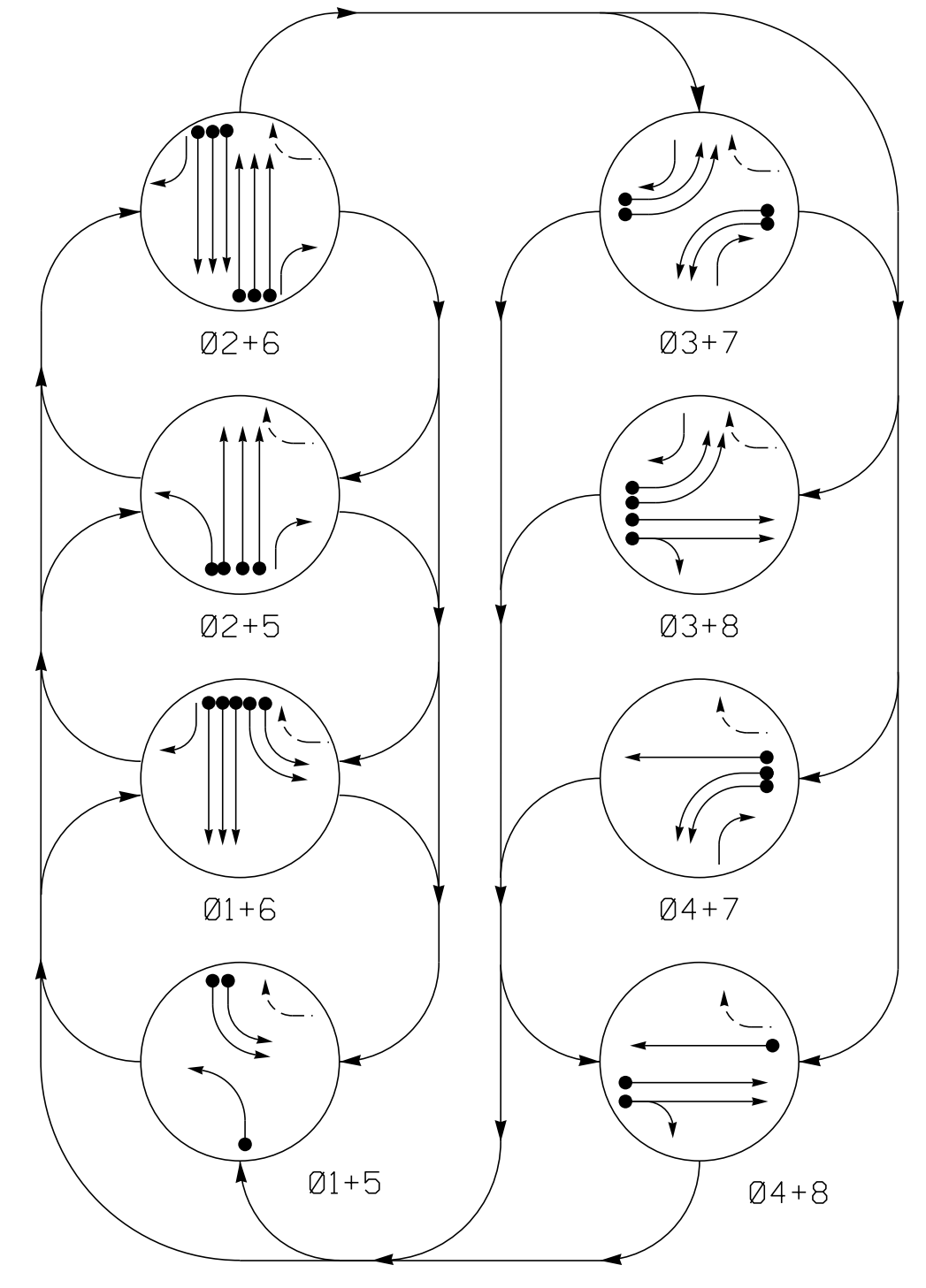


**PHASING DIAGRAM**



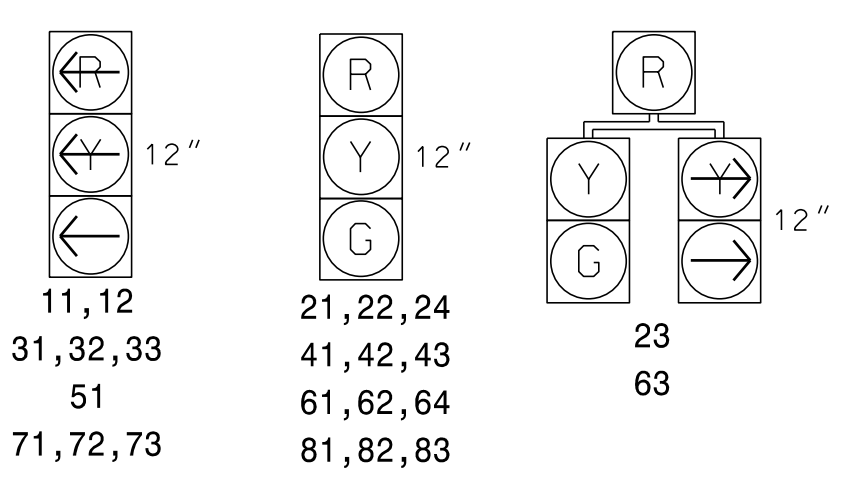
**PHASING DIAGRAM DETECTION LEGEND**

- ←●→ DETECTED MOVEMENT
- ←○→ UNDETECTED MOVEMENT (OVERLAP)
- ←○→ UNSIGNALIZED MOVEMENT
- ←○→ PEDESTRIAN MOVEMENT

**TABLE OF OPERATION**

SIGNAL FACE	PHASE							
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8
11,12	←	←	←	←	←	←	←	←
