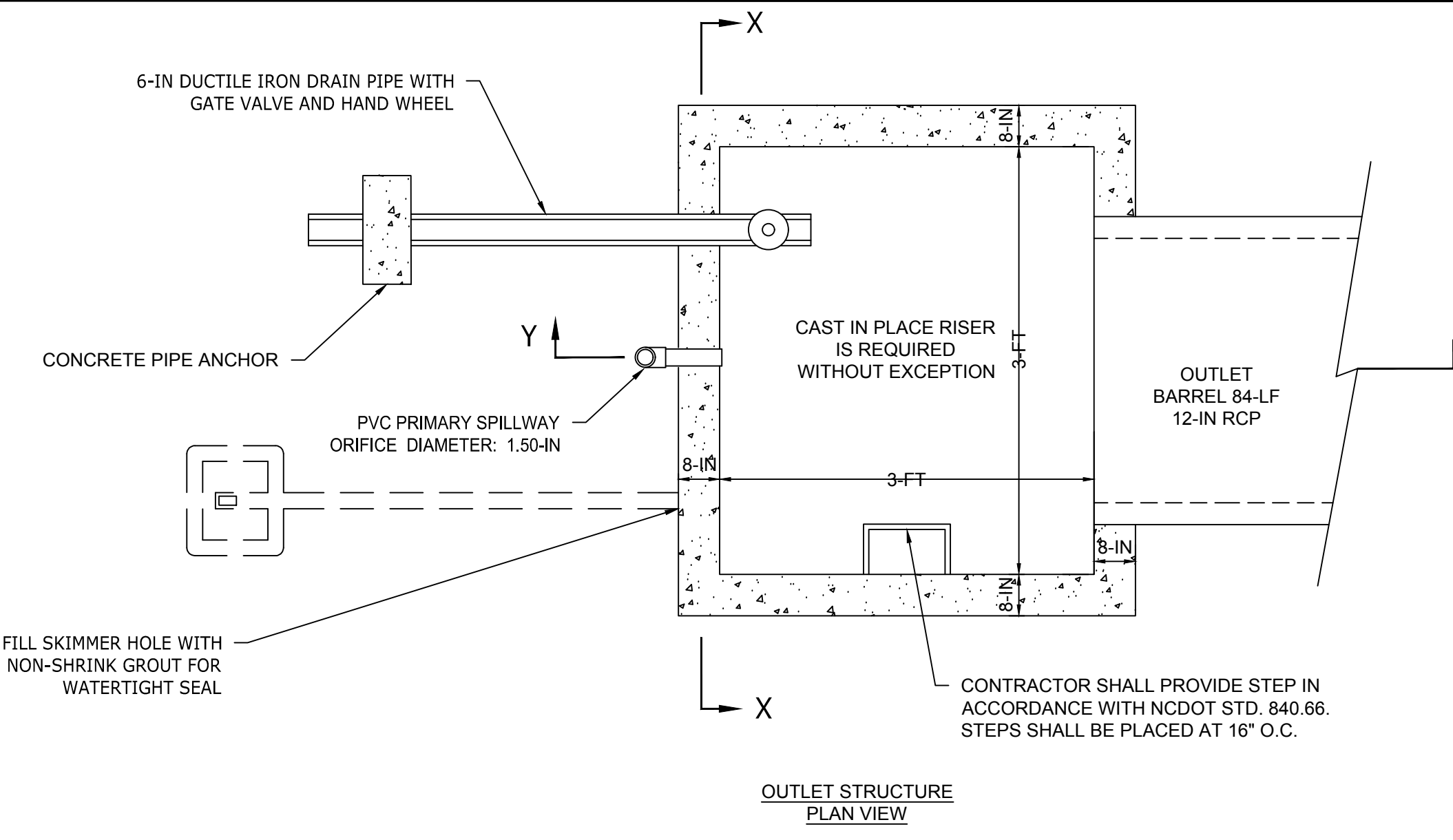
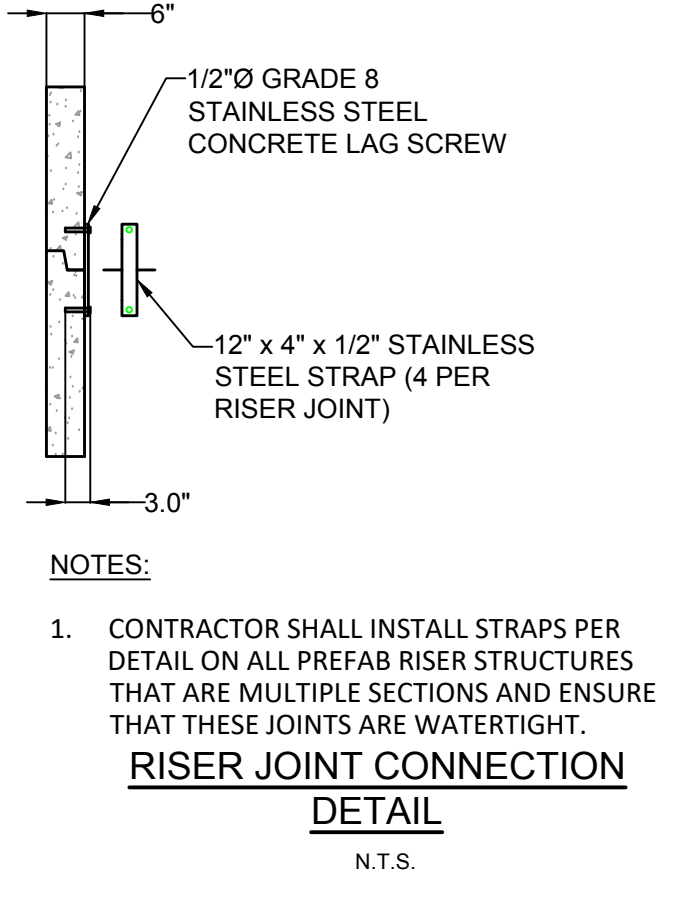
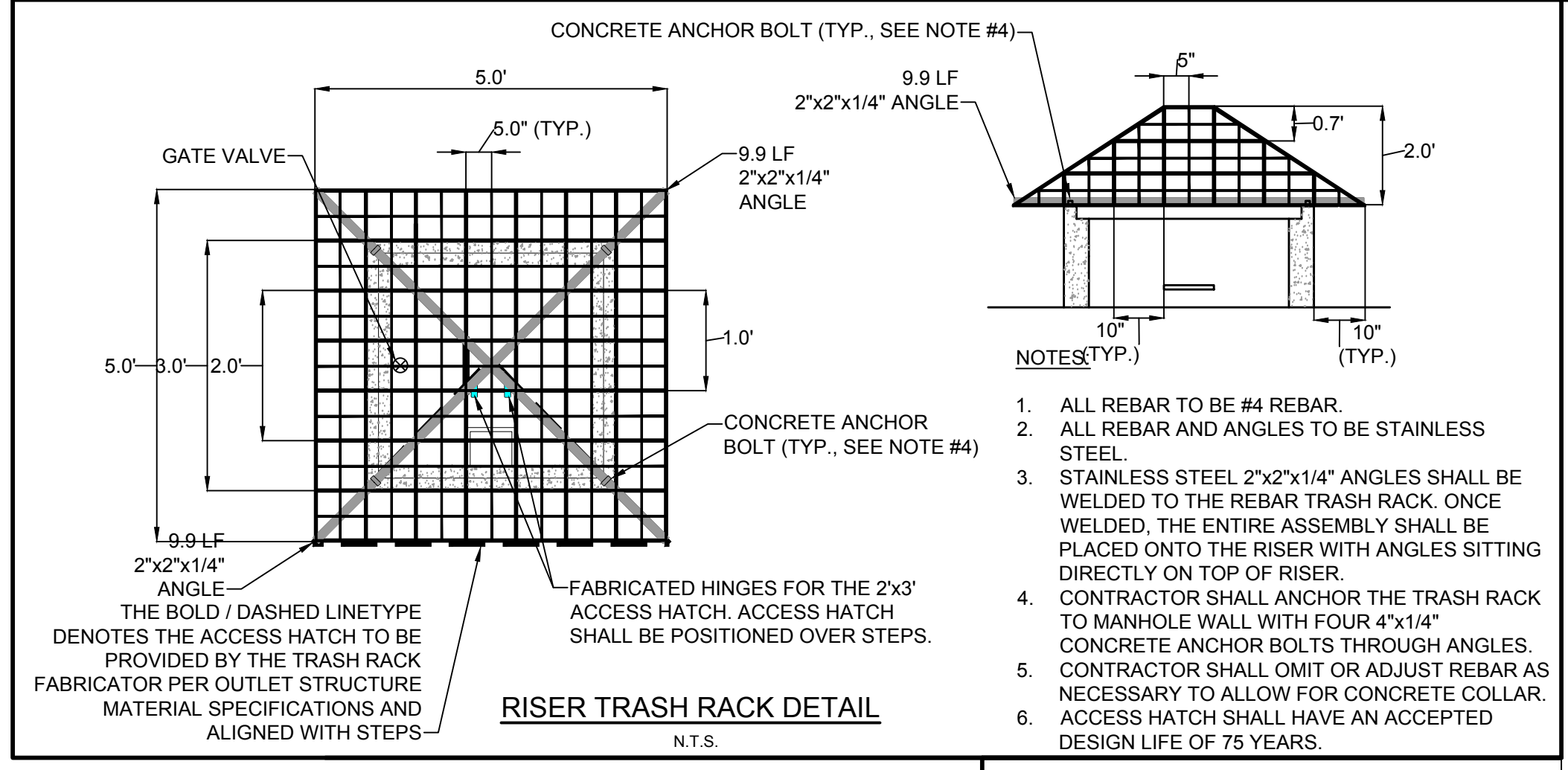
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- NOTES:
1. CONCRETE CRADLE SHALL INCLUDE EXPANSION JOINTS EVERY 8 FEET ON CENTER AT PIPE JOINTS.
 2. REINFORCED CONCRETE STRENGTH TO BE 3,000 PSI.
 3. NO FLOWABLE FILL ALLOWED.



10-YR STORM ELEV	380.15
2-YR STORM ELEV	379.57
1-YR STORM ELEV	379.29



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	CHECKED BY G. FRANK
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TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

JONES DAIRY STORAGE FACILITY
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SCM NOTES AND DETAILS

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SANITARY SEWER SCHEDULE

MH1	TOP = 389.79 INV IN = 380.51 (SE)
MH2	TOP = 389.51 INV IN = 381.35 (SE) INV OUT = 381.25 (NW)
MH3	TOP = 387.31 INV IN = 383.00 (SE) INV OUT = 382.90 (NW)
MH4	TOP = 390.33 INV OUT = 384.30 (NW)

PIPE TABLE				
PIPE NAME	SIZE	LENGTH	SLOPE	BEARING
MH2-MH1	8"	148.34 LF	0.50%	N47° 48' 15"W
MH4-MH3	8"	255.85 LF	0.51%	N49° 24' 12"W
MH3-MH2	8"	296.80 LF	0.52%	N49° 08' 39"W

WAKE COUNTY
BOARD OF
EDUCATION
PIN: 1850613181
DB 6397 PG 408
BM 1994 PG 1943

#13 - Provide
elevations at
crossings to confirm
separation
requirements are met

#13 - Provide
elevations at
crossings to confirm
separation
requirements are met

CHARLES SPENCER
JONES
PIN: 1850700632
DB 3539 PG 26
ZONING DISTRICT: I-1

THE PETTIT HAMIL
LIVING TRUST
AGREEMENT
PIN: 1850609303
DB 18060 PG 336
BM 2007 PG 2000

QUINTIN STANTON
& EMILY LAUREN
STANTON
PIN: 1850608313
DB 15766 PG 670
BM 2007 PG 2000

ALICIA KNOWLES
& WILBERT
KNOWLES
PIN: 1850607323
DB 17492 PG 2680
BM 2007 PG 2000

ROBERT C. MINOR
& AMY C. MINOR
PIN: 1850606333
DB 15206 PG 47
BM 2007 PG 2000

ARTHUR C. DOYLE
& PATRICIA A.
DOYLE
PIN: 1850605343
DB 15533 PG 1116
BM 2007 PG 2000

CITY OF RALEIGH UTILITY NOTES

ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)

- UTILITY SEPARATION REQUIREMENTS:
 - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER
 - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS
 - 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
 - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & S-49)
 - ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED
- ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION
- CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT
- 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS
- INSTALL 4" PVC* SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM
- PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE
- NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION
- GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUD FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919) 996-2334 OR TIMOTHY.BEASLEY@RALEIGHNC.GOV FOR MORE INFORMATION
- CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLEY AT (919) 996-5923 OR JOANIE.HARTLEY@RALEIGHNC.GOV FOR MORE INFORMATION

KEY NOTES

- | | |
|-----------|---|
| 8
C6.2 | FIRE LINE CAPPING |
| 1
C6.3 | FIRE HYDRANT ASSEMBLY |
| 2
C6.3 | GATE VALVE BOX |
| 3
C6.3 | GATE VALVE ASSEMBLY |
| 4
C6.3 | SANITARY SEWER MANHOLE |
| 5
C6.3 | SANITARY SEWER MANHOLE RING & COVER |
| 6
C6.3 | SEWER MANHOLE STEPS |
| 1
C6.4 | TAPPING SLEEVE w/ GATE VALVE |
| 2
C6.4 | POST INDICATOR VALVE ASSEMBLY |
| 3
C6.4 | THRUST BLOCKING (TYP.) |
| 4
C6.4 | SANITARY CLEANOUT |
| 5
C6.4 | UTILITY TRENCHING AND BACKFILL |
| 6
C6.4 | FIRE, DOMESTIC, & IRRIGATION |
| A
- | WALL MOUNTED FIRE DEPARTMENT CONNECTION |

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

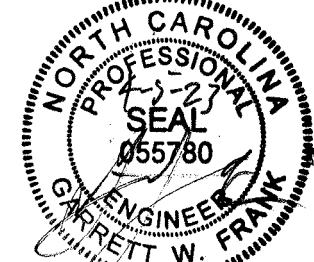
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CITY OF RALEIGH DEVELOPMENT APPROVAL

RALEIGH WATER REVIEW OFFICER

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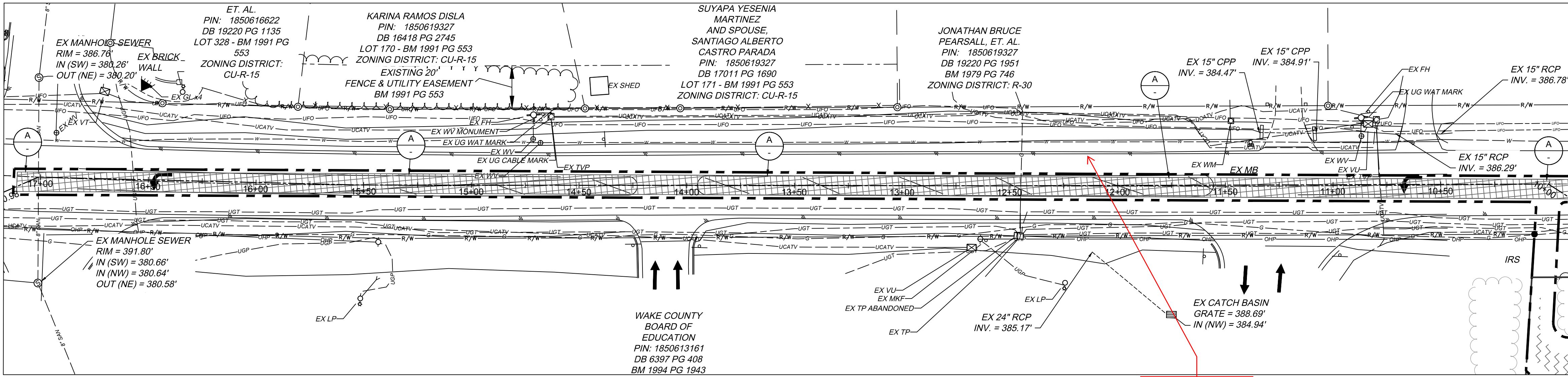
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JONES DAIRY STORAGE FACILITY
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE UTILITY PLAN

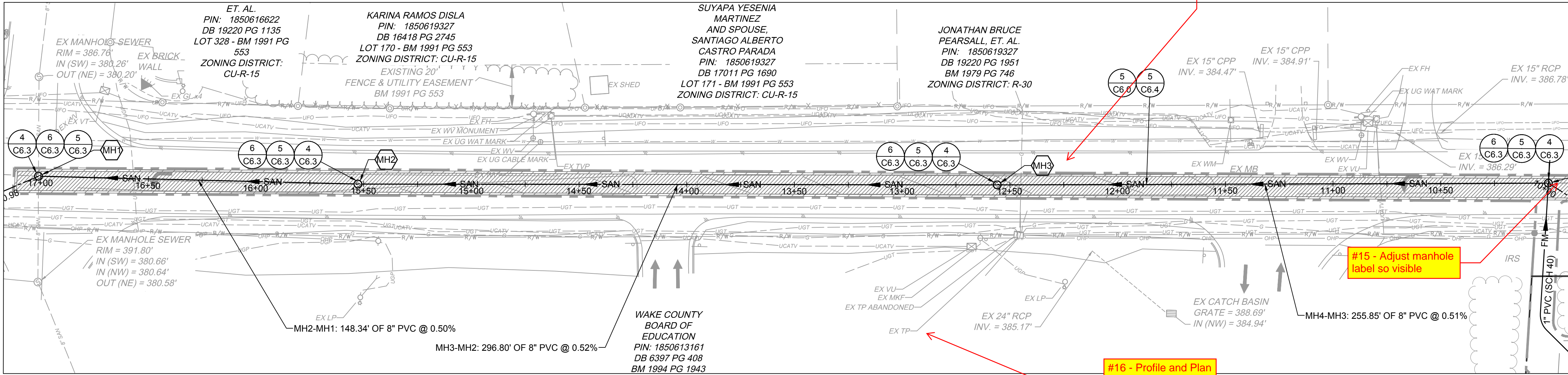
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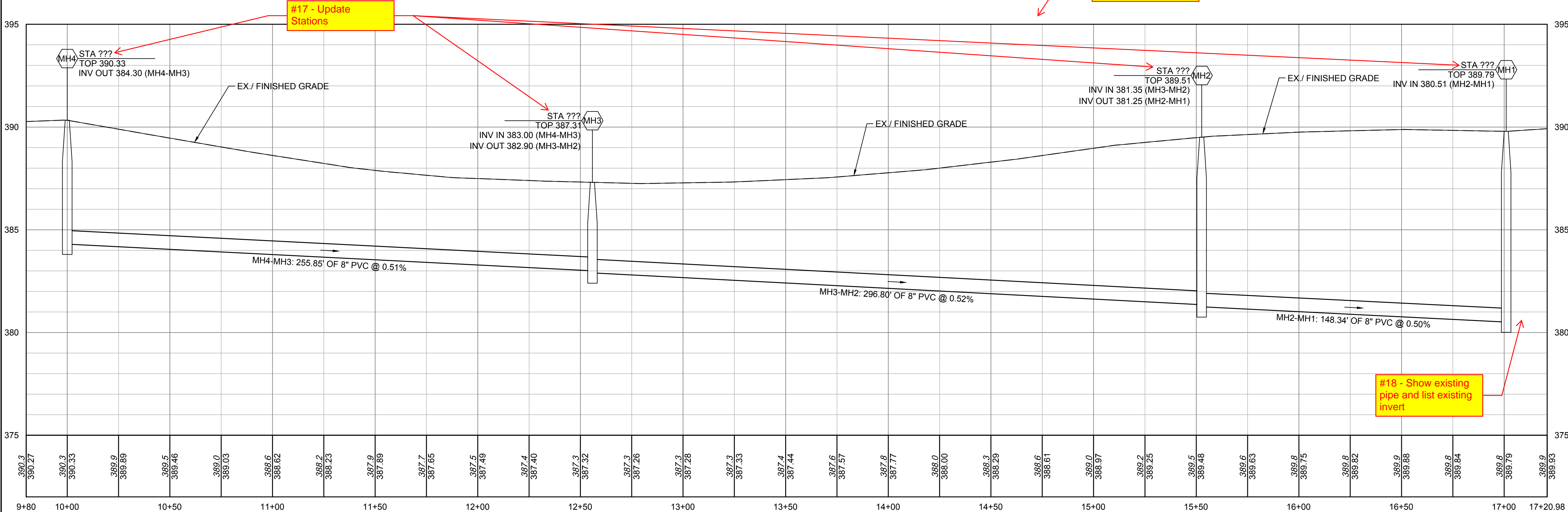
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EX CONDITIONS & DEMOLITION



SITE, UTILITY & GRADING PLAN



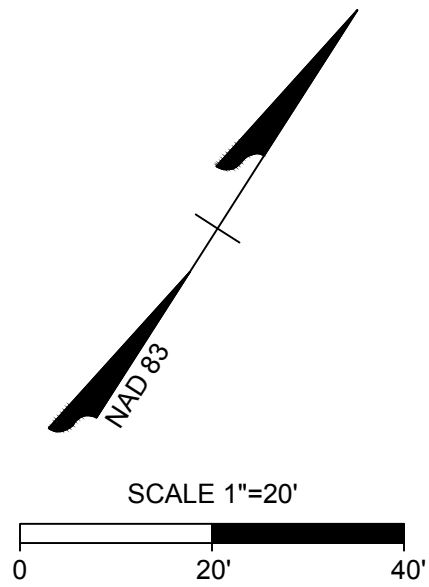
PROFILE VIEW

CITY OF RALEIGH UTILITY NOTES

- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
1. UTILITY SEPARATION REQUIREMENTS:
- a) WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER
 - b) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASUREMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS
 - c) 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
 - d) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS. MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & S-49)
 - e) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION
4. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT
5. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS
6. INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM
7. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE
8. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION
9. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUD FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919) 996-2334 OR TIMOTHY.BEASLEY@RALEIGHNC.GOV FOR MORE INFORMATION
10. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLEY AT (919) 996-5923 OR JOANIE.HARTLEY@RALEIGHNC.GOV FOR MORE INFORMATION

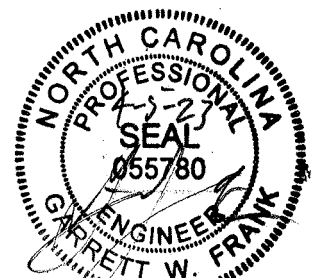
KEY NOTES

- (A) REMOVE ASPHALT PAVEMENT AND STONE BASE
- (5) NCDOT ASPHALT PAVEMENT
- (4) SANITARY SEWER MANHOLE
- (5) SANITARY SEWER MANHOLE RING & COVER
- (6) SEWER MANHOLE STEPS
- (5) UTILITY TRENCHING AND BACKFILL



PRELIMINARY PLANS

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REVISION DESCRIPTION

DATE

04/05/2023

DRAWN BY

J. HAYES

DESIGNED BY

G. FRANK

CHECKED BY

G. FRANK

SCALE

AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652
JONES DAIRY STORAGE FACILITY
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
SITE UTILITY PLAN & PROFILE

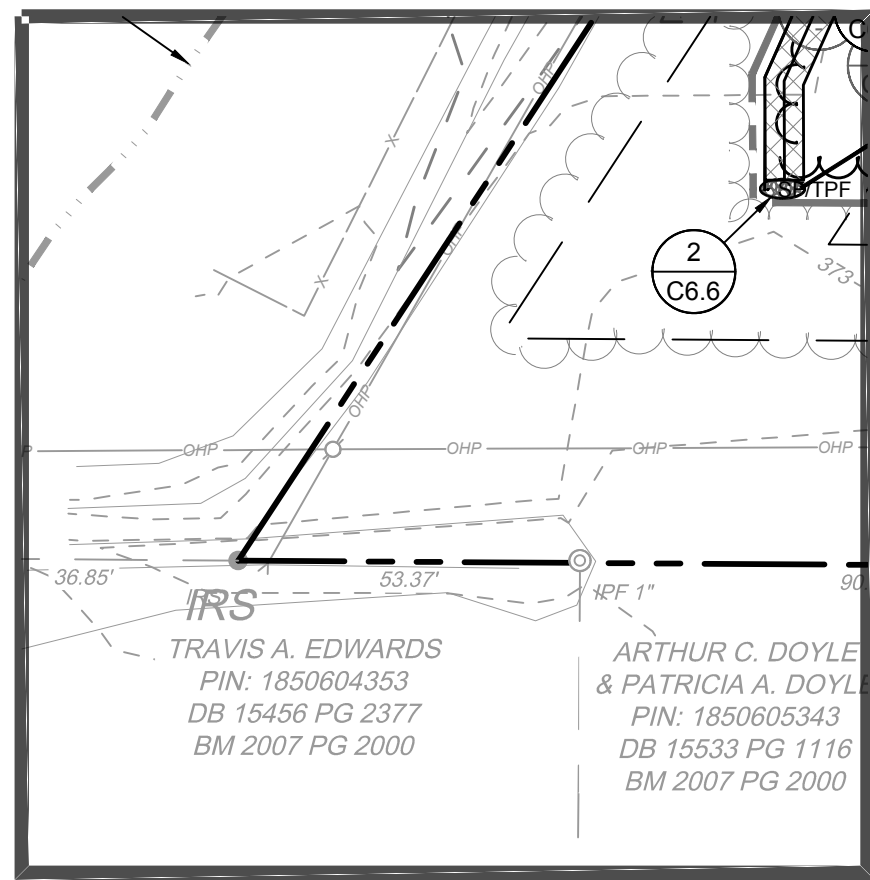
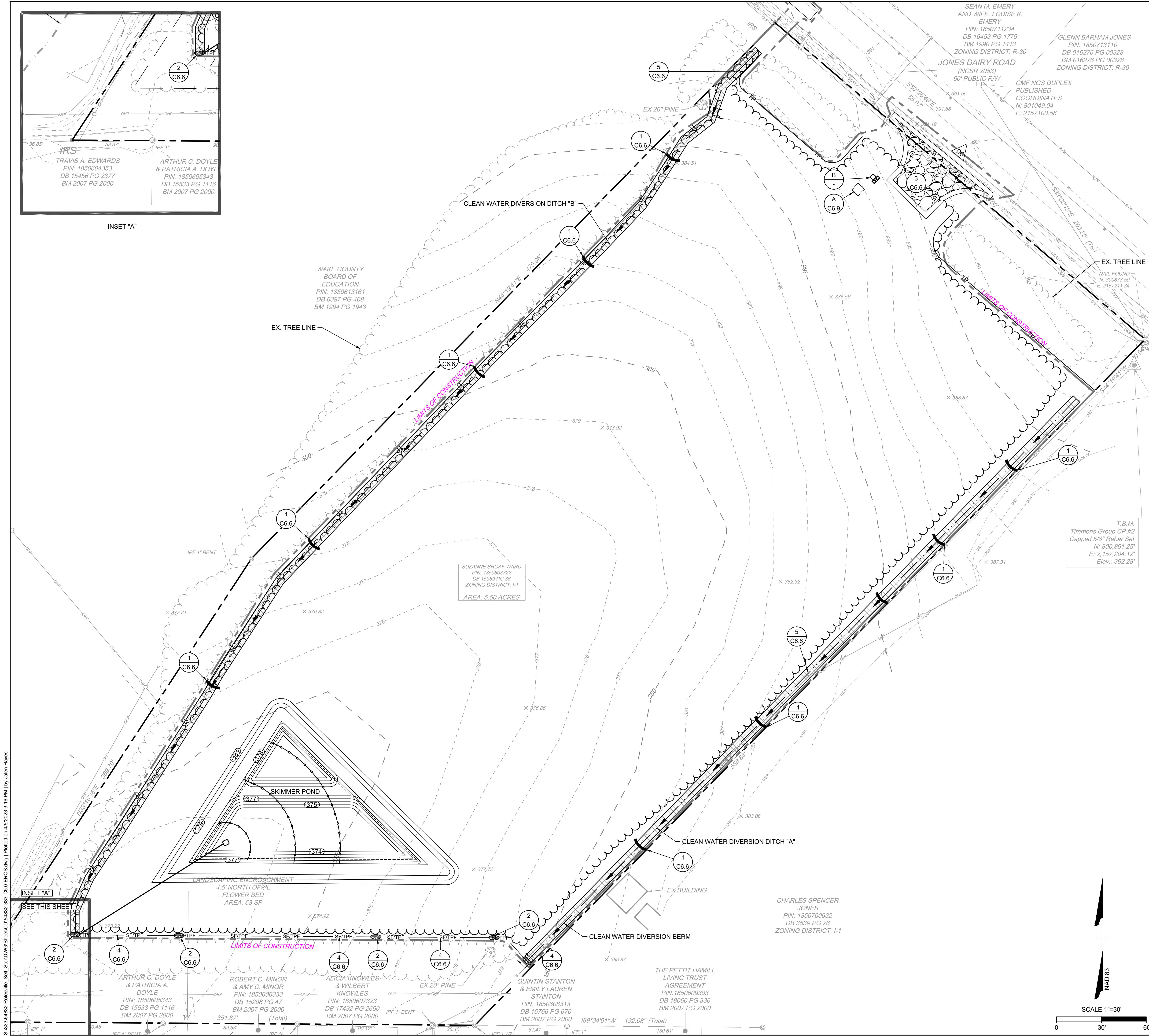
JOB NO.

