



Town of Beaufort, NC

701 Front St. - P.O. Box 390 - Beaufort, N.C. 28516
252-728-2141 - 252-728-3982 fax - www.beaufortnc.org

Town of Beaufort Planning Board Regular Meeting 6:00 PM Monday, August 17, 2020 - Held Virtually through Zoom Due to the COVID-19 Pandemic Monthly Meeting

Call to Order

1. Call to Order

Roll Call

1. Roll Call

Agenda Approval

1. Agenda Approval for the August 17, 2020 Meeting

Minutes Approval

1. Minutes Approval from the July 20, 2020 meeting

New Business

1. Preliminary Plat for Live Oak Commons

Commission / Board Comments

Staff Comments

Adjourn



Town of Beaufort, NC

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Town of Beaufort Planning Board Regular Meeting

6:00 PM Monday, July 20, 2020 - Held Virtually through Zoom due to the COVID-19 Pandemic
Minutes

Call to Order

Chairman Neve called the July 20, 2020 meeting to order.

Roll Call

Chairman Neve asked for a roll call. Present for the meeting were; Ryan Neve, Paula Gillikin, Diane Meelheim, Ralph Merrill, Jeff Vreugdenhill, Aaron Willis and John LoPiccolo. Secretary Winn declared a quorum.

Also present for the meeting were, Kyle Garner, Kate Allen, Commission John Hagle and Commissioner Marianna Hollinshed.

Agenda Approval

Agenda Approval for July 20, 2020

Chairman Neve asked if there were any changes to the Agenda. Hearing none he asked for a motion to approve the Agenda as presented. Board Member LoPiccolo made the motion to approve the Agenda, Board Member Meelheim made the second and the motion carried unanimously.

Minutes Approval

- 4. Minutes Approval from the June 15, 2020 Meeting

Chairman Neve asked if there were any changes to the Minutes from the June 15, 2020 meeting. Hearing no changes he asked for a motion to approve the Minutes as presented. Board Member Meelheim made a motion to approve the Minutes as presented, Board Member Gillikin made the second and the motion carried unanimously.

Old Business

- 5. Case 20-07 - Text Amendment Modifying Section 4 Definitions: Building Height

Chairman Neve opened Case 20-07, Text Amendment that was tabled from the June 15, 2020 meeting.

Kate Allen, presented updated information to the Board that they had requested through a power point presentation. Ms. Allen showed the current standards versus what is being proposed. Ms. Allen stated that she created a new scenario based off of an actual property at 423 West Beaufort Road. She said the structure had recently been demolished. Ms. Allen stated that she was able to obtain the ground elevation through Carteret County's GIS website. Ms. Allen

explained that the difference in the ground elevation versus the Regulatory Flood Protection Elevation (BFE) would be about a foot and a half difference. Ground Elevation would put the height of the home right at 40' and BFE would put it at about 41.5'. Ms. Allen brought up the existing and proposed definition and stated she would be happy to entertain any questions. She also brought up the rules for Public Hearings and Remote Meetings.

Chairman Neve thanked Ms. Allen for her presentation and opened it to the board for questions. Board Member LoPiccolo had the question that North Carolina had recommended 2' of freeboard in some areas and he wanted to know how 1' was adopted for Beaufort. Ms. Allen stated that it was in 2003 when the current flood maps were adopted and that was the recommended freeboard at that point. Mr. Garner stated that when the time comes to adopt new flood maps the Planning Board will have an opportunity to go through the whole ordinance again. Mr. Garner stated that points are given based on freeboard for the flood insurance rating. Board Member LoPiccolo wanted to know if adopting an additional foot would raise the height and Ms. Allen stated yes. Board Member Willis wanted to know how often changing the freeboard was assessed. Ms. Allen stated that no changes were usually made until new flood maps are received. She stated the last ones were 2003 and we are still waiting on new ones. Mr. Garner stated about every 20 to 25 years. Chairman Neve stated he went through some of the higher AE numbers and in most cases it seemed like it was 2 to 3 feet for water front property. Board Member LoPiccolo asked if the rules applied to the ETJ as well and Ms. Allen stated yes. Chairman Neve stated that most of the AE9's were in the ETJ. Board Member Gillikin stated she was doing some basic analysis and she stated she backed off of that and stated that she kept going back to needing to be very careful developing the flood plain. She stated that she felt changing the definition could possibly make it more enticing to develop in the flood plain. She felt it should be more difficult to develop in the flood plains to protect our future. Board Member Vreugdenhill asked how long the definition was. Ms. Allen stated it was 3 or 4 sentences and he asked her to read it for him due to the fact he was driving. Ms. Allen read the existing and proposed. Board Member Vreugdenhill wanted clarification on what the proposed height could be and used the example of AE7, pilings 7' and house 40' for overall 47' and Ms. Allen confirmed yes, from BFE. Board Member LoPiccolo also stated that would also depend on the Zone, whether the structure could be 35' or 40'. Chairman Neve stated that he agreed with Board Member Gillikin, that it would put buildings in the most vulnerable areas to build higher and larger than they can now. He stated he didn't see a high motivation to allow bigger structures to go in the most vulnerable areas. Chairman Neve stated that he didn't see this as being a positive for the town. Board Member Vreugdenhill stated that he agreed. He feels that it may be offensive to someone who had already built and then a new one come in taller than what they were held to. Board Member Willis asked about the affect on current structures, what would happen to them. Ms. Allen explained that if a structure that was built before the current rules, then they could be raised to be in compliance, even if it put them above the height allowed now. Board Member Gillikin stated that is different because they are trying to prevent future loss. Vice Chair Merrill said the subject was originally brought up within the last year and the main motivation was older houses that needed protection. Ms. Allen stated that was correct but some people were losing a whole story to meet within the current height requirements. Vice Chair Merrill stated those that want to go above could always ask for a Variance and it could be reviewed on a case by case basis. Board Member Vreugdenhill asked Mr. Garner if he felt that a Variance would be granted for this type of situation. Mr. Garner stated that the current rules allow for that to be done without a Variance because we want them to be compliant. Mr. Garner also stated to keep in mind that if the freeboard is changed from 1' to 3' it could make flood insurance rates go higher for people because more people would be out of compliance. Board Member Willis asked if there was a distinction between the Historic District, the Town of Beaufort and the ETJ when it came to this matter. Ms. Allen stated no, but Mr. Garner stated that since the Historic District is Quasi-Judicial, they HPC can require that a structure is built a lower height to fit in with those requirements regardless of what the zoning says. Board Member LoPiccolo had one more question, concerning what spurred this on, he wanted to know if other towns were doing. Ms. Allen stated that the discussion started after Florence to promote going above and beyond the minimum and to help keep structures in compliance if and when the freeboard could increase. Board Member LoPiccolo asked what the overall would be. Ms. Allen pulled up a slide showing the Finished Floor Elevation (FFE), Lowest Adjacent Grade (LAG) and Highest Adjacent Grade (HAG) and gave the members clarification. Board Member Gillikin stated she understands but she is weary of this. Board

Member LoPiccolo stated that you can still have development in these areas. Vice Chair Merrill asked if the freeboard change would come through Planning Board. Mr. Garner stated it comes before the Planning Board but the Commissioners make the decision because it is an ordinance.

Vice Chair Merrill stated that he would make a motion to not approve this. Chairman Neve asked for a second, Board Member Gillikin made the second and after a roll call vote there were 6 members who voted yes, not to adopt the new definition and one member who voted against.

Commission / Board Comments

Chairman Neve opened Commission/Board comments. Board Member LoPiccolo stated he felt it was good that they were going to be looking at resiliency. He stated that he felt there were going to be issues to address with flooding moving forward and also with homeowners and how protect them. Board Member Gillikin thanked staff for the great data that was put together and for answering the questions from the last meeting. She also stated that it would be good to have strategic visions/goals for updating the Land Development Ordinance (LDO) and Ordinances. Vice Chair Merrill stated that he appreciated the updated information that was provided. He stated that most of the members are new and he said it takes some time to become familiar with the LDO and other things that are used as guidance. He referred to the May 2020 meeting and he suggested going back and reading to see what the intent of the overlay district is. Board Member Willis stated he was looking forward to hearing more about the freeboard change as well as the definition change and how they will interact with one another. Chairman Neve thanked Commissioners Hagle and Hollinshed for joining and he thanked staff for the presentation. He said this will be interesting conversation on freeboard and it needs to be balanced to see what is best for everyone and the Town at large.

Staff Comments

Mr. Garner stated that he would "tag on" to Board Member Willis and then he had another topic. Mr. Garner stated that they have asked when the update to the flood maps are gong to take place. He said it could be 2025 before this even comes back from the State. They have gone through changes. When the maps first came out, Ms. Allen and I went through them and found errors and they had to start all over. Morehead City and Jacksonville also appealed.

Mr. Garner stated that an ad for proposals to update the CAMA Land Use Plan or what we are calling the UDO has been sent out for consultant proposals. The goal is to have those bids back the first of August, have a selection and then begin in September. With the CAMA the Planning Board will be looking at the land use and will be the steering committee on this. This will be a busy year for the Board. He stated that the CAMA Land Use is the "steering document" for the Board to go by that gives recommendations and maybe it can be expanded upon going into the Unified Development Ordinance (UDO). Both projects will be done at one time and this will allow you all to become real familiar with both documents.

Adjourn

Chairman Neve asked for a motion to adjourn the meeting. Board Member Vreugdenhill made the motion to adjourn, Vice Chair Merrill made the second and the motion carried unanimously.

Ryan Neve, Chairman

Denice Winn, Secretary to the Board



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**Town of Beaufort Planning Board Regular Meeting
6:00 PM Monday, August 17, 2020 – Virtual Meeting via Zoom**

AGENDA CATEGORY: New Business
SUBJECT: Preliminary Plat for Live Oak Commons

BRIEF SUMMARY:

The applicant wishes to Subdivide a 1.279 Acre Tract into 8 Single-Family Lots. In addition to Planning Staff the Town Engineer and applicants Engineer will also be available to answer questions regarding the proposed infrastructure.

REQUESTED ACTION:

Recommendation to Board of Commissioners

EXPECTED LENGTH OF PRESENTATION:

20 Minutes

SUBMITTED BY:

Kyle Garner, AICP
Planning & Inspections Director

BUDGET AMENDMENT REQUIRED:

N/A



PLANNING BOARD STAFF REPORT

To: Beaufort Planning Board Members
From: Kyle Garner, AICP, Town Planner
Date: August 10, 2020
Project: Live Oak Commons – Preliminary Plat

THE QUESTION: Subdivide a 1.279 Acre Tract into 8 Single-Family Lots

BACKGROUND:

Location:	Live Oak Street & Loftin Lane
Owners:	New Vision Trust
Requested Action:	Subdivide a 1.279 acre tract into 8 lots
Existing Zoning	RS-5
Size:	1.279 Acres
Existing Land Use:	Vacant-Cleared
Adjoining Land Use & Zoning:	North – By Single-Family Homes, Zoned R-8 South – Across Live Oak Street By Single-Family Homes, Zoned R-8 & RS-5 East – By Single-Family Homes, Zoned R-8 West – By Single-Family Homes, Zoned R-8

SPECIAL INFORMATION:

This preliminary plat is in concert with the recent rezoning to RS-5 which took place in July 2019. This plan is also consistent with the adopted Small Area Plan developed by Stantec and will contains a 5 foot sidewalk along Live Oak Street. It should be noted that the street is to be private and not dedicated to the Town. The attached set of plans is also from our Town Engineer recommending approval with conditions noted on the plans.

Public Utilities & Works:

Water:	Town Water
Sanitary Sewer:	Town Sewer

OPTIONS:

1. Approve the request as presented.
2. Deny the request.
3. Table the request.

ATTACHMENTS:

Vicinity Map
Zoning Map
Construction Drawings

Case 20-09 Vicinity Map - Preliminary Plat - Live Oak Commons

1.



7

Case 20-09 Zoning Map - Preliminary Plat - Live Oak Commons

1.



