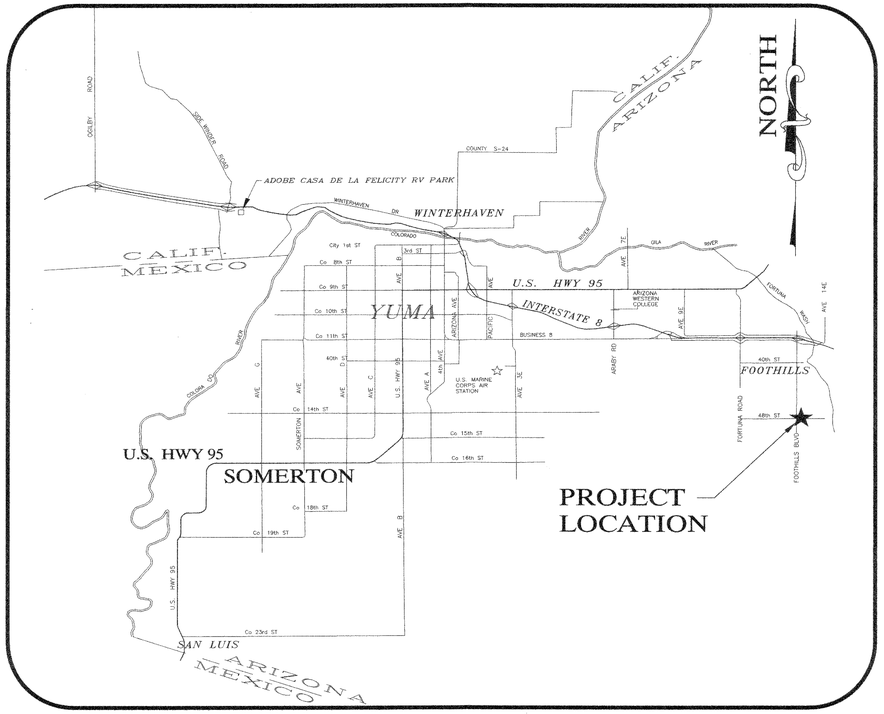
YUMA COUNTY

DEPARTMENT OF DEVELOPMENT SERVICES

IMPROVEMENTS FOR INTERSECTION OF 48th STREET & FOOTHILLS BOULEVARD



VICINITY MAP

BOARD OF SUPERVISORS

CHAIRMAN ---------- Russell McCloud
VICE-CHAIRMAN ---------- Russ Clark
MEMBER ---------- Gregory S. Ferguson
MEMBER ---------- Marco A. Reyes
MEMBER ---------- Lenore Loroña Stuart

YUMA COUNTY

COUNTY ADMINISTRATOR ---------- James Flory
INTERIM DEVELOPMENT SERVICES DIRECTOR ---------- Roger A. Patterson, P.E.
COUNTY ENGINEER ---------- Roger A. Patterson, P.E.
PROJECT MANAGER ---------- John Savicky, P.E.

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BASIS OF BEARING

THE CENTERLINE OF 48th STREET AS SHOWN ON FOOTHILLS MOBILE ESTATES NO. 5 PLAT AS RECORDED IN BOOK 9 OF PLATS, PAGES 69 TO 70, YUMA COUNTY RECORDS, YUMA COUNTY ARIZONA
BEARING: N89°54'02"E

BENCHMARK

BENCHMARK LOCATED AT SOUTHEAST COR. OF INTERSTATE 8 (I-8) AND FOOTHILLS BOULEVARD, BEING 60' PLUS OR MINUS FROM SOUTH I-8 ROW FENCE AND 50' PLUS OR MINUS FROM EAST FOOTHILLS BLVD. FENCE. FOUND CONCRETE MONUMENT WITH BRASS CAP WITH GUARD POST

USGS RECORD ELEVATION OF 342.13 FEET.
ASSUMED ELEVATION OF 69.12 FEET.
DIFFERENCE BETWEEN U.S.G.S. RECORD AND ASSUMED ELEVATIONS: 273.01 FEET.

TEMPORARY BENCHMARK

BRASS CAP @ INTERSECTION OF FOOTHILLS BOULEVARD & 48TH. STREET.
U.S.G.S. RECORD ELEVATION TIE 373.01 FEET
ASSUMED ELEVATION OF 100.00 FEET.
DIFFERENCE BETWEEN U.S.G.S. RECORD TIE AND ASSUMED ELEVATION: 273.01 FEET.

APPROVALS

APPROVED BY:

COUNTY ADMINISTRATOR ---------- DATE

COUNTY ENGINEER ---------- DATE

Registered Professional Engineer (Civil) CERTIFICATE NO. 26844 NAUDIT K. ELAIS Date Signed 08/28/15 ARIZONA, U.S.A. EXPIRES 3/31/17

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E½ IMPROVEMENTS FOR INTERSECTION OF 48th STREET & FOOTHILLS BOULEVARD

COVER SHEET

SCALE: AS SHOWN	DESIGNED BY: N.K.E	CHECKED BY: N.K.E.
DATE: OCT. "15"	DRAWN BY: M.J.O.	JOB No. 15-019

EDAIS Engineering, Inc.
PLANNING-CIVIL-ENGINEERING-ARCHITECTURE
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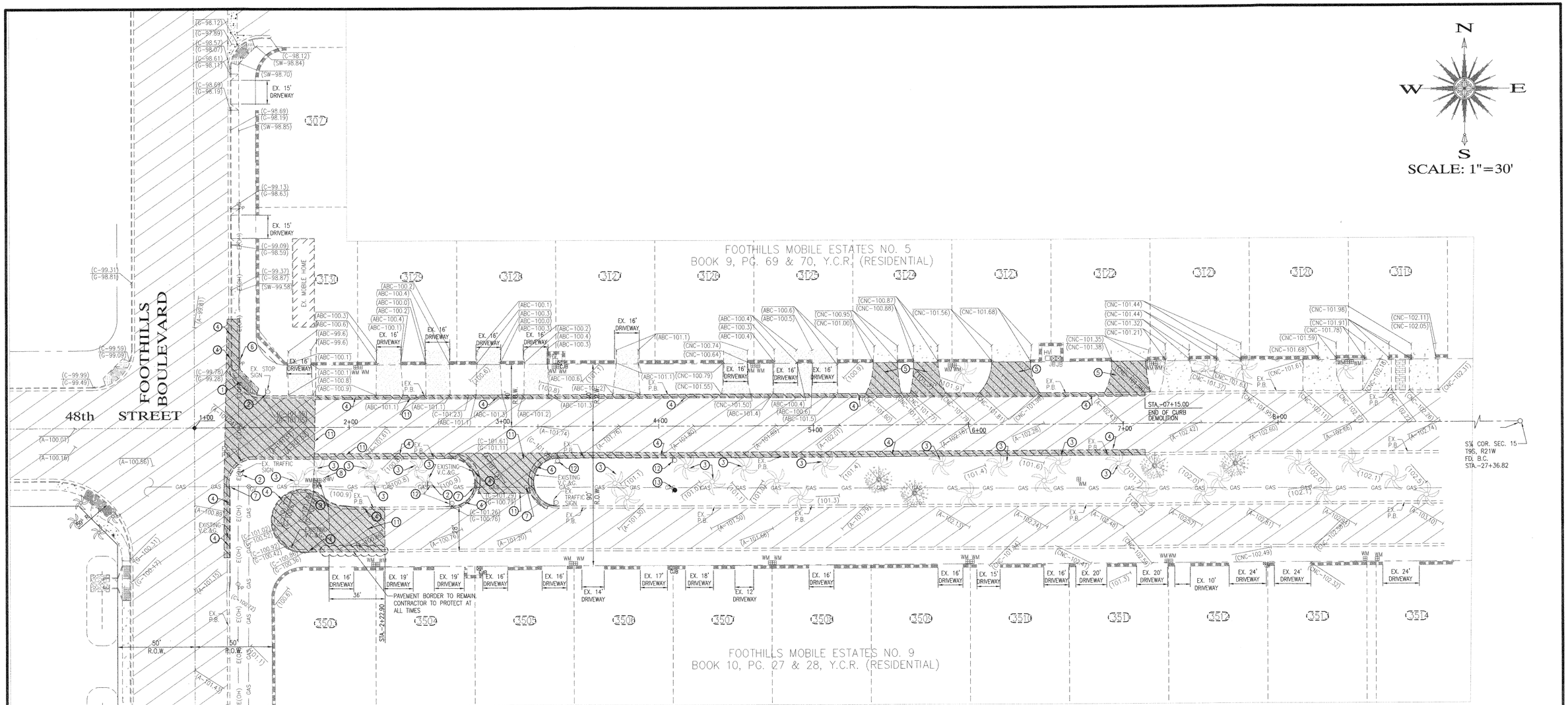
(928) 344-3566 FAX (928) 341-1075
EMAIL: EE@Edaisengineering.com

SHEET 00



LEGEND

- CENTERLINE
- RIGHT OF WAY LINE
- E(OH) — EXISTING ELECTRICAL OVERHEAD
- GAS — GAS — EXISTING UNDERGROUND GAS LINE
- DEMOLITION AREA
- EXISTING CONCRETE
- EXISTING ASPHALT
- FOUND MONUMENT (TYPE AS SHOWN)
- P.B. — INDICATES PAVEMENT BORDER
- WV — EXISTING WATER VALVE
- GV — EXISTING GAS VALVE
- CJB — EXISTING JUNCTION BOX
- EXISTING LIGHT / CAMERA POLE
- EXISTING ELECTRICAL BOX
- FH — EXISTING FIRE HYDRANT
- WM — EXISTING WATER METER
- EXISTING TRAFFIC SIGN
- EXISTING LANDSCAPING TREE
- EXISTING LANDSCAPING PALM TREE
- 35D — EXISTING LOT NUMBER
- (114.8) — EXISTING NATURAL SOIL ELEVATION
- (A-114.11) — EXISTING ASPHALT ELEVATION
- (C-114.87) — EXISTING CURB & GUTTER ELEVATION
- (ABC-114.79) — EXISTING ABC ELEVATION
- (CNC-114.79) — EXISTING CONCRETE ELEVATION

