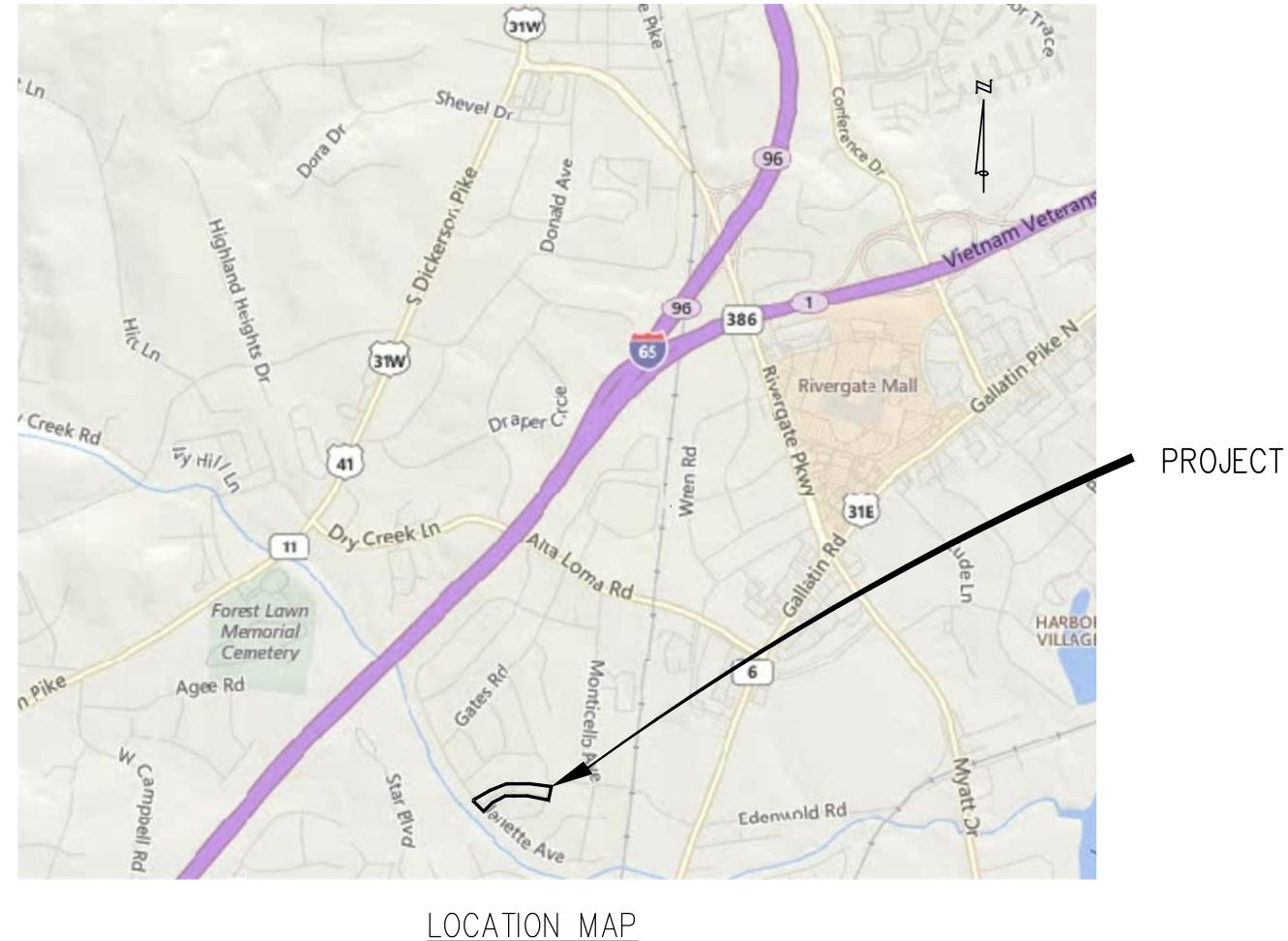
	INDEX OF SHEETS
SHEET NO.	DESCRIPTION
1	COVER
2	GENERAL NOTES
3	LEGEND
4	TYPICAL SECTIONS
5	DETAILS
6	REMOVAL PLAN
7	CONSTRUCTION PLAN
8	PROFILE VIEW
9	CROSS SECTIONS
10	EPSC PLAN

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



CITY OF GOODLETTSVILLE DAVIDSON COUNTY, TENNESSEE FRIENDSHIP DR. STORM WATER IMPROVEMENTS

N.T.S.

<u>CITY OF GOODLETTSVILLE</u>

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

CONTRACT FOR: DRAINAGE IMPROVEMENTS INCLUDING INSTAL AND PAVEMENT REMOVAL AND REPLACEMEN	
	Advancing Communities n Avenue South, Suite 116 Nashville, TN 37203 649-5264
PREPARED UNDER T	HE SUPERVISION OF:
RUE Contract Statistics	<u>118007</u> Registration No.
ROBERT E. PELOSI, PE	<u>4/7/17</u> Date
REVIS	SIONS
PROJECT NO.	SHEET NO.
1079–16–0020	1 OF 10

GENERAL

NO WORK SHALL BE PERFORMED WITHOUT INSPECTION BY THE CITY OR ITS DESIGNATED REPRESENTATIVES.

LIMITATIONS ON PRIVATE WORK: DURING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT.

THE CONTRACTOR SHALL CONDUCT HIS/HER OPERATIONS IN SUCH A MANNER TO COMPLY WITH ALL FEDERAL. STATE. AND LOCAL CODES FOR NOISE LEVELS, VIBRATIONS, OR ANY OTHER RESTRICTIONS WHILE REMOVING PAVEMENT OR FOR ANY OTHER CONSTRUCTION OPERATIONS WITHIN THIS CONTRACT TO BE INCLUDED IN THE RESPECTIVE ITEM OF WORK.

THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE CITY OF GOODLETTSVILLE PUBLIC WORKS DEPT. 72 HOURS IN ADVANCE OF PROPOSED CONSTRUCTION.

THE CONTRACTOR SHALL NOTIFY THE HOMEOWNER OF TEMPORARY DRIVEWAY CLOSURE PRIOR TO CONSTRUCTION.

ALL SALVAGED MATERIAL, INCLUDING EXCESS EXCAVATED MATERIAL, IS TO BECOME PROPERTY OF THE CONTRACTOR. ANY OFFSITE DISPOSAL SHALL BE IN CONFORMANCE WITH ALL LOCAL RULES AND REGULATIONS.

ABSOLUTELY NO EXPLOSIVES SHALL BE USED FOR ANY EXCAVATION ACTIVITIES.

TREE PRESERVATION

EXISTING TREES ARE NOT TO BE REMOVED UNLESS AUTHORIZED BY THE CITY OR THE ENGINEER.

TREES REMOVED BY THE CONTRACTOR THAT WERE NOT INTENDED FOR REMOVAL SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. REPLACEMENT PLANTINGS SHALL BE OF A SIMILAR SPECIES AND THE QUANTITY SHALL BE SUCH THAT THE TOTAL DIAMETER IS EQUAL TO THE DIAMETER OF REMOVED TREES.

EXISTING UNDERGROUND PUBLIC UTILITIES

THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING WATER MAINS, SEWER MAINS, AND EXISTING UTILITY LEADS DURING THE CONSTRUCTION OF THIS PROJECT.

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED FROM EXISTING PLANS AND UTILITY RECORDS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO VERIFY THE ACTUAL LOCATION OF EXISTING UTILITIES.

