#### **ADDENDUM NO. 1**

Date:	April 5, 2018
To:	All Bidders
From:	City of Oak Ridge, Cannon & Cannon, Inc.
Project:	Oak Ridge Turnpike Intersection Pedestrian Safety Improvements Oak Ridge Project No.: FY2018-139 TDOT PIN: 122976.00 TDOT Project No.: 01LPLM-F3-031 Federal Project No.: TAP-STP-M-9115(20)
Bid Opening:	April 17, 2018 at 3:00 pm (Eastern Time)

This Addendum consists of two (2) pages and the following attachments:

- Revised Bid Form
- Revised Plan Sheets: 1A, 1A1, 2, 4A, and 5A

This Addendum becomes part of the Contract Documents and amends or supplements the original plans and specifications as noted below.

- 1. The following topics were discussed at the Pre-bid Meeting on March 28, 2018:
  - The project completion time is inclusive of the time to order and receive materials.
  - Addenda to the Proposal shall be acknowledged by all bidders. It is the responsibility of each bidder, prior to submitting bids, to determine if addenda were issued and to make such addenda part of their bid. Specifically, bidders must print off, initial, and submit each and every addendum to the Instructions to Bidders by attaching the addenda to the inside front cover of the bound Bid Proposal Contract.
- 2. The following questions or comments were raised subsequent to the Pre-bid Meeting:
  - Question/Comment 1: Requested clarification on Footnote 17 on Sheet 2 regarding the hardwire interconnect.
    - Answer: The existing signal system utilizes hardwire copper communication. This communication system will need to be integrated with the new cabinets and controllers. This integration shall be paid under the price bid for pay item 730-15.32. Additionally, the cabinet shall not restrict the City from using fiber optic communication in the future.
  - Question/Comment 2: Requested clarification on Footnote 18 on Sheet 2 regarding the signal controller brand.
    - Answer: The controller shall be an Advanced Traffic Controller model, however, the specific controller and manufacturer/brand is up to the Contractor. The controller shall be capable of coordinated signal operation with adjacent signals on the Turnpike.
- 3. The Bid Form was revised to include the following:
  - o Added pay item 611-03.05, Gray Iron Castings (ADA Grate), 1 Each

- Added pay item 611-09.01, Adjustment of Existing Catch Basin, 3 Each
- Total Bid Form pages increased from 2 to 3. The Total Bid summary is now on Page 3.
- 4. Sheet 1A was revised with updated revision dates for the following standard roadway drawings:
  - o RP-H-7
  - RP-H-9 (date removed, drawing has not been revised)
  - o T-M-1
  - o T-M-2
- 5. Sheet 1A1 was revised with updated revision dates for the following standard traffic operations drawings:
  - o T-SG-7
  - o T-SG-9
  - o T-SG-9A
  - o T-SG-10
  - o T-SG-11
  - T-SG-12
- 6. Sheet 2 was revised to include the addition of the following pay items and quantities:
  - o 611-03.05, Gray Iron Castings (ADA Grate), 1 Each
  - o 611-09.01, Adjustment of Existing Catch Basin, 3 Each
- 7. Sheet 4A was revised to include a flagged note to install a new truncated dome surface on the existing curb ramp in the southwest corner.
- 8. Sheet 5A was revised to include flagged notes to adjust existing catch basins on the south side of the Turnpike.
- 9. Bidders must acknowledge receipt of this Addendum by initialing and attaching it to the inside front cover of the bound Bid Proposal Contract.

END OF ADDENDUM NO. 1

BID FORM					
ITEM NO.	DESCRIPTION	QTY.	UNIT	UNIT PRICE	EXTENDED PRICE
105-01	CONSTRUCTION STAKES, LINES AND GRADES	1	LS		
201-01	CLEARING AND GRUBBING	1	LS		
202-03	REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC.	230	SY		
202-03.01	REMOVAL OF ASPHALT PAVEMENT	475	SY		
203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	37	СҮ		
203-04	PLACING AND SPREADING TOPSOIL	130	CY		
209-03.20	FILTER SOCK (8 INCH)	700	LF		
209-05	SEDIMENT REMOVAL	20	CY		
209-09.43	CURB INLET PROTECTION (TYPE 4)	8	Each		
303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	340	Ton		
307-02.08	ASPHALT CONCRETE MIX (PG70-22) (BPMB- HM) GRADING BM-2	24	Ton		
411-02.10	ACS MIX (PG70-22) GRADING D	17	Ton		
611-03.05	GRAY IRON CASTINGS (ADA GRATE)	1	Each		
611-09.01	ADJUSTMENT OF EXISTING CATCH BASIN	3	Each		
701-01.01	CONCRETE SIDEWALK (4")	1515	SF		
701-02	CONCRETE DRIVEWAY	830	SF		
701-02.03	CONCRETE CURB RAMP	1420	SF		
702-01	CONCRETE CURB	6	CY		
702-03	CONCRETE COMBINED CURB & GUTTER	35	CY		
712-01	TRAFFIC CONTROL	1	LS		
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	100	Each		
712-05.03	WARNING LIGHTS (TYPE C)	100	Each		
712-06	SIGNS (CONSTRUCTION)	604	SF		
712-08.03	ARROW BOARD (TYPE C)	2	Each		
713-15.02	REMOVAL & RELOCATION OF SIGN & SUPPORT	2	Each		
713-15.36	REMOVE SIGN, SUPPORT & FOOTING	1	Each		
713-16.41	RELOCATE SIGN	1	LS		
714-01.36	ROADWAY LIGHTING	1	LS		
716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	280	LF		
716-02.08	PLASTIC PAVEMENT MARKING (8" DOTTED LINE)	140	LF		