KEY NOTES

1. SAWCUT AND REMOVE EX. CONCRETE SIDEWALK RAMP AS NECESSARY TO CONSTRUCT NEW IMPROVEMENTS.
2. EX. STREET SIGN TO BE REMOVED
3. EX. PALM TREE TO BE REMOVED
4. SAWCUT AND REMOVE EX. CONCRETE CURB AS NECESSARY TO CONSTRUCT NEW IMPROVEMENTS
5. SAWCUT AND REMOVE EX. CONCRETE DRIVEWAY FOR CONSTRUCTION OF NEW CONCRETE DRIVEWAY
6. EX. POWER POLE TO BE RELOCATED
7. CONTRACTOR TO PROTECT EX. UNDERGROUND UTILITIES DURING CONSTRUCTION, IF DAMAGE OCCURS, CONTRACTOR MUST REPAIR AT HIS OWN EXPENSE.
8. EX. WATER VALVE TO BE RELOCATED
9. EX. WATER METERS TO BE RELOCATED
10. EX. TREE TO BE REMOVED
11. SAWCUT AND REMOVE EX. PAVEMENT AS NECESSARY TO CONSTRUCT NEW IMPROVEMENTS. REPLACE WITH NEW PAVEMENT – SEE DETAIL D/4
12. EX. STREET SIGN TO BE RELOCATED
13. NEW LOCATION OF STREET SIGN

CALL TWO WORKING DAYS BEFORE YOU DIG
263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

UTILITY DISCLAIMER

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Registered Professional Engineer (Civil) CERTIFICATE NO. 26844 NAVIN K. DAIS ARIZONA, U.S.A. Date Signed 06/26/15 EXPIRES 3/31/17

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IMPROVEMENTS FOR INTERSECTION OF 48th STREET & FOOTHILLS BOULEVARD

DEMOLITION PLAN

SCALE: AS SHOWN	DESIGNED BY: N.K.E.	CHECKED BY: N.K.E.
DATE: OCT "15"	DRAWN BY: M.J.O.	JOB No. 15-019

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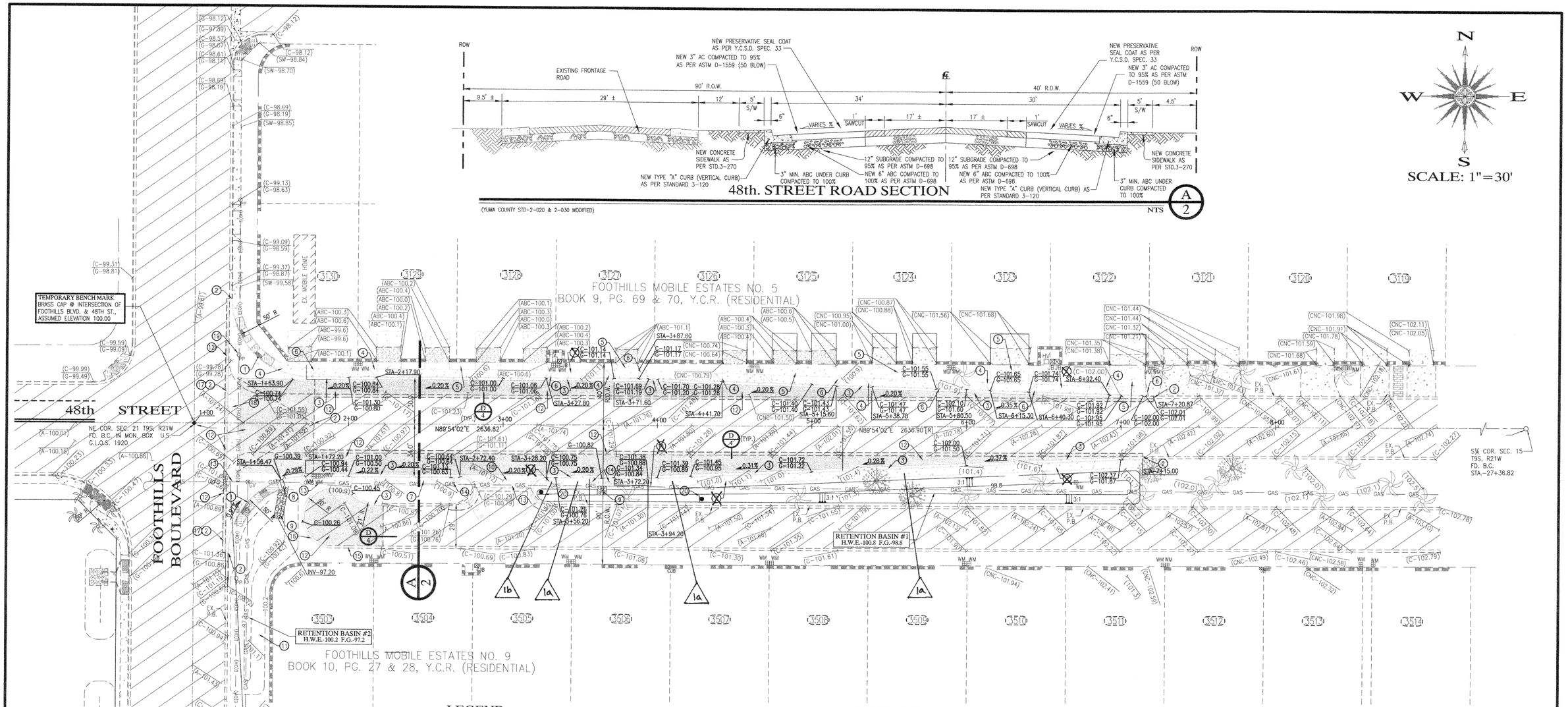
SHEET 1



LEGEND

	CENTERLINE
	RIGHT OF WAY LINE
E(OH)	EXISTING ELECTRICAL OVERHEAD
GAS GAS	EXISTING UNDERGROUND GAS LINE
	NEW ASPHALT
	EXISTING ASPHALT
	NEW CONCRETE
	EXISTING CONCRETE
	EXISTING WALL
	FOUND MONUMENT (TYPE AS SHOWN)
WV	EXISTING WATER VALVE
JB	EXISTING JUNCTION BOX
	EXISTING LIGHT / CAMERA POLE
E	EXISTING ELECTRICAL BOX
FH	EXISTING FIRE HYDRANT
CV	EXISTING GAS VALVE
WM	EXISTING WATER METER
	EXISTING TRAFFIC SIGN
P.B.	PAVEMENT BORDER
	EXISTING LANDSCAPING TREE
	EXISTING LANDSCAPING PALM TREE
350	EXISTING LOT NUMBER
A-114.11	NEW ASPHALT ELEVATION
C-114.37 G-114.37	NEW CURB & GUTTER ELEVATION
(114.8)	EXISTING NATURAL SOIL ELEVATION
(A-114.11)	EXISTING ASPHALT ELEVATION
(C-114.37) (G-114.37)	EXISTING CURB & GUTTER ELEVATION
(ABC-114.79)	EXISTING ABC ELEVATION
(CNC-114.79)	EXISTING CONCRETE ELEVATION
[R]	DATA REFERS TO FOOTHILLS MOBILE ESTATES NO. 5, AS RECORDED IN BOOK 9, PG. 69 & 70, Y.C.R.

KEY NOTES

1. NEW CONCRETE SIDEWALK RAMP – SEE DETAIL I/4
2. CONSTRUCT TO MATCH WITH EXISTING IMPROVEMENTS
3. NEW VERTICAL CURB AND GUTTER – SEE DETAIL A/4
4. BEGINNING OF DRIVEWAY
5. NEW CONCRETE DRIVEWAY – SEE DETAIL G/4 1C
6. END OF DRIVEWAY
7. NEW 5' CONCRETE SIDEWALK – SEE DETAIL E/4
8. NEW SCUPPER AS PER YUMA COUNTY STD. DETAIL 05-050
9. NEW ROCK SPILLWAY – SEE DETAIL H/4
10. NEW CONCRETE CROSS GUTTER – SEE DETAIL K/4
11. FUTURE STORMWATER RETENTION BASIN BY OTHERS
12. NEW AC PAVEMENT MATCH TO EXISTING THICKNESS (3" MIN.)
13. CONTRACTOR TO PROTECT EX. UNDERGROUND UTILITIES DURING CONSTRUCTION, IF DAMAGE OCCURS, CONTRACTOR MUST REPAIR AT HIS OWN EXPENSE.
14. NEW CONCRETE SIDEWALK RAMP (12:1)
15. PROTECT EXISTING PAVEMENT BORDER
16. NEW BORDER CURB – SEE DETAIL N/4
17. SAWCUT 1 FOOT OF EXISTING PAVEMENT AND REPLACE WITH NEW AC PAVEMENT. MATCH TO EXISTING THICKNESS (3" MIN.) – SEE DETAIL L/4
18. NEW 8' CONCRETE VALLEY GUTTER – SEE DETAIL K/4 M/4
19. EXISTING POWER POLE TO BE RELOCATED
20. NEW LOCATION OF STOP SIGN

BENCHMARK

BENCHMARK LOCATED AT SOUTHEAST COR. OF INTERSTATE 8 (I-8) AND FOOTHILLS BOULEVARD. BEING 60' PLUS OR MINUS FROM SOUTH I-8 ROW FENCE AND 50' PLUS OR MINUS FROM EAST FOOTHILLS BLVD. FENCE. FOUND CONCRETE MONUMENT WITH BRASS CAP WITH GUARD POST