UTILITIES

1. ELECTRIC: NASHVILLE ELECTRIC SERVICE 1214 CHURCH STREET NASHVILLE, TENNESSEE 37246 615.736.9000 (OFFICE)

2. NATURAL GAS: PIEDMONT NATURAL GAS 511 8TH STREET

NASHVILLE, TENNESSEE 37206 615.872.8034

3. <u>SEWER</u>: METRO WATER SERVICES 800 2ND AVENUE SOUTH NASHVILLE, TENNESSEE 37210 615.862.4600 (OFFICE)

4. <u>CABLE</u>: COMCAST CABLE COMMUNICATIONS 2400 FRANKLIN PIKE NASHVILLE, TENNESSEE 37204 800.266.2278 (OFFICE)

5. <u>TELEPHONE</u>: AT&T 333 COMMERCE STREET NASHVILLE, TENNESSEE 37201 615.214.6525 (OFFICE)

6. <u>WATER</u>: MADISON SUBURBAN UTILITY DISTRICT 108 WEST WEBSTER MADISON. TENNESSEE 37115 615.868.3201

FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL DIAL 811 A MINIMUM OF 3 WORKING DAYS PRIOR TO EACH EXCAVATION IN THE VICINITY OF UTILITY LINES. ALL "TENN811" PARTICIPATING MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE "TENN811" ALERT SYSTEM.

THE OWNERS OF EXISTING UTILITY POLES AND OTHER SERVICE STRUCTURES THAT ARE WITHIN GRADING LIMITS AND THAT ARE IDENTIFIED TO BE RELOCATED WILL BE MOVED TO LOCATIONS DESIGNATED BY THE ENGINEER/OWNER.

OWNERS OF PUBLIC UTILITIES WILL NOT BE REQUIRED TO MOVE ADDITIONAL POLES AND STRUCTURES THAT ARE NOT WITHIN GRADING OR STRUCTURE LIMITS IN ORDER TO FACILITATE THE OPERATION OF CONSTRUCTION EQUIPMENT UNLESS IT IS DETERMINED BY THE ENGINEER THAT SUCH POLE LINE OR STRUCTURES CONSTITUTE A HAZARD TO THE PUBLIC OR ARE EXTRAORDINARILY DANGEROUS TO THE CONTRACTOR'S OPERATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.

ALL EXPLORATORY WORK REQUIRED FOR LOCATING EXISTING UTILITIES SHALL NOT BE PAID FOR SEPARATELY EXCEPT AS SHOWN OR DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE AWARE OF AND USE CAUTION WHEN WORKING NEAR UNDERGROUND OR OVERHEAD POWER LINES. TELEPHONE LINES. GAS LINES. WATER AND SEWER FACILITIES.

PLAN COORDINATES & ELEVATION

HORIZONTAL COORDINATES ARE TENNESSEE STATE PLANE (NAD 83). ELEVATIONS SHOWN ON THESE PLANS ARE ON THE 1988 NAVD DATUM.

PAVEMENT REMOVAL

PAVEMENT REMOVAL AREAS ARE SHOWN ON THE PLANS, HOWEVER ACTUAL REMOVAL SHALL BE AT THE DISCRETION OF THE ENGINEER AS TO WHETHER OR NOT AREAS OF PAVEMENT MAY BE LEFT IN PLACE. OR ADDITIONAL AREAS ADDED, TO ACHIEVE THE GOALS OF THE PROJECT.

SAWING FOR PAVEMENT REMOVAL AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, TO THE DEPTH REQUIRED FOR NEAT REMOVAL OF PAVEMENT OR CURB. SHALL BE INCLUDED IN THE ITEM OF REMOVAL. SAWING DEPTH SHALL BE ADEQUATE TO PREVENT SPALLING, CHIPPING, OR DAMAGE TO EXISTING PAVEMENT EDGES LEFT IN PLACE AS DIRECTED BY THE ENGINEER.

<u>SIGNS</u>

ALL SIGNS REQUIRING RELOCATION DUE TO CONSTRUCTION OPERATIONS SHALL BE SALVAGED AND RESET BY THE CONTRACTOR AT LOCATIONS DESIGNATED BY THE ENGINEER. THIS WORK WILL BE PERFORMED AT THE CONTRACTOR EXPENSE AS NO SIGNS ARE PLANNED FOR REMOVAL AND RELOCATION.

SURFACE RESTORATION

DISTURBED AREAS SHALL BE RESTORED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. AREAS FOR TOPSOIL, SEED AND STRAW ARE AS INDICATED ON THE PLANS

ALL AREAS DISTURBED BY THE CONTRACTOR AND/OR HIS SUBCONTRACTOR BEYOND THE TRENCH LIMITS OF THE PROJECT SHALL BE RESTORED AS DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT OR COMPENSATION SHALL BE MADE FOR THIS ACTIVITY.

STORM SEWER

WHEN EXCAVATING FOR STORM SEWER OR UNDERDRAIN CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO:

BEFORE EACH DAY'S WORK, OR WHEN MOVING TO A NEW AREA OF WORK. DETERMINE AND EVALUATE THE LOCATION OF ALL UNDER-GROUND FACILITIES IN THE AREA. IF LOCATION STAKES HAVE BEEN REMOVED OR DO NOT APPEAR CORRECT, THE CONTRACTOR SHALL NOT EXCAVATE UNTIL ALL UTILITIES HAVE HAD AN OPPORTUNITY TO CHECK THEIR LOCATIONS. ANY DELAYS INCURRED, DUE TO CHECKING OR RESTAKING OF UTILITIES SHALL NOT BE A BASIS FOR ADDITIONAL COMPENSATION.

ALL SEWER TRENCHES SHALL BE BACKFILLED OR BARRICADED OVERNIGHT AS DIRECTED BY THE ENGINEER. SUCH WORK SHALL BE INCLUDED IN THE COST OF THE STORM SEWER CONSTRUCTION.

WHEN EXCAVATING FOR STORM SEWER CONSTRUCTION, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING GAS, ELECTRIC, WATER AND SANITARY SEWER FACILITIES, BY THE USE OF SHEETING OR OTHER METHODS AS APPROVED BY THE ENGINEER, THIS WORK SHALL BE INCLUDED IN THE PAY ITEMS FOR STORM SEWER CONSTRUCTION.

FINAL ADJUSTMENTS OF ALL STRUCTURES BOTH NEW AND EXISTING SHALL BE MADE PRIOR TO PLACING THE FINAL SURFACE COURSE OF HMA.

PERMITS

THE CONTRACTOR IS REQUIRED TO OBTAIN A LAND DISTURBANCE PERMIT FROM THE CITY OF GOODLETTSVILLE PRIOR TO CONSTRUCTION.

DUST CONTROL

ALL HAUL ROADS, DETOUR ROADS, TEMPORARY ACCESS ROADS, OTHER PUBLIC OR PRIVATE ROADS, DRIVEWAYS, AND PARKING LOTS USED BY THE CONTRACTOR MUST BE MAINTAINED IN A DUST-FREE CONDITION FOR THE DURATION OF THE CONTRACT. THE CONTROL OF THE DUST SHALL BE ACCOMPLISHED BY APPLICATION OF DUST CONTROL MATERIALS AND METHODS OF APPLICATION AS APPROVED AND AS DIRECTED BY THE ENGINEER. SUCH DUST CONTROL MEASURES SHALL BE APPLIED AS OFTEN AS IS NECESSARY TO CONTROL DUST.

UNDERGROUND CONFLICTS

THE CONTRACTOR SHALL EXPOSE EXISTING WATER MAIN, SANITARY SEWERS. AND PRIVATE UTILITY CROSSINGS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER TO VERIFY EXISTING LOCATIONS AND ELEVATIONS BEFORE COMMENCING WORK ON A PROPOSED STORM SEWER. EACH EXCAVATION SHALL BE PAID FOR AS "EXPLORATORY EXCAVATION" (EACH). EXCAVATION FOR MULTIPLE POTENTIAL CONFLICTS WITHIN 10 FEET OF EACH OTHER WILL ONLY BE PAID FOR ONCE. EXPLORATORY EXCAVATIONS WILL ONLY BE ALLOWED WHERE SHOWN ON THE PLANS OR WHEN AUTHORIZED BY THE ENGINEER.

