

CITY OF GOODLETTSVILLE DAVIDSON COUNTY, TENNESSEE

FRIENDSHIP DR. STORM WATER IMPROVEMENTS

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CITY OF GOODLETTSVILLE

JOHN COOMBS
•MAYOR•

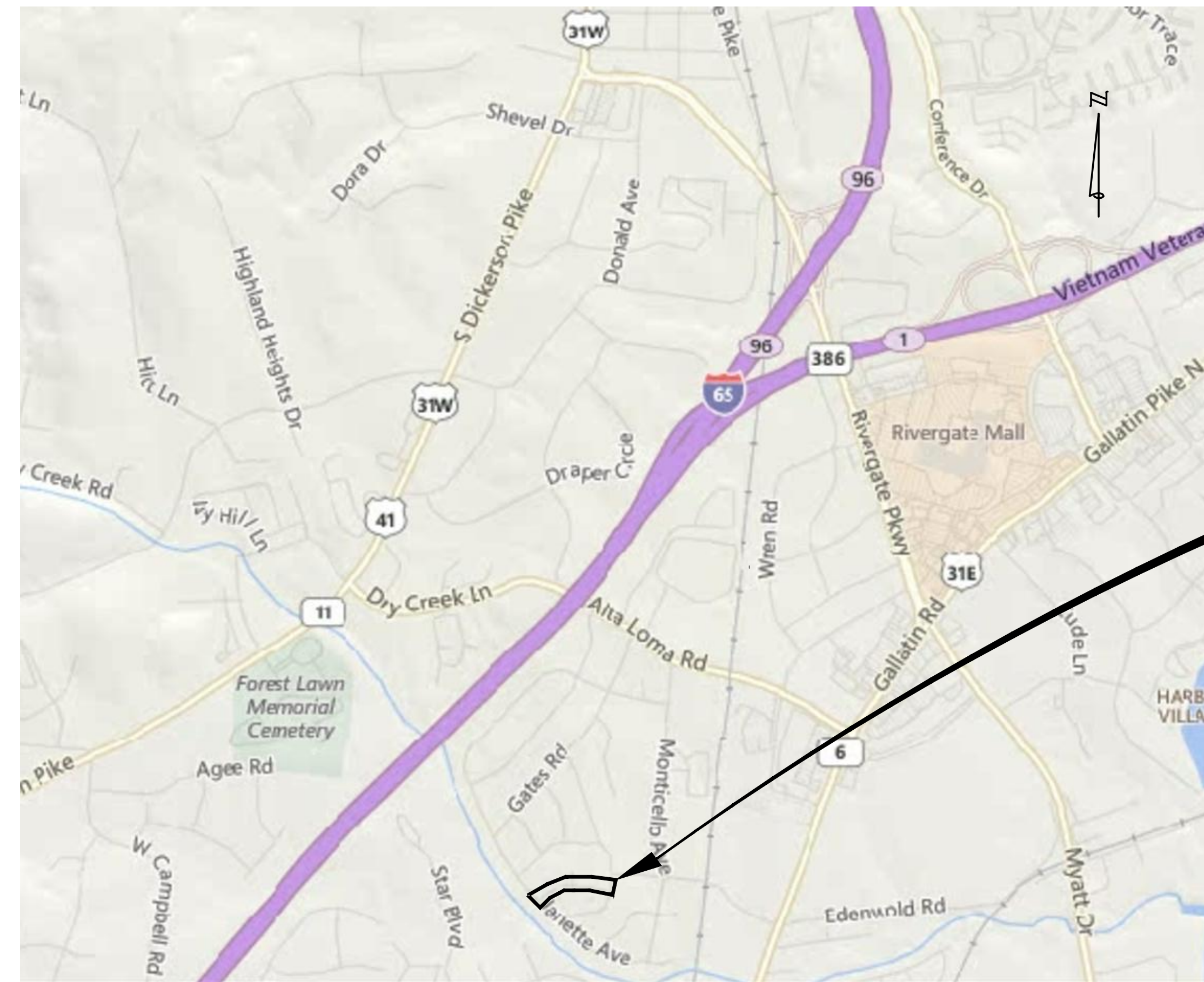
JEFF DUNCAN
•VICE MAYOR•

HARRY BELL
RUSTY TINNIN
ZACH YOUNG
•COMMISSIONERS•

TIM ELLIS
•CITY MANAGER•

JULIE HIGH
• ASSISTANT CITY MANAGER/•
FINANCE & ADMIN SVCS DIRECTOR

ELIZABETH SIMPSON
•CITY CLERK•

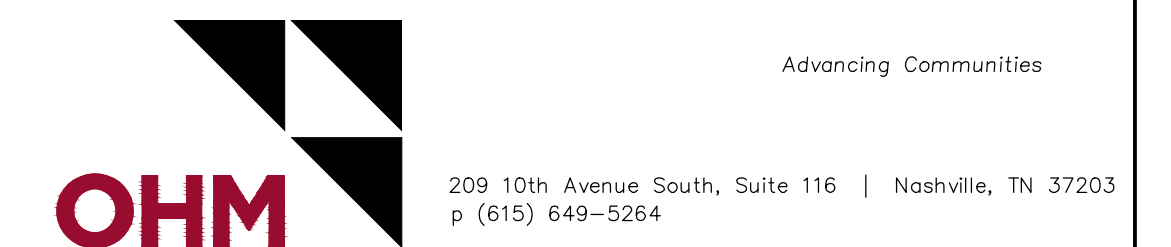


PROJECT LOCATION

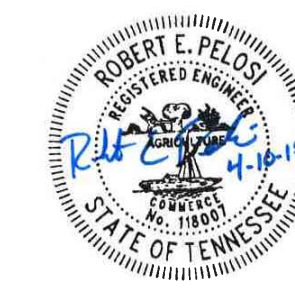
LOCATION MAP
N.T.S.

| UTILITY PROVIDERS | |
|---|---|
| <p>SANITARY SEWER METRO WATER SERVICES 800 2ND AVENUE SOUTH NASHVILLE, TN 37210 615.862.4600 (OFFICE)</p> | <p>ELECTRICITY NASHVILLE ELECTRIC SERVICE 1214 CHURCH STREET NASHVILLE, TN 37246 615.736.6900 (OFFICE)</p> |
| <p>WATER MADISON SUBURBAN UTILITY DISTRICT 108 WEST WEBSTER MADISON, TN 37115 615.868.3201 CONTACT: KENNETH TURNER</p> | <p>TELEPHONE AT&T 333 COMMERCE STREET NASHVILLE, TN 37201 615.214.6525 (OFFICE)</p> |
| <p>NATURAL GAS PIEDONT NATURAL GAS 511 SOUTH 8TH STREET NASHVILLE, TN 37206 615.872.8034</p> | <p>CABLE COMCAST CABLE COMMUNICATIONS 2400 FRANKLIN PIKE NASHVILLE, TN 37204 800.266.2278 (OFFICE)</p> |

CONTRACT FOR:
DRAINAGE IMPROVEMENTS INCLUDING INSTALLATION OF STORM SEWER, CATCH BASINS,
AND PAVEMENT REMOVAL AND REPLACEMENT.



PREPARED UNDER THE SUPERVISION OF:



118007
Registration No.

ROBERT E. PELOSI, PE

4/7/17
Date

REVISIONS

| | |
|-----------------------------|----------------------|
| PROJECT NO. 1079-16-0020 | SHEET NO. 1 OF 10 |
|-----------------------------|----------------------|

WATER & SEWER UTILITY SYMBOLS

- EXISTING**
- ST STORM MANHOLE
 - SQUARE CATCH BASIN
 - ⊕ ROUND CATCH BASIN
 - ==== CULVERT
 - ⊖ CULVERT W/O END SECTION
 -) CULVERT W/END SECTION
 - ⊕B SANITARY MANHOLE
 - ⊙ CO CLEAN OUT
 - ⊗ GW GATE VALVE & WELL
 - GATE VALVE & BOX
 - ⊖ W WATER STOP BOX
 - ⊖ FIRE HYDRANT
 - ⊖ MP METER PIT
 - ⊖ W WATER METER
 - ⊖ SH SPRINKLER HEAD
 - ⊖ (W) IRRIGATION VALVE

- PROPOSED**
- STORM MANHOLE
 - INLET/CATCH BASIN
 -) CULVERT END SECTION
 - SANITARY MANHOLE
 - ⊗ GV&W GATE VALVE & WELL
 - ⊗ GV&B GATE VALVE & BOX
 - ⊗ TSV&W TAPPING SLEEVE VALVE & WELL
 - ⊗ TSV&B TAPPING SLEEVE VALVE & BOX
 - FIRE HYDRANT

REAL ESTATE SYMBOLS

- CONTIGUOUS PROPERTY SYMBOL
- ⊖ XXXX PARCEL NUMBER BOX
- ⊖ NO ROW IMPACTS

MISCELLANEOUS UTILITY SYMBOLS

- EXISTING**
- ↖ GUY WIRE
 - ⊗ GP GUY POLE
 - ⊗ U UTILITY POLE
 - ⊕ UTILITY POLE W/LIGHT
 - ⊕ LIGHT/DECOR LAMP POLE
 - ⊕ FLOOD LIGHT
 - ⊖ GAS VALVE
 - ⊖ G GAS VENT
 - ⊖ G GAS METER
 - ⊖ G GAS RISER
 - ⊖ TRAFFIC SIGNAL
 - ⊖ PEDESTRIAN RISER
 - ⊖ E TRANSFORMER PAD
 - ⊖ U PRIVATE UTILITY MANHOLE
 - ⊖ R R RAILROAD CROSSING
 - ⊖ E ELECTRIC METER
 - ⊖ PB PHONE BOOTH
 - ⊖ TS TRAFFIC SIGNAL CONTROLLER
 - ⊖ HAND HOLE
 - ⊖ E ELECTRIC RISER
 - ⊖ T TELEPHONE RISER
 - ⊖ G CABLE TV RISER
 - ⊖ W MONITORING WELL
 - ⊖ UNDERGROUND MARKER

MISCELLANEOUS SYMBOLS

- EXISTING**
- ⊖ RIPRAP
 - ⊖ SIGN
 - FLOW DIRECTION
 - ⊖ STUMP
 - ⊖ WETLAND
 - ⊖ CONIFEROUS TREE } CL 1 1" TO 5"
 - ⊖ DECIDUOUS TREE } CL 2 6" TO 17"
 - ⊖ CONIFEROUS SHRUB
 - ⊖ DECIDUOUS SHRUB
 - ⊖ SB# SOIL BORING
 - ⊖ SECTION CORNER
 - ⊖ MON MONUMENT
 - ⊖ IRON ROD/PIPE
 - ⊖ PK PK NAIL
 - ⊖ BM BENCHMARK
 - ⊖ TP# TRAVERSE POINT
 - ⊖ MAIL/NEWSPAPER BOX
 - ⊖ FP FLAG POLE
 - ⊖ POST
 - ⊖ HAZARDOUS OR FLAMMABLE MATERIAL USED WITH UNDERGROUND GAS & ELECTRICAL LINES
 - ⊖ CAUTION - CRITICAL UNDERGROUND UTILITY USED WITH TELEPHONE & FIBER OPTIC LINES
- PROPOSED**
- ⊖ RIPRAP
 - ⊖ SIGN
 - FLOW DIRECTION
 - ⊖ STRUCTURE NUMBER WM SAN STM
 - ⊖ ADA SIDEWALK RAMP

UTILITY PATTERN

- EXISTING**
- ⊖ ELEC ELECTRICAL *
 - ⊖ G GAS/OIL
 - ⊖ T CABLE/TELEPHONE *
 - ⊖ FIBER OPTIC FIBER OPTIC *
 - ⊖ W WATER
 - ⊖ SA SANITARY
 - ⊖ ST STORM
- PROPOSED**
- ⊖ 12" → STORM/SANITARY/WATER
 - ⊖ 12" PRIMARY UTILITY WILL HAVE A CONTINUOUS LIFESTYLE, WITH THE SECONDARY UTILITY MATCHING ITS RESPECTIVE EXISTING UTILITY LIFESTYLE
- *OH = OVERHEAD, UG = UNDERGROUND

ROW PATTERN

- EXISTING**
- ⊖ EX. R.O.W. ROW
 - ⊖ PROPERTY/PARCEL
- PROPOSED**
- ⊖ ROW PROP. PERMANENT SEWER EASEMENT
 - ⊖ PROP. TEMPORARY CONST. EASEMENT

TOPO PATTERN

- EXISTING**
- ⊖ HEDGE/TREE
 - ⊖ FENCE
 - ⊖ GUARDRAIL
 - ⊖ CENTERLINE OF DITCH
 - ⊖ RAILROAD
 - ⊖ WETLAND/EDGE OF WATER
- PROPOSED**
- ⊖ GRADING LIMIT (SLOPE STAKE)
 - ⊖ CENTERLINE OF DITCH
 - ⊖ GUARDRAIL
 - ⊖ FENCE