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BRASS CAP @ INTERSECTION OF FOOTHILLS BOULEVARD & 48TH. STREET.
U.S.G.S. RECORD ELEVATION TIE 373.01 FEET
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BASIS OF BEARING

THE CENTERLINE OF 48th STREET AS SHOWN ON FOOTHILLS MOBILE ESTATES NO. 5 PLAT AS RECORDED IN BOOK 9 OF PLATS, PAGES 69 TO 70, YUMA COUNTY RECORDS, YUMA COUNTY ARIZONA

BEARING: N89°54'02"E

REVISED: 12/01/10

DRAINAGE REPORT

I. RAINFALL CALCULATIONS (48TH STREET) D.A. #1

48TH STREET AREA (A) = 0.22 AC.
RAINFALL INTENSITY (1) = 1.22 IN 1 HR.
PEAK RATE RUNOFF (C) = 0.43
Q= (0.22)(0.43)(1.22) = 0.12 CFS.
TOTAL RAINFALL = (7200)(0.12) = 831 CF

II. STORAGE VOLUME PROVIDED:

RETENTION BASIN # 1 :
TOP AREA : 5,217 SF.
BOTTOM AREA : 2,826 SF.
DEPTH = 2 FT
STORAGE VOLUME PROVIDED =
(8,043) 2 / 2 = 8,043 CF
FACTOR OF SAFETY = 8,043 / 831 = 9.68% ∴ OK

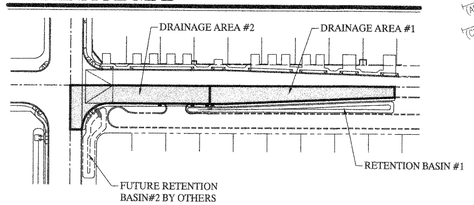
I. RAINFALL CALCULATIONS (48TH STREET) D.A. #2

48TH STREET AREA (A) = 0.24 AC.
RAINFALL INTENSITY (1) = 1.22 IN 1 HR.
PEAK RATE RUNOFF (C) = 0.43
Q= (0.24)(0.43)(1.22) = 0.13 CFS.
TOTAL RAINFALL = (7200)(0.13) = 907 CF

II. STORAGE VOLUME PROVIDED:

RETENTION BASIN # 2 :
TOP AREA : 3,330 SF.
BOTTOM AREA : 783 SF.
DEPTH = 3 FT
STORAGE VOLUME PROVIDED =
(4,113) 3 / 2 = 6,169 CF
FACTOR OF SAFETY = 6,169 / 907 = 6.80% ∴ OK

DRAINAGE MAP



Registered Professional Engineer (Civil) CERTIFICATE NO. 26844 ARIZONA, U.S.A.
Expires 12/31/2018

1
a. No Sidewalk Construction
b. No Sidewalk Ramp
c. Detail G/4 Modified, SEE Pg. 4

UTILITY DISCLAIMER

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Registered Professional Engineer (Civil) CERTIFICATE NO. 26844 EDAIS Engineering ARIZONA, U.S.A. Expires 3/31/17 08/28/16

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IMPROVEMENTS FOR INTERSECTION OF 48th STREET & FOOTHILLS BOULEVARD

IMPROVEMENT PLAN

SCALE: AS SHOWN	DESIGNED BY: N.K.E.	CHECKED BY: N.K.E.
DATE: OCT. "15"	DRAWN BY: M.J.O.	JOB No. 15-019

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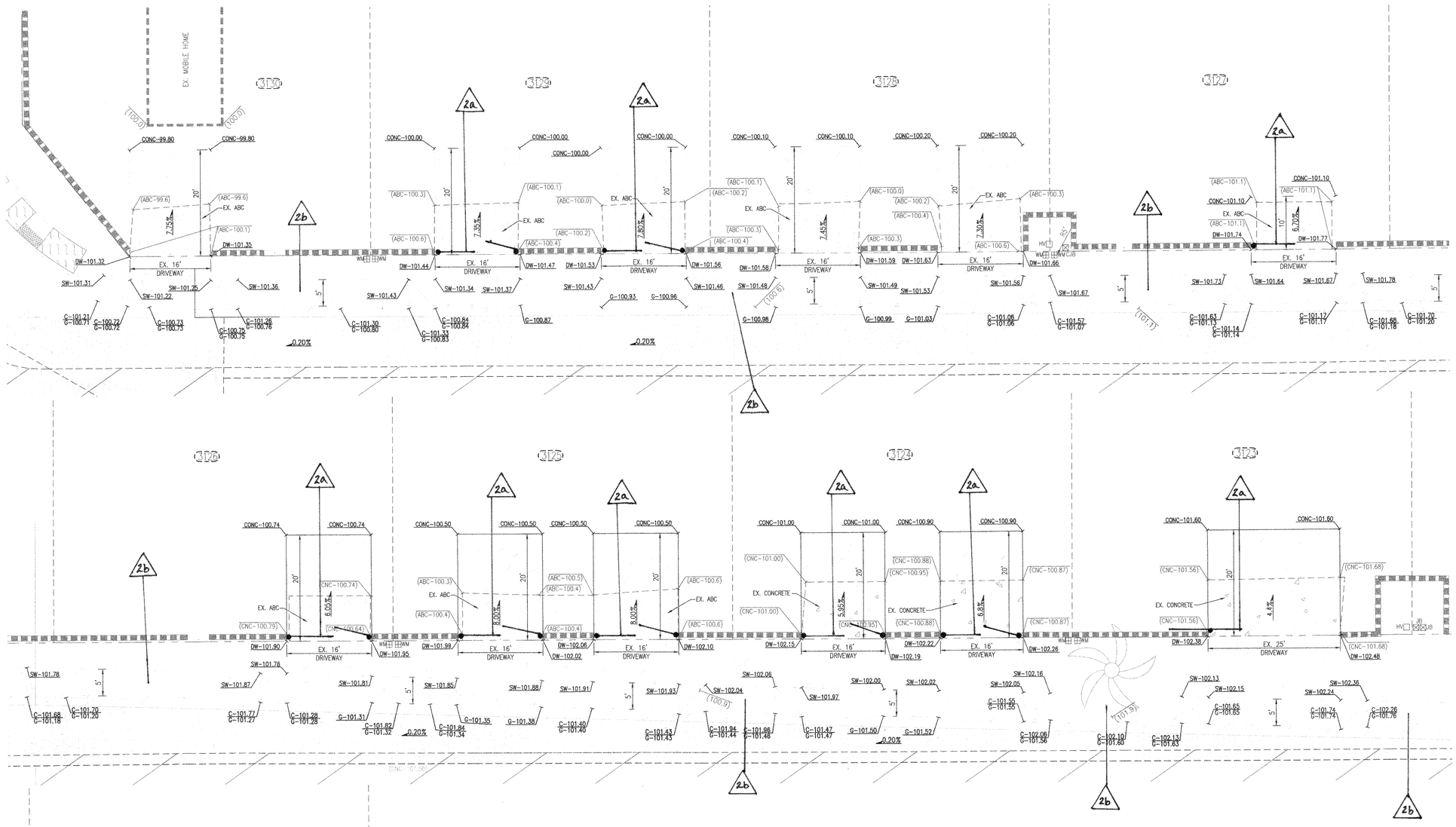
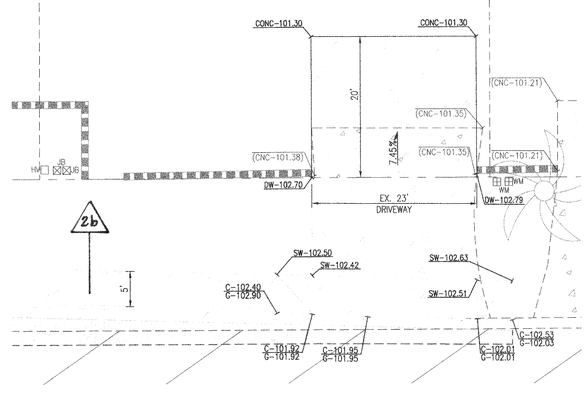
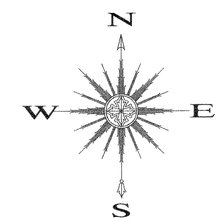
SHEET 2







SCALE: 1"=10'

Registered Professional Engineer (Civil) CERTIFICATE NO. 40239 FRANCISCO J. SANCHEZ Date Signed 1-19-18 ARIZONA, U.S.A. Expires 12/31/2018

2

a. Adjust D/W Gates to match new D/W construction. Cost is incidental to Construction D/W Cost line item.

b. No S/W construction.