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INSET "A"

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF SITE. ALL OFF-SITE SOIL BORROW AND WASTE SITES SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITIES.
2. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR ENGINEER.
3. ALL OPEN STORM PIPES SHALL BE PROTECTED WITH STONE FILTER PROTECTION AFTER WORK STOPPAGE EACH DAY.
4. ALL STORM DRAINAGE PIPES SHALL BE THOROUGHLY FLUSHED OF ALL SEDIMENT FOLLOWING SITE STABILIZATION. INTERIOR FLUSHING OF SYSTEM SHALL BE PERFORMED AS NEEDED TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM.
5. THE INDICATED STAGING AREA IS INTENDED FOR VEHICLES AND NON-ERODIBLE MATERIALS ONLY. NO SOIL, SAND OR OTHER ERODIBLE, FINE GRAINED MATERIAL SHALL BE STORED OUTSIDE OF THE LIMITS OF THE SITE PROTECTED BY SEDIMENT AND EROSION CONTROL DEVICES AND MEASURES.
6. SOIL AND OTHER MATERIALS SHALL ONLY BE TEMPORARILY STOCKPILED WITHIN THE CONSTRUCTION LIMITS PROTECTED BY SEDIMENT AND EROSION CONTROL DEVICES AND MEASURES.
7. TREE PROTECTION INSPECTION SHALL BE COMPLETED PRIOR TO INSTALLING EROSION CONTROL DEVICES.
8. ALL APPLICABLE E&S CONTROL MEASURES ARE TO BE PROPERLY MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
9. PERMANENT GROUND COVER SHALL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 90 CALENDAR DAYS (WHICHEVER IS SHORTER).
10. PROVIDE 8-FT TALL CONSTRUCTION FENCING W/ SCREEN AROUND ALL WORK AREAS AT ALL TIMES DURING THE ENTIRE DURATION OF CONSTRUCTION. ANY PAVEMENT DAMAGED FROM TEMPORARY FENCING SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
11. TOTAL DISTURBED AREA: 4.70 AC.

KEYNOTES

1 C6.6	CHECK DAM	
2 C6.6	REINFORCED SILT FENCE OUTLET	
3 C6.6	GRAVEL CONSTRUCTION ENTRANCE	
4 C6.6	TEMPORARY SILT & TREE PROTECTION FENCE	SF/TPF
5 C6.6	TEMPORARY DIVERSION DITCH	
6 C6.6	RIPRAP OUTLET PROTECTION	
1 C6.7	TEMPORARY CHANNEL LINING	
2 C6.7	ROLLED EROSION CONTROL PRODUCT	
3 C6.7	COIR MESH BAFFLES	
4 C6.7	INLET PROTECTION	
5 C6.7	DEWATERING PUMP WITH SILT BAG	
1 C6.8	SKIMMER BASIN	
A C6.9	CONCRETE WASHOUT AREA	
B -	RAIN GAUGE AND PERMIT RECORDS BOX	
	LIMITS OF CONSTRUCTION	
	PROPOSED RCP STORM SEWER PIPES	
	PROPOSED HPDE STORM SEWER PIPES	
	SKIMMER BASIN DRAINAGE AREA	
	EXISTING CONTOUR	
	FINISHED CONTOUR	
	DUST CONTROL	

CONSTRUCTION SEQUENCE - PH I

1. OBTAIN AN APPROVED PLAN AND APPLICABLE PERMIT PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITY. A COPY OF THE APPROVED PLAN AND APPROVAL LETTER MUST BE ON FILE AT THE JOB SITE. NOTIFY EROSION CONTROL AUTHORITIES OF PROPOSED STARTING DATE OF LAND DISTURBING ACTIVITIES BY CALLING THE NCDEQ RALEIGH REGIONAL OFFICE AT (919) 791-4200.
2. CONDUCT PRE-CONSTRUCTION CONFERENCE AND INVITE NCDEQ LAND QUALITY SECTION, RALEIGH REGIONAL OFFICE, BY CALLING (919) 791-4200.
3. INSTALL CONSTRUCTION ENTRANCE, PERIMETER SILT FENCE AND REINFORCED SILT FENCE OUTLETS.
4. INSTALL STORM STRUCTURES A2-A1 WITH RIP RAP OUTLET PROTECTION RR-1 AS SHOWN ON PLANS (PRIOR TO SKIMMER BASIN INSTALLATION)
5. CLEAR/GRUB AND GRADE ONLY AS NECESSARY TO INSTALL EROSION CONTROL MEASURES AND BASIN.
6. CALL NCDEQ AND THE ENGINEER TO ARRANGE AN INSPECTION OF INSTALLED EROSION CONTROL DEVICES. (NOTE: DEMOLITION, GRADING, AND ANY OTHER CONSTRUCTION WORK SHALL NOT OCCUR UNTIL THE EROSION CONTROL FEATURES ARE INSTALLED AND APPROVED BY NCDEQ INSPECTOR.)
7. PROCEED WITH DEMOLITION, GRADING AND SITE WORK AS SHOWN ON PLANS.
8. MAINTAIN ALL EROSION & SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION. REMOVE AND STABILIZE CONSTRUCTION LAY DOWN, STAGING, DIRT & WASTE PILE AREAS. ALL APPLICABLE E&S CONTROL MEASURES ARE TO REMAIN UNTIL PERMANENT VEGETATION IS ESTABLISHED.
9. ONCE THE SITE IS READY TO MOVE FORWARD WITH SITE PAVING, STABILIZE THE SITE AND PROCEED TO PHASE 2 EROSION CONTROL.

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DATE

04/05/2023

DRAWN BY

J. HAYES

DESIGNED BY

G. FRANK

CHECKED BY

G. FRANK

SCALE

AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

EROSION & SEDIMENTATION CONTROL PLAN - PH I

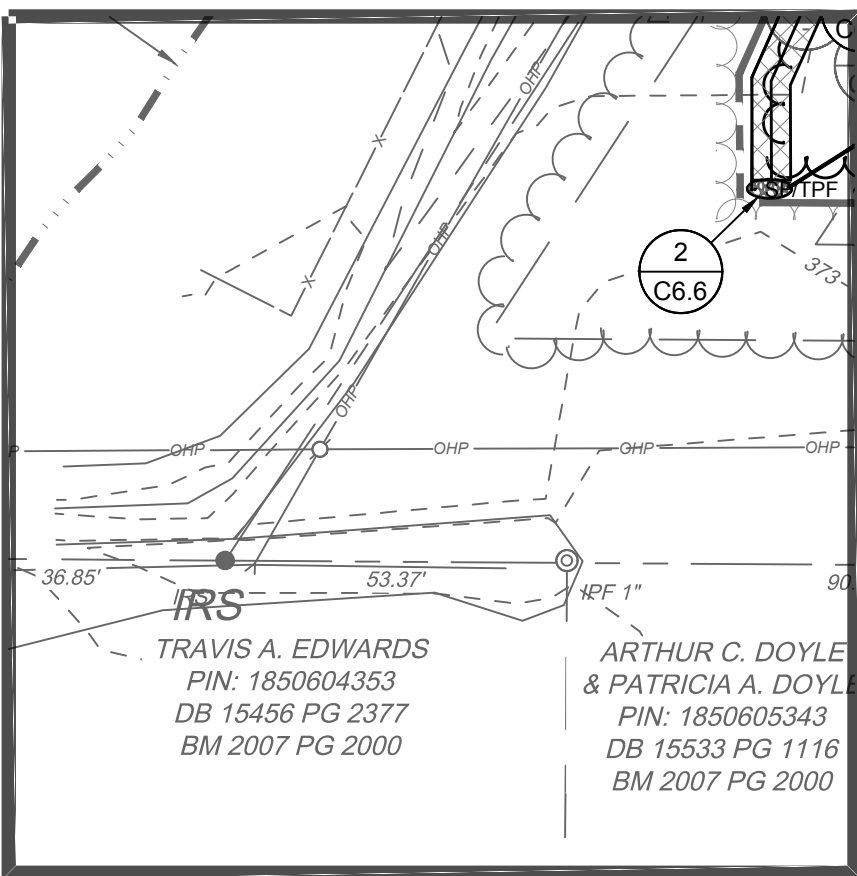
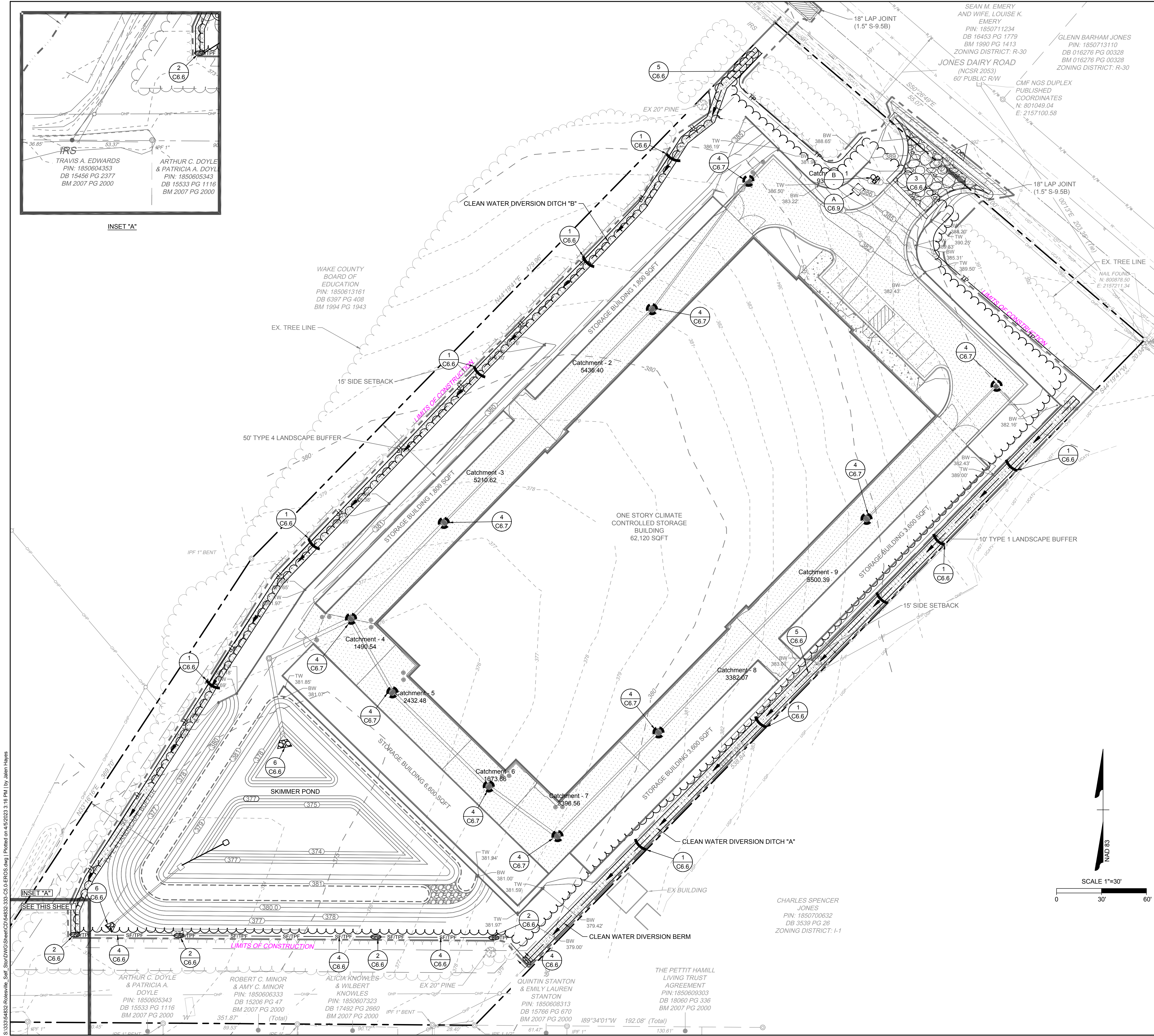
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KEYNOTES

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B -	RAIN GAUGE AND PERMIT RECORDS BOX	
	LIMITS OF CONSTRUCTION	
	PROPOSED RCP STORM SEWER PIPES	
	PROPOSED HPDE STORM SEWER PIPES	
	SKIMMER BASIN DRAINAGE AREA	
	EXISTING CONTOUR	
	FINISHED CONTOUR	
	DUST CONTROL	

CONSTRUCTION SEQUENCE - PH II

1. MAINTAIN ALL EXISTING EROSION & SEDIMENT CONTROL MEASURES PREVIOUSLY CONSTRUCTED AND ASSOCIATED WITH PHASE I. ADJUST AS NEEDED.
2. AS SITE IS PAVED AND BROUGHT UP TO FINAL GRADE, INSTALL THE REMAINDER OF THE STORM DRAINAGE SYSTEM. INSTALL INLET AND OUTLET PROTECTION DEVICES AT NEW STRUCTURES AS THEY ARE CONSTRUCTED.
3. INSTALL REMAINDER OF PAVING AND SITE FEATURES.
4. RESPREAD TOPSOIL, INSTALL SLOPE PROTECTION BLANKETS ON ANY 3:1 SLOPES AND VEGETATE STEEP SLOPES AS THEY ARE ESTABLISHED AS SHOWN ON PLANS.
5. VEGETATE ALL DISTURBED AREAS ACCORDING TO THE NPDES CHART.
6. WHEN THE SITE IS STABILIZED, CONTACT NCDEQ AT (336) 776-9800 AND TIMMONS GROUP AT 919-866-4503 FOR AN INSPECTION.
7. IF APPROVAL IS GRANTED BY NCDEQ AND TIMMONS GROUP, REMOVE TEMPORARY SILT FENCING AND OTHER TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES.
8. DEWATER SKIMMER BASINS BY PUMPING WATER THROUGH SILT BAG AS SHOWN ON PLANS.
9. REMOVE SKIMMER BASINS AND ALL OTHER TEMPORARY EROSION CONTROL MEASURES.
10. FINE GRADE AND PROVIDE ALL REMAINING IMPROVEMENTS.
11. SEED AND RE-SEED ALL BARE AREAS WITH PERMANENT SEEDING.

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	04/05/2023
DRAWN BY	J. HAYES
DESIGNED BY	G. FRANK
CHECKED BY	G. FRANK
SCALE	AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

JONES DAIRY STORAGE FACILITY
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
EROSION & SEDIMENTATION CONTROL PLAN - PH II

JOB NO.	54832
SHEET NO.	C5.1

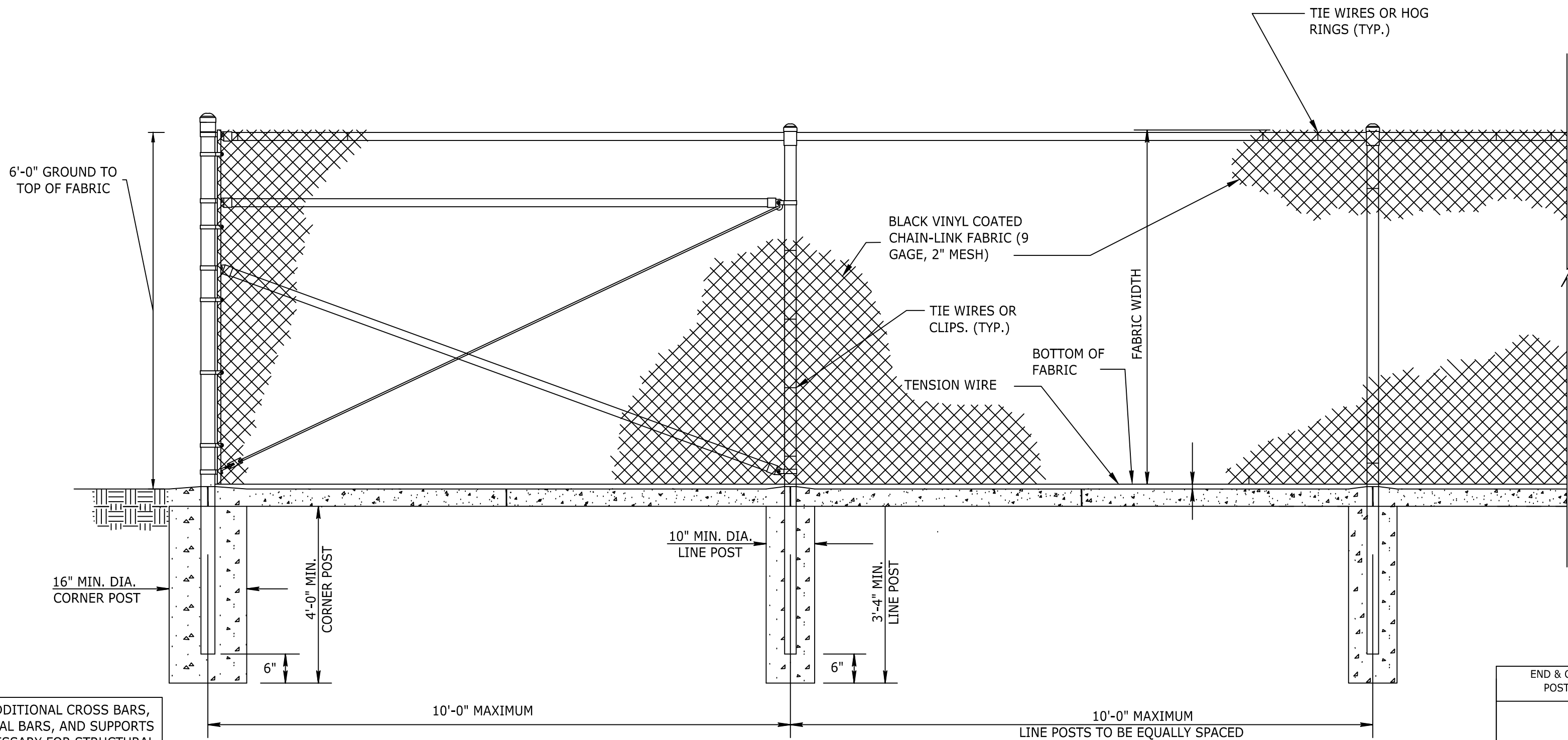
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1

ADD ADDITIONAL CROSS BARS,
DIAGONAL BARS, AND SUPPORTS
AS NECESSARY FOR STRUCTURAL
SUPPORT

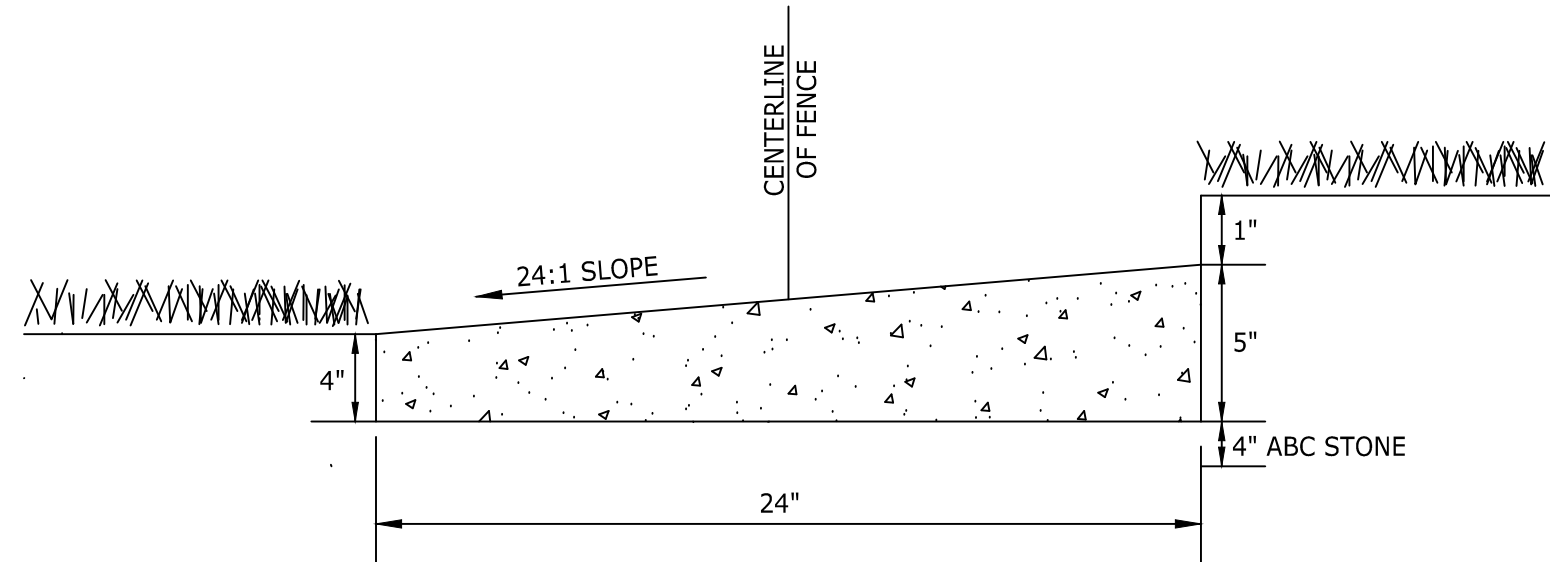
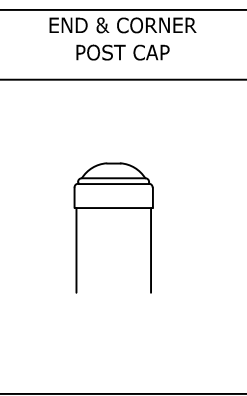
PROVIDE SHOP DRAWINGS FOR
REVIEW



CHAIN-LINK SECURITY FENCE DETAIL
NO SCALE

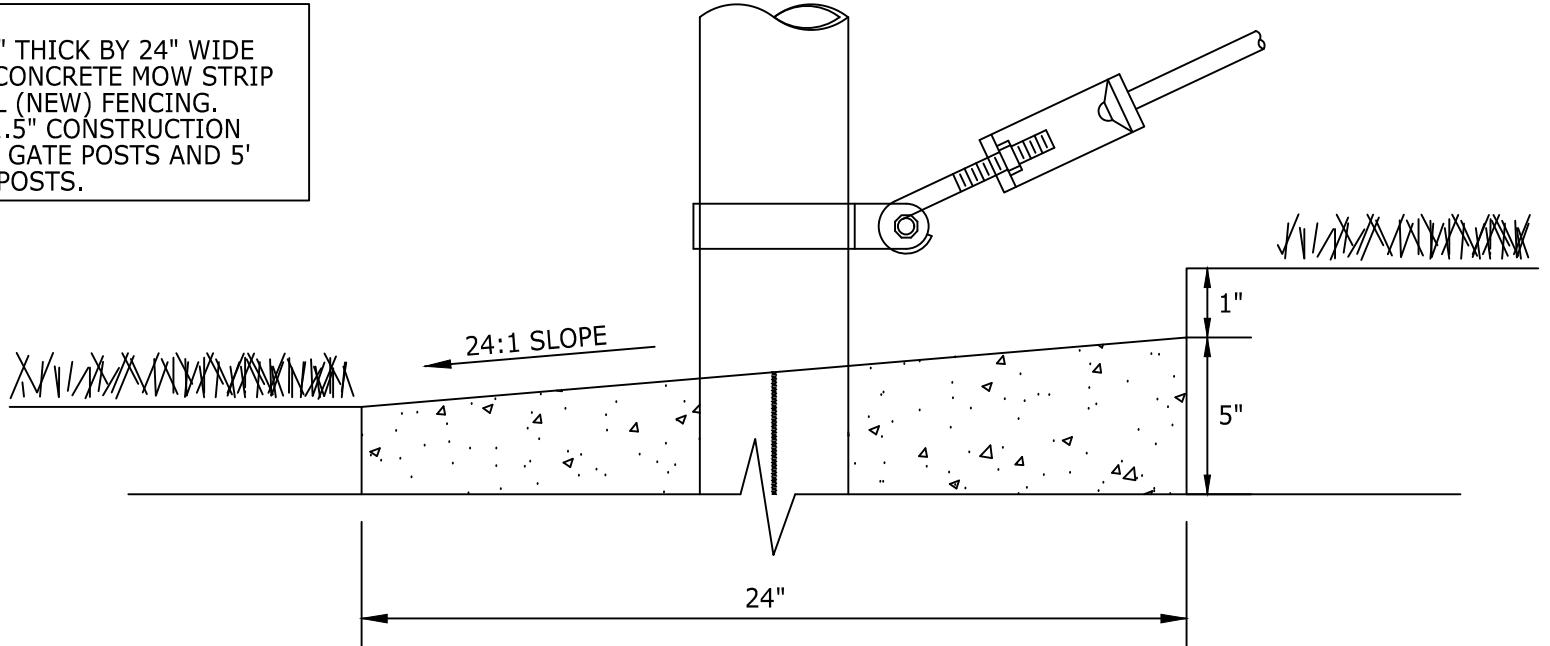
STEEL POST SCHEDULE	
USE AND SECTION	MINIMUM OUTSIDE DIMENSIONS (NOMINAL)
CORNER, END & PULL POSTS	TUBULAR - ROUND
	C-SECTION (ROLL-FORMED)
	2.875" O.D. 3.50" X 3.50"
LINE POSTS	TUBULAR - ROUND
	H-SECTION
	C-SECTION (ROLL-FORMED)
	2.375" O.D. 2.25" X 1.70" 2.25" X 1.70"
TOP, BOTTOM & BRACE RAILS	TUBULAR - ROUND
	H-SECTION
	C-SECTION (ROLL-FORMED)
	1.66" O.D. 1.625" X 1.50" 1.625" X 1.25"

- NOTES:
- DETAILS SHOWN ARE TO CLARIFY REQUIREMENTS AND ARE NOT INTENDED TO LIMIT OTHER TYPES OF FENCE SECTIONS AND METHODS OF INSTALLATION THAT COMPLY WITH THE SPECIFICATIONS.
 - WIRE TIES, RAILS, POSTS, AND BRACES SHALL BE CONSTRUCTED ON THE SECURE SIDE OF THE FENCE ALIGNMENT. CHAIN-LINK FABRIC SHALL BE PLACED ON THE SIDE OPPOSITE THE SECURE AREA.
 - C-SECTION POSTS SHALL BE INSTALLED SO THAT THE VOID INSIDE THE POST IS COMPLETELY FILLED WITH CONCRETE UP TO THE TOP OF THE FOUNDATION.
 - POWDER COAT ALL FENCE FRAMING MATERIALS AND FITTINGS "BLACK" IN COLOR. FENCE FABRIC SHALL BE VINYL COATED "BLACK" IN COLOR.**

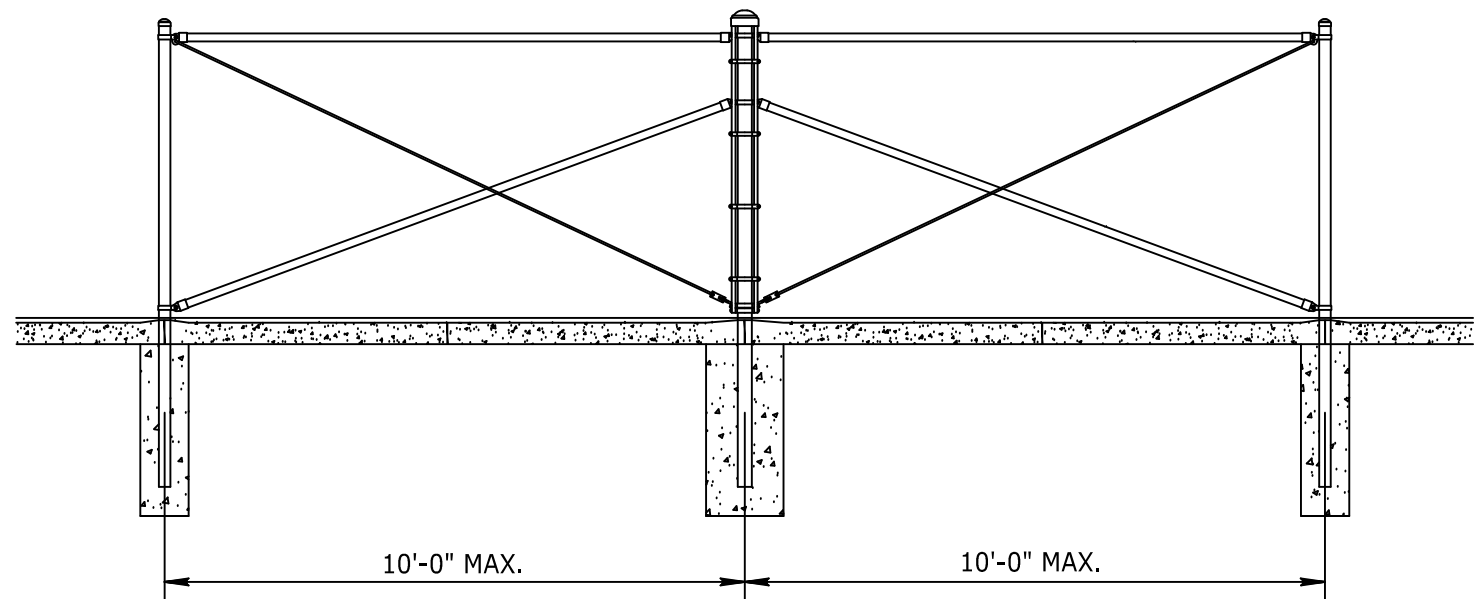


MOW STRIP CROSS SECTION

- NOTES:
- INSTALL 4" THICK BY 24" WIDE STRIP OF CONCRETE MOW STRIP UNDER ALL (NEW) FENCING.
 - PROVIDE 1.5" CONSTRUCTION JOINTS AT GATE POSTS AND 5' BETWEEN POSTS.

