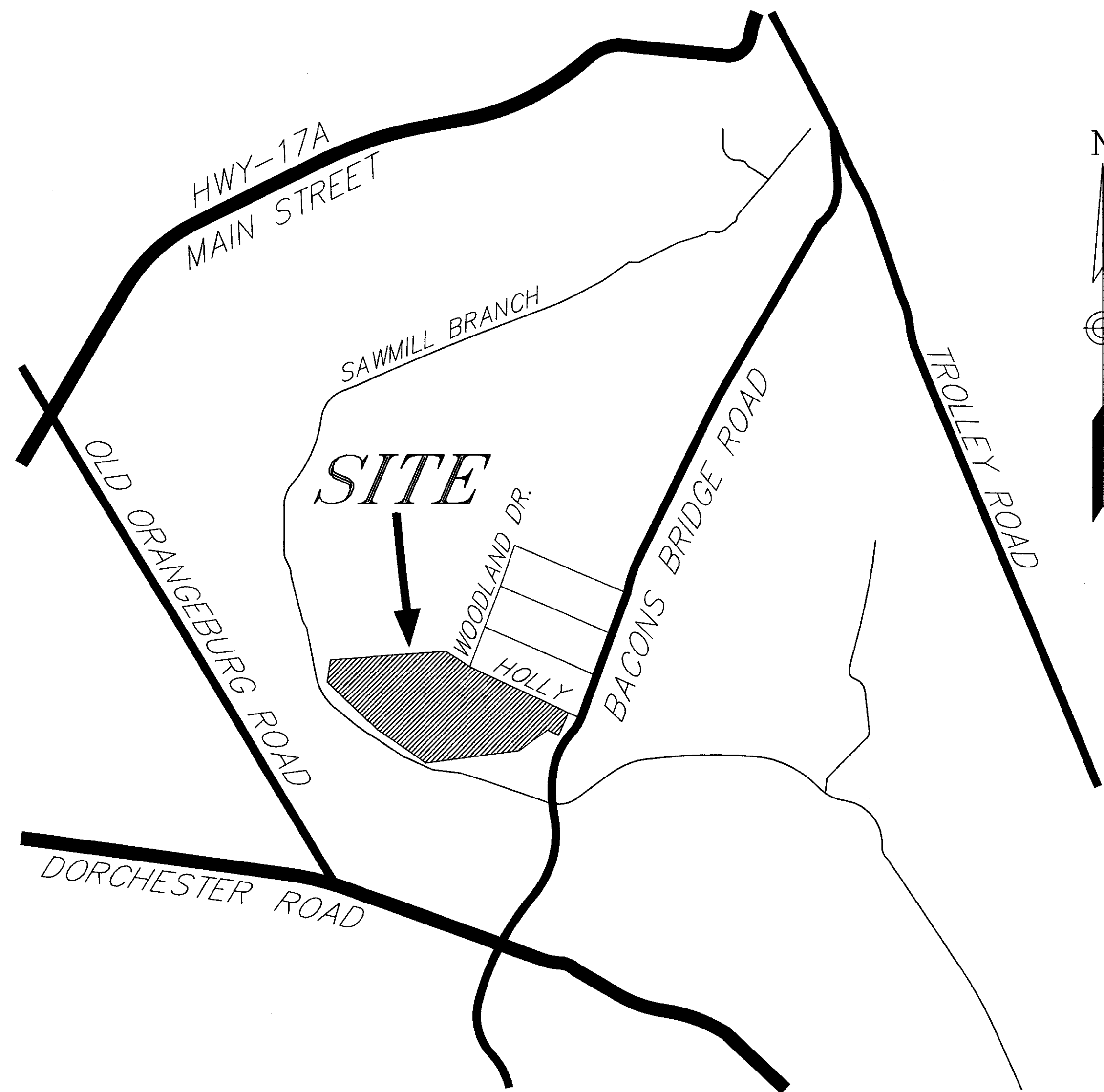


PHASE I-ARBOR OAKS SUBDIVISION

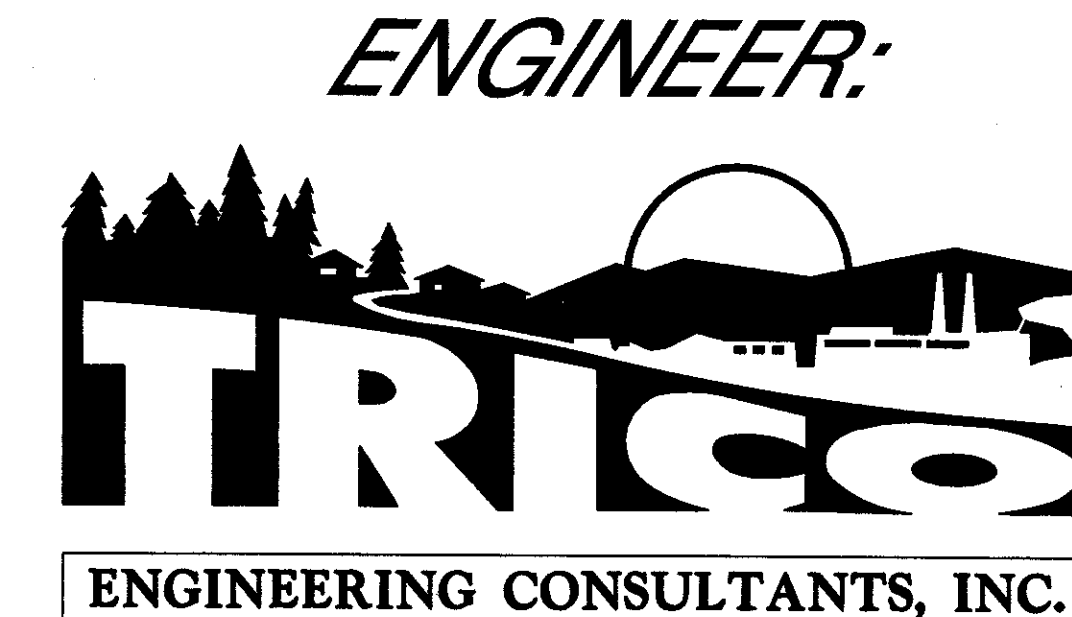
LOCATED IN
THE TOWN OF SUMMERVILLE
DORCHESTER COUNTY, SOUTH CAROLINA



SHT. NO.	SHEET INDEX	CURRENT REVISION
1	COVER SHEET	-- 01-29-2002
2	OVERALL PLAN	-- 01-29-2002
3	PRELIMINARY PLAT	4 05-10-2002
4	PRELIMINARY PLAT	4 05-10-2002
5	PRELIMINARY PLAT	4 05-10-2002
6	PRELIMINARY PLAT	4 05-10-2002
7	ROADWAY PLAN & PROFILE	4 05-10-2002
8	ROADWAY PLAN & PROFILE	4 05-10-2002
9	ROADWAY PLAN & PROFILE	4 05-10-2002
10	ROADWAY PLAN & PROFILE	4 05-10-2002
11	ROADWAY DETAILS	4 05-10-2002
12	GRADING & DRAINAGE PLAN	1 04-25-2002
13	GRADING & DRAINAGE PLAN	1 04-25-2002
14	GRADING & DRAINAGE PLAN	1 04-25-2002
15	GRADING & DRAINAGE PLAN	1 04-25-2002
16	DRAINAGE DETAILS	1 04-25-2002
17	DRAINAGE DETAILS	1 04-25-2002
18	WATER PLANS	5 06-24-2002
19	WATER PLANS	5 06-24-2002
20	WATER DETAILS	5 06-24-2002
21	SANITARY SEWER PLANS	3 04-26-2002
22	SANITARY SEWER PLANS	3 04-26-2002
23	SANITARY SEWER PLANS	3 04-26-2002
24	SANITARY SEWER PROFILES	3 04-26-2002
25	SANITARY SEWER PROFILES	3 04-26-2002
26	SANITARY SEWER PROFILES	3 04-26-2002
27	SANITARY SEWER PROFILES	3 04-26-2002
28	SANITARY SEWER DETAILS	3 04-26-2002
29	EROSION CONTROL PLAN	-- 01-29-2002
30	EROSION CONTROL PLAN	-- 01-29-2002
31	EROSION CONTROL PLAN	-- 01-29-2002
32	EROSION CONTROL PLAN	-- 01-29-2002
33	EROSION CONTROL DETAILS	-- 01-29-2002

OWNER:
GRAMLING BROTHERS
REAL ESTATE AND DEVELOPMENT
 P.O. Box 389
GRAMLING, SOUTH CAROLINA 29348
(864) 472-2157

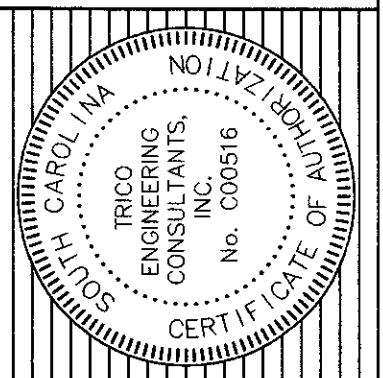
APPROVED
Matthew Halter
MATTHEW HALTER, P.E., L.S.
 TOWN ENGINEER
 TOWN OF SUMMERVILLE, SC
 DATE: 8/22/02



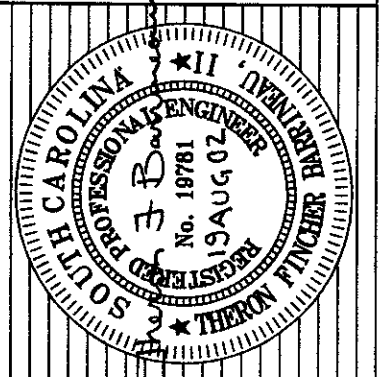
4425 BELLE OAKS DRIVE
NORTH CHARLESTON, SOUTH CAROLINA 29405
(843) 740-7700

NO.	DATE	REVISIONS
4	05-10-2002	REVISED PLAT/ROAD PLANS PER SUMMERVILLE'S COMMENTS
3	04-26-2002	REVISED SEWER PLANS PER SCOW'S COMMENTS
2	04-20-2002	REVISED WATER PLANS PER SCOW'S COMMENTS
1	04-25-2002	REVISED DRAINAGE & PONDS AS PER SCOW'S COMMENTS

TITLE
COVER SHEET
PHASE I OF ARBOR OAKS SUBDIVISION
LOCATED IN
THE TOWN OF SUMMERVILLE
DORCHESTER COUNTY, SOUTH CAROLINA



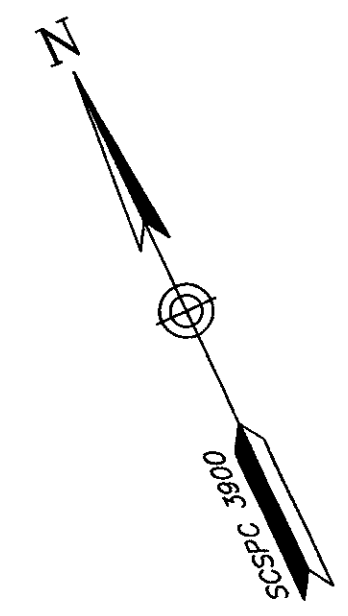
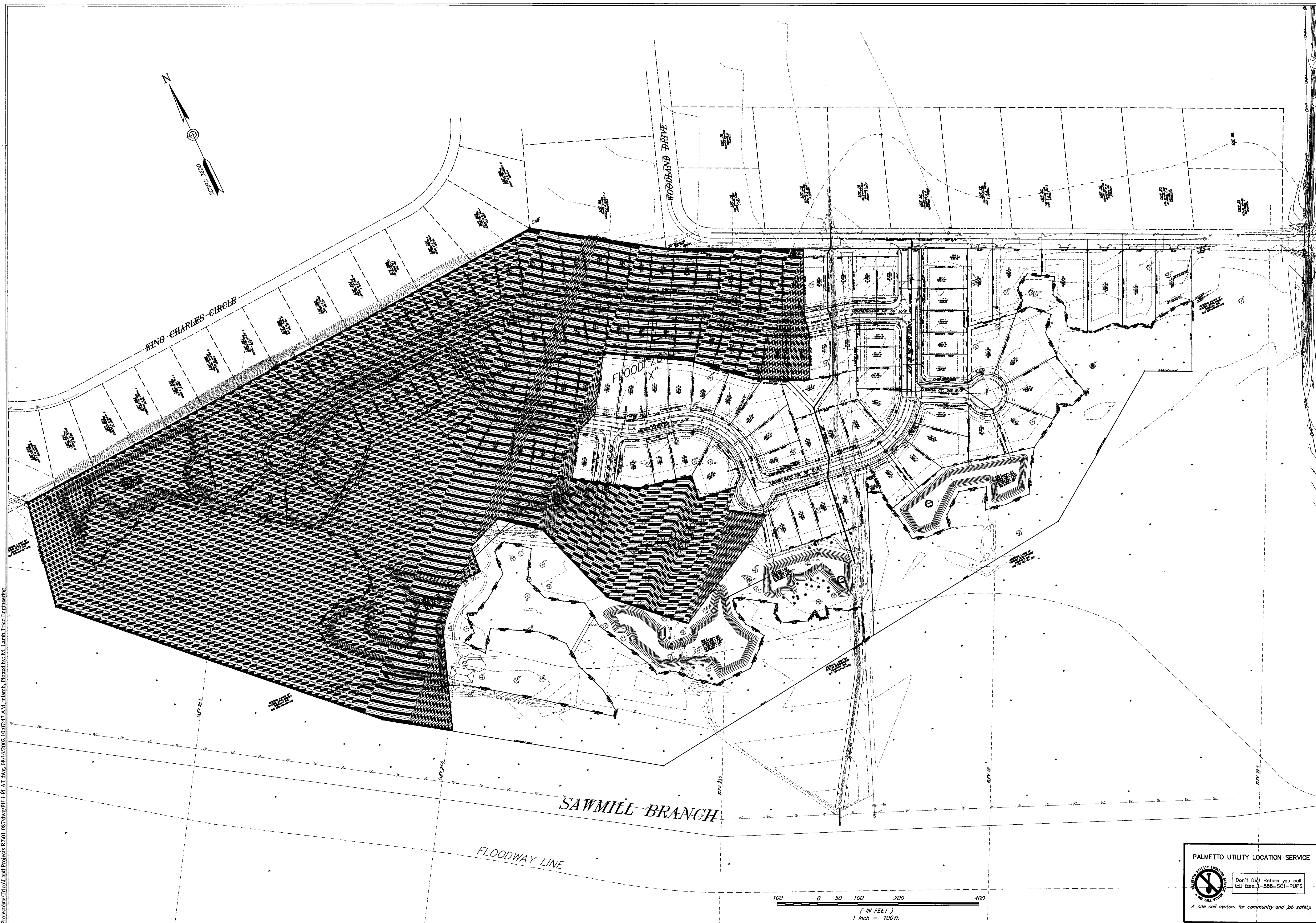
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 Fax: (843) 740-7707
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DESIGNED: MEL
 DRAWN: MEL
 CHECKED: MEC
 APPROVED: MEC
 SCALE: 1"=30'
 DATE: 29 JANUARY 2002
 PROJECT NO.: 01-087
 SHEET 7 OF 33

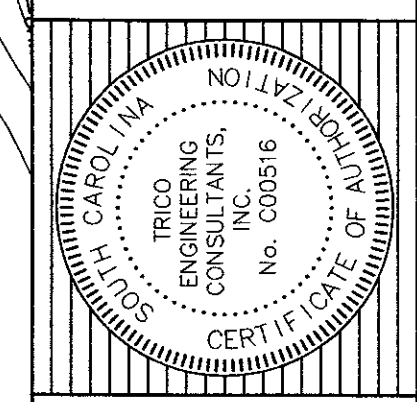
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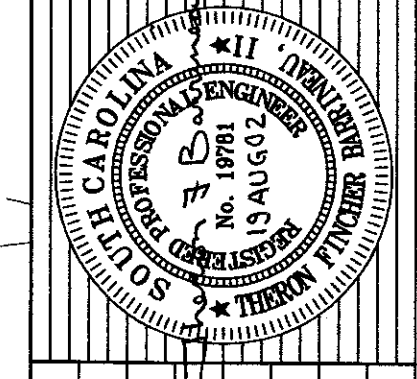
NO.	DATE	REVISIONS

TITLE
OVERALL PLAN
PHASE I OF ARBOR OAKS SUBDIVISION
 LOCATED IN
THE TOWN OF SUMMERVILLE
DORCHESTER COUNTY, SOUTH CAROLINA

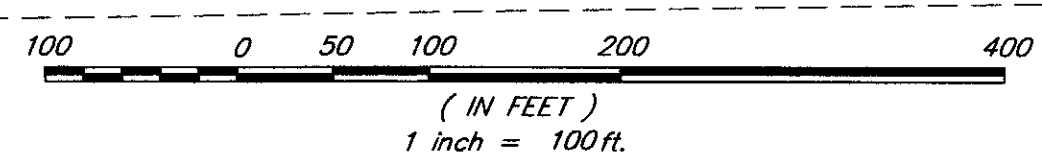


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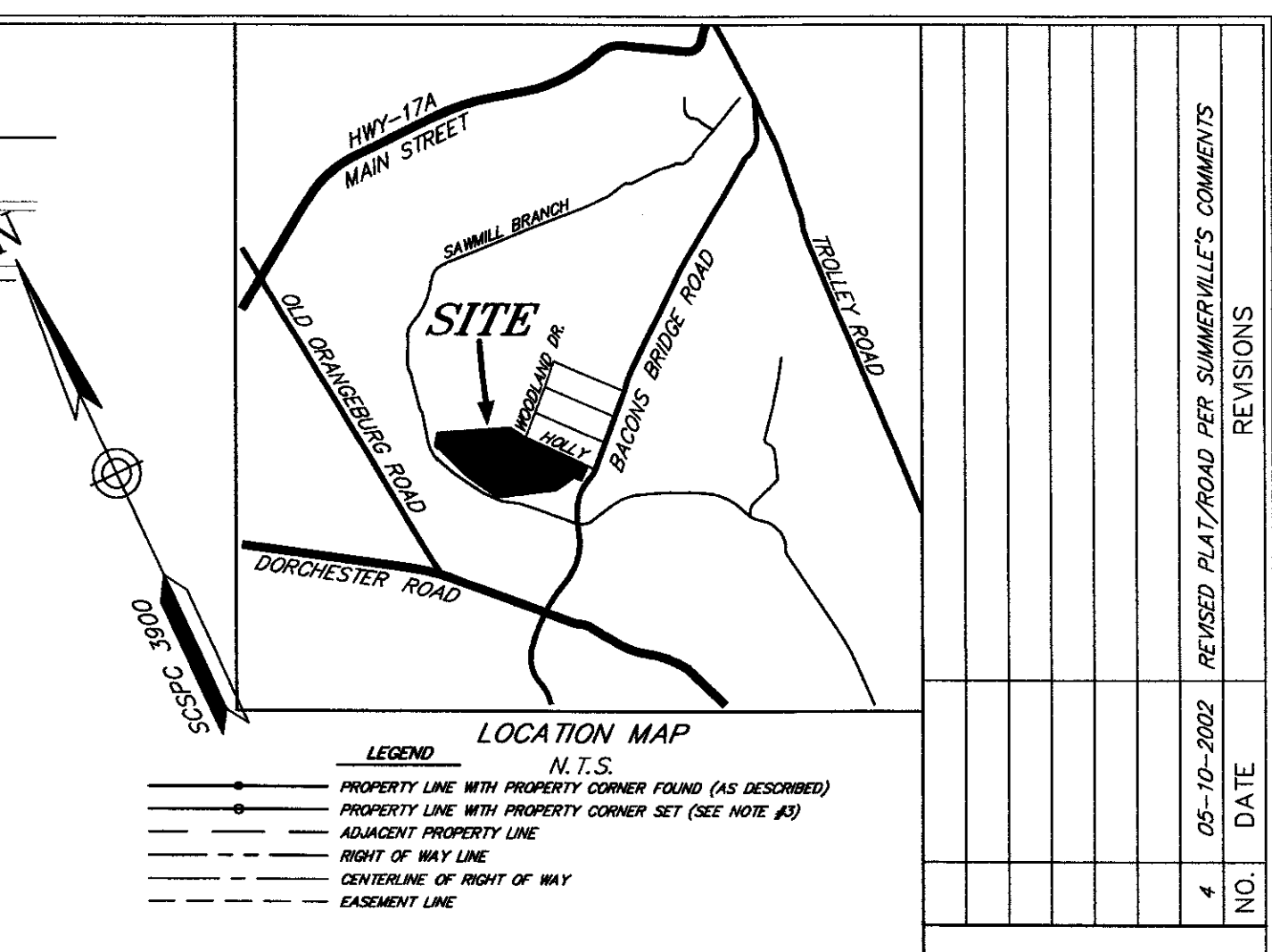
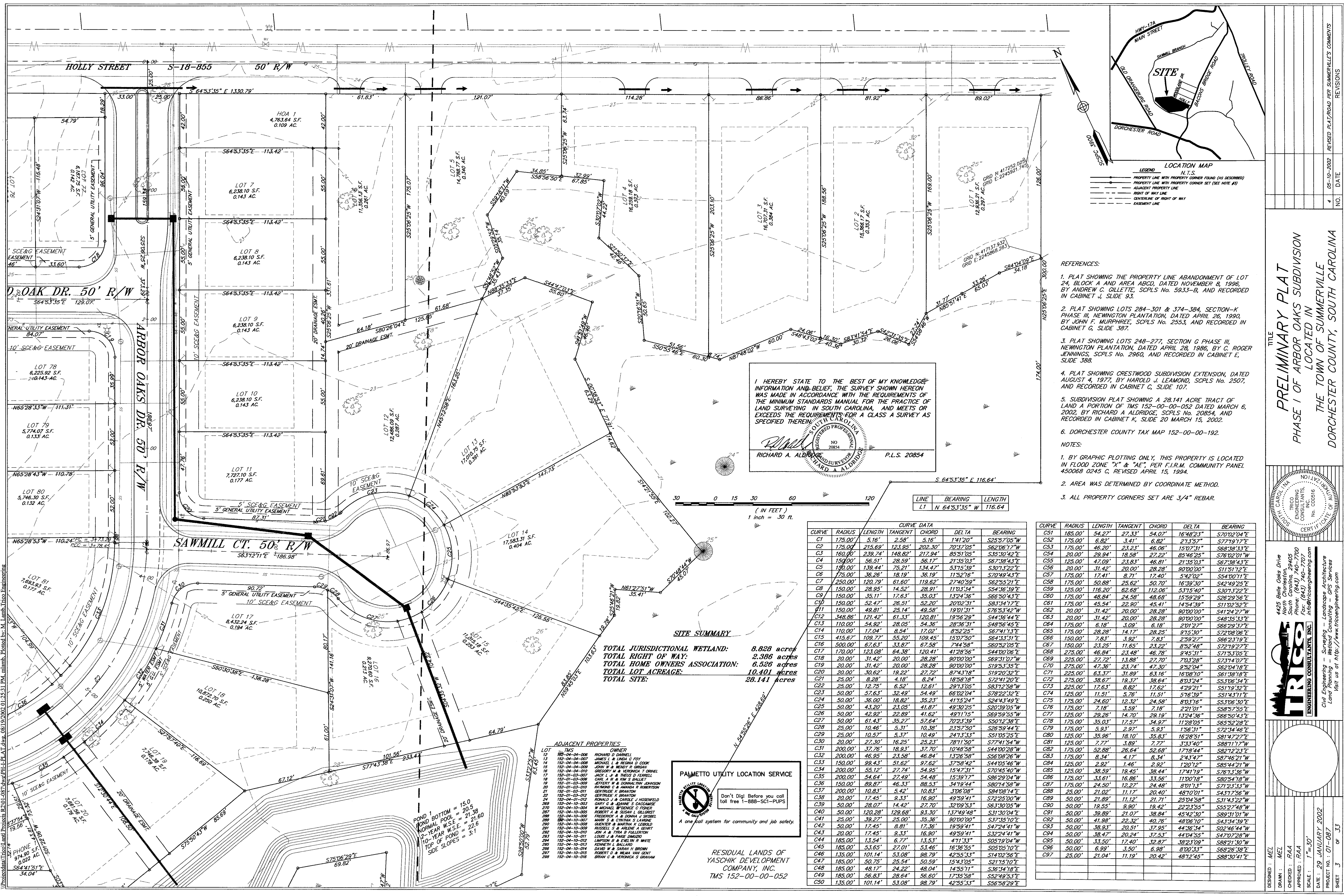
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 DRAWN : MEL
 CHECKED : MEC
 APPROVED : MEC
 SCALE : 1" = 100'
 DATE : 29 JANUARY 2002
 PROJECT NO. : 07-087
 SHEET 2 OF 33



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I HEREBY STATE TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS A SURVEY AS SPECIFIED THEREIN.

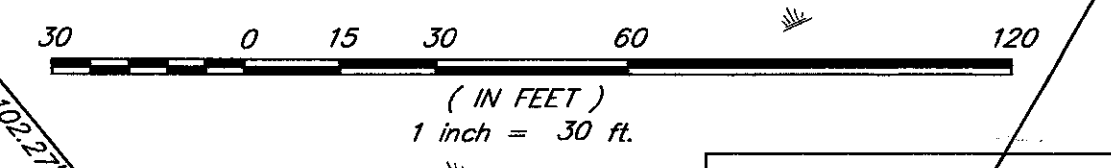
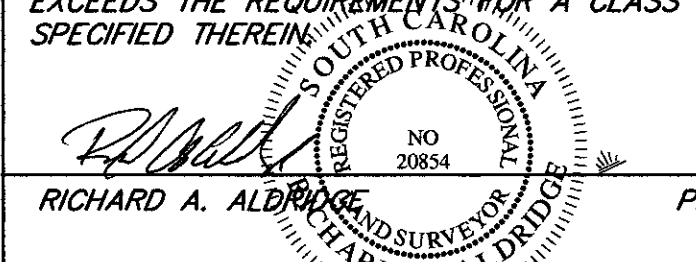


Table with 3 columns: LINE, BEARING, LENGTH. Row 1: LT N 64°53'35" W 116.64'

SITE SUMMARY

TOTAL JURISDICTIONAL WETLAND: 8.828 acres
TOTAL RIGHT OF WAY: 2.386 acres
TOTAL HOME OWNERS ASSOCIATION: 6.526 acres
TOTAL LOT ACREAGE: 10.401 acres
TOTAL SITE: 28.141 acres

Table of ADJACENT PROPERTIES listing lot numbers, owners, and dates.

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RESIDUAL LANDS OF YASCHIK DEVELOPMENT COMPANY, INC. TMS 152-00-00-052

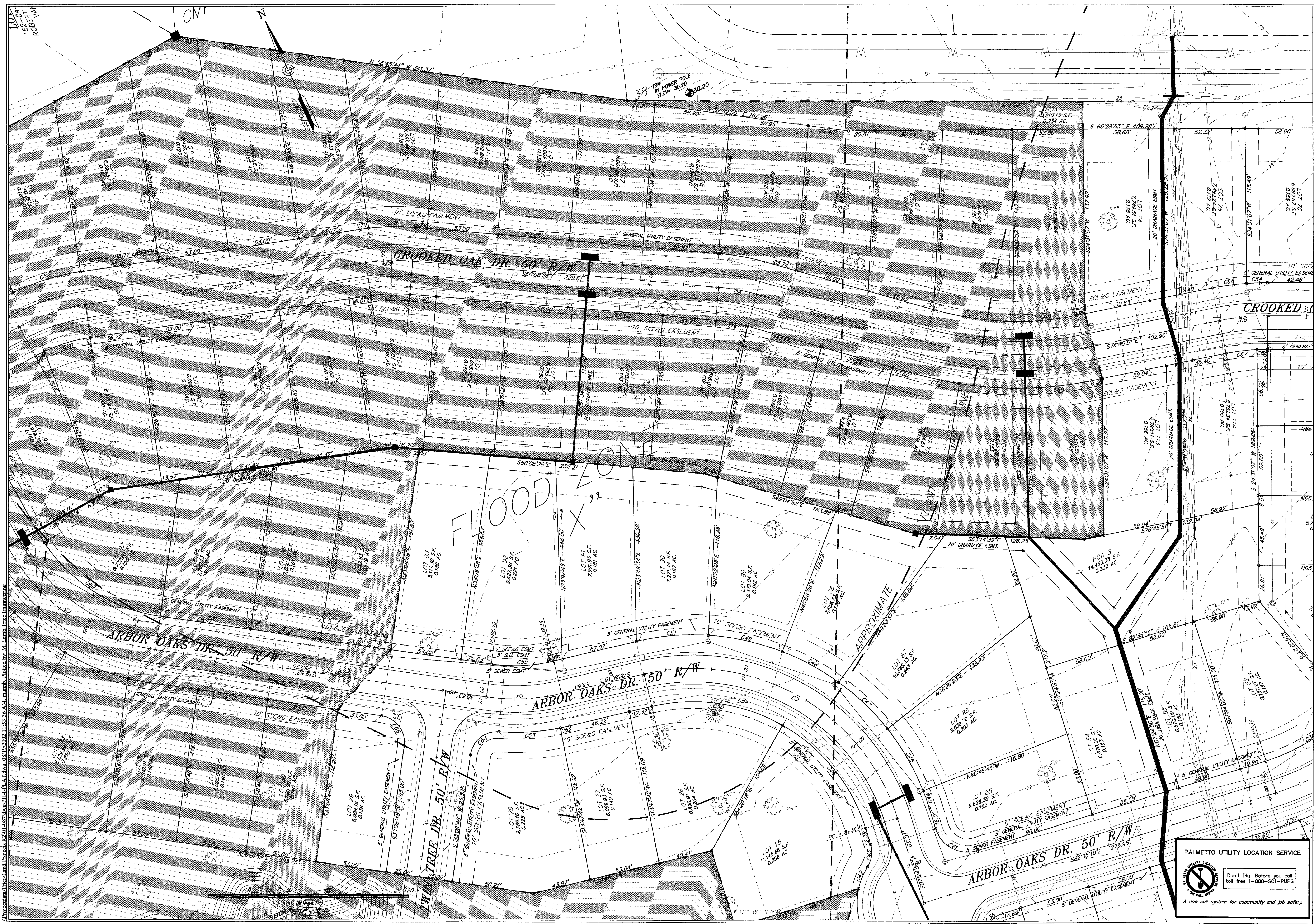
REFERENCES:

- 1. PLAT SHOWING THE PROPERTY LINE ABANDONMENT OF LOT 24, BLOCK A AND AREA ABCD, DATED NOVEMBER 8, 1996, BY ANDREW C. GILLETTE, SCPLS No. 5933-B, AND RECORDED IN CABINET J, SLIDE 93.
- 2. PLAT SHOWING LOTS 284-301 & 374-384, SECTION-K PHASE III, NEWINGTON PLANTATION, DATED APRIL 26, 1990, BY JOHN F. MURPHREE, SCPLS No. 2553, AND RECORDED IN CABINET G, SLIDE 387.
- 3. PLAT SHOWING LOTS 248-277, SECTION G PHASE III, NEWINGTON PLANTATION, DATED APRIL 28, 1986, BY C. ROGER JENNINGS, SCPLS No. 2960, AND RECORDED IN CABINET E, SLIDE 388.
- 4. PLAT SHOWING CRESTWOOD SUBDIVISION EXTENSION, DATED AUGUST 4, 1977, BY HAROLD J. LEAMOND, SCPLS No. 2507, AND RECORDED IN CABINET G, SLIDE 107.
- 5. SUBDIVISION PLAT SHOWING A 28.141 ACRE TRACT OF LAND A PORTION OF TMS 152-00-00-052 DATED MARCH 6, 2002, BY RICHARD A. ALDRIDGE, SCPLS No. 20854, AND RECORDED IN CABINET K, SLIDE 20 MARCH 15, 2002.
- 6. DORCHESTER COUNTY TAX MAP 152-00-00-192.

Table with 11 columns: CURVE, RADIUS, LENGTH, TANGENT, CHORD, DELTA, BEARING. Lists curves C01 through C50 with their respective measurements.

Professional Seal and Title: M. Lamb Thico, Engineering

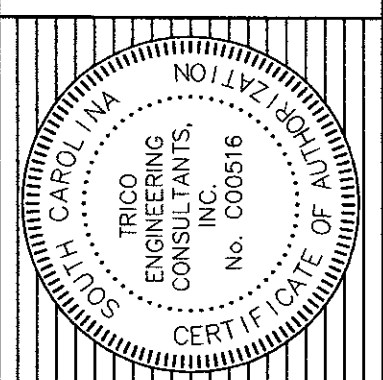
Project information including title (PRELIMINARY PLAT PHASE I OF ARBOR OAKS SUBDIVISION), location (THE TOWN OF SUMMERVILLE, DORCHESTER COUNTY, SOUTH CAROLINA), date (29 JANUARY 2002), scale (1"=30'), and sheet number (3 of 3).



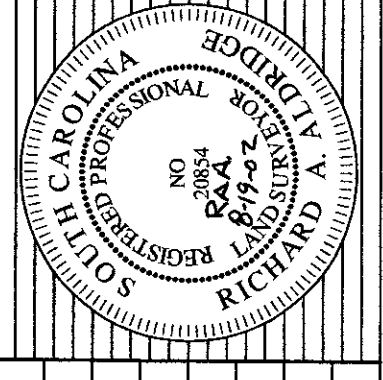
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NO.	DATE	REVISIONS
4	05-10-2002	REVISED PLAT/ROAD PER SUMMERVILLE'S COMMENTS

PRELIMINARY PLAT
PHASE I OF ARBOR OAKS SUBDIVISION
 LOCATED IN
THE TOWN OF SUMMERVILLE
DORCHESTER COUNTY, SOUTH CAROLINA



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 4425 Belle Oaks Drive
 North Charleston, SC 29405
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 info@tricoengineering.com

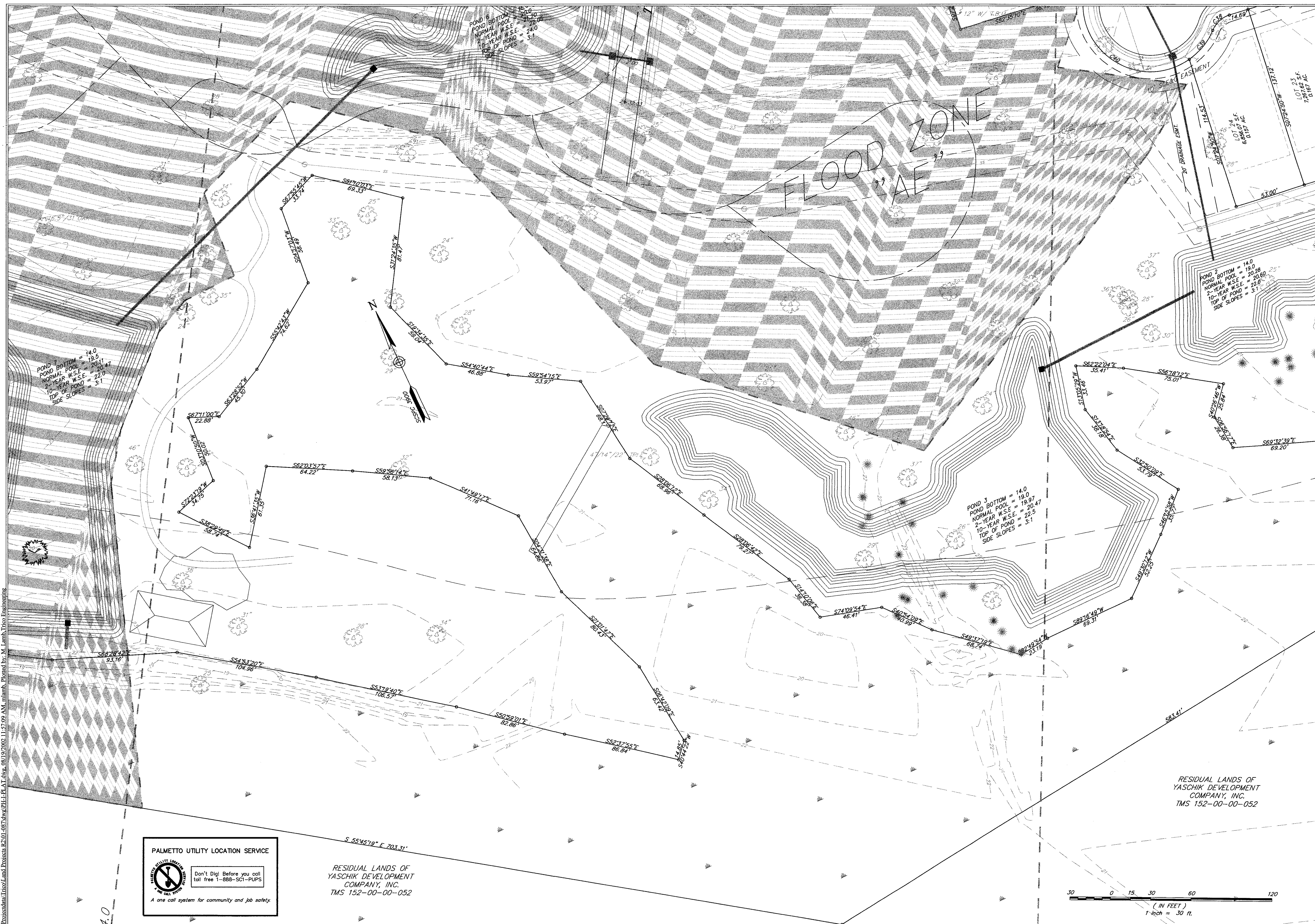


DESIGNED: MEL	CHECKED: PAA
APPROVED: PAA	DATE: 29 JANUARY 2002
SCALE: 1"=30'	PROJECT NO.: 07-087
SHEET 4 OF 33	


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\\Procedural\Trico\Land\Process\K201-087.dwg:PH1-PLAT.dwg, 08/19/2002 11:57:09 AM, mlimb, Plotted by: M. Lamb, Trico Engineering



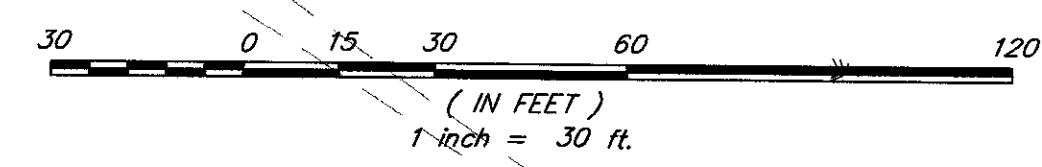
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RESIDUAL LANDS OF
YASCHIK DEVELOPMENT
COMPANY, INC.
TMS 152-00-00-052



DESIGNED : MEL	NO. 00016
DRAWN : MEL	CERTIFIED
CHECKED : RAA	REGISTERED PROFESSIONAL ENGINEER
APPROVED : RAA	NO. 00016
SCALE : 1" = 30'	REGISTERED PROFESSIONAL ENGINEER
DATE : 29 JANUARY 2002	NO. 00016
PROJECT NO. : 01-087	CERTIFIED
SHEET 5 OF 33	REGISTERED PROFESSIONAL ENGINEER

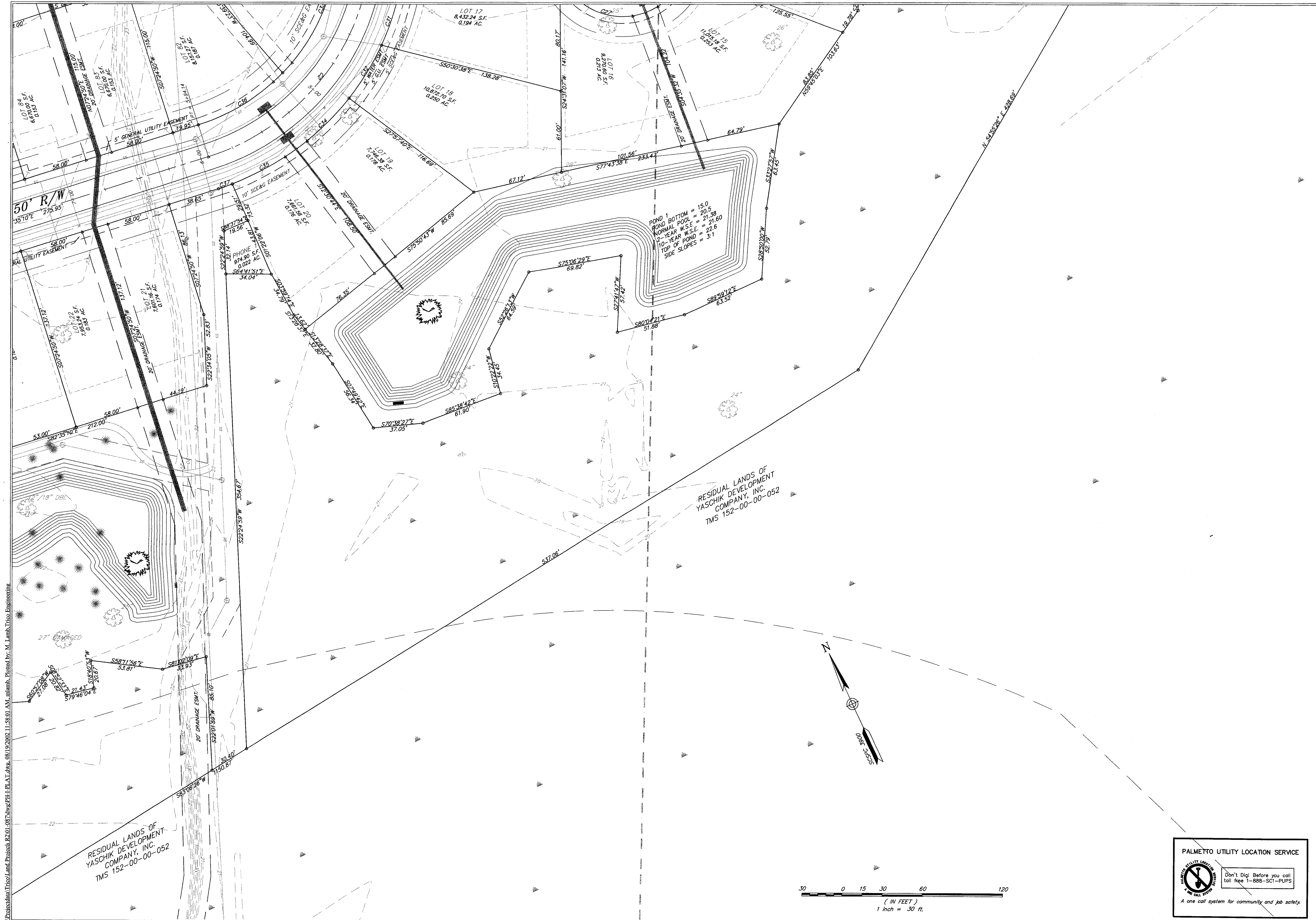
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TITLE
PRELIMINARY PLAT
PHASE I OF ARBOR OAKS SUBDIVISION
LOCATED IN
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DORCHESTER COUNTY, SOUTH CAROLINA

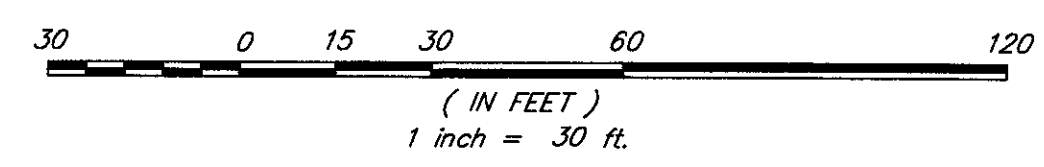
NO.	DATE	REVISIONS
4	05-10-2002	REVISED PLAT/ROAD PER SUMMERVILLE COMMENTS



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RESIDUAL LANDS OF
 YASCHIK DEVELOPMENT
 COMPANY, INC.
 TMS 152-00-00-052