Registered Professional Engineer (Civil) CERTIFICATE NO. 26844 NAUDIK K. EDAIS Date Signed 06/29/17 ARIZONA, U.S.A. Expires 3/31/17

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IMPROVEMENTS FOR INTERSECTION OF 48th STREET & FOOTHILLS BOULEVARD

DRIVEWAY ENLARGEMENT IMPROVEMENT PLAN

SCALE:	AS SHOWN	DESIGNED BY:	N.K.E.	CHECKED BY:	N.K.E.
DATE:	OCT. "15"	DRAWN BY:	M.J.O.	JOB No.	15-019

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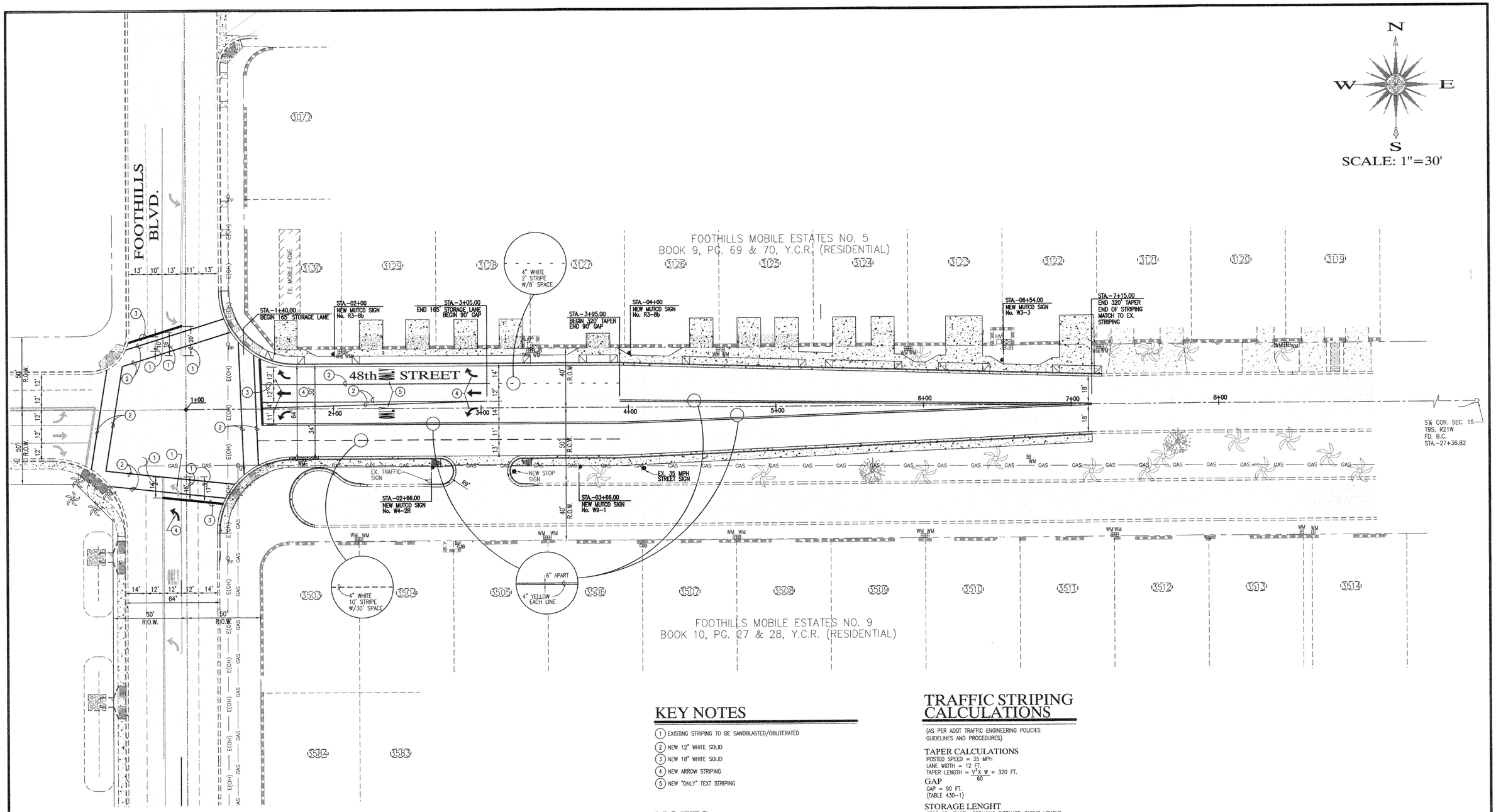
SHEET 2a



KEY NOTES

1. EXISTING STRIPING TO BE SANDBLASTED/OBLITERATED
2. NEW 12" WHITE SOLID
3. NEW 18" WHITE SOLID
4. NEW ARROW STRIPING
5. NEW "ONLY" TEXT STRIPING

NOTES

- PAVEMENT MARKINGS MUST BE IN COMPLIANCE WITH MUTCD STANDARDS AND ADOT
- ALL PAVEMENT MARKING TO BE THERMO PLASTIC
- EXISTING STRIPING ON CONSTRUCTION AREA SHALL BE SANDBLASTED/OBLITERATED (UNLESS NOTED OTHERWISE)
- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO YUMA COUNTY PUBLIC WORKS STANDARDS VOL. I, CONSTRUCTION STANDARDS AND VOL. II SPECIFICATIONS.
- ALL SIGNING MATERIALS SHALL BE 3M HIGH INTENSITY GRADE
- INSPECTION OF ROADBEDS

  THE COUNTY DEPARTMENT OF DEVELOPMENT SERVICES, ENGINEERING DIVISION SHALL BE CONTACTED FOR CONSTRUCTION INSPECTION AT LEAST 24 HOURS BEFORE THE FOLLOWING WORK UNDERTAKEN:

  1. PRIOR TO BACKFILLING FINAL TWO FEET OF TRENCHES UNDER PAVED STREETS.
  2. AFTER COMPACTION OF SUB-GRADE AND PRIOR TO PLACING ABC.
  3. AFTER PLACING ABC AND PRIOR TO PAVING.

TRAFFIC STRIPING CALCULATIONS

(AS PER ADOT TRAFFIC ENGINEERING POLICIES GUIDELINES AND PROCEDURES)

TAPER CALCULATIONS

POSTED SPEED = 35 MPH
LANE WIDTH = 12 FT.
TAPER LENGTH = $\frac{V^2 X W}{60}$ = 320 FT.

GAP

GAP = 90 FT.
(TABLE 430-1)

STORAGE LENGHT

STORAGE LENGTH=BREAKING DISTANCE+QUEUE LENGHT
STORAGE LENGTH=115 FT + 50 FT = 165 FT

CALL TWO WORKING DAYS BEFORE YOU DIG
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1-800-STAKE-IT
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Registered Professional Engineer (Civil) CERTIFICATE NO. 26844 NAKIA K. EDAIS Date Signed 09/28/16 ARIZONA, U.S.A. EXPIRES 3/31/17

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IMPROVEMENTS FOR INTERSECTION OF 48th STREET & FOOTHILLS BOULEVARD

STRIPING PLAN

SCALE: AS SHOWN	DESIGNED BY: N.K.E.	CHECKED BY: N.K.E.
DATE: OCT. '15'	DRAWN BY: M.J.O.	JOB No. 15-019

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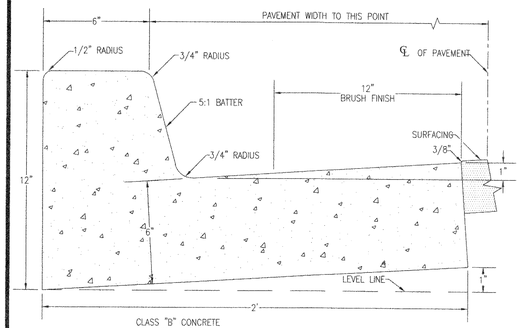
SHEET 3

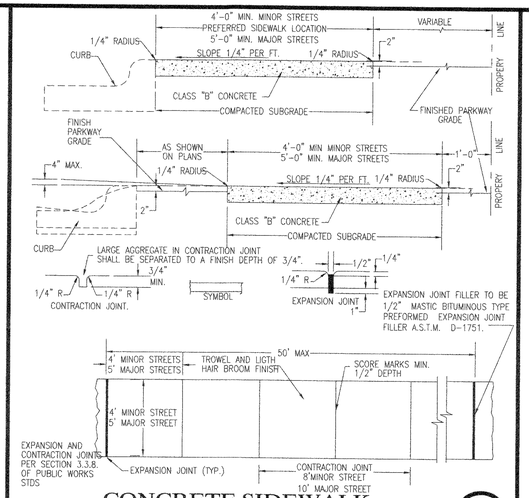


NOTES:

1.- ALL EXPOSED SURFACES SHALL BE TROWEL FINISHED EXCEPT AS SHOWN.
2.- CONTRACTION JOINT SPACING AS PER SECTION 3.3.8. OF PUBLIC WORKDS STANDARDS.
3.- EXPANSION JOINT SPACING 50' MAX. AS PER SECTION 3.3.8. OF PUBLIC WORKS STANDARDS.

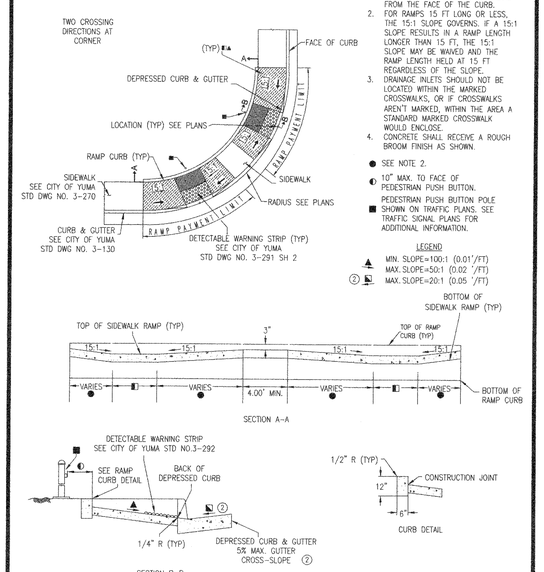
TYPE "A" CURB

(YUMA COUNTY STD-3-120) NTS **A 4**



CONCRETE SIDEWALK

(MAG STANDARDS 230) NTS **E 4**



GENERAL NOTES

1. RAMP CENTERLINE SHALL BE RADIAL FROM THE FACE OF THE CURB.
2. FOR RAMPS 15 FT LONG OR LESS, THE 15:1 SLOPE GOVERNS. IF A 15:1 SLOPE RESULTS IN A RAMP LENGTH LONGER THAN 15 FT, THE 15:1 SLOPE MAY BE WAIVED AND THE RAMP LENGTH HELD AT 15 FT REGARDLESS OF THE SLOPE.
3. DRAINAGE INLETS SHOULD NOT BE LOCATED WITHIN THE MARKED CROSSWALKS, OR IF CROSSWALKS AREN'T MARKED, WITHIN THE AREA A STANDARD MARKED CROSSWALK WOULD ENCLOSE.
4. CONCRETE SHALL RECEIVE A ROUGH BROOM FINISH AS SHOWN.

