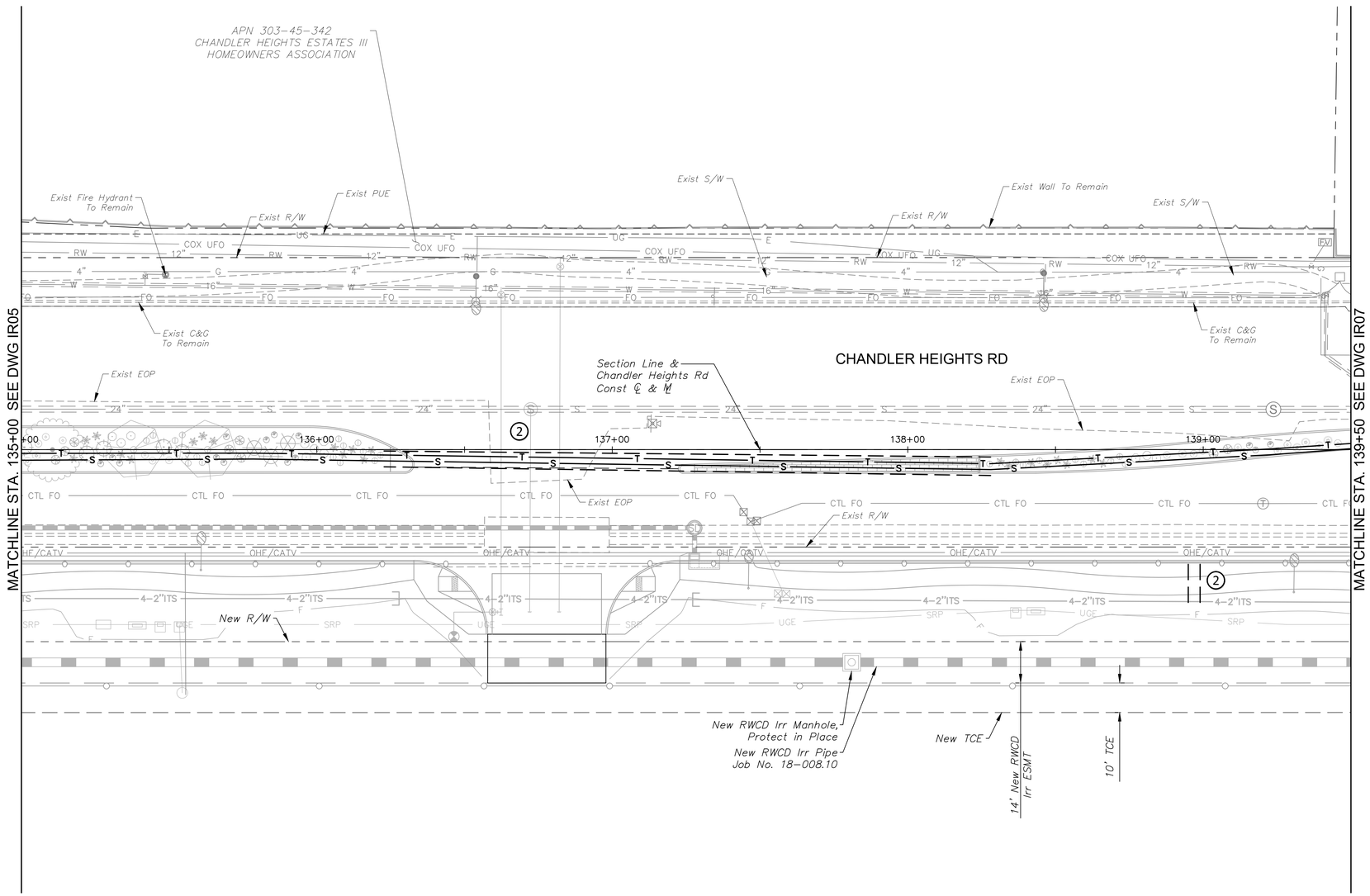


NORTH

IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼" Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE

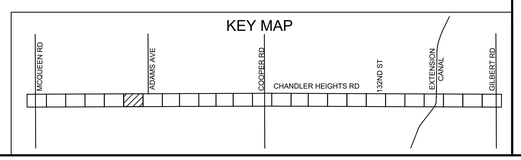
DRIP-SHRUBS		
5.8 GPM	1"	#

VALVE FLOW — VALVE # — VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
2. EXISTING PLANTS TO REMAIN SHALL CONTINUE TO BE WATERED WITH EXISTING IRRIGATION SYSTEM, WHERE APPLICABLE. WHERE NOT FEASIBLE, PROVIDE WATER WITH NEW PIPE LATERALS.
3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

KEY MAP



GRAPHIC SCALE IN FEET
0 10 20 40

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2019 KIMLEY-HORN AND ASSOCIATES, INC.
7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08-11-21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

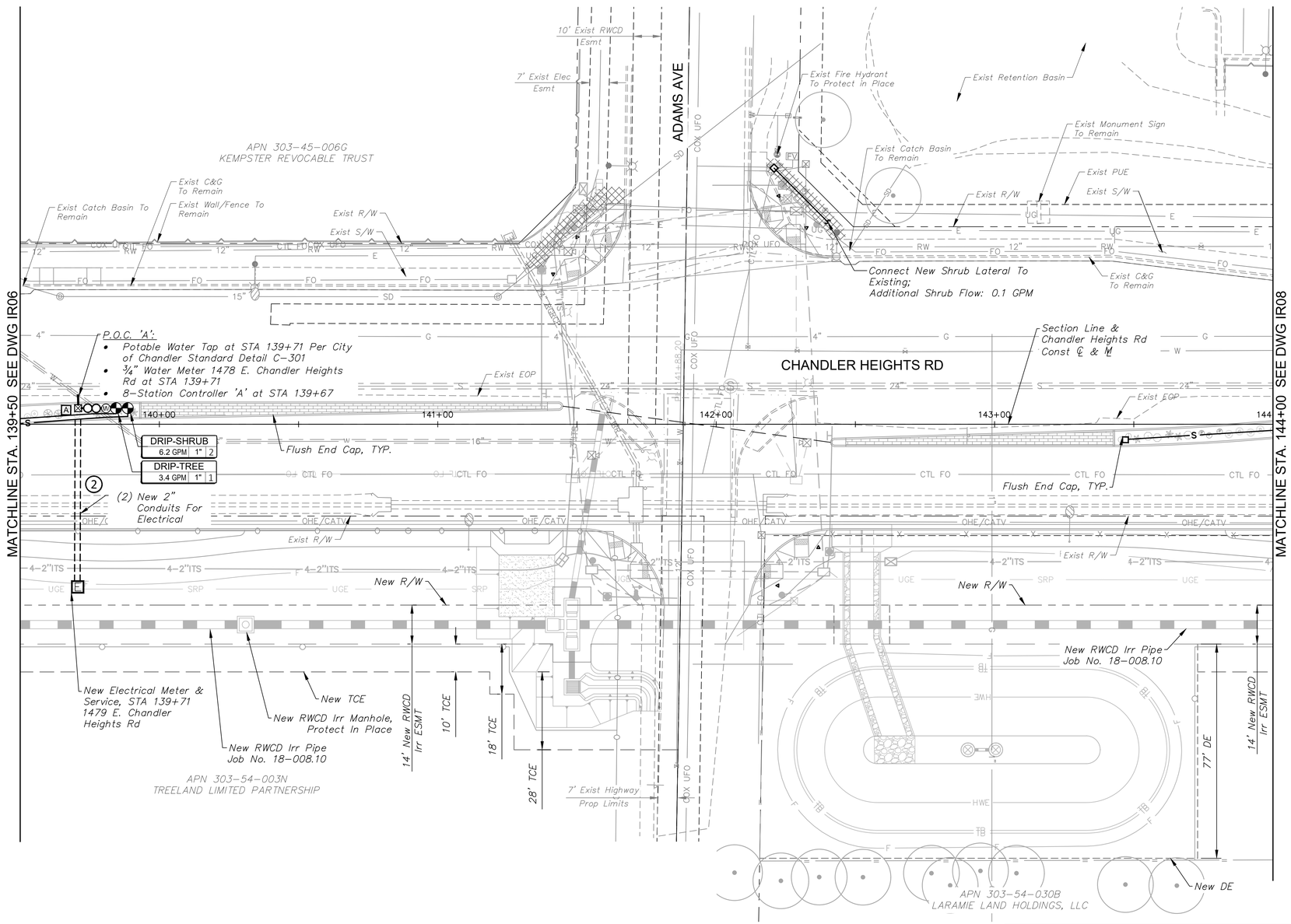
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 135+00 TO STA 139+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR06

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By: Spinolo, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR06 September 09, 2021 08:16:16pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_01.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

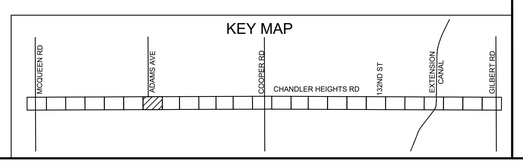
DRIP-SHRUBS | 5.8 GPM | 1" | #

VALVE ZONE; VALVE FLOW; VALVE #; VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
2. EXISTING PLANTS TO REMAIN SHALL CONTINUE TO BE WATERED WITH EXISTING IRRIGATION SYSTEM, WHERE APPLICABLE. WHERE NOT FEASIBLE, PROVIDE WATER WITH NEW PIPE LATERALS.
3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

KEY MAP



GRAPHIC SCALE IN FEET 0 10 20 40

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No.	REVISIONS	DATE	BY

Kimley»Horn
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7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 50615 ANNE S. DEBOARD Date Signed 08.11.21 ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H): 1"=20'
SCALE (V): N/A
DESIGNED BY: ASD
DRAWN BY: RAS
CHECKED BY: ASD
DATE: 08/2021

