

MA-22-09 CONDITIONS OF APPROVAL:

- DEVELOPMENT OF THE PROPERTY SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE ACCOMPANYING EXHIBIT D CONCEPT PLAN. LOCATIONS SHOWN FOR COMMITTED ELEMENTS INCLUDING, BUT NOT LIMITED TO BUILDINGS, PARKING, AND STORMWATER CONTROL MEASURES SHOWN ON EXHIBIT D, ARE CONCEPTUAL AND PROVIDED FOR ILLUSTRATION AND CONTEXT ONLY. FINAL LOCATIONS OF ELEMENTS SHALL BE DETERMINED AT SUBSEQUENT STAGES OF APPROVAL. SUBJECT TO APPROVAL BY THE TOWN OF ROLESVILLE, THE VEGETATION IN THE AREA THAT EXTENDS AT LEAST 55 (55) FEET FROM THE PROPERTY LINE ABUTTING PINS 1850604353, 1850605343, 1850606333, 1850607323, AND 1850608313 EXISTING AT THE TIME OF SITE DEVELOPMENT PLAN APPLICATION SUBMISSION SHALL NOT BE DISTURBED AND SHALL BE INCLUDED IN THE BUFFER OTHERWISE REQUIRED BY THE LDO (THE "UNDISTURBED VEGETATION AREA"). THIS SHALL EXCLUDE MINOR ENCROACHMENTS FOR SITE DESIGN FEATURES, SUCH AS DRAINAGE AREAS OR PIPES AND UTILITY EASEMENTS.
- ALL EXTERIOR LIGHT FIXTURES SHALL BE FULL CUTOFF FIXTURES, EXCEEDING THE MINIMUM STANDARD OF "CUTOFF FIXTURES" AS REQUIRED BY LDO § 6.6.G.2.
- IF THE EXISTING VEGETATION IS REMOVED IN THE BUFFER AREA OTHERWISE REQUIRED BY THE LDO ON THE PROPERTY LINE ABUTTING PIN 1850700632 AND EXTENDING FROM THE UNDISTURBED VEGETATION AREA TO THE RIGHT-OF-WAY ON JONES DAIRY ROAD, THE FOLLOWING ADDITIONAL VEGETATION SHALL BE PROVIDED IN THE REQUIRED BUFFER OR WITHIN 5 (5) FEET OF ANY PERIMETER EASEMENT THAT WOULD PREVENT SUCH PLANTINGS: FAST-GROWING DENSE EVERGREEN TREES 15-FT ON CENTER, THE EVERGREEN TREES SHALL HAVE A MINIMUM MATURE HEIGHT OF 30-FT AND A SPREAD OF 12-FT. INSTALL HEIGHT SHALL BE 4-FT MINIMUM.
- AT LEAST SEVENTY-FIVE PERCENT (75%) OF ANY REQUIRED PLANTS IN THE STORMWATER CONTROL MEASURE POND, EXCLUDING GRASSES, SHALL BE POLLINATOR PLANTS SUCH AS NATIVE MILKWEEDS AND OTHER NECTAR-RICH FLOWERS.
- GATES TO ACCESS AREAS WITH EXTERIOR-ACCESS STORAGE UNITS SHALL BE LOCKED BETWEEN 10PM AND 6AM.
- ON EXTERIOR FACADES FACING A PUBLIC RIGHT-OF-WAY OR EXTERIOR FACADES FACING PINS 1850700632, 1850604353, 1850605343, 1850606333, 1850607323, AND 1850608313:
  - THE FOLLOWING MATERIALS ARE PROHIBITED: CINDERBLOCK, CONCRETE, METAL SIDING, AND VINYL SIDING; AND
  - BRICK, EIFS BRICK, STONE, OR CONCRETE MASONRY COMPONENTS SHALL BE A MINIMUM OF 10%.

# SITE PLAN REVIEW DRAWINGS: FOR JONES DAIRY STORAGE FACILITY

0 JONES DAIRY RD  
ROLESVILLE, NC 27587

SITE PLAN#: SDP-23-03  
REZONING CASE #: MA-22-09  
TEXT AMENDMENT CASE #: TA-22-02

APPROVED TA-22-02:

- 5.1.6.D.5.b. - 'INDUSTRIAL, LIGHT' PRINCIPAL USE - SELF-SERVICE STORAGE SHALL BE CONTAINED WITHIN A FULLY ENCLOSED BUILDING AND CONTAINED IN A SINGLE BUILDING. ACCESS INTERNALLY, EXCEPT IN THE GENERAL INDUSTRIAL DISTRICT NOT LOCATED ON N MAIN ST OR S MAIN ST.
- 5.1.6.I.4. - 'WAREHOUSING' PRINCIPAL USE - EXAMPLES, INCLUDES WAREHOUSES AND MINI-WAREHOUSES.

APPROVED ALTERNATE PARKING PLAN CONDITIONS:

- 1 PARKING SPACE PER 100 SELF-STORAGE UNITS.
- PARKING PERMITTED BETWEEN A PROPOSED BUILDING AND THE STREET FRONTAGE.

V2 - SDP-23-03 -

PRELIMINARY PLANS

FOR REVIEW ONLY



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DATE	REVISION DESCRIPTION
06/01/2023	ADDED TOWN OF ROLESVILLE COMMENTS

DATE	DRAWN BY	DESIGNED BY	CHECKED BY	SCALE
06/01/2023	J. HAYES	G. FRANK	G. FRANK	AS SHOWN

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652  
JONES DAIRY STORAGE FACILITY  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
COVER

SITE DATA TABLE

PROJECT NAME:	JONES DAIRY STORAGE FACILITY
SITE PLAN NUMBER	SDP-23-03
PROPERTY OWNER/ DEVELOPER:	WARD, SUZANNE SHOAF 10925 ENCHANTED HOLLOW WAY RALEIGH, NC 27614
REAL ESTATE ID:	0162697
PIN:	1850608722
DEED ACRES:	5.55 ACRES (PER GIS)
PROPERTY ADDRESS:	0 JONES DAIRY RD, ROLESVILLE NC 27587
PROPERTY ZONING:	GI-CZ
CURRENT USE:	VACANT
PROPOSED USE:	SELF STORAGE (COMMERCIAL)
DISTURBED AREA:	4.70 ACRES
CURRENT IMPERVIOUS:	0 ACRES
PROPOSED IMPERVIOUS:	2.80 ACRES
TREE SAVE SUMMARY:	
REQUIRED TREE PRESERVATION:	10% SAVE = 0.10*4.76 (TREE AREA ON-SITE) = 0.476 ACRES
PROVIDED TREE PRESERVATION:	0.607 ACRES = 13%
PARKING SUMMARY:	
REQUIRED VEHICULAR SPACES:	1 SPACE PER 100 STORAGE UNITS = 1,000/100 = 10 SPACES
PROVIDED VEHICULAR SPACES:	10 SPACES
ADA PARKING SUMMARY:	
REQUIRED VEHICULAR SPACES:	1 SPACE
PROVIDED VEHICULAR SPACES:	1 SPACE
BUILDING HEIGHT:	MAXIMUM BUILDING HEIGHT: WITHOUT SPRINKLERS: 35-FT WITH SPRINKLERS: 60-FT PROVIDED BUILDING HEIGHT: 16 FT
BUILDING SQUARE FOOTAGE(S):	CLIMATE CONTROLLED BUILDING: 62,120 STORAGE BUILDING(S): 1800 SQFT (2), 3600 SQFT (2), 6800 SQFT PROPOSED TOTAL UNITS: 1,000
BUILDING/STRUCTURE SETBACKS:	
FRONT:	30-FT
SIDE:	15-FT
REAR:	35-FT
LANDSCAPE BUFFERS:	
ADJACENT PROPERTY:	50' TYPE "4" BUFFER (SOUTH & WEST OF PARCEL)
ADJACENT PROPERTY:	SEE CONDITION 4 (EAST OF PARCEL)
WATERSHED:	NEUSE RIVER
RIVER BASIN:	SANFORD CREEK (NEUSE)
SURFACE WATER CLASSIFICATION:	NONE



VICINITY MAP  
SCALE 1"=200'

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, PE, PLA  
PHONE: (919) 866-4503  
5410 TRINITY ROAD, SUITE 102  
RALEIGH, NC 27607

Sheet List Table

Sheet Number	Sheet Title
C0.0	COVER
C1.0	EXISTING CONDITIONS & DEMOLITION PLAN
C2.0	SITE PLAN
C2.1	VEHICULAR ROUTING PLAN
C3.0	GRADING & DRAINAGE PLAN
C3.1	STORM SEWER PROFILES
C3.2	SCM PLAN & PROFILE
C3.3	SCM NOTES & DETAILS
C4.0	SITE UTILITY PLAN
C4.1	SITE UTILITY PLAN & PROFILE
C4.2	FIRE HOSE LAY PLAN
C5.0	EROSION & SEDIMENTATION CONTROL PLAN - PH I
C5.1	EROSION & SEDIMENTATION CONTROL PLAN - PH II
C6.0	SITE DETAILS
C6.1	SITE DETAILS
C6.2	SITE DETAILS
C6.3	SITE DETAILS
C6.4	SITE DETAILS
C6.5	SITE DETAILS
C6.6	SITE DETAILS
C6.7	SITE DETAILS
C6.8	SITE DETAILS
C6.9	NCG01 GROUND STABILIZATION AND MATERIALS HANDLING
C6.10	NCG01 SELF-INSPECTION, RECORDKEEPING, AND REPORTING
L1.0	LANDSCAPE PLAN
L1.1	TREE PRESERVATION PLAN
L2.0	LANDSCAPE NOTES AND DETAILS
PS1.0	PUMP STATION SITE AND FORCEMAIN
PS1.1	PUMP STATION NOTES AND DETAILS
W1.0	HYDRAULIC ANALYSIS LAYOUT AND RESULTS
A-200	ARCHITECTURAL ELEVATIONS
E-010	SITE PHOTOMETRICS

ATTENTION CONTRACTORS

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for inspection, install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE WITH THE PLANS KEPT ON FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.

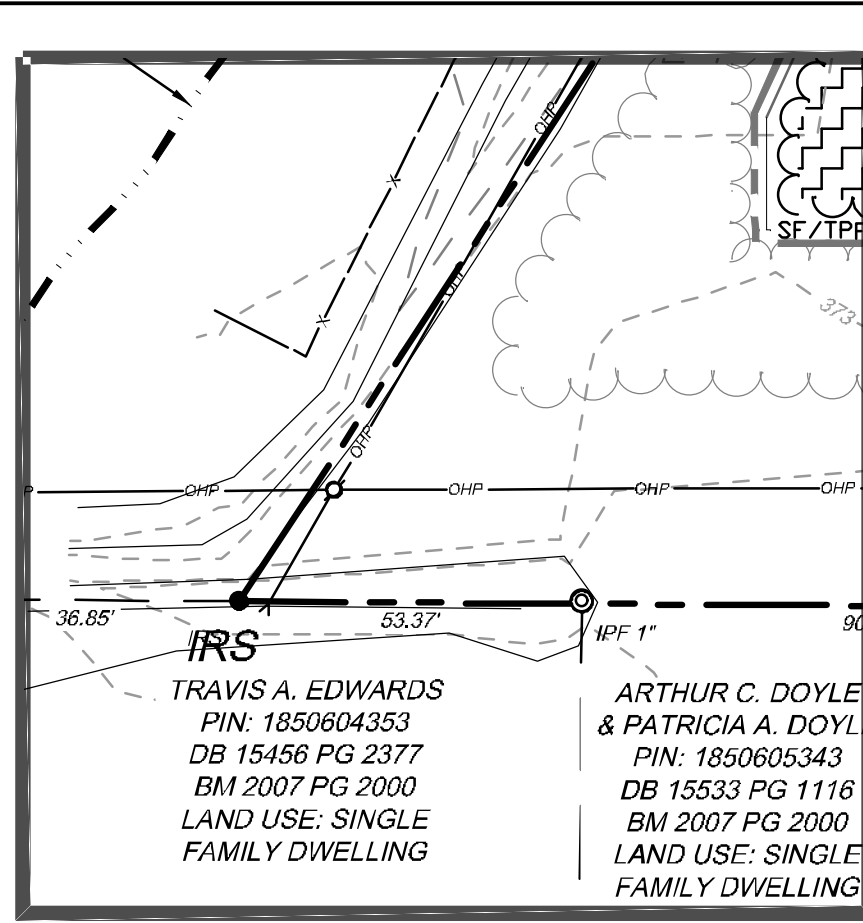
CITY OF RALEIGH DEVELOPMENT APPROVAL \_\_\_\_\_  
RALEIGH WATER REVIEW OFFICER \_\_\_\_\_

Public Sewer Collection / Extension System

The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh  
Public Utilities Department Permit # \_\_\_\_\_  
Authorization to Construct \_\_\_\_\_  
Date \_\_\_\_\_

JOB NO.  
54832  
SHEET NO.  
C0.0



TRAVIS A. EDWARDS  
PIN: 1850604353  
DB 15456 PG 2377  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ARTHUR C. DOYLE & PATRICIA A. DOYLE  
PIN: 1850605343  
DB 15533 PG 1116  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

INSET "A"

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

EX. TREE LINE

20' CRITICAL ROOT ZONE (23% DISTURBED)

EX 20" PINE

PROPOSED PROPERTY LINE AFTER ROW DEDICATION

SEAN M. EMERY AND WIFE, LOUISE  
K. EMERY  
PIN: 1850711234  
DB 16453 PG 1779  
BM 1990 PG 1413  
ZONING DISTRICT: R-30  
LAND USE: SINGLE FAMILY DWELLING  
JONES DAIRY ROAD  
(NCSR 2053)  
60' PUBLIC R/W

GLENN BARHAM JONES  
PIN: 1850713110  
DB 016276 PG 00328  
BM 016276 PG 00328  
ZONING DISTRICT: R-30  
LAND USE: SINGLE FAMILY DWELLING

CMF NGS DUPLEX  
PUBLISHED COORDINATES  
N: 801049.04  
E: 2157100.58

20' RW DEDICATION

MAIL FOUND  
N: 800578.50  
E: 2157211.34

LIMITS OF CONSTRUCTION

SUZANNE SHOAF WARD  
PIN: 1850608722  
DB 18008 PG 36  
ZONING DISTRICT: I-1  
AREA: 5.50 ACRES

T.B.M.  
Timmons Group CP #2  
Capped 5/8" Rebar Set  
N: 800,861.25'  
E: 2,157,204.12'  
Elev.: 392.28'

CHARLES SPENCER JONES  
PIN: 1850700632  
DB 3539 PG 28  
ZONING DISTRICT: I-1  
LAND USE: ELECTRICAL CONTRACTOR OFFICE

THE PETTIT HAMILL LIVING TRUST AGREEMENT  
PIN: 1850609303  
DB 18060 PG 336  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

QUINTIN STANTON & EMILY LAUREN STANTON  
PIN: 1850608313  
DB 15766 PG 670  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ALICIA KNOWLES & WILBERT KNOWLES  
PIN: 1850607323  
DB 17492 PG 2860  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ROBERT C. MINOR & AMY C. MINOR  
PIN: 1850606333  
DB 15206 PG 47  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ARTHUR C. DOYLE & PATRICIA A. DOYLE  
PIN: 1850605343  
DB 15533 PG 1116  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

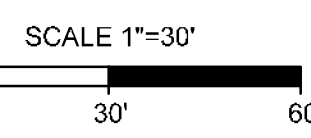
LANDSCAPING ENCROACHMENT  
4.5' NORTH OF FLOWER BED  
AREA: 63 SF

LIMITS OF CONSTRUCTION

EX 20" PINE

20' CRITICAL ROOT ZONE (24% DISTURBED)

EX BUILDING



- 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). 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.
  - A TREE SURVEY PER ROLESVILLE LDO SECTION 6 WAS PERFORMED BY STEVEN BALL, RF AT SOIL & ENVIRONMENTAL CONSULTANTS, PA.
  - ALL TREE PROTECTION FENCING MUST REMAIN IN PLACE THROUGHOUT THE ENTIRE SITE DEVELOPMENT PROCESS UNTIL THE TIME A CERTIFICATE OF OCCUPANCY IS ISSUED.

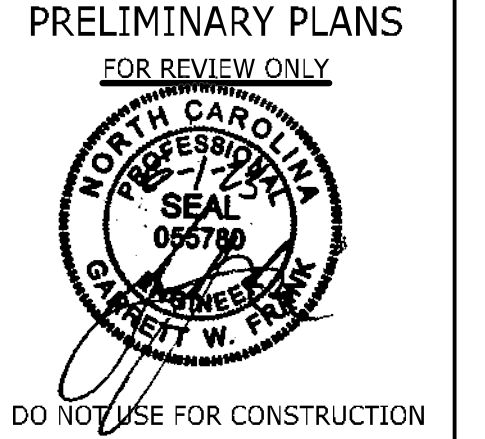
- KEY NOTES**
- (A) REMOVE ASPHALT PAVEMENT AND STONE BASE
  - (B) REMOVE TREE CLEARING

**EXISTING CONDITIONS LEGEND**

EX. CONSTRUCTION LIMITS	---
EX. STORM PIPE	----
EX. FENCE	-X-
EX. GAS LINE	-G-
EX. POWER LINE	-UGP-
EX. TELEPHONE LINE	-UGT-
EX. WATER LINE	-W-
EX. SANITARY SEWER FORCE MAIN	-FM-
EX. SANITARY SEWER LINE	-SAN-
EX. CABLE TV LINE	-CMTV-
EX. FIBER OPTIC LINE	-UFC-
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
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REVISION DESCRIPTION	DATE
ADDRESSSED TOWN OF ROLESVILLE COMMENTS	06/07/2023
DATE	06/01/2023
DRAWN BY	J. HAYES
DESIGNED BY	G. FRANK
CHECKED BY	G. FRANK
SCALE	AS SHOWN

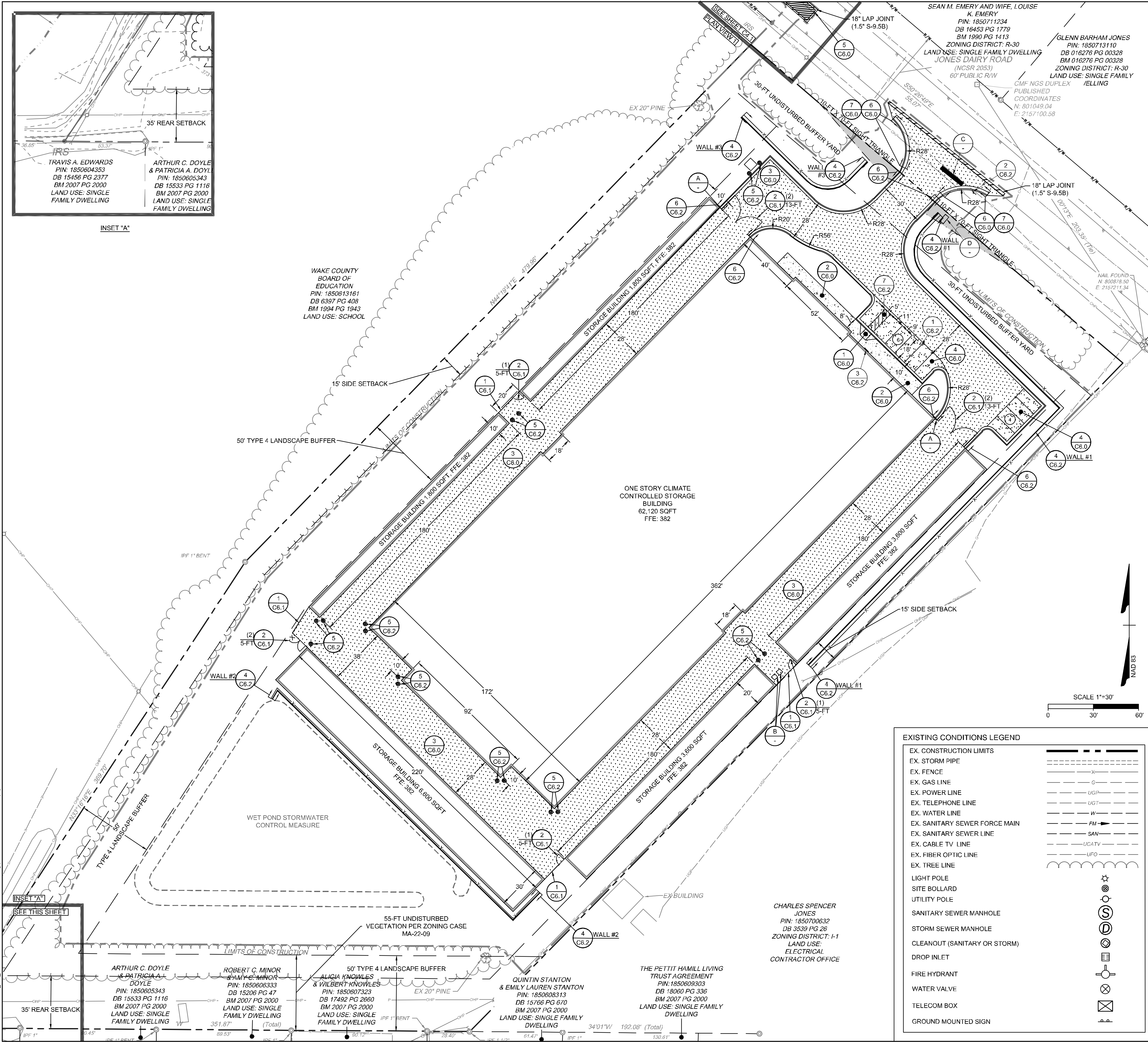
**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652

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

**EXISTING CONDITIONS & DEMOLITION PLAN**

JOB NO. 54832  
SHEET NO. C1.0

S:\33354832-Rolesville\_Site\_Short\DWG\Sheet\CD\54832-C1-DEM.DWG | Plotted on 6/22/2023 7:55 AM | by Garrett Frank



**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 (1-800-832-4949) 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 ACCESSIBLE CURB RAMP
- 2 STANDARD DUTY CONCRETE PAVEMENT
- 3 HEAVY DUTY ASPHALT PAVEMENT
- 4 STANDARD DUTY ASPHALT PAVEMENT
- 5 NCDOT ASPHALT PAVEMENT
- 6 NCDOT 30" CONCRETE CURB & GUTTER
- 7 CURB ENDING TAPER
- 1 8-FT ORNAMENTAL FENCE
- 2 8' TALL ORNAMENTAL GATES
- 3 RETAINING WALL
- 5 BOLLARD TYP.
- 6 24" CONCRETE CURB & GUTTER
- A KNOX BOX
- B ROLLOUT TRASH & RECYCLING BINS

**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.
- "AFS" ON PLANS DENOTES ACCESSIBLE PARKING SIGN. INSTALL R7-8A & R7-8D ONLY.

**STRIPING KEY NOTES**

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

**SIGNAGE KEY NOTES**

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

**EXISTING CONDITIONS LEGEND**

EX. CONSTRUCTION LIMITS	---
EX. STORM PIPE	---
EX. FENCE	-X-
EX. GAS LINE	-G-
EX. POWER LINE	-UGP-
EX. TELEPHONE LINE	-UGT-
EX. WATER LINE	-W-
EX. SANITARY SEWER FORCE MAIN	-FM-
EX. SANITARY SEWER LINE	-SAN-
EX. CABLE TV LINE	-UCATV-
EX. FIBER OPTIC LINE	-UFO-
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	⊗

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06/01/2023	ACHIEVED THROUGH OURS.	

DATE	06/01/2023
DRAWN BY	J. HAYES
DESIGNED BY	G. FRANK
CHECKED BY	G. FRANK
SCALE	AS SHOWN

**TIMMONS GROUP**

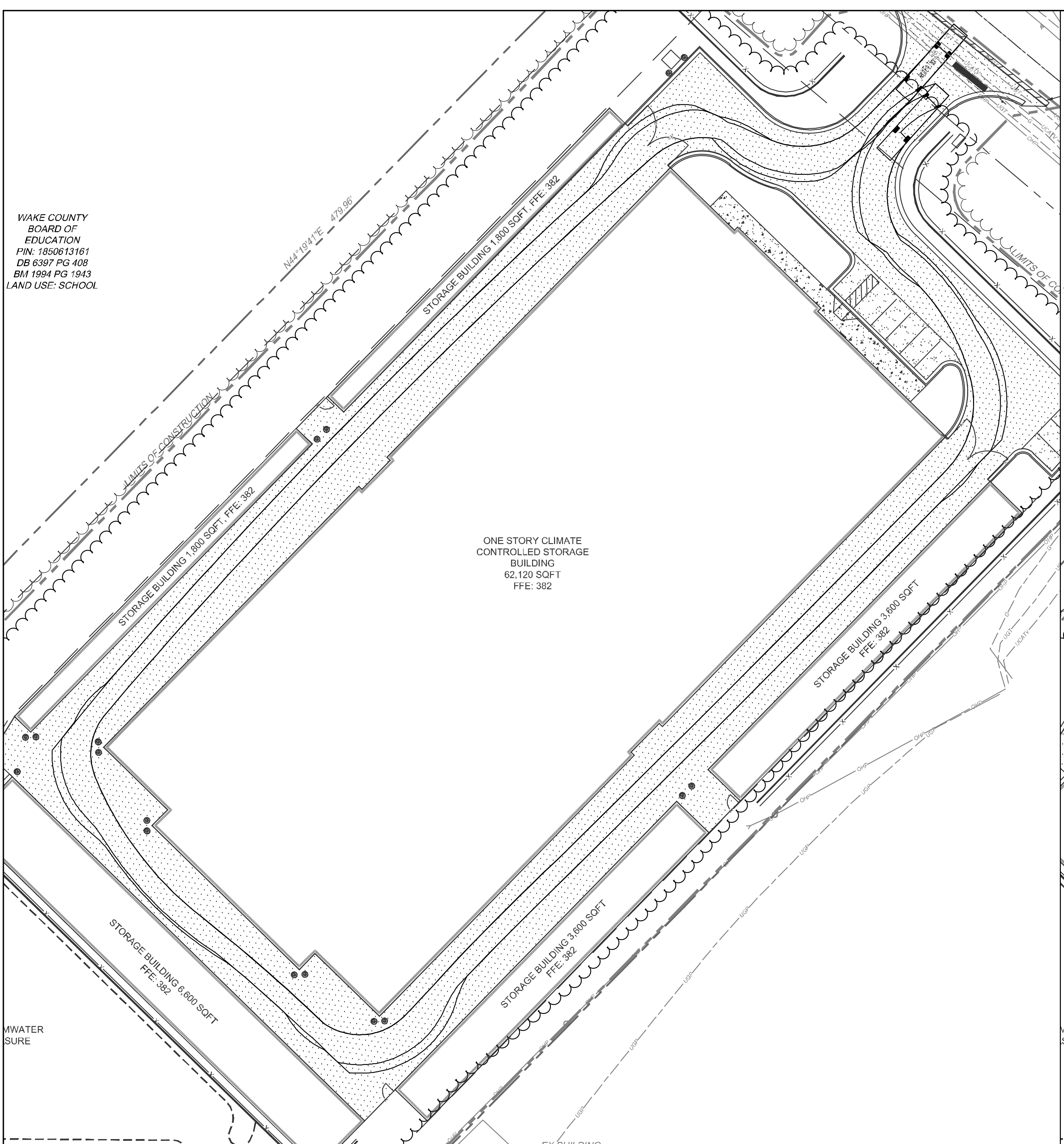
**JONES DAIRY STORAGE FACILITY**  
NORTH CAROLINA LICENSE NO. C-1652  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**SITE PLAN**

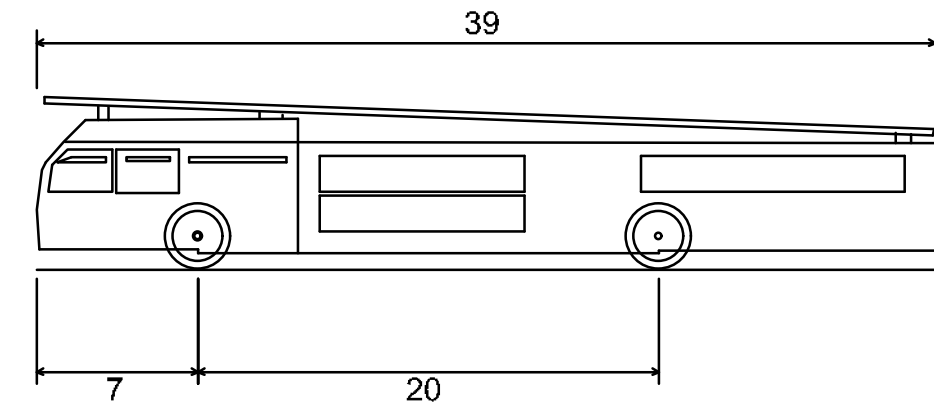
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SHEET NO. C2.0

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WAKE COUNTY  
BOARD OF  
EDUCATION  
PIN: 1850613161  
DB 6397 PG 408  
BM 1994 PG 1943  
LAND USE: SCHOOL

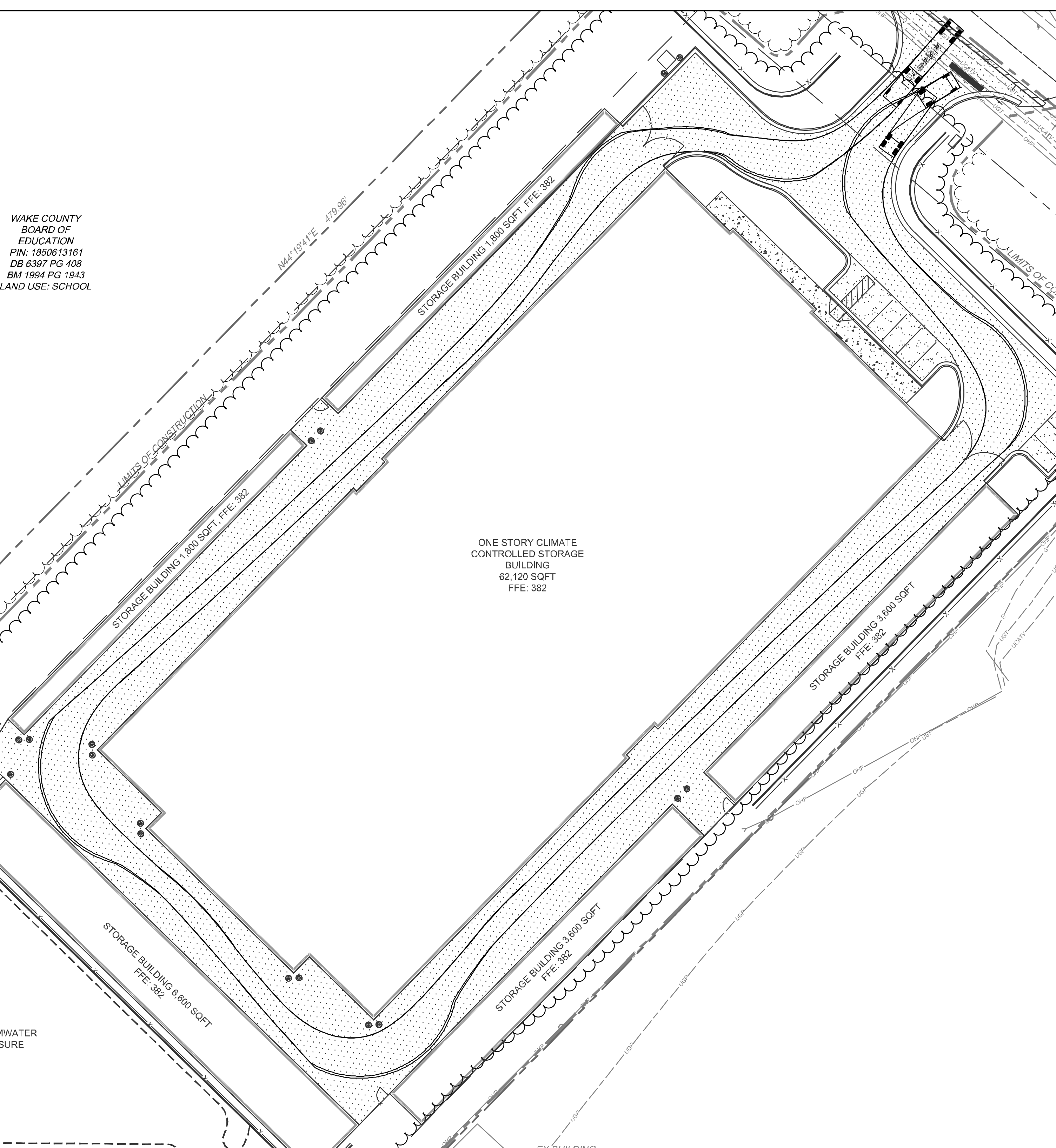


FIRE LADDER APPARATUS TURNING PLAN

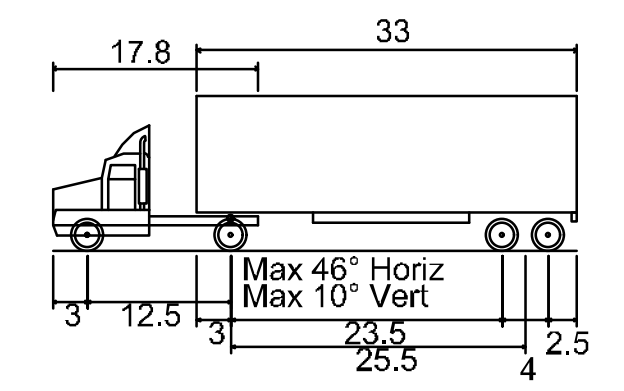


Aerial Fire Truck  
Overall Length 39.000ft  
Overall Width 8.167ft  
Overall Body Height 7.500ft  
Min Body Ground Clearance 0.750ft  
Track Width 8.167ft  
Lock-to-lock time 5.00s  
Max Wheel Angle 45.00°

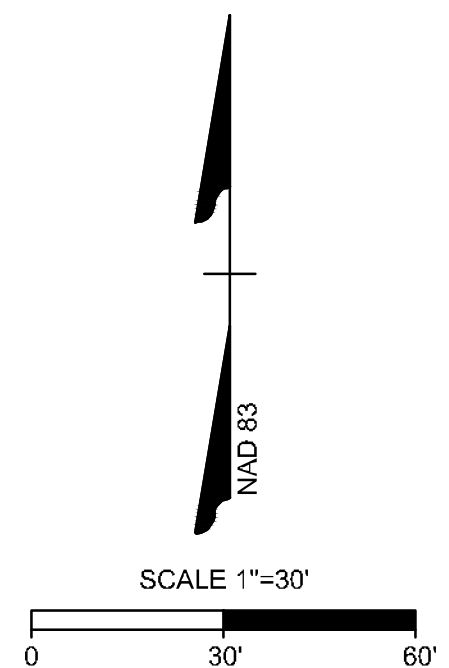
WAKE COUNTY  
BOARD OF  
EDUCATION  
PIN: 1850613161  
DB 6397 PG 408  
BM 1994 PG 1943  
LAND USE: SCHOOL



WB-40 INTERMEDIATE SEMI-TRAILER TURNING PLAN



WB-40 - Intermediate Semi-Trailer  
Overall Length 45.499ft  
Overall Width 8.000ft  
Overall Body Height 13.500ft  
Min Body Ground Clearance 1.334ft  
Track Width 8.000ft  
Lock-to-lock time 4.00s  
Max Steering Angle (Virtual) 20.30°



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DATE	REVISION DESCRIPTION	ADDRESSED TOWN OF ROLESVILLE COMMENTS
06/07/2023		
06/01/2023		

DATE 06/01/2023  
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

**VEHICULAR ROUTING PLAN**

JOB NO. 54832  
SHEET NO. C2.1

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STORM STRUCTURE TABLE			
STRUCTURE #	TOP	STRUCTURE HEIGHT	DESCRIPTION
A1	376.75	1.00'	30" FES
A2	381.45	7.24'	CONCRETE DROP INLET
A3	381.65	7.19'	CONCRETE DROP INLET
A4	381.40	6.63'	CONCRETE DROP INLET
A5	381.45	6.13'	CONCRETE DROP INLET
A6	381.45	5.03'	CONCRETE DROP INLET
A7	381.35	4.31'	CONCRETE CATCH BASIN
B1	381.77	6.62'	CONCRETE DROP INLET
B2	381.74	6.04'	CONCRETE DROP INLET
B3	381.97	5.89'	CONCRETE DROP INLET
B4	381.44	4.77'	CONCRETE DROP INLET
B5	381.44	3.69'	CONCRETE DROP INLET
B6	381.50	3.24'	CONCRETE CATCH BASIN
C1	380.00	6.90'	RISER
C2	374.19	1.00'	12" FES

STORM PIPE TABLE							
PIPE #	DIA	FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DESCRIPTION
A2-A1	30"	A2 - A1	374.21	374.00	0.50%	42.83 LF	30" HP PIPE*
A3-A2	30"	A3 - A2	374.46	374.31	0.50%	29.69 LF	30" HP PIPE
A4-A3	30"	A4 - A3	374.77	374.56	0.50%	42.55 LF	30" HP PIPE*
A5-A4	24"	A5 - A4	375.32	374.87	0.50%	89.50 LF	24" HP PIPE*
A6-A5	15"	A6 - A5	376.41	375.42	0.50%	198.55 LF	15" HP PIPE*
A7-A6	12"	A7 - A6	377.04	376.51	0.50%	106.64 LF	12" HP PIPE*
B1-A4	24"	B1 - A4	375.15	374.87	0.50%	56.51 LF	24" HP PIPE*
B2-B1	24"	B2 - B1	375.70	375.25	0.50%	90.01 LF	24" HP PIPE*
B3-B2	24"	B3 - B2	376.08	375.80	0.50%	55.92 LF	24" HP PIPE*
B4-B3	18"	B4 - B3	376.66	376.18	0.50%	96.72 LF	18" HP PIPE*
B5-B4	18"	B5 - B4	377.76	376.76	0.50%	199.09 LF	18" HP PIPE*
B6-B5	12"	B6 - B5	378.35	377.86	0.50%	99.00 LF	12" HP PIPE*
C1-C2	12"	C1 - C2	373.50	373.02	0.88%	54.56 LF	12" RCP

\*DENOTES GASKETED PIPE

**GRADING & DRAINAGE NOTES**

- ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE ROLES/VLVE, 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 NCEQ LAND QUALITY REQUIREMENTS AND AS DIRECTED BY THE NCEQ 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 TOP SOIL 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 STORM SEWER CLEANOUT
- 2 STORM DRAINAGE TRENCHES
- 3 FLARED END SECTION
- 4 YARD INLET
- 5 CONCRETE DROP INLET
- 6 CONCRETE CATCH BASIN
- 6 RIP RAP OUTLET PROTECTION (SEE EROSION CONTROL PLAN)
- A PROVIDE SMOOTH PAVING TRANSITION
- B CONCRETE RISER STRUCTURE (SEE SHEET C3.3)

**PRELIMINARY PLANS**



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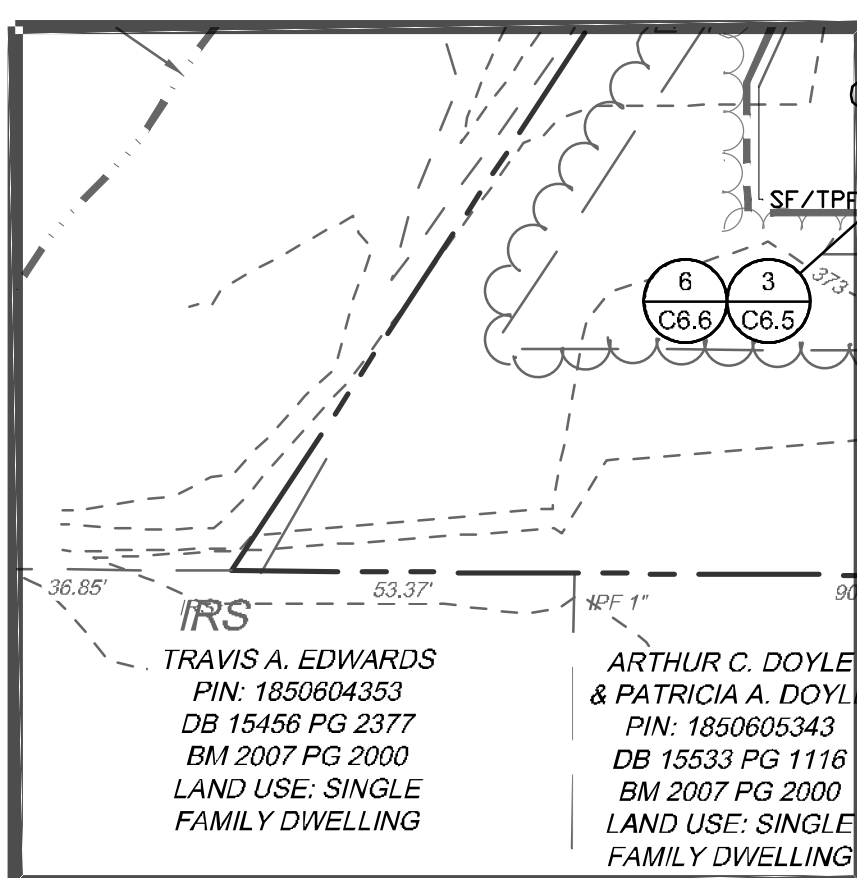
DATE: 06/01/2023  
 DRAWN BY: J. HAYES  
 DESIGNED BY: G. FRANK  
 CHECKED BY: G. FRANK  
 SCALE: AS SHOWN

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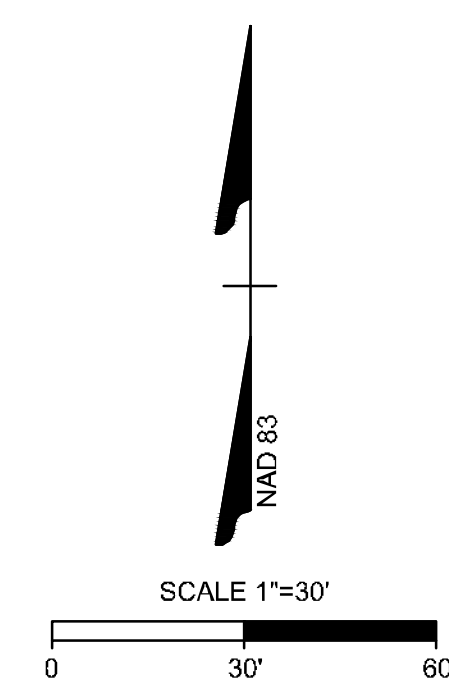
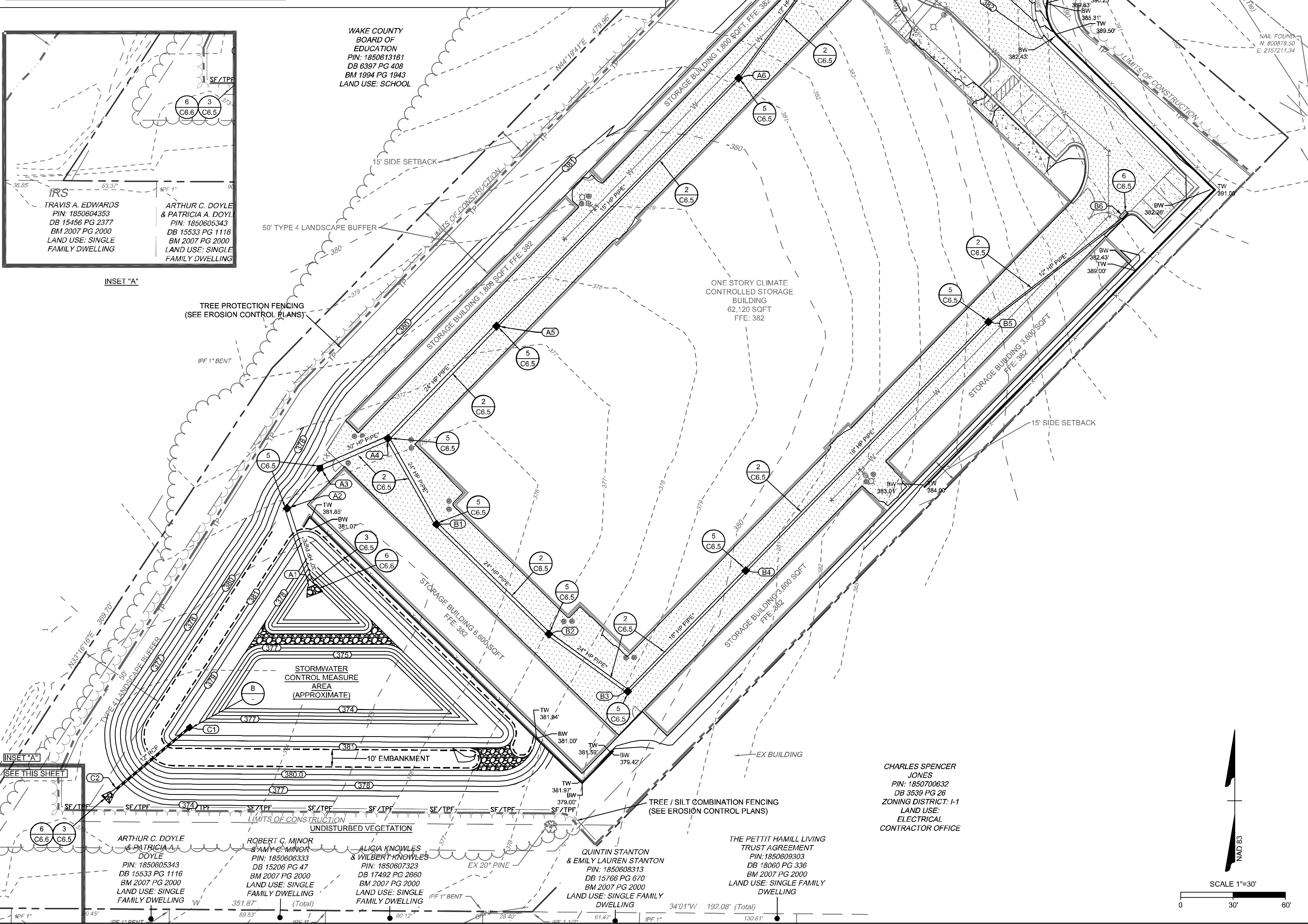
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 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**GRADING & DRAINAGE PLAN**

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 SHEET NO. C3.0

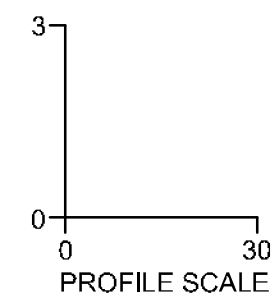
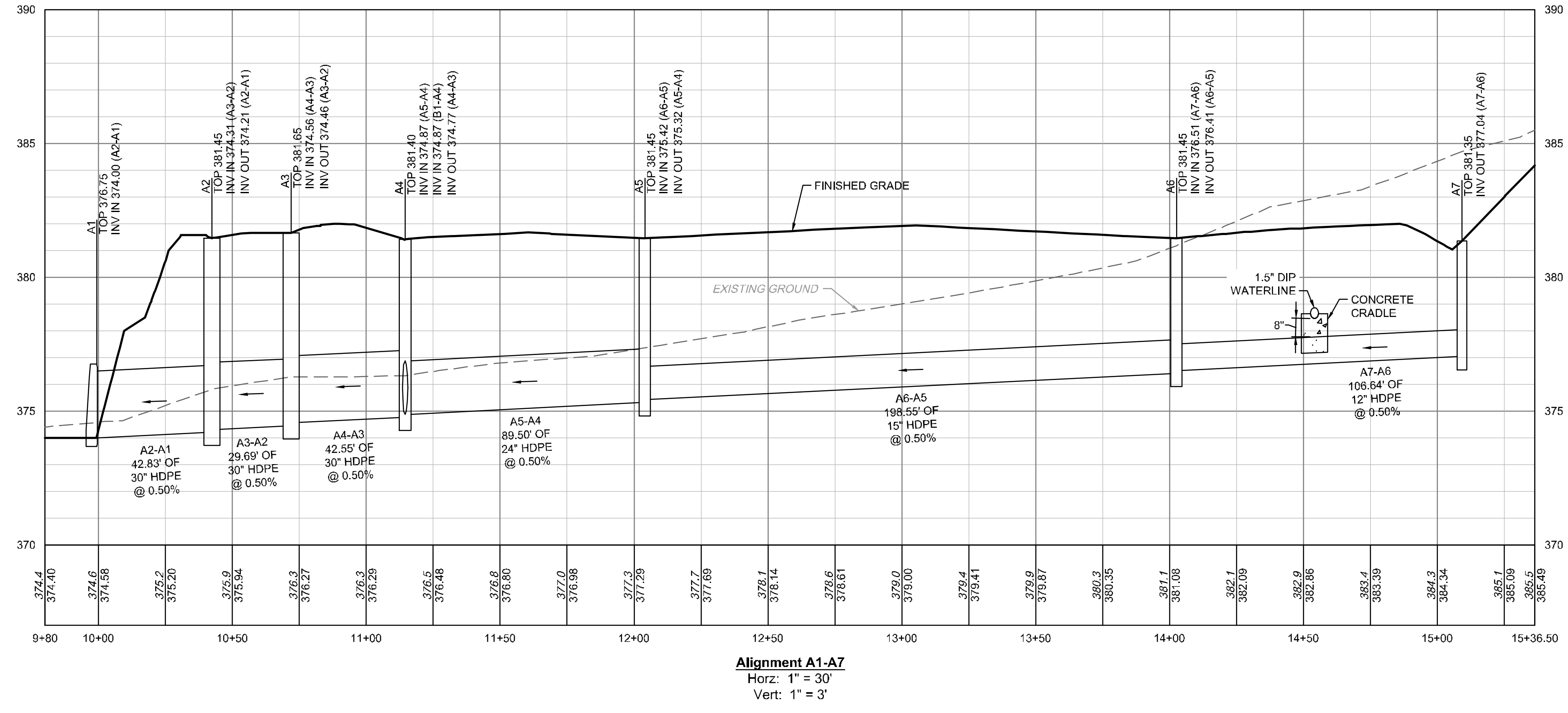
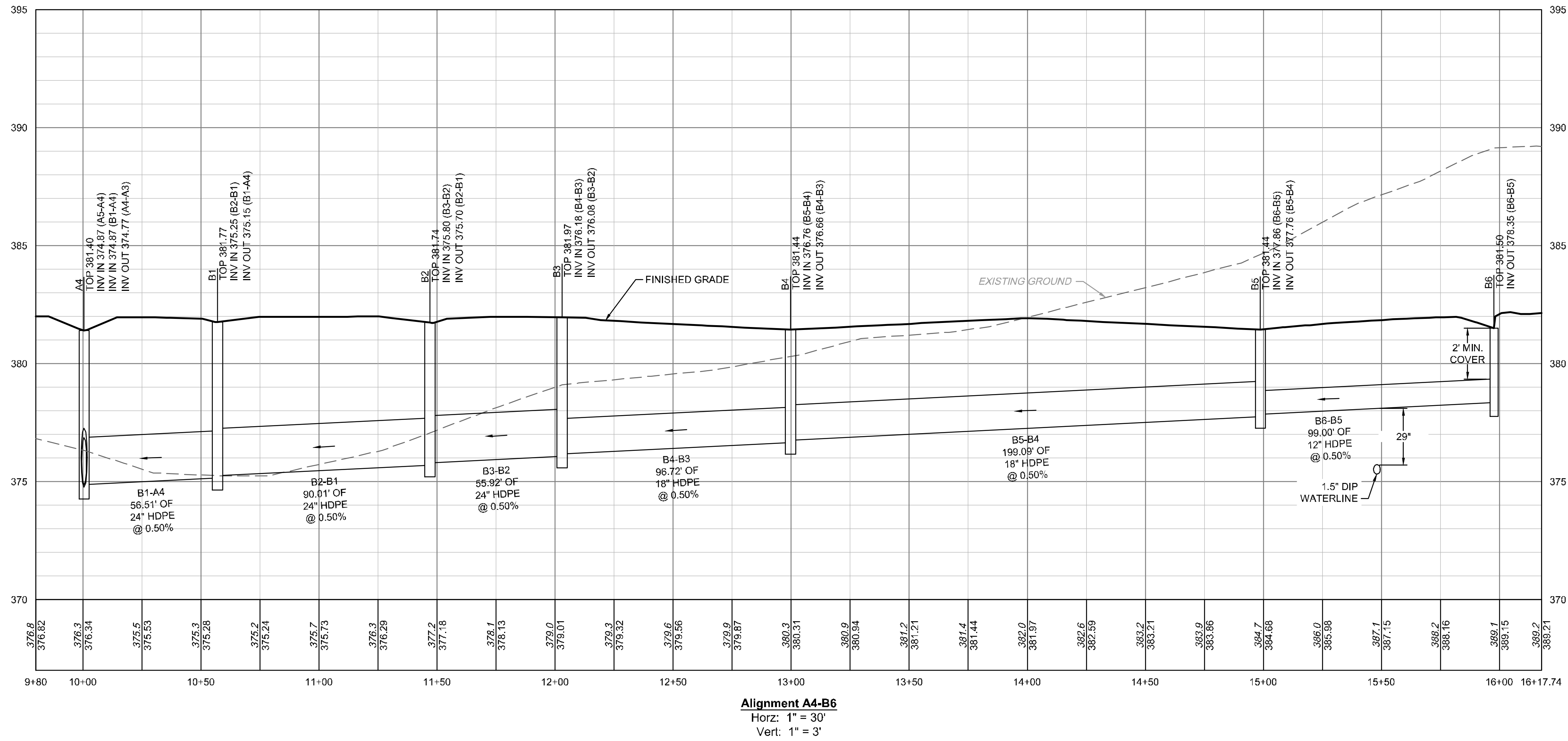


INSET "A"



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SCALE	AS SHOWN

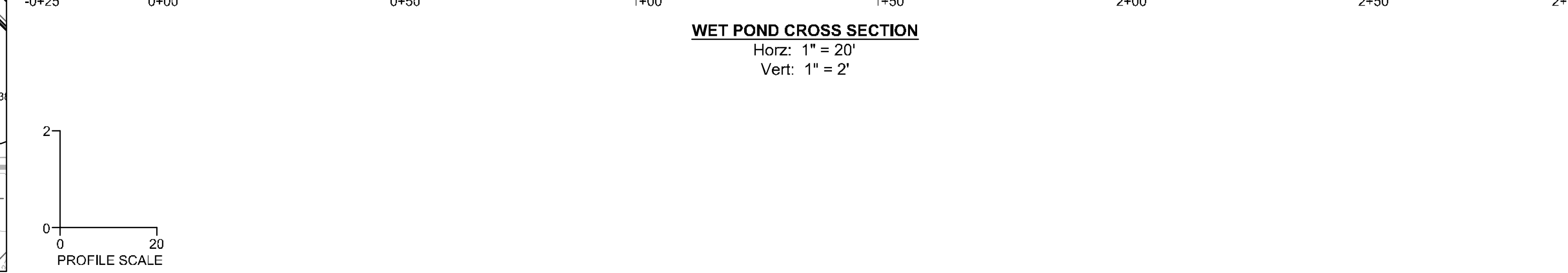
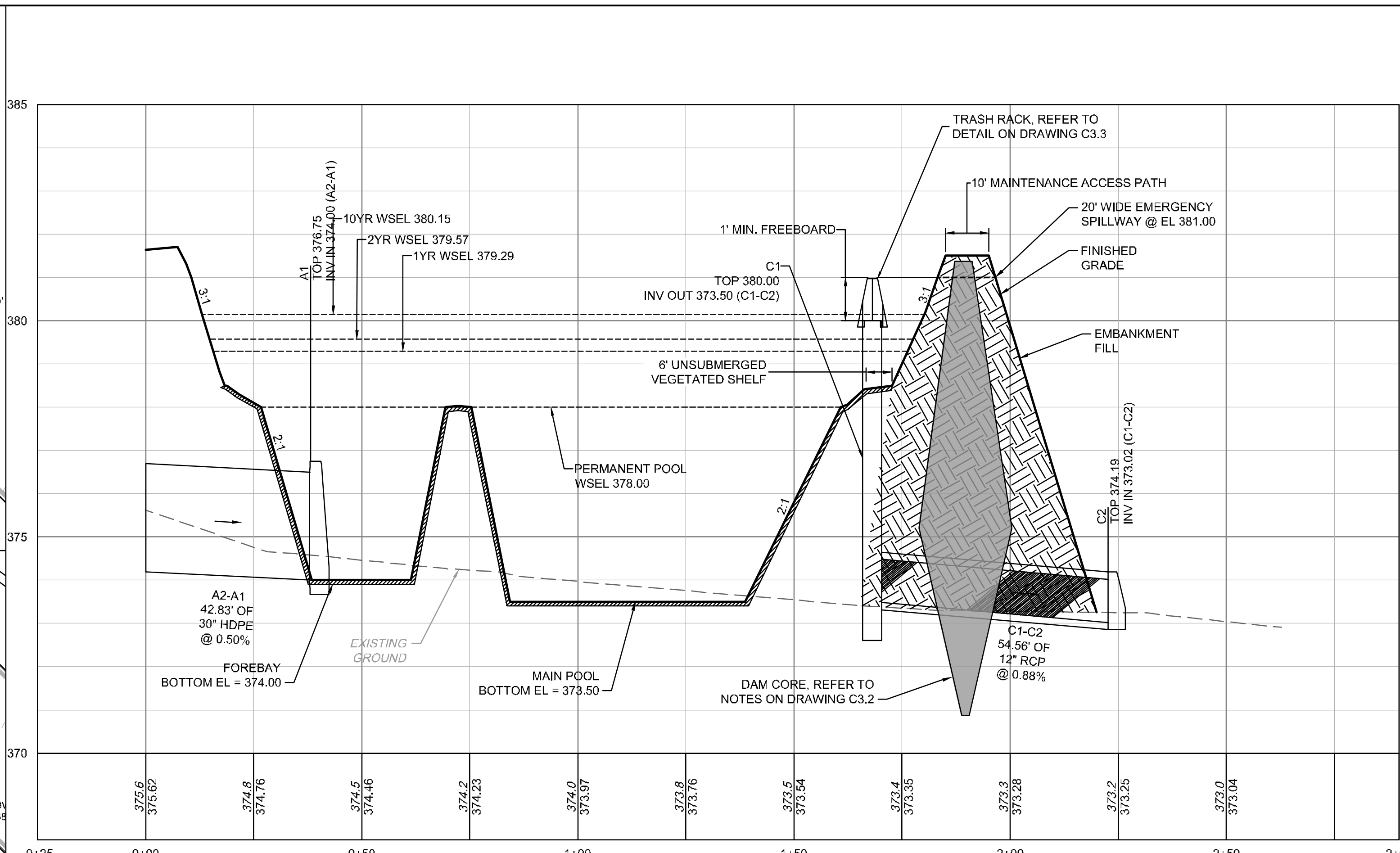
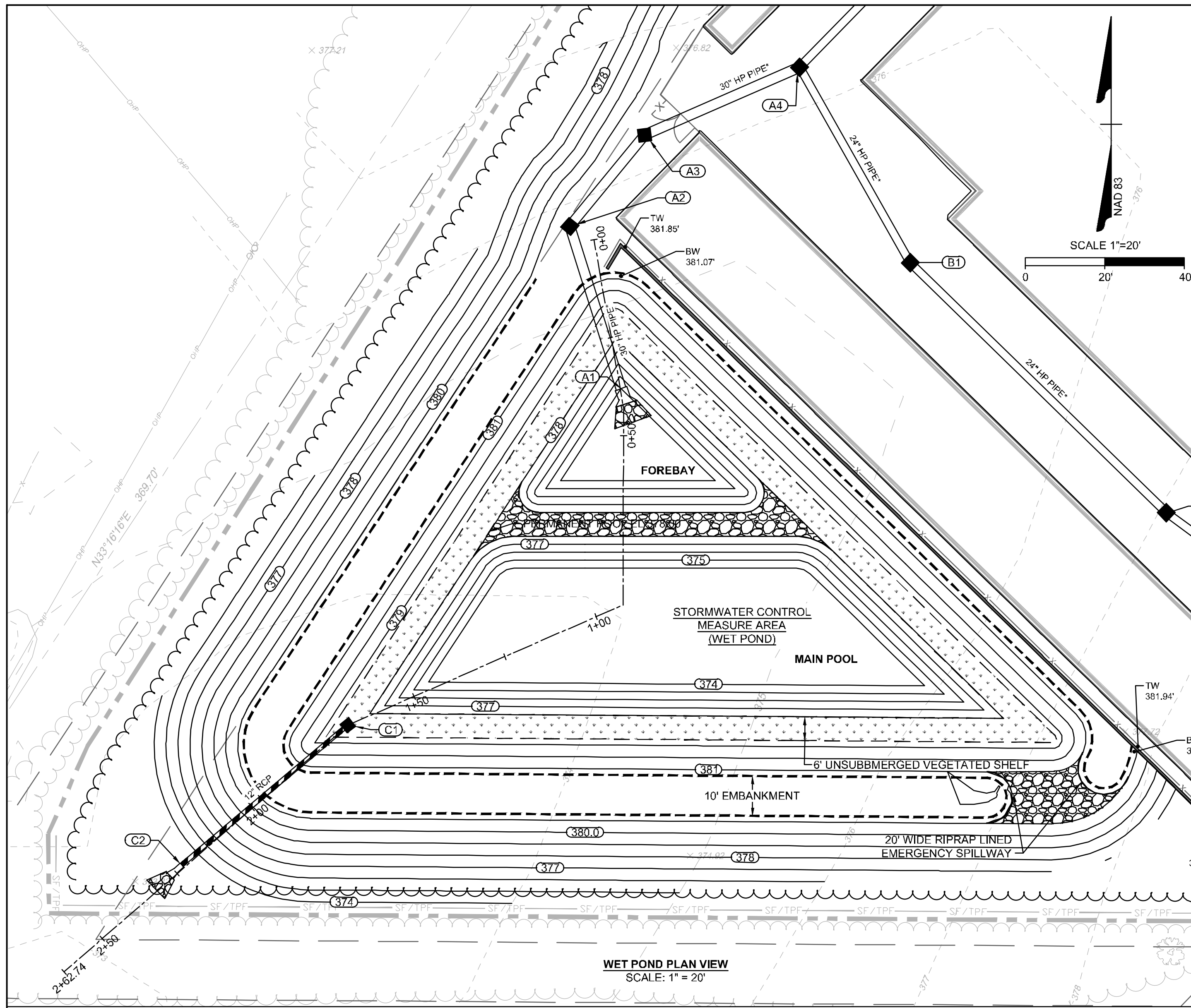
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 NORTH CAROLINA LICENSE NO. C-1652

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

**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 MAN-HOLE 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 AS 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), NDEQ 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 DOWELING 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 HYDROSEEDED.