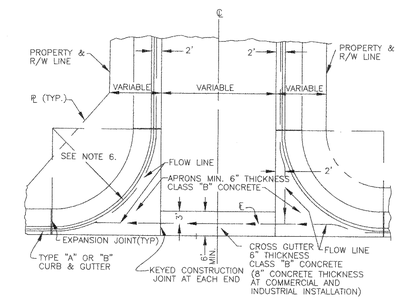
● SEE NOTE 2.
◐ 10" MAX. TO FACE OF PEDESTRIAN PUSH BUTTON.
■ PEDESTRIAN PUSH BUTTON POLE SHOWN ON TRAFFIC PLANS. SEE TRAFFIC SIGNAL PLANS FOR ADDITIONAL INFORMATION.

LEGEND

▲ MIN. SLOPE=100:1 (0.01'/FT)
MAX. SLOPE=50:1 (0.02 '/FT)
② ◣ MAX. SLOPE=20:1 (0.05 '/FT)

SIDEWALK RAMP

(YUMA COUNTY STD. 3-280) MODIFIED NTS **I 4**

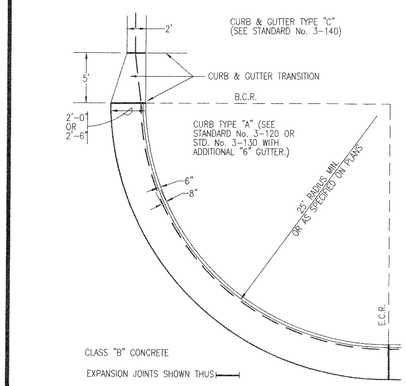


NOTES

1. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX. AS PER SECTION 3.3.8. OF PUBLIC WORKS STANDARDS
3. EXPANSION JOINT SPACING 20' MAX. AS PER SECTION 3.3.8. OF PUBLIC WORKS STANDARDS

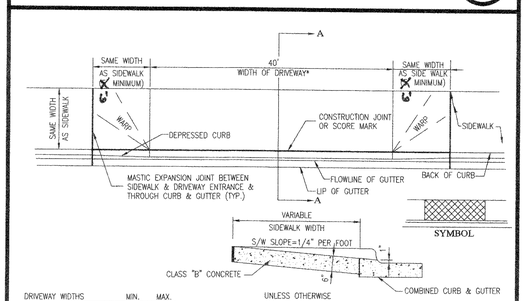
CONCRETE VALLEY GUTTER

(YUMA COUNTY STD-3-170) NTS **M 4**



CURB & GUTTER TRANSITION

(YUMA COUNTY STD-3-190) MODIFIED NTS **B 4**



DRIVEWAY WIDTHS	MIN.	MAX.
COMMERCIAL	16'	40'
INDUSTRIAL	16'	40'
RESIDENTIAL	12'*	30'

*16' DESIRABLE

ANY EXCEPTIONS TO THE ABOVE DIMENSIONS MUST BE APPROVED BY THE DEPARMENT OF PUBLIC WORKS.

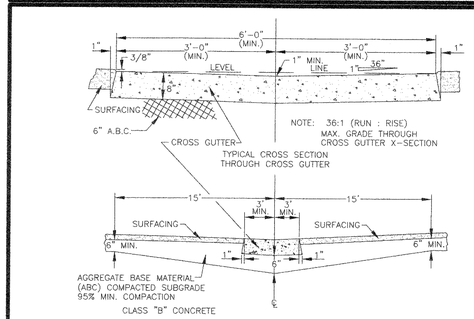
1C Modified for 5% D/W Slope.

NOTES

1. SIDEWALKS IN ALL CASES SHALL BE CONSTRUCTED ACROSS DRIVEWAY ENTRANCES.
2. CONTRACTION JOINT SPACING 10' MAX. AS PER SECTION 3.3.8. OF PUBLICS WORKS.
3. EXPANSION JOINTS AS PER SECTION 3.3.8. OF PUBLIC WORKS.

DRIVEWAY ENTRANCE

(MAG STANDARDS 250-1 OR 250-2) NTS **G 4**

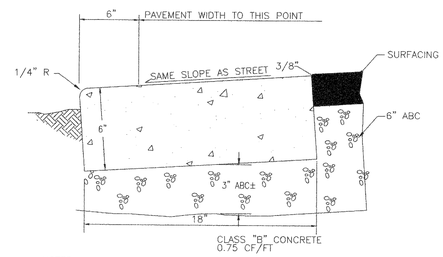


NOTES

1. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINT SPACING 20' MAX.
4. ASPHALT CROSS GUTTERS ARE NOT ALLOWED.
5. 6" ABC SHALL BE PLACED UNDER BOTH APRONS & CROSS-GUTTER COMPACTED TO A MIN. 95% DENSITY.
6. RADIUS REQUIREMENTS:
   A. LOCAL STREET: 25' MINIMUM
   B. COLLECTOR STREETS: 40' MINIMUM
   C. ARTERIAL STREETS: 50' MINIMUM
7. ALL CONCRETE JOINTS TO BE SEALED

CONCRETE CROSS GUTTER

(YUMA COUNTY STD. 3-180) NTS **K 4**

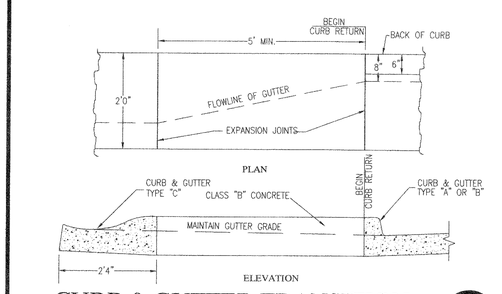


NOTES

1. ALL CONCRETE TO BE 2500 PSI @ 28 DAYS
2. BROOM FINISH EXPOSED SURFACE.
3. CONTRACTION JOINT SPACING AS PER SECTION 3.3.8 OF YUMA COUNTY PUBLIC WORKS STANDARDS.
4. EXPANSION JOINT SPACING 50' MAX. AS PER SECTION 3.3.8 OF YUMA COUNTY PUBLIC WORKS STANDARDS.

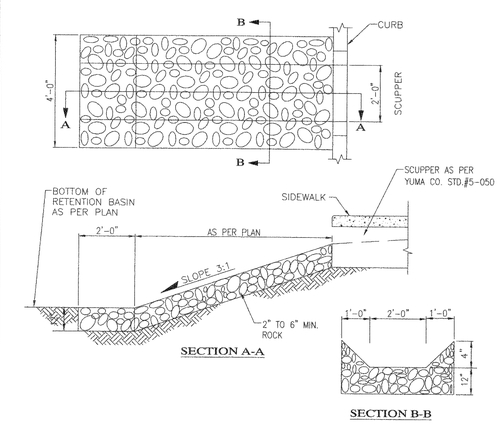
PAVEMENT BORDER CURB

(YUMA COUNTY STD-3-160) NTS **N 4**



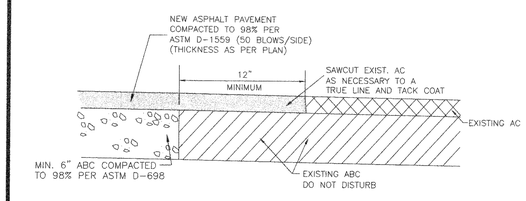
CURB & GUTTER TRANSITION

(YUMA COUNTY STD-3-200) NTS **C 4**



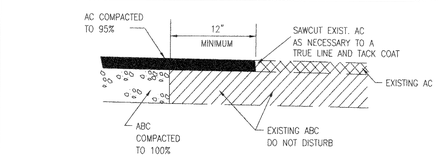
ROCK SPILLWAY

NTS **H 4**



SAWCUT DETAIL

NTS **L 4**



SAWCUT DETAIL

NTS **D 4**

REVISED: 12/01/10

Registered Professional Engineer (Civil) CERTIFICATE NO. 26844 NAZIR K. EDAIS Date Signed 06/08/10 ARIZONA, U.S.A. EXPIRES 3/31/11

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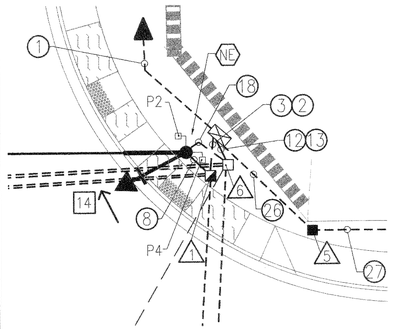
IMPROVEMENTS FOR INTERSECTION OF 48th STREET & FOOTHILLS BOULEVARD

CONSTRUCTION DETAILS

SCALE: AS SHOWN	DESIGNED BY: N.K.E.	CHECKED BY: N.K.E.
DATE: OCT. "15"	DRAWN BY: M.J.O.	JOB No. 15-019

EDAIS Engineering, Inc.
PLANNING-ENG.-SURVEYING-ARCHITECTURAL
3075 S. Ave. 4E Yuma, Arizona 85365
(928) 344-3566 FAX (928) 341-1075
EMAIL: EE@Edaisengineering.com