THE CONTRACTOR SHALL PRESERVE ALL EXISTING WATER SERVICE LEADS AND SEWER SERVICE LEADS TO THE EXTENT PRACTICAL UNLESS OTHERWISE SPECIFIED BY THE CITY ENGINEER.

UTILITY CROSSINGS AT DRIVEWAYS

ALL UTILITY CROSSINGS AT DRIVEWAYS SHALL BE BACKFILLED IMMEDIATELY FOLLOWING PIPE INSTALLATION TO MAKE THESE DRIVEWAYS ACCESSIBLE. THIS WORK IS INCLUDED IN PIPE INSTALLATION.

UTILITY TRENCH DEWATERING

THE COST OF ANY DEWATERING OPERATIONS REQUIRED TO INSTALL THE PROPOSED UTILITIES SHALL BE INCLUDED IN THE UNIT PRICE FOR THE AFFECTED UTILITY. DISCHARGE FROM ALL DEWATERING PUMPS MUST BE FILTERED THROUGH A FILTER BAG. COST FOR THE PROVIDING AND DISPOSING OF THE FILTER BAGS SHALL BE PAID INCLUDED IN THE UNIT PRICE FOR THE AFFECTED UTILITY. BAGS SHALL BE REPLACED WHEN THEY BECOME CLOGGED OR IF THEY BECOME DAMAGED.

PAVING

HMA BOND AND/OR TACK COAT WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF HMA PAY ITEMS.

MISCELLANEOUS

ALL PROPERTY IRONS AND PROPERTY CORNERS DISTURBED OR DESTROYED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR PROVIDED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

PROPERTY AND RIGHT-OF-WAY LINES ARE GENERALLY LOCATED AND FOR REFERENCE ONLY. NO RIGHT-OF-WAY SURVEY WAS PERFORMED.

EARTHWORK & GRADING

ALL EROSION PREVENTION SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION. THE CONTRACTOR SHALL FOLLOW LOCAL RULES AND REGULATIONS FOR SOIL EROSION AND SEDIMENTATION CONTROL FOR ALL MATERIALS THAT ARE DISPOSED OF OFF THE PROJECT SITE.

ALL BACKFILL OUTSIDE OF ROADWAY, SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF MAXIMUM UNIT WEIGHT AS DETERMINED BY A STANDARD PROCTOR TEST.

ALL SURPLUS AND UNSUITABLE MATERIAL FROM EARTH EXCAVATION NOT ABLE TO BE INCORPORATED INTO THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL OFFSITE.

EXCAVATION: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY STORAGE AREAS FOR EXCAVATION THAT THEY INTEND TO USE AS FILL MATERIAL IN OTHER AREAS.

THROUGHOUT THE PROJECT NO UNDERCUTS OR TRENCHES SHALL BE LEFT OPEN OR UNBACKFILLED DURING EACH NIGHT OR NON-WORKING HOURS THAT ARE WITHIN 10' OF THE EDGE OF THE TRAVELED WAY.

AT LEAST ONE STANDARD ORANGE WARNING FLAG SHOULD BE POSITIONED OVER EACH WARNING SIGN USED FOR THESE OPERATIONS.

THE TEMPORARY SIGNS WHICH ARE TO REMAIN IN THE SAME PLACE FOR 60 DAYS OR MORE SHALL BE INSTALLED ON DRIVEN POSTS. ALL OTHER TEMPORARY SIGNS MAY BE INSTALLED ON PORTABLE SUPPORTS. ALL SIGNS SHALL HAVE A MINIMUM BOTTOM HEIGHT OF 7 FEET. TRAFFIC CONES SHALL BE CLEANED & HAVE A MINIMUM HEIGHT OF 28 INCH.

CONTRACTOR WILL FURNISH, ERECT AND MAINTAIN ALL TRAFFIC CONTROL DEVICES SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. THE TRAFFIC CONTROL DEVICES SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2011 EDITION.

ANY EXISTING SIGNS REMOVED BY THE CONTRACTOR ARE TO REMAIN THE PROPERTY OF THE CITY. THE CONTRACTOR SHALL STORE IN A SECURE LOCATION ON SITE ANY EXISTING SIGNS THAT ARE REMOVED AND COORDINATE PICK UP BY THE CITY.

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH TDOT TRAFFIC CONTROL DETAILS T-M-1 THRU T-M-17.

ALL SOIL EROSION AND SEDIMENTATION MUST BE CONTROLLED AND CONTAINED ON SITE.

TRAFFIC CONTROL

THE CONTRACTOR SHALL NOT BEGIN ANY OPERATIONS ON THE PROJECT UNTIL ALL TEMPORARY SIGNS HAVE BEEN INSTALLED & FLASHER LIGHTS HAVE BEEN ATTACHED TO ALL REQUIRED SIGNS & BARRICADES.

THE ENGINEER MAY ALTER THE CONSTRUCTION STAGING TO IMPROVE THE TRAFFIC FLOW OR THE CONTRACTOR'S OPERATION WITHIN THE CONSTRUCTION AREA. ANY CHANGES IN THE CONSTRUCTION STAGING SHALL NOT RESULT IN ADDITIONAL COMPENSATION TO THE CONTRACTOR.

THE WORK VEHICLE USED FOR PLACING BARRICADES OR MARKINGS SHALL HAVE EITHER FLASHING (ALTERNATING) OR ROTATING LIGHTS.

DROP-OFFS IN EXCESS OF 3" SHALL BE SHIELDED WITH DRUMS TO PROTECT THE TRAFFIC AND THE WORK.

SOIL EROSION AND SEDIMENTATION CONTROL

- SOIL EROSION AND SEDIMENTATION CONTROL: IN ADDITION TO THE GENERAL SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS IN THE PROPOSAL THE FOLLOWING MEASURES SHALL BE INCORPORATED INTO THIS PROJECT:
- 1. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO MINIMIZE THE AREAS LEFT BARREN DURING CONSTRUCTION AND TO DISTURB ONLY THOSE AREAS ABSOLUTELY REQUIRED FOR THE CONSTRUCTION OF THE PROJECT.

2. EROSION CONTROL ITEMS (SILT FENCE, FILTERS, CHECK DAMS & SEDIMENT TRAPS AS CALLED OUT ON PLAN &/OR AS DIR. BY ENGR.), SHALL BE INSTALLED AND MAINTAINED ACCORDING TO TDOT STD. PLANS, AND SHALL BE REMOVED WHEN THEY ARE NO LONGER EFFECTIVE AS DETERMINED BY THE ENGINEER. NO SEPARATE PAYMENT SHALL BE ALLOWED FOR EITHER MAINTENANCE OR REMOVAL OF THE EROSION CONTROL ITEMS.

3. THE CONTRACTOR SHALL REMOVE SEDIMENT COLLECTED IN CULVERTS & SUMPS OF ALL DRAINAGE STRUCTURES CONSTRUCTED WITH THE PROJECT WHEN SUCH SEDIMENT EXCEEDS 1/2 OF THE SUMP DEPTH OR CULVERT DIA. THE ENGINEER WILL INSPECT SUMPS & CULVERTS AFTER STORMS AND DIRECT THE CONTRACTOR TO CLEANOUT SUMPS & CULVERTS TO PROVIDE FOR SEDIMENT COLLECTIONS. CLEARING SUMPS & CULVERTS FOR SEDIMENTATION CONTROL SHALL NOT BE PAID FOR SEPARATELY.

4. THE CONTRACTOR SHALL FOLLOW LOCAL RULES AND REGULATIONS FOR SOIL EROSION AND SEDIMENTATION CONTROL FOR ALL MATERIALS THAT ARE DISPOSED OF OFF THE PROJECT SITE.