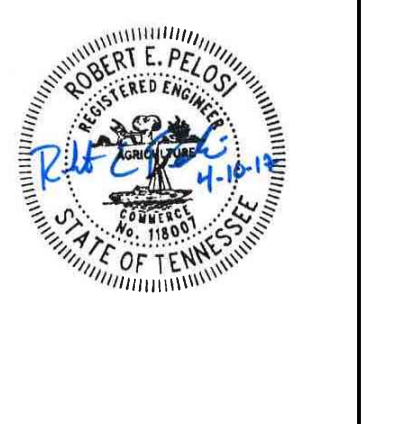
REMOVAL LEGEND

- ⊖ SIDEWALK REMOVAL
- ⊖ HMA SURFACE REMOVAL
- ⊖ PAVEMENT REMOVAL
- ⊖ COLD MILLING HMA SURFACE
- ⊖ HMA BASE CRUSHING AND SHAPING
- ⊖ EXCAVATION, EARTH, MODIFIED
- ⊖ CURB AND GUTTER, REM
- ⊖ TREE, REM
- ⊖ S-XXXXXX SALVAGE
- ⊖ B-XXXXXX BULKHEAD
- ⊖ A-XXXXXX ABANDON
- ⊖ R-XXXXXX REMOVE
- ⊖ ADJ-XXXXXX ADJUST
- ⊖ REL-XXXXXX RELOCATE
- ⊖ REC-XXXXXX RECONSTRUCT
- ⊖ R B/O-XXXXXX REMOVE BY OTHERS
- ⊖ ADJ B/O-XXXXXX ADJUST BY OTHERS
- ⊖ REL B/O-XXXXXX RELOCATE BY OTHERS

IF NECESSARY FOR CLARITY

- ⊖ S SALVAGE
- ⊖ B BULKHEAD
- ⊖ A ABANDON
- ⊖ C CLEARING
- ⊖ R REMOVE
- ⊖ REL RELOCATE
- ⊖ REC RECONSTRUCT
- ⊖ REL B/O RELOCATE BY OTHERS
- ⊖ ADJ B/O ADJUST BY OTHERS

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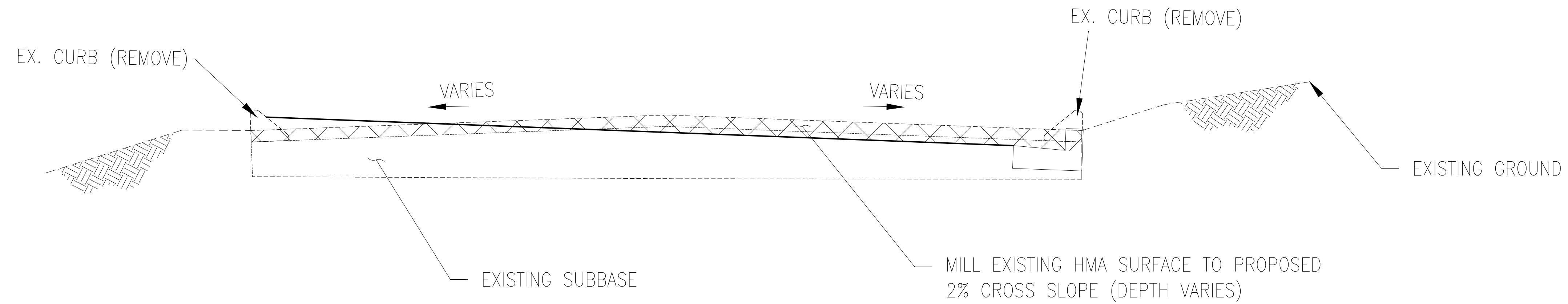
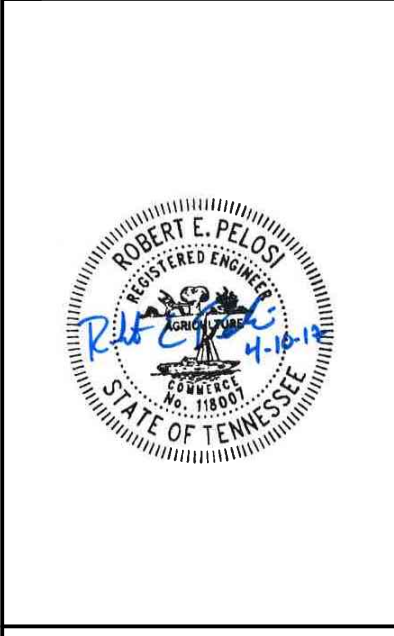
MUNICIPALITY: GOODLETTSVILLE
COUNTY: DAVENPORT
CADD: J.H. DAVENSON
PROJ. MGR: R.P.
DATE: 4/7/17
ENC: R.P.
PROJ. NUMBER: 1079-16-0000
ENC: R.P.

CITY OF GOODLETTSVILLE
FRIENDSHIP DR. DRAINAGE IMPROVEMENTS
LEGEND

DRAWING PATH: P:\000-1999\1079160020-Friendship Dr-Drainage-imp\Drawings\Civil\Misc\Cover&Notes&Legend\160020-EG.dwg Apr 10, 2017 - 4:02pm

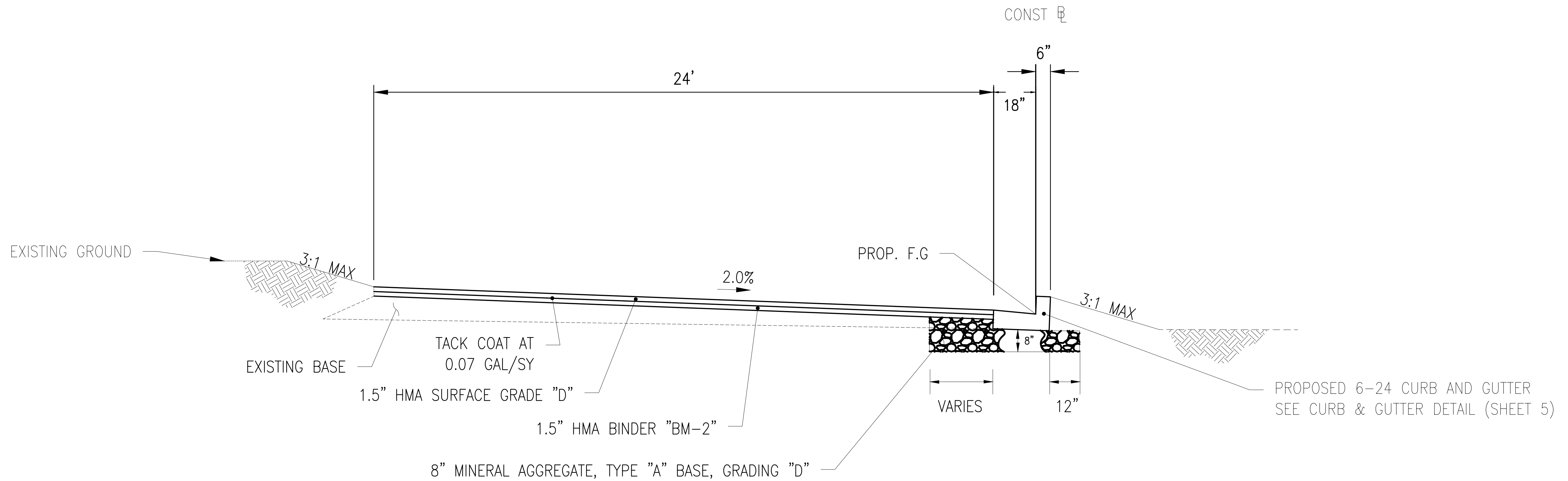
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FRIENDSHIP DRIVE



EXISTING CROSS SECTION

N.T.S



PROPOSED CROSS SECTION

N.T.S



Know what's below.
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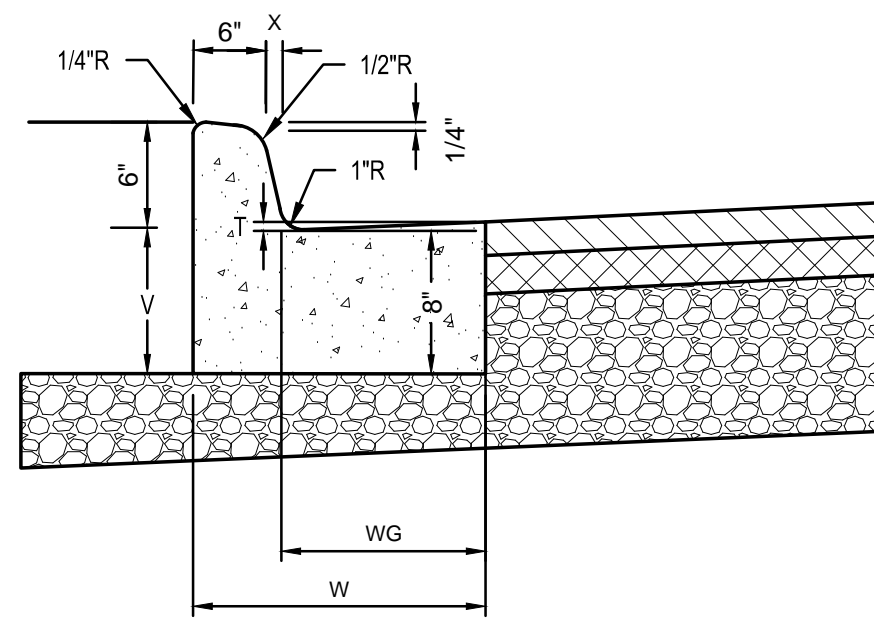
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|--------------------------------------|--------------|------|----------|---------|----------------|--------------|
| DATE | PROJ NUMBER | ENG | PROJ MGR | CADD | COUNTY | MUNICIPALITY |
| 4/7/17 | 1079-16-0020 | R.P. | J.H. | DAVISON | GOODLETTSVILLE | |
| CITY OF GOODLETTSVILLE | | | | | | |
| FRIENDSHIP DR. DRAINAGE IMPROVEMENTS | | | | | | |
| TYPICAL SECTIONS | | | | | | |

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| TYPE | TOTAL WIDTH W (in) | WIDTH OF GUTTER WG (in) | CURB OFFSET X (in) | VERTICAL DROP T (in) | VERTICAL DEPTH V (in) |
|---------|-----------------------|----------------------------|-----------------------|-------------------------|--------------------------|
| *6 - 24 | 24 | 18 | 1 | 1.5 | 8.5 |
| 6 - 30 | 30 | 23.5 | 0.5 | 2 | 6.47 |

* 6-24 CURB TO BE USED ON MINOR RESIDENTIAL STREETS ONLY



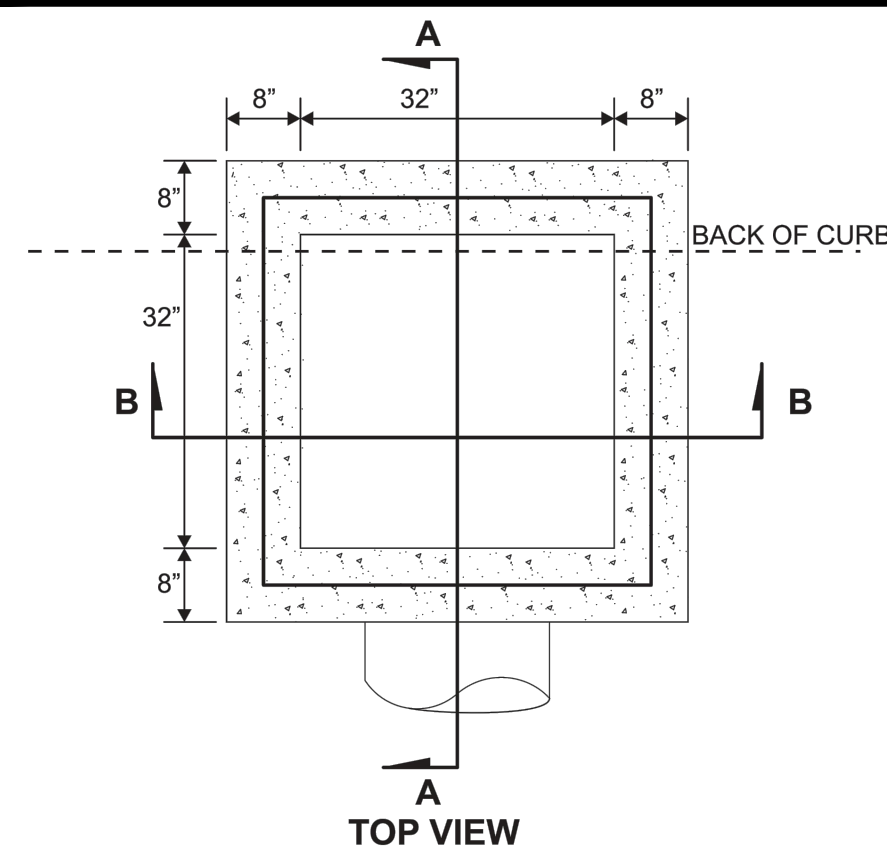
- GENERAL NOTES
- 6-24 CURB & GUTTER TO BE USED WITH JOHN BOUCHARD & SON 3080
 - 6-30 CURB & GUTTER TO BE USED WITH JOHN BOUCHARD & SON 3123
 - FOR SPECIFICATIONS SEE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION, SECTION 702 - CEMENT CONCRETE CURB, GUTTER AND COMBINED CURB AND GUTTER.
 - CONCRETE EXPANSION JOINT MATERIAL IS TO BE 3/4" PREMOLDED FIBER IN ACCORDANCE WITH SECTION 905 - JOINT MATERIALS OF THE TDOT STANDARD SPECIFICATIONS.
 - CONTRACTION JOINTS ARE TO BE SPACED AT 10 FEET. THE SPACING OF 10 FEET MAY BE REDUCED FOR CLOSURES, BE NOT LESS THAN 6 FEET.
 - EXPANSION JOINTS ARE TO BE PLACED AS FOLLOWS: AT TANGENT JOINTS OF CIRCULAR CURBS, BETWEEN CURBS AND ABUTTING RIGID OBJECTS, AT OTHER PLACES WHERE STRESSES MAY DEVELOP, SO AS TO LINE UP WITH PAVEMENT JOINTS WHERE THE ADJACENT PAVEMENT IS CONCRETE. MAXIMUM SPACING IS TO BE 100 FEET.
 - CLASS "A" CONCRETE, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH SYNTHETIC MICROFIBER REINFORCEMENT.