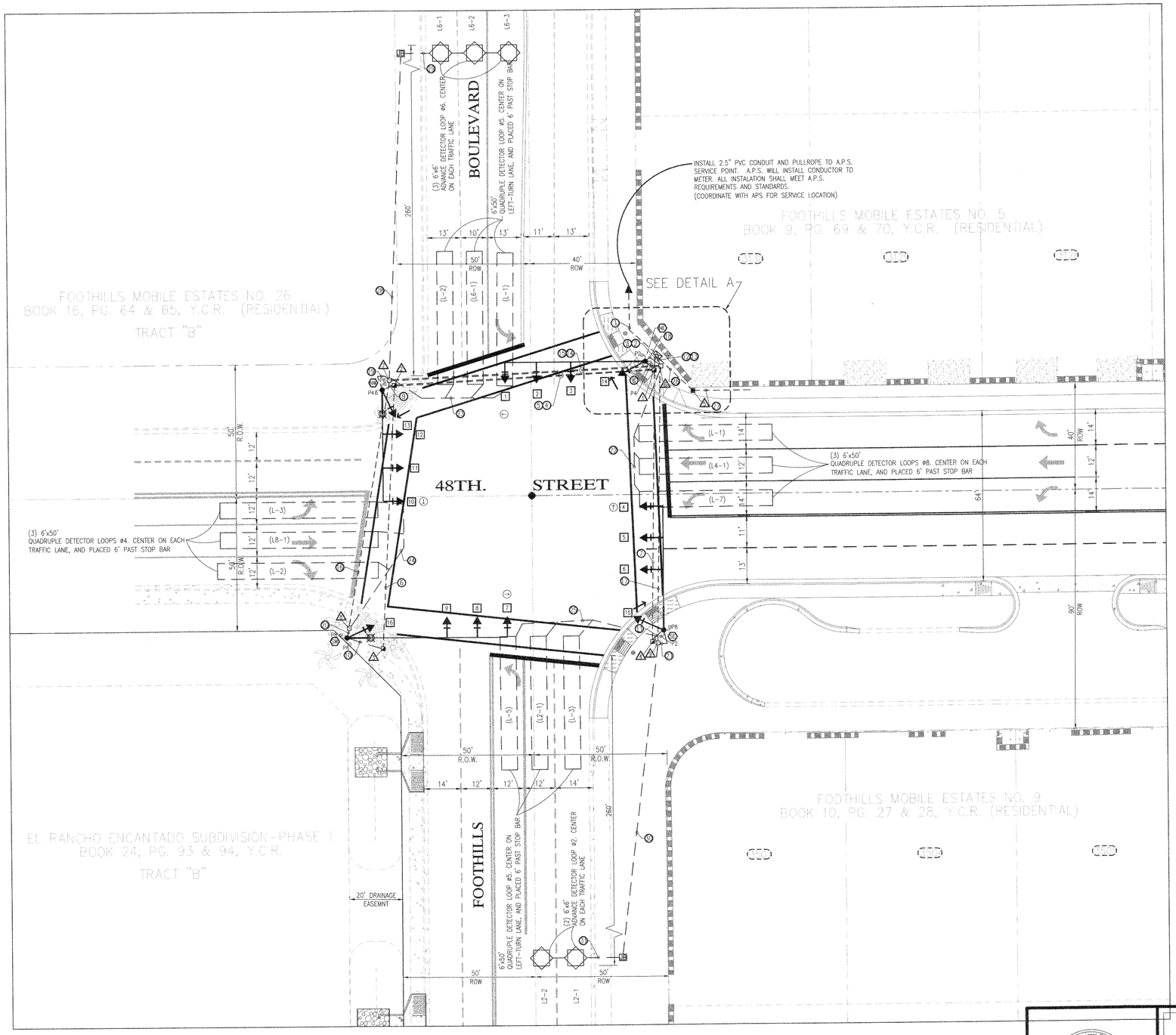
SHEET 4

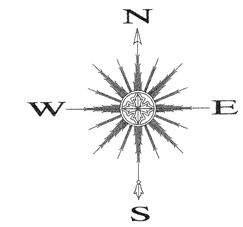


DETAIL A

NE POLE & MAST ARM, LUMIINAIRE ARM, CONDUIT, PULL BOX, PEDESTRIAN SIGNAL FACE, AND CONTROLLER CABINET DETAIL

SCALE: 1'=10'



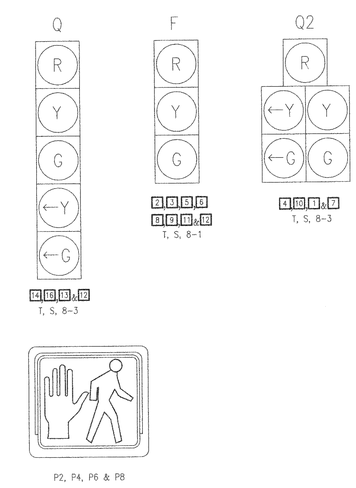


SCALE: 1"=20'

LEGEND

	3-SECTION VEHICLE SIGNAL FACE WITH PHASE NUMBER AND UNIQUE NUMBER.
P4	PEDESTRIAN SIGNAL FACE WITH PHASE NUMBER
	NUMBER 5 PULL BOX
	NUMBER 7 PULL BOX
	TYPE FO PULL BOX (STD. NO. 6-031)
	PEDESTRIAN PUSHBUTTON POLE
	CONTROLLER CABINET W/SERVICE ENCLOSURE
NE	POLE OR POST IDENTIFIER
2	CONDUIT IDENTIFIER
	TURN LANE LIGHT DIRECTION INDICATOR
1	SIGNAL FACE IDENTIFIER
	PULL BOX IDENTIFIER
L4-2	LOOP IDENTIFIER
	LOOP NUMBER ON PHASE ASSOCIATED PHASE
(L5)	FUTURE LOOP PHASE ASSOCIATION
J2	JUNCTION BOX
	POLE & MAST ARM
	LUMINAIRE ARM
	ADVANCE DETECTOR LOOP
D.M.T.	DETECTABLE MARKING TAPE

SIGNAL FACE LEGEND



CALL TWO WORKING DAYS BEFORE YOU DIG
263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

Registered Professional Engineer (Civil) CERTIFICATE NO. 26844 NAIDIR K. EDAIS Date Signed 08/28/15 ARIZONA, U.S.A. EXPIRES 3/31/17

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IMPROVEMENTS FOR INTERSECTION OF 48th STREET & FOOTHILLS BOULEVARD

TRAFFIC SIGNAL PLAN

SCALE: AS SHOWN	DESIGNED BY: N.K.E.	CHECKED BY: N.K.E.
DATE: OCT. "15"	DRAWN BY: M.J.O.	JOB No. 15-019

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EMAIL: EE@Edaisengineering.com

SHEET 5

GENERAL NOTES:

1. ALL MATERIALS AND INSTALLATION SHALL CONFORM TO ADOT STANDARD SPECIFICATIONS AND CITY OF YUMA CONSTRUCTION STANDARD DETAILS.
2. THE LOCATION OF UTILITIES SHOWN ON THE PLANS IS APPROXIMATE. ALL INVOLVED UTILITIES MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITIES FOR EXACT LOCATION PRIOR TO ANY CONSTRUCTION ACTIVITIY.
3. THE CONTRACTOR SHALL COORDINATE ALL WORK THROUGH THE YUMA COUNTY ENGINEER & PUBLIC WORKS DIRECTOR.
4. ALL GREEN, YELLOW AND RED SIGNALS SHALL HAVE LED TRAFFIC LAMPS THAT MEET OR EXCEED ITE SPECIFICATION DATED JULY 1998.
5. LUMINAIRES SHALL BE 250W HPS, 240V, TYPE III, MEDIUM CUTOFF. LUMINAIRES SHALL HAVE SHORTING CAPS. PHOTO CELL WILL BE MOUNTED ON THE POWER CABINET. PHOTO CELL WILL CONTROL I.S.N.S. AND LUMINAIRES.
6. THE CONTRACTOR SHALL FIELD VERIFY ALL SIGNAL POLE FOUNDATION LOCATIONS WITH THE ENGINEER, PRIOR TO ANY INSTALLATION.
7. THE CONTROL CABINET SHALL BE WIRED AND LABELED WITH THE SAME PHASE NUMBER DESIGNATIONS FOR PHASE AS SHOW IN THE PHASE MOVEMENT DIAGRAM OR AS NOTED ON THE PLANS. EACH CONNECTOR SHALL HAVE ALL PINS WITHIN THE CONNECTOR BROUGHT TO CABINET TIE POINTS. ANY CONTROL CABINET NOT WIRED ACCORDINIGLY WILL BE REJECTED BY THE ENGINEER.
8. SPECIAL ADA PEDESTRIAN PUSH BUTTON SHALL BE INSTALLED. SEE SPECIAL PROVISIONS FOR PEDESTRIAN PUSH BUTTON ASSEMBLY AND INSTALLATION REQUIREMENTS.
9. THE LOOP DETECTORS SHALL BE INSTALLED PER C.O.Y. STD. 6-400 EXCEPT ALL STOP BAR LOOPS SHALL BE INSTALLED 6' PAST THE STOP BAR, POLE LOCATIONS SHOULD BE POT-HOLED BY THE DESIGNER TO VERIFY.
10. ALL BACKPLATES FOR SIGNAL FACES SHALL BE LOUVERED.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION AND ACTUAL ESTABLISHMENT OF ELECTRIAL SERVICE WITH APS.
12. ALL EXPOSED CONDUIT AND FITTINGS INSTALLED ABOVE GROUND, SHALL BE THE RIGID METAL TYPE PER THE STANDARD SPECIFICATIONS.
13. THE CONTRACTOR SHALL CONTACT YUMA COUNTY ENGINEER & PUBLIC WORKS DIRECTOR BEFORE DRILLING POLES FOR PUSH BUTTON ASSEMBLIES AND TRAFFIC SIGNALS MOUNTING ASSEMBLIES FOR EXACT LOCATION.
14. THE CONTRACTOR SHALL CONTACT YUMA COUNTY ENGINEER, PUBLIC WORKS DIRECTOR AND C.O.Y. TRAFFIC SIGNAL SUPERVISOR TO SCHEDULE THE TRAFFIC SIGNAL TURN-ON. THE CONTRACTOR SHALL ALSO CONTACT THE ELECTRICAL INSPECTOR PRIOR TO THE TRAFFIC SIGNAL TURN-ON.
15. THE CONTRACTOR SHALL NOTIFY THE COUNTY 14 DAYS PRIOR TO THE TIME THE SIGNAL TIMINGS WILL BE REQUIRED. INTERSECTION TIMING SHALL BE FURNISHED TO THE CONTRACTOR BY THE COUNTY OF YUMA FOR INSTALLATION AND SET-UP BY THE CONTRACTOR.
16. ALL STRIPPING SHALL BE INSTALLED PRIOR TO DAY OF TURN-ON.
17. ALL LOOP DETECTOR SHALL BE INSTALLED AND FUNCTIONAL BEFORE THE DAY OF TURN-ON
18. FOR SERVICE REQUIREMENT, CONTACT ARIZONA PUBLIC SERVICE COMPANY AT (928) 336-9869 A MINIMUM OF 7-WORKING DAYS BEFORE SERVICE IS REQUIRED. CONTRACTOR IS RESPONSIBLE FOR ALL INSPECTIONS AND INSPECTION REQUIREMENTS.
19. THE CONTROL CABINET SHALL BE DELIVERED TO CITY OF YUMA, ARIZONA FOR TESTING PER SECTION 734-2.01(E) & (F).