SHEET	DATE PROJ NUMBER ENG	PROJ MGR	CADD	COUNTY	MUNICIPALITY	REVISIONS:			-	
	4/7/17 1079-16-0020 R.P.	R.P.	J.H.	DAVIDSON	GOODLETTSVILLE				arch 209	~
	CITY OF GOODLE	ETTSVILLE				#### ####		RUF	10TH A NASHVIL 615	
2	FRIENDSHIP DR.	DRAINAG	E IMPF	DRAINAGE IMPROVEMENTS	S	#### ####		CONTROL	ENGINEERS	
	GENERAL NOTES					####			5 PLANNERS SUITE 116 37203 64	
	COPYRIGHT 2016 OHM ALL DRAWINGS /	AND WRITTEN MAT	ERIALS APPE	VRING HEREIN CONS	STITUTE THE ORIGINAL ANI	AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF OHM AND THE SAME MAY NOT BE DUPLICATED,	THE SAME MAY NOT BE DUPLICATED, DISTRIBUTED, OR DISCLOSED WITHOUT PRIOR WRITTEN			

OF 10

WATER & SEWER UTILITY SYMBOLS

<u>EXISTING</u>

	LAISTING
⊖st	STORM MANHOLE
	SQUARE CATCH BASIN
\bigoplus	ROUND CATCH BASIN
	CULVERT
(+)	CULVERT W/O END SECTION
)	CULVERT W/END SECTION
	SANITARY MANHOLE
CO	CLEAN OUT
⊗ GW	GATE VALVE & WELL
\bigcirc	GATE VALVE & BOX
W	WATER STOP BOX
Ŋ	FIRE HYDRANT
MP	METER PIT
W	WATER METER
SH	SPRINKLER HEAD
Ŵ	IRRIGATION VALVE
<u> </u>	PROPOSED
\bullet	STORM MANHOLE
	INLET/CATCH BASIN
)	CHIVERT END SECTION

	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
Ŭ	FIRE HYDRANT

MISCELLANEOUS UTILITY SYMBOLS

EXISTING

	EXISTING
\swarrow	GUY WIRE
\oslash_{GP}	GUY POLE
$arnothing_{\sf U}$	UTILITY POLE
	UTILITY POLE W/LIGHT
-\$	LIGHT/DECOR LAMP POLE
- É	FLOOD LIGHT
	GAS VALVE
G	GAS VENT
G	GAS METER
G	GAS RISER
-\$-	TRAFFIC SIGNAL
-(P)-	PEDESTRIAN RISER
E	TRANSFORMER PAD
Ou	PRIVATE UTILITY MANHOLE
RX R	RAILROAD CROSSING
Ε	ELECTRIC METER
PB	PHONE BOOTH
TS	TRAFFIC SIGNAL CONTROLLER
\bigcirc	HAND HOLE
E	ELECTRIC RISER
$\langle T \rangle$	TELEPHONE RISER
Ċ	CABLE TV RISER
W	MONITORING WELL
	UNDERGROUND MARKER

<u>REAL ESTATE SYMBOLS</u>

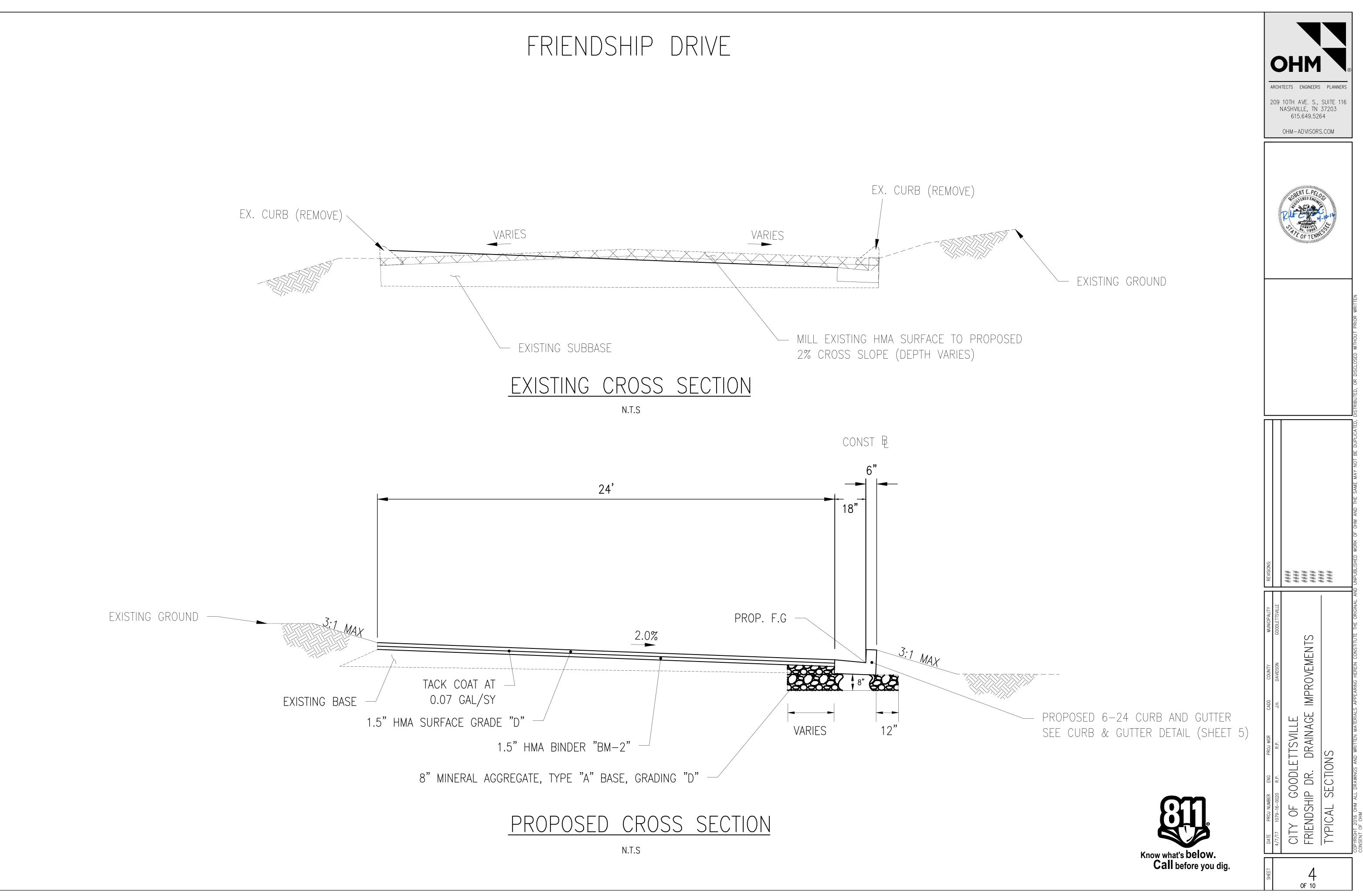
	CONTIGUOUS PROPERTY SYMBOL
(XXXX)	PARCEL NUMBER BOX
$\langle \rangle \times \langle \rangle$	NO ROW IMPACTS