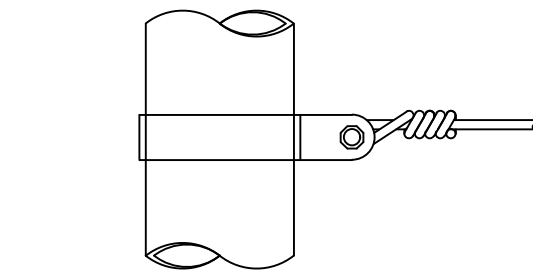


MOW STRIP AT FENCE POST

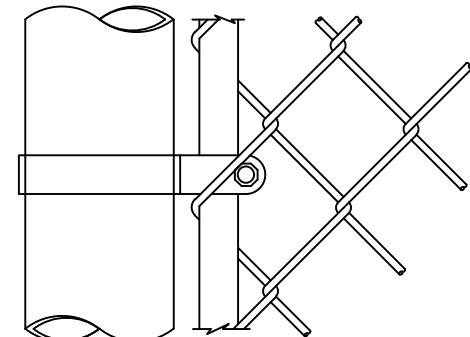


BRACE PANEL DETAIL
NO SCALE

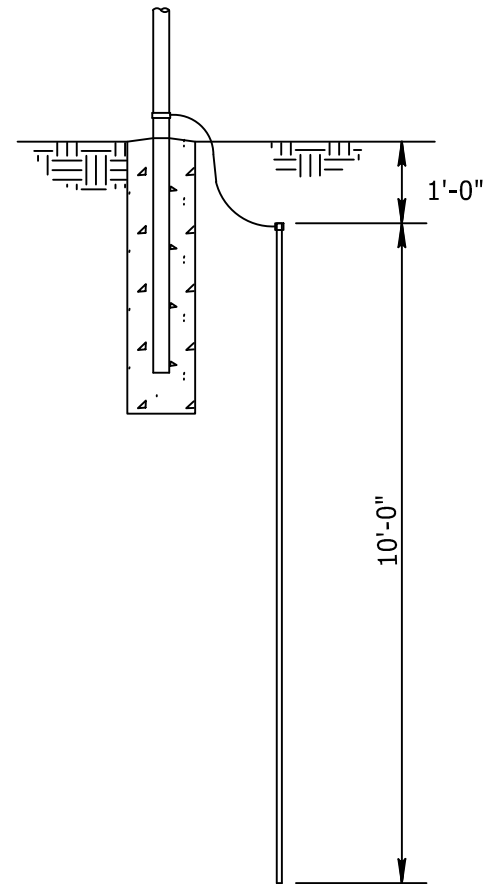
NOTE:
PROVIDE BRACE PANEL WHENEVER
STRAIGHT RUNS EXCEED 500 FEET.



TENSION BAND DETAIL

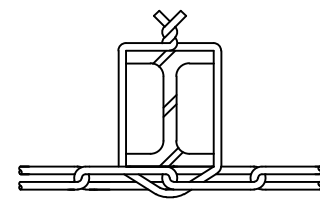


END OR GATE POST DETAIL

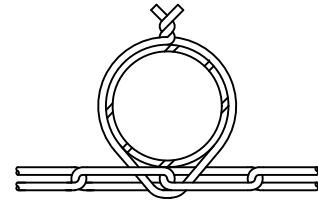


GROUNDING DETAIL
NO SCALE

INSTALL GROUNDING ROD AT
EACH FENCE CORNER POST AND
GATE POSTS OR EVERY 500 FT
ALONG FENCE WHICHEVER
DISTANCE IS GREATER

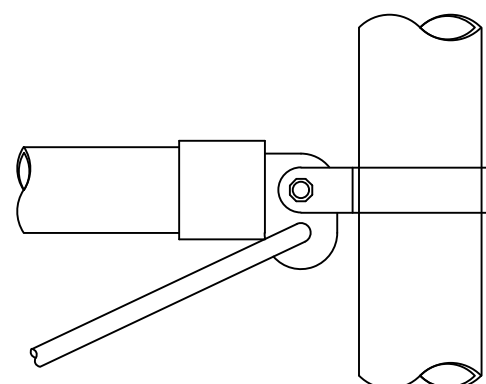


H-BEAM

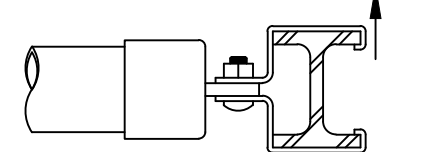


ROUND POST

LINE POST ATTACHMENTS

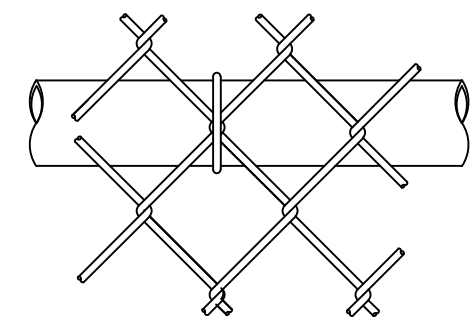


ROUND POST



H-BEAM

BRACE RAIL CLAMP DETAILS



TOP OR BRACE RAIL ATTACHMENT

BLACK VINYL CHAINLINK FENCE

N.T.S.

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TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE DETAILS

JOB NO.
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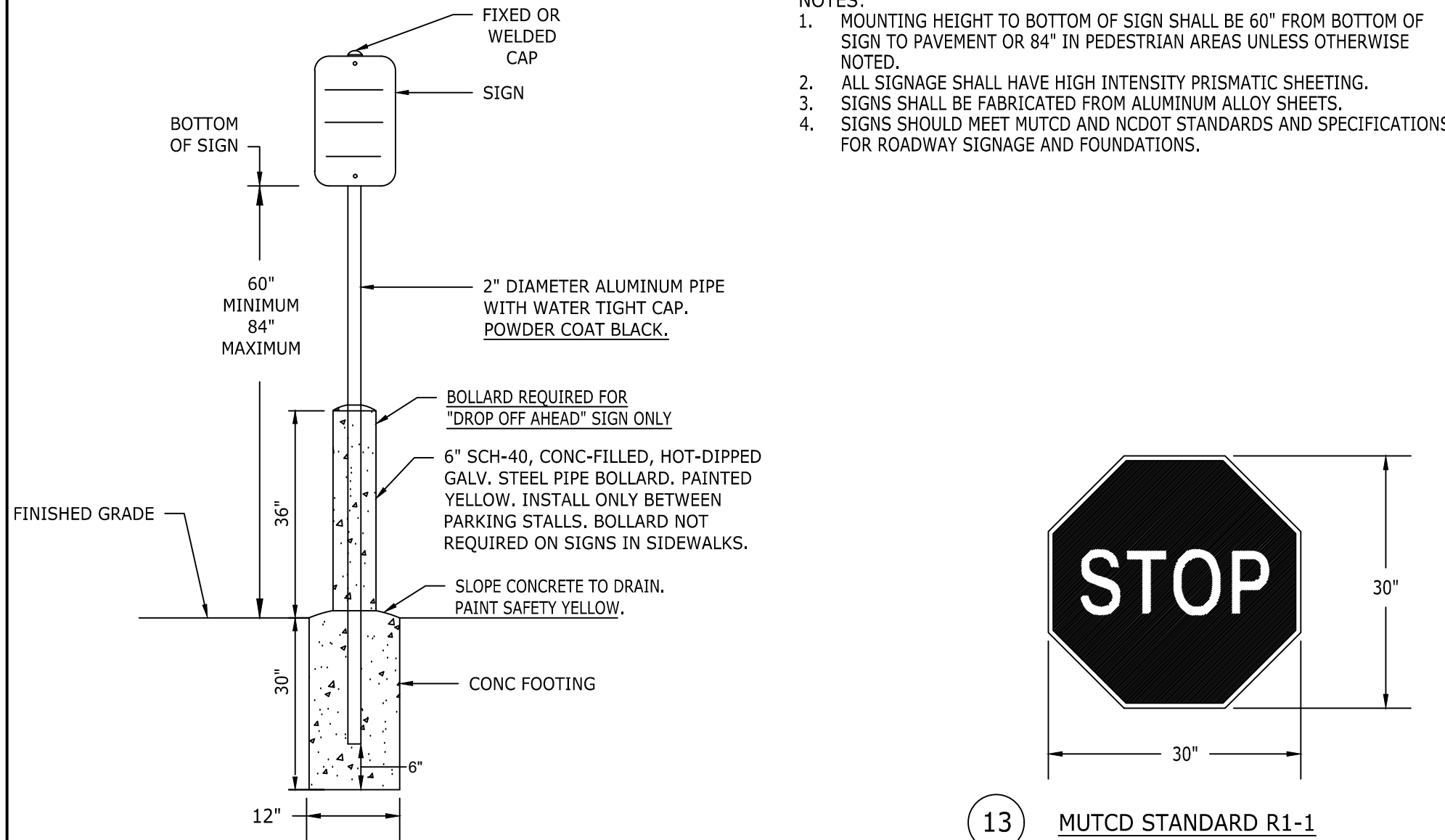
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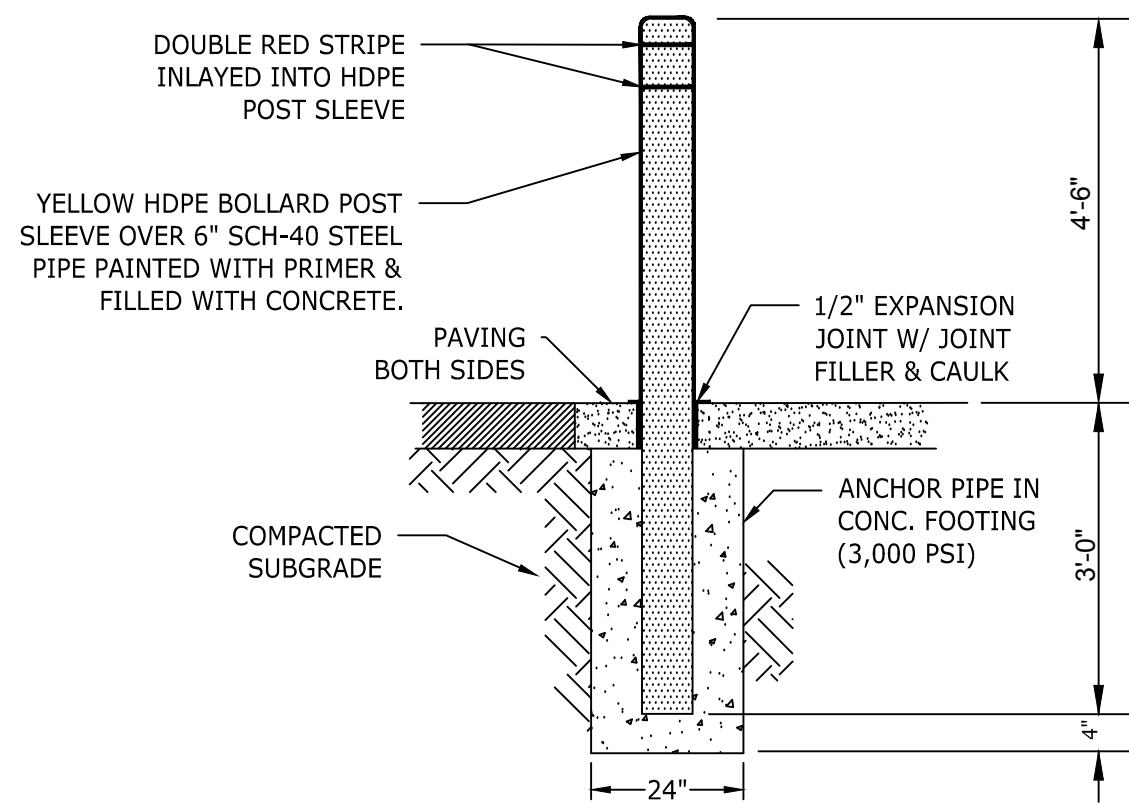
Diagram illustrating the cross-section of a gutter system with various components and dimensions:

- 24' OR AS NOTED ON PLAN**: Dimension for the main gutter length.
- 9' TO FC**: Dimension from the gutter face to the curb face (FC).
- 9' TYP.**: Typical dimension for the gutter depth.
- 4" WIDE WHITE THERMOPLASTIC STRIPING (TYP.)**: Dimension for the white striping on the gutter.
- 18" TO FC (TYP.) SEE PLANS**: Dimension for the gutter face to the curb face (FC).
- 18" TO EP (TYP.) SEE PLANS**: Dimension for the gutter face to the edge of pavement (EP).
- EDGE OF PAVEMENT (EP)**: Dimension for the edge of the pavement.
- FACE OF CURB (FC)**: Dimension for the curb face.
- STRIPING TO EDGE OF ASPHALT NO STRIPING IN GUTTER PAN (TYP.)**: Dimension for the striping to the edge of the asphalt.

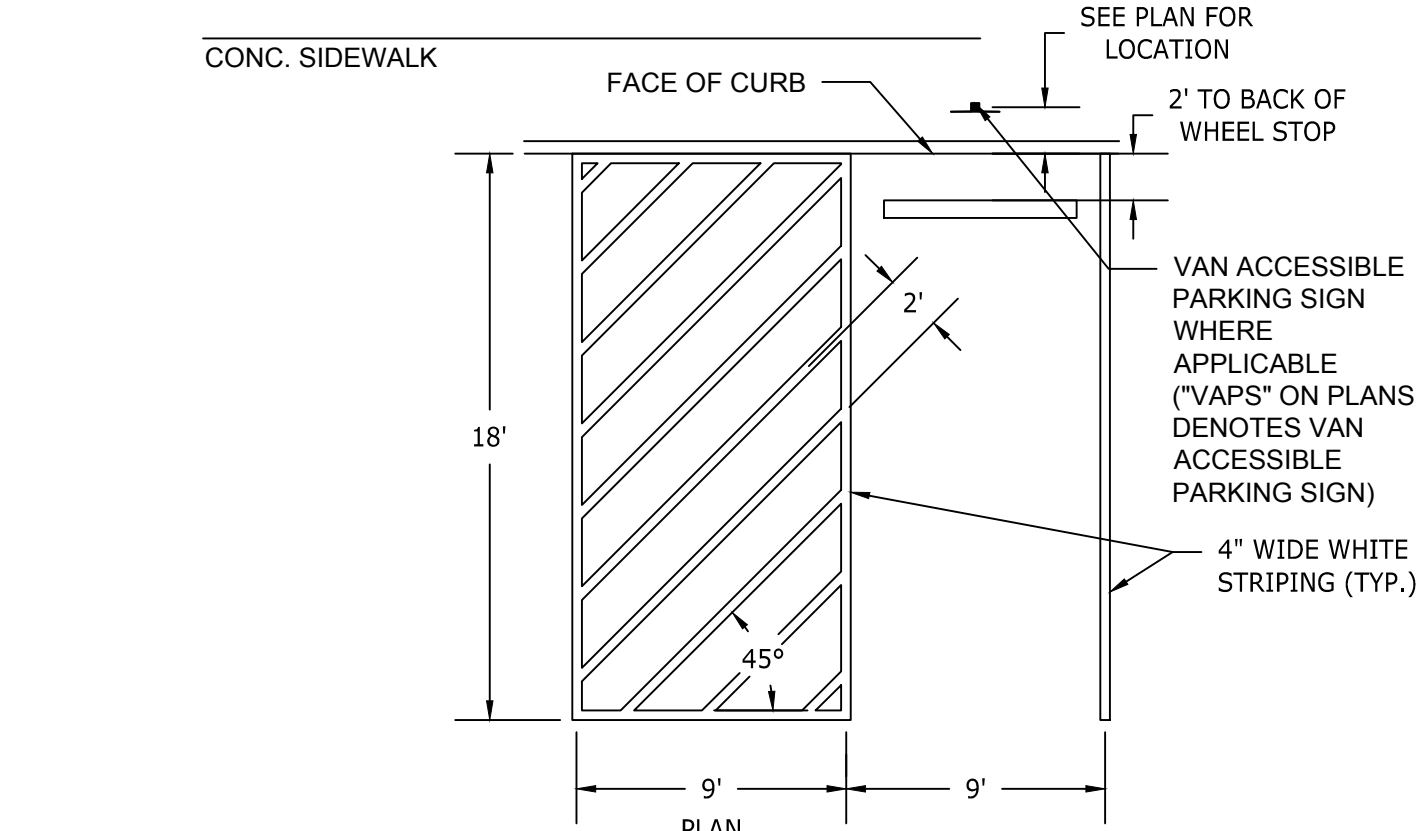
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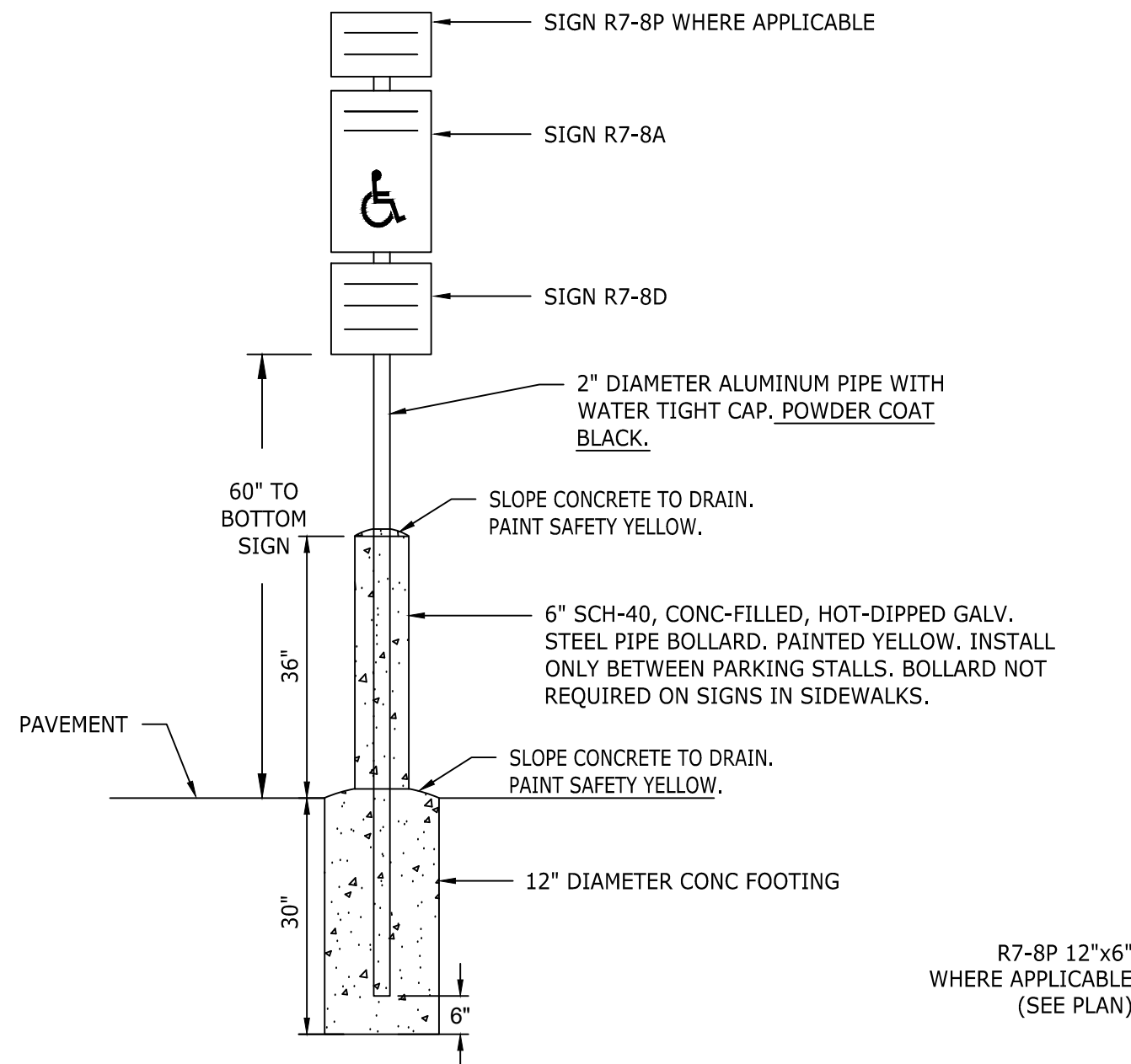


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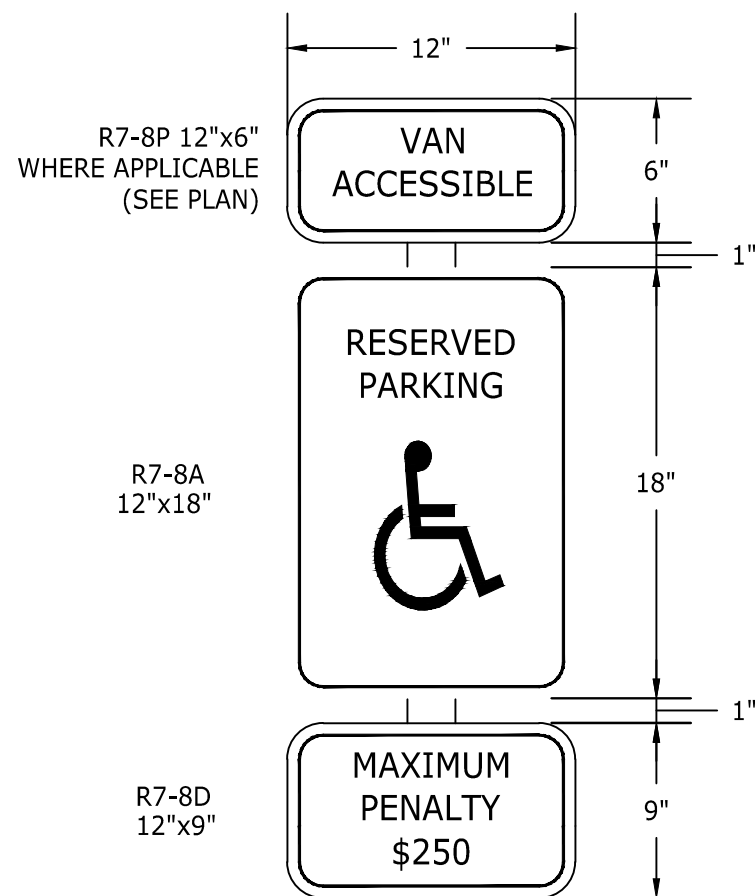
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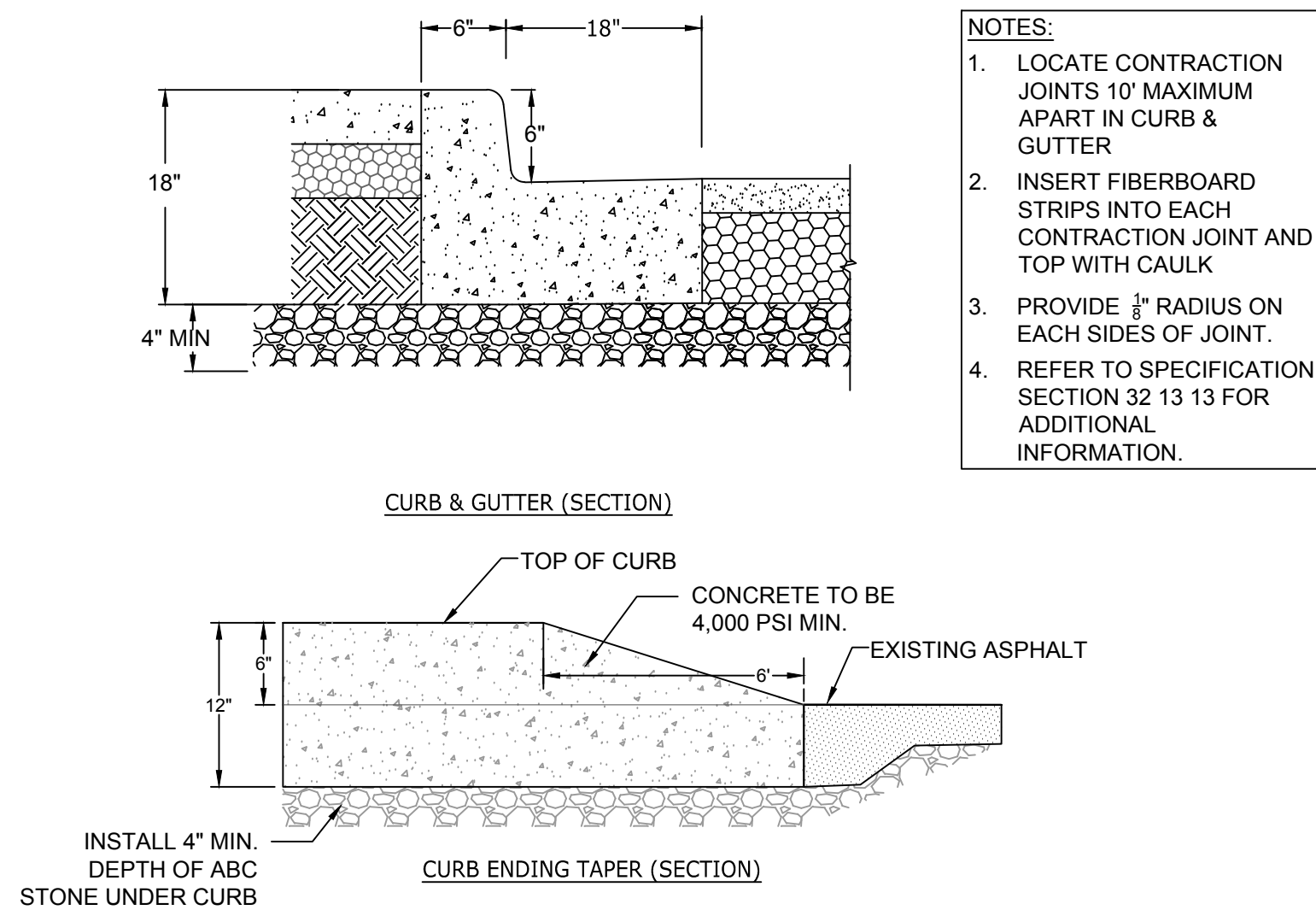
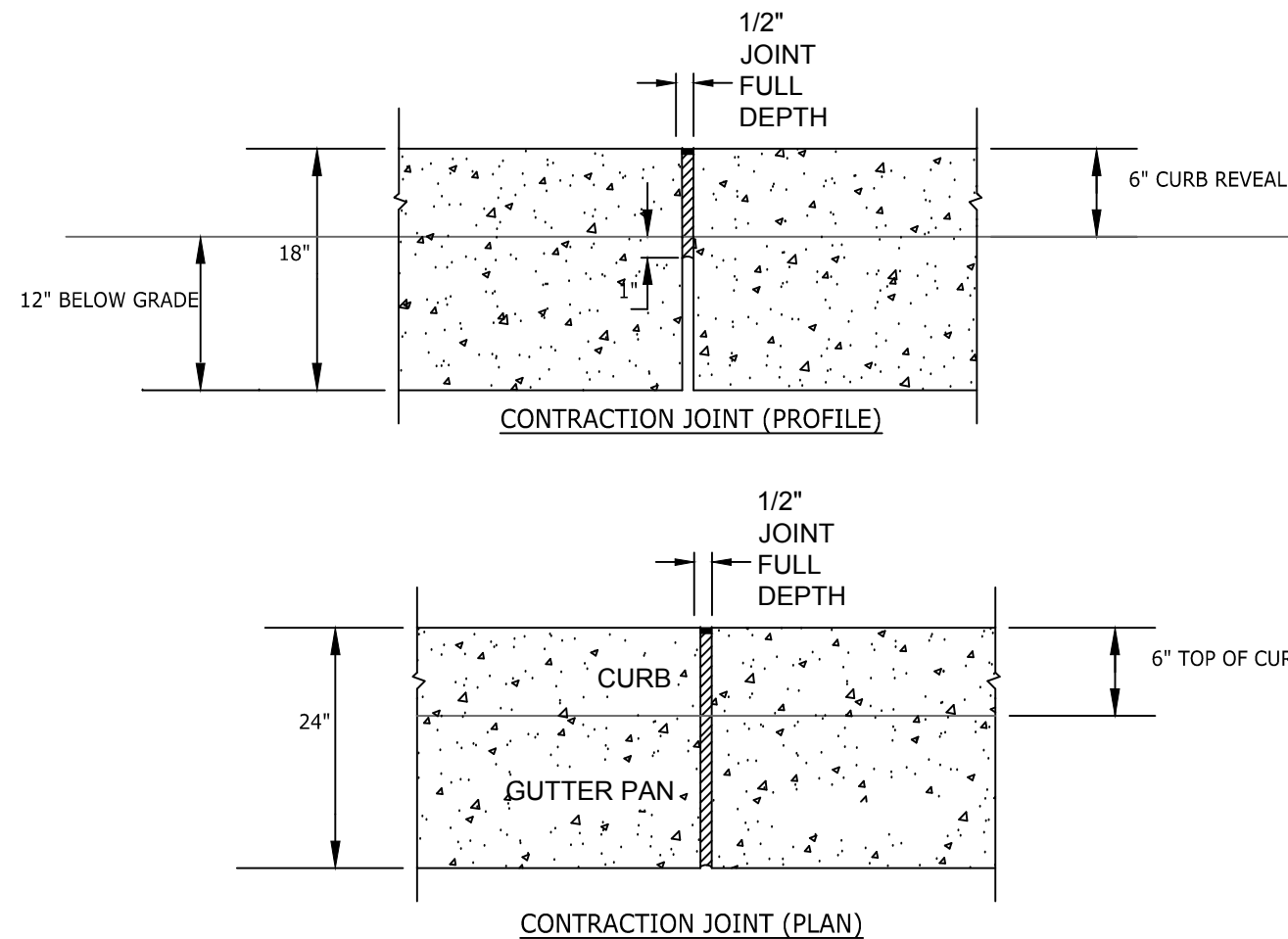