Legend

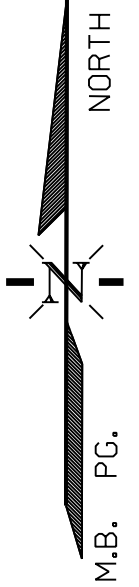
ZONING

-  R-8
-  RS-5

8

**CRUCIAL DURING CONSTRUCTION
THAT TOTAL LAND DISTURBANCE
REMAINS LESS THAN 1 ACRE**

LOT DATA		
LOT #	LOT AREA	50% LOT COVERAGE
1	5087.17 SF	2543 SF
2	5102.47 SF	2551 SF
3	5975.24 SF	2987 SF
4	8038.85 SF	4019 SF
5	7868.32 SF	3934 SF
6	9385.58 SF	4692 SF
7	5066.81 SF	2533 SF
8	5064.71 SF	2532 SF



SITE DATA

TOTAL TRACT AREA = 1.279 AC +/- (55,740.57 SF)

RIVER BASIN = WHITE OAK
RECEIVING STREAM = TOWN CREEK
STREAM CLASS = SC
STREAM ID = 21-33

FLOOD ZONE = AE6
REFERENCED FIRM COMMUNITY PANEL NO. 3720730600J
EFFECTIVE DATE 7/16/13

PIN NUMBERS = 73061951523000
730619516709000
730619515910000

DEED BOOK/PAGE = 1649/183 AND 1649/191
CURRENT ZONE = RS-5
PROPOSED USE = SINGLE FAMILY RESIDENTIAL
NUMBER OF LOTS PROPOSED = 8
SMALLEST LOT SIZE = 5,064.71 SF
AVERAGE LOT SIZE = 6,448.64 SF
LINEAR FEET OF STREET = 145 LF

BUILDING SETBACKS
FRONT = 20'
SIDE = 5'
REAR = 15'
REAR = 20' (DOUBLE FRONTAGE LOTS)

NOTES

- THIS MAP IS NOT FOR RECORDING.
- ALL DRAINAGE AND UTILITY EASEMENTS, RIGHTS OF WAY AND FACILITIES TO BE DEDICATED AND RECORDED AT THE CARTERET COUNTY REGISTER OF DEEDS AS REQUIRED BY THE PUBLIC WORKS AND PUBLIC UTILITIES DEPARTMENTS.
- HYDRAULIC ANALYSIS PERFORMED ON EXISTING WATER SYSTEM BASED ON INFORMATION OBTAINED FROM THE TOWN OF BEAUFORT & FIRE FLOW DEMAND DOES NOT EXCEED THE AVAILABLE WATER SUPPLY & HYDRANTS CONFORM TO THE TOWN OF BEAUFORT ISO STANDARDS. CLOSEST EXISTING HYDRANTS LOCATED AT THE MARINA AND INTERSECTION OF TURNER ST AND WEST BEAUFORT DRIVE.
- BOUNDARY, TOPOGRAPHICAL AND EXISTING FEATURES TAKEN FROM DIGITAL FILE PREPARED BY GLENN E. CORBETT, PLS OF THE CULLIPHER GROUP, PA
- ALL STORMWATER FEATURES INCLUDING DRAINAGE SWALES AND DITCHES SHALL BE MANAGED AND MAINTAINED BY THE HOME OWNERS ASSOCIATION. THE TOWN OF BEAUFORT IS NOT RESPONSIBLE FOR THEIR MAINTENANCE.
- SITE STAKING INFORMATION IS COMPUTER GENERATED AND SHALL BE REVIEWED AND CONFIRMED BY THE REGISTERED LAND SURVEYOR PROVIDING CONSTRUCTION STAKING.
- RELOCATE OR ABANDON EXISTING UTILITIES AS REQUIRED BY UTILITY COMPANY.
- NO ADDITIONAL ACCESS FOR LOTS 1 AND 8 TO LIVE OAK STREET. LOTS MUST BE ACCESSED BY PRIVATE DRIVE ONLY.

BEFORE YOU DIG!
NC ONE CALL
(TOLL FREE)



(OR 1-800-632-4949)
IT'S THE LAW!

REVISIONS:

No.	BY	DATE	DESCRIPTION

ADDRESS: 1107 & 1111 LIVE OAK ST
101 LOFTIN LANE

PRELIMINARY PLAT

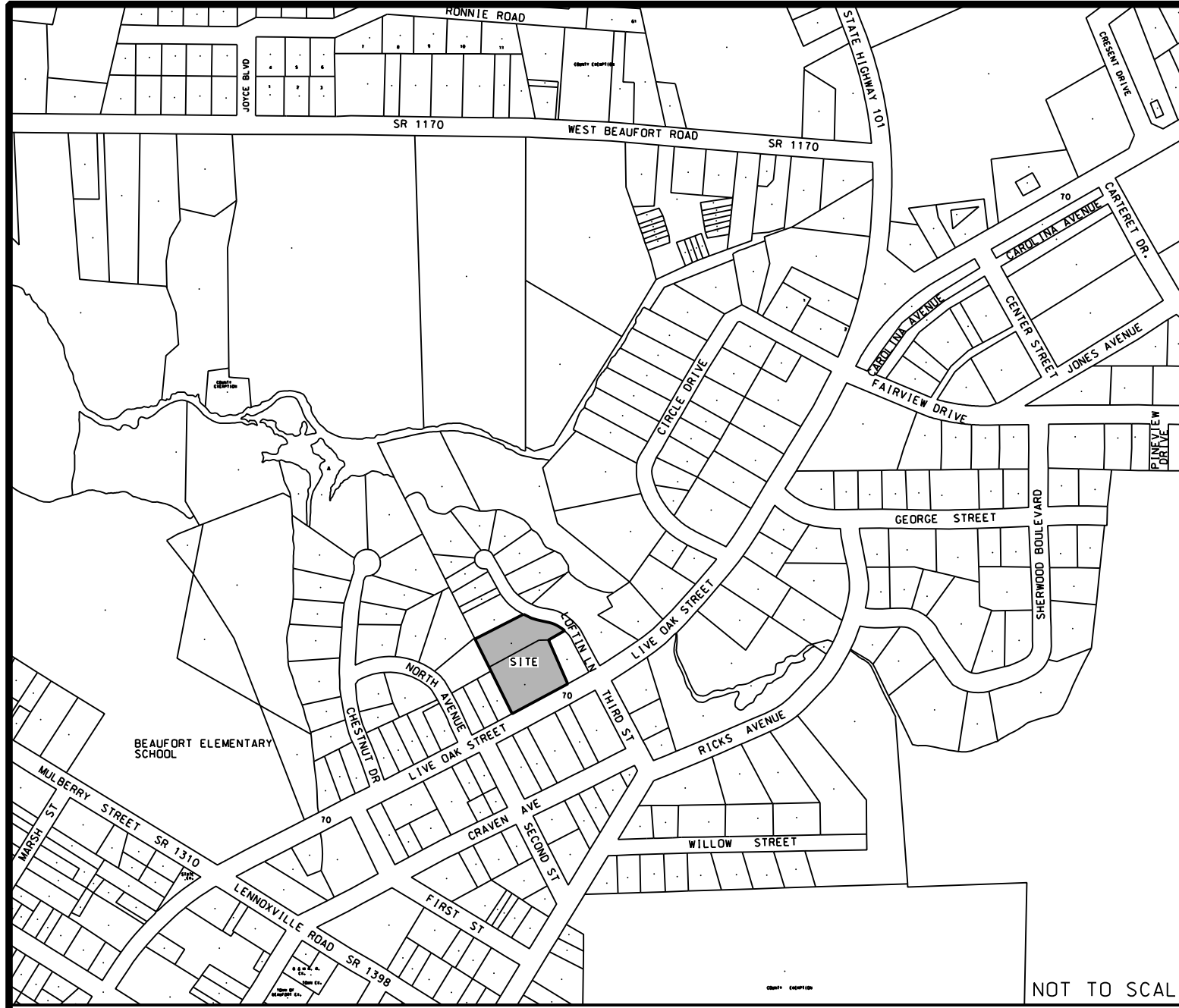
LIVE OAK COMMONS

BEAUFORT, CARTERET COUNTY, NORTH CAROLINA

CLIENT: NEW VISION TRUST CUSTODIAN FBO WALTER D. BRADY IRA	DESIGNED: WDB/LFC/GYT
ADDRESS: 805 FRONT STREET BEAUFORT, NC 28516	DRAWN: WDB/LFC/GYT
PHONE: 252-241-2780	CHECKED:
THE CULLIPHER GROUP, P.A. ENGINEERING & SURVEYING SERVICES 151A HIGHWAY 24 MORHEAD CITY, N.C. 28557 (252) 773-0090 LICENSE NO. C-4482	APPROVED: GYT
DATE: 7/1/2020	SCALE: 1" = 20'



Ginger Y. Turner 7/1/2020
GINGER Y. TURNER, P.E. DATE



VICINITY MAP
NOT TO SCALE

Approved _____ Revise and Resubmit _____
X Approved w/ Comments _____ Incomplete _____

Comments:
Pg 2: Is there an outfall structure planned for the SW pipe outlet? If so what type?
Pg. 3: Mark power pole relocation.

This review was performed only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Modifications or comments made on the drawings during review do not relieve the contractor from compliance with the requirements of the plans and specifications. Approval of a of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences, and procedures of construction; coordination of the work of all trades; and for performing all work in a safe and satisfactory manner.

Date: 7/13/20 By: Sam Bell

Town of Beaufort
701 Front St.
Beaufort, NC 28516

N/F
30 ANN CANNON
NCPIN 730619514838000
DB 1197 PG264
ZONE R-8

N/F
DWIGHT YELTON ETUX PATRICIA
NCPIN 730619513660000
DB 1389 PG138
ZONE R-8

N/F
LYNN B SWANN ETAL HELEN MILLER
NCPIN 730619514669000
DB 1645 PG122
ZONE R-8

CHORD BEARING = S61°10'50"E
LENGTH = 34.19
ARC LENGTH = 34.30
RADIUS = 123.00

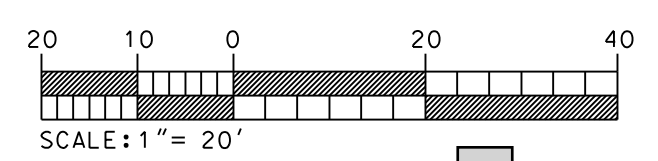
CHORD BEARING = S44°42'20"E
LENGTH = 36.01
ARC LENGTH = 37.35
RADIUS = 40.00

N/F
TERRY LEE ALLEN
NCPIN 730619516882000
DB 1582 PG116
ZONE R-8

LEGEND

AC - ACRE	MBL - MAXIMUM BUILDING LINE
BLDG - BUILDING	MH - MANHOLE
BRG - BEARING	MIN - MINIMUM
CF - CUBIC FEET	N/F - NOW OR FORMERLY
CL - CENTERLINE	NTS - NOT TO SCALE
CO - CLEAN OUT	D.C. - ON CENTER
DI - DROP INLET	R - RADIUS
DIP - DUCTILE IRON PIPE	RCP - REINFORCED CONCRETE PIPE
EL - ELEVATION	ROW - RIGHT-OF-WAY
EIR - EX. IRON ROD	SF - SQUARE FEET
EOP - EDGE OF PAVEMENT	SH - SHEET
EX - EXISTING	SIR - SET IRON ROD
FE - FINISHED ELEVATION	STA - STATION
FF - FINISHED FLOOR	TC - TOP OF CURB
FT - FEET	TSW - TOP OF SIDEWALK
GV - GATE VALVE	TYP - TYPICAL
INW - INVERT	
LF - LINEAR FEET	

SHEET C-1
PROJECT # PM1070-11
DESIGN FILE: PM1070-11/PM1070-11 CONSTRUCTION.dgn



US HWY 70
(60' ROW - LIVE OAK STREET)

NO ADDITIONAL ACCESS TO LIVE OAK STREET

NO ADDITIONAL ACCESS TO LIVE OAK STREET

NO ADDITIONAL ACCESS TO LIVE OAK STREET

UTILITY, INGRESS/EGRESS & EMERGENCY ACCESS EASEMENT

30' PRIVATE ROW

(40' ROW - LOFTIN LANE ROAD)