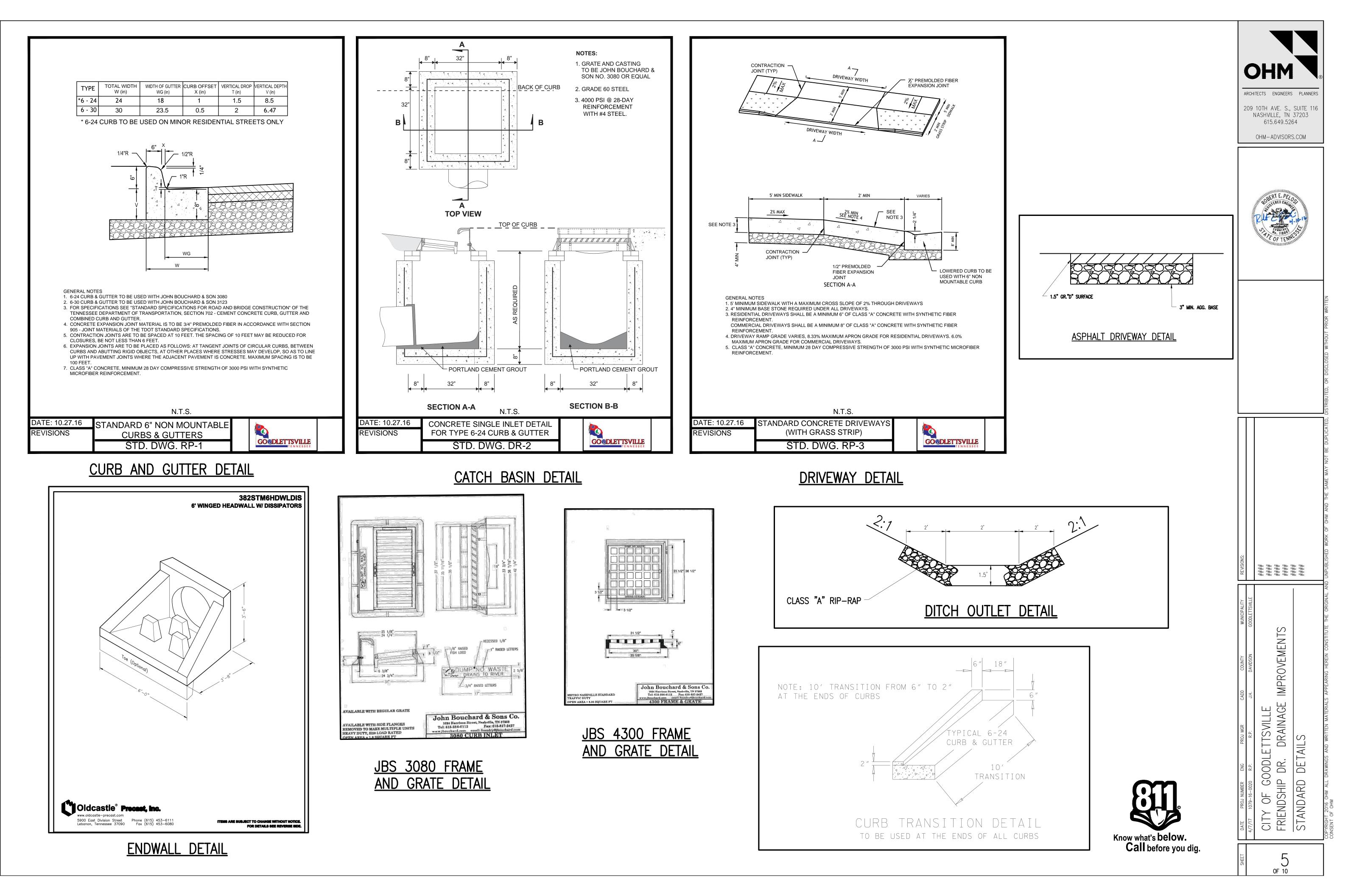
UTILITY PATTERN MISCELLANEOUS SYMBOLS <u>EXISTING</u> <u>EXISTING</u> ELEC _____ ELECTRICAL * RIPRAP SIGN FLOW DIRECTION $\sim \rightarrow$ _____т ____т ____т ____т ____т ____т ____т ____т ____т ____т CABLE/TELEPHONE * M STUMP WETLAND CONIFEROUS TREE CL 1 1" TO 5" CL 2 6" TO 17" CL 3 18" TO 35" CL 4 36" AND UP stry s $\left\{ \begin{array}{c} \\ \end{array} \right\}$ CONIFEROUS SHRUB 53 _____ st _____ DECIDUOUS SHRUB 53 ●_{SB#} SOIL BORING <u>PROPOSED</u> SECTION CORNER 12" ~~► STORM/SANITARY/WATER •_{MON} MONUMENT PRIMARY UTILITY WILL HAVE A CONTINUOUS LINESTYLE, WITH THE IRON ROD/PIPE ۲ SECONDARY UTILITY MATCHING ITS RESPECTIVE EXISTING UTILITY LINESTYLE [⊕]ΡK PK NAIL *OH = OVERHEAD , UG = UNDERGROUND BENCHMARK ROW PATTERN \triangle TP# TRAVERSE POINT Ë MAIL/NEWSPAPER BOX <u>EXISTING</u> $^{\circ}$ _{FP} FLAG POLE POST 0 EX. R.O.W. ____ ROW HAZARDOUS OR USED WITH UNDERGROUND GAS & FLAMMABLE MATERIAL ELECTRICAL LINES PROPERTY/PARCEL CAUTION – CRITICAL USED WITH TELEPHONE & UNDERGROUND UTILITY FIBER OPTIC LINES <u>PROPOSED</u> <u>PROPOSED</u> ROW_____ PROP. PERMANENT SEWER EASEMENT _____ · · · ____ · · · ____ RIPRAP ______ PROP. TEMPORARY CONST. EASEMENT ┤,╢,╫,╡,╫,╢ SIGN ✓ FLOW DIRECTION XXX XXX STRUCTURE NUMBER WM SAN STM TOPO PATTERN <u>EXISTING</u> ADA SIDEWALK RAMP HEDGE/TREE CENTERLINE OF DITCH RAILROAD WETLAND/EDGE OF WATER <u>PROPOSED</u> (SLOPE STAKE) _____ __ ___ ___ ___ ___ ___ CENTERLINE OF DITCH