ITEM NO.	DESCRIPTION	QTY.	UNIT	UNIT PRICE	EXTENDED PRICE
716-02.09	PLASTIC PAVEMENT MARKING (CUSTOM LADDER CROSS-WALK)	620	LF		
716-04.12	PLASTIC PAVEMENT MARKING (YIELD LINE)	36	SF		
716-08.01	REMOVAL OF PAVEMENT MARKING (LINE)	200	LF		
716-08.03	REMOVAL OF PAVEMENT MARKING (CROSS- WALK)	420	LF		
716-08.05	REMOVAL OF PAVEMENT MARKING (STOP LINE)	285	LF		
716-10.30	TRUNCATED DOME DETECTABLE WARNING MAT	8	SF		
716-12.01	ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE)	0.1	LM		
717-01	MOBILIZATION	1	LS		
730-01.02	REMOVAL OF SIGNAL EQUIPMENT	1	Each		
730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	16	Each		
730-02.30	SIGNAL HEAD ASSEMBLY (140A4F WITH BACKPLATE)	6	Each		
730-03.21	INSTALL PULL BOX (TYPE B)	10	Each		
730-05.04	MODIFY EXISTING ELECTRICAL SERVICE CONNCECTION	2	Each		
730-08.01	SIGNAL CABLE - 3 CONDUCTOR	1300	LF		
730-08.02	SIGNAL CABLE - 5 CONDUCTOR	1750	LF		
730-08.03	SIGNAL CABLE - 7 CONDUCTOR	3250	LF		
730-12.02	CONDUIT 2" DIAMETER (PVC)	370	LF		
730-12.03	CONDUIT 3" DIAMETER (PVC)	150	LF		
730-12.13	CONDUIT 2" DIAMETER (JACK AND BORE)	1650	LF		
730-13.13	VEHICLE DETECTOR (RADAR)	8	Each		
730-15.32	CABINET (EIGHT PHASE BASE MOUNTED)	2	Each		
730-16.02	EIGHT PHASE ACTUATED CONTROLLER	2	Each		
730-23.30	PEDESTAL POLE (PEDESTRIAN)	6	Each		
730-23.88	CANTILEVER SIGNAL SUPPORT (1 ARM @ 45')	1	Each		
730-26.06	PEDESTRIAN PUSHBUTTON POST	4	Each		
730-26.09	PEDESTRIAN PUSHBUTTON WITH 15IN SIGN	2	Each		
730-26.11	CNTDWN PED SGNL HEAD W/ AUDIBLE PUSHBUTTON & 15IN SIGN	16	Each		
801-02	SEEDING (WITHOUT MULCH)	14	Unit		
801-03	WATER (SEEDING AND SODDING)	1	MG		
805-12.01	EROSION CONTROL BLANKET (TYPE 1)	1200	SY		

TOTAL BID \$\_\_\_\_\_

TOTAL BID IN WORDS \_\_\_\_\_\_

## **ROADWAY INDEX**

SHEET NAME	SHEET NO.	DWG.	RE
TITLE SHEET	1	ROADWAY	/ DE
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS	1A	RD-A-1	12-1
STANDARD TRAFFIC OPERATIONS DRAWINGS	1A1	RD-L-1	10-2
ESTIMATED ROADWAY QUANTITIES	2	RD-L-3	03-1
TYPICAL SECTIONS, PAVING SCHEDULE, AND DETAILS	2A		
GENERAL NOTES	2B – 2D	RD-L-4	03-1
SPECIAL NOTES AND SCOPE OF WORK	2E	RD01-S-11	04-0
UTILITY NOTES AND UTILITY OWNERS	3		
PRESENT LAYOUTS	4 – 5	ROADWAY	
PROPOSED LAYOUTS	4A – 5A	RP-D-16	04-0
TRAFFIC CONTROL PLANS	6 – 6A		<u></u>
PROPOSED SIGNAL LAYOUT(S)	7 – 8	RP-NMC-10	07-2
SIGNAL OPERATIONAL SETTINGS	7A -8A	RP-NMC-11	02-2
ROADWAY CROSS SECTIONS	9 – 11		
		RP-H-3	10-1
NO PROJECT COMMITMENTS SHEET INCLUDED IN THIS SE	T OF PLANS.	RP-H-4	10-1
		RP-H-5	10-1
		RP-H-6	10-1
		RP-H-7	07-0
		RP-H-8	10-1
		RP-H-9	
		RP-S-7	02-0
		DESIGN - 1	ſRAF
		T-M-1	07-0
		T-M-2	07-0
		T-M-4	10-1
		T-FAB-1	05-2
		T-WZ-40	03-0
		T-WZ-41	03-0
		T-WZ-42	03-0
		T-WZ-51	04-0
		T-WZ-52	04-0
		T-WZ-55	10-1
		EROSION	PRE
		EC-STR-8	06-1
		EC-STR-34	08-0
		EC-STR-39A	08-0