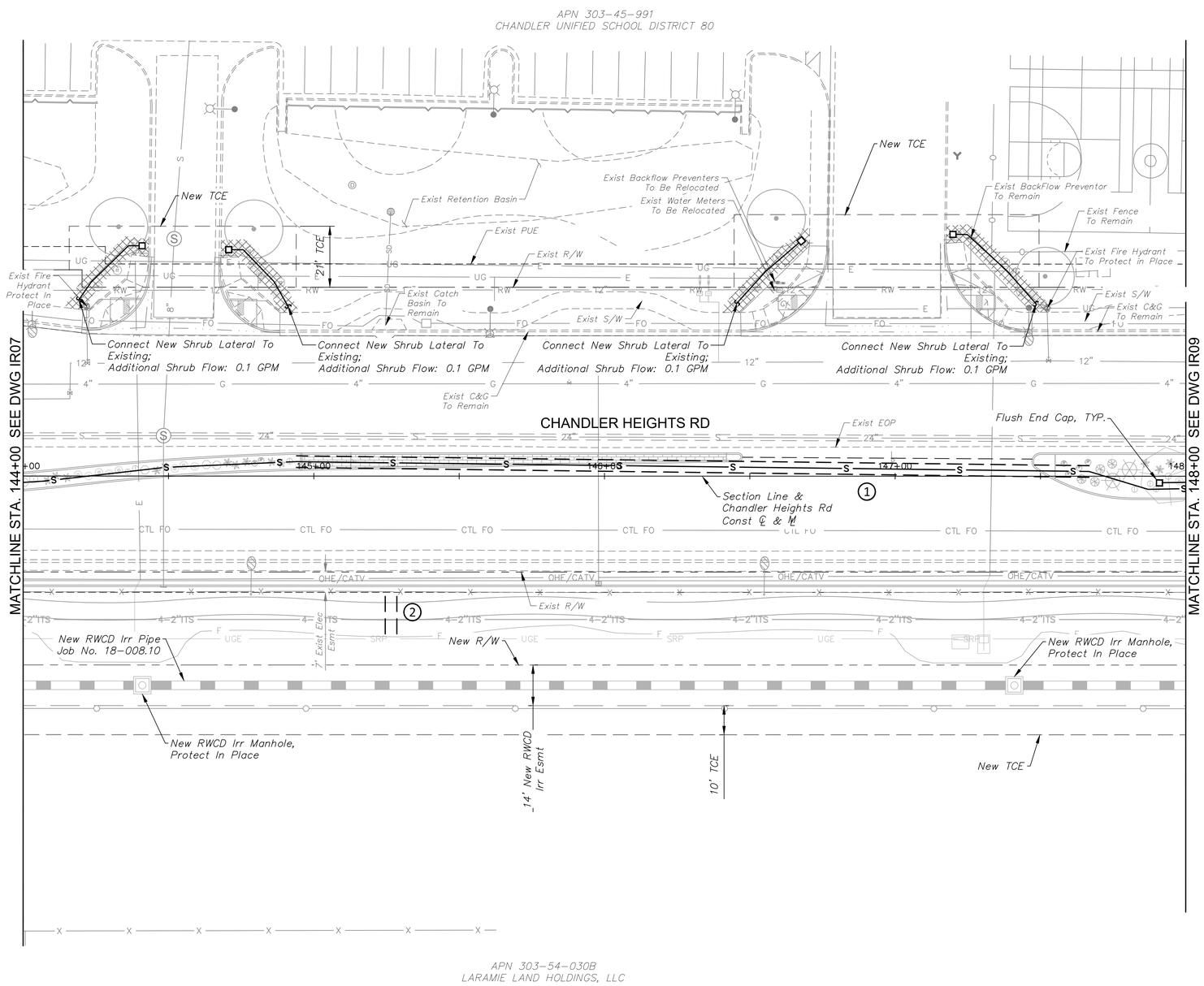
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 139+50 TO STA 144+00

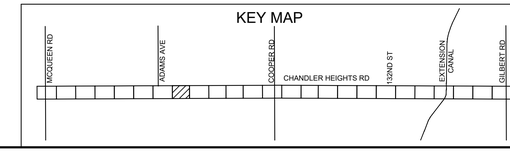
CITY PROJECT NO. ST1614.401
FEDERAL NO. CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG IR07

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR07 September 09, 2021 08:16:30pm K:\PHX_Roadway\191466108-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466108_IR_01.dwg





IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE

DRIP-SHRUBS | 5.8 GPM | 1" | #

VALVE FLOW — VALVE # — VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
2. EXISTING PLANTS TO REMAIN SHALL CONTINUE TO BE WATERED WITH EXISTING IRRIGATION SYSTEM, WHERE APPLICABLE. WHERE NOT FEASIBLE, PROVIDE WATER WITH NEW PIPE LATERALS.
3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

GRAPHIC SCALE IN FEET
0 10 20 40

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Expires 03/31/2022

SCALE (H): 1"=20'	
SCALE (V): N/A	
DESIGNED BY: ASD	
DRAWN BY: RAS	
CHECKED BY: ASD	
DATE: 08/2021	

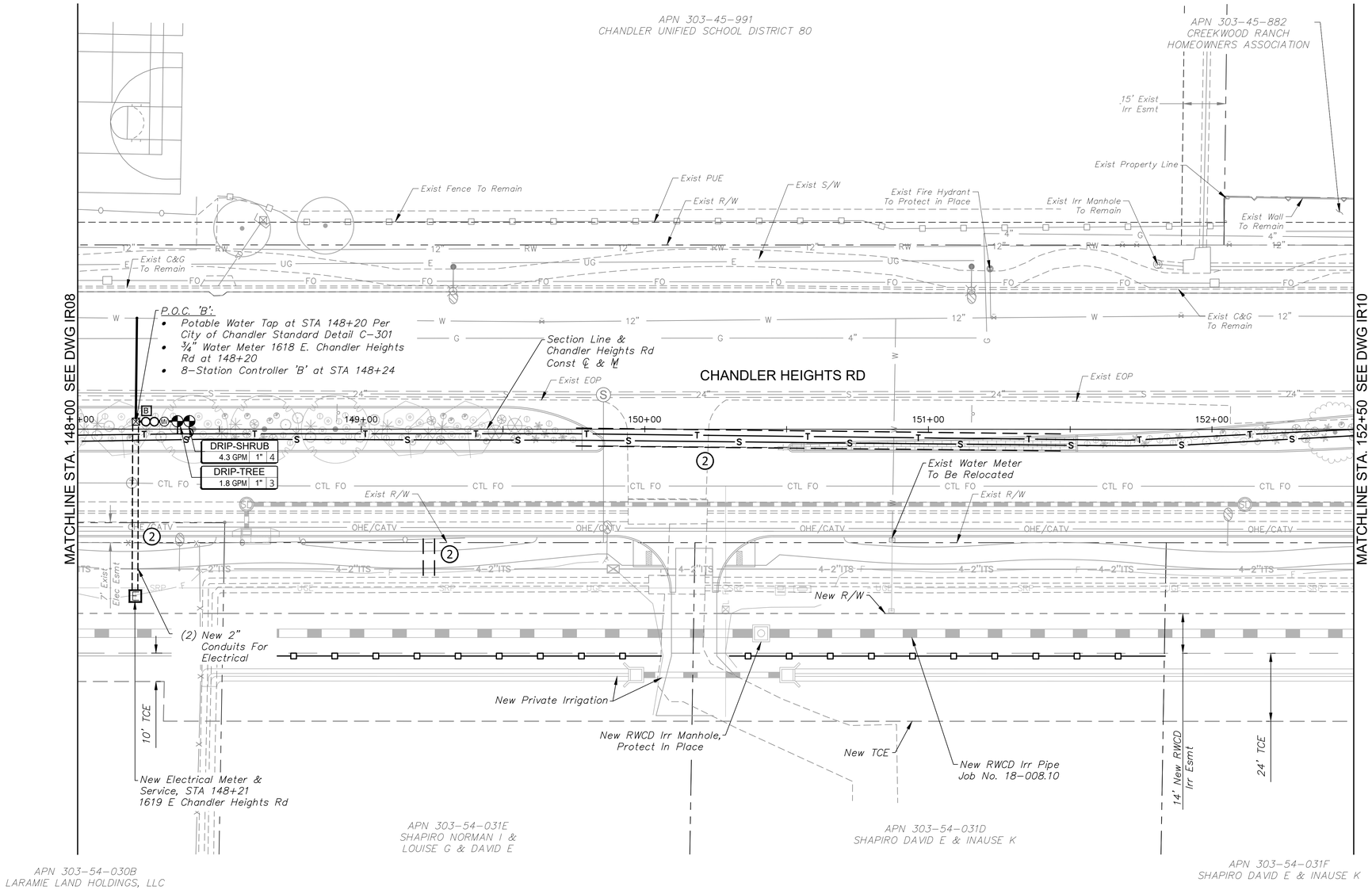
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
LANDSCAPE IRRIGATION PLANS
STA 144+00 TO STA 148+00

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR08

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR08 September 09, 2021 08:16:45pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_01.dwg



NORTH

IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼" Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE

DRIP-SHRUBS
5.8 GPM 1" #

VALVE FLOW — VALVE # — VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
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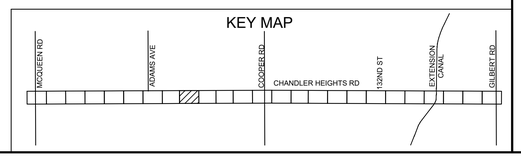
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