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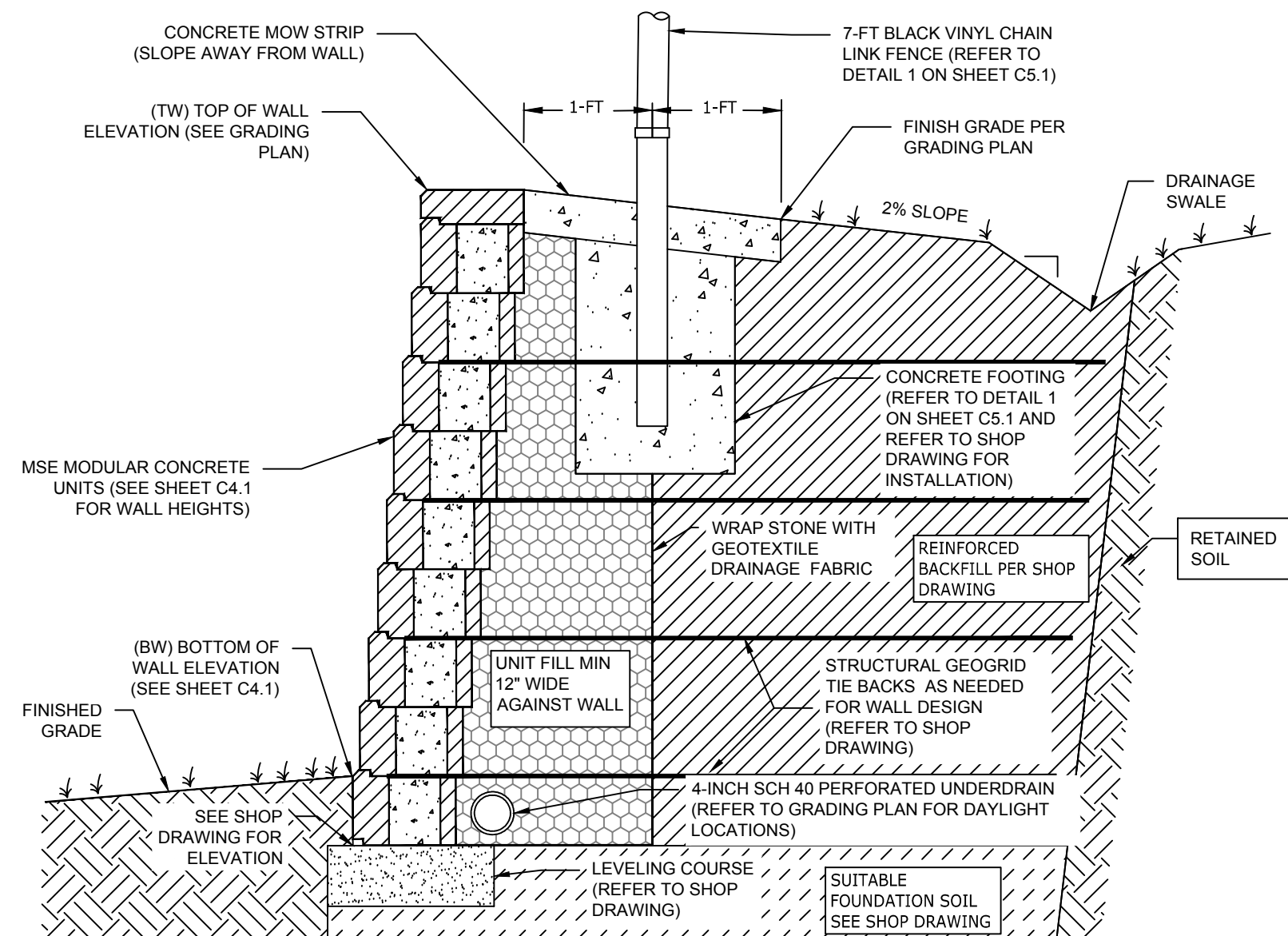
1. MOUNTING HEIGHT TO BOTTOM OF SIGN SHALL BE 60" FROM BOTTOM OF SIGN TO PAVEMENT OR 84" IN PEDESTRIAN AREAS UNLESS OTHERWISE NOTED.
2. ALL SIGNAGE SHALL HAVE HIGH INTENSITY PRISMATIC SHEETING. SIGNS SHALL BE FABRICATED FROM ALUMINUM ALLOY SHEETS.
3. ALL MOUNTING HARDWARE SHALL BE GALVANIZED.
4. "VAPS" ON PLANS DENOTES VAN ACCESSIBLE PARKING SIGN. INSTALL R7-8A, R7-8D, & R7-8P.
5. "APS" ON PLANS DENOTES ACCESSIBLE PARKING SIGN. INSTALL R7-8A & R7-8D ONLY.



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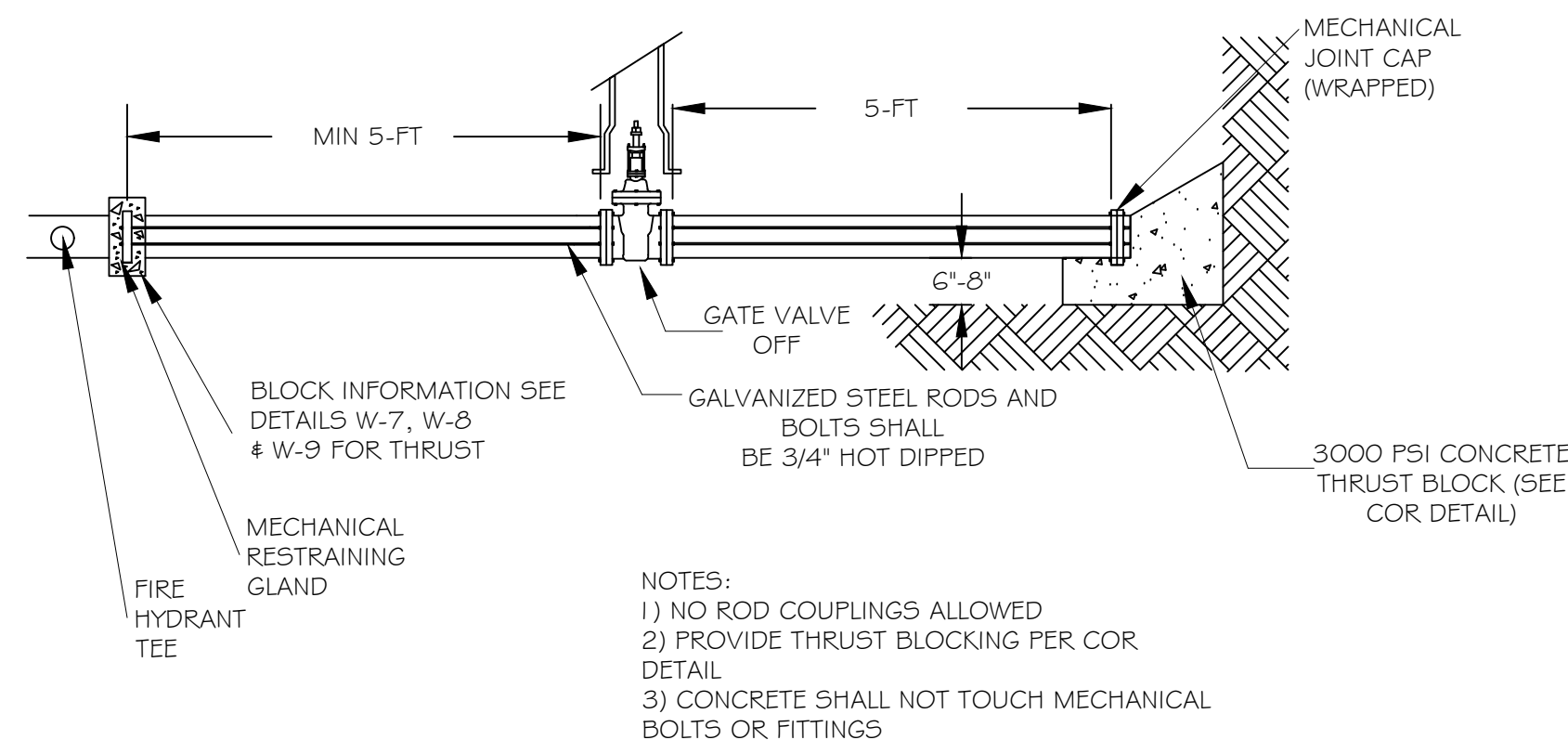
N.T.S.



NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHOP DRAWING OF WALL DESIGN, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER (REGISTERED IN NORTH CAROLINA), FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR MUST BE CERTIFIED TO BUILD THE WALL OR HAVE LICENSE PROFESSIONAL ENGINEER CERTIFY CONSTRUCTION.
2. FURNISH AND INSTALL ALL MATERIALS IN ACCORDANCE WITH THE SIGNED AND SEALED RETAINING WALL SHOP DRAWING.
3. MODULAR CONCRETE WALL UNITS SHALL CONCRETE WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000-PSI. UNITS SHALL HAVE STRAIGHT, SPLITFACE EXTERIOR FACE. PROVIDE CAP UNITS WITH SMOOTH TOP SURFACES. BASIS OF DESIGN BLOCK IS ANCHOR DIAMOND PRO.
4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE MATERIALS IN THE REINFORCED ZONE FOR THE WALL CONSTRUCTION IN ACCORDANCE WITH THE SHOP DRAWINGS. ANY BORROW OR IMPORTED FILL MATERIAL REQUIRED FOR PROPER BACKFILLING OF THE WALL SHALL BE PROVIDED BY THE CONTRACTOR IN THE BASE BID CONTRACT. (REFER TO THE ATTACHED GEOTECHNICAL REPORT FOR EXISTING ONSITE SOILS)
5. A. THE FOUNDATION SOIL (BELOW THE WALL AND GEORGIT TIE BACKS) MUST MEET THE REQUIREMENTS IN THE SHOP DRAWING. THESE SOILS WILL BE TESTED BY THE MATERIAL TESTING COMPANY HIRED BY THE OWNER; SHOULD THE SITE SOILS NOT MEET THE REQUIREMENTS CONSULT WITH THE WALL DESIGNER AND CIVIL ENGINEER PRIOR TO CONSTRUCTION.
B. PROVIDE A DESIGN THAT COMBINES WITH THE FOUNDATION SOILS (REFER TO ATTACHED GEOTECHNICAL REPORT).
6. ACCOUNT FOR PREMIUM COLOR BLOCK IN THE BID. BASIS OF DESIGN COLOR IS ANCHOR DIAMOND PRO PLANTATION. REFER TO SPECIFICATION SECTION 32 32 23 "SEGMENTAL RETAINING WALL SYSTEM" AND GEOTECHNICAL ENGINEERING REPORTS BY TERRACON, DATED DECEMBER 11, 2020 AND ADDENDUMS DATED JANUARY 3, 2021 AND JANUARY 15, 2021 FOR ADDITIONAL INFORMATION, INCLUDING OTHER ACCEPTABLE MSE WALL SYSTEMS BASED ON OWNER APPROVAL.

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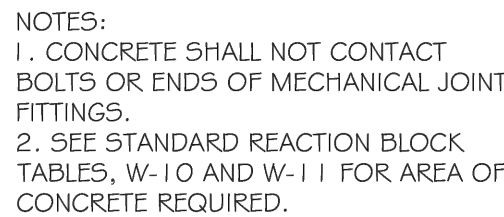


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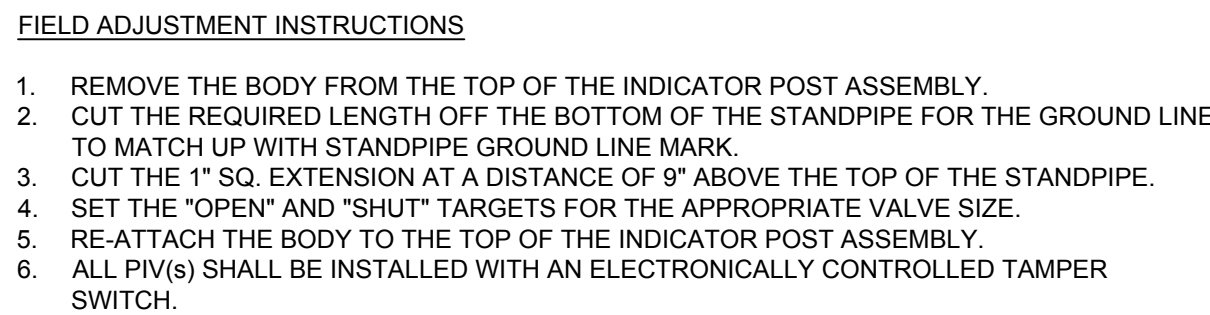
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SHEET

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DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-14	Y.C.A.	12-31-91	RRH	3-31-00
	D.W.C.	9-7-99	J.P.S.	11-1-10



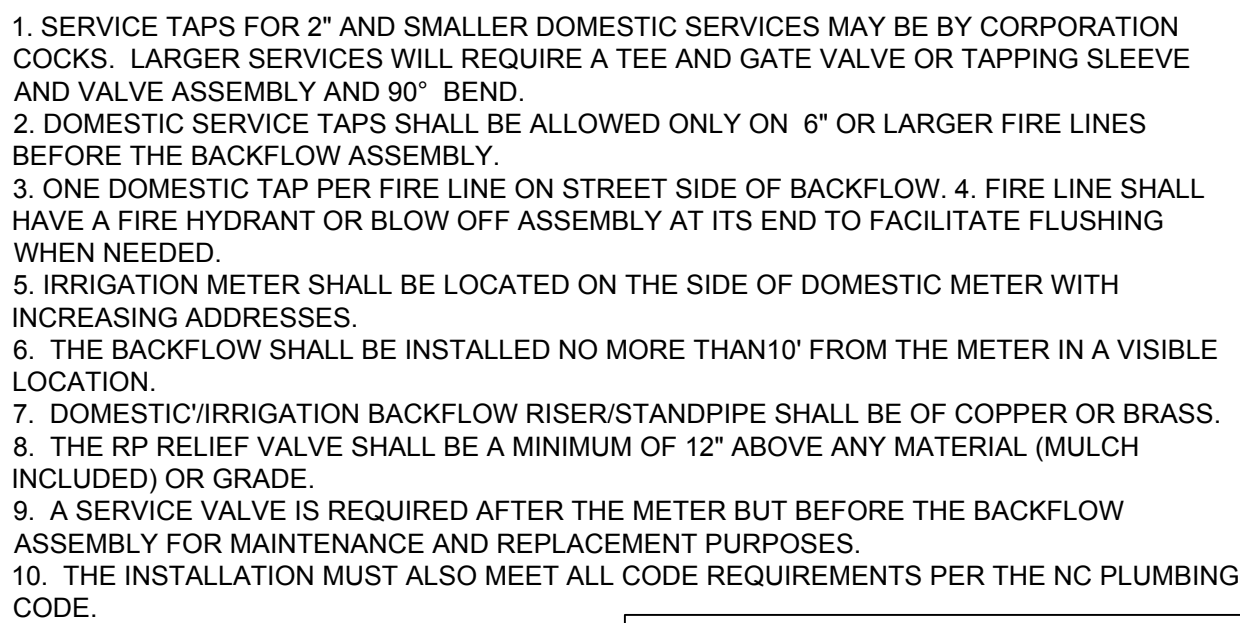
REINFORCING REQUIREMENTS						
I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6" - 36"	#5	2'-2" + O.D. PIPE	1.043 LBS/FT	1'-1"	1.1 LBS. EACH	X-24, Y-12
48" & greater	#6	3'-0" + O.D. PIPE	1.502 LBS/FT	1'-3"	1.9 LBS. EACH	X-24, Y-12

NOTES:

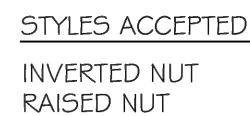
1. SEE STANDARD DETAIL W-9 FOR THRUST BLOCK LOCATIONS.
2. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
3. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
4. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD DETAIL W-3.
5. BACKFILL TAMPED IN 6" LIFTS PER STANDARD DETAIL W-3.
6. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

	CITY OF RALEIGH
	DEPARTMENT OF PUBLIC UTILITIES
	THRUST BLOCKING DESIGN DATA FOR WATER MAINS

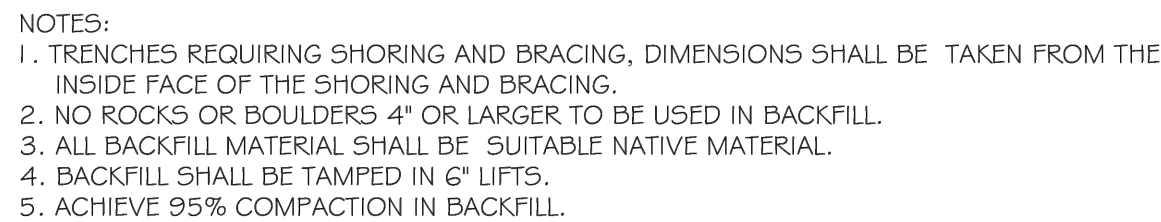
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	D.H.L.	6-18-08		



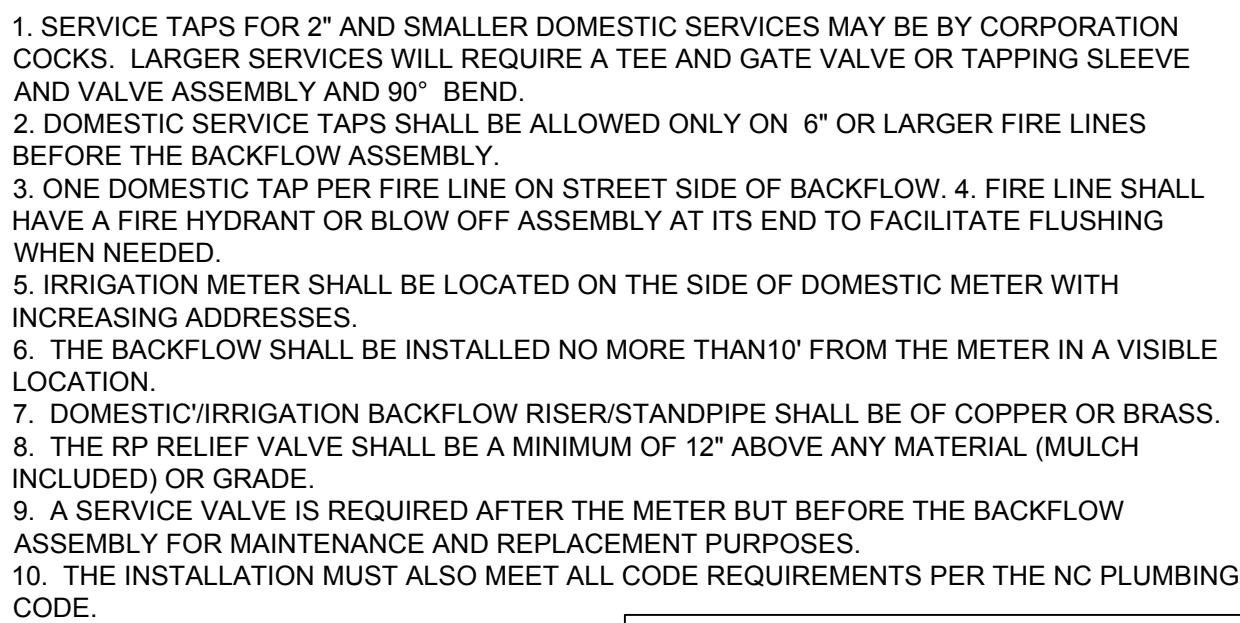
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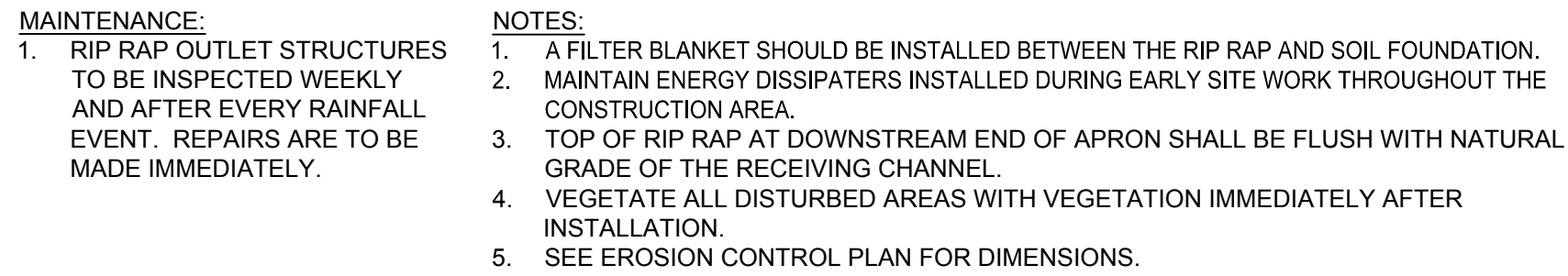
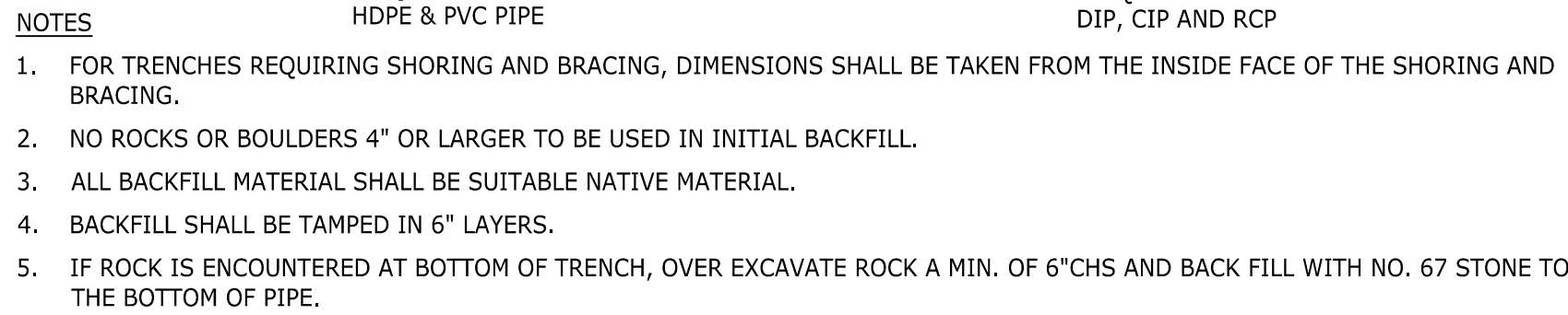
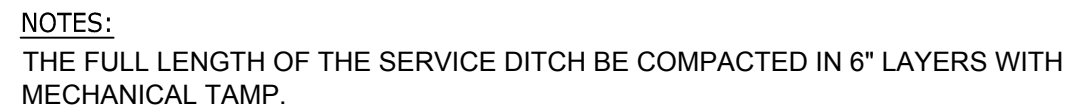
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	D.W.C.	3-27-98		



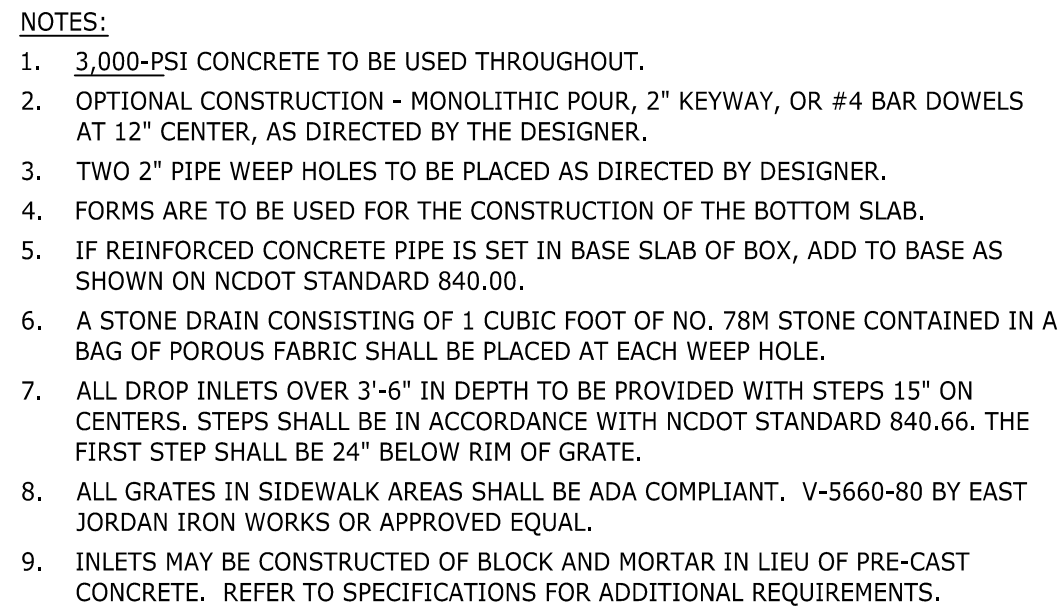
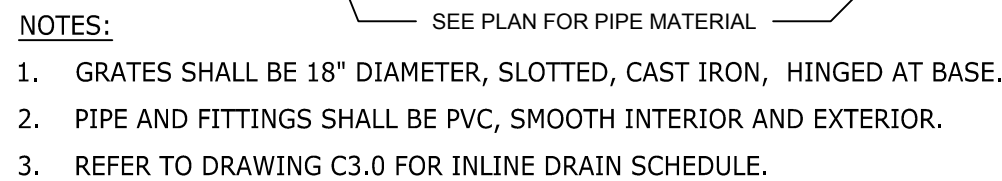
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-3	D.W.C.	9-3-99	ABB	2-15-05
	RRH	3-31-00	JP S	10-29-10



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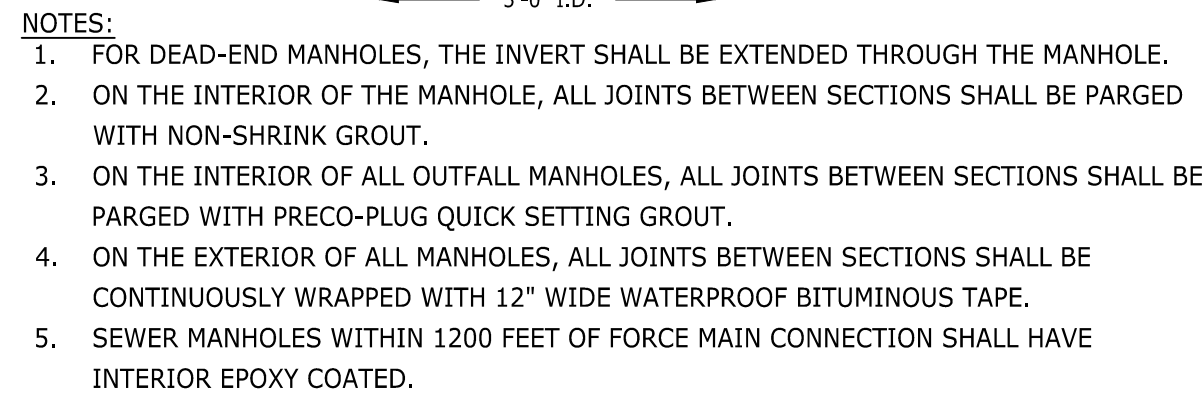
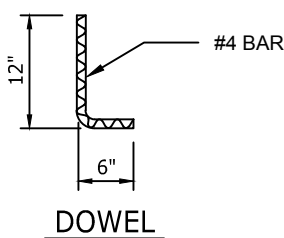


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CURB INLET WITH "H" VALUES (HEIGHT) LESS THAN MINIMUM SHOWN IN CHART SHALL HAVE SHOP DRAWINGS DESIGNED AND SEALED BY PROFESSIONAL ENGINEER MEETING SPEC SECTION 33 40 00 REQUIREMENTS. THESE STRUCTURES CAN BE CONCRETE AND/OR MASONRY DESIGN

DIMENSIONS FOR CHANNELS			
NO.	SIZE	LENGTH	TOTAL LIN. FT.
2	3"x4.1"	4'-0"	8'-0"
2	3"x4.1"	2'-6"	5'-0"



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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
RALEIGH WATER REVIEW OFFICER _____

SHEET NO.