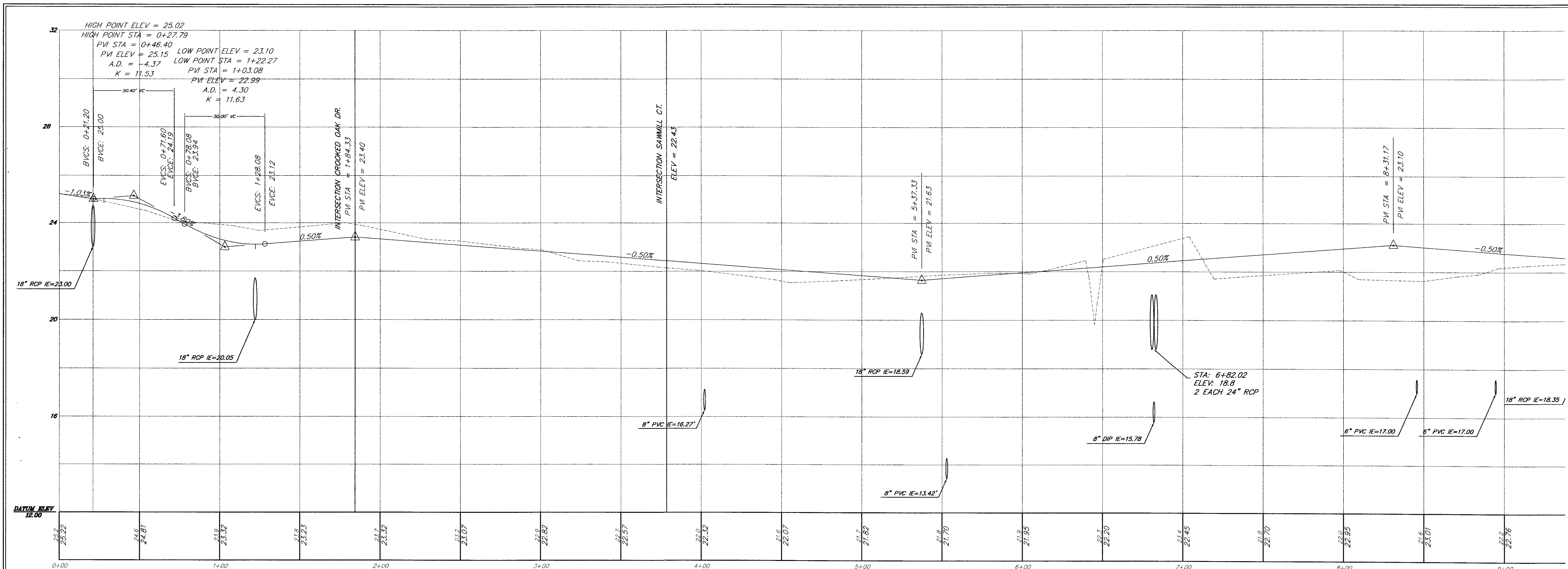
RESIDUAL LANDS OF
 YASCHIK DEVELOPMENT
 COMPANY, INC.
 TMS 152-00-00-052



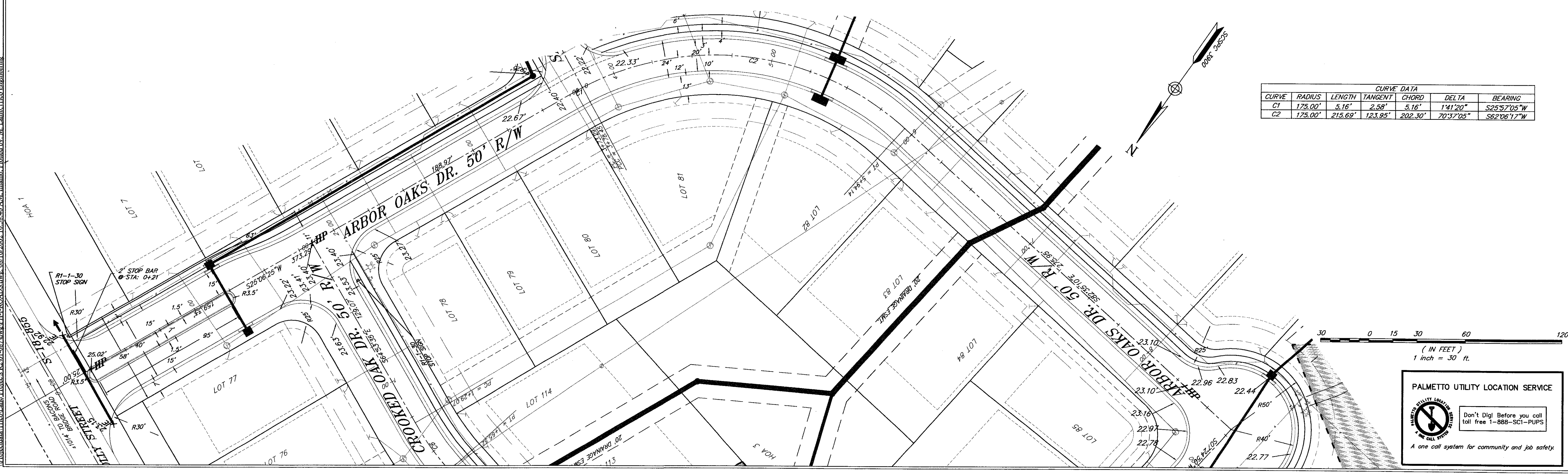
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DESIGNED : MEL	DATE : 29 JANUARY 2002
DRAWN : MEL	PROJECT NO. : 01-087
CHECKED : RAA	SHEET 6 OF 33
APPROVED : RAA	
SCALE : 1" = 30'	
TITLE PRELIMINARY PLAT PHASE I OF ARBOR OAKS SUBDIVISION LOCATED IN THE TOWN OF SUMMERVILLE DORCHESTER COUNTY, SOUTH CAROLINA	
4425 Belle Oaks Drive Charleston, SC 29405 South Carolina Phone: (843) 740-7700 Fax: (843) 740-7707 info@tricoengineering.com	
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REVISIONS NO. DATE REVISIONS COMMENTS 4 05-10-2002 REVISED PLAT/ROAD PER SUMMERVILLE COMMENTS	



ARBOR OAKS DR.
 HORIZONTAL SCALE: 1"=30'
 VERTICAL SCALE: 1"=2'



TITLE
ROADWAY PLANS
 PHASE I OF ARBOR OAKS SUBDIVISION
 LOCATED IN
 THE TOWN OF SUMMERVILLE
 DORCHESTER COUNTY, SOUTH CAROLINA

1425 Belle Oaks Drive
 Summerville, SC 29405
 Phone: (843) 740-7700
 Fax: (843) 740-7707
 info@tricoengineering.com

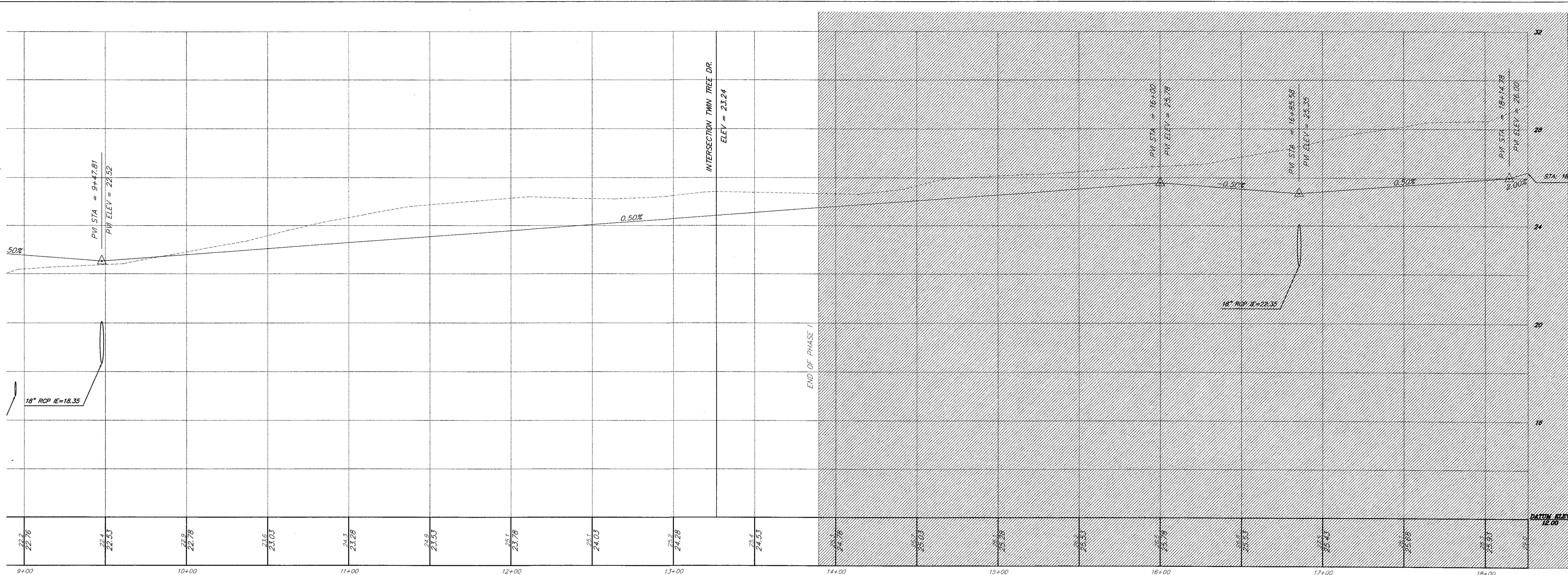
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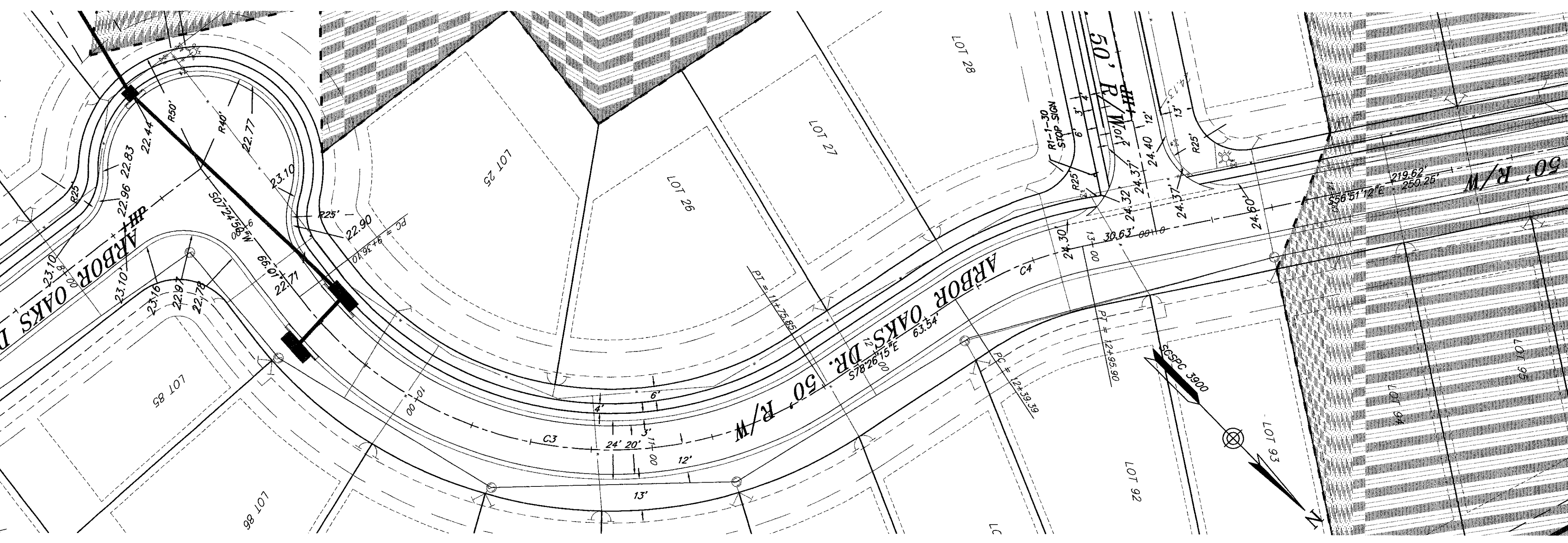
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 CHECKED: TFB
 APPROVED: TFB
 SCALE: 1"=30'
 DATE: 29 JANUARY 2002
 PROJECT NO.: 01-087
 SHEET 7 OF 33

NO. DATE
 1 05-10-2002 REVISED PLAN/ROAD PLANS PER SUMMERVILLE'S COMMENTS
 REVISIONS

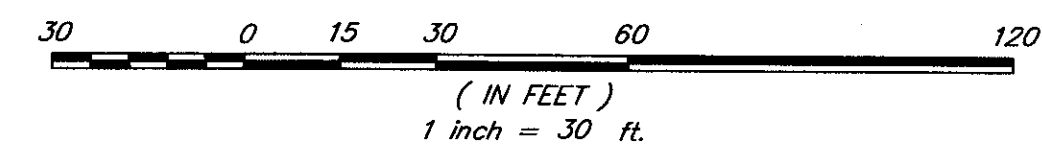
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ARBOR OAKS DR.
 HORIZONTAL SCALE: 1"=30'
 VERTICAL SCALE: 1"=2'



CURVE	RADIUS	LENGTH	TANGENT	CHORD	DELTA	BEARING
C1	125.00'	5.16'	2.58'	5.16'	141°20'	S25°57'05"W
C2	125.00'	215.69'	123.95'	202.30'	70°17'05"	S62°06'17"W
C3	160.00'	239.74'	148.82'	217.94'	85°51'05"	S35°30'42"E
C4	150.00'	56.51'	28.59'	56.17'	21°35'03"	S67°38'43"E



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TITLE
 ROADWAY PLANS
 PHASE I OF ARBOR OAKS SUBDIVISION
 LOCATED IN
 THE TOWN OF SUMMERVILLE
 DORCHESTER COUNTY, SOUTH CAROLINA

DESIGNED: MEL
 DRAWN: MEL
 CHECKED: TEB
 APPROVED: TEB
 SCALE: 1"=30'
 DATE: 29 JANUARY 2002
 PROJECT NO.: 01-087
 SHEET 8 OF 33

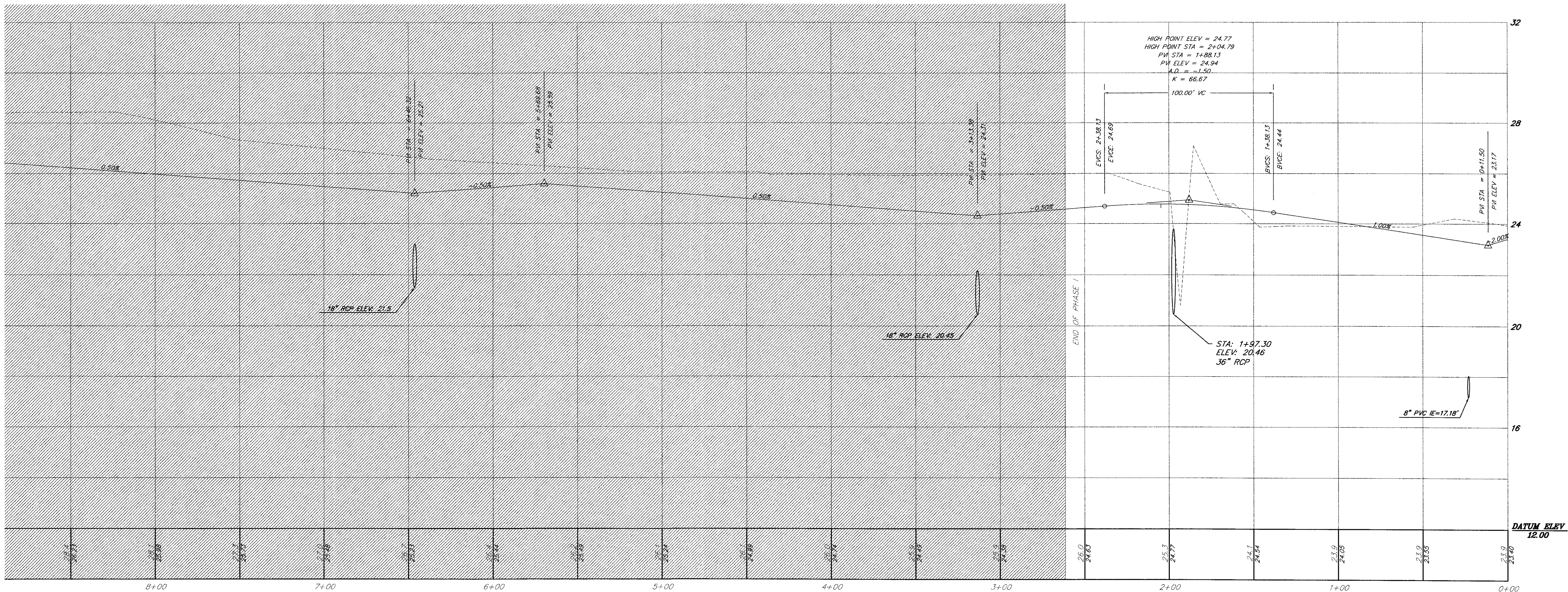
NO. DATE REVISIONS COMMENTS

4 05-10-2002 REVISED PLAT/ROAD PLANS PER SUMMERVILLE'S COMMENTS

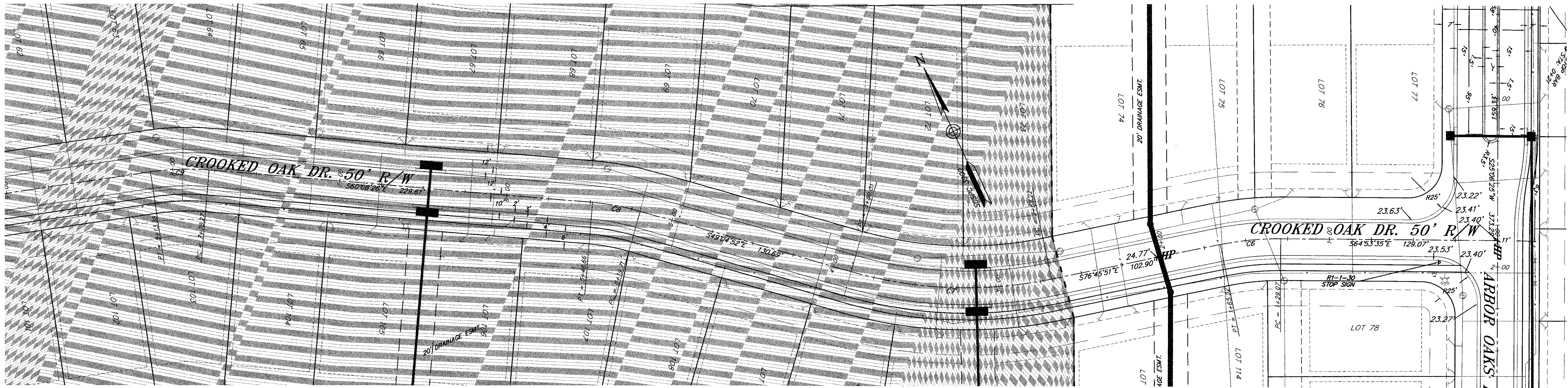
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CROOKED OAK DR.
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=2'

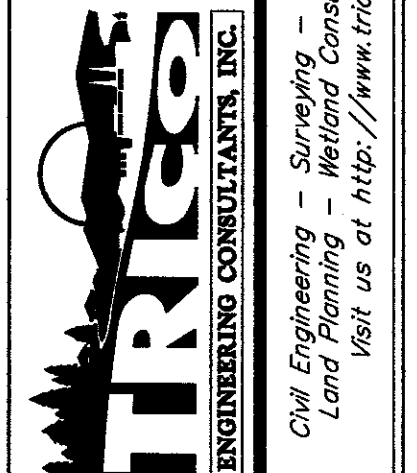
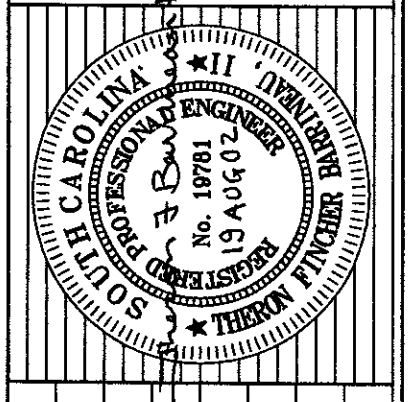


PALMETTO UTILITY LOCATION SERVICE

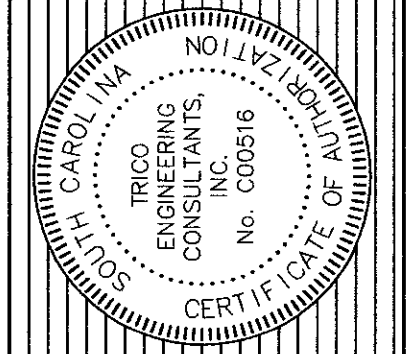
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toll free 1-888-SC1-PUPS

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DESIGNED: MEL
DRAWN: MEL
CHECKED: TFB
APPROVED: TFB
SCALE: 1"=30'
DATE: 29 JANUARY 2002
PROJECT NO.: 01-087
SHEET 9 of 33

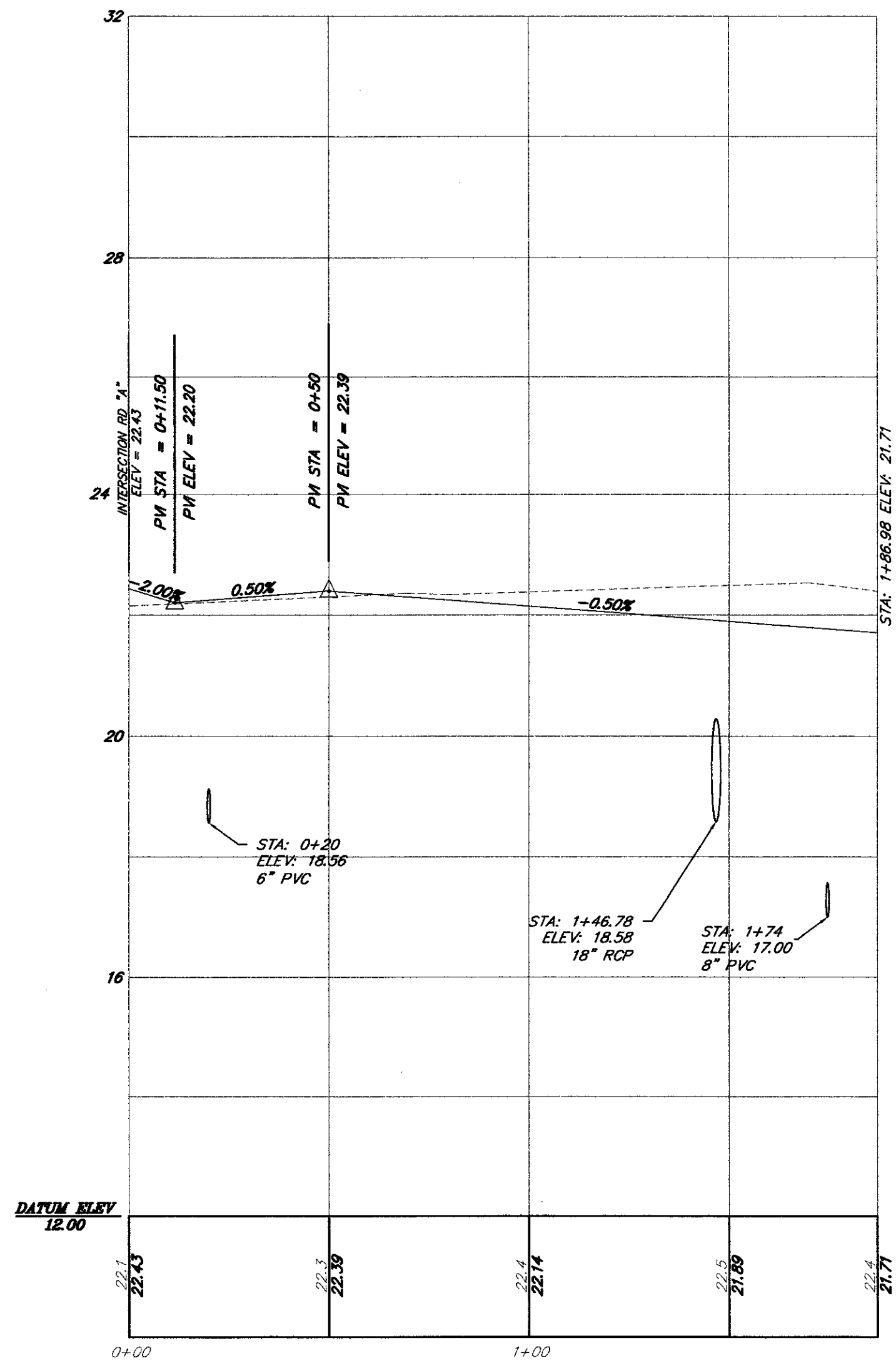


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North Charleston, SC 29405
South Carolina, 29405
Phone: (843) 740-7700
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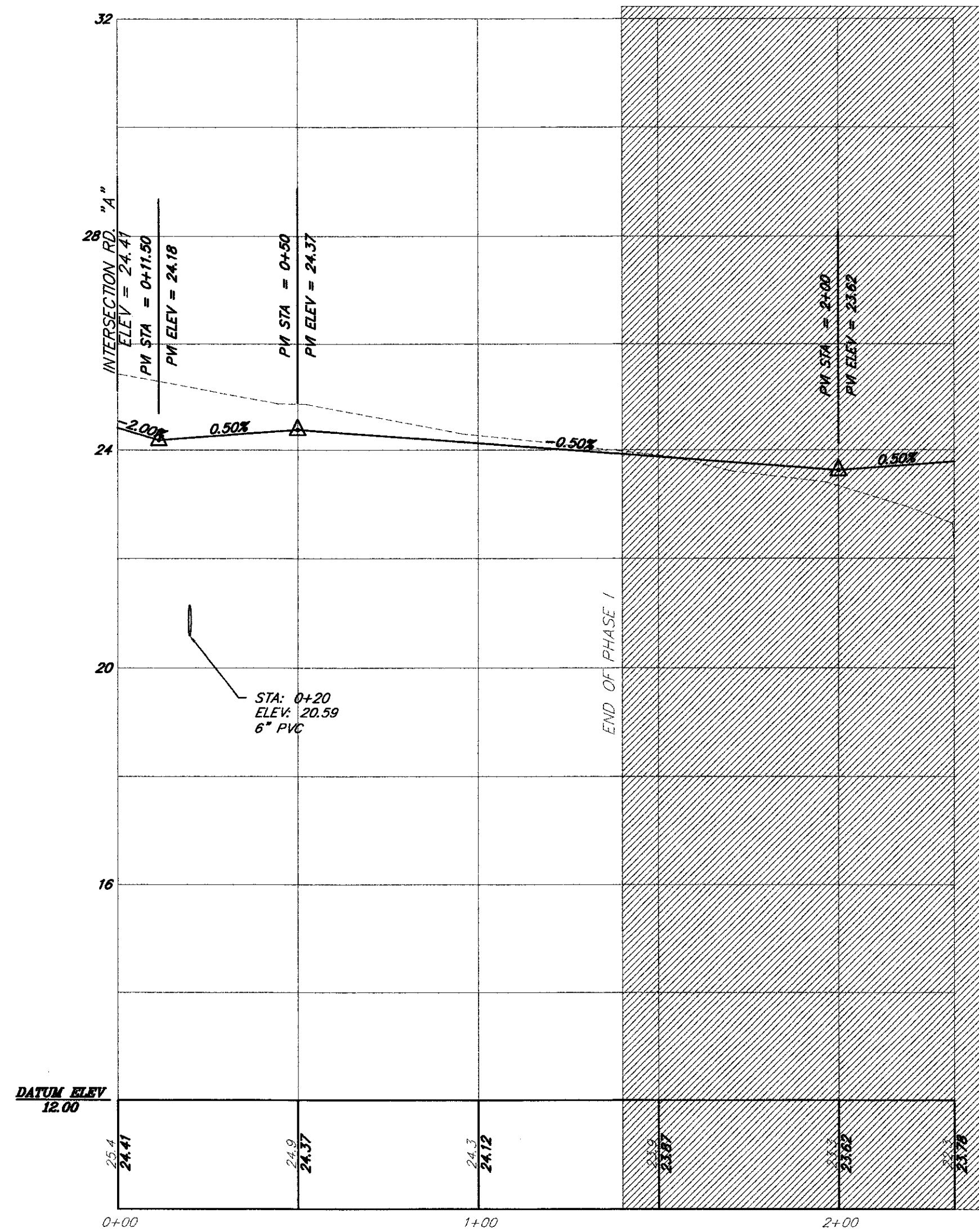


TITLE
ROADWAY PLANS
PHASE I OF ARBOR OAKS SUBDIVISION
LOCATED IN
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DORCHESTER COUNTY, SOUTH CAROLINA

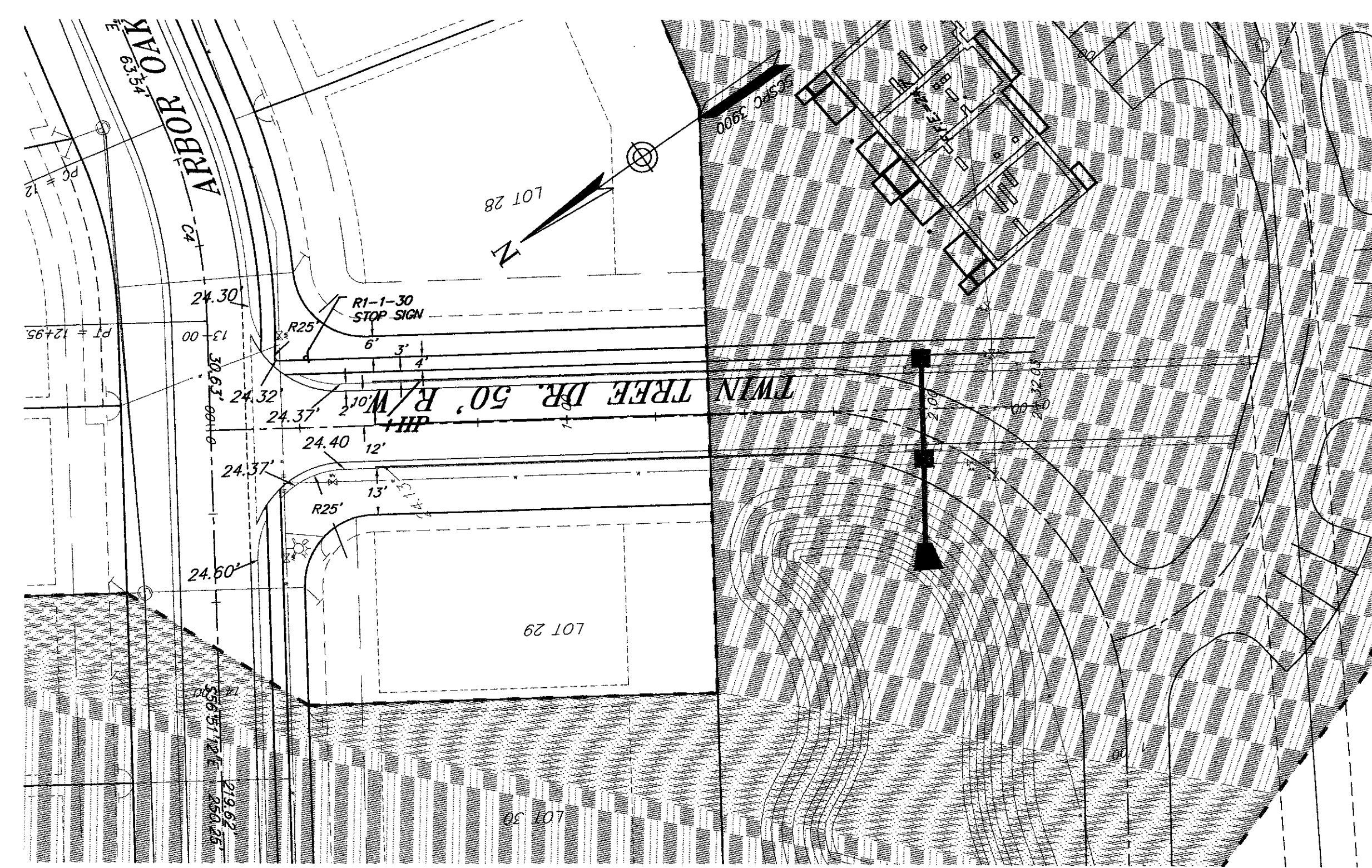
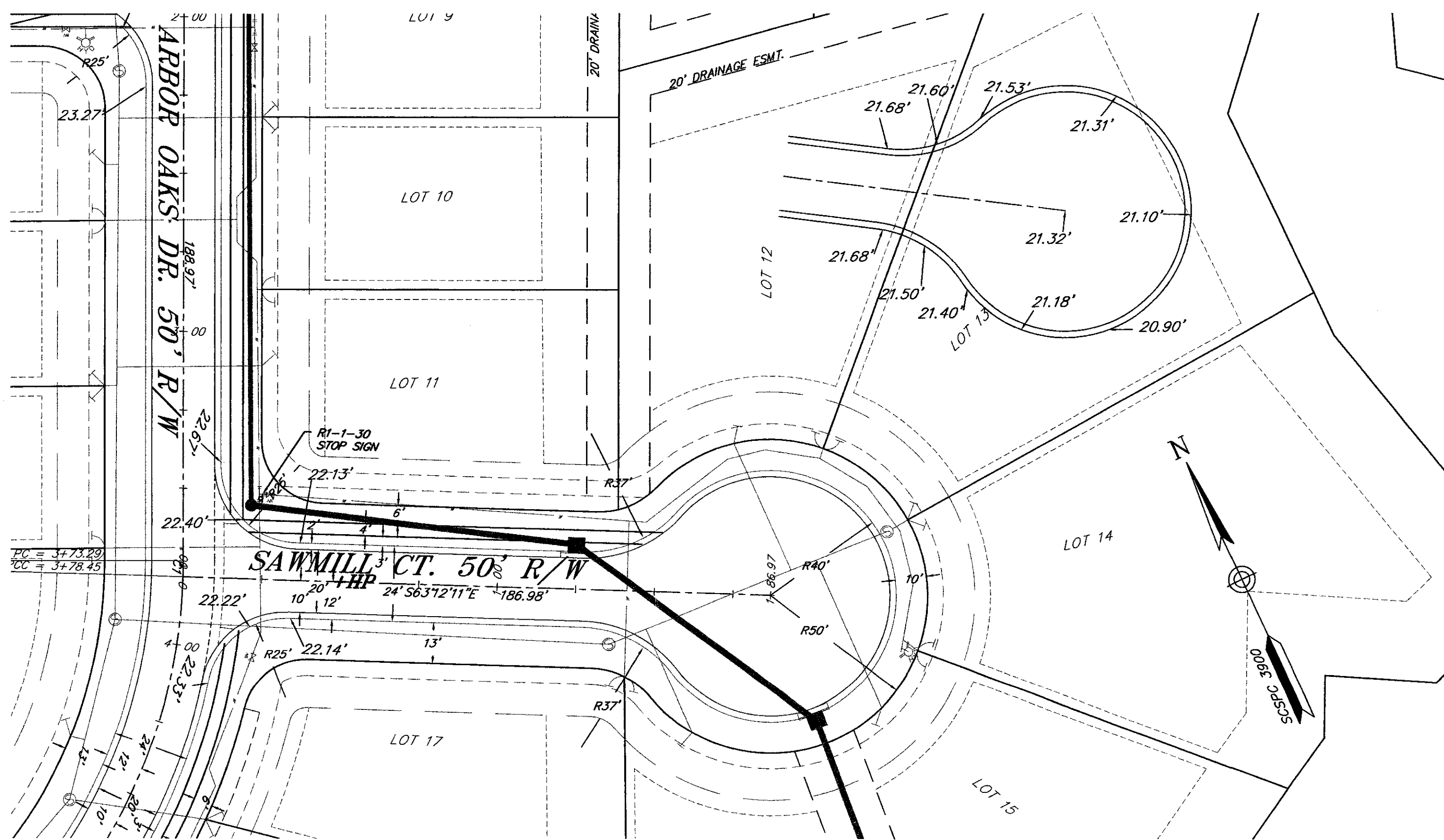
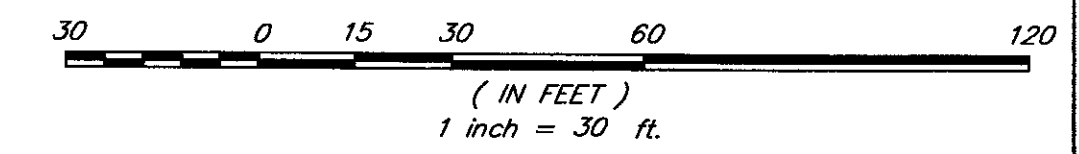
NO.	DATE	REVISIONS
4	05-10-2002	REVISED PLAT/ROAD PLANS PER SUMMERVILLE'S COMMENTS



SAWMILL CT.
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=2'

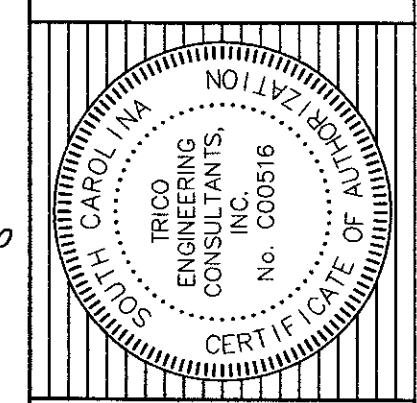


TWIN TREE DR.
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=2'



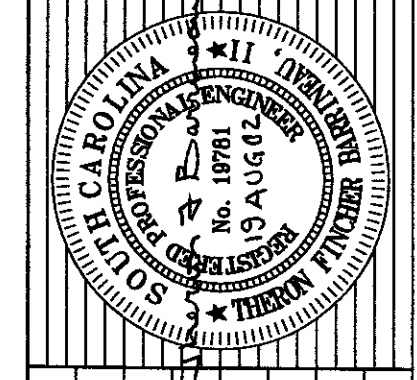
NO.	DATE	REVISIONS
4	05-10-2002	REVISED PLAT/ROAD PLANS PER SUMMERVILLE'S COMMENTS

TITLE
ROADWAY PLANS
PHASE I OF ARBOR OAKS SUBDIVISION
LOCATED IN
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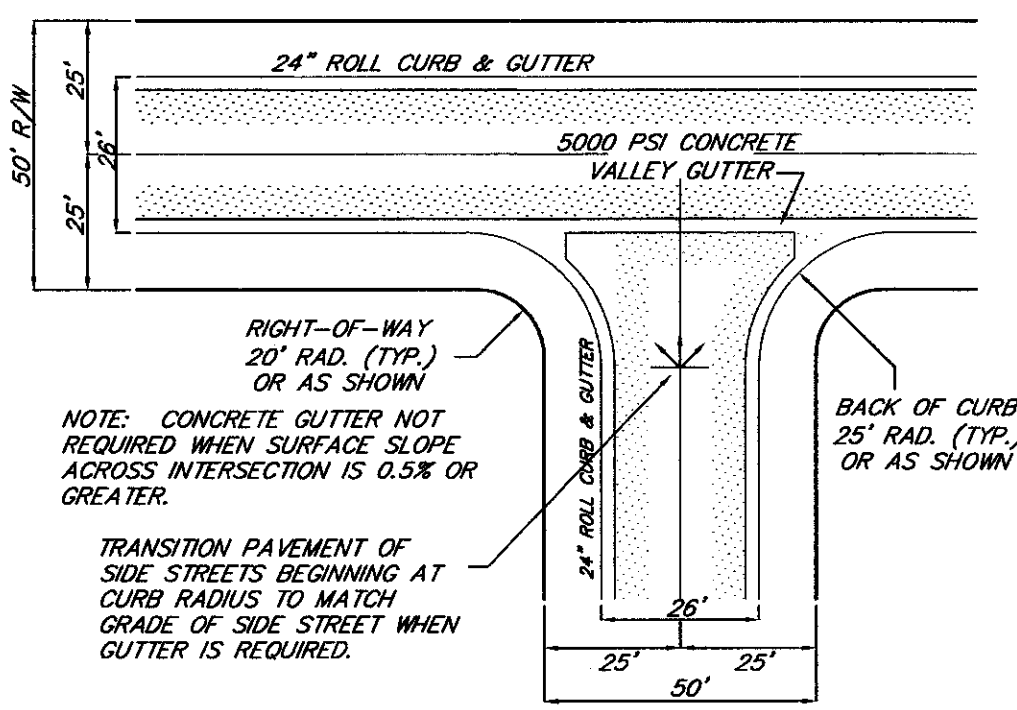
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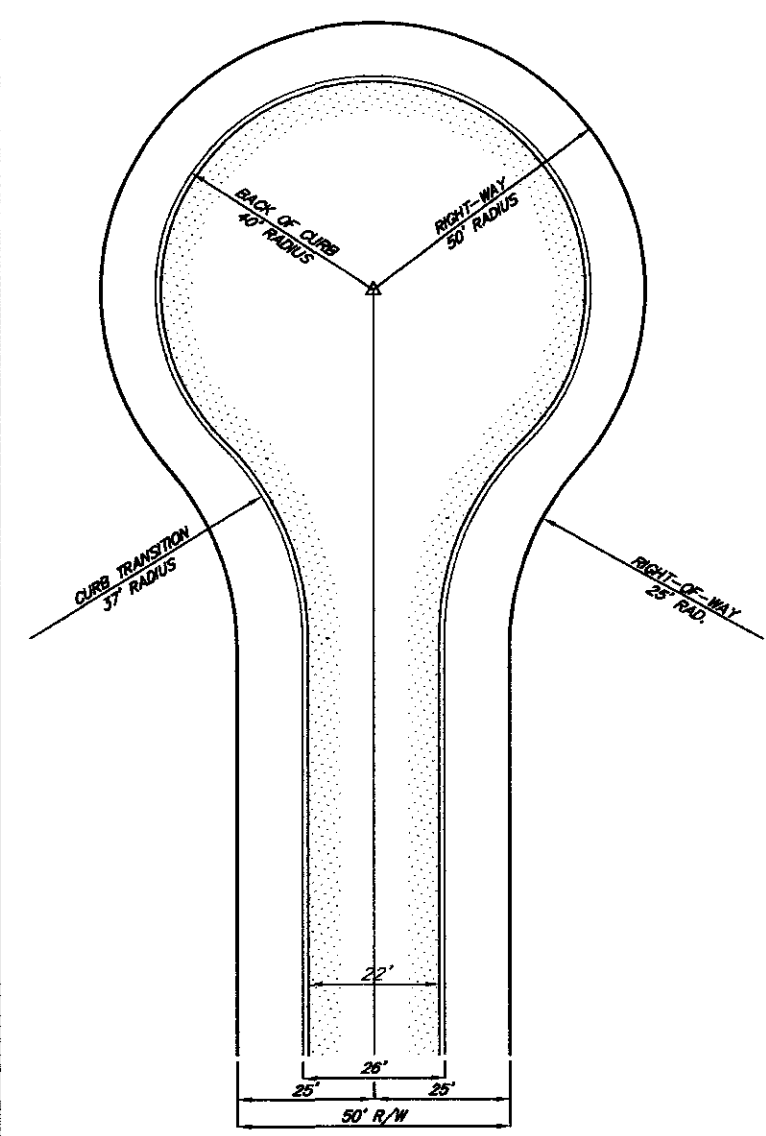
A one call system for community and job safety.

DESIGNED: IMEL
DRAWN: MEL
CHECKED: TFB
APPROVED: TFB
SCALE: 1"=30'
DATE: 29 JANUARY 2002
PROJECT NO.: 01-087
SHEET 10 of 33

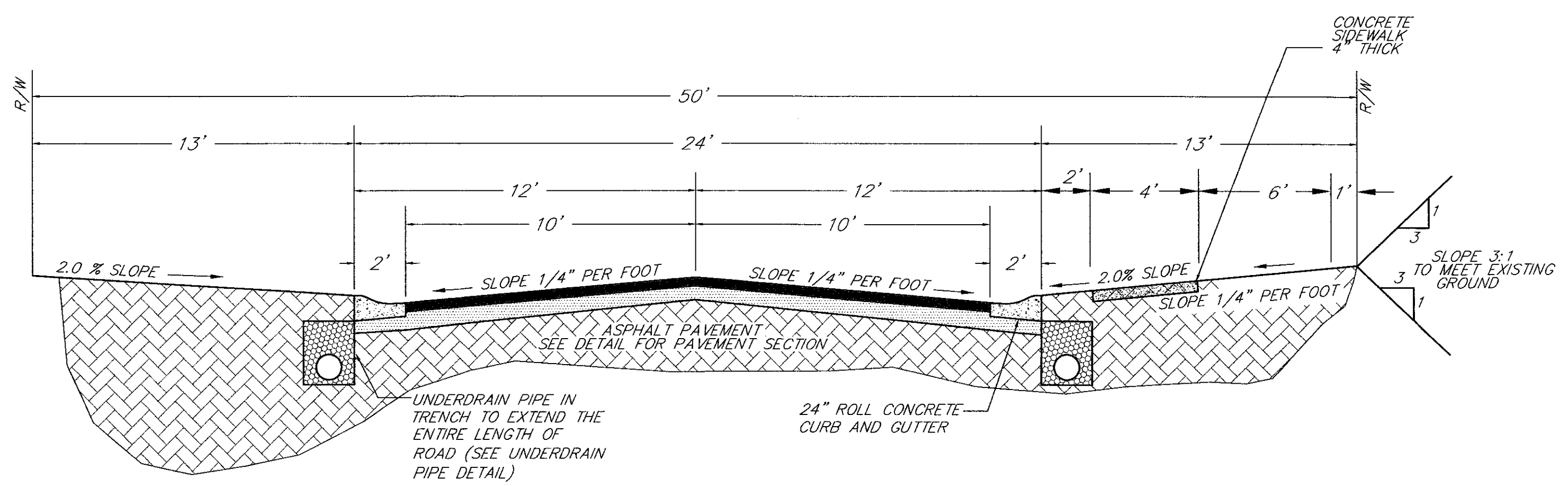
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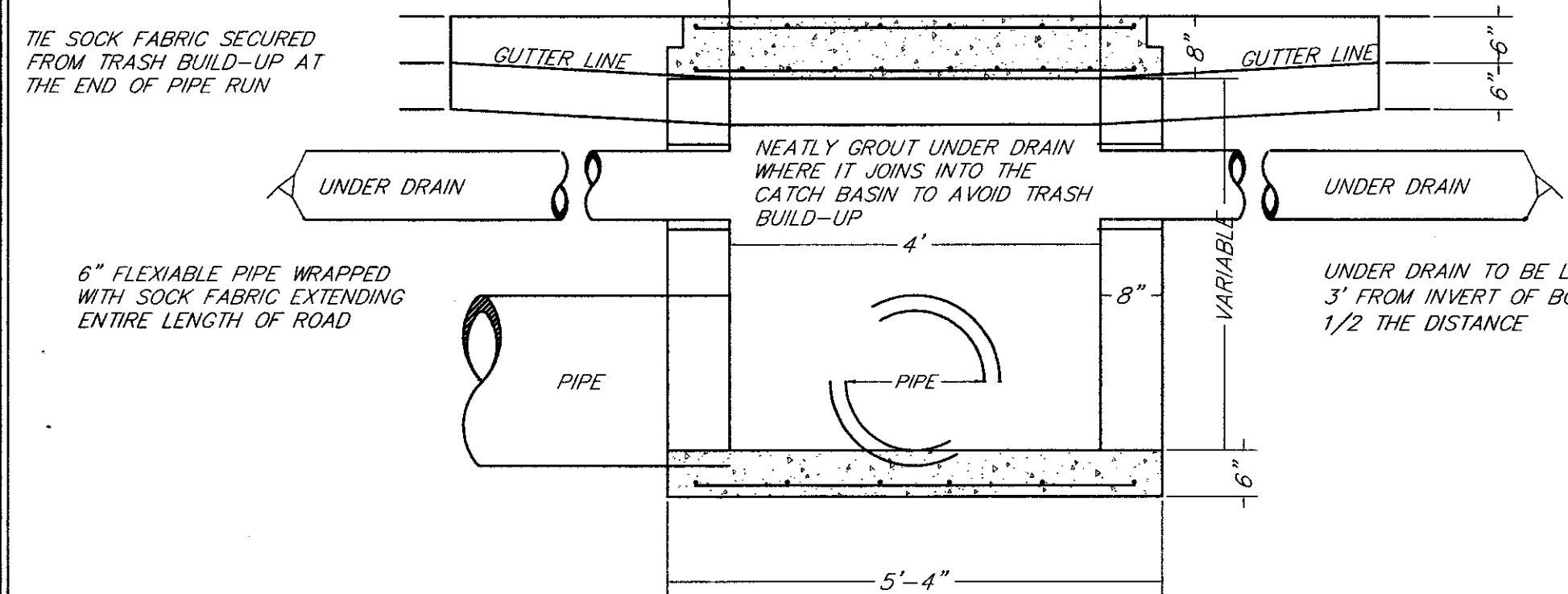
TYPICAL INTERSECTION DETAIL
N.T.S.



