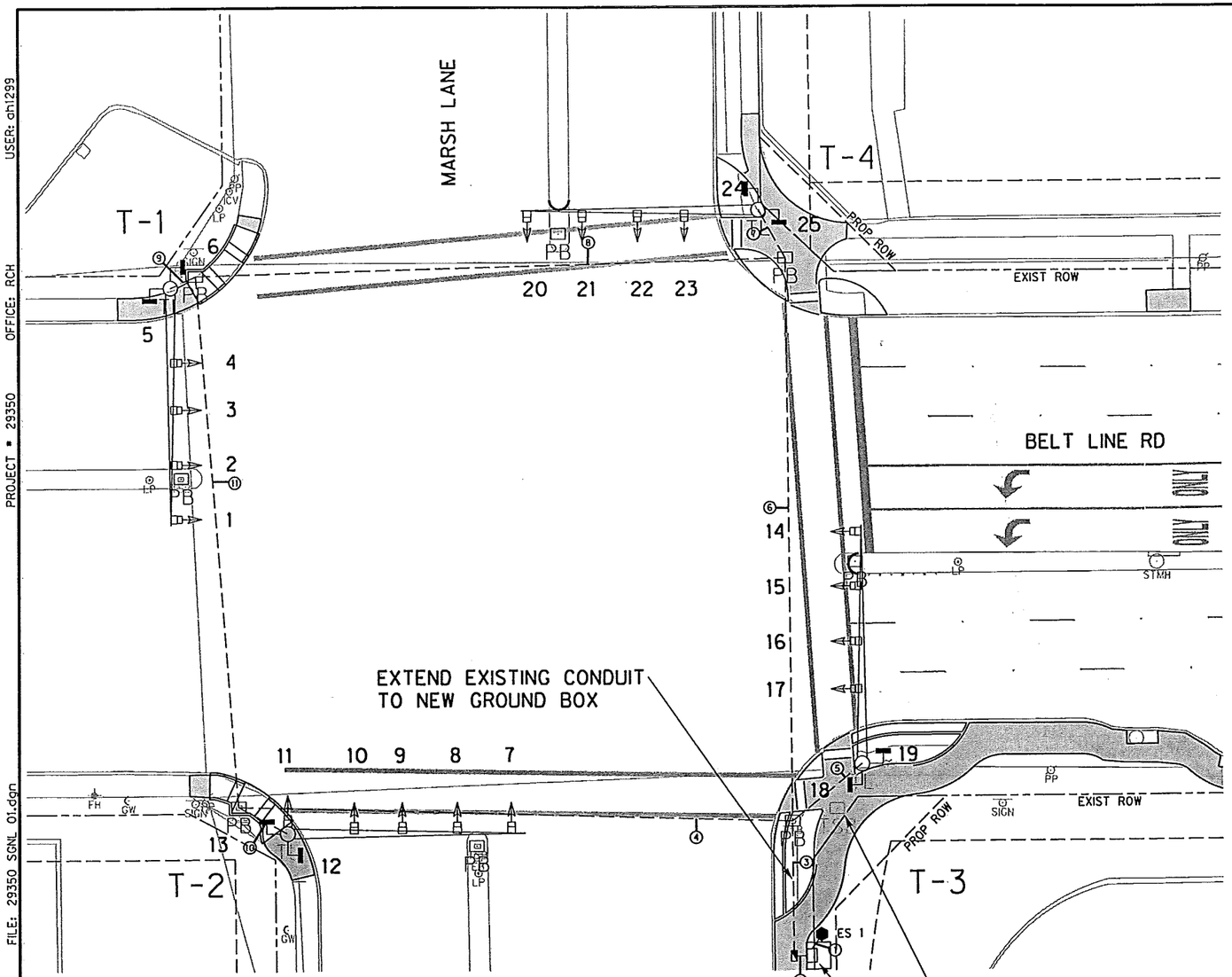


0 15 30 45
SCALE IN FEET

N

LEGEND OF SYMBOLS	
	VIDEO DETECTION ZONES
	SIGNAL POLE/MAST ARM SET UP
2	SIGNAL HEAD NUMBERS
	CONTROLLER CABINET
	GROUND BOX TYPE D (LG)
	GROUND BOX TYPE E (SM)
	LUMINAIRE
*2	PHASE NUMBERS
T-2	POLE NUMBERS
(22)	CONDUIT RUN NUMBERS
R.O.W.	RIGHT OF WAY LINES
	VIVDS CAMERA
	ELECTRICAL SERVICE
	OPTICOM
	MAST ARM MOUNTED SIGN
	WIRELESS ETHERNET SUBSCRIBER

NOTES:

1) RELOCATE EXISTING SIGNAL CONTROLLER AND ELECTRICAL SERVICE AS SHOWN.
2) EXTEND EXISTING CONDUIT FROM EXISTING GROUND BOX ON SOUTHEAST CORNER OF INTERSECTION TO NEW GROUND BOX IN FRONT OF CABINET.
3) LOCATION OF CONDUIT IS APPROXIMATE BASED ON LOCATION OF EXISTING GROUND BOXES
4) EXISTING POLES, MAST ARMS, AND SIGNAL HEADS TO REMAIN. NEW CABLE TO EXISTING SIGNAL HEADS BE INSTALLED IN SIGNAL POLES AND MAST ARMS.
5) SPLICING OF SIGNAL CABLE, VIVDS CABLE, AND ELECTRICAL CABLE IS NOT PERMITTED. INSTALL NEW CABLE TO ALL EXISTING POLES AND EQUIPMENT.

ELECTRICAL SERVICE DATA

ELECTRICAL SERVICE DESCRIPTION SEE ED(4)	SERVICE CONDUIT SIZE (RMC)	SERVICE CONDUCTORS NO. / SIZE	MAIN CIRCUIT BREAKER POLE / AMP	TWO-POLE CONTACTOR AMPS	PANELBD / LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	BRANCH CKT. BRK. POLE / AMPS	KVA LOAD
TY D (120/240) 70 (NS) SS (E) PS (U)	2"	3 / #6	2P / 100	30	100	T.S. ILSN	1P / 50 2P / 20	< 7.1

•ONCOR WILL CONNECT ELECTRICAL SERVICE TO ELECTRICAL SUPPLY. CONTRACTOR RESPONSIBLE TO CONNECT SIGNAL CONTROLLER TO SERVICE