N.T.S.

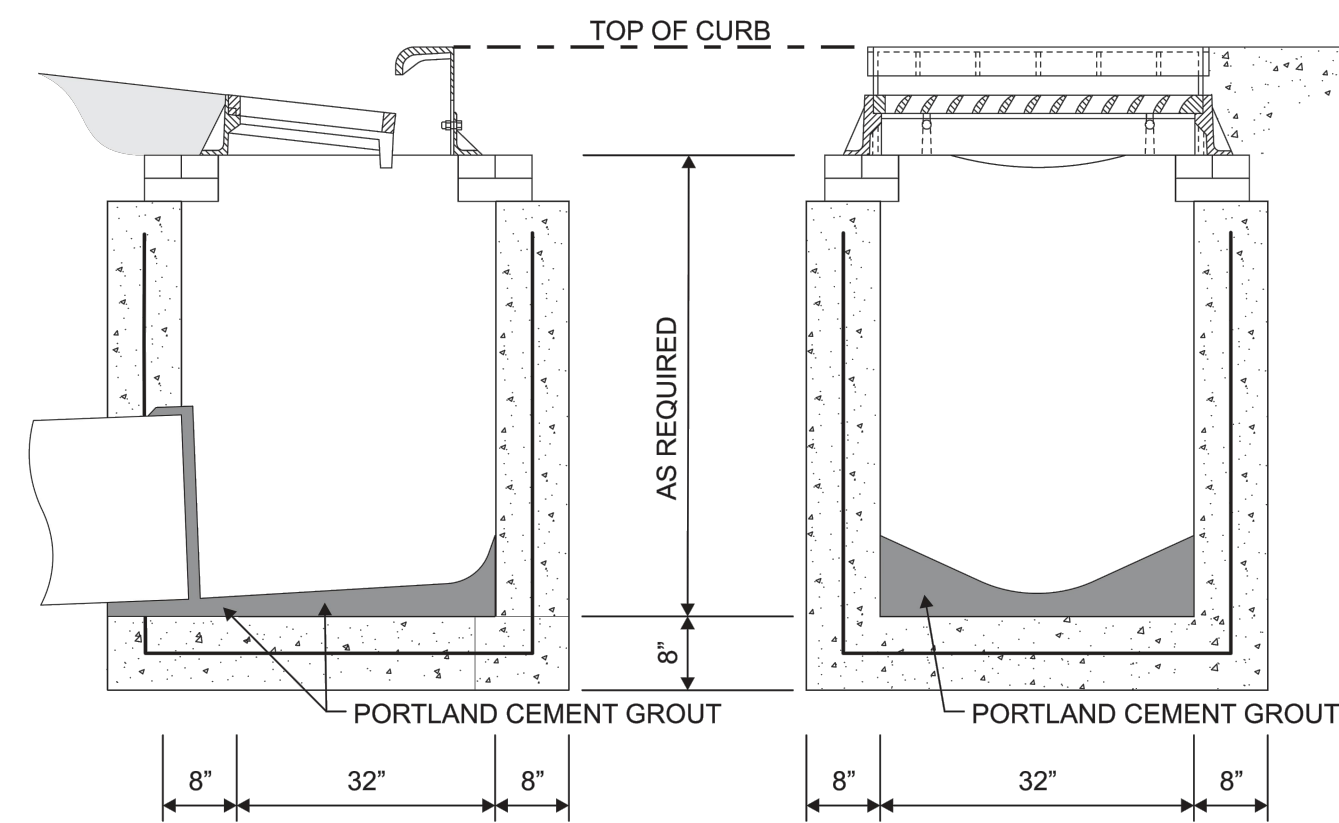
DATE: 10.27.16
STANDARD 6" NON MOUNTABLE
CURBS & GUTTERS
REVISIONS
STD. DWG. RP-1



CURB AND GUTTER DETAIL



- NOTES:
- GRATE AND CASTING TO BE JOHN BOUCHARD & SON NO. 3080 OR EQUAL
 - GRADE 60 STEEL
 - 4000 PSI @ 28-DAY REINFORCEMENT WITH #4 STEEL.

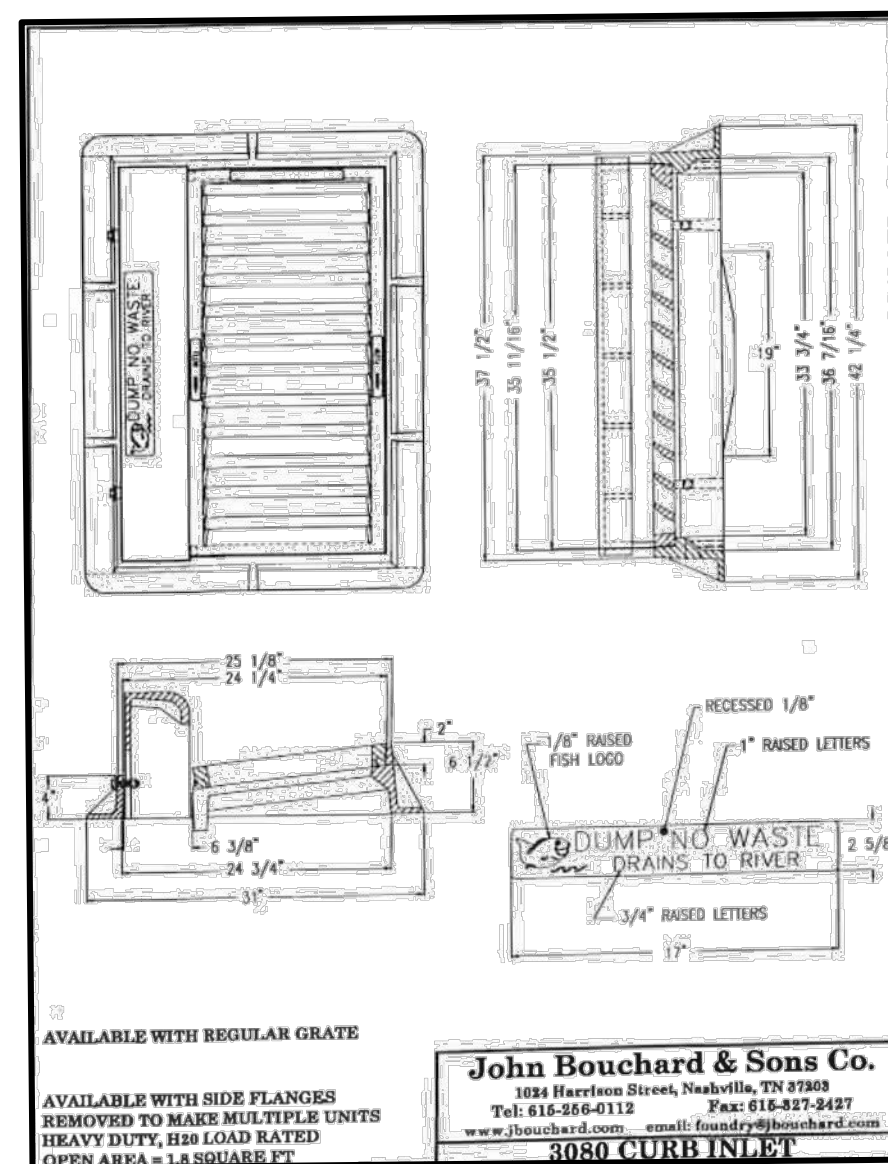


SECTION A-A N.T.S. SECTION B-B

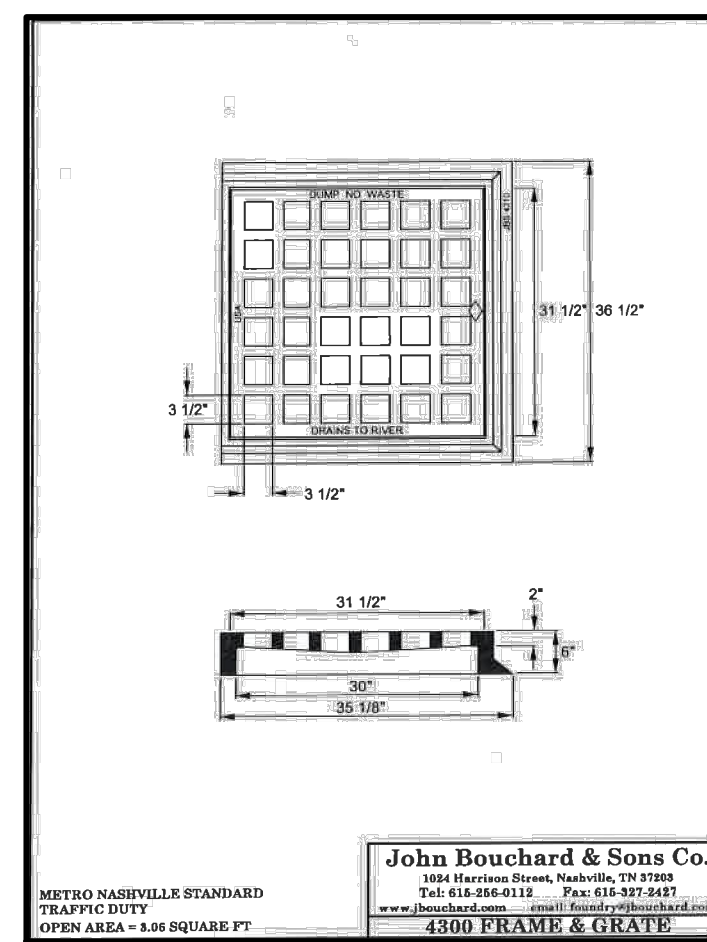
DATE: 10.27.16
CONCRETE SINGLE INLET DETAIL
FOR TYPE 6-24 CURB & GUTTER
REVISIONS
STD. DWG. DR-2