## **STANDARD ROADWAY DRAWINGS**

## EV. DESCRIPTION

#### ESIGN STANDARDS

- -18-99 STANDARD ABBREVIATIONS
- -26-94 STANDARD LEGEND
- -16-17 STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
- -16-17 STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
- -04-03 DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT

#### ND PAVEMENT APPURTENANCES

- -08-16 DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS
- 7-29-03 STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
- 2-28-02 STANDARD VERTICAL (NONMOUNTABLE) CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
- -10-16 CURB RAMP AND TRUNCATED DOME SURFACE DETAIL
- -10-16 PERPENDICULAR CURB RAMP
- -10-16 PARALLEL CURB RAMP
- -10-16 PEDESTRIAN REFUGE
- -05-17 PERPENDICULAR CURB RAMP IN CURVE
- -10-16 PERPENDICULAR CURB RAMP PLACED OUTSIDE CURVE
  - PARALLEL CURB RAMP IN CURVE
- -05-16 DETAILS FOR CONCRETE SIDEWALKS

### AFFIC CONTROL

- 7-05-17 DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
- 7-05-17 DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
- -10-16 STANDARD INTERSECTION PAVEMENT MARKINGS
- FLASHING YELLOW ARROW BOARD
- RIGHT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
- INTERSECTIONS
- -05-17 CENTER LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
- -02-12 TRAFFIC CONTROL FOR SIGNALS ONLY PROJECTS ON 4 OR 5 LANE MAJOR ROUTES
- 4-02-12 TRAFFIC CONTROL FOR SIGNALS ONLY PROJECTS ON 4 OR 5 LANE MAJOR AND MINOR ROUTES
- -10-16 SIDEWALK TRAFFIC CONTROL

### **EVENTION AND SEDIMENT CONTROL**

- -10-14 FILTER SOCK
- 3-01-12 EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
- 3-01-12 CURB INLET PROTECTION TYPE 3 & 4



DWG.	REV.	DESCRIPTION
SIGNS		
T-S-9	06-10-14	STANDARD LAYOUT GROUND MOUNTED SIGNS
SIGNALS		
T-SG-2	06-27-16	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3A	06-27-16	ALTERNATE DETECTION DETAILS
T-SG-5	06-27-16	CONTROLLER CABINET DETAILS
T-SG-6		PEDESTRIAN SIGNAL DETAILS
T-SG-7	07-11-17	SIGNAL HEAD ASSEMBLIES
T-SG-7C		TYPICAL SIGNAL HEAD PLACEMENT ONE-LANE AND TWO-LANE APPROACHES
T-SG-7H		TYPICAL SIGNAL HEAD PLACEMENT THREE-LANE AND FOUR-LANE APPROACHES
T-SG-7L		TYPICAL SIGNAL HEAD PLACEMENT FOUR-LANE APPROACHES
T-SG-9	07-11-17	DETAILS OF CANTILEVER SIGNAL SUPPORT
T-SG-9A	07-12-17	MISCELLANEOUS SIGNAL DETAILS
T-SG-10	07-11-17	MAST ARM POLE AND STRAIN POLES FOUNDATION DETAILS
T-SG-11	07-12-17	MAINTENANCE OF EXISTING SIGNALS DURING HIGHWAY CONSTRUCTION
T-SG-12	07-12-17	TYPICAL WIRING FOR SIGNAL HEADS AND DETECTION LOOPS

### LIGHTING AND UTILITY POLES

T-L-1SA	09-11-13	STANDARD LIGHTING DETAILS FOR SINGLE ARM SUPPORTS
T-L-3	04-15-96	STANDARD LIGHTING DETAILS PULL BOXES
T-L-4	05-25-11	STANDARD LIGHTING DETAILS CONDUIT, CABLE INSTALLATION