S.P. BOOTH 84903 LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS

S. P. Booth, P.E. 3/21/2014
Signature of Registrant Date

NO.	REVISION	BY	DATE

TOWN OF ADDISON
DALLAS COUNTY, TEXAS

BELT LINE ROAD
UNDERGROUND ELECTRICAL

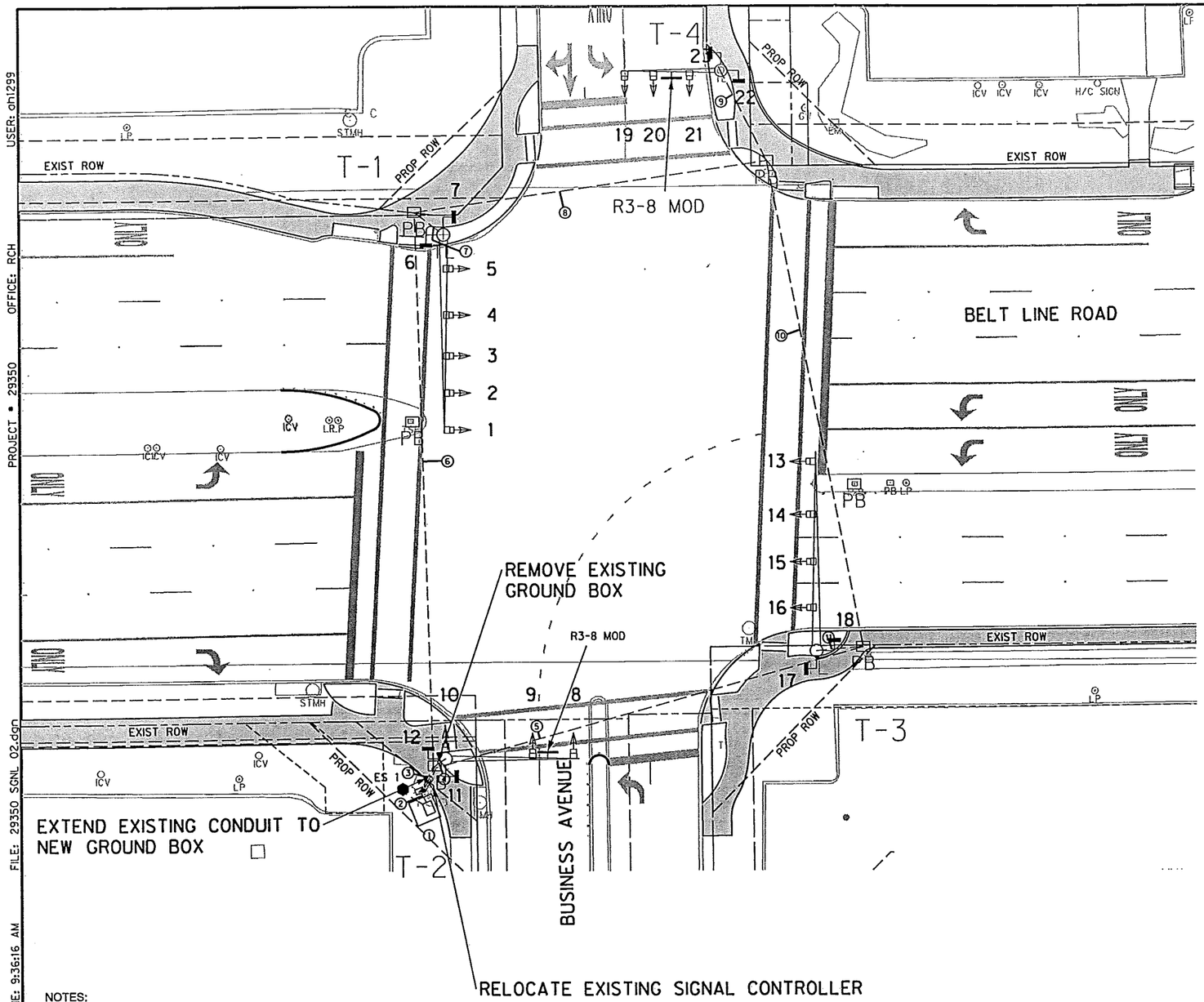
PROPOSED TRAFFIC SIGNAL LAYOUT
BELT LINE RD AT MARSH LANE

HALFF
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
29350	HALFF	HALFF	MAR. 2014	29350 SGNL 01	TS-1

SHEET 114 OF 235

USER: dh1299
OFFICE: RCH
PROJECT # 29350
FILE: 29350 SGNL 01.dgn
TIME: 9:35:56 AM
DATE: 3/24/2014



0 15 30 45
SCALE IN FEET

N

R3-8 MOD
30" X 30"

LEGEND OF SYMBOLS	
	VIDEO DETECTION ZONES
	SIGNAL POLE/MAST ARM SET UP
2	SIGNAL HEAD NUMBERS
	CONTROLLER CABINET
	GROUND BOX TYPE D (LG)
	GROUND BOX TYPE E (SM)
	LUMINAIRE
Ø2	PHASE NUMBERS
T-2	POLE NUMBERS
	CONDUIT RUN NUMBERS
R.O.W.	RIGHT OF WAY LINES
	VIVDS CAMERA
	ELECTRICAL SERVICE
	OPTICOM
	MAST ARM MOUNTED SIGN
	WIRELESS ETHERNET SUBSCRIBER

NOTES:

1) RELOCATE EXISTING SIGNAL CONTROLLER AND ELECTRICAL SERVICE AS SHOWN.
2) EXTEND EXISTING CONDUIT FROM EXISTING GROUND BOX ON SOUTHEAST CORNER OF INTERSECTION TO NEW GROUND BOX IN FRONT OF CABINET.
3) LOCATION OF CONDUIT IS APPROXIMATE BASED ON LOCATION OF EXISTING GROUND BOXES
4) EXISTING POLES, MAST ARMS, AND SIGNAL HEADS TO REMAIN. NEW CABLE TO EXISTING SIGNAL HEADS BE INSTALLED IN SIGNAL POLES AND MAST ARMS.
5) SPLICING OF SIGNAL CABLE, VIVDS CABLE, AND ELECTRICAL CABLE IS NOT PERMITTED. INSTALL NEW CABLE TO ALL EXISTING POLES AND EQUIPMENT.

NOTES:

1) RELOCATE EXISTING SIGNAL CONTROLLER AS SHOWN.
2) EXTEND EXISTING CONDUIT FROM EXISTING GROUND BOX (TO BE REMOVED) ON SOUTHWEST CORNER OF INTERSECTION TO NEW GROUND BOX ADJACENT TO CABINET.
3) EXISTING POLES, MAST ARMS, AND SIGNAL HEADS TO REMAIN. NEW CABLE TO EXISTING SIGNAL HEADS BE INSTALLED IN SIGNAL POLES AND MAST ARMS.
4) SPLICING OF SIGNAL CABLE, VIVDS CABLE, AND ELECTRICAL CABLE IS NOT PERMITTED. INSTALL NEW CABLE TO ALL EXISTING POLES AND EQUIPMENT.

ELECTRICAL SERVICE DATA

ELECTRICAL SERVICE DESCRIPTION SEE ED(4)	SERVICE CONDUIT SIZE (RMC)	SERVICE CONDUCTORS NO. / SIZE	MAIN CIRCUIT BREAKER POLE / AMP	TWO-POLE CONTACTOR AMPS	PANELBD/ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	BRANCH CKT. BRK. POLE / AMPS	KVA LOAD
TY D (120/240) 70 (NS) SS (E) PS (U)	2"	3 / #6	2P / 100	30	100	T.S. ILSN	1P / 50 2P / 20	< 7.1

•ONCOR WILL CONNECT ELECTRICAL SERVICE TO ELECTRICAL SUPPLY. CONTRACTOR RESPONSIBLE TO CONNECT SIGNAL CONTROLLER TO SERVICE

S.P. BOOTH 94903 LICENSED PROFESSIONAL ENGINEER

S.P. Booth, P.E. 3/21/2014
Signature of Registrant Date

NO.	REVISION	BY	DATE

TOWN OF ADDISON
DALLAS COUNTY, TEXAS

BELT LINE ROAD
UNDERGROUND ELECTRICAL

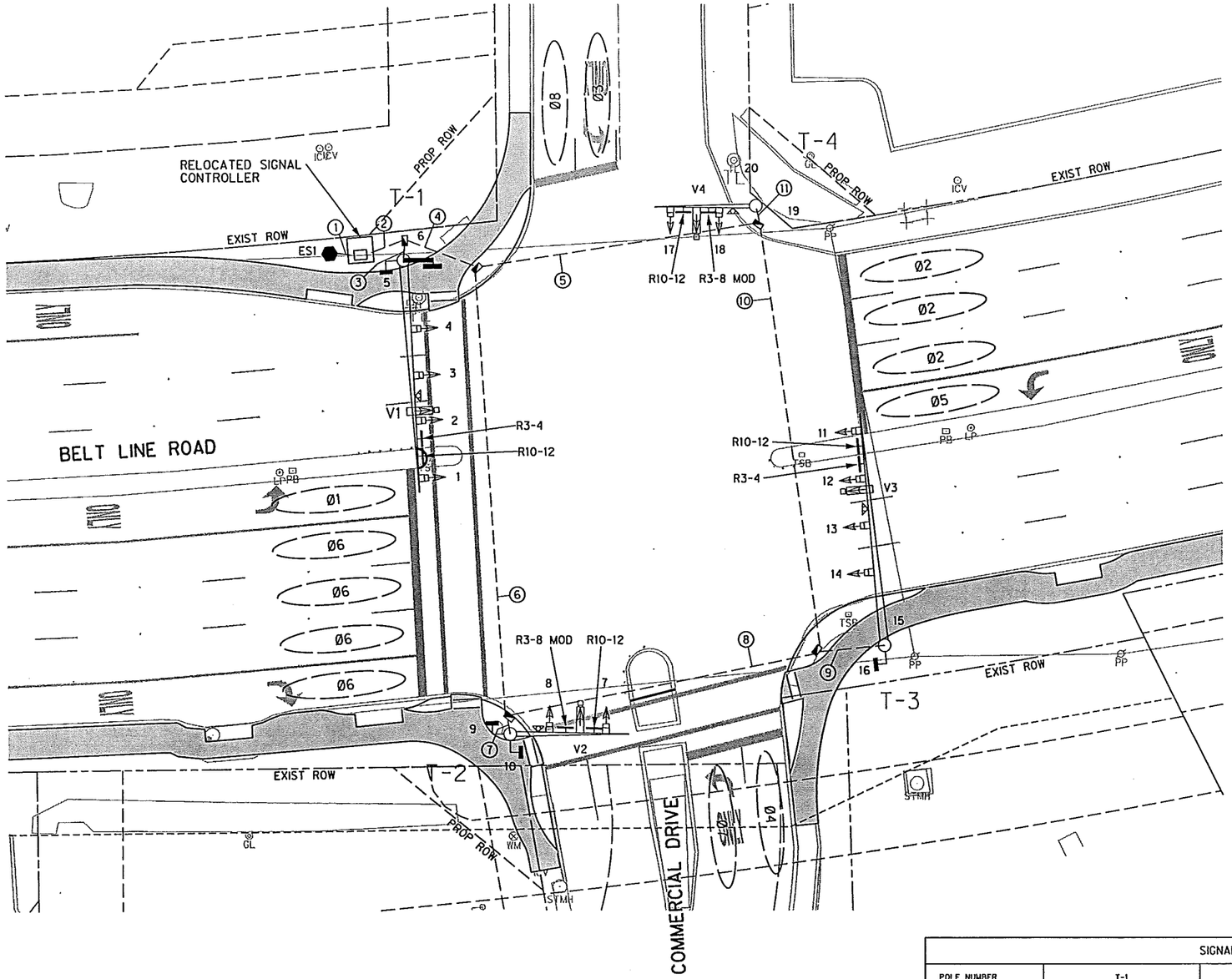
PROPOSED TRAFFIC SIGNAL LAYOUT
BELT LINE RD AT BUSINESS AVENUE

HALFF
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
29350	HALFF	HALFF	MAR. 2014	29350 SGNL 02	TS-2