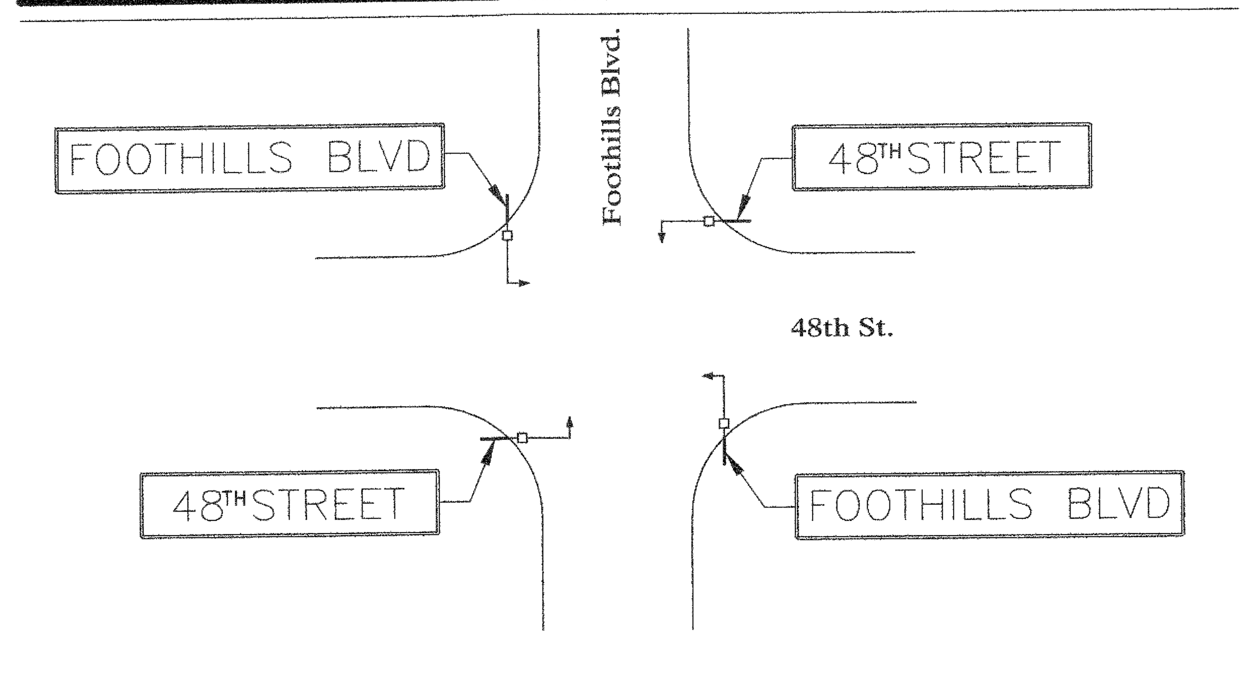
POLE SCHEDULE

TRAFFIC SIGNAL CONTROLLER				REMARKS	POLE LOCATION
CABINET	TYPE	CONTROLLER	AUX. CONTROL		
CONTROL CABINET, PEC	TYPE "0" CONTROLLER CABINET WITH SERVICE PEDESTAL	ECONOLITE ASC/25-1000 PER CITY OF YUMA SPECIFICATIONS		CABINET AND CONTROLLER SUPPLIED BY CONTRACTOR	APPROXIMATELY AS SHOWN ON PLANS

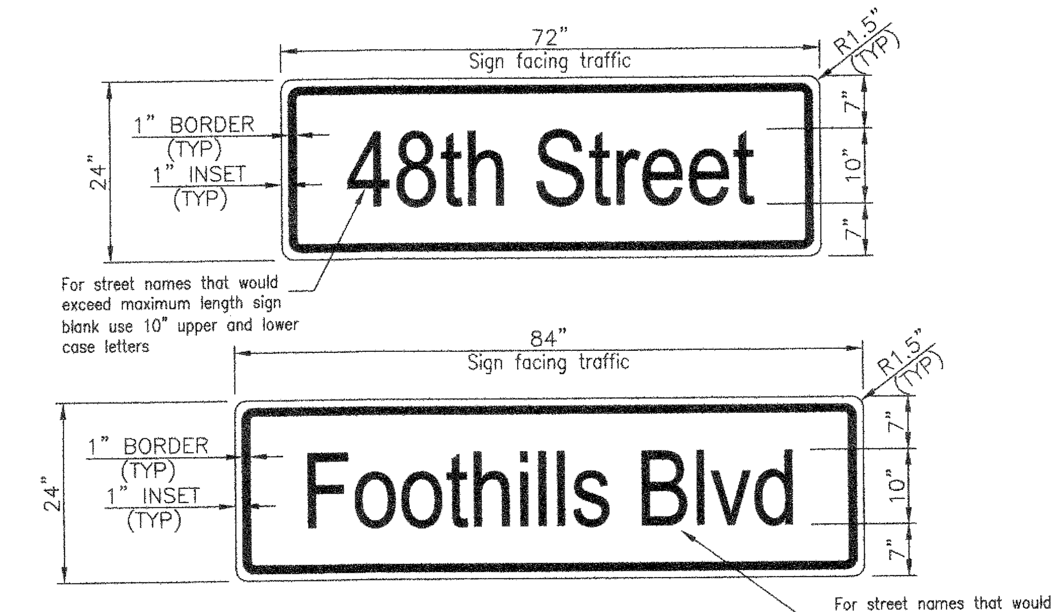
POLE No.	POLE TYPE	MAST ARM SIG.	MAST ARM LUM.	SIGNALS FACE	SIGNALS MOUNT	PEDESTRIANS POLE SIDE	PEDESTRIANS PHASE	PUSH BUTTON SIGN	REMARKS	DISTANCE FROM CENTERLINE 48TH STREET	DISTANCE FROM CENTERLINE BLVD FOOTHILLS
(NE) TYPE "SP-1A" POLE, 50' MAST ARM; 12' 12'; 1-Q2 1-F 1-F; 1-Q 1-M/H; PED. P.B.S. w/R10-4b(R)(L)	SP-1B	55'		1-Q2 2-F 1-R 1-M/H	1-G 2-F 1-F 1-B	S & W	2 & 4	T.S.11-4 R10-4b(R)(L)	400 WATT, 240V HPS LUMINAIRE, 2-TYPE 1 PPB	50' NORTH	43' EAST
(NW) TYPE "SP-1B" POLE WITH DAVIT, 45' MAST ARM 400W H.P.S., 8' LUMINAIRE; 12' 12'; 1-Q2 1-F 1-F; 1-Q 1-M/H; PED. P.B.S. w/R10-4b(R)(L)	SP-1B	45'	8'	1-R 2-F 1-Q 1-M/H	1-G 2-F 1-F 1-B	S & E	6 & 4	T.S.11-4 R10-4b(R)(L)	400 WATT, 240V HPS LUMINAIRE, 2-TYPE 1 PPB	40' NORTH	56' WEST
(SW) TYPE "SP-1B" POLE WITH DAVIT, 60' MAST ARM 400W H.P.S., 8' LUMINAIRE; 12' 12'; 1-Q2 1-F 1-F; 1-Q 1-M/H; PED. P.B.S. w/R10-4b(R)(L)	SP-1B	60'	8'	1-Q2 2-F 1-R 1-M/H	1-G 2-F 1-F 1-B	N & E	6 & 8	T.S.11-4 R10-4b(R)(L)	400 WATT, 240V HPS LUMINAIRE, 2-TYPE 1 PPB	53' SOUTH	70' WEST
(SE) TYPE "SP-1A" POLE, 50' MAST ARM; 12' 12'; 1-Q2 1-F 1-F; 1-Q 1-M/H; PED. P.B.S. w/R10-4b(R)(L)	SP-1B	50'		1-R 2-F 1-Q 1-M/H	1-G 2-F 1-F 1-B	N & W	2 & 8	T.S.11-4 R10-4b(R)(L)	400 WATT, 240V HPS LUMINAIRE, 2-TYPE 1 PPB	54' SOUTH	45' EAST

NOTE: POLE HEIGHT(H) = 30 FEET
LUMINAIRE ARM V = 2.5 FEET, L=8

STREET NAME SIGN DETAIL



NOTE:
MUST CONFORM TO CITY OF YUMA STD. #6-100.