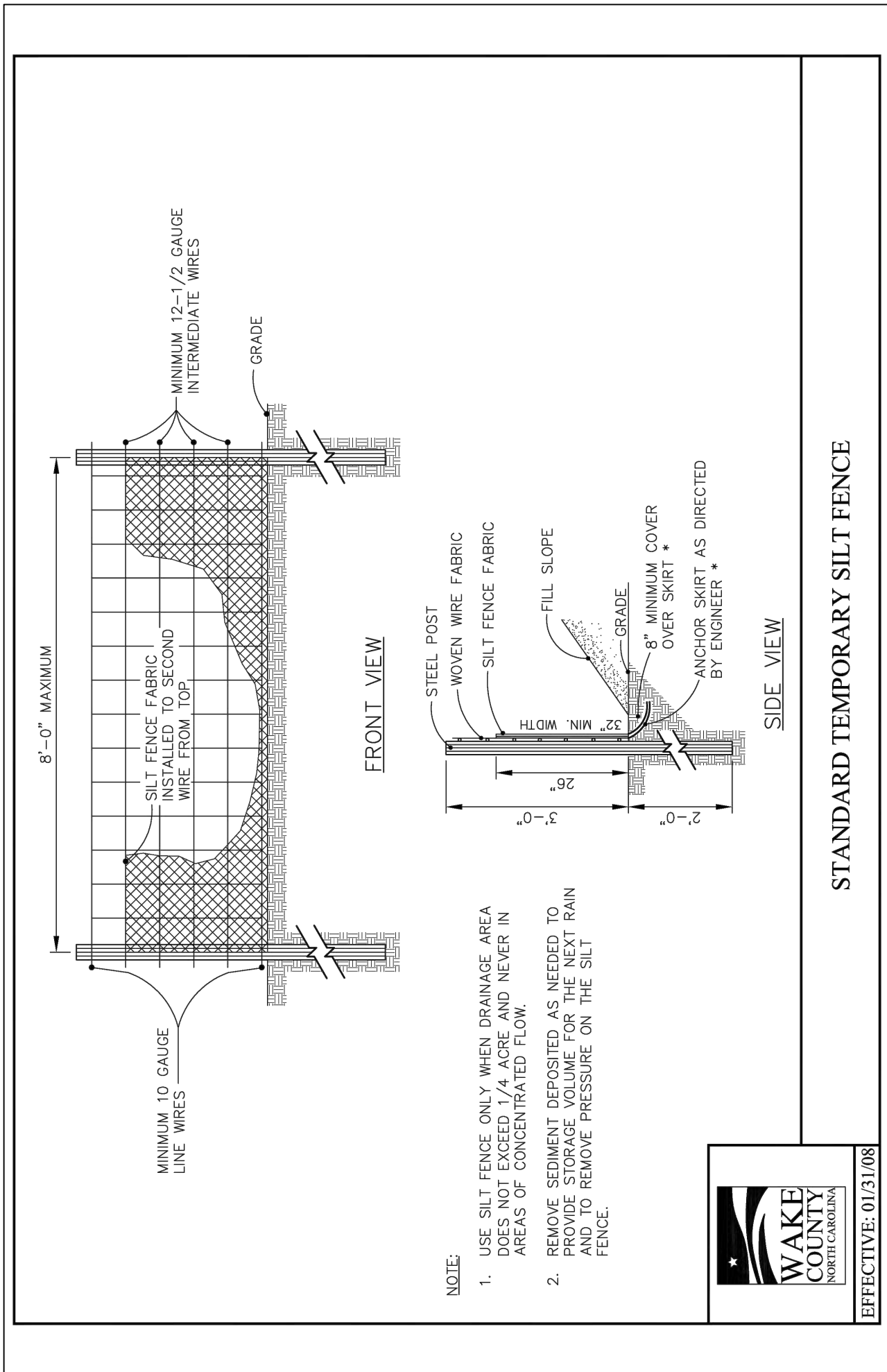
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④

TEMPORARY SEDIMENT FENCE

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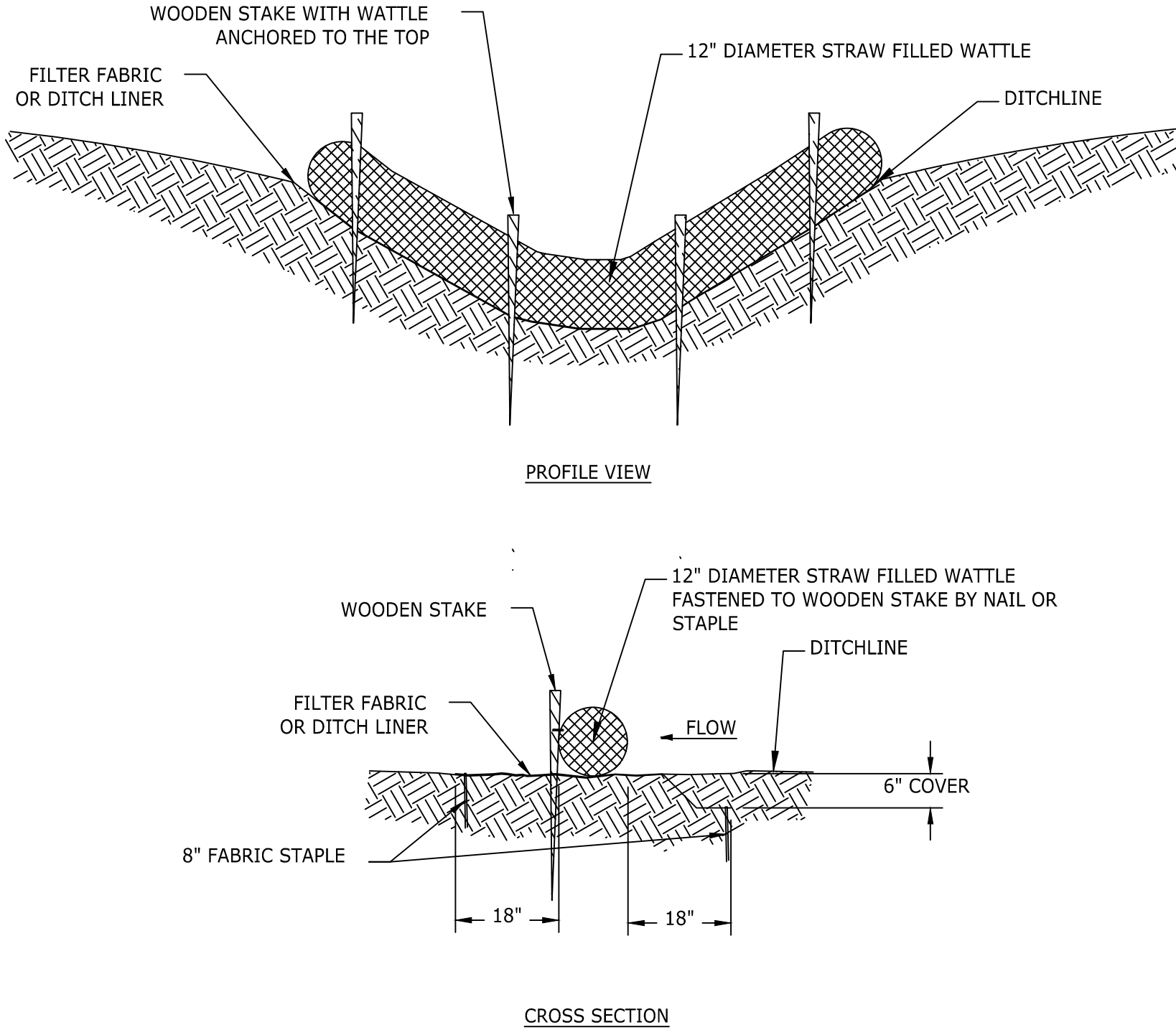


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CHECK DAM

N.T.S.

- NOTES:**
- WATTLES SHALL BE FILLED WITH STRAW OR OTHER APPROVED MATERIAL.
 - SPACING FOR WATTLES SHALL BE AS SHOWN ON EROSION CONTROL PLAN.
 - STAKE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
 - THE SOCK SHALL BE PRODUCED FROM A 5 MIL THICK CONTINUOUS POLYPROPYLENE, WOVEN INTO A TUBULAR MESH NETTING MATERIAL, WITH OPENINGS IN THE KNITTED MESH OF 1/8" TO 3/8" OPENINGS.
 - HARDWOOD 2"x2" STAKES SHALL BE DRIVEN THROUGH CENTER OF COMPOST SOCK AT 4' O.C. MAXIMUM SPACING ANGLED UP SLOPE.
- MAINTENANCE NOTES:**
- INSPECT COMPOST SOCKS WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT (1/2 INCH OR GREATER).
 - REMOVE ACCUMULATED SEDIMENT AND ANY DEBRIS. THE COMPOST SOCK MUST BE REPLACED IF CLOGGED OR TORN.
 - IF PONDING BECOMES EXCESSIVE, THE SOCK MAY NEED TO BE REPLACED WITH A LARGER DIAMETER OR A DIFFERENT MEASURE.
 - THE SOCK NEEDS TO BE REINSTALLED IF UNDERMINED OR DISLODGED.
 - THE COMPOST SOCK SHALL BE INSPECTED UNTIL LAND DISTURBANCE IS COMPLETE AND THE AREA ABOVE THE MEASURE HAS BEEN PERMANENTLY STABILIZED.



⑤

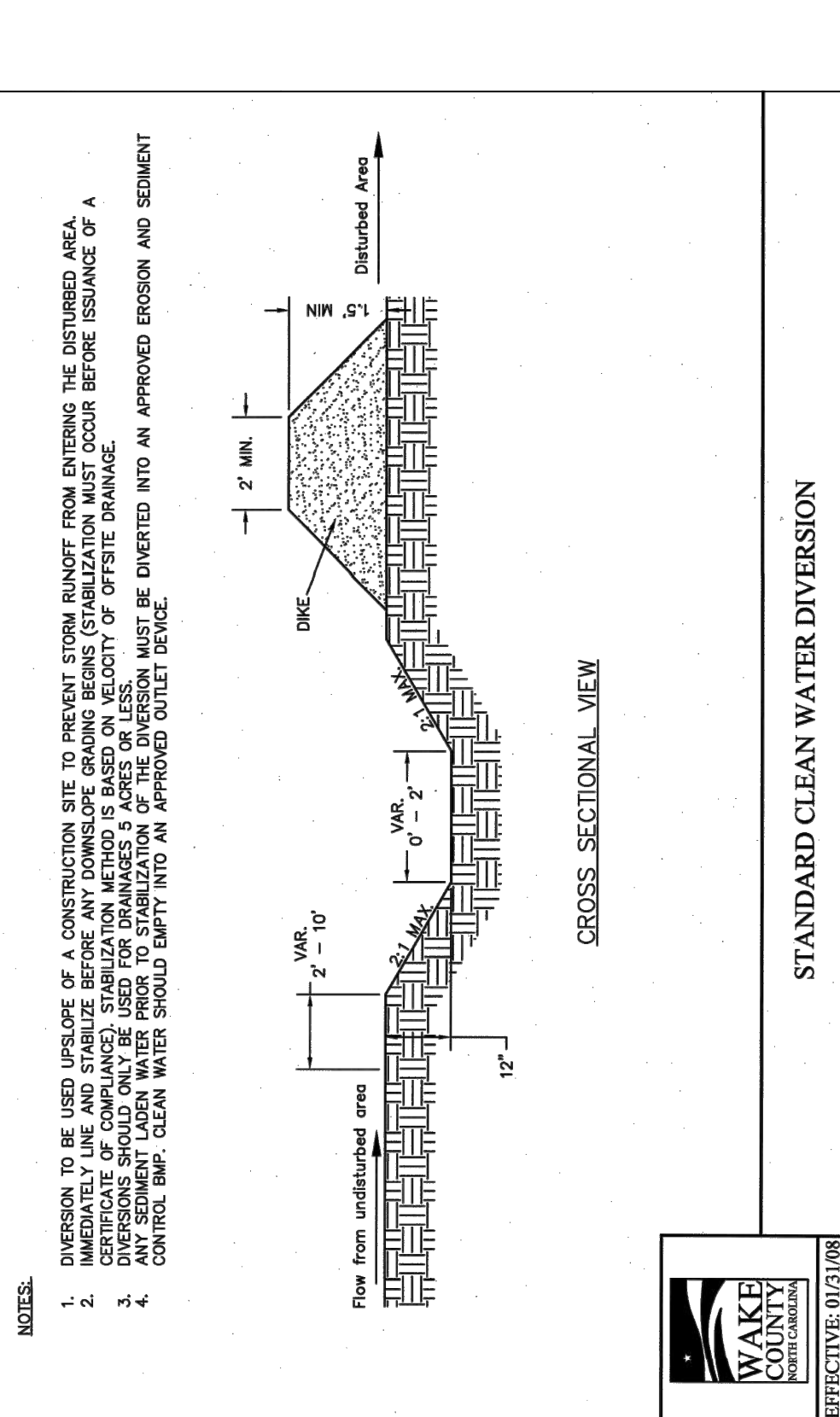
TEMPORARY CLEAN WATER DIVERSION DITCH

N.T.S.

DITCH	TOTAL FLOW (CFS)	SLOPE (%)	BOTTOM WIDTH (FT)	RIGHT SLOPE (H:V)	LEFT SLOPE (H:V)	FLOW DEPTH (FT)	TEMPORARY LINER	PERMANENT LINER
A	0.7	2.2	0	2:1	2:1	0.41	CURLED MAT	N/A
B	2.8	2.0	0	2:1	2:1	0.70	CURLED MAT	N/A

*SWALES HAVE BEEN DESIGNED USING RAINFALL INTENSITY FOR THE 10-YEAR STORM ACCORDING TO THE NCDENR EROSION CONTROL MANUAL.

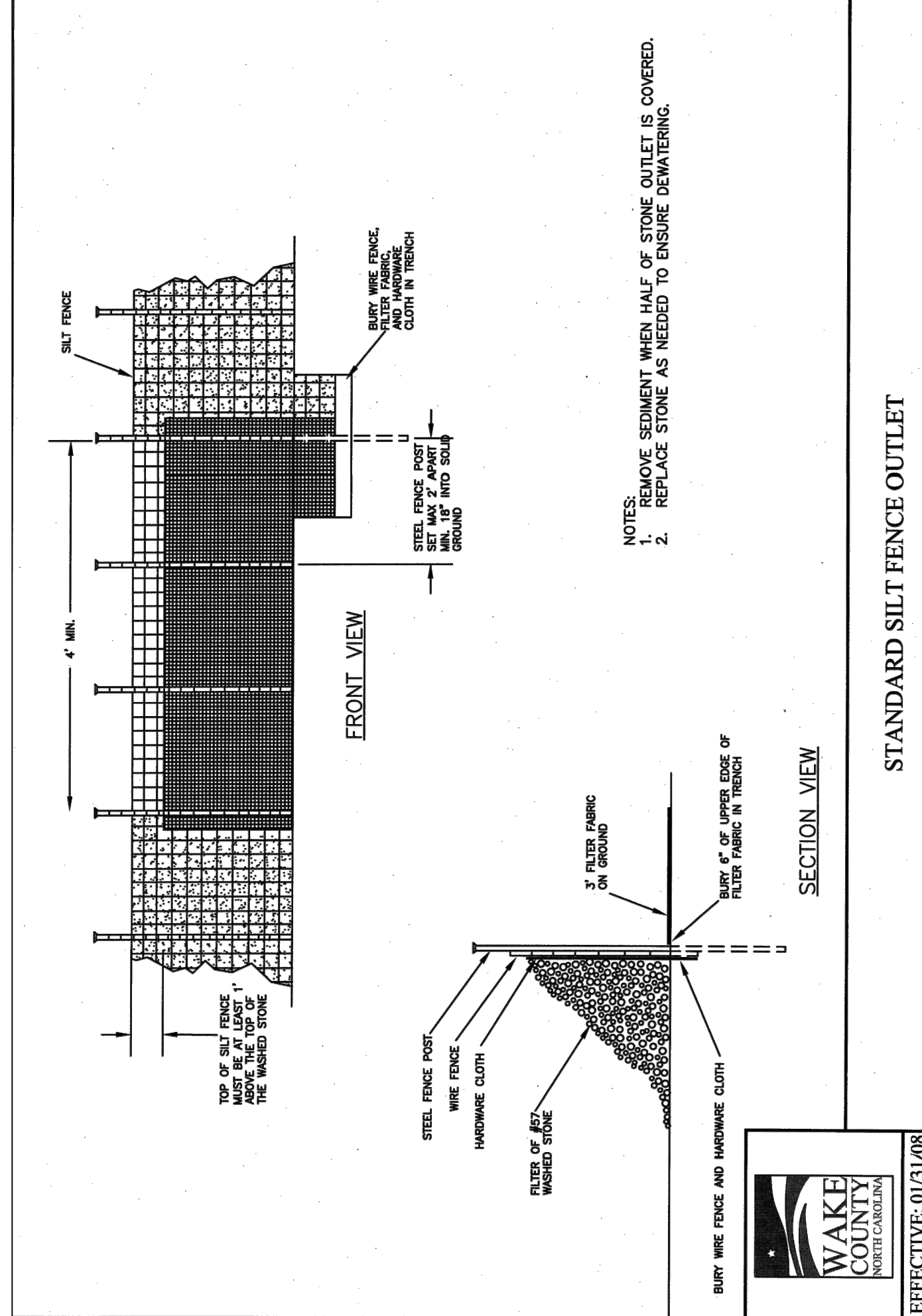
**NORTH AMERICAN GREEN MATERIAL OR APPROVED EQUIVALENT



②

REINFORCED SILT FENCE OUTLET

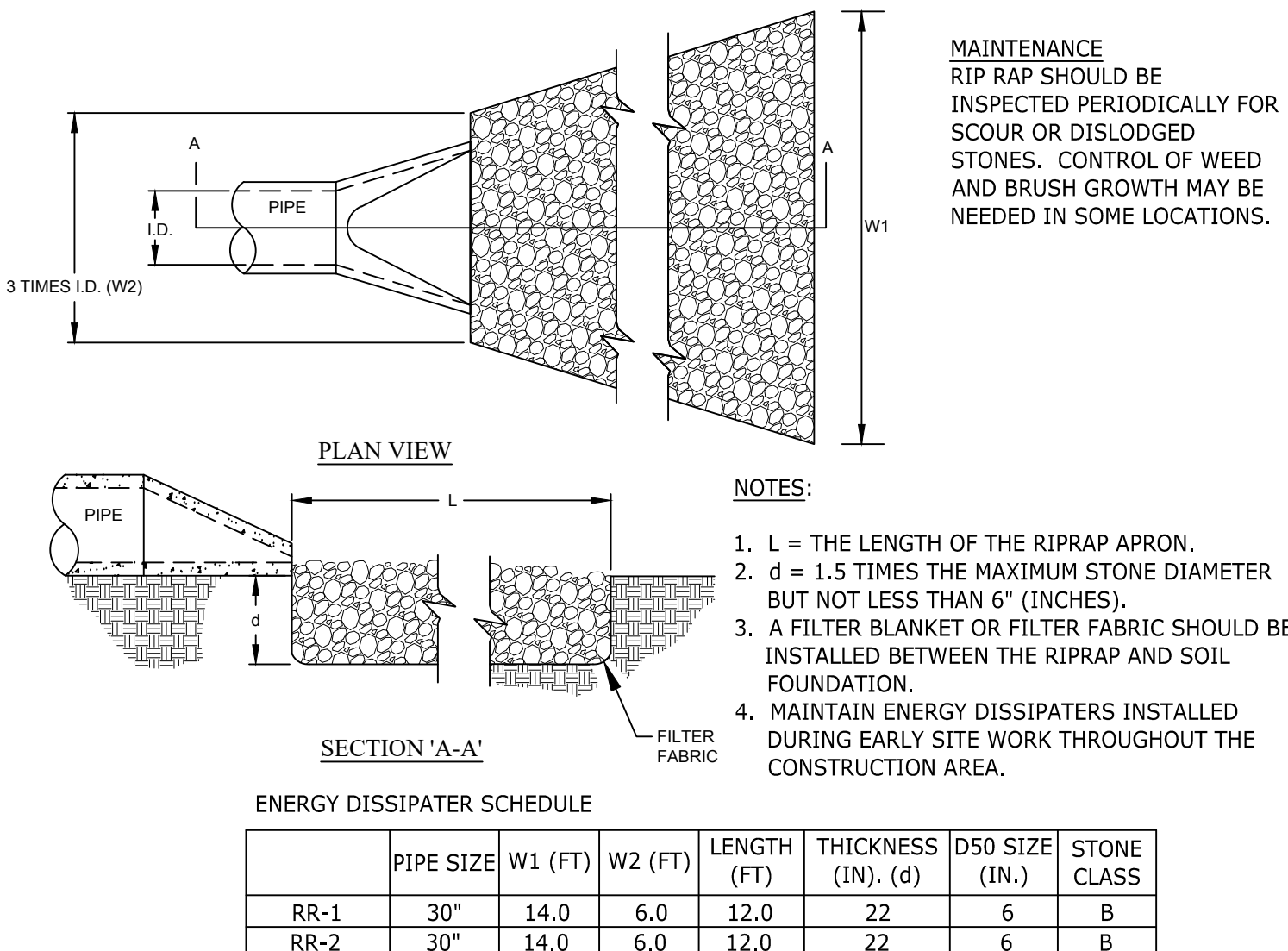
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RIP RAP OUTLET PROTECTION

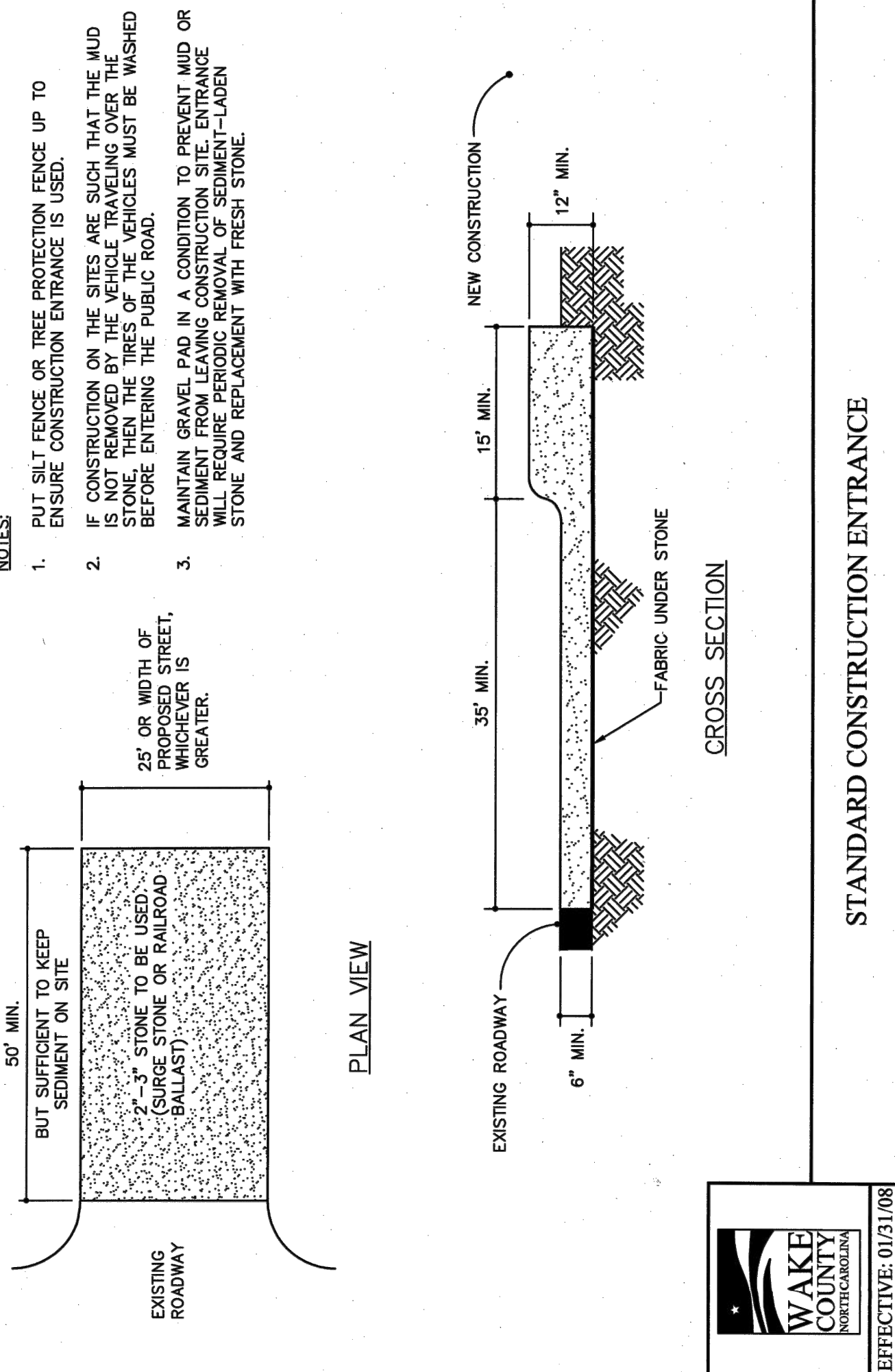
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GRAVEL CONSTRUCTION ENTRANCE

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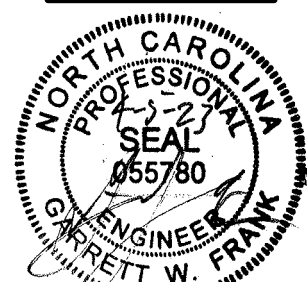


MAINTENANCE

MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH TWO-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

PRELIMINARY PLANS

FOR REVIEW ONLY



DO NOT USE FOR CONSTRUCTION

THIS DRAWING PREPARED AT THE
RALEIGH OFFICE
5410 Trinity Road, Suite 102 | Raleigh, NC 27607
TEL 919.866-4951 FAX 919.833.8124 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION

DATE

04/05/2023

DRAWN BY
J. HAYES

DESIGNED BY
G. FRANK

CHECKED BY
G. FRANK

SCALE
AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE DETAILS

JOB NO.
54832

SHEET NO.
C6.6

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1

SEDIMENT BASIN WITH STANDARD SKIMMER

N.T.S.