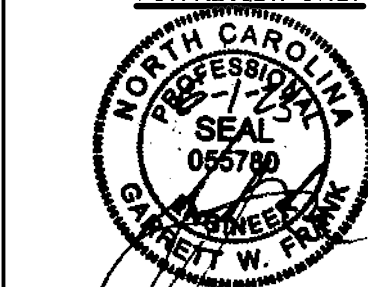
**TESTING, OBSERVATION, AND CERTIFICATION**

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 SCMs OF THE SIZE AND SCOPE COVERED BY THESE STANDARDS AND GUIDELINES.

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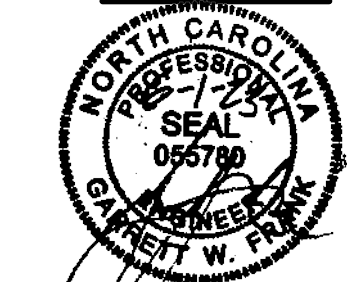
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**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**SCM PLAN & PROFILE**

JOB NO. 54832  
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DATE	REVISION DESCRIPTION
06/07/2023 <td>ADDED TOWN OF ROLESVILLE COMMENTS</td>	ADDED TOWN OF ROLESVILLE COMMENTS
06/01/2023 <td></td>	

DRAWN BY  
J. HAYES

DESIGNED BY  
G. FRANK

CHECKED BY  
G. FRANK

SCALE  
AS SHOWN

# TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

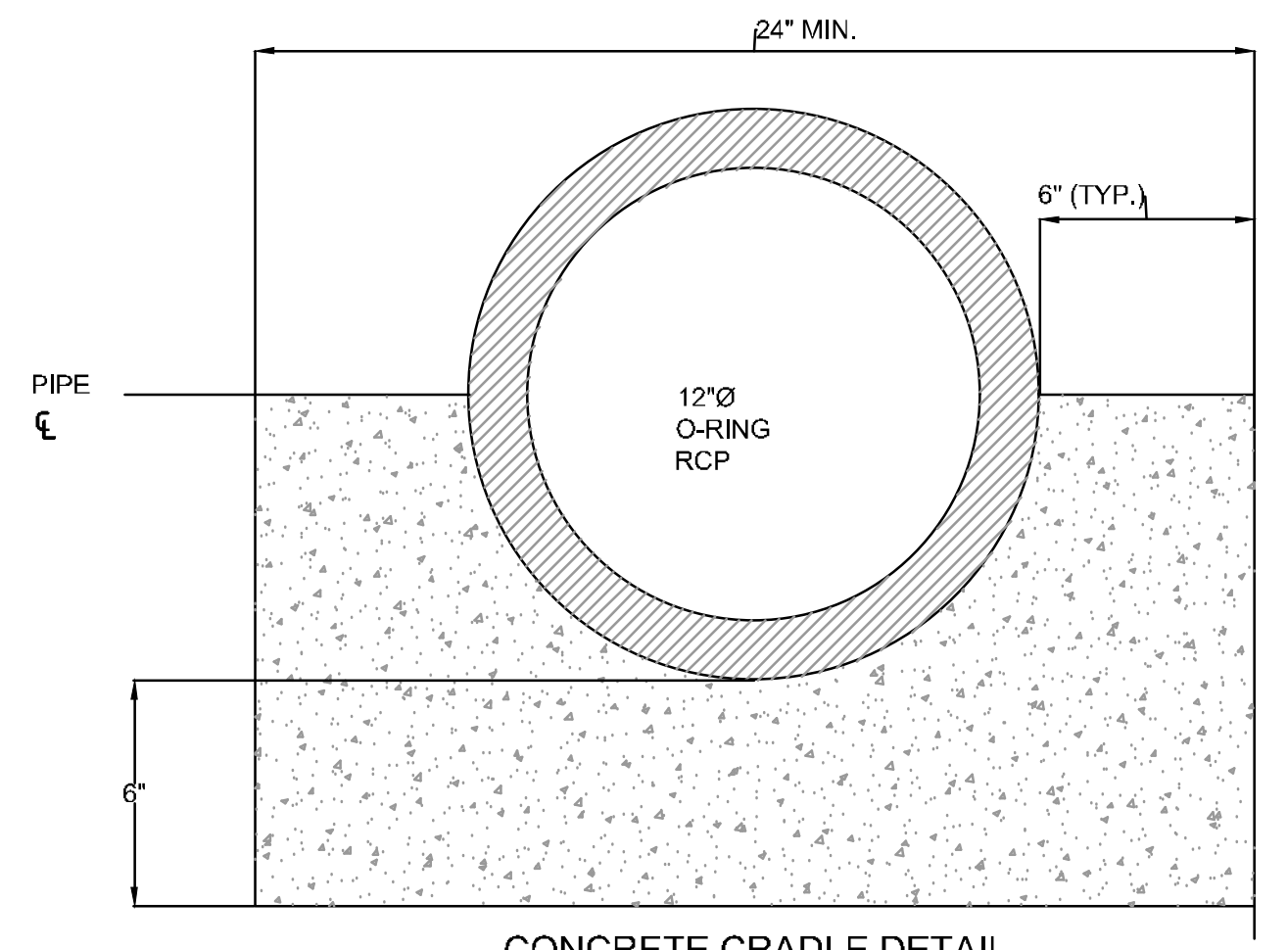
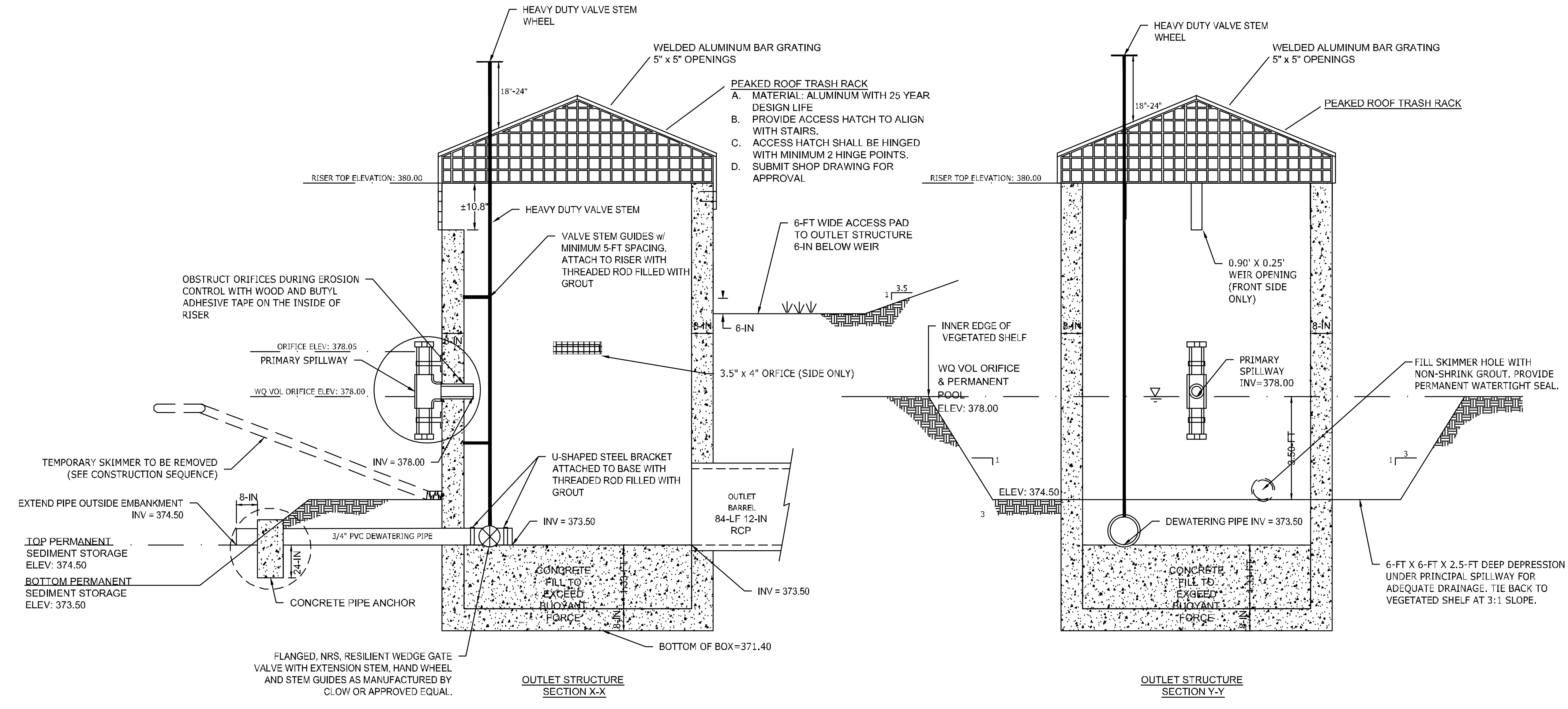
## JONES DAIRY STORAGE FACILITY

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

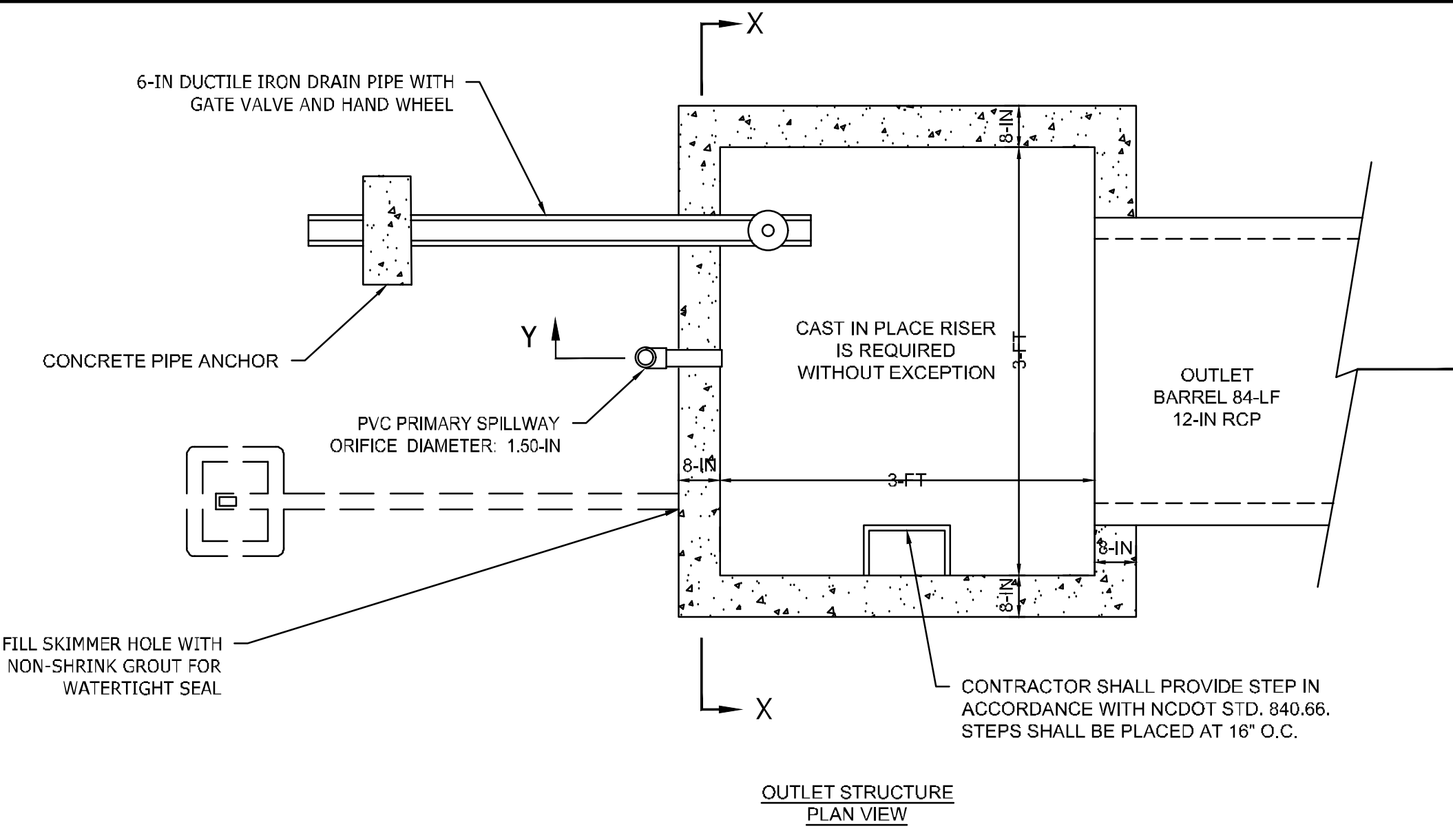
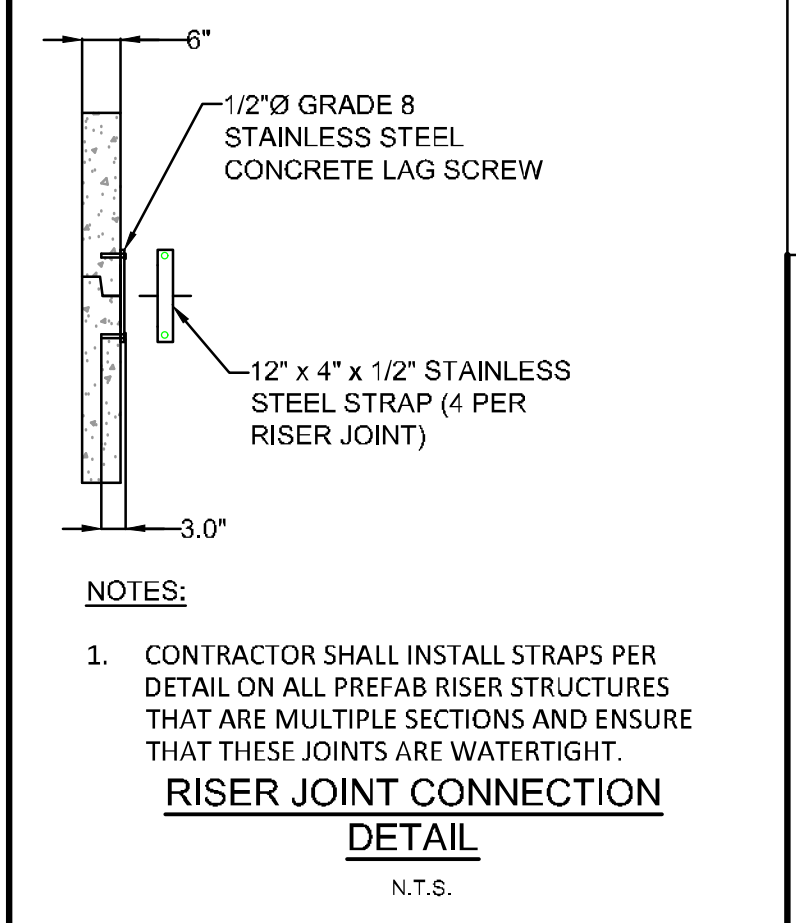
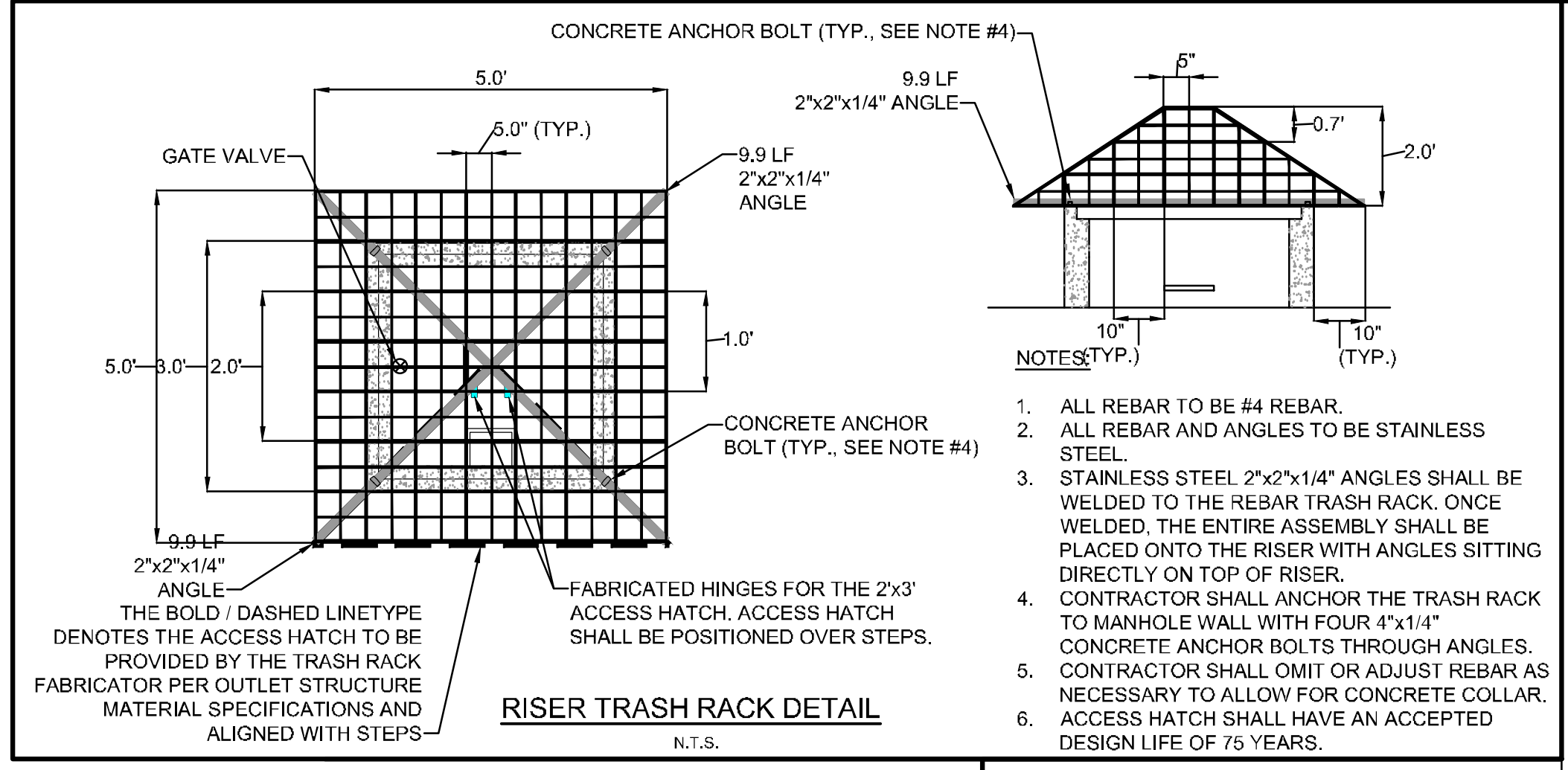
JOB NO.  
**54832**

SHEET NO.  
**C3.3**

SCM NOTES & DETAILS

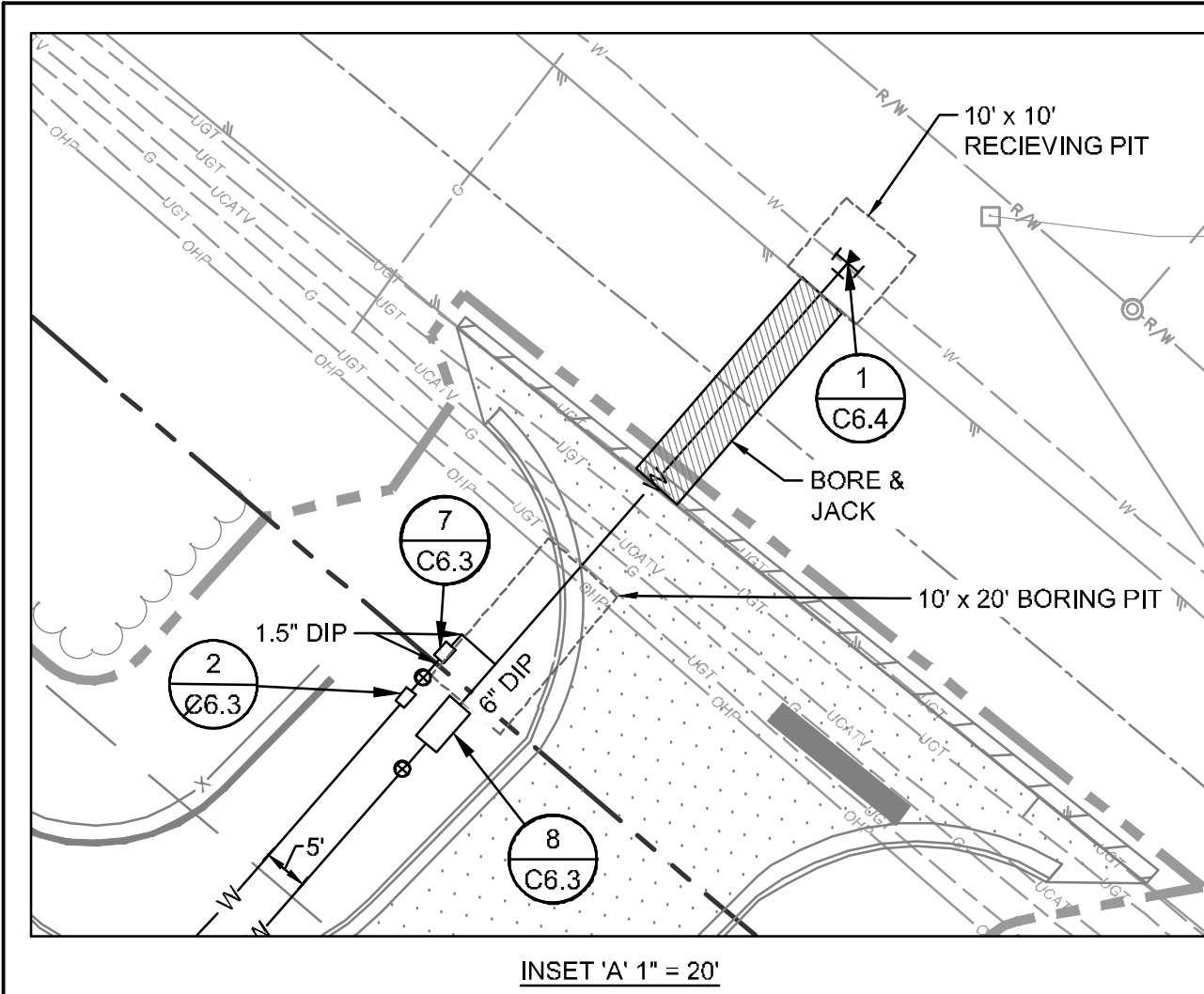


- NOTES:
- CONCRETE CRADLE SHALL INCLUDE EXPANSION JOINTS EVERY 8 FEET ON CENTER AT PIPE JOINTS.
  - REINFORCED CONCRETE STRENGTH TO BE 3,000 PSI.
  - NO FLOWABLE FILL ALLOWED.



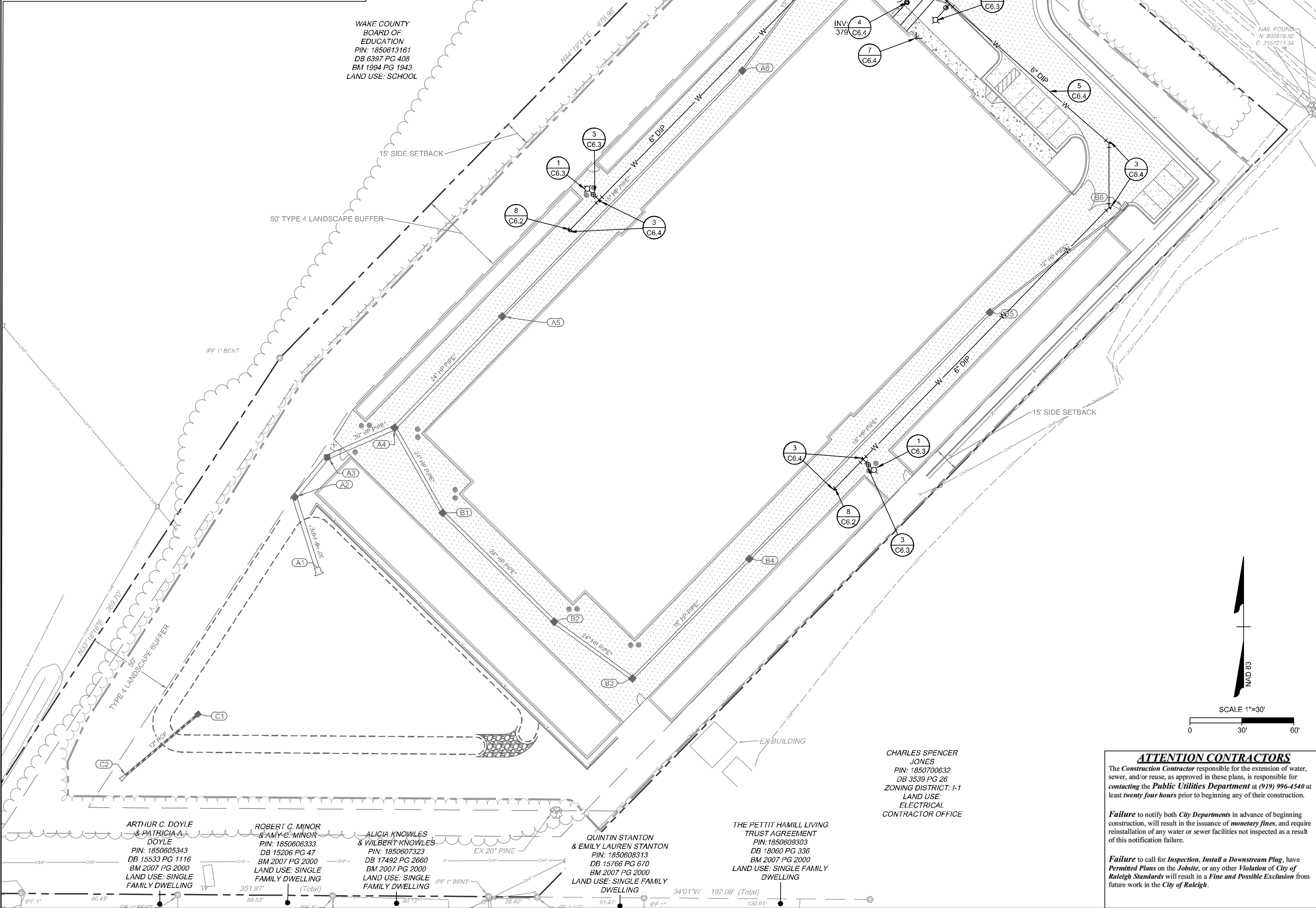
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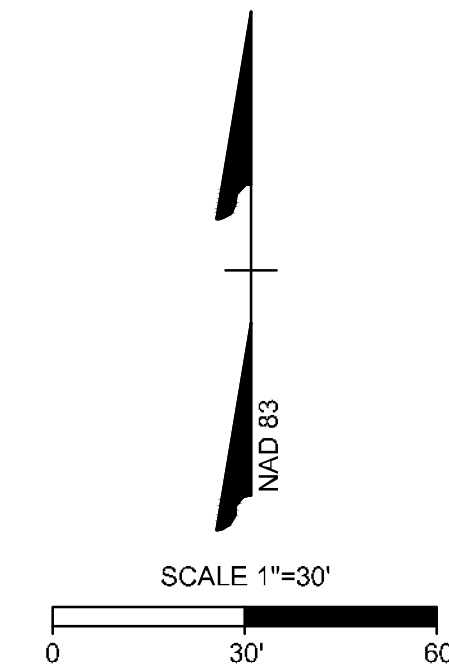


INSET 'A' 1" = 20'

WAKE COUNTY BOARD OF EDUCATION  
 PIN: 1850613181  
 DB 0397 PG 408  
 BM 1994 PG 1943  
 LAND USE: SCHOOL



CHARLES SPENCER JONES  
 PIN: 1850700632  
 DB 3539 PG 28  
 ZONING DISTRICT: I-1  
 LAND USE: ELECTRICAL CONTRACTOR OFFICE



**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.  
 Failure to call for inspection, install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

**CITY OF RALEIGH UTILITY NOTES**

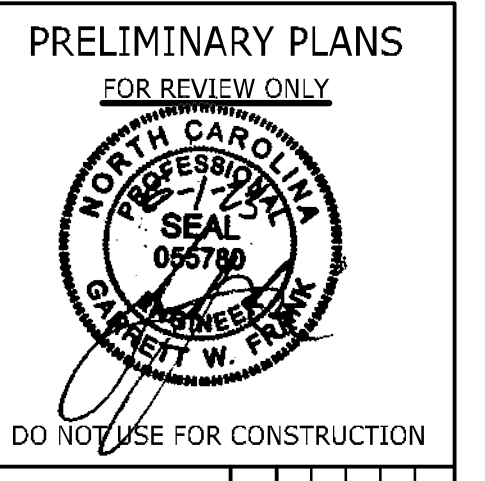
- UTILITY SEPARATION REQUIREMENTS:
  - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN 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 ENCASMENT 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	8 C6.3	FIRE SERVICE BACKFLOW (6" RPDA)
1 C6.3	FIRE HYDRANT ASSEMBLY	1 C6.4	TAPPING SLEEVE w/ GATE VALVE
2 C6.3	1.5" RPZ BACKFLOW PREVENTER (DOMESTIC SERVICE)	2 C6.4	POST INDICATOR VALVE ASSEMBLY
3 C6.3	GATE VALVE ASSEMBLY	3 C6.4	THRUST BLOCKING (TYP.)
4 C6.3	SANITARY SEWER MANHOLE	4 C6.4	SANITARY CLEANOUT
5 C6.3	SANITARY SEWER MANHOLE RING & COVER	5 C6.4	UTILITY TRENCHING AND BACKFILL
6 C6.3	SEWER MANHOLE STEPS	6 C6.4	FIRE, DOMESTIC, & IRRIGATION WALL MOUNTED FIRE DEPARTMENT CONNECTION (STORZ)
7 C6.3	1-1/2" WATER METER AND VAULT		

**Public Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # \_\_\_\_\_  
 Authorization to Construct \_\_\_\_\_  
 Date \_\_\_\_\_

**CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION**  
 ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A CITY OF RALEIGH REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE WITH THE PLANS KEPT ON FILE WITH THE CITY. THIS ELECTRONIC APPROVAL MAY NOT BE EDITED ONCE ISSUED. ANY MODIFICATION TO THIS APPROVAL ONCE ISSUED WILL INVALIDATE THIS APPROVAL.  
 CITY OF RALEIGH DEVELOPMENT APPROVAL \_\_\_\_\_  
 RALEIGH WATER REVIEW OFFICER \_\_\_\_\_



THIS DRAWING PREPARED AT THE RALEIGH OFFICE  
 5410 Trinity Road, Suite 102 | Raleigh, NC 27607  
 TEL 919.866.9951 FAX 919.833.8174 www.timmons.com

REVISION DESCRIPTION	DATE
ADDED TOWN OF ROLESVILLE COMMENTS <td>06/07/2023</td>	06/07/2023

YOUR VISION. ACHIEVED THROUGH OURS.

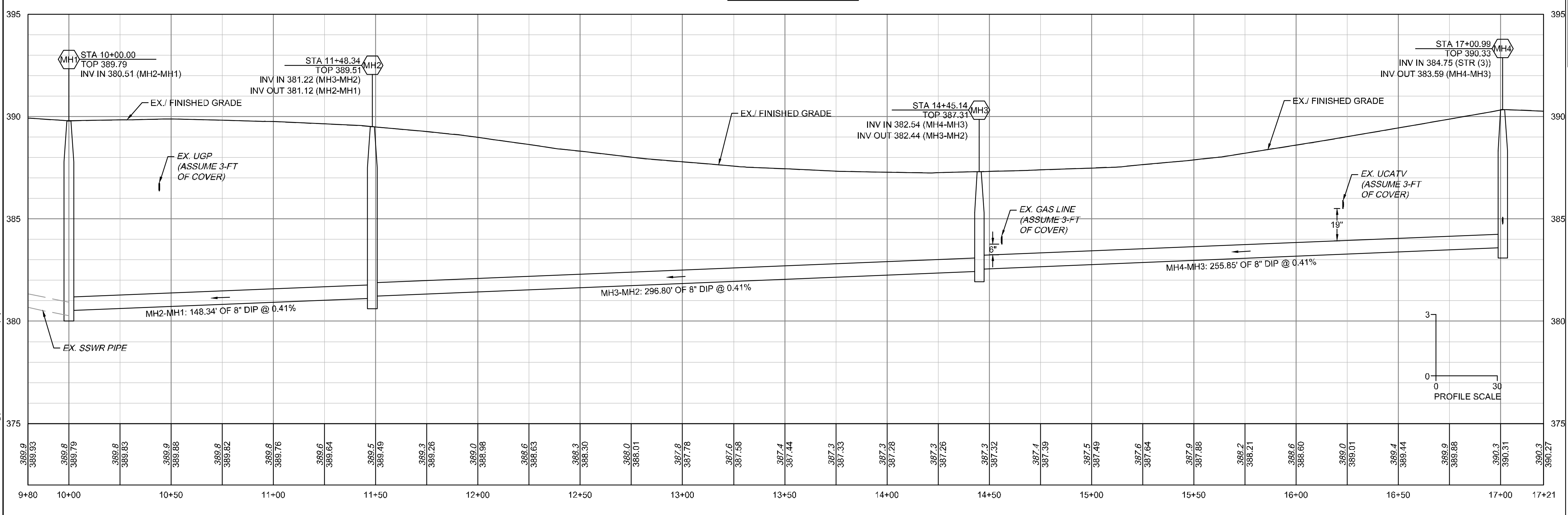
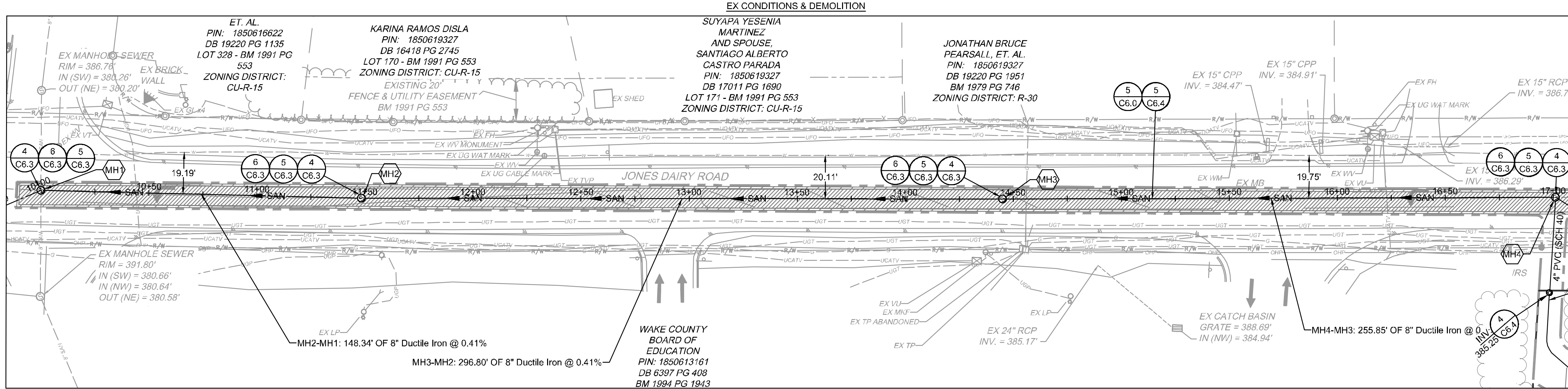
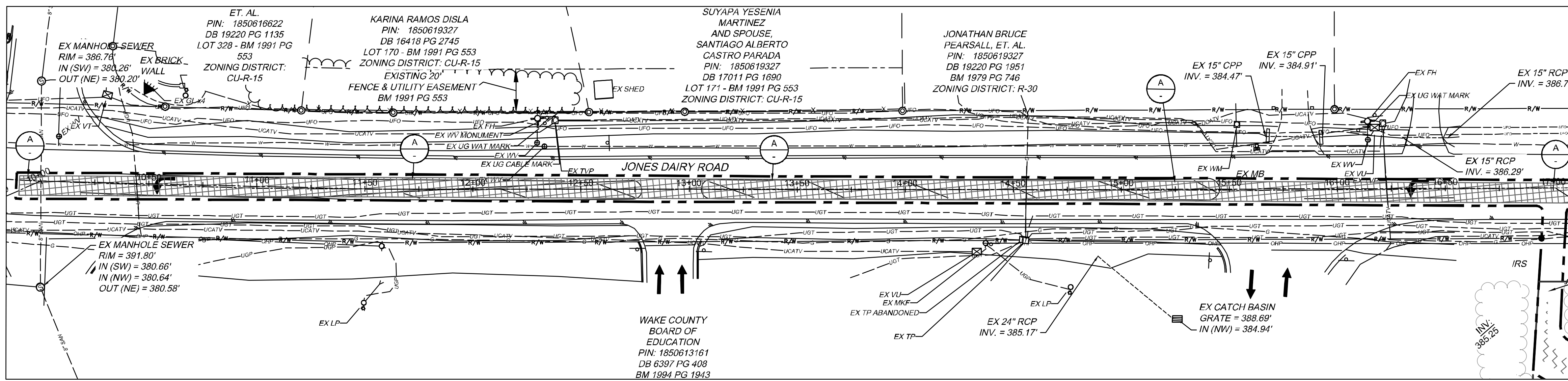
DATE	DATE
06/01/2023	

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**

JOB NO.	SHEET NO.
54832	C4.0

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**SANITARY SEWER SCHEDULE**

MANHOLE	TOP	INVERT	DIAMETER	LENGTH	SLOPE	BEARING
MH1	389.79	380.51 (SE)	8"	148.34 LF	0.41%	N47° 48' 15\"/>
MH2	389.51	381.22 (SE)	8"	296.80 LF	0.41%	N49° 08' 39\"/>
MH3	387.31	382.44 (SE)	8"	255.85 LF	0.41%	N49° 08' 39\"/>
MH4	390.33	384.75 (SW)	8"	95.34 LF	0.42%	N41° 04' 56\"/>

**PIPE TABLE**

PIPE NAME	SIZE	LENGTH	SLOPE	BEARING
MH2-MH1	8"	148.34 LF	0.41%	N47° 48' 15\"/>
MH4-MH3	8"	255.85 LF	0.41%	N49° 08' 39\"/>
MH3-MH2	8"	296.80 LF	0.41%	N49° 08' 39\"/>
STR (1)	8"	95.34 LF	0.42%	N41° 04' 56\"/>
STR (3)	4"	44.29 LF	1.13%	N44° 20' 58\"/>

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City of Raleigh  
Public Utilities Department Permit # \_\_\_\_\_  
Authorization to Construct \_\_\_\_\_  
Date \_\_\_\_\_

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

**ATTENTION CONTRACTORS**

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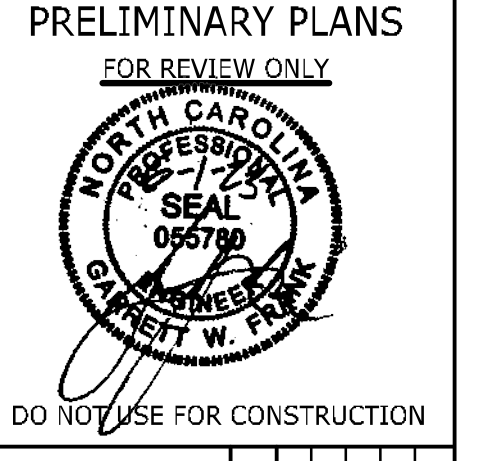
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CITY OF RALEIGH DEVELOPMENT APPROVAL \_\_\_\_\_  
RALEIGH WATER REVIEW OFFICER \_\_\_\_\_



**REVISION DESCRIPTION**

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06/07/2023	YOUR VISION ACHIEVED THROUGH OURS.

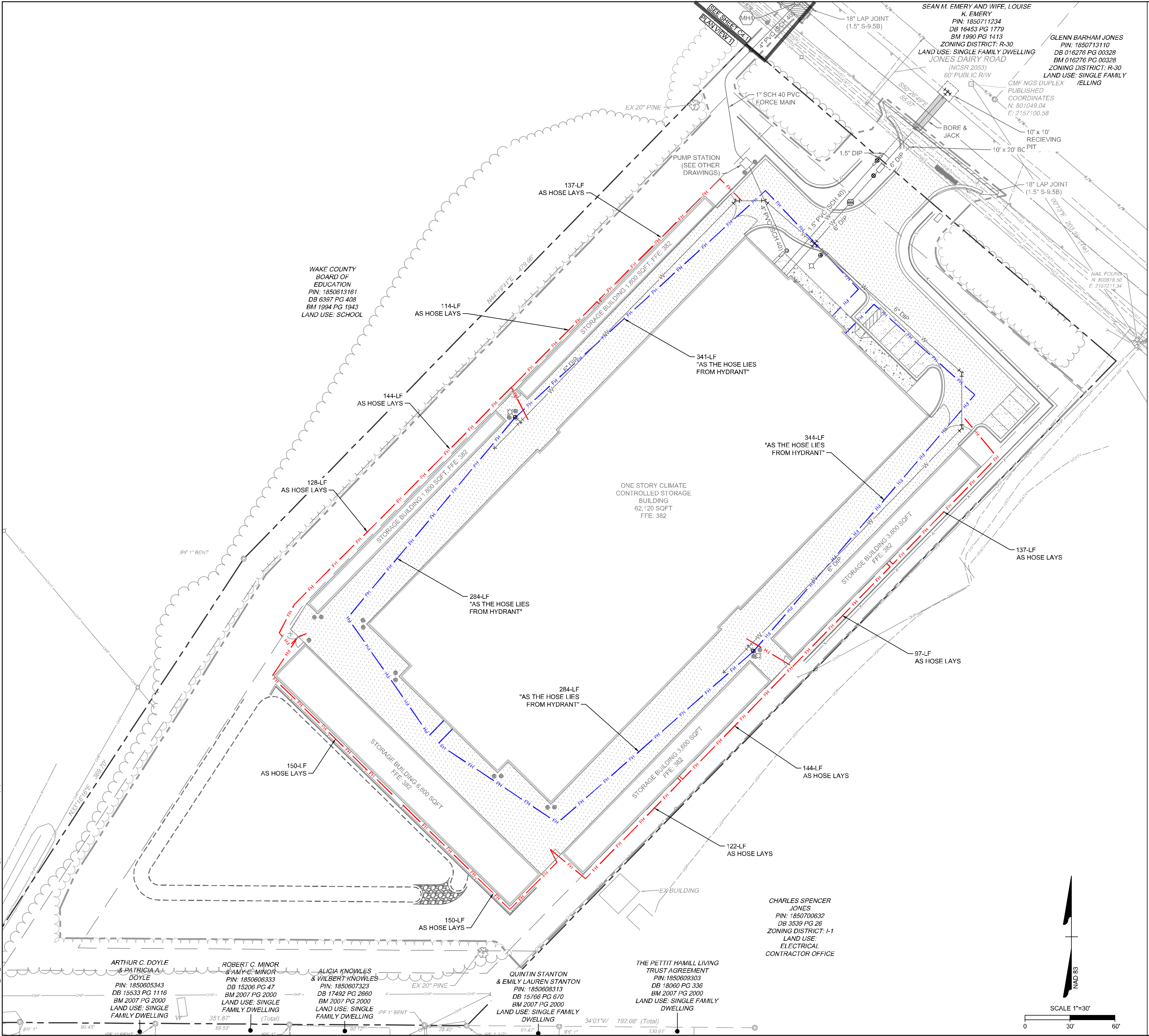
DATE: 06/01/2023  
DRAWN BY: J. HAYES  
DESIGNED BY: G. FRANK  
CHECKED BY: G. FRANK  
SCALE: AS SHOWN

**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. 54832  
SHEET NO. C4.1



PRELIMINARY PLANS  
FOR REVIEW ONLY



DO NOT USE FOR CONSTRUCTION

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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.