# **STANDARD TRAFFIC OPERATIONS DRAWINGS**

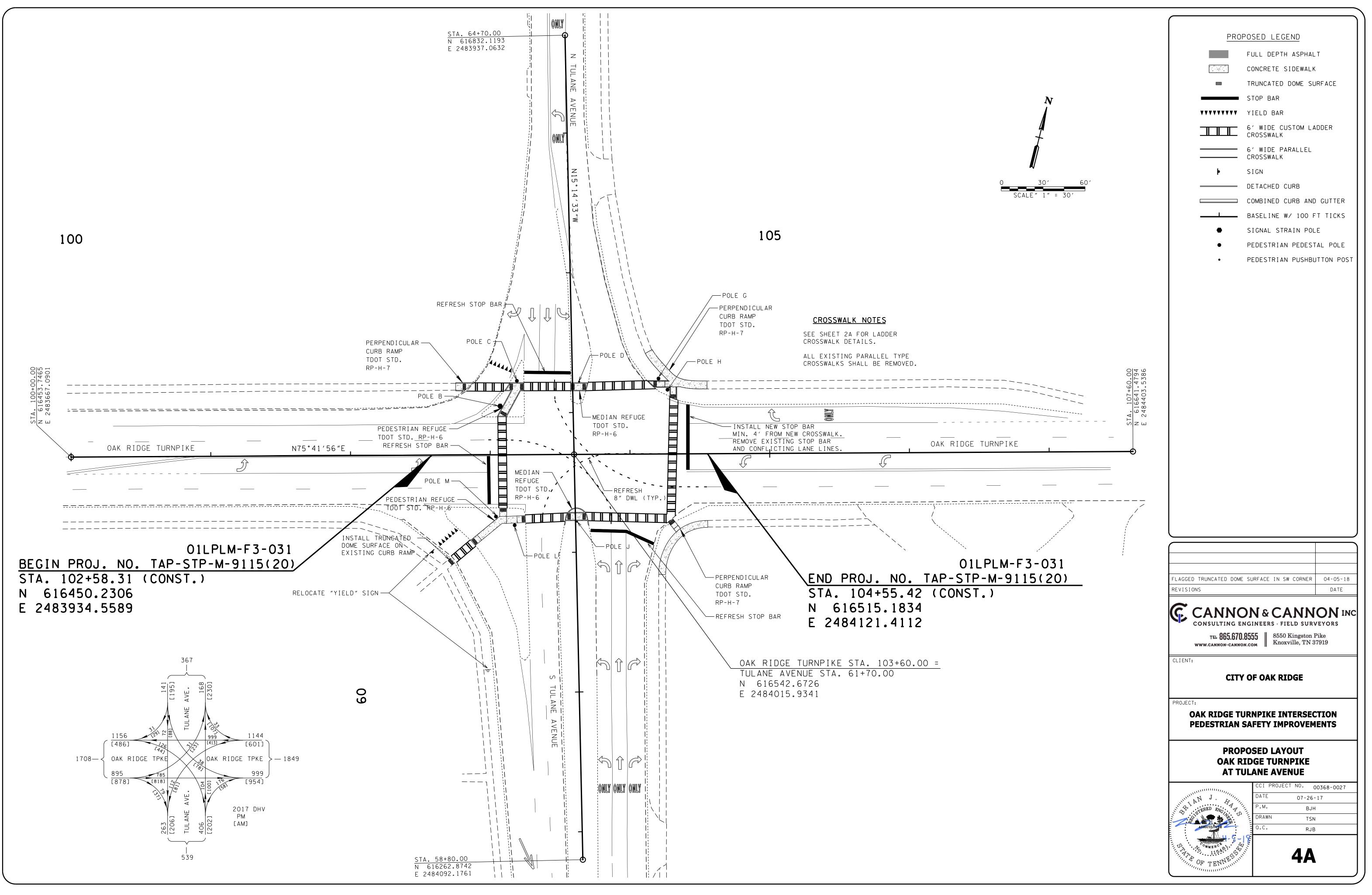
PDATED STANDARD DRAWIN	IG REVISION DATES	04-05-18
REVISIONS		DATE
CANNO CONSULTING EN	S555 8550 Kingstor Knoxville, TN	n Pike
WWW.CANNON-CANNON	I.COM    KIIOXVIIIE, IIV	57919
CLIENT:		
CITY	OF OAK RIDGE	
PROJECT:		
OAK RIDGE TH	RNDIKE INTERSE	CTION
	RNPIKE INTERSE	
	RNPIKE INTERSE AFETY IMPROVE	
PEDESTRIAN S	AFETY IMPROVE	
PEDESTRIAN S		
PEDESTRIAN S	AFETY IMPROVE	MENTS
PEDESTRIAN S STANE OPERATI	DARD TRAFFIC	MENTS
PEDESTRIAN S STANI OPERATI	CCI PROJECT NO.	MENTS S 00368-0027
PEDESTRIAN S STANE OPERATI	CCI PROJECT NO.	MENTS S 00368-0027 6-17
PEDESTRIAN S	CCI PROJECT NO.	MENTS S 00368-0027 6-17 JH
PEDESTRIAN S STANE OPERATI	CCI PROJECT NO. DATE 07-24 P.M. B.	MENTS S 00368-0027 6-17 JH
PEDESTRIAN S STANE OPERATI	CCI PROJECT NO. DATE 07-24 P.M. B. DRAWN TS	MENTS S 00368-0027 6-17 JH
PEDESTRIAN S STANE OPERATI	CCI PROJECT NO. DATE 07-20 P.M. B. DRAWN TS 0.C. R.	MENTS S 00368-0027 6-17 JH SN JB
PEDESTRIAN S STANE OPERATI	CCI PROJECT NO. DATE 07-20 P.M. B. DRAWN TS 0.C. R.	MENTS S 00368-0027 6-17 JH SN JB
PEDESTRIAN S STANE OPERATI	CCI PROJECT NO. DATE 07-24 P.M. B. DRAWN TS	MENTS S 00368-0027 6-17 JH SN JB