TEMPORARY SEED SCHEDULE (Oct 1 - May 1)

GRASS SPECIES BLEND	PLANTING RATE	MIN. % PURE SEED	MAX. % WEED SEED
ANNUAL RYE GRASS	50-LBS PER 1-ACRE	85%	1%
SOIL AMENDMENTS: FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,00LB/ACRE GROUND AGRICULTURAL LIMESTONE IN SANDY SOILS OR 6,000LB/ACRE IN CLAY SOILS, AND 1,000 LB/ACRE 10-10-10 FERTILIZER.			
MULCH: APPLY 4,000 lb/ACRE STRAW. THE GROUND SHOULD BE COMPLETELY COVERED WITH NO BARE SPOT LARGER THAN A QUARTER, THEN TACKED WITH EMULSIFIED ASPHALT. EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 400 GALLONS PER ACRE.			
MAINTENANCE: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.			

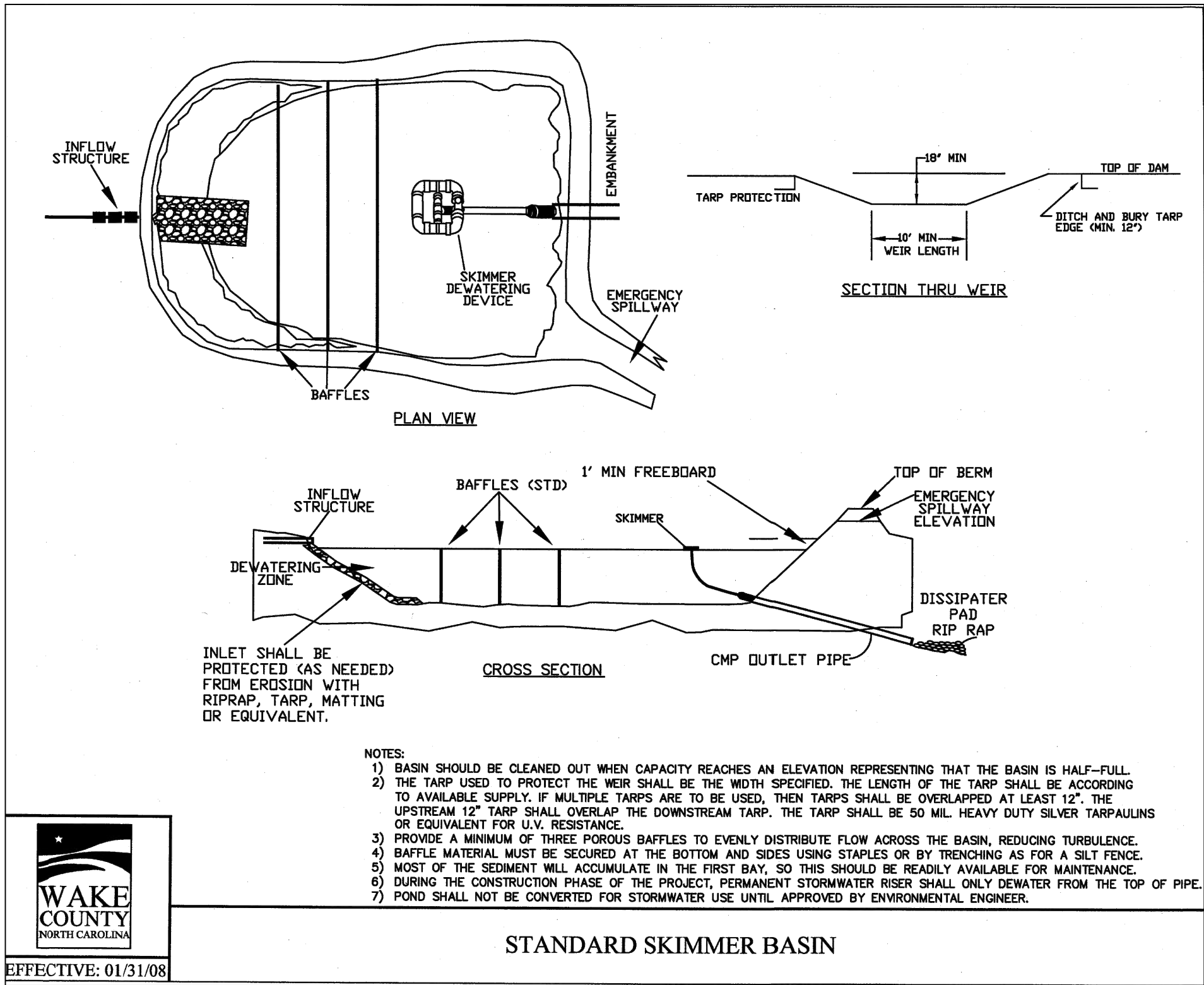
TEMPORARY SEED SCHEDULE (May 1 - Sept 30)

GRASS SPECIES BLEND	PLANTING RATE	MIN. % PURE SEED	MAX. % WEED SEED
GERMAN MILLET	30-LBS PER 1-ACRE	85%	1%
SOIL AMENDMENTS: FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 4,00LB/ACRE GROUND AGRICULTURAL LIMESTONE IN SANDY SOILS OR 6,000LB/ACRE IN CLAY SOILS, AND 1,000 LB/ACRE 10-10-10 FERTILIZER.			
MULCH: APPLY 4,000 lb/ACRE STRAW. THE GROUND SHOULD BE COMPLETELY COVERED WITH NO BARE SPOT LARGER THAN A QUARTER, THEN TACKED WITH EMULSIFIED ASPHALT. EMULSIFIED ASPHALT SHALL BE APPLIED AT A RATE OF 400 GALLONS PER ACRE.			
MAINTENANCE: REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.			

PERMANENT SEED SCHEDULE (MAY1 - SEPT 1)

GRASS SPECIES BLEND	PLANTING RATE	MIN. % PURE SEED	MAX. % WEED SEED
CELEBRATION BERMUDA	200-LBS PER 1-ACRE	98%	1%

- NOTES:
- PERMANENT SEEDING FOR THIS PROJECT SHALL OCCUR BETWEEN MAY - AUGUST 1. ADJUSTED AS NECESSARY FOR ADEQUATE GROUND TEMPERATURES. GROUND TEMPERATURES SHALL BE IN THE RANGE OF 60-68 DEGREES FOR GERMINATION. REFER TO SPECIFICATION SECTION 329200.
 - 80% OF PERMANENT SEEDING MUST BE ESTABLISHED PRIOR TO GRADING PERMIT CLOSEOUT



BASIN NUMBER	DRAIN AREA(ACRES)	DISTB. AREA(ACRES)	PEAK FLOW(CFS)	BASIN SURFACE AREA(SF)	REQUIRED SURFACE AREA(SF)	BASIN VOLUME (CF)	REQUIRED BASIN VOLUME (CF)	SPILLWAY WIDTH (FT)	SKIMMER SIZE (IN.)	SKIMMER ORIFICE DIAMETER (IN.)	TOP OF BERM ELEV.	EMERGENCY SPILLWAY ELEV.	BOTTOM OF BASIN ELEV.	SIDE SLOPES	DEWATERING TIME (DAYS)
A	3.39	4.70	12.98	5,869	4,873	9,919	9,763	N/A	1.5	1.5	378	377	373.5	2:1	4.40

BASIN SIDES AND WEIR SHALL HAVE MAXIMUM SLOPES OF 2:1 OR FLATTER. DIMENSIONS SHOWN ARE AT WEIR ELEVATION OF BASIN VOLUMES PROVIDED ARE BASED ON AVAILABLE VOLUME AT THE PRINCIPAL SPILLWAY

MAINTENANCE NOTES:

INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.

REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM. IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.

IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.

CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.

FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

CONSTRUCTION SEQUENCE

- CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED.
- ENSURE THAT FILL MATERIAL FOR THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER, AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVER FILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
- SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
- PLACE THE BARREL (TYPICALLY 4-INCH SCHEDULE 40 PVC PIPE) ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
- ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURERS INSTRUCTIONS, OR AS DESIGNED.
- LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.
- EARTHEN SPILLWAYS--INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED, OTHERWISE WATER CAN GET UNDER THE FABRIC; IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS. (ADAPTED FROM "A MANUAL FOR DESIGNING, INSTALLING AND MAINTAINING SKIMMER SEDIMENT BASINS," FEBRUARY, 1999. J. W. FAIRCLOTH & SON.).
- INLETS--DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT- LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY (REFERENCES: RUNOFF CONTROL MEASURES AND OUTLET PROTECTION).
- EROSION CONTROL--CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION (REFERENCES: SURFACE STABILIZATION).
- INSTALL POROUS BAFFLES AS SPECIFIED IN PRACTICE 6.65
- AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND STABILIZE PROPERLY (REFERENCES: SURFACE STABILIZATION).

2

TEMPORARY/PERMANENT SEEDING

N.T.S.

PRELIMINARY PLANS

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REVISION DESCRIPTION

DATE

DATE

04/05/2023

DRAWN BY

J. HAYES

DESIGNED BY

G. FRANK

CHECKED BY

G. FRANK

SCALE

AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

JONES DAIRY STORAGE FACILITY
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE DETAILS

JOB NO.

54832

SHEET NO.

C6.8

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GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

IMPLEMENTING THE DETAILS AND SPECIFICATIONS ON THIS PLAN SHEET WILL RESULT IN THE CONSTRUCTION ACTIVITY BEING CONSIDERED COMPLIANT WITH THE GROUND STABILIZATION AND MATERIALS HANDLING SECTIONS OF THE NCG01 CONSTRUCTION GENERAL PERMIT (SECTIONS E AND F, RESPECTIVELY). THE PERMITTEE SHALL COMPLY WITH THE EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE DELEGATED AUTHORITY HAVING JURISDICTION. ALL DETAILS AND SPECIFICATIONS SHOWN ON THIS SHEET MAY NOT APPLY DEPENDING ON SITE CONDITIONS AND THE DELEGATED AUTHORITY HAVING JURISDICTION.

SECTION E: GROUND STABILIZATION

REQUIRED GROUND STABILIZATION TIMEFRAMES		
SITE AREA DESCRIPTION	STABILIZE WITHIN THIS MANY CALENDAR DAYS AFTER CEASING LAND DISTURBANCE	TIMEFRAME VARIATIONS
(A) PERIMETER DIKES, SWALES, DITCHES, AND PERIMETER SLOPES	7	NONE
(B) HIGH QUALITY WATER (HQW) ZONES	7	NONE
(C) SLOPES STEEPER THAN 3:1	7	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
(D) SLOPES 3:1 TO 4:1	14	-7 DAYS FOR SLOPES > 50' IN LENGTH AND WITH SLOPES STEEPER THAN 4:1 -7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND HQW ZONES -10 DAYS FOR FALLS LAKE WATERSHED
(E) AREAS WITH SLOPES FLATTER THAN 4:1	14	-7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND HQW ZONES -10 DAYS FOR FALLS LAKE WATERSHED UNLESS THERE IS ZERO SLOPE

NOTE: AFTER THE PERMANENT CESSATION OF CONSTRUCTION ACTIVITIES, ANY AREAS WITH TEMPORARY GROUND STABILIZATION SHALL BE CONVERTED TO PERMANENT GROUND STABILIZATION AS SOON AS PRACTICABLE BUT IN NO CASE LONGER THAN 90 CALENDAR DAYS AFTER THE LAST LAND DISTURBING ACTIVITY. TEMPORARY GROUND STABILIZATION SHALL BE MAINTAINED IN A MANNER TO RENDER THE SURFACE STABLE AGAINST ACCELERATED EROSION UNTIL PERMANENT GROUND STABILIZATION IS ACHIEVED.

GROUND STABILIZATION SPECIFICATION

STABILIZE THE GROUND SUFFICIENTLY SO THAT RAIN WILL NOT DISLODGE THE SOIL. USE ONE OF THE TECHNIQUES IN THE TABLE BELOW:

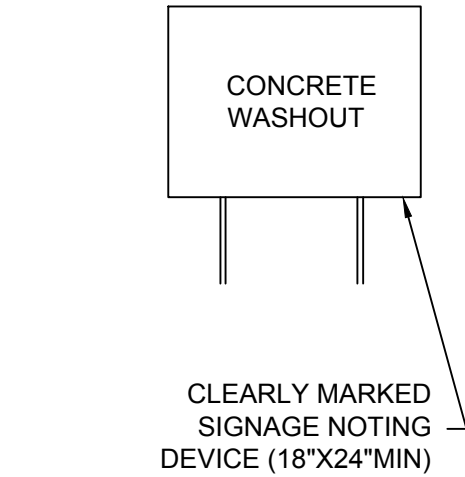
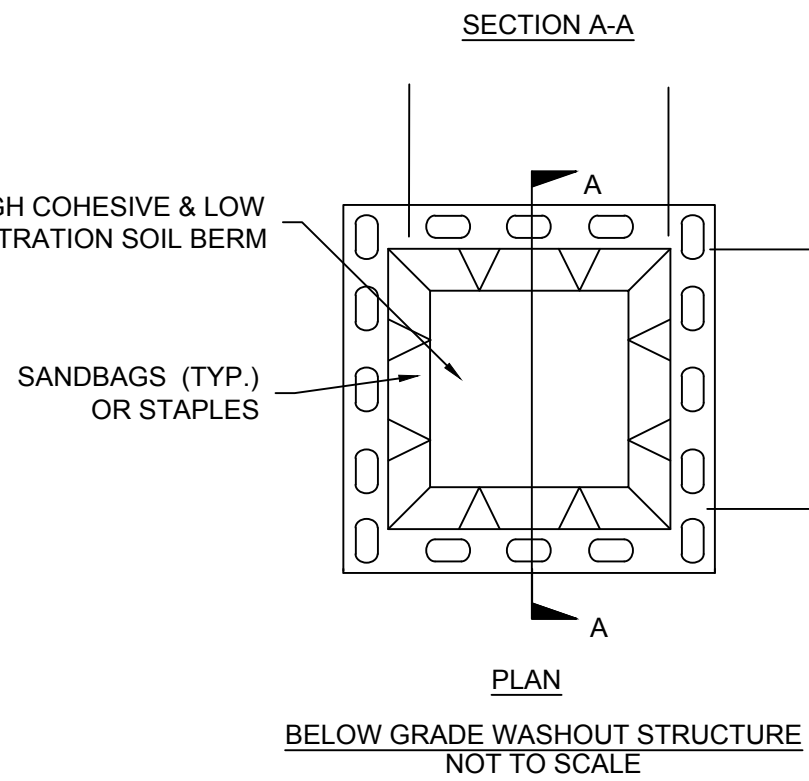
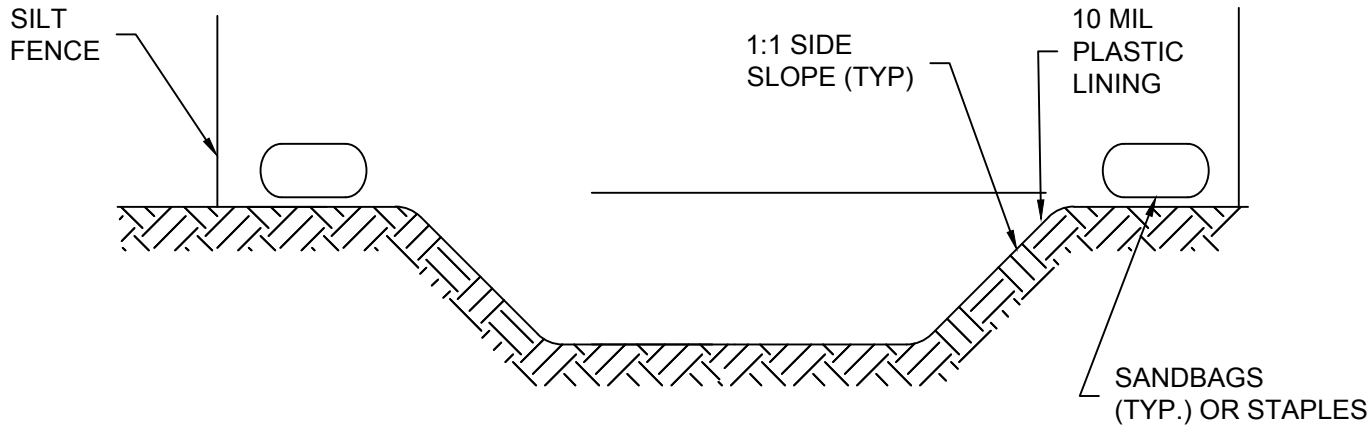
TEMPORARY STABILIZATION	PERMANENT STABILIZATION
<ul style="list-style-type: none">TEMPORARY GRASS SEED COVERED WITH STRAW OR OTHER MULCHES AND TACKIFIERSHYDROSEEDINGROLLED EROSION CONTROL PRODUCTS WITH OR WITHOUT TEMPORARTY GRASS SEEDAPPROPRIATELY APPLIED STRAW OR OTHER MULCHPLASTIC SHEETING	<ul style="list-style-type: none">PERMANENT GRASS SEED COVERED WITH STRAW OR OTHER MULCHES AND TACKIFIERSGEOTEXTILE FABRICS SUCH AS PERMANENT SOIL REINFORCEMENT MATTINGHYDROSEEDINGSHRUBS OR OTHER PERMANENT PLANTINGS COVERED WITH MULCHUNIFORM AND EVENLY DISTRIBUTED GROUND COVER SUFFICIENT TO RESTRAIN EROSIONSTRUCTURAL METHODS SUCH AS CONCRETE, ASPHALT OR RETAINING WALLSROLLED EROSION CONTROL PRODUCTS WITH GRASS SEED

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- SELECT FLOCCULANTS THAT ARE APPROPRIATE FOR THE SOILS BEING EXPOSED DURING CONSTRUCTION, SELECTING FROM THE *NC DWR LIST OF APPROVED PAMS/FLOCCULANTS*.
- APPLY FLOCCULANTS AT OR BEFORE THE INLETS TO EROSION AND SEDIMENT CONTROL MEASURES.
- APPLY FLOCCULANTS AT THE CONCENTRATIONS SPECIFIED IN THE *NC DWR LIST OF APPROVED PAMS/FLOCCULANTS* AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- PROVIDE PONDING AREA FOR CONTAINMENT OF TREATED STORMWATER BEFORE DISCHARGING OFFSITE.
- STORE FLOCCULANTS IN LEAK-PROOF CONTAINERS THAT ARE KEPT UNDER STORM-RESISTANT COVER OR SURROUNDED BY SECONDARY CONTAINMENT STRUCTURES.

EQUIPMENT AND VEHICLE MAINTENANCE

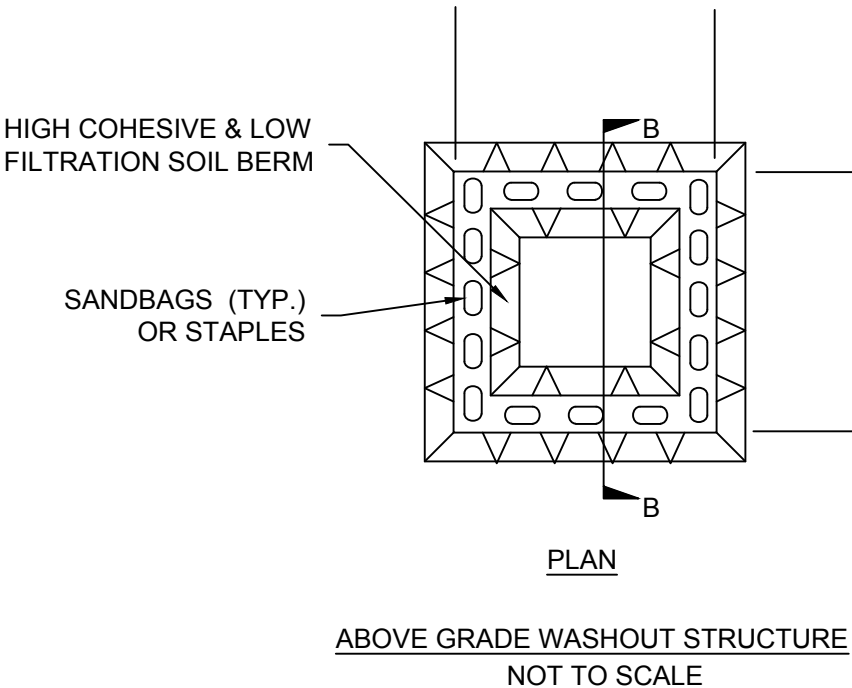
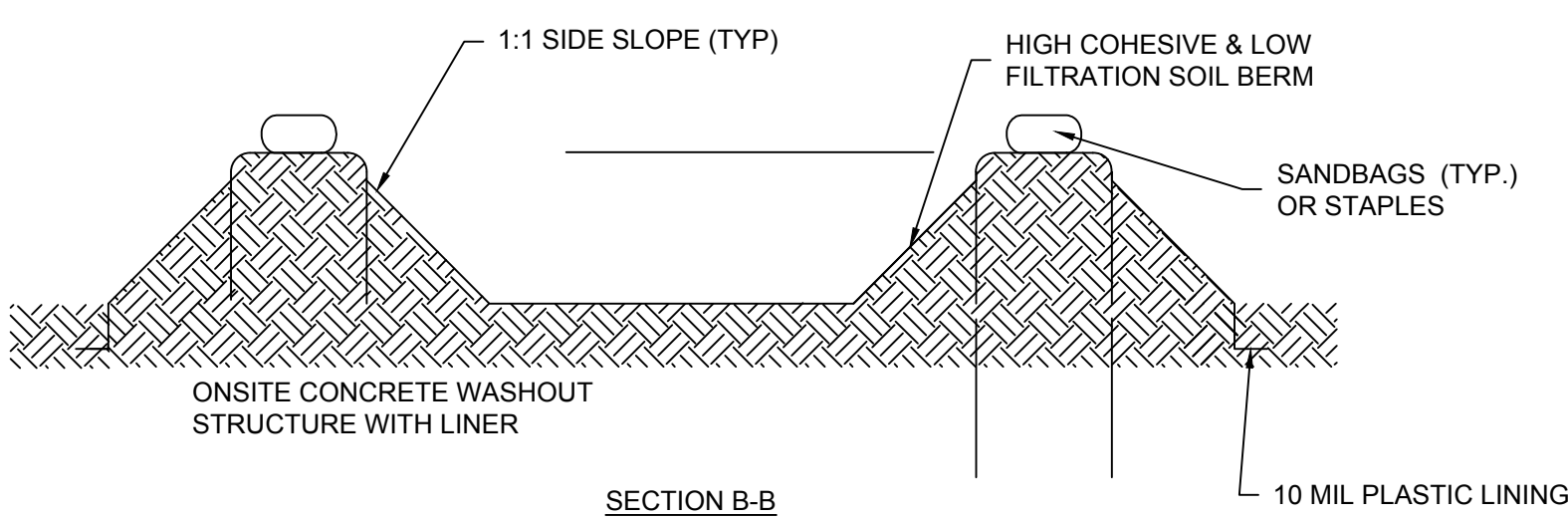
- MAINTAIN VEHICLES AND EQUIPMENT TO PREVENT DISCHARGE OF FLUIDS.
- PROVIDE DRIP PANS UNDER ANY STORED EQUIPMENT.
- IDENTIFY LEAKS AND REPAIR AS SOON AS FEASIBLE, OR REMOVE LEAKING EQUIPMENT FROM THE PROJECT.
- COLLECT ALL SPENT FLUIDS, STORE IN SEPARATE CONTAINERS AND PROPERLY DISPOSE AS HAZARDOUS WASTE (RECYCLE WHEN POSSIBLE).
- REMOVE LEAKING VEHICLES AND CONSTRUCTION EQUIPMENT FROM SERVICE UNTIL THE PROBLEM HAS BEEN CORRECTED.
- BRING USED FUELS, LUBRICANTS, COOLANTS, HYDRAULIC FLUIDS AND OTHER PETROLEUM PRODUCTS TO A RECYCLING OR DISPOSAL CENTER THAT HANDLES THESE MATERIALS.



SIGNAGE FOR EITHER WASHOUT STRUCTURE

BELOW GROUND CONCRETE WASHOUT NOTES:

- ACTUAL LOCATION DETERMINED IN FIELD
- THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY.
- CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



ABOVE GROUND WASHOUT STRUCTURE NOTES:

- ACTUAL LOCATION DETERMINED IN FIELD
- THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
- CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

A

CONCRETE WASHOUT AREA

N.T.S.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- NEVER BURY OR BURN WASTE. PLACE LITTER AND DEBRIS IN APPROVED WASTE CONTAINERS.
- PROVIDE A SUFFICIENT NUMBER AND SIZE OF WASTE CONTAINERS (E.G DUMPSTER, TRASH RECEPTACLE) ON SITE TO CONTAIN CONSTRUCTION AND DOMESTIC WASTES.
- LOCATE WASTE CONTAINERS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- LOCATE WASTE CONTAINERS ON AREAS THAT DO NOT RECEIVE SUBSTANTIAL AMOUNTS OF RUNOFF FROM UPLAND AREAS AND DOES NOT DRAIN DIRECTLY TO A STORM DRAIN, STREAM OR WETLAND.
- COVER WASTE CONTAINERS AT THE END OF EACH WORKDAY AND BEFORE STORM EVENTS OR PROVIDE SECONDARY CONTAINMENT. REPAIR OR REPLACE DAMAGED WASTE CONTAINERS.
- ANCHOR ALL LIGHTWEIGHT ITEMS IN WASTE CONTAINERS DURING TIMES OF HIGH WINDS.
- EMPTY WASTE CONTAINERS AS NEEDED TO PREVENT OVERFLOW. CLEAN UP IMMEDIATELY IF CONTAINERS OVERFLOW.
- DISPOSE WASTE OFF-SITE AT AN APPROVED DISPOSAL FACILITY.
- ON BUSINESS DAYS, CLEAN UP AND DISPOSE OF WASTE IN DESIGNATED WASTE CONTAINERS.