CONSTRUCT 30" STANDARD CURB & GUTTER AT REMOVED CURB CUT

TIE INTO EX. CURB & GUTTER

36" VALLEY GUTTER MAINTAIN FLOW DIRECTION

REMOVE EXISTING CURB & GUTTER FOR PROPOSED ACCESS

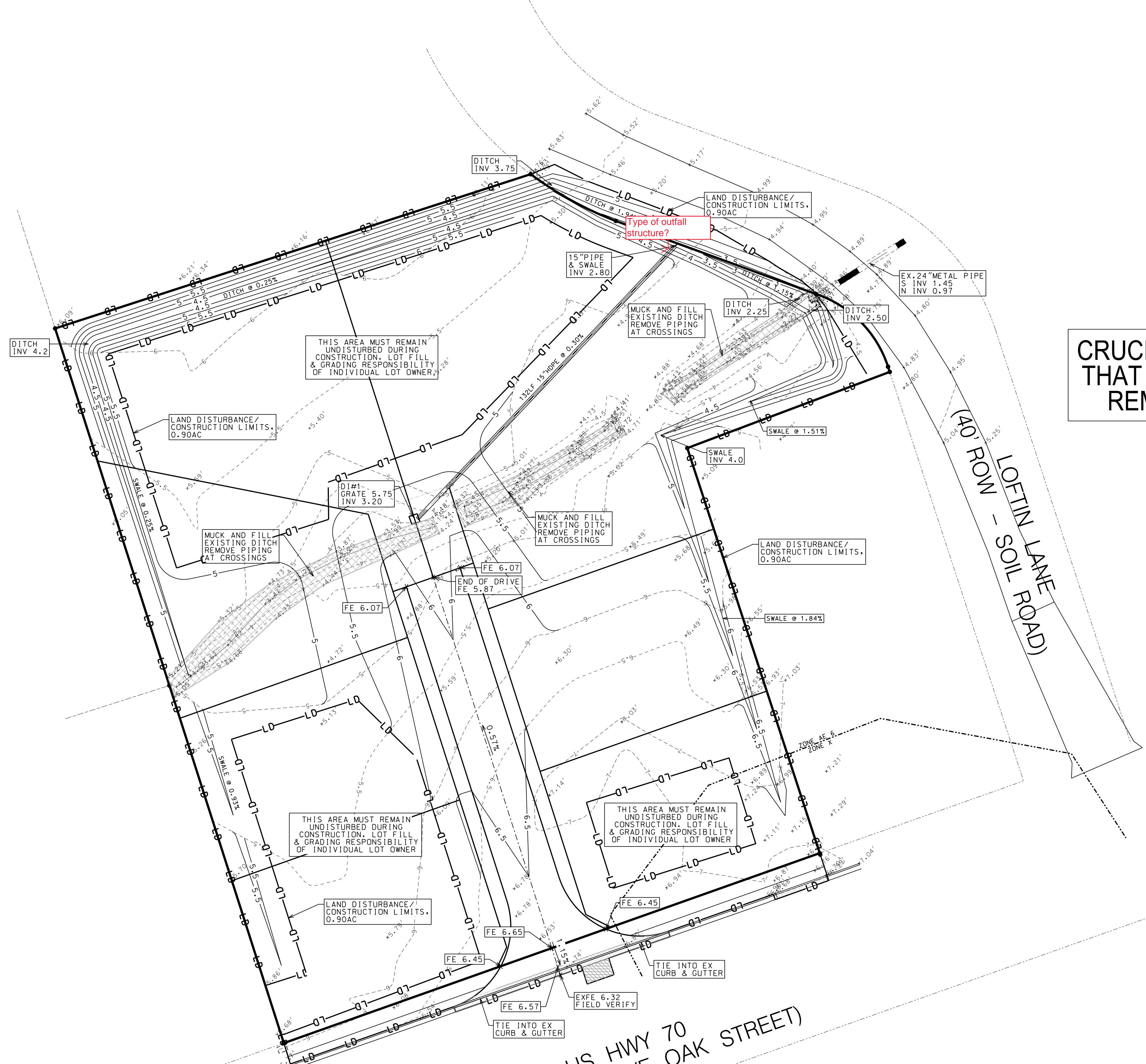
TIE INTO EX. CURB & GUTTER

10' x 70' SITE TRIANGLE

10' x 70' SITE TRIANGLE

OPEN CUT & PATCH EX. ROAD; FIELD VERIFY WATERLINE LOCATION

10' x 70' SITE TRIANGLE



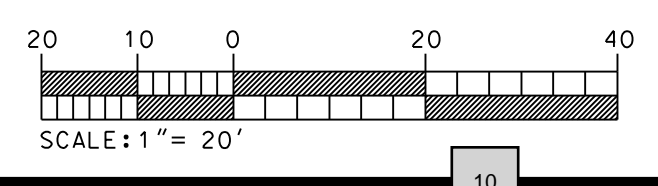
**CRUCIAL DURING CONSTRUCTION
THAT TOTAL LAND DISTURBANCE
REMAINS LESS THAN 1 ACRE**

(40' ROW - LOFTIN LANE ROAD)

(60' ROW - US HWY 70 - LIVE OAK STREET)

LEGEND	
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BRG	- BEARING
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CL	- CENTERLINE
CD	- CLEAN OUT
DJ	- DROP INLET
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ELR	- EX. IRON ROD
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TC	- TOP OF CURB
TSW	- TOP OF SIDEWALK
TYP	- TYPICAL
LD	- LAND DISTURBANCE LIMITS
SS	- PROPOSED SEWER
W	- PROPOSED DOMESTIC WATER
-18-	- EXISTING CONTOUR
-19-	- PROPOSED CONTOUR

SHEET C-2
PROJECT # PM1070-11
DESIGN FILE: PM1070-11/PM1070-11 CONSTRUCTION.dgn



BEFORE YOU DIG!
NC ONE CALL
(TOLL FREE)
811
(OR 1-800-632-4949)
IT'S THE LAW!

REVISIONS:

No.	By	DATE	DESCRIPTION

ADDRESS: 1107 & 1111 LIVE OAK ST
101 LOFTIN LANE

GRADING & DRAINAGE PLAN

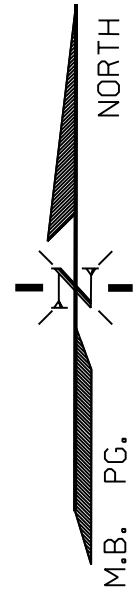
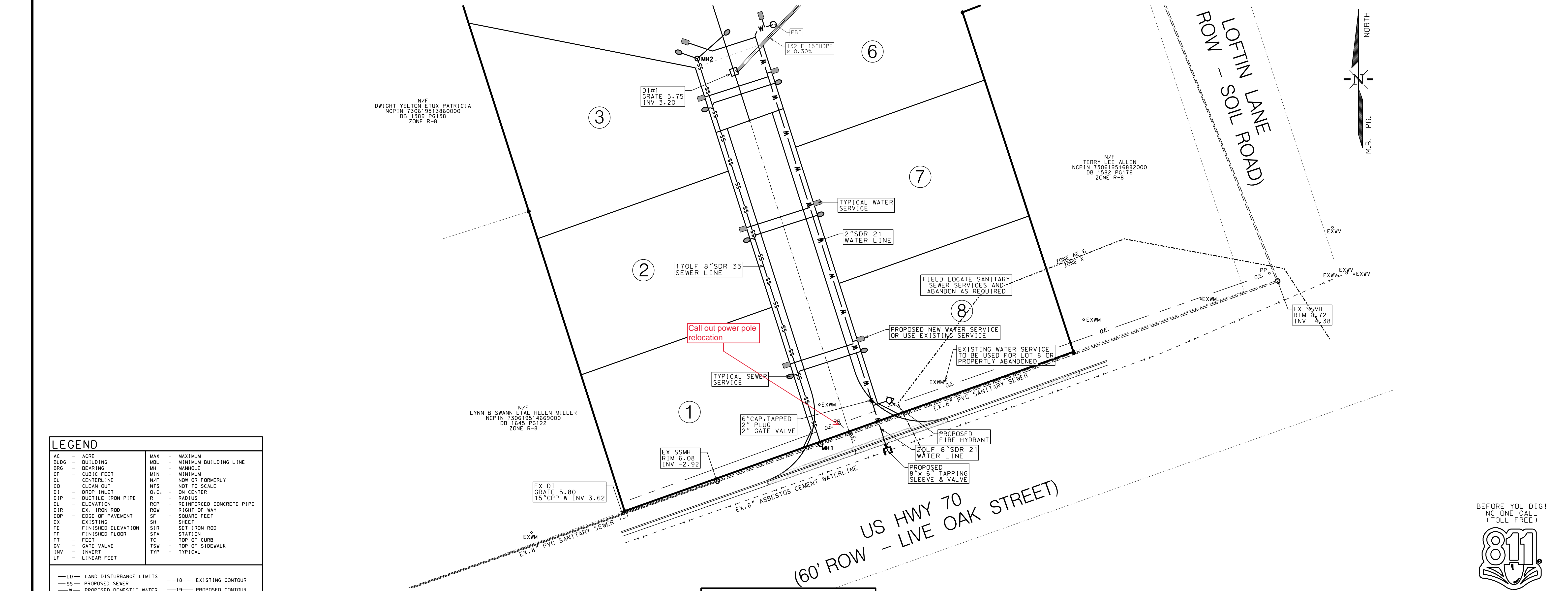
LIVE OAK COMMONS

BEAUFORT, CARTERET COUNTY, NORTH CAROLINA

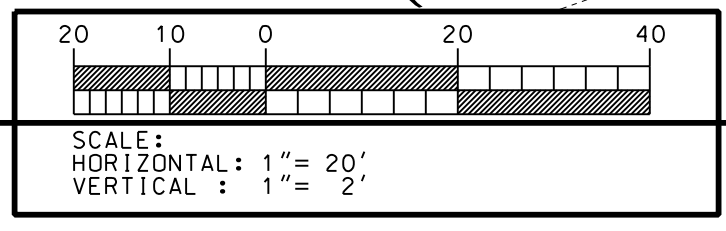
CLIENT: NEW VISION TRUST CUSTODIAN FBO WALTER D. BRADY IRA	DESIGNED: WDB/LFC/GYT
ADDRESS: 805 FRONT STREET BEAUFORT, NC 28516	DRAWN: WDB/LFC/GYT
PHONE: 252-241-2780	CHECKED:
THE CULLIPHER GROUP, P.A. ENGINEERING & SURVEYING SERVICES 151A HIGHWAY 24 MORHEAD CITY, N.C. 28557 (252) 773-0090 LICENSE NO. C-4482	APPROVED: GYT
DATE: 7/1/2020	SCALE: 1" = 20'



Ginger Y. Turner 7/1/2020
GINGER Y. TURNER, P.E. DATE

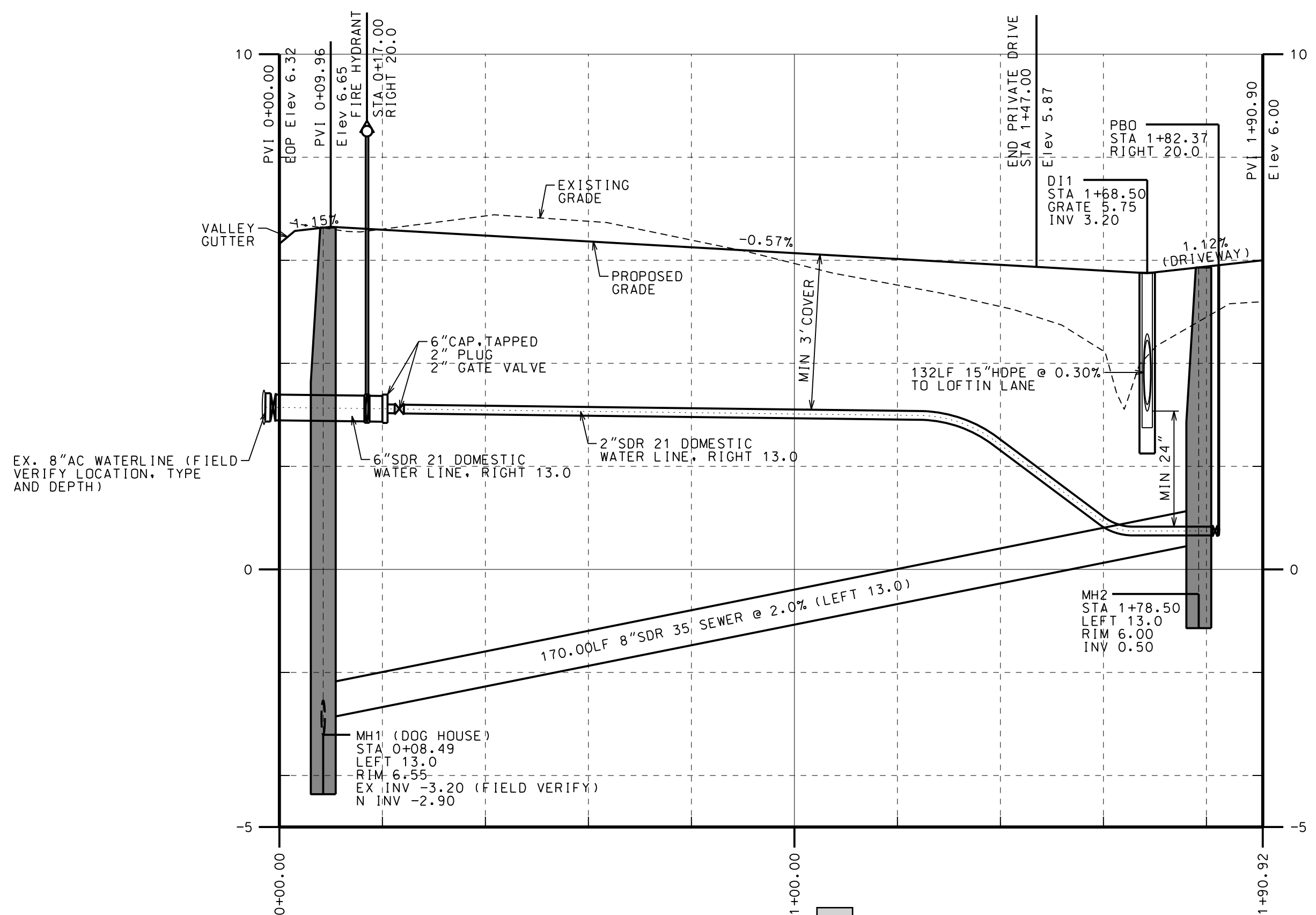


LEGEND	
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SS - PROPOSED SEWER	19 - PROPOSED CONTOUR
W - PROPOSED DOMESTIC WATER	



BEFORE YOU DIG!
NO ONE CALL
(TOLL FREE)

(OR 1-800-632-4949)
IT'S THE LAW!