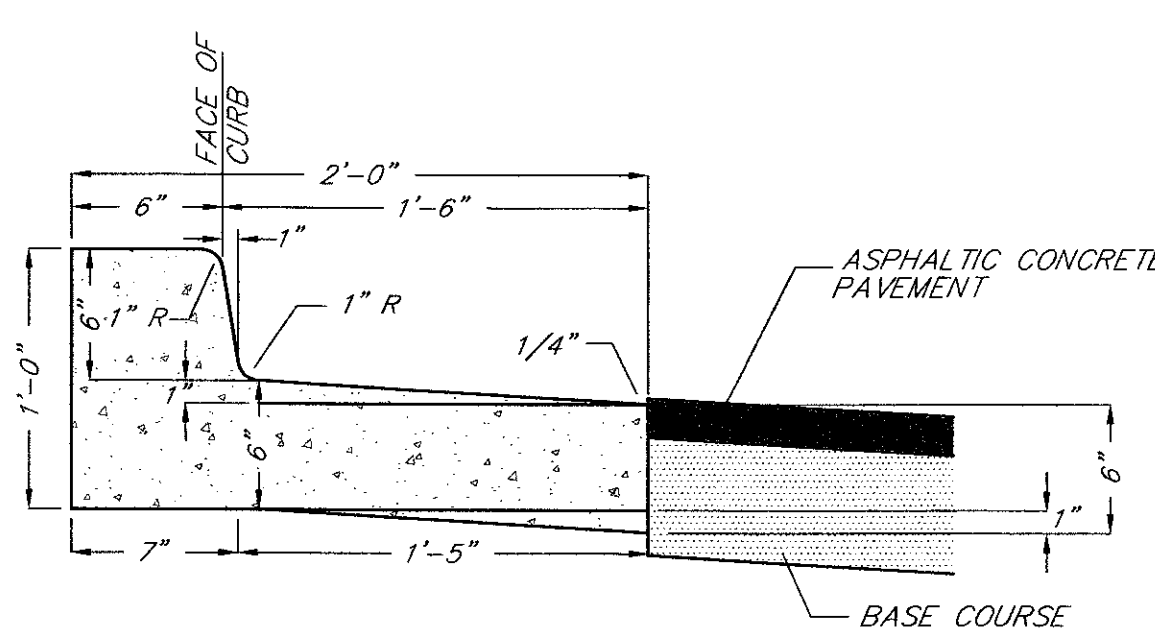
CUL-DE-SAC DETAIL (50' R/W)
N.T.S.



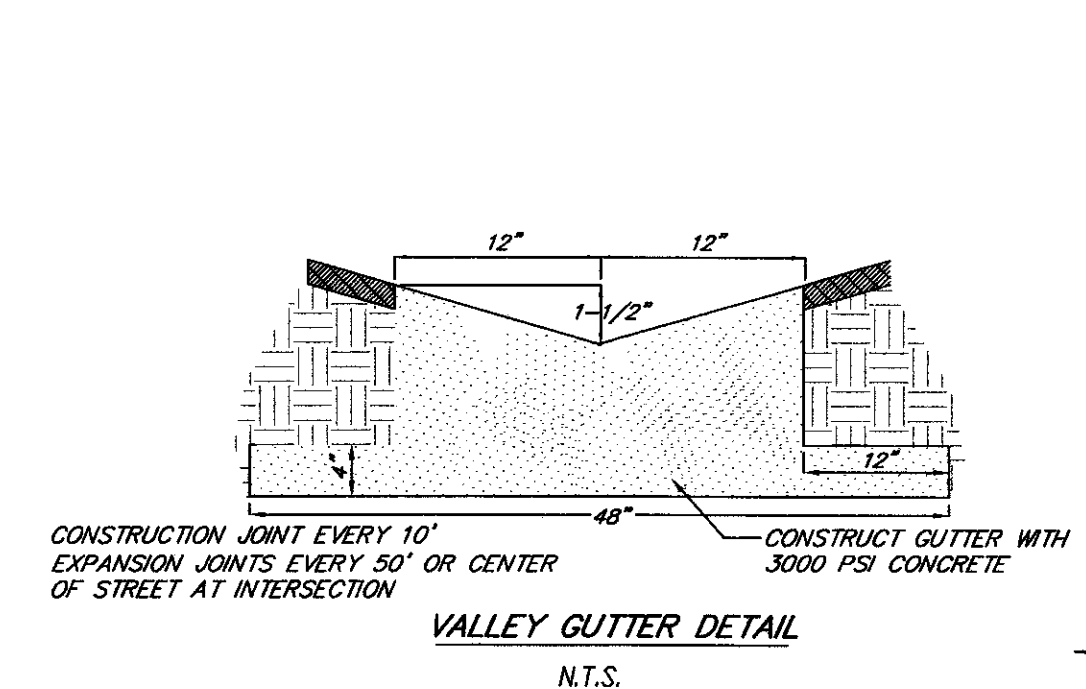
TYPICAL 50' ROADWAY SECTION
N.T.S.



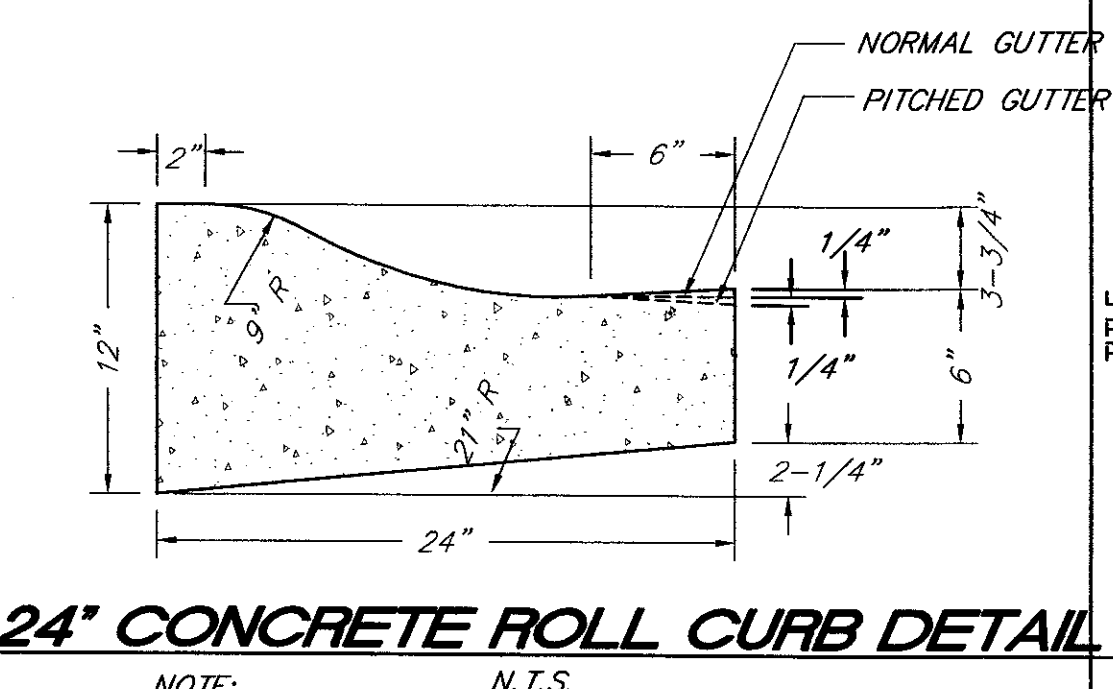
UNDER DRAIN DETAIL
N.T.S.



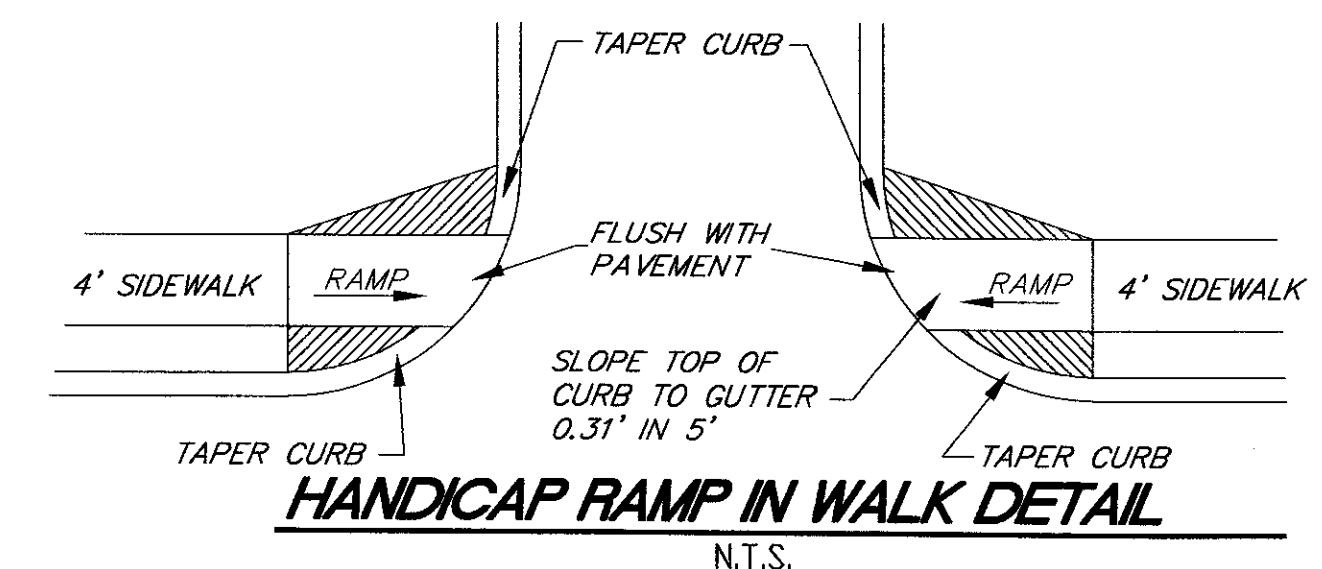
24' PITCHED STRAIGHT CONCRETE CURB AND GUTTER DETAIL
N.T.S.



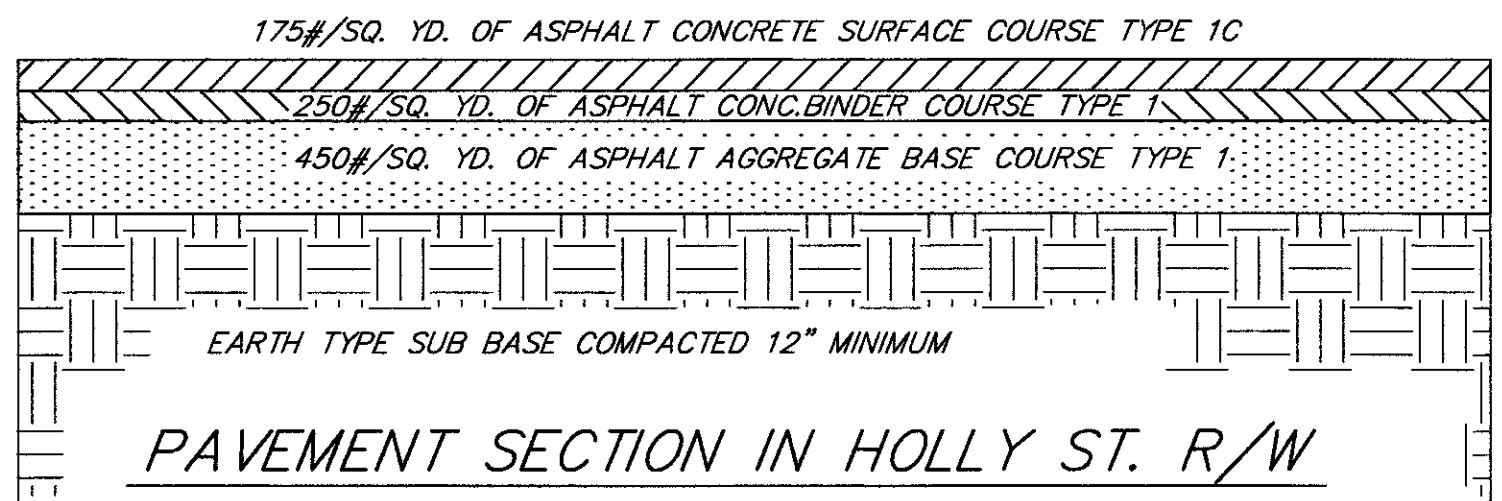
VALLEY GUTTER DETAIL
N.T.S.



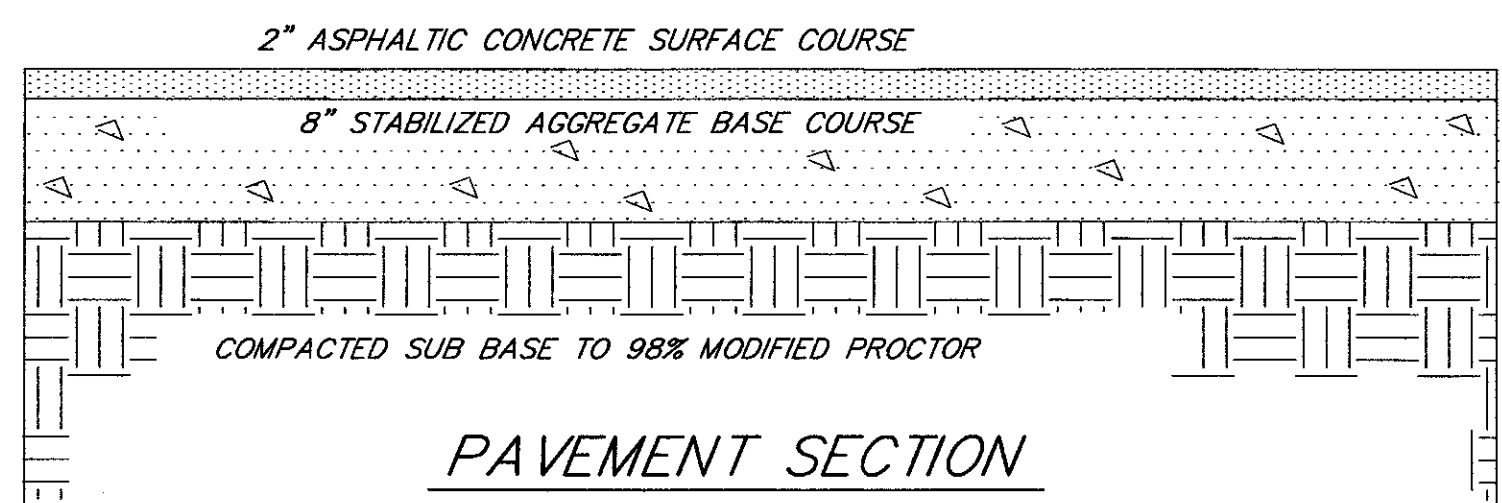
24' CONCRETE ROLL CURB DETAIL
N.T.S.



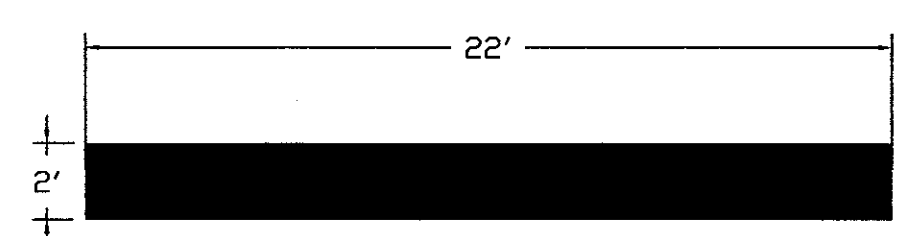
HANDICAP RAMP IN WALK DETAIL
N.T.S.



PAVEMENT SECTION IN HOLLY ST. R/W
N.T.S.



PAVEMENT SECTION
N.T.S.



STOP BAR DETAIL
N.T.S.

CONSTRUCTION NOTES:

1. TOPOGRAPHICAL INFORMATION BY TRICO ENGINEERING CONSULTANTS.
2. THE LOCATION OF EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, SIZES, AND ELEVATIONS PRIOR TO BEGINNING WORK.
3. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES ON THE DRAWINGS OR IN THE FIELD PRIOR TO BEGINNING WORK OR DURING CONSTRUCTION, HE/SHE SHALL IMMEDIATELY NOTIFY THE ENGINEER.
4. CONTRACTOR SHALL VERIFY THAT OWNER OR ENGINEER HAS OBTAINED ALL NECESSARY PERMITS FOR CONSTRUCTION PRIOR TO THE START OF THE PROJECT.
5. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO BEGINNING OF ANY WORK.
6. UNIFORMLY GRADE TOP SOIL AT ADJACENT PROPERTY LINES TO MEET EXISTING GRADE AND TO PROVIDE POSITIVE DRAINAGE. ALL AREAS DISTURBED SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH SCDOT ITEM 810.
7. CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT EDGES PRIOR TO CONSTRUCTION OF NEW SIDEWALKS AND REPAIR ALL DAMAGE TO EXISTING PAVEMENT AT ENTRANCE WAYS. CONTRACTOR SHALL CONSTRUCT ENTRANCE WAYS IN ACCORDANCE WITH THE REQUIREMENTS AND CONDITIONS OF THE S.C. HIGHWAY DEPT. SPECIFICATIONS.
8. CONTRACTOR SHALL REPAIR ALL DAMAGE TO EXISTING PAVEMENT AND CURBING AT ENTRANCE WAYS IN ACCORDANCE WITH THE REQUIREMENTS AND CONDITIONS OF SCDOT SPECIFICATIONS.
9. ANY UTILITIES DAMAGED THAT ARE NOT TO BE REMOVED SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE PRIOR TO COMMENCING WITH EXCAVATION. CONTRACTOR SHALL NOTIFY PALMETTO UTILITY LOCATOR SERVICE AT 1-800-922-0983 FOR LOCATIONS OF UNDERGROUND UTILITIES.
10. ALL PIPE ENDS NOT CONSTRUCTED WITH STRUCTURES WILL BE RIP-RAPPED AS SHOWN IN DETAIL.
11. SILT FENCING SHALL BE PLACED ALONG TOE OF SLOPES ON BOTH SIDES OF ROADWAY EMBANKMENT IN FILL AREAS, AND OVER THE INLET END OF ALL EXPOSED STORM DRAINAGE PIPES. SILT FENCING IS TO BE MAINTAINED UNTIL ALL SLOPES HAVE BEEN STABILIZED AND GRASSED, AND NO FURTHER EROSION IS EVIDENT.
12. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE BEEN TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN 21 DAYS.
13. ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AFTER ANY STORM EVENT OF GREATER THAN 0.5 INCHES OF PRECIPITATION DURING ANY 24-HR PERIOD. ALL SEDIMENT CONTROL FEATURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION HAS BEEN OBTAINED.
14. WHEN WORK IN A LIVE WATERWAY IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION.

STREET NAME SIGNS:

EACH SIGN PLATE SHALL BE 7"x24" ANODIZED ALUMINUM 0.090 GAUGE WITH 1-1/4" RADI ON CORNERS. BACKGROUND FACING FOR THE SIGNS SHALL BE NO.2277 GREEN SCOTCH LITE REFLECTIVE SHEETING AND SHALL COVER THE ENTIRE SIGN. THE LEGENDS AND BORDERS SHALL BE FABRICATED FROM NO.2270 SILVER SCOTCH LITE REFLECTIVE SHEETING. THE STREET NAME LEGEND SHALL BE MADE WITH 4" HIGH LETTERS. THE DESIGNATION OF AVE., ST., RD., DR., ETC., MAY BE ABBREVIATED AND SHALL BE MADE WITH 2" HIGH LETTERS. PERIODS WILL NOT BE USED AFTER THE ABBREVIATIONS. THE BORDER AROUND THE ENTIRE EDGE OF THE SIGN SHALL BE 1/2" WIDE. THE FINISHED SIGN SHALL BE COATED WITH AN APPLICATION OF NO.700 CLEAR COAT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. AN APPROPRIATE MARK SHALL BE PLACED IN THE MIDDLE OF THE SIGN BOTH TOP AND BOTTOM. REFLECTIVE SHEETING OF EQUAL QUALITY MAY BE USED IN LIEU OF THAT DESIGNATED ABOVE. BEADED SIGNS WILL NOT BE ACCEPTABLE.

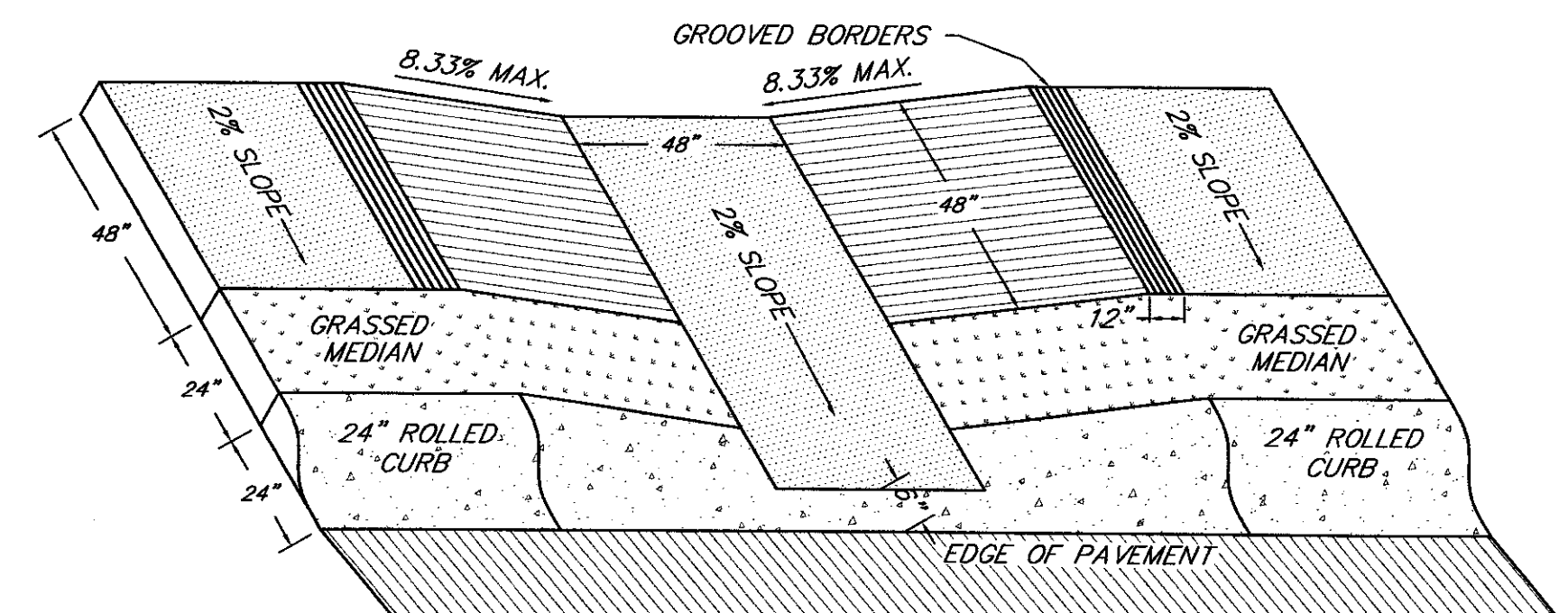
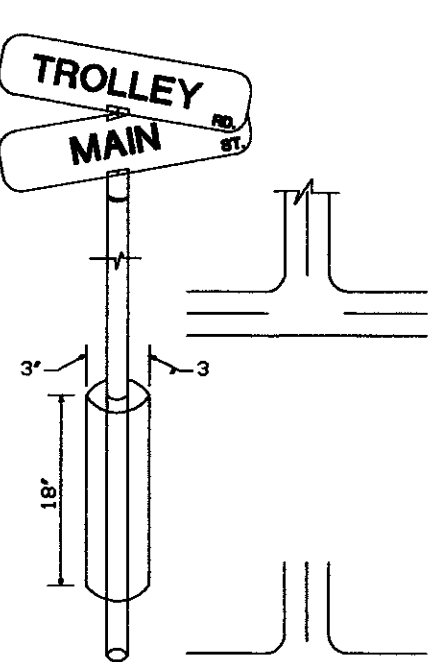
POSTS AND BRACKETS:

THE SIGN POSTS SHALL BE 2" GALVANIZED IRON PIPE 10'-6" LONG. THE BRACKET SHALL BE CAST ALUMINUM AND IN TWO (2) PARTS. A CAP AND A SPACER THE CAP SHALL FIT OVER THE TOP OF THE PIPE AND HAVE A SLOT IN ITS TOP TO HOLD THE STREET NAME SIGN. THE SPACER SHALL BE MADE WITH TWO SLOTS AT 90° TO EACH OTHER TO FIT OVER ONE STREET NAME SIGN AND TO HOLD THE OTHER. THE BRACKET PARTS SHALL BE PROVIDED WITH ALLEN HEAD SET SCREWS TO HOLD THE ENTIRE ASSEMBLY TOGETHER ON THE POST.

INSTALLATION:

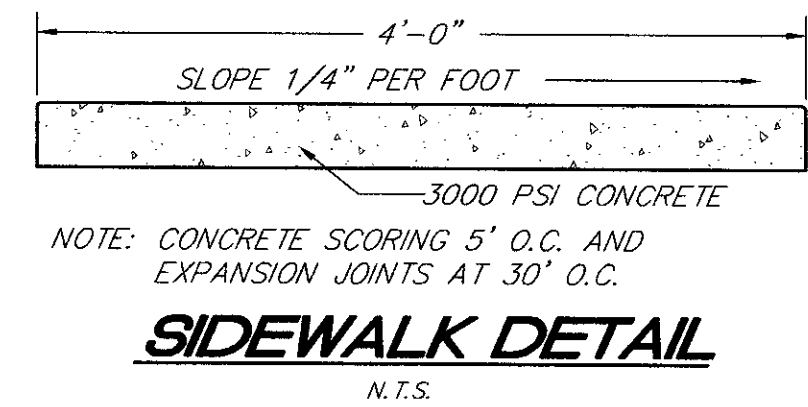
EACH INSTALLATION SHALL CONSIST OF TWO (2) DOUBLE-FACED STREET NAME SIGNS MOUNTED ONE ABOVE THE OTHER ON TOP OF A 2-INCH GALVANIZED PIPE. CROSS-TYPE AND T-TYPE INTERSECTIONS SHALL HAVE ONE (1) SIGN ASSEMBLY. WHERE THE INTERSECTION HAS MORE THAN FOUR (4) STREET LESS THAN ONE SIGN ASSEMBLY WILL BE REQUIRED. THE INSTALLATION SHALL NOT BE CLOSER TO THE EDGE OF THE PAVEMENT THAN FOUR (4) FEET, NOR MORE THAN EIGHT (8) FEET FROM THE PAVEMENT. THE BOTTOM OF THE SIGNS SHALL BE SEVEN (7) FEET ABOVE THE CENTERLINE FINISHED GRADE OF THE STREET. THE 2" GALVANIZED IRON POST SHALL BE ENCASED IN CONCRETE FOR A DISTANCE OF 3" COMPLETELY AROUND IT AND FOR A DEPTH OF 18" BELOW GROUND.

TYPICAL STREET NAME INSTALLATION



CURB CUT RAMP
N.T.S.

- NOTES:
- 1.) SURFACE TEXTURE OF RAMP SHALL BE BROOM FINISH, TRANSVERSE TO THE SLOPE OF THE RAMP.
 - 2.) ACCESS RAMP SHALL MEET FLUSH WITH LOW POINT OF ROLLED CURB
 - 3.) ROLLED CURB SHALL BE HAND FORMED TO MEET FLUSH WITH RAMP.
 - 4.) GROOVED BORDERS MUST BE ON THE LEVEL SURFACE AT TOP OF THE RAMPS.
 - 5.) CROSS SLOPE OF LANDING AREAS DO NOT EXCEED 2% IN ANY DIRECTION.



SIDEWALK DETAIL
N.T.S.

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REVISIONS

NO.	DATE	REVISIONS
4	05-16-2002	REVISED PLAT/ROAD PLANS PER SUMMERVILLE'S COMMENTS

TITLE

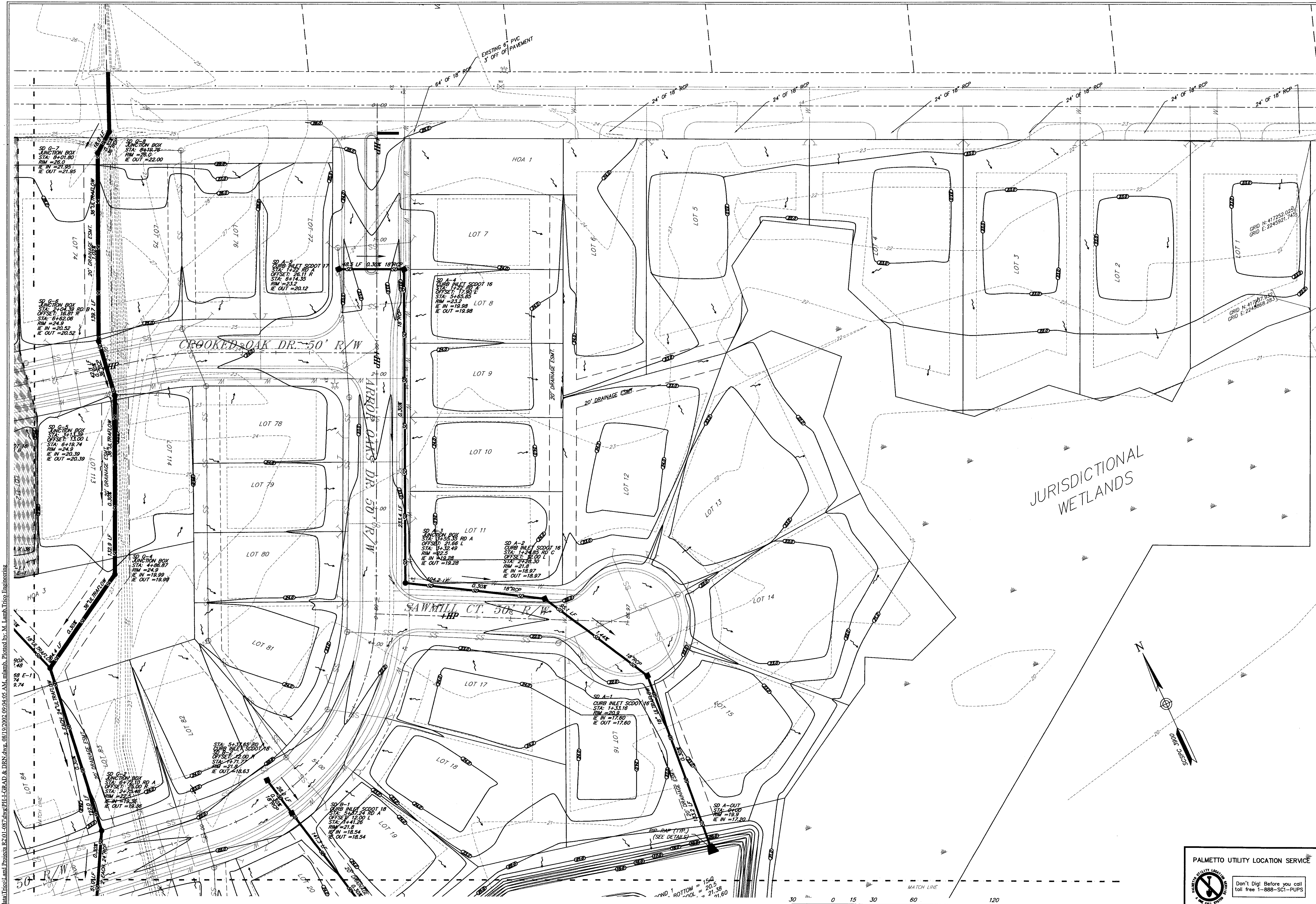
ROADWAY DETAILS
PHASE I OF ARBOR OAKS SUBDIVISION
LOCATED IN
THE TOWN OF SUMMERVILLE
DORCHESTER COUNTY, SOUTH CAROLINA

4425 Belle Oaks Drive
North Charleston, SC 29405
Phone: (843) 740-7700
Fax: (843) 740-7707
info@tricoengineering.com

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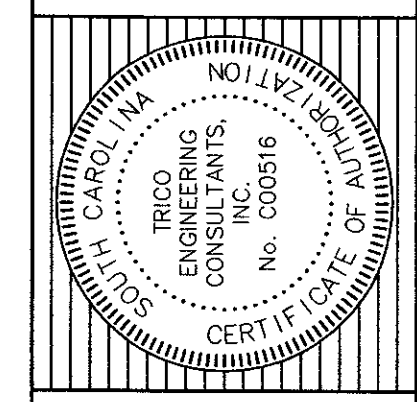
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DATE: 29 JANUARY 2002
PROJECT NO.: 01-087
SHEET 17 OF 33



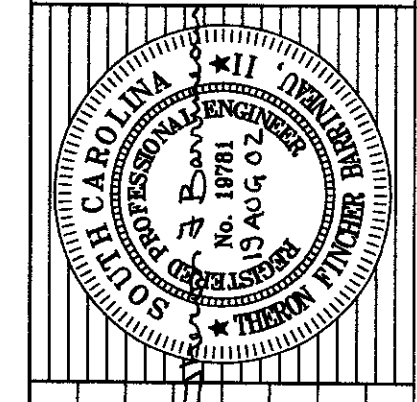
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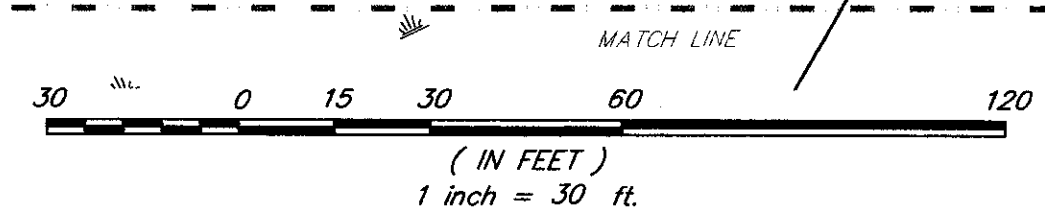
TITLE
GRADING AND DRAINAGE PLAN
 PHASE I OF ARBOR OAKS SUBDIVISION
 LOCATED IN
 THE TOWN OF SUMMERVILLE
 DORCHESTER COUNTY, SOUTH CAROLINA



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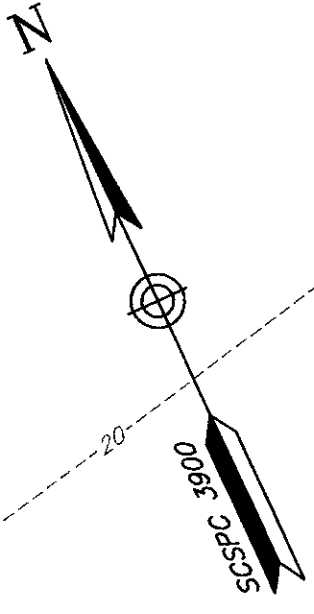
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JURISDICTIONAL WETLANDS



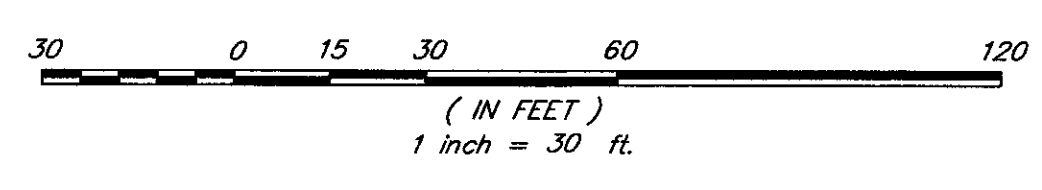


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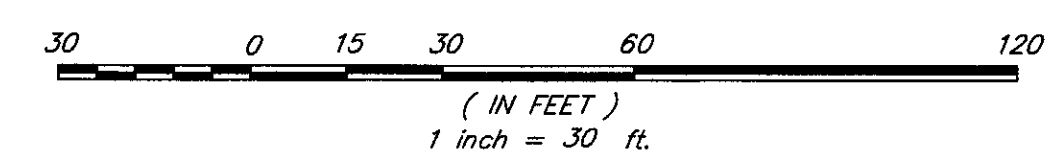
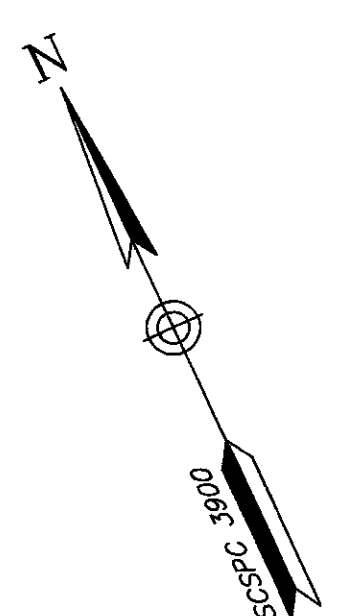
GRADING AND DRAINAGE PLAN PHASE I OF ARBOR OAKS SUBDIVISION LOCATED IN THE TOWN OF SUMMERVILLE DORCHESTER COUNTY, SOUTH CAROLINA	TITLE NO. DATE REVISIONS
TRICO ENGINEERING CONSULTANTS, INC. 4425 Belle Oaks Drive North Charleston, SC 29405 Phone: (843) 740-7700 Fax: (843) 740-7707 info@tricoengineering.com	
Civil Engineering - Surveying - Landscape Architecture Land Planning - Wetland Consulting - GPS Services Visit us at: http://www.tricoengineering.com	
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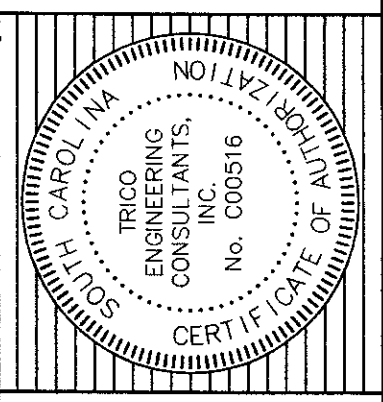


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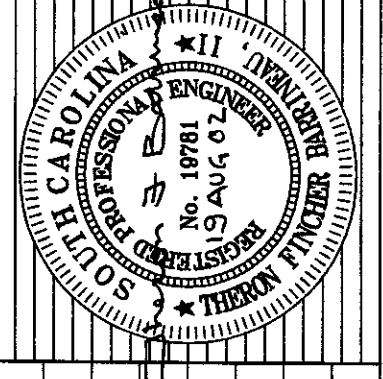
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GRADING AND DRAINAGE PLAN
 PHASE I OF ARBOR OAKS SUBDIVISION
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Proposed Trico and Project R201-087.dwg PLE-GRAD & DRS.dwg 08/19/2002 09:13:45 AM. Plotted by: M. Lamb, Trico Engineering

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TITLE

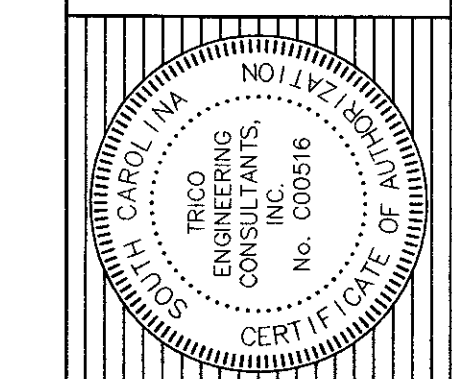
GRADING AND DRAINAGE PLAN

PHASE I OF ARBOR OAKS SUBDIVISION

LOCATED IN

THE TOWN OF SUMMERVILLE

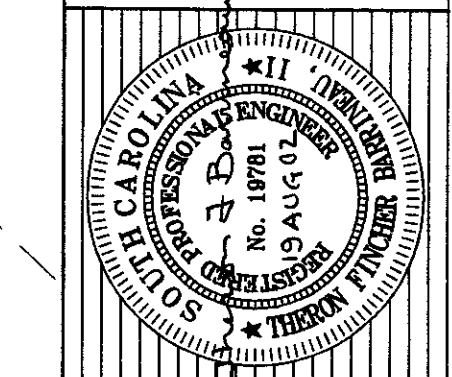
DORCHESTER COUNTY, SOUTH CAROLINA



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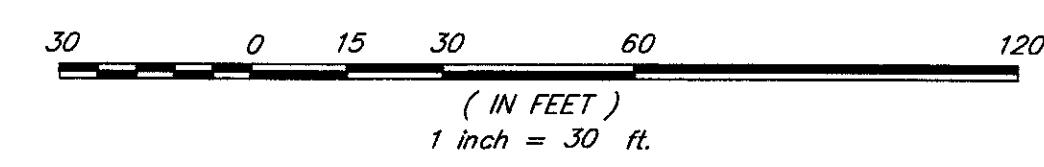


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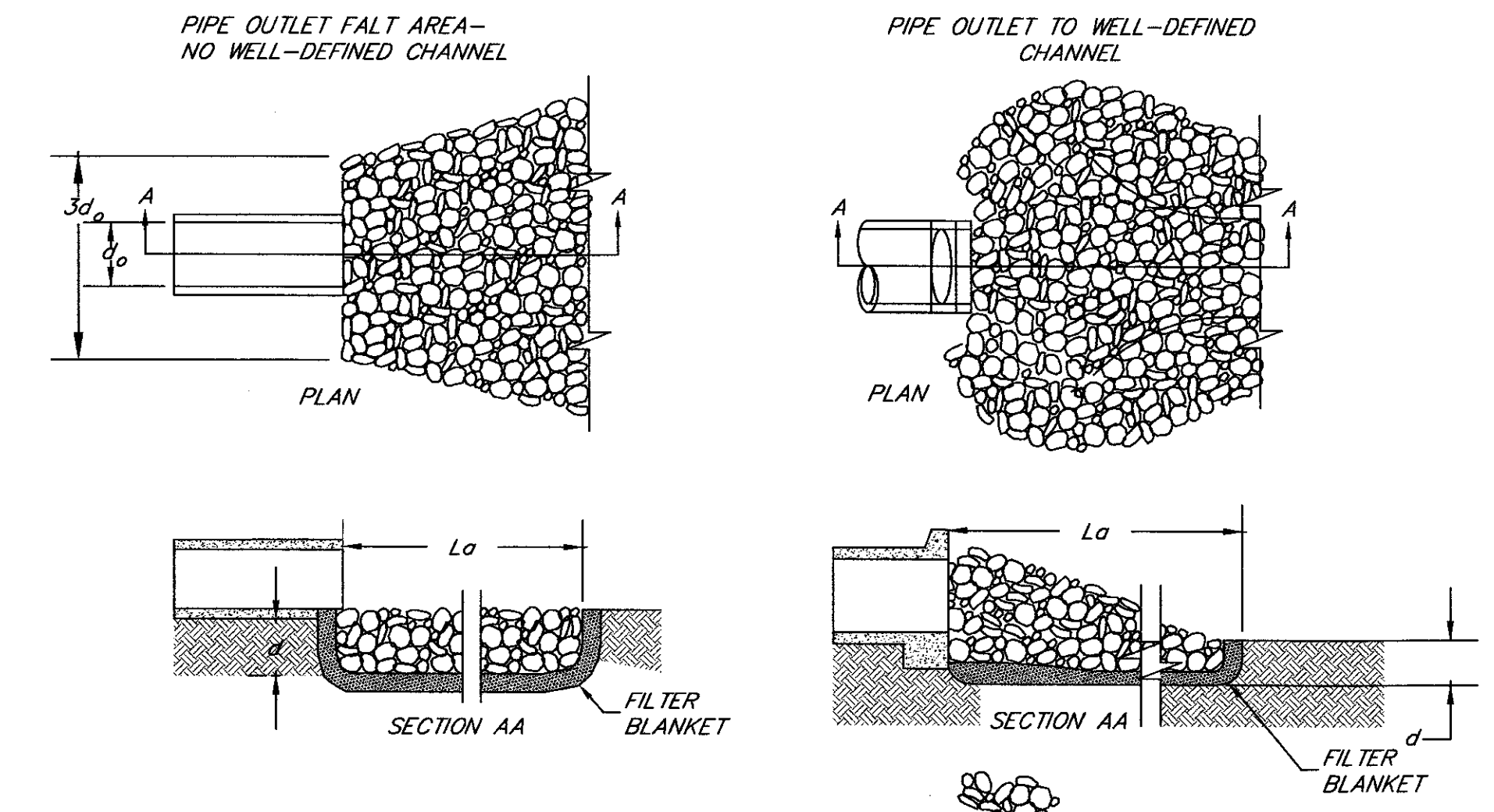
A one call system for community and job safety.