PAINT AND OTHER LIQUID WASTE

- DO NOT DUMP PAINT AND OTHER LIQUID WASTE INTO STORM DRAINS, STREAMS OR WETLANDS.
- LOCATE PAINT WASHOUTS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- CONTAIN LIQUID WASTES IN A CONTROLLED AREA.
- CONTAINMENT MUST BE LABELED, SIZED AND PLACED APPROPRIATELY FOR THE NEEDS OF SITE.
- PREVENT THE DISCHARGE OF SOAPS, SOLVENTS, DETERGENTS AND OTHER LIQUID WASTES FROM CONSTRUCTION SITES.

PORTABLE TOILETS

- INSTALL PORTABLE TOILETS ON LEVEL GROUND, AT LEAST 50 FEET AWAY FROM STORM DRAINS, STREAMS OR WETLANDS UNLESS THERE IS NO ALTERNATIVE REASONABLY AVAILABLE. IF 50 FOOT OFFSET IS NOT ATTAINABLE, PROVIDE RELOCATION OF PORTABLE TOILET BEHIND SILT FENCE OR PLACE ON A GRAVEL PAD AND SURROUND WITH SAND BAGS.
- PROVIDE STAKING OR ANCHORING OF PORTABLE TOILETS DURING PERIODS OF HIGH WINDS OR IN HIGH FOOT TRAFFIC AREAS.
- MONITOR PORTABLE TOILETS FOR LEAKING AND PROPERLY DISPOSE OF ANY LEAKED MATERIAL. UTILIZE A LICENSED SANITARY WASTE HAULER TO REMOVE LEAKING PORTABLE TOILETS AND REPLACE WITH PROPERLY OPERATING UNIT.

EARTHEN STOCKPILE MANAGEMENT

- SHOW STOCKPILE LOCATIONS ON PLANS. LOCATE EARTHEN-MATERIAL STOCKPILE AREAS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS, SEDIMENT BASINS, PERIMETER SEDIMENT CONTROLS AND SURFACE WATERS UNLESS IT CAN BE SHOWN NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
- PROTECT STOCKPILE WITH SILT FENCE INSTALLED ALONG TOE OF SLOPE WITH A MINIMUM OFFSET OF FIVE FEET FROM THE TOE OF STOCKPILE.
- PROVIDE STABLE STONE ACCESS POINT WHEN FEASIBLE.
- STABILIZE STOCKPILE WITHIN THE TIMEFRAMES PROVIDED ON THIS SHEET AND IN ACCORDANCE WITH THE APPROVED PLAN AND ANY ADDITIONAL REQUIREMENTS. SOIL STABILIZATION IS DEFINED AS VEGETATIVE, PHYSICAL OR CHEMICAL COVERAGE TECHNIQUES THAT WILL RESTRAIN ACCELERATED EROSION ON DISTURBED SOILS FOR TEMPORARY OR PERMANENT CONTROL NEEDS.

CONCRETE WASHOUTS

- DO NOT DISCHARGE CONCRETE OR CEMENT SLURRY FROM THE SITE.
- DISPOSE OF, OR RECYCLE SETTLED, HARDENED CONCRETE RESIDUE IN ACCORDANCE WITH LOCAL AND STATE SOLID WASTE REGULATIONS AND AT AN APPROVED FACILITY.
- MANAGE WASHOUT FROM MORTAR MIXERS IN ACCORDANCE WITH THE ABOVE ITEM AND IN ADDITION PLACE THE MIXER AND ASSOCIATED MATERIALS ON IMPERVIOUS BARRIER AND WITHIN LOT PERIMETER SILT FENCE.
- INSTALL TEMPORARY CONCRETE WASHOUTS PER LOCAL REQUIREMENTS, WHERE APPLICABLE. IF AN ALTERNATE METHOD OR PRODUCT IS TO BE USED, CONTACT YOUR APPROVAL AUTHORITY FOR REVIEW AND APPROVAL. IF LOCAL STANDARD DETAILS ARE NOT AVAILABLE, USE ONE OF THE TWO TYPES OF TEMPORARY CONCRETE WASHOUTS PROVIDED ON THIS DETAIL.
- DO NOT USE CONCRETE WASHOUTS FOR DEWATERING OR STORING DEFECTIVE CURB OR SIDEWALK SECTIONS. STORMWATER ACCUMULATED WITHIN THE WASHOUT MAY NOT BE PUMPED INTO OR DISCHARGED TO THE STORM DRAIN SYSTEM OR RECEIVING SURFACE WATERS. LIQUID WASTE MUST BE PUMPED OUT AND REMOVED FROM PROJECT.
- LOCATE WASHOUTS AT LEAST 50 FEET FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS IT CAN BE SHOWN THAT NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE. AT A MINIMUM, INSTALL PROTECTION OF STORM DRAIN INLET(S) CLOSEST TO THE WASHOUT WHICH COULD RECEIVE SPILLS OR OVERFLOW.
- LOCATE WASHOUTS IN AN EASILY ACCESSIBLE AREA, ON LEVEL GROUND AND INSTALL A STONE ENTRANCE PAD IN FRONT OF THE WASHOUT. ADDITIONAL CONTROLS MAY BE REQUIRED BY THE APPROVING AUTHORITY.
- INSTALL AT LEAST ONE SIGN DIRECTING CONCRETE TRUCKS TO THE WASHOUT WITHIN THE PROJECT LIMITS. POST SIGNAGE ON THE WASHOUT ITSELF TO IDENTIFY THIS LOCATION.
- REMOVE LEAVINGS FROM THE WASHOUT WHEN AT APPROXIMATELY 75% CAPACITY TO LIMIT OVERFLOW EVENTS. REPLACE THE TARP, SAND BAGS OR OTHER TEMPORARY STRUCTURAL COMPONENTS WHEN NO LONGER FUNCTIONAL. WHEN UTILIZING ALTERNATIVE OR PROPRIETARY PRODUCTS, FOLLOW MANUFACTURER'S INSTRUCTIONS.
- AT THE COMPLETION OF THE CONCRETE WORK, REMOVE REMAINING LEAVINGS AND DISPOSE OF IN AN APPROVED DISPOSAL FACILITY. FILL PIT, IF APPLICABLE, AND STABILIZE ANY DISTURBANCE CAUSED BY REMOVAL OF WASHOUT.

HERBICIDES, PESTICIDES AND RODENTICIDES

- STORE AND APPLY HERBICIDES, PESTICIDES AND RODENTICIDES IN ACCORDANCE WITH LABEL RESTRICTIONS.
- STORE HERBICIDES, PESTICIDES AND RODENTICIDES IN THEIR ORIGINAL CONTAINERS WITH THE LABEL, WHICH LISTS DIRECTIONS FOR USE, INGREDIENTS AND FIRST AID STEPS IN CASE OF ACCIDENTAL POISONING.
- DO NOT STORE HERBICIDES, PESTICIDES AND RODENTICIDES IN AREAS WHERE FLOODING IS POSSIBLE OR WHERE THEY MAY SPILL OR LEAK INTO WELLS, STORMWATER DRAINS, GROUND WATER OR SURFACE WATER. IF A SPILL OCCURS, CLEAN AREA IMMEDIATELY.
- DO NOT STOCKPILE THESE MATERIALS ONSITE.

HAZARDOUS AND TOXIC WASTE

- CREATE DESIGNATED HAZARDOUS WASTE COLLECTION AREAS ON-SITE.
- PLACE HAZARDOUS WASTE CONTAINERS UNDER COVER OR IN SECONDARY CONTAINMENT.
- DO NOT STORE HAZARDOUS CHEMICALS, DRUMS OR BAGGED MATERIALS DIRECTLY ON THE GROUND.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

- CHISEL ALL CUT GRADED OR COMPACTED AREAS TO A MINIMUM DEPTH OF 6".
- DISC ALL AREAS TO RECEIVE GRASS TO A MINIMUM OF 6 INCHES. MIX AND AMEND WITH 3 INCHES OF WELL SCREENED TOPSOIL. ON-SITE TOPSOIL MAY BE USED IN PLACE OF IMPORTED TOPSOIL, IF WELL-SCREENED AND DRY PRIOR TO APPLICATION IN ACCORDANCE WITH SPECIFICATION SECTION 329000.
- REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- APPLY AGRICULTURAL LIME, FERTILIZER, AND PHOSPHATE UNIFORMLY AS PER SPECIFICATIONS AND MIX WELL WITH SOIL.
- CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED TO A 6 INCHES DEPTH.
- SEED AT RATE SPECIFIED OR AS NEEDED TO ACHIEVE AND MAINTAIN A THICK HEALTHY GROUND COVERAGE
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH. BEGIN THOROUGH WATERING OF GRASSED AREAS IMMEDIATELY UPON INSTALLATION. DO NOT ALLOW GRASSED AREAS TO BECOME EXCESSIVELY DRY.
- INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS AS NEEDED.
- IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.

LIME & FERTILIZATION SCHEDULE

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

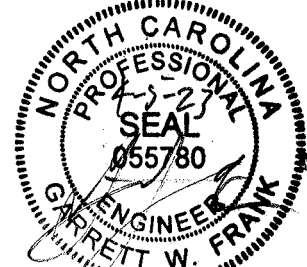
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CITY OF RALEIGH DEVELOPMENT APPROVAL

RALEIGH WATER REVIEW OFFICER

PRELIMINARY PLANS

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REVISION DESCRIPTION

DATE

04/05/2023

DRAWN BY

J. HAYES

DESIGNED BY

G. FRANK

CHECKED BY

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SCALE

AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

JOB NO.

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SELF-INSPECTIONS ARE REQUIRED DURING NORMAL BUSINESS HOURS IN ACCORDANCE WITH THE TABLE BELOW. WHEN ADVERSE WEATHER OR SITE CONDITIONS WOULD CAUSE THE SAFETY OF THE INSPECTION PERSONNEL TO BE IN JEOPARDY, THE INSPECTION MAY BE DELAYED UNTIL THE NEXT BUSINESS DAY ON WHICH IT IS SAFE TO PERFORM THE INSPECTION. IN ADDITION, WHEN A STORM EVENT OF EQUAL TO OR GREATER THAN 1.0 INCH OCCURS OUTSIDE OF NORMAL BUSINESS HOURS, THE SELF-INSPECTION SHALL BE PERFORMED UPON THE COMMENCEMENT OF THE NEXT BUSINESS DAY. ANY TIME WHEN INSPECTIONS WERE DELAYED SHALL BE NOTED IN THE INSPECTION RECORD.

NOTE: THE RAIN INSPECTION RESETS THE REQUIRED 7 CALENDAR DAY INSPECTION REQUIREMENT.

THE APPROVED E&SC PLAN AS WELL AS ANY APPROVED DEVIATION SHALL BE KEPT ON THE SITE. THE APPROVED E&SC PLAN MUST BE KEPT UP-TO-DATE THROUGHOUT THE COVERAGE UNDER THIS PERMIT. THE FOLLOWING ITEMS PERTAINING TO THE E&SC PLAN SHALL BE KEPT ON SITE AND AVAILABLE FOR INSPECTION AT ALL TIMES DURING NORMAL BUSINESS HOURS.

ALL DATA USED TO COMPLETE THE E-NOI AND ALL INSPECTION RECORDS SHALL BE MAINTAINED FOR A PERIOD OF THREE YEARS AFTER PROJECT COMPLETION AND MADE AVAILABLE UPON REQUEST. [40 CFR 122.41]

AFTER A PERMITTEE BECOMES AWARE OF AN OCCURRENCE THAT MUST BE REPORTED, HE SHALL CONTACT THE APPROPRIATE DIVISION REGIONAL OFFICE WITHIN THE TIMEFRAMES AND IN ACCORDANCE WITH THE OTHER REQUIREMENTS LISTED BELOW. OCCURRENCES OUTSIDE NORMAL BUSINESS HOURS MAY ALSO BE REPORTED TO THE DEPARTMENT'S ENVIRONMENTAL EMERGENCY CENTER PERSONNEL AT (800) 858-0368.

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CITY OF RALEIGH DEVELOPMENT APPROVAL _____
RALEIGH WATER REVIEW OFFICER _____

SEDIMENT BASINS AND TRAPS THAT RECEIVE RUNOFF FROM DRAINAGE AREAS OF ONE ACRE OR MORE SHALL USE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE WHEN THESE DEVICES NEED TO BE DRAWN DOWN FOR MAINTENANCE OR CLOSE OUT UNLESS THIS IS INFEASIBLE. THE CIRCUMSTANCES IN WHICH IT IS NOT FEASIBLE TO WITHDRAW WATER FROM THE SURFACE SHALL BE RARE (FOR EXAMPLE, TIMES WITH EXTENDED COLD WEATHER). NON-SURFACE WITHDRAWALS FROM SEDIMENT BASINS SHALL BE ALLOWED ONLY WHEN ALL OF THE FOLLOWING CRITERIA HAVE BEEN MET:

- (a) THE E&SC PLAN AUTHORITY HAS BEEN PROVIDED WITH DOCUMENTATION OF THE NON-SURFACE WITHDRAWAL AND THE SPECIFIC TIME PERIODS OR CONDITIONS IN WHICH IT WILL OCCUR. THE NON-SURFACE WITHDRAWAL SHALL NOT COMMENCE UNTIL THE E&SC PLAN AUTHORITY HAS APPROVED THESE ITEMS,
- (b) THE NON-SURFACE WITHDRAWAL HAS BEEN REPORTED AS AN ANTICIPATED BYPASS IN ACCORDANCE WITH PART III, SECTION C, ITEM (2)(C) AND (D) OF THIS PERMIT,
- (c) DEWATERING DISCHARGES ARE TREATED WITH CONTROLS TO MINIMIZE DISCHARGES OF POLLUTANTS FROM STORMWATER THAT IS REMOVED FROM THE SEDIMENT BASIN. EXAMPLES OF APPROPRIATE CONTROLS INCLUDE PROPERLY SITED, DESIGNED AND MAINTAINED DEWATERING TANKS, WEIR TANKS, AND FILTRATION SYSTEMS,
- (d) VEGETATED, UPLAND AREAS OF THE SITES OR A PROPERLY DESIGNED STONE PAD IS USED TO THE EXTENT FEASIBLE AT THE OUTLET OF THE DEWATERING TREATMENT DEVICES DESCRIBED IN ITEM (C) ABOVE,
- (e) VELOCITY DISSIPATION DEVICES SUCH AS CHECK DAMS, SEDIMENT TRAPS, AND RIPRAP ARE PROVIDED AT THE DISCHARGE POINTS OF ALL DEWATERING DEVICES, AND
- (f) SEDIMENT REMOVED FROM THE DEWATERING TREATMENT DEVICES DESCRIBED IN ITEM (C) ABOVE IS DISPOSED OF IN A MANNER THAT DOES NOT CAUSE DEPOSITION OF SEDIMENT INTO WATERS OF THE UNITED STATES.

EFFECTIVE: 04/01/19

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DATE _____

DATE

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DESIGNED BY

	CHECKED BY
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	SCALE
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AS SHOWN

S DAIRY STORAGE FACILITY
NORTH CAROLINA LICENSE NO. C-1652
DOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
INSPECTION RECORDKEEPING AND REPORTING

JONES DAIRY STORAGE FACILITY

NCCG-01 SEI E-INSPECTION RECORDKEEPING AND REPORTING

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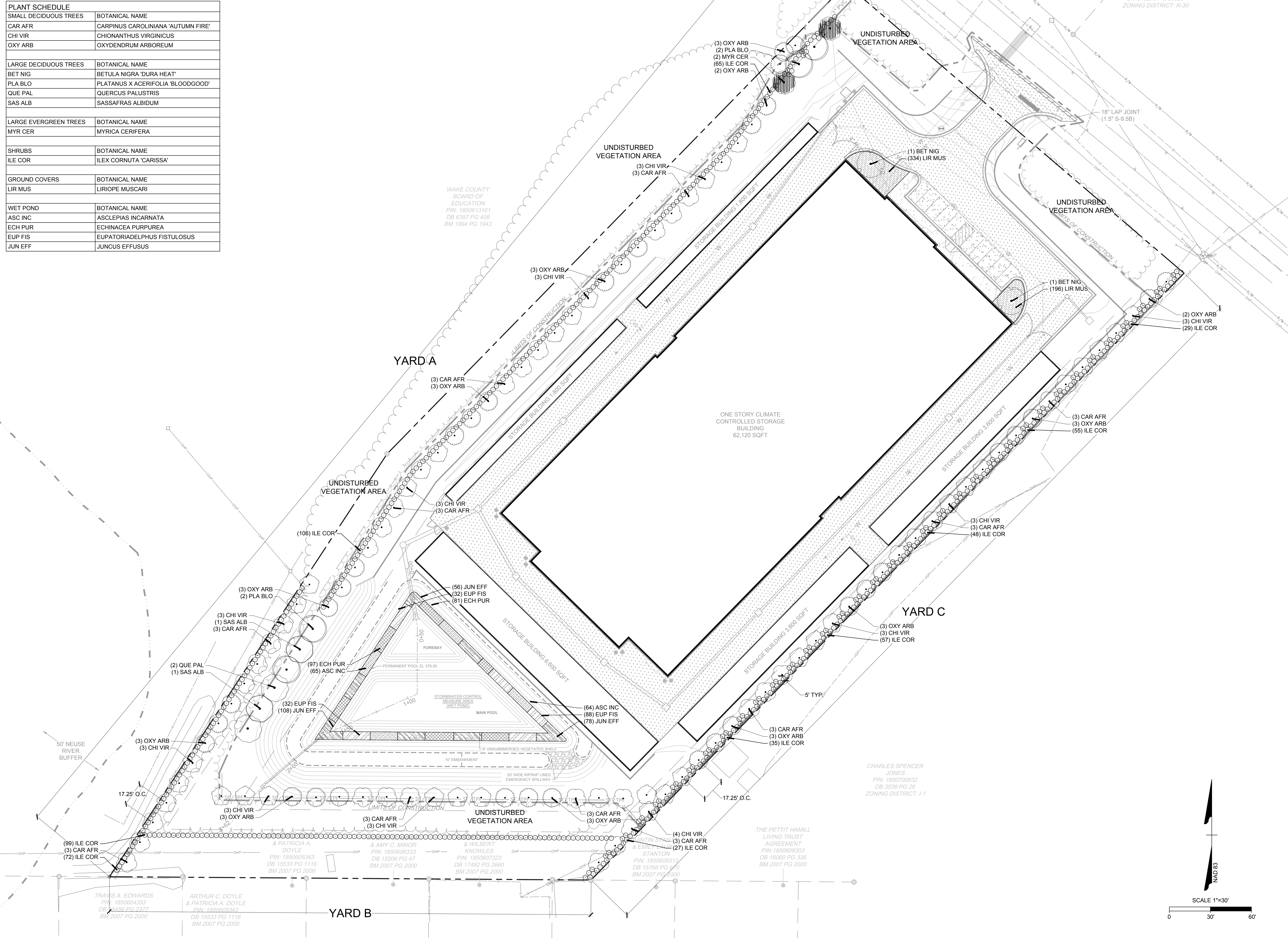
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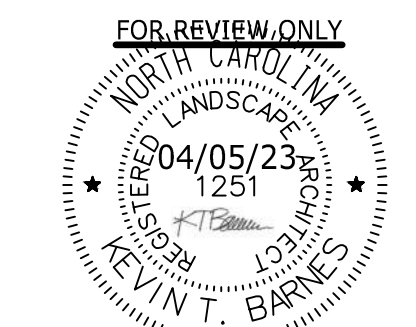
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PLANT SCHEDULE	
SMALL DECIDUOUS TREES	BOTANICAL NAME
CAR AFR	CARPINUS CAROLINIANA 'AUTUMN FIRE'
CHI VIR	CHIONANTHUS VIRGINICUS
OXY ARB	OXYDENDRUM ARBOREUM
LARGE DECIDUOUS TREES	BOTANICAL NAME
BET NIG	BETULA NIGRA 'DURA HEAT'
PLA BLO	PLATANUS X ACERIFOLIA 'BLOODGOOD'
QUE PAL	QUERCUS PALUSTRIS
SAS ALB	SASSAFRAS ALBIDUM
LARGE EVERGREEN TREES	BOTANICAL NAME
MYR CER	MYRICA CERIFERA
SHRUBS	BOTANICAL NAME
ILE COR	ILEX CORNUTA 'CARISSA'
GROUND COVERS	BOTANICAL NAME
LIR MUS	LIRIOPE MUSCARI
WET POND	BOTANICAL NAME
ASC INC	ASCLEPIAS INCARNATA
ECH PUR	ECHINACEA PURPUREA
EUP FIS	EUPATORIADELPHUS FISTULOSUS
JUN EFF	JUNCUS EFFUSUS



PRELIMINARY PLANS



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DATE
03/31/2023

DRAWN BY
S. HALISH

DESIGNED BY
S. HALISH

CHECKED BY
K. BARNES

SCALE
AS SHOWN

TIMMONS GROUP

JONES DAIRY STORAGE FACILITY
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

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PERIMETER LANDSCAPE REQUIREMENT (per table 6.2.2.1.)					
YARD	REQUIREMENT	LENGTH & WIDTH	CALCULATION	REQUIRED LANDSCAPE	PROVIDED LANDSCAPE
A	LANDSCAPE TYPE: 4 SM. DECID TREE : 4 / 100 LG. DECID TREE : 8 / 100 EVERGREE TREE : 0 MEDIUM SHRUB HEDGE	LENGTH: 869.7 ENTRIES: - EASEMENTS: - EXIST. VEG.: - TOTAL: 869.7	SM. DECID TREE : (870 / 100) x 4 = 34.79 LG. DECID TREE : (870 / 100) x 8 = 69.58 EVERGREE TREE : MEDIUM SHRUB HEDGE	SM. DECID TREE : 35 LG. DECID TREE : 70 EVERGREE TREE : MEDIUM SHRUB :	SM. DECID TREE : 47 LG. DECID TREE : 8 EVERGREE TREE : 2 MEDIUM SHRUB : 245
		WIDTH: 50			
B	LANDSCAPE TYPE: 4 SM. DECID TREE : 4 / 100 LG. DECID TREE : 8 / 100 EVERGREE TREE : 0 MEDIUM SHRUB HEDGE	LENGTH: 351.8 ENTRIES: - EASEMENTS: - EXIST. VEG.: - TOTAL: 351.8	SM. DECID TREE : (352 / 100) x 4 = 14.07 LG. DECID TREE : (352 / 100) x 8 = 28.14 EVERGREE TREE : MEDIUM SHRUB HEDGE	SM. DECID TREE : 15 LG. DECID TREE : 29 EVERGREE TREE : MEDIUM SHRUB :	SM. DECID TREE : 18 LG. DECID TREE : EVERGREE TREE : 93 MEDIUM SHRUB :
		WIDTH: 50			
C	LANDSCAPE TYPE: 1 SM. DECID TREE : 1 / 100 LG. DECID TREE : 3 / 100 EVERGREE TREE : 0 MEDIUM SHRUB 40 / 100	LENGTH: 640.1 ENTRIES: - EASEMENTS: - EXIST. VEG.: - TOTAL: 640.1	SM. DECID TREE : (641 / 100) x 1 = 6.40 LG. DECID TREE : (641 / 100) x 3 = 19.20 EVERGREE TREE : MEDIUM SHRUB (641 / 100) x 40 = 256.04	SM. DECID TREE : 7 LG. DECID TREE : 20 EVERGREE TREE : 0 MEDIUM SHRUB : 257	SM. DECID TREE : 36 LG. DECID TREE : EVERGREE TREE : MEDIUM SHRUB : 250
		WIDTH: 10			

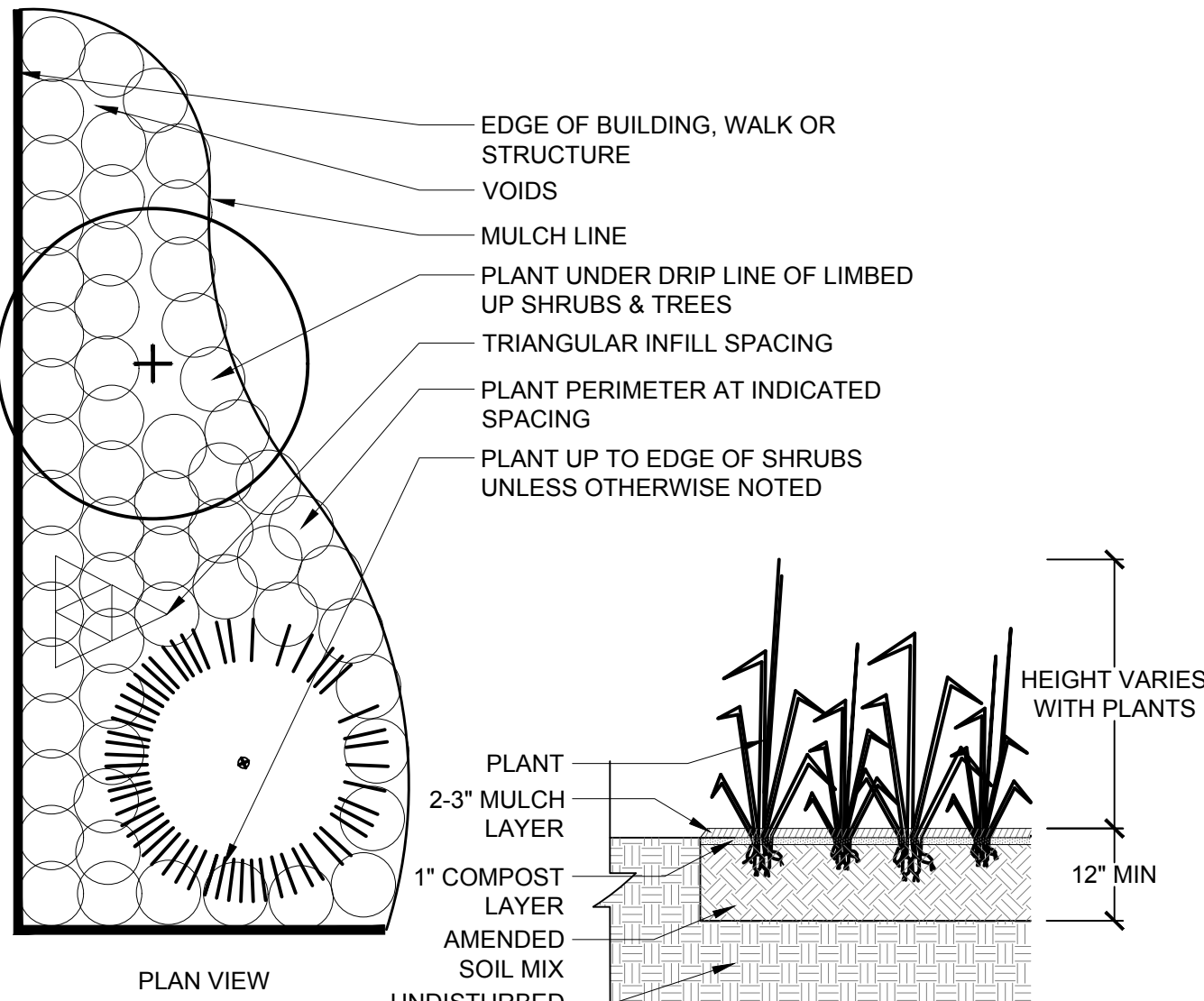
PLANT SCHEDULE YARD A							
SMALL DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS	
CAR AFR	15	CARPINUS CAROLINIANA 'AUTUMN FIRE'	AUTUMN FIRE AMERICAN HORNBEAM	2" CAL.	B&B		
CHI VIR	15	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	2" CAL.	B&B		
OXY ARB	17	OXYDENDRUM ARBOREUM	SOURWOOD TREE	2" CAL.	B&B		
LARGE DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS	
PLA BLO	4	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANE TREE	2.5" CAL.	B&B		
QUE PAL	2	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.	B&B		
SAS ALB	2	SASSAFRAS ALBIDUM	SASSAFRAS	2.5" CAL.	B&B		
LARGE EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS	
MYR CER	2	MYRICA CERIFERA	WAX MYRTLE	2.5" CAL.	B&B		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	SPACING	REMARKS
ILE COR	245	ILEX CORNUTA 'CARISSA'	CARISSA CHINESE HOLLY	24" HT./SPRD.	CONTAINER	42" o.c.	