CATCH BASIN DETAIL



JBS 3080 FRAME
AND GRATE DETAIL

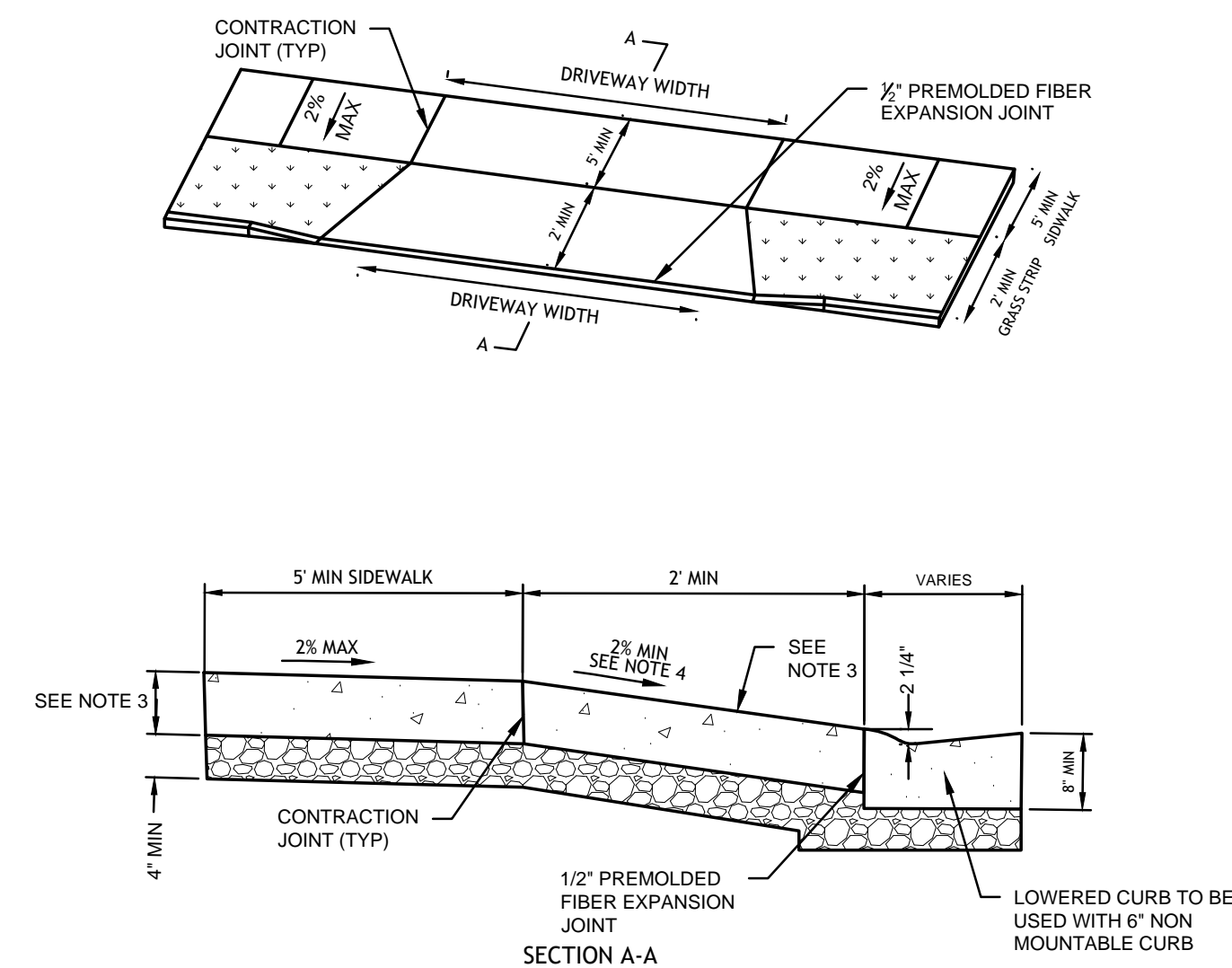


JBS 4300 FRAME
AND GRATE DETAIL

DATE: 10.27.16
STANDARD CONCRETE DRIVEWAYS
(WITH GRASS STRIP)
REVISIONS
STD. DWG. RP-3



DRIVEWAY DETAIL



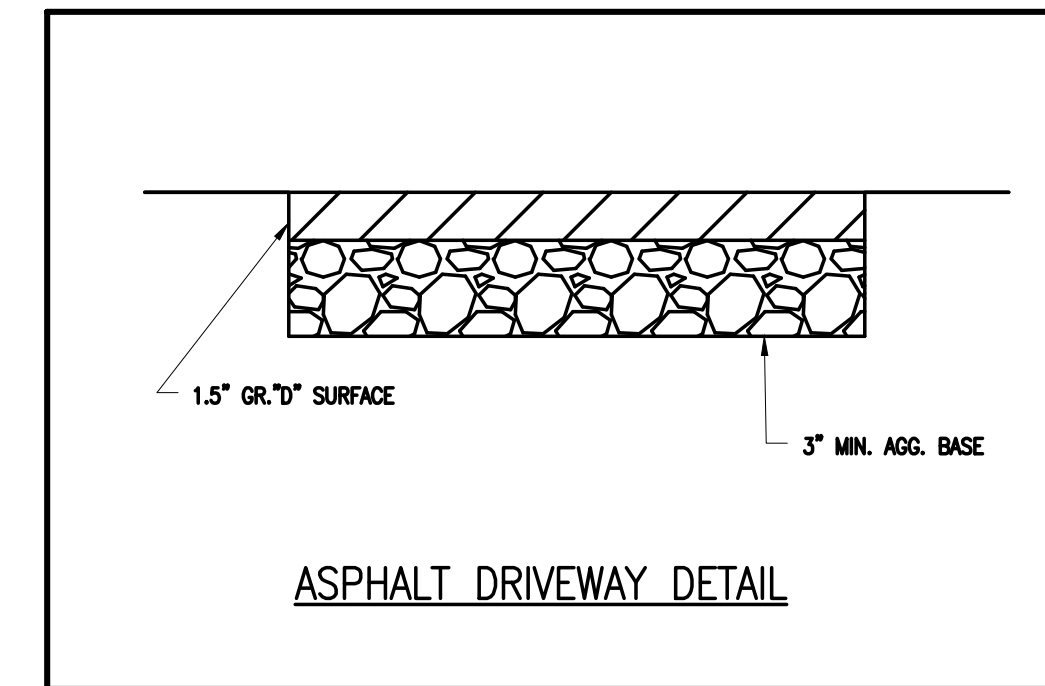
- GENERAL NOTES
- 5' MINIMUM SIDEWALK WITH A MAXIMUM CROSS SLOPE OF 2% THROUGH DRIVEWAYS
 - 4" MINIMUM BASE STONE REQUIRED UNDER ALL DRIVEWAYS.
 - RESIDENTIAL DRIVEWAYS SHALL BE A MINIMUM 6" OF CLASS "A" CONCRETE WITH SYNTHETIC FIBER REINFORCEMENT. COMMERCIAL DRIVEWAYS SHALL BE A MINIMUM 8" OF CLASS "A" CONCRETE WITH SYNTHETIC FIBER REINFORCEMENT.
 - DRIVEWAY RAMP GRADE VARIES. 8.33% MAXIMUM APRON GRADE FOR RESIDENTIAL DRIVEWAYS. 6.0% MAXIMUM APRON GRADE FOR COMMERCIAL DRIVEWAYS.
 - CLASS "A" CONCRETE, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH SYNTHETIC MICROFIBER REINFORCEMENT.

N.T.S.

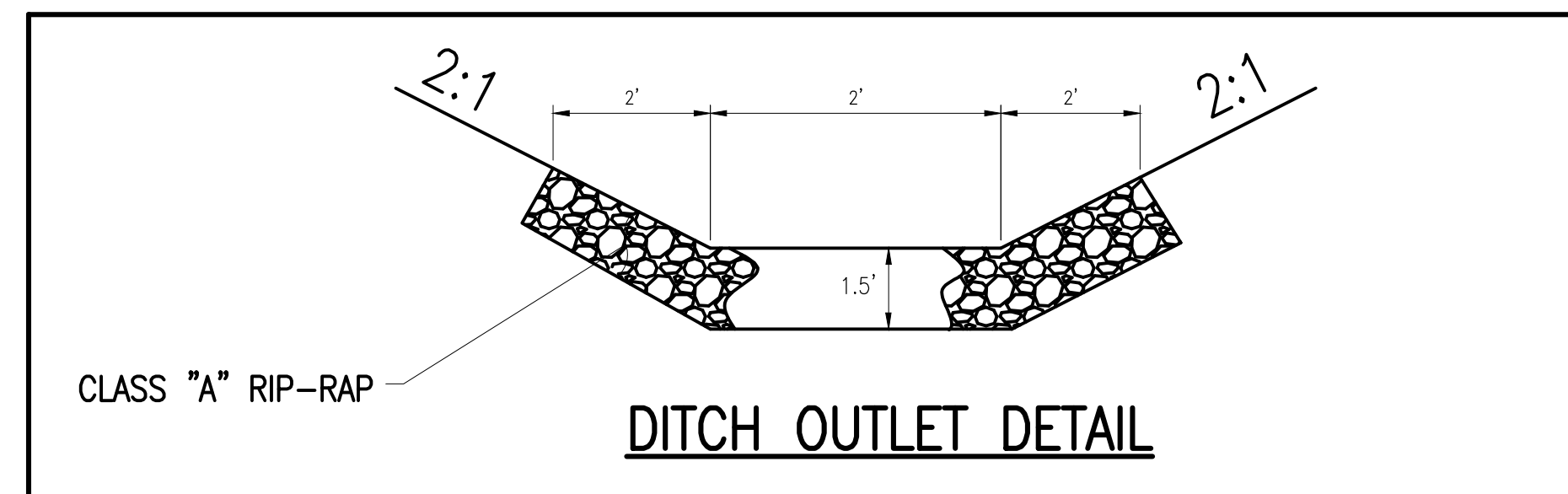
DATE: 10.27.16
STANDARD CONCRETE DRIVEWAYS
(WITH GRASS STRIP)
REVISIONS
STD. DWG. RP-3



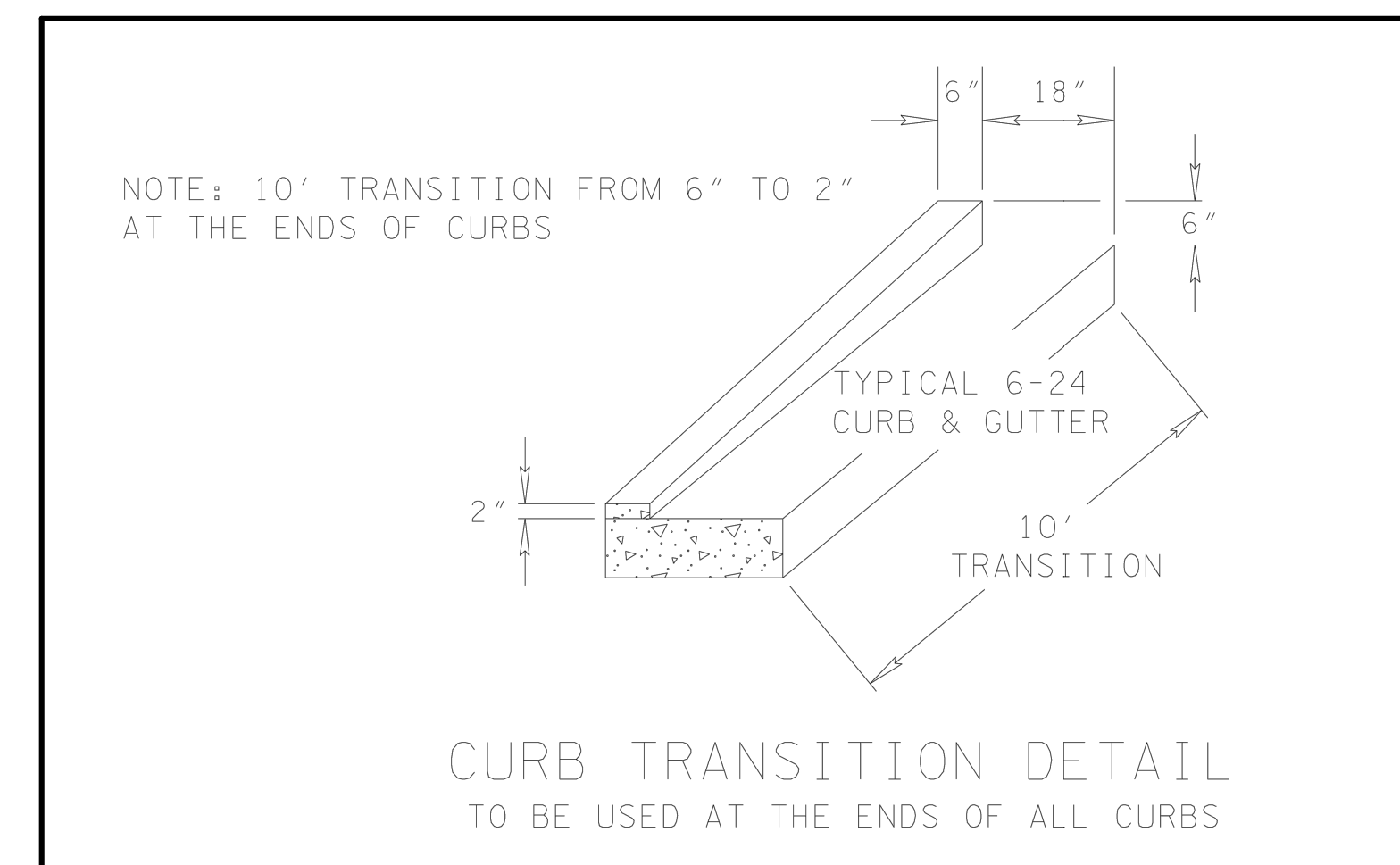
DRIVEWAY DETAIL



ASPHALT DRIVEWAY DETAIL



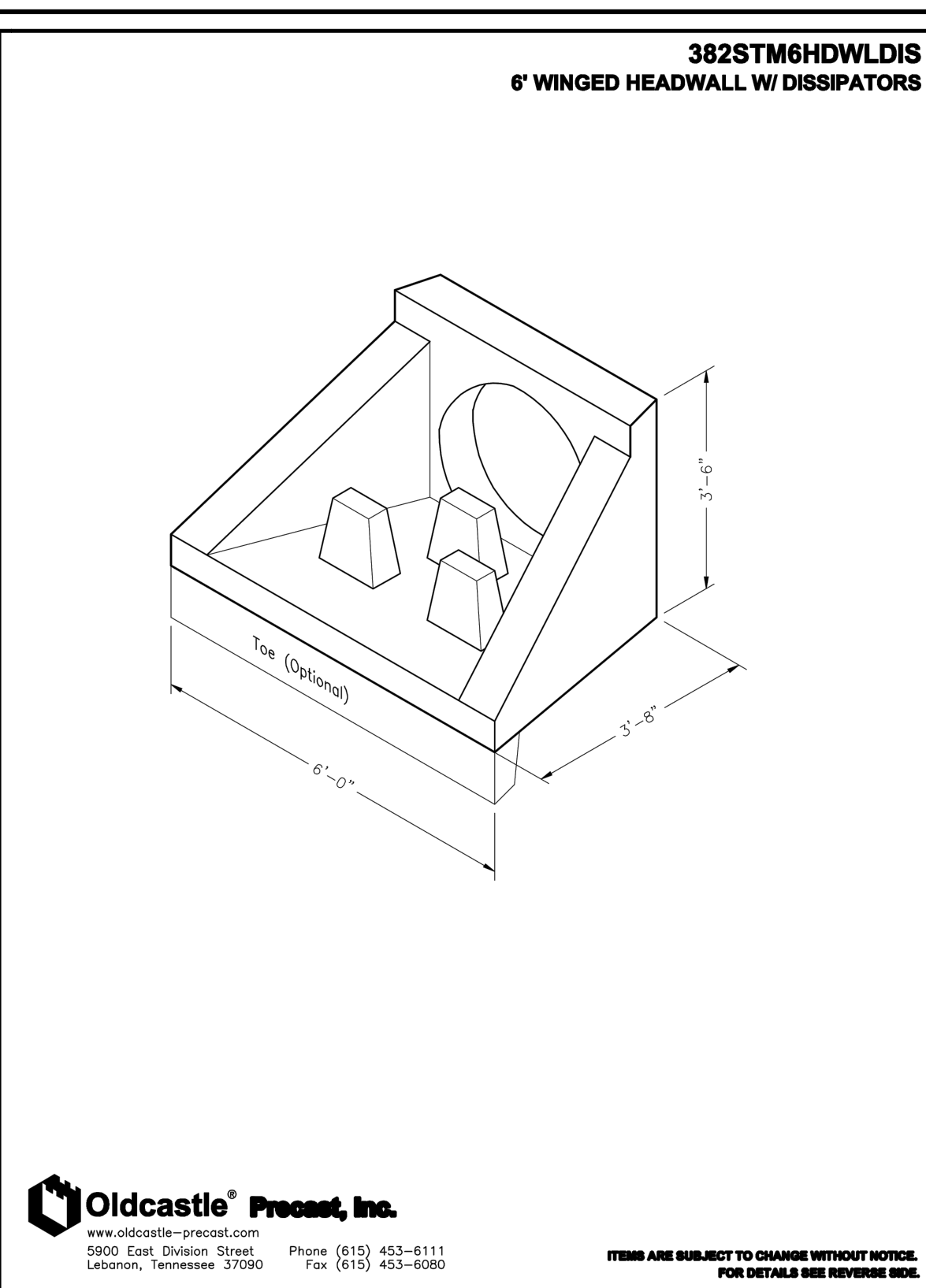
DITCH OUTLET DETAIL



CURB TRANSITION DETAIL
TO BE USED AT THE ENDS OF ALL CURBS



Know what's below.
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ENDWALL DETAIL

Oldcastle Precast, Inc.
www.oldcastle-precast.com
5900 East Division Street
Laboron, Tennessee 37080
Phone (615) 453-6111
Fax (615) 453-6080

ITEMS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
FOR DETAILS SEE REVERSE SIDE.