KEY MAP



GRAPHIC SCALE IN FEET
0 10 20 40

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REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 50615 ANNE S. DEBOARD Date Signed 08/13/21 ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

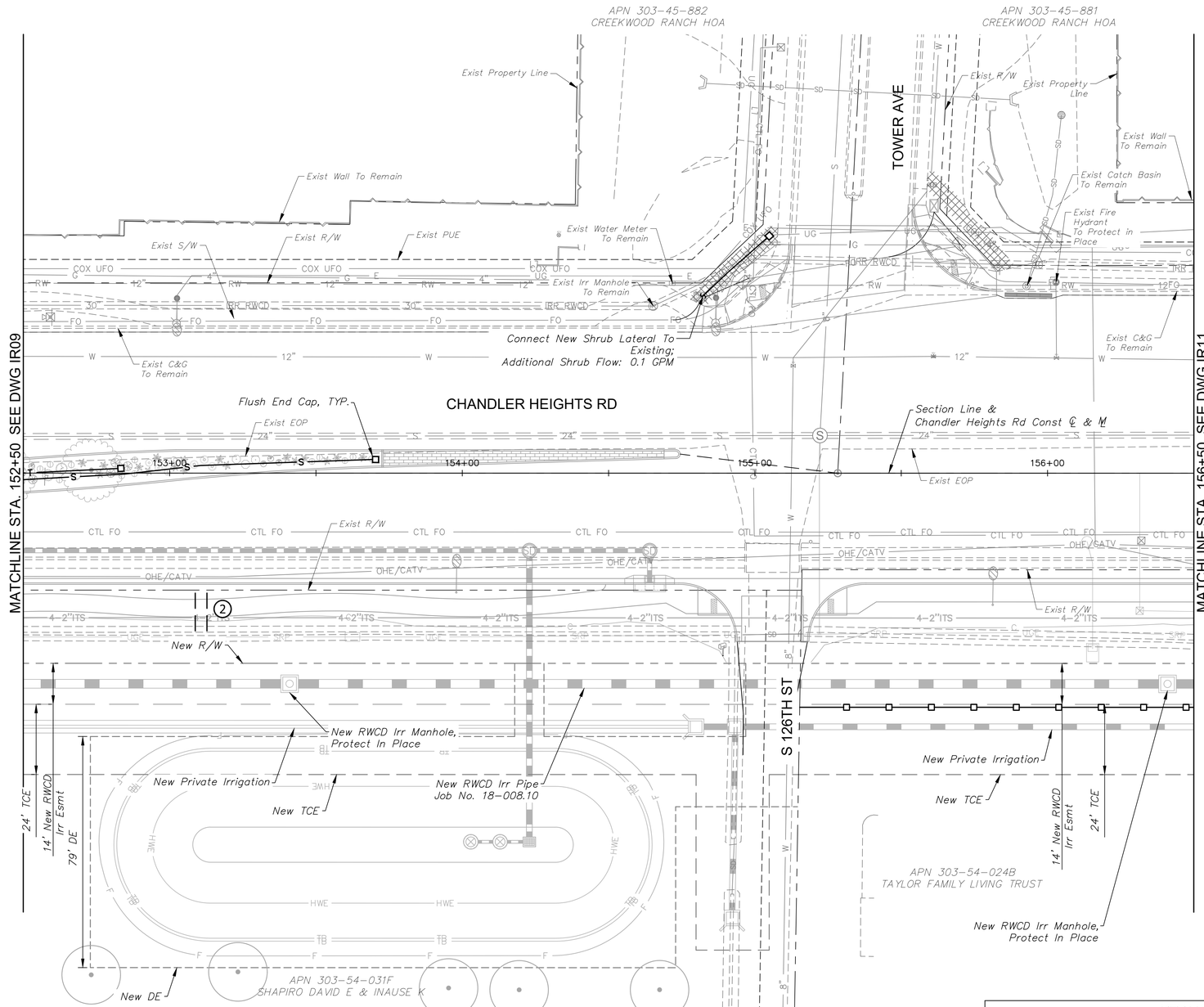
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 148+00 TO STA 152+50

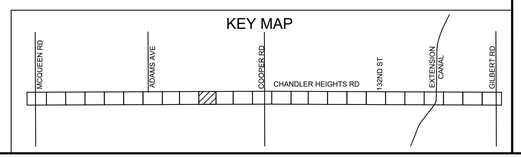
CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR09

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR09 September 09, 2021 08:17:00pm K:\PHX_Roadway\191466108-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466108_IR_01.dwg





IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
⊠	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
○○	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
□	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼" Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

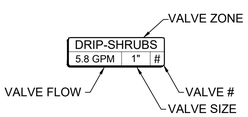
PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY



IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
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3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

GRAPHIC SCALE IN FEET
0 10 20 40

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DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

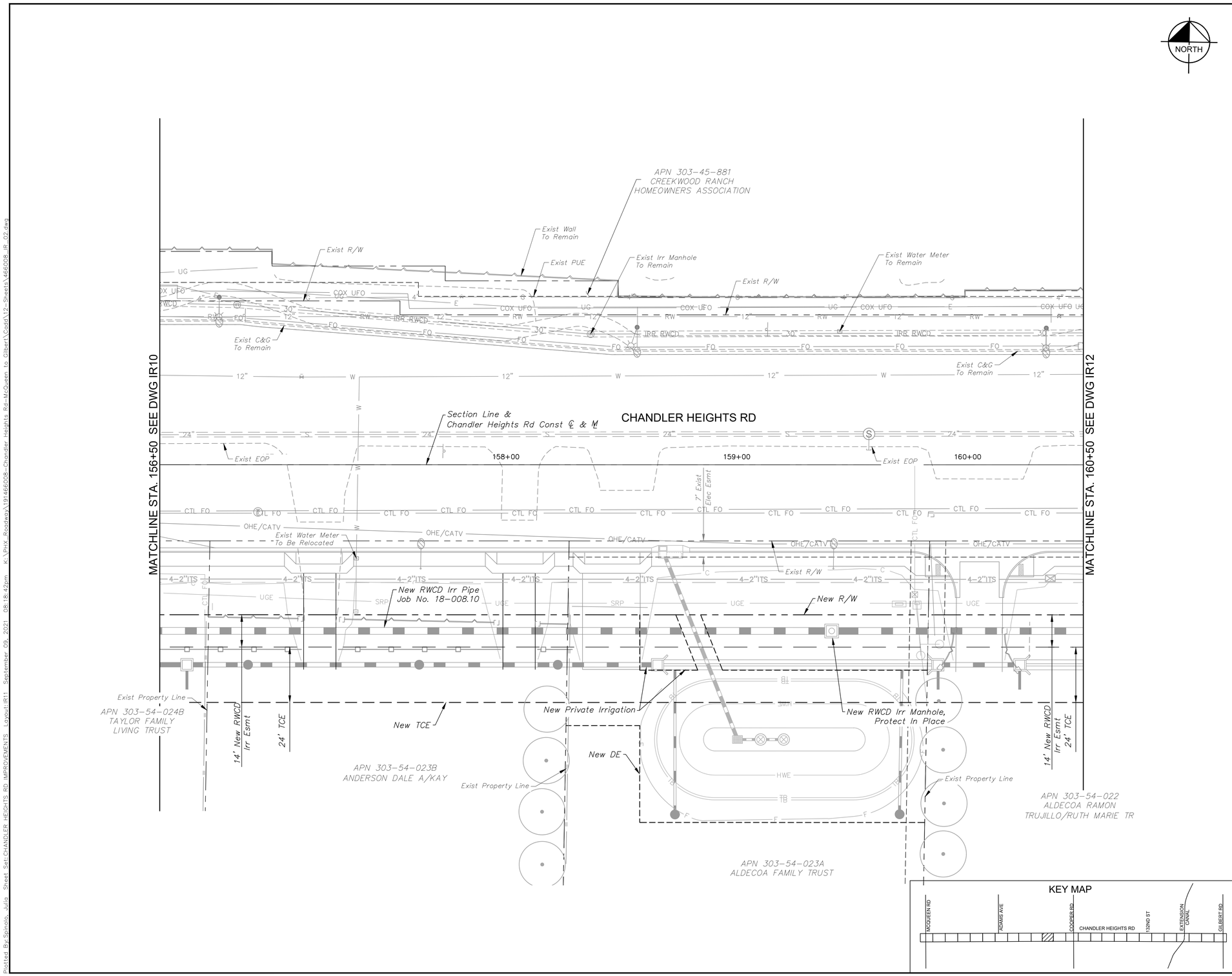
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 152+50 TO STA 156+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR10

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinelo, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR10 September 09, 2021 08:17:17pm K:\Phx_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_01.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
⊠	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
○○	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
▫	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

(X) 2" Lateral Sleeve

PIPE SCHEDULE

Mainline - 4" Copper Type 'K'