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SCALE: 1"=30'
DATE: 29 JANUARY 2002
PROJECT NO.: 01-087
SHEET 15 of 33



CONSTRUCTION NOTES:

1. ALL ELEVATIONS ARE BASED ON NGVD 29, ON SITE BENCHMARK LOCATED IN A POWER POLE NEAR LOT 68 AT ELEVATION 30.20'.
2. ALL WORK METHODS, EQUIPMENT AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF SUMMERVILLE ROAD CODE AND SPECIFICATIONS, LATEST EDITION.
3. ALL STREET RIGHT OF WAYS, SANITARY SEWER EASEMENTS, AND DRAINAGE EASEMENTS TO BE CLEARED 100% AND ALL DEBRIS REMOVED.
4. THE LOCATIONS OF EXISTING UTILITIES IS APPROXIMATE, THE CONTRACTOR SHALL VERIFY THE LOCATIONS, SIZES AND ELEVATIONS PRIOR TO BEGINNING WORK. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES ON THE DRAWINGS OR IN THE FIELD PRIOR TO BEGINNING WORK OR DURING CONSTRUCTION, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER.
5. CONTRACTOR SHALL VERIFY OWNER OR ENGINEER HAS OBTAINED ALL NECESSARY PERMITS FOR CONSTRUCTION PRIOR TO THE START OF THE PROJECT.
6. PIPE UNDERDRAINS WILL BE CONSTRUCTED ALONG 100% OF ALL ROADWAY CURB INLETS AND JUNCTION BOXES, AND ALL AREAS DEEMED NECESSARY BY THE PROJECT ENGINEER OR COUNTY ENGINEER AND WILL BE CONSTRUCTED IN ACCORDANCE WITH THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.
7. ALL SWALE DITCHES SHALL BE GRADED, PRIOR TO COMPLETION OF STREETS, TO GRADES SET BY THE DESIGN ENGINEER WITH THE APPROVAL OF THE TOWN OF SUMMERVILLE ENGINEER.
8. UNIFORMLY GRADE TOP SOIL BEHIND CURB AND GUTTER AT ADJACENT PROPERTY LINES TO MEET EXISTING GRADES AT PROPERTY LINE.
9. GRADE TO ENSURE POSITIVE DRAINAGE. FINISHED SURFACES SHALL FREE FROM SURFACE IRREGULARITIES.
10. THE SITE MUST BE CLEARED AND GRUBBED PRIOR TO PLACING EARTHWORK FILL. UNSUITABLE "POCKETS" OF COMPRESSIBLE SOILS SHALL BE REMOVED, BACKFILLED, AND COMPACTED WITH SUITABLE SOIL.
11. SHOULDERS OF ROADWAYS SHALL BE LEFT IN GOOD CONDITION, THAT IS ACCEPTABLE TO THE TOWN OF SUMMERVILLE AND ALL TOPSOIL AND GRASS THAT IS DISTURBED SHALL BE REPLACED IN ACCORDANCE WITH THE S.C. DEPT. OF TRANSPORTATION.
12. ALL PIPE ENDS NOT CONSTRUCTED WITH STRUCTURES WILL BE RIPRAPPED AS SHOWN IN DETAIL.
13. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO BEGINNING OF ANY WORK.
14. TOPOGRAPHICAL SURVEY PROVIDED BY TRICO ENGINEERING CONSULTANTS.
15. ALL UTILITIES TO BE INSTALLED BEFORE CURB & GUTTER OR S.A.B.C. INSTALLED.

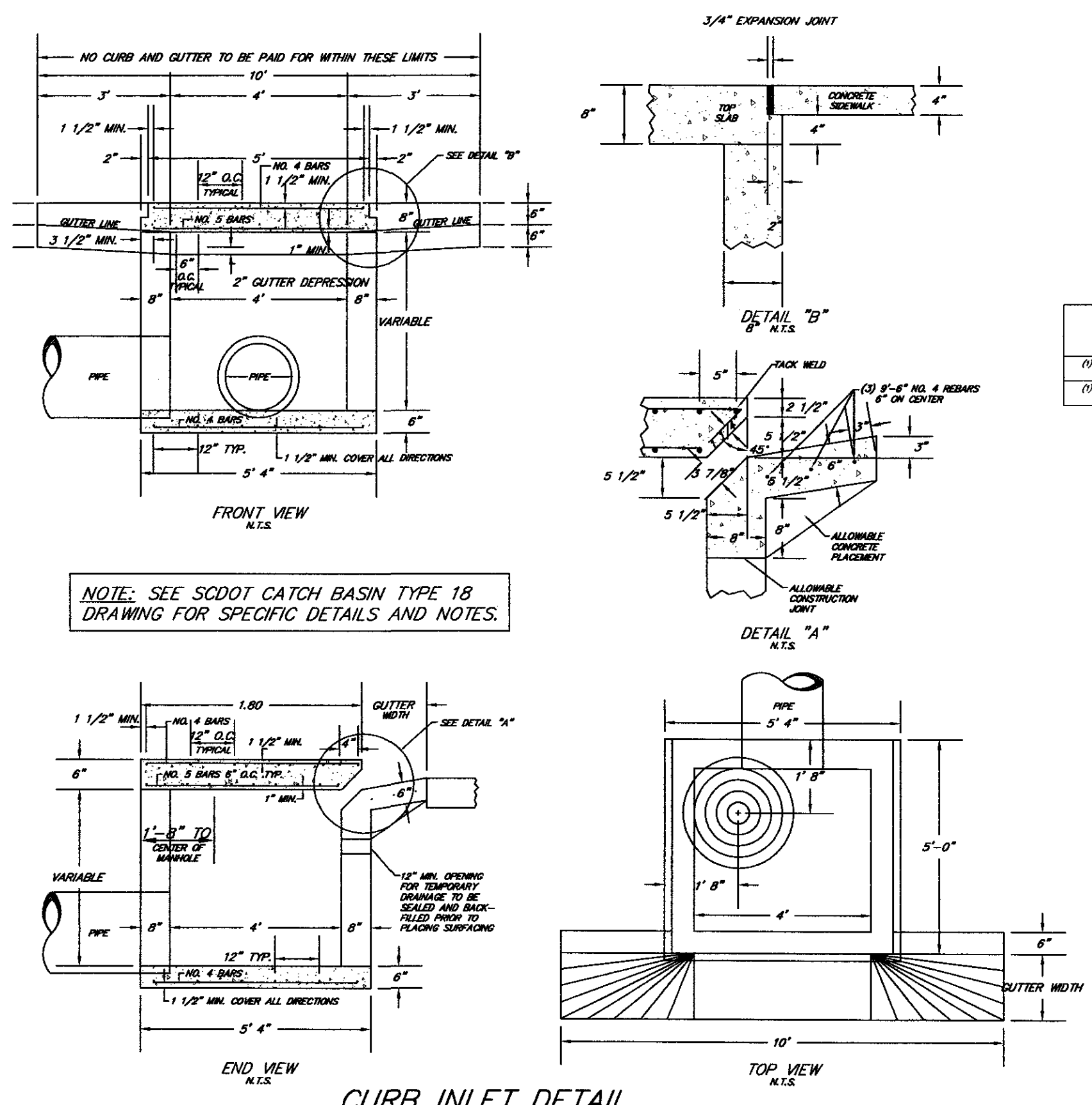


RIPP-RAP DIMENSIONS

PIPE OUTLET	PIPE DIA. (in.)	# PIPES	3D (ft.)	Lo (ft.)	W (ft.)	d (in.)
11A-1	24	1	6	5	8	9
11O-2	24	1	6	5	8	9

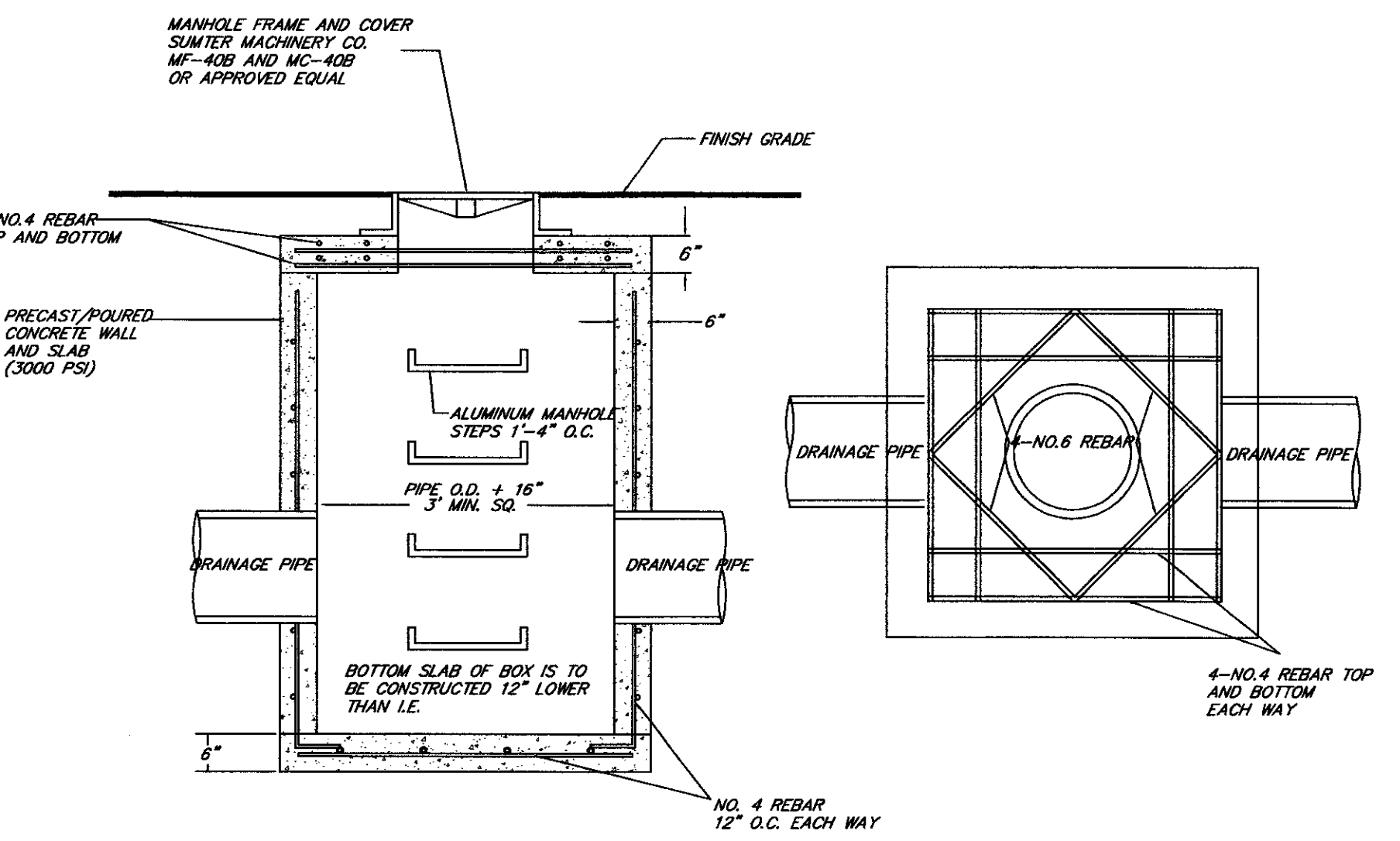
- NOTES:**
1. Lo IS THE LENGTH OF THE RIPRAP APRON.
 2. d=1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
 3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
 4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

OUTLET STABILIZATION STRUCTURE
N.T.S.

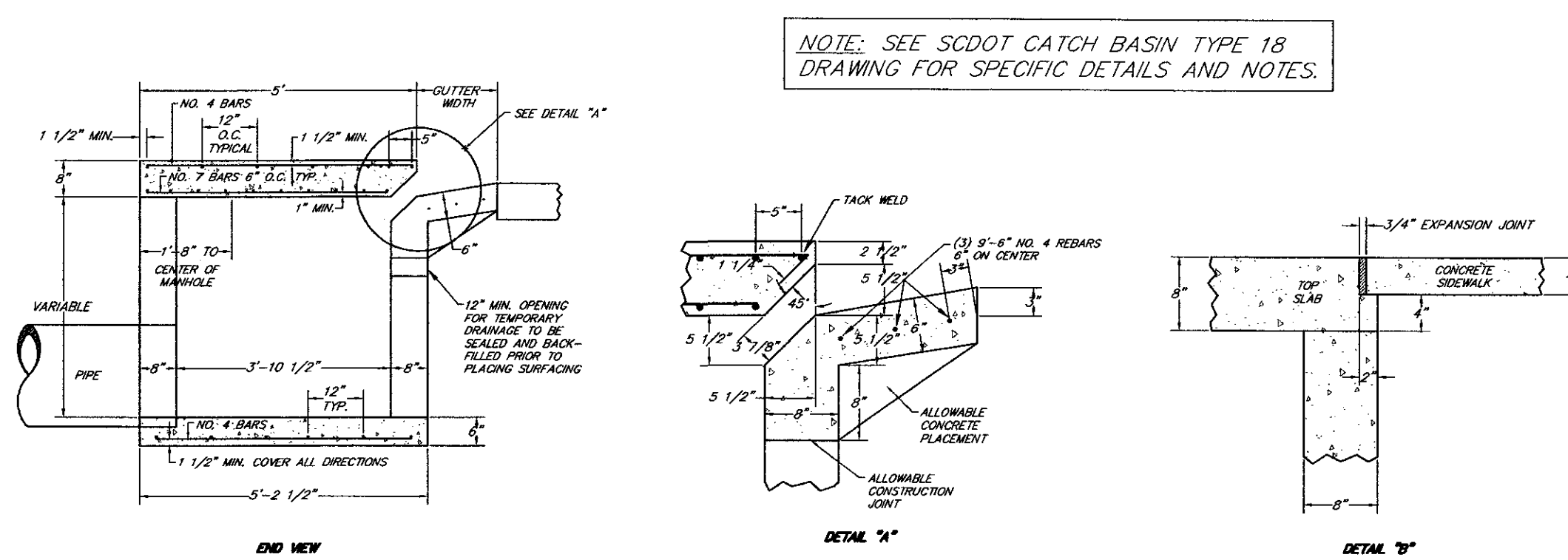
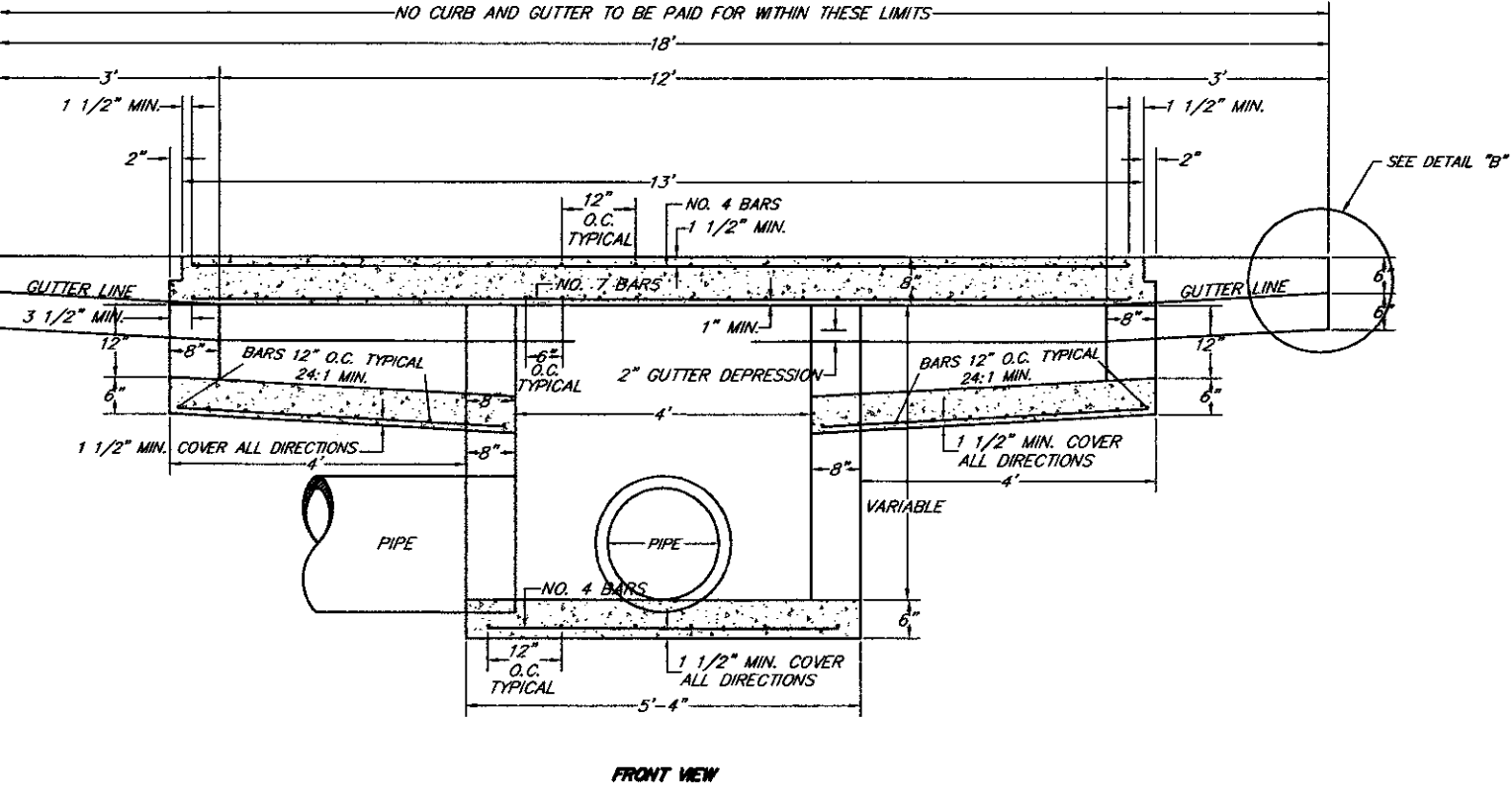


CURB INLET DETAIL
N.T.S.
SCDOT TYPE 16

- NOTES:**
1. FOR CONSTRUCTION OF THE CATCH BASIN WALLS EITHER BRICK MASONRY OR CLASS "A" CONCRETE MAY BE USED. FOR CONCRETE THE WALLS ARE TO BE 6 IN. THICK WITH A REINFORCING STEEL AREA OF 0.20 SQ. INCH PER FT. FOR BRICK THE WALLS ARE TO BE 8 IN. THICK.
 2. THE BOTTOM SLAB OF THE BOX SHALL BE A MINIMUM OF 6 IN. THICK CLASS A CONCRETE WITH A REINFORCING STEEL AREA OF 0.20 SQ. INCH PER FT. WIRE MESH MAY BE USED IN LIEU OF STEEL BARS PROVIDED A MINIMUM OF 0.20 SQ. INCH PER FT. IS MET.
 3. FOR CONSTRUCTION OF THE CATCH BASIN TOP CLASS A OR BETTER CONCRETE SHALL BE USED WITH REINFORCING STEEL AS SHOWN.
 4. MORTAR SHALL BE TYPE S OR M.
 5. IF DESIRED THESE ITEMS MAY BE PRE CAST PRIOR TO INSTALLATION IN LIEU OF BEING CAST IN PLACE. THE USE OF PRE CAST UNITS WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF OBTAINING SATISFACTORY INSTALLATIONS. SEE STANDARD DRAWINGS FOR PRE CAST STRUCTURES FOR ADDITIONAL DETAILS AND SPECIFICATIONS.
 6. REINFORCING STEEL SHALL BE DEFORMED AND SHALL CONFORM TO AASHTO M 31, GRADE 60. WIRE MESH SHALL CONFORM TO AASHTO M 55, AND M 221.
 7. THE NUMBER OF BOX OPENINGS SHALL BE CONSTRUCTED, AS DIRECTED BY THE ENGINEER, TO FIT FIELD CONDITIONS.
 8. STEPS ARE REQUIRED IN ALL DRAINAGE STRUCTURES THAT EXCEED 4.5' IN DEPTH.

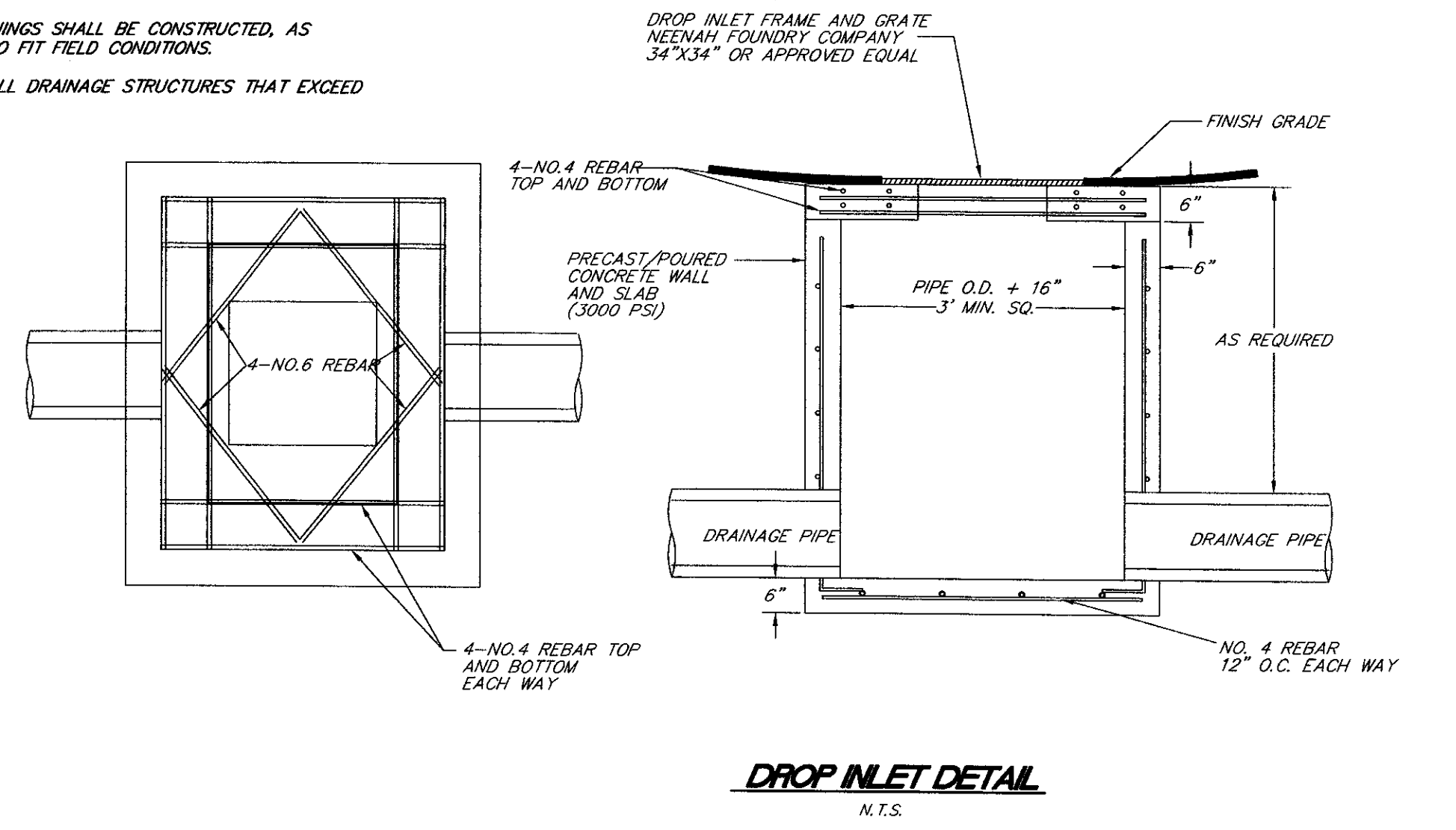


JUNCTION BOX DETAIL
N.T.S.

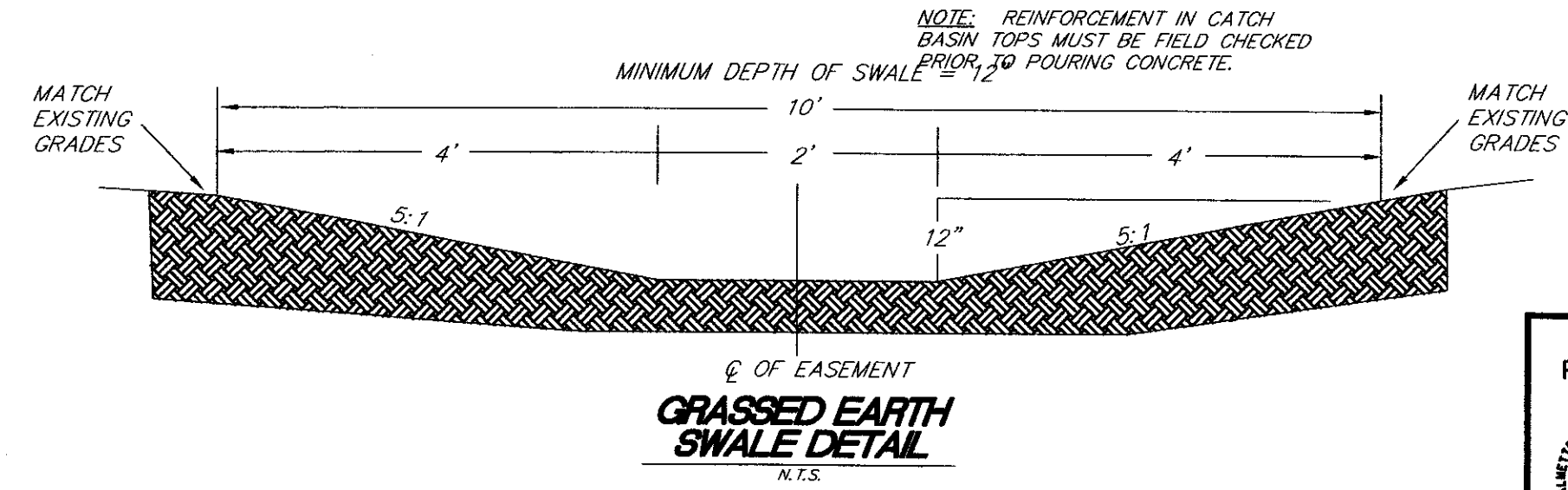


- NOTES:**
1. FOR CONSTRUCTION OF THE CATCH BASIN WALLS EITHER BRICK MASONRY OR CLASS A CONCRETE MAY BE USED FOR CONCRETE THE WALLS ARE TO BE 6 IN. THICK WITH A REINFORCING STEEL AREA OF 0.20 SQ. IN. PER FT. FOR BRICK THE WALLS ARE TO BE 8 IN. THICK. THE INTERIOR DIMENSIONS ARE TO REMAIN AS SHOWN FOR EITHER TYPE CONSTRUCTION.
 2. THE BOTTOM SLAB OF THE BOX SHALL BE A MINIMUM OF 8 IN. THICK CLASS A CONCRETE WITH A REINFORCING STEEL AREA OF 0.20 SQ. IN. PER FT. WIRE MESH MAY BE USED IN LIEU OF STEEL BARS PROVIDED A MINIMUM OF 0.20 SQ. IN. PER FT. IS MET.
 3. FOR CONSTRUCTION OF THE CATCH BASIN LID CLASS AA OR BETTER CONCRETE SHALL BE USED WITH REINFORCING STEEL AS SHOWN.
 4. MORTAR SHALL BE TYPE S OR M.
 5. IF DESIRED THESE ITEMS MAY BE PRECAST PRIOR TO INSTALLATION IN LIEU OF BEING CAST IN PLACE. THE USE OF PRECAST UNITS WILL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF OBTAINING SATISFACTORY INSTALLATIONS. SEE STANDARD DRAWINGS FOR PRECAST STRUCTURES FOR ADDITIONAL DETAILS AND SPECIFICATIONS.
 6. REINFORCING STEEL SHALL BE DEFORMED AND SHALL CONFORM TO AASHTO M 31, GRADE 60. WIRE MESH SHALL CONFORM TO AASHTO M 55 AND M 221.
 7. IF STRUCTURE DEPTH EXCEEDS 4'-6", METAL STEPS ARE TO BE PLACED ON WALL. SEE SCDOT STEP STANDARD DRAWING 719-16.
 8. WHEN IT IS NECESSARY TO PLACE A CATCH BASIN IN A CURB, THE FACE OF THE CATCH BASIN TOP SHALL CONFORM TO THE HORIZONTAL CURVATURE OF THE ADJACENT CURB WHEN THE RADIUS IS 100 FEET OR LESS. OTHERWISE, THE TOP SHALL BE RECTANGULAR WITH SQUARE CORNERS. IN ALL CASES, THE BACK OF THE CATCH BASIN SHOULD FOLLOW THE SAME ALIGNMENT AS ITS FACE.
 9. SEE SCDOT STANDARD DRAWING 719-7 FOR DETAIL OF MANHOLE CASTING AND COVER.
 10. LIFT HOLES MAY BE PLACED AS NECESSARY. ALL LIFT HOLES IN THE LID SHALL BE GROUTED SHUT PRIOR TO COMPLETION OF THE INSTALLATION.
 11. THE CONTRACT UNIT PRICE FOR CATCH BASINS SHALL INCLUDE THE COST OF FURNISHING ALL MATERIALS AND WORK INCIDENTAL TO THE CONSTRUCTION OF THE STRUCTURE COMPLETE IN PLACE AS SHOWN, INCLUDING THE CURB AND GUTTER, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

SCDOT CATCH BASIN TYPE 18
N.T.S.



DROP INLET DETAIL
N.T.S.



GRASSSED EARTH SWALE DETAIL
N.T.S.

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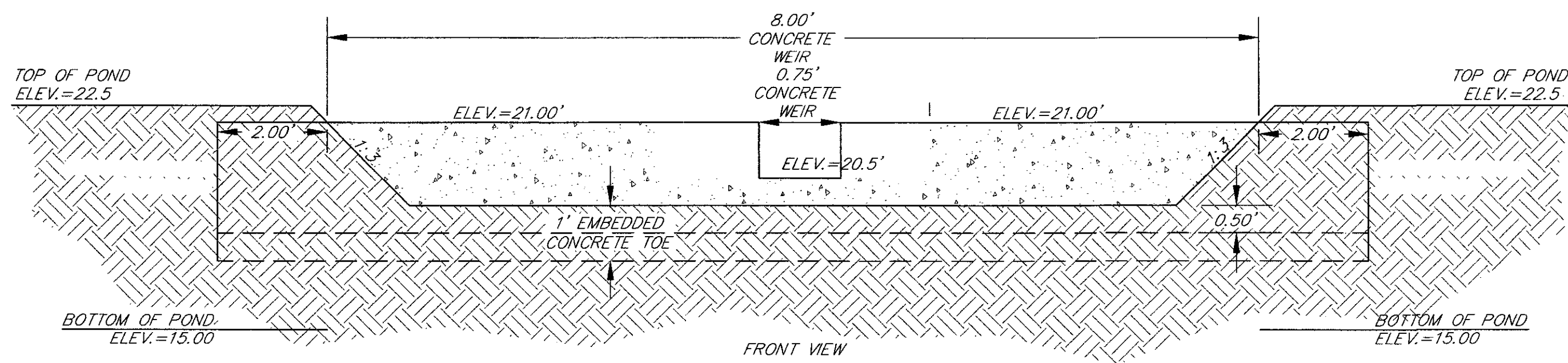
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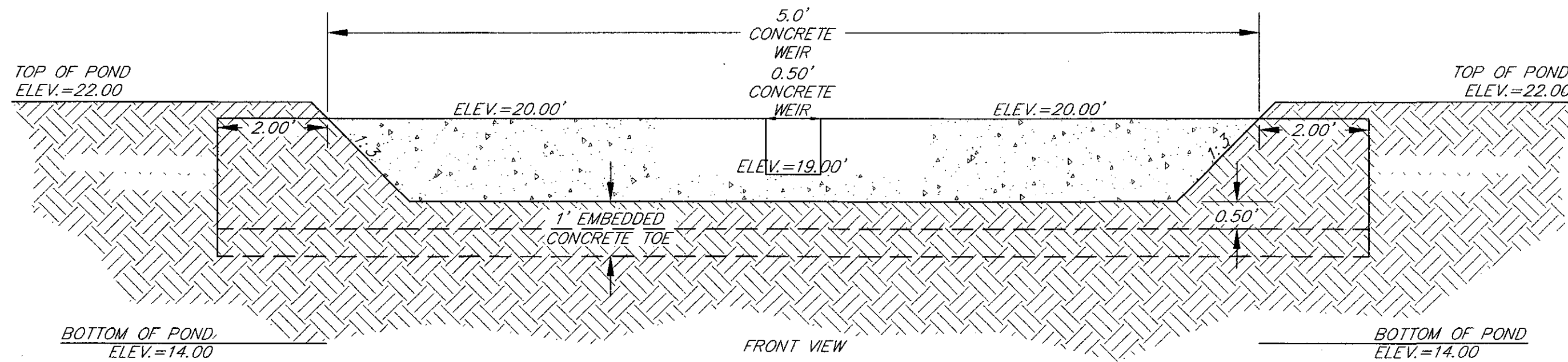
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DATE: 29 JANUARY 2002
PROJECT NO.: 01-087
SHEET 16 OF 33

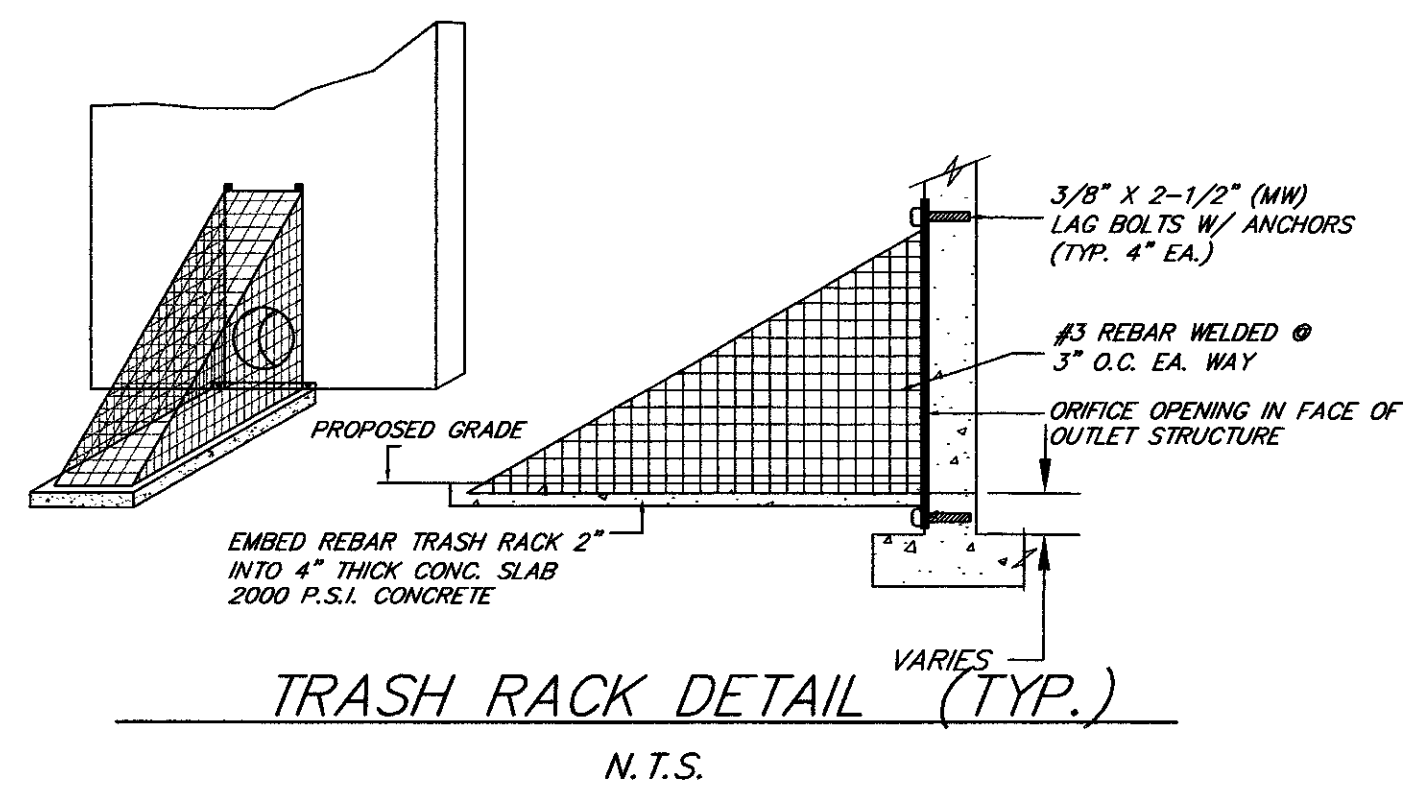
\\Procedural\Trico\and Projects\B201_087\New\PEL\CAD & DRI\Draw_08192002_101318.AM.mlbmbh.Plotter by: M. Lamb, Trico Engineering



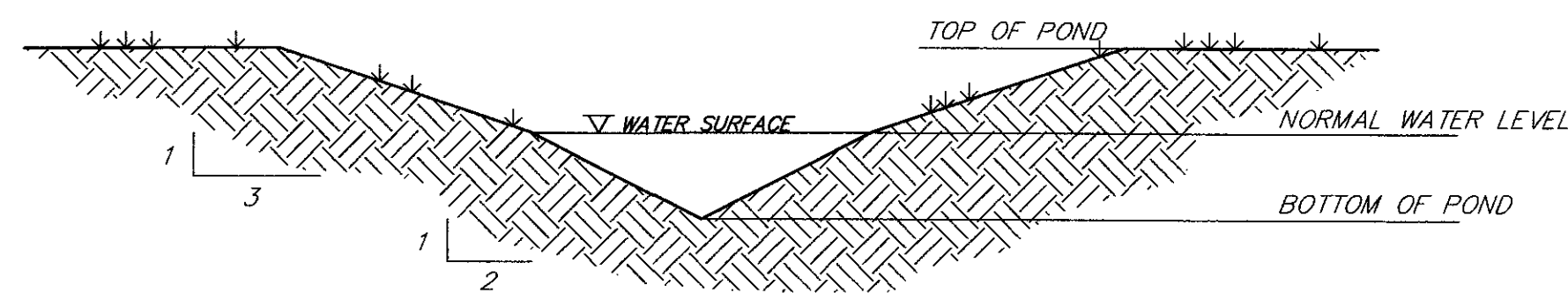
POND 1 OUTLET CONTROL DEVICE
N.T.S.



POND 2 OUTLET CONTROL DEVICE
N.T.S.



TRASH RACK DETAIL (TYP.)
N.T.S.



TYPICAL POND SECTION
N.T.S.

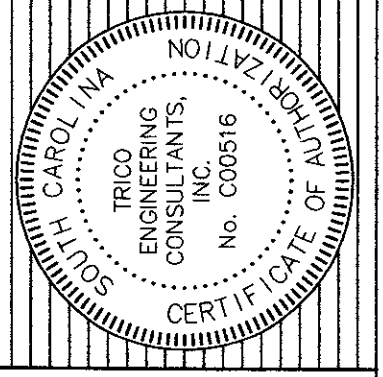
NOTE: DETAIL TO SHOW 3:1 SLOPE ABOVE NORMAL WATER AND 2:1 BELOW NORMAL WATER FOR ALL PONDS

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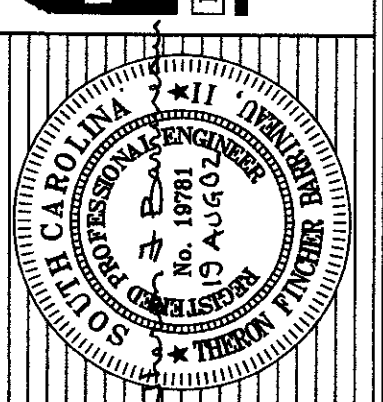
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GRADING AND DRAINAGE DETAILS
PHASE I OF ARBOR OAKS SUBDIVISION
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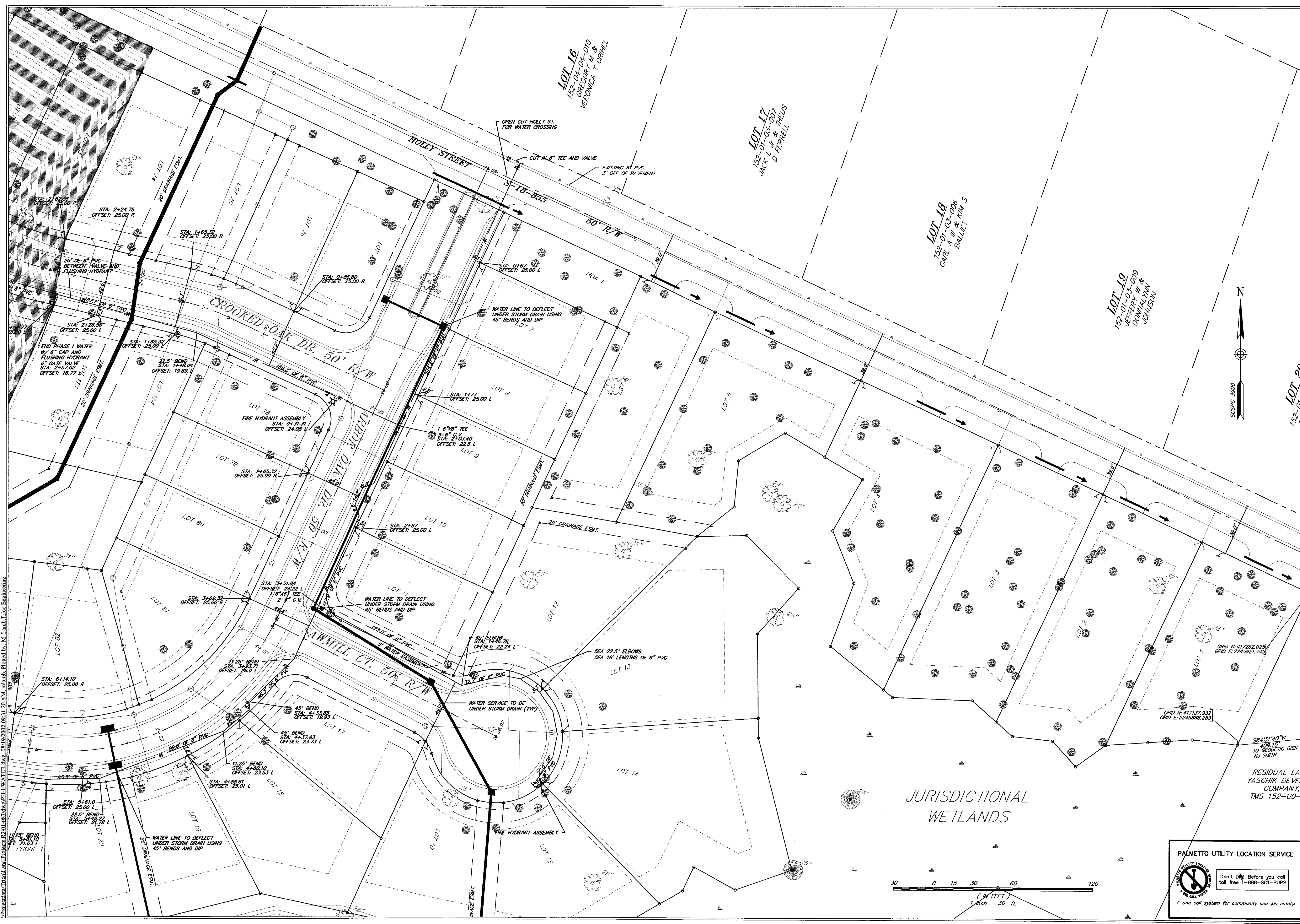
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SHEET 17 OF 33

NO.	DATE	REVISIONS

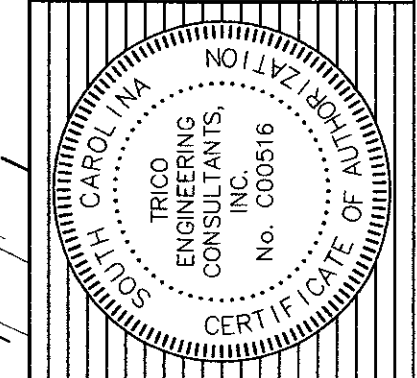
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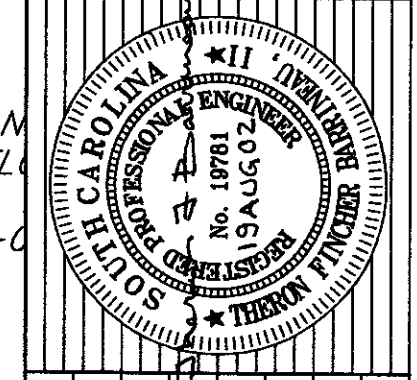
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NO.	DATE	REVISIONS
5	06-24-2002	WATER LINE CHANGED TO SAFE TREES.
2	04-30-2002	REVISED WATER PLANS PER SCIP'S COMMENTS

TITLE
WATER PLAN
 PHASE I OF ARBOR OAKS SUBDIVISION
 LOCATED IN
 THE TOWN OF SUMMERVILLE
 DORCHESTER COUNTY, SOUTH CAROLINA



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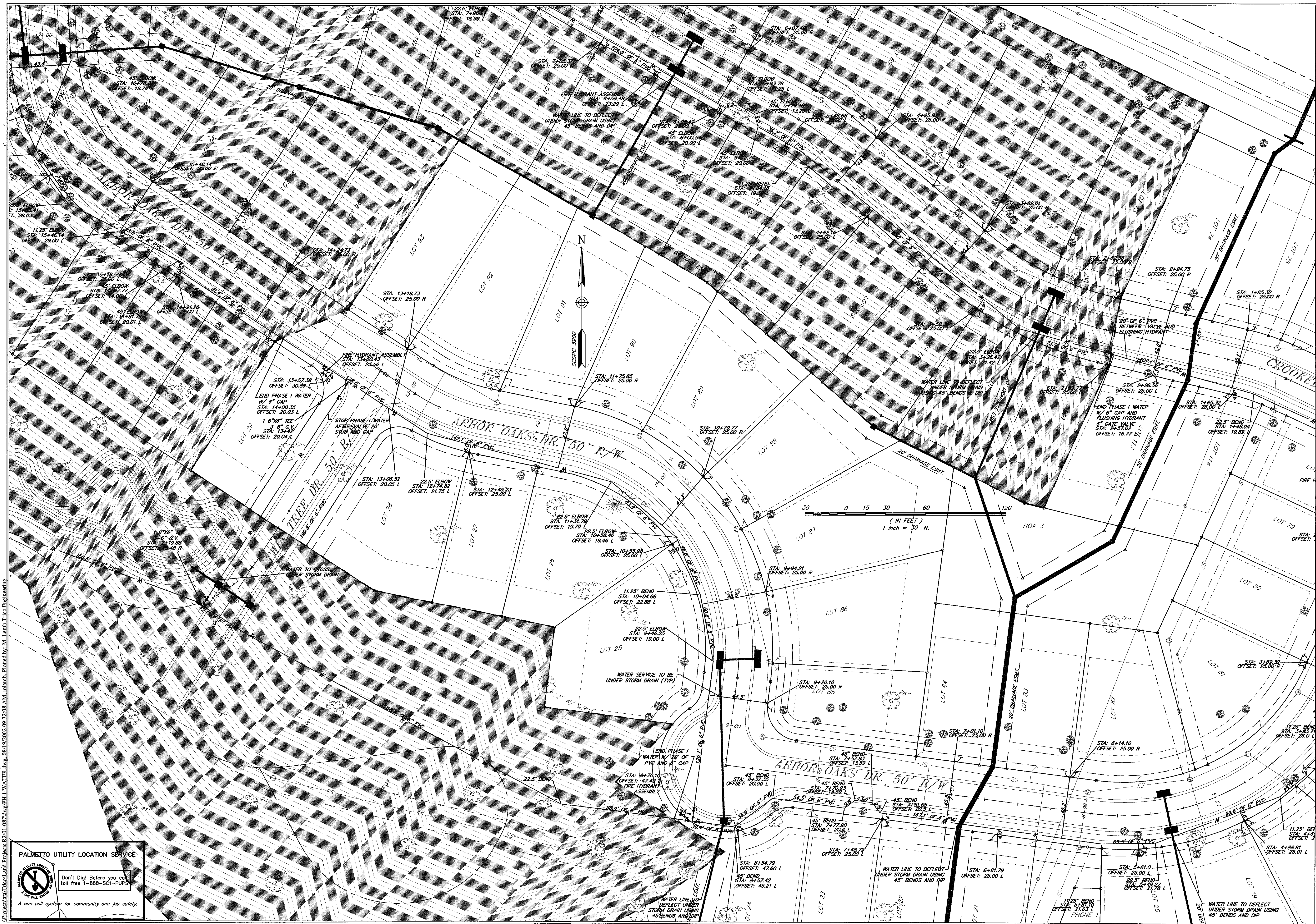
RESIDUAL LAND DEVELOPMENT COMPANY,
 TMS 152-00-0