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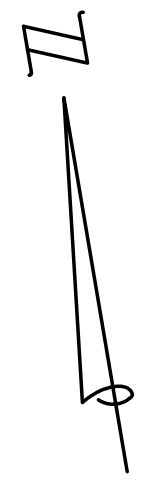
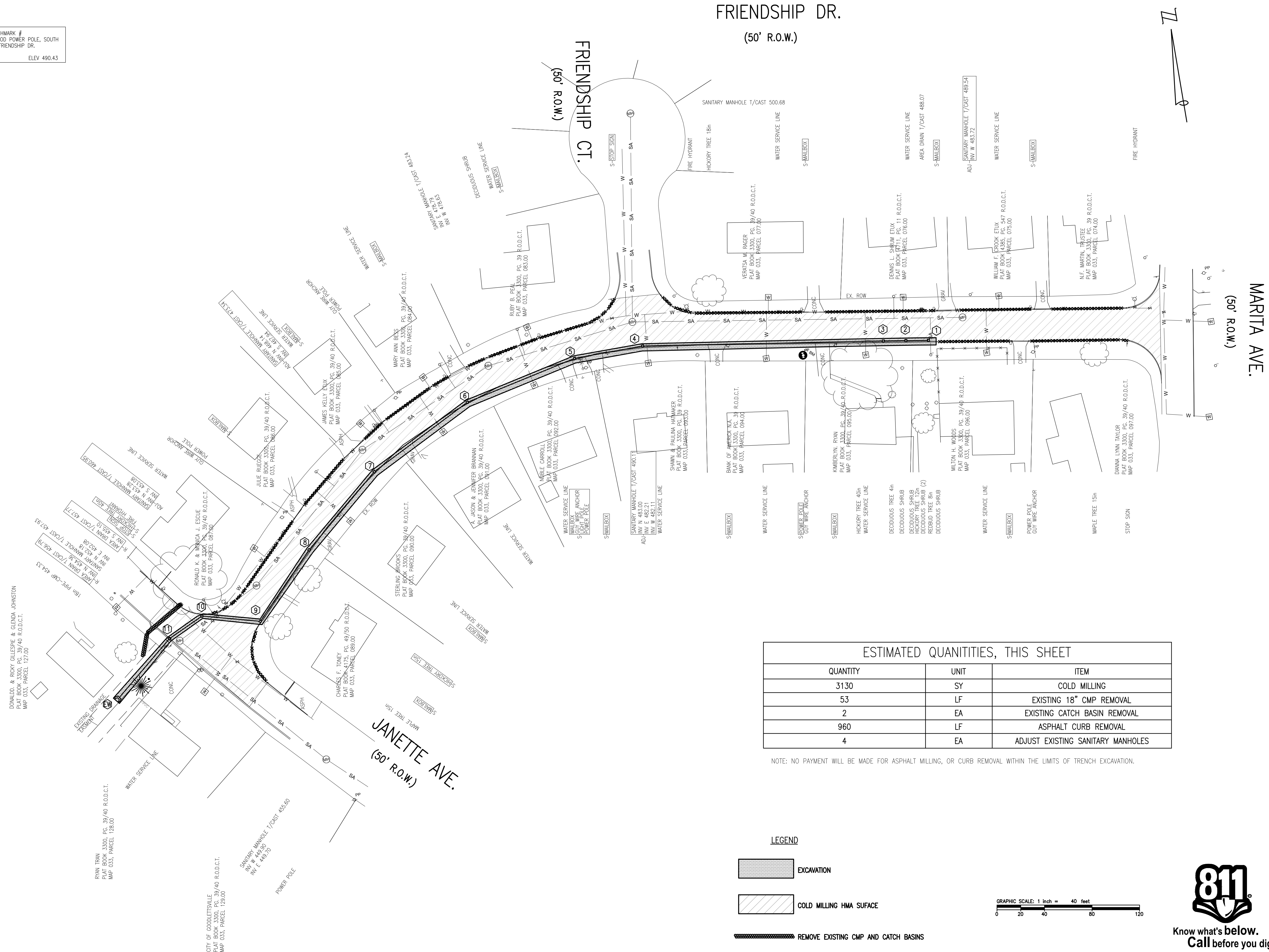
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DATE: 4/7/17
PROJ NUMBER: 1079-16-0020
ENG: R.P.
MUNICIPALITY: GOODLETTSVILLE
COUNTY: DAVIDSON
CADD: J.H.
PROJ MAP: R.P.
CITY OF GOODLETTSVILLE
FRIENDSHIP DR. DRAINAGE IMPROVEMENTS
STANDARD DETAILS

DRAWING PATH: P:\1000_1999\1079160020_Friendship_Dr_Drainage\Imp_Drawings\Civil\Details\160020Details.dwg Apr. 10, 2017 - 4:04pm

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JOB BENCHMARK #
TIE IN WOOD POWER POLE, SOUTH
SIDE OF FRIENDSHIP DR.
ELEV 490.43



FRIENDSHIP DR.
(50' R.O.W.)

FRIENDSHIP CT.
(50' R.O.W.)

MARITA AVE.
(50' R.O.W.)

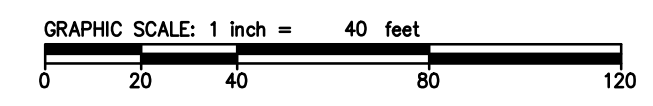
JANETTE AVE.
(50' R.O.W.)

ESTIMATED QUANTITIES, THIS SHEET

| QUANTITY | UNIT | ITEM |
|----------|------|-----------------------------------|
| 3130 | SY | COLD MILLING |
| 53 | LF | EXISTING 18" CMP REMOVAL |
| 2 | EA | EXISTING CATCH BASIN REMOVAL |
| 960 | LF | ASPHALT CURB REMOVAL |
| 4 | EA | ADJUST EXISTING SANITARY MANHOLES |

NOTE: NO PAYMENT WILL BE MADE FOR ASPHALT MILLING, OR CURB REMOVAL WITHIN THE LIMITS OF TRENCH EXCAVATION.

- LEGEND**
- EXCAVATION
 - COLD MILLING HMA SURFACE
 - REMOVE EXISTING CMP AND CATCH BASINS
 - REMOVE EXISTING ASPHALT CURB



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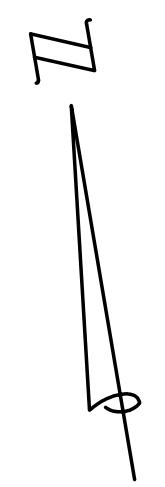
DATE 4/7/17
PROJ NUMBER 1079-16-0020
ENC R.P.
CADD -JH.
COUNTY DAVIDSON
MUNICIPALITY GOODLETTSVILLE

**CITY OF GOODLETTSVILLE
FRIENDSHIP DR. DRAINAGE IMPROVEMENTS
REMOVAL PLAN**

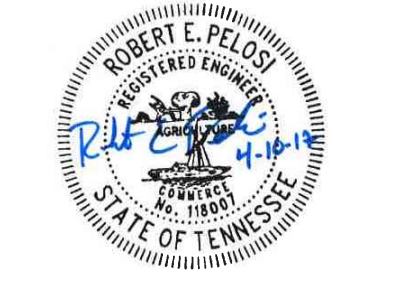
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JOB BENCHMARK #
TIE IN WOOD POWER POLE, SOUTH
SIDE OF FRIENDSHIP DR.
ELEV 490.43

FRIENDSHIP DR.
(50' R.O.W.)

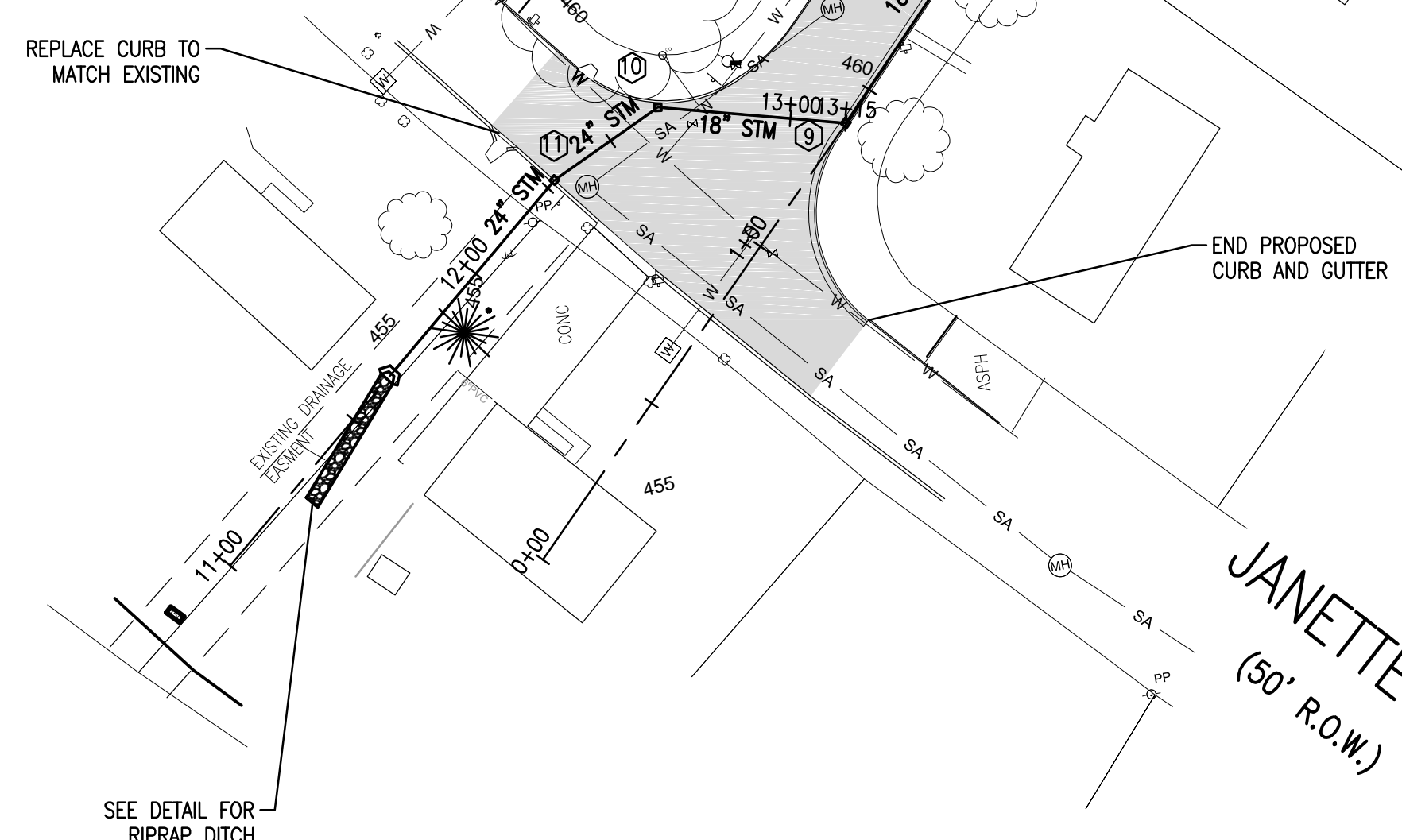
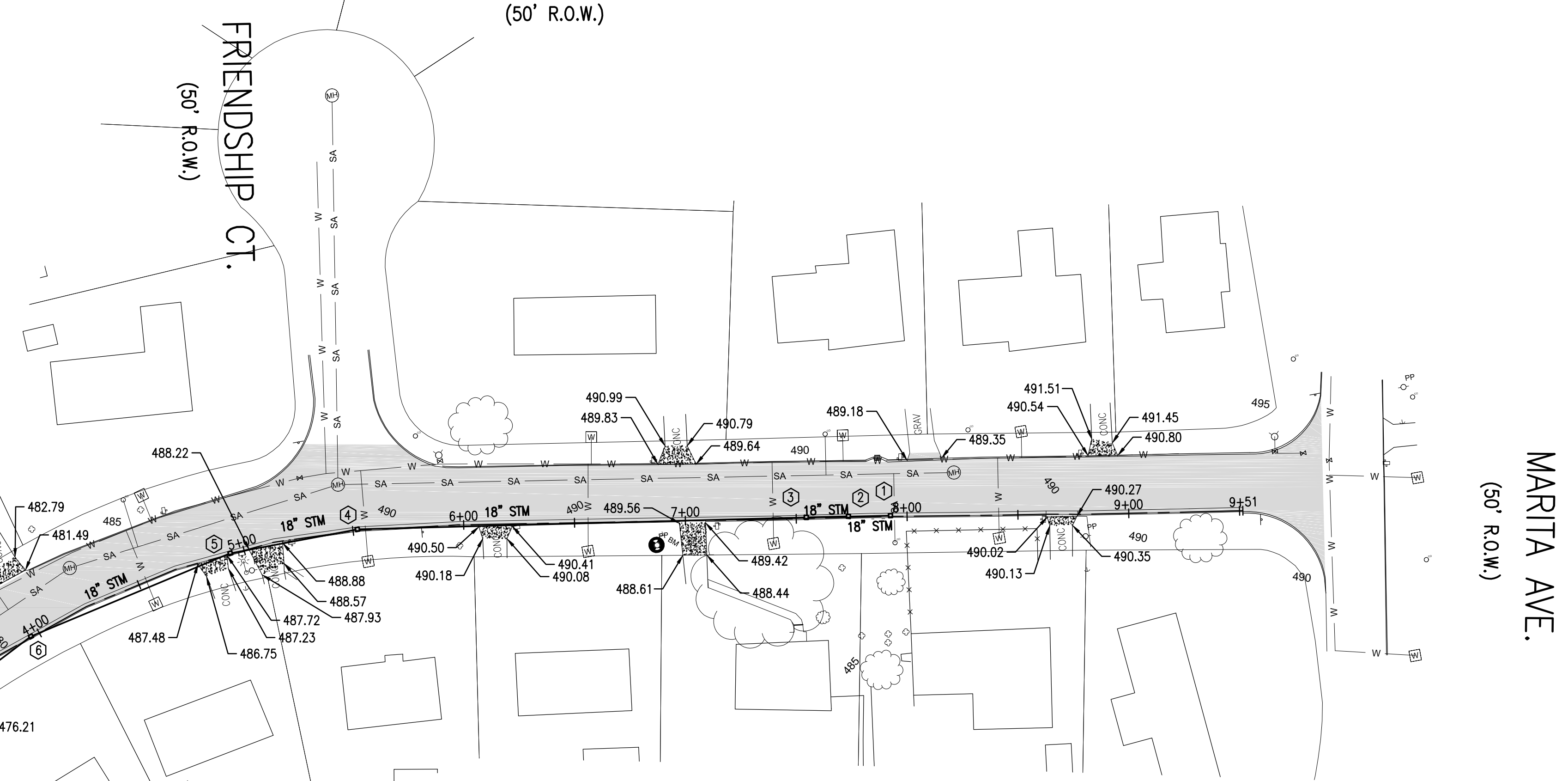