21,22,24	R	R	G	G	R	R	R	Y
23	R	R	G	G	R	R	R	Y
31,32,33	←	←	←	←	←	←	←	←
41,42,43	R	R	R	R	R	R	G	G
51	←	←	←	←	←	←	←	←
61,62,64	R	G	R	G	R	R	R	Y
63	R	G	R	G	R	R	R	Y
71,72,73	←	←	←	←	←	←	←	←
81,82,83	R	R	R	R	R	G	R	G

**SIGNAL FACE I.D.**  
All Heads L.E.D.



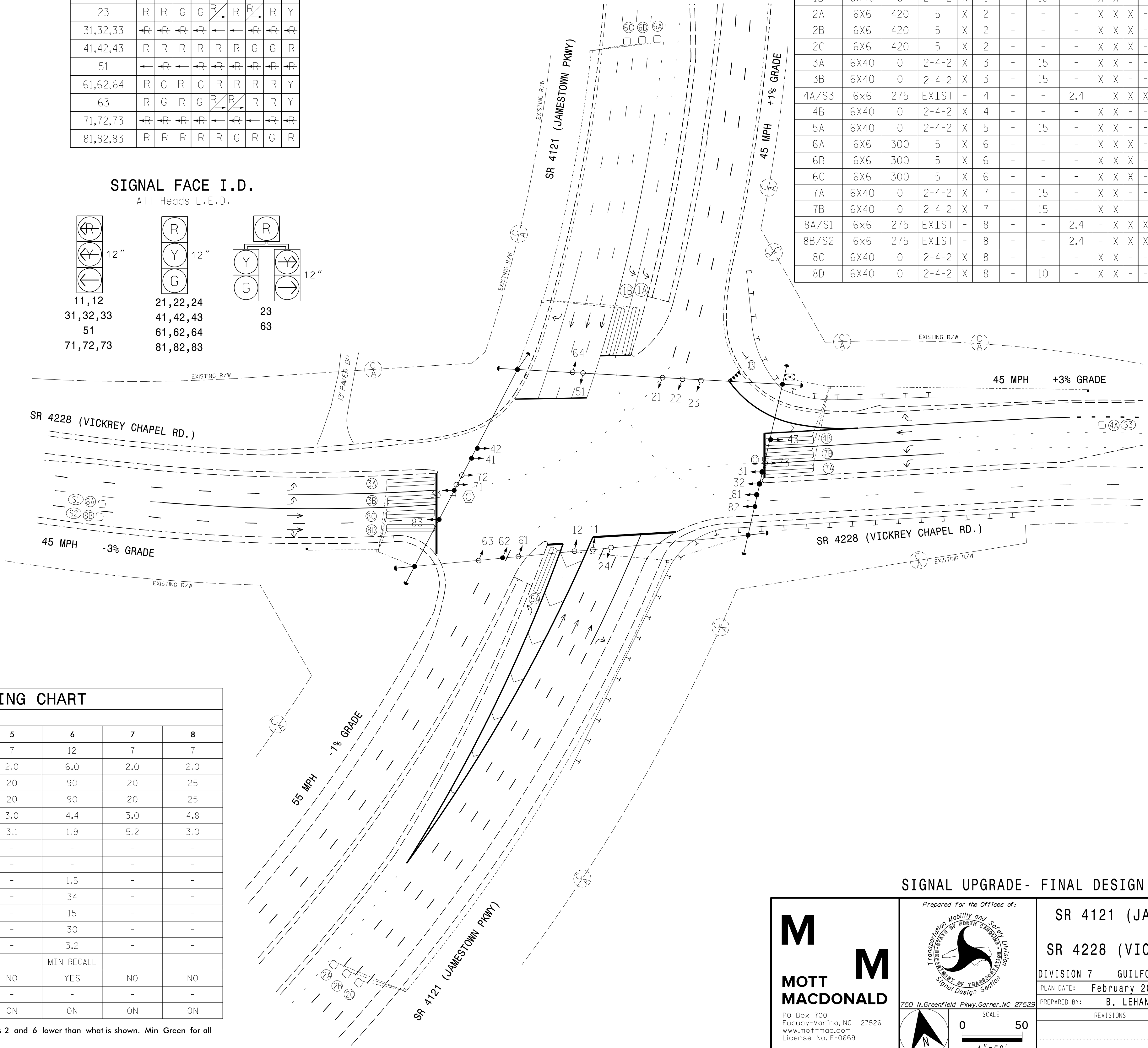
**LOOP & DETECTOR UNIT INSTALLATION CHART**  
NAZTEC APOGEE SOFTWARE 2070 CONTROLLER