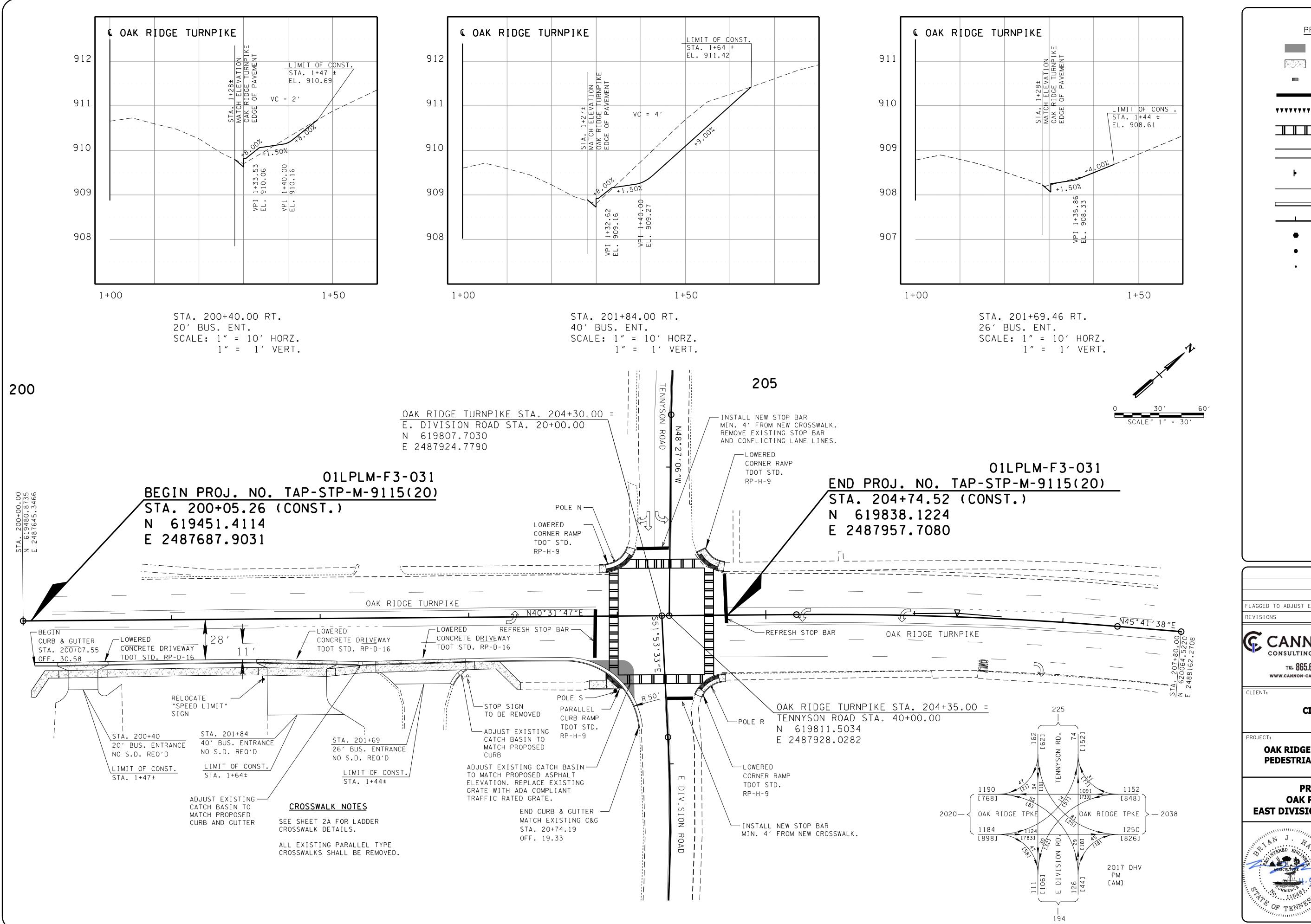
FOOT NOTES	ITEM NO.	DESCRIPTION	QTY.	UNIT
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	1	LS
	201-01	CLEARING AND GRUBBING	1	LS
1	202-03	REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC.	230	SY
1	202-03.01	REMOVAL OF ASPHALT PAVEMENT	475	SY
	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	37	СҮ
	203-04	PLACING AND SPREADING TOPSOIL	130	CY
1	209-03.20	FILTER SOCK (8 INCH)	700	LF
1	209-05	SEDIMENT REMOVAL	20	СҮ
1	209-09.43	CURB INLET PROTECTION (TYPE 4)	8	Each
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	340	Ton
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		ACS MIX (PG70-22) GRADING D	17	Ton
		GRAY IRON CAST INGS (ADA GRATE)	1	Each
		ADJUSTMENT OF EXISTING CATCH BASIN	5	Each
		CONCRETE SIDEWALK (4")	1515	SF
		CONCRETE DRIVEWAY	830	SF
2				
Z		CONCRETE CURB RAMP	1420	SF
	702-01	CONCRETE CURB	6	CY
	702-03	CONCRETE COMBINED CURB & GUTTER	35	CY
	712-01		1	LS
		FLEXIBLE DRUMS (CHANNELIZING)	100	Each
		WARNING LIGHTS (TYPE C)	100	Each
		SIGNS (CONSTRUCTION)	604	SF
		ARROW BOARD (TYPE C)	2	Each
3	713-15.02	REMOVAL & RELOCATION OF SIGN & SUPPORT	2	Each
4	713-15.36	REMOVE SIGN, SUPPORT & FOOT ING	1	Each
5	713-16.41	RELOCAT E SIGN	1	LS
6	714-01.36	ROADWAY LIGHT ING	1	LS
7	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	280	LF
	716-02.08	PLASTIC PAVEMENT MARKING (8" DOTTED LINE)	140	LF
7,8	716-02.09	PLASTIC PAVEMENT MARKING (CUSTOM LADDER CROSS-WALK)	620	LF