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 PROJECT NO.: 01-087
 SHEET 18 OF 33


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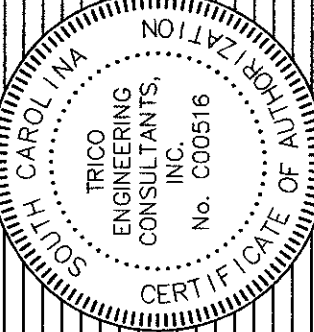
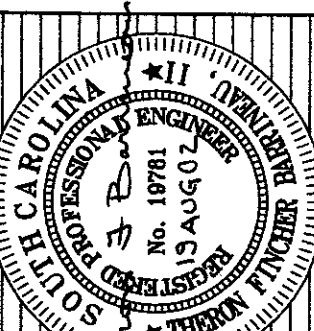
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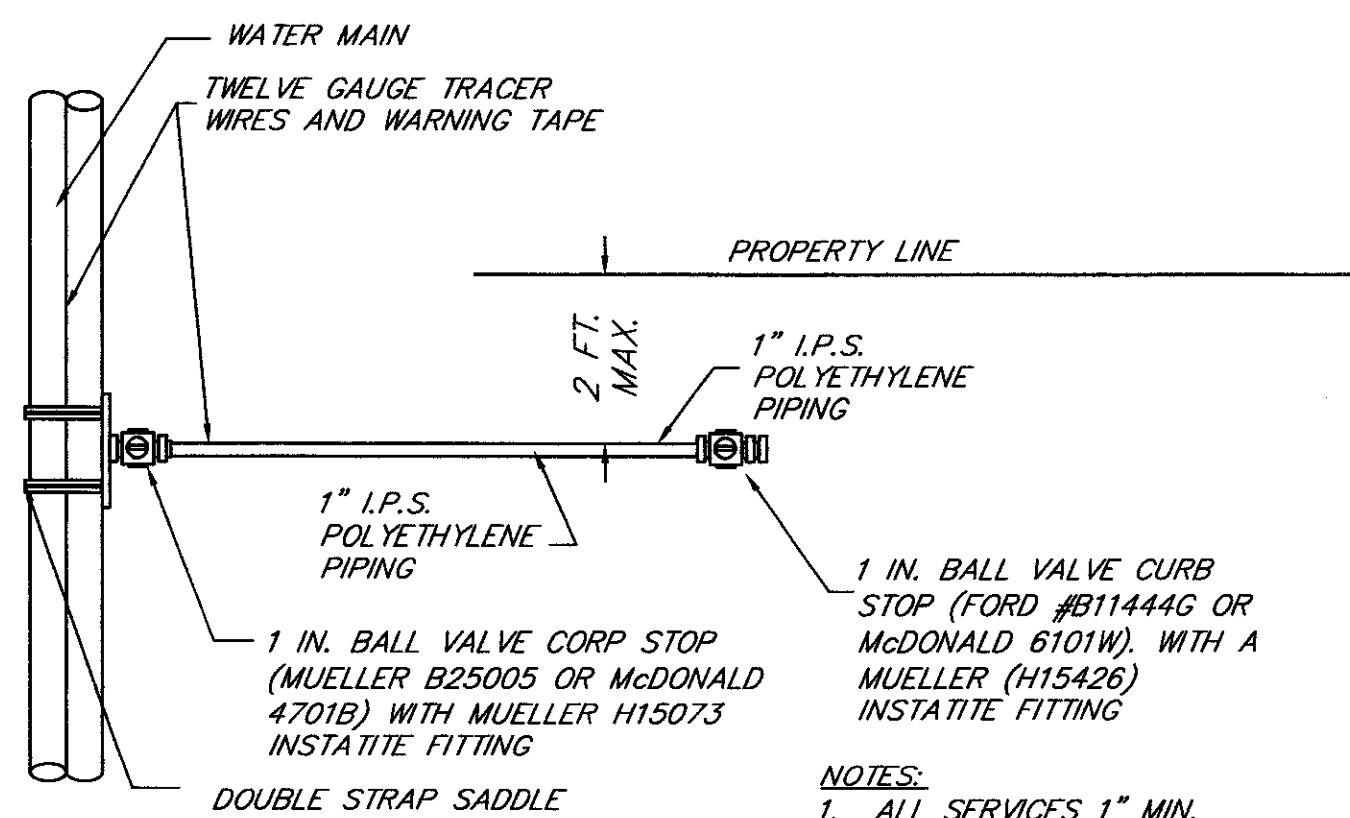


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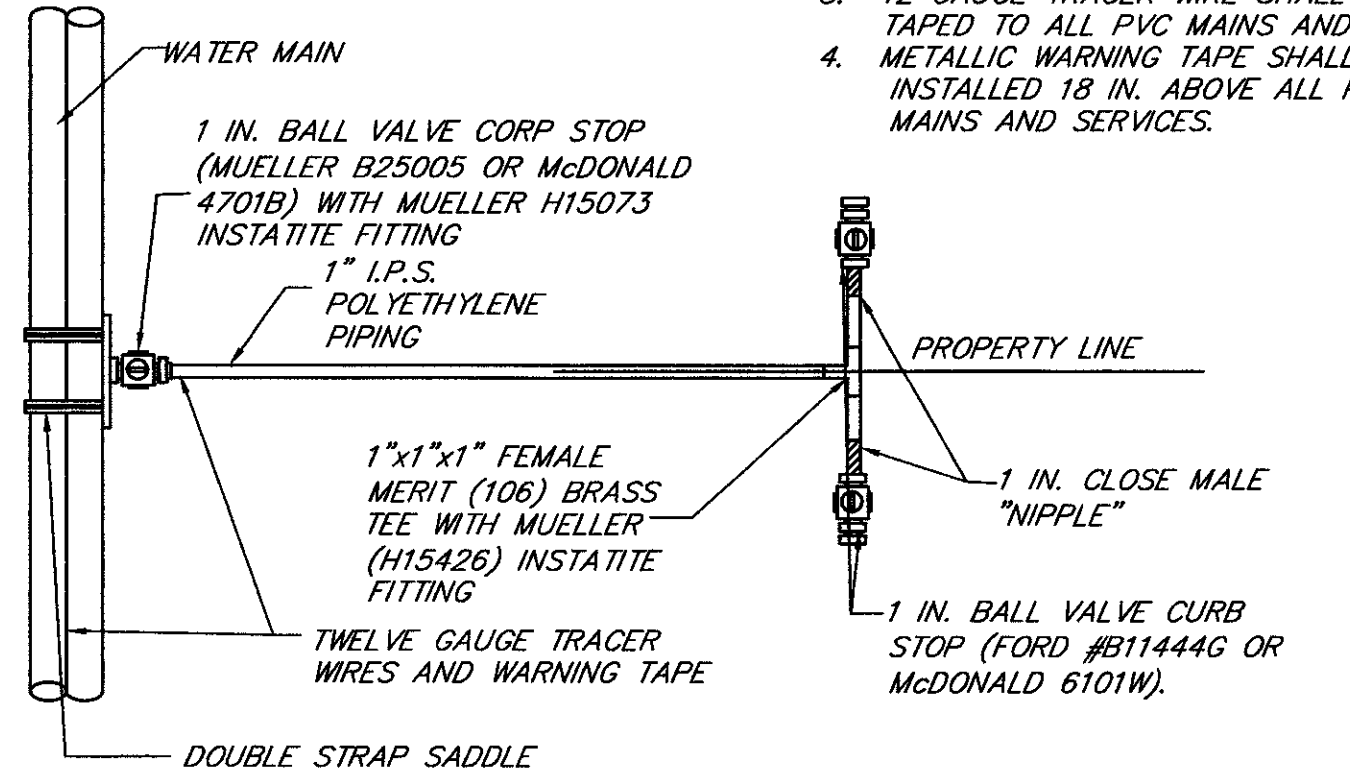

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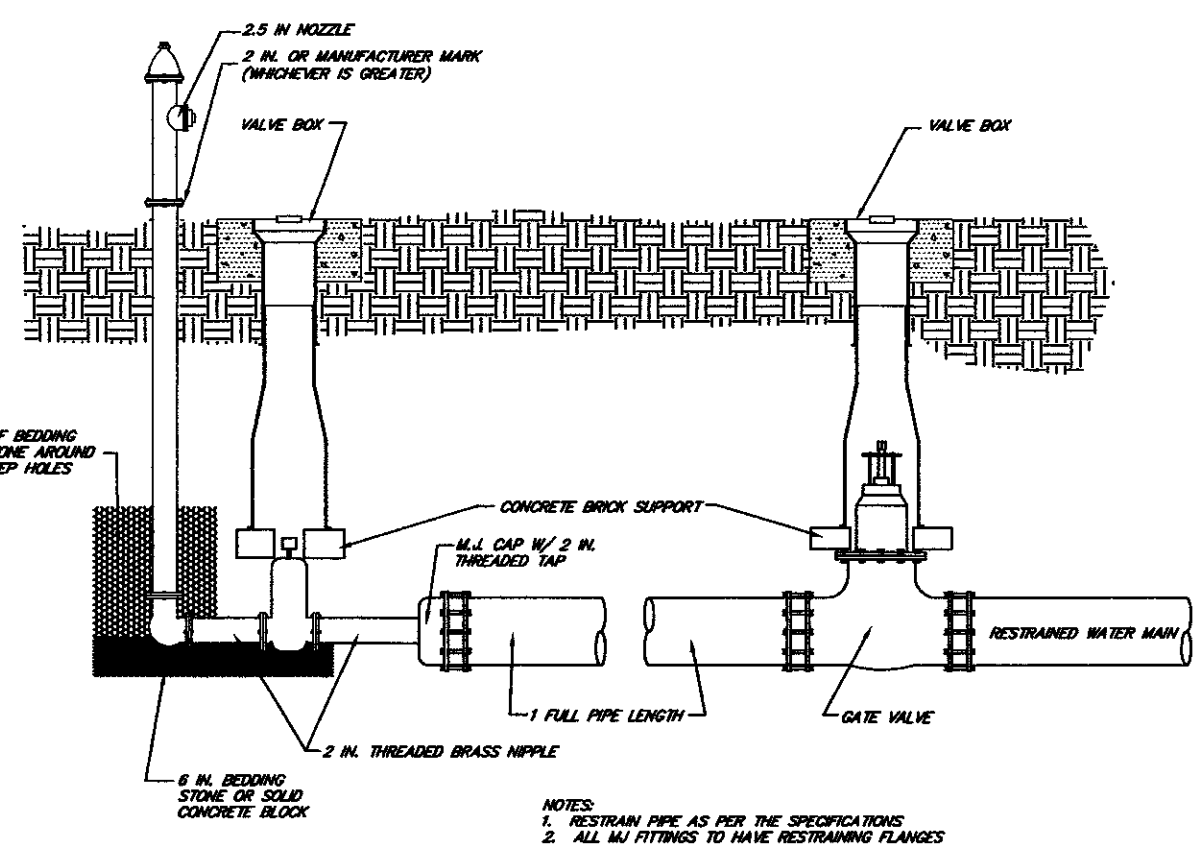
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DESIGNED: MEL DRAWN: MEL CHECKED: TFB APPROVED: TFB	DATE: 29 JANUARY 2002 PROJECT NO.: 01-087 SHEET 19 OF 33
NO. DATE 5 06-24-2002 WATER LINE CHANGED TO SAVE TREES 2 04-30-2002 REVISED WATER PLANS PER SDCPW'S COMMENTS REVISIONS	
	
	
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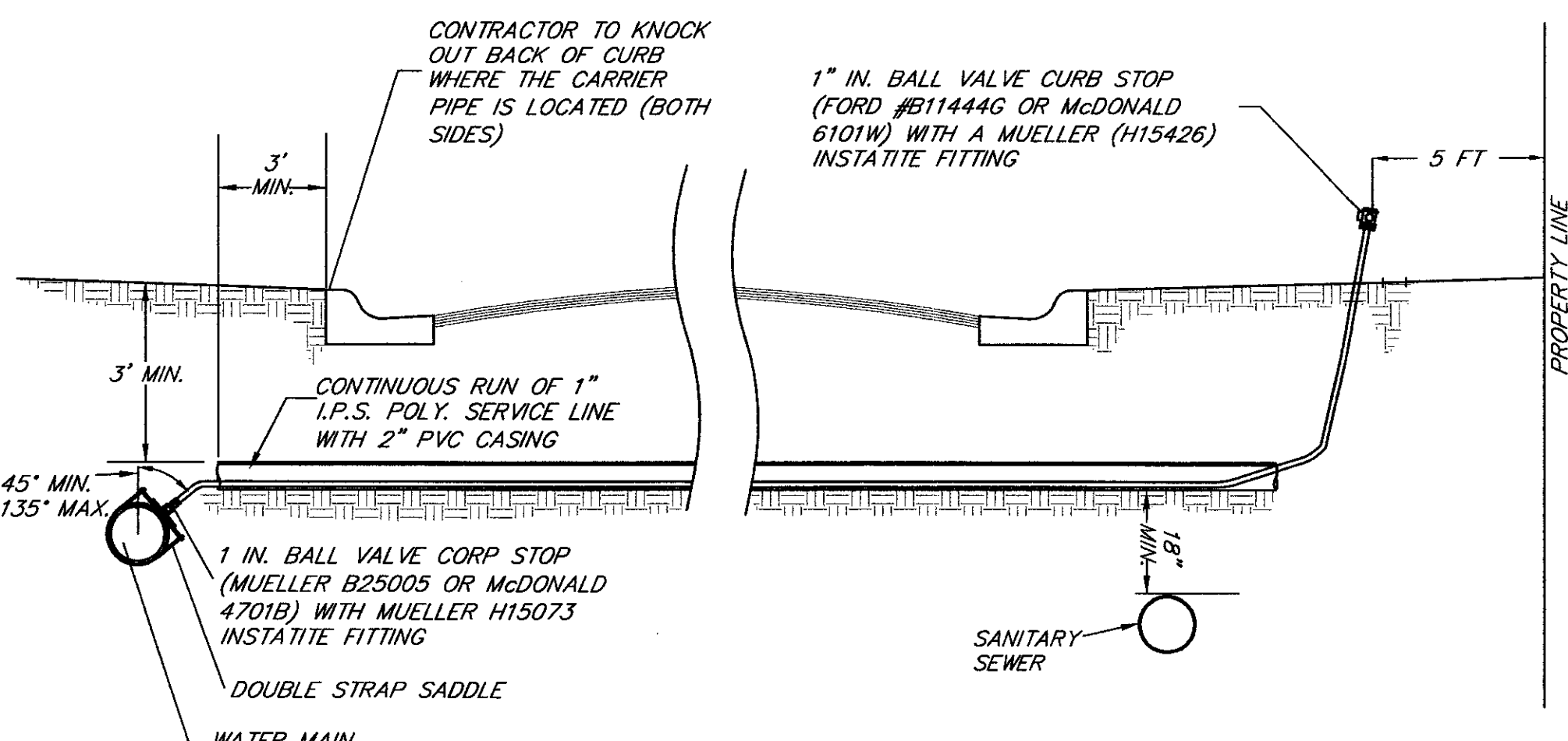


TYPICAL WATER SERVICE - PLAN VIEW
N.T.S.



TYPICAL LINE STUB AND FLUSHING HYDRANT DETAIL

SUMMERVILLE CPW (1999) N.T.S.



TYPICAL DOMESTIC WATER SERVICE CARRIER PIPE FOR LONG SIDE SERVICES
N.T.S.

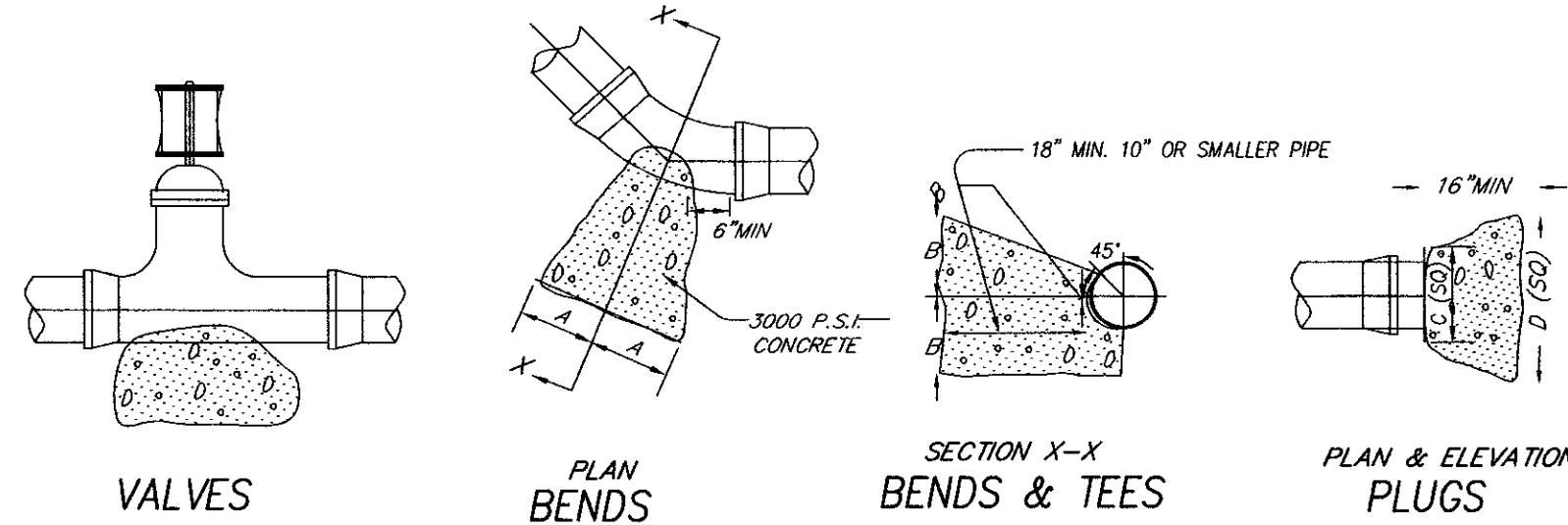
CONSTRUCTION NOTES:

- PIPE, FITTINGS, PACKING, JOINTING MATERIALS, VALVES AND FIRE HYDRANTS SHALL CONFORM TO SECTION C OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS. ALL MATERIALS OR PRODUCTS WHICH COME INTO CONTACT WITH DRINKING WATER SHALL MEET SCWP SPECIFICATIONS & BE CERTIFIED AS MEETING THE SPECIFICATIONS OF THE AMERICAN NATIONAL STANDARD INSTITUTE/NATIONAL SANITATION FOUNDATION STANDARD 61, DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS.
- CONSTRUCTION SPECIFICATIONS SHALL INCORPORATE THE PROVISIONS OF SECTION C OF THE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS, SCWP SPECIFICATIONS AND/OR MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES. THE MOST STRINGENT STANDARD SHALL PREVAIL.
- A CONTINUOUS AND UNIFORM BEDDING SHALL BE PROVIDED IN THE TRENCH FOR ALL BURIED PIPE. BACK-FILL MATERIAL SHALL BE TAMPED IN LAYERS AROUND THE PIPE AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE. STONES, OTHER THAN CRUSHED BEDDING, SHALL NOT COME IN CONTACT WITH THE PIPE AND SHALL NOT BE WITHIN SIX (6) INCHES OF THE PIPE.
- ALL WATER MAINS SHALL BE PROVIDED WITH A MINIMUM THIRTY-SIX (36) INCHES OF COVER.
- ALL TEES, BENDS, PLUGS AND HYDRANTS ON LINES TWO INCHES IN DIAMETER AND LARGER SHALL BE PROVIDED WITH REACTION BLOCKING, THE RODS OR OTHER APPROVED RESTRAINING METHODS TO PREVENT MOVEMENT.
- WATER LINE PRESSURE TEST @ 150 PSI SHALL BE HELD FOR A MINIMUM OF TWO HOURS WITH A REPRESENTATIVE FROM SCWP PRESENT. FINAL INSPECTION SHALL NOT BE SCHEDULED UNTIL ASBUILT DRAWINGS ARE PREPARED.
- CHLORINATION RATES AND SAMPLING FOR DISINFECTION OF WATER MAIN TO BE DONE IN ACCORDANCE WITH SUMMERVILLE CPW ENGINEERING MANUAL, SECTION II PARAGRAPH 2.3.17, PAGES 19-20
- HYDRANT LEADS SHALL BE A MINIMUM OF SIX (6) INCHES IN DIAMETER. AUXILIARY GATE VALVES SHALL BE INSTALLED IN ALL HYDRANT LEADS.
- NO VALVES TO BE CONSTRUCTED UNDER CURB.
- USE MECHANICAL JOINT BENDS TO GET PIPE AROUND CUL-DE-SACS AND CURVES.
- TAPE #12 SINGLE STRAND TO ALL MAINS AND SERVICES. INSTALL 3" METALLIC WARNING TAPE 18" ABOVE ALL MAINS AND SERVICES.
- LOCATE FIRE HYDRANTS & VALVES ON OR AS CLOSE TO PROPERTY LINE AS POSSIBLE.
- ALL UTILITIES TO BE INSTALLED BEFORE CURB/CUTTER OR SABC INSTALLED.
- UTILITY CONTRACTOR SHALL RECOMPACT TRENCH CUTS IN ROADWAY UNDER STRICT COMPACTION CONTROL SUPERVISED BY THE ENGINEER, AND SCWP REPRESENTATIVES.
- CONTRACTORS SHALL VERIFY ALL EXISTING UTILITIES AS TO LOCATION, SIZE, ELEVATION AND MATERIAL PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL ALSO NOTIFY ALL UTILITY COMPANIES OR AGENCIES THAT WILL BE AFFECTED DURING CONSTRUCTION OF THIS PROJECT PRIOR TO START.
- CONTRACTOR WILL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS, OR VERIFYING OWNER HAS OBTAINED PERMITS NEEDED FOR ALL PHASES OF CONSTRUCTION PRIOR TO START OF PROJECT.
- IN THE EVENT OF A CONFLICT WITH WATER, SEWER, DRAINAGE, OR OTHER UTILITY LINES, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND FIELD ADJUST TO AVOID CONFLICTS.
- ALL SERVICES THAT RUN BENEATH PAVEMENT WILL BE PLACED IN 2" PVC CASING.
- INSTALLATION OF THE WATER MAIN SHALL BE A MINIMUM OF 2' OFF THE BACK OF THE CURB.
- ALL BLOCKING AND STRAPPING SHALL REMAIN OPEN FOR INSPECTION BY SCWP.
- ALL PVC PIPE USED MUST BE C900 PVC.
- SCWP SHALL BE NOTIFIED IN WRITING PRIOR TO START OF CONSTRUCTION.
- WATER MAIN CONSTRUCTION SHALL NOT BE INITIATED UNTIL FINAL ROAD & R/W GRADES (±0.5') ARE ACHIEVED.
- ALL BENDS SHALL BE MARKED WITH 2" CAPPED PVC PIPE UNTIL ASBUILT SURVEYS ARE COMPLETE.

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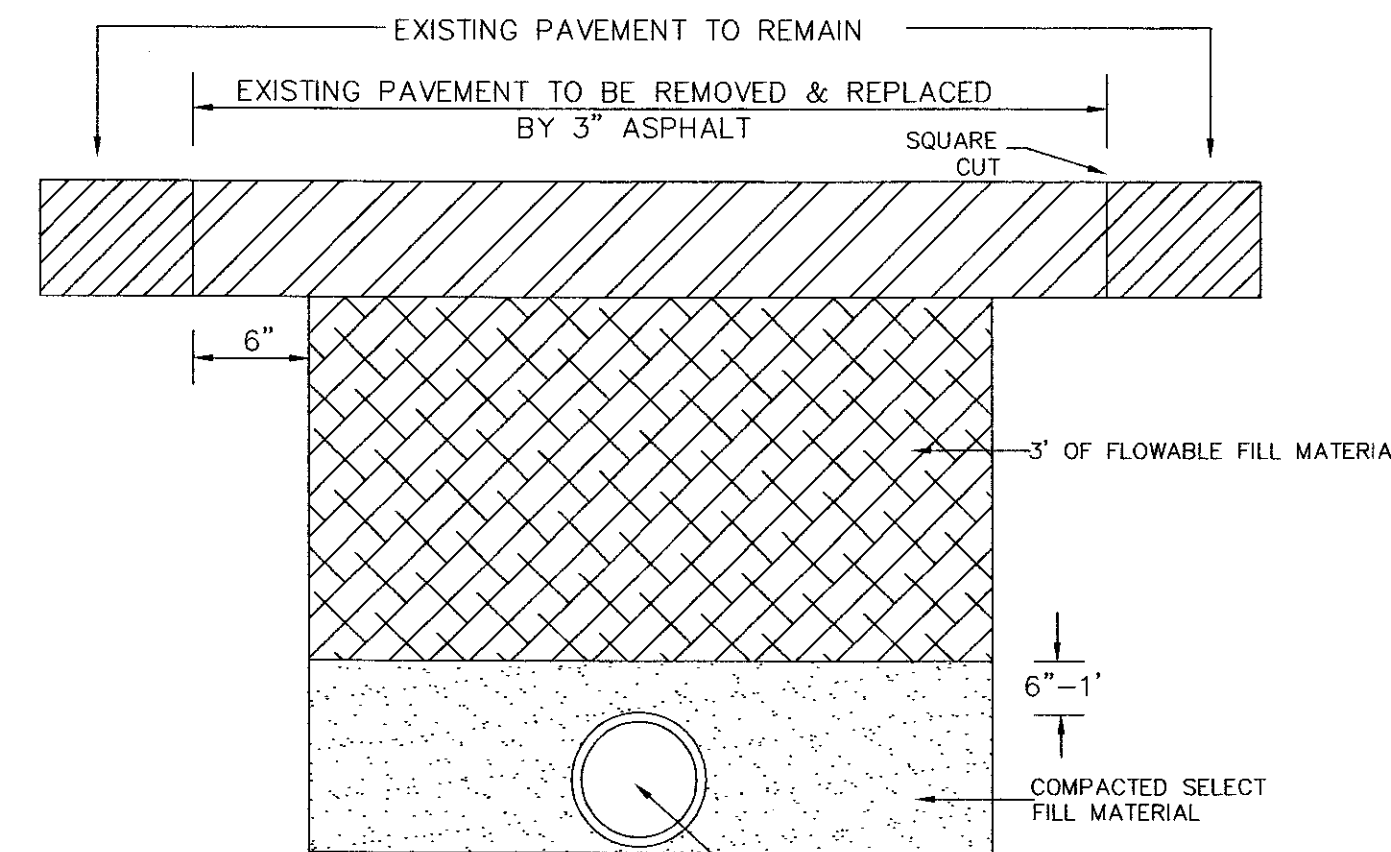
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SIZE	1/4 BEND		1/8 BEND		1/16 BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
4" & SMALLER	6"	10"	5"	10"	3"	6"	5"	12"	6"	14"
6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"

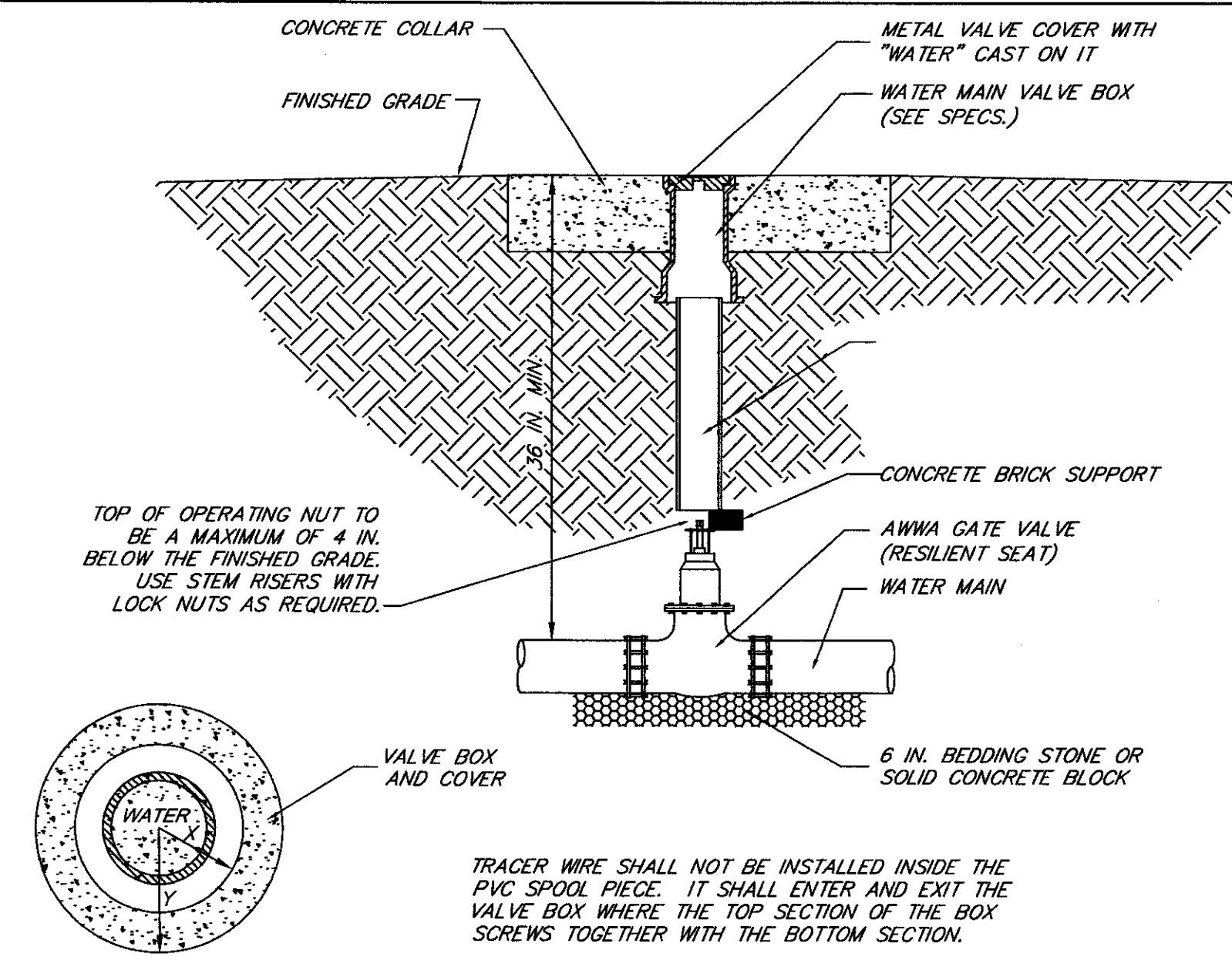
TYPICAL THRUST BLOCK LOCATIONS FOR HORIZONTAL CHANGES IN DIRECTION
N.T.S.

- NOTES:
- CONCRETE TO BE FORMED WITH 3/4" PLYWOOD.
 - BENDS AND/OR FITTINGS TO BE WRAPPED WITH POLYETHYLENE.
 - 6" STONE OR SOLID BLOCK REQUIRED UNDER BENDS / FITTINGS.
 - FITTINGS WITHIN 10' OF EACH OTHER SHALL BE RODED TOGETHER WITH 3/4" ALL THREAD ROD (2 MIN.).
 - RESTRAINING FLANGES REQUIRED ON ALL FITTINGS. ALL FITTINGS TO BE M.J.
 - ALL BENDS SHALL BE MARKED WITH PVC PIPES TO GROUND SURFACE UNTIL AFTER AS-BUILT SURVEY IS COMPLETED.



TYPICAL ROAD CUT DETAIL
N.T.S.

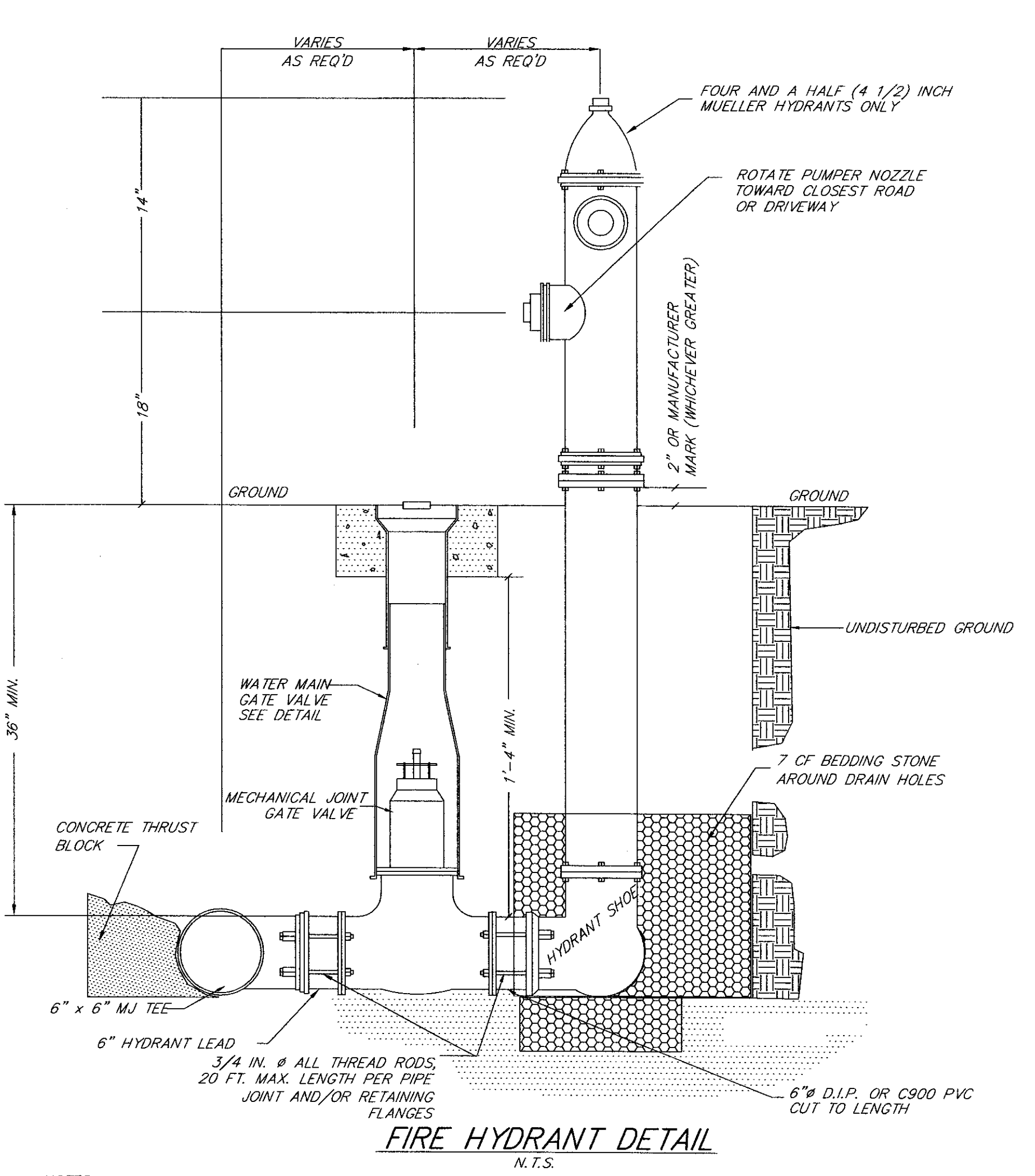
- STEEL PLATES SECURED WITH ASPHALT "RAMPS" SHALL BE REQUIRED UNTIL THE FILL HAS SET
- ASPHALT SHALL BE TYPE 1B



TYPICAL GATE VALVE DETAIL
N.T.S.

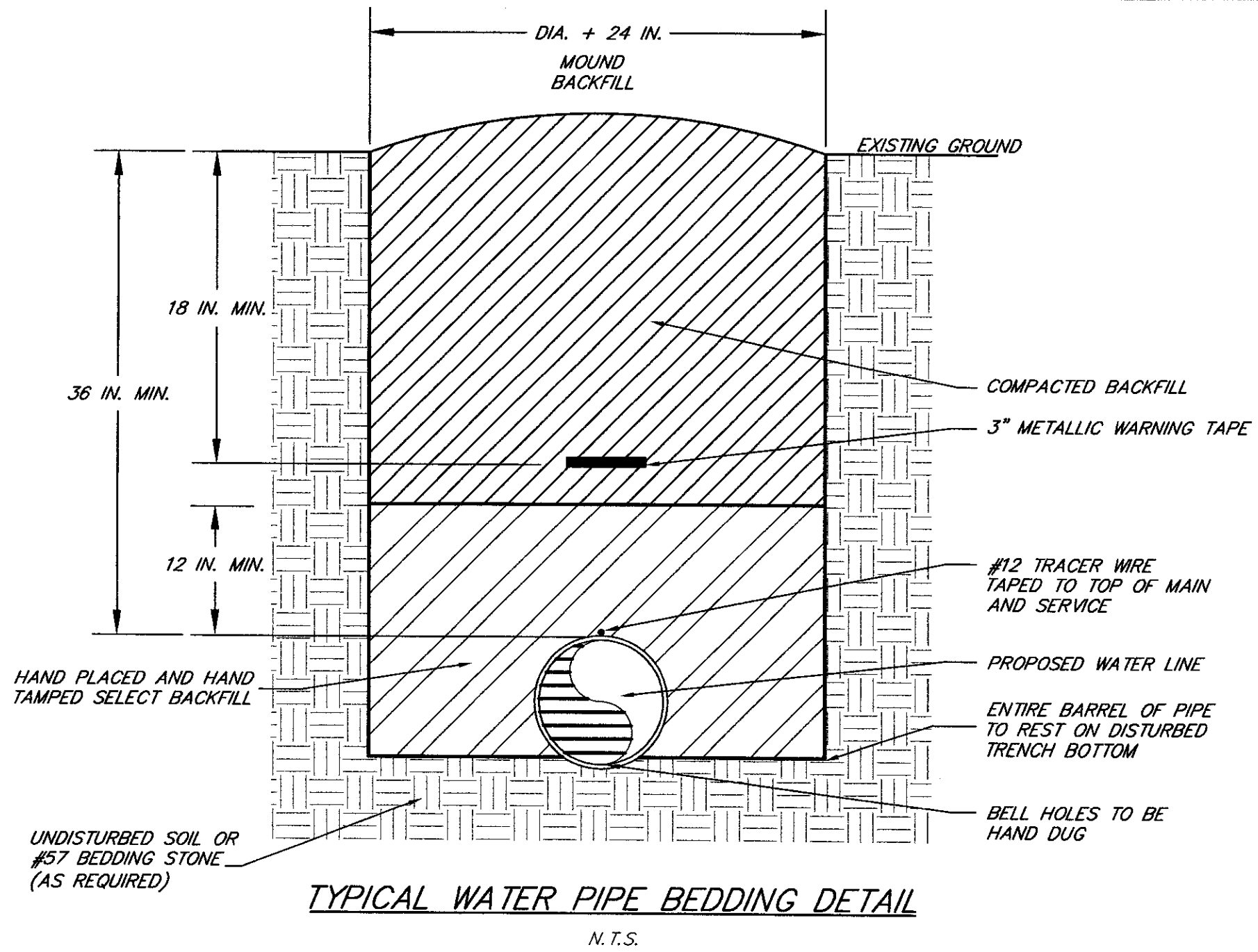
X=DIA. OF BOX + 2" MIN.
Y=16" MINIMUM
Z=MINIMUM 2" THICK

PVC SPOOL PIECE CUT TO DESIRED LENGTH. PIPE SHALL STOP EVENLY WITH THE BOTTOM OF THE OPERATING NUT AND SHALL NOT REST ON THE BODY OF THE VALVE. SPOOL PIECE TO BE CUT FROM 6 IN. WATER MAIN PIPE.

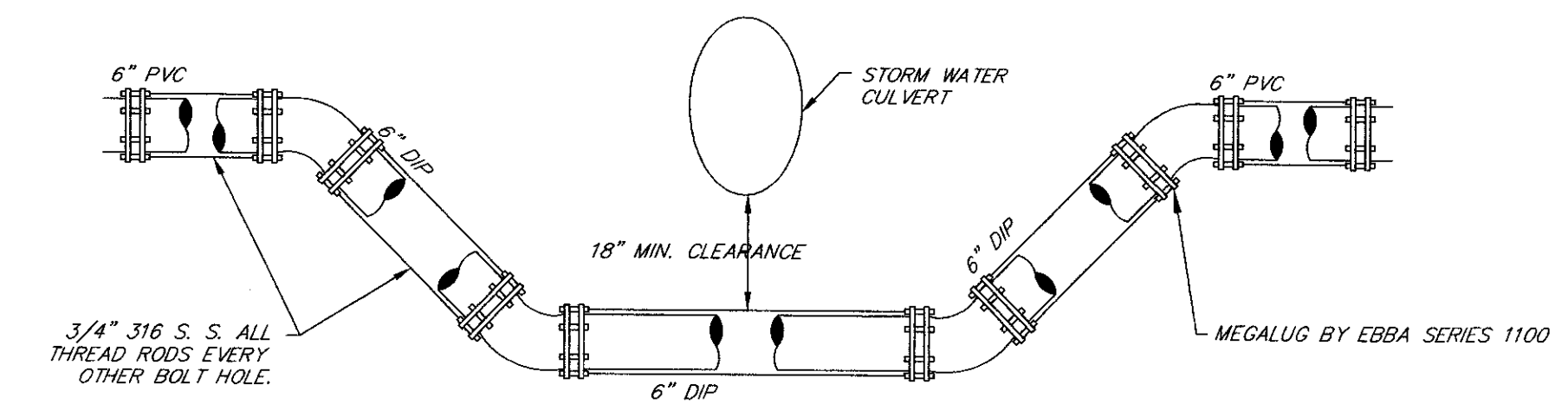


FIRE HYDRANT DETAIL
N.T.S.

- NOTES:
- HYDRANTS SHALL BE PAINTED YELLOW WITH WHITE CAPS & BONNET. DO NOT PAINT OPERATING NUT OR OIL RESERVOIR.
 - ALL MJ FITTINGS SHALL BE RESTRAINED WITH RESTRAINING FLANGES AND ALL THREAD ROD.
 - ALL PIPE AND FITTINGS CONTACT WITH CONCRETE BLOCKING SHALL BE WRAPPED IN POLYETHYLENE.
 - A MINIMUM THICKNESS OF 6 IN. BEDDING STONE OR A SOLID CONCRETE BLOCK IS REQUIRED UNDER ALL FITTINGS, VALVES AND HYDRANTS.



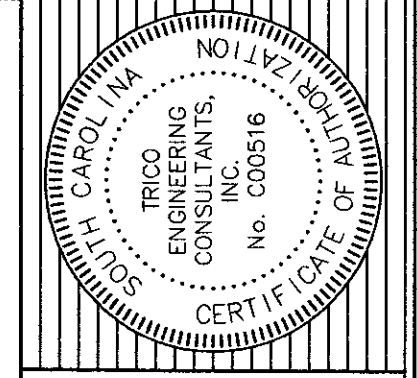
TYPICAL WATER PIPE BEDDING DETAIL
N.T.S.



TYPICAL WATER/STORM DRAIN CROSSING DETAIL
N.T.S.

