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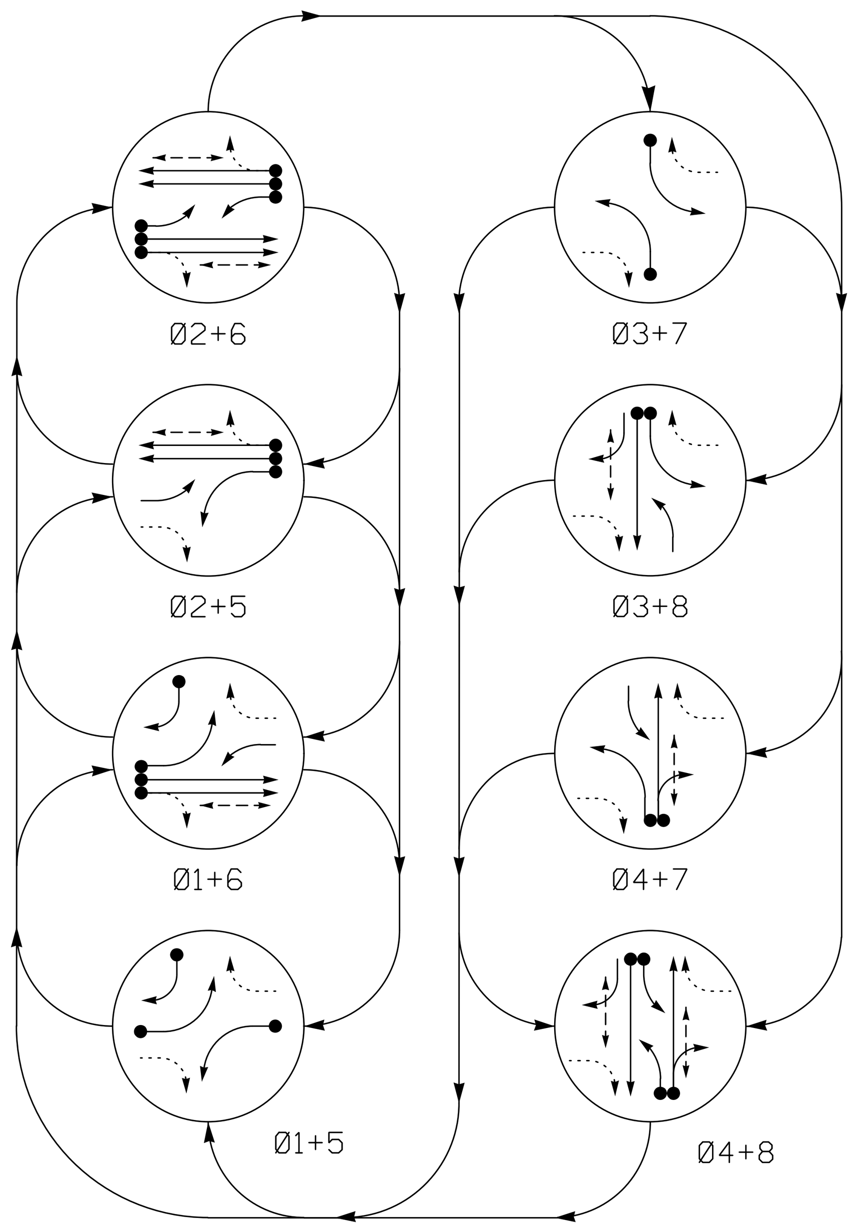
PROJECT REFERENCE NO.	SHEET NO.
I-5711	Sig 17.0

8 Phase
Fully Actuated w/ Emergency Vehicle Preemption
SR 1007 (Mebane Oaks Rd) CLS
Signal System: 10705

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

EV PREEMPT PHASES
(Medium Priority)

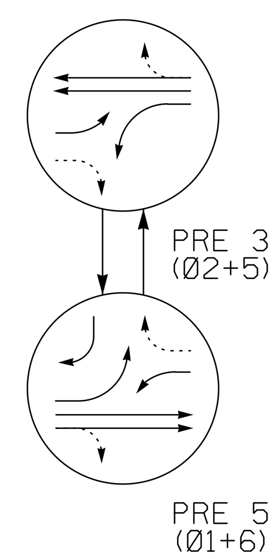
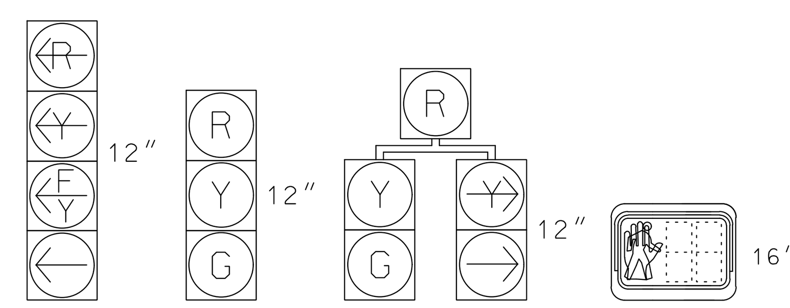