REVISIONS:	NO.	BY	DATE	DESCRIPTION
	1			
	2			
	3			
	4			
	5			
	6			

DESIGNED:	WOB/LFC/GYT	WOB/LFC/GYT	WOB/LFC/GYT
DRAWN:	WOB/LFC/GYT	GJT	GJT
APPROVED:			
DATE:	7/1/2020		
SCALE:	AS NOTED		

CLIENT: NEW VISION TRUST CUSTODIAN
FBO WALTER D. BRADY IRA

ADDRESS: 805 FRONT STREET
BEAUFORT, NC 28516

PHONE: 252-241-2780

PLAN AND PROFILE

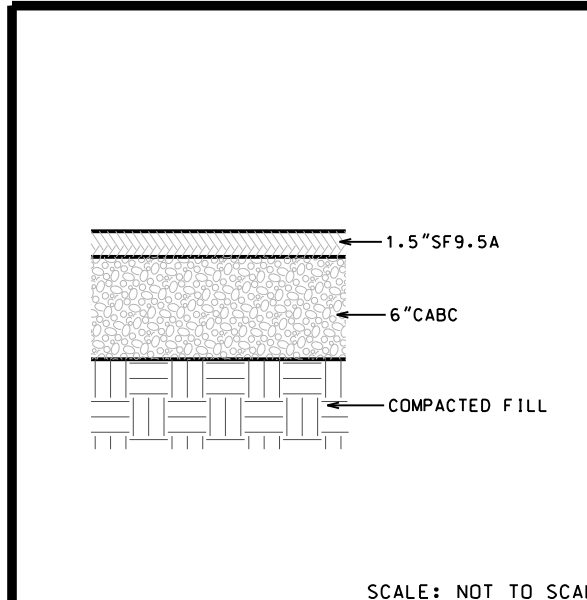
LIVE OAK COMMONS

BEAUFORT, CARTERET COUNTY, NORTH CAROLINA

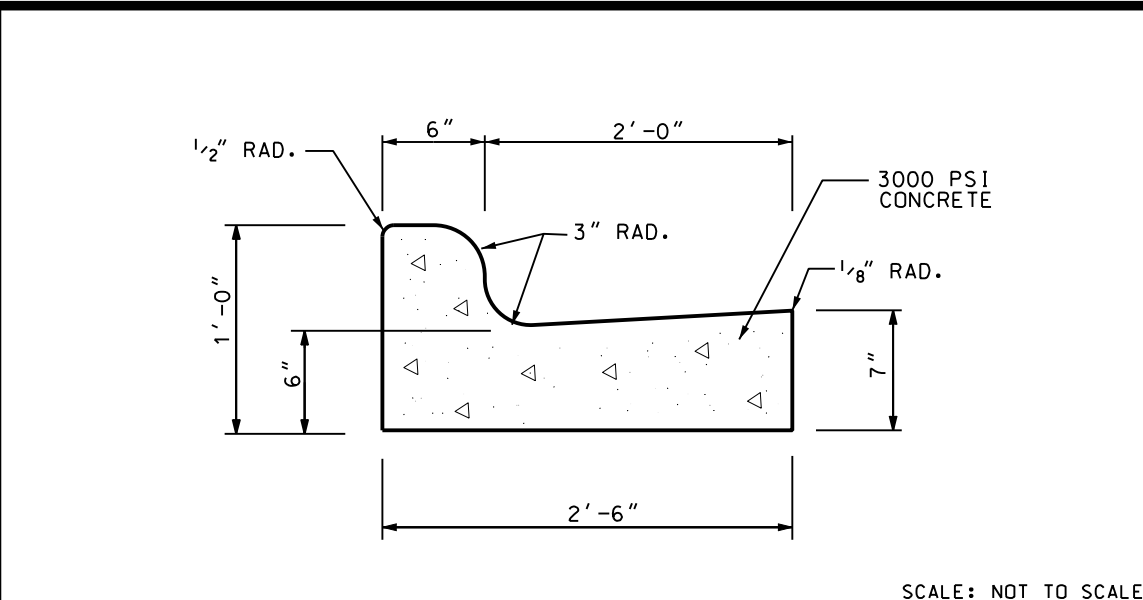
THE CULLIPHER GROUP, P.A.
ENGINEERING & SURVEYING SERVICES
1514 HIGHWAY 24
MORRHEAD CITY, N.C. 28657
LICENSE NO. C-4482
12325773-0060

Angela Turner
ANGELA Y. TURNER, P.E.