PLANT SCHEDULE YARD B							
SMALL DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT		REMARKS
CAR AFR	6	CARPINUS CAROLINIANA 'AUTUMN FIRE'	AUTUMN FIRE AMERICAN HORNBEAM	2" CAL.	B&B		
CHI VIR	6	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	2" CAL.	B&B		
OXY ARB	6	OXYDENDRUM ARBOREUM	SOURWOOD TREE	2" CAL.	B&B		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	SPACING	REMARKS
ILE COR	93	ILEX CORNUTA 'CARISSA'	CARISSA CHINESE HOLLY	24" HT./SPRD.	CONTAINER	42" o.c.	

PLANT SCHEDULE YARD C							
SMALL DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT		REMARKS
CAR AFR	12	CARPINUS CAROLINIANA 'AUTUMN FIRE'	AUTUMN FIRE AMERICAN HORNBEAM	2" CAL.	B&B		
CHI VIR	13	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	2" CAL.	B&B		
OXY ARB	11	OXYDENDRUM ARBOREUM	SOURWOOD TREE	2" CAL.	B&B		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	SPACING	REMARKS
ILE COR	250	ILEX CORNUA 'CARISSA'	CARISSA CHINESE HOLLY	24" HT./SPRD.	CONTAINER	42" o.c.	

PLANT SCHEDULE							
SMALL DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT		REMARKS
CAR AFR	33	CARPINUS CAROLINIANA 'AUTUMN FIRE'	AUTUMN FIRE AMERICAN HORNBEAM	2" CAL.	B&B		
CHI VIR	34	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	2" CAL.	B&B		
OXY ARB	34	OXYDENDRUM ARBOREUM	SOURWOOD TREE	2" CAL.	B&B		
LARGE DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT		REMARKS
BET NIG	2	BETULA NIGRA 'DURA HEAT'	DURA HEAT RIVER BIRCH	2.5" CAL.	B&B		
PLA BLO	4	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANE TREE	2.5" CAL.	B&B		
QUE PAL	2	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.	B&B		
SAS ALB	2	SASSAFRAS ALBIDUM	SASSAFRAS	2.5" CAL.	B&B		
LARGE EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT		REMARKS
MYR CER	2	MYRICA CERIFERA	WAX MYRTLE	2.5" CAL.	B&B		
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	SPACING	REMARKS
ILE COR	593	ILEX CORNUTA 'CARISSA'	CARISSA CHINESE HOLLY	24" HT./SPRD.	CONTAINER	42" o.c.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	SPACING	REMARKS
LIR MUS	530	LIRIOPE MUSCARI	LILYTURF	BARE ROOT	CONTAINER	18" o.c.	
WET POND	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	SPACING	REMARKS
ASC INC	129	ASCLEPIAS INCARNATA	SWAMP MILKWEED	BULB	CONTAINER	24" o.c.	
ECH PUR	178	ECHINACEA PURPUREA	CONEFLOWER	BULB	CONTAINER	24" o.c.	
EUP FIS	152	EUPATORIADELPHUS FISTULOSUS	JOE PYE WEED	BULB	CONTAINER	24" o.c.	
JUN EFF	242	JUNCUS EFFUSUS	COMMON RUSH	BULB	CONTAINER	24" o.c.	

WET POND DENSITY CALCULATION = TOTAL SQUARE FOOTAGE (2645) PER 200 SF SHELF AREA ,PROVIDED 50 PLANTS = 662 REQUIRED PLANTS, 701 PROVIDED



4 GROUNDCOVER PLANTING DETAIL
NTS

GENERAL NOTES

PRE-CONSTRUCTION

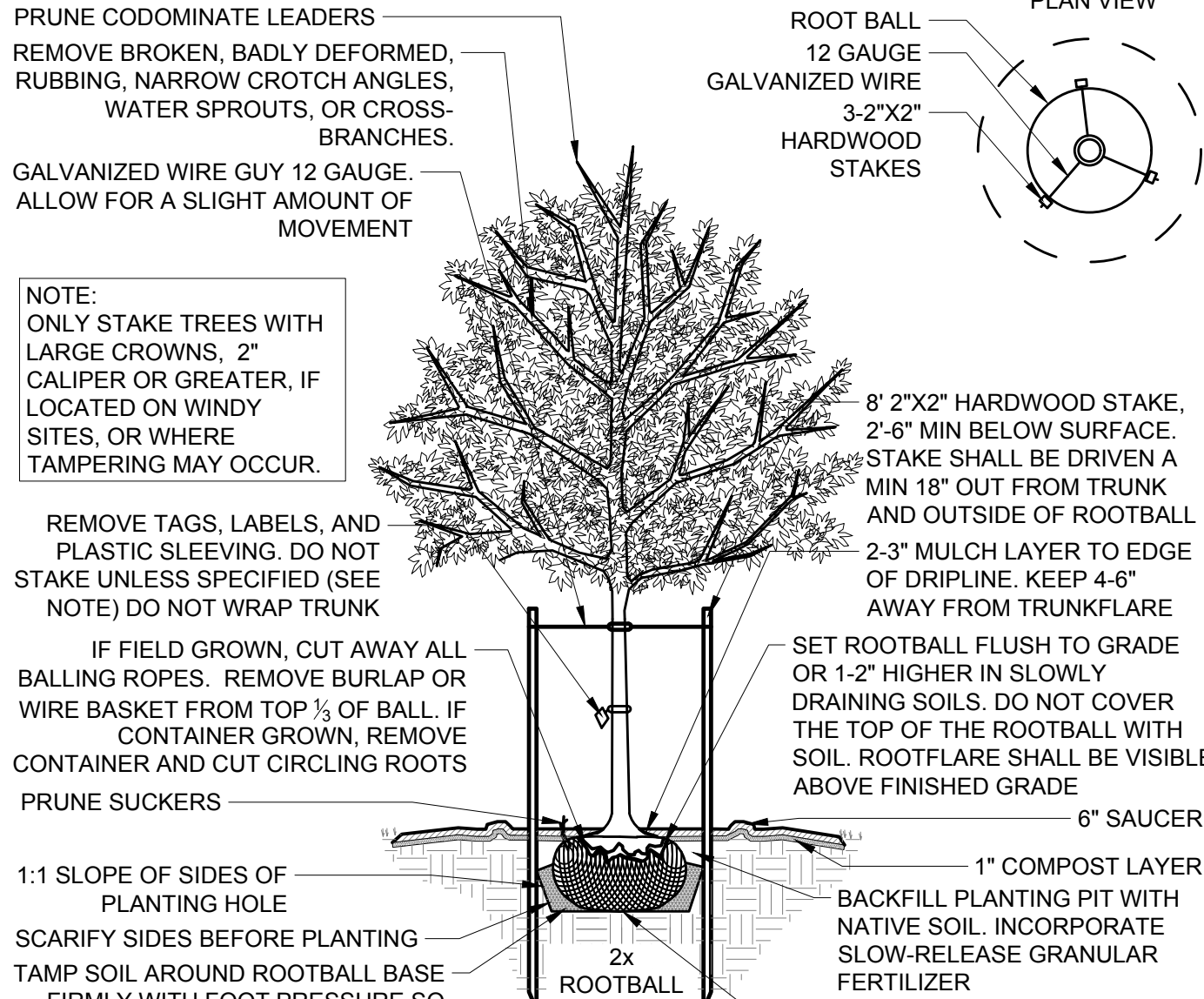
- CONTRACTOR IS RESPONSIBLE FOR CONTACTING VIRGINIA 811 AT 1.800.553.3120 FOR LOCATION OF ALL UTILITY LINES.TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS. NOTIFY LANDSCAPE ARCHITECT OF CONFLICTS.
- VERIFY ALL PLANT MATERIAL QUANTITIES ON THE PLAN PRIOR TO BIDDING, PLANT LIST TOTALS ARE FOR CONVENIENCE ONLY AND SHALL BE VERIFIED PRIOR TO BIDDING.
- PROVIDE PLANT MATERIALS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY INDICATED ON PLANS. ALL PLANT MATERIALS AND INSTALLATION SHALL COMPLY WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". IF SPECIFIED PLANT MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON AVAILABILITY TO THE LANDSCAPE ARCHITECT, TOGETHER WITH PROPOSAL FOR USE OF EQUIVALENT MATERIAL.
- PROVIDE AND INSTALL ALL PLANTS AS IN ACCORDANCE WITH DETAILS AND CONTRACT SPECIFICATIONS.
- SOIL TESTS SHALL BE PERFORMED TO DETERMINE SOIL CHARACTER AND QUALITY. NECESSARY SOIL AMENDMENTS SHALL BE PERFORMED PER TEST RESULTS TO ENSURE PLANT HEALTH.

CONSTRUCTION/INSTALLATION

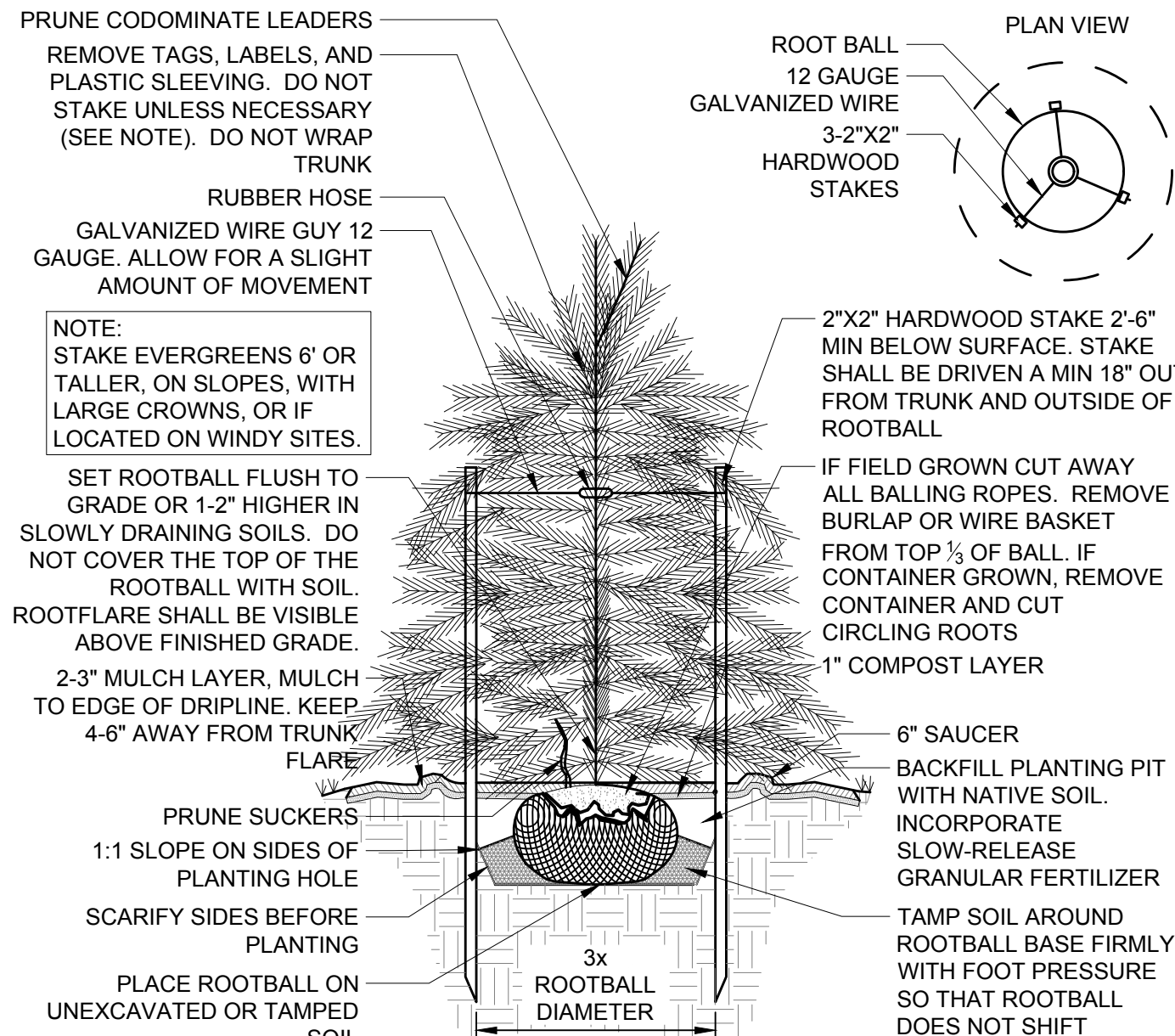
- LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANTS AND MATERIALS THAT ARE IN AN UNHEALTHY OR UNSIGHTLY CONDITION, AS WELL AS PLANTS AND MATERIALS THAT DO NOT CONFORM TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK"
- LABEL AT LEAST ONE TREE AND ONE SHRUB OF EACH VARIETY AND CALIPER WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING THE DESIGNATION OF BOTANICAL AND COMMON NAME.
- INSTALL LANDSCAPE PLANTINGS AT ENTRANCES/EXITS AND PARKING AREAS ACCORDING TO PLANS SO THAT MATERIALS WILL NOT INTERFERE WITH SIGHT DISTANCES.
- CONTRACTOR IS RESPONSIBLE FOR WATERING ALL PLANT MATERIAL DURING INSTALLATION AND UNTIL FINAL INSPECTION AND ACCEPTANCE BY OWNER. CONTRACTOR SHALL NOTIFY OWNER OF CONDITIONS WHICH AFFECTS THE GUARANTEE.

INSPECTIONS/GUARANTEE

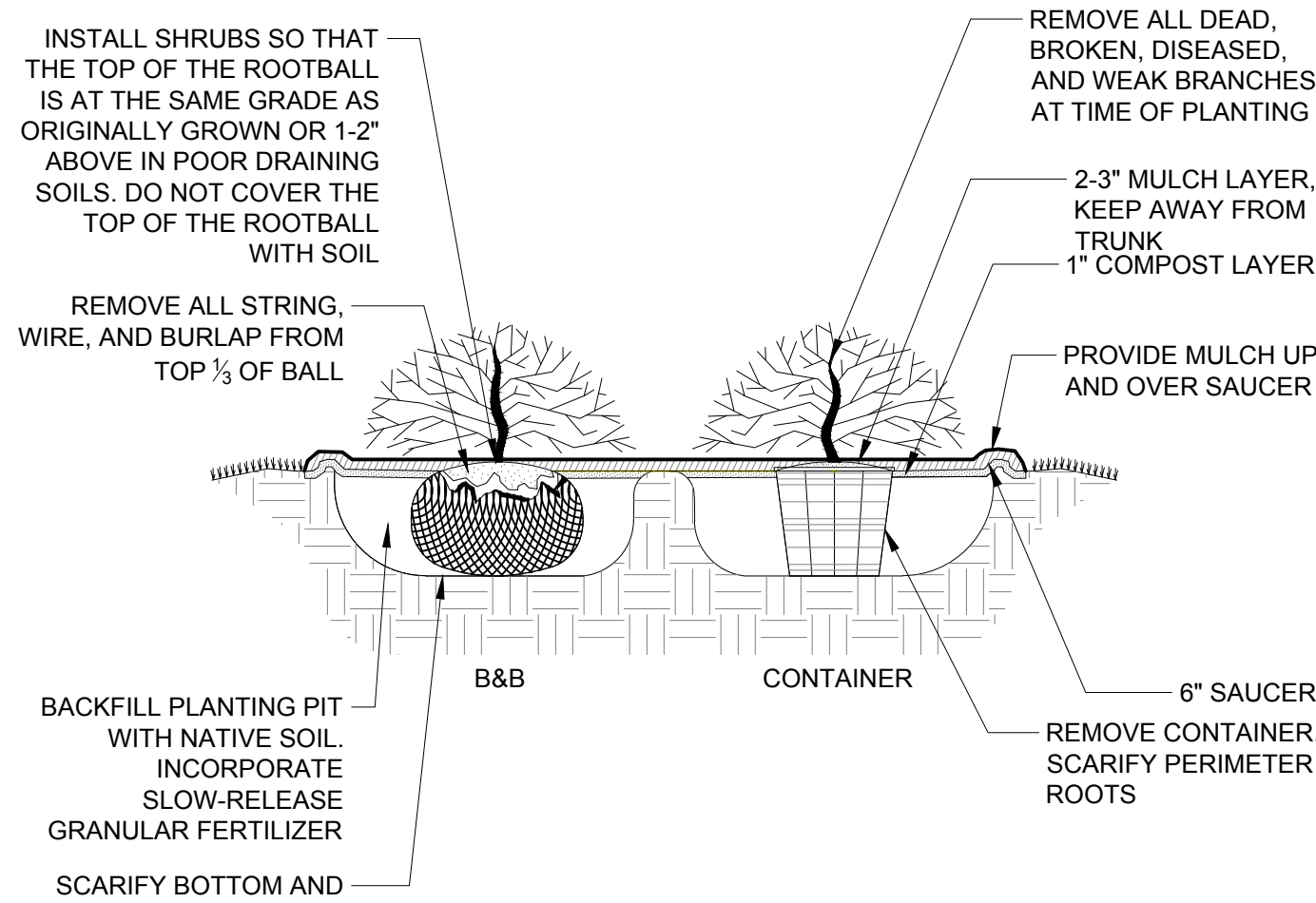
- UPON COMPLETION OF LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR WHO WILL VERIFY COMPLETENESS, INCLUDING THE REPLACEMENT OF ALL DEAD PLANT MATERIAL. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A FINAL INSPECTION BY THE LANDSCAPE ARCHITECT.
- ALL EXTERIOR PLANT MATERIALS SHALL BE GUARANTEED FOR ONE FULL YEAR AFTER DATE OF FINAL INSPECTION AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. DEFECTS RESULTING FROM NEGLECT BY THE OWNER, ABUSE OR DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS WHICH ARE BEYOND THE CONTRACTORS CONTROL ARE NOT THE RESPONSIBILITY OF THE CONTRACTOR.
- PLANT MATERIAL QUANTITIES AND SIZES WILL BE INSPECTED FOR COMPLIANCE WITH APPROVED PLANS BY A SITE PLAN REVIEW AGENT OF THE PLANNING DEPARTMENT PRIOR TO THE RELEASE OF THE CERTIFICATE OF OCCUPANCY.
- REMOVE ALL GUY WIRES AND STAKES 12 MONTHS AFTER INSTALLATION.



1 DECIDUOUS TREE PLANTING DETAIL
NTS



2 EVERGREEN TREE PLANTING DETAIL
NTS



3 SHRUB PLANTING DETAIL
NTS

PRELIMINARY PLANS



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03/31/2023

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S. HALISH

DESIGNED BY
S. HALISH

CHECKED BY
K. BARNES

SCALE
AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

JONES DAIRY STORAGE FACILITY
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

LANDSCAPE NOTES AND DETAILS

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Instantaneous Flow Test Curve - Fire Hydrant #125123 Located at 1208 Jones Dairy Road.

HYDRANT FLOW TEST
 Test Date: 03/01/2023
 Test Time: 12:35 p.m.
 Static Pressure #125123: 57 PSI
 Residual Pressure #125123: 53 PSI
 Observed Flow #125123: 1,276 GPM

DISCLAIMER:
 The flow test results are based upon information gathered at the time the test was performed. The variability of the water system due to changes in usage, demand and operating conditions precludes guarantee that expectations regarding pressures and flows will be exacting. Projected flow beyond the observed flow is only an estimation.

Flow (GPM)	Observed Flow (PSI)	Projected Flow (PSI)
0	58	-
1300	51	51
2000	-	43
2500	-	35
3000	-	27
3500	-	19

FLOW SCENARIO	HYDRANTS			
	H-1	H-2	H-3	H-4
ELEVATION (FT)	383.4	383.4	388.0	383.3
AVAILABLE FIRE FLOW*	1,788	1,716	2,896	2,050
MINIMUM RESIDUAL PRESSURE DURING REQUIRED FIRE FLOW**	34.6	34.5	39.3	34.5

RESIDUAL PRESSURE RESULTS (PSI)

FLOW SCENARIO	JUNCTIONS					HYDRANTS			
	J-1	J-2	J-3	J-4	J-5	H-1	H-2	H-3	H-4
ELEVATION (FT)	391.5	389.9	383.3	383.5	383.5	383.4	383.4	388.0	383.3
STATIC	55.5	56.6	54.0	53.9	58.8	53.9	53.9	57.0	54.0
AVERAGE DAILY DEMAND (ADD)	55.5	56.6	54.0	53.9	47.7	53.9	53.9	57.0	54.0
MAXIMUM DAILY DEMAND (MDD)	55.5	56.6	54.0	53.9	47.4	53.9	53.9	57.0	54.0
MDD + SPRINKLER	54.5	55.5	51.4	51.0	46.3	51.4	51.4	56.1	51.4

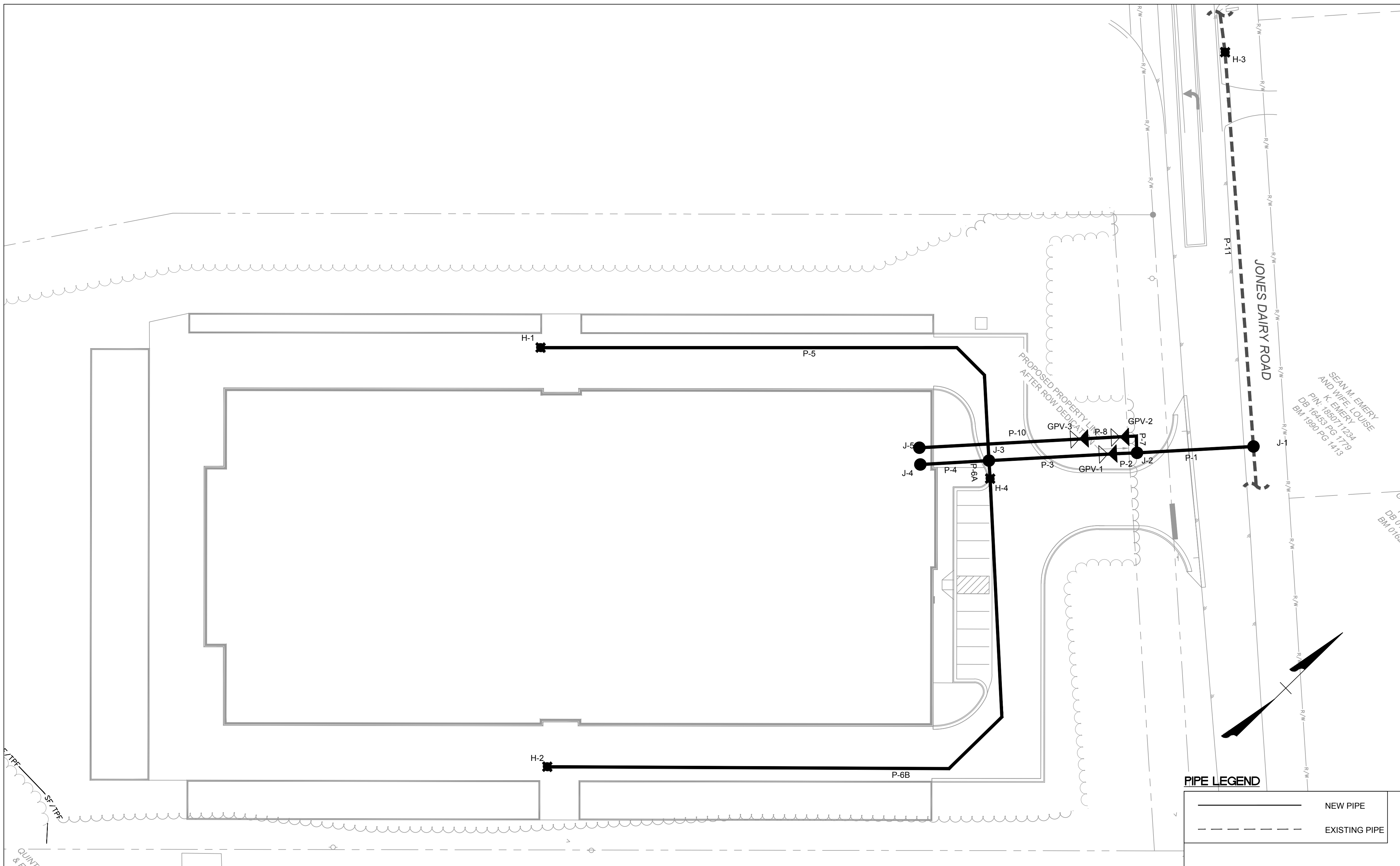
LABEL	LENGTH (FT)	DIA (IN.)
P-1	59	8
P-2	9	8
P-3	67	8
P-4	35	6
P-5	276	8
P-6A	9	8
P-6B	364	8
P-7	8	1.5
P-8	5	1.5
P-10	103	1.5
P-11	202	12

- FLOW INFORMATION WAS OBTAINED BY ASSOCIATED FIRE PROTECTION FROM ONE INSTANTANEOUS FLOW TEST ON 03/01/2023. THE FLOW TEST NODE IS THE EXISTING HYDRANT LOCATED ON THE EXISTING 12-INCH WATERLINE, AT 1208 JONES DAIRY ROAD. THE AVAILABLE FLOW CURVE IS SHOWN ON THIS SHEET.
- SYSTEM FLOW FOR IS REPRESENTED AT H-3 IN THE INCLUDED WATER MODEL LAYOUT.
- THIS WATER MODEL HAS BEEN PERFORMED TO EVALUATE AVAILABLE PRESSURE AND FLOW BASED ON THE INCLUDED WATER MODEL LAYOUT AND FLOW DEMAND CRITERIA. ALL WATERLINES WERE MODELED WITH A HAZEN-WILLIAMS ROUGHNESS COEFFICIENT OF 120.
- THE WATER MODEL LAYOUT IS BASED ON INFORMATION (SURVEY, GRADING AND SITE LAYOUT) PROVIDED BY TIMMONS GROUP.
- THE PROPOSED SYSTEM MUST MAINTAIN A MINIMUM RESIDUAL PRESSURE OF 30 PSI FOR ALL DOMESTIC SCENARIOS, AND A MINIMUM RESIDUAL PRESSURE OF 20 PSI FOR ALL FIRE SCENARIOS DURING MAXIMUM DAY DEMAND PER THE NDEQ DESIGN STANDARDS AND PROCEDURES FOR WATER DISTRIBUTION.

- GPV CURVES
 - GPV-1 = 6" WATTS 709 DCDA
 - GPV-2 = 2" NEPTUNE TURBINE METER
 - GPV-3 = 2" WATTS 009 RFPZ

- AVERAGE DAILY DEMAND (ADD) = 1 GPD / SELF STORAGE UNIT
- 1,570 STORAGE UNITS (1.09 GPM) APPLIED AT J-5
- MAXIMUM DAILY DEMAND (MDD) = ADD X 2.5
- SPRINKLER DEMAND
- 450 GPM APPLIED AT J-4
- FIRE FLOW DEMAND
- A MINIMUM OF 1,500 GPM IS REQUIRED ON EACH ON-SITE HYDRANT.

- BASED ON THE INFORMATION PROVIDED, THE PROPOSED SYSTEM ADEQUATELY MEETS THE MINIMUM RESIDUAL PRESSURE REQUIREMENTS WHILE PROVIDING THE REQUIRED FLOWS FOR THE DOMESTIC AND FIRE SCENARIOS.
- THE RESULTS PRESENTED ARE BASED ON INFORMATION GATHERED AT THE TIME OF THIS ANALYSIS. THE VARIABILITY OF THE WATER SUPPLY, CHANGES IN USAGE, DEMAND, OPERATING CONDITIONS, AND LAYOUT PRECLUDES GUARANTEES OF EXACT PRESSURES AND FLOWS.
- THE PROPOSED SYSTEM MEETS BOTH TOWN OF ROLESVILLE AND NCDEQ DESIGN STANDARDS



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REVISION DESCRIPTION

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DATE
04/03/2023

L. SOLARI

DESIGNED BY

CHECKED BY
C. PETREE

SCALE
N.T.S.

TIMMONS GROUP

JONES DAIRY STORAGE FACILITY
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
HYDRAULIC ANALYSIS LAYOUT AND RESULTS

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ROLESVILLE SELF STORAGE
ROLESVILLE, NC

04 APRIL 2023

FRONT ELEVATION

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ROLESVILLE SELF STORAGE
ROLESVILLE, NC

04 APRIL 2023

EAST ELEVATION

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APPROX. 25%
EIFS BRICK



ROLESVILLE SELF STORAGE
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ROLESVILLE SELF STORAGE
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BACK ELEVATION

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