TABLE OF OPERATION

SIGNAL FACE	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3+7	Ø3+8	Ø4+7	Ø4+8	PRE3	PRE5	FLASH
11	←	←	←FY	←FY	←R	←R	←R	←R	←FY	←	←Y
21, 22	R	R	G	G	R	R	R	R	G	R	Y
31	←R	←R	←R	←R	←	←	←FY	←FY	←R	←R	←R
41, 42, 43	R	R	R	R	R	R	G	G	R	R	R
51	←	←FY	←	←FY	←R	←R	←R	←R	←	←FY	←Y
61, 62	R	G	R	G	R	R	R	R	R	G	Y
71	←R	←R	←R	←R	←	←FY	←	←FY	←R	←R	←R
81	R	R	R	R	R	G	R	G	R	R	R
82	R/→	R/→	R	R	R	G	R	G	R	R/→	R
P21,P22	DW	DW	W	W	DW	DW	DW	DW	DW	DW	DRK
P41,P42	DW	DW	DW	DW	DW	DW	W	W	DW	DW	DRK
P61,P62	DW	W	DW	W	DW	DW	DW	DW	DW	DW	DRK
P81,P82	DW	DW	DW	DW	DW	W	DW	W	DW	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



ASC/3 DETECTOR INSTALLATION CHART

ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X40	0	✳	✳	1	Yes	-	15	-	S	-	✳
					6	Yes	-	-	-	S	-	✳
1B	6X40	0	✳	✳	1	Yes	-	15	-	S	-	✳
2A	6X6	70	✳	✳	2	Yes	-	-	-	S	-	✳
2B	6X6	70	✳	✳	2	Yes	-	-	-	S	-	✳
3A	6X40	0	✳	✳	3	Yes	-	15	-	S	-	✳
					8	Yes	-	3	-	S	-	✳
4A	6X40	0	✳	✳	4	Yes	-	10	-	S	-	✳
5A	6X40	0	✳	✳	5	Yes	-	15	-	S	-	✳
					2	Yes	-	-	-	S	-	✳
6A	6X6	70	✳	✳	6	Yes	-	-	-	S	-	✳
6B	6X6	70	✳	✳	6	Yes	-	-	-	S	-	✳
7A	6X40	0	✳	✳	7	Yes	-	15	-	S	-	✳
					4	Yes	-	3	-	S	-	✳
8A	6X40	0	✳	✳	8	Yes	-	-	-	S	-	✳
S17	6x6	+135	✳	✳	-	No	-	-	-	N	X	✳
S18	6x6	+135	✳	✳	-	No	-	-	-	N	X	✳

✳ Video Detection Zone

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 and/or phase 7 may be lagged.
5. Reposition existing signal heads numbered 11, 22, 22, 51, 61, 62 and signs A and B.
6. Set all detector units to presence mode.
7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
8. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
9. This intersection features a GPS Emergency Vehicle Preemption system.
10. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
11. Closed loop system data:
    Controller Asset #: 1349.