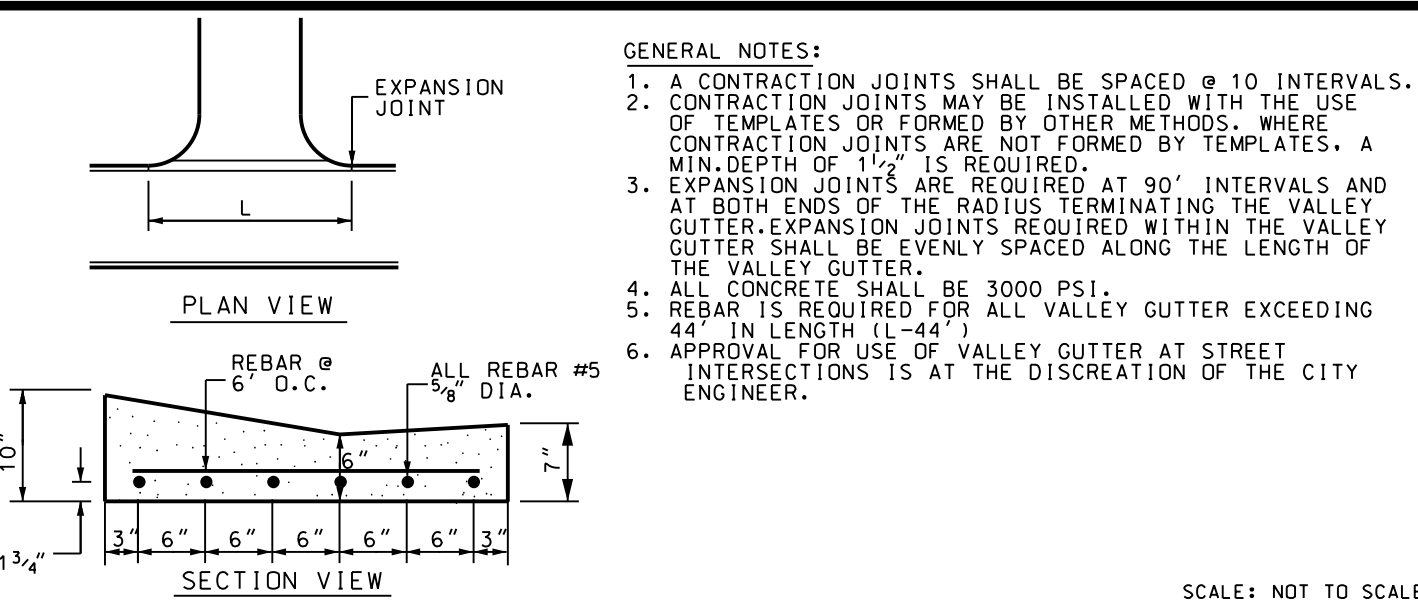
SHEET NO.: C-3 OF 4



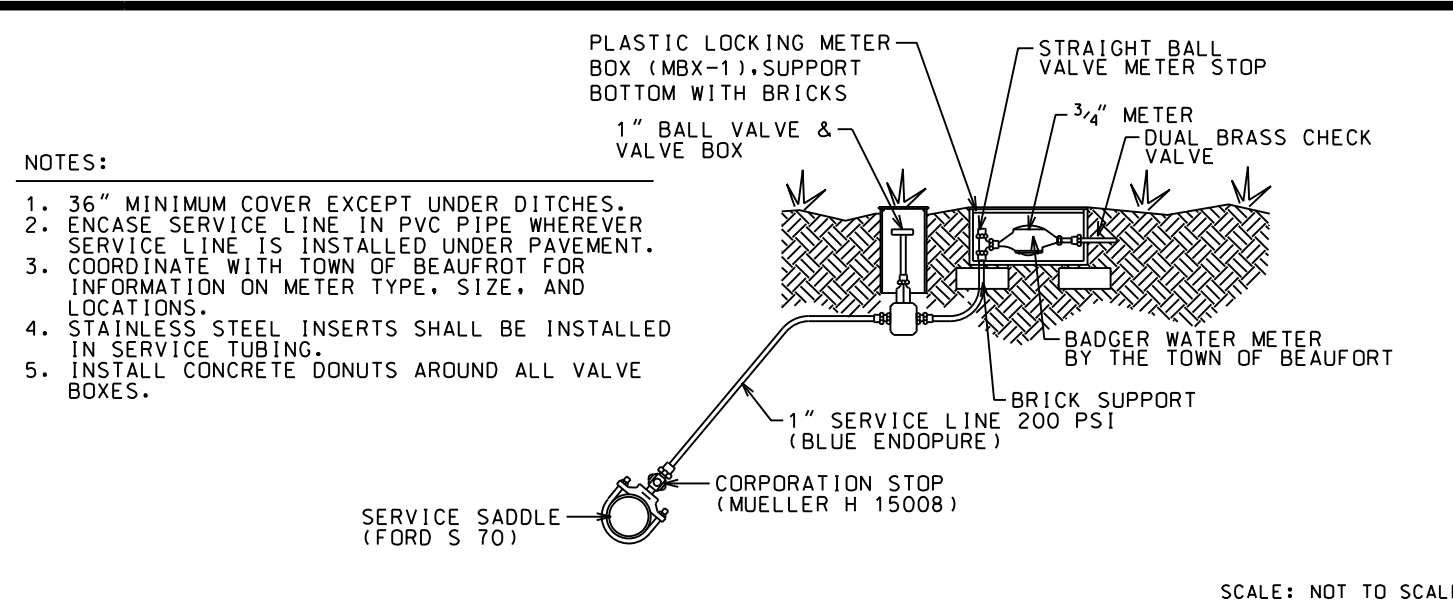
PAVEMENT SECTION



30" STANDARD CURB AND GUTTER



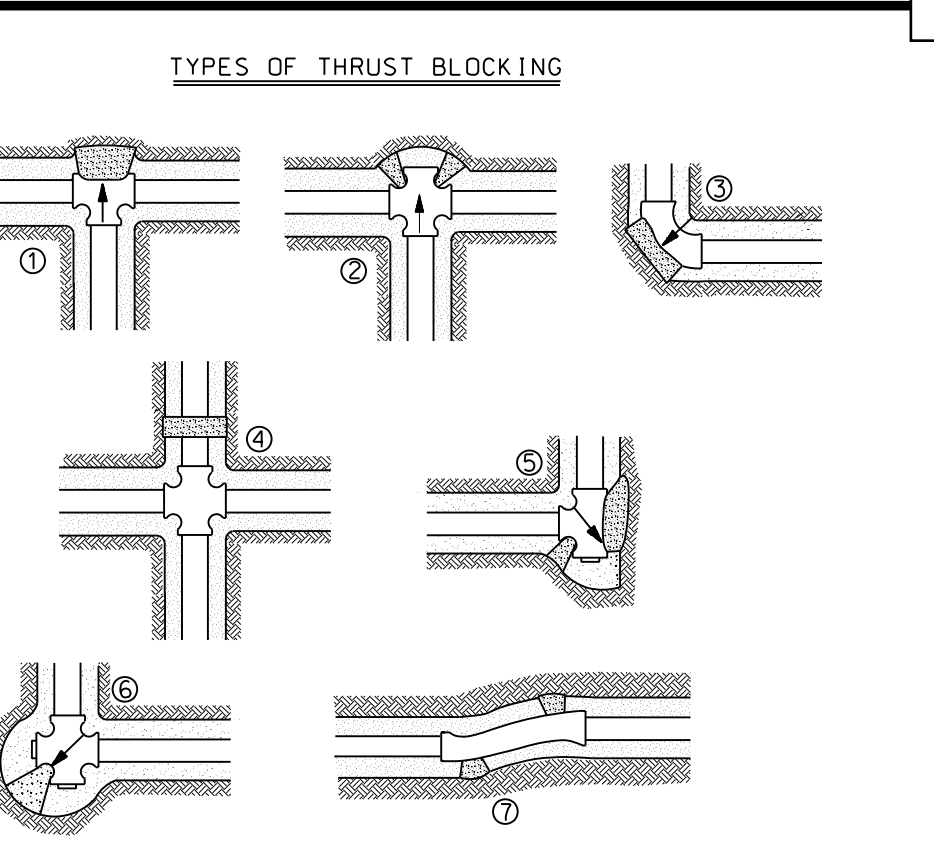
STANDARD 36" VALLEY GUTTER W/REINFORCEMENT



WATER METER SET

RESULTANT THRUST AT FITTING AT 150 P.S.I. WATER PRESSURE

NORMAL PIPE DIA.	TOTAL POUNDS			
	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4"	2,700	3,800	2,100	1,100
6"	5,600	8,000	4,300	2,200
8"	9,700	13,600	7,400	3,600
10"	14,500	20,500	11,100	5,700
12"	20,500	29,000	15,700	8,000
14"	27,600	39,000	21,100	11,000
16"	35,700	50,400	27,300	14,000
18"	44,800	63,400	34,400	17,500
20"	55,000	77,800	42,100	21,500
24"	78,500	111,000	60,000	31,600
30"	120,800	170,600	98,300	47,100
36"	172,800	274,400	132,300	67,500
42"	233,300	330,000	178,600	91,000
48"	304,000	430,000	232,700	118,600
54"	384,100	543,200	294,000	149,000



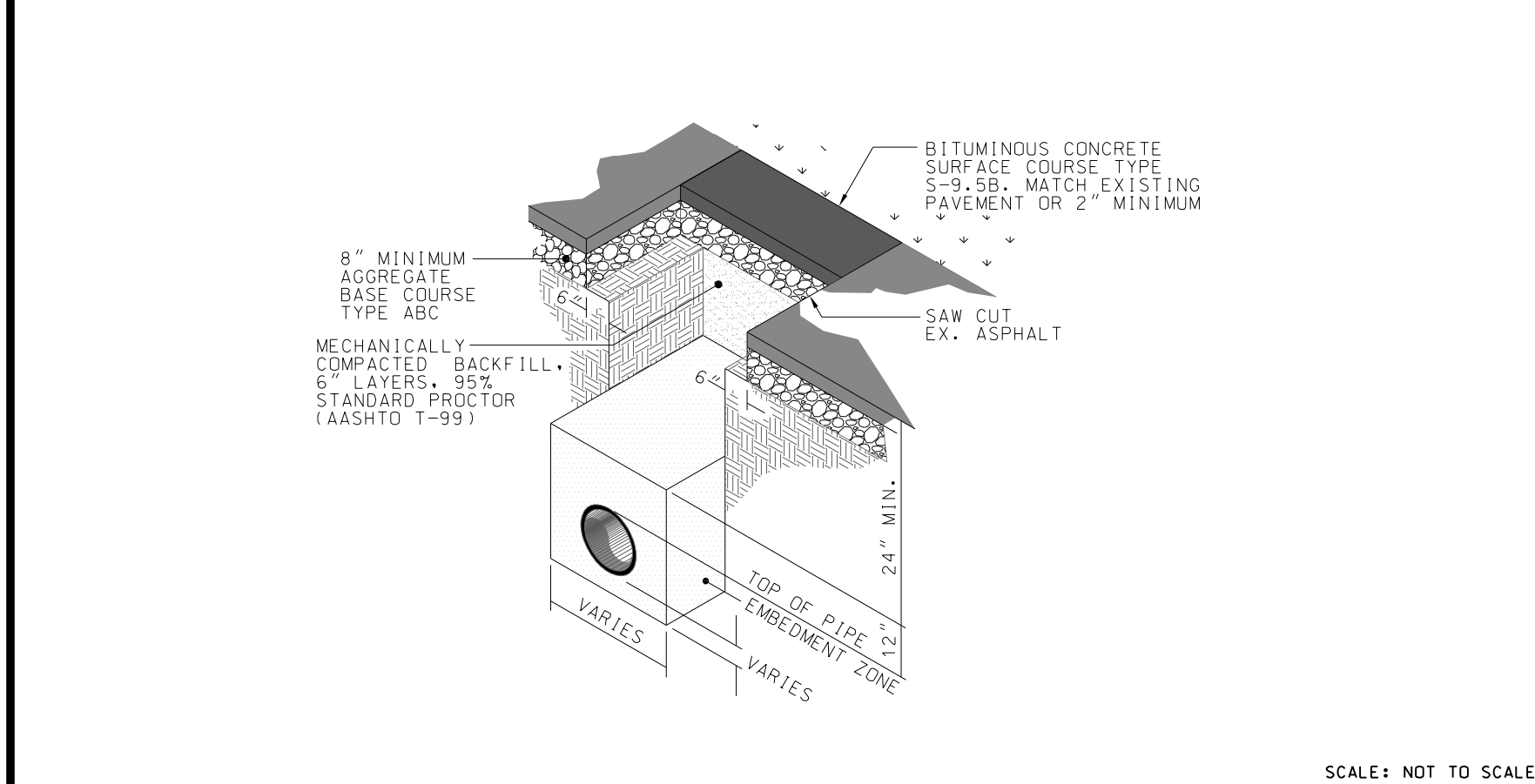
SOIL BEARING LOAD (LB./SQ FT.)

MUCK	0
SOFT CLAY	1,000
SILT	1,500
SANDY SILT	3,000
SAND	4,000
SANDY CLAY	6,000
HARD CLAY	9,000

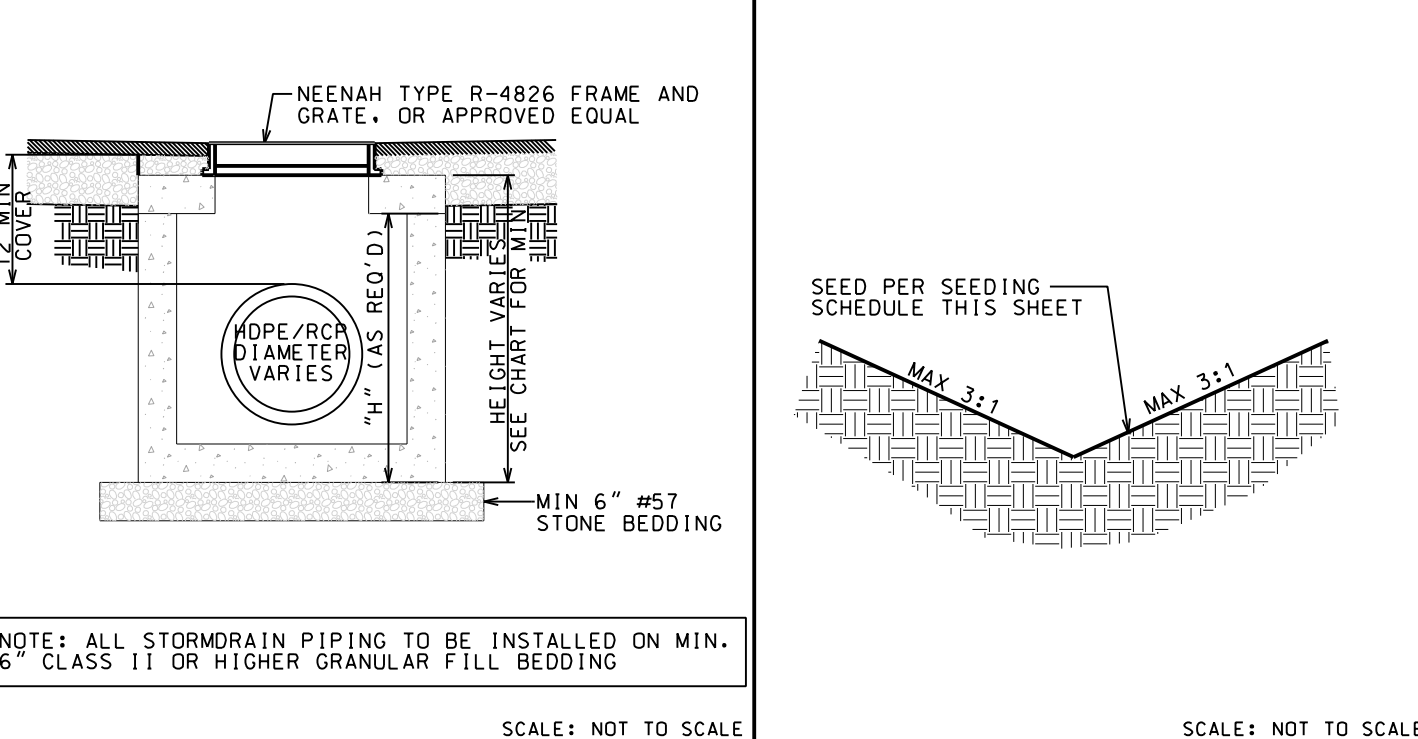
- THRU LINE CONNECTION, TEE
- THRU LINE CONNECTION, CROSS USED AS TEE
- DIRECTION CHANGE, ELBOW
- CHANGE LINE SIZE, REDUCER
- DIRECTION CHANGE, TEE USED AS ELBOW
- DIRECTION CHANGE, CROSS USED AS ELBOW
- DIRECTION CHANGE

TO DETERMINE THE SIZE OF A CONCRETE THRUST BLOCK, DIVIDE THE TOTAL FORCE BY THE BEARING VALUES OF THE SOIL. THE QUOTIENT WILL BE THE SIZE OF THE BEARING AREA OF THE THRUST BLOCK IN SQUARE FEET. APPROXIMATE VALUES FOR VARIOUS TYPES OF SOILS ARE LISTED IN THE TABLE. NO RESPONSIBILITY CAN BE ASSUMED FOR THE ACCURACY OF THE DATA IN THIS TABLE DUE TO THE WIDE VARIATION OF BEARING LOAD CAPACITIES FOR EACH SOIL TYPE.