Mainline - 2" SCH 40 PVC

T — Tree Lateral - 1" or ¾" Class 200 PVC

S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE

DRIP-SHRUBS
5.8 GPM | 1" | #

VALVE FLOW

VALVE #

VALVE SIZE

IRRIGATION LAYOUT NOTES

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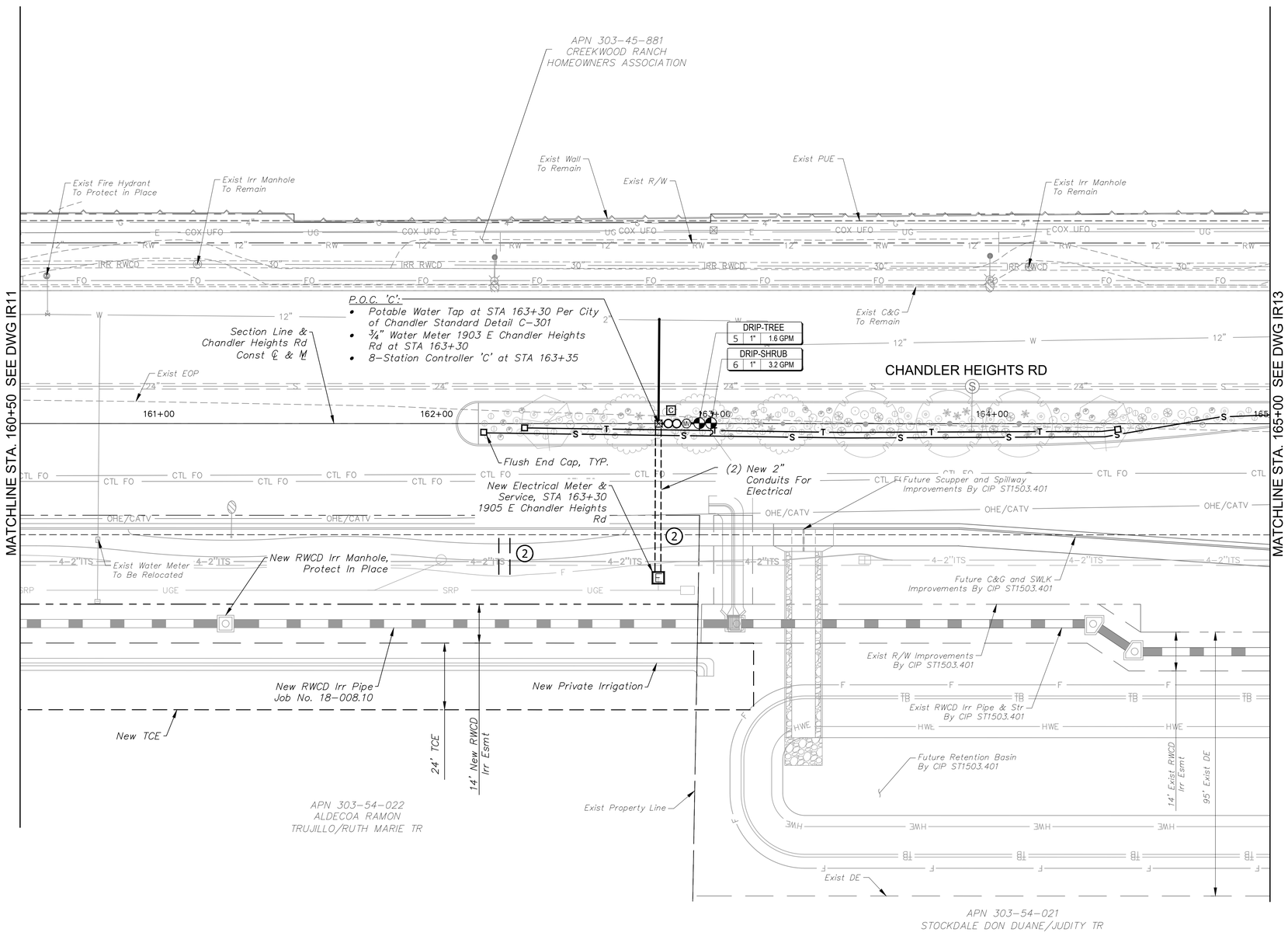
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 156+50 TO STA 160+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR11

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR11 September 09, 2021 08:18:42pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_02.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
⊠	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
○○	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
□	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼" Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

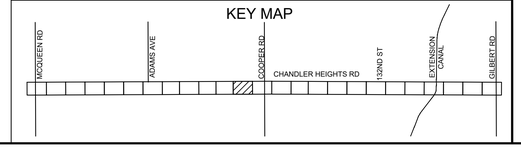
VALVE KEY

DRIP-SHRUBS
5.8 GPM | 1" | #

VALVE ZONE
VALVE FLOW
VALVE #
VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
2. EXISTING PLANTS TO REMAIN SHALL CONTINUE TO BE WATERED WITH EXISTING IRRIGATION SYSTEM, WHERE APPLICABLE. WHERE NOT FEASIBLE, PROVIDE WATER WITH NEW PIPE LATERALS.
3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.



GRAPHIC SCALE IN FEET
0 10 20 40

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2019 KIMLEY-HORN AND ASSOCIATES, INC.
7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 50615 ANNE S. DEBOARD Date Signed 03/19/21 ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H): 1"=20'	
SCALE (V): N/A	
DESIGNED BY: ASD	
DRAWN BY: RAS	
CHECKED BY: ASD	
DATE: 08/2021	

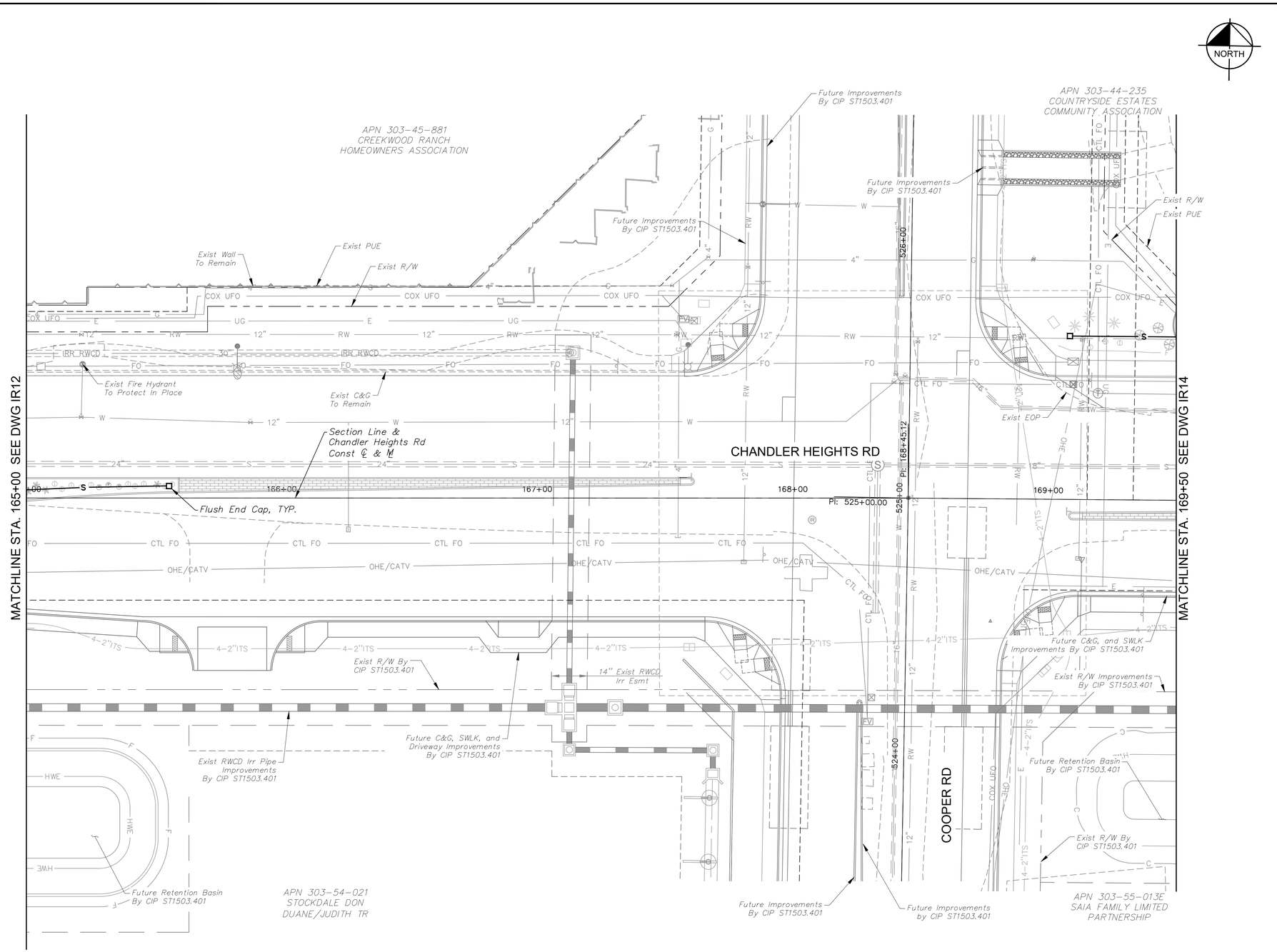
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 160+50 TO STA 165+00

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR12

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR12 September 09, 2021 08:19:03pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_02.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
⊠	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
○○	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
□	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

DRIP-SHRUBS		
5.8 GPM	1"	#

VALVE ZONE
VALVE FLOW
VALVE #
VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
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3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
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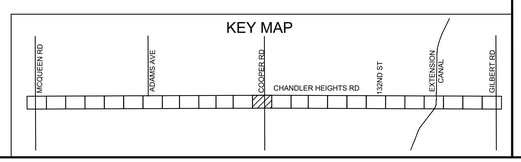

GRAPHIC SCALE IN FEET
0 10 20 40

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No.	REVISIONS	DATE	BY

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PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08.11.2021
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