DATE	REVISION DESCRIPTION
06/01/2023	ADDED TOWN OF ROLESVILLE COMMENTS

DATE	06/01/2023
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

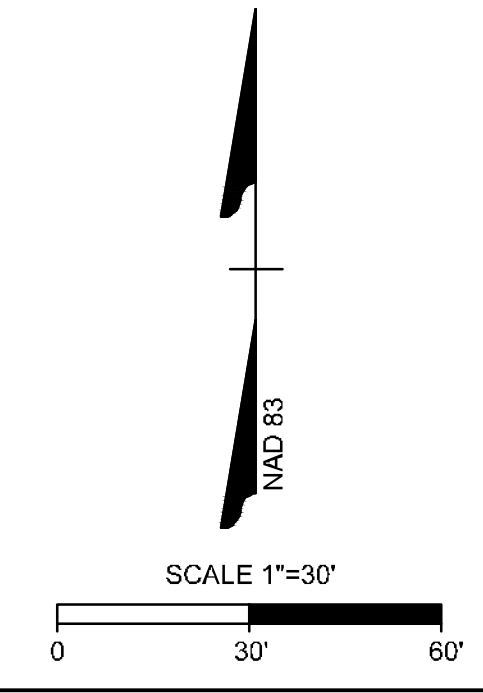
**FIRE HOSE LAY PLAN**

JOB NO. 54832  
SHEET NO. C4.2

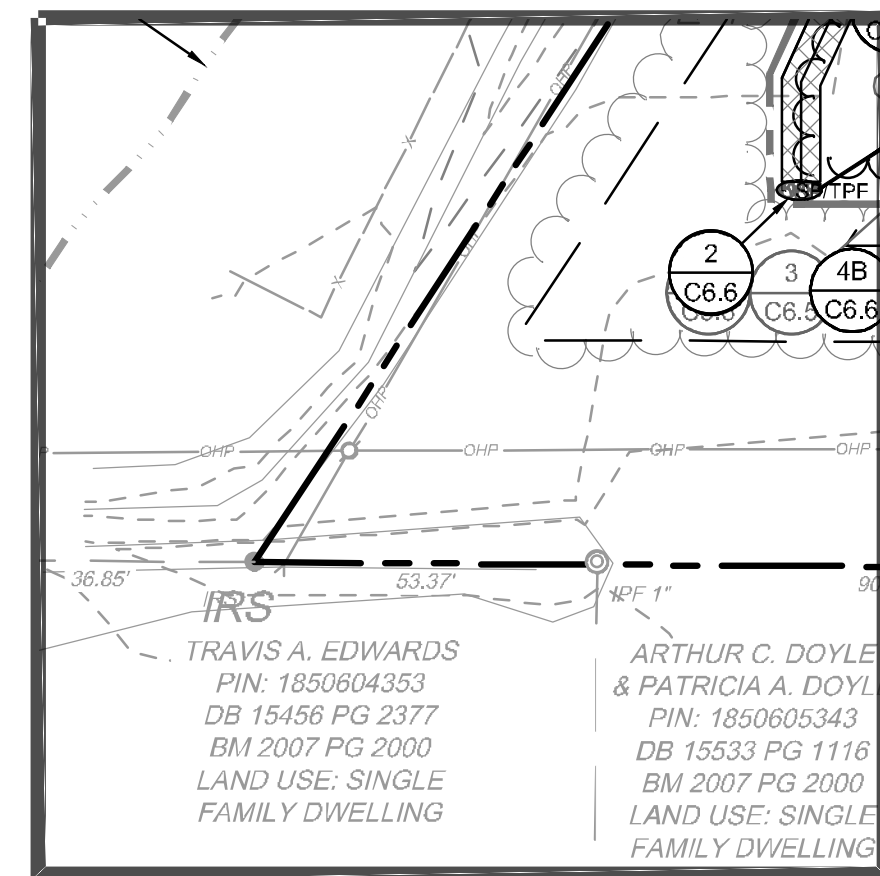
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CITY OF RALEIGH DEVELOPMENT APPROVAL  
RALEIGH WATER REVIEW OFFICER



S:\3334832-Rolesville\_Site\_Short\DWG\Sheet\CD\54832-333-C4-C4-UTIL.dwg | Plotted on 06/20/2023 7:56 AM | by Gurnell Frank



INSET "A"

TRAVIS A. EDWARDS  
PIN: 1850604353  
DB 15456 PG 2377  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ARTHUR C. DOYLE & PATRICIA A. DOYLE  
PIN: 1850605343  
DB 15533 PG 1116  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

WAKE COUNTY BOARD OF EDUCATION  
PIN: 1850613181  
DB 6397 PG 409  
BM 1994 PG 1943  
LAND USE: SCHOOL

SUZANNE SHOAF WARD  
PIN: 1850608722  
DB 16009 PG 36  
ZONING DISTRICT: I-1  
AREA: 5.50 ACRES

ROBERT C. MINOR & AMY C. MINOR  
PIN: 1850603333  
DB 15206 PG 47  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ALIGIA KNOWLES & WILBERT KNOWLES  
PIN: 1850607323  
DB 17492 PG 2860  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

QUINTIN STANTON & EMILY LAUREN STANTON  
PIN: 1850608313  
DB 15766 PG 670  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

THE PETTIT HAMILL LIVING TRUST AGREEMENT  
PIN: 1850609303  
DB 18060 PG 336  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

CHARLES SPENCER JONES  
PIN: 1850700632  
DB 3519 PG 28  
ZONING DISTRICT: I-1  
LAND USE: ELECTRICAL CONTRACTOR OFFICE

T.B.M. Timmons Group CP #2  
Capped 5/8" Rebar Set  
N: 800,861.25'  
E: 2,157,204.12'  
Elev.: 392.28'

SEAN M. EMERY AND WIFE, LOUISE K. EMERY  
PIN: 185071234  
DB 18453 PG 1779  
BM 1990 PG 1413  
ZONING DISTRICT: R-30  
LAND USE: SINGLE FAMILY DWELLING JONES DAIRY ROAD (NCSR 2053)  
60' PUBLIC R/W

GLENN BARHAM JONES  
PIN: 1850713110  
DB 016276 PG 00328  
BM 016276 PG 00328  
ZONING DISTRICT: R-30  
LAND USE: SINGLE FAMILY DWELLING

ARTHUR C. DOYLE & PATRICIA A. DOYLE  
PIN: 1850605343  
DB 15533 PG 1116  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

4.5' NORTH OF S/L FLOWER BED  
AREA: 63 SF

SKIMMER POND

CLEAN WATER DIVERSION DITCH "A"

CLEAN WATER DIVERSION DITCH "B"

EX. TREE LINE

EX. TREE LINE

TREE PROTECTION FENCE

IPF 1" BENT

IPF 1" BENT

IPF 1" BENT

IPF 1" BENT

EX. BUILDING

CLEAN WATER DIVERSION BERM

EX. 20" PINE

EX. 20" PINE

EX. 20" PINE

EX. 20" PINE

EX. TREE LINE

EX. TREE LINE

EX. TREE LINE

EX. TREE LINE

EX. TREE LINE

EX. TREE LINE

EX. TREE LINE

EX. TREE LINE

EX. TREE LINE

EX. TREE LINE

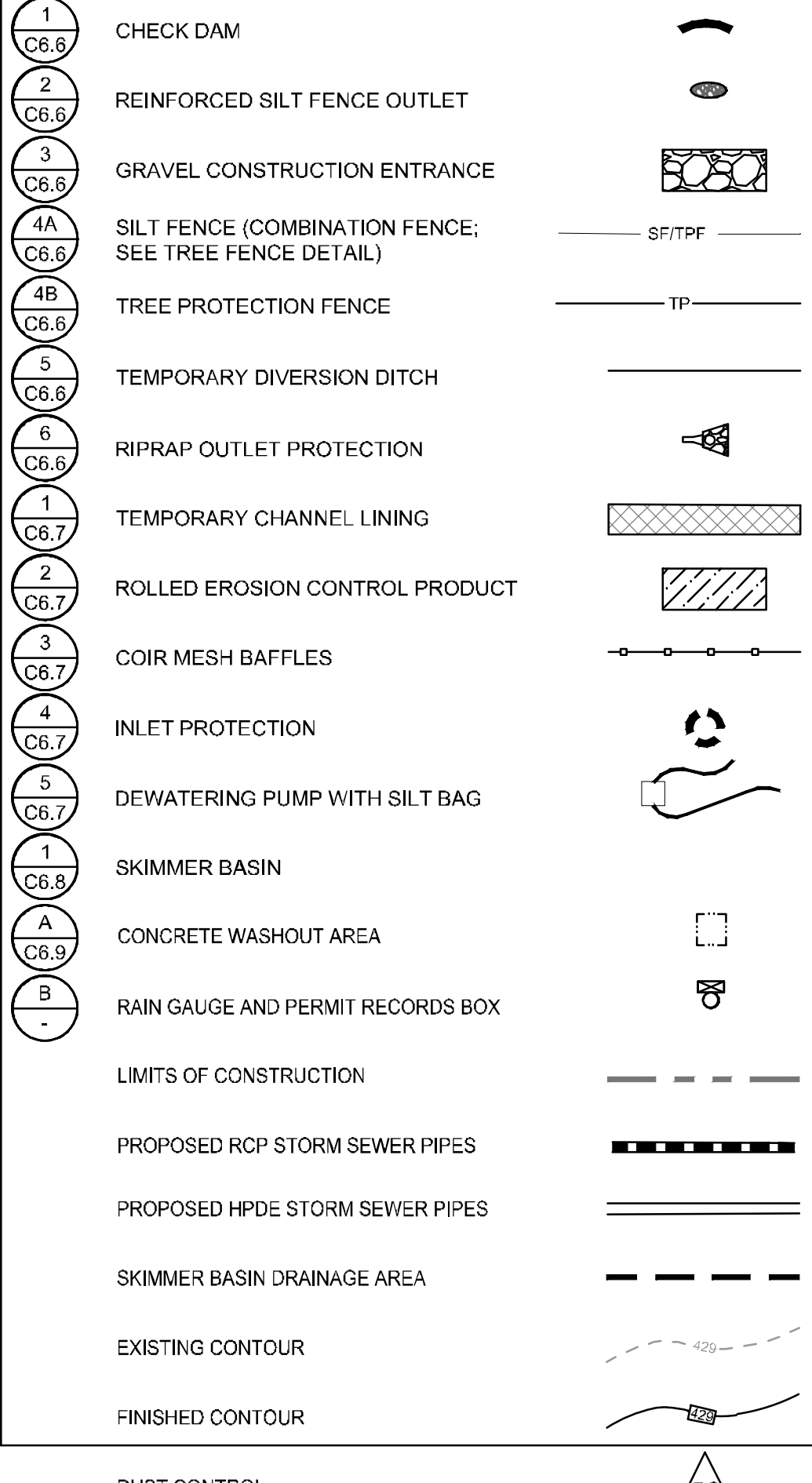
EX. TREE LINE

EX. TREE LINE

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.

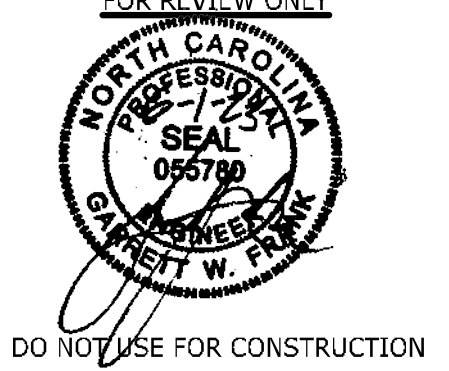
KEYNOTES



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.

PRELIMINARY PLANS



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DATE	REVISION DESCRIPTION
06/01/2023 <td>YOUR VISION. ACHIEVED THROUGH OURS.</td>	YOUR VISION. ACHIEVED THROUGH OURS.

DATE: 06/01/2023  
DRAWN BY: J. HAYES  
DESIGNED BY: G. FRANK  
CHECKED BY: G. FRANK  
SCALE: AS SHOWN

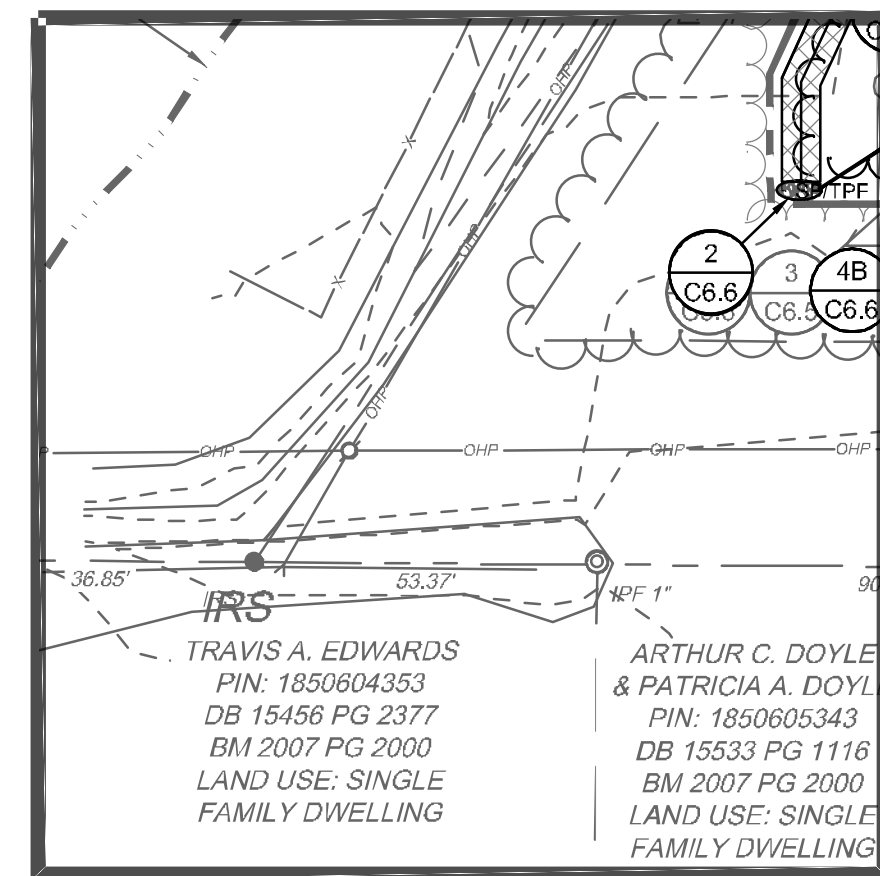
**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652

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

**EROSION & SEDIMENTATION CONTROL PLAN - PH I**

JOB NO. 54832  
SHEET NO. C5.0

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INSET "A"

TRAVIS A. EDWARDS  
PIN: 1850604353  
DB 15456 PG 2377  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ARTHUR C. DOYLE & PATRICIA A. DOYL  
PIN: 1850605343  
DB 15533 PG 1116  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

WAKE COUNTY BOARD OF EDUCATION  
PIN: 1850613181  
DB 6397 PG 409  
BM 1994 PG 1943  
LAND USE: SCHOOL

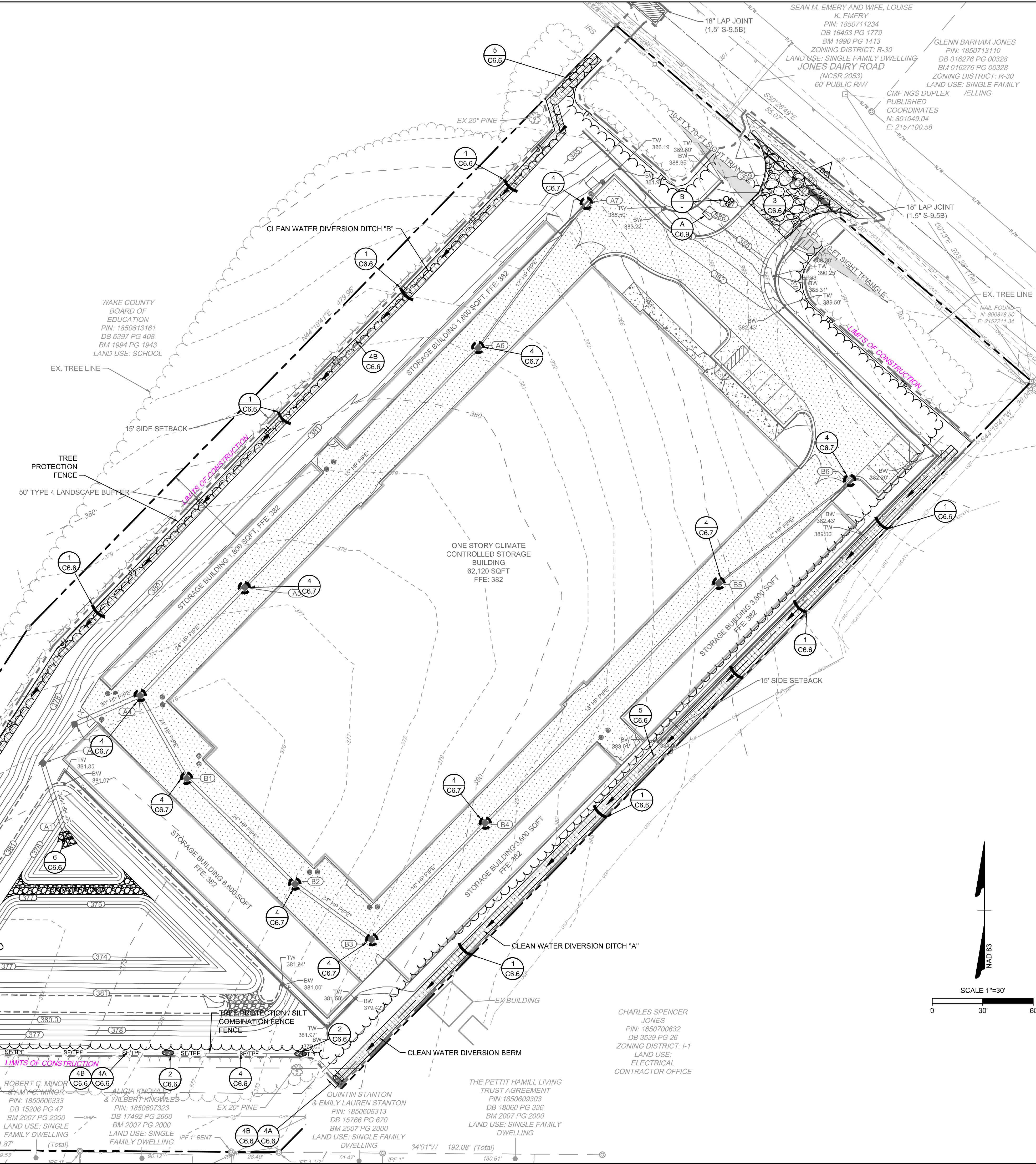
ARTHUR C. DOYLE & PATRICIA A. DOYL  
PIN: 1850605343  
DB 15533 PG 1116  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

ROBERT C. MINOR & PATRICIA A. DOYLE  
PIN: 1850606333  
DB 15206 PG 47  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

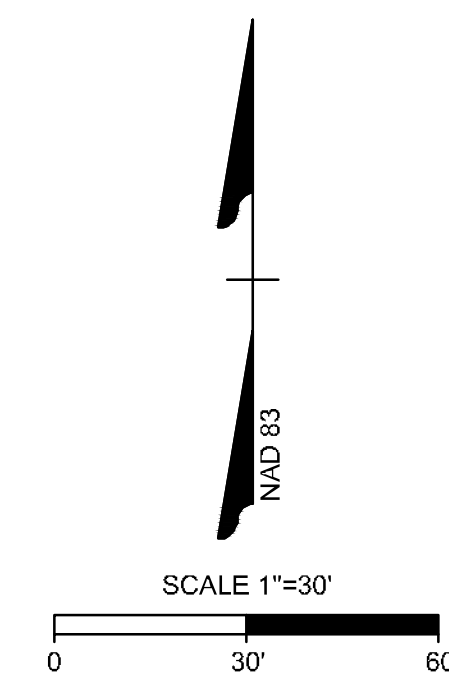
ALICIA KNOWLES & WILBERT KNOWLES  
PIN: 1850607323  
DB 17492 PG 2860  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

QUINTIN STANTON & EMILY LAUREN STANTON  
PIN: 1850608313  
DB 15766 PG 670  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING

THE PETTIT HAMILL LIVING TRUST AGREEMENT  
PIN: 1850609303  
DB 18060 PG 336  
BM 2007 PG 2000  
LAND USE: SINGLE FAMILY DWELLING



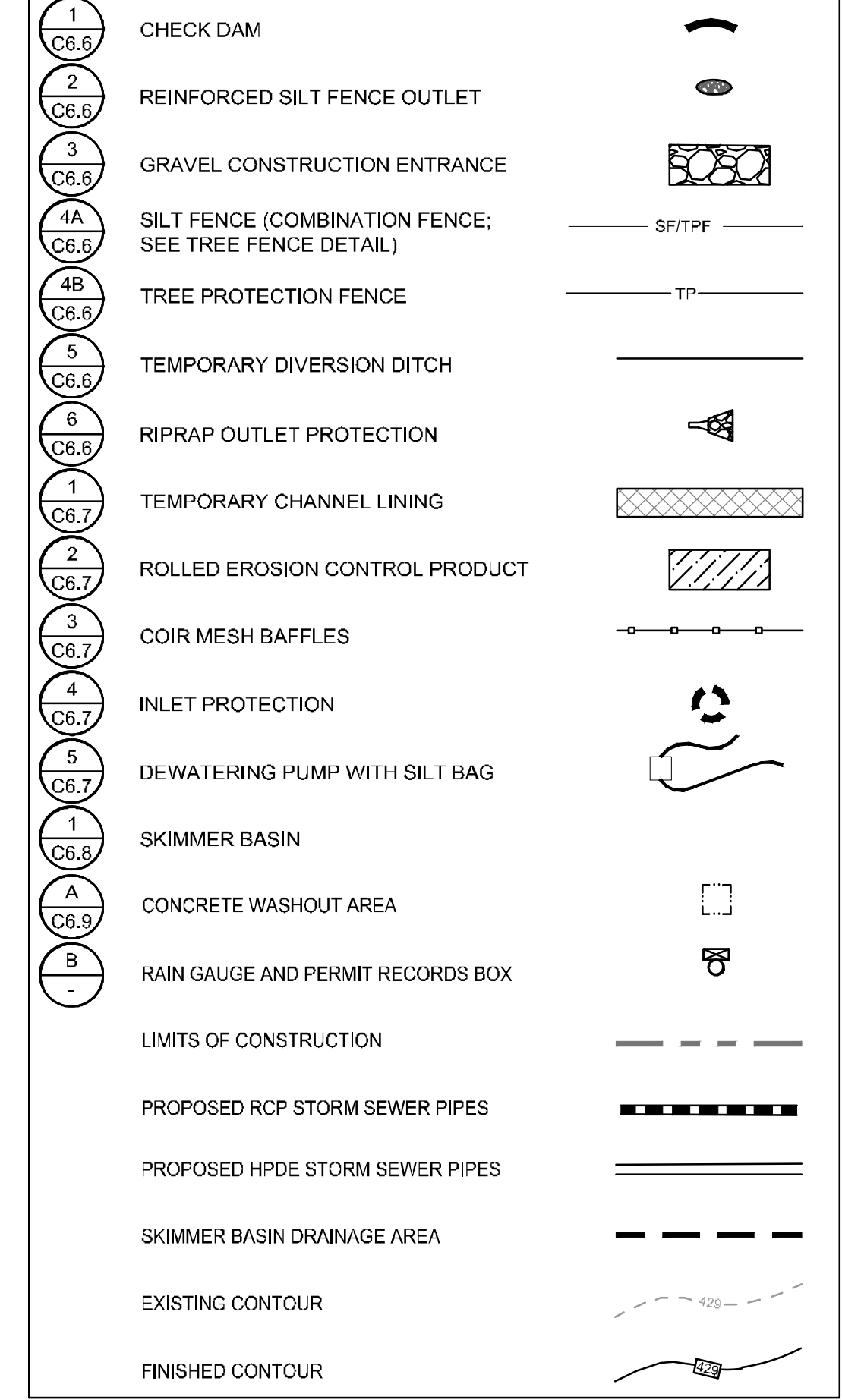
CHARLES SPENCER JONES  
PIN: 1850700632  
DB 3539 PG 28  
ZONING DISTRICT: I-1  
LAND USE: ELECTRICAL CONTRACTOR OFFICE



GENERAL NOTES

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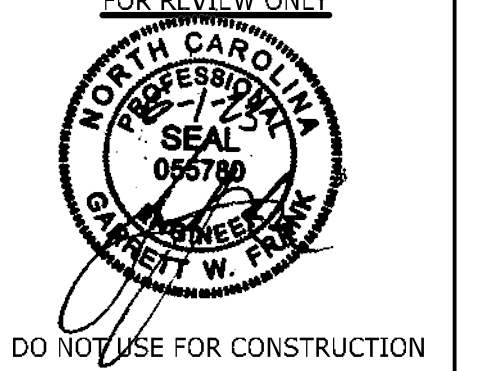
KEYNOTES



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. RESPADE 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.

PRELIMINARY PLANS



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DATE	REVISION DESCRIPTION
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YOUR VISION. ACHIEVED THROUGH OURS.

DATE: 06/01/2023  
DRAWN BY: J. HAYES  
DESIGNED BY: G. FRANK  
CHECKED BY: G. FRANK  
SCALE: AS SHOWN

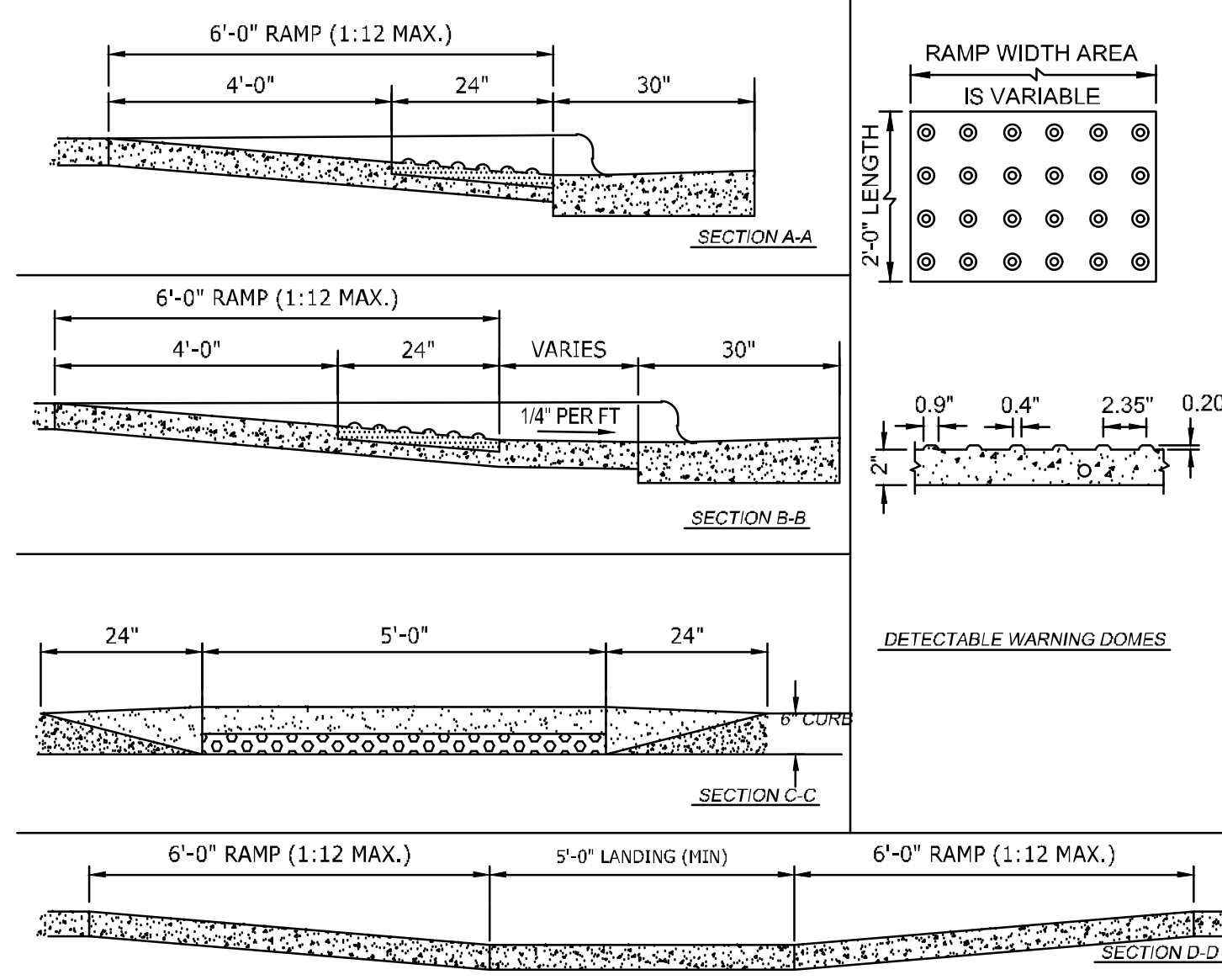
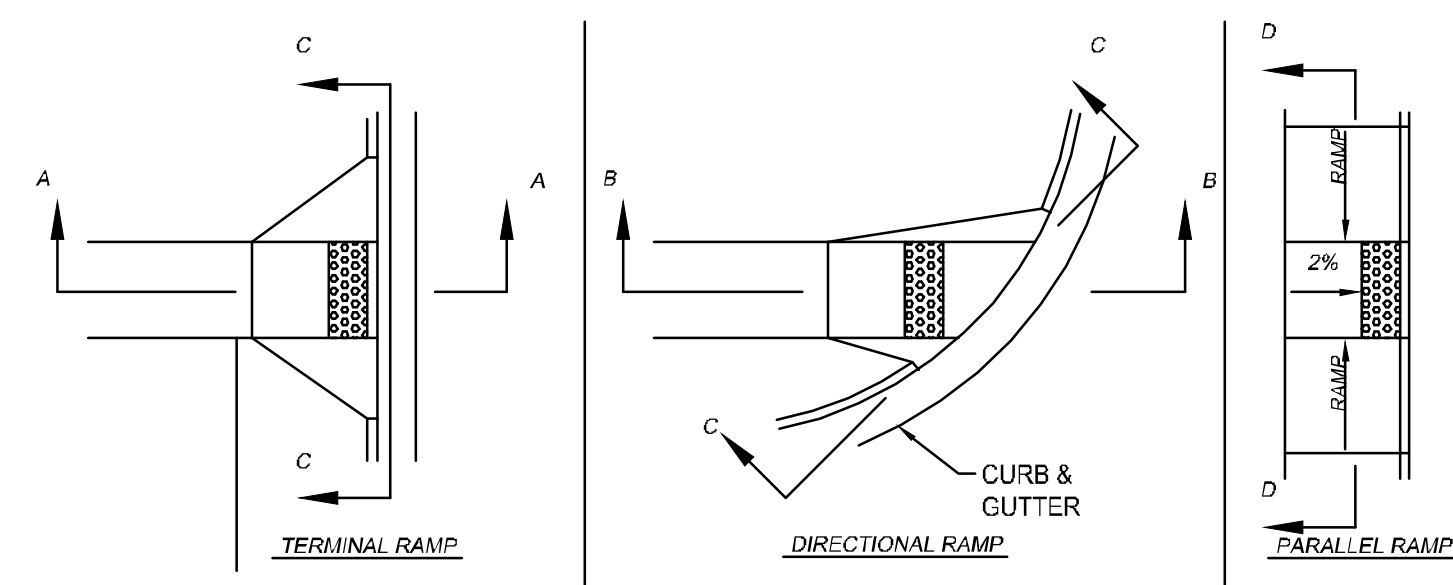
**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652

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

**EROSION & SEDIMENTATION CONTROL PLAN - PH II**

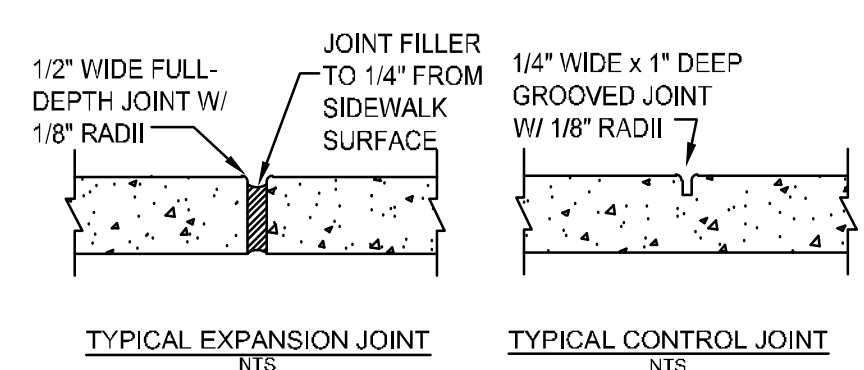
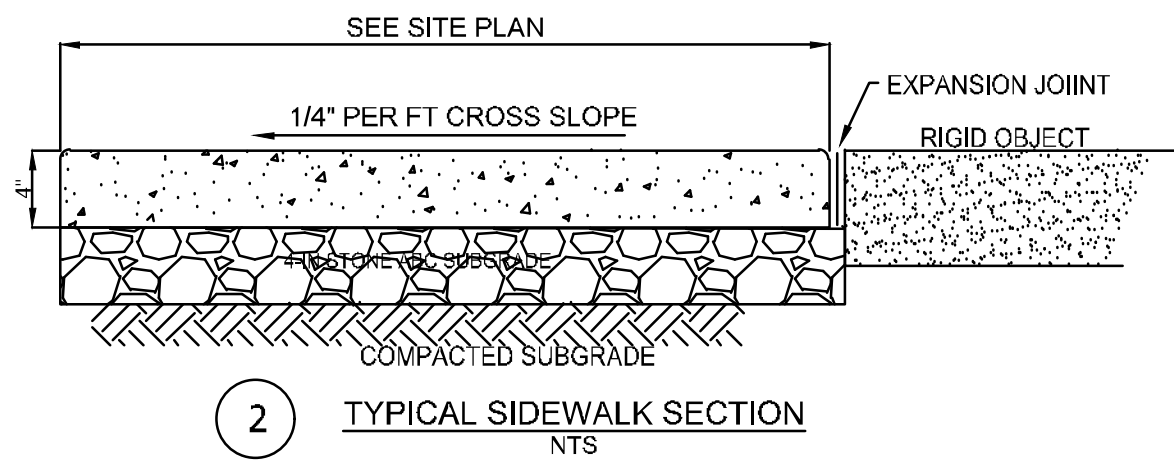
JOB NO. 54832  
SHEET NO. C5.1

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- NOTES:
- NO SLOPE ON THE SIDEWALK ACCESS RAMP SHALL EXCEED 17/1' (1:12) IN RELATIONSHIP TO THE GRADE OF THE STREET. WHERE SIDEWALK INTERSECTS RAMP PERPENDICULAR, SIDE FLARES SHALL BE LESS THAN 10% SLOPE.
  - IN NO CASE SHALL THE WIDTH OF THE ACCESS RAMP BE LESS THAN 48" (4'-0")
  - DETECTABLE WARNING DOMES SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN.
  - FLARES MAY BE SLOPED GREATER THAN 10% WHEN A SIDEWALK IS NOT INTERSECTING PERPENDICULAR WITH RAMP

1 ACCESSIBLE CURB RAMPS N.T.S.



- GENERAL NOTES:
- PROVIDE GROOVE CONTROL JOINT 1-IN DEEP WITH 1/8-IN RADI IN SIDEWALK AT 5' INTERVALS UNLESS INDICATED OTHERWISE.
  - PROVIDE 1/2-IN EXPANSION JOINT AT 50' INTERVALS.
  - PROVIDE 1/2-IN EXPANSION JOINT WHERE THE SIDEWALK ABUTS ANY RIGID STRUCTURE.
  - SEE SPECIFICATIONS FOR ADDITIONAL JOINT SPACING REQUIREMENTS.
  - ALL CONCRETE SHALL BE 3,000 P.S.I. WITH BROOM FINISH.
  - ALL SIDEWALKS SHALL HAVE 2% OR LESS CROSS SLOPE.
  - ALL SIDEWALKS SHALL HAVE 5% OR LESS LONGITUDINAL SLOPE.

2 CONCRETE SIDEWALK N.T.S.

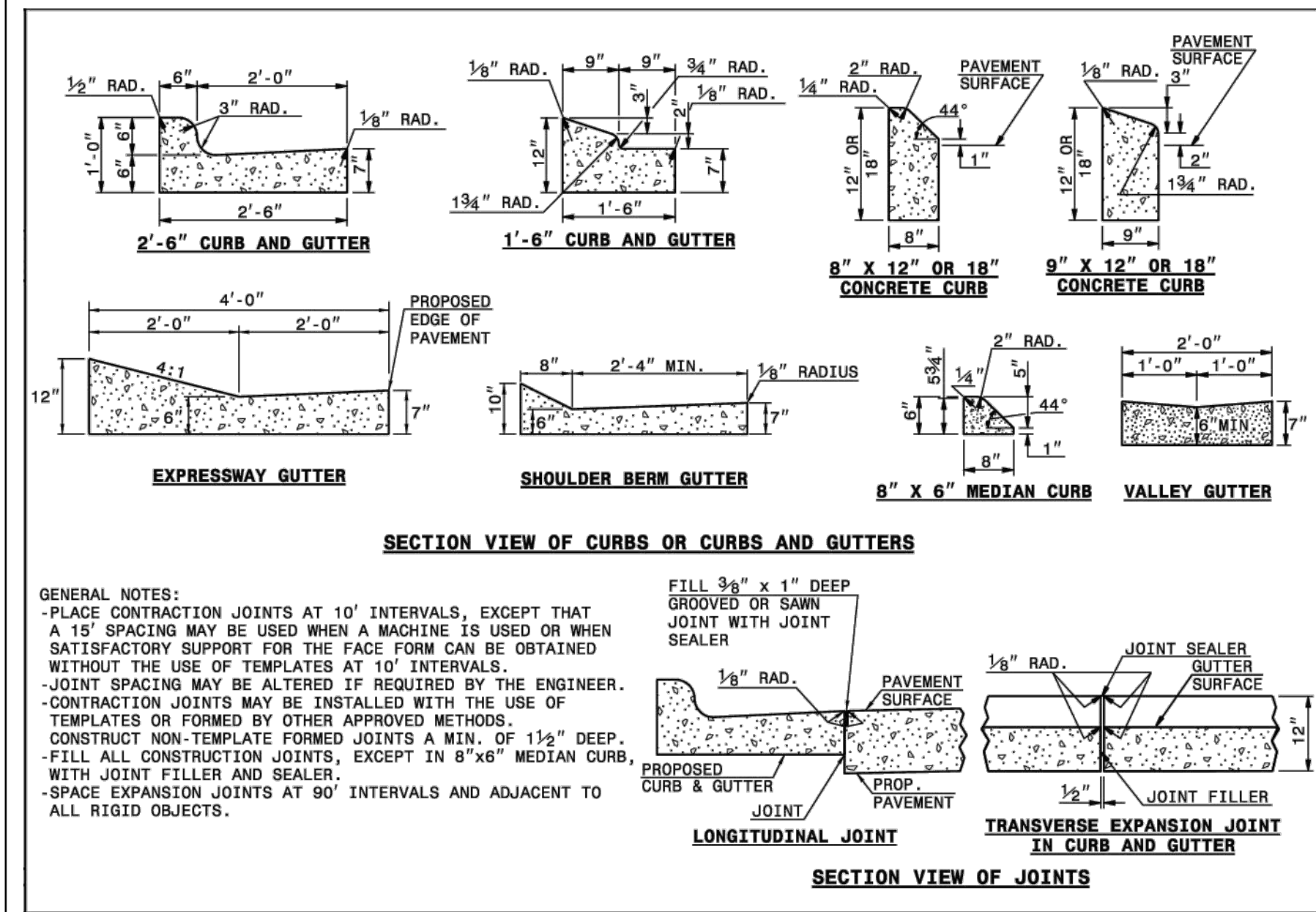
- COMPACTION NOTES:
- SUBGRADE AND ABC STONE
- COMPACT TO MAXIMUM DRY DENSITY PER ASTM D698 STANDARD PROCTOR AND WITHIN 3% MAXIMUM MOISTURE CONTENT.
  - COMPACT SUBGRADE SOIL TO 95%.
  - COMPACT ABC STONE TO 100%.
  - REFER TO SPECIFICATION SECTION NCDOT 31 10 00 FOR ADDITIONAL INFORMATION.
- ASPHALT
- COMPACT ASPHALT TO 92% MAXIMUM SPECIFIC GRAVITY.
  - REFER TO SPECIFICATION SECTION NCDOT 32 12 16 FOR ADDITIONAL INFORMATION.

KEYNOTE	3 (C5.0)	4 (C5.0)	5 (C5.0)
PATTERN			
CLASSIFICATION	HEAVY DUTY ASPHALT	STANDARD DUTY ASPHALT	NCDOT ASPHALT
TYPE 5-9.5B (2018) SURFACE COURSE	3" (2.1.5" LIFTS)	3" (2.1.5" LIFTS)	1.5"
TYPE 1-19.0C (2018) INTERMEDIATE COURSE	-	-	2.5"
NCDOT CABC STONE	8"	6"	8"

GEOGRID (SEE ALLOWANCE)  
COMPACTED SUBGRADE

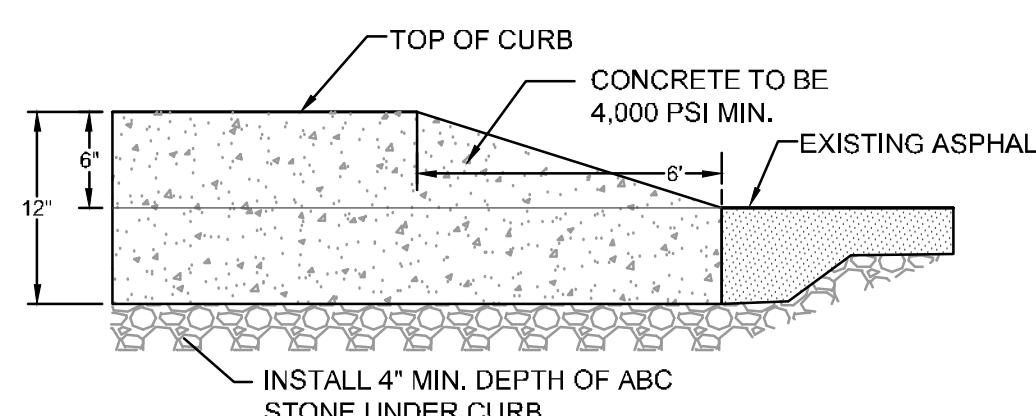
- NOTES:
- THE CONTRACTOR MAY CHOOSE TO INSTALL INTERMEDIATE COURSES OF PAVEMENT TO STABILIZE THE SITE DURING CONSTRUCTION AT NO ADDITIONAL COST. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ADEQUATE THICKNESS REQUIRED FOR INTERMEDIATE PAVING. INCREASES IN THE DESIGN PAVEMENT SECTION TO FACILITATE INTERMEDIATE PAVING SHALL BE PROVIDED AT NO ADDITIONAL COST.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING PAVEMENT DURING ALL PHASES OF WORK. THE FINAL SURFACE OF PAVEMENT SHALL BE FREE OF ALL DEFECTS OR DAMAGE.
  - CONTRACTOR IS RESPONSIBLE FOR THEIR OWN QC TESTING, PROOF ROLL, AND REQUIREMENTS NOTED IN SPECIFICATIONS.
  - OWNER WILL ACQUIRE 3RD PARTY QC TESTING SERVICES FOR SOILS AND PAVEMENTS.
  - REFER TO SPECIFICATION SECTION 32 12 16 & 31 10 00 FOR ADDITIONAL INFORMATION.

3 4 5 ASPHALT & GRAVEL PAVEMENTS N.T.S.



- GENERAL NOTES:
- PLACE CONTRACTION JOINTS AT 10' INTERVALS, EXCEPT THAT A 15' SPACING MAY BE USED WHEN A MACHINE IS USED OR WHEN SATISFACTORY SUPPORT FOR THE FACE FORM CAN BE OBTAINED WITHOUT THE USE OF TEMPLATES AT 10' INTERVALS.
  - JOINT SPACING MAY BE ALTERED IF REQUIRED BY THE ENGINEER.
  - CONTRACTION JOINTS MAY BE INSTALLED WITH THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS.
  - CONSTRUCT NON-TEMPLATE FORMED JOINTS A MIN. OF 1 1/2" DEEP.
  - FILL ALL CONSTRUCTION JOINTS, EXCEPT IN 8"x6" MEDIAN CURB, WITH JOINT FILLER AND SEALER.
  - SPACE EXPANSION JOINTS AT 90' INTERVALS AND ADJACENT TO ALL RIGID OBJECTS.
- FILL 3/8" x 1" DEEP GROOVED OR SAWN JOINT WITH JOINT SEALER
- 1/8" RAD. JOINT SEALER GUTTER SURFACE
- 1/8" RAD. JOINT FILLER IN CURB AND GUTTER

6 NCDOT 30" CONCRETE CURB AND GUTTER N.T.S.



7 CURB ENDING TAPER N.T.S.

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DATE	06/01/2023
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**

STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR  
CONCRETE CURB, GUTTER  
AND CURB & GUTTER

SHEET 1 OF 3  
846.01

JOB NO.	54832
SHEET NO.	C6.0

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DESIGNED BY  
G. FRANK

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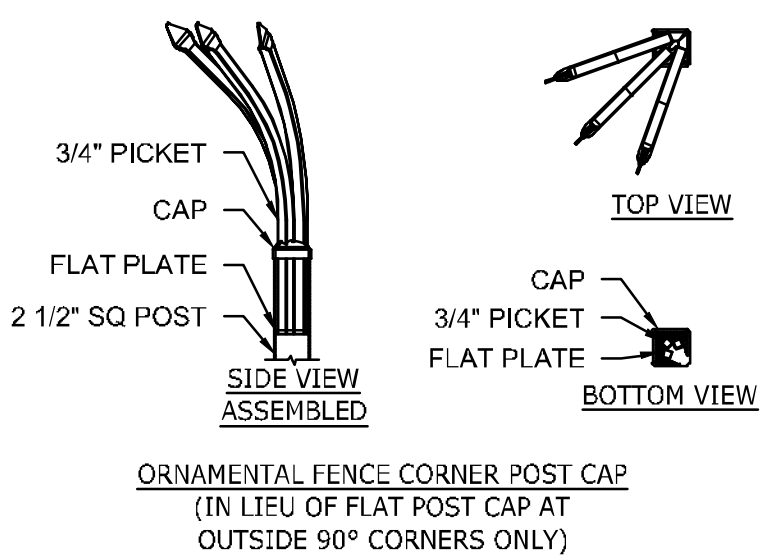
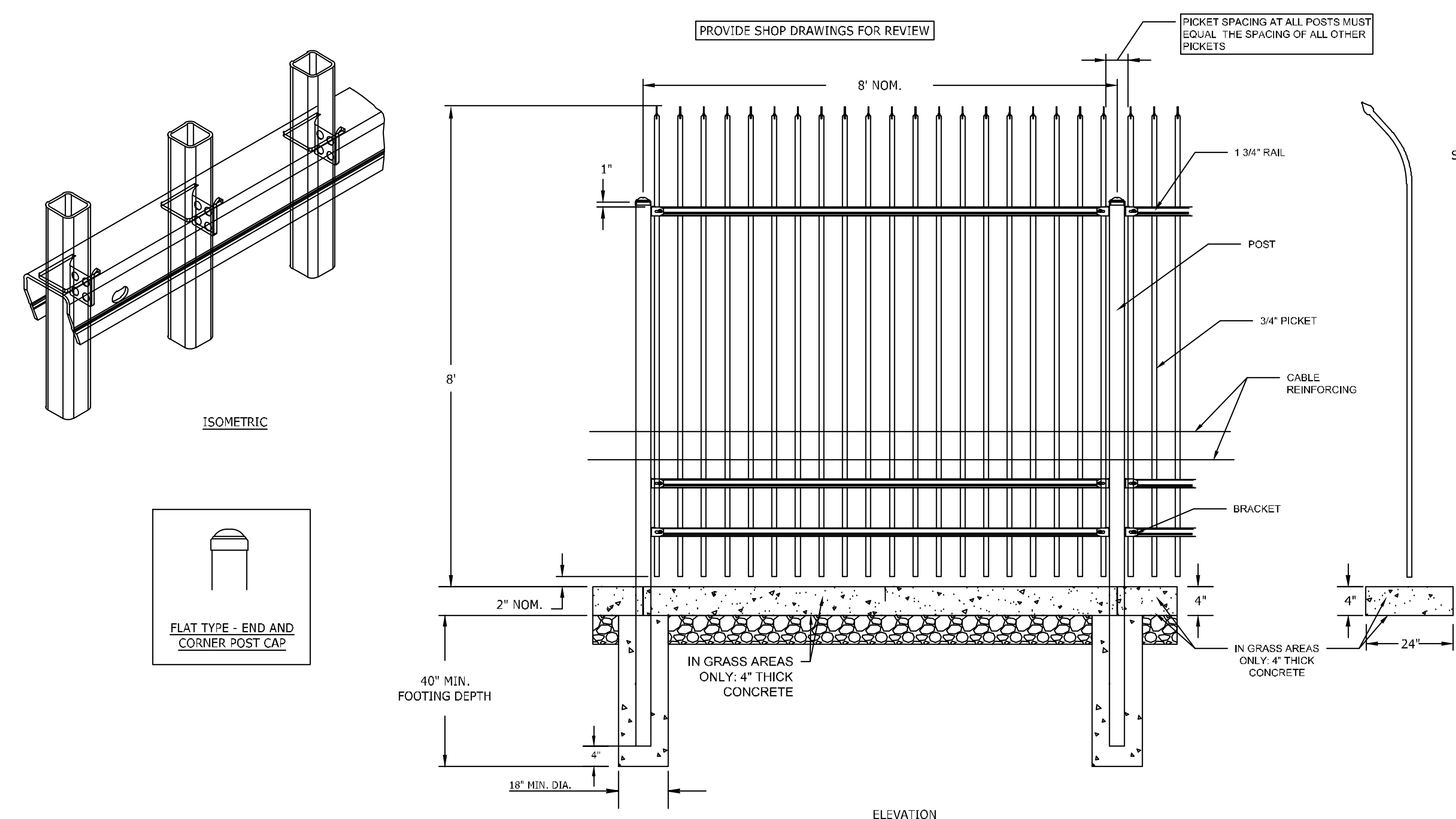
SCALE  
AS SHOWN

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TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
SITE DETAILS

JOB NO.  
54832  
SHEET NO.  
C6.1

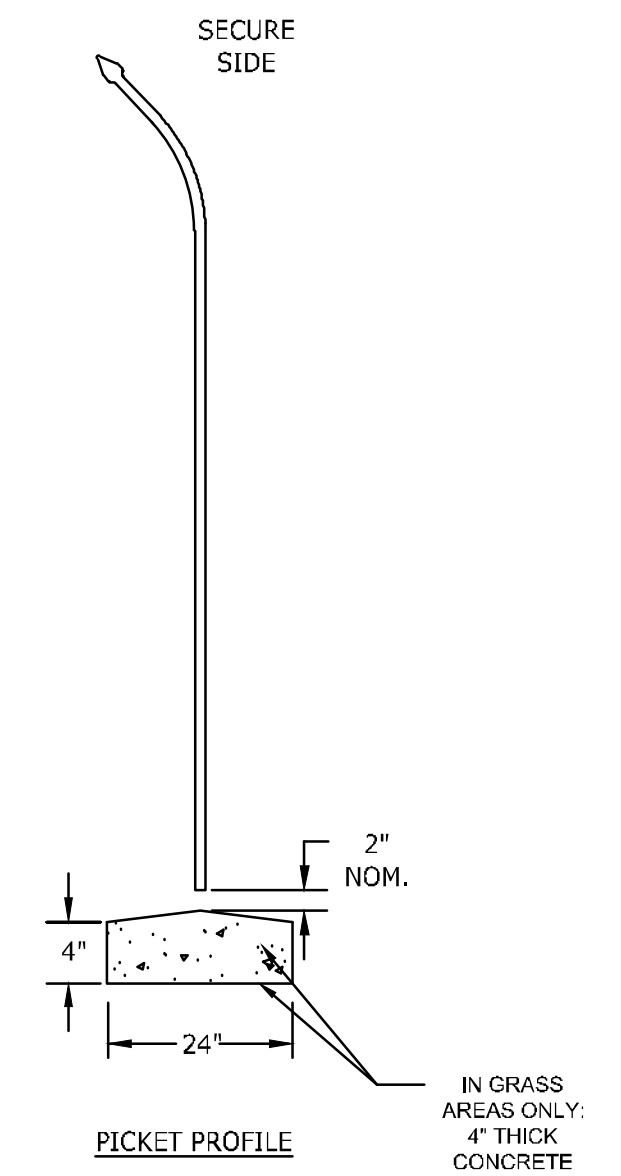
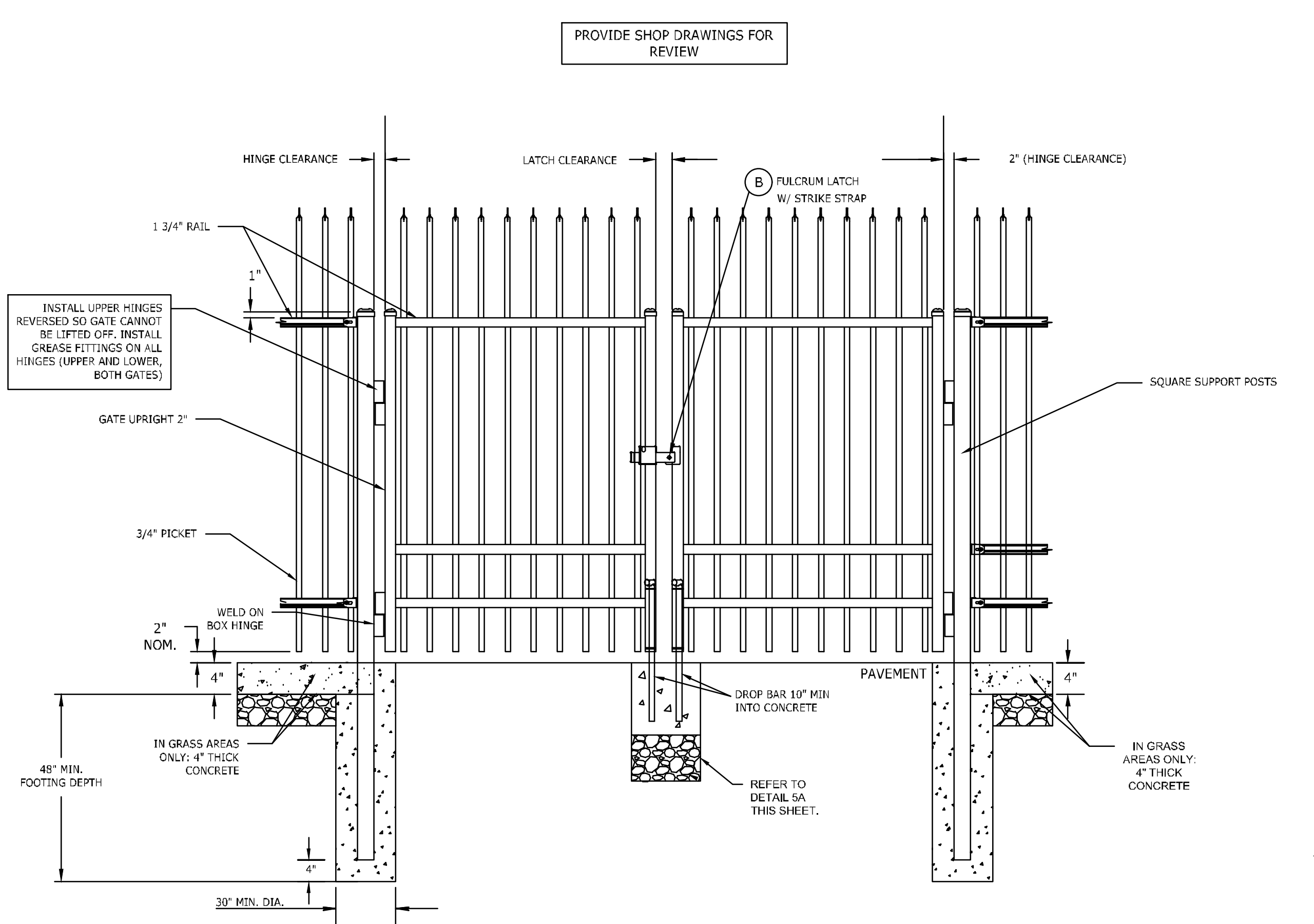
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- NOTES:**
- BASIS OF DESIGN FOR ORNAMENTAL FENCING IS: AMERISTAR MONTAGE COMMERCIAL INVINCIBLE.
  - FOR ALL FENCING IN GRASS AREAS: INSTALL 4" THICK BY 24" WIDE STRIP OF CONCRETE (MOW STRIP). REFER TO MOW STRIP DETAILS ON SHEET C8.1.
    - PROVIDE A GROOVE CONTROL JOINT 1" DEEP AT 5' INTERVALS (1/4 WAY BETWEEN EACH POST).
    - PROVIDE 1/2" EXPANSION JOINTS WITH FABRIC JOINT FILLER AT EACH FENCE POST
    - ALL CONCRETE SHALL BE 3,000 P.S.I. WITH BROOM FINISH.

ORNAMENTAL FENCE (8' HEIGHT)

N.T.S.