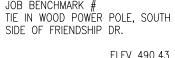
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	LEGEND	SIDEWALK REMOVAL	HMA SURFACE REMOVAL	PAVEMENT REMOVAL	COLD MILLING HMA SURFACE	HMA BASE CRUSHING AND SHAPING	EXCAVATION, EARTH, MODIFIED	CURB AND GUTTER, REM	TREE, REM	SALVAGE	BULKHEAD	ABANDON	REMOVE	ADJUST	RELOCATE	RECONSTRUCT	REMOVE BY OTHERS	ADJUST BY OTHERS	RELOCATE BY OTHERS	FOR CLARITY	SALVAGE	BULKHEAD	ABANDON	CLEARING	RELOCATE	RECONSTRUCT	RELOCATE BY OTHERS	ADJUST BY OTHERS									
	REMOVAL							;	\bigotimes	(XXX	XXXX	XXX	(XXX]	XXX	XXX]	XXX	XXX	XXX	XXX	ECESSARY						_	B/0)	B/O									
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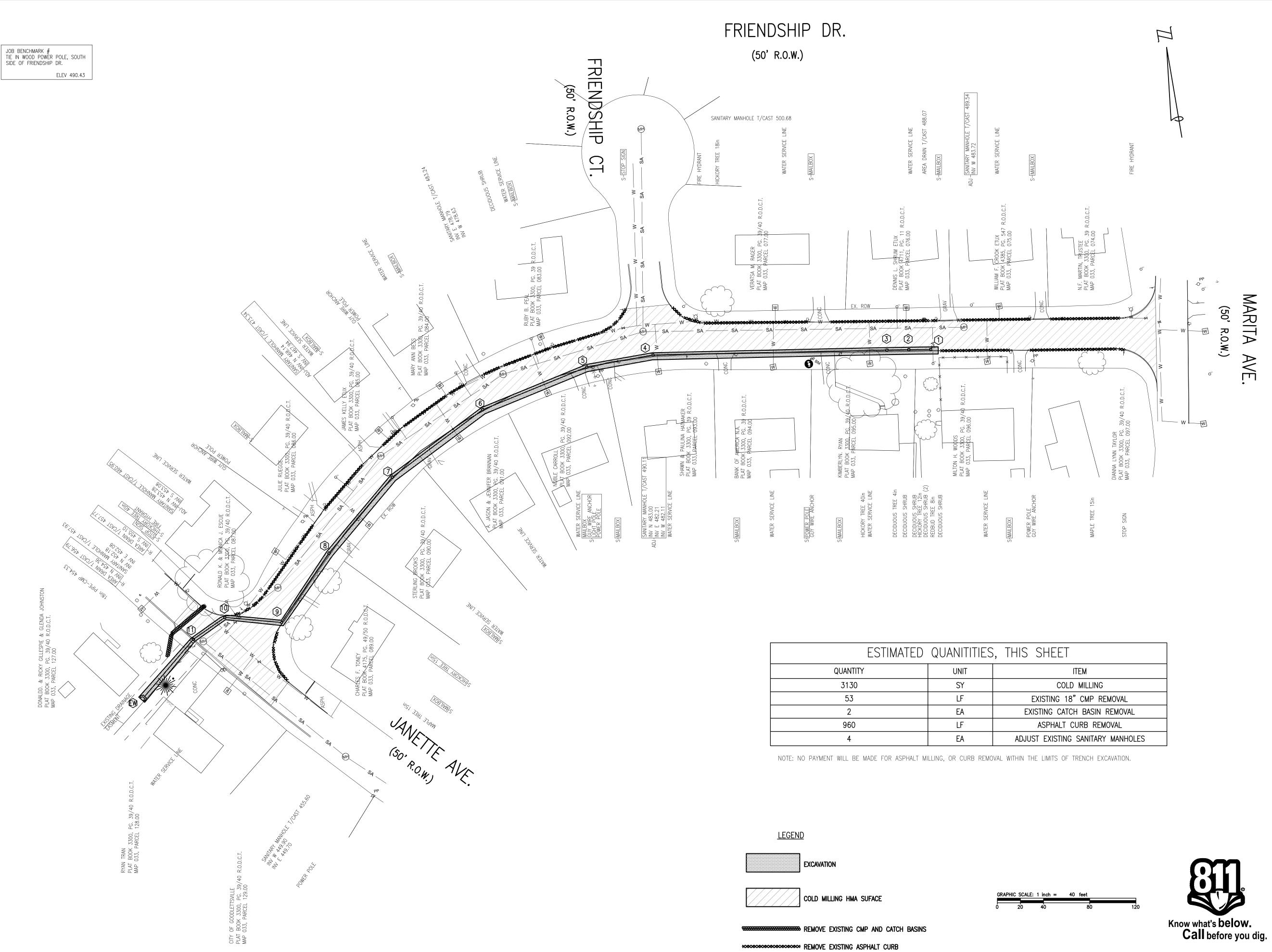
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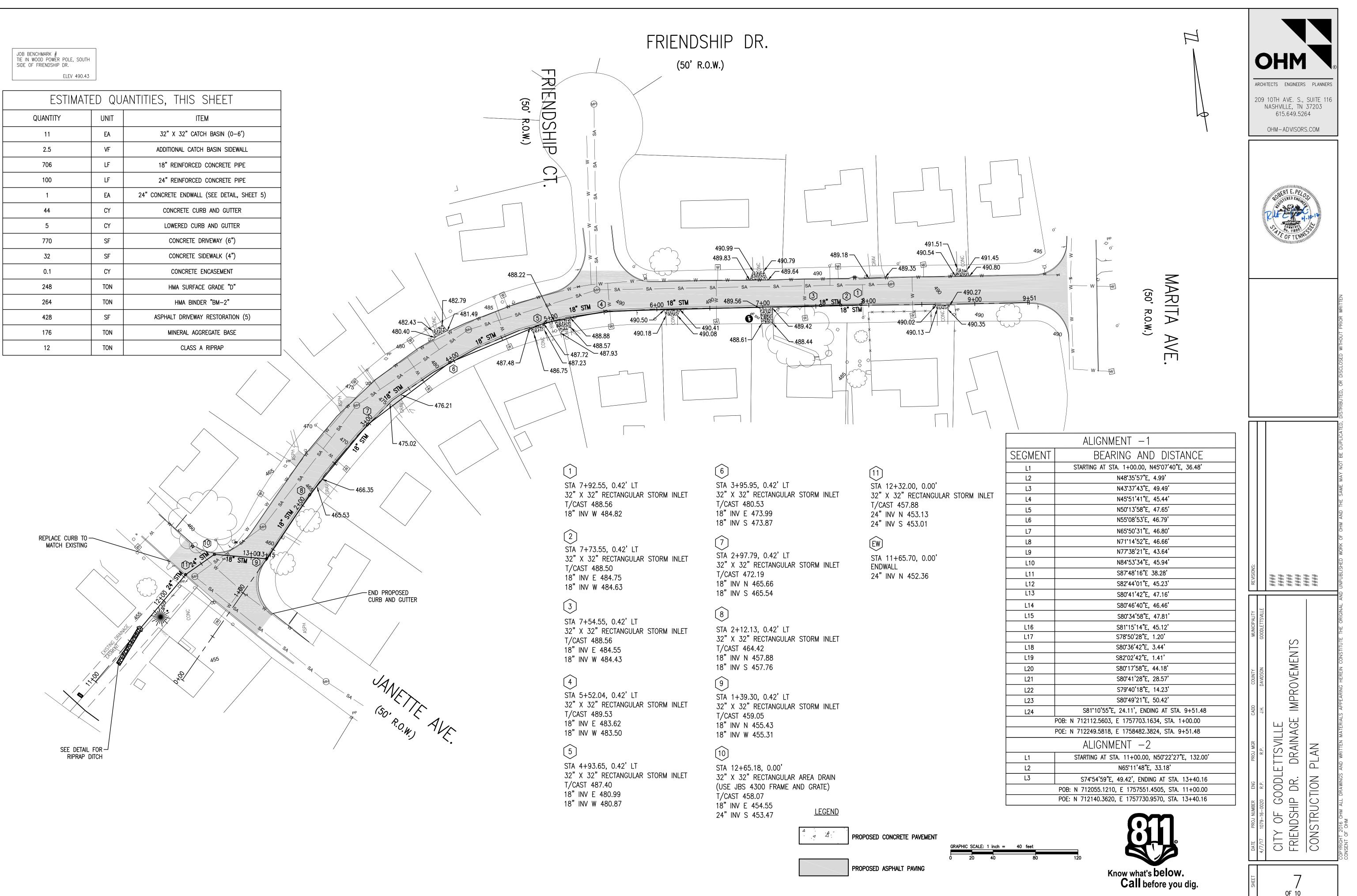