SHEET 115 OF 235

USER: ah1299
OFFICE: RCH
PROJECT # 29350
FILE: 29350 SGNL 02.dgn
TIME: 9:36:16 AM
DATE: 3/24/2014



0 15 30 45
SCALE IN FEET

N

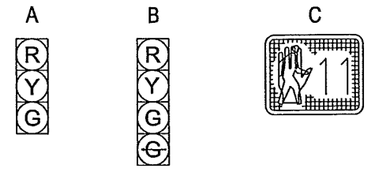
LEGEND OF SYMBOLS	
	VIDEO DETECTION ZONES
	SIGNAL POLE/MAST ARM SET UP
2	SIGNAL HEAD NUMBERS
	CONTROLLER CABINET
	GROUND BOX TYPE D (LG)
	GROUND BOX TYPE E (SM)
	LUMINAIRE
Ø2	PHASE NUMBERS
T-2	POLE NUMBERS
(22)	CONDUIT RUN NUMBERS
R.O.W.	RIGHT OF WAY LINES
	VIVDS CAMERA
	ELECTRICAL SERVICE
	OPTICOM
	MAST ARM MOUNTED SIGN
	WIRELESS ETHERNET SUBSCRIBER

R3-8 MOD
30" X 30"

R3-4
24" X 24"

R10-12
24" X 30"

SIGNAL HEAD TYPES



PED
V3 V4LT* (WITH COUNTDOWN)

*WITH BI-MODAL YELLOW AND GREEN ARROWS.

ELECTRICAL SERVICE DATA

ELECTRICAL SERVICE DESCRIPTION SEE ED(1)	SERVICE CONDUIT SIZE (RMC)	SERVICE CONDUCTORS NO. / SIZE	MAIN CIRCUIT BREAKER, POLE / AMP	TWO-POLE CONTACTOR AMPS	PANELBD / LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	BRANCH CKT, BRK. POLE / AMPS	KVA LOAD
TY D (120/240) 70 (NS) SS (E) PS (U)	2"	3 / #6	2P / 70	30	100	T.S. ILSN	1P / 50 2P / 20	< 7.1

*ONCOR WILL CONNECT ELECTRICAL SERVICE TO ELECTRICAL SUPPLY. CONTRACTOR RESPONSIBLE TO CONNECT SIGNAL CONTROLLER TO SERVICE

NOTES:

1) EXISTING SIGNAL CONTROLLER TO BE RELOCATED AS SHOWN. SALVAGE EXISTING SIGNAL EQUIPMENT AND RETURN TO TOWN OF ADDISON.
2) ALL POLES AND MAST ARMS TO BE POWDER COAT SILVER TO MATCH BELT LINE STREET LIGHTS.
3) ALL MAST ARM MOUNTED SIGNS SHALL HAVE HIGH INTENSITY PRISMATIC (HIP) SHEETING.
4) RELOCATE EXISTING STREET NAME SIGNS TO NEW POLES/MAST ARMS.
5) FURNISH AND INSTALL A 10' POLE EXTENSION ON T-1 SIGNAL ARM. CONTRACTOR TO INSTALL TOWN SUPPLIED WIRELESS ETHERNET SUBSCRIBER ON THE POLE EXTENSION. CONTRACTOR TO MOUNT WIRELESS RADIO AND SHALL AIM THE ETHERNET SUBSCRIBER UNIT AS DIRECTED BY THE TOWN ENGINEER.
6) CONTRACTOR SHALL FURNISH AND INSTALL THE VIDEO SERVER AND HARDENED ETHERNET SWITCH INSIDE THE TRAFFIC SIGNAL CONTROLLER CABINET.
7) THE VIDEO SERVER SHALL BE INSTALLED BETWEEN THE VIVDS PROCESSOR AND THE HARDENED ETHERNET SWITCH (POLE T-1).
8) REMOVE ALL EXISTING FIELD WIRING AFTER NEW SIGNALS ARE PUT INTO SERVICE.
9) ALL EXISTING PULL BOXES TO TO BE REMOVED AND ABANDONED CONDUIT TO BE CUT AND CAPPED. SALVAGED PULL BOXES TO BE RETURNED TO TOWN OF ADDISON.

SIGNAL POLE CHART

POLE NUMBER	T-1						T-2				T-3						T-4			
MAST ARM LENGTH	55'						28'				55'						24'			
FOUNDATION TYPE	48-A						30-A				48-A						30-A			
WITH LUMINAIRES	NO						NO				NO						NO			
MAST ARM SIGNS	R3-4, R10-12						R10-12				R3-4, R10-12						R10-12			
SIZE OF LENS	12"																			
SIGNAL TYPE	B	A	A	A	C	C	B	A	C	C	B	A	A	A	C	C	B	A	C	C
SIGNAL FACE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
LED SIGNAL INDICATIONS	R	R	R	R	DW	DW	R	R	DW	DW	R	R	R	R	DW	DW	R	R	DW	DW
	Y	Y	Y	Y	W	W	Y	Y	W	W	Y	Y	Y	Y	W	W	Y	Y	W	W
	G	G	G	G			G	G			G	G	G	G			G	G		
	~~GY~~						~~GY~~				~~GY~~						~~GY~~			

ALL SIGNAL HEADS SHALL HAVE BLACK PLASTIC BACK PLATES.
LEFT-TURN INDICATIONS WILL CONSIST OF 4 SECTION HEADS WITH BI-MODAL YELLOW AND GREEN ARROWS.
ALL MAST ARMS WILL HAVE LED ILLUMINATED STREET NAME SIGNS.