NO.	DATE	REVISIONS
5	08-24-2002	WATER LINE CHANGED TO SAVE TREES
2	04-30-2002	REVISED WATER PLANS PER SCWP'S COMMENTS

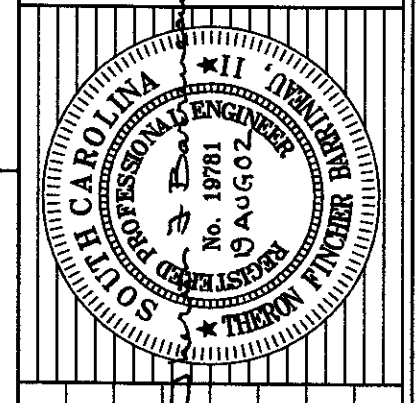
TITLE
WATER DETAILS
PHASE I OF ARBOR OAKS SUBDIVISION
LOCATED IN
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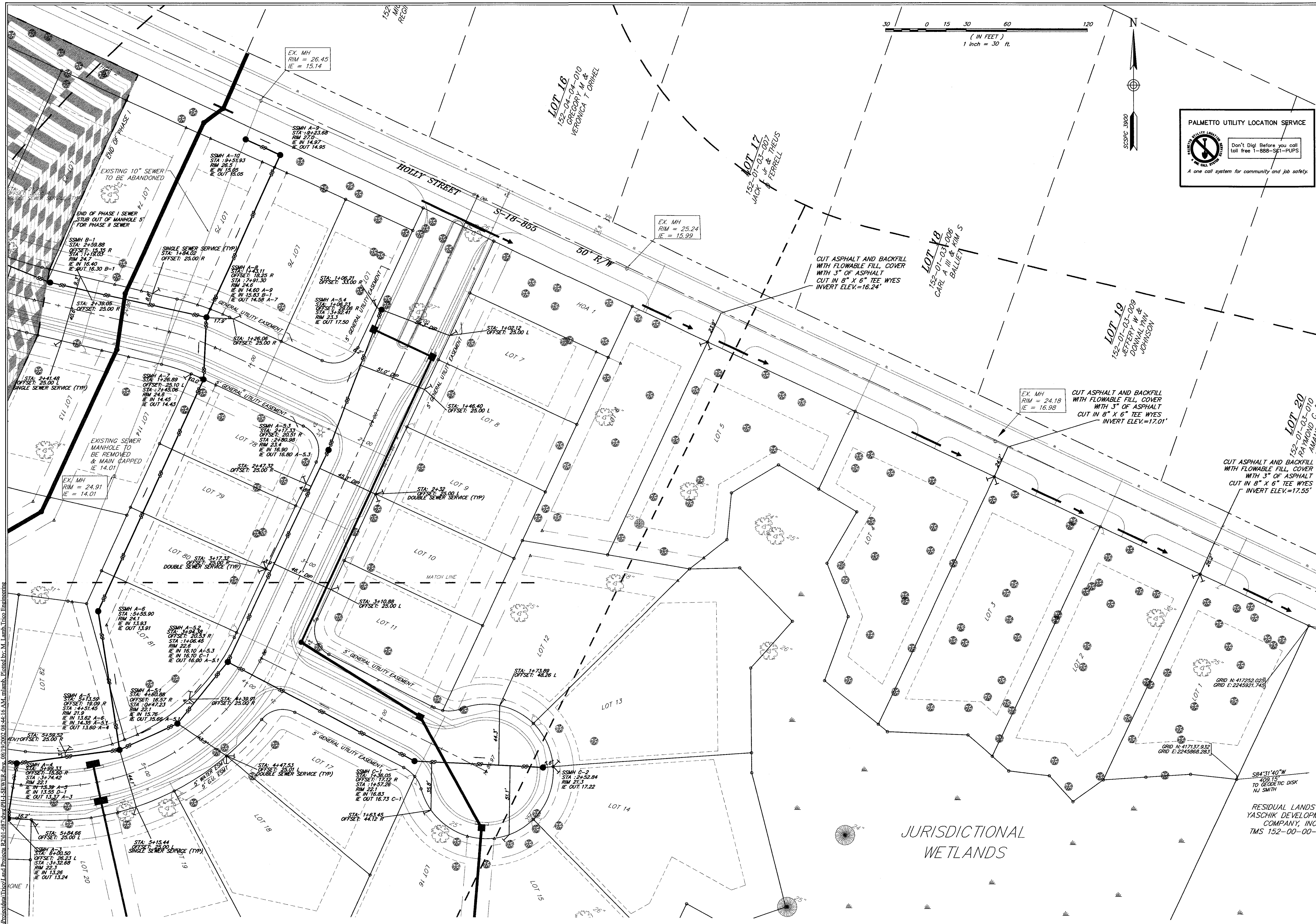
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CHECKED: TEB
APPROVED: TEB
SCALE: N.T.S.
DATE: 29 JANUARY 2002
PROJECT NO.: 01-087
SHEET 20 OF 33

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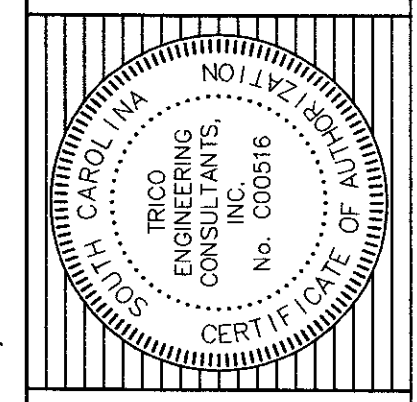
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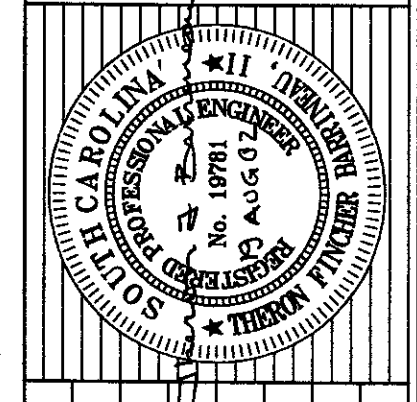
NO.	DATE	REVISIONS
3	04-28-2002	REVISED SEWER PLANS AS PER SCWPS COMMENTS

TITLE
SEWER PLAN
 PHASE I OF ARBOR OAKS SUBDIVISION
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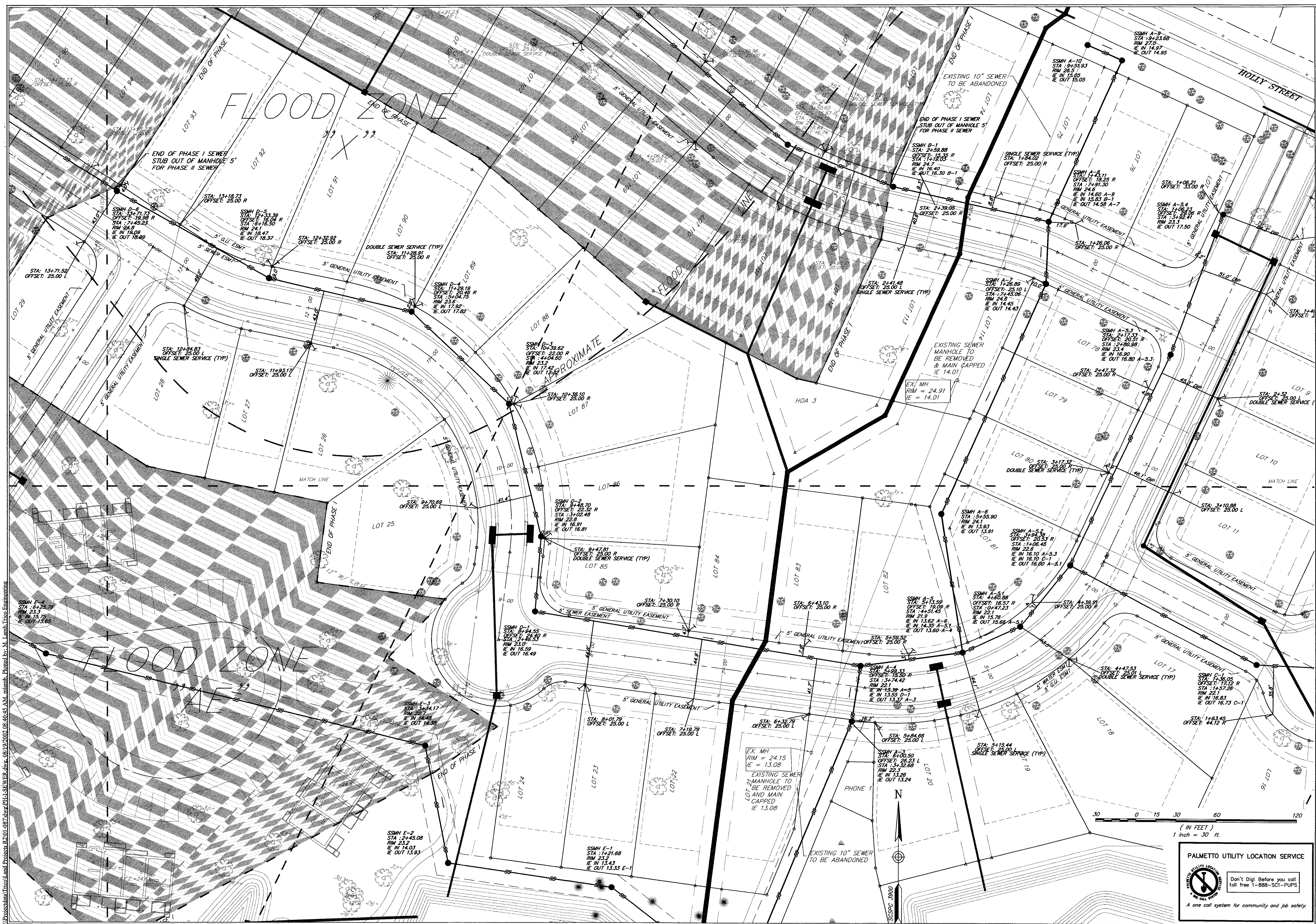
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 Project: 08/19/2002 08:40:45 AM, mlablamb, Plotted by: M. Lamb, Trico Engineering

<p>SEWER PLAN PHASE I OF ARBOR OAKS SUBDIVISION LOCATED IN THE TOWN OF SUMMERVILLE DORCHESTER COUNTY, SOUTH CAROLINA</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">NO. DATE</td> <td style="width: 50%;">REVISED SEWER PLANS AS PER SOWMS COMMENTS</td> </tr> <tr> <td>3</td> <td>04-26-2002</td> </tr> </table>	NO. DATE	REVISED SEWER PLANS AS PER SOWMS COMMENTS	3	04-26-2002
NO. DATE	REVISED SEWER PLANS AS PER SOWMS COMMENTS				
3	04-26-2002				

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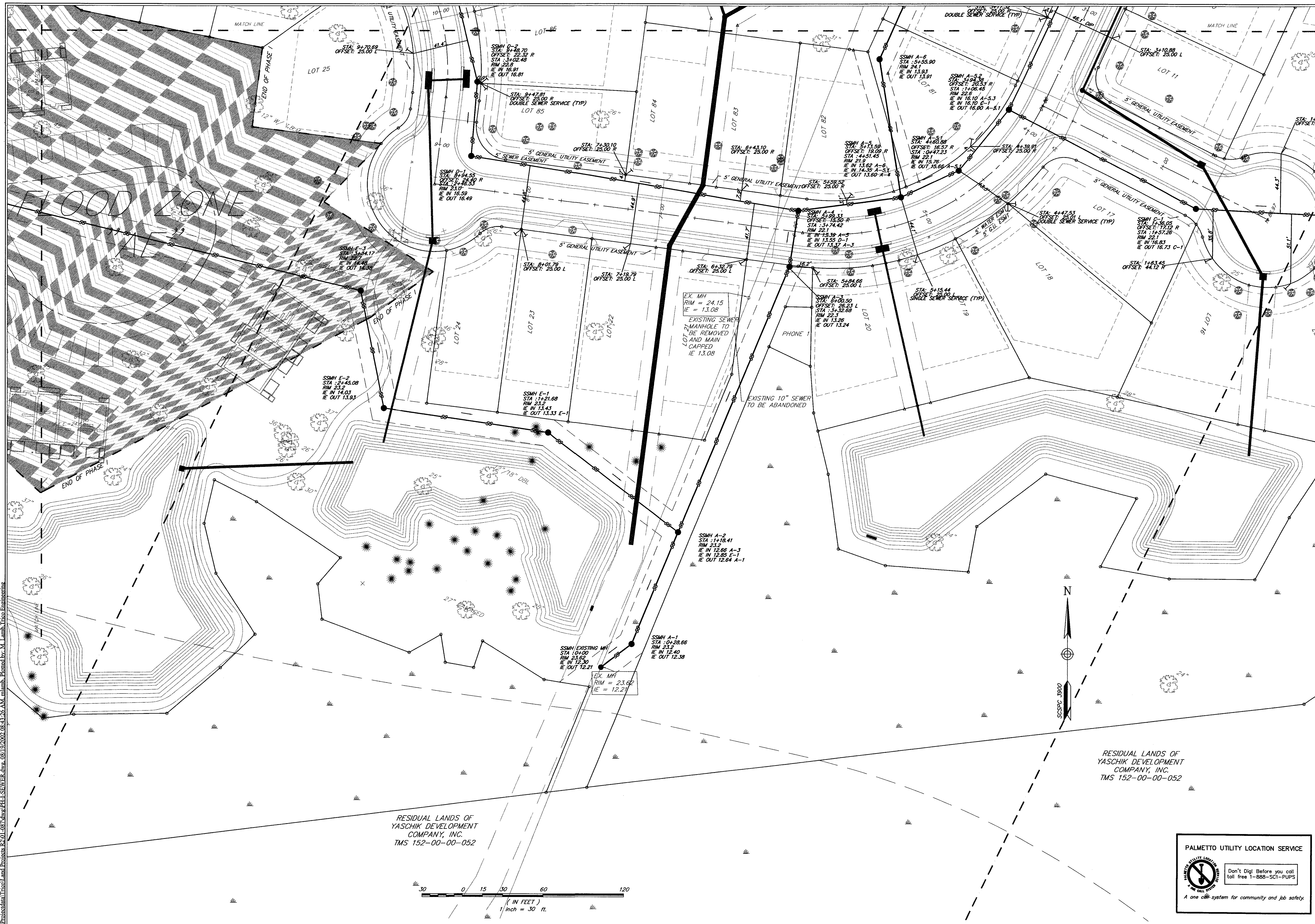
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 APPROVED: TFB
 SCALE: 1"=30'
 DATE: 29 JANUARY 2002
 PROJECT NO.: 07-087
 SHEET 22 OF 33

TRICO ENGINEERING CONSULTANTS, INC.
 ENGINEERING CONSULTANTS, INC.
 PROFESSIONAL ENGINEERS
 LICENSE NO. 19448
 REGISTERED PROFESSIONAL ENGINEERS
 STATE OF SOUTH CAROLINA

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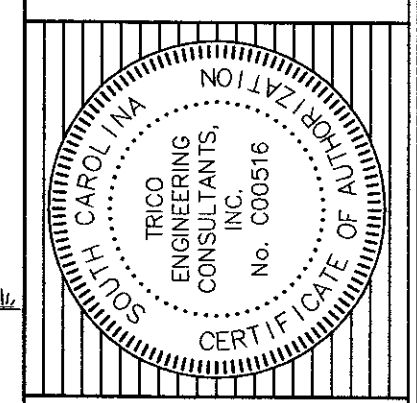
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 YASCHIK DEVELOPMENT
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 TMS 152-00-00-052

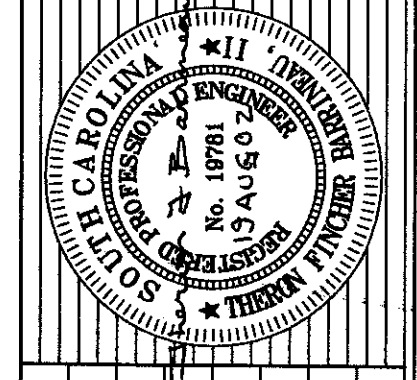
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 COMPANY, INC.
 TMS 152-00-00-052

NO.	DATE	REVISIONS
3	04-26-2002	REVISED SEWER PLANS AS PER SCOW'S COMMENTS

TITLE
SEWER PLAN
 PHASE I OF ARBOR OAKS SUBDIVISION
 LOCATED IN
 THE TOWN OF SUMMERVILLE
 DORCHESTER COUNTY, SOUTH CAROLINA



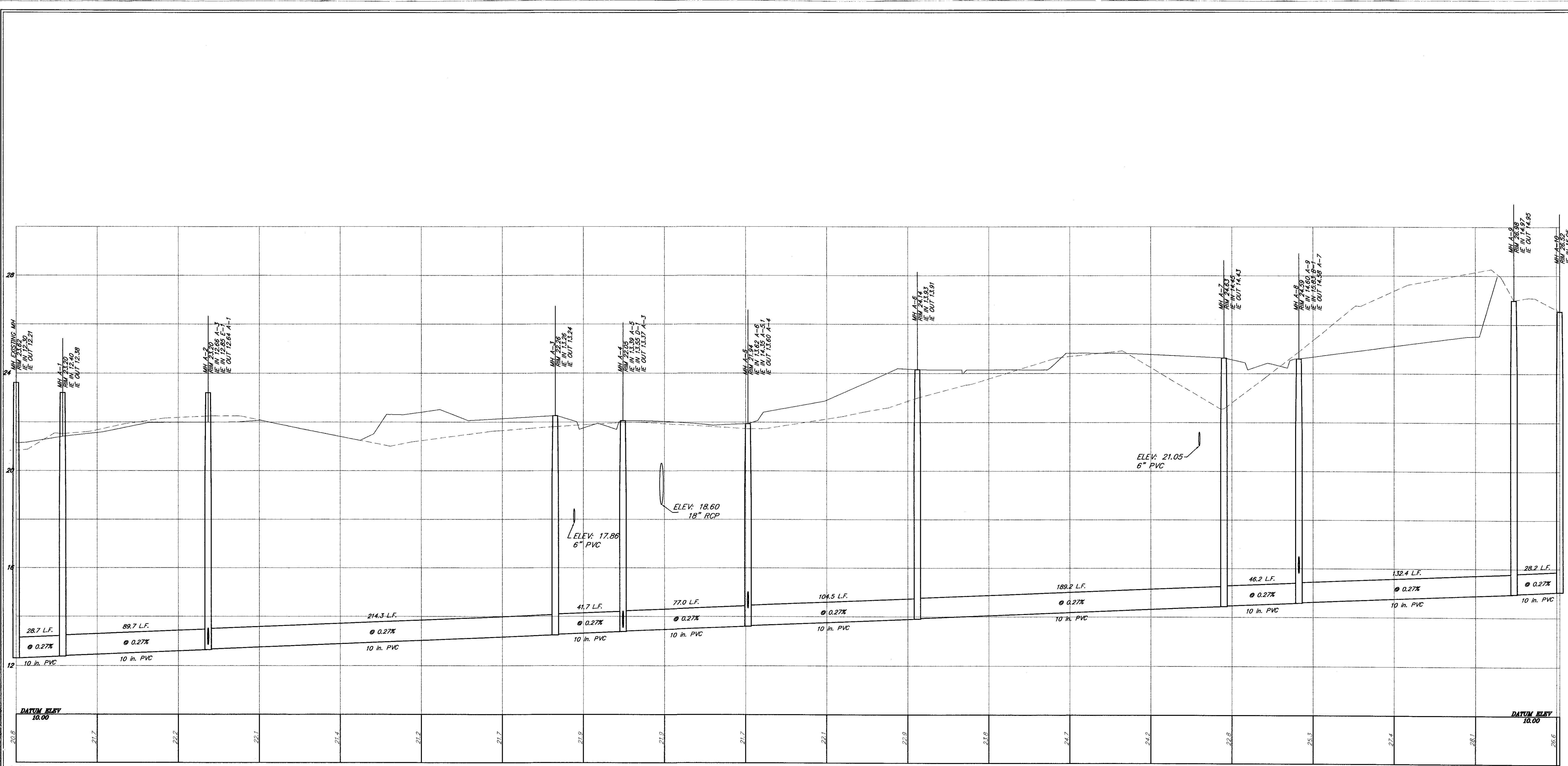
TRICO
 ENGINEERING CONSULTANTS, INC.
 4425 Belle Oaks Drive
 Summerville, South Carolina 29405
 Phone: (843) 740-7700
 Fax: (843) 740-7707
 info@tricoengineering.com



DESIGNED: MEL
 DRAWN: MEL
 CHECKED: TFB
 APPROVED: TFB
 SCALE: 1" = 30'
 DATE: 29 JANUARY 2002
 PROJECT NO.: 01-087
 SHEET 23 OF 33

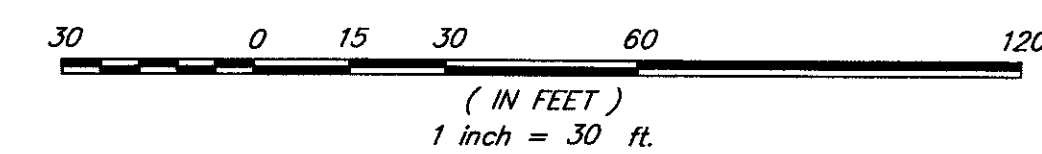
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M:\projects\Tico\Land\Projects\B201-087.dwg\PHLSEWER.dwg 08/19/2002 07:52:08 AM mlamb. Plotted by: M. Lamb, Tico Engineering



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 VERTICAL SCALE: 1"=2'

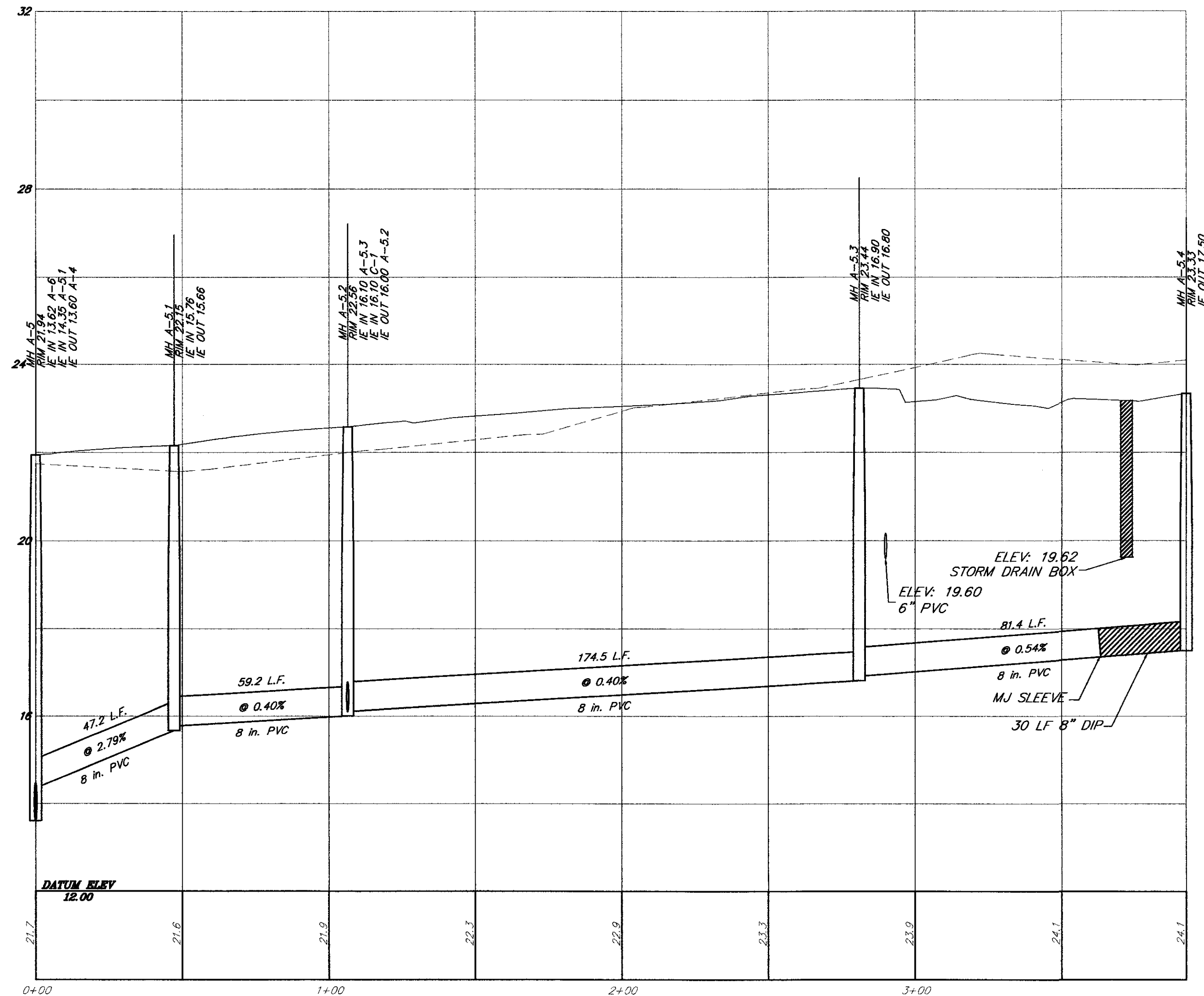
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 VERTICAL SCALE: 1"=2'



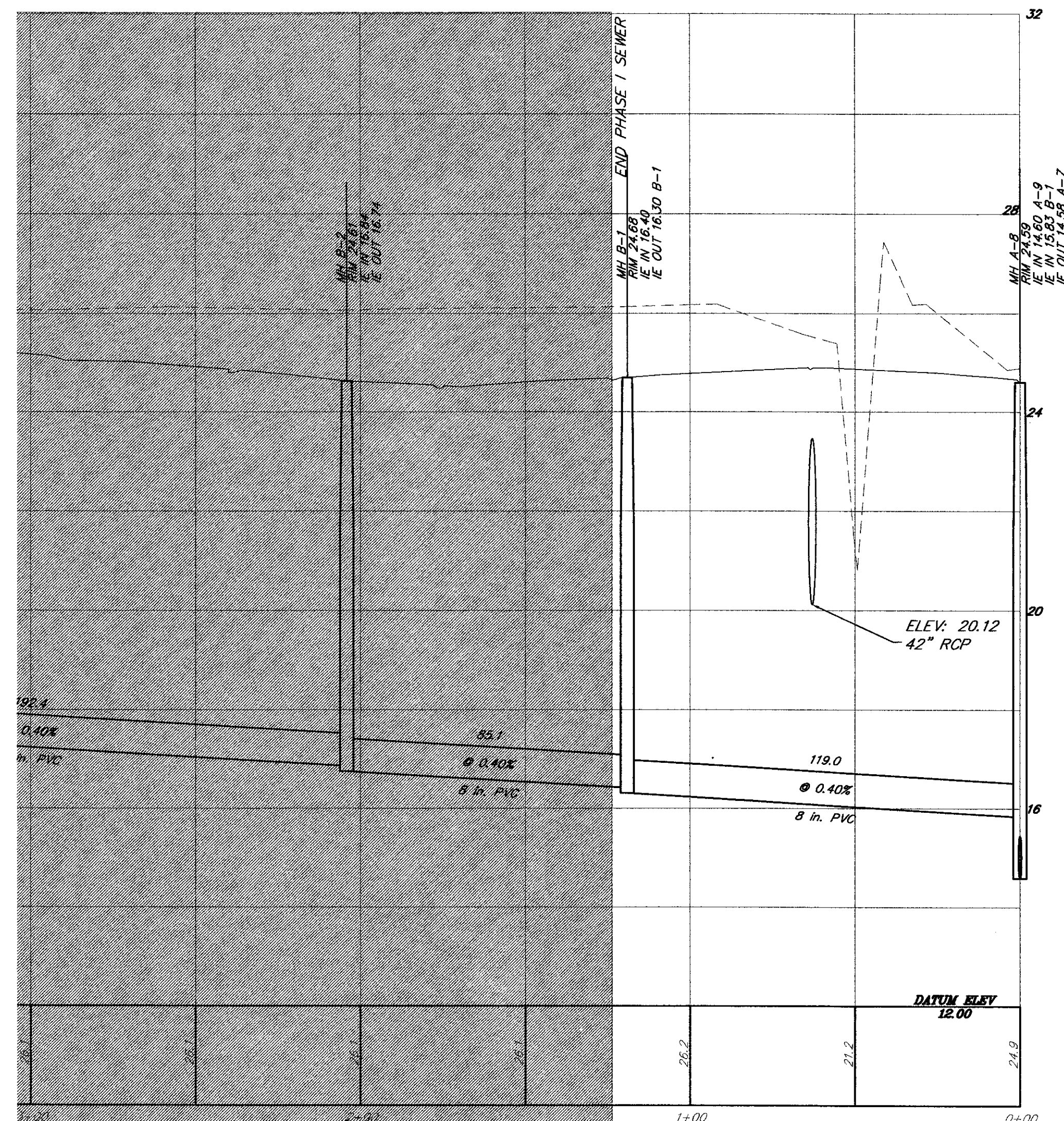
PALMETTO UTILITY LOCATION SERVICE
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TITLE SEWER PROFILE PHASE I OF ARBOR OAKS SUBDIVISION LOCATED IN THE TOWN OF SUMMERVILLE DORCHESTER COUNTY, SOUTH CAROLINA	
NO. 3 DATE 04-26-2002	REVISIONS AS PER SCOWS COMMENTS
4425 Belle Oaks Drive North Charleston, SC 29405 Phone: (843) 740-7100 Fax: (843) 740-7107 Email: info@tricoengineering.com TRICO ENGINEERING CONSULTANTS, INC. Civil Engineering - Surveying - Landscape Architecture Land Planning - Wetland Consulting - GPS Services Visit us at http://www.tricoengineering.com	
DESIGNED: MEL DRAWN: MEL CHECKED: TFB APPROVED: TFB SCALE: 1"=30' DATE: 29 JANUARY 2002 PROJECT NO.: 01-087 SHEET 24 OF 33	REVISIONS AS PER SCOWS COMMENTS

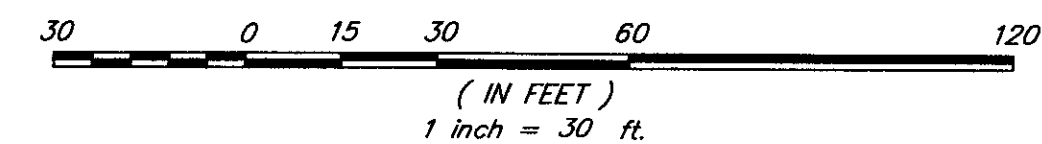
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 VERTICAL SCALE: 1"=2'



SEWER "B"
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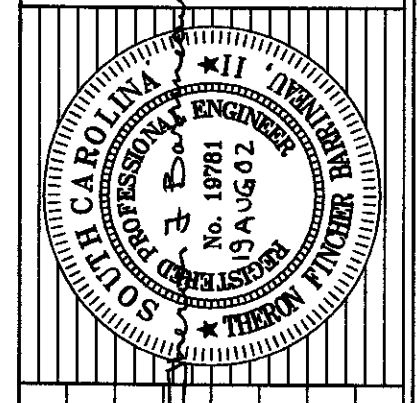


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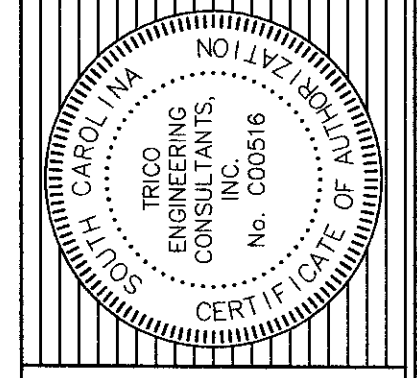
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 SCALE: 1"=30'
 DATE: 29 JANUARY 2002
 PROJECT NO.: 01-087
 SHEET 25 OF 33



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1425 Belle Oaks Drive
 South Carolina 29405
 Phone: (843) 740-7700
 Fax: (843) 740-7707
 info@tricoengineering.com

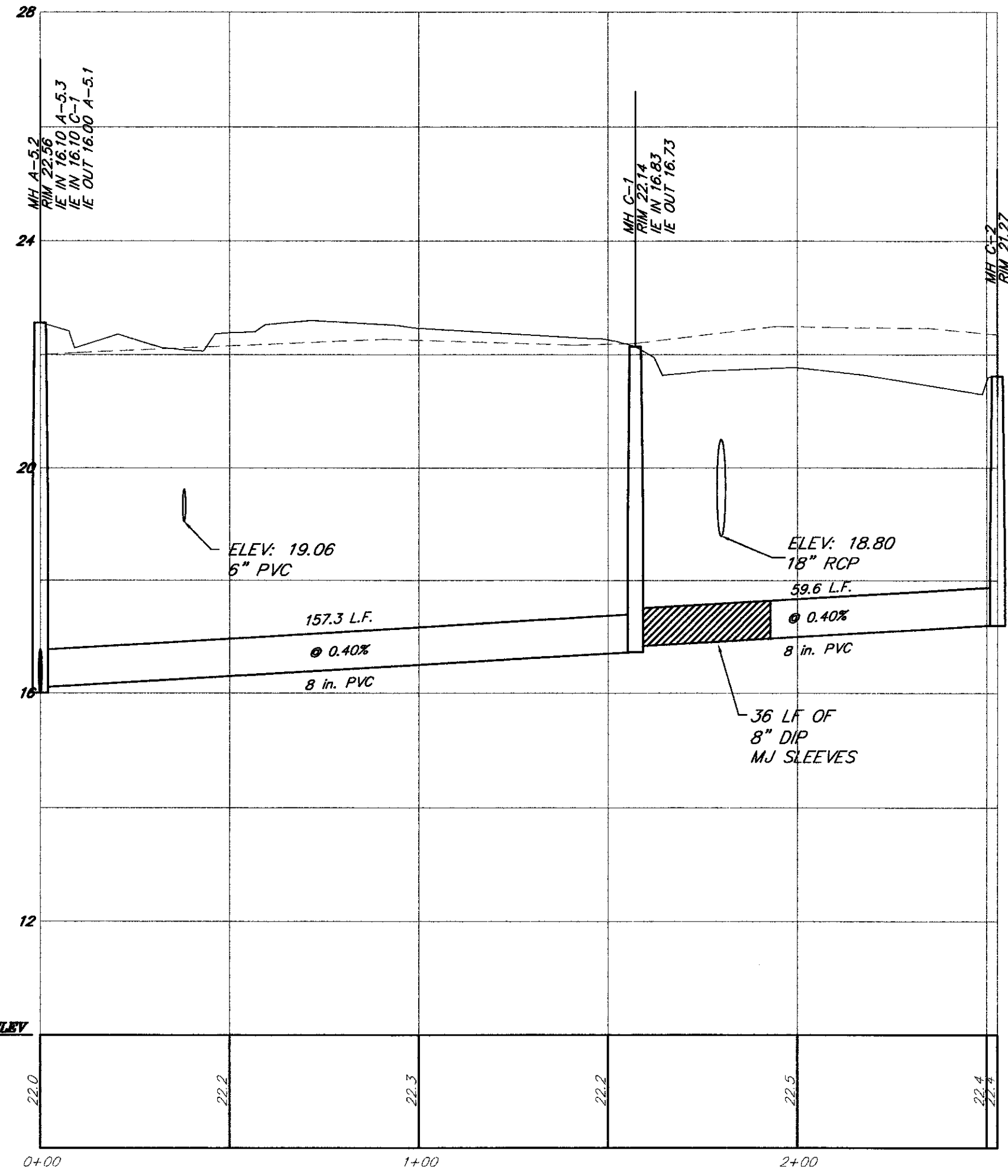
Civil Engineering - Surveying - Landscape Architecture
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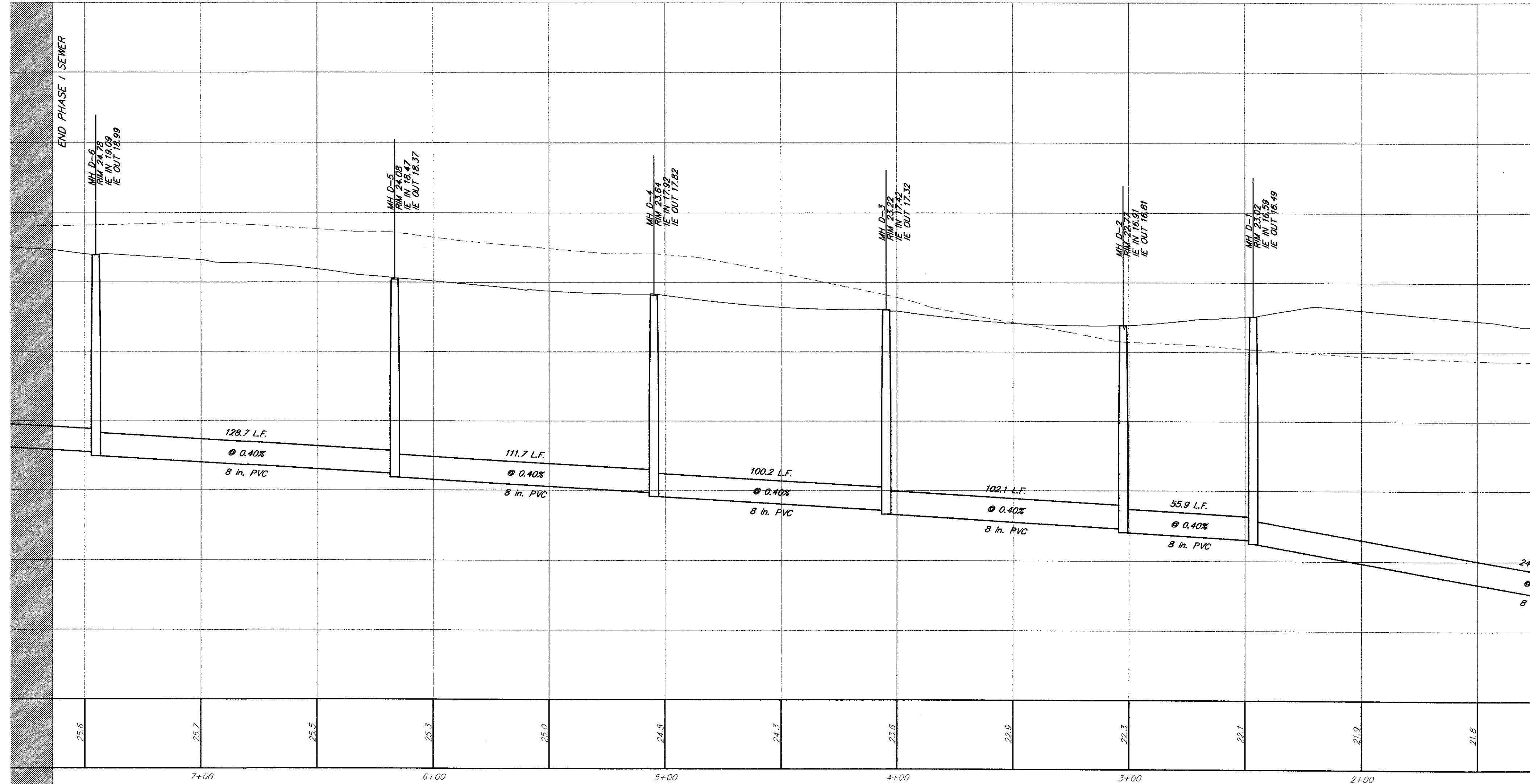
TITLE
SEWER PROFILE
 PHASE I OF ARBOR OAKS SUBDIVISION
 LOCATED IN
 THE TOWN OF SUMMERVILLE
 DORCHESTER COUNTY, SOUTH CAROLINA

NO.	DATE	REVISIONS
J	04-26-2002	REVISED SEWER PLANS AS PER SCOWS COMMENTS

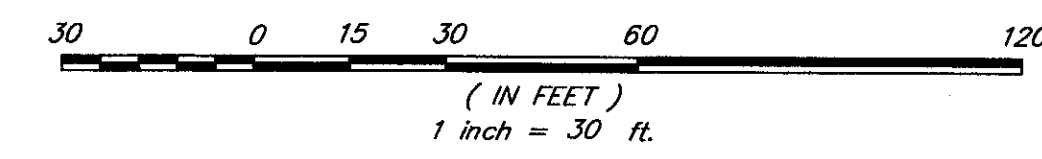
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SEWER "C"
 HORIZONTAL SCALE: 1"=30'
 VERTICAL SCALE: 1"=2'



SEWER "D"
 HORIZONTAL SCALE: 1"=30'
 VERTICAL SCALE: 1"=2'

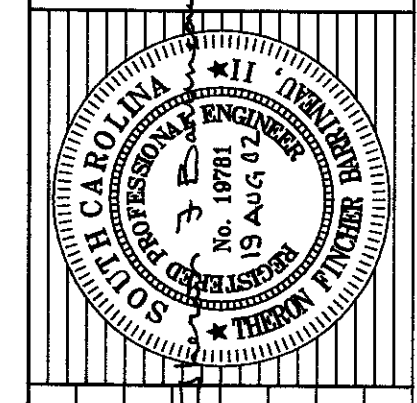


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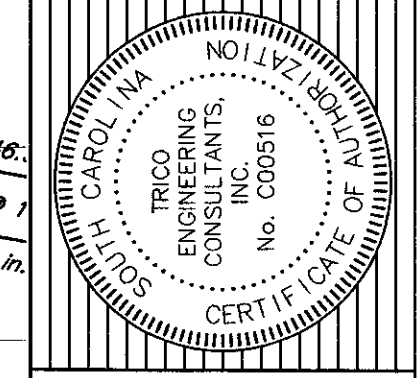
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 APPROVED: TFB
 SCALE: 1"=30'
 DATE: 29 JANUARY 2002
 PROJECT NO.: 07-087
 SHEET 26 of 33



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 info@tricoengineering.com

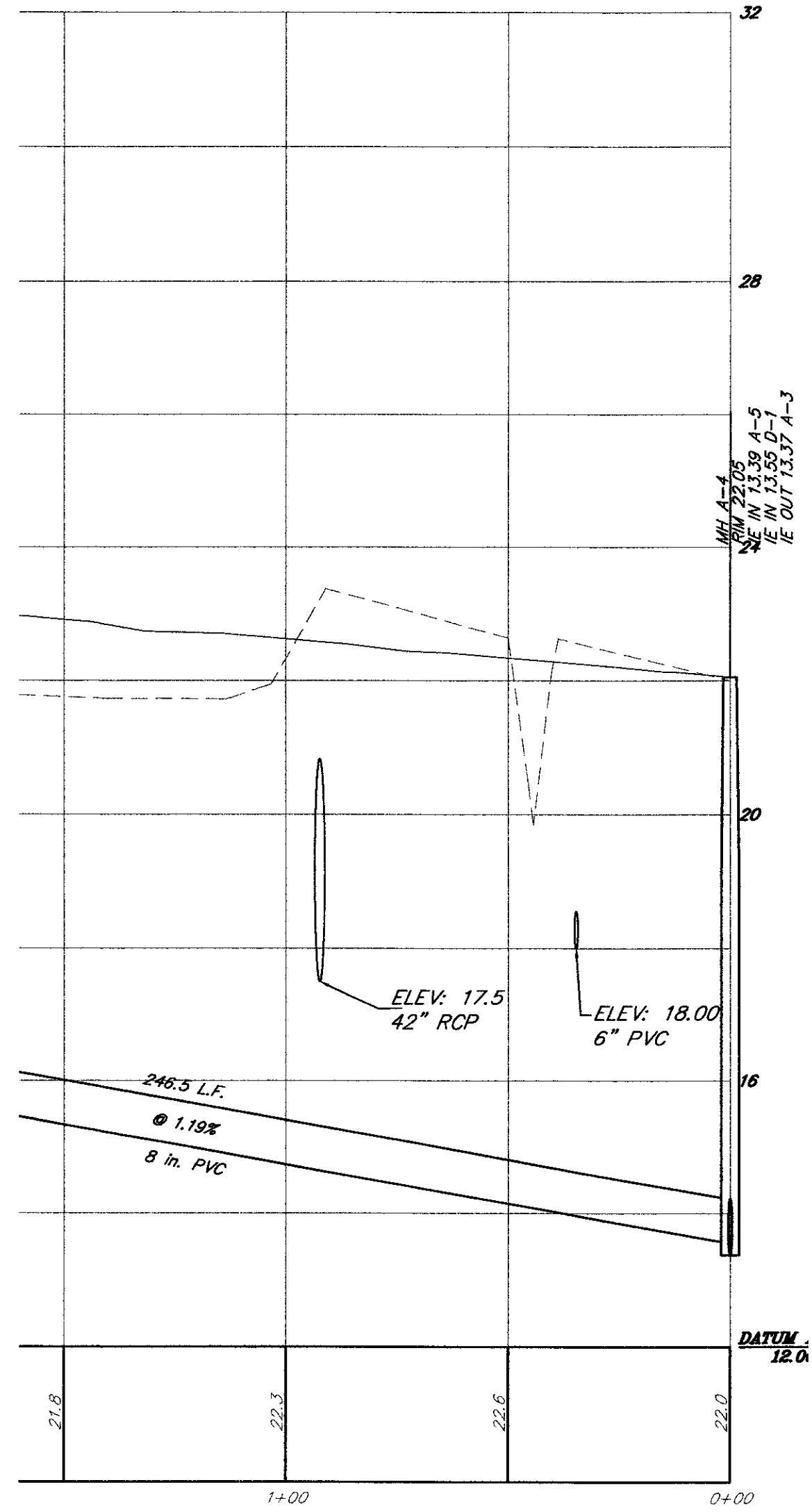
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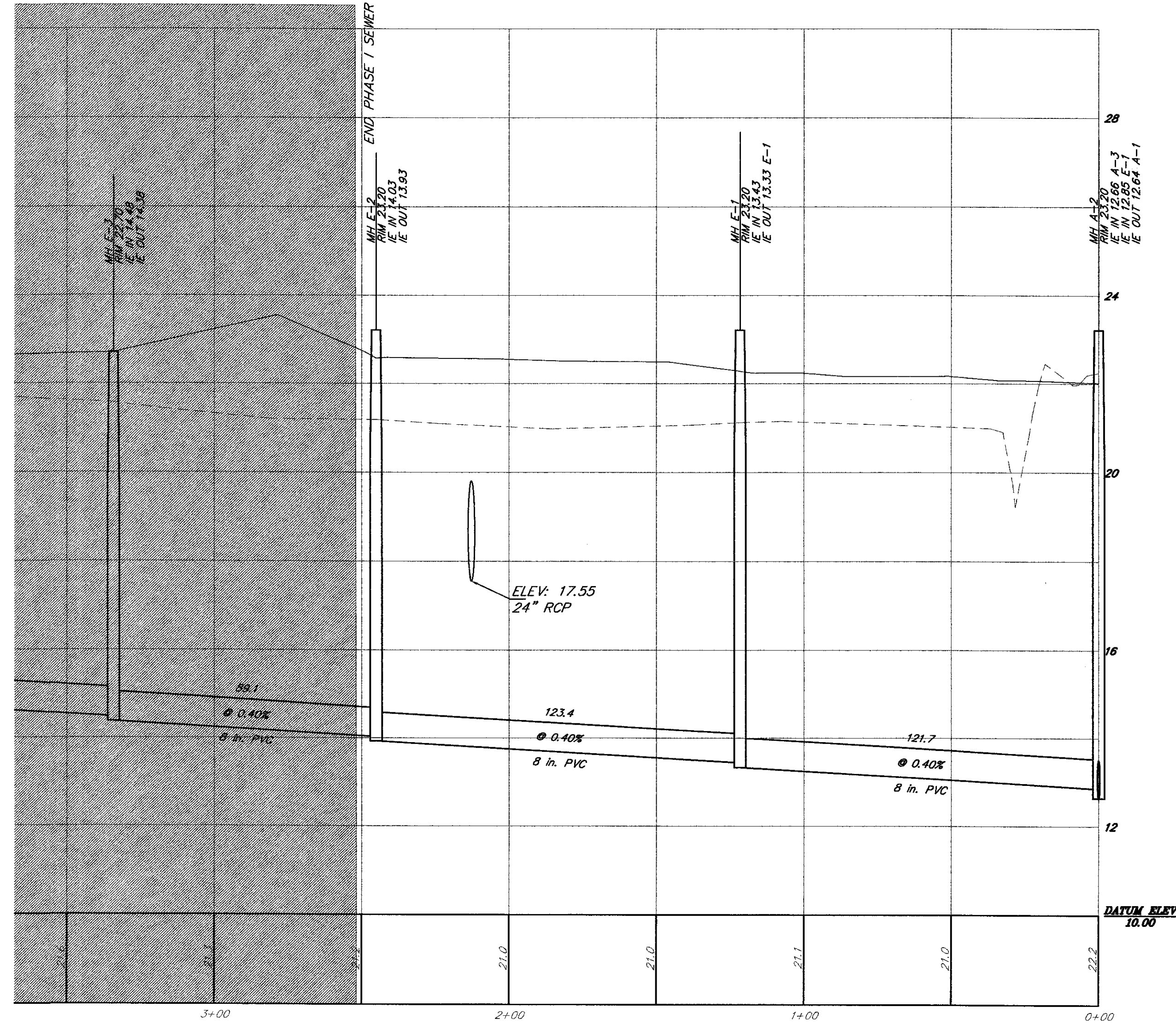
SEWER PROFILE
 PHASE I OF ARBOR OAKS SUBDIVISION
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 THE TOWN OF SUMMERVILLE
 DORCHESTER COUNTY, SOUTH CAROLINA