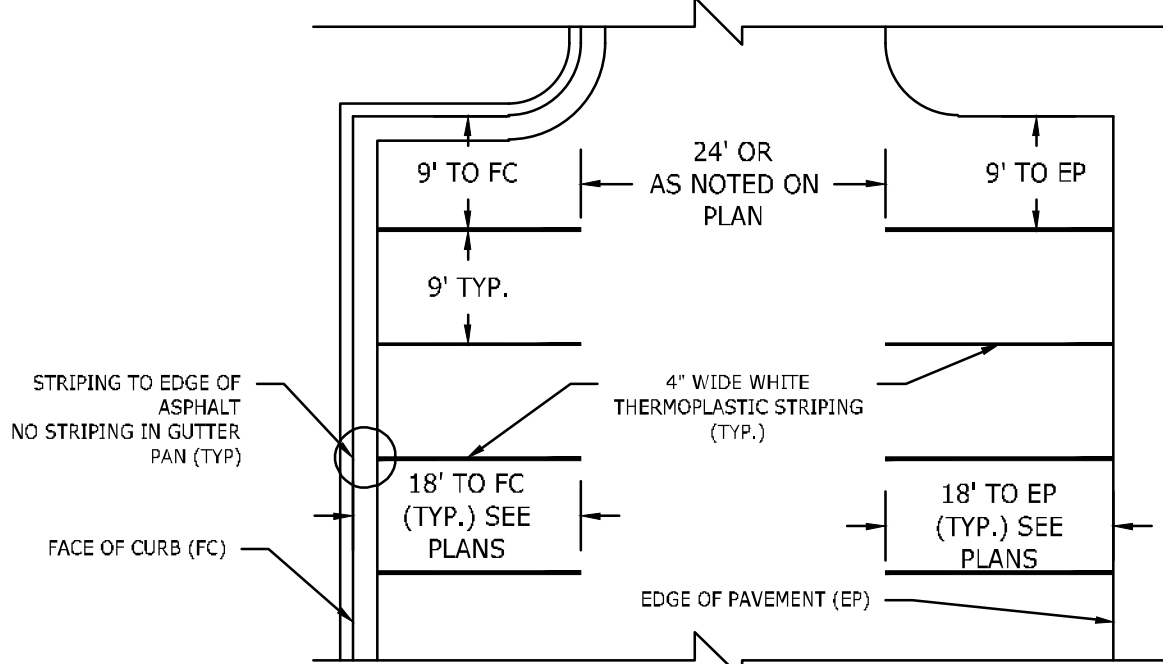
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8' TALL ORNAMENTAL GATES (SEE PLANS FOR GATE WIDTH)

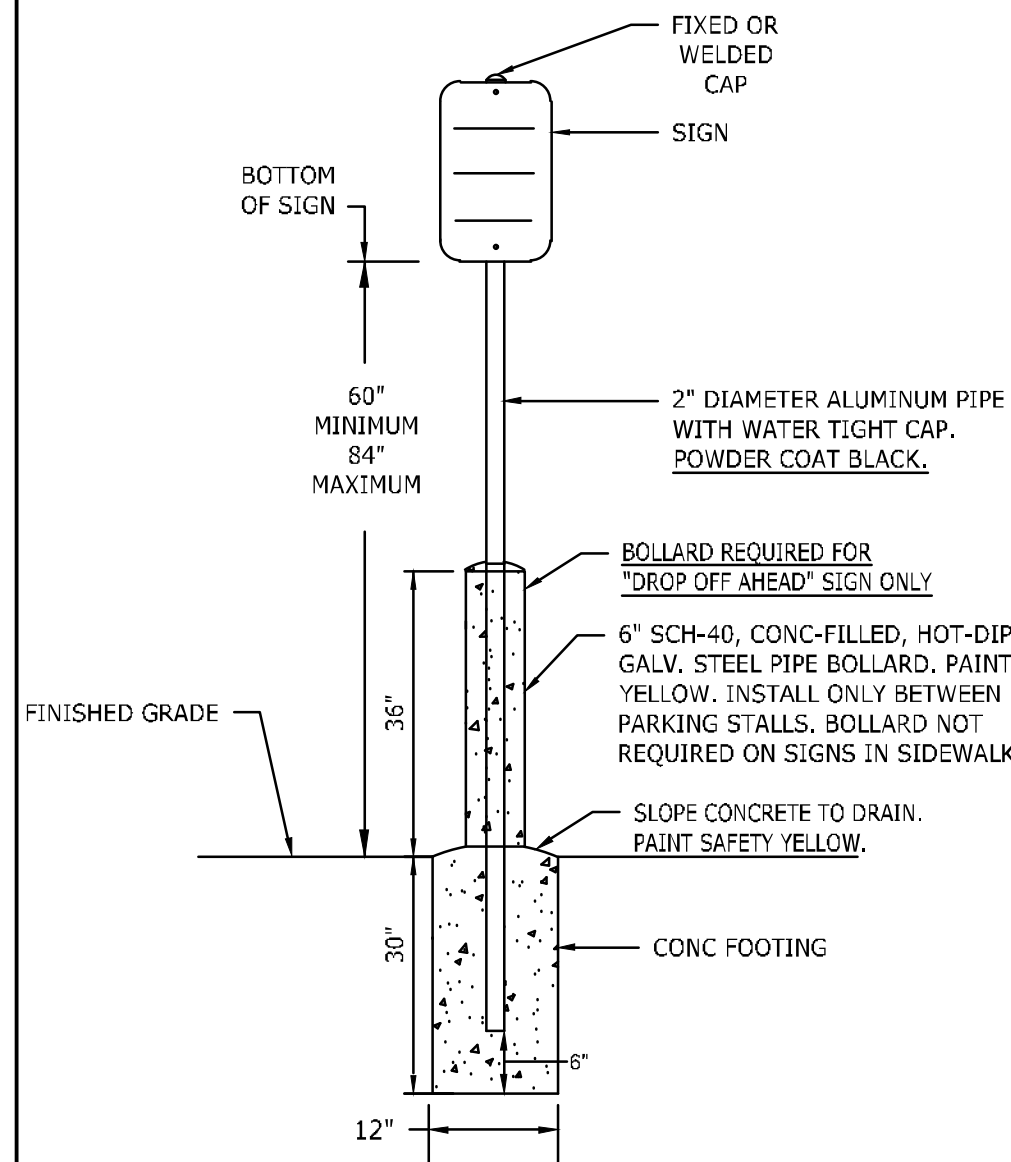
N.T.S.

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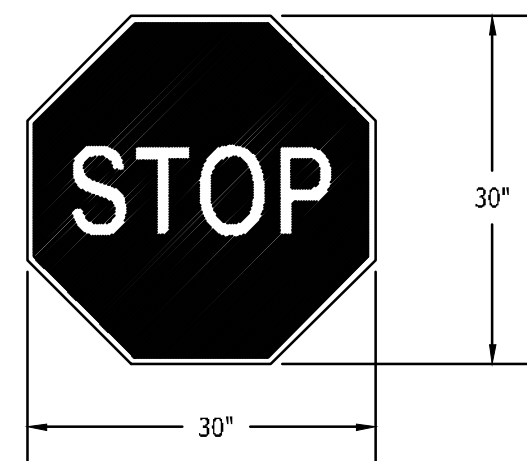
- NOTE:  
 1. ALL PARKING STALL MARKINGS SHALL BE REFLECTORIZED  
 60-MI THICK WHITE THERMOPLASTIC WITH GLASS BEADS.  
 2. FC = FACE OF CURB  
 3. EP = EDGE OF PAVEMENT



1 PARKING STALL AND TRAFFIC STRIPE N.T.S.

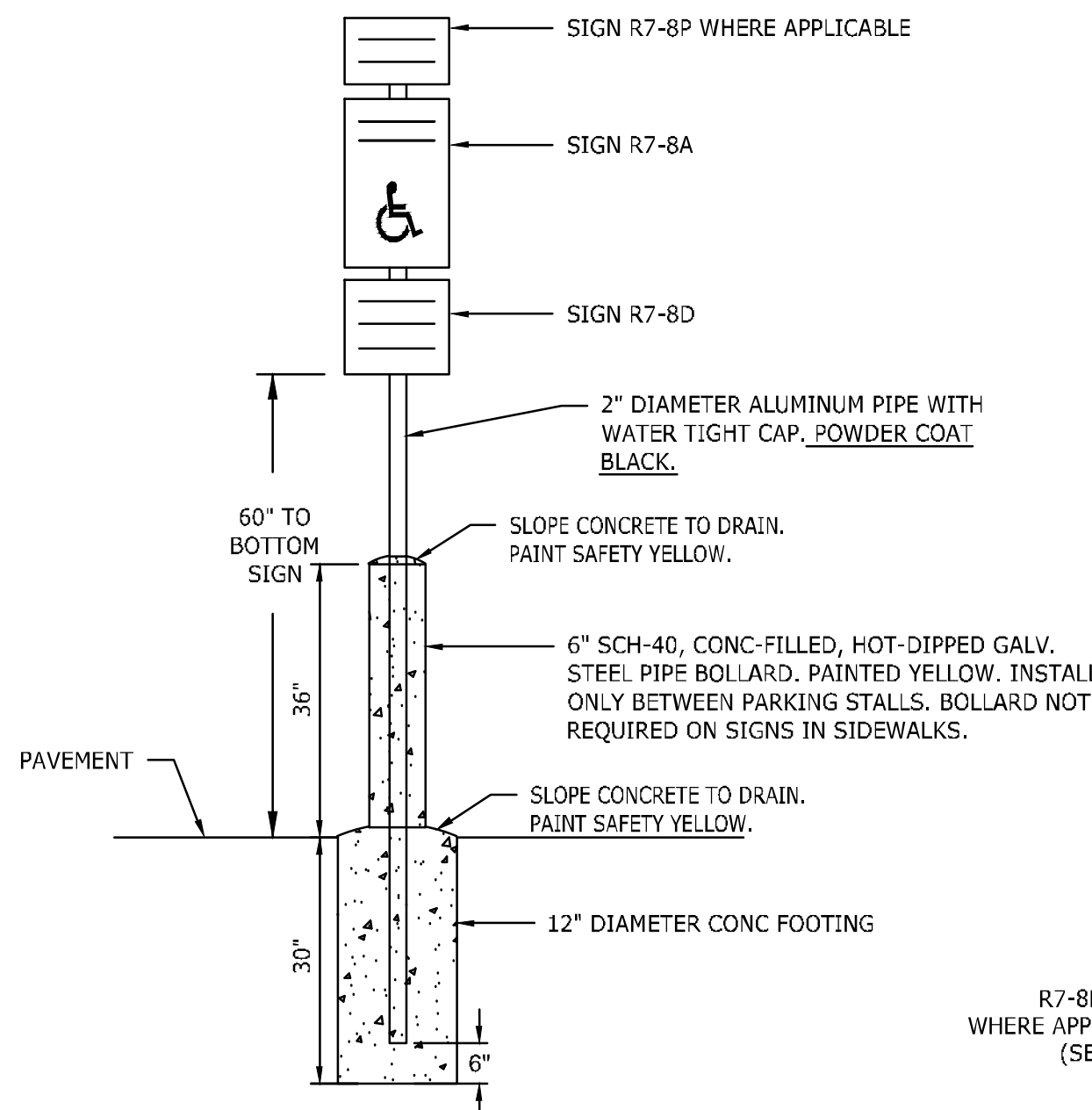


- NOTES:  
 1. MOUNTING HEIGHT TO BOTTOM OF SIGN SHALL BE 60" FROM BOTTOM OF SIGN TO PAVEMENT OR 84" IN PEDESTRIAN AREAS UNLESS OTHERWISE NOTED.  
 2. ALL SIGNAGE SHALL HAVE HIGH INTENSITY PRISMATIC SHEETING. SIGNS SHALL BE FABRICATED FROM ALUMINUM ALLOY SHEETS.  
 3. SIGNS SHOULD MEET MUTED AND NCDOT STANDARDS AND SPECIFICATIONS FOR ROADWAY SIGNAGE AND FOUNDATIONS.  
 4.

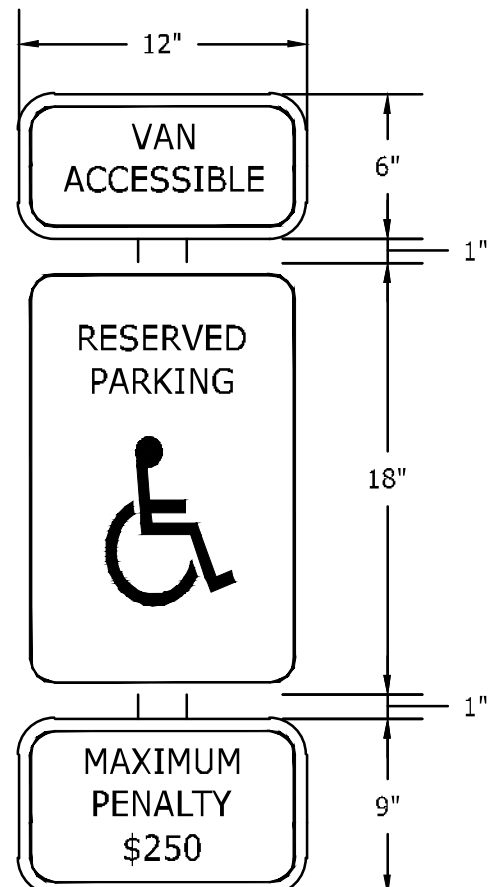


13 MUTCD STANDARD R1-1

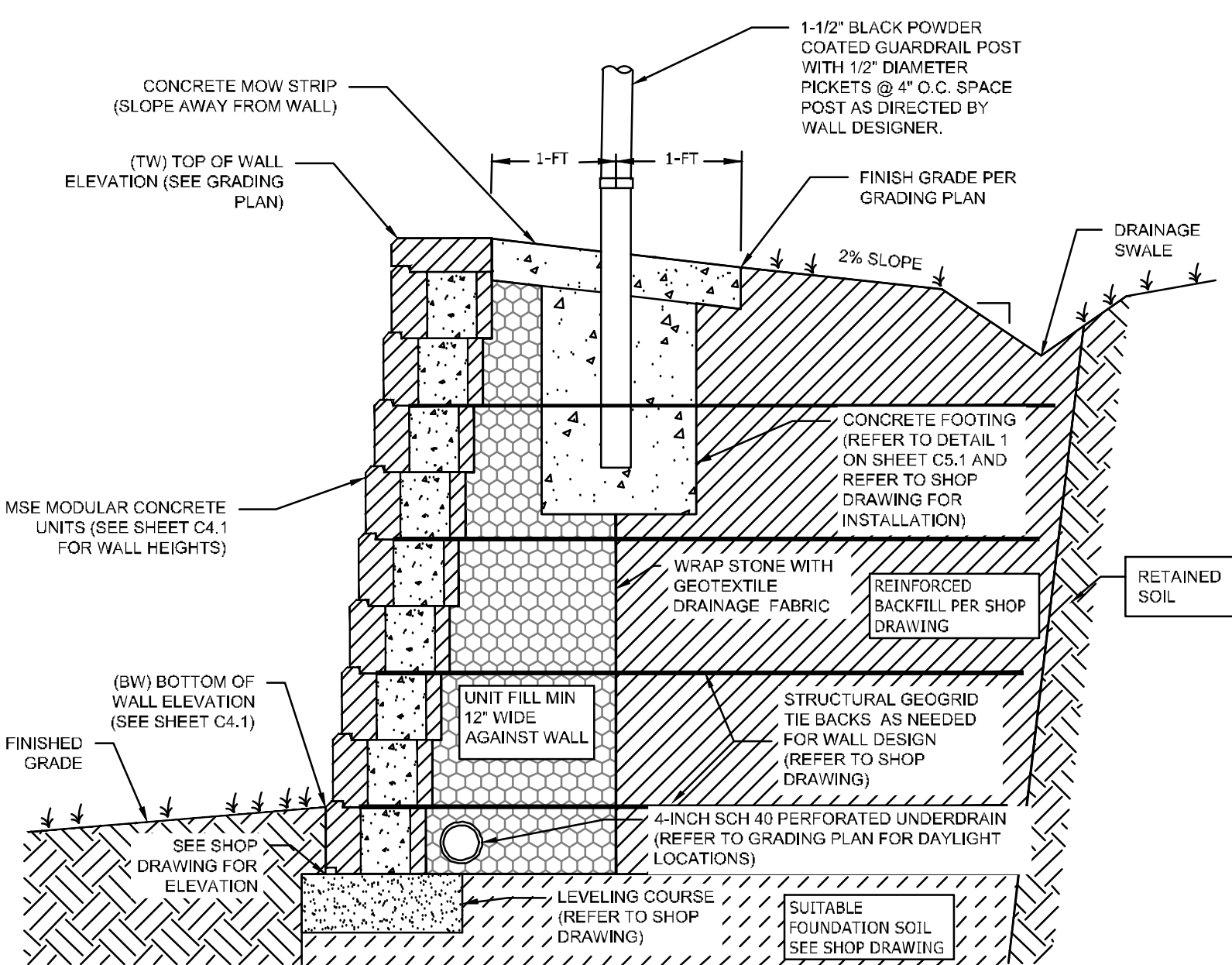
2 TYPICAL ROADWAY SIGN N.T.S.



- NOTES:  
 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.  
 6.

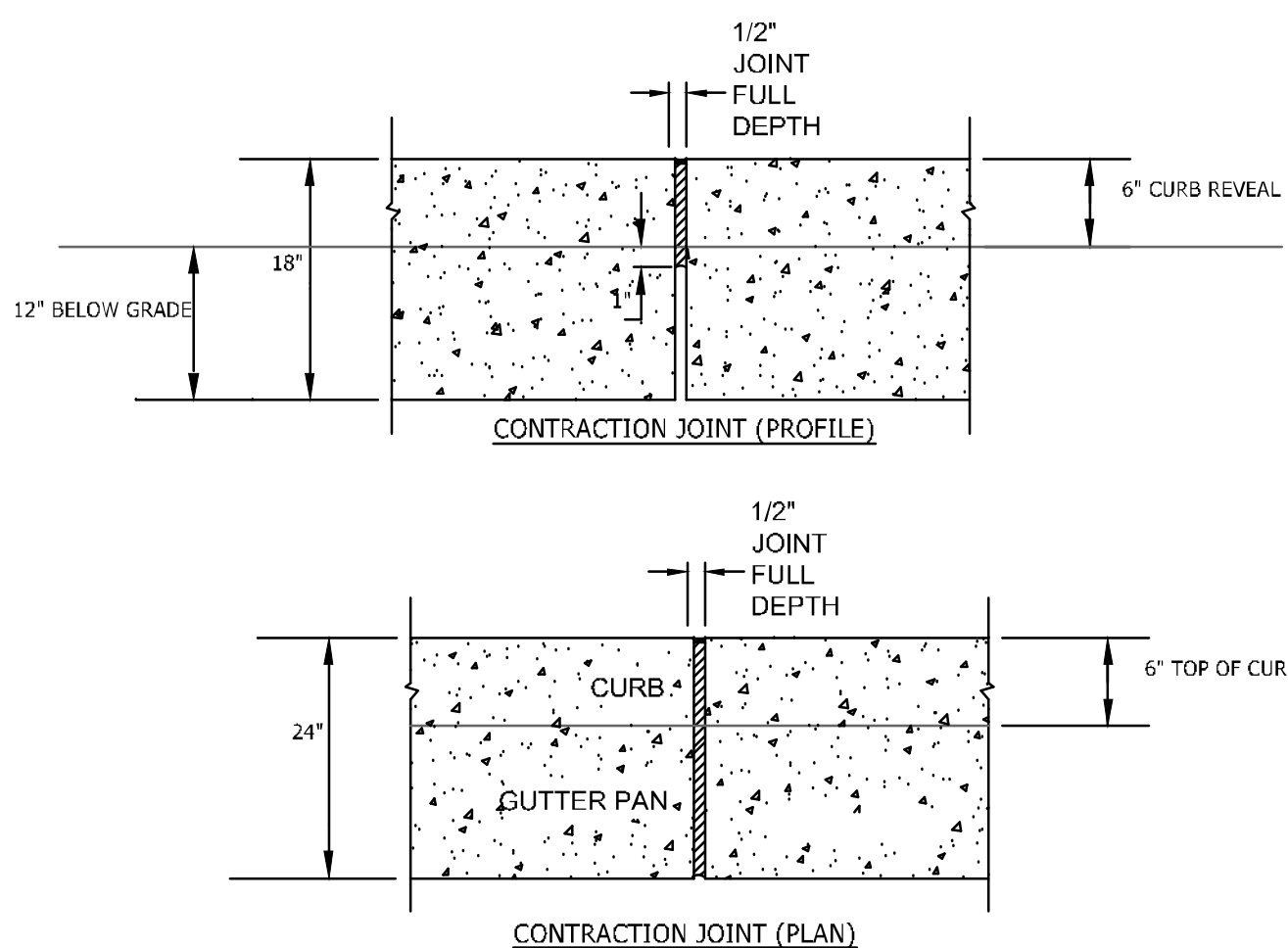


3 ACCESSIBLE PARKING SIGN N.T.S.

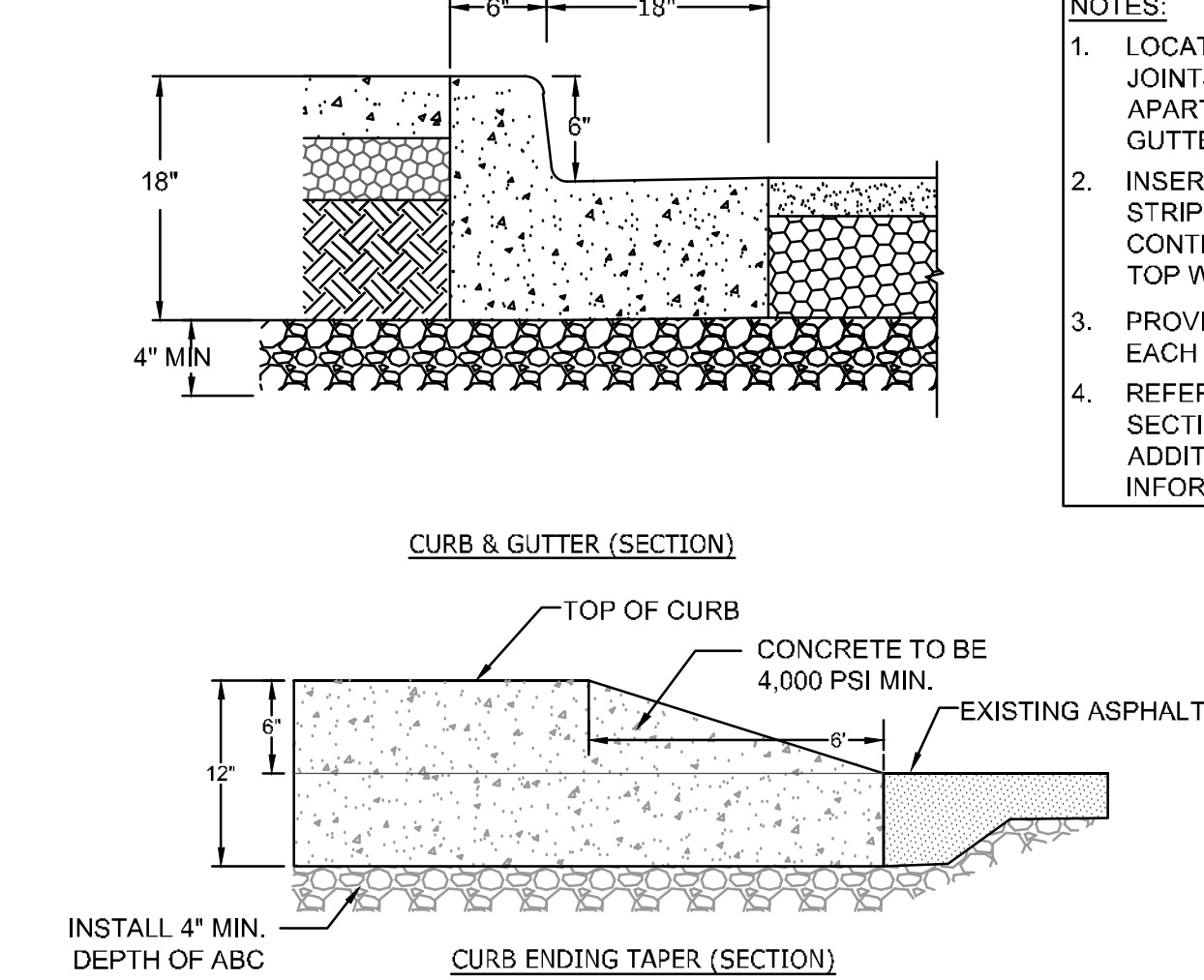


- NOTES:  
 1. CONTRACTOR IS RESPONSIBLE FOR PROVIDING SHOP DRAWING OF WALL DESIGN, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER (REGISTERED IN NORTH CAROLINA), FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR MUST BE CERTIFIED TO BUILD THE WALL OR HAVE LICENSE PROFESSIONAL ENGINEER CERTIFY CONSTRUCTION.  
 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 GEOGRID 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 WORKS 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.

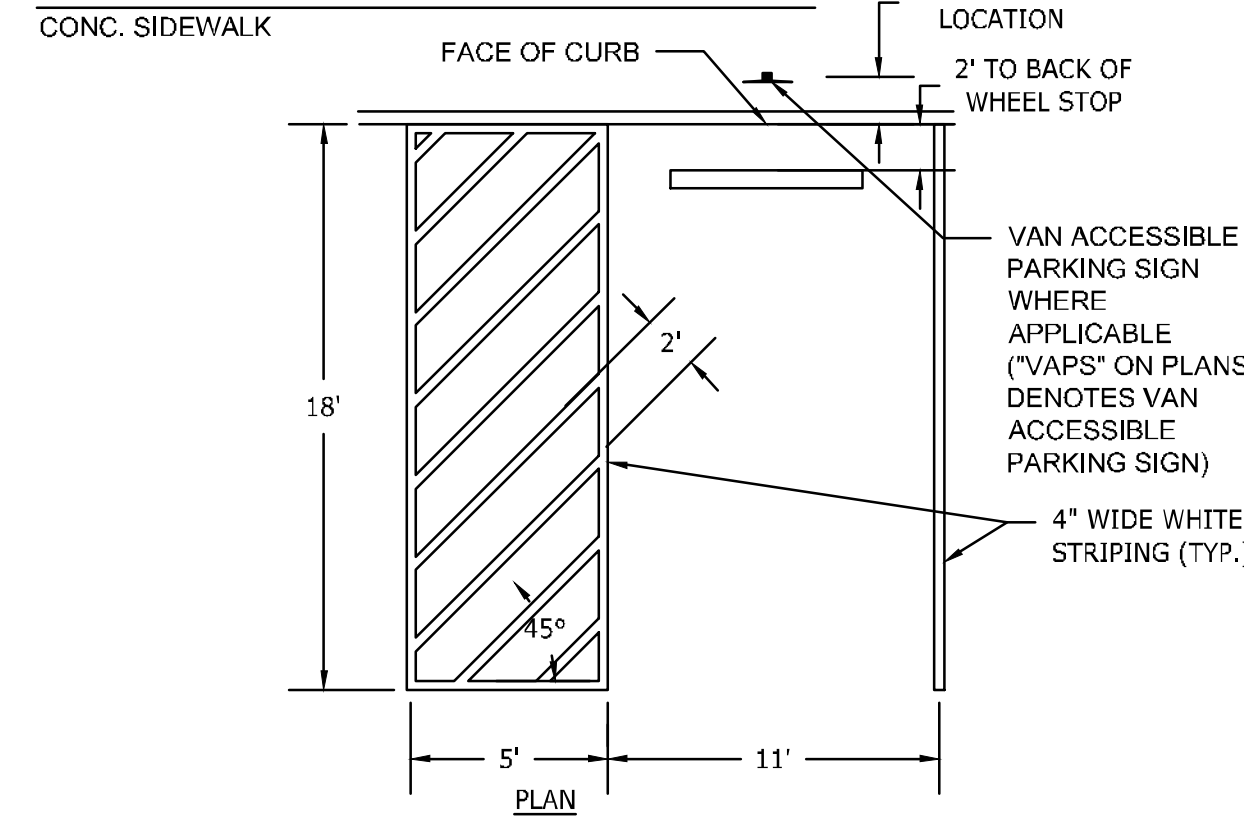
4 MODULAR BLOCK RETAINING WALL WITH BLACK VINYL CHAINLINK FENCE N.T.S.



- NOTES:  
 1. LOCATE CONTRACTION JOINTS 10' MAXIMUM APART IN CURB & GUTTER  
 2. INSERT FIBERBOARD STRIPS INTO EACH CONTRACTION JOINT AND TOP WITH CAULK  
 3. PROVIDE 3/8" RADIUS ON EACH SIDES OF JOINT.  
 4. REFER TO SPECIFICATION SECTION 32 13 13 FOR ADDITIONAL INFORMATION.

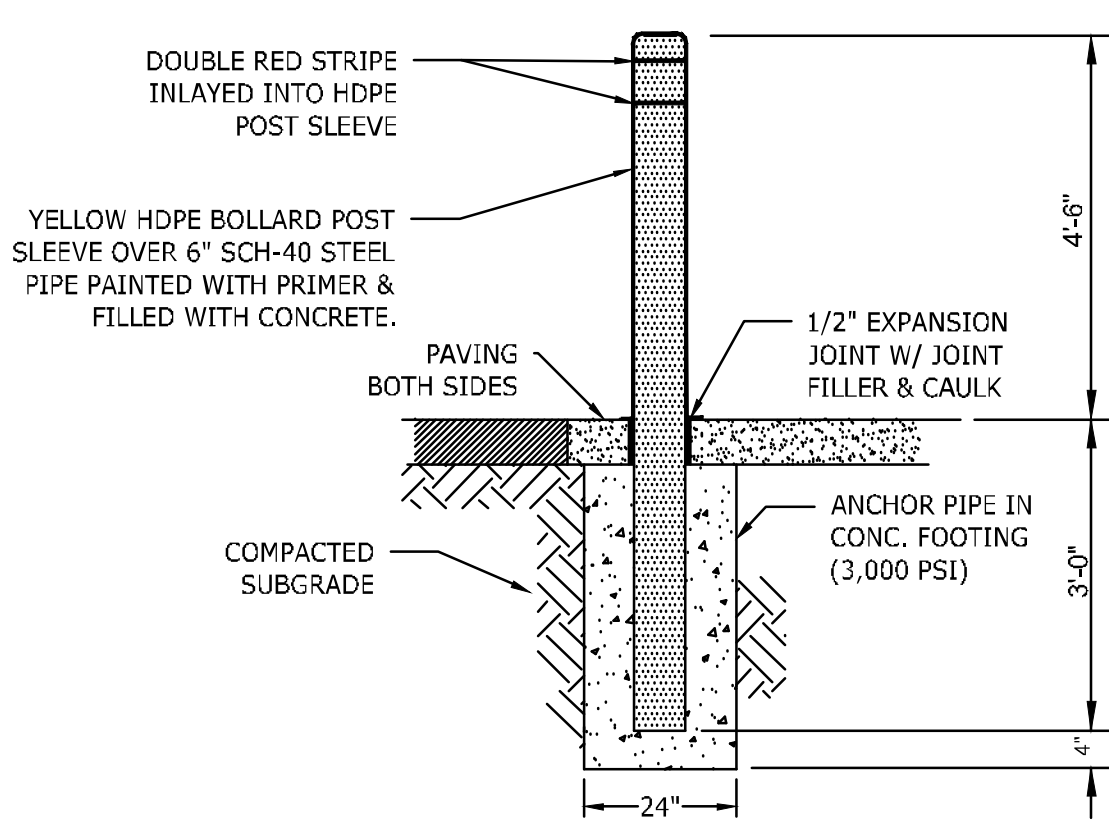


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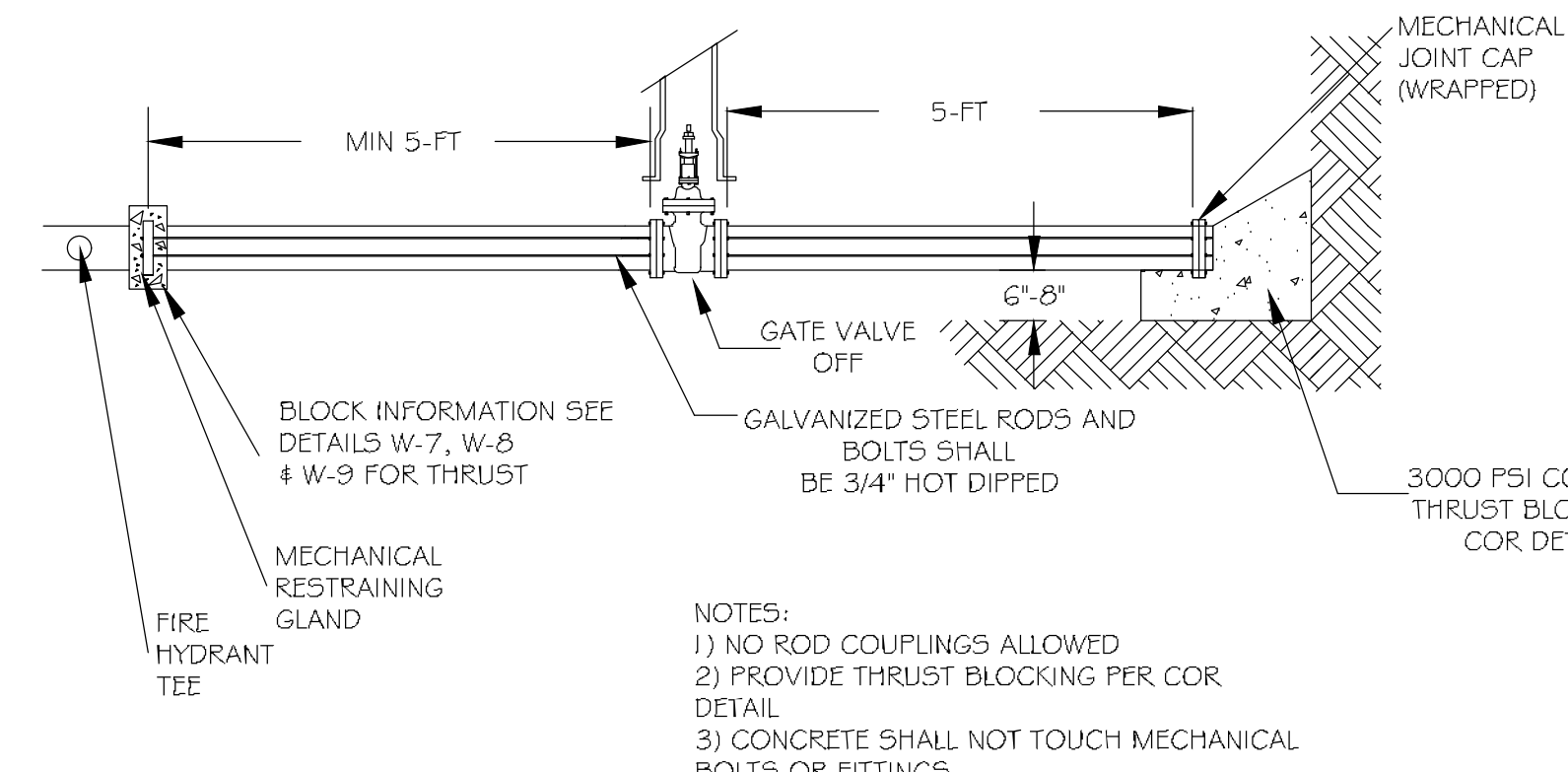


- NOTE:  
 1. ALL PARKING STALL MARKINGS SHALL BE REFLECTORIZED 60-MI THICK WHITE THERMOPLASTIC WITH GLASS BEADS

7 ACCESSIBLE PARKING SPACE LAYOUT N.T.S.

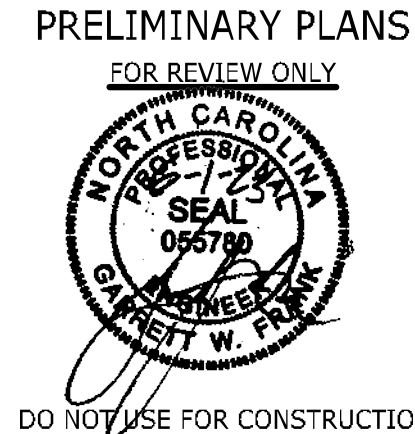


5 6\"/>



- NOTES:  
 1) NO ROD COUPLINGS ALLOWED  
 2) PROVIDE THRUST BLOCKING PER COR DETAIL  
 3) CONCRETE SHALL NOT TOUCH MECHANICAL BOLTS OR FITTINGS

8 FIRE LINE CAPPING DETAIL N.T.S.



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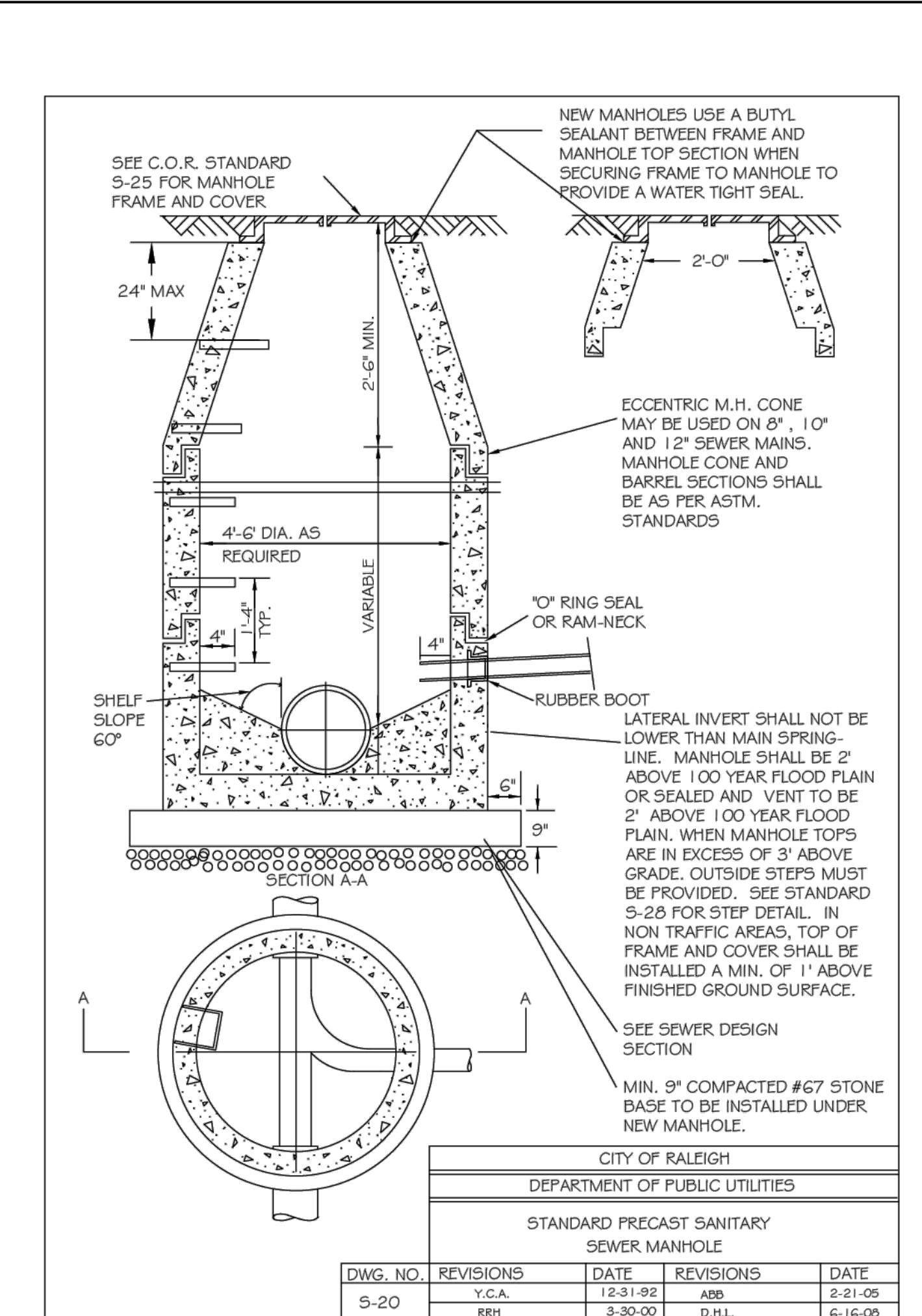
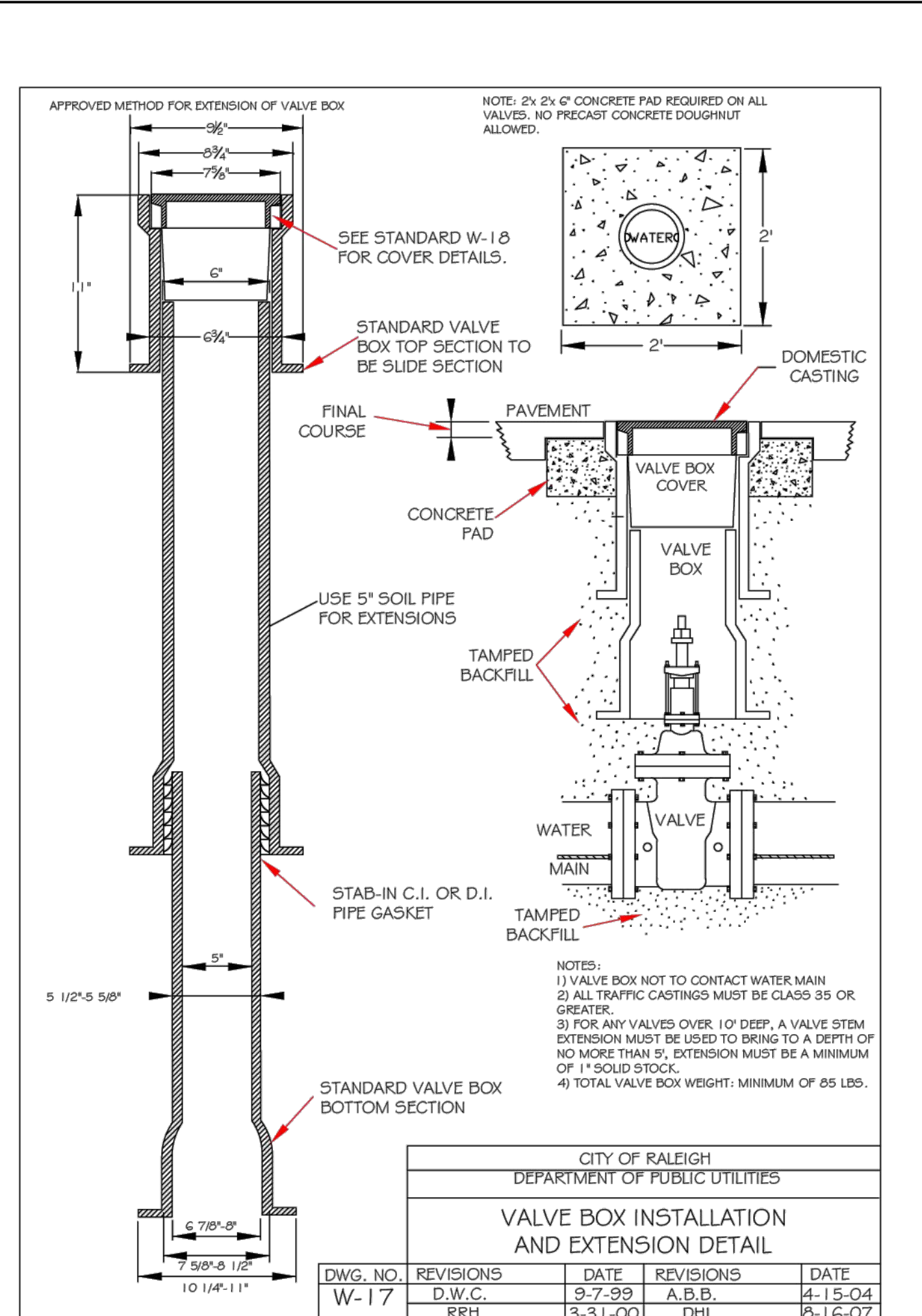
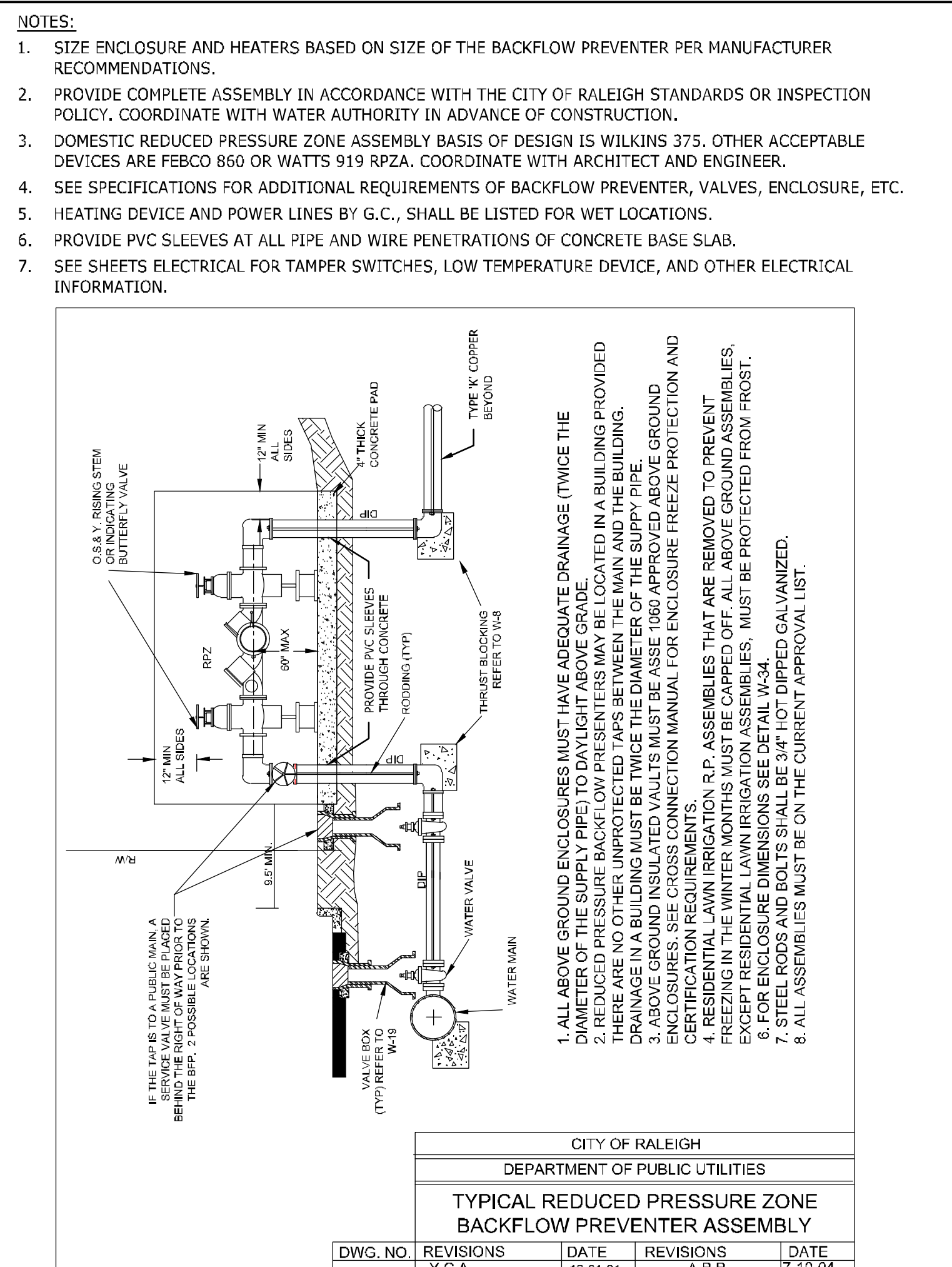
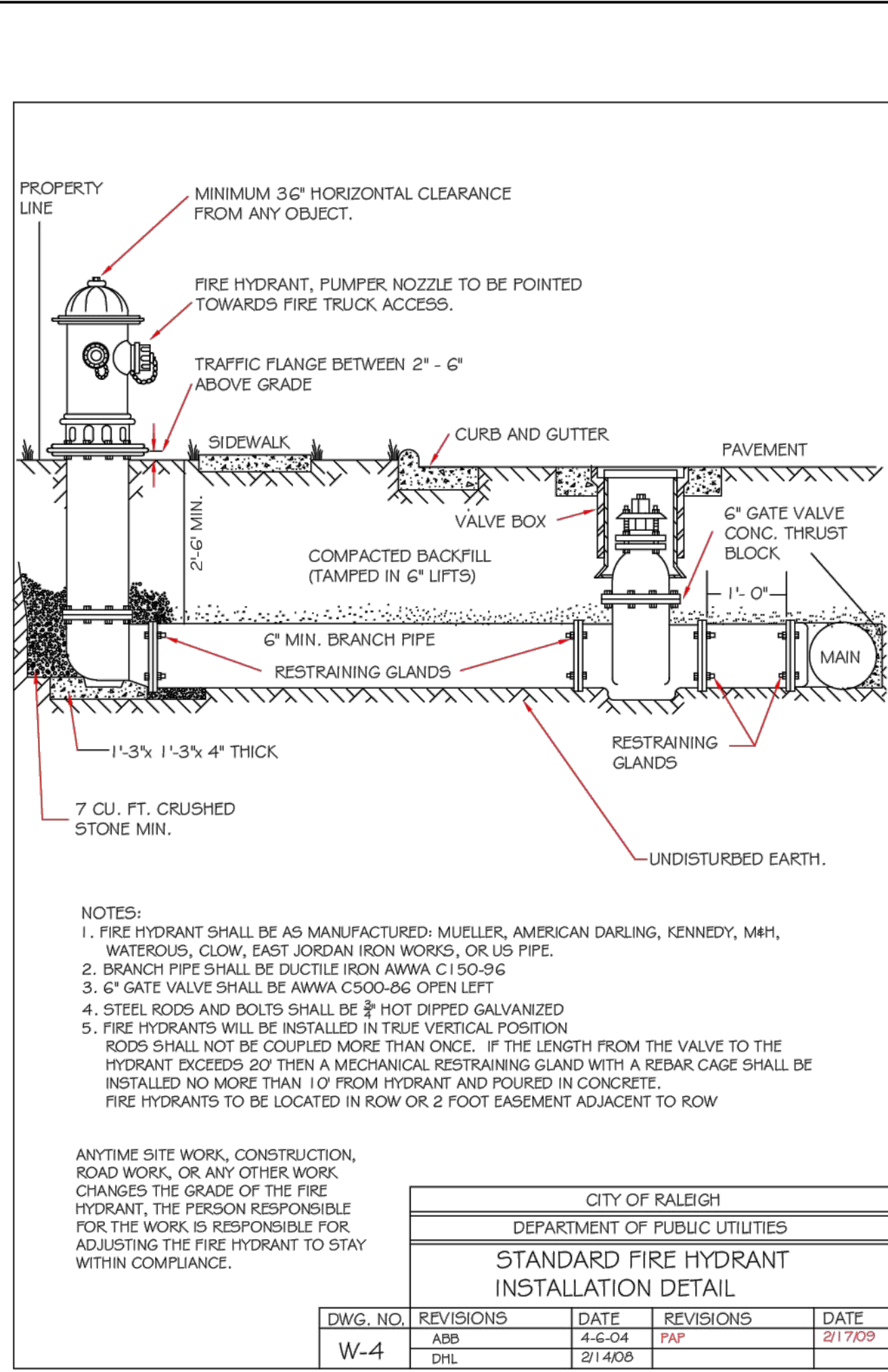
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ADDED TOWN OF ROLESVILLE COMMENTS <td>06/07/2023</td> <td>06/01/2023</td> <td>J. HAYES</td>	06/07/2023	06/01/2023	J. HAYES
			G. FRANK
			G. FRANK
			SCALE AS SHOWN