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ESTIMATED QUANTITIES, THIS SHEET

| QUANTITY | UNIT | ITEM |
|----------|------|--|
| 11 | EA | 32" X 32" CATCH BASIN (0-6") |
| 2.5 | VF | ADDITIONAL CATCH BASIN SIDEWALL |
| 706 | LF | 18" REINFORCED CONCRETE PIPE |
| 100 | LF | 24" REINFORCED CONCRETE PIPE |
| 1 | EA | 24" CONCRETE ENDWALL (SEE DETAIL, SHEET 5) |
| 44 | CY | CONCRETE CURB AND GUTTER |
| 5 | CY | LOWERED CURB AND GUTTER |
| 770 | SF | CONCRETE DRIVEWAY (6") |
| 32 | SF | CONCRETE SIDEWALK (4") |
| 0.1 | CY | CONCRETE ENCASEMENT |
| 248 | TON | HMA SURFACE GRADE "D" |
| 264 | TON | HMA BINDER "BM-2" |
| 428 | SF | ASPHALT DRIVEWAY RESTORATION (5) |
| 176 | TON | MINERAL AGGREGATE BASE |
| 12 | TON | CLASS A RIPRAP |



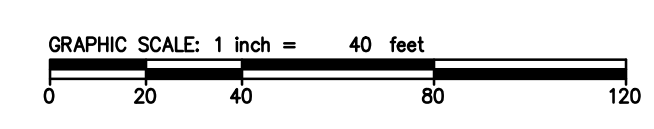
- ① STA 7+92.55, 0.42' LT
32" X 32" RECTANGULAR STORM INLET
T/CAST 488.56
18" INV W 484.82
- ② STA 7+73.55, 0.42' LT
32" X 32" RECTANGULAR STORM INLET
T/CAST 488.50
18" INV E 484.75
18" INV W 484.63
- ③ STA 7+54.55, 0.42' LT
32" X 32" RECTANGULAR STORM INLET
T/CAST 488.56
18" INV E 484.55
18" INV W 484.43
- ④ STA 5+52.04, 0.42' LT
32" X 32" RECTANGULAR STORM INLET
T/CAST 489.53
18" INV E 483.62
18" INV W 483.50
- ⑤ STA 4+93.65, 0.42' LT
32" X 32" RECTANGULAR STORM INLET
T/CAST 487.40
18" INV E 480.99
18" INV W 480.87
- ⑥ STA 3+95.95, 0.42' LT
32" X 32" RECTANGULAR STORM INLET
T/CAST 480.53
18" INV E 473.99
18" INV S 473.87
- ⑦ STA 2+97.79, 0.42' LT
32" X 32" RECTANGULAR STORM INLET
T/CAST 472.19
18" INV N 465.66
18" INV S 465.54
- ⑧ STA 2+12.13, 0.42' LT
32" X 32" RECTANGULAR STORM INLET
T/CAST 464.42
18" INV N 457.88
18" INV S 457.76
- ⑨ STA 1+39.30, 0.42' LT
32" X 32" RECTANGULAR STORM INLET
T/CAST 459.05
18" INV N 455.43
18" INV W 455.31
- ⑩ STA 12+65.18, 0.00'
32" X 32" RECTANGULAR AREA DRAIN
(USE JBS 4300 FRAME AND GRATE)
T/CAST 458.07
18" INV E 454.55
24" INV S 453.47
- ⑪ STA 12+32.00, 0.00'
32" X 32" RECTANGULAR STORM INLET
T/CAST 457.88
24" INV N 453.13
24" INV S 453.01
- EW STA 11+65.70, 0.00'
ENDWALL
24" INV N 452.36

| ALIGNMENT -1 | |
|---|---|
| SEGMENT | BEARING AND DISTANCE |
| L1 | STARTING AT STA. 1+00.00, N45°07'40"E, 36.48' |
| L2 | N48°35'57"E, 4.99' |
| L3 | N43°37'43"E, 49.49' |
| L4 | N45°51'41"E, 45.44' |
| L5 | N50°13'58"E, 47.65' |
| L6 | N55°08'53"E, 46.79' |
| L7 | N65°50'31"E, 46.80' |
| L8 | N71°14'52"E, 46.66' |
| L9 | N77°38'21"E, 43.64' |
| L10 | N84°53'34"E, 45.94' |
| L11 | S87°48'16"E, 38.28' |
| L12 | S82°44'01"E, 45.23' |
| L13 | S80°41'42"E, 47.16' |
| L14 | S80°46'40"E, 46.46' |
| L15 | S80°34'58"E, 47.81' |
| L16 | S81°15'14"E, 45.12' |
| L17 | S78°50'28"E, 1.20' |
| L18 | S80°36'42"E, 3.44' |
| L19 | S82°02'42"E, 1.41' |
| L20 | S80°17'58"E, 44.18' |
| L21 | S80°41'28"E, 28.57' |
| L22 | S79°40'18"E, 14.23' |
| L23 | S80°49'21"E, 50.42' |
| L24 | S81°10'55"E, 24.11', ENDING AT STA. 9+51.48 |
| POB: N 712112.5603, E 1757703.1634, STA. 1+00.00 | |
| POE: N 712249.5818, E 1758482.3824, STA. 9+51.48 | |
| ALIGNMENT -2 | |
| L1 | STARTING AT STA. 11+00.00, N50°22'27"E, 132.00' |
| L2 | N65°11'48"E, 33.18' |
| L3 | S74°54'59"E, 49.42', ENDING AT STA. 13+40.16 |
| POB: N 712055.1210, E 1757551.4505, STA. 11+00.00 | |
| POE: N 712140.3620, E 1757730.9570, STA. 13+40.16 | |

LEGEND

PROPOSED CONCRETE PAVEMENT

PROPOSED ASPHALT PAVING



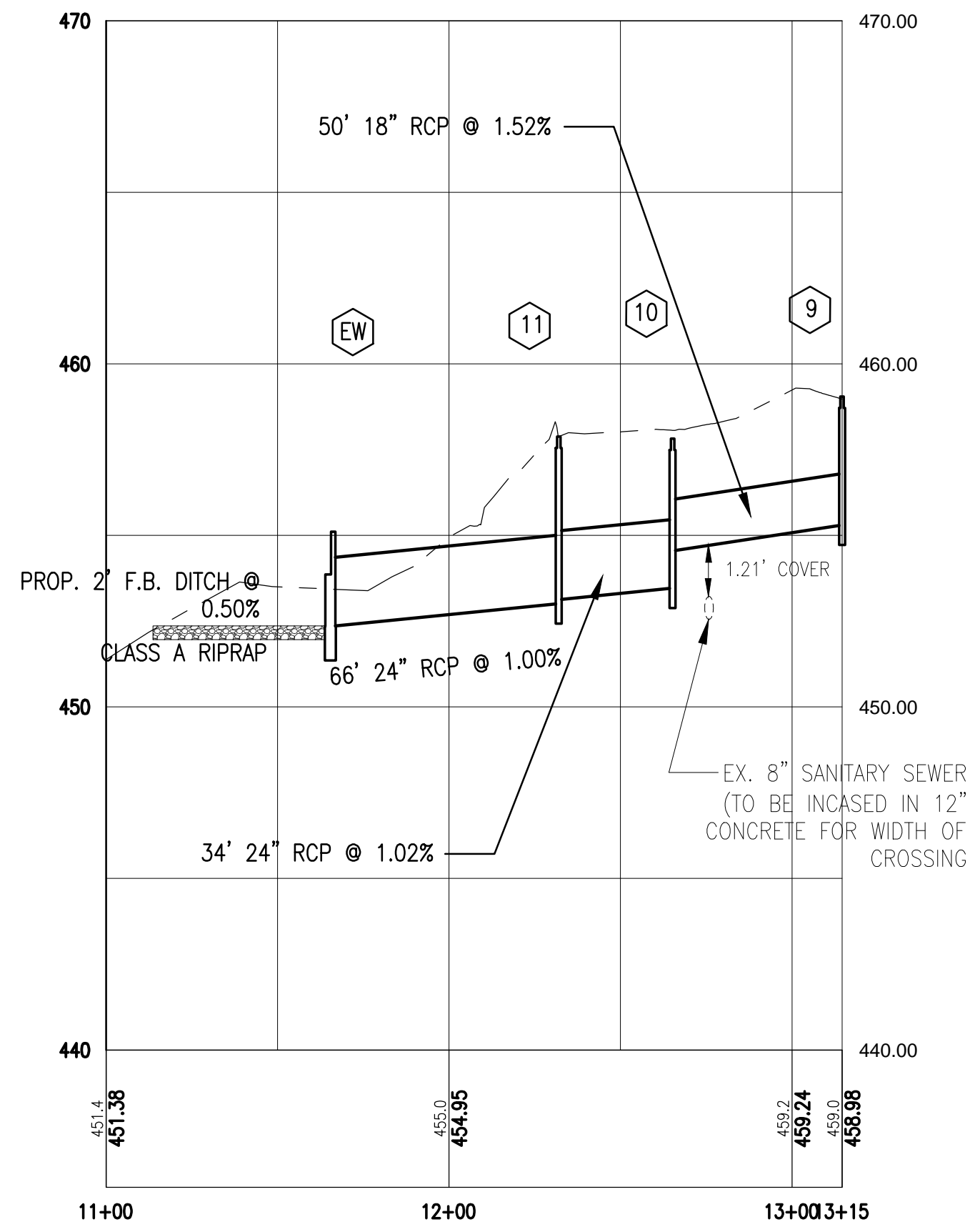
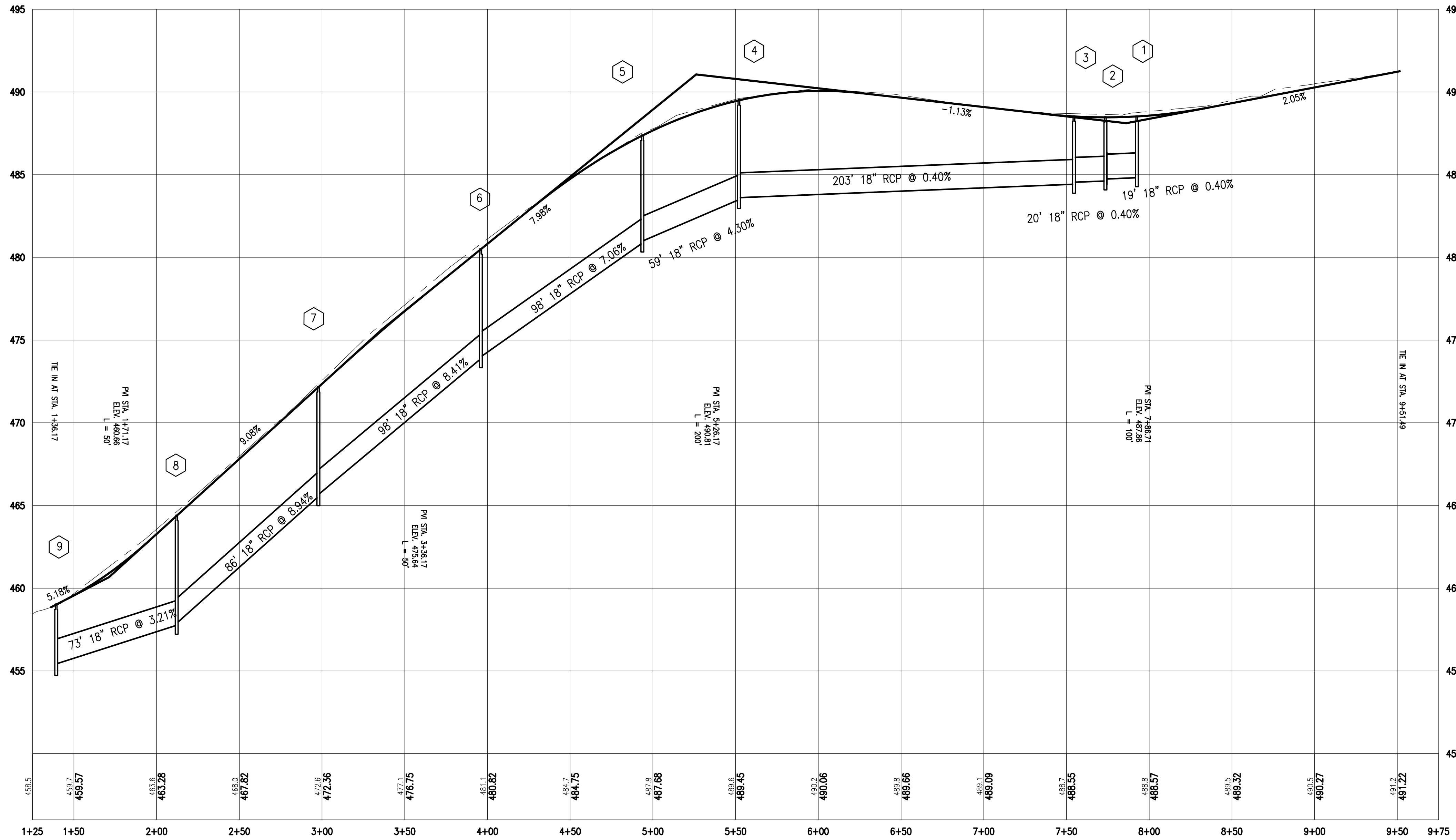
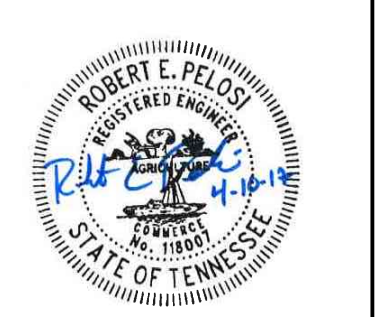
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PROJECT NUMBER: 1079160070
MUNICIPALITY: GOODLETTSVILLE
COUNTY: BANGOR
CADD: JJA
FROM MGR: R.P.
ENG: R.P.
R.P.