STATE OF TEXAS
S.P. BOOTH
94903
LICENSED
PROFESSIONAL ENGINEER

S. P. Booth ,P.E. 3/21/2014
Signature of Registrant Date

NO.	REVISION	BY	DATE

Addison TOWN OF ADDISON
DALLAS COUNTY, TEXAS

BELT LINE ROAD
UNDERGROUND ELECTRICAL

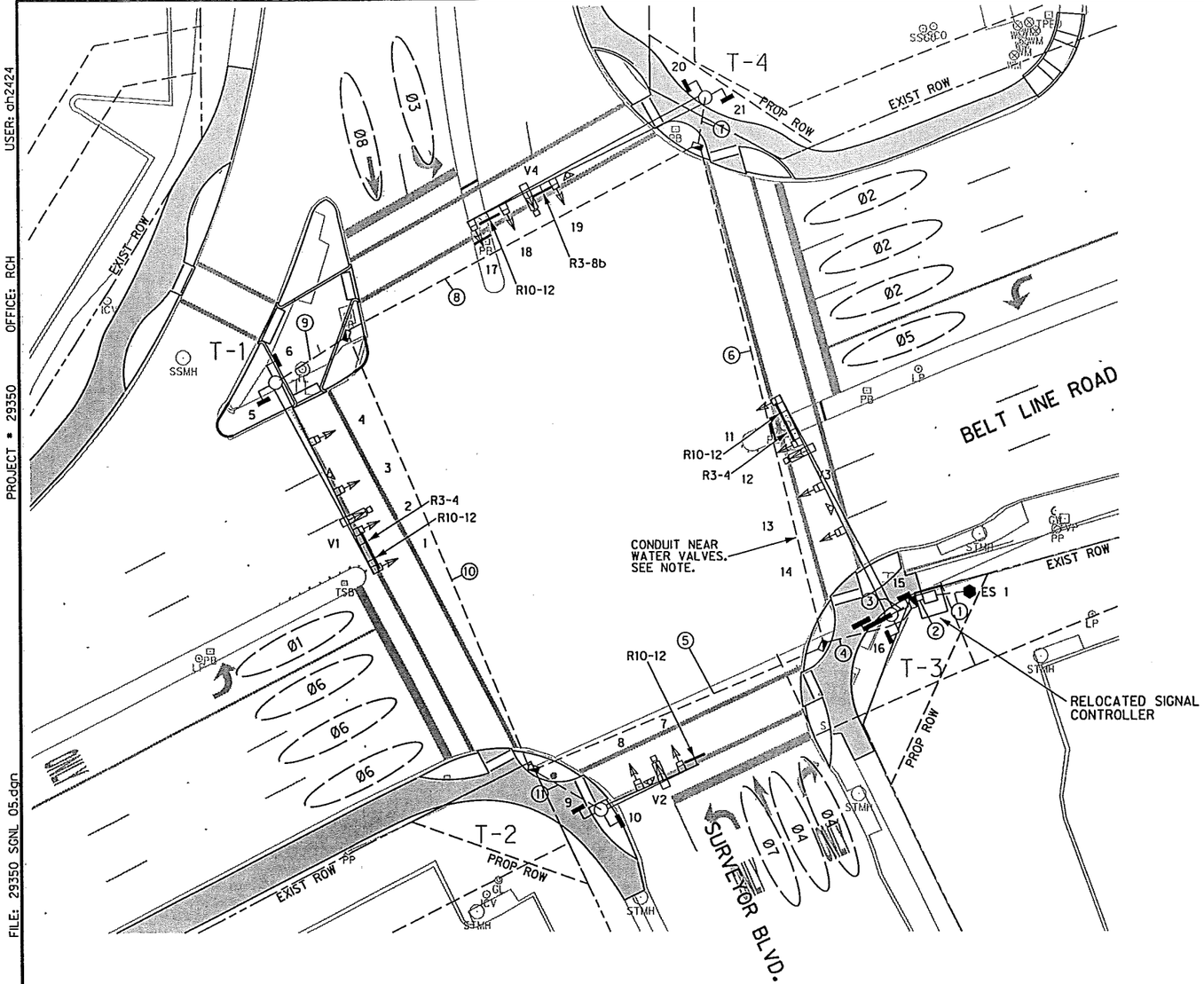
PROPOSED TRAFFIC SIGNAL LAYOUT
BELT LINE RD AT COMMERCIAL DR

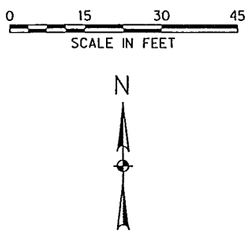
HALFF
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
29350	HALFF	HALFF	MAR. 2014	29350 SGNL 03	TS-3

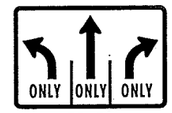
SHEET 116 OF 235

USER: ch2424
OFFICE: RCH
PROJECT # 29350
FILE: 29350 SGNL 03.dgn
TIME: 9:57:16 AM
DATE: 3/24/2014





LEGEND OF SYMBOLS	
	VIDEO DETECTION ZONES
	SIGNAL POLE/MAST ARM SET UP
2	SIGNAL HEAD NUMBERS
	CONTROLLER CABINET
	GROUND BOX TYPE D (LG)
	GROUND BOX TYPE E (SM)
	LUMINAIRE
Ø2	PHASE NUMBERS
T-2	POLE NUMBERS
22	CONDUIT RUN NUMBERS
R.O.W.	RIGHT OF WAY LINES
	VIVDS CAMERA
	ELECTRICAL SERVICE
	OPTICOM
	MAST ARM MOUNTED SIGN
	WIRELESS ETHERNET SUBSCRIBER

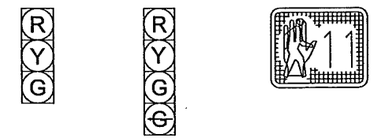


R3-8b
36" X 24"

R3-4
24" X 24"

R10-12
24" X 30"

SIGNAL HEAD TYPES



V3 V4LT* PED (WITH COUNTDOWN)

*WITH BI-MODAL YELLOW AND GREEN ARROWS.

ELECTRICAL SERVICE DATA

ELECTRICAL SERVICE DESCRIPTION SEE ED(4)	SERVICE CONDUIT SIZE (RMC)	SERVICE CONDUCTORS NO./ SIZE	MAIN CIRCUIT BREAKER POLE / AMP	TWO-POLE CONTACTOR AMP'S	PANELBD/ LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	BRANCH CKT. BRK. POLE / AMP'S	KVA LOAD
TY D (120/240) 70 (NS) SS (E) PS (U)	2"	3 / #6	2P / 100	30	100	T.S. ILSN	1P / 50 2P / 20	< 7.1

*ONCOR WILL CONNECT ELECTRICAL SERVICE TO ELECTRICAL SUPPLY. CONTRACTOR RESPONSIBLE TO CONNECT SIGNAL CONTROLLER TO SERVICE

NOTES:

1) EXISTING SIGNAL CONTROLLER TO BE RELOCATED AS SHOWN. SALVAGE EXISTING SIGNAL EQUIPMENT AND RETURN TO TOWN OF ADDISON.
2) ALL POLES AND MAST ARMS TO BE POWDER COAT SILVER TO MATCH BELT LINE STREET LIGHTS.
3) ALL MAST ARM MOUNTED SIGNS SHALL HAVE HIGH INTENSITY PRISMATIC (HIP) SHEETING.
4) RELOCATE EXISTING STREET NAME SIGNS TO NEW POLES/MAST ARMS.
5) FURNISH AND INSTALL A 10' POLE EXTENSION ON T-3 SIGNAL ARM. CONTRACTOR TO INSTALL TOWN SUPPLIED WIRELESS ETHERNET SUBSCRIBER ON THE POLE EXTENSION. CONTRACTOR TO MOUNT WIRELESS RADIO AND SHALL AIM THE ETHERNET SUBSCRIBER UNIT AS DIRECTED BY THE TOWN ENGINEER.
6) CONTRACTOR SHALL FURNISH AND INSTALL THE VIDEO SERVER AND HARDENED ETHERNET SWITCH INSIDE THE TRAFFIC SIGNAL CONTROLLER CABINET.
7) THE VIDEO SERVER SHALL BE INSTALLED BETWEEN THE VIVDS PROCESSOR AND HARDENED ETHERNET SWITCH (POLE T-3).
8) REMOVE ALL EXISTING FIELD WIRING AFTER NEW SIGNALS ARE PUT INTO SERVICE.
9) ALL EXISTING PULL BOXES TO TO BE REMOVED AND ABANDONED CONDUIT TO BE CUT AND CAPPED. SALVAGED PULL BOXES TO BE RETURNED TO TOWN OF ADDISON.
10) COORDINATE SEQUENCING OF INSTALL OF SIGNAL CONDUITS WITH INSTALL OF WATER VALVES.

SIGNAL POLE CHART

POLE NUMBER	T-1						T-2				T-3						T-4				
MAST ARM LENGTH	48'						24'				55'						60'				
FOUNDATION TYPE	36-A						30-A				48-A						48-A				
WITH LUMINAIRES	NO						NO				NO						NO				
MAST ARM SIGNS	R10-12, R3-4						R10-12				R10-12, R3-4						R10-12, R3-8b				
SIZE OF LENS	12"																				
SIGNAL TYPE	B	A	A	A	C	C	B	A	C	C	B	A	A	A	C	C	B	A	A	C	C
SIGNAL FACE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
LED SIGNAL INDICATIONS	R	R	R	R	DW	DW	R	R	DW	DW	R	R	R	R	DW	DW	R	R	R	DW	DW
	Y	Y	Y	Y	W	W	Y	Y	W	W	Y	Y	Y	Y	W	W	Y	Y	Y	W	W
	G	G	G	G			G	G			G	G	G	G			G	G	G		
	~~GY~~						~~GY~~				~~GY~~						~~GY~~				

ALL SIGNAL HEADS SHALL HAVE BLACK PLASTIC BACK PLATES.
LEFT-TURN INDICATIONS WILL CONSIST OF 4 SECTION HEADS WITH BI-MODAL YELLOW AND GREEN ARROWS.
ALL MAST ARMS WILL HAVE LED ILLUMINATED STREET NAME SIGNS.