7		PLASTIC PAVEMENT MARKING (YIELD LINE)	36	SF
9		REMOVAL OF PAVEMENT MARKING (LINE)	200	LF
9		REMOVAL OF PAVEMENT MARKING (CROSS-WALK)	420	LF
9		REMOVAL OF PAVEMENT MARKING (STOP LINE)	285	LF
10		TRUNCATED DOME DETECTABLE WARNING MAT	8	SF
10			Ū.	
		ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE)	0.1	LM
11	_	MOBILIZATION	1	LS
11		REMOVAL OF SIGNAL EQUIPMENT	1	Each
12		SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	16	Each
12		SIGNAL HEAD ASSEMBLY (140A4F WITH BACKPLATE)	6	Each
13		INSTALL PULL BOX (TYPE B)	10	Each
14		MODIFY EXISTING ELECTRICAL SERVICE CONNCECTION	2	Each
	730-08.01	SIGNAL CABLE - 3 CONDUCT OR	1300	LF
	730-08.02	SIGNAL CABLE - 5 CONDUCT OR	1750	LF
	730-08.03	SIGNAL CABLE - 7 CONDUCT OR	3250	LF
15	730-12.02	CONDUIT 2" DIAMETER (PVC)	370	LF
15	730-12.03	CONDUIT 3" DIAMETER (PVC)	150	LF
15	730-12.13	CONDUIT 2" DIAMETER (JACK AND BORE)	1650	LF
16		VEHICLE DETECTOR (RADAR)	8	Each
17		CABINET (EIGHT PHASE BASE MOUNTED)	2	Each
18		EIGHT PHASE ACTUATED CONTROLLER	2	Each
19		PEDESTAL POLE (PEDESTRIAN)	6	Each
20		CANTILEVER SIGNAL SUPPORT (1 ARM @ 45')	1	Each
19		PEDESTRIAN PUSHBUTTON POST	4	
			-	Each
21		PEDESTRIAN PUSHBUTTON WITH 15IN SIGN	2	Each
21		CNT DWN PED SGNL HEAD W/ AUDIBLE PUSHBUTTON & 15IN SIGN	16	Each
	801-02	SEEDING (WITHOUT MULCH)	14	Unit
	801-03	WATER (SEEDING AND SODDING)	1	MG
	1805 1201	EROSION CONTROL BLANKET (TYPE 1)	1200	SY