**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.	C6.2

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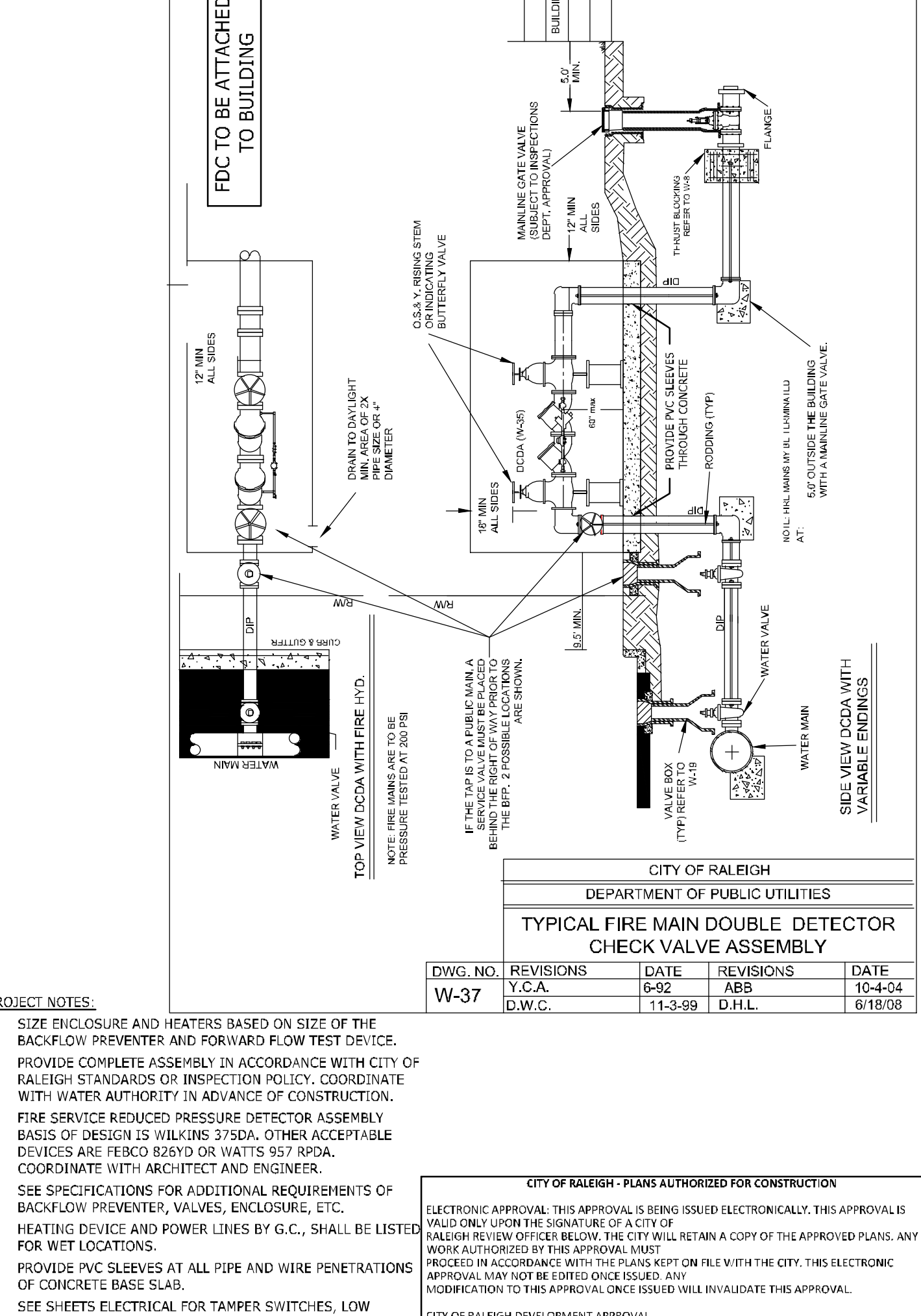
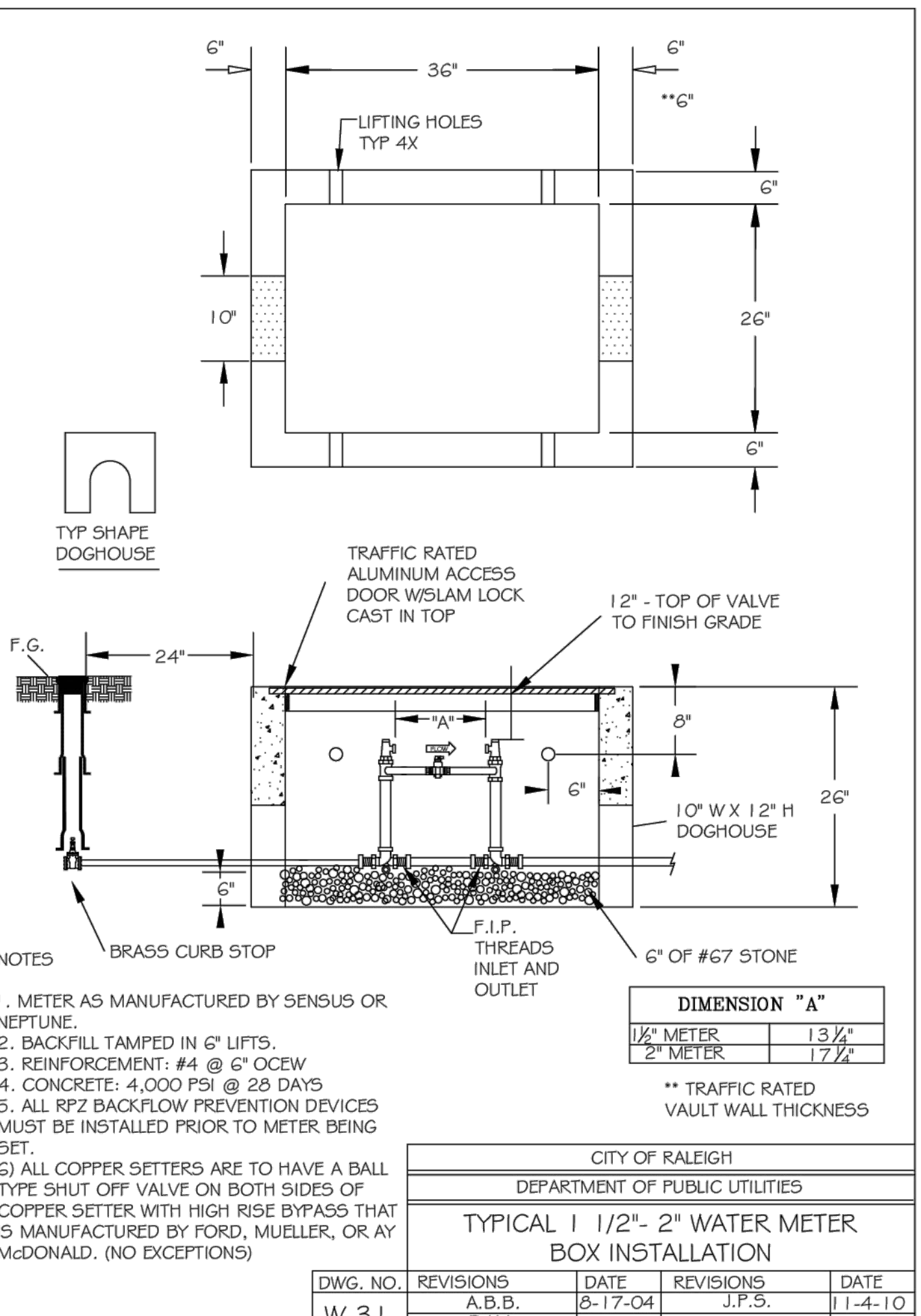
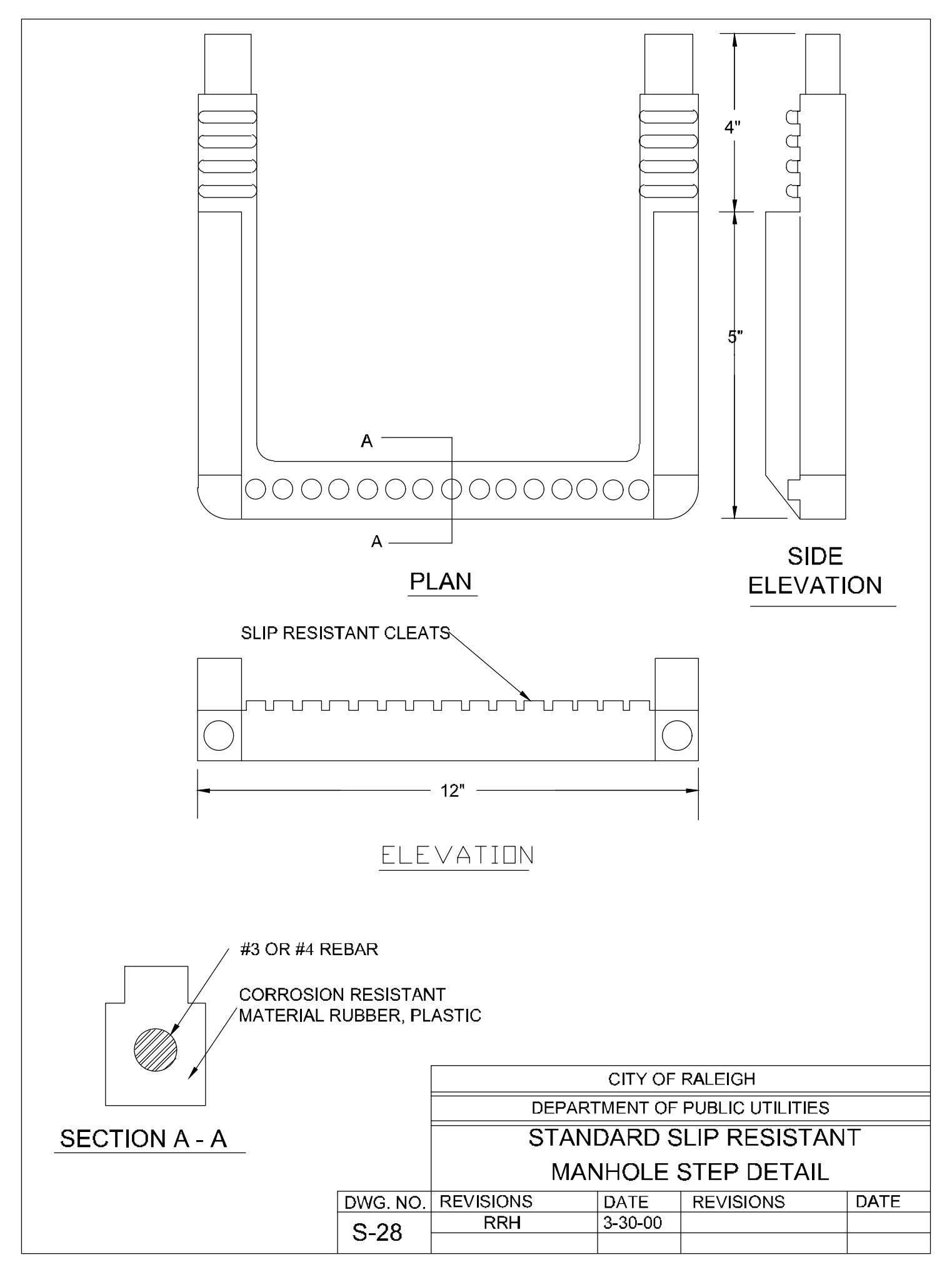
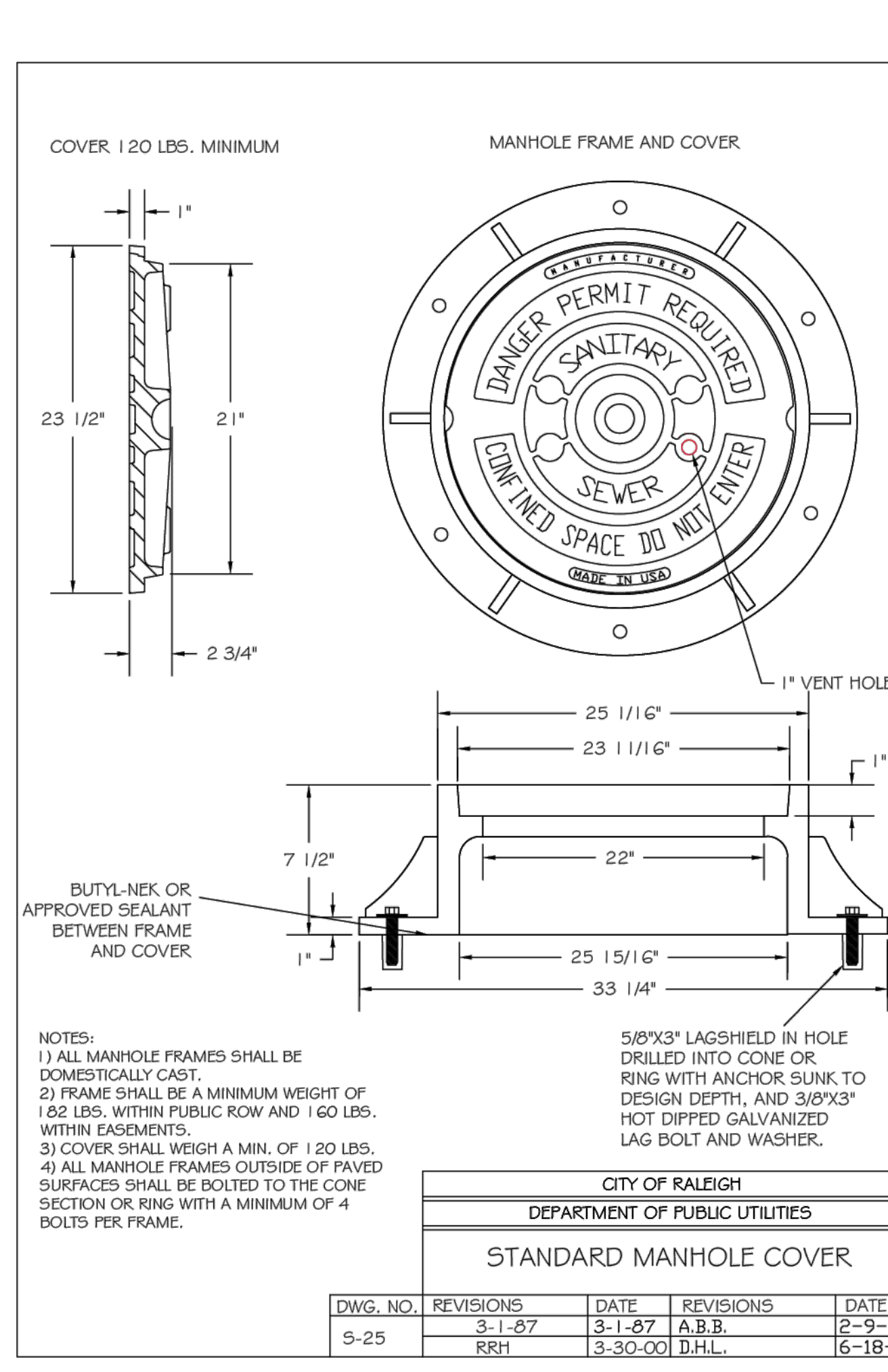


1 FIRE HYDRANT ASSEMBLY N.T.S.

2 1.5" RPZ BACKFLOW PREVENTER (DOMESTIC SERVICE) N.T.S.

3 GATE VALVE ASSEMBLY N.T.S.

4 SANITARY SEWER MANHOLE N.T.S.



5 SANITARY SEWER MANHOLE RING & COVER N.T.S.

6 MANHOLE STEPS N.T.S.

7 WATER METER AND VAULT N.T.S.

8 FIRE SERVICE BACKFLOW (6" RPDA) N.T.S.

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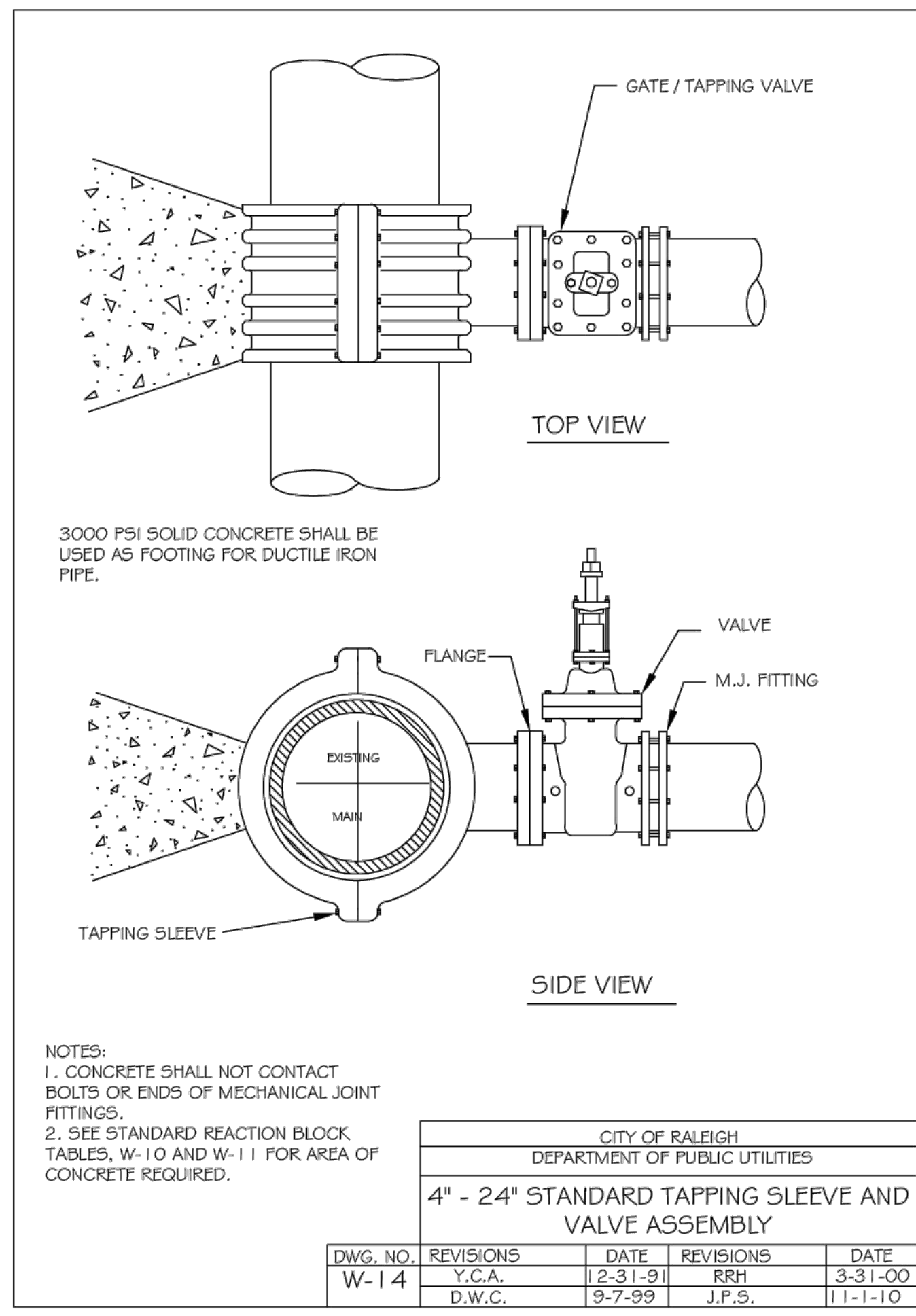
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DATE	DRAWN BY
06/01/2023	J. HAYES

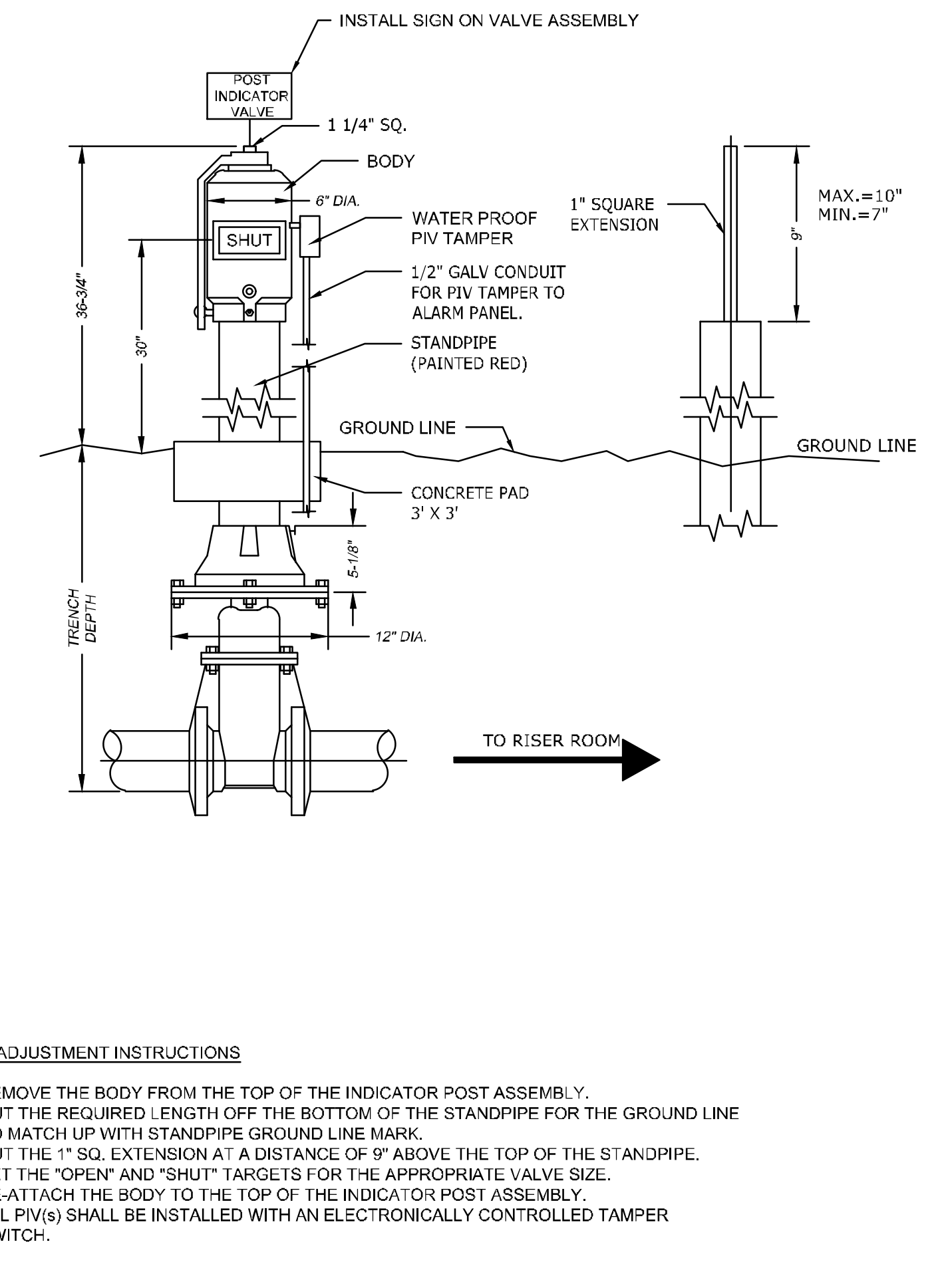
DATE	DESIGNED BY
	G. FRANK

DATE	CHECKED BY
	G. FRANK

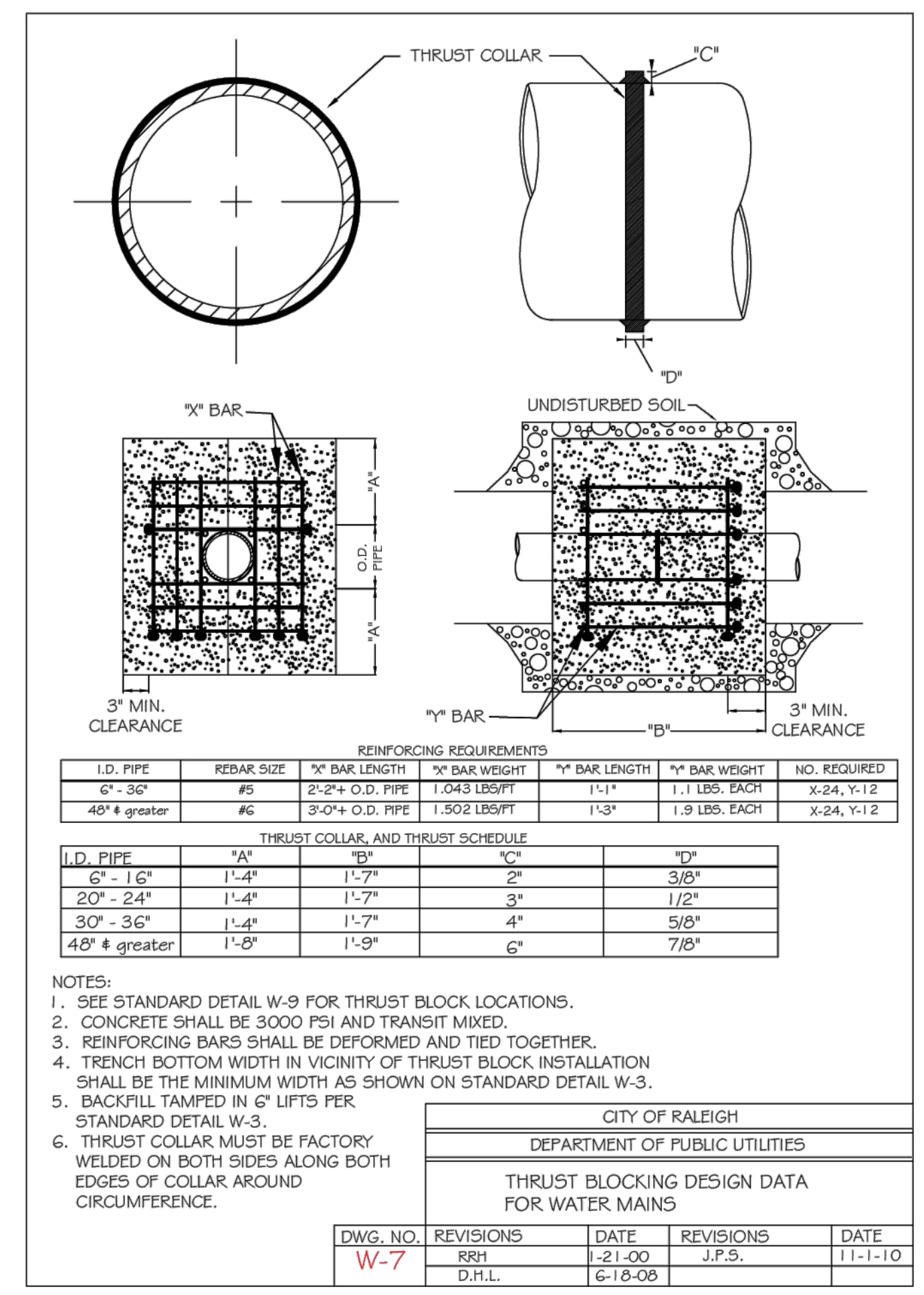
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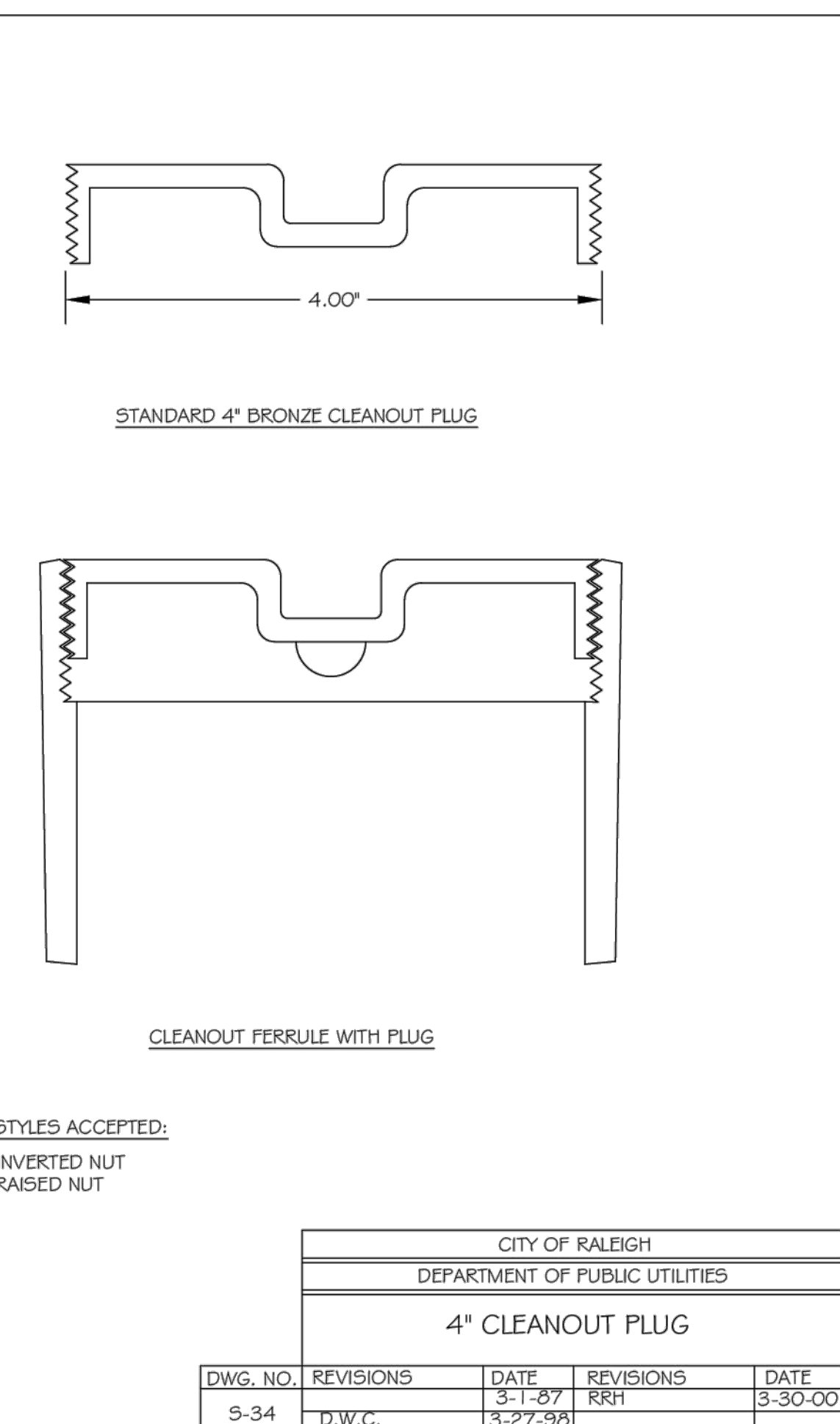
① TAPPING SLEEVE w/ GATE VALVE N.T.S.



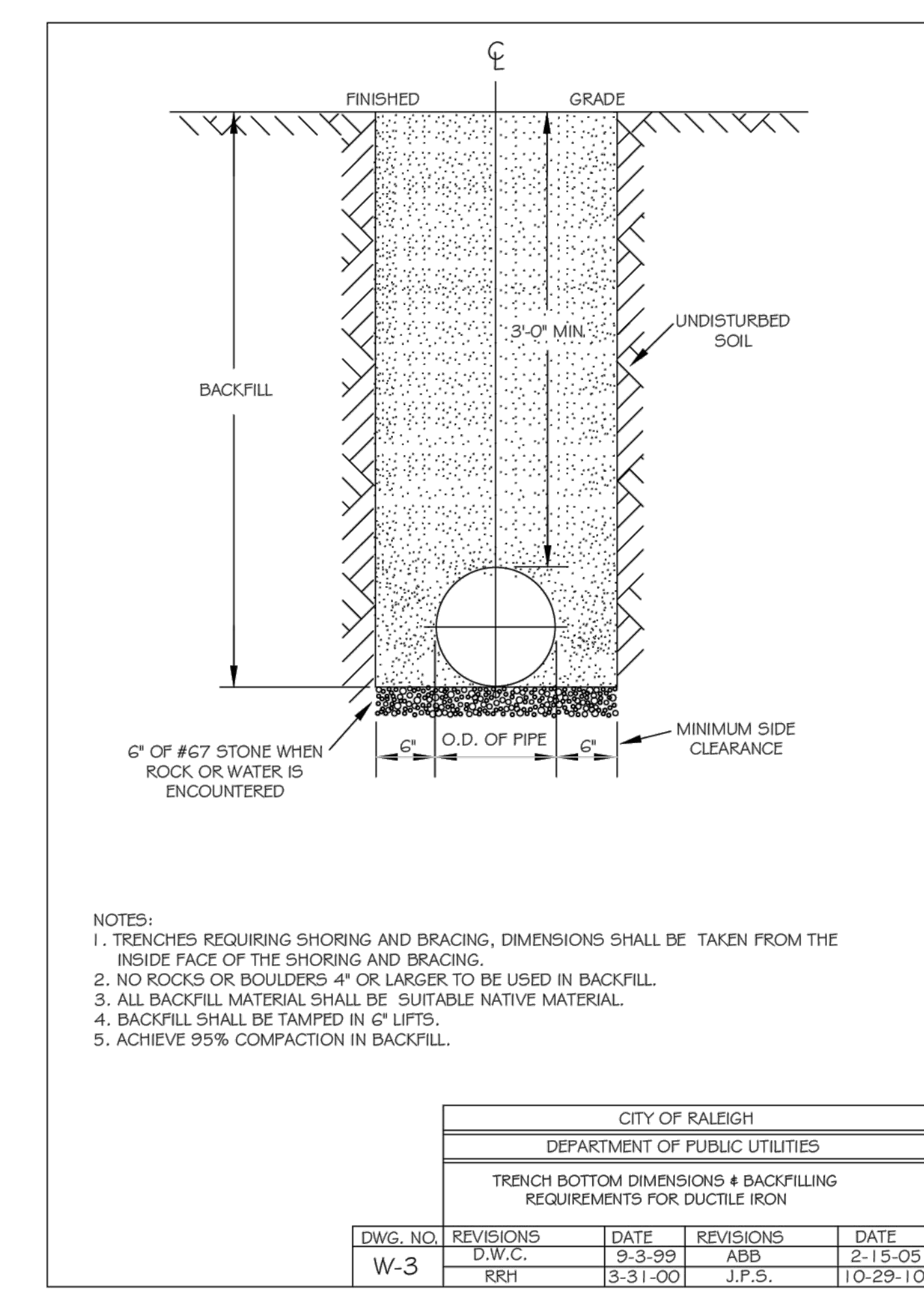
② POST INDICATOR VALVE ASSEMBLY N.T.S.



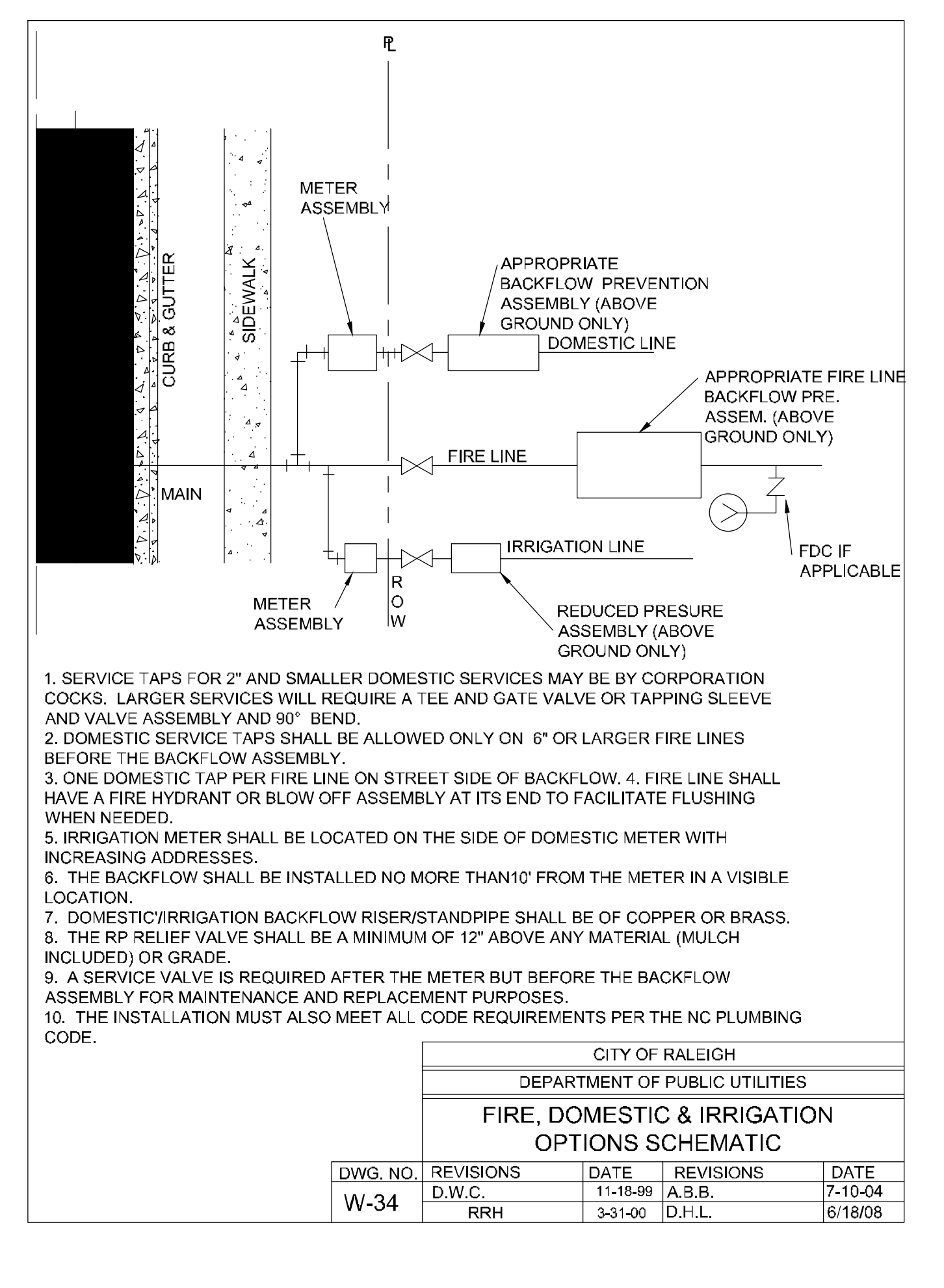
③ THRUST BLOCKING N.T.S.



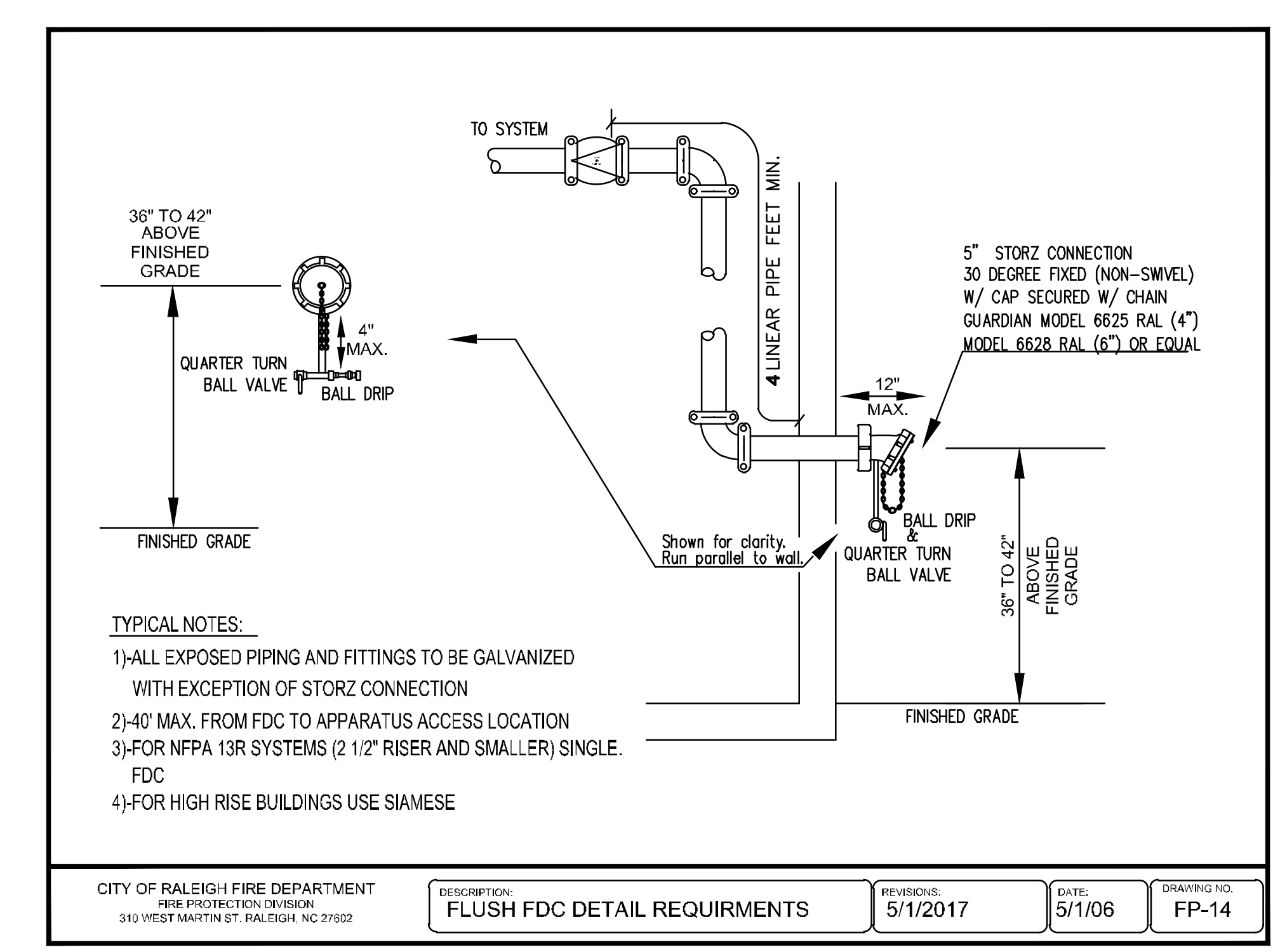
④ SANITARY SEWER CLEANOUT N.T.S.



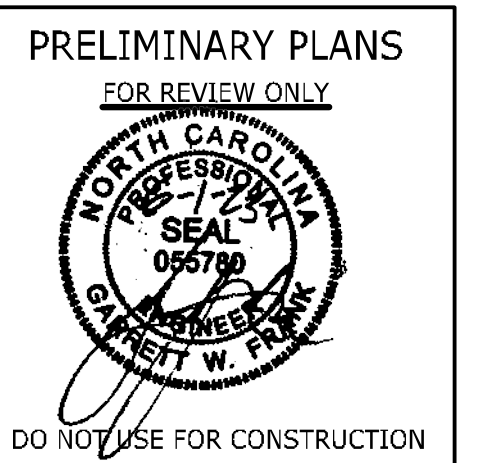
⑤ UTILITY TRENCHING AND BACKFILL N.T.S.



⑥ FIRE, DOMESTIC, & IRRIGATION OPTIONS N.T.S.



⑦ WALL MOUNTED FDC (STORZ) N.T.S.



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06/01/2023 <td>ADDRESSED TOWN OF ROLESVILLE COMMENTS <td></td> </td>	ADDRESSED TOWN OF ROLESVILLE COMMENTS <td></td>	
06/01/2023 <td> <td></td> </td>	<td></td>	

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**J. HAYES**

DESIGNED BY  
**G. FRANK**

CHECKED BY  
**G. FRANK**

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**TIMMONS GROUP**

NORTH CAROLINA LICENSE NO. C-1652

**JONES DAIRY STORAGE FACILITY**

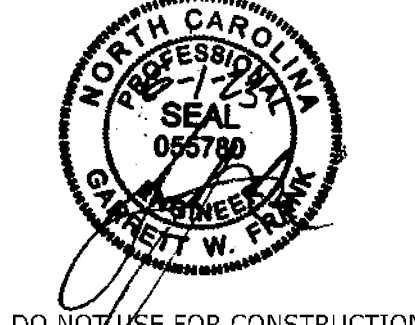
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**SITE DETAILS**

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**54832**

SHEET NO.  
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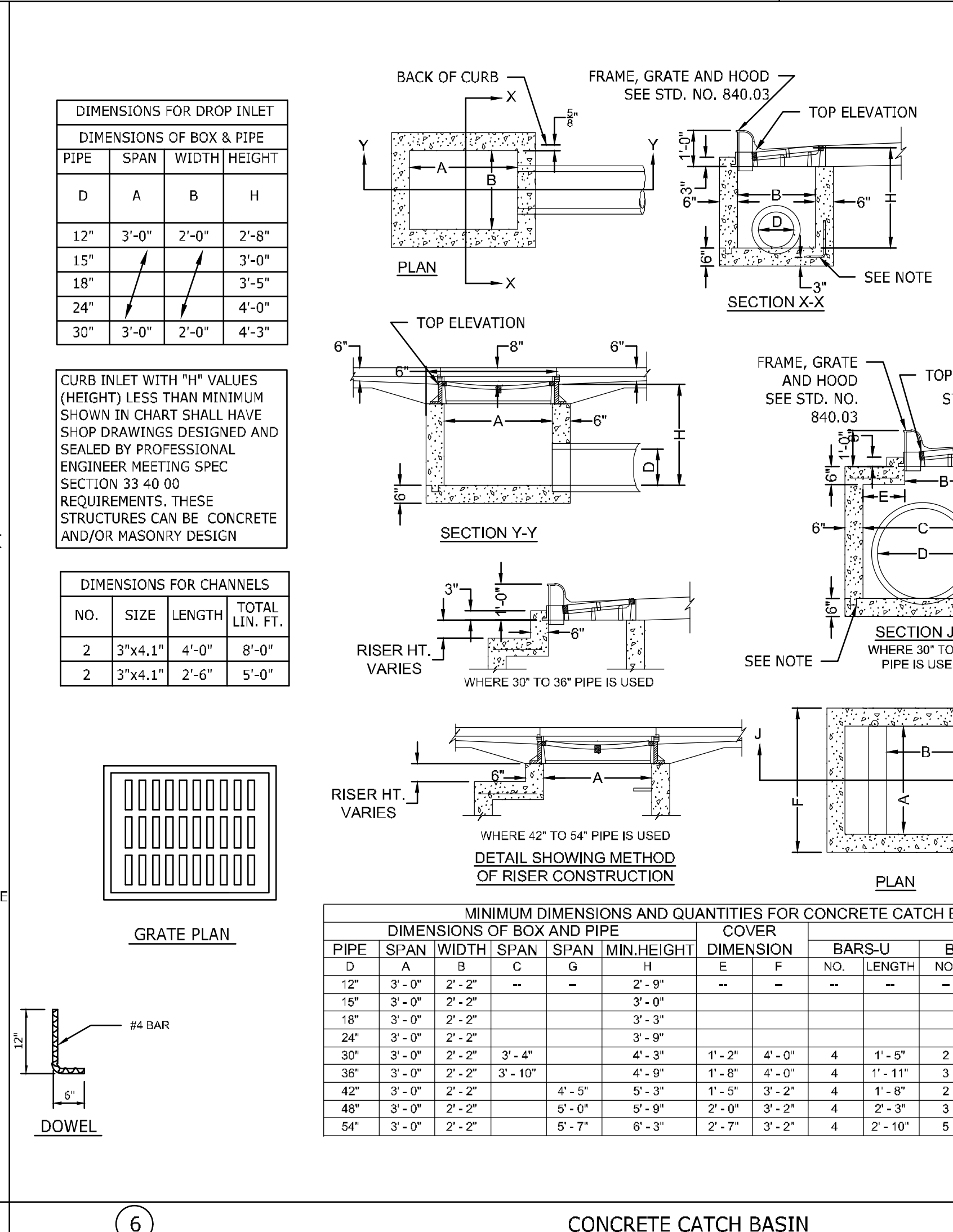
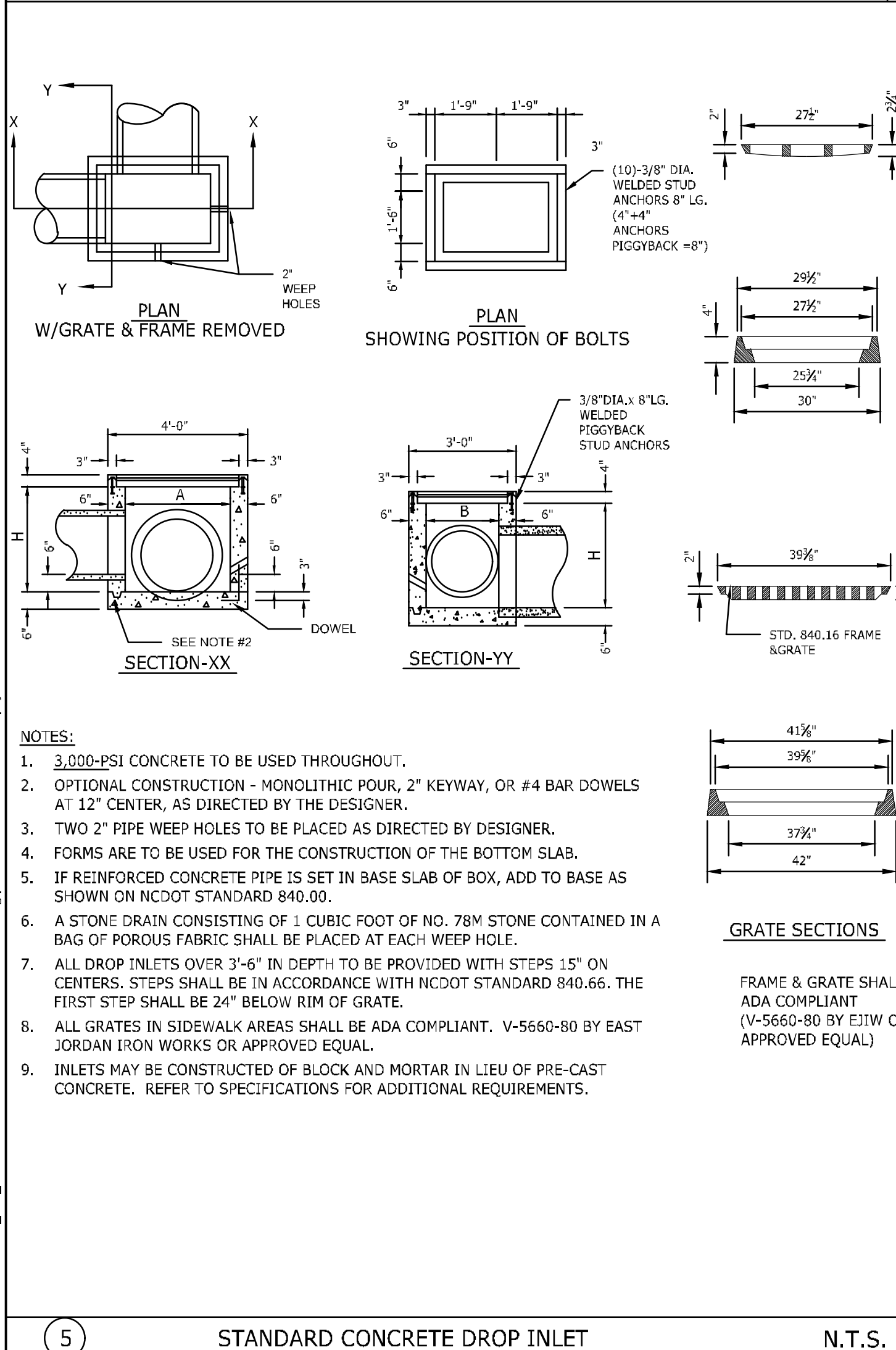
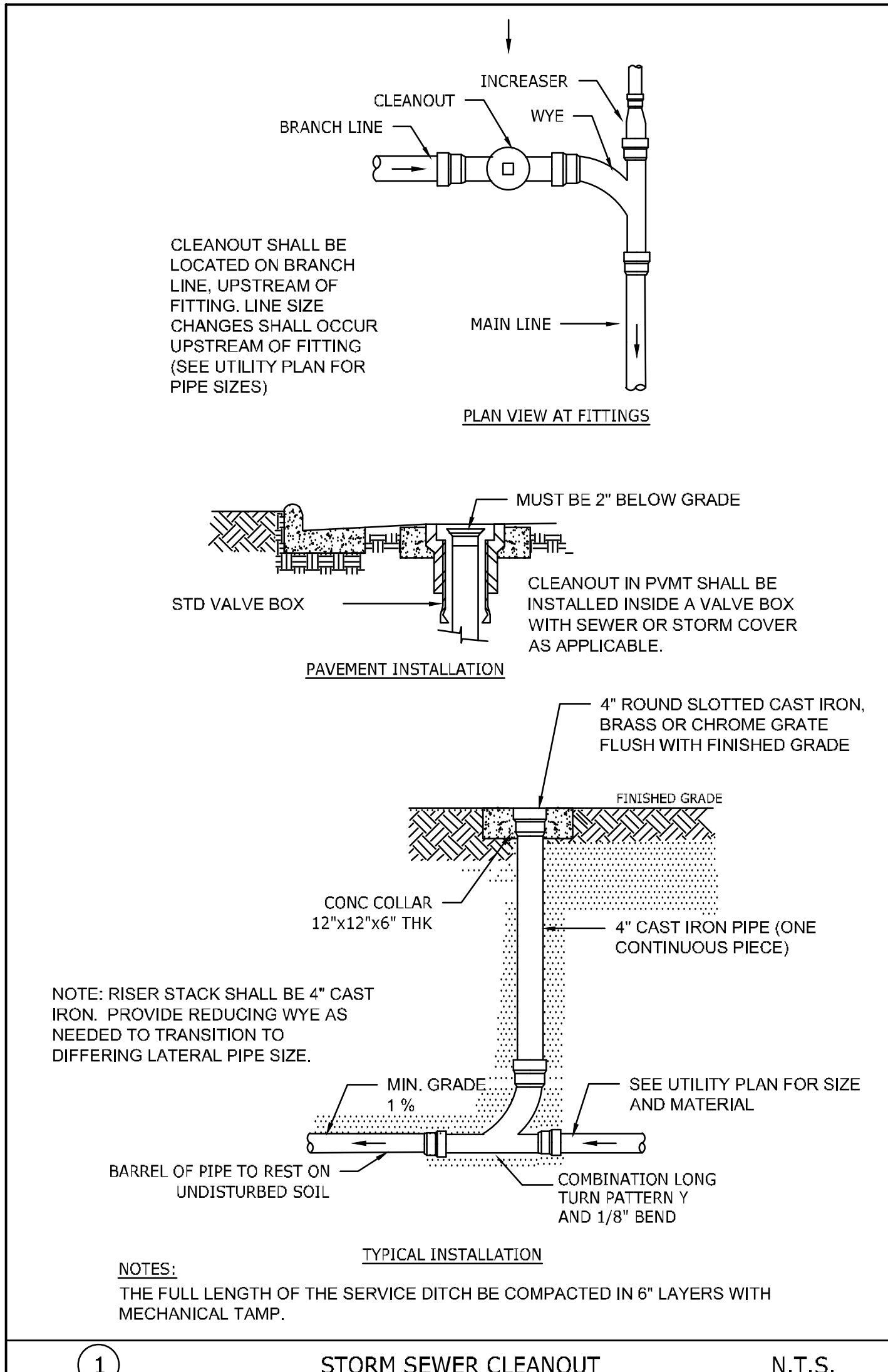
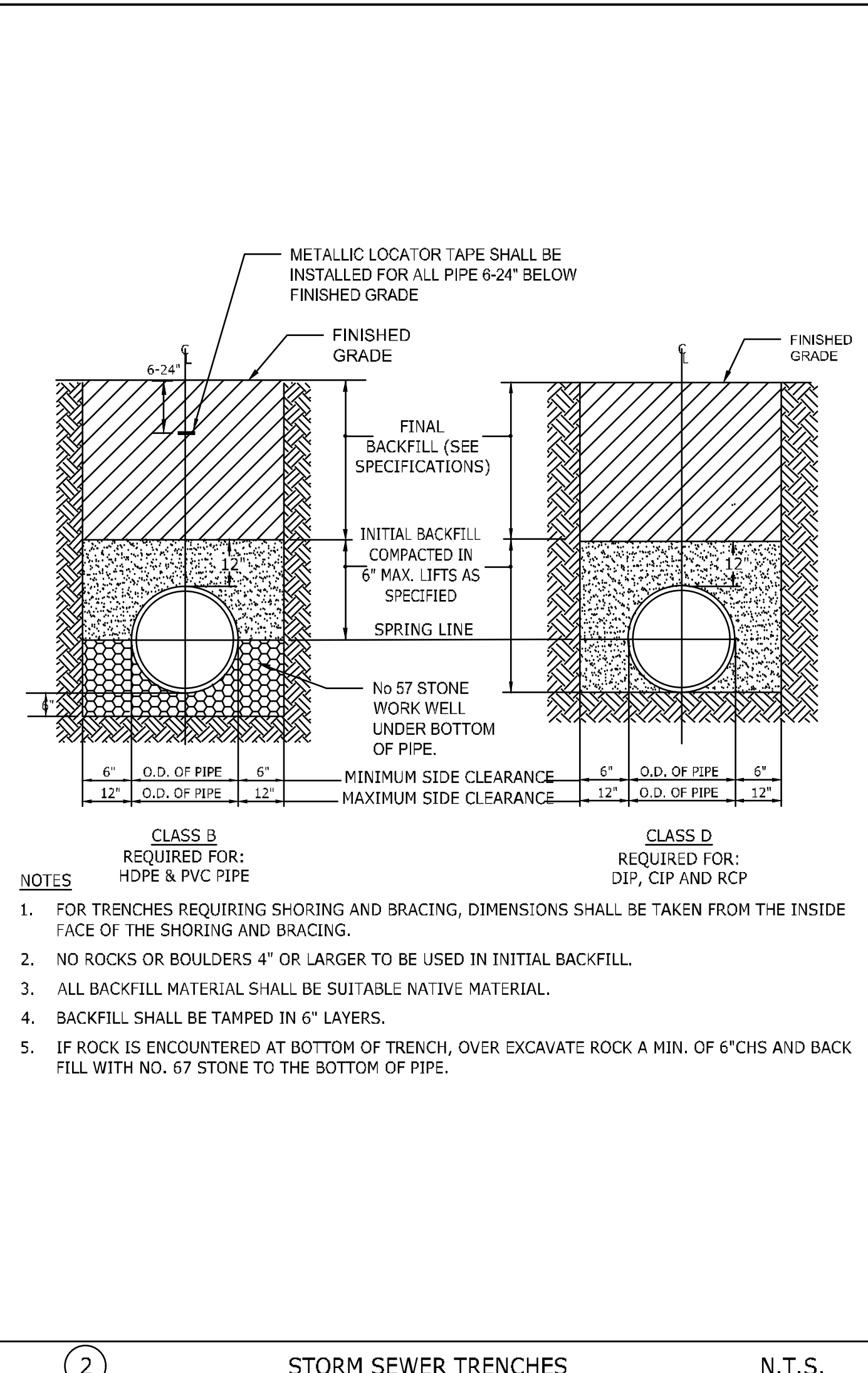
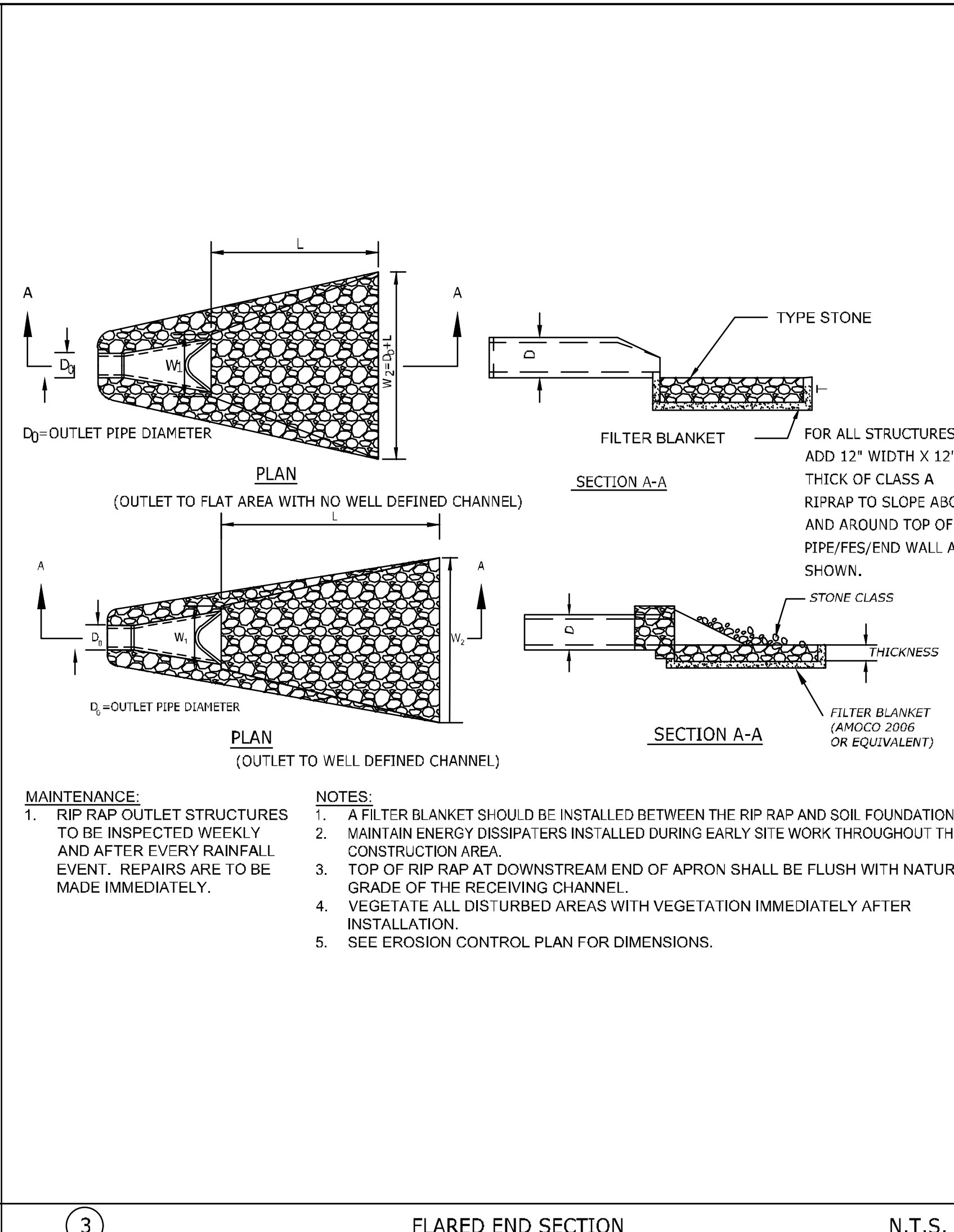
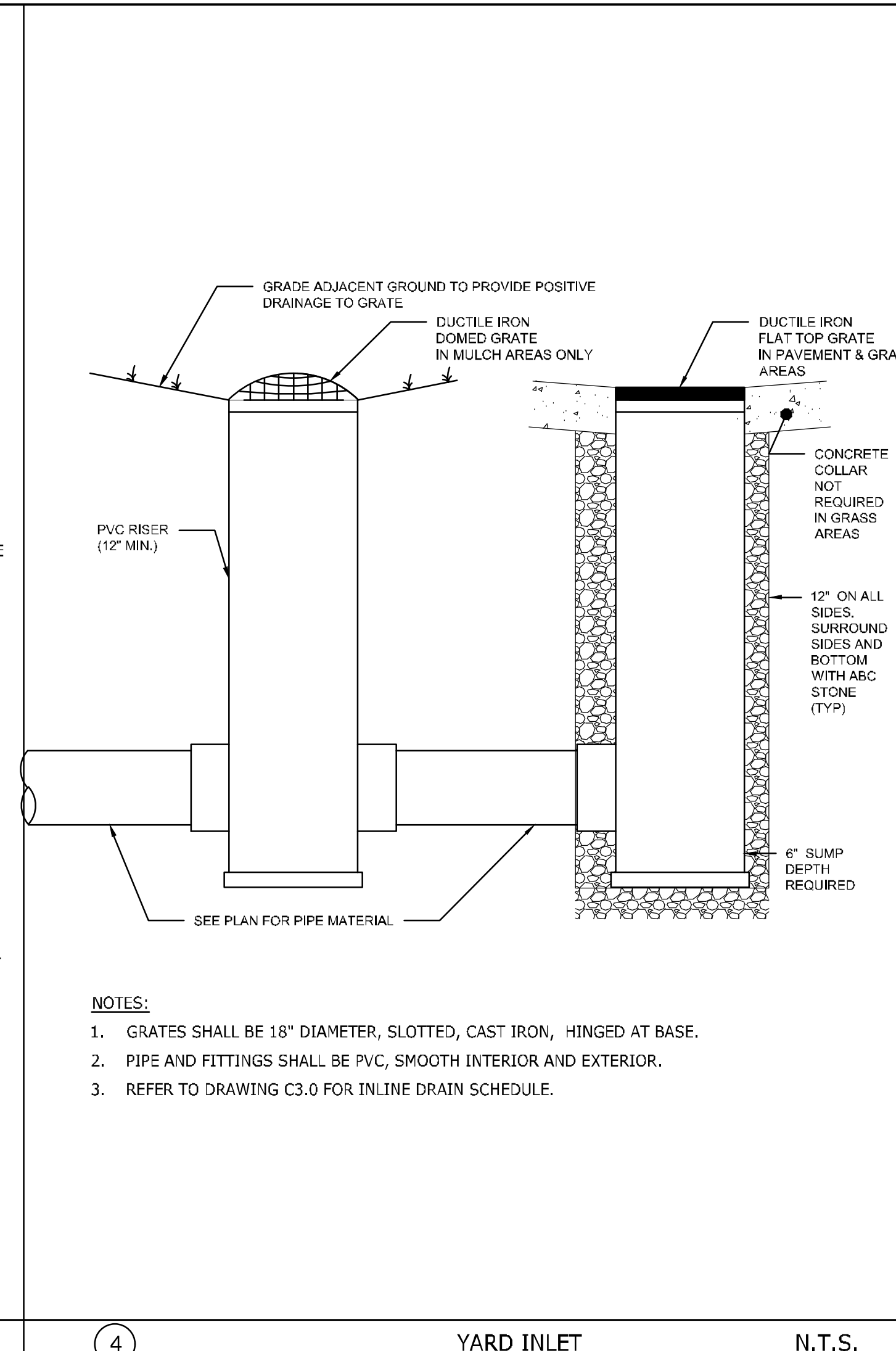
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06/01/2023	