STATE OF TEXAS
S.P. BOOTH
94903
LICENSED
PROFESSIONAL ENGINEER

S. P. Booth P.E. 3/21/2014
Signature of Registrant Date

NO.	REVISION	BY	DATE

Addison TOWN OF ADDISON
DALLAS COUNTY, TEXAS

BELT LINE ROAD
UNDERGROUND ELECTRICAL

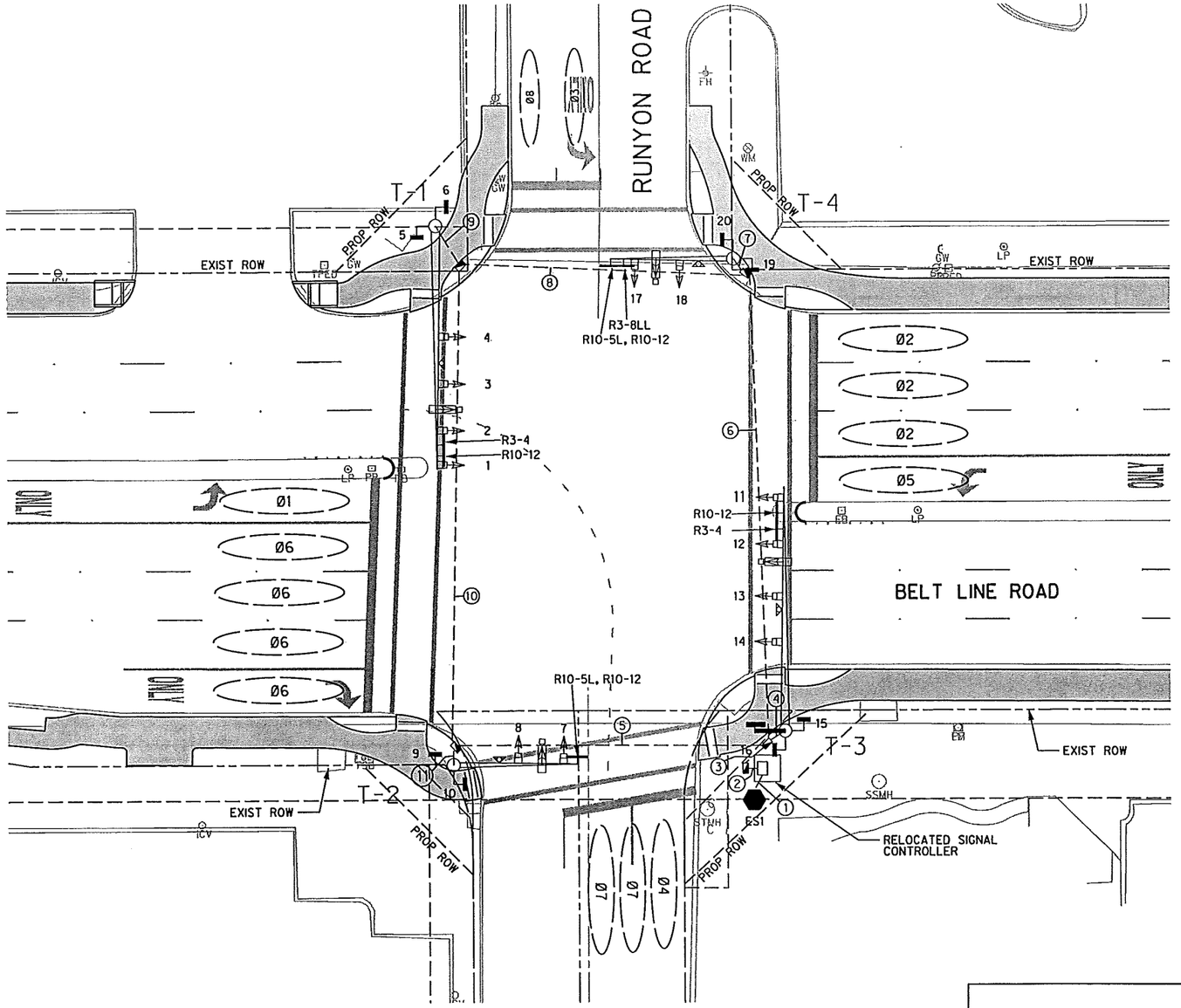
PROPOSED TRAFFIC SIGNAL LAYOUT
BELT LINE RD AT SURVEYOR BLVD

HALFF 1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275 TEL (214) 346-6200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
29350	HALFF	HALFF	MAR. 2014	29350 SGNL 05	TS-5

SHEET 118 OF 235

USER: oh2424 OFFICE: RCH PROJECT • 29350 FILE: 29350 SGNL 05.dgn TIME: 9:58:37 AM DATE: 3/24/2014



0 15 30 45
SCALE IN FEET

N

LEGEND OF SYMBOLS	
	VIDEO DETECTION ZONES
	SIGNAL POLE/MAST ARM SET UP
2	SIGNAL HEAD NUMBERS
	CONTROLLER CABINET
	GROUND BOX TYPE D (LG)
	GROUND BOX TYPE E (SM)
	LUMINAIRE
Ø2	PHASE NUMBERS
T-2	POLE NUMBERS
(22)	CONDUIT RUN NUMBERS
R.O.W.	RIGHT OF WAY LINES
	VIVDS CAMERA
	ELECTRICAL SERVICE
	OPTICOM
	MAST ARM MOUNTED SIGN
	WIRELESS ETHERNET SUBSCRIBER

R3-8LL
24" X 24"


R3-4
24" X 24"

R10-12
24" X 30"

SIGNAL HEAD TYPES

PED
V3 V4LT* (WITH COUNTDOWN)

*WITH BI-MODAL YELLOW AND GREEN ARROWS.

ELECTRICAL SERVICE DATA

ELECTRICAL SERVICE DESCRIPTION SEE ED(4)	SERVICE CONDUIT SIZE (RMC)	SERVICE CONDUCTORS NO. / SIZE	MAIN CIRCUIT BREAKER POLE / AMP	TWO-POLE CONTACTOR AMPS	PANELBD / LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	BRANCH CKT. BRK. POLE / AMPS	KVA LOAD
TY D (120/240) 70 (NS) SS (E) PS (U)	2"	3 / #6	2P / 100	30	100	T.S. ILSN	1P / 50 2P / 20	< 7.1

*ONCOR WILL CONNECT ELECTRICAL SERVICE TO ELECTRICAL SUPPLY. CONTRACTOR RESPONSIBLE TO CONNECT SIGNAL CONTROLLER TO SERVICE

NOTES:

1) EXISTING SIGNAL CONTROLLER TO BE RELOCATED AS SHOWN. SALVAGE EXISTING SIGNAL EQUIPMENT AND RETURN TO TOWN OF ADDISON.
2) ALL POLES AND MAST ARMS TO BE POWDER COAT SILVER TO MATCH BELT LINE STREET LIGHTS.
3) ALL MAST ARM MOUNTED SIGNS SHALL HAVE HIGH INTENSITY PRISMATIC (HIP) SHEETING.
4) RELOCATE EXISTING STREET NAME SIGNS TO NEW POLES/MAST ARMS.
5) FURNISH AND INSTALL A 10' POLE EXTENSION ON T-3 SIGNAL ARM. CONTRACTOR TO INSTALL TOWN SUPPLIED WIRELESS ETHERNET SUBSCRIBER ON THE POLE EXTENSION. CONTRACTOR TO MOUNT WIRELESS RADIO AND SHALL AIM THE ETHERNET SUBSCRIBER UNIT AS DIRECTED BY THE TOWN ENGINEER.
6) CONTRACTOR SHALL FURNISH AND INSTALL THE VIDEO SERVER AND HARDENED ETHERNET SWITCH INSIDE THE TRAFFIC SIGNAL CONTROLLER CABINET.
7) THE VIDEO SERVER SHALL BE INSTALLED BETWEEN THE VIVDS PROCESSOR AND HARDENED ETHERNET SWITCH (POLE T-3).
8) REMOVE ALL EXISTING FIELD WIRING AFTER NEW SIGNALS ARE PUT INTO SERVICE.
9) ALL EXISTING PULL BOXES TO TO BE REMOVED AND ABANDONED CONDUIT TO BE CUT AND CAPPED. SALVAGED PULL BOXES TO BE RETURNED TO TOWN OF ADDISON.

SIGNAL POLE CHART

POLE NUMBER	T-1						T-2				T-3						T-4			
MAST ARM LENGTH	55'						28'				55'						28'			
FOUNDATION TYPE	48-A						30-A				48-A						30-A			
WITH LUMINAIRES	NO						NO				NO						NO			
MAST ARM SIGNS	R10-12, R3-4						R10-5L				R10-12, R3-4						R3-8LL, R10-5L			
SIZE OF LENS	12"																			
SIGNAL TYPE	B	A	A	A	C	C	B	A	C	C	B	A	A	A	C	C	B	A	C	C
SIGNAL FACE NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
LED SIGNAL INDICATIONS	R	R	R	R	DW	DW	R	R	DW	DW	R	R	R	R	DW	DW	R	R	DW	DW
	Y	Y	Y	Y	W	W	Y	Y	W	W	Y	Y	Y	Y	W	W	Y	Y	W	W
	G	G	G	G			G	G			G	G	G	G			G	G		
	~~GY~~						~~GY~~				~~GY~~						~~GY~~			

ALL SIGNAL HEADS SHALL HAVE BLACK PLASTIC BACK PLATES.
LEFT-TURN INDICATIONS WILL CONSIST OF 4 SECTION HEADS WITH BI-MODAL YELLOW AND GREEN ARROWS.
ALL MAST ARMS WILL HAVE LED ILLUMINATED STREET NAME SIGNS.