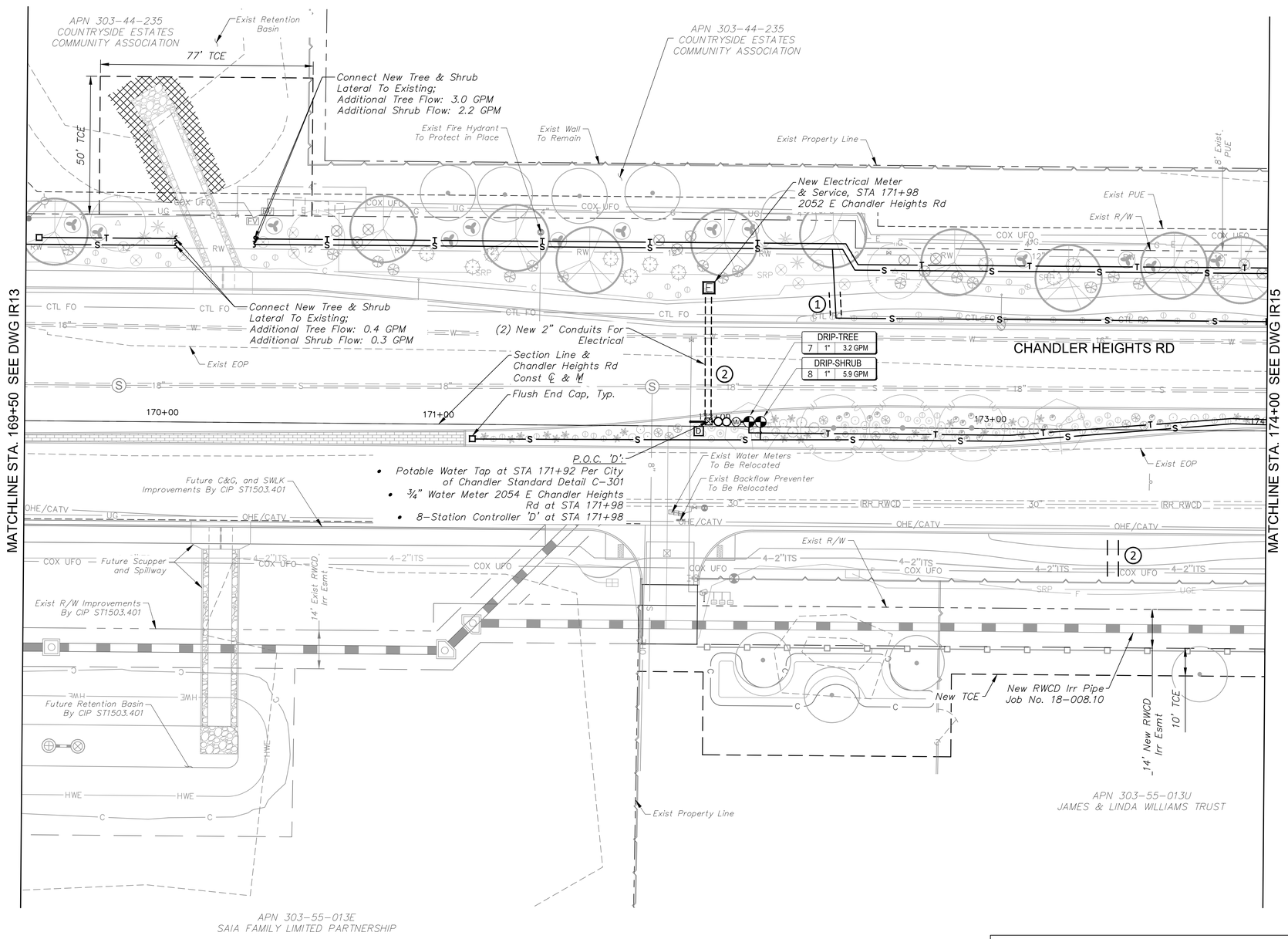
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 165+00 TO STA 169+50

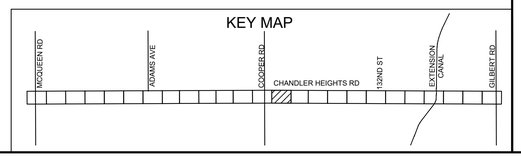
CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR13

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR13 September 09, 2021 08:19:22pm K:\PHX Roadway\194466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_02.dwg





IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
⊠	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
○○	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
□	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼" Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X	2" Lateral Sleeve

PIPE SCHEDULE

———	Mainline - 4" Copper Type 'K'
— — —	Mainline - 2" SCH 40 PVC
—— T ——	Tree Lateral - 1" or ¾" Class 200 PVC
—— S ——	Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

DRIP-SHRUBS
5.8 GPM | 1" | #

VALVE ZONE
VALVE FLOW
VALVE #
VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
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3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

GRAPHIC SCALE IN FEET
0 10 20 40

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Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

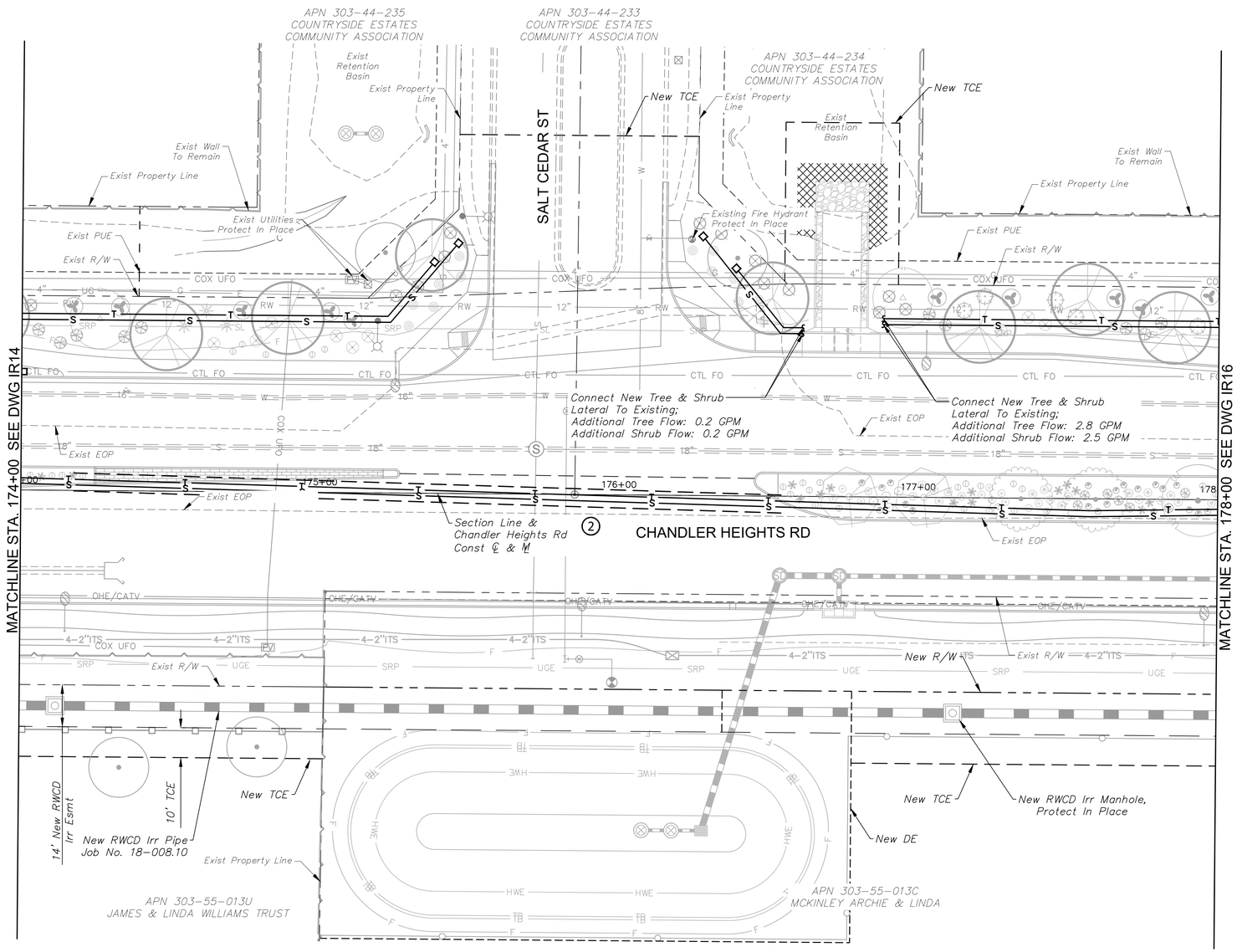
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 169+50 TO STA 174+00

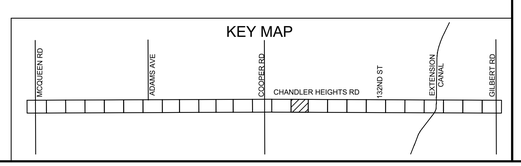
CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR14

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR14 September 09, 2021 08:19:42pm K:\PHX Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_02.dwg





IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE
DRIP-SHRUBS
5.8 GPM | 1" | #
VALVE FLOW
VALVE #
VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
2. EXISTING PLANTS TO REMAIN SHALL CONTINUE TO BE WATERED WITH EXISTING IRRIGATION SYSTEM, WHERE APPLICABLE. WHERE NOT FEASIBLE, PROVIDE WATER WITH NEW PIPE LATERALS.
3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