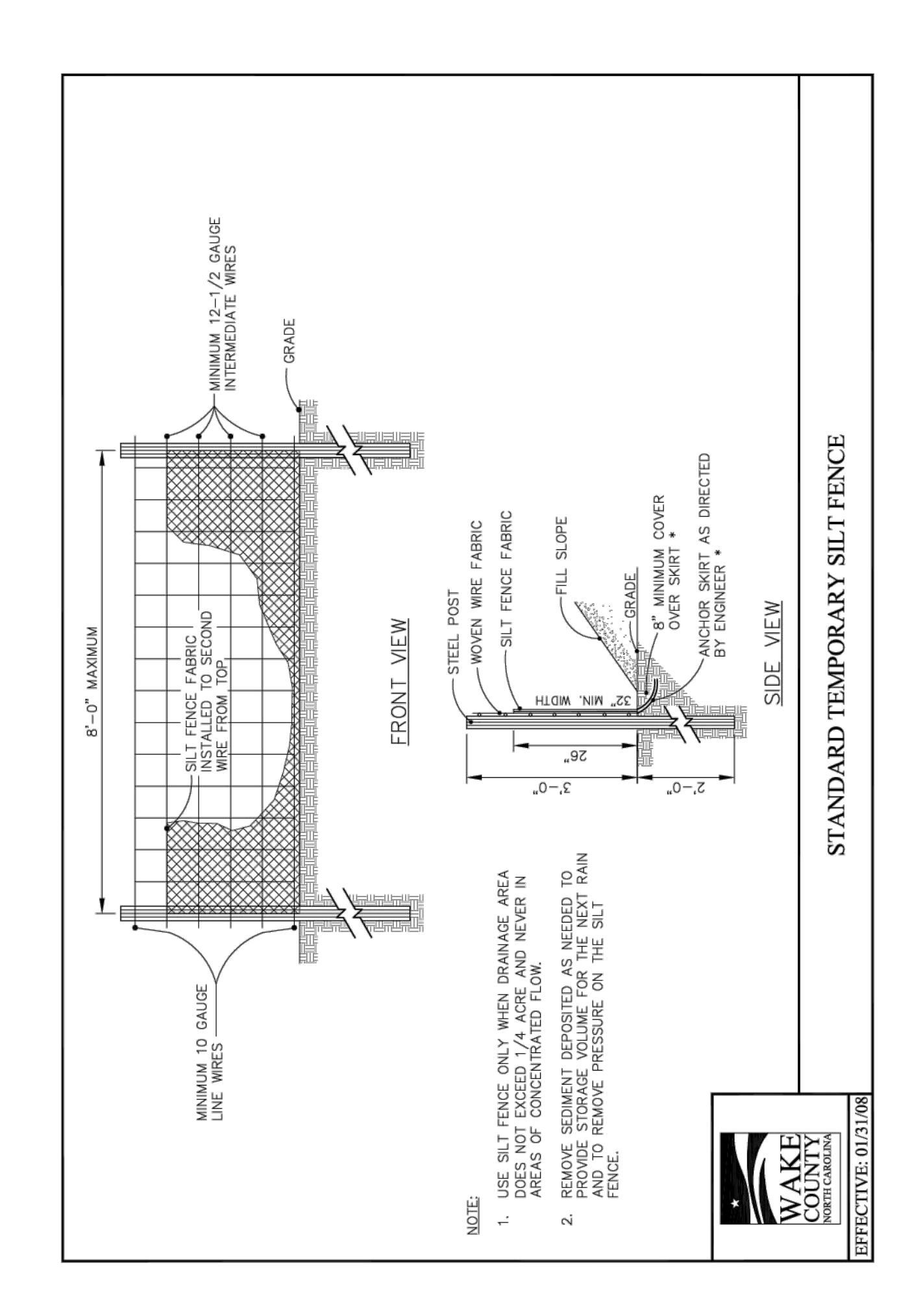
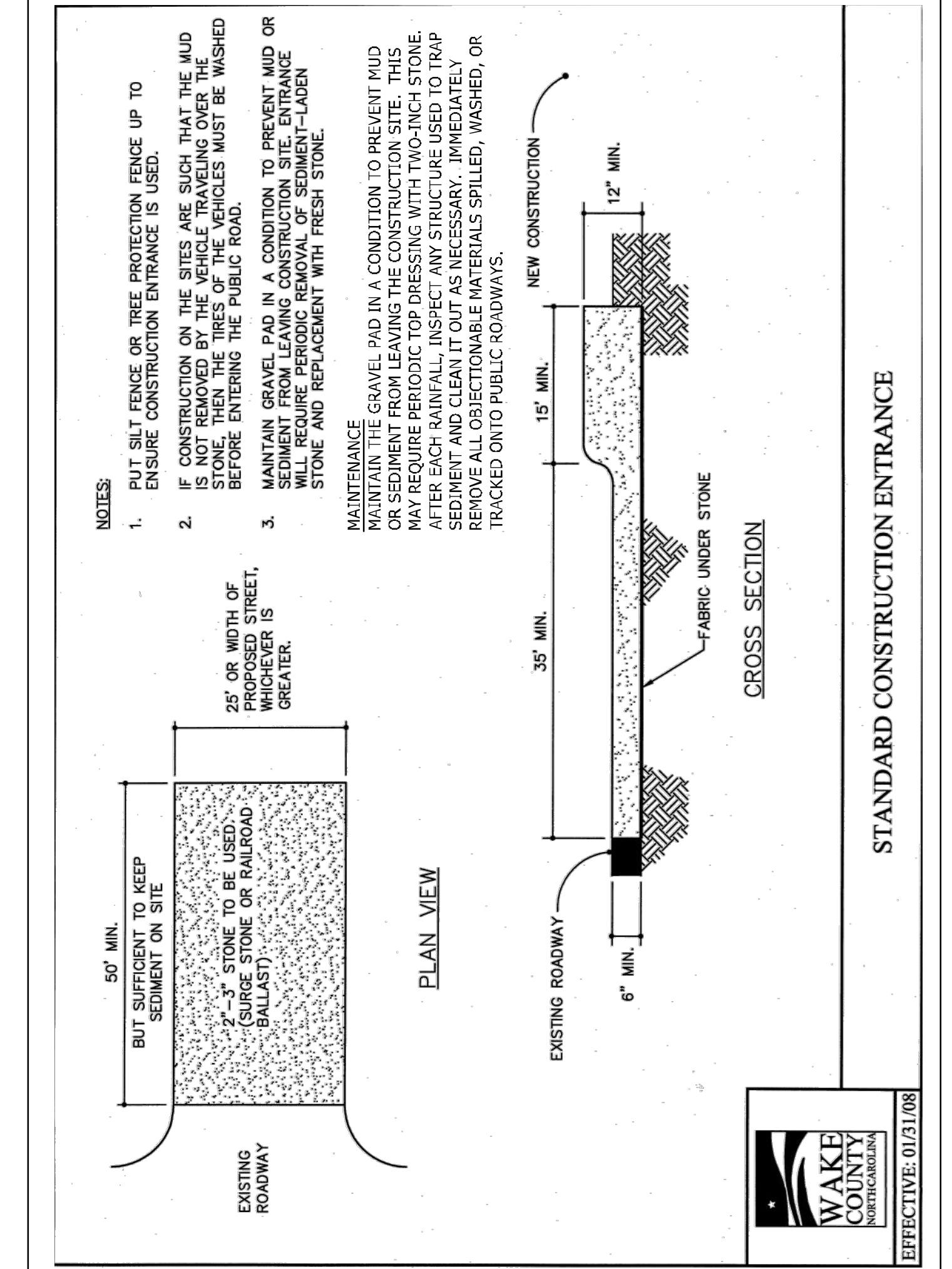
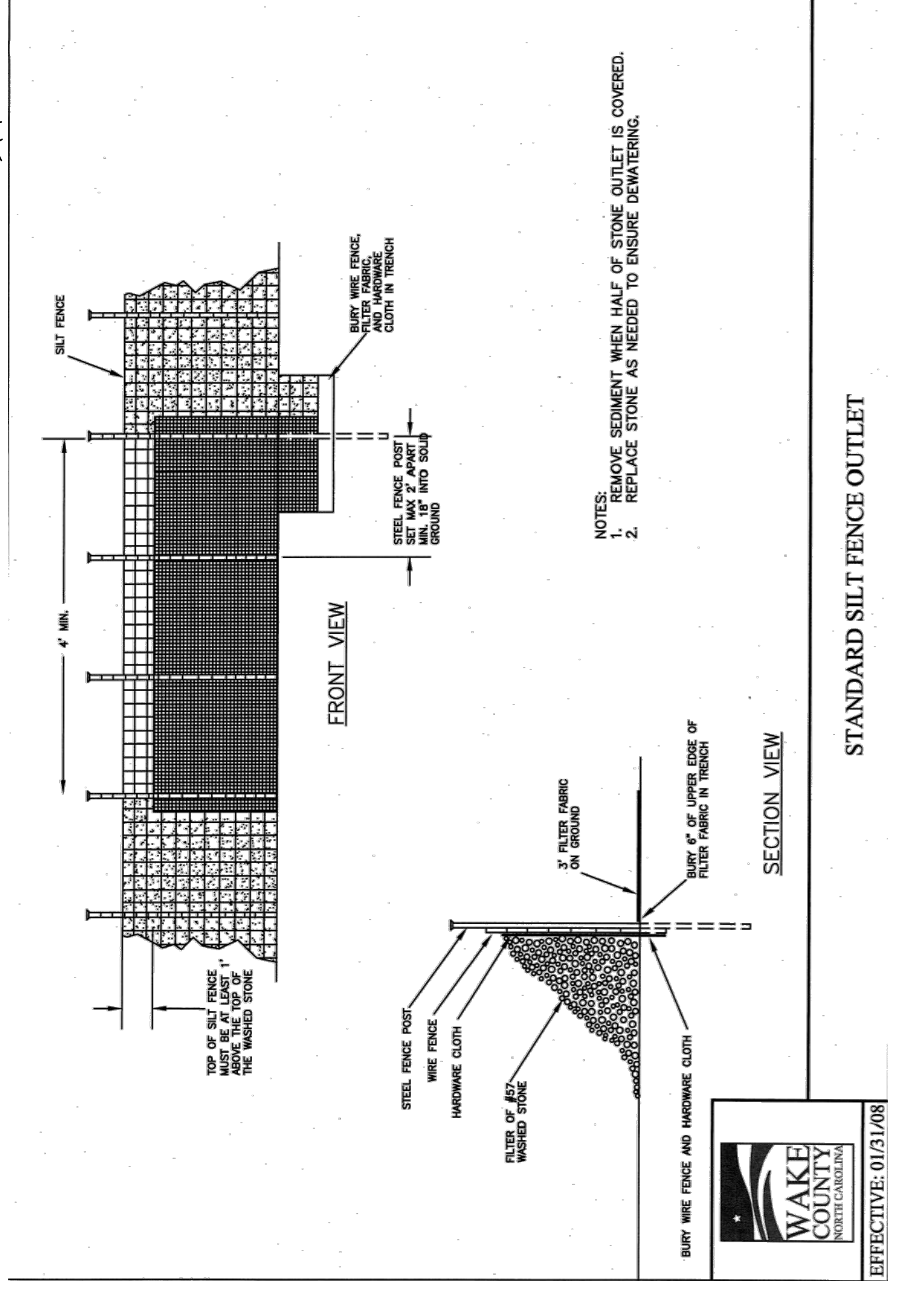
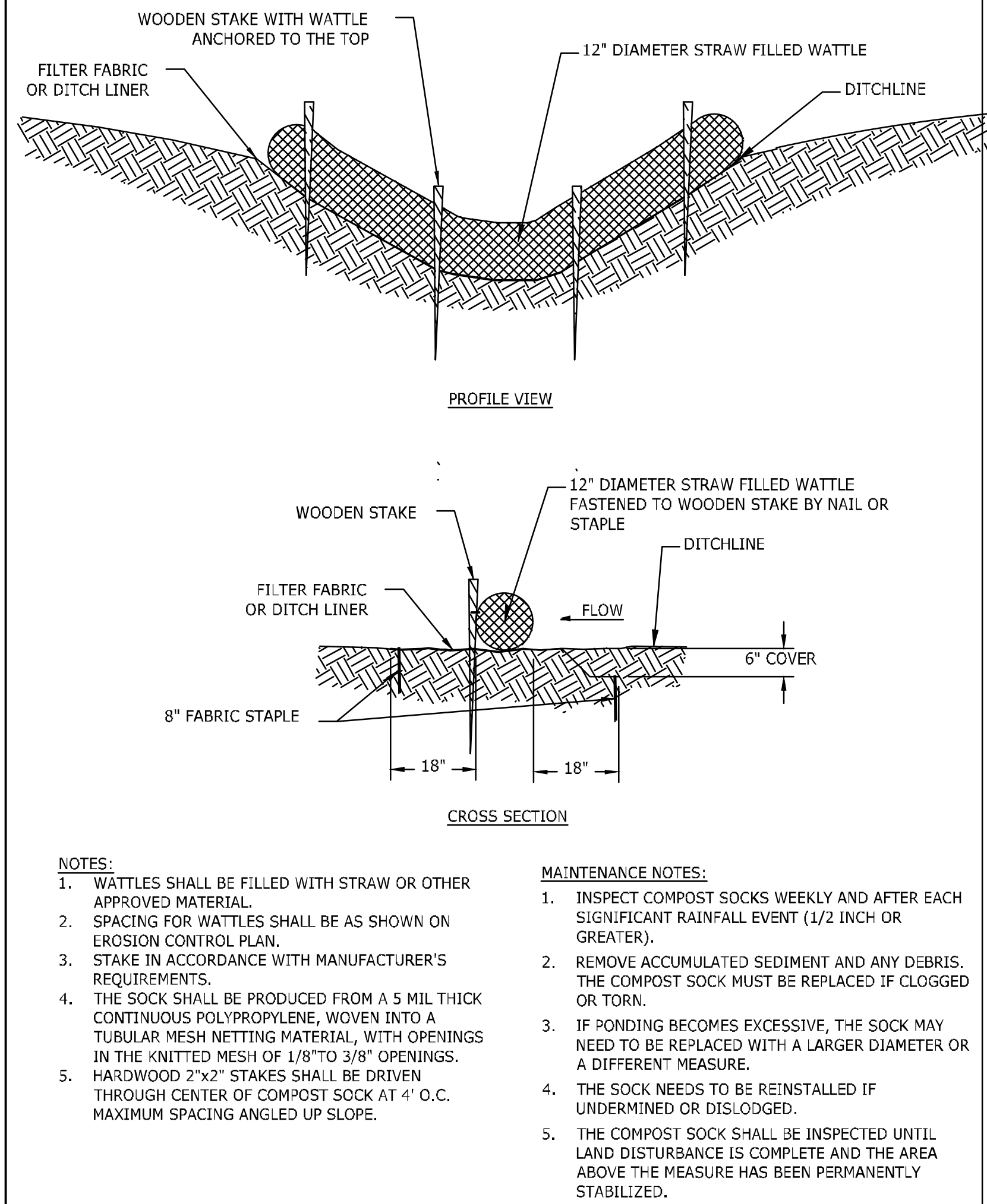
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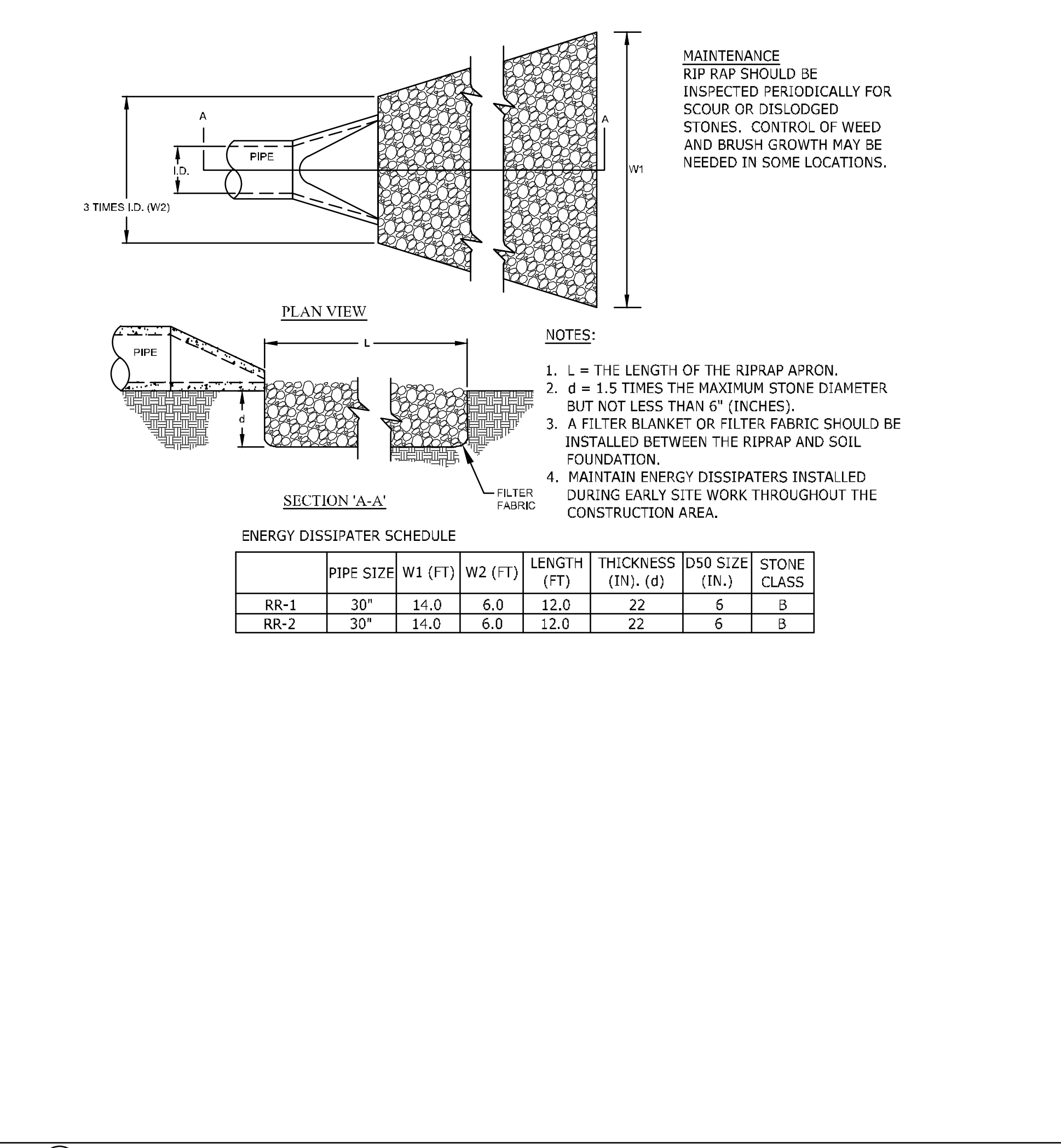
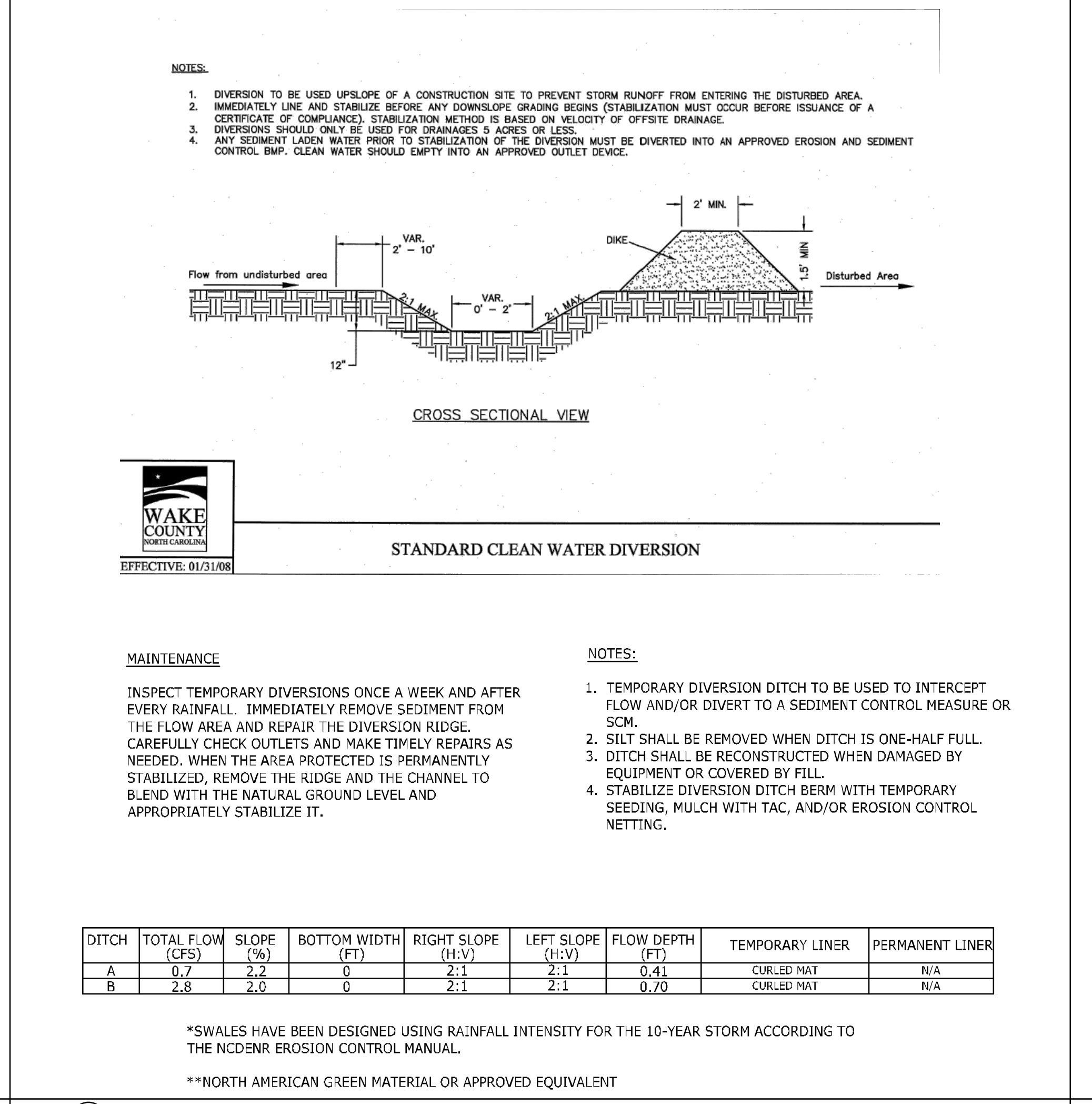
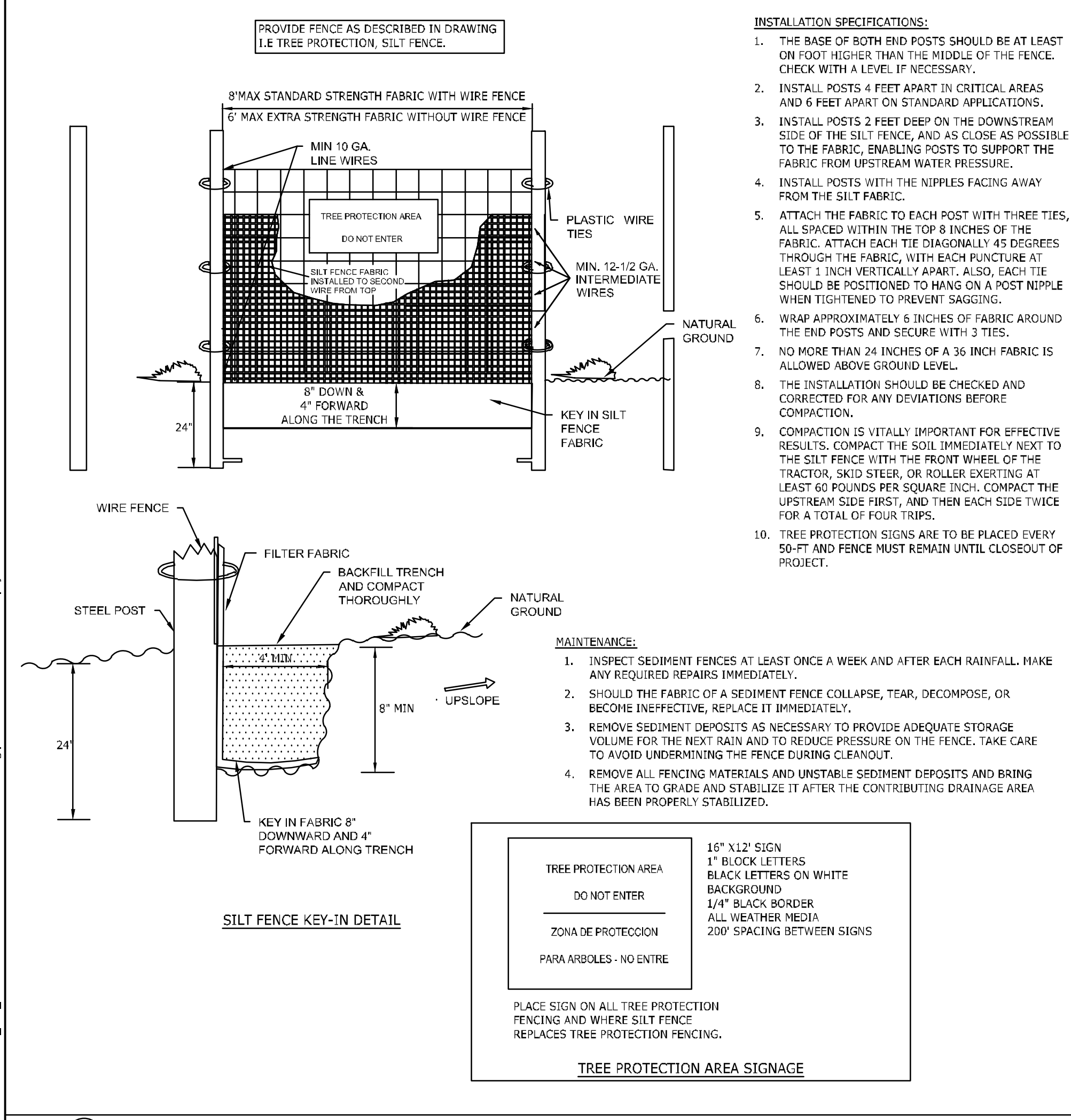


1 CHECK DAM N.T.S.

2 REINFORCED SILT FENCE OUTLET N.T.S.

3 GRAVEL CONSTRUCTION ENTRANCE N.T.S.

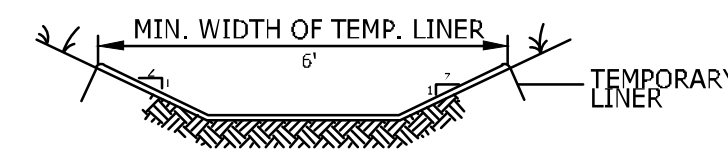
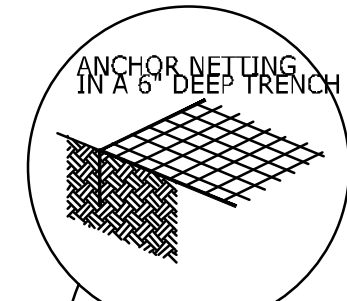
4A TEMPORARY SEDIMENT FENCE N.T.S.



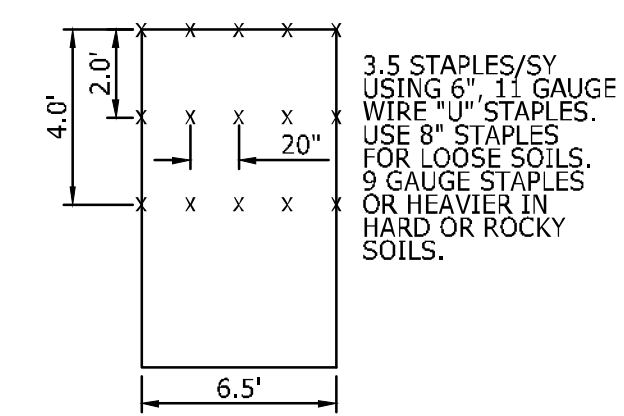
4B TREE PROTECTION FENCE N.T.S.

5 TEMPORARY CLEAN WATER DIVERSION DITCH N.T.S.

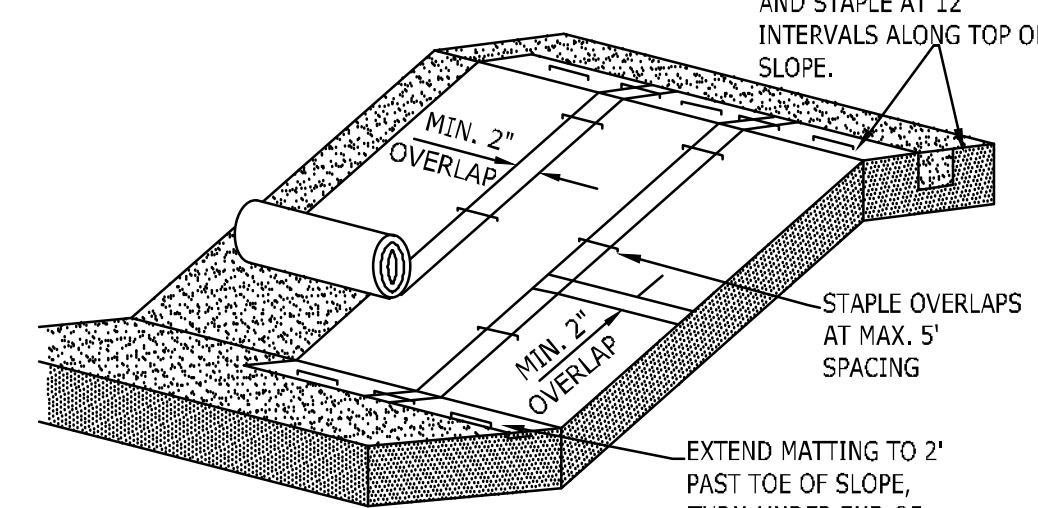
6 RIP RAP OUTLET PROTECTION N.T.S.



GRASS-LINED CHANNEL NTS



EXCELSIOR MAT STAPLE PATTERN NTS



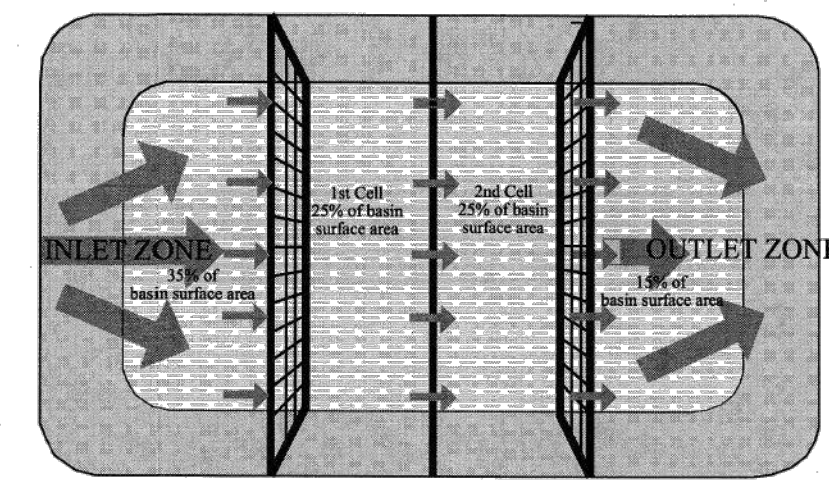
ANCHOR MATTING IN 6"x6" TRENCH AT TOP OF SLOPE AND STAPLE AT 12" INTERVALS ALONG TOP OF SLOPE.

MIN. 2" OVERLAP

MIN. 2" OVERLAP

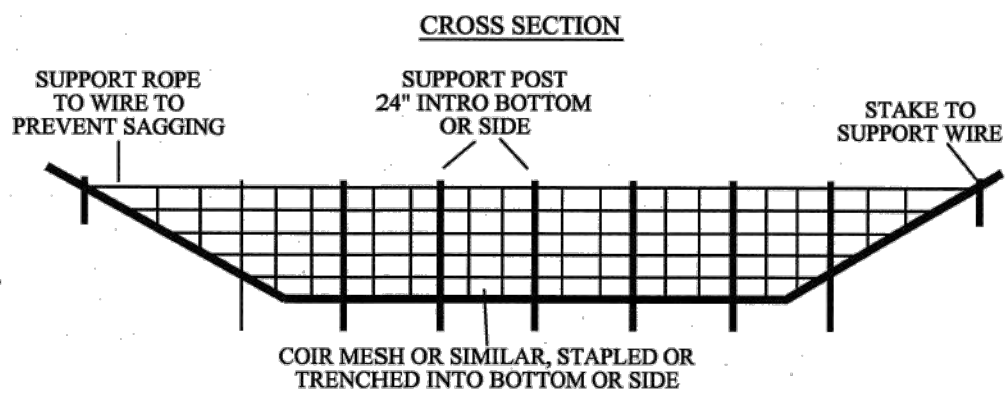
STAPLE OVERLAPS AT MAX. 5' SPACING

EXTEND MATTING TO 2' PAST TOE OF SLOPE, TURN-UNDER END OF MATTING AND STAPLE AT 12" INTERVALS.

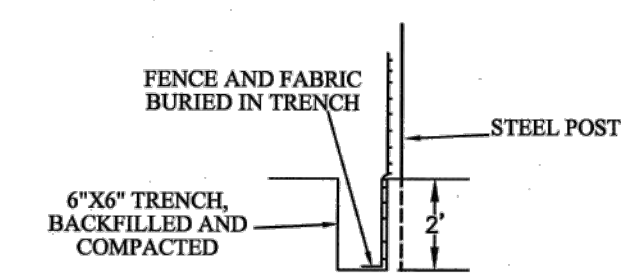


PLAN VIEW

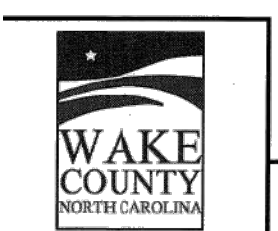
- NOTES:
1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
  2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
  3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
  4. BAFFLE SHALL BE 700 GMZ COIR EROSION BLANKET.
  5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.
  6. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL.



CROSS SECTION



SECTION VIEW AT OPENING



EFFECTIVE: 01/31/08

STANDARD BAFFLES DETAIL

MAINTENANCE

INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

CONSTRUCTION NOTES:

1. INSTALL EXCELSIOR CHANNEL LINING IN ALL SWALES OR AREAS OF CONCENTRATED STORMWATER FLOW.
2. SEE SPECIFICATIONS FOR TEMP. LINING REQUIREMENTS.
3. PREPARE SOIL BEFORE INSTALLING MATS OR NETS, INCLUDING APPLICATION OF LIME, FERTILIZER AND SEED.
4. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE NET OR MAT IN A 6" DEEP TRENCH, BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
5. ROLL CENTER MAT OR NET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
6. PLACE MAT OR NET OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE.
7. FULL LENGTH EDGE OF MAT OR NET AT TOP SIDE SLOPES SHALL BE ANCHORED IN 6" DEEP TRENCH AFTER STAPLING.
8. MATS OR NETS SHALL BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED.
9. THE TERMINAL END OF THE MAT OR NET MUST BE ANCHORED IN A 6" DEEP TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

MAINTENANCE NOTES:

1. GRASS-LINED CHANNELS TO BE INSPECTED WEEKLY AND AFTER EVERY RAINFALL EVENT, DURING THE ESTABLISHMENT AND AFTER THE ESTABLISHMENT PERIOD.
2. REPAIRS ARE TO BE MADE IMMEDIATELY.
3. REMOVE SEDIMENT ACCUMULATIONS TO MAINTAIN DESIGNED CARRYING CAPACITY.
4. GRASS TO BE HEALTHY AND IN VIGOROUS CONDITIONS AT ALL TIMES.

NOTES:

1. SLOPE SURFACE SHALL BE SMOOTH PRIOR TO PLACEMENT OF MATTING TO ENSURE PROPER SOIL CONTACT.
2. LIME, FERTILIZE, AND SEED PRIOR TO PLACING MATTING. PLANT SHRUBS, TREES, ETC. FOLLOWING PLACEMENT OF MATTING.
3. ON SLOPES FLATTER THAN 4:1, ROLLS MAY BE PLACED IN HORIZONTAL STRIPS.
4. DO NOT STRETCH MATTING TIGHT. ALLOW ROLLS TO CONFORM TO ANY IRREGULARITIES.
5. INSTALL STAPLES IN PATTERNS AS RECOMMENDED BY MATTING MANUFACTURER.

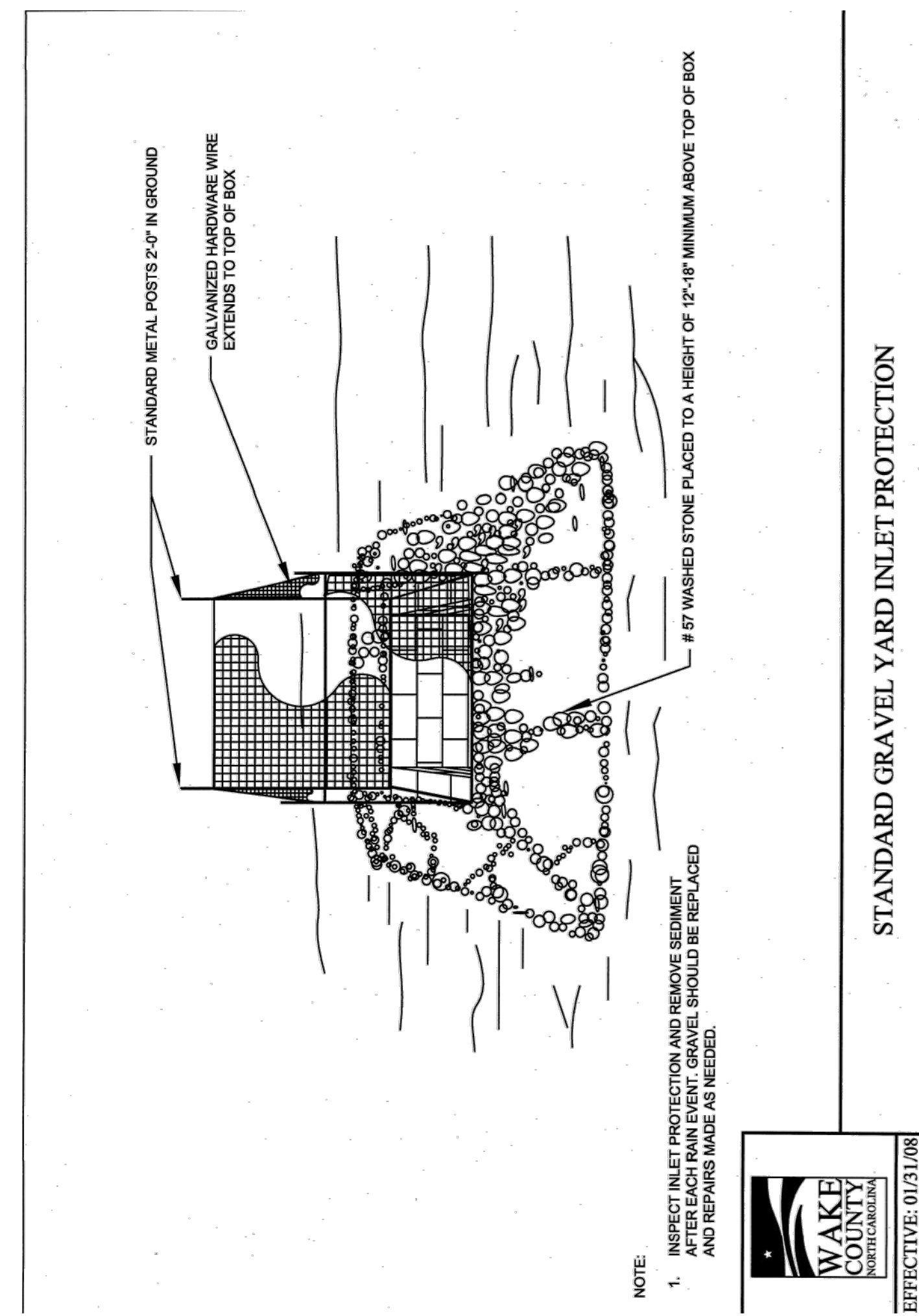
MAINTENANCE NOTES:

1. INSPECT MATTING AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2" OR GREATER) RAINFALL AND REPAIR IMMEDIATELY AS NEEDED.
2. ENSURE GOOD CONTACT WITH SOIL SURFACE IS MAINTAINED AND EROSION DOES NOT OCCUR BENEATH MATTING.
3. AREAS OF MATTING THAT ARE DAMAGED OR WHERE NOT IN CLOSE CONTACT WITH THE SOIL SHALL BE REPAIRED AND STAPLED.
4. IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREAS PROTECTED.
5. MONITOR AND REPAIR MATTING AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

1 TEMPORARY CHANNEL LINING N.T.S.

2 ROLLED EROSION CONTROL PRODUCT N.T.S.

3 COIR MESH BAFFLES (NCDENR 6.65) N.T.S.



STANDARD GRAVEL YARD INLET PROTECTION

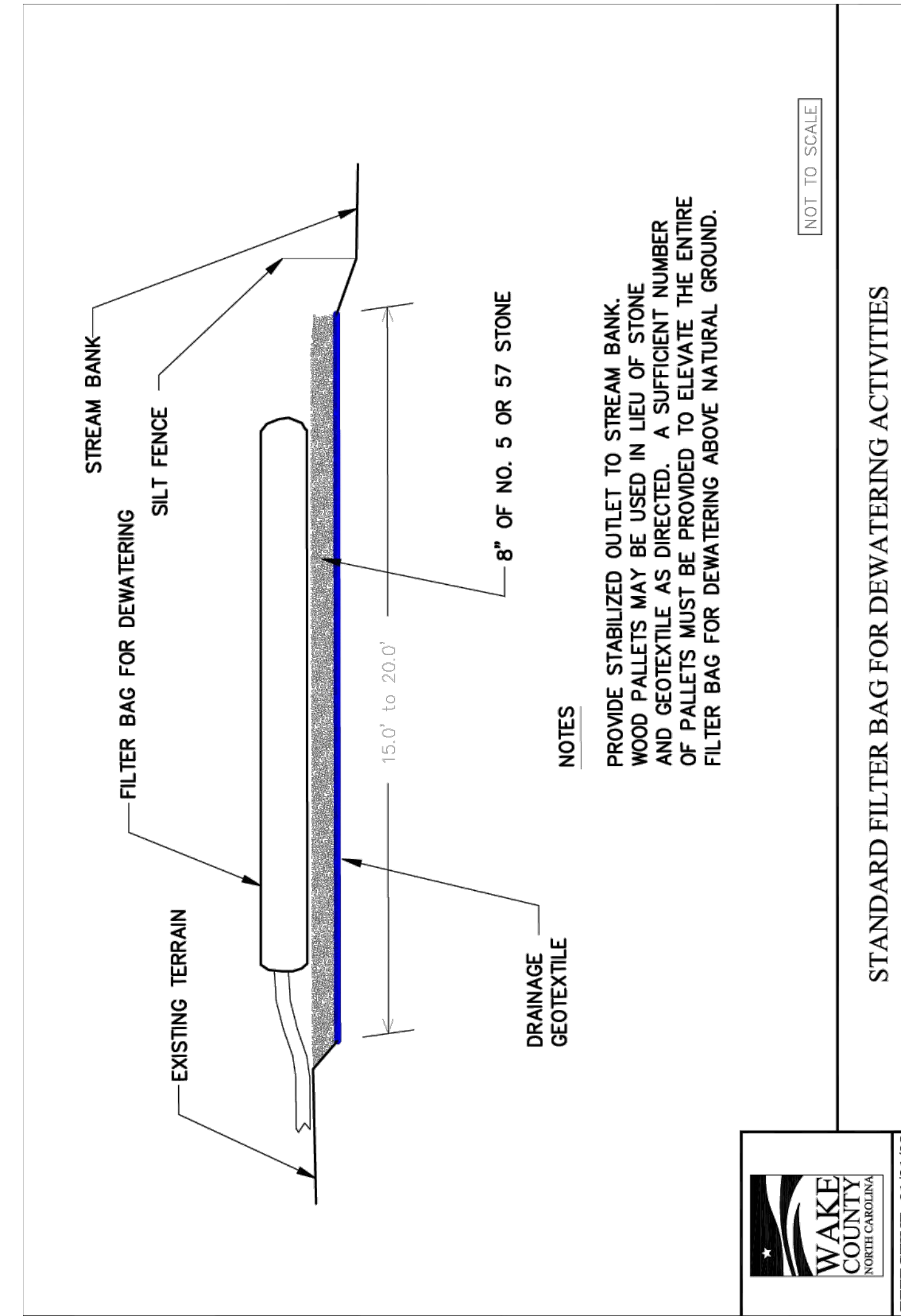


EFFECTIVE: 01/31/08

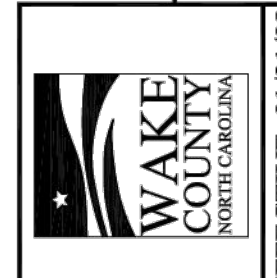
NOTE:

1. INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.

4 YARD INLET PROTECTION N.T.S.



STANDARD FILTER BAG FOR DEWATERING ACTIVITIES

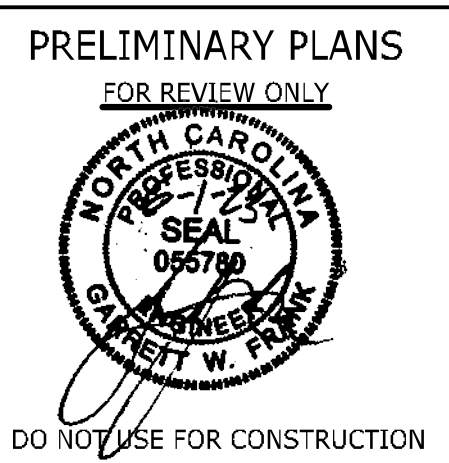


EFFECTIVE: 01/31/08

NOTES

PROVIDE STABILIZED OUTLET TO STREAM BANK. WOOD PALLET'S MAY BE USED IN LIEU OF STONE AND GEOTEXTILE AS DIRECTED. A SUFFICIENT NUMBER OF PALLET'S MUST BE PROVIDED TO ELEVATE THE ENTIRE FILTER BAG FOR DEWATERING ABOVE NATURAL GROUND.

5 DEWATERING PUMP WITH SILT BAG N.T.S.



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REVISION DESCRIPTION	DATE
ADDRESSSED TOWN OF ROLESVILLE COMMENTS	06/07/2023

DRAWN BY  
J. HAYES

DESIGNED BY  
G. FRANK

CHECKED BY  
G. FRANK

SCALE  
AS SHOWN

**TIMMONS GROUP**

NORTH CAROLINA LICENSE NO. C-1652

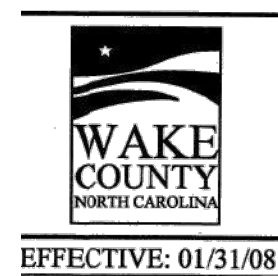
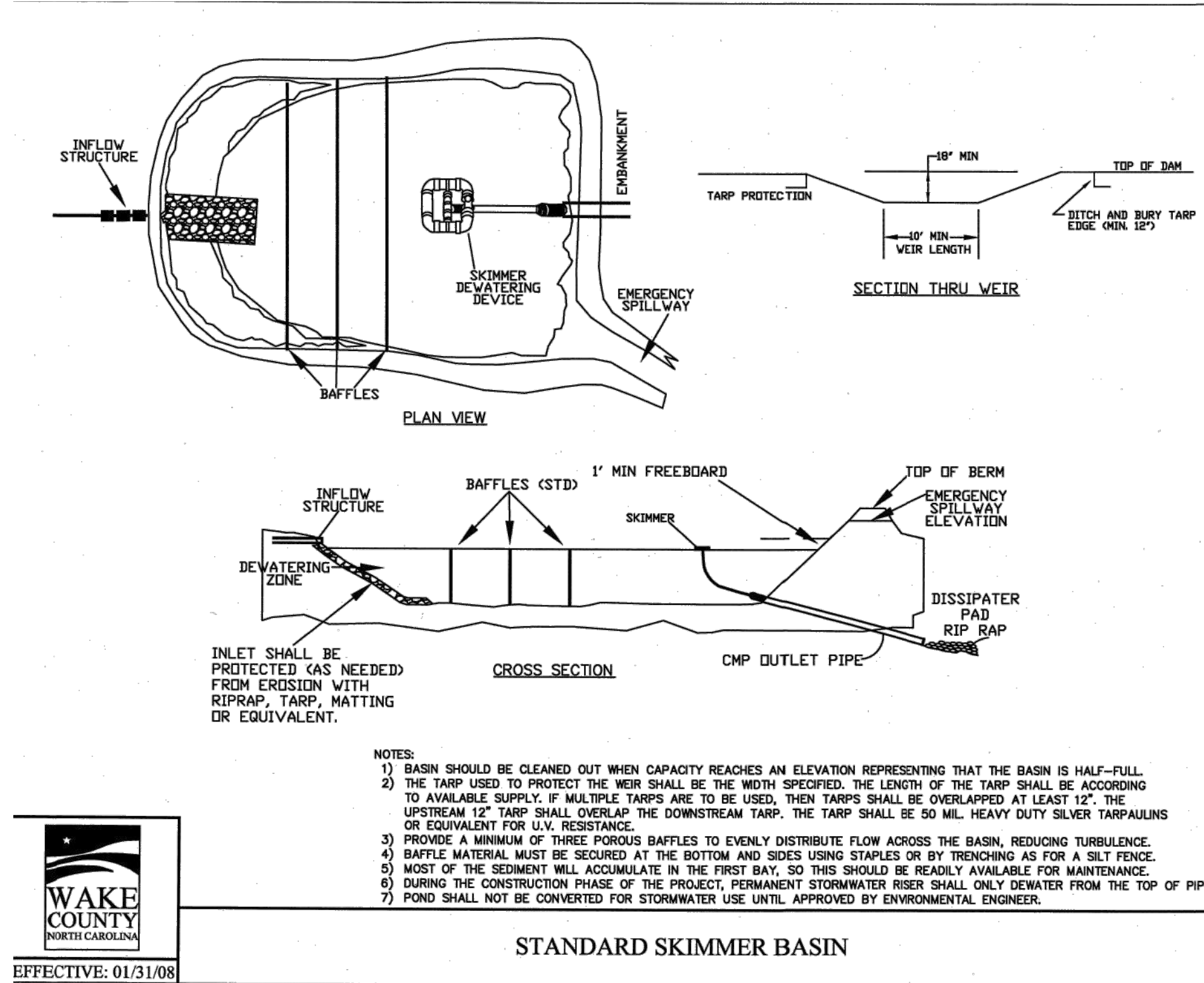
**JONES DAIRY STORAGE FACILITY**

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**SITE DETAILS**

JOB NO.  
54832

SHEET NO.  
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STANDARD SKIMMER BASIN

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 DAMMING 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).