STATE OF TEXAS
S.P. BOOTH
94903
LICENSED
PROFESSIONAL ENGINEER

S.P. Booth, P.E. 3/21/2014
Signature of Registrant Date

NO.	REVISION	BY	DATE

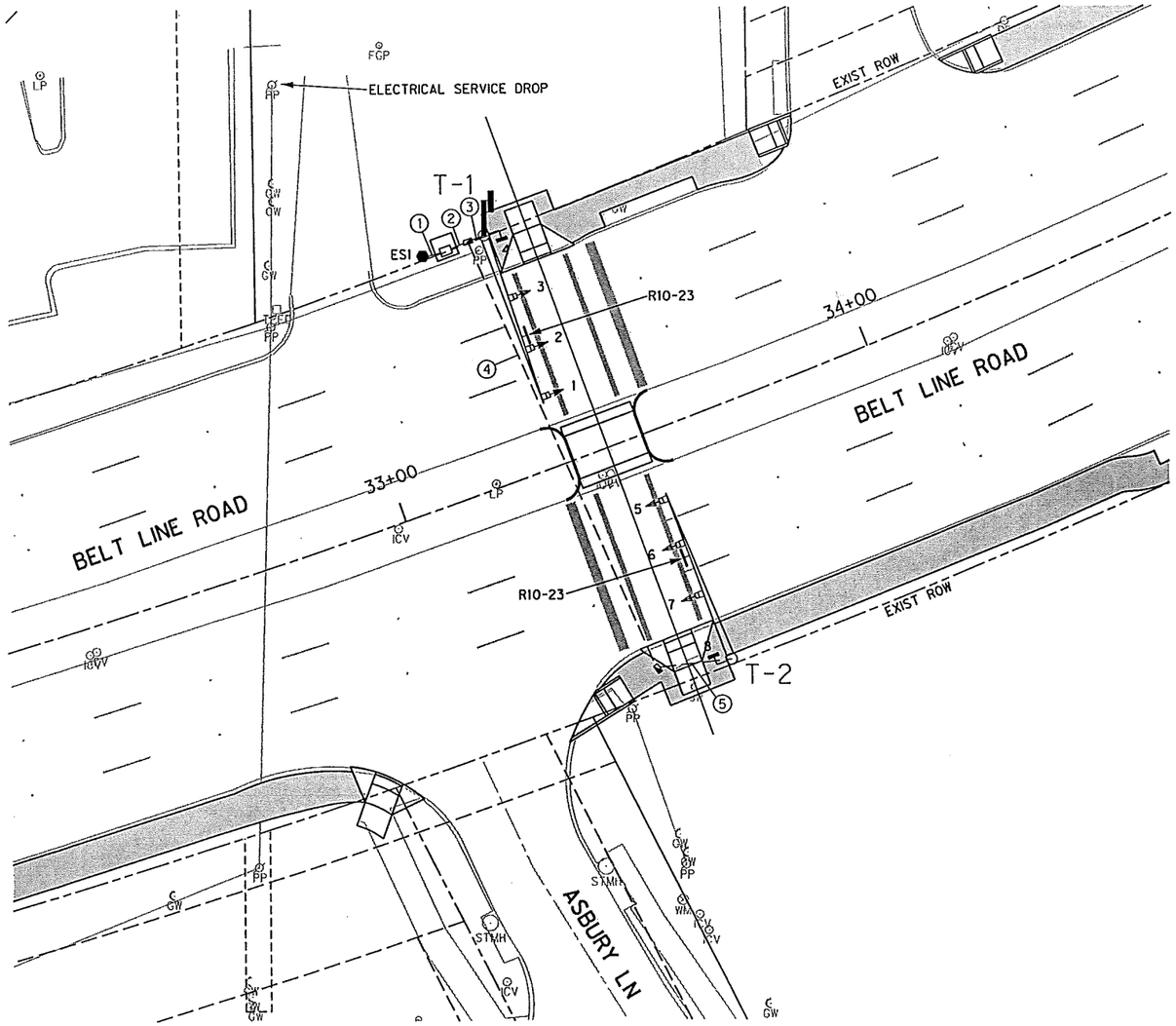
TOWN OF ADDISON
DALLAS COUNTY, TEXAS

BELT LINE ROAD
UNDERGROUND ELECTRICAL

PROPOSED TRAFFIC SIGNAL LAYOUT
BELT LINE RD AT RUNYON RD

HALFF
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
29350	HALFF	HALFF	MAR. 2014	29350 SGNL 07	TS-7



0 15 30 45
SCALE IN FEET

N

LEGEND OF SYMBOLS	
	VIDEO DETECTION ZONES
	SIGNAL POLE/MAST ARM SET UP
2	SIGNAL HEAD NUMBERS
	CONTROLLER CABINET
	GROUND BOX TYPE D (LG)
	GROUND BOX TYPE E (SM)
	LUMINAIRE
Ø2	PHASE NUMBERS
T-2	POLE NUMBERS
(22)	CONDUIT RUN NUMBERS
R.O.W.	RIGHT OF WAY LINES
	VIVDS CAMERA
	ELECTRICAL SERVICE
	OPTICOM
	MAST ARM MOUNTED SIGN
	WIRELESS ETHERNET SUBSCRIBER

CROSSWALK
STOP ON RED
R10-23
24" X 30"

SIGNAL HEAD TYPES

D — HAWK ASSEMBLY

B — PED (WITH COUNTDOWN)

ELECTRICAL SERVICE DATA

ELECTRICAL SERVICE DESCRIPTION SEE ED(4)	SERVICE CONDUIT SIZE (RMC)	SERVICE CONDUCTORS NO./ SIZE	MAIN CIRCUIT BREAKER POLE / AMP	TWO-POLE CONTACTOR AMPS	PANELBD / LOADCENTER AMP RATING (MIN)	CIRCUIT NO.	BRANCH CKT. BRK. POLE / AMPS	KVA LOAD
TY D (120/240) 70 (NS) SS (E) PS (U)	2"	3 / #6	2P / 100	30	100	T.S.	1P / 50	< 7.1

•ONCOR WILL CONNECT ELECTRICAL SERVICE TO ELECTRICAL SUPPLY. CONTRACTOR RESPONSIBLE TO CONNECT SIGNAL CONTROLLER TO SERVICE

NOTES:

1) ALL POLES AND MAST ARMS TO BE POWDER COAT SILVER TO MATCH BELT LINE STREET LIGHTS.
2) ALL MAST ARM MOUNTED SIGNS SHALL HAVE HIGH INTENSITY PRISMATIC (HIP) SHEETING.
3) FURNISH AND INSTALL A 10' POLE EXTENSION ON T-3 SIGNAL ARM. CONTRACTOR TO INSTALL TOWN SUPPLIED WIRELESS ETHERNET SUBSCRIBER ON THE POLE EXTENSION. CONTRACTOR TO MOUNT WIRELESS RADIO AND SHALL AIM THE ETHERNET SUBSCRIBER UNIT AS DIRECTED BY THE TOWN ENGINEER.
4) CONTRACTOR TO FURNISH HARDENED ETHERNET SWITCH INSIDE THE TRAFFIC CONTRACTOR CABINET (INSTALL).

. SIGNAL POLE CHART								
POLE NUMBER	T-1				T-2			
MAST ARM LENGTH	36'				36'			
FOUNDATION TYPE	36-A				36-A			
WITH LUMINAIRES	NO				NO			
MAST ARM SIGNS	R10-23				R10-23			
SIZE OF LENS								
SIGNAL TYPE	D	D	D	B	D	D	D	B
SIGNAL FACE NO.	1	2	3	4	5	6	7	8
LED SIGNAL INDICATIONS	R	R	R	DW	R	R	R	DW
	R	R	R	W	R	R	R	W
	Y	Y	Y		Y	Y	Y	

ALL SIGNAL HEADS SHALL HAVE BLACK PLASTIC BACK PLATES.