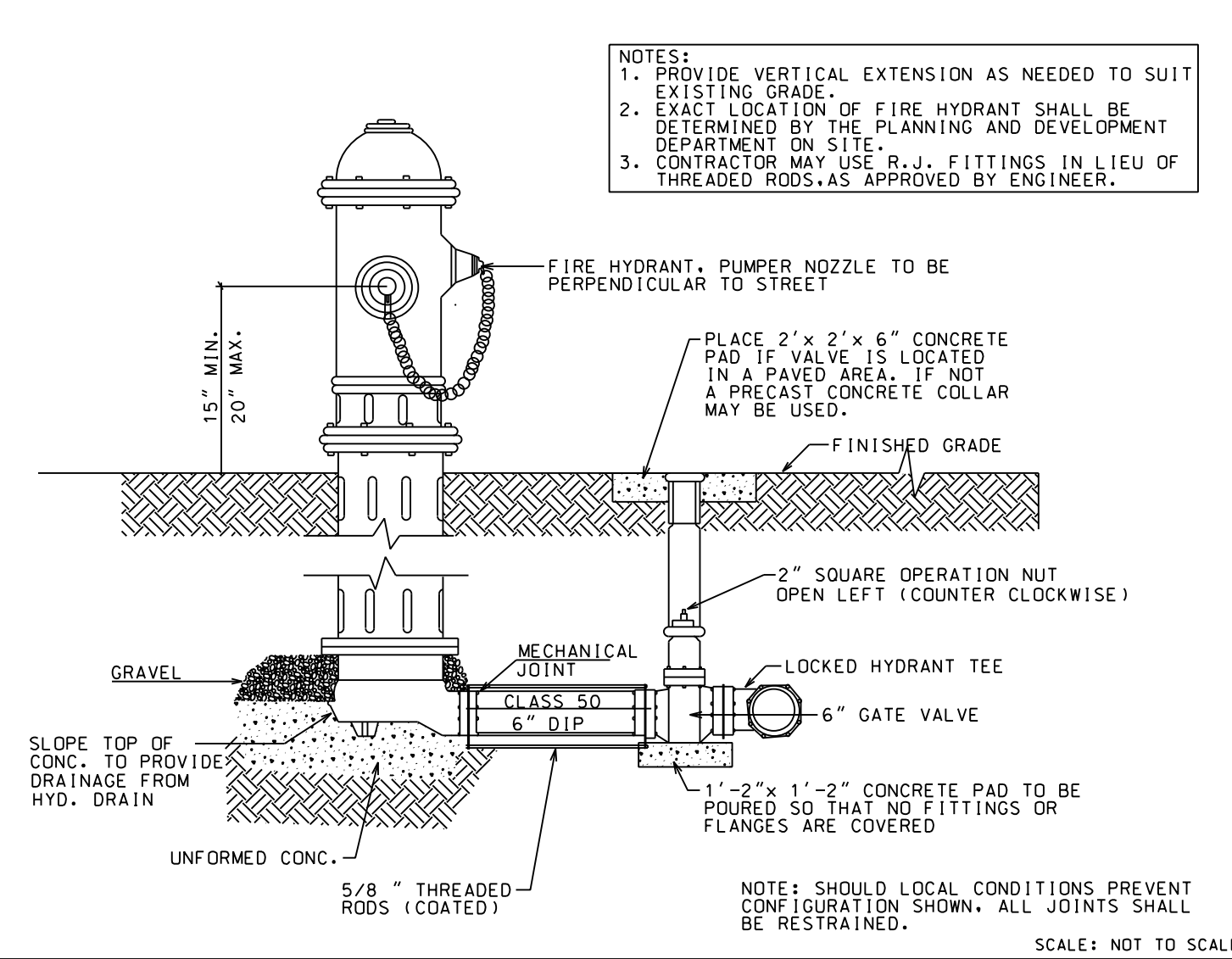
SEE BEAUFORT MANUAL FOR ADDITIONAL DETAILS ON THRUST BLOCKING



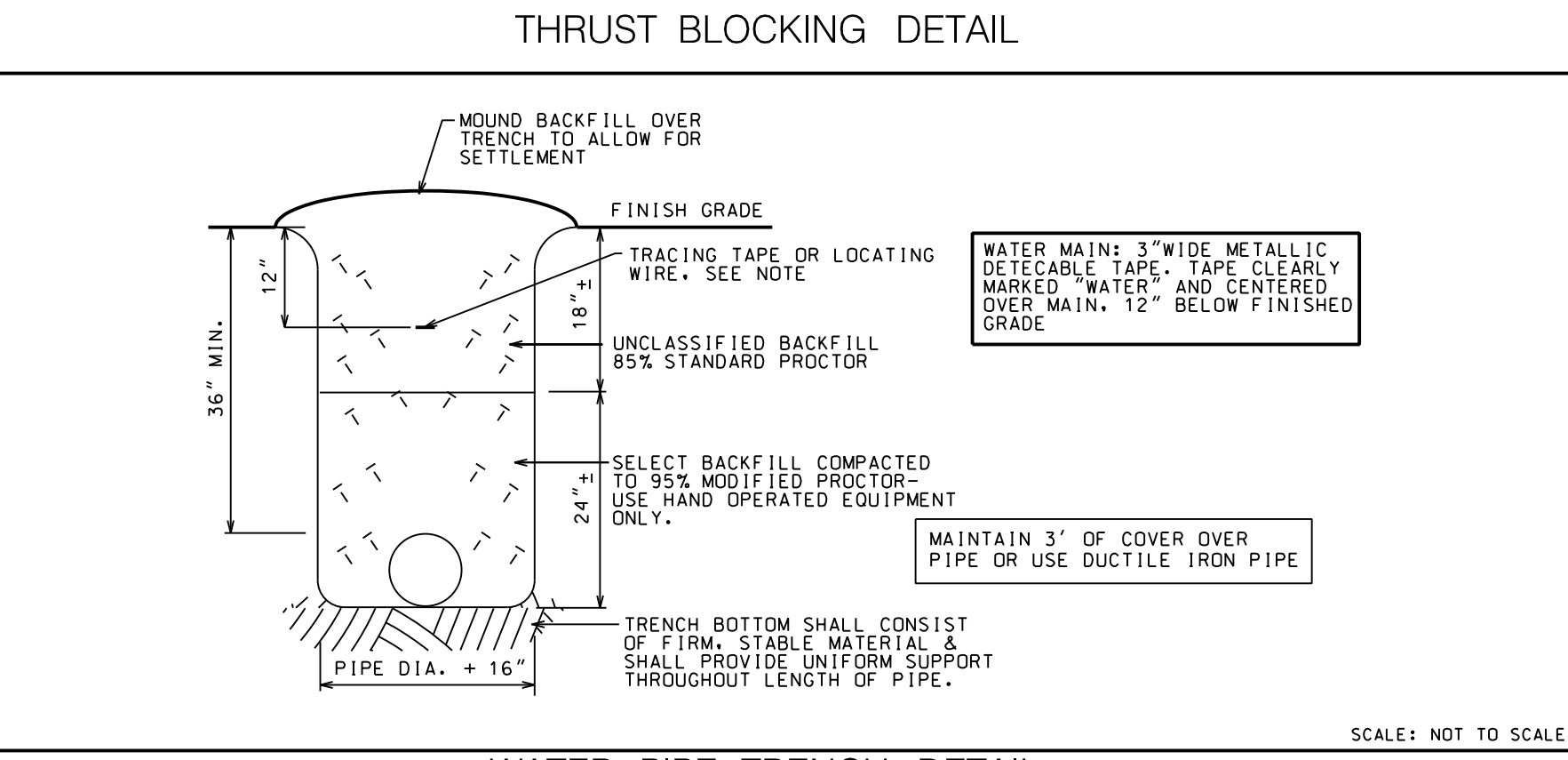
PAVEMENT REPAIR SECTION



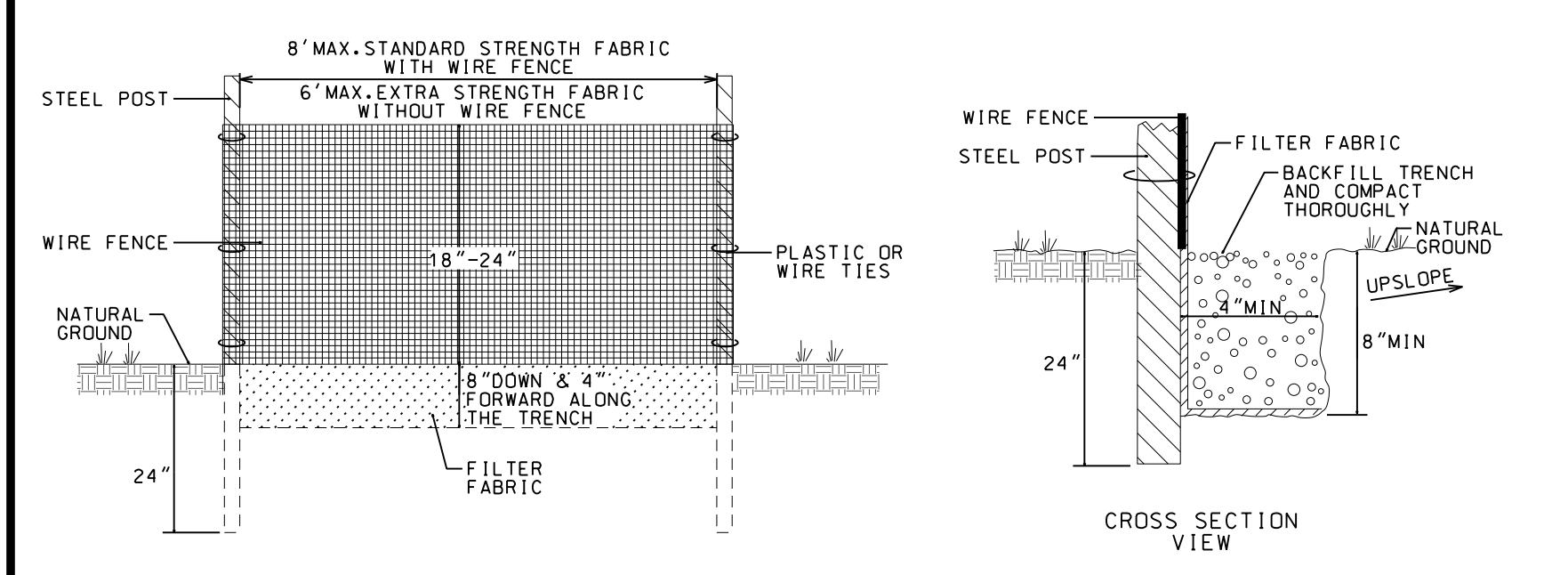
DROP INLET DITCH SECTION



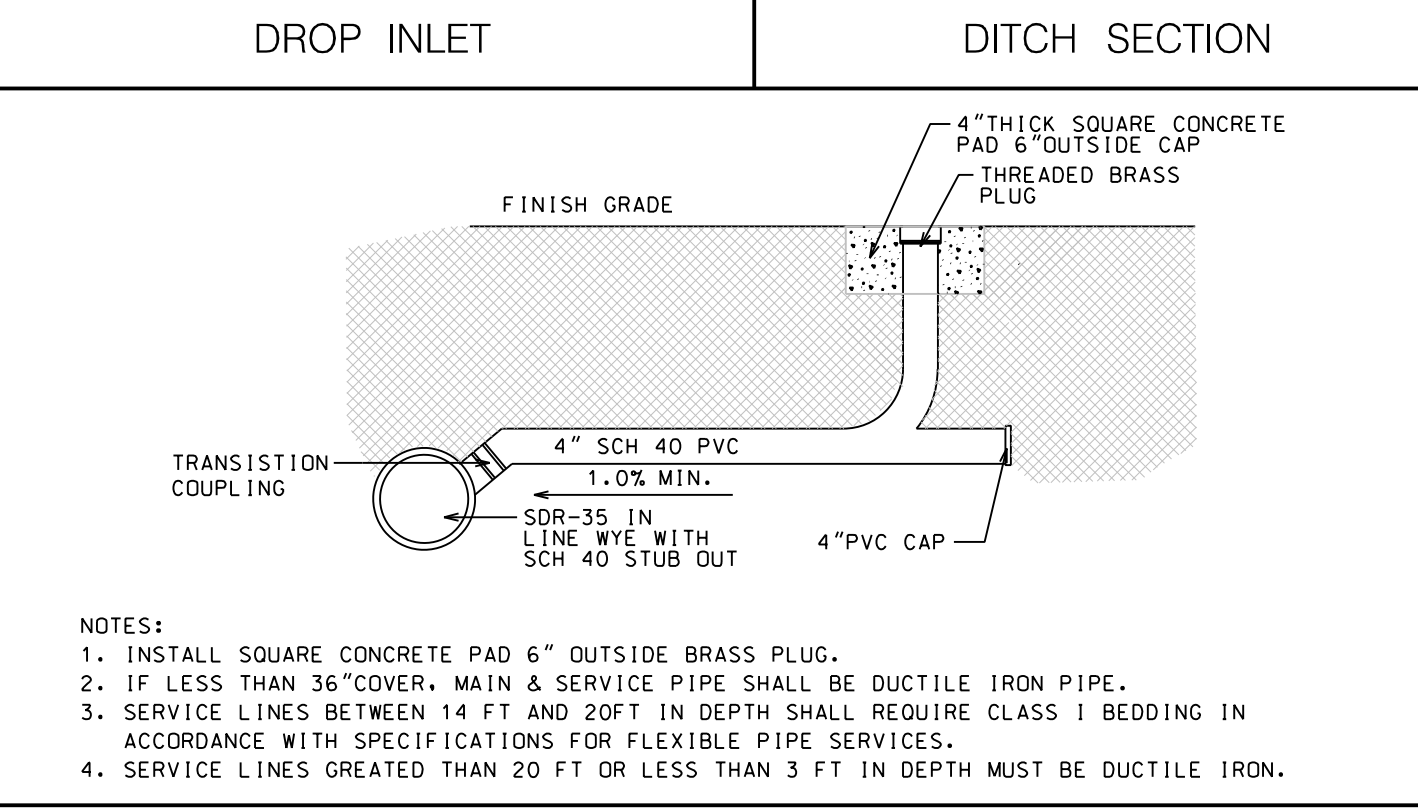
TYPICAL FIRE HYDRANT ASSEMBLY



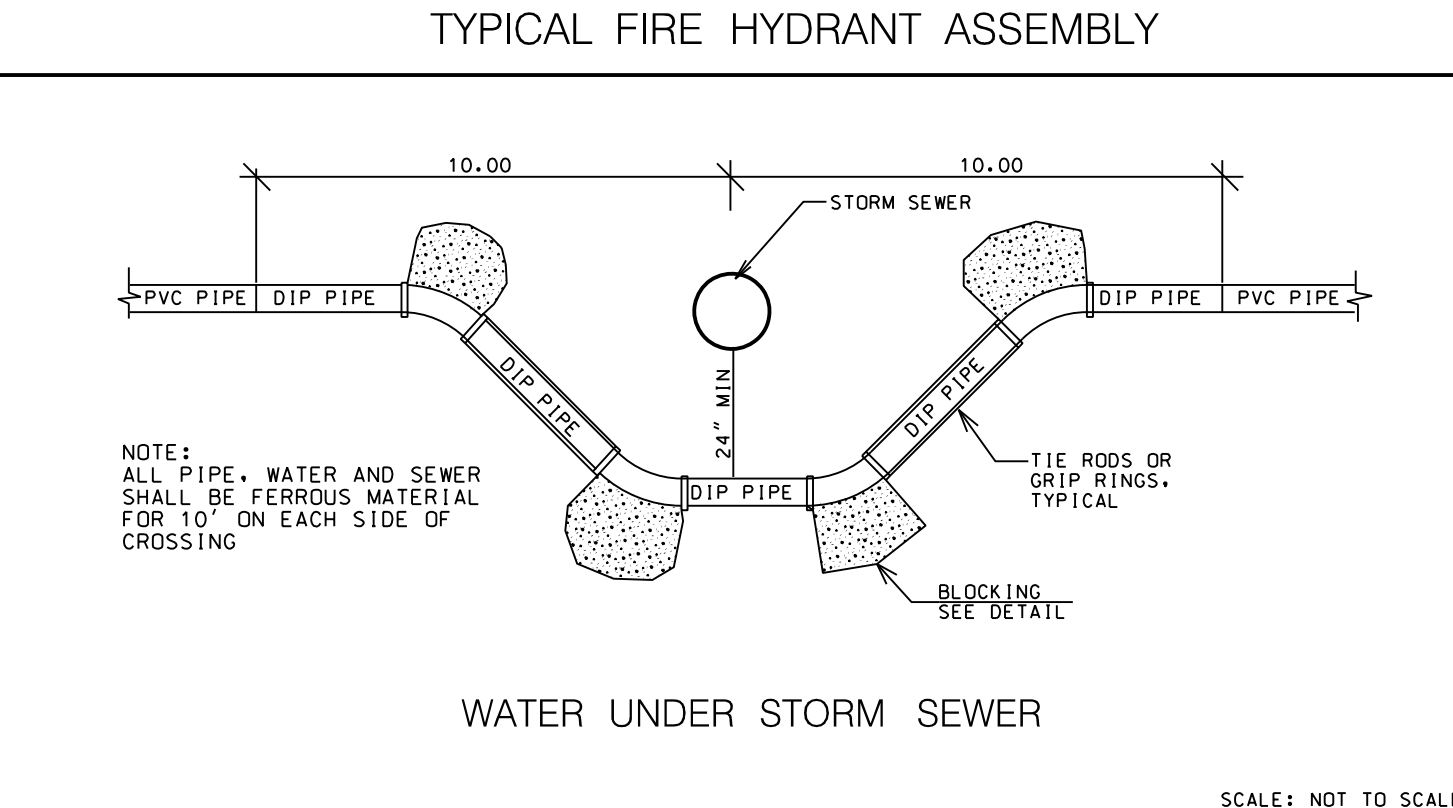
THRUST BLOCKING DETAIL



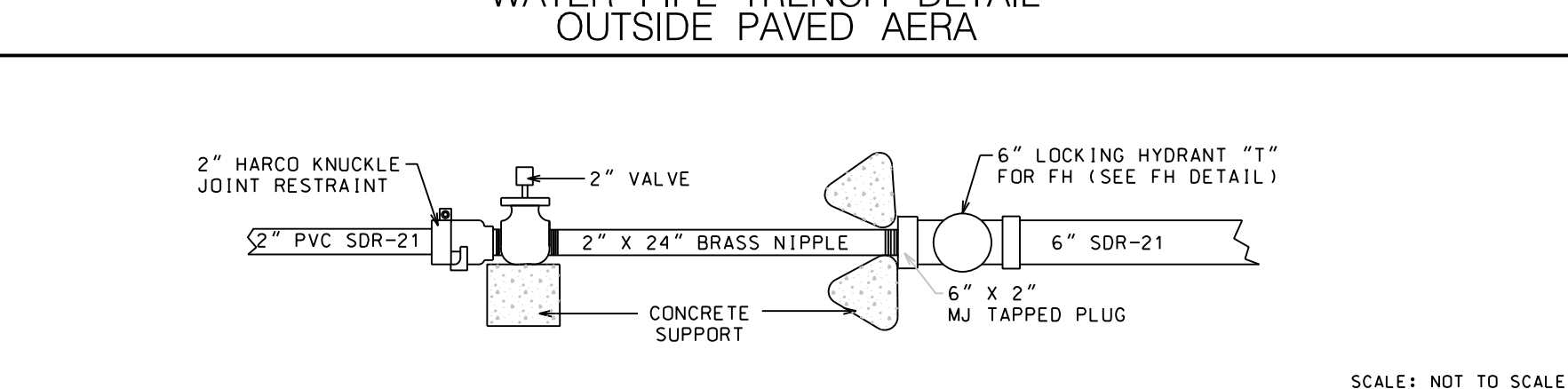
CONSTRUCTION OR SILT FENCE



SANITARY SEWER SERVICE



WATER UNDER STORM SEWER



WATER PIPE TRENCH DETAIL OUTSIDE PAVED AREA

INSTALLATION NOTES:
 1. THE BASE OF BOTH END POSTS SHOULD BE AT LEAST ONE FOOT HIGHER THAN THE MIDDLE OF THE FENCE. CHECK WITH A LEVEL IF NECESSARY.
 2. INSTALL POSTS 4 FEET APART IN CRITICAL AREAS AND 6 FEET APART ON STANDARD APPLICATIONS.
 3. INSTALL POSTS 2 FEET DEEP ON THE DOWNSTREAM SIDE OF THE SILT FENCE, AND AS CLOSE AS POSSIBLE TO THE FABRIC. ENABLING POSTS TO SUPPORT THE FABRIC FROM UPSTREAM WATER PRESSURE.