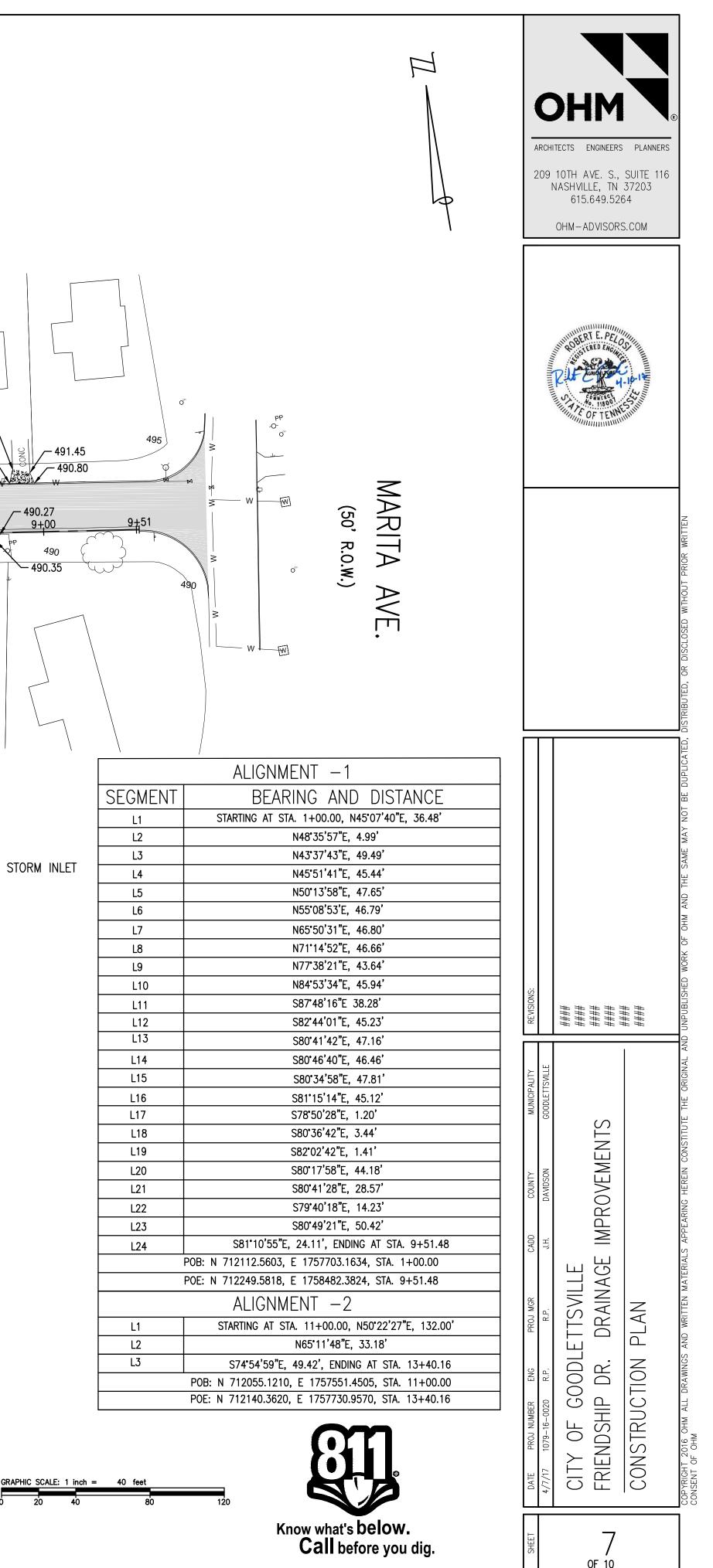


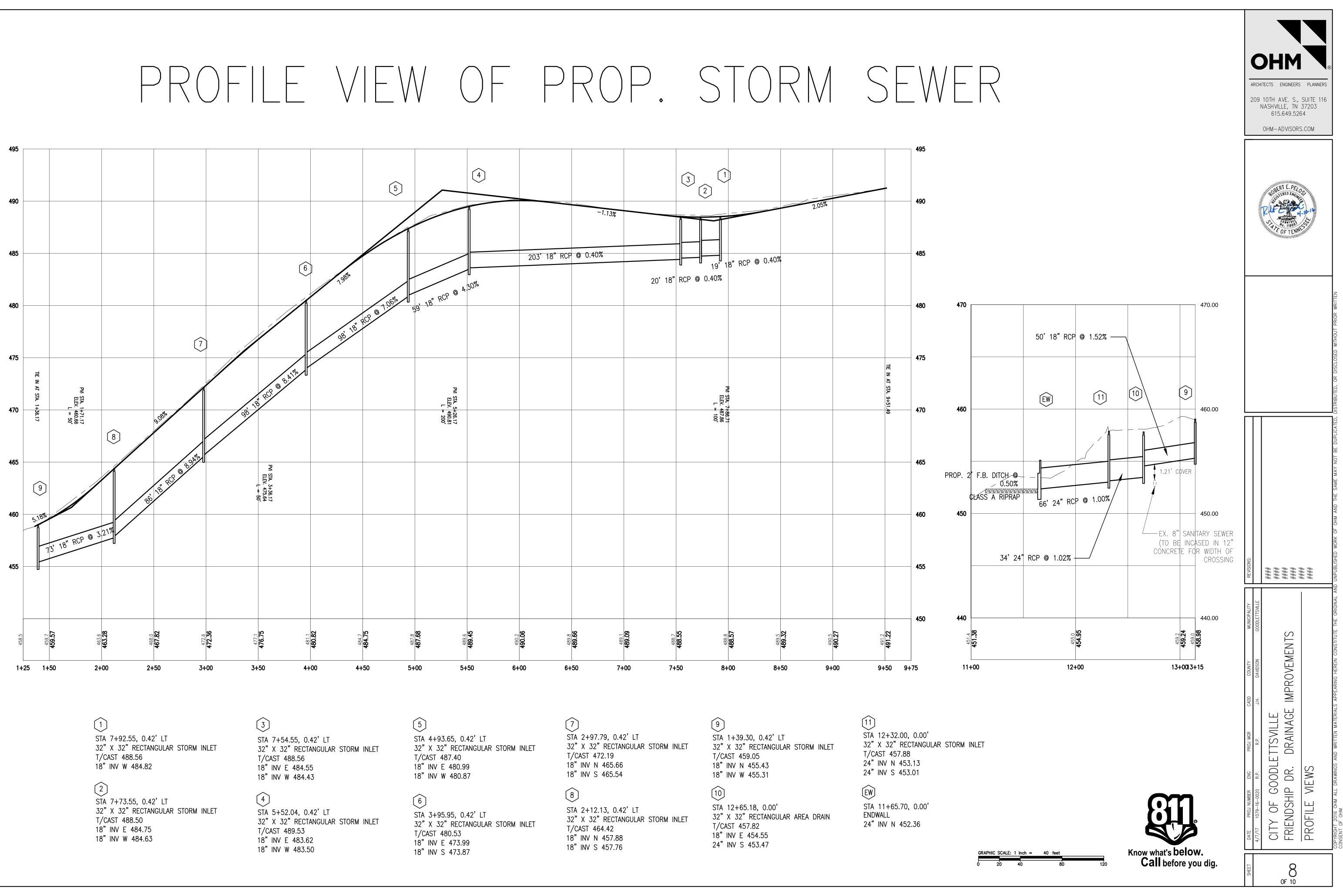


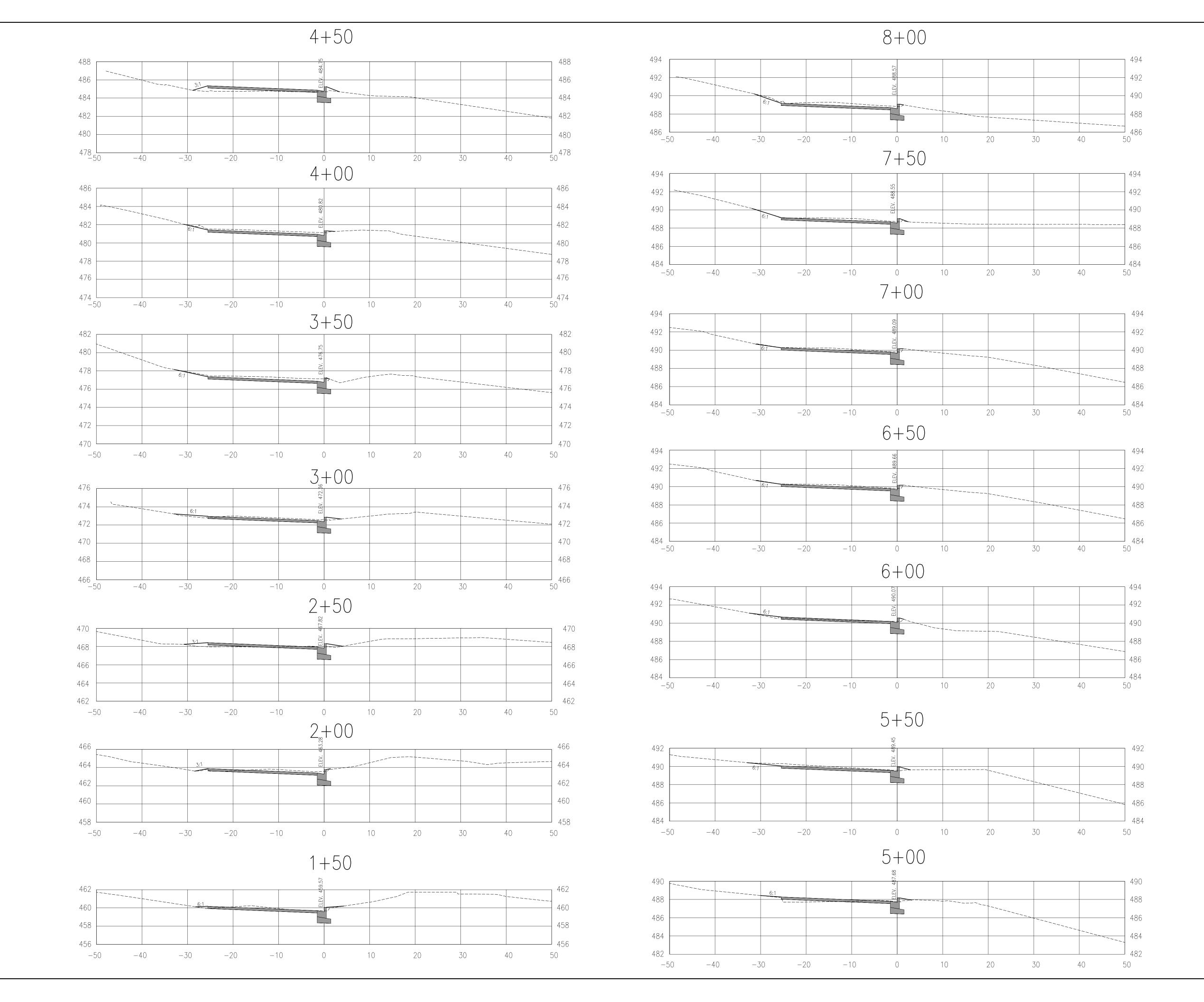
ESTIMATED	QUANITITIES	S, THIS SHEET
QUANTITY	UNIT	ITEM
3130	SY	COLD MILLING
53	LF	EXISTING 18" CMP REMOVAL
2	EA	EXISTING CATCH BASIN REMOVAL
960	LF	ASPHALT CURB REMOVAL
4	EA	ADJUST EXISTING SANITARY MANHOLES





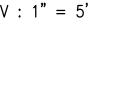




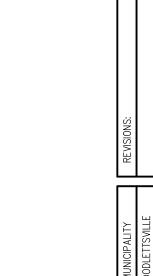


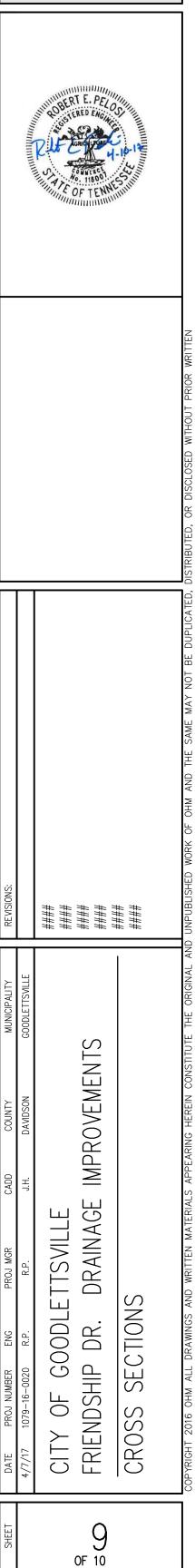


<u>SCALE</u> H : 1" = 10' V : 1" = 5'







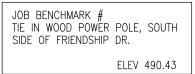


OHM

ARCHITECTS ENGINEERS PLANNERS

209 10TH AVE. S., SUITE 116 NASHVILLE, TN 37203 615.649.5264

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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.

<u>measure</u> Silt fence	<u>MAINTENANCE_SCHEDULE</u> INSTALL AT THE START OF CONSTRUCTION PER PLAN. REMOVE ACCUMULATED SEDIMENTS WHEN DEPTH REACHES 浅 TO ½ 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 $\frac{1}{2}$ 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 $\frac{1}{2}$ 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 $\frac{1}{2}$ THE ORIGINAL HEIGHT OF THE STRUCTURE.

CONSTRUCTION SEQUENCE

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

FRIENDSHIP DR.

(50' R.O.W.)

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FRIENDSHIP

 \bigtriangledown

(50'

R.O.W.

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SITE DATA