STATE OF TEXAS
S.P. BOOTH
94903
LICENSED PROFESSIONAL ENGINEER

S. P. Booth, P.E. 3/21/2014
Signature of Registrant Date

NO.	REVISION	BY	DATE

Addison TOWN OF ADDISON
DALLAS COUNTY, TEXAS

BELT LINE ROAD
UNDERGROUND ELECTRICAL

PROPOSED TRAFFIC SIGNAL LAYOUT
BELT LINE RD AT HAWK SIGNAL

HALFF
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
29350	HALFF	HALFF	MAR. 2014	29350 SGNL 09	TS-9

SHEET 122 OF 235

USER: gh1299
OFFICE: RCH
PROJECT # 29350
FILE: 29350 SGNL 09.dgn
TIME: 9:37:53 AM
DATE: 3/24/2014

Traffic Control Narrative:

Duct Bank Construction:

1. Follow proposed sequence of construction.
2. Restripe 10' lanes Marsh to Midway.
3. For each section,
   a. Shift traffic to 10' wide lanes with the right lane adjacent to outside curb. Use Type 1 low profile concrete barrier with Type 2 low profile concrete barrier at ends to protect primary work zone. See typical sections in Traffic Control Plan sheets.
   b. Primary work zone with three open through lanes in each direction shall be in place at all times during peak hours from:
      6:30 am - 9:30 am Monday through Saturday
      3:30 pm - 7:30 pm Monday through Saturday
   c. Secondary work zone will include the primary work zone in addition to a coned off lane on one or both sides. It will be used for material removal, delivery of new material and manhole installation and shall be in place during off-peak hours only.
   d. Once traffic is shifted and barriers in place, excavate and load dirt to dump truck.
   e. Install concrete duct bank by open cut unless otherwise noted.
   f. After cure, backfill and pave
   g. Move on to next section
4. A section must be completed and restored before proceeding to the next adjacent section.

Utility Crossing by Tunnel:

1. Bore pit to be approximately 10' from back of curb or as otherwise indicated on the plans.
2. Can be done at any time.

Utility Crossing by Open Cut:

1. Construction to be done at night during off-peak hours.
2. Shift eastbound traffic to southern westbound lane and construct utility south of median.
3. Once completed, flip traffic to other side of median with eastbound traffic in two southern eastbound lanes and westbound traffic in northern eastbound lane.
4. Construct remaining utility crossing. If construction cannot be completed during the allowed off-peak hours, provide steel plates with an asphalt edge transition until the next available work period.

Water line 20" Valves and 8" Water line B Construction

1. Construction to be done at night during off-peak hours.
2. For 8" water line, repeat steps 2, 3 and 4 for "Utility Crossing by Open Cut."
3. For 20" valves, outside lane closure at night during off-peak hours.
4. If construction cannot be completed during the allowed off-peak hours, provide steel plates with an asphalt edge transition and wait until next available work period.

Short Term Outside Lane Closure for Parkway, Sidewalk & Signal Work:

1. Outside lane closure for parkway and sidewalk construction shall only be allowed between 9 am and 3:30 pm.
2. Maintain access to businesses at all times.
3. Maintain a continuous pedestrian path on either side of the road at all times through the entire project limits.

Overlay and Permanent Striping Construction:

1. To be done during off-peak hours one lane at a time.
2. Use work vehicle with a trail vehicle and a shadow vehicle.
3. Open to traffic behind shadow vehicle once overlay can be driven on.
4. Maintain access at all times to businesses during their operating hours.

TRAFFIC CONTROL PARAMETERS *

1. 3 lanes each direction available for peak hour traffic, 6:30 AM to 9:30 AM, 3:30 PM to 7:30 PM, weekdays.
2. 2 lanes each direction available for traffic, 9:30 AM to 3:30 PM, 7:30 PM to 11 PM, weekdays.
3. 1 lane each direction available for traffic, 11 PM to 6:30 AM, weekdays.
4. Weekend work - 2 lanes each direction available for traffic 9:30 AM to 3:30 PM, Saturday. 1 lane each direction available for traffic, 7:30 PM Saturday through midnight Sunday.
5. Contractor shall not perform any work during the following Town events and dates: Taste of Addison (May 16-18, 2014), Addison Kaboom Town (July 3-4, 2014), Addison Oktoberfest (September 18-21, 2014).
6. Close 1 successive median opening at a time for duct bank construction as shown in the plans. Proceed to the next closure once pavement is restored.
7. Maintain access to adjacent properties at all times, only one driveway closed to each property at any one time.
8. Duct bank crossings are shown to be constructed by open cut and must satisfy the above traffic control parameters.
9. All detours shall conform to Texas MUTCD and standard sheets provided in the plans.
10. Provide 6 changeable message signs, at the locations shown in the plans for advance warning.
11. Only one consecutive median opening can be closed at a time.

GENERAL CONSTRUCTION SEQUENCE

1. Electrical duct bank
2. Telecom duct bank
3. Oncor, Fiberlight, Time Warner, AT&T facility relocations
4. Pole removal
5. Traffic signals, sidewalks, water and storm sewer are concurrent
6. ~~Overlay and striping~~

* Contractor may propose a different sequence of work as long as traffic control parameters are met and duct bank circuit 1 (ONCOR) Phase 1, Steps 1-5 in detailed TCP is the first work completed.

STATE OF TEXAS
M.E. ROMANOWSKI
56306
LICENSED
PROFESSIONAL ENGINEER

Signature of Registrant, P.E. Date 3/21/14

FIRM REGISTRATION NUMBER: 312

NO.	REVISION	BY	DATE

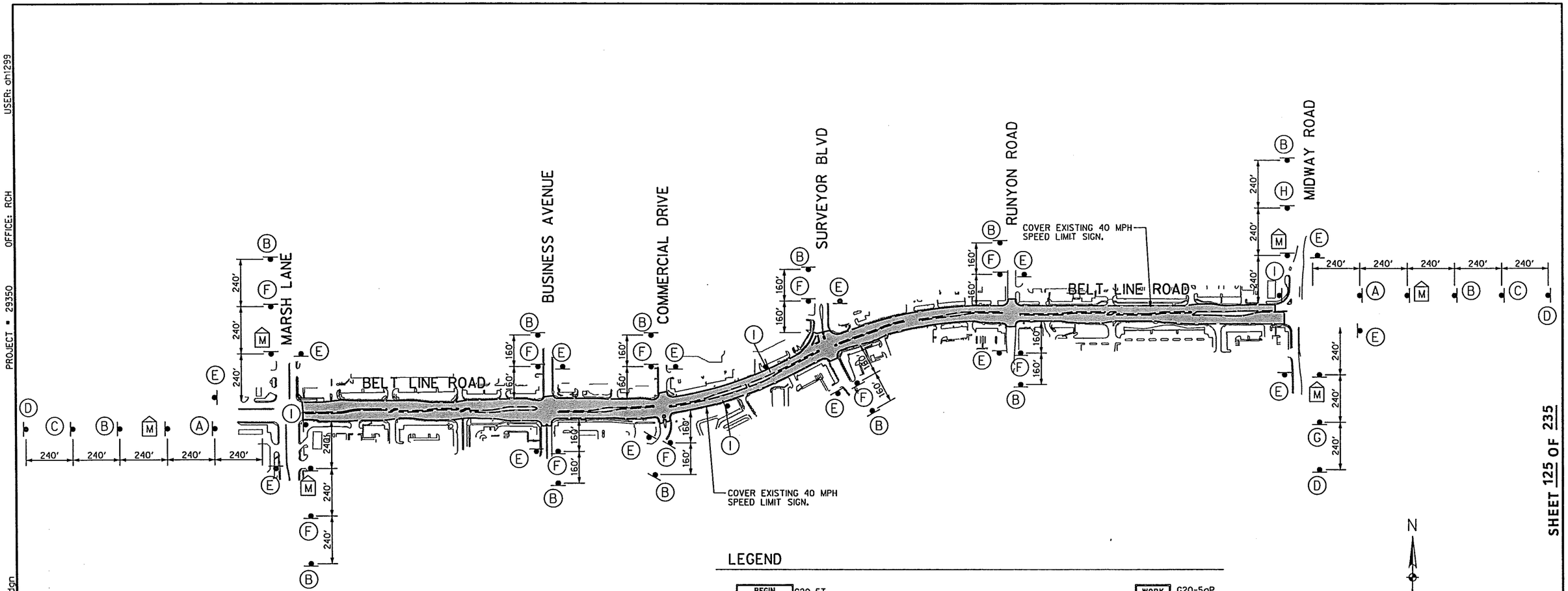
TOWN OF ADDISON
DALLAS COUNTY, TEXAS

BELT LINE ROAD
UNDERGROUND ELECTRICAL

TRAFFIC CONTROL NARRATIVE & GENERAL NOTES

HALFF
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
29350	HALFF	HALFF	MAR. 2014	29350 TCPN 01	TCP-00