NO.	DATE	REVISIONS
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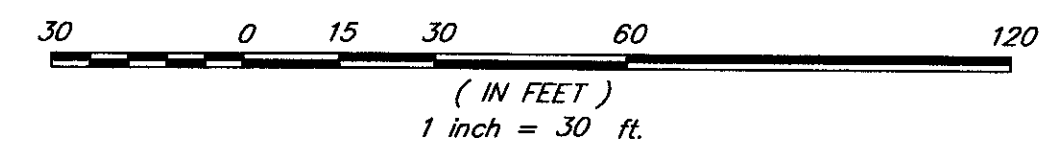
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SEWER "D"
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=2'



SEWER "E"
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VERTICAL SCALE: 1"=2'

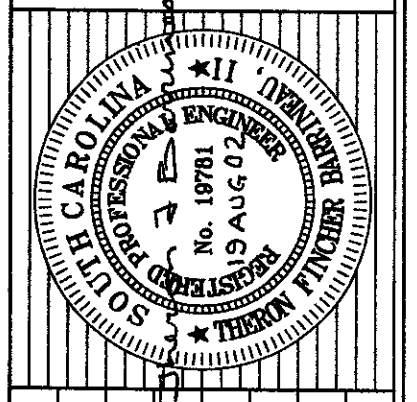


PALMETTO UTILITY LOCATION SERVICE

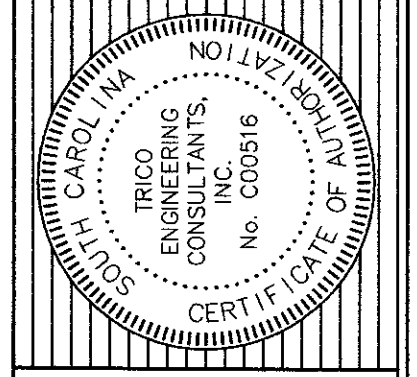
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CHECKED: TFB
APPROVED: TFB
SCALE: 1"=30'
DATE: 29 JANUARY 2002
PROJECT NO.: 01-087
SHEET 27 OF 33

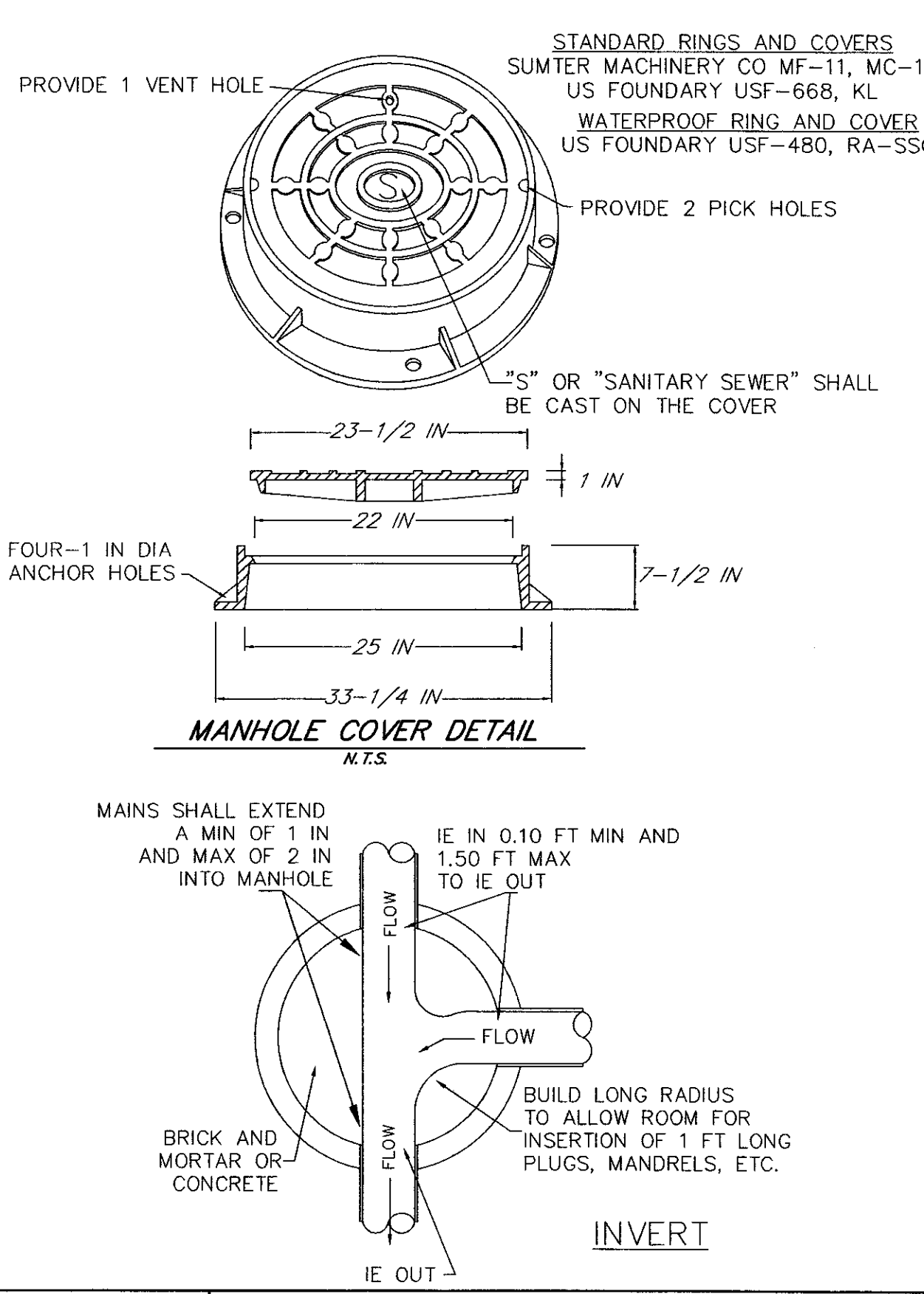
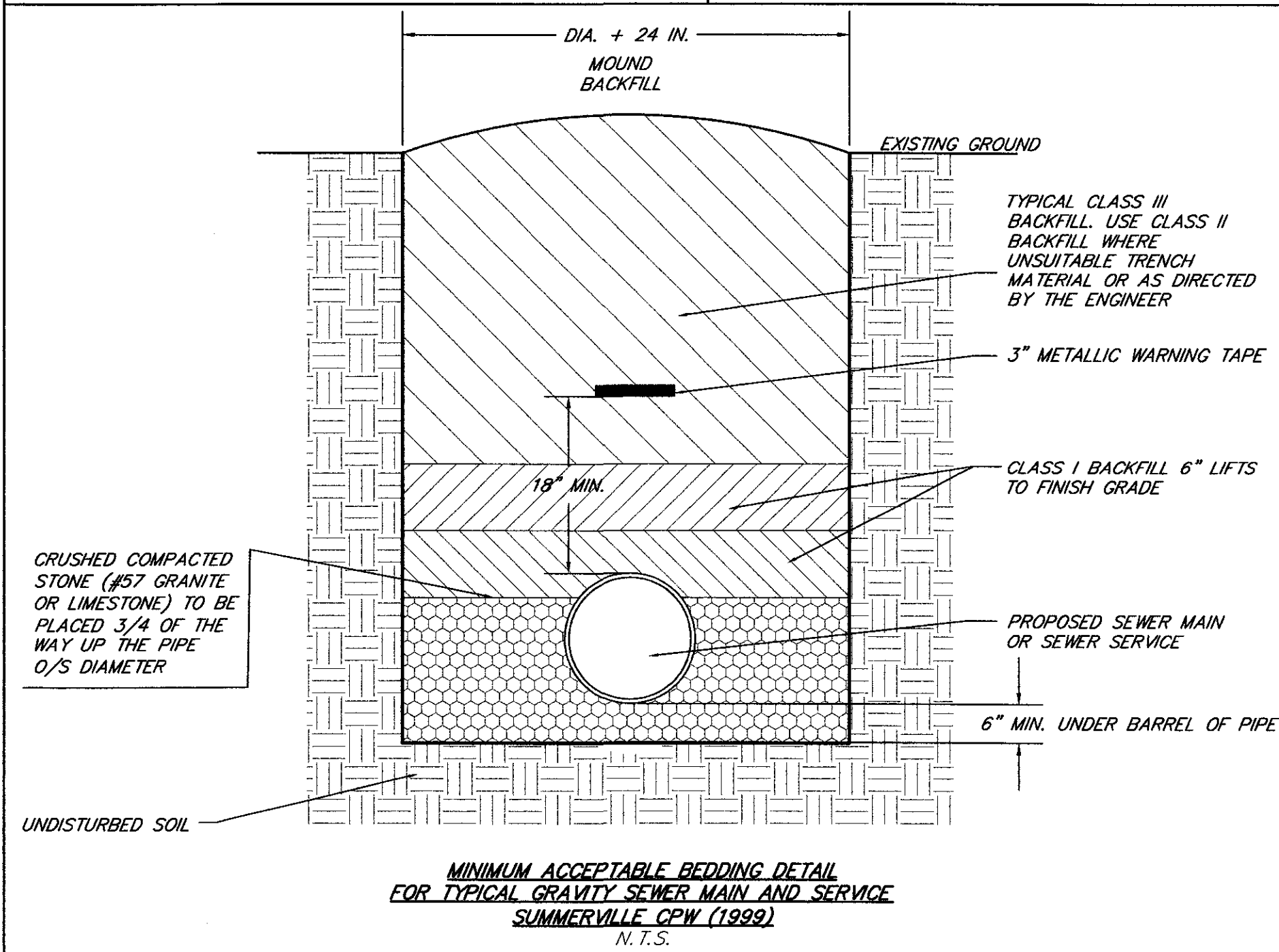
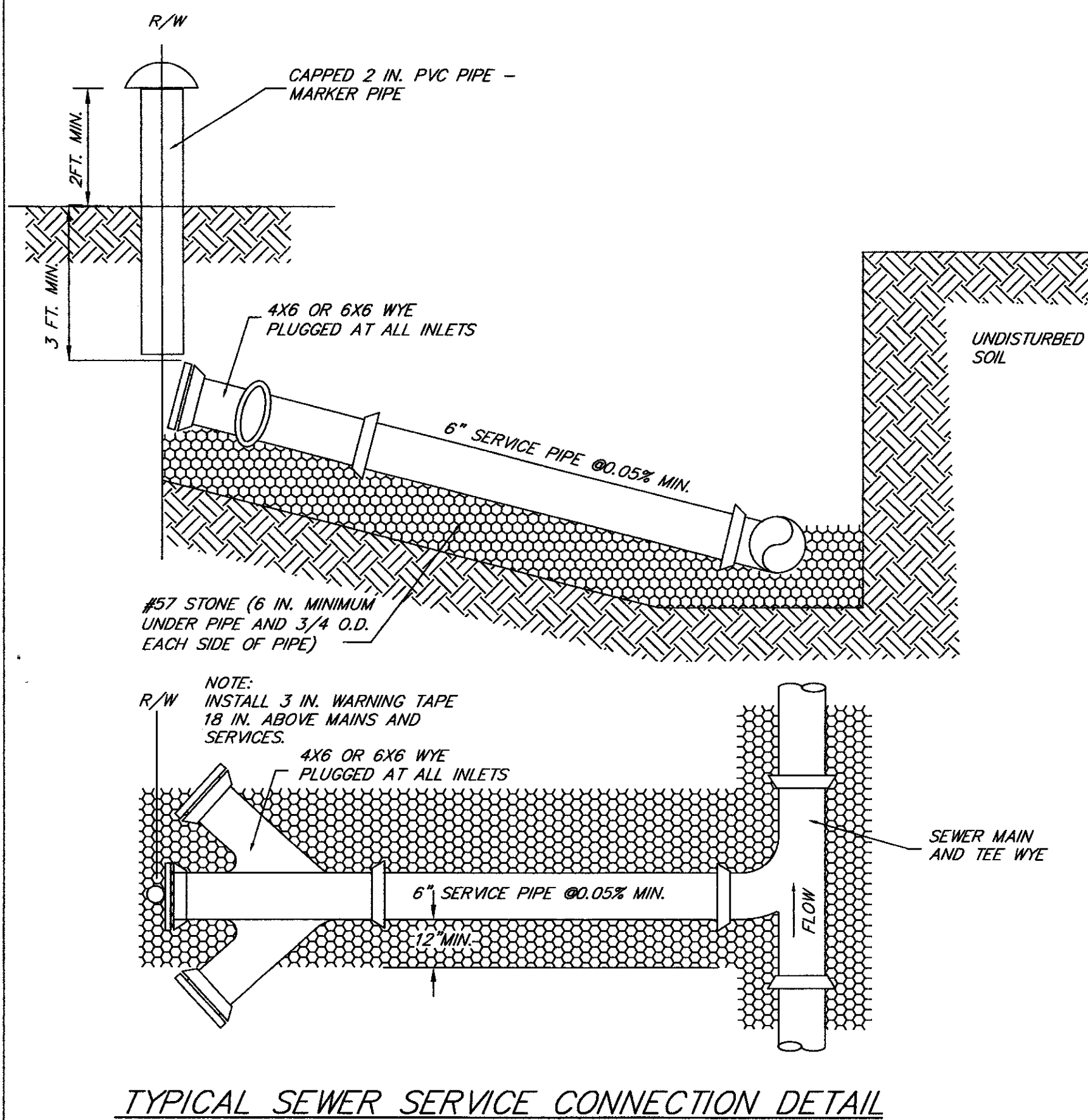
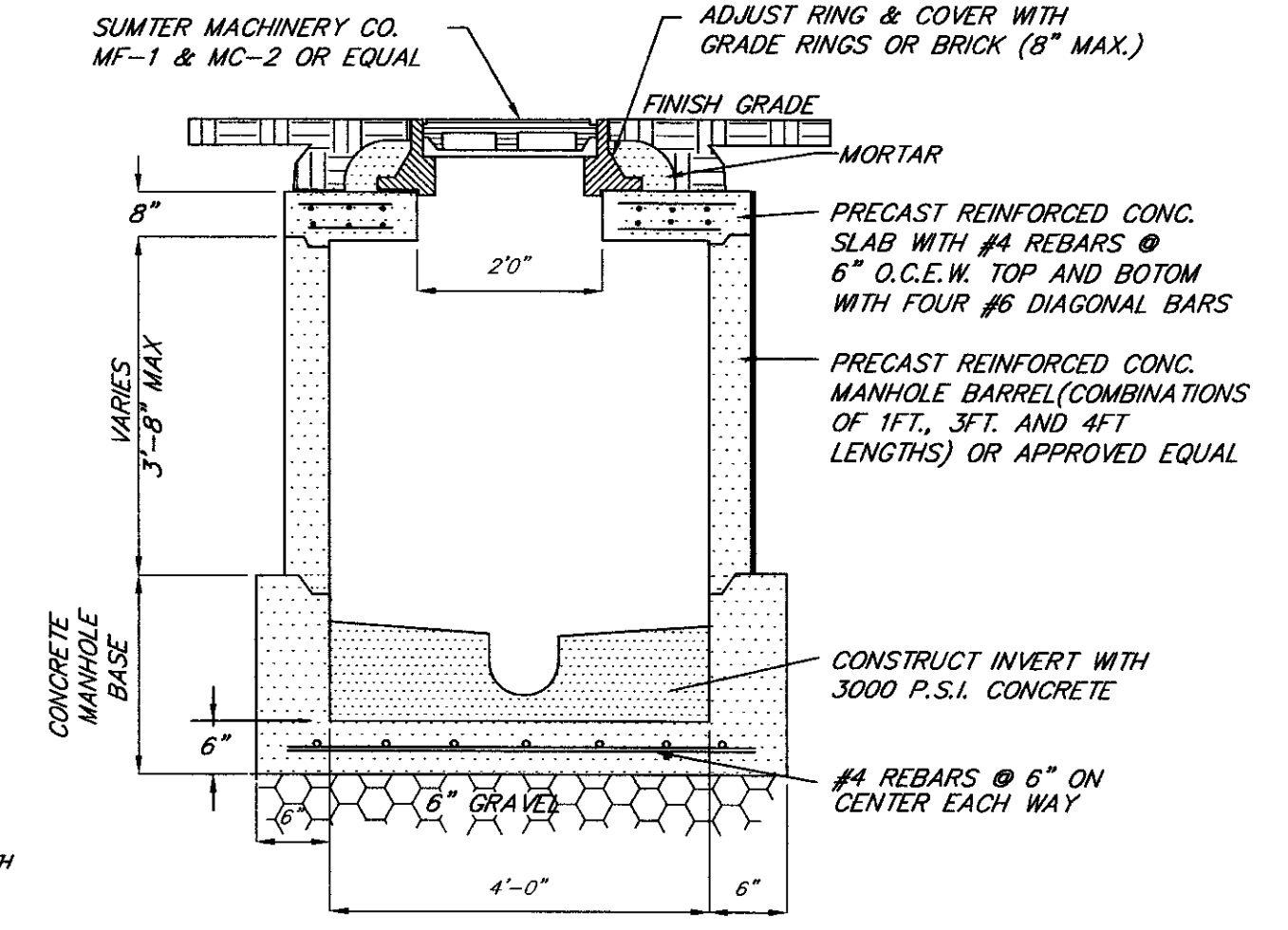
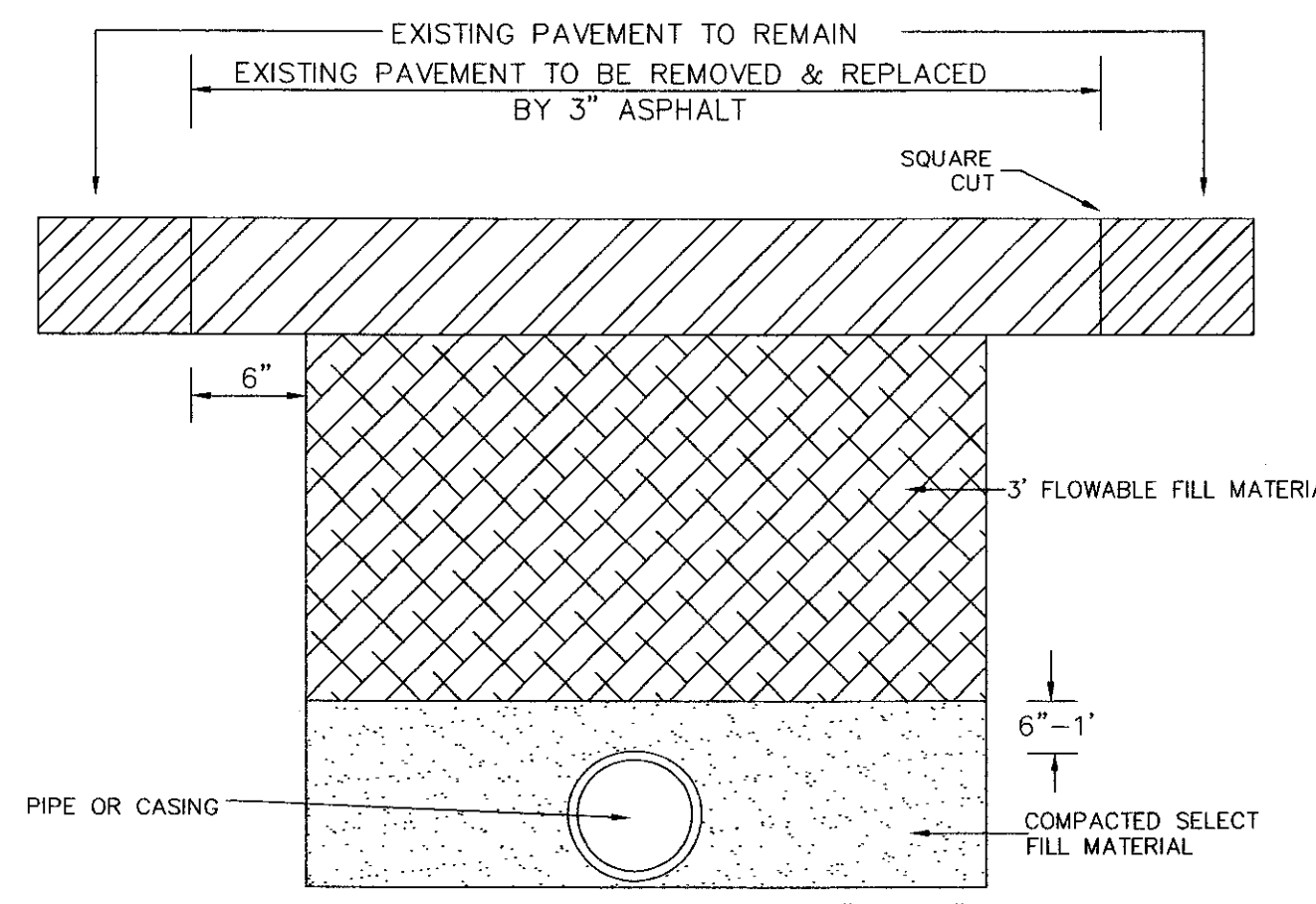
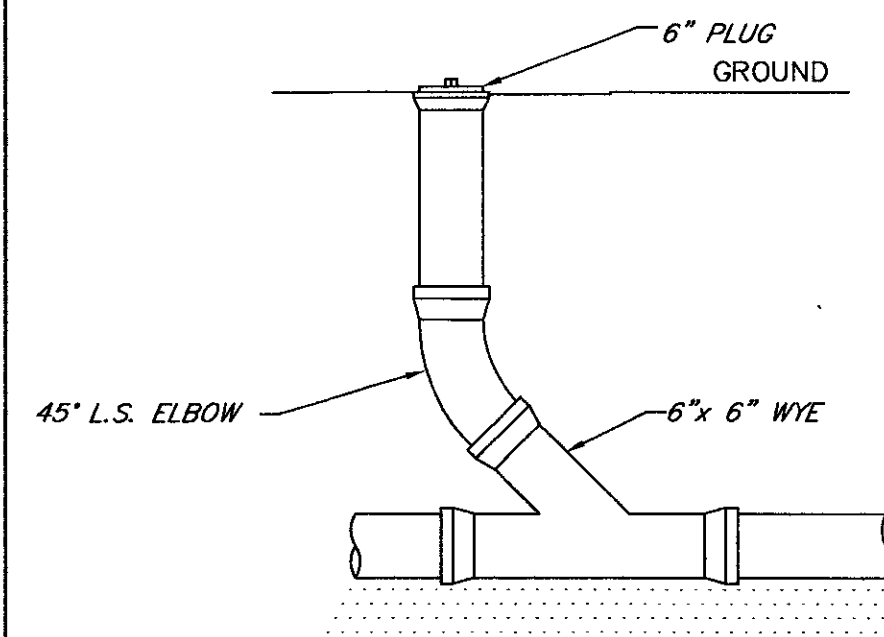
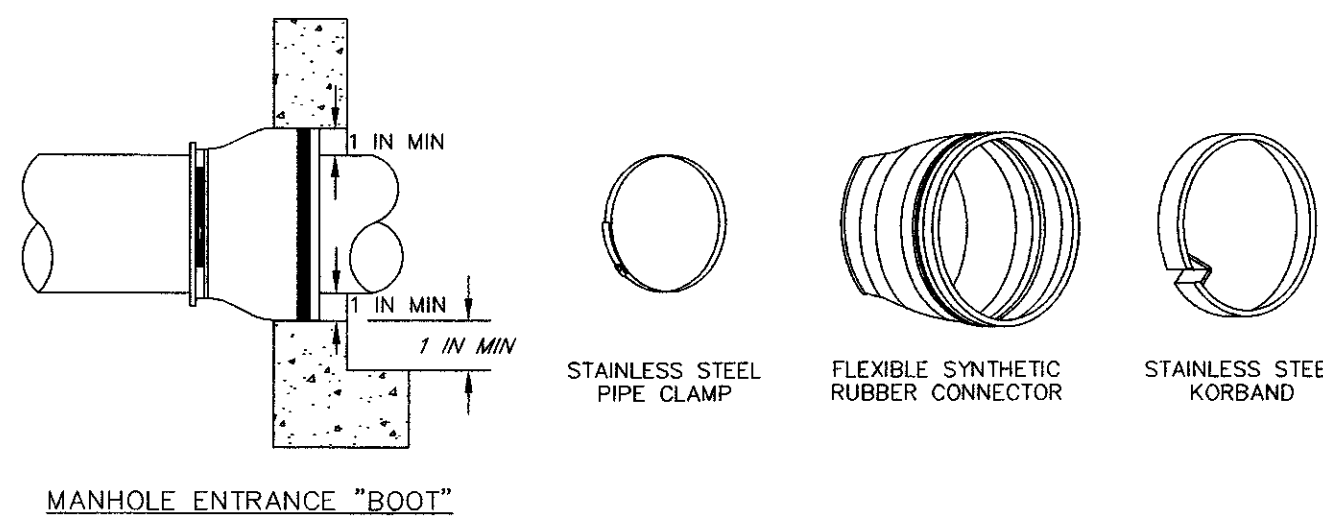


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Fax: (843) 740-7707
info@triscoengineering.com
www.triscoengineering.com
Surrey B. L. Trisco, Architect
Lena L. Manning - Wetzel, Consulting Engineer
Visit us at <http://www.triscoengineering.com>

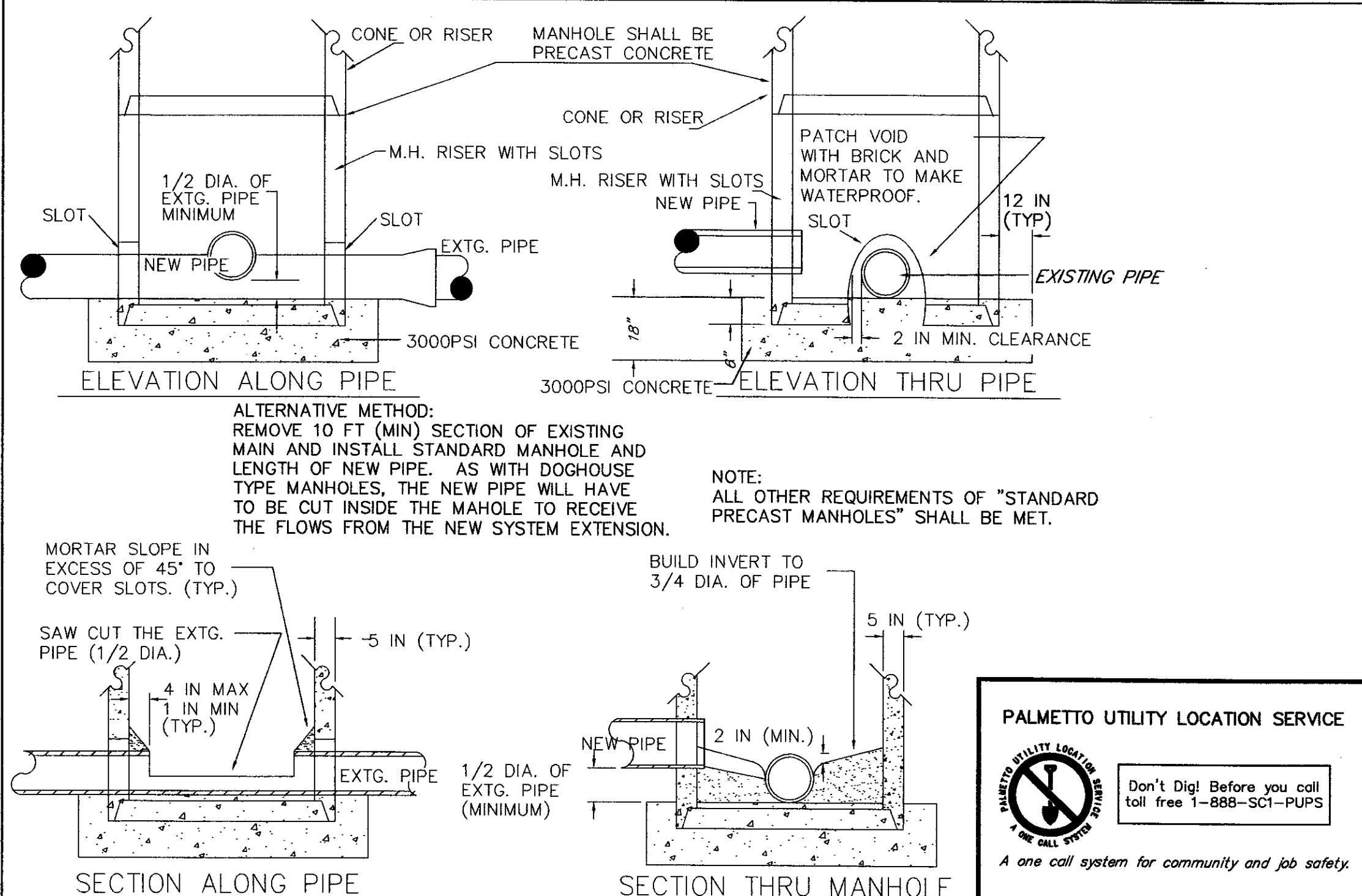
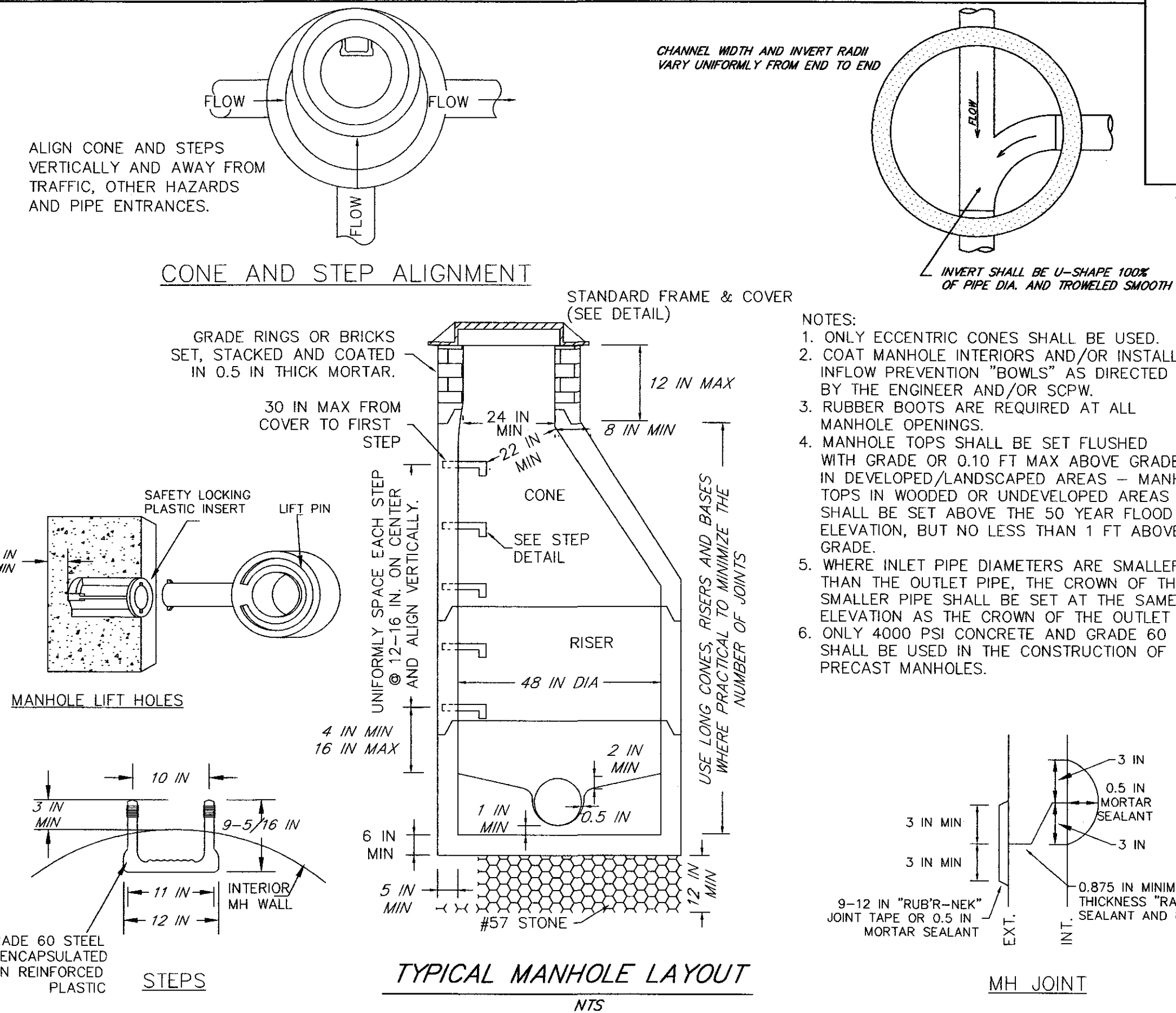
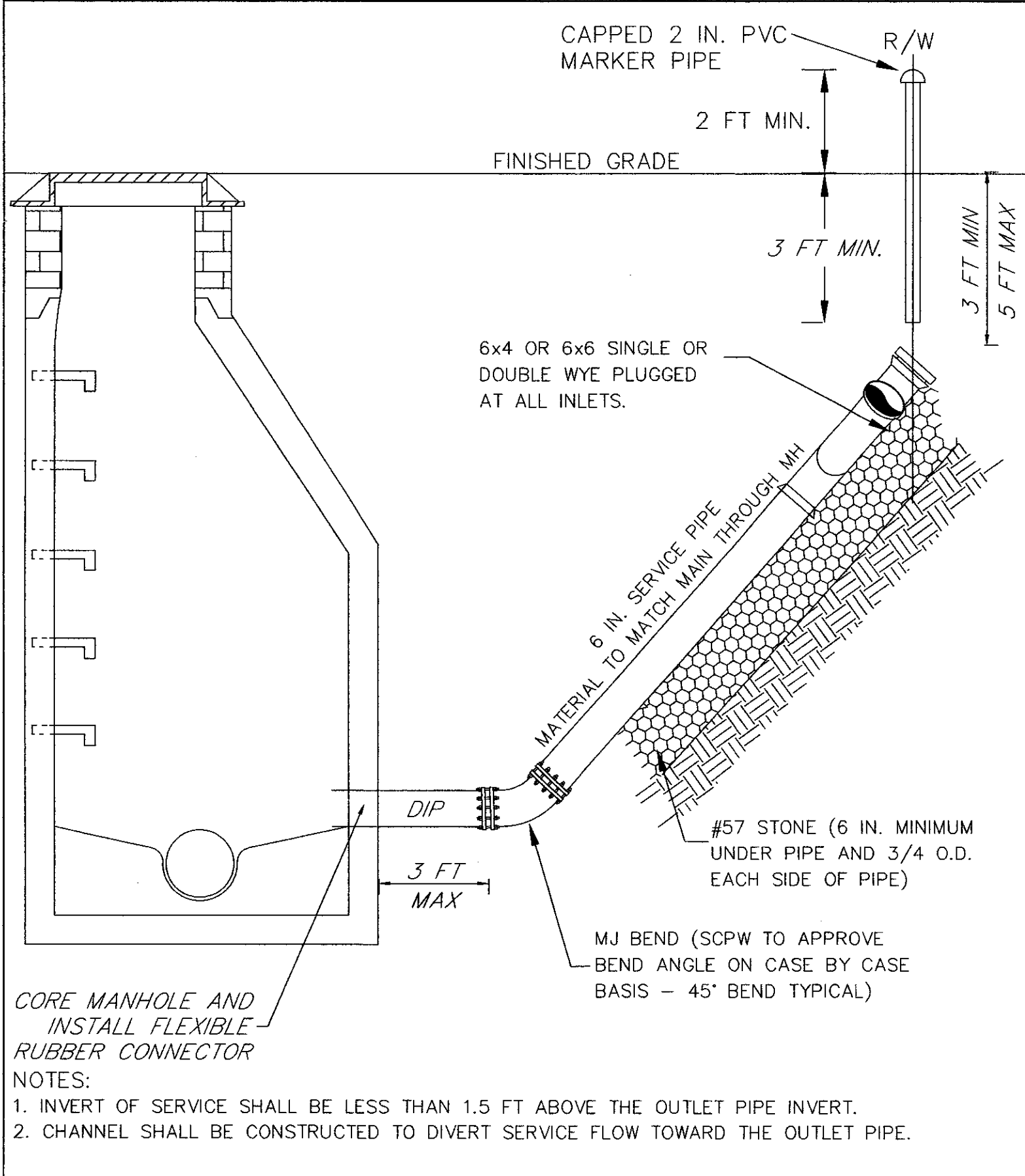


TITLE
SEWER PROFILE
PHASE I OF ARBOR OAKS SUBDIVISION
LOCATED IN
THE TOWN OF SUMMERVILLE
DORCHESTER COUNTY, SOUTH CAROLINA

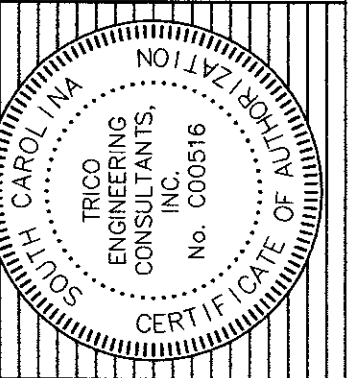
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J	04-26-2002	REVISED SEWER PLANS PER SCPI'S COMMENTS



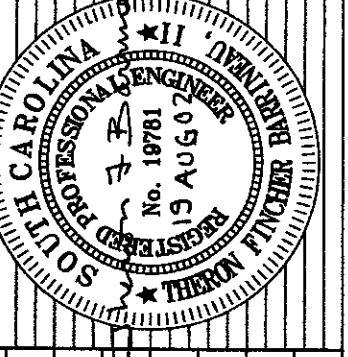
- SEWER CONSTRUCTION NOTES:**
- CONTRACTOR SHALL VERIFY EXISTING INVERT ELEVATIONS, MATERIALS AND LOCATION OF EXISTING SANITARY SEWER LINES AND MANHOLES BEING TIED INTO, PRIOR TO CONSTRUCTION.
 - CONTRACTOR SHALL USE A SECTION OF 8\"/>
- SEWER NOTES:**
- ADJUST MANHOLE RIM ELEVATIONS TO MATCH FINAL GRADE WHEN NECESSARY. IN THE EVENT OF A CONFLICT WITH WATER, SEWER, DRAINAGE OR OTHER UTILITY LINES, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND FIELD ADJUST TO AVOID CONFLICTS.