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING							
					PHASE	SWITCH (PHASE)	DELAY TIME	STRETCH TIME	CALLING EXTENSION	ADDED INIT.	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	X	1	-	15	-	X	X	-	X
1B	6X40	0	2-4-2	X	1	-	15	-	X	X	-	X
2A	6X6	420	5	X	2	-	-	-	X	X	-	X
2B	6X6	420	5	X	2	-	-	-	X	X	-	X
2C	6X6	420	5	X	2	-	-	-	X	X	-	X
3A	6X40	0	2-4-2	X	3	-	15	-	X	X	-	X
3B	6X40	0	2-4-2	X	3	-	15	-	X	X	-	X
4A/S3	6x6	275	EXIST	-	4	-	-	2.4	-	X	X	X
4B	6X40	0	2-4-2	X	4	-	-	-	X	X	-	X
5A	6X40	0	2-4-2	X	5	-	15	-	X	X	-	X
6A	6X6	300	5	X	6	-	-	-	X	X	-	X
6B	6X6	300	5	X	6	-	-	-	X	X	-	X
6C	6X6	300	5	X	6	-	-	-	X	X	-	X
7A	6X40	0	2-4-2	X	7	-	15	-	X	X	-	X
7B	6X40	0	2-4-2	X	7	-	15	-	X	X	-	X
8A/S1	6x6	275	EXIST	-	8	-	-	2.4	-	X	X	X
8B/S2	6x6	275	EXIST	-	8	-	-	2.4	-	X	X	X
8C	6X40	0	2-4-2	X	8	-	-	-	X	X	-	X
8D	6X40	0	2-4-2	X	8	-	10	-	X	X	-	X

**8 PHASE Fully Actuated (GREENSBORO SIGNAL SYSTEM)**

**NOTES**

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or 5 may be lagged.
- Phase 3 and/or 7 may be lagged.
- Set all detector units to presence mode.
- Renumber existing signal phases, loops, and signal heads as shown.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



**NAZTEC APOGEE 2070 TIMING CHART**

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green *	7	12	7	7	7	12	7	7
Gap, Extension *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Maximum Green 1 *	20	90	20	25	20	90	20	25
Maximum Green 2 *	20	90	20	25	20	90	20	25
Yellow Clear	3.0	5.3	3.0	4.3	3.0	4.4	3.0	4.8
Red Clear	3.7	1.2	4.7	3.3	3.1	1.9	5.2	3.0
Walk *	-	-	-	-	-	-	-	-
Pedestrian Clear	-	-	-	-	-	-	-	-
Added Initial *	-	1.5	-	-	-	1.5	-	-
Maximum Initial *	-	46	-	-	-	34	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	3.2	-	-	-	3.2	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Lock Calls	NO	YES	NO	NO	NO	YES	NO	NO
Dual Entry	-	-	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	ON

\* 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	●→ N/A
●→ Modified Signal Head	○→ N/A
⊥ Sign	⊥ Sign
⊥ Pedestrian Signal Head With Push Button & Sign	⊥ Sign
⊥ Signal Pole with Guy	⊥ Sign
⊥ Signal Pole with Sidewalk Guy	⊥ Sign
⊠ Inductive Loop Detector	⊠ Inductive Loop Detector
⊠ Controller & Cabinet	⊠ Junction Box
□ Junction Box	□ Junction Box
--- 2-in Underground Conduit	--- 2-in Underground Conduit
N/A Right of Way	--- Right of Way
→ Directional Arrow	→ Directional Arrow
N/A Guardrail	--- Guardrail
Ⓐ Left Arrow "ONLY" Sign (R3-5L)	Ⓐ Left Arrow "ONLY" Sign (R3-5L)
Ⓑ "YIELD" Sign (R1-2)	Ⓑ "YIELD" Sign (R1-2)
Ⓒ "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓒ "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)

**SIGNAL UPGRADE- FINAL DESIGN**

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Prepared for the Offices of:

TRANSPORTATION MOBILITY AND SAFETY DIVISION  
STATE OF NORTH CAROLINA  
Signal Design Section

**SR 4121 (JAMESTOWN PARKWAY)  
AT  
SR 4228 (VICKREY CHAPEL ROAD)**

DIVISION 7 GUILFORD COUNTY HIGH POINT

PLAN DATE: February 2018 REVIEWED BY: R. Thompson

PREPARED BY: B. LEHAN REVIEWED BY:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL  
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3/21/2018