GRAPHIC SCALE IN FEET
0 10 20 40

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CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08/11/21
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Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
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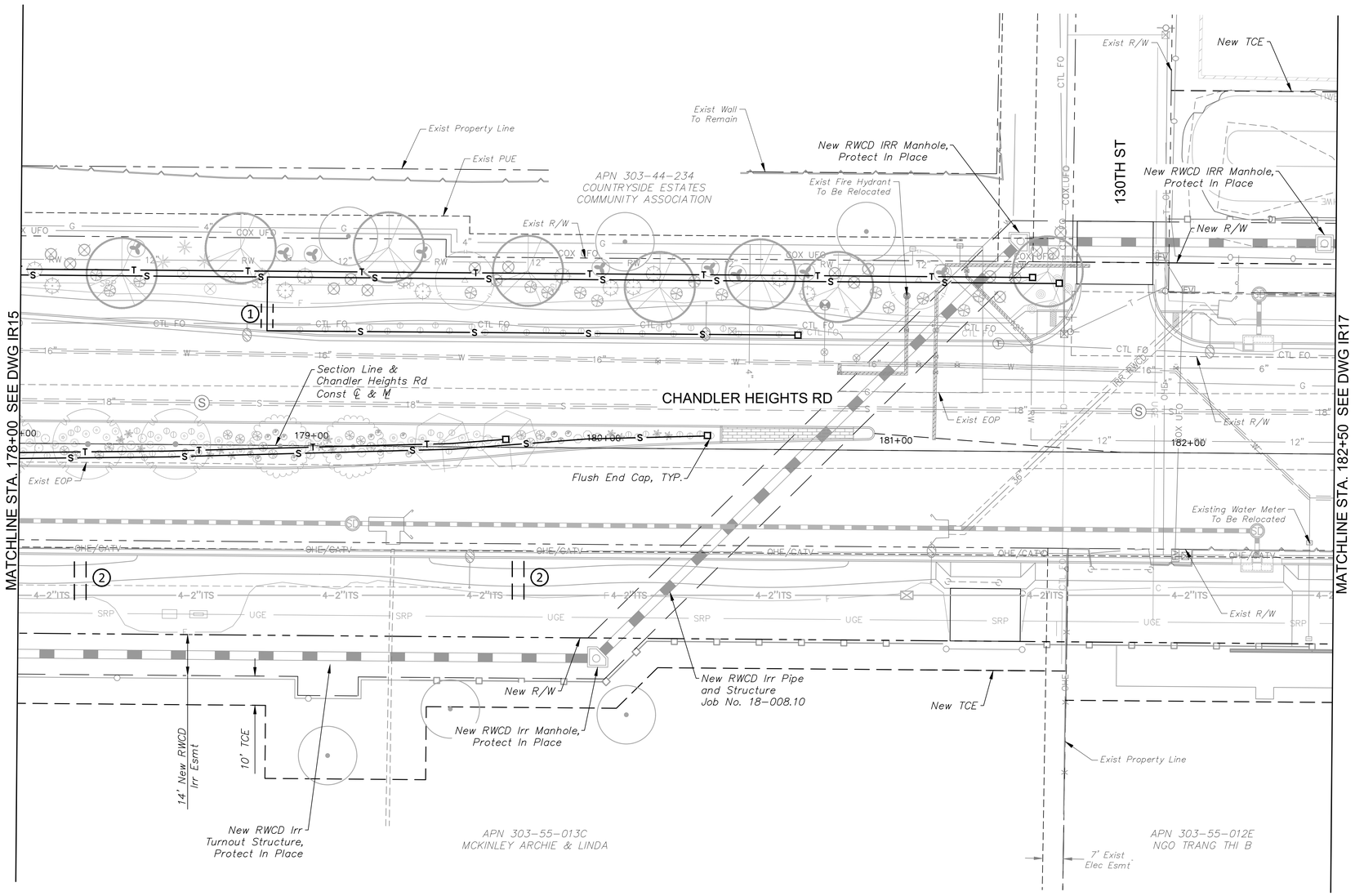
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 174+00 TO STA 178+00

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR15

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Posted By:Spinolo, Julio Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR15 September 09, 2021 08:20:03pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_02.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X	2" Lateral Sleeve

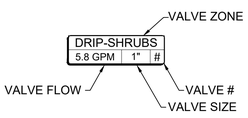
PIPE SCHEDULE

———	Mainline - 4" Copper Type 'K'
— — —	Mainline - 2" SCH 40 PVC
—— T ——	Tree Lateral - 1" or ¾" Class 200 PVC
—— S ——	Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY



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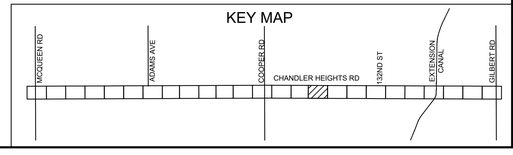
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

KEY MAP



GRAPHIC SCALE IN FEET
0 10 20 40

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DRAWN BY:	RAS
CHECKED BY:	ASD
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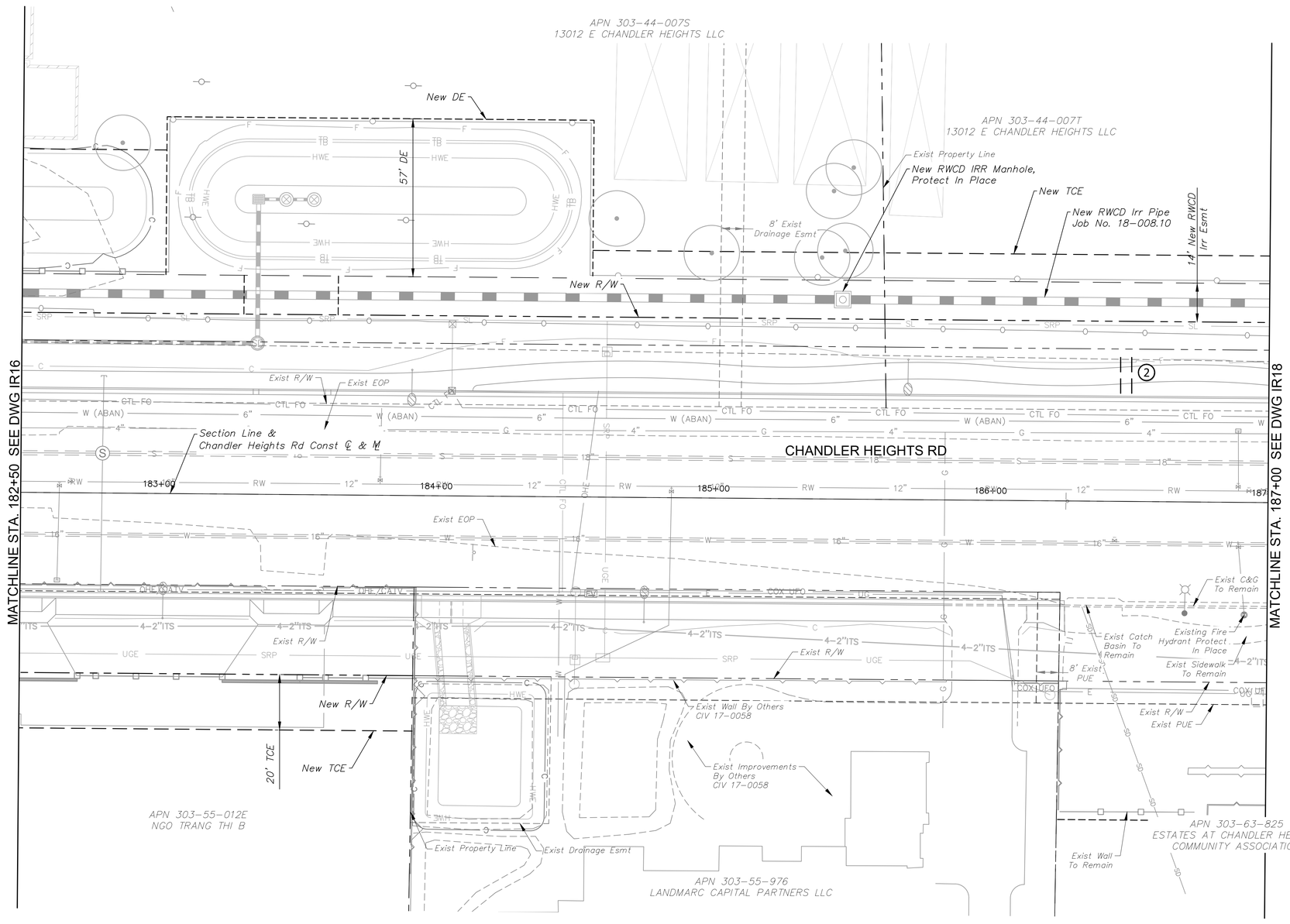
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 178+00 TO STA 182+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR16

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julio Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR16 September 09, 2021 08:20:23pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_02.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼" Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

DRIP-SHRUBS | 5.8 GPM | 1" | #

VALVE ZONE
VALVE FLOW
VALVE #
VALVE SIZE

IRRIGATION LAYOUT NOTES

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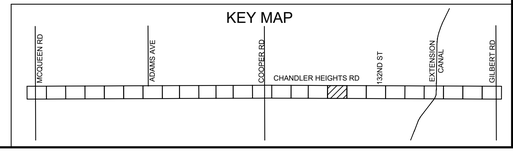
KEY MAP



GRAPHIC SCALE IN FEET
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In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2019 KIMLEY-HORN AND ASSOCIATES, INC.
7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 50615 ANNE S. DEBOARD Date Signed 03/09/21 ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