AREA OF DISTURBANCE: TEMPORARY SOIL EROSION MEASURES: $0.24 \pm ACRES$

SILT FENCE, SEDIMENT TUBE OR FILTER SOCK, INLET PROTECTION, CHECK DAM

T.D.E.C. STANDARDS DETA	ILS
TITLE	DETAIL
SILT FENCE WITH BACKING	7.34
FILTER SOCK	7.3
INLET PROTECTION	7.3
CHECK DAM	7.20



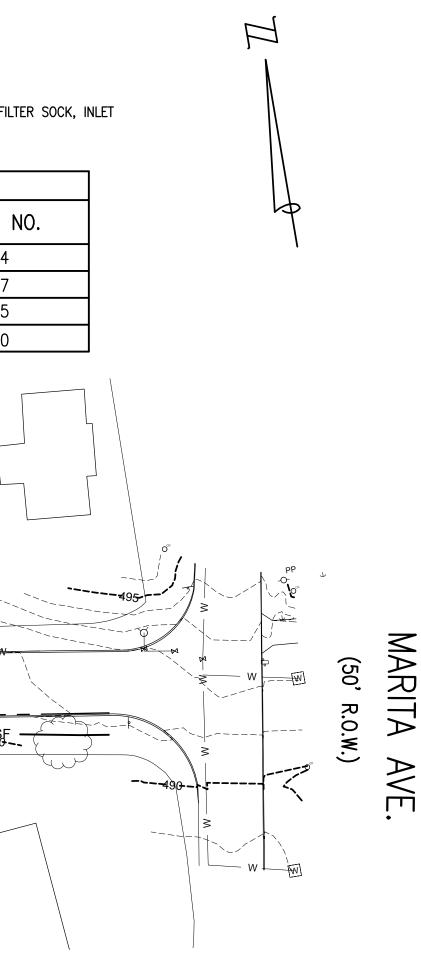
6

- 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.
- 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			EPSC QUANTITIES		
		QUANTITY UNIT		ITEM	
SE	SILT FENCE W/ BACKING	370	LF	SILT FENCE W/O BACKING	
3F	JILI FLINCE W/ DACKING	390	LF	FILTER SOCK	
	FILTER SOCK	2	EA	INLET PROTECTION	GRAPHIC SCALE: 1 ir
		1	EA	CHECK DAM	Ó 20 4
∇	CHECK DAM	1	LS	FINAL RESTORATION (TOPSOIL, SEED AND STRAW)	

INLET PROTECTION

JANETTE (So. R.O.W.) AVE



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

inch =	40	feet		
40		8	0	120



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REVISIONS: #### #### #### #### ####	D INDIBUSHED WORK OF OHM AND THE SAME MAY NOT BE DUDUICATE
DATE PROJ NUMBER ENG PROJ MGR CADD COUNTY MUNICIPALITY 4/7/17 1079-16-0020 R.P. R.P. J.H. DAVIDSON GODLETTSVILLE CITY OF GOODLETTSVILLE FRIENDSHIP DR. DRAINAGE IMPROVEMENTS FRIENDSHIP DR. DRAINAGE IMPROVEMENTS FROSION PREVENTION & SEDIMENT CONTROL	COPVECHT 2016 OHM ALL DRAWIGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND THE SAME MAY NOT RE DUDITION THE DISTINGTED OF DISCLOSED WRITTEN