24" SIGNS
Proposed ASTM Type XI Reflective Sheeting
Green/White (1 Side)
Typestyle: Clearview 2-W or 3-W
Blank Sizes: 24" x 60", 24" x 72", 24" x 84"
Blank Type: 0.125 Treated Aluminum

Intended Usage: 24" Metro Street Name Signs shall be used on signalized major roads with a speed limit of 35MPH or higher.
Sign imaging: Must meet FHWA standards. Must be acrylic based electronic cuttable film (1170 series or equivalent) or silk screen ink. All inks and films shall be graffiti resistant.

STREET NAME SIGNS

NTS — A/6

CONDUCTOR SCHEDULE

CONDUIT	POLE	CONDUIT TYPE	CONDUIT SCHEDULE	SIZE (INCHES)	FUNCTION
1	–	PVC	40	2.5	POWER SERVICE
2	–	PVC	40	3	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)
3	–	PVC	40	3	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)
4	–	PVC	40	3	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)
5	–	PVC	40	3	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)
6	–	PVC	40	3	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)
7	–	PVC	40	3	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)
8	–	PVC	40	3	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)
9	–	PVC	40	3	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)
10	–	PVC	40	3	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)
11	–	PVC	40	3	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)
12	–	PVC	40	2	LOOP LEAD-IN CABLES, PUSH-BUTTONS CABLES
13	–	PVC	40	2	LOOP LEAD-IN CABLES, PUSH-BUTTONS CABLES
14	–	PVC	40	2	LOOP LEAD-IN CABLES, PUSH-BUTTONS CABLES
15	–	PVC	40	2	LOOP LEAD-IN CABLES, PUSH-BUTTONS CABLES
16	–	PVC	40	2	LOOP LEAD-IN CABLES, PUSH-BUTTONS CABLES
17	–	PVC	40	2	LOOP LEAD-IN CABLES, PUSH-BUTTONS CABLES
18	–	PVC	40	2	PUSH-BUTTONS CABLES
19	–	PVC	40	2	PUSH-BUTTONS CABLES
20	–	PVC	40	2	PUSH-BUTTONS CABLES
21	–	PVC	40	2	PUSH-BUTTONS CABLES
22	–	PVC	40	2	LOOP WIRE
23	–	PVC	40	2	LOOP WIRE
24	–	PVC	40	2	LOOP WIRE
25	–	PVC	40	2	LOOP WIRE
26	–	PVC	40	2	PULL CORD
27	–	PVC	40	2	PULL CORD
28	–	PVC	40	2	LOOP LEAD-IN CABLES
29	–	PVC	40	2	LOOP LEAD-IN CABLES
30	–	PVC	40	2	LOOP LEAD-IN CABLES
31	–	PVC	40	2	LOOP LEAD-IN CABLES
–	NE	–	–	–	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)PUSH-BUTTONS CABLES
–	NW	–	–	–	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)PUSH-BUTTONS CABLES
–	SW	–	–	–	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)PUSH-BUTTONS CABLES
–	SE	–	–	–	SIGNAL CABLES (SIGNALS, STREET LIGHTS, ISNS)PUSH-BUTTONS CABLES

CABLE REQUIREMENTS

IMSA CABLE SPEC. 19-1, #12 AWG
20 CONDUCTOR CONTROLLER-SIGNAL POLE CABLE

CONDUCTOR NUMBER	INSULATION COLOR	INSULATION TRACER	SIGNALS	SIGNAL COLOR
1	BLACK	---	SPARE	---
2	WHITE	---	VEHICLE SIGNALS	COMMON
3	RED	---	MAST ARM THROUGH PHASE-A	RED
4	GREEN	---	MAST ARM THROUGH PHASE-A	GREEN
5	ORANGE	---	MAST ARM THROUGH PHASE-A	YELLOW
6	BLUE	---	MAST ARM THROUGH PHASE PED-D	MAN
7	WHITE	BLACK	MAST ARM THROUGH PHASE PED-D	HAND
8	RED	BLACK	MAST ARM END-B	SPARE
9	GREEN	BLACK	MAST ARM END-B	GREEN ARROW
10	ORANGE	BLACK	MAST ARM END-B	YELLOW ARROW
11	BLUE	BLACK	CROSS STREET THROUGH PHASE PED-E	MAN
12	BLACK	WHITE	CROSS STREET THROUGH PHASE PED-E	HAND
13	RED	WHITE	POLE SIDE CROSS STREET-C	RED
14	GREEN	WHITE	POLE SIDE CROSS STREET-C	GREEN
15	BLUE	WHITE	POLE SIDE CROSS STREET-C	GREEN ARROW
16	BLACK	RED	POLE SIDE CROSS STREET-C	YELLOW ARROW
17	WHITE	RED	PEDESTRIAN SIGNALS	COMMON
18	ORANGE	RED	POLE SIDE CROSS STREET-C	YELLOW
19	BLUE	RED	SPARE	---
20	RED	GREEN	SPARE	---

IMSA CABLE SPEC. 19-1, #12 AWG
4 CONDUCTOR CONTROLLER - SIGNAL POLE CABLE

CONDUCTOR NUMBER	INSULATION COLOR	FUNCTION
1	BLACK	SPARE
2	WHITE	COMMON
3	RED	ø4 OR ø8 BUTTON
4	GREEN	ø2 OR ø6 BUTTON, IF ANY

IMSA CABLE SPEC. 19-1, #12 AWG
4 CONDUCTOR CABLE TO PUSH -BUTTON

CONDUCTOR NUMBER	INSULATION COLOR	FUNCTION
1	BLACK	SPARE
2	WHITE	COMMON
3	RED	BUTTON
4	GREEN	SPARE

IMSA CABLE SPEC. 19-1, #12 AWG
4 CONDUCTOR CABLE TO 3-SECTION SIGNAL FACE

CONDUCTOR NUMBER	INSULATION COLOR	FUNCTION
1	BLACK	YELLOW
2	WHITE	COMMON
3	RED	RED
4	GREEN	GREEN

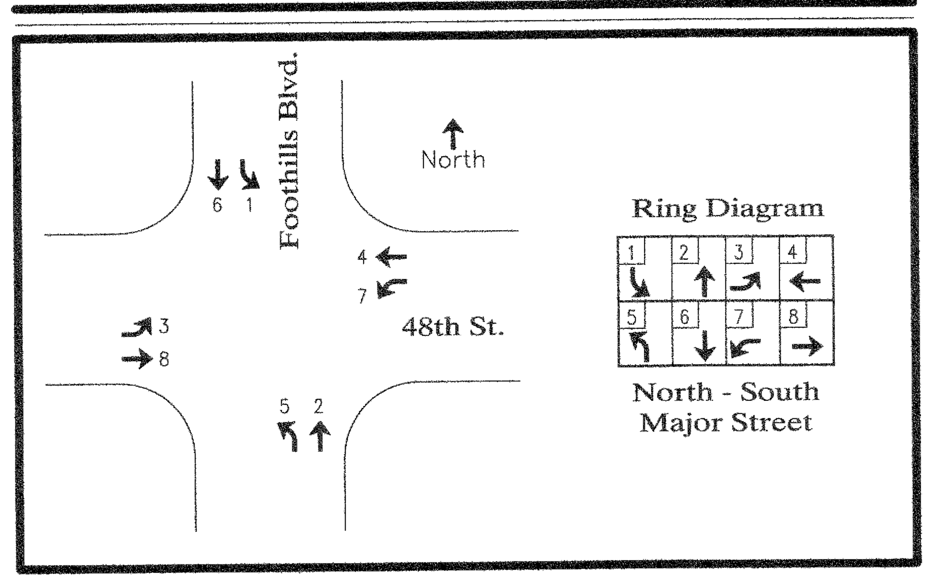
IMSA CABLE SPEC. 19-1, #12 AWG
7 CONDUCTOR CABLE TO MAST ARM END SIGNAL FACE

CONDUCTOR NUMBER	INSULATION COLOR	TRACER	FUNCTION
1	BLACK	---	YELLOW
2	WHITE	---	COMMON
3	RED	---	RED
4	GREEN	---	GREEN
5	ORANGE	---	YELLOW ARROW
6	BLUE	---	GREEN ARROW
7	WHITE	BLACK	SPARE

IMSA CABLE SPEC. 19-1, #12 AWG
4 CONDUCTOR CABLE TO PEDESTRIAN SIGNAL

CONDUCTOR NUMBER	INSULATION COLOR	FUNCTION
1	BLACK	SPARE
2	WHITE	COMMON
3	RED	HAND
4	GREEN	MAN

PHASE ASSIGNMENTS



PULL BOX SCHEDULE

PULL BOX NUMBER	TYPE No.	DISTANCE FROM ℄ 48TH. STREET	DISTANCE FROM ℄ FOOTHILLS BOULEVARD
1	7 W/EXT.	46' NORTH	44' EAST
2	7	42' NORTH	51' WEST
3	7	57' SOUTH	56' WEST
4	7	58' SOUTH	40' EAST
5	FO	39' NORTH	52' EAST
6	5	47' NORTH	47' EAST
7	5	44' NORTH	53' WEST
8	5	49' SOUTH	69' WEST
9	5	59' SOUTH	43' EAST

Registered Professional Engineer (Civil) CERTIFICATE NO. 26844 NAJEH K. EDAIS, Date Signed 06/28/16, ARIZONA, U.S.A., EXPIRES 3/31/17

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IMPROVEMENTS FOR INTERSECTION OF 48th STREET & FOOTHILLS BOULEVARD

POLE AND CONDUCTOR SCHEDULE

SCALE: AS SHOWN	DESIGNED BY: N.K.E.	CHECKED BY: N.K.E.
DATE: OCT. "15"	DRAWN BY: M.J.O.	JOB No. 15-019

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