#### FOOTNOTES:

- SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
   ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.
- (2) IT EM INCLUDES TRUNCATED DOME SURFACE.
- (3) REMOVAL AND RELOCATION OF ONE "YIELD" SIGN AND ONE "SPEED LIMIT" SIGN. SEE SHEETS 4A AND 5A FOR LOCATIONS.
- (4) REMOVAL OF ONE "STOP" SIGN. SEE SHEET 5A FOR LOCATION.
- (5) RELOCATION OF ONE STREET NAME SIGN FROM EXISTING MAST ARM TO NEW MAST ARM AT OAK RIDGE TURNPIKE / TULANE INTERSECTION.
- (6) IT EM INCLUDES REMOVAL OF EXISTING STREET LIGHT AND INSTALLATION OF NEW STREET LIGHT AT OAK RIDGE TURNPIKE / TULANE INTERSECTION AND ALL WIRING AND OTHER INCIDENTALS NECESSARY FOR FULLY FUNCTIONAL LUMINAIRE ON NEW SIGNAL POLE.
- (7) THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC.
   PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
- (8) SEE SHEET 2A FOR CROSS-WALK DET AIL.
- (9) PAVEMENT MARKING REMOVAL SHALL BE COMPLETED USING WATERBLASTING, HYDROBLASTING, OR GRINDING TECHNIQUES TO MINIMIZE THE VISIBILITY OF EXISTING STRIPING.
- (10) IT EM IS FOR TRUNCATED DOME SURFACES TO BE INSTALLED ON EXISTING CURB RAMPS AS SHOWN ON SHEET 4A.
- (11) IT EM INCLUDES REMOVAL OF ALL MAST ARMS, VEHICULAR SIGNAL HEADS, PEDESTRIAN PEDESTAL POLES, PEDESTRIAN SIGNAL HEADS, PEDESTRIAN PUSHBUTTONS, CABINETS, WIRING, AND ASSOCIATED CONTENTS AS SHOWN ON THE PLANS AT THE INTERSECTIONS OF TURNPIKE AT TULANE AND TURNPIKE AT EAST DIVISION / TENNYSON.
- (12) SIGNAL HEADS SHALL INCLUDE LOUVERED BACKPLATES WITH A 1" MINIMUM/3" MAXIMUM YELLOW RET RO REFLECTIVE BORDER AROUND THE PERIMETER OF THE FACE OF THE BACKPLATE. THE RET RO REFLECTIVE BORDER SHALL BE MADE OF A TYPE III PRISMATIC OR BETTER MATERIAL.
- (13) PULL BOXES SHALL HAVE "TRAFFIC SIGNAL" STAMPED ON THE LID.
- (14) IT EM INCLUDES CONDUIT, CABLE, AND ALL OTHER IT EMS NECESSARY TO MODIFY ELECTRICAL SERVICE CONNECTION FROM EXISTING TRAFFIC SIGNALS TO NEW TRAFFIC SIGNALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL UTILITY TO OBTAIN THE ESTIMATE FOR ANY CHARGES BY THE UTILITY FOR PROVIDING ELECTRICAL SERVICE TO THE SIGNAL CONTROLLER. THESE CHARGES SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 730-05.04 FOR PAYMENT BY THE CONTRACTOR.
- (15) CONDUIT SHALL BE PVC SCHEDULE 80.
- (16) EQUIPMENT TO BE WAVET RONIX SMART SENSOR MATRIX DETECTION SYSTEM. INCLUDES ALL SENSOR UNITS, HARDWARE, SOFT WARE, MOUNTING ASSEMBLIES, 1,200 FEET OF POWER CABLE, AND RELATED EQUIPMENT TO PROVIDE ALL DETECTION ZONES AS SHOWN ON THE PLANS. CONTRACTOR TO ENSURE COMPATIBILITY WITH SIGNAL CONTROLLER.
- (17) CABINET SHALL BE NEMATS2-TYPE 2, COMPLETE WITH PANELS, WIRING, AND OTHER INCIDENTALS REQUIRED FOR CLOSED LOOP OPERATION EMPLOYING EXISTING HARDWIRE COMMUNICATION AND FUTURE FIBER COMMUNICATION. ITEM INCLUDES CONNECTING CABINET TO EXISTING HARDWIRE SIGNAL INTERCONNECT.
- (18) CONTROLLER SHALL BE AT C.
- (19) IT EM INCLUDES COMPLETE POWER INSTALL TYPE FOUNDATION.
- (20) IT EM INCLUDES COMPLETE FOUNDATION PER TDOT STANDARDS.
- (21) PEDEST RIAN PUSHBUTTONS SHALL BE FULLY ACCESSIBLE AND AUDIBLE AND COMPLIANT WITH ALL REQUIREMENTS OF THE MUTCD, ADA, AND PROWAG.