CITY OF GOODLETTSVILLE
FRIENDSHIP DR. DRAINAGE IMPROVEMENTS
CONSTRUCTION PLAN

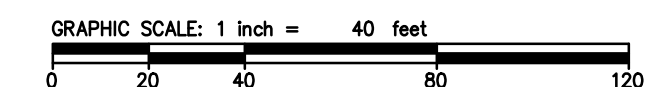
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PROFILE VIEW OF PROP. STORM SEWER



- | | | | | | |
|--|--|--|--|--|--|
| <p>① STA 7+92.55, 0.42' LT 32" X 32" RECTANGULAR STORM INLET T/CAST 488.56 18" INV W 484.82</p> | <p>③ STA 7+54.55, 0.42' LT 32" X 32" RECTANGULAR STORM INLET T/CAST 488.56 18" INV E 484.55 18" INV W 484.43</p> | <p>⑤ STA 4+93.65, 0.42' LT 32" X 32" RECTANGULAR STORM INLET T/CAST 487.40 18" INV E 480.99 18" INV W 480.87</p> | <p>⑦ STA 2+97.79, 0.42' LT 32" X 32" RECTANGULAR STORM INLET T/CAST 472.19 18" INV N 465.66 18" INV S 465.54</p> | <p>⑨ STA 1+39.30, 0.42' LT 32" X 32" RECTANGULAR STORM INLET T/CAST 459.05 18" INV N 455.43 18" INV W 455.31</p> | <p>⑪ STA 12+32.00, 0.00' 32" X 32" RECTANGULAR STORM INLET T/CAST 457.88 24" INV N 453.13 24" INV S 453.01</p> |
| <p>② STA 7+73.55, 0.42' LT 32" X 32" RECTANGULAR STORM INLET T/CAST 488.50 18" INV E 484.75 18" INV W 484.63</p> | <p>④ STA 5+52.04, 0.42' LT 32" X 32" RECTANGULAR STORM INLET T/CAST 480.53 18" INV E 483.62 18" INV W 483.50</p> | <p>⑥ STA 3+95.95, 0.42' LT 32" X 32" RECTANGULAR STORM INLET T/CAST 480.53 18" INV E 473.99 18" INV S 473.87</p> | <p>⑧ STA 2+12.13, 0.42' LT 32" X 32" RECTANGULAR STORM INLET T/CAST 464.42 18" INV N 457.88 18" INV S 457.76</p> | <p>⑩ STA 12+65.18, 0.00' 32" X 32" RECTANGULAR AREA DRAIN T/CAST 457.82 18" INV E 454.55 24" INV S 453.47</p> | <p>EW STA 11+65.70, 0.00' ENDWALL 24" INV N 452.36</p> |



REVISIONS:

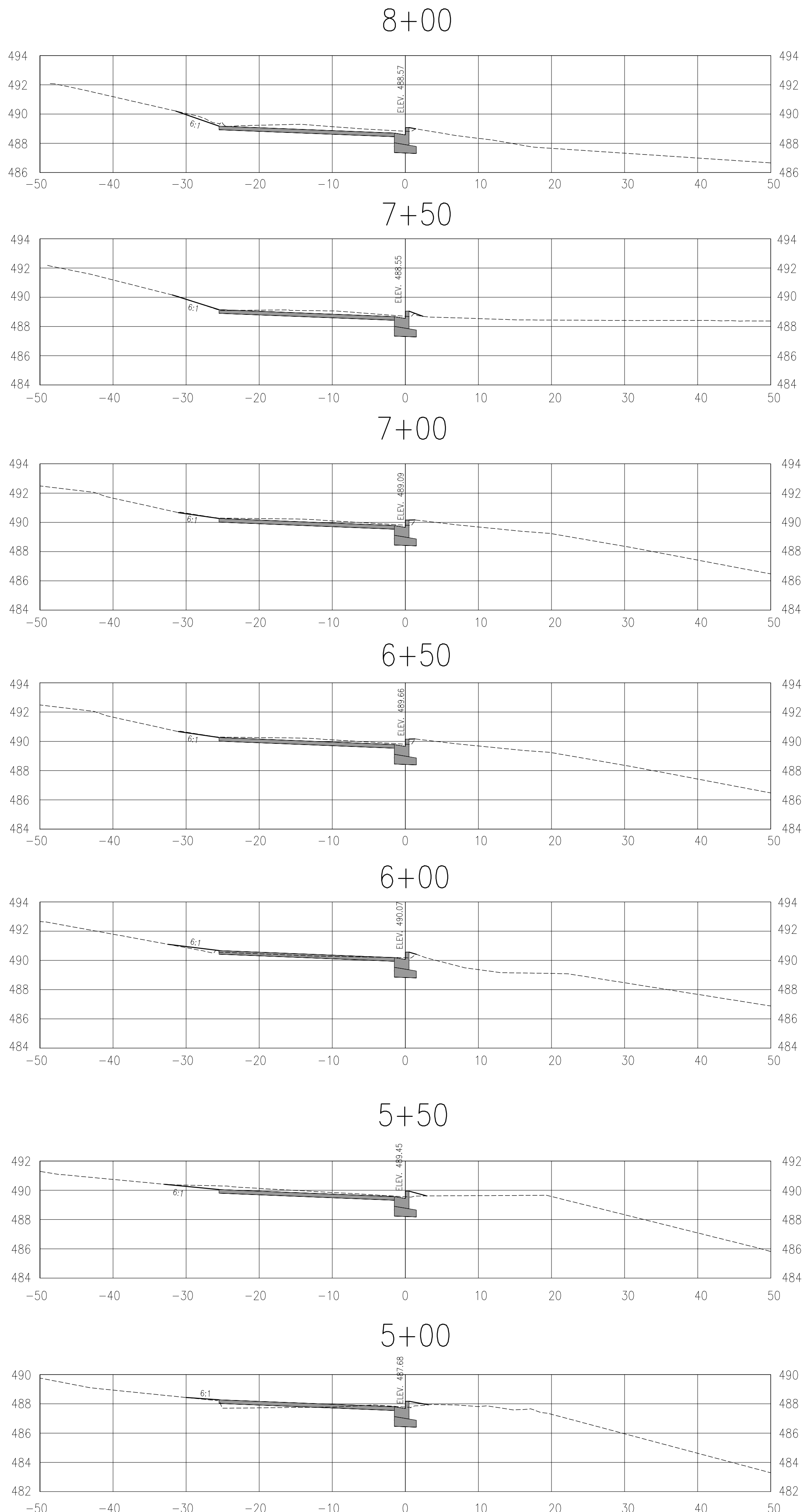
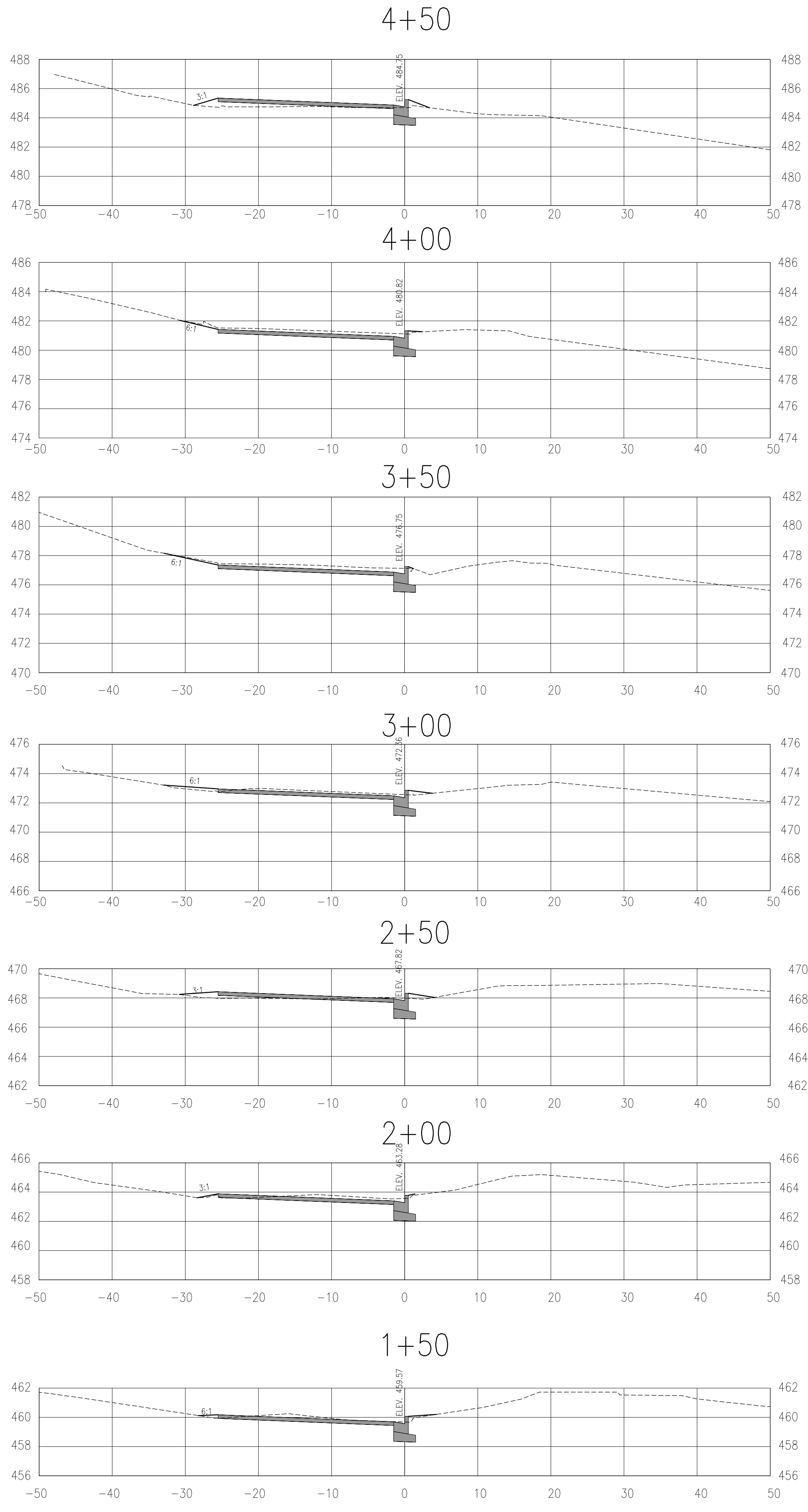
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MUNICIPALITY: GOODLETTSVILLE
COUNTY: DAVIDSON
CADD: J.H.
PROJ. NO.: 1079-16-0020
DATE: 4/7/17
CITY OF GOODLETTSVILLE
FRIENDSHIP DR. DRAINAGE IMPROVEMENTS
PROFILE VIEWS

DRAWING: P:\TH-P\1000_1999\1079160020_Friendship_Dr_Drainage\Imp\Drawings\Civil\Plans_Const\160020CON.dwg Apr. 10, 2017 - 4:07pm

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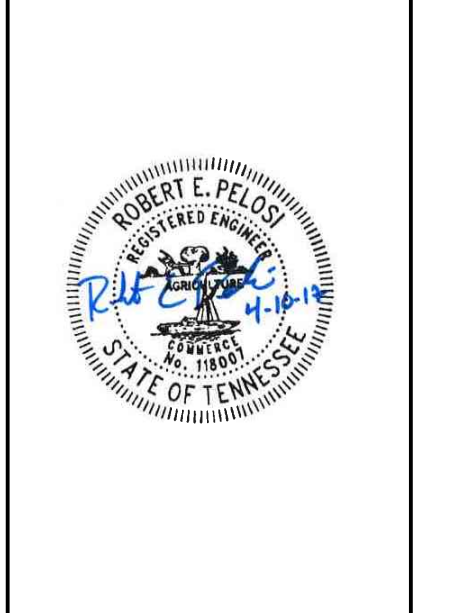
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SCALE
 H : 1" = 10'
 V : 1" = 5'