LEGEND

(A) BEGIN ROAD WORK NEXT X MILES — G20-5T 48x24
NAME ADDRESS CITY STATE CONTRACTOR — G20-6 48x30

(B) ROAD WORK AHEAD — CW20-1D 48x48

(C) WORK ZONE — G20-9 36x24
TRAFFIC FINES DOUBLE — R20-5 36x30
WHEN WORKERS ARE PRESENT — PLAQUE 36x18

(D) OBEY WARNING SIGNS STATE LAW — R20-3

(E) END ROAD WORK — G20-2a 48x24

(F) ROAD WORK ← NEXT X MILES NEXT X MILES → — G20-1a 72x36

(G) ROAD WORK ← NEXT X MILES — G20-1BL 72x24

(H) ROAD WORK NEXT X MILES → — G20-1BR 72x24

(I) WORK ZONE / SPEED LIMIT 30 — G20-5aP 24x18, R2-1 24x30

(M) PORTABLE CHANGEABLE MESSAGE SIGN

N

0 125 250 375 500 750
SCALE IN FEET

M.E. ROMANOWSKI 56306 LICENSED PROFESSIONAL ENGINEER

Signature of Registrant, P.E. Date 10/25/13

FIRM REGISTRATION NUMBER: 312

NO.	REVISION	BY	DATE

TOWN OF ADDISON
DALLAS COUNTY, TEXAS

BELT LINE ROAD
UNDERGROUND ELECTRICAL

TRAFFIC CONTROL PLAN
ADVANCED WARNING SIGN LAYOUT

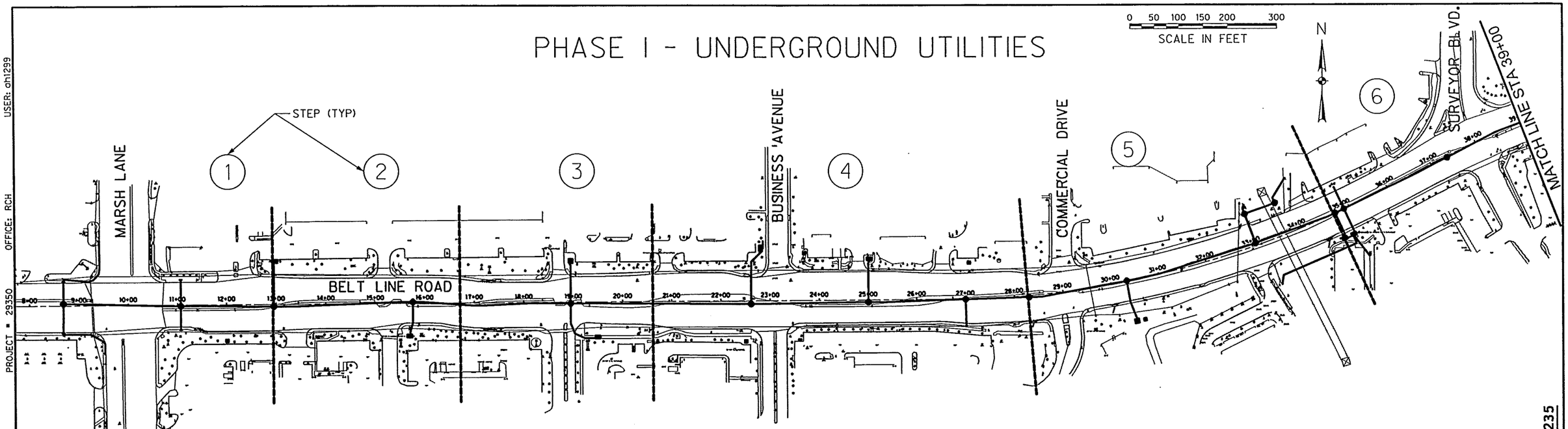
HALFF
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
29350	HALFF	HALFF	OCT. 2013	29350 TCP 01	TCP-0

SHEET 125 OF 235

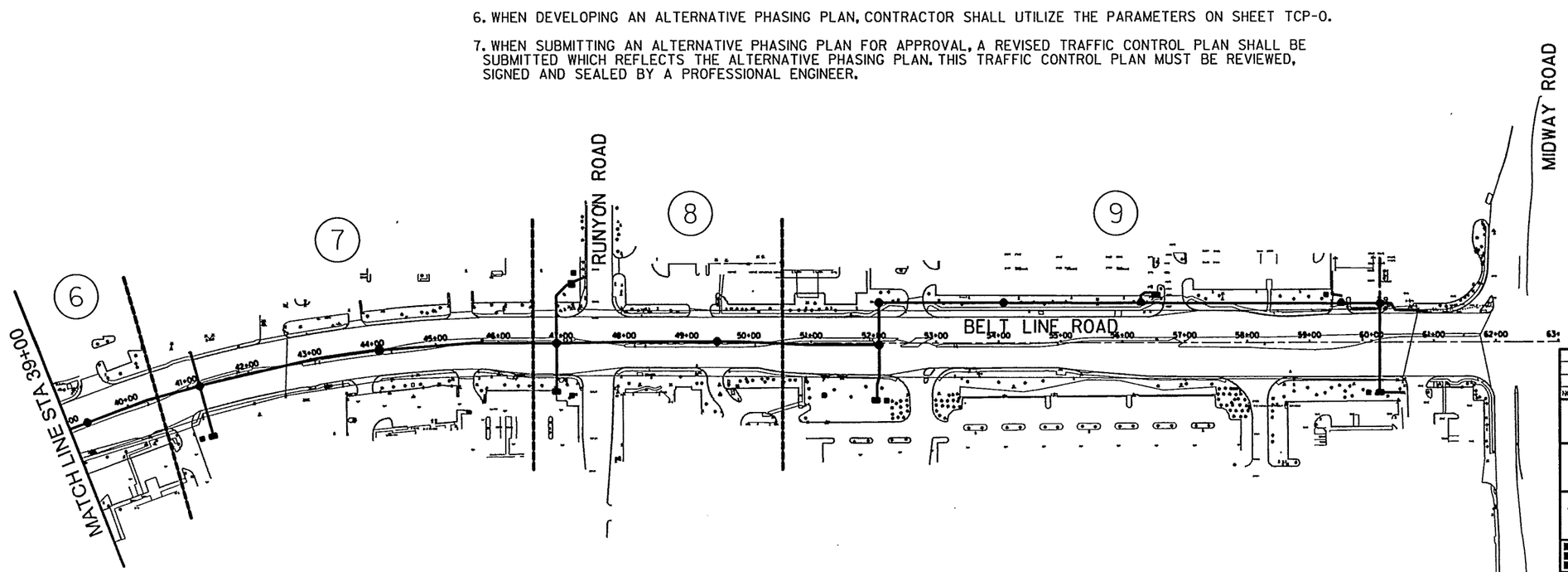
USER: dh1299
OFFICE: RCH
PROJECT # 29350
FILE: 29350 TCP 01.dgn
TIME: 3:14:02 PM
DATE: 10/24/2013

PHASE I - UNDERGROUND UTILITIES



NOTES:

1. COMPLETE & RESTORE EACH STEP BEFORE PROCEEDING TO NEXT.
2. CONTRACTOR MUST ALLOW AND COORDINATE WITH ONCOR PRIOR TO PROCEEDING TO STEPS 6-9.
3. ADDITIONAL CLOSURES OF LANES WILL BE REQUIRED FOR PULLING & SPLICING CONDUCTORS.
4. THE PHASING PLAN IS A SUGGESTED SEQUENCE OF CONSTRUCTION.
5. THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE PHASING PLAN FOR APPROVAL BY THE OWNER AND ENGINEER.
6. WHEN DEVELOPING AN ALTERNATIVE PHASING PLAN, CONTRACTOR SHALL UTILIZE THE PARAMETERS ON SHEET TCP-0.
7. WHEN SUBMITTING AN ALTERNATIVE PHASING PLAN FOR APPROVAL, A REVISED TRAFFIC CONTROL PLAN SHALL BE SUBMITTED WHICH REFLECTS THE ALTERNATIVE PHASING PLAN. THIS TRAFFIC CONTROL PLAN MUST BE REVIEWED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.



STATE OF TEXAS
M.E. ROMANOWSKI
56306
LICENSED
PROFESSIONAL ENGINEER

Signature of Registrant P.E. Date 10/25/13

FIRM REGISTRATION NUMBER: 312

NO.	REVISION	BY	DATE

TOWN OF ADDISON
DALLAS COUNTY, TEXAS

BELT LINE ROAD
UNDERGROUND ELECTRICAL

SUGGESTED SEQUENCE OF CONSTRUCTION
PHASE 1 - UNDERGROUND UTILITIES

HALFF
1201 NORTH BOWSER ROAD, RICHARDSON, TEXAS 75081-2275
TEL (214) 346-6200 FAX (214) 739-0095

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
29350	HALFF	HALFF	OCT. 2013	29350 DUCT BANK 01	SOC-1

USER: ah1299
OFFICE: RCH
PROJECT # 29350
FILE: 29350 SOC 01.dgn
TIME: 3:14:03 PM
DATE: 10/24/2013