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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 4,000LB/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 4,000LB/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 (MAY 1 - 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 329.000.
  - 80% OF PERMANENT SEEDING MUST BE ESTABLISHED PRIOR TO GRADING PERMIT CLOSEOUT

TEMPORARY & PERMANENT SEEDING SPECIFICATIONS

COMPLETE GRADING BEFORE PREPARING SEEDBEDS, AND INSTALL ALL NECESSARY EROSION CONTROL PRACTICES SUCH AS, DIKES, WATERWAYS, AND BASINS. MINIMIZE STEEP SLOPES BECAUSE THEY MAKE SEEDBED PREPARATION DIFFICULT AND INCREASE THE EROSION HAZARD. IF SOILS BECOME COMPACTED DURING GRADING, LOOSEN THEM TO A DEPTH OF 6-8 INCHES USING A RIPPER, HARROW, OR CHISEL PLOW.

**SEEDBED PREPARATIONS**  
GOOD SEEDBED PREPARATION IS ESSENTIAL TO SUCCESSFUL PLANT ESTABLISHMENT. A GOOD SEEDBED IS WELL-PULVERIZED, LOOSE, AND UNIFORM. WHERE HYDROSEEDING METHODS ARE USED, THE SURFACE MAY BE LEFT WITH A MORE IRREGULAR SURFACE OF LARGE CLODS AND STONES.

- LIMING** - APPLY LIME ACCORDING TO SOIL TEST RECOMMENDATIONS. IF THE PH (ACIDITY) OF THE SOIL IS NOT KNOWN, AN APPLICATION OF GROUND AGRICULTURAL LIMESTONE AT THE RATE OF 2 TONS/ACRE ON COARSE-TEXTURED SOILS AND 3 TONS/ACRE ON FINE-TEXTURED SOILS IS USUALLY SUFFICIENT. APPLY LIMESTONE UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL. SOILS WITH A PH OF 6 OR HIGHER NEED NOT BE LIMED.
- FERTILIZER** - BASE APPLICATION RATES ON SOIL TESTS. WHEN THESE ARE NOT POSSIBLE, APPLY A 10-10-10 GRADE FERTILIZER AT 700-1,000 LB/ACRE. BOTH FERTILIZER AND LIME SHOULD BE INCORPORATED INTO THE TOP 4-6 INCHES OF SOIL. IF A HYDRAULIC FEEDER IS USED, DO NOT MIX SEED AND FERTILIZER MORE THAN 30 MINUTES BEFORE APPLICATION.
- SURFACE ROUGHENING** - IF RECENT TILLAGE OPERATIONS HAVE RESULTED IN A LOOSE SURFACE, ADDITIONAL ROUGHENING MAY NOT BE REQUIRED, EXCEPT TO BREAK UP LARGE CLODS. IF RAINFALL CAUSES THE SURFACE TO BECOME SEALED OR CRUSTED, LOOSEN IT JUST PRIOR TO SEEDING BY DISKING, RAKING, HARROWING, OR OTHER SUITABLE METHODS. GROOVE OR FURROW SLOPES STEEPER THAN 3:1 ON THE CONTOUR BEFORE SEEDING (REFER TO THE NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, PRACTICE 6.03, SURFACE ROUGHENING).

**PLANT SELECTION**

- SELECT AN APPROPRIATE SPECIES OR SPECIES MIXTURE FROM TABLE 6.10A FOR SEEDING IN LATE WINTER AND EARLY SPRING, TABLE 6.10B FOR SUMMER, AND TABLE 6.10C FOR FALL.
- IN THE MOUNTAINS, DECEMBER AND JANUARY SEEDING HAVE POOR CHANCES OF SUCCESS. WHEN IT IS NECESSARY TO PLANT AT THESE TIMES, USE RECOMMENDATIONS FOR FALL AND A SECURELY TACKED MULCH.

**SEEDING**

- EVENLY APPLY SEED USING A CYCLONE SEEDER (BROADCAST), DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. USE SEEDING RATES GIVEN IN TABLES 6.10A-6.10C. BROADCAST SEEDING AND HYDROSEEDING ARE APPROPRIATE FOR STEEP SLOPES WHERE EQUIPMENT CANNOT BE DRIVEN. HAND BROADCASTING IS NOT RECOMMENDED BECAUSE OF THE DIFFICULTY IN ACHIEVING A UNIFORM DISTRIBUTION.
- SMALL GRAINS SHOULD BE PLANTED NO MORE THAN 1 INCH DEEP, AND GRASSES AND LEGUMES NO MORE THAN 1/2 INCH. BROADCAST SEED MUST BE COVERED BY RAKING OR CHAIN DRAGGING, AND THEN LIGHTLY FIRMED WITH A ROLLER OR CULTIPACKER. HYDROSEEDED MIXTURES SHOULD INCLUDE A WOOD FIBER (CELLULOSE) MULCH.

**MULCHING**  
THE USE OF AN APPROPRIATE MULCH WILL HELP ENSURE ESTABLISHMENT UNDER NORMAL CONDITIONS, AND IS ESSENTIAL TO SEEDING SUCCESS UNDER HARSH SITE CONDITIONS (REFER TO THE NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, PRACTICE 6.14, MULCHING). 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.

**HARSH SITE CONDITIONS INCLUDE:**

- SEEDING IN FALL FOR WINTER COVER (WOOD FIBER MULCHES ARE NOT CONSIDERED ADEQUATE FOR THIS USE),
- SLOPES STEEPER THAN 3:1,
- EXCESSIVELY HOT OR DRY WEATHER,
- ADVERSE SOILS (SHALLOW, ROCKY, OR HIGH IN CLAY OR SAND), AND
- AREAS RECEIVING CONCENTRATED FLOW.

IF THE AREA TO BE MULCHED IS SUBJECT TO CONCENTRATED WATERFLOW, AND IN CHANNELS, ANCHOR MULCH WITH NETTING (REFER TO THE NCDEQ EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, PRACTICE 6.14, MULCHING).

**TEMPORARY SEEDING MAINTENANCE**  
RESEED AND MULCH AREAS WHERE SEEDING EMERGENCE IS POOR, OR WHERE EROSION OCCURS, AS SOON AS POSSIBLE. DO NOT MOW. PROTECT FROM TRAFFIC AS MUCH AS POSSIBLE.

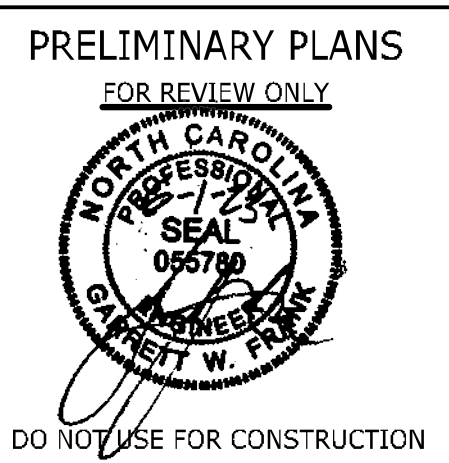
**LIME & FERTILIZER NOTES**

- 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 329.000.
- 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 SEEDING AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS AS NEEDED.
- IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.

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TEMPORARY/PERMANENT SEEDING

N.T.S.



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DATE	REVISION DESCRIPTION	ADDRESSED TOWN OF ROLESVILLE COMMENTS
06/07/2023		

DATE  
06/01/2023

DRAWN BY  
J. HAYES

DESIGNED BY  
G. FRANK

CHECKED BY  
G. FRANK

SCALE  
AS SHOWN

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652

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TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**SITE DETAILS**

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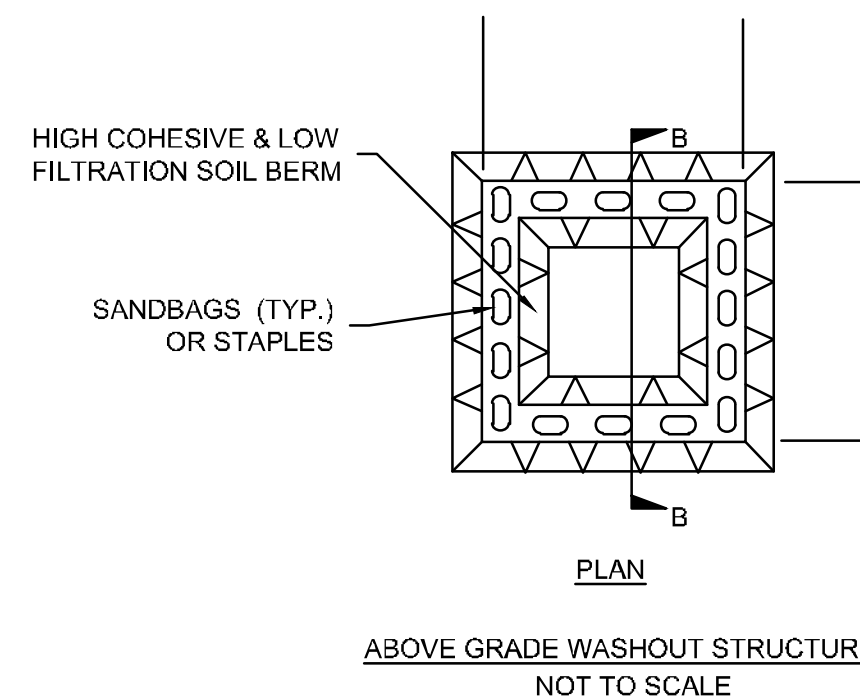
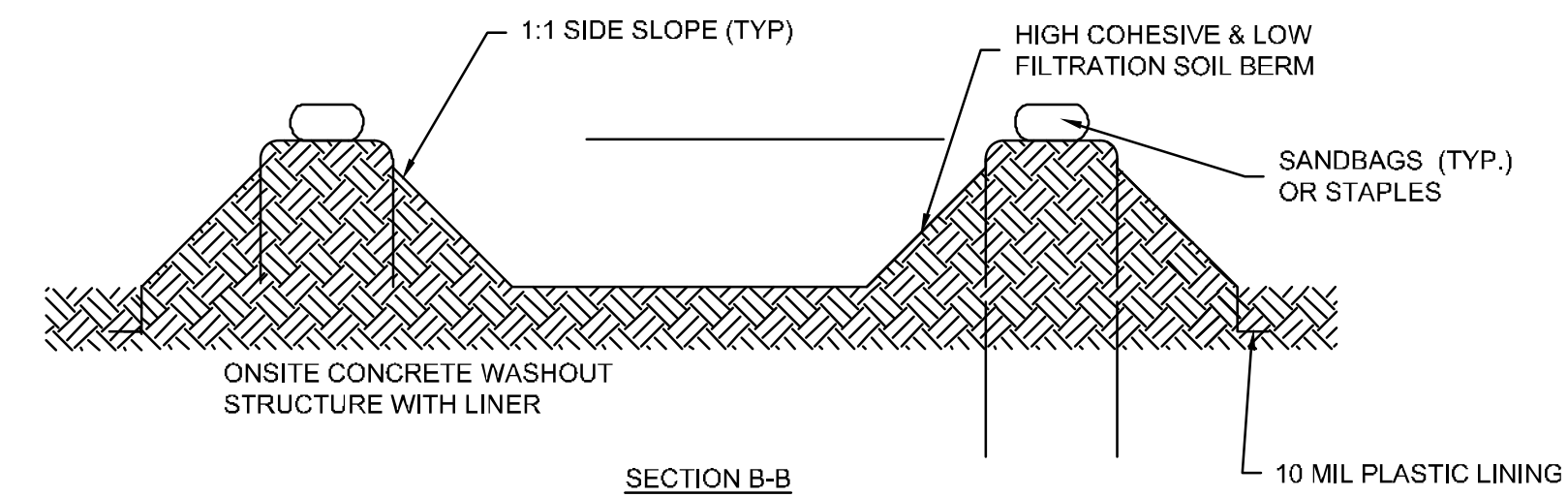
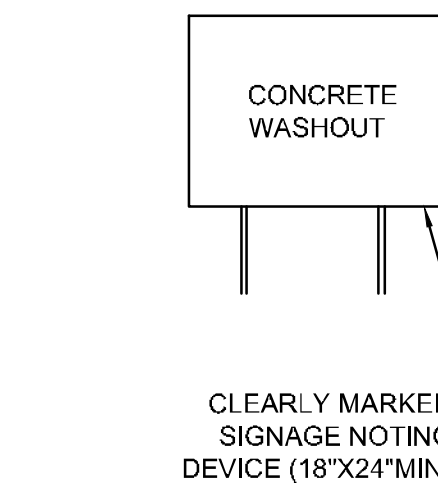
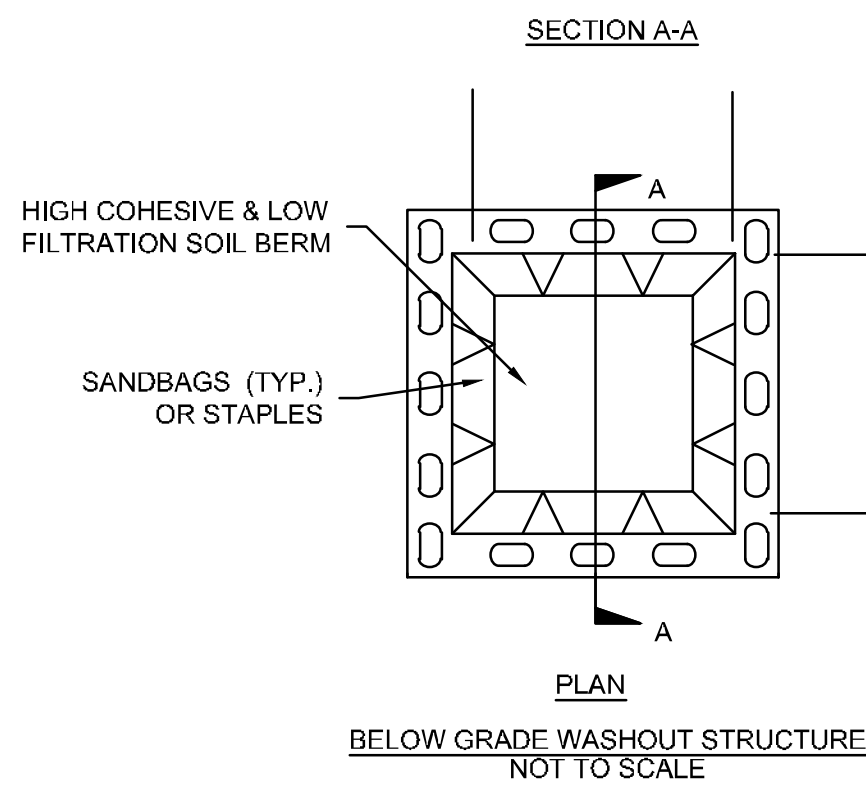
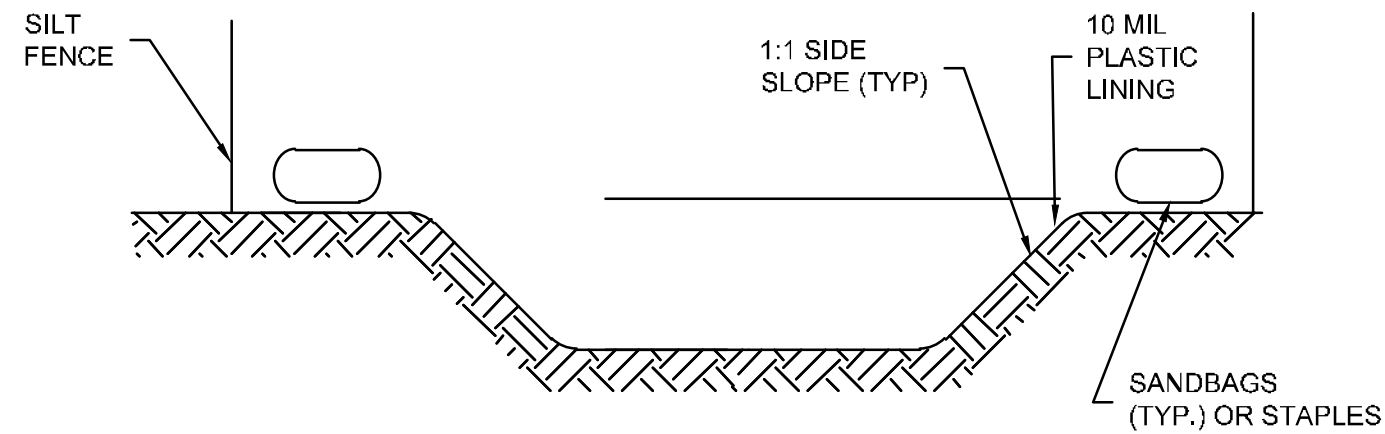
**GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT**

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.



SIGNAGE FOR EITHER WASHOUT STRUCTURE

**BELOW GROUND CONCRETE WASHOUT NOTES:**

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

**ABOVE GROUND WASHOUT STRUCTURE NOTES:**

1. ACTUAL LOCATION DETERMINED IN FIELD
2. 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.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

**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"> <li>TEMPORARY GRASS SEED COVERED WITH STRAW OR OTHER MULCHES AND TACKIFIERS</li> <li>HYDROSEEDING</li> <li>ROLLED EROSION CONTROL PRODUCTS WITH OR WITHOUT TEMPORARY GRASS SEED</li> <li>APPROPRIATELY APPLIED STRAW OR OTHER MULCH</li> <li>PLASTIC SHEETING</li> </ul>	<ul style="list-style-type: none"> <li>PERMANENT GRASS SEED COVERED WITH STRAW OR OTHER MULCHES AND TACKIFIERS</li> <li>GEOTEXTILE FABRICS SUCH AS PERMANENT SOIL REINFORCEMENT MATTING</li> <li>HYDROSEEDING</li> <li>SHRUBS OR OTHER PERMANENT PLANTINGS COVERED WITH MULCH</li> <li>UNIFORM AND EVENLY DISTRIBUTED GROUND COVER SUFFICIENT TO RESTRAIN EROSION</li> <li>STRUCTURAL METHODS SUCH AS CONCRETE, ASPHALT OR RETAINING WALLS</li> <li>ROLLED EROSION CONTROL PRODUCTS WITH GRASS SEED</li> </ul>

**POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

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

**EQUIPMENT AND VEHICLE MAINTENANCE**

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

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

1. NEVER BURY OR BURN WASTE. PLACE LITTER AND DEBRIS IN APPROVED WASTE CONTAINERS.
2. PROVIDE A SUFFICIENT NUMBER AND SIZE OF WASTE CONTAINERS (E.G. DUMPSTER, TRASH RECEPTACLE) ON SITE TO CONTAIN CONSTRUCTION AND DOMESTIC WASTES.
3. LOCATE WASTE CONTAINERS AT LEAST 50 FEET AWAY FROM STORM DRAIN INLETS AND SURFACE WATERS UNLESS NO OTHER ALTERNATIVES ARE REASONABLY AVAILABLE.
4. 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.
5. COVER WASTE CONTAINERS AT THE END OF EACH WORKDAY AND BEFORE STORM EVENTS OR PROVIDE SECONDARY CONTAINMENT. REPAIR OR REPLACE DAMAGED WASTE CONTAINERS.
6. ANCHOR ALL LIGHTWEIGHT ITEMS IN WASTE CONTAINERS DURING TIMES OF HIGH WINDS.
7. EMPTY WASTE CONTAINERS AS NEEDED TO PREVENT OVERFLOW. CLEAN UP IMMEDIATELY IF CONTAINERS OVERFLOW.
8. DISPOSE WASTE OFF-SITE AT AN APPROVED DISPOSAL FACILITY.
9. ON BUSINESS DAYS, CLEAN UP AND DISPOSE OF WASTE IN DESIGNATED WASTE CONTAINERS.

**PAINT AND OTHER LIQUID WASTE**

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

**PORTABLE TOILETS**

1. 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.
2. PROVIDE STAKING OR ANCHORING OF PORTABLE TOILETS DURING PERIODS OF HIGH WINDS OR IN HIGH FOOT TRAFFIC AREAS.
3. 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**

1. 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.
2. PROTECT STOCKPILE WITH SILT FENCE INSTALLED ALONG TOE OF SLOPE WITH A MINIMUM OFFSET OF FIVE FEET FROM THE TOE OF STOCKPILE.
3. PROVIDE STABLE STONE ACCESS POINT WHEN FEASIBLE.
4. 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**

1. DO NOT DISCHARGE CONCRETE OR CEMENT SLURRY FROM THE SITE.
2. DISPOSE OF, OR RECYCLE SETTLED, HARDENED CONCRETE RESIDUE IN ACCORDANCE WITH LOCAL AND STATE SOLID WASTE REGULATIONS AND AT AN APPROVED FACILITY.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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**

1. STORE AND APPLY HERBICIDES, PESTICIDES AND RODENTICIDES IN ACCORDANCE WITH LABEL RESTRICTIONS.
2. 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.
3. 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.
4. DO NOT STOCKPILE THESE MATERIALS ONSITE.

**HAZARDOUS AND TOXIC WASTE**

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

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

1. CHISEL ALL CUT GRADED OR COMPACTED AREAS TO A MINIMUM DEPTH OF 6".
2. 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.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND PHOSPHATE UNIFORMLY AS PER SPECIFICATIONS AND MIX WELL WITH SOIL.
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED TO A 6 INCHES DEPTH.
6. SEED AT RATE SPECIFIED OR AS NEEDED TO ACHIEVE AND MAINTAIN A THICK HEALTHY GROUND COVERAGE.
7. 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.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS AS NEEDED.
9. IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.

LIME & FERTILIZATION SCHEDULE

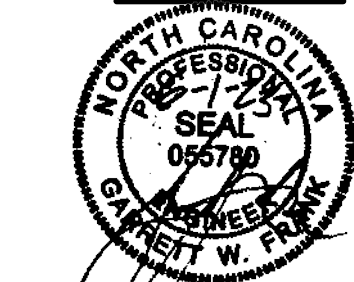
**CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION**

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CITY OF RALEIGH DEVELOPMENT APPROVAL RALEIGH WATER REVIEW OFFICER

**PRELIMINARY PLANS**

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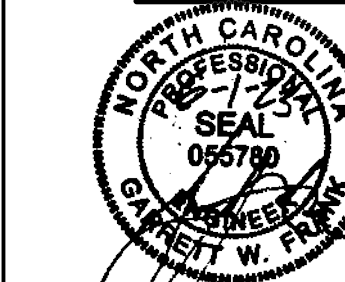
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DATE 06/01/2023  
DRAWN BY J. HAYES  
DESIGNED BY G. FRANK  
CHECKED BY G. FRANK  
SCALE AS SHOWN

**TIMMONS GROUP**  
NORTH CAROLINA LICENSE NO. C-1652  
**JONES DAIRY STORAGE FACILITY**  
TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**NCG01 GROUND STABILIZATION AND MATERIALS HANDLING**

JOB NO. 54832  
SHEET NO. C6.9

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ADDRESSSED TOWN OF ROLESVILLE COMMENTS DATE 06/01/2023 DRAWN BY J. HAYES DESIGNED BY G. FRANK CHECKED BY G. FRANK SCALE AS SHOWN

TIMMONS GROUP logo and contact information: NORTH CAROLINA LICENSE NO. C-1652 JONES DAIRY STORAGE FACILITY TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA NCG01 SELF-INSPECTION, RECORDKEEPING, AND REPORTING

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PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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.

Table with 3 columns: INSPECT, FREQUENCY (DURING NORMAL BUSINESS HOURS), TIMEFRAME VARIATIONS. Rows include Rain Gauge, E&S&C Measures, Stormwater Discharge Outfalls, Perimeter of Site, Streams or Wetlands, and Ground Stabilization Measures.

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

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&S&C PLAN DOCUMENTATION

THE APPROVED E&S&C PLAN AS WELL AS ANY APPROVED DEVIATION SHALL BE KEPT ON THE SITE. THE APPROVED E&S&C PLAN MUST BE KEPT UP-TO-DATE THROUGHOUT THE COVERAGE UNDER THIS PERMIT.

Table with 2 columns: OCCURRENCE, DOCUMENTATION REQUIREMENTS. Rows (A) through (E) describe requirements for E&S&C measures, grading, ground cover, maintenance, and corrective actions.

2. ADDITIONAL DOCUMENTATION TO BE KEPT ON SITE

IN ADDITION TO THE E&S&C PLAN DOCUMENTS ABOVE, THE FOLLOWING ITEMS SHALL BE KEPT ON THE SITE AND AVAILABLE FOR INSPECTORS AT ALL TIMES DURING NORMAL BUSINESS HOURS.

- (a) THIS GENERAL PERMIT AS WELL AS THE CERTIFICATE OF COVERAGE, AFTER IT IS RECEIVED. (b) RECORDS OF INSPECTIONS MADE DURING THE PREVIOUS TWELVE MONTHS.

3. DOCUMENTATION TO BE RETAINED FOR THREE YEARS

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.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. OCCURRENCES THAT MUST BE REPORTED

PERMITTEES SHALL REPORT THE FOLLOWING OCCURRENCES:

- (a) VISIBLE SEDIMENT DEPOSITION IN A STREAM OR WETLAND. (b) OIL SPILLS IF: THEY ARE 25 GALLONS OR MORE, THEY ARE LESS THAN 25 GALLONS BUT CANNOT BE CLEANED UP WITHIN 24 HOURS, THEY CAUSE SHEEN ON SURFACE WATERS, OR THEY ARE WITHIN 100 FEET OF SURFACE WATERS. (c) RELEASES OF HAZARDOUS SUBSTANCES IN EXCESS OF REPORTABLE QUANTITIES UNDER SECTION 311 OF THE CLEAN WATER ACT. (d) ANTICIPATED BYPASSES AND UNANTICIPATED BYPASSES. (e) NONCOMPLIANCE WITH THE CONDITIONS OF THIS PERMIT THAT MAY ENDANGER HEALTH OR THE ENVIRONMENT.

2. REPORTING TIMEFRAMES AND OTHER REQUIREMENTS

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.

Table with 2 columns: OCCURRENCE, REPORTING TIMEFRAMES (AFTER DISCOVERY) AND OTHER REQUIREMENTS. Rows (A) through (E) detail reporting requirements for sediment, oil spills, bypasses, and noncompliance.

PART II, SECTION G, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

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.

- (a) THE E&S&C PLAN AUTHORITY HAS BEEN PROVIDED WITH DOCUMENTATION OF THE NON-SURFACE WITHDRAWAL AND THE SPECIFIC TIME PERIODS OR CONDITIONS IN WHICH IT WILL OCCUR. (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. (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.

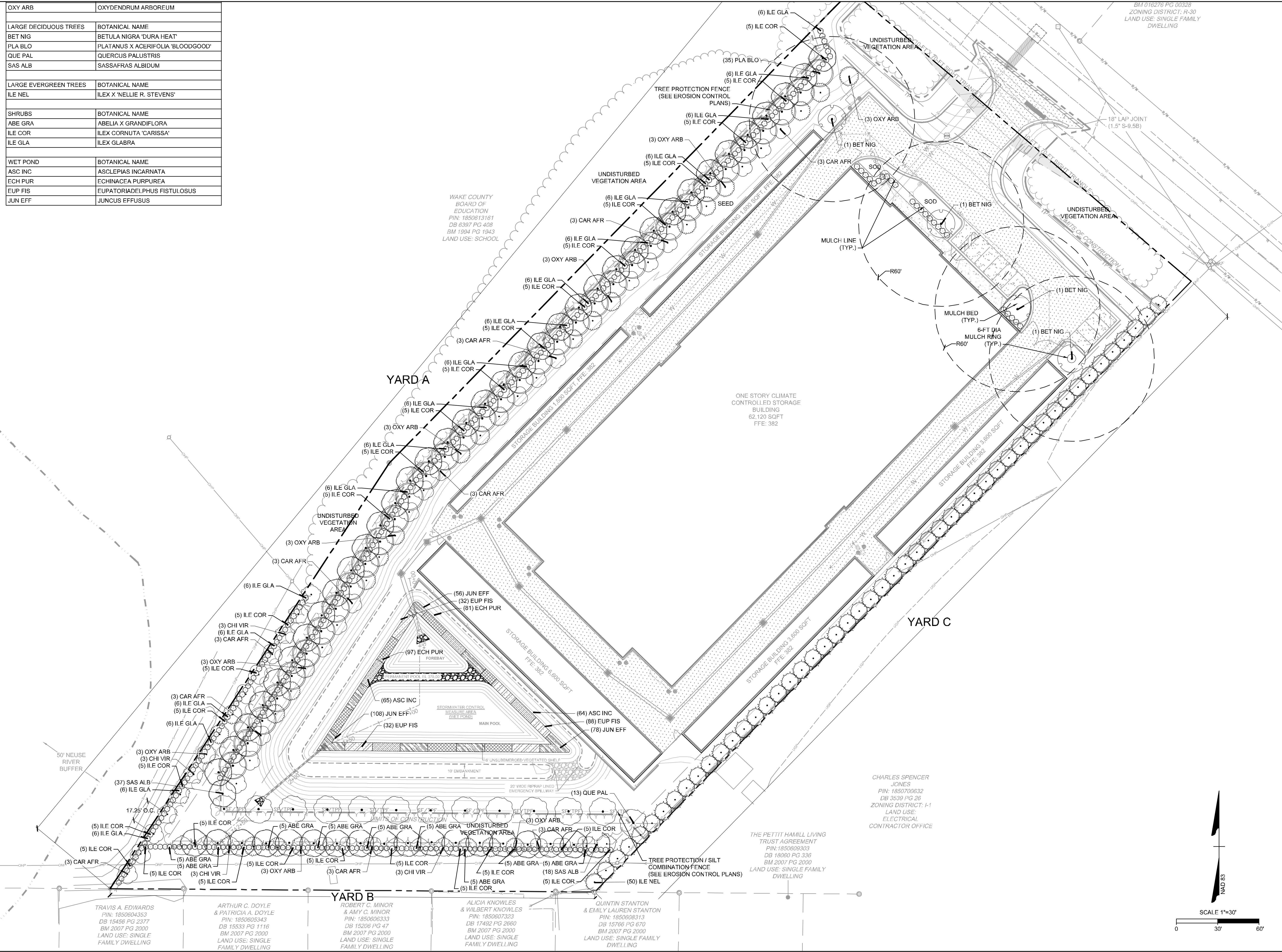
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CITY OF RALEIGH DEVELOPMENT APPROVAL RALEIGH WATER REVIEW OFFICER



OXY ARB	OXYDENDRUM ARBOREUM
<b>LARGE DECIDUOUS TREES</b>	
BET NIG	BETULA NIGRA 'DURA HEAT'
PLA BLO	PLATANUS X ACERIFOLIA 'BLOODGOOD'
QUE PAL	QUERCUS PALUSTRIS
SAS ALB	SASSAFRAS ALBIDUM
<b>LARGE EVERGREEN TREES</b>	
ILE NEL	ILEX X 'NELLIE R. STEVENS'
<b>SHRUBS</b>	
ABE GRA	ABELIA X GRANDIFLORA
ILE COR	ILEX CORNUTA 'CARISSA'
ILE GLA	ILEX GLABRA
<b>WET POND</b>	
ASC INC	ASCLEPIAS INCARNATA
ECH PUR	ECHINACEA PURPUREA
EUP FIS	EUPATORIADELPHUS FISTULOSUS
JUN EFF	JUNCUS EFFUSUS



WAKE COUNTY BOARD OF EDUCATION  
 PIN: 1850613161  
 DB 6397 PG 408  
 BM 1994 PG 1943  
 LAND USE: SCHOOL

CHARLES SPENCER JONES  
 PIN: 1850700632  
 DB 3539 PG 26  
 ZONING DISTRICT: I-1  
 LAND USE: ELECTRICAL CONTRACTOR OFFICE

THE PETTIT HAMIL LIVING TRUST AGREEMENT  
 PIN: 18508092033  
 DB 18060 PG 336  
 BM 2007 PG 2000  
 LAND USE: SINGLE FAMILY DWELLING

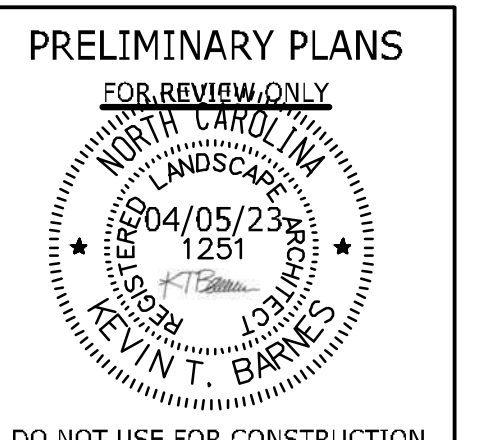
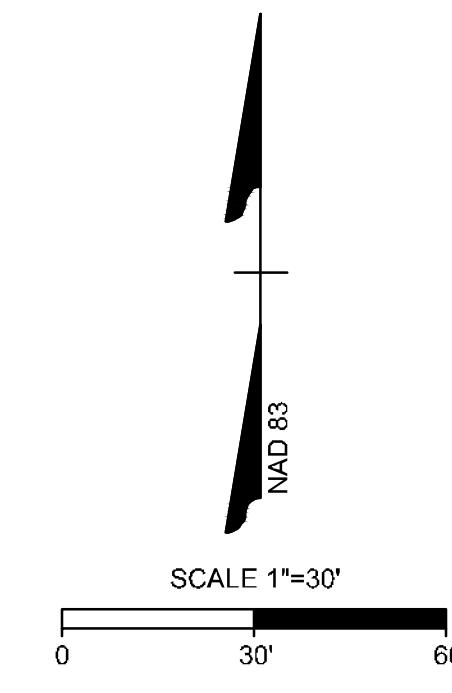
TRAVIS A. EDWARDS  
 PIN: 1850604353  
 DB 15456 PG 2377  
 BM 2007 PG 2000  
 LAND USE: SINGLE FAMILY DWELLING

ARTHUR C. DOYLE & PATRICIA A. DOYLE  
 PIN: 1850605343  
 DB 15533 PG 1116  
 BM 2007 PG 2000  
 LAND USE: SINGLE FAMILY DWELLING

ROBERT C. MINOR & AMY C. MINOR  
 PIN: 1850606333  
 DB 15200 PG 47  
 BM 2007 PG 2000  
 LAND USE: SINGLE FAMILY DWELLING

ALICIA KNOWLES & WILBERT KNOWLES  
 PIN: 1850607323  
 DB 17492 PG 2660  
 BM 2007 PG 2000  
 LAND USE: SINGLE FAMILY DWELLING

QUINTIN STANTON & EMILY LAUREN STANTON  
 PIN: 1850608313  
 DB 15766 PG 670  
 BM 2007 PG 2000  
 LAND USE: SINGLE FAMILY DWELLING



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DATE	
DATE	
DATE	

DATE: 03/31/2023  
 DRAWN BY: S. HALISH  
 DESIGNED BY: S. HALISH  
 CHECKED BY: K. BARNES  
 SCALE: AS SHOWN

**TIMMONS GROUP**

NORTH CAROLINA LICENSE NO. C-1652

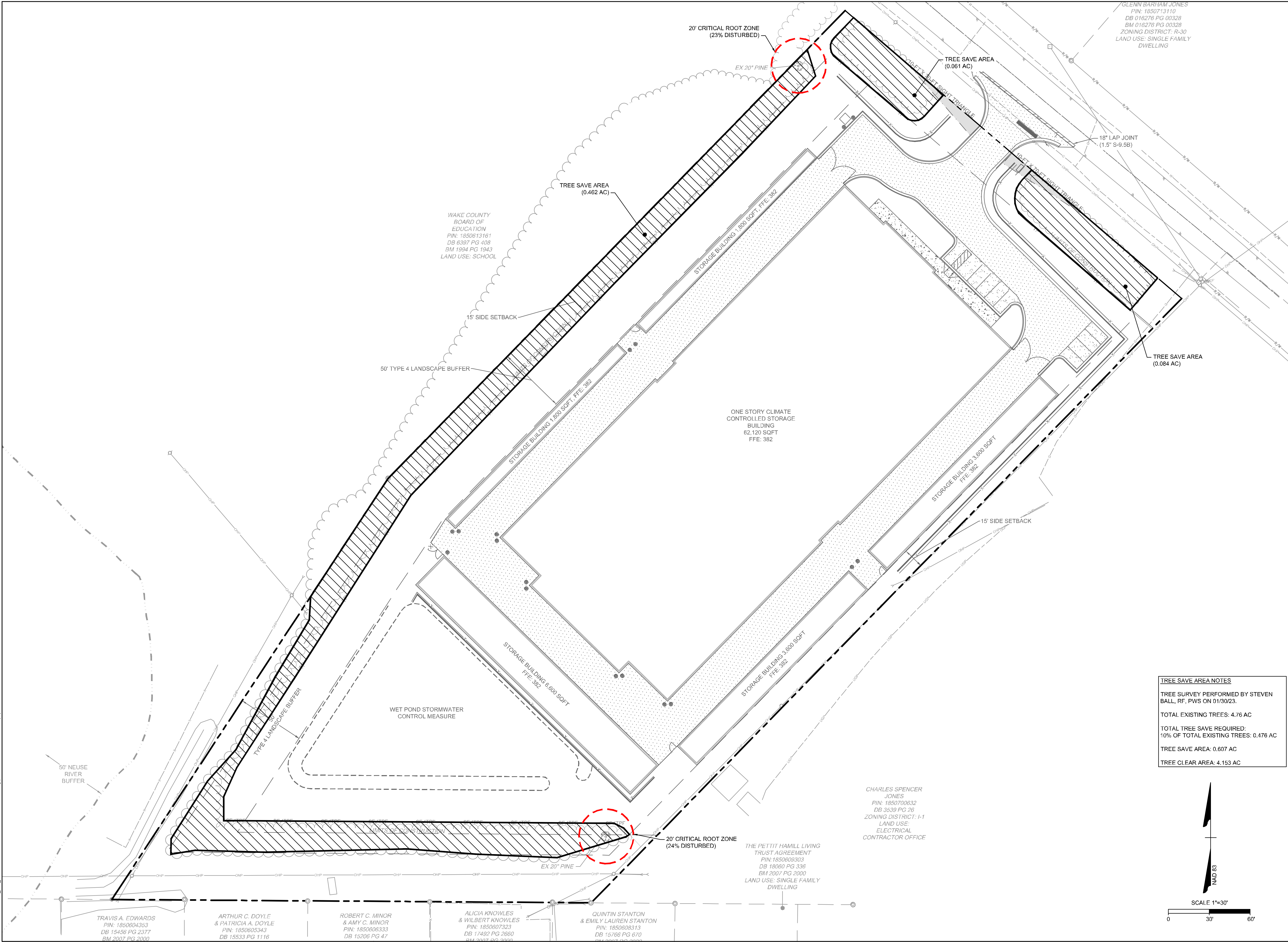
**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**LANDSCAPE PLAN**

JOB NO. 54832  
 SHEET NO. L1.0

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S:\33304832-Rolesville\_Site\_Storage\DWG\Sheet\CD\54832-3334.dwg [Plotted on 6/2/2023 7:58 AM] by Garrett Frank



GLENN BARIAM JONES  
 PIN: 1850713110  
 DB 016276 PG 00328  
 BM 016276 PG 00328  
 ZONING DISTRICT: R-30  
 LAND USE: SINGLE FAMILY DWELLING

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 04/05/23  
 1251  
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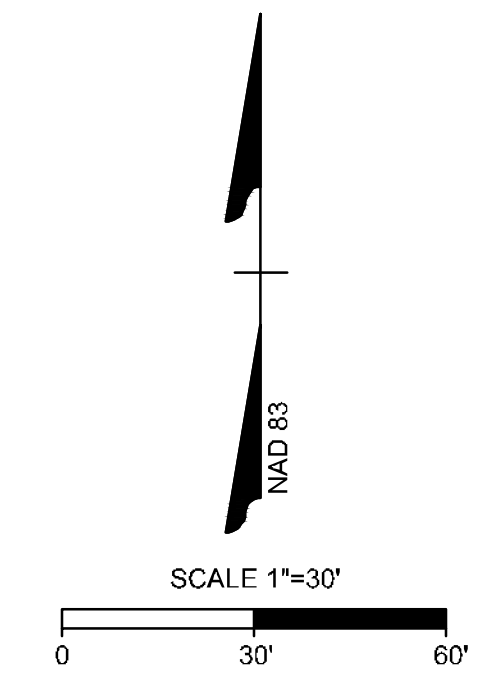
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DATE	REVISION DESCRIPTION
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 DESIGNED BY: S. HALISH  
 CHECKED BY: K. BARNES  
 SCALE: AS SHOWN

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 NORTH CAROLINA LICENSE NO. C-1652  
**JONES DAIRY STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**TREE PRESERVATION PLAN**

**TREE SAVE AREA NOTES**  
 TREE SURVEY PERFORMED BY STEVEN BALL, RF, PWS ON 01/30/23.  
 TOTAL EXISTING TREES: 4.76 AC  
 TOTAL TREE SAVE REQUIRED: 10% OF TOTAL EXISTING TREES: 0.476 AC  
 TREE SAVE AREA: 0.607 AC  
 TREE CLEAR AREA: 4.153 AC



TRAVIS A. EDWARDS  
 PIN: 1850604353  
 DB 15456 PG 2377  
 BM 2007 PG 2000

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

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

ALICIA KNOWLES & WILBERT KNOWLES  
 PIN: 1850607323  
 DB 17492 PG 2660  
 BM 2007 PG 2000

QUINTIN STANTON & EMILY LAUREN STANTON  
 PIN: 1850608313  
 DB 15706 PG 670  
 BM 2007 PG 2000

JOB NO. 54832  
 SHEET NO. L1.1

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PERIMETER LANDSCAPE REQUIREMENT (per table 6.2.2.1. & Zoning Conditions)						
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 WIDTH: 50	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: 35.00 LG. DECID TREE: 70.00 EVERGREE TREE: 0 MEDIUM SHRUB : HEDGE	SM. DECID TREE: 51 LG. DECID TREE: 72 EVERGREE TREE: 0 MEDIUM SHRUB : 255	
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 WIDTH: 50	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: 14.00 LG. DECID TREE: 28.00 EVERGREE TREE: 0 MEDIUM SHRUB : HEDGE	SM. DECID TREE: 18 LG. DECID TREE: 32 EVERGREE TREE: 0 MEDIUM SHRUB : 93	
C	LANDSCAPE TYPE: C SM. DECID TREE: 1 / 100 LG. DECID TREE: 3 / 100 EVERGREE TREE: 15-ft O.C MEDIUM SHRUB 40 / 100	LENGTH: 640.1 ENTRIES: - EASEMENTS: - EXIST. VEG.: - TOTAL: 640.1 WIDTH: 10	SM. DECID TREE: n/a LG. DECID TREE: n/a EVERGREE TREE: ( 641 @15-ft O.C ) = 42.67 MEDIUM SHRUB n/a	SM. DECID TREE: n/a LG. DECID TREE: n/a EVERGREE TREE: 43 MEDIUM SHRUB : n/a	SM. DECID TREE: n/a LG. DECID TREE: n/a EVERGREE TREE: 50 MEDIUM SHRUB : n/a	

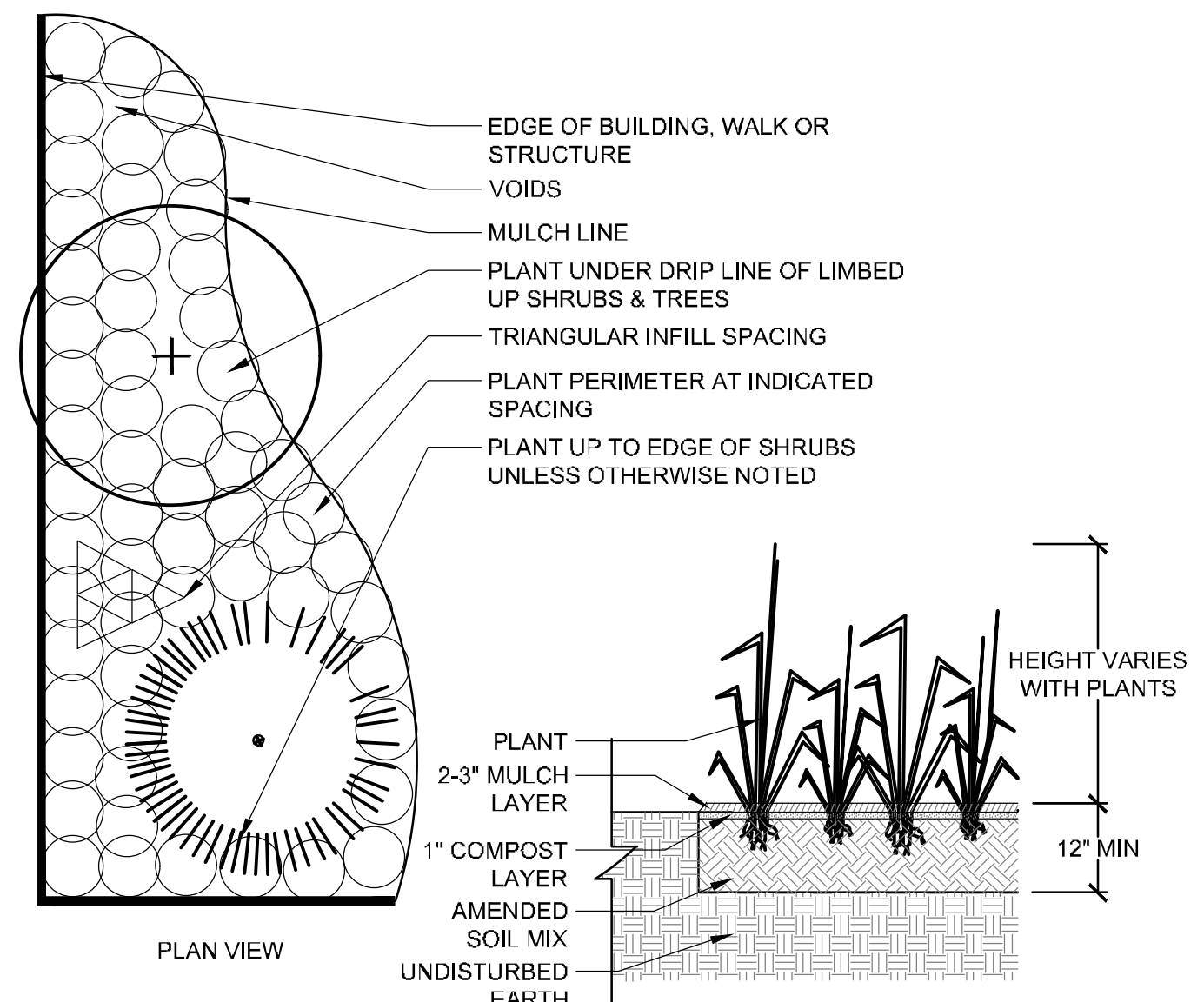
PLANT SCHEDULE YARD A						
SMALL DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
CAR AFR	24	CARPINUS CAROLINIANA 'AUTUMN FIRE'	AUTUMN FIRE AMERICAN HORNBEAM	2" CAL.	B&B	
CHI VIR	6	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	2" CAL.	B&B	
OXY ARB	21	OXYDENDRUM ARBOREUM	SOURWOOD TREE	2" CAL.	B&B	
LARGE DECIDUOUS TREES						
PLA BLO	35	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANE TREE	2.5" CAL.	B&B	
SAS ALB	37	SASSAFRAS ALBIDUM	SASSAFRAS	2.5" CAL.	B&B	
SHRUBS						
ILE COR	117	ILEX CORNUTA 'CARISSA'	CARISSA CHINESE HOLLY	24" HT./SPRD.	CONTAINER	42" o.c.
ILE GLA	138	ILEX GLABRA	INKBERRY HOLLY	24" HT./SPRD.	3 GAL.	48" 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	7	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	2" CAL.	B&B	
OXY ARB	6	OXYDENDRUM ARBOREUM	SOURWOOD TREE	2" CAL.	B&B	
LARGE DECIDUOUS TREES						
QUE PAL	13	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.	B&B	
SAS ALB	19	SASSAFRAS ALBIDUM	SASSAFRAS	2.5" CAL.	B&B	
SHRUBS						
ABE GRA	45	ABELIA X GRANDIFLORA	GLOSSY ABELIA	24" HT./SPRD.		48" o.c.
ILE COR	50	ILEX CORNUTA 'CARISSA'	CARISSA CHINESE HOLLY	24" HT./SPRD.	CONTAINER	42" o.c.

PLANT SCHEDULE YARD C						
LARGE EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	REMARKS	
ILE NEL	50	ILEX X 'NELLIE R. STEVENS'	NELLIE R. STEVENS HOLLY	4' HT. MIN.		

OVERALL PLANT SCHEDULE						
SMALL DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
CAR AFR	24	CARPINUS CAROLINIANA 'AUTUMN FIRE'	AUTUMN FIRE AMERICAN HORNBEAM	2" CAL.	B&B	
CHI VIR	25	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	2" CAL.	B&B	
OXY ARB	20	OXYDENDRUM ARBOREUM	SOURWOOD TREE	2" CAL.	B&B	
LARGE DECIDUOUS TREES						
BET NIG	4	BETULA NIGRA 'DURA HEAT'	DURA HEAT RIVER BIRCH	2.5" CAL.	B&B	
PLA BLO	45	PLATANUS X ACERIFOLIA 'BLOODGOOD'	BLOODGOOD LONDON PLANE TREE	2.5" CAL.	B&B	
QUE PAL	12	QUERCUS PALUSTRIS	PIN OAK	2.5" CAL.	B&B	
SAS ALB	44	SASSAFRAS ALBIDUM	SASSAFRAS	2.5" CAL.	B&B	
SHRUBS						
ILE COR	593	ILEX CORNUTA 'CARISSA'	CARISSA CHINESE HOLLY	24" HT./SPRD.	CONTAINER	42" o.c.
ILE GLA	24	ILEX GLABRA	INKBERRY HOLLY	24" HT./SPRD.	3 GAL.	48" o.c.
WET POND						
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	EUPATORIADDELPHUS 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



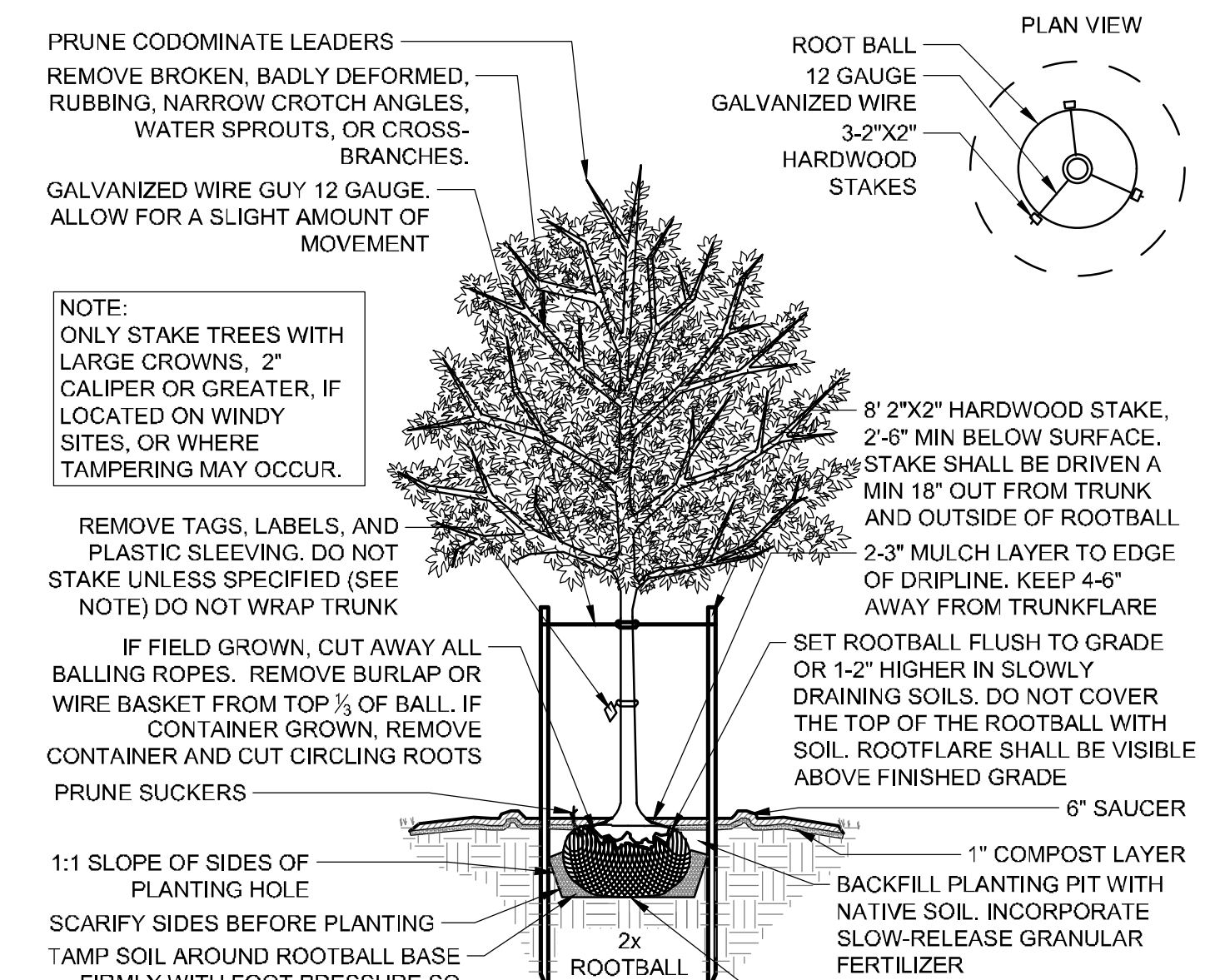
4 GROUND COVER PLANTING DETAIL  
NTS

### GENERAL NOTES

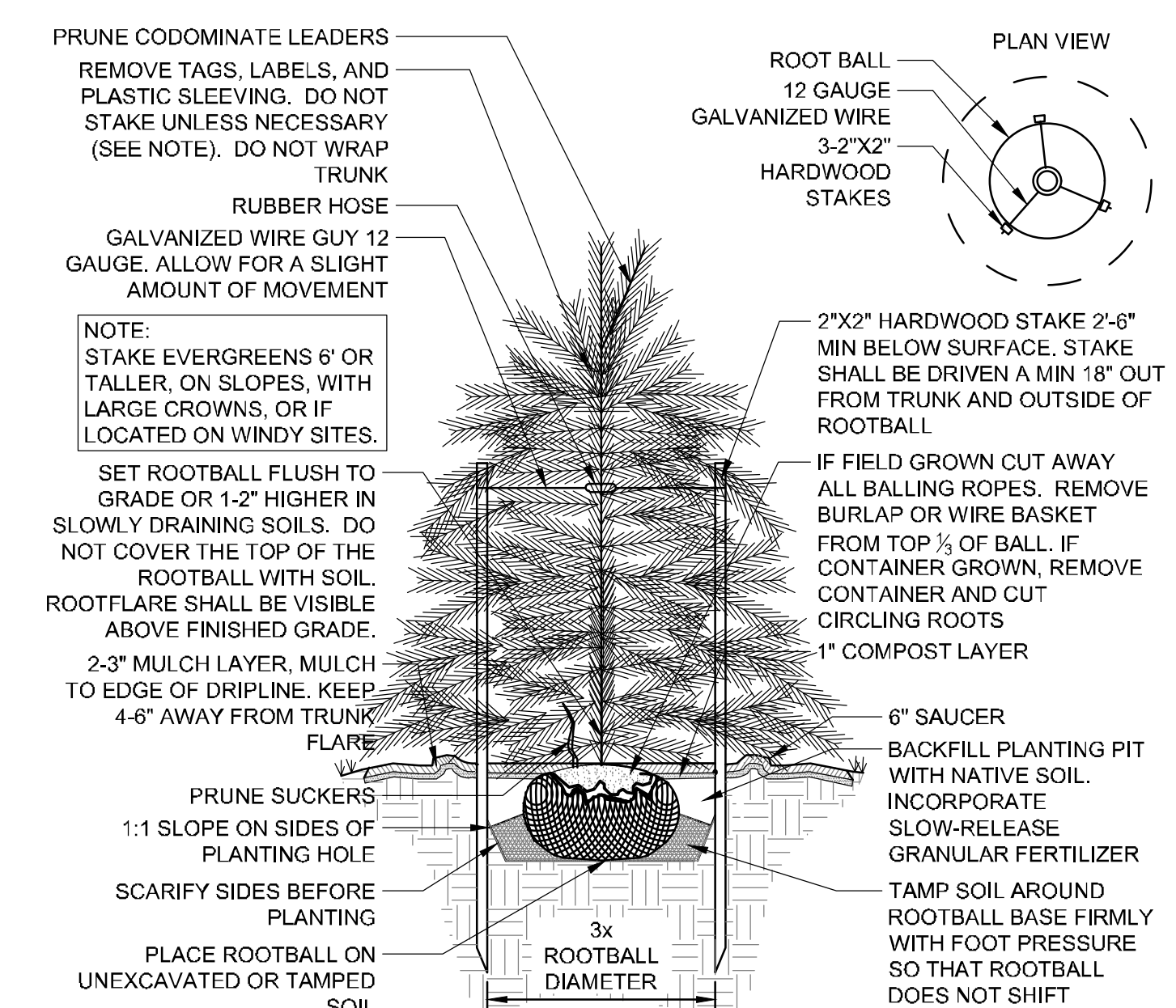
- PRE-CONSTRUCTION
- CONTRACTOR IS RESPONSIBLE FOR CONTACTING VIRGINIA 811 AT 1.800.553.3120 FOR LOCATION OF ALL UTILITY LINES. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS. NOTIFY LANDSCAPE ARCHITECT OF CONFLICTS.
  - VERIFY ALL PLANT MATERIAL QUANTITIES ON THE PLAN PRIOR 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.