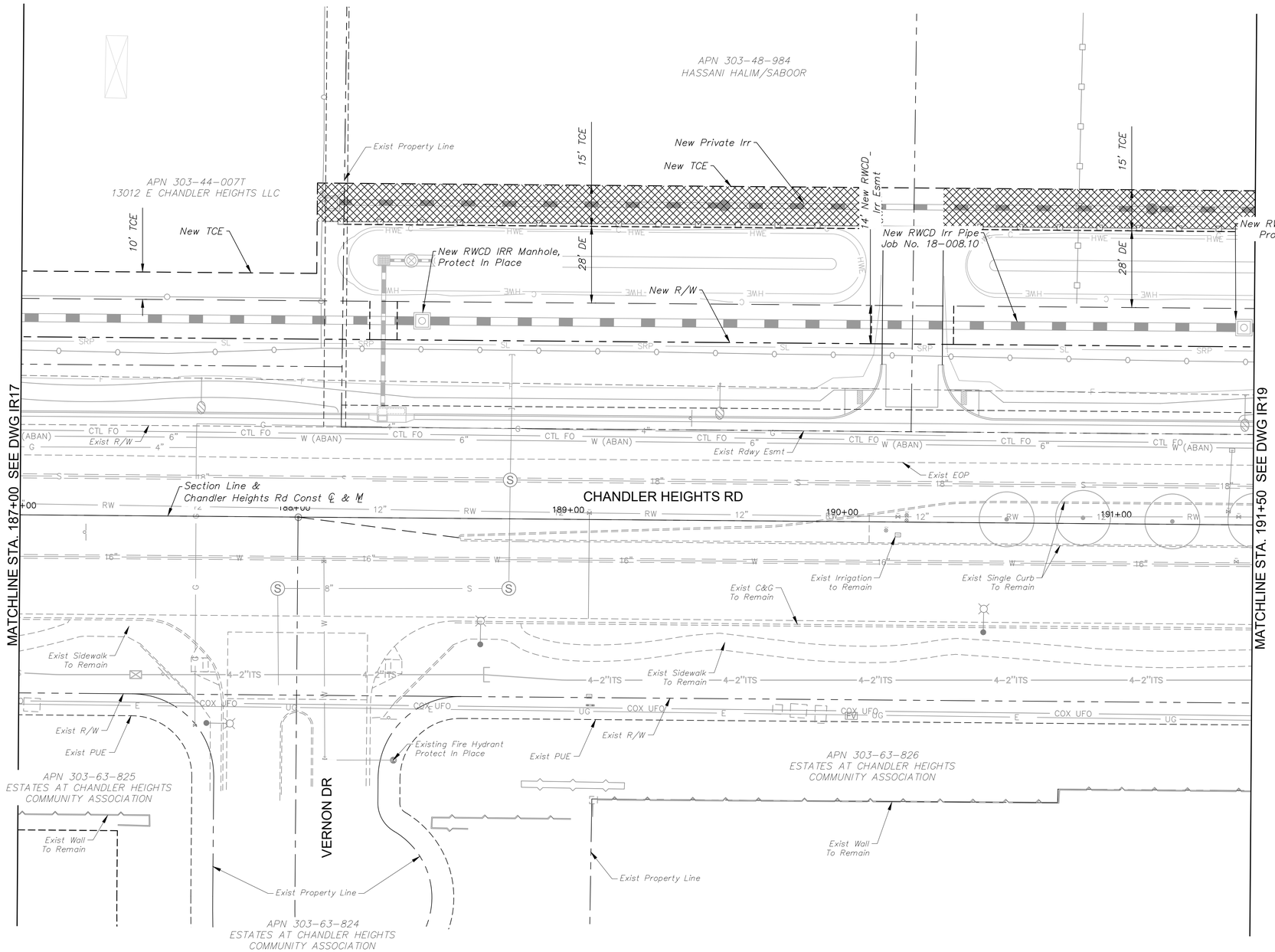
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 182+50 TO STA 187+00

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR17

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinolo, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR17 September 09, 2021 08:20:41pm K:\PHX_Roadway\\18466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_02.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼" Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE

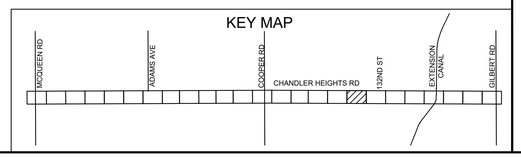
DRIP-SHRUBS | 5.8 GPM | 1" | #

VALVE FLOW — VALVE # — VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
2. EXISTING PLANTS TO REMAIN SHALL CONTINUE TO BE WATERED WITH EXISTING IRRIGATION SYSTEM, WHERE APPLICABLE. WHERE NOT FEASIBLE, PROVIDE WATER WITH NEW PIPE LATERALS.
3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

KEY MAP



GRAPHIC SCALE IN FEET
0 10 20 40

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
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In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

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PHONE: 602-944-5500 FAX: 602-944-7423
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REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08/13/21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H): 1"=20'	
SCALE (V): N/A	
DESIGNED BY: ASD	
DRAWN BY: RAS	
CHECKED BY: ASD	
DATE: 08/2021	

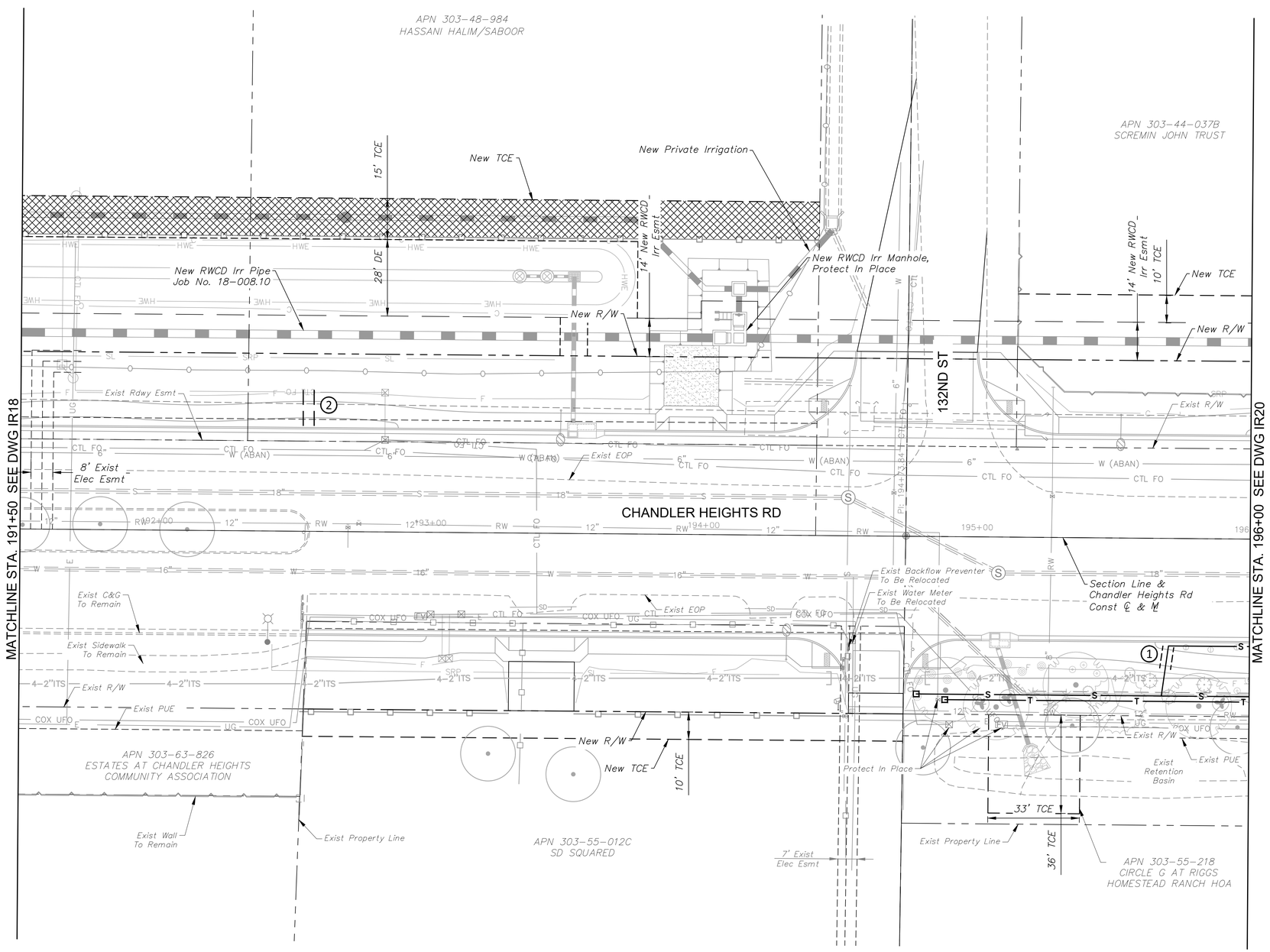
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 187+00 TO STA 191+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

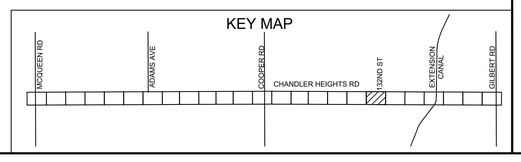
SHEET DWG
IR18

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR18 September 09, 2021 08:20:57pm K:\PHX_Roadway\191466108-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466108_IR_02.dwg



KEY MAP



GRAPHIC SCALE IN FEET
0 10 20 40

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In Maricopa County: (602) 263-1100

IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
⊠	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
○○	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

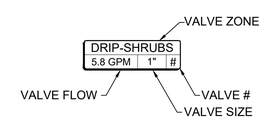
PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY



IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
2. EXISTING PLANTS TO REMAIN SHALL CONTINUE TO BE WATERED WITH EXISTING IRRIGATION SYSTEM, WHERE APPLICABLE. WHERE NOT FEASIBLE, PROVIDE WATER WITH NEW PIPE LATERALS.
3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

No.	REVISIONS	DATE	BY

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REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 50615 ANNE S. DEBOARD Date Signed 08-11-21 ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