 4. INSTALL POSTS WITH THE NIPPLES FACING AWAY FROM THE SILT FABRIC.
 5. ATTACH THE FABRIC TO EACH POST WITH THREE TIES. ALL SPACED WITHIN THE TOP 8 INCHES OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1 INCH VERTICALLY APART. ALSO, EACH TIE SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
 6. WRAP APPROXIMATELY 6 INCHES OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
 7. NO MORE THAN 24 INCHES OF 1.36 INCH FABRIC IS ALLOWED ABOVE GROUND LEVEL.
 8. THE INSTALLATION SHOULD BE CHECKED AND CORRECTED FOR ANY DEVIATIONS BEFORE COMPACTION.
 9. COMPACTION IS VITALLY IMPORTANT FOR EFFECTIVE RESULTS. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQUARE INCH. COMPACT THE UPSTREAM SIDE FIRST, AND THEN EACH SIDE TWICE FOR A TOTAL OF 4 TRIPS.

SEED BED PREPARATION
 LIME ----- 2 TONS/AC
 10-10-10 ----- 1,000 LBS/AC

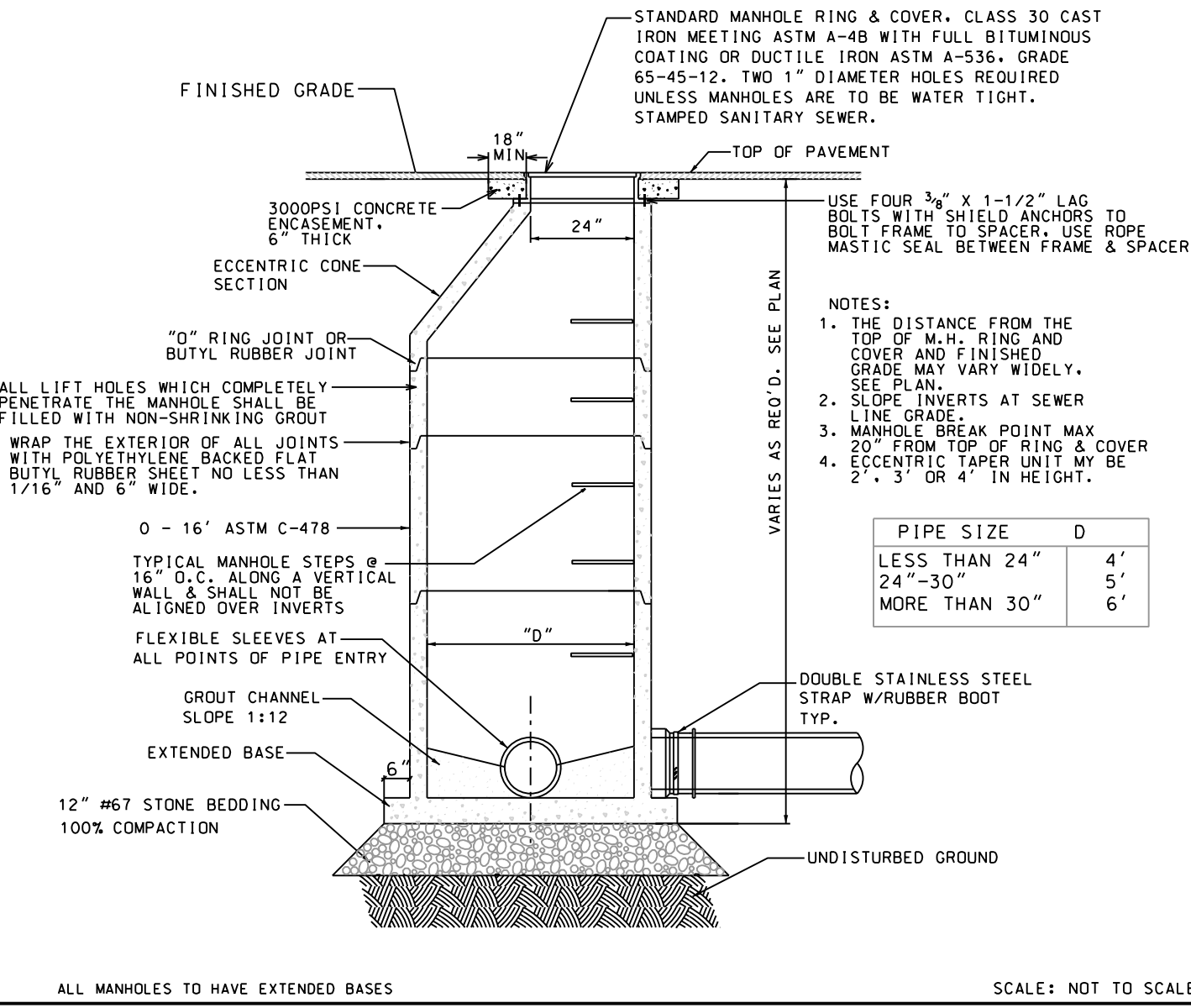
PERMANENT SEEDING MIXTURE
 TALL FESCUE ----- 60 LBS/AC
 PENSACOLA BAHIAGRASS ----- 50 LBS/AC
 SERICEA LESPEDEZA ----- 30 LBS/AC
 KOBE LESPEDEZA ----- 10 LBS/AC