EVISIONS       DATE         CONSULTING ENGINEERS - FIELD SURVEYORS         CONSULTING ENGINEERS - FIELD SURVEYORS         TEL 865.670.8555         WWW.CANNON-CANNON.COM         8550 Kingston Pike Knoxville, TN 37919         LIENT:         CITY OF OAK RIDGE         ROJECT:         OAK RIDGE TURNPIKE INTERSECTION PEDESTRIAN SAFETY IMPROVEMENTS         ESTIMATED ROADWAY QUANTITIES         CCI PROJECT NO. 00368-0027         DATE 07-26-17	EVISIONS       DATE         CONSULTING ENGINEERS - FIELD SURVEYORS         CONSULTING ENGINEERS - FIELD SURVEYORS         TEL 865.670.8555         WWW.CANNON-CANNON.COM         8550 Kingston Pike Knoxville, TN 37919         LIENT:         CITY OF OAK RIDGE         ROJECT:         OAK RIDGE TURNPIKE INTERSECTION PEDESTRIAN SAFETY IMPROVEMENTS         ESTIMATED ROADWAY QUANTITIES         CCI PROJECT NO. 00368-0027         DATE 07-26-17		
EVISIONS       DATE         DATE       DATE         DATE       DATE         DECONSULTING ENGINEERS - FIELD SURVEYORS       INCONSULTING ENGINEERS - FIELD SURVEYORS         TEL 865.670.8555       8550 Kingston Pike Knoxville, TN 37919         LIENT:       CITY OF OAK RIDGE         ROJECT:       OAK RIDGE TURNPIKE INTERSECTION PEDESTRIAN SAFETY IMPROVEMENTS         ESTIMATED ROADWAY QUANTITIES         CCI PROJECT NO. 00368-0027         DATE         O7-26-17	EVISIONS       DATE         EVISIONS       CANNON & CANNON IN CONSULTING ENGINEERS - FIELD SURVEYORS         EVISIONS       ES50 Kingston Pike Knoxville, TN 37919         Image: State of the sta		
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CLIENT: CONSULTING ENGINEERS - FIELD SURVEYORS TEL 865.670.8555 WWW.CANNON-CANNON.COM 8550 Kingston Pike Knoxville, TN 37919 CLIENT: CITY OF OAK RIDGE PROJECT: OAK RIDGE TURNPIKE INTERSECTION PEDESTRIAN SAFETY IMPROVEMENTS ESTIMATED ROADWAY QUANTITIES CCI PROJECT NO. 00368-0027 DATE 07-26-17	CLIENT: CONSULTING ENGINEERS - FIELD SURVEYORS TEL 865.670.8555 WWW.CANNON-CANNON.COM 8550 Kingston Pike Knoxville, TN 37919 SCLIENT: CITY OF OAK RIDGE PROJECT: OAK RIDGE TURNPIKE INTERSECTION PEDESTRIAN SAFETY IMPROVEMENTS ESTIMATED ROADWAY QUANTITIES CCI PROJECT NO. 00368-0027 DATE 07-26-17 P.M. BJH DRAWN TSN 0.C. RJB C.C. RJB		
TEL 865.670.8555       8550 Kingston Pike Knoxville, TN 37919         CLIENT:       CITY OF OAK RIDGE         PROJECT:       OAK RIDGE TURNPIKE INTERSECTION PEDESTRIAN SAFETY IMPROVEMENTS         ESTIMATED ROADWAY QUANTITIES         CCI PROJECT NO. 00368-0027         DATE       07-26-17	TEL 865.670.8555 WWW.CANNON-CANNON.COM       8550 Kingston Pike Knoxville, TN 37919         CLIENT:       CITY OF OAK RIDGE         PROJECT:       OAK RIDGE TURNPIKE INTERSECTION PEDESTRIAN SAFETY IMPROVEMENTS         ESTIMATED ROADWAY QUANTITIES         CCI PROJECT NO. 00368-0027 DATE 07-26-17 P.M. BJH DRAWN TSN 0.C. RJB         DATE 07-26-17 P.M. BJH DRAWN TSN 0.C. RJB         DATE 07-26-17 P.M. BJH DRAWN TSN 0.C. RJB		
WWW.CANNON-CANNON.COM       Knoxville, TN 37919         CLIENT:       CITY OF OAK RIDGE         PROJECT:       OAK RIDGE TURNPIKE INTERSECTION PEDESTRIAN SAFETY IMPROVEMENTS         ESTIMATED ROADWAY QUANTITIES         CCI PROJECT NO. 00368-0027         DATE       07-26-17	WWW.CANNON-CANNON.COM       Knoxville, TN 37919         CLIENT:       CITY OF OAK RIDGE         PROJECT:       OAK RIDGE TURNPIKE INTERSECTION PEDESTRIAN SAFETY IMPROVEMENTS         ESTIMATED ROADWAY QUANTITIES         Image: Contract of the second seco	CANNON & CANN CONSULTING ENGINEERS - FIELD SUR	ION IN
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DATE 07-26-17 P.M. BJH DRAWN TSN Q.C. RJB	AGRICULTURE O.C. RJB O.C. RJB O.C. RJB O.C. RJB O.C. RJB	ESTIMATED ROADWAY QUANT	
P.M. BJH DRAWN TSN Q.C. RJB	AGRICULTURE O.C. RJB O.C. RJB O.C. RJB O.C. RJB O.C. RJB	ESTIMATED ROADWAY QUANT	TITIES
AGRICULTURE O.C. RJB	AGRICULTURE O.C. RJB O.C. RJB O.C. RJB O.C. RJB O.C. RJB	ESTIMATED ROADWAY QUANT	<b>TITIES</b> 00368-0027
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PROPOSED LEGEND         FULL DEPTH ASPHALT         CONCRETE SIDEWALK         TRUNCATED DOME SURFACE         STOP BAR         YTTYTYY         YIELD BAR         G' WIDE CUSTOM LADDER         CROSSWALK         G' WIDE PARALLEL         CROSSWALK         SIGN         DETACHED CURB         COMBINED CURB AND GUTTER         BASELINE W/ 100 FT TICKS         SIGNAL STRAIN POLE         PEDESTRIAN PEDESTAL POLE         PEDESTRIAN PUSHBUTTON POST	
FLAGGED TO ADJUST EXISTING CATCH BASINS 04-05-18	
REVISIONS     DATE       CONSULTING ENGINEERS · FIELD SURVEYORS       TEL 865.670.85555     8550 Kingston Pike Knoxville, TN 37919       CLIENT:       CITY OF OAK RIDGE	
PROJECT: OAK RIDGE TURNPIKE INTERSECTION PEDESTRIAN SAFETY IMPROVEMENTS PROPOSED LAYOUT OAK RIDGE TURNPIKE AT EAST DIVISION BOAD / TENNYSON BOAD	
EAST DIVISION ROAD/TENNYSON ROAD         CCI PROJECT NO. 00368-0027         DATE       07-26-17         P.M.       BJH         DRAWN       TSN         O.C.       RJB         540         OK         DATE         OK         OK         OK         OK         OK         OK         OK         OK         OK         DATE         OK         OK         OK <td col<="" th=""></td>	