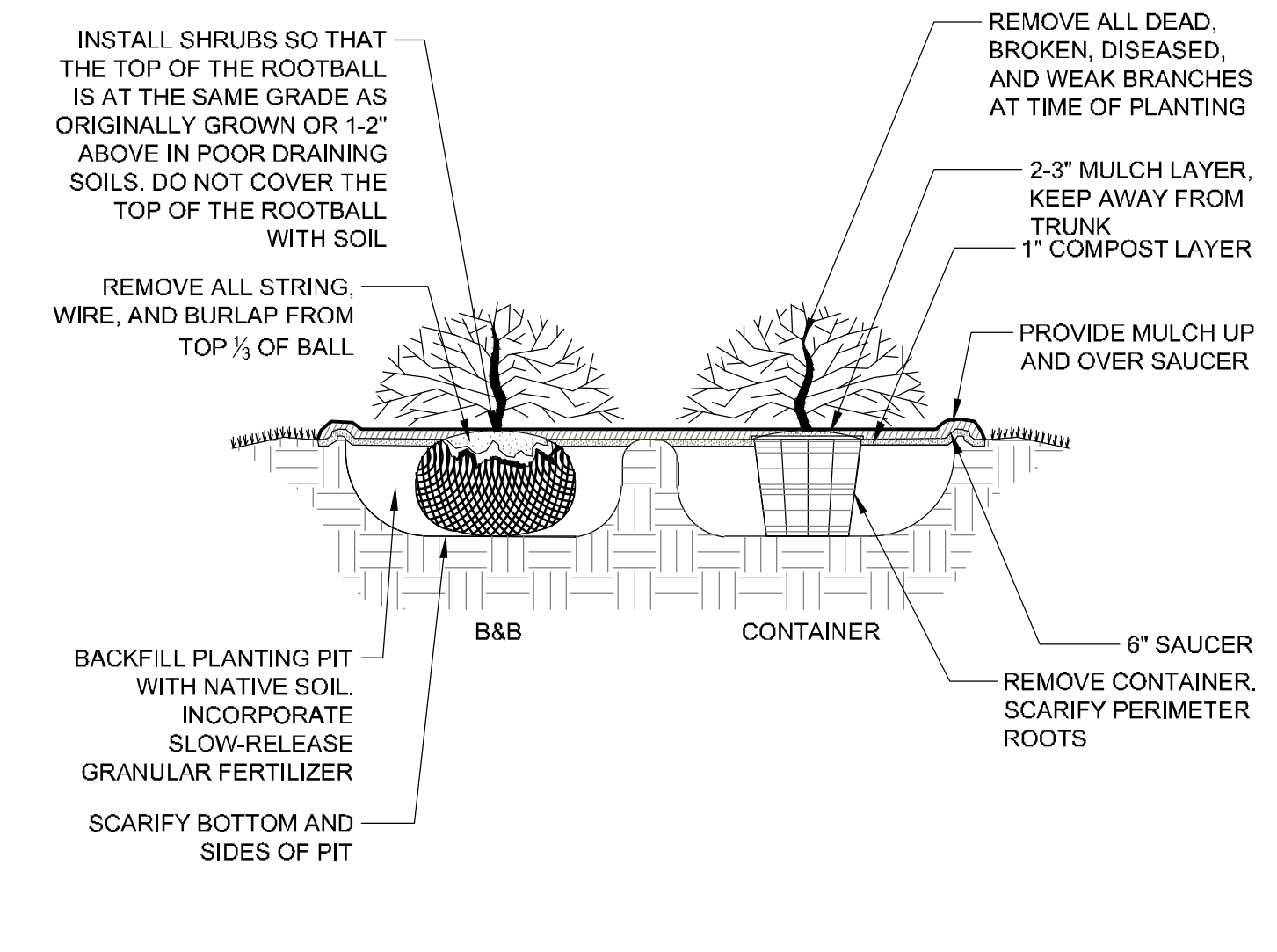
- INSPECTIONS/GUARANTEES
- UPON COMPLETION OF LANDSCAPE INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR WHO WILL VERIFY COMPLETENESS, INCLUDING THE REPLACEMENT OF ALL DEAD PLANT MATERIAL. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING A FINAL INSPECTION BY THE LANDSCAPE ARCHITECT.
  - 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 NEGLIGENCE 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  
FOR REVIEW ONLY  
NORTH CAROLINA LANDSCAPE ARCHITECTS ASSOCIATION  
04/05/23  
1251  
KEVIN T. BARNES  
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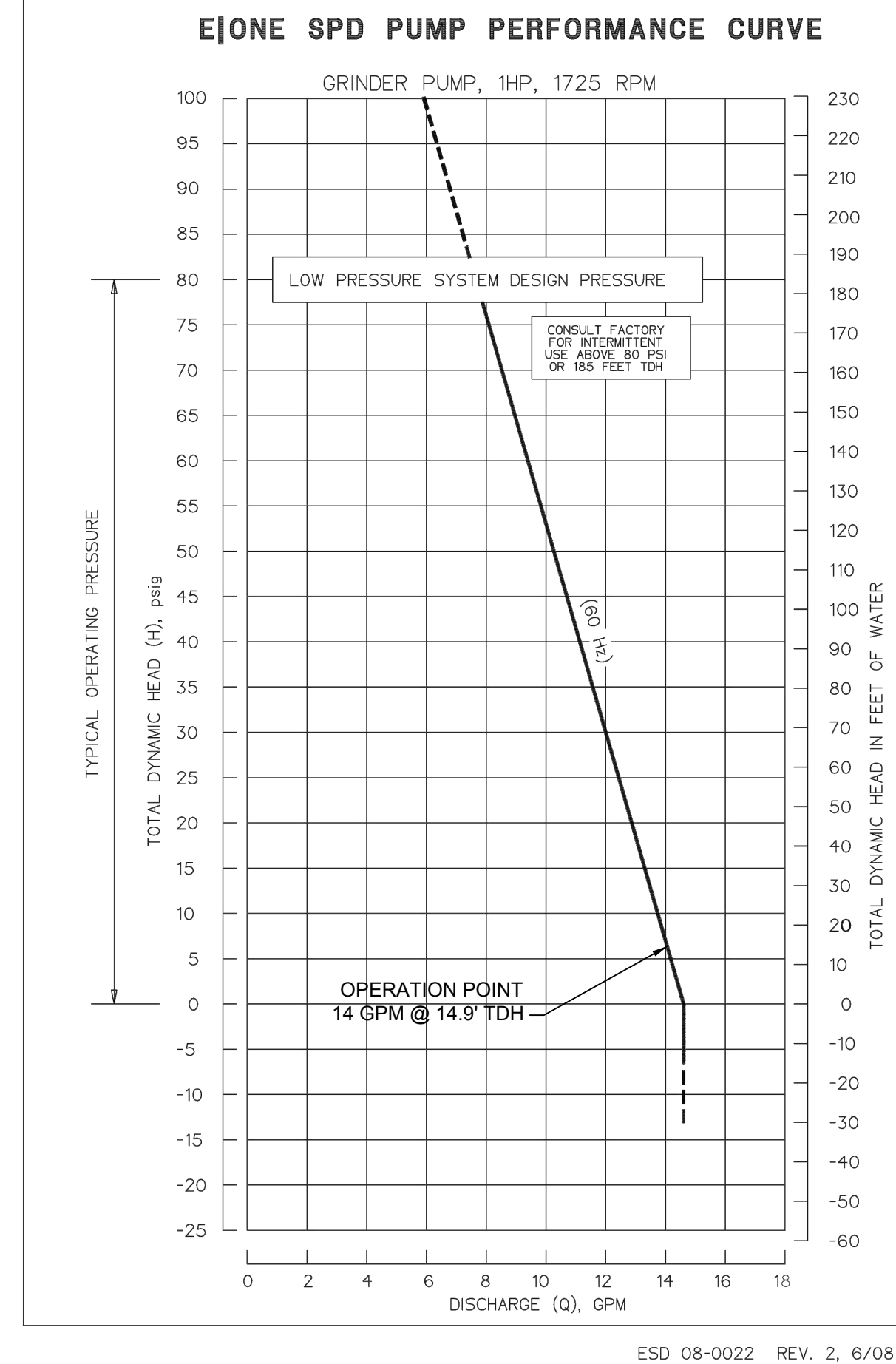
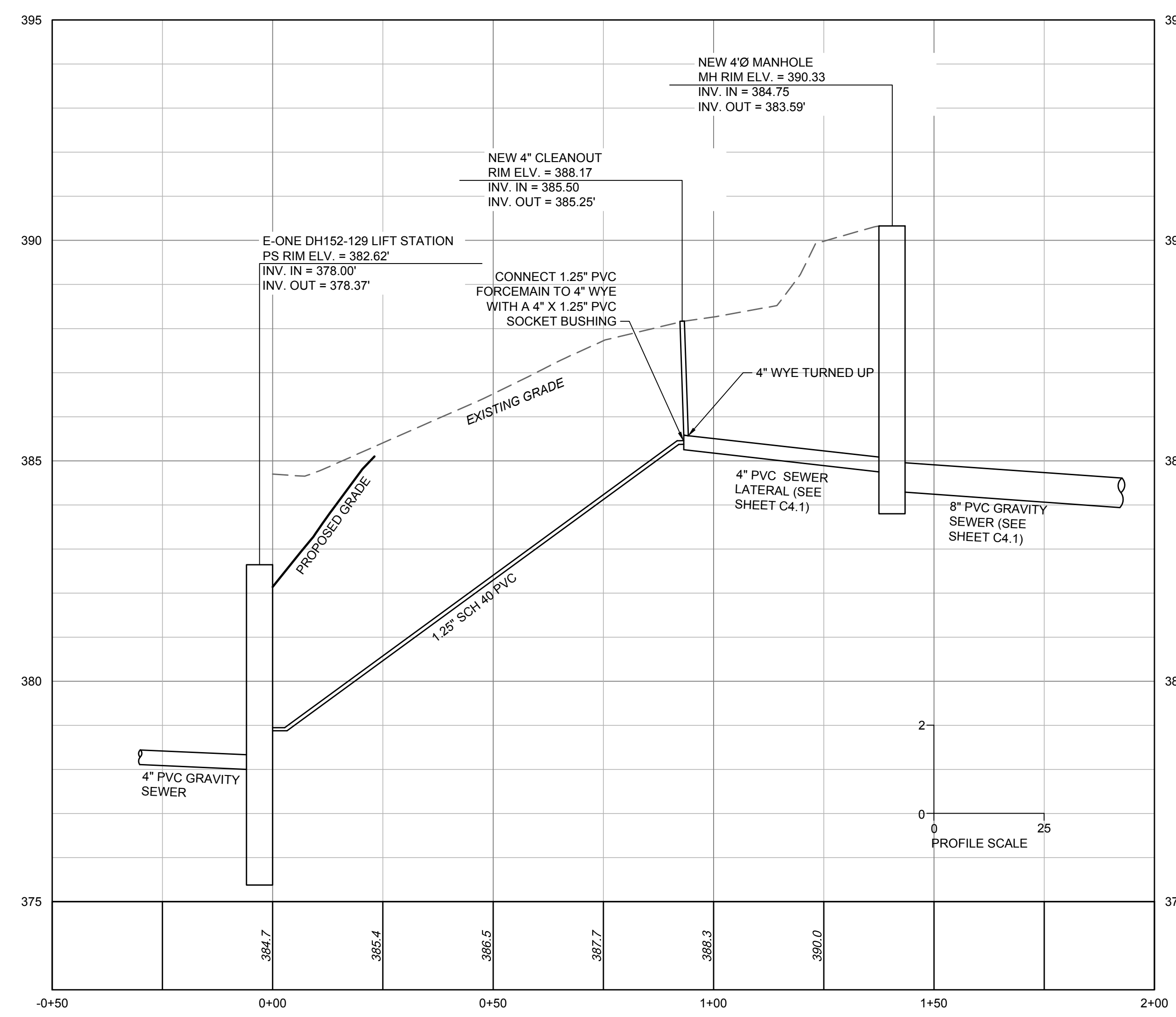
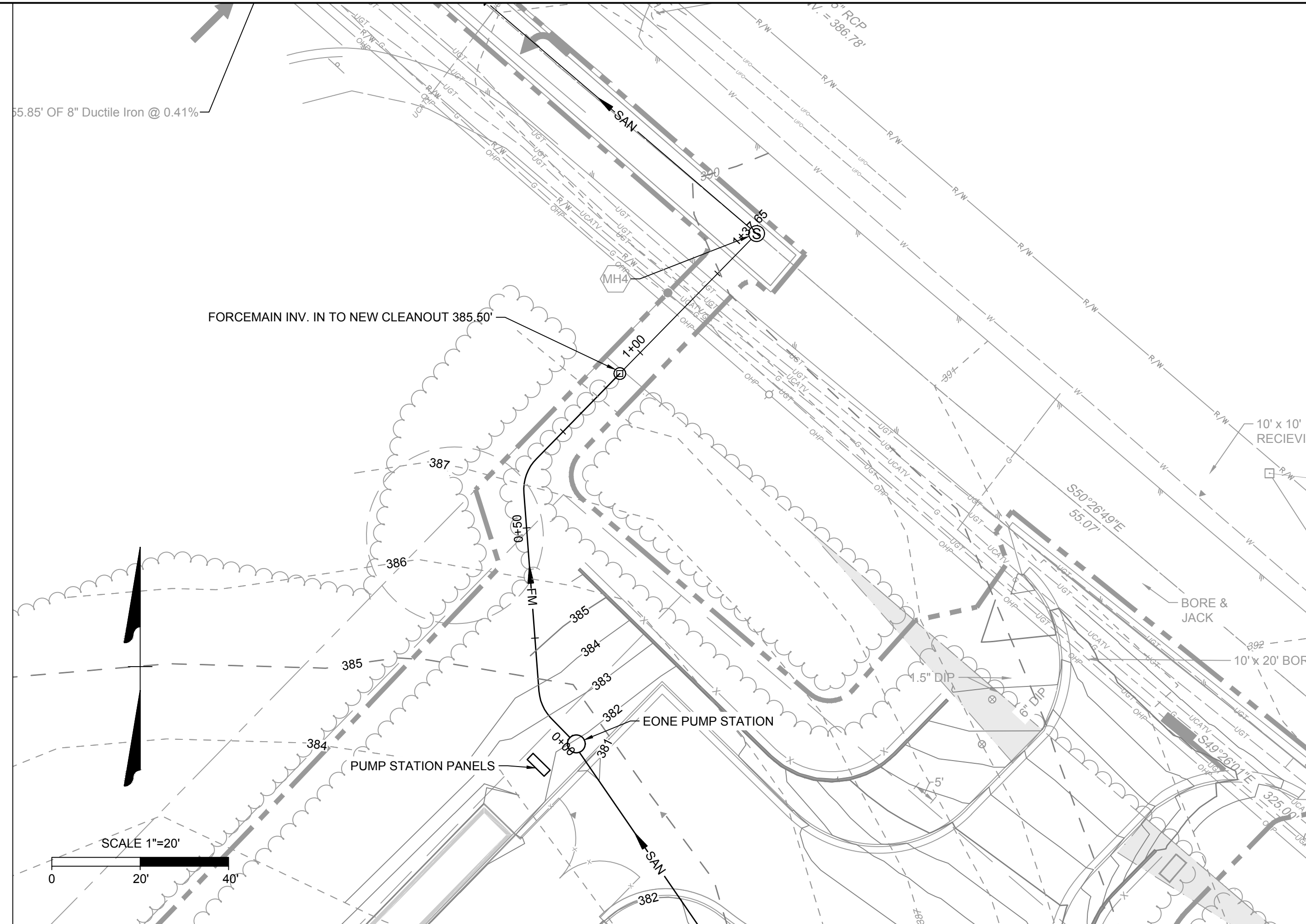
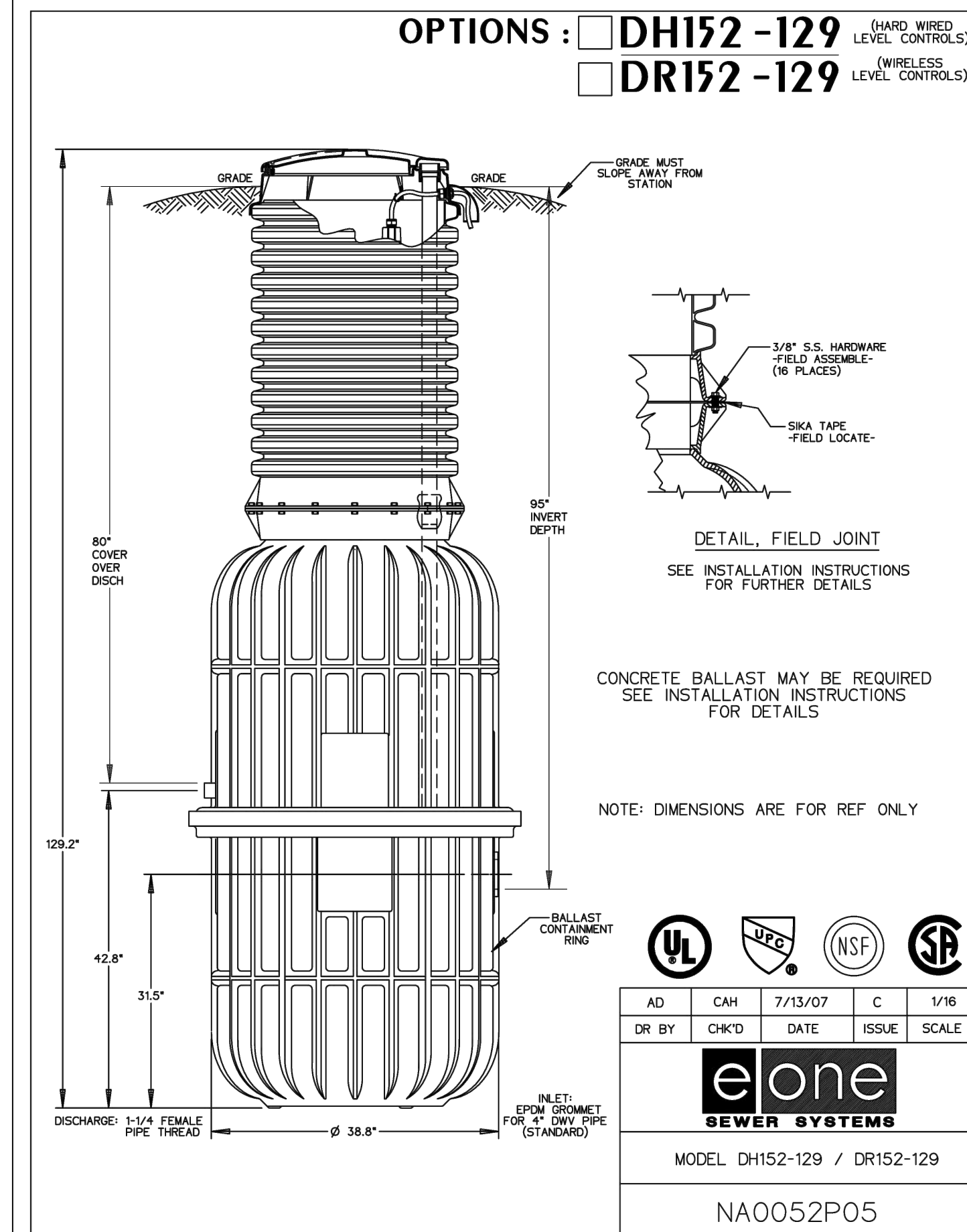
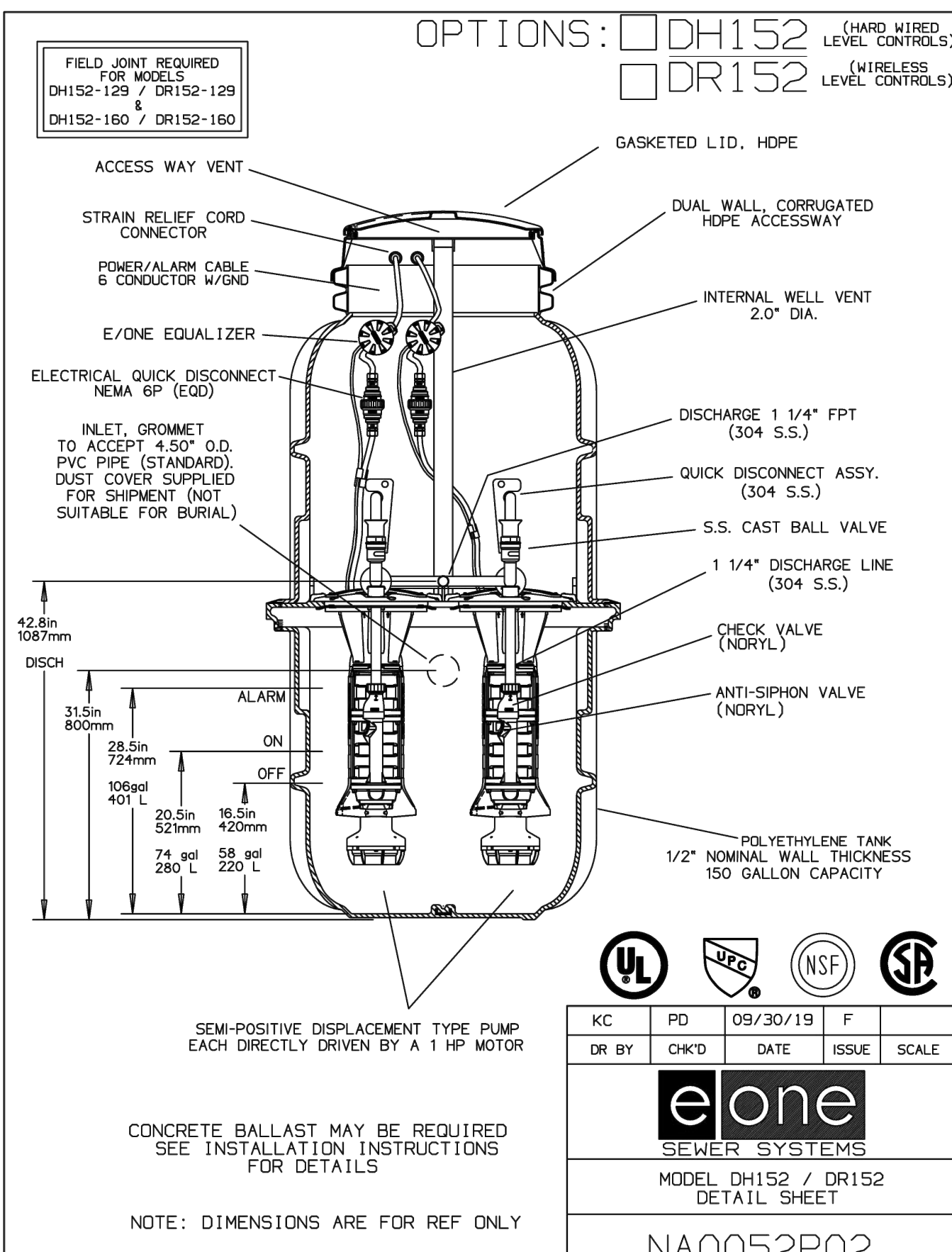
DATE	REVISION DESCRIPTION
03/31/2023	

YOUR VISION. ACHIEVED THROUGH OURS.  
DATE: 03/31/2023  
DRAWN BY: 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

JOB NO. 54832  
SHEET NO. L2.0

S:\33304832-Rolesville\_Site\_Short\DWG\Sheet\CD\54832-33304832-NT1.dwg [Plotted on 02/20/23 7:58 AM] by Garrett Frank



**DESIGN CRITERIA:**

- PUMP STATION IS NOT LOCATED WITHIN 100-YR FLOODPLAIN ACCORDING TO FEMA FIRM MAP 3720185000K EFF. 07/19/2022.
- THE ROLESVILLE STORAGE FACILITY PUMP STATION HAS BEEN DESIGNED TO HANDLE AN AVERAGE DAILY FLOW OF 1,570 GALLONS PER DAY (GPD) BASED ON 15A NCAC 02T FLOW RULES: 1 GPD PER STORAGE UNIT. THE PEAK INFLUENT RATE IS 2.73 GALLONS PER MINUTE BASED ON A PEAKING FACTOR OF 2.5. THE STATION WILL BE A DUPLEX ENVIRONMENT ONE STATION (OR APPROVED EQUAL) WITH A 1.25" SCH 40 PVC FORCE MAIN, WHICH WILL DISCHARGE TO AN PROPOSED 4" CLEANOUT LOCATED AT THE RIGHT OF WAY.
- PUMP STATION FLOWS ARE HANDLED BY A SINGLE ENVIRONMENT ONE SUBMERSIBLE GRINDER PUMP OR APPROVED EQUIVALENT OPERATING AT THE RATE SHOWN BELOW. A SECOND ENVIRONMENT ONE PUMP IS PROVIDED FOR REDUNDANCY.
- THE DESIGN PUMPING RATE IS 14 GPM AT 14.9' TDH UTILIZING A SINGLE PUMP.

**PUMP STATION NOTES:**

- ALL PUMP STATION COMPONENTS SHALL BE SUPPLIED BY ONE MANUFACTURER: ENVIRONMENT ONE OR APPROVED EQUIVALENT.
- CONTRACTOR TO MAINTAIN A DRY EXCAVATION UNTIL ALL BACKFILLING IS COMPLETED.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM PUMP STATION.
- A BACKUP GENERATOR WILL BE PROVIDED FOR THE BUILDING AND WILL BE SIZED TO SERVE THE REQUIRED PUMP STATION LOAD.

**ELECTRICAL NOTES:**

- ALL ABOVE-GRADE ENCLOSURES INSTALLED UNDER THIS CONTRACT SHALL BE PAD LOCKABLE AND NEMA 4X.
- ALL WIRE INSTALLED UNDER THIS CONTRACT SHALL BE COPPER.
- ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND REGULATIONS; AND THE RECOMMENDATIONS AND REQUIREMENTS OF THE EQUIPMENT MANUFACTURERS.
- NO ELECTRICAL SPLICES ALLOWED IN WET WELL.
- ALL EXTERIOR CONDUITS SHALL BE UNDERGROUND AND SHALL BE INSTALLED PER 1996 NEC TABLE 300-5 & TABLE 300-50 AND ARTICLE 300-6 (PROTECTION AGAINST CORROSION).
- EONE CELLULAR MODEM SENTRY ADVISOR AND SENTRY PROTECT PLUS DUPLEX SHALL BE COMBINED INTO ONE PANEL.



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	06/01/2023
DRAWN BY	L. SOLARI
DESIGNED BY	L. SOLARI
CHECKED BY	A. KABAT
SCALE	AS SHOWN

**TIMMONS GROUP**

NORTH CAROLINA LICENSE NO. C-1652

**ROLESVILLE STORAGE FACILITY**

TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

**PUMP STATION SITE AND FORCEMAIN**

JOB NO. 54832

SHEET NO. PS1.0

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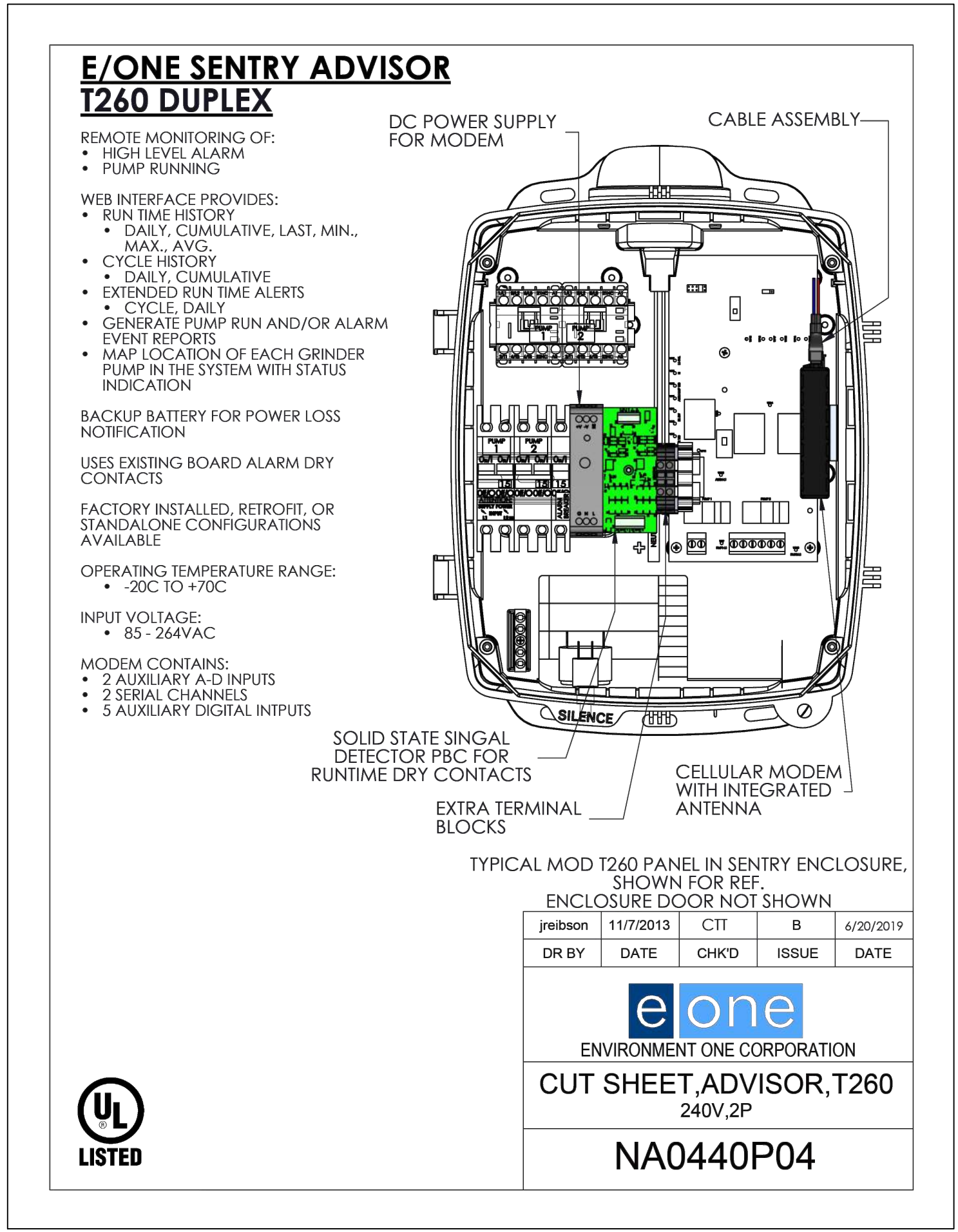
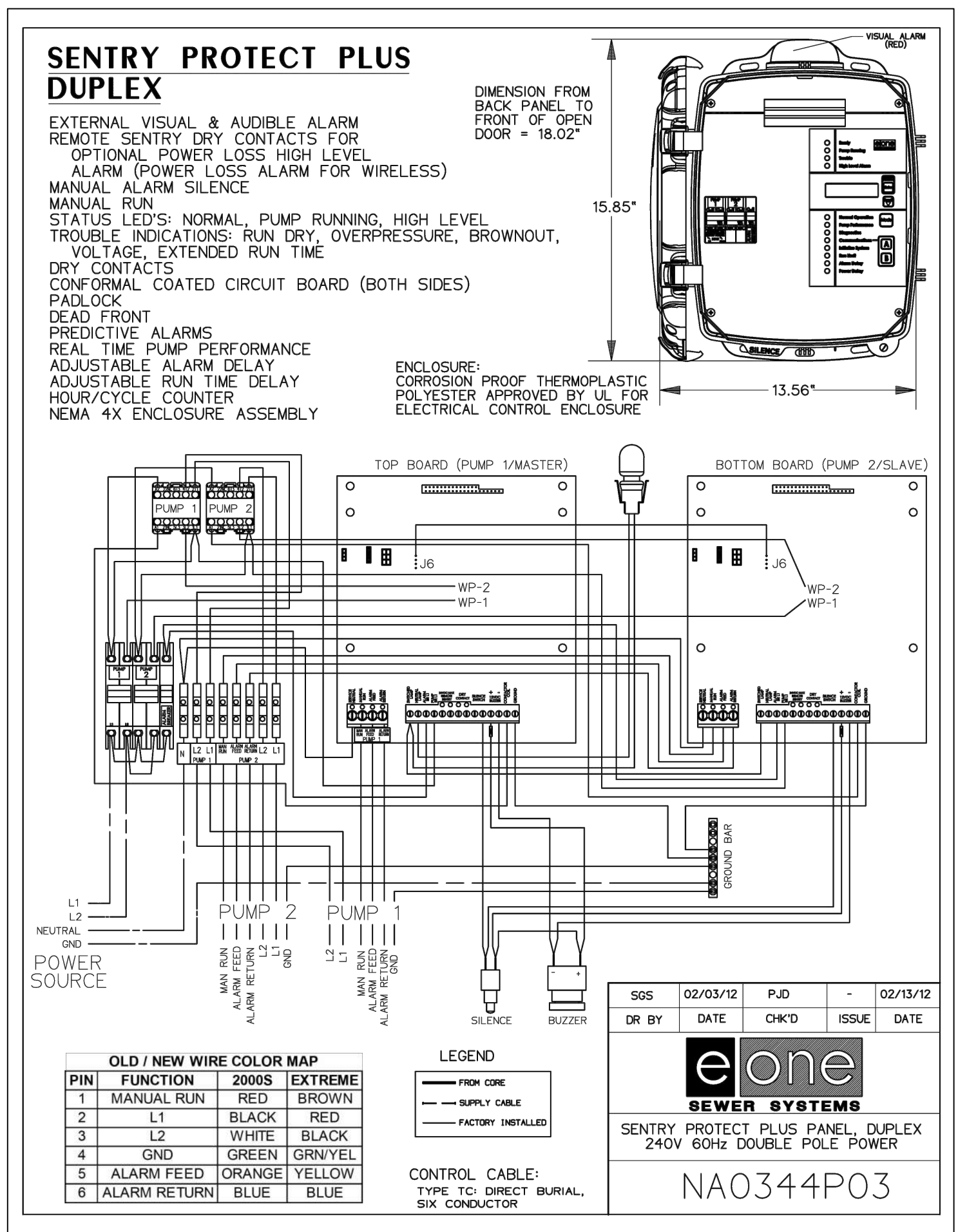
DESIGNED BY L. SOLARI

CHECKED BY A. KABAT

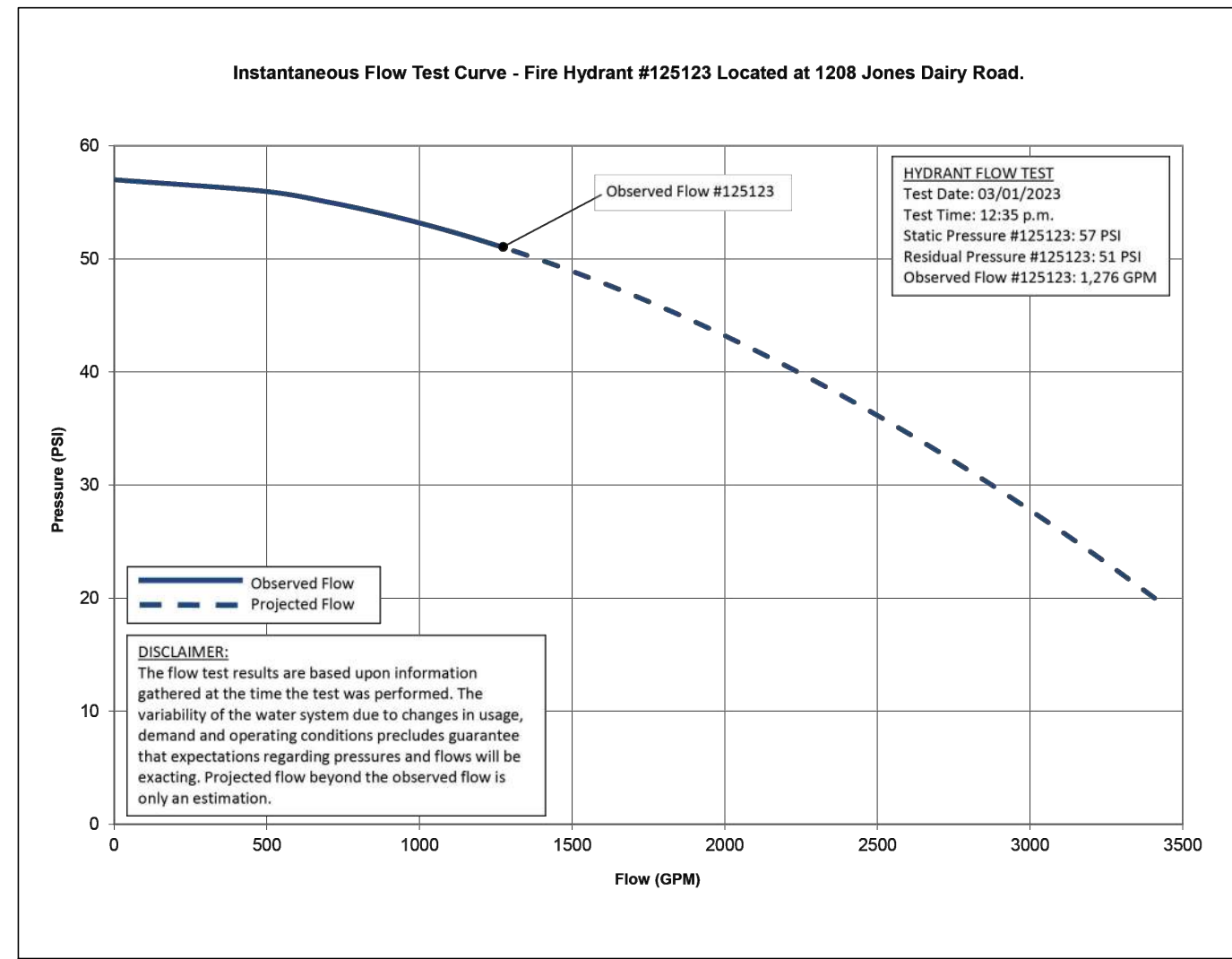
SCALE AS SHOWN

**TIMMONS GROUP**  
 NORTH CAROLINA LICENSE NO. C-1652  
**ROLESVILLE STORAGE FACILITY**  
 TOWN OF ROLESVILLE - WAKE COUNTY - NORTH CAROLINA  
**PUMP STATION NOTES AND DETAILS**

JOB NO.	54832
SHEET NO.	PS1.1



**AVAILABLE FLOW CURVE**



**AVAILABLE FIRE FLOW**

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	2,956	2,050
MINIMUM RESIDUAL PRESSURE DURING REQUIRED FIRE FLOW**	34.6	34.5	40.4	34.5

\*AVAILABLE FIRE FLOW IS MEASURED, NON-SIMULTANEOUSLY, DURING THE MAX DAILY DEMAND SCENARIO AT A SYSTEM RESIDUAL PRESSURE LIMIT OF 20 PSI.  
 \*\*1,500 GPM IS REQUIRED AT EACH ONSITE HYDRANT.

**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	388.9	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	48.7	53.9	53.9	57.0	54.0
MAXIMUM DAILY DEMAND (MDD)	55.5	56.6	54.0	53.9	48.5	53.9	53.9	57.0	54.0
MDD + SPRINKLER	54.5	55.5	51.4	51.0	47.4	51.4	51.4	56.1	51.4

**PIPE REPORT**

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

**DESIGN CRITERIA**

- 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 NCDCE DESIGN STANDARDS AND PROCEDURES FOR WATER DISTRIBUTION.
- GPV CURVES
  - GPV-1 = 6" WATTS 709 DCDA
  - GPV-2 = 1.5" NEPTUNE TURBINE METER
  - GPV-3 = 1.5" WATTS 009 RPZ

**FLOW DEMAND CRITERIA**

- 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.

**CONCLUSION**

- 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 SYSTEM DUE TO CHANGES IN USAGE, DEMAND, OPERATING CONDITIONS, AND LAYOUT PRECLUDES GUARANTEES OF EXACT PRESSURES AND FLOWS.
- THE PROPOSED SYSTEM MEETS BOTH TOWN OF ROLESVILLE AND NCDCE DESIGN STANDARDS



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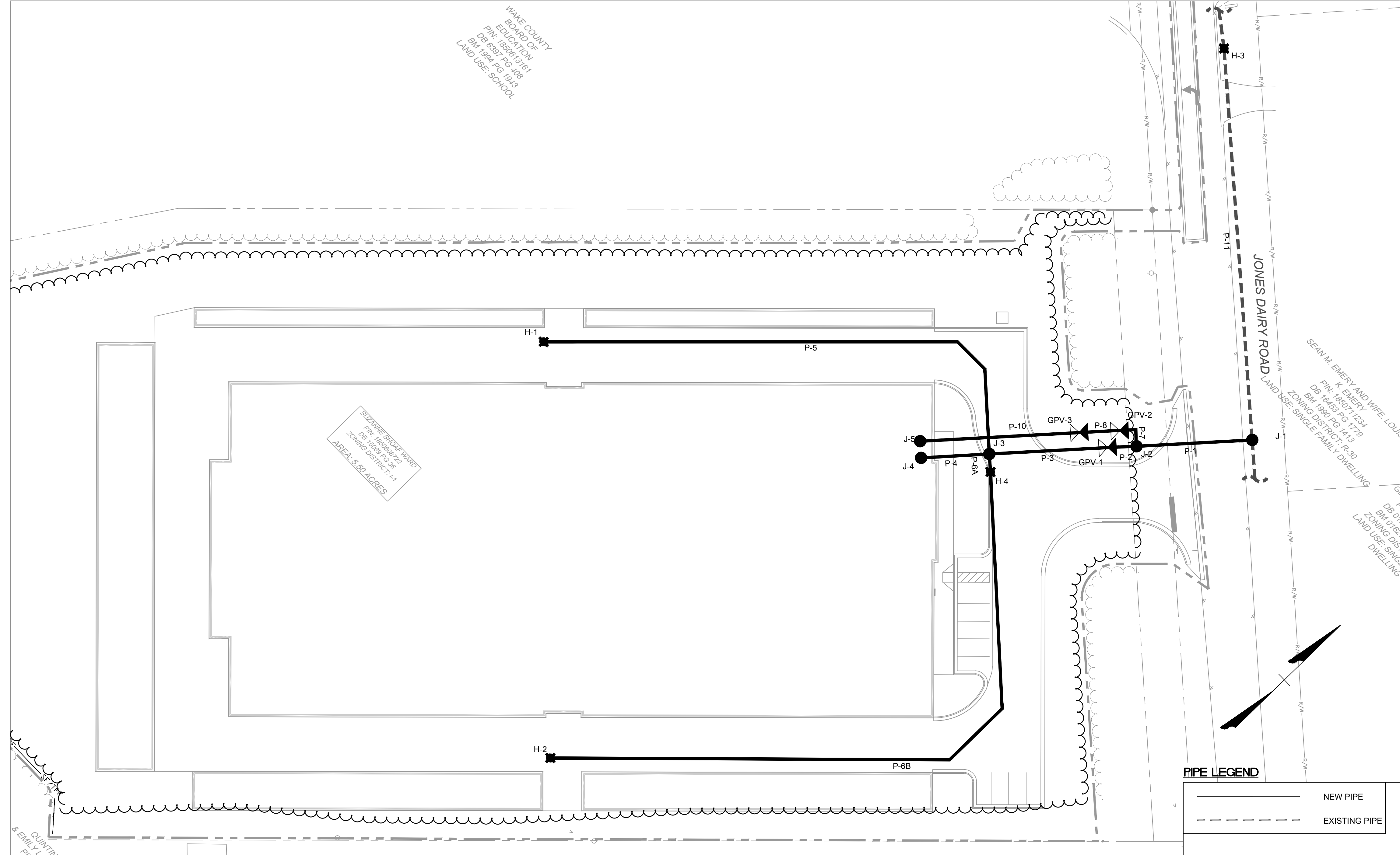
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**TIMMONS GROUP**

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

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**EXT. FINISH LEGEND**

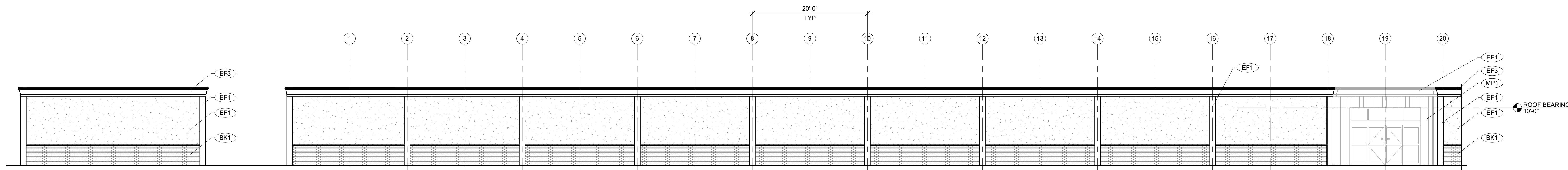
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 Manufacture of EIFS  
 Color: TBD - Light Tan  
 Texture: Fine
- EF2 EIFS 2**  
 Manufacture of EIFS  
 Color: TBD - Darker Tan  
 Texture: Fine
- EF3 EIFS 3**  
 Manufacture of EIFS  
 Color: TBD - White  
 Texture: Fine
- BK1 BRICK 1**  
 Manufacture of Brick  
 Color: TBD - Brown Tone
- MP1 VERTICAL CORRUGATED METAL PANEL**  
 Manufacture of Metal Panel  
 Color: TBD - Light Tan
- MP2 HORIZONTAL CORRUGATED METAL PANEL**  
 Manufacture of Metal Panel  
 Color: TBD - Darker Tan
- ST1 PAINTED STEEL**  
 Color: TBD - Black



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 704.332.1615  
 www.oda.us.com

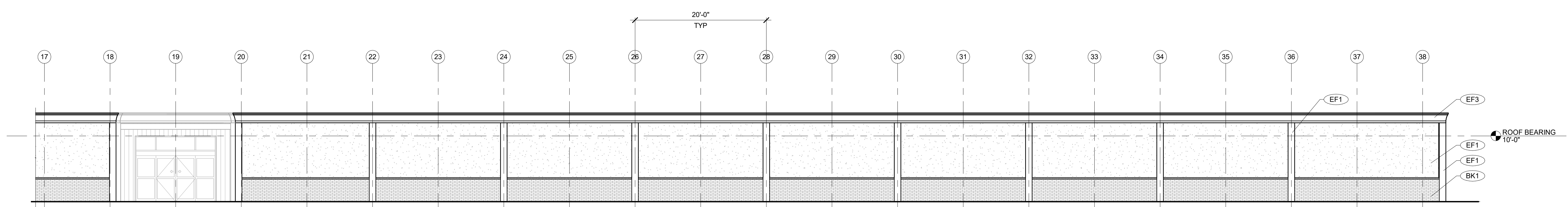
SEAL:  
**PROGRESS PRINT  
 NOT FOR  
 CONSTRUCTION**

CONSULTANT:



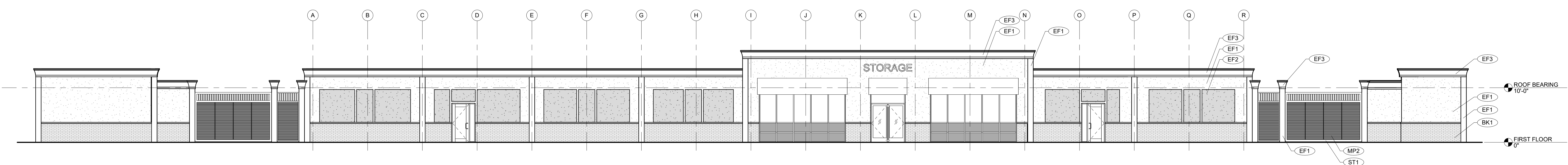
**3** SOUTH ELEVATION - B

scale: 1/8" = 1'-0"



**2** SOUTH ELEVATION - A

scale: 1/8" = 1'-0"



**1** EAST ELEVATION

scale: 1/8" = 1'-0"

**Rolesville Storage**

Wake County, NC

ODA Project No. 223686

Schematic Design

4/19/2023

REVISIONS		
No.	Description	Date

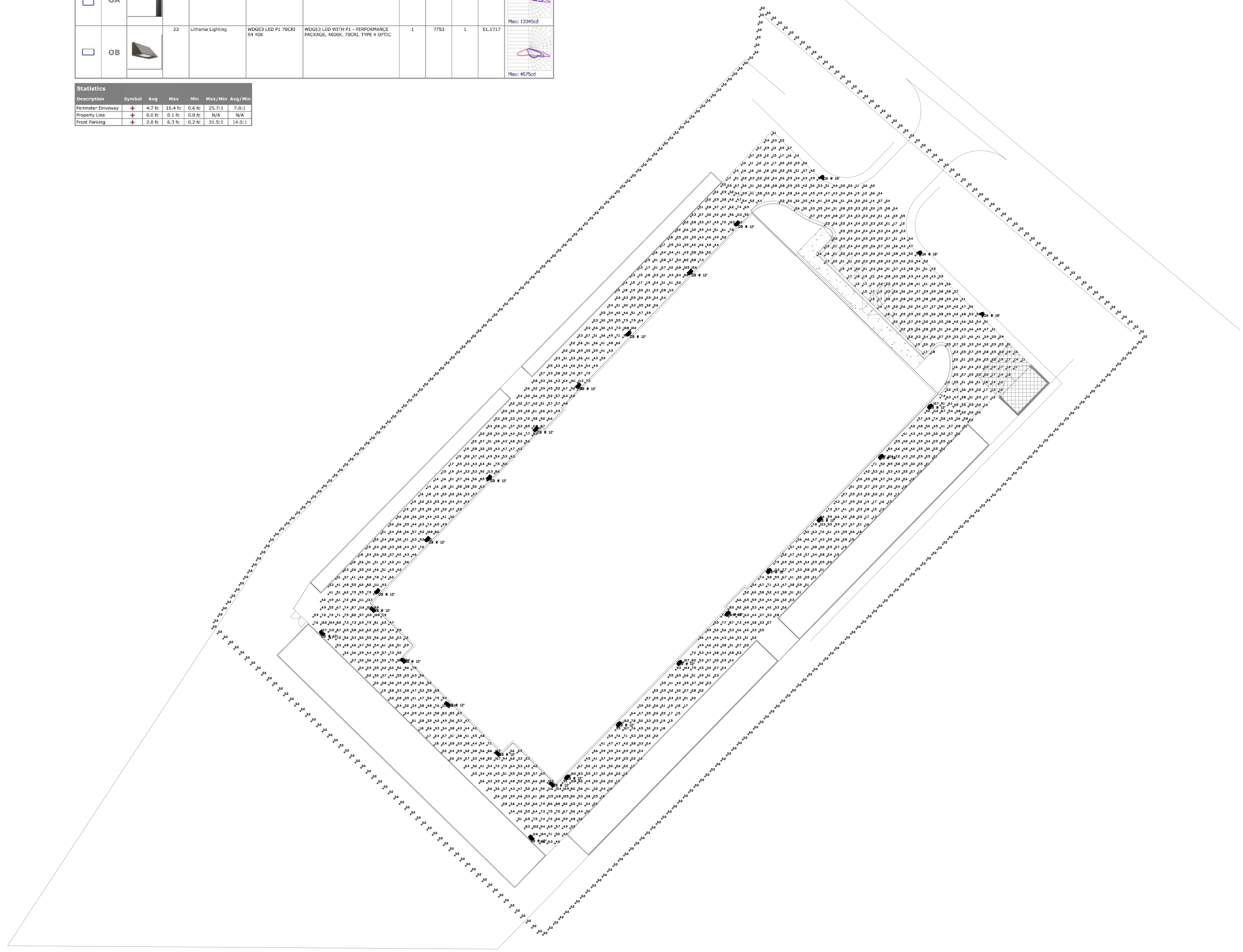
**BUILDING ELEVATIONS**

**A-200**

**NOTES:**  
 1. ALL WALL MOUNTED LIGHTS HAVE A MOUNTING HEIGHT OF 12-FT.  
 2. ALL POLE MOUNTED LIGHTS HAVE A MOUNTING HEIGHT OF 18-FT.  
 THE HEIGHT OF EACH POLE IS 18-FT ABOVE GRADE.

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
OA			3	Lithonia Lighting	DDX1 LED P4 40K 70CRI 119W HG	D-Series Size 1 Area Luminaire P4 Performance Package 4000K CCT 70 CRI Forward Throw HouseSide Shield	1	13740	1	123.9373	
OB			23	Lithonia Lighting	WDGEJ LED P1 70CRI 64 40K	WDGEJ LED WITH P1 - PERFORMANCE PACKAGE, 6000K, 70CRI, TYPE 4 OPTIC	1	7753	1	51.1717	

Statistics						
Description	Symbol	Avg	Max	Min	Min/Max	Avg/Min
Perimeter Driveway	+	4.7 fc	15.4 fc	0.6 fc	25.7:1	7.0:1
Property Line	+	0.0 fc	0.1 fc	0.0 fc	N/A	N/A
Front Parking	+	2.8 fc	6.3 fc	0.2 fc	31.5:1	14.0:1



**1** SITE PHOTOMETRICS  
 1"=30'-0"



**Wilde**  
 engineering

MECHANICAL, ELECTRICAL & P.LUMBING  
 15822 Kelly Park Cir  
 Huntersville, NC  
 (704) 439-7038  
 NC Firm License No. P-2182

CONSULTANTS

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SEAL

**ROLESVILLE STORAGE BUILDING  
 SITE PHOTOMETRICS**

03/27/2023

REVISIONS		
No.	Description	Date

SITE PHOTOMETRICS

E-010