PERMANENT SEEDING MIXTURE (SWALES & DITCHES)
 COMMON BERMOGRASS ----- 80 LBS/AC

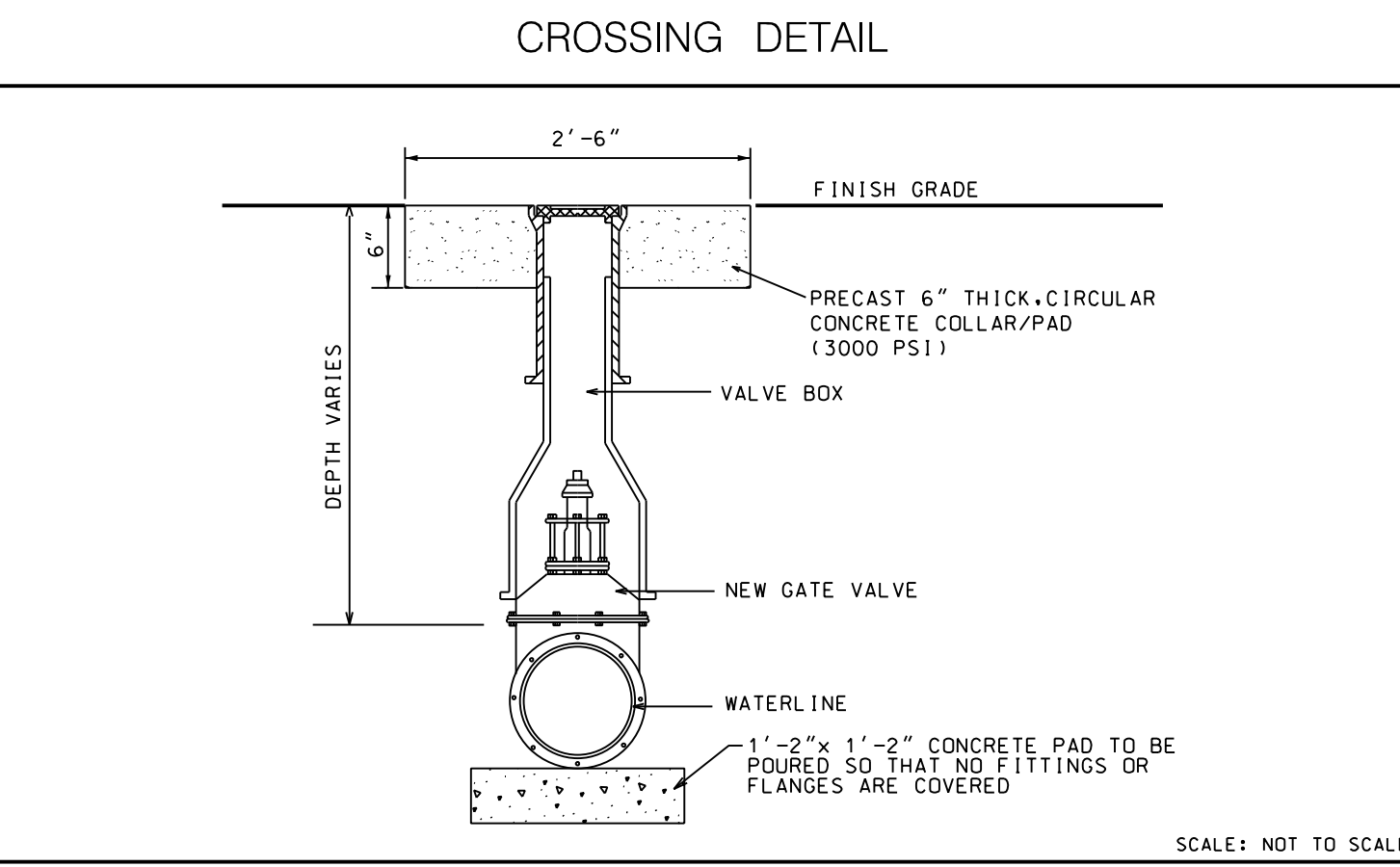
TEMPORARY SEEDING MIXTURE
 (DECEMBER 1 - APRIL 15)
 RYE (GRAIN) ----- 120 LBS/AC
 KOBE LESPEDEZA (SCARIFIED) ----- 50 LBS/AC
 (OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE)
 (APRIL 15 - AUGUST 15)
 GERMAN MILLET ----- 40 LBS/AC
 (AUGUST 15 - DECEMBER 30)
 RYE (GRAIN) ----- 25 LBS/AC
 (IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50LB/AC KOBE.)

MAINTENANCE
 IF GROWTH IS LESS THAN FULLY ADEQUATE, REPEAT FERTILIZE IN THE SECOND YEAR WITH 500 LB/AC 10-10-10 FERTILIZER. NOW AS NEEDED WHEN SERICEA IS OMITTED FROM THE MIXTURE. RESEED, FERTILIZE AND MULCH DAMAGED AREAS IMMEDIATELY.

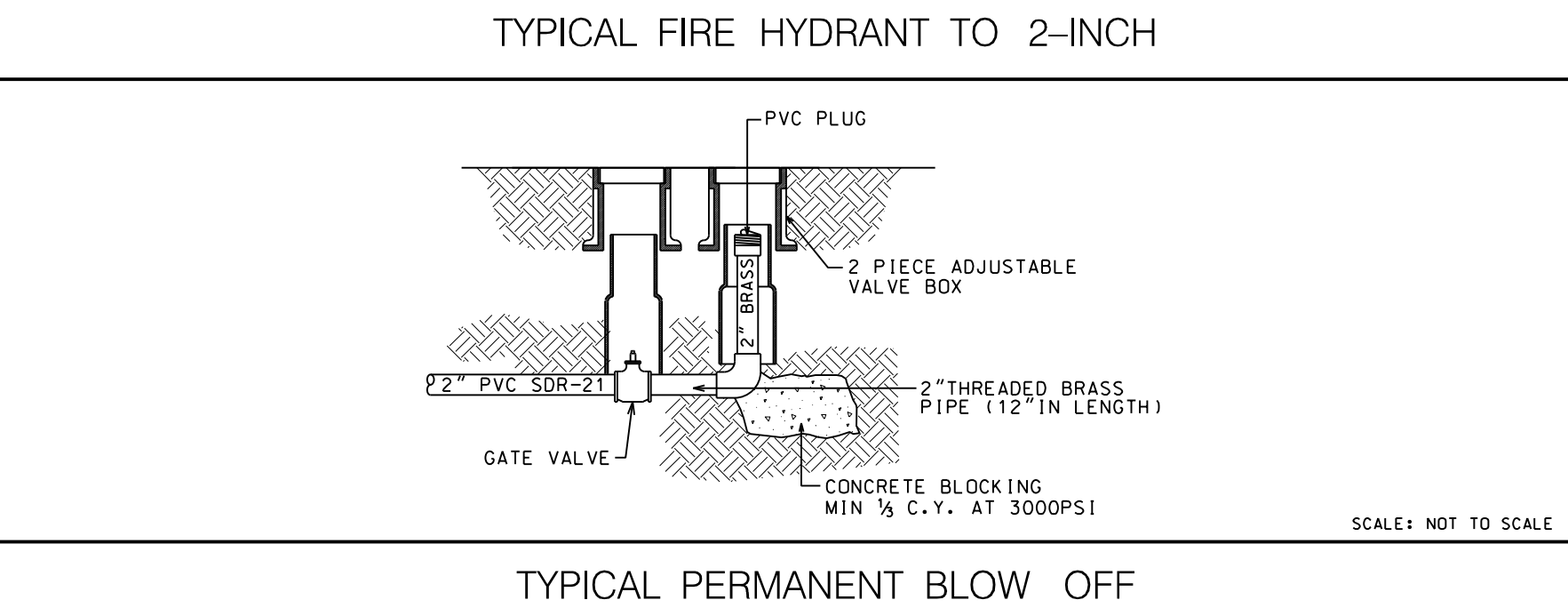
SEEDING SCHEDULE



TYPICAL PRECAST MANHOLE



NEW GATE VALVE & VALVE BOX DETAIL



TYPICAL FIRE HYDRANT TO 2-INCH

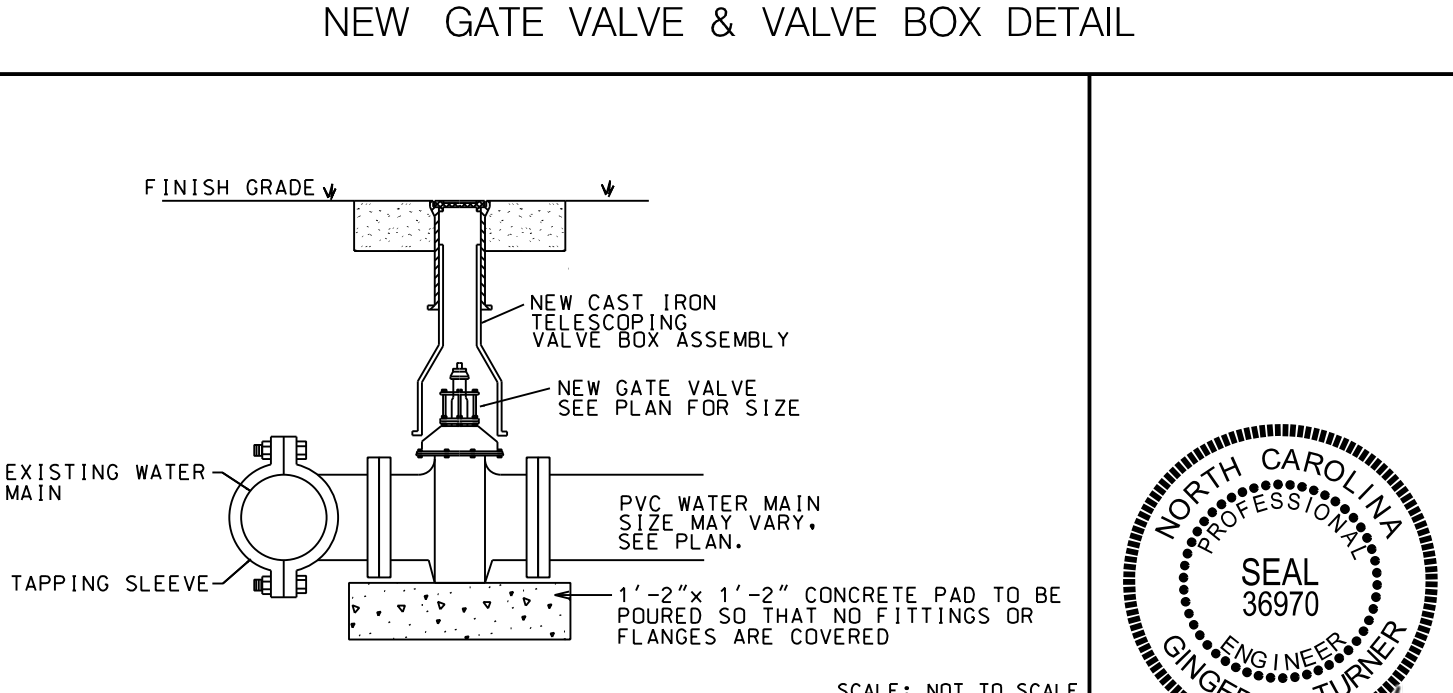
REVISIONS:

No.	BY	DATE	DESCRIPTION

ADDRESS: 1107 & 1111 LIVE OAK ST
101 LOFTIN LANE

SEWER PIPE TRENCH diagram showing 18\"/>

SEWER PIPE TRENCH



TAPPING DETAIL



GINGER Y. TURNER, P.E. DATE

DETAILS

LIVE OAK COMMONS

BEAUFORT, CARTERET COUNTY, NORTH CAROLINA

CLIENT: NEW VISION TRUST CUSTODIAN
FBO WALTER D. BRADY IRA

ADDRESS: 805 FRONT STREET
BEAUFORT, NC 28516

PHONE: 252-241-2780

DESIGNED: WOB/LFC/GYT
 DRAWN: WOB/LFC/GYT
 CHECKED: GYT
 APPROVED: GYT
 DATE: 7/1/2020
 SCALE: AS NOTED

THE CULLIPHER GROUP, P.A.
 ENGINEERING & SURVEYING SERVICES
 151A HIGHWAY 24
 MORRISVILLE, N.C. 28557
 (252) 773-0090 LICENSE NO. C-4482