ASC/3 EV PREEMPT

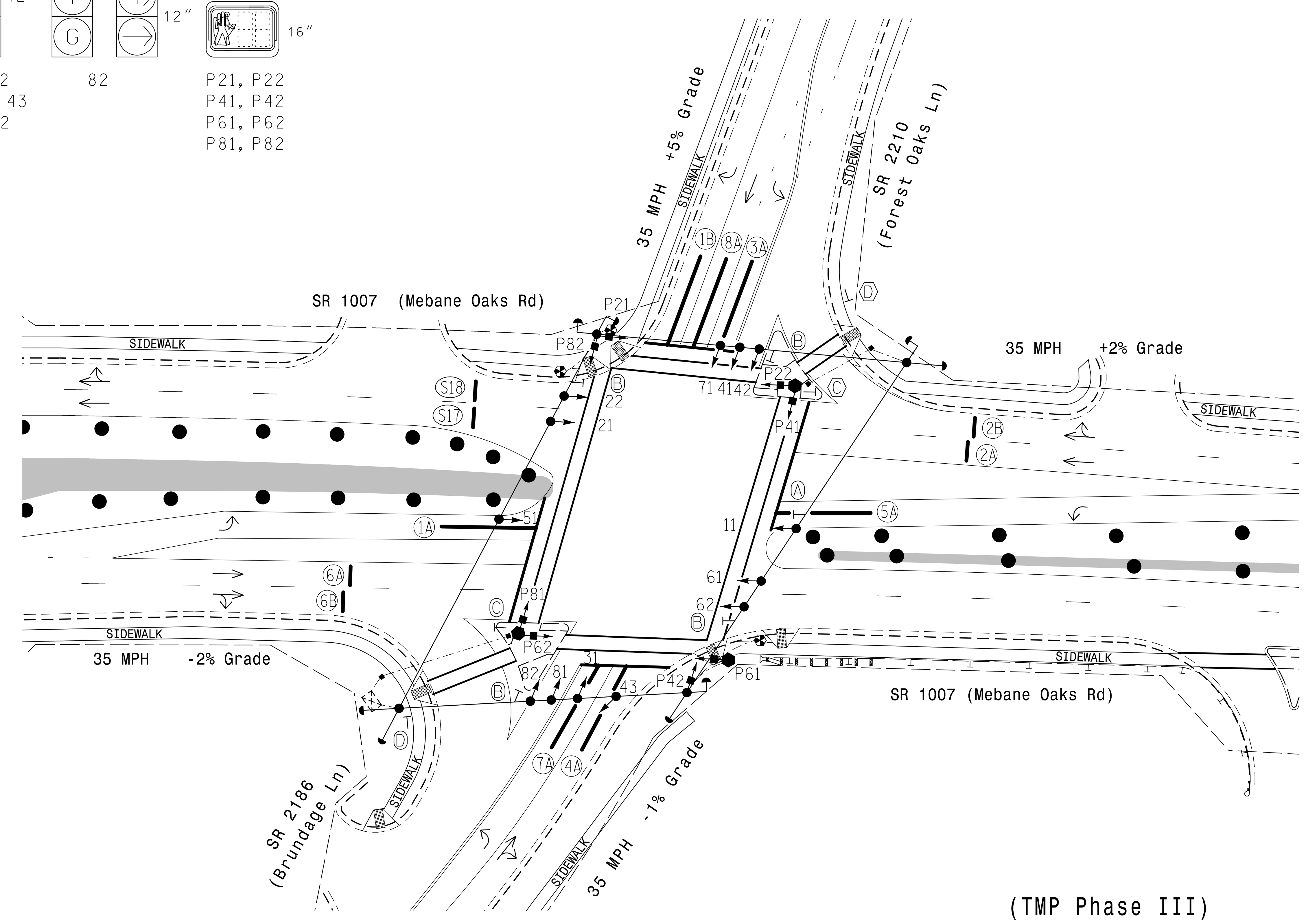
FUNCTION	PRE 3	PRE 5
Exit Phase(s)	2+6	2+6
Preempt Override	OFF	OFF
Delay Time	0	0
Ped Clear Through Yellow	Y	Y
Terminate Phases	N	N
Entrance Walk	1	1
Entrance Ped Clear	14	14
Entrance Min Green	1	1
Entrance Yellow Clear	25.5*	25.5*
Entrance Red Clear	25.5*	25.5*
Min Dwell Time	7	7
Preempt Input Extension Time	2	2
Preempt Max Time	120	120
Exit Yellow Clear	25.5*	25.5*
Exit Red Clear	25.5*	25.5*

* Time defaults to time used for phase during normal operation

ASC/3 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8
Min Green *	7	10	7	7	7	10	7	7
Walk *	0	7	0	4	0	7	0	4
Ped Clear	0	14	0	28	0	14	0	28
Veh. Extension *	2.0	3.0	2.0	2.0	2.0	3.0	2.0	2.0
Max 1 *	20	90	20	30	20	90	20	30
Yellow	3.0	4.0	3.0	3.9	3.0	4.0	3.0	3.9
Red Clear	3.4	2.6	3.2	2.6	3.3	2.6	3.3	2.6
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-	-	-	-	-
Seconds /Actuation *	-	-	-	-	-	-	-	-
Max Initial *	-	-	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-	-	-
Locking Detector	-	X	-	-	-	X	-	-
Recall Position	-	VEH. RECALL	-	-	-	VEH. RECALL	-	-
Dual Entry	-	-	-	X	-	-	-	X
Simultaneous Gap	X	X	X	X	X	X	X	X

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Construction Zone Drums	
	Construction Zone	
	Video Detection Area	
	Type I Pushbutton Post	
	Type II Signal Pedestal	
N/A	Curb Ramp	
N/A	Guardrail	
A	No U Turn Sign (R3-4)	A
B	Right "TURNING VEHICLES" Yield "TO" Pedestrians Sign (R10-15R)	B
C	Pedestrian Warning Sign (W11-2) w/ Diagonal Arrow Plaque (W16-7P)	C
D	"YIELD" Sign (R1-2)	D

(TMP Phase III)
Signal Upgrade - Temporary Design 3

PREPARED IN THE OFFICE OF:
Accelerate Engineering, PLLC
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Cary, NC 27511
Tel: 919.263.5678 Fax: 919.263.5687
NC License No. P-1442

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Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 1007 (Mebane Oaks Road)
at
SR 2186 (Brundage Lane) /
SR 2210 (Forest Oaks Lane)

Division 7 Alamance County Mebane

PLAN DATE: November 2019	REVIEWED BY: Z. "Gavin" Teng
PREPARED BY: Z. "Gavin" Teng	REVIEWED BY:

SCALE 0 40 — 1" = 40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032179 ENGINEER ZHAOLONG TENG

DocuSigned by: Zhaolong Teng 12/17/2019
DATE

SIG. INVENTORY NO. 07-1349T3

$$$$SYSTIME$$$$ $$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$ $$$$USERNAME$$$$