OHM
 ARCHITECTS ENGINEERS PLANNERS
 209 10TH AVE. S., SUITE 116
 NASHVILLE, TN 37203
 615.649.5264
 OHM-ADVISORS.COM



REVISIONS
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|--------|--------------|------|----------|---------|----------------|----------------|
| DATE | PROJ NUMBER | ENG | PROJ MGR | CODE | COUNTY | MUNICIPALITY |
| 4/7/17 | 1079-16-0020 | R.P. | J.H. | DAVISON | GOODLETTSVILLE | GOODLETTSVILLE |

CITY OF GOODLETTSVILLE
 FRIENDSHIP DR. DRAINAGE IMPROVEMENTS
 CROSS SECTIONS

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JOB BENCHMARK #
TIE IN WOOD POWER POLE, SOUTH
SIDE OF FRIENDSHIP DR.
ELEV 490.43

MAINTENANCE SCHEDULE

THE CONTRACTOR SHALL INSPECT EPSC MEASURES TWICE WEEKLY UNDER NORMAL CONDITIONS, WITHIN 24 HOURS OF EACH RAIN EVENT, AND DAILY DURING A PROLONGED RAIN EVENT.

| MEASURE | MAINTENANCE SCHEDULE |
|------------------|---|
| SILT FENCE | INSTALL AT THE START OF CONSTRUCTION PER PLAN. REMOVE ACCUMULATED SEDIMENTS WHEN DEPTH REACHES 1/2 TO 3/4 THE HEIGHT OF THE FENCE. FABRIC SHALL BE REPLACED IF DAMAGED. |
| DUST CONTROL | WATER SHALL BE APPLIED TO EXPOSED AREAS BY THE CONTRACTOR IN THE EVENT OF EXCESSIVE AIRBORNE DUST. DUST CONTROL SHALL BE APPLIED AS DIRECTED BY THE ENGINEER OR CITY PERSONNEL. |
| FILTER SOCK | INSTALL AT THE START OF CONSTRUCTION PER PLAN. REMOVE ACCUMULATED SEDIMENTS WHEN THE DEPTH REACHES 1/2 THE ORIGINAL HEIGHT OF THE TUBE. FILTER SOCK SHALL BE REMOVED IF DAMAGED. |
| INLET PROTECTION | INSTALL AT THE START OF CONSTRUCTION PER PLAN. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN DEPTH REACHES 1/2 THE ORIGINAL HEIGHT OF THE STRUCTURE. |
| CHECK DAM | INSTALL AT THE START OF CONSTRUCTION PER PLAN. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM BEHIND THE CHECK DAM WHEN DEPTH OF SEDIMENT REACHES 1/2 THE ORIGINAL HEIGHT OF THE STRUCTURE. |

CONSTRUCTION SEQUENCE

1. MOBILIZATION
2. INSTALL EPSC MEASURES
3. REMOVALS PER PLAN
4. CONSTRUCT STORM SEWER AND ASSOCIATED IMPROVEMENTS
5. SITE RESTORATION
6. SITE CLEAN UP
7. REMOVE EPSC MEASURES AFTER FINAL STABILIZATION

FRIENDSHIP DR.
(50' R.O.W.)

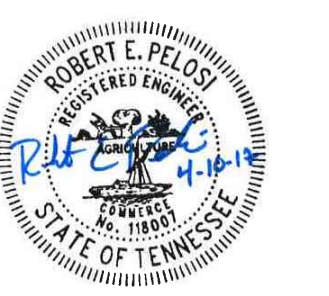
SITE DATA

AREA OF DISTURBANCE: 0.24 ± ACRES
TEMPORARY SOIL EROSION MEASURES: SILT FENCE, SEDIMENT TUBE OR FILTER SOCK, INLET PROTECTION, CHECK DAM

| T.D.E.C. STANDARDS DETAILS | |
|----------------------------|------------|
| TITLE | DETAIL NO. |
| SILT FENCE WITH BACKING | 7.34 |
| FILTER SOCK | 7.37 |
| INLET PROTECTION | 7.35 |
| CHECK DAM | 7.20 |



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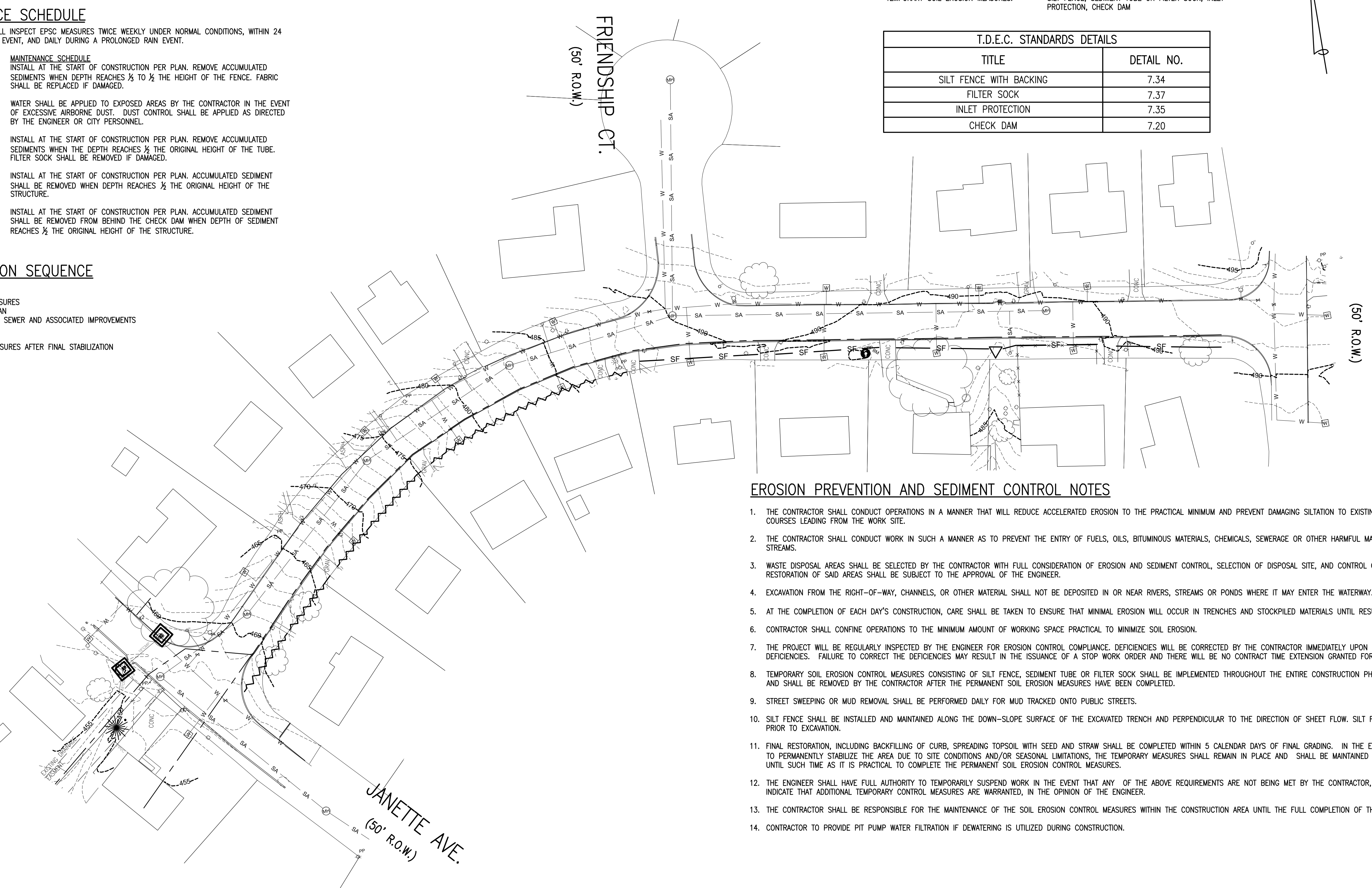
REVISIONS:

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DATE: 4/7/17
PROJ NUMBER: 1079160020
ENG: J.P.
PROJ MGR: J.P.
CADD: J.H.
COUNTY: BARBERSCO
MUNICIPALITY: GOODLETTSVILLE

CITY OF GOODLETTSVILLE
FRIENDSHIP DR. DRAINAGE IMPROVEMENTS
EROSION PREVENTION & SEDIMENT CONTROL

SHEET 10 OF 10



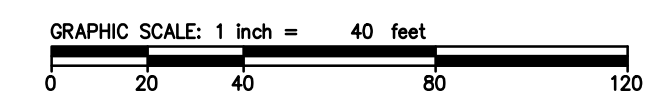
EROSION PREVENTION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR SHALL CONDUCT OPERATIONS IN A MANNER THAT WILL REDUCE ACCELERATED EROSION TO THE PRACTICAL MINIMUM AND PREVENT DAMAGING SILTATION TO EXISTING SEWERS AND WATER COURSES LEADING FROM THE WORK SITE.
2. THE CONTRACTOR SHALL CONDUCT WORK IN SUCH A MANNER AS TO PREVENT THE ENTRY OF FUELS, OILS, BITUMINOUS MATERIALS, CHEMICALS, SEWERAGE OR OTHER HARMFUL MATERIALS INTO NEARBY STREAMS.
3. WASTE DISPOSAL AREAS SHALL BE SELECTED BY THE CONTRACTOR WITH FULL CONSIDERATION OF EROSION AND SEDIMENT CONTROL, SELECTION OF DISPOSAL SITE, AND CONTROL OF OPERATIONS, AND THE RESTORATION OF SAID AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
4. EXCAVATION FROM THE RIGHT-OF-WAY, CHANNELS, OR OTHER MATERIAL SHALL NOT BE DEPOSITED IN OR NEAR RIVERS, STREAMS OR PONDS WHERE IT MAY ENTER THE WATERWAY.
5. AT THE COMPLETION OF EACH DAY'S CONSTRUCTION, CARE SHALL BE TAKEN TO ENSURE THAT MINIMAL EROSION WILL OCCUR IN TRENCHES AND STOCKPILED MATERIALS UNTIL RESUMPTION OF WORK.
6. CONTRACTOR SHALL CONFINE OPERATIONS TO THE MINIMUM AMOUNT OF WORKING SPACE PRACTICAL TO MINIMIZE SOIL EROSION.
7. THE PROJECT WILL BE REGULARLY INSPECTED BY THE ENGINEER FOR EROSION CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE CONTRACTOR IMMEDIATELY UPON NOTICE OF SUCH DEFICIENCIES. FAILURE TO CORRECT THE DEFICIENCIES MAY RESULT IN THE ISSUANCE OF A STOP WORK ORDER AND THERE WILL BE NO CONTRACT TIME EXTENSION GRANTED FOR THIS TYPE OF STOPPAGE.
8. TEMPORARY SOIL EROSION CONTROL MEASURES CONSISTING OF SILT FENCE, SEDIMENT TUBE OR FILTER SOCK SHALL BE IMPLEMENTED THROUGHOUT THE ENTIRE CONSTRUCTION PHASE OF THE PROJECT, AND SHALL BE REMOVED BY THE CONTRACTOR AFTER THE PERMANENT SOIL EROSION MEASURES HAVE BEEN COMPLETED.
9. STREET SWEEPING OR MUD REMOVAL SHALL BE PERFORMED DAILY FOR MUD TRACKED ONTO PUBLIC STREETS.
10. SILT FENCE SHALL BE INSTALLED AND MAINTAINED ALONG THE DOWN-SLOPE SURFACE OF THE EXCAVATED TRENCH AND PERPENDICULAR TO THE DIRECTION OF SHEET FLOW. SILT FENCE SHALL BE INSTALLED PRIOR TO EXCAVATION.
11. FINAL RESTORATION, INCLUDING BACKFILLING OF CURB, SPREADING TOPSOIL WITH SEED AND STRAW SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS OF FINAL GRADING. IN THE EVENT IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE THE AREA DUE TO SITE CONDITIONS AND/OR SEASONAL LIMITATIONS, THE TEMPORARY MEASURES SHALL REMAIN IN PLACE AND SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS IT IS PRACTICAL TO COMPLETE THE PERMANENT SOIL EROSION CONTROL MEASURES.
12. THE ENGINEER SHALL HAVE FULL AUTHORITY TO TEMPORARILY SUSPEND WORK IN THE EVENT THAT ANY OF THE ABOVE REQUIREMENTS ARE NOT BEING MET BY THE CONTRACTOR, OR IF CONDITIONS INDICATE THAT ADDITIONAL TEMPORARY CONTROL MEASURES ARE WARRANTED, IN THE OPINION OF THE ENGINEER.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SOIL EROSION CONTROL MEASURES WITHIN THE CONSTRUCTION AREA UNTIL THE FULL COMPLETION OF THE PROJECT.
14. CONTRACTOR TO PROVIDE PIT PUMP WATER FILTRATION IF DEWATERING IS UTILIZED DURING CONSTRUCTION.

LEGEND

- SF — SILT FENCE W/ BACKING
- ~~~~~ FILTER SOCK
- ▽ CHECK DAM
- INLET PROTECTION

| EPSC QUANTITIES | | |
|-----------------|------|---|
| QUANTITY | UNIT | ITEM |
| 370 | LF | SILT FENCE W/O BACKING |
| 390 | LF | FILTER SOCK |
| 2 | EA | INLET PROTECTION |
| 1 | EA | CHECK DAM |
| 1 | LS | FINAL RESTORATION (TOPSOIL, SEED AND STRAW) |



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