PHASE I OF ARBOR OAKS SUBDIVISION
 LOCATED IN
 THE TOWN OF SUMMERVILLE
 DORCHESTER COUNTY, SOUTH CAROLINA



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 Fax: (843) 740-7707
 info@tricoengineering.com

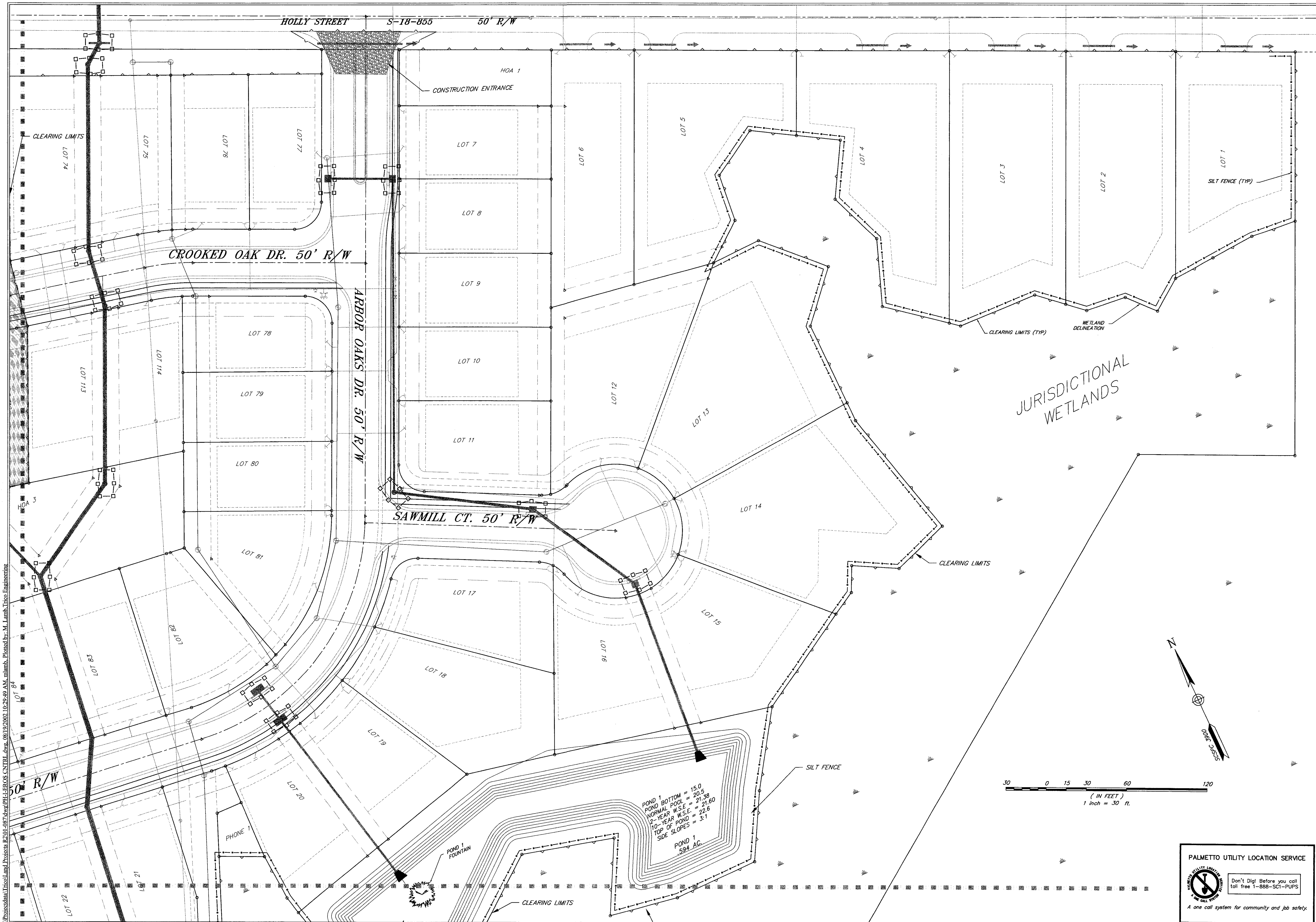


DESIGNED: MEL
 DRAWN: MEL
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 APPROVED: TFB
 DATE: 29 JANUARY 2002
 PROJECT NO.: 01-087
 SHEET 28 of 33

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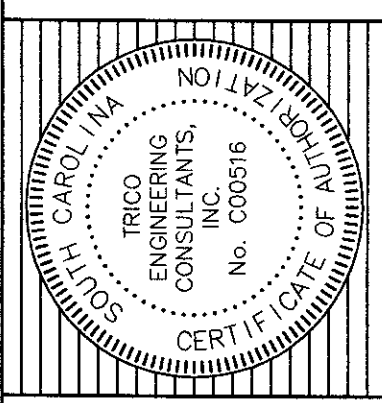
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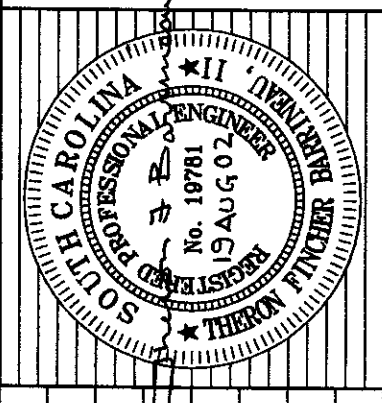
NO.	DATE	REVISIONS

TITLE
EROSION CONTROL PLAN
PHASE 1 OF ARBOR OAKS SUBDIVISION
LOCATED IN
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DORCHESTER COUNTY, SOUTH CAROLINA



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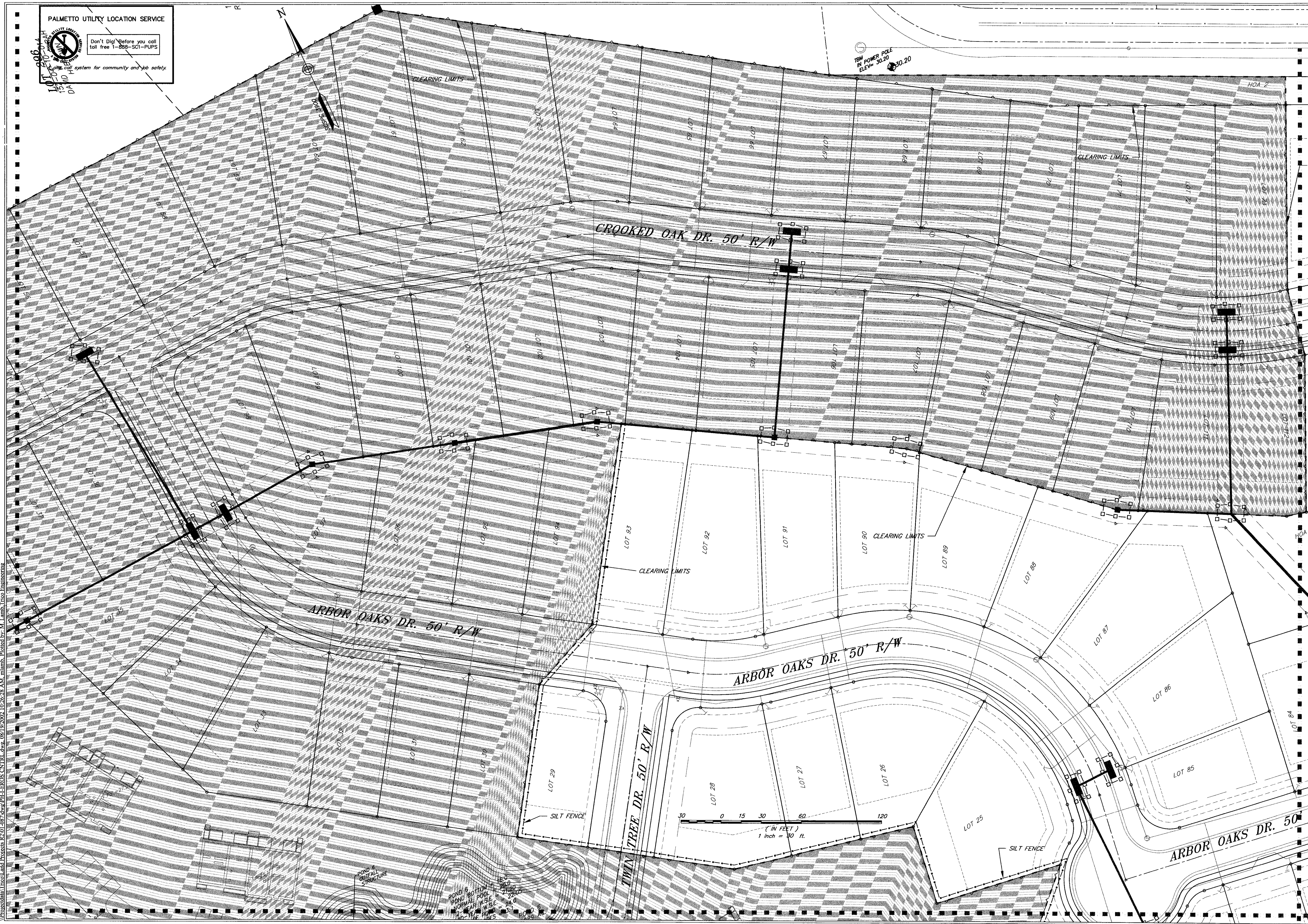
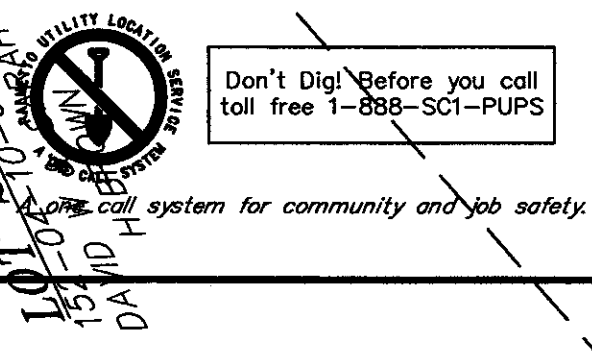
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 SCALE: 1" = 30'
 DATE: 29 JANUARY 2002
 PROJECT NO.: 01-087
 SHEET 29 OF 33

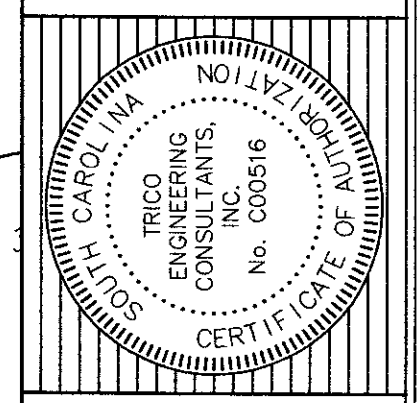
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TM IN POWER POLE
ELEV = 30.20

NO.	DATE	REVISIONS

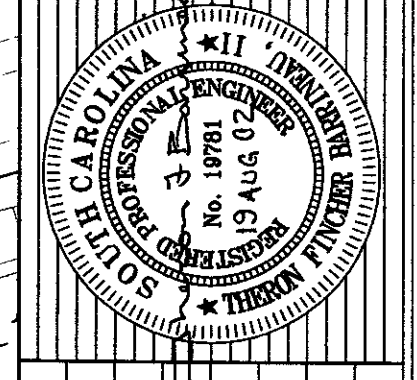
TITLE
EROSION CONTROL PLAN
 PHASE I OF ARBOR OAKS SUBDIVISION
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 South Carolina 29405
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 info@trecengineering.com

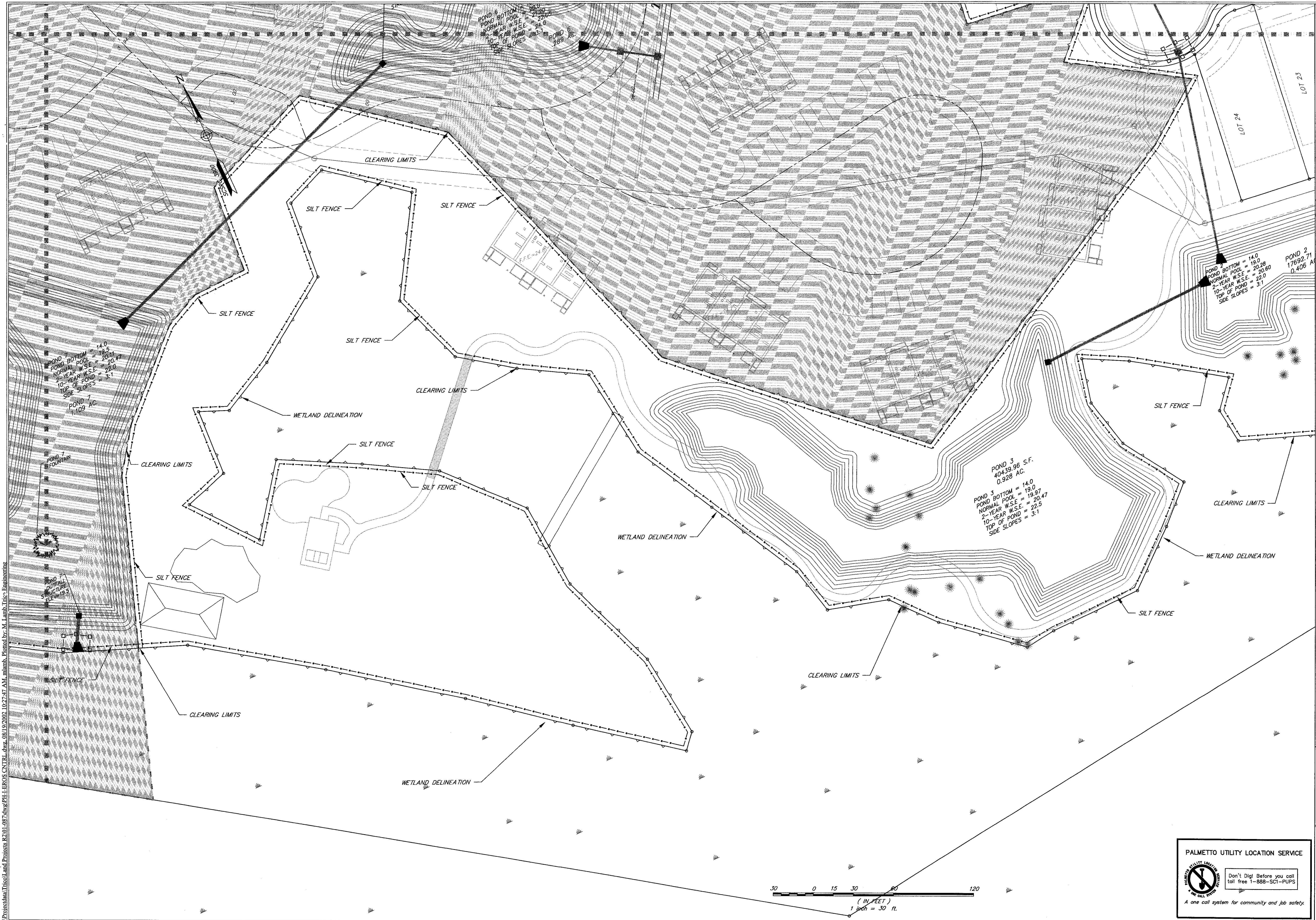
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 PROJECT NO.: 01-087
 SHEET 30 OF 33

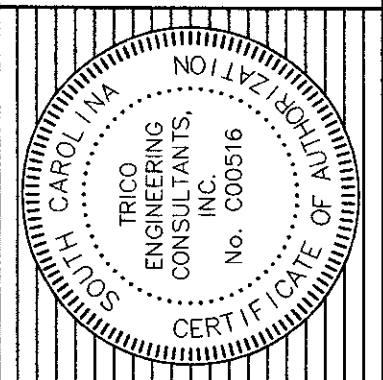
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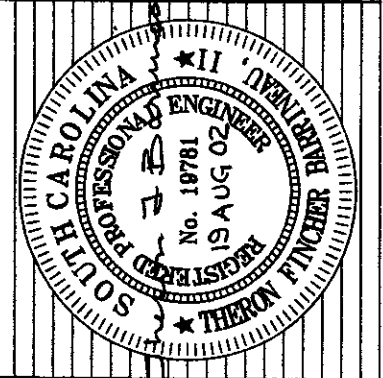
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NO.	DATE	REVISIONS

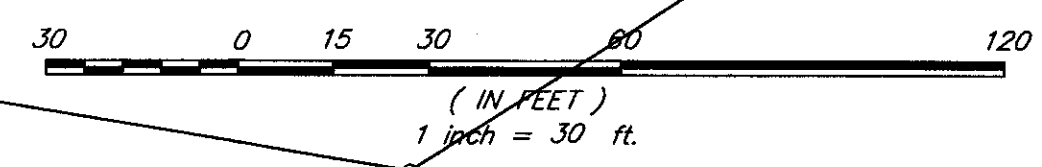
EROSION CONTROL PLAN
 PHASE I OF ARBOR OAKS SUBDIVISION
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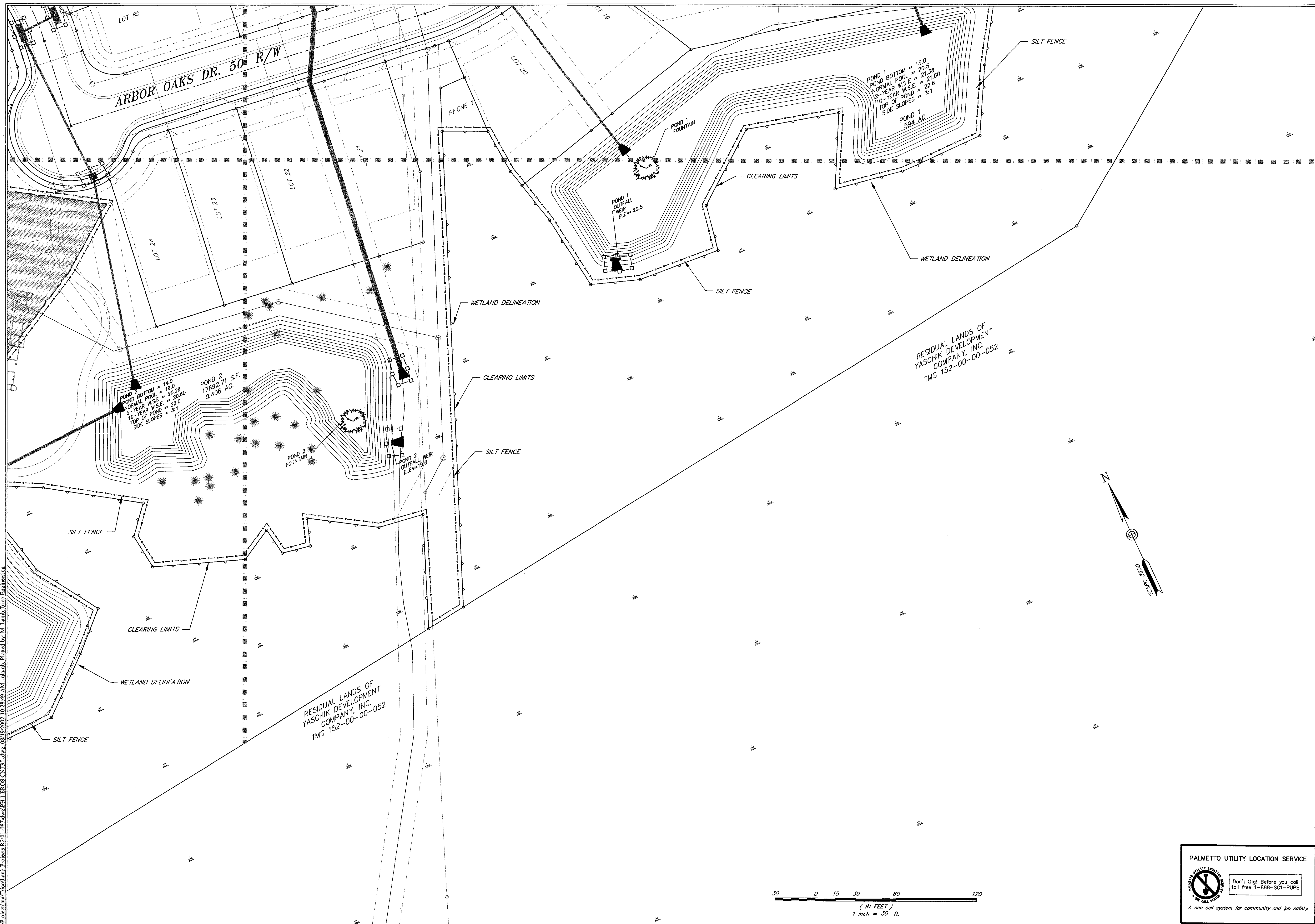


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 PROJECT NO.: 01-087
 SHEET 31 OF 33



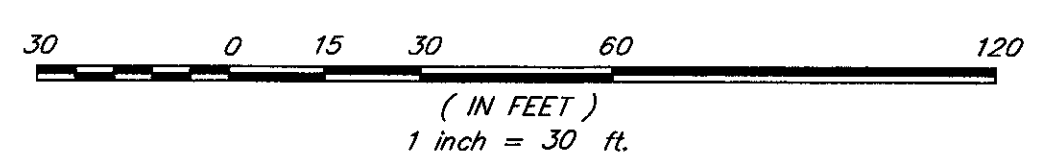
PALMETTO UTILITY LOCATION SERVICE

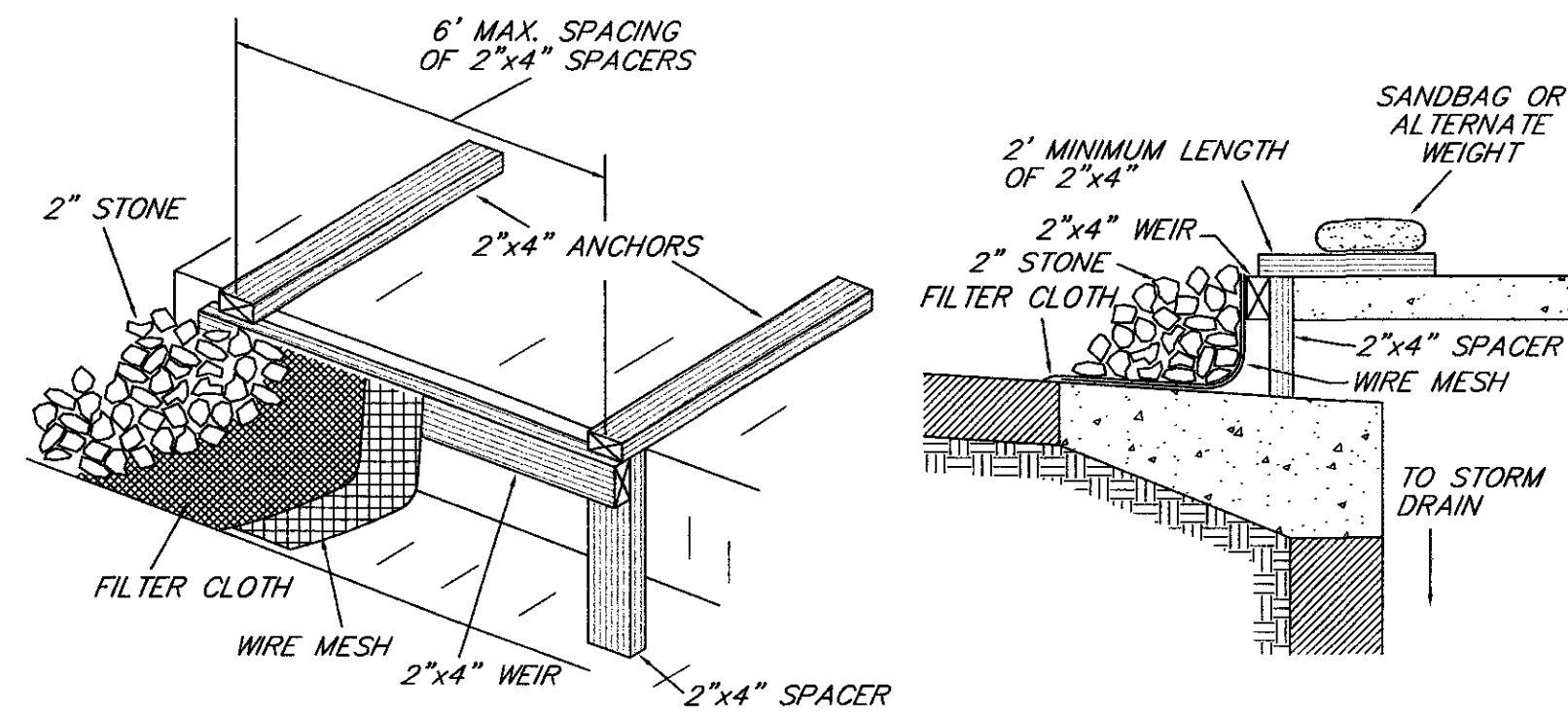
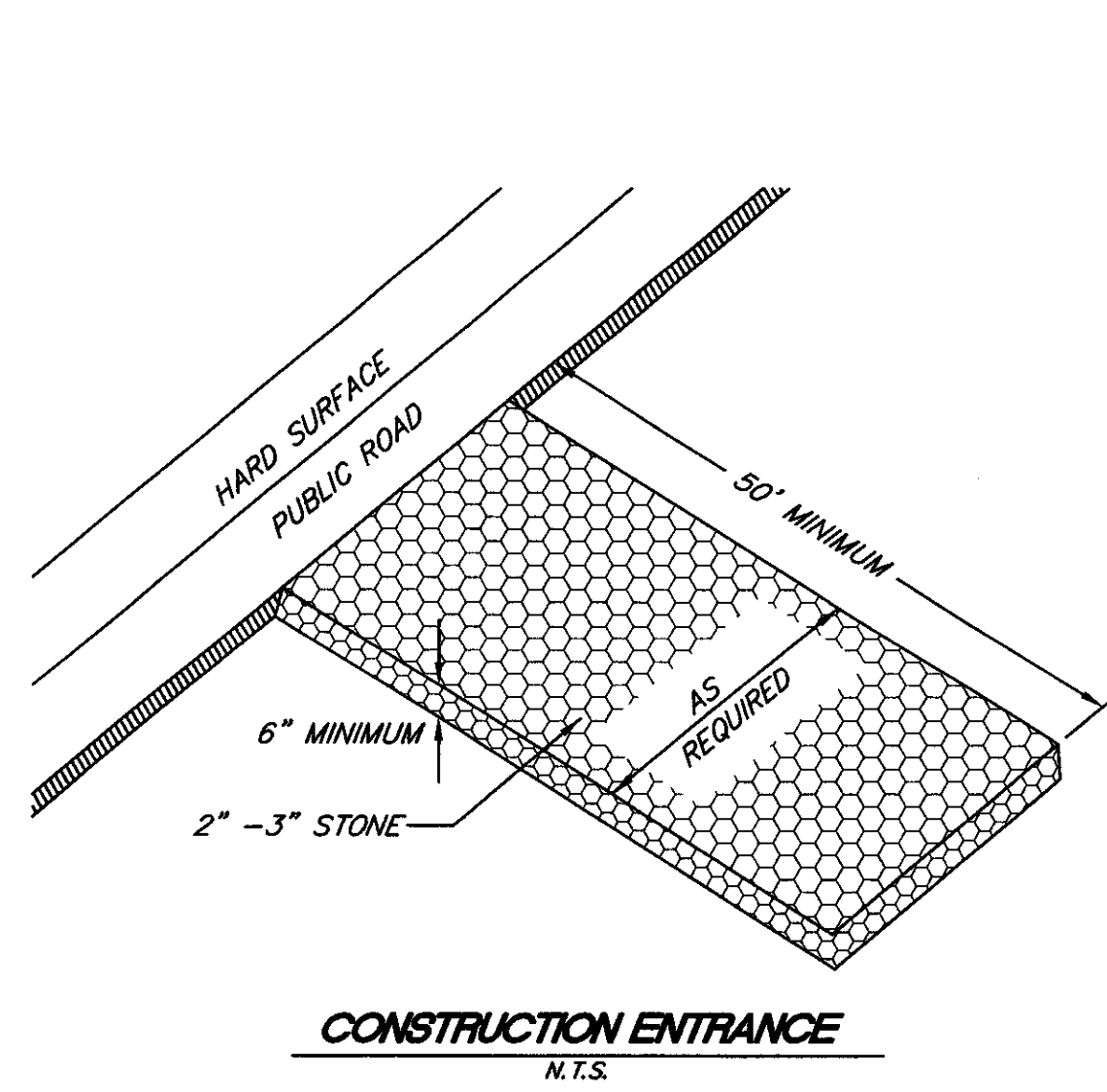
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V:\Projects\Tropical\Tropical\Projects\B2\01-087\Drawings\EROSION CONTROL.dwg, 08/19/2002, 10:28:49 AM, mblamb, Plotted by: M. Lamb, Tracy Engineering

<p style="text-align: center;"> EROSION CONTROL PLAN PHASE I OF ARBOR OAKS SUBDIVISION LOCATED IN THE TOWN OF SUMMERSVILLE DORCHESTER COUNTY, SOUTH CAROLINA </p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 5%;">NO.</th> <th style="width: 5%;">DATE</th> <th style="width: 5%;">REVISIONS</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	REVISIONS									
NO.	DATE	REVISIONS											
<p> TRACY ENGINEERING CONSULTANTS, INC. 4425 Belle Oaks Drive South Charleston, SC 29405 Phone: (843) 740-7700 Fax: (843) 740-7707 info@tracyengineering.com </p>													
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<p> PALMETTO UTILITY LOCATION SERVICE Don't Dig! Before you call toll free 1-888-SC1-PUPS A one call system for community and job safety. </p>													
<p> DESIGNED: MEL DRAWN: MEL CHECKED: TEB APPROVED: TEB SCALE: 1"=30' DATE: 29 JANUARY 2002 PROJECT NO.: 01-087 SHEET 32 OF 33 </p>													



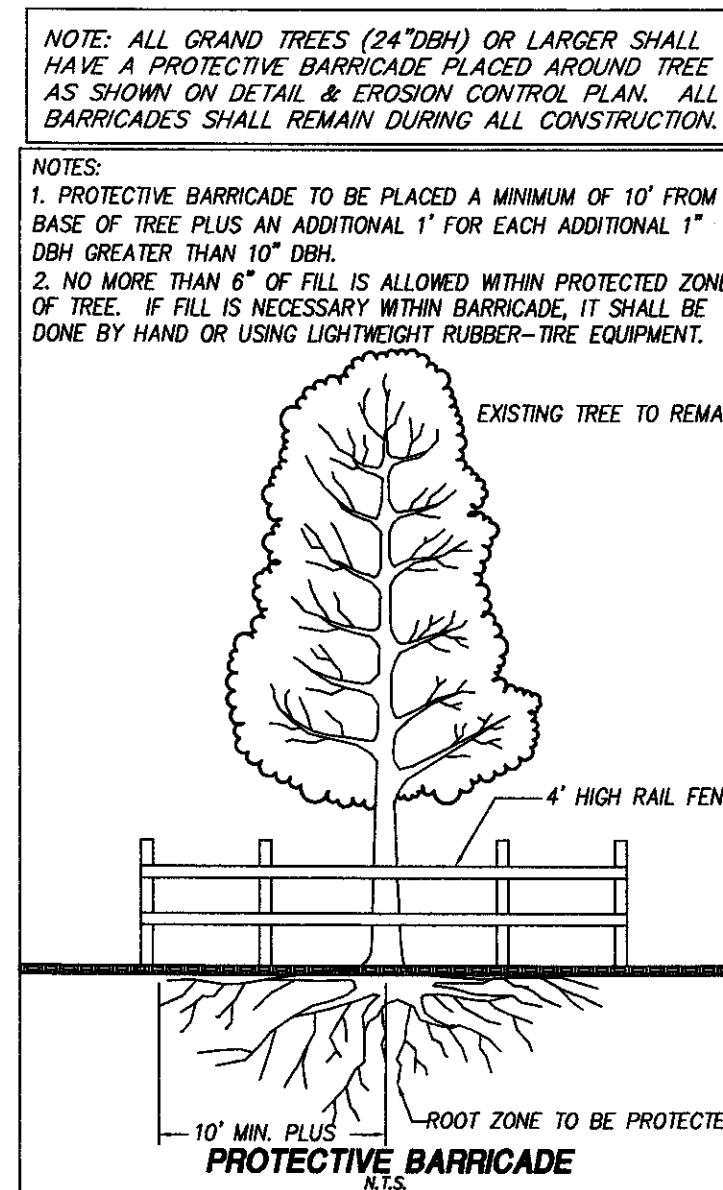


CURB INLET PROTECTION

1. ATTACH A CONTINUOUS PIECE OF WIRE MESH (30\"/>

CURB INLET PROTECTION DETAIL

N.T.S.

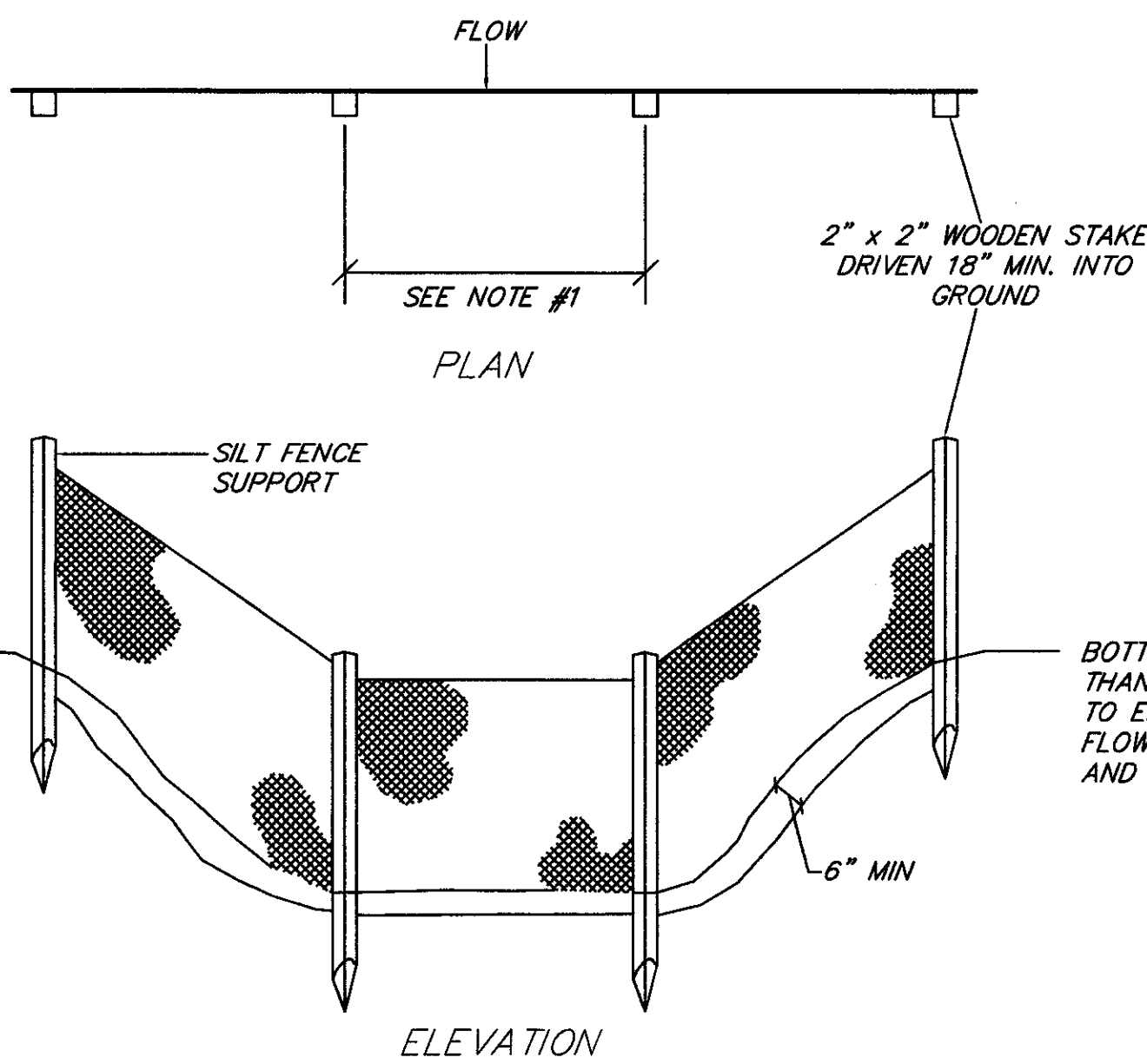


NOTE: ALL GRAND TREES (24\"/>

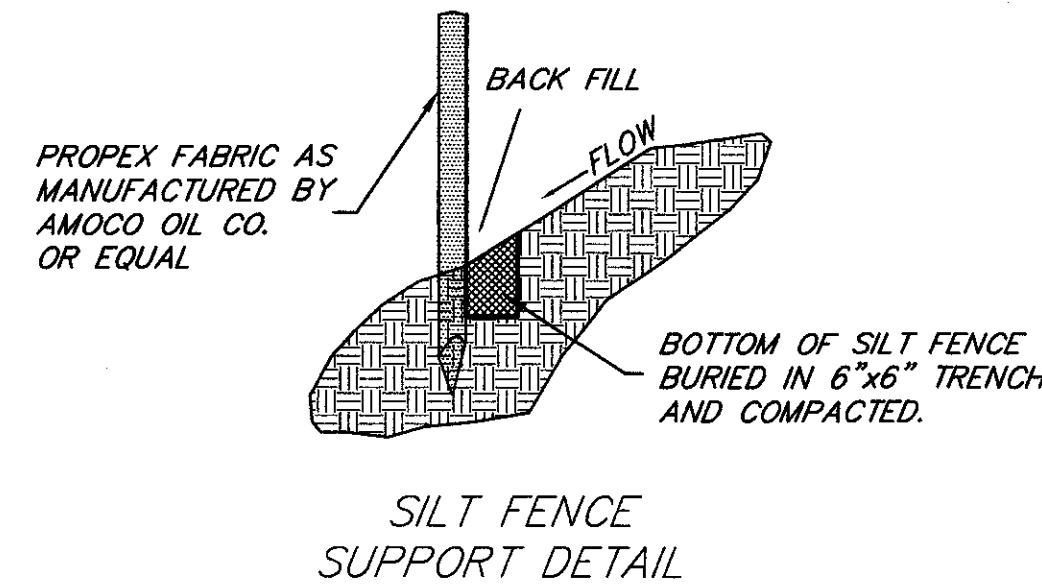
1. PROTECTIVE BARRICADE TO BE PLACED A MINIMUM OF 10\"/>

NOTES:

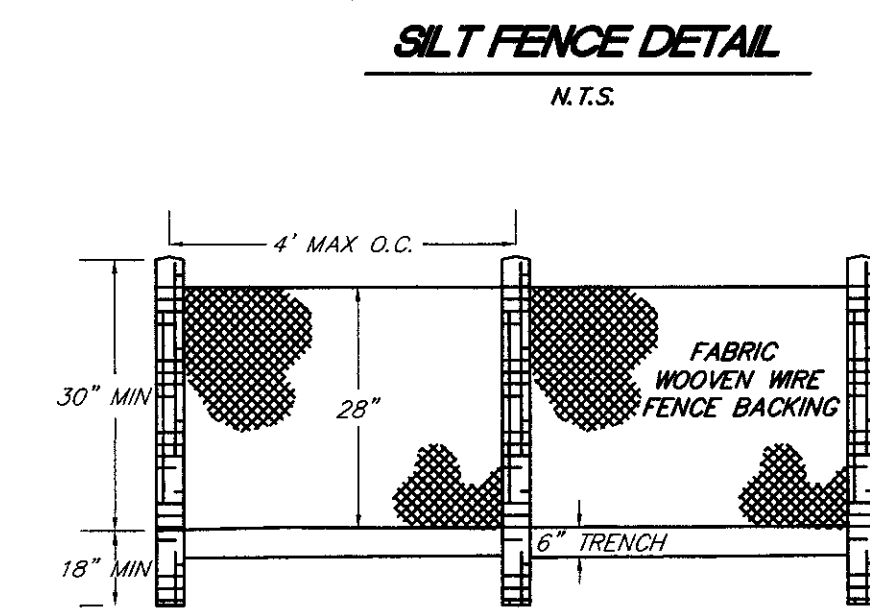
1. SPACING OF SUPPORTS (8 TO 10 FEET WITH WIRE MESH SUPPORT FENCE OR NO MORE THAN 6 FEET APART WITHOUT WIRE FENCE).
2. MAXIMUM SILT FENCE HEIGHT (36 INCHES ABOVE GROUND).
3. MINIMUM 6 INCH OVERLAP AT JOINTS AND JOINTS ARE ONLY TO BE AT SUPPORTS.
4. MIN. BURRY DEPTH OF SILT FENCE IS 6 INCHES BELOW GRADE.



BOTTOM EDGE HIGHER THAN TOP AT CENTER TO ENSURE THAT WATER FLOWS THROUGH OR OVER AND NOT AROUND FENCE

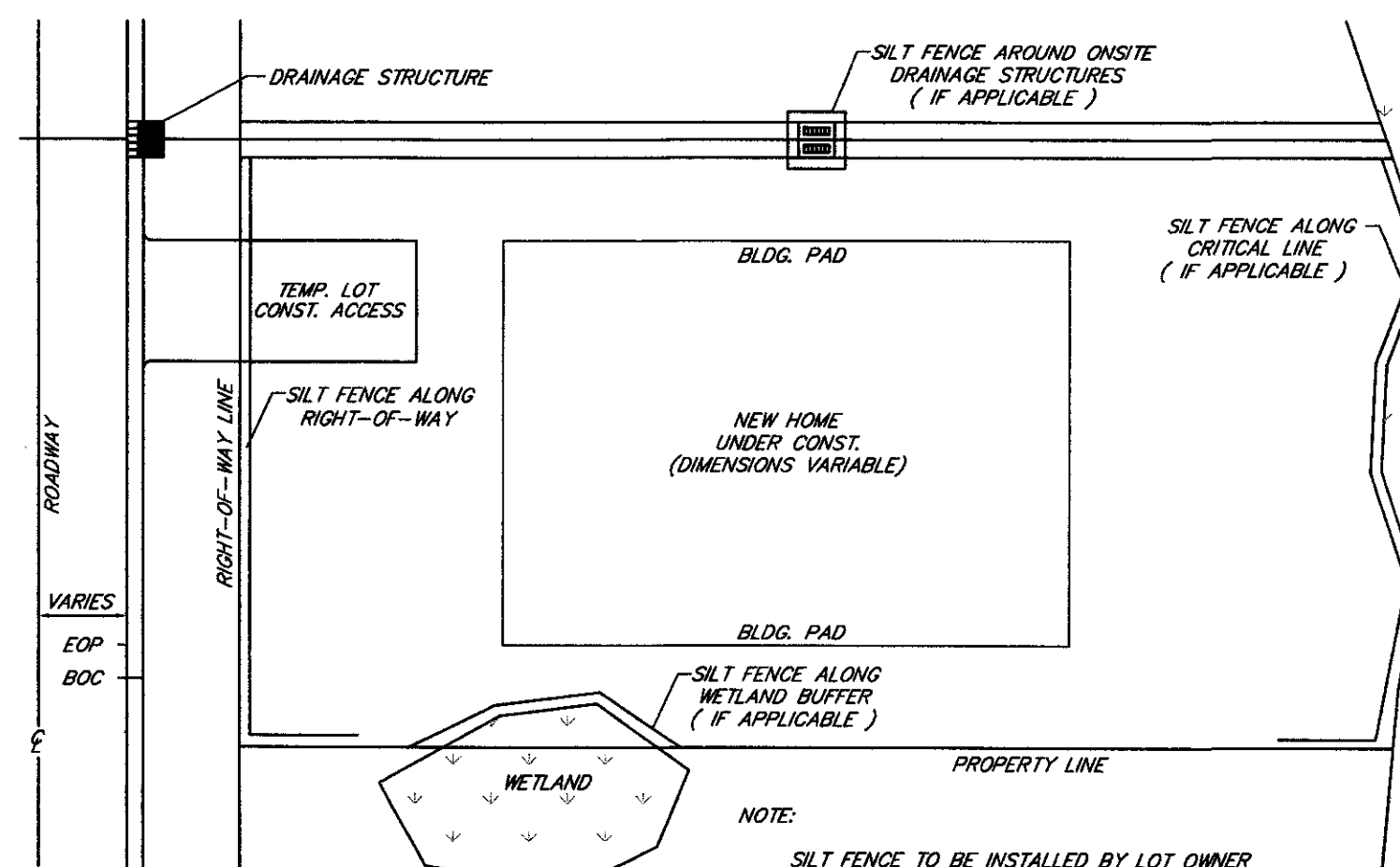


SILT FENCE SUPPORT DETAIL



WIRE BACK SILT FENCE DETAIL

N.T.S.



TYPICAL LOT SILT FENCE DETAIL

N.T.S.

NOTE: SILT FENCE TO BE INSTALLED BY LOT OWNER PRIOR TO CONSTRUCTION AND TO BE MAINTAINED UNTIL LOT IS GRADED AND TURF IS ESTABLISHED.

CONSTRUCTION NOTES:

1. ALL ELEVATIONS ARE BASED ON NGVD 29.
2. ALL WORK, METHODS, EQUIPMENT AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWN OF SUMMERVILLE ROAD CODE AND SPECIFICATIONS, LATEST EDITION.
3. ALL STREET RIGHT OF WAYS, SANITARY SEWER EASEMENTS, AND DRAINAGE EASEMENTS TO BE CLEARED 100% AND ALL DEBRIS REMOVED.
4. THE LOCATIONS OF EXISTING UTILITIES IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, SIZES AND ELEVATIONS PRIOR TO BEGINNING WORK. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES ON THE DRAWINGS OR IN THE FIELD PRIOR TO BEGINNING WORK OR DURING CONSTRUCTION, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER.
5. CONTRACTOR SHALL VERIFY OWNER OR ENGINEER HAS OBTAINED ALL NECESSARY PERMITS FOR CONSTRUCTION PRIOR TO THE START OF THE PROJECT.
6. PIPE UNDERDRAINS WILL BE CONSTRUCTED ALONG 100% OF ALL ROADWAY CURBS, INLETS AND JUNCTION BOXES, AND ALL AREAS DEEMED NECESSARY BY THE PROJECT ENGINEER OR CITY ENGINEER AND WILL BE CONSTRUCTED IN ACCORDANCE WITH THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.
7. ALL SWALE DITCHES SHALL BE GRADED, PRIOR TO COMPLETION OF STREETS, TO GRADES SET BY THE DESIGN ENGINEER WITH THE APPROVAL OF THE TOWN OF SUMMERVILLE ENGINEER.
8. UNIFORMLY GRADE TOP SOIL BEHIND CURB AND GUTTER AT ADJACENT PROPERTY LINES TO MEET EXISTING GRADES AT PROPERTY LINE.
9. GRADE TO ENSURE POSITIVE DRAINAGE. FINISHED SURFACES SHALL FREE FROM SURFACE IRREGULARITIES.
10. THE SITE MUST BE CLEARED AND GRUBBED PRIOR TO PLACING EARTHWORK FILL. UNSUITABLE "POCKETS" OF COMPRESSIBLE SOILS SHALL BE REMOVED, BACKFILLED, AND COMPACTED WITH SUITABLE SOIL.
11. SHOULDERS OF ROADWAYS SHALL BE LEFT IN GOOD CONDITION, THAT IS ACCEPTABLE TO THE CITY OF NORTH CHARLESTON AND ALL TOPSOIL AND GRASS THAT IS DISTRIBUTED SHALL BE REPLACED IN ACCORDANCE WITH THE S.C. DEPT. OF TRANSPORTATION.
12. ALL PIPE ENDS NOT CONSTRUCTED WITH STRUCTURES WILL BE RIPRAPPED AS SHOWN IN DETAIL.
13. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO BEGINNING OF ANY WORK.
14. TOPOGRAPHICAL SURVEY PROVIDED BY TRICO ENGINEERING CONSULTANTS.
15. ALL UTILITIES TO BE INSTALLED BEFORE CURB & GUTTER OR S.A.B.C. INSTALLED.

EROSION CONTROL NOTES:

1. IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS. IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED DAILY UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN TWENTY-ONE (21) DAYS.
3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED EVERY SEVEN (7) DAYS OR AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS ONE-HALF (0.5) INCH. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED, AS NECESSARY.
4. PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION.
5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING MUD ONTO THE PAVED ROADWAY FROM CONSTRUCTION AREAS. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING LOT CONSTRUCTION OR PROVIDE AN INDIVIDUAL PLAN MEETING SECTION R 72-307 OF THE STORMWATER MANAGEMENT AND SEDIMENT REDUCTION ACT. PROVIDE A DETAIL.

SPECIES	SEEDING RATES FOR TEMPORARY SEEDINGS		PLANTING DATES
	RATE PER 1,000 sq. ft.	RATE PER ACRE	
RYE	3 POUNDS	2-3 BU.	10/1-3/1
RYEGRASS	1 POUNDS	40-50 LBS.	8/15-3/1
RYE AND ANNUAL LESPEDEZA	1 1/2 POUNDS	1-1 1/2 BU.	2/1-3/1
	1/2 POUND	20-25 LBS.	2/1-3/1
WHEEPING LONGGRASS	0.2 POUNDS	4-6 LBS.	2/15-8/15
SUDANGRASS	1 POUND	35-45 LBS.	4/1-7/15
BROWNTOP MILLET	1 POUND	30-40 LBS.	4/1-7/15
WHEAT	3 POUNDS	2-3 BU.	11/1-1/15

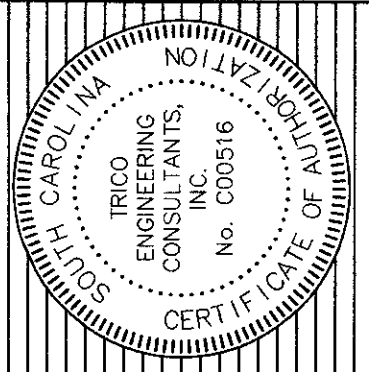
UNUSUAL SITE CONDITIONS MAY REQUIRE HEAVIER SEEDING RATES. SEEDING DATES MAY NEED TO BE ALTERED TO FIT TEMPERATURE VARIATIONS AND LOCAL CONDITIONS.
ALL DISTURBED AREAS MUST BE GRASSED IN ACCORDANCE WITH S.C.D.O.T. STANDARD SPECS. PRIOR TO ACCEPTANCE BY BERKELEY COUNTY.

SEEDING SCHEDULE

SEQUENCE OF CONSTRUCTION

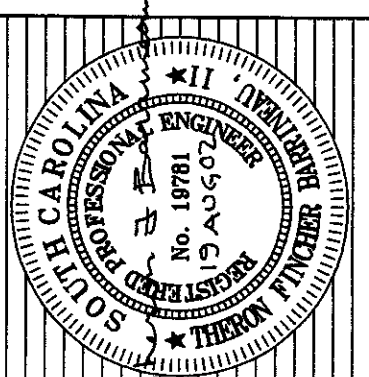
1. INSTALL PERIMETER EROSION CONTROL
2. CLEARING & GRUBBING
3. INSTALL STORMDRAIN INFRASTRUCTURE
4. INSTALL SEDIMENT BASINS & TRAPS
5. INSTALL PERIMETER CONTROLS
6. UTILITY INSTALLATION
7. ROAD GRADING
8. COMPLETION OF SITE GRADING
9. FINAL GRADING & LANDSCAPE STABILIZATION
10. REMOVAL OF SEDIMENT CONTROLS

EROSION CONTROL PLAN
PHASE I OF ARBOR OAKS SUBDIVISION
LOCATED IN
THE TOWN OF SUMMERVILLE
DORCHESTER COUNTY, SOUTH CAROLINA



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Summerville, SC 29585
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APPROVED: ITB
SCALE: 1"=30'
DATE: 29 JANUARY 2002
PROJECT NO.: 01-087
SHEET 33 OF 33

Project: 01-087, File: PHEL-EROSION CONTROL.dwg, 08/19/2002, 10:29:04 AM, Plotted by: M. Lamb, Trico Engineering