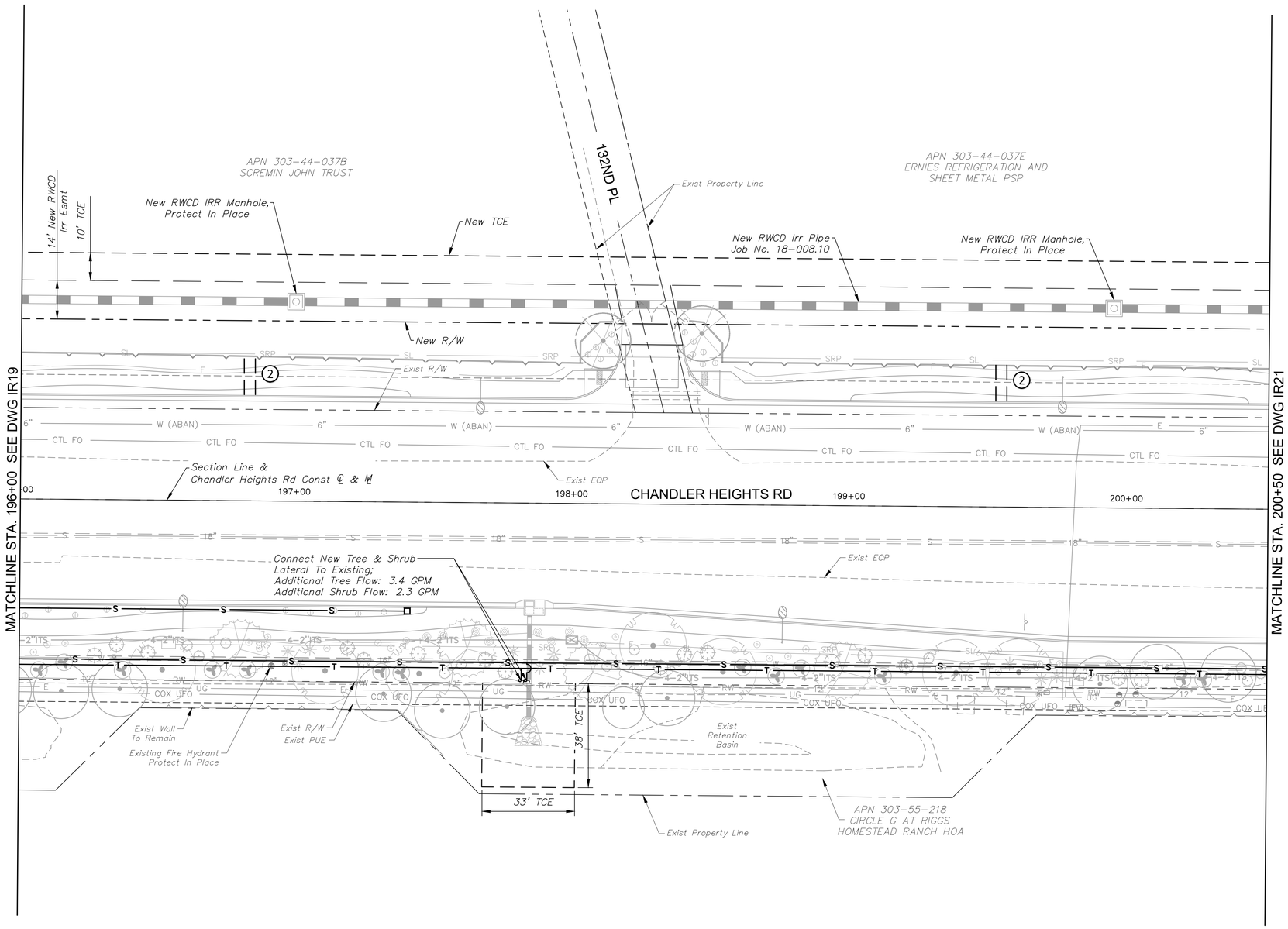
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 191+50 TO STA 196+00

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR19

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Posted By:Spinolo, Julio Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR19 September 09, 2021 08:21:12pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_02.dwg



NORTH

IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE

DRIP-SHRUBS | 5.8 GPM | 1" | #

VALVE FLOW — VALVE # — VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
2. EXISTING PLANTS TO REMAIN SHALL CONTINUE TO BE WATERED WITH EXISTING IRRIGATION SYSTEM, WHERE APPLICABLE. WHERE NOT FEASIBLE, PROVIDE WATER WITH NEW PIPE LATERALS.
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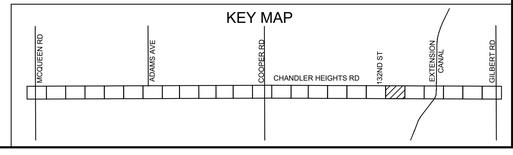
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

KEY MAP



GRAPHIC SCALE IN FEET
0 10 20 40

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REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08/11/21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

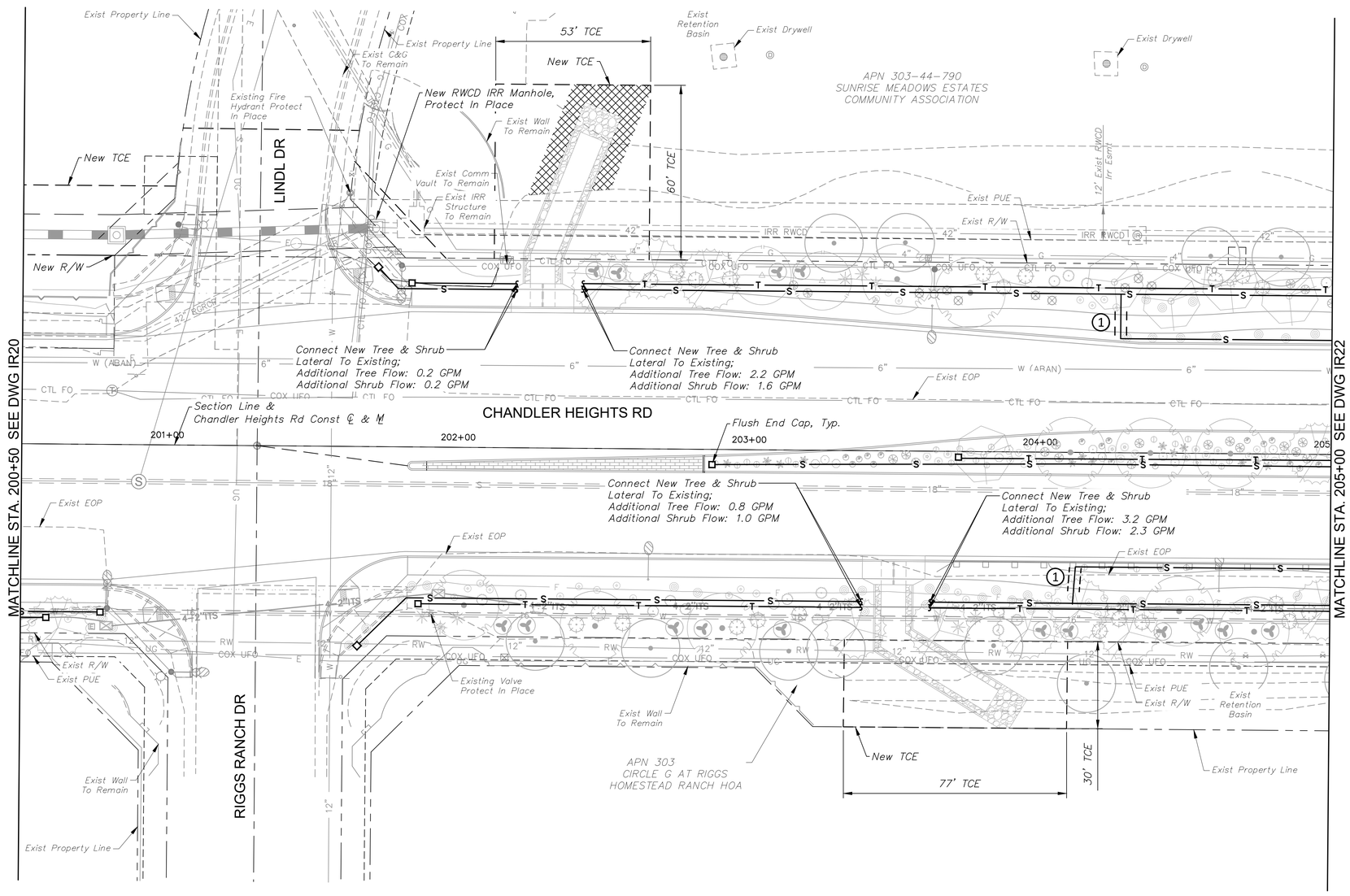
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 196+00 TO STA 200+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR20

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julio Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR20 September 09, 2021 08:21:29pm K:\PHX Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_02.dwg



NORTH

IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼" Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE

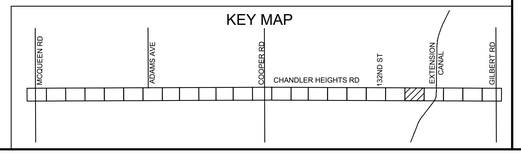
DRIP-SHRUBS | 5.8 GPM | 1" | #

VALVE FLOW — VALVE # — VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
2. EXISTING PLANTS TO REMAIN SHALL CONTINUE TO BE WATERED WITH EXISTING IRRIGATION SYSTEM, WHERE APPLICABLE. WHERE NOT FEASIBLE, PROVIDE WATER WITH NEW PIPE LATERALS.
3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

KEY MAP



GRAPHIC SCALE IN FEET 0 10 20 40

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No.	REVISIONS	DATE	BY

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REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 50615 ANNE S. DEBOARD Date Signed 08-11-21 ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H): 1"=20'	
SCALE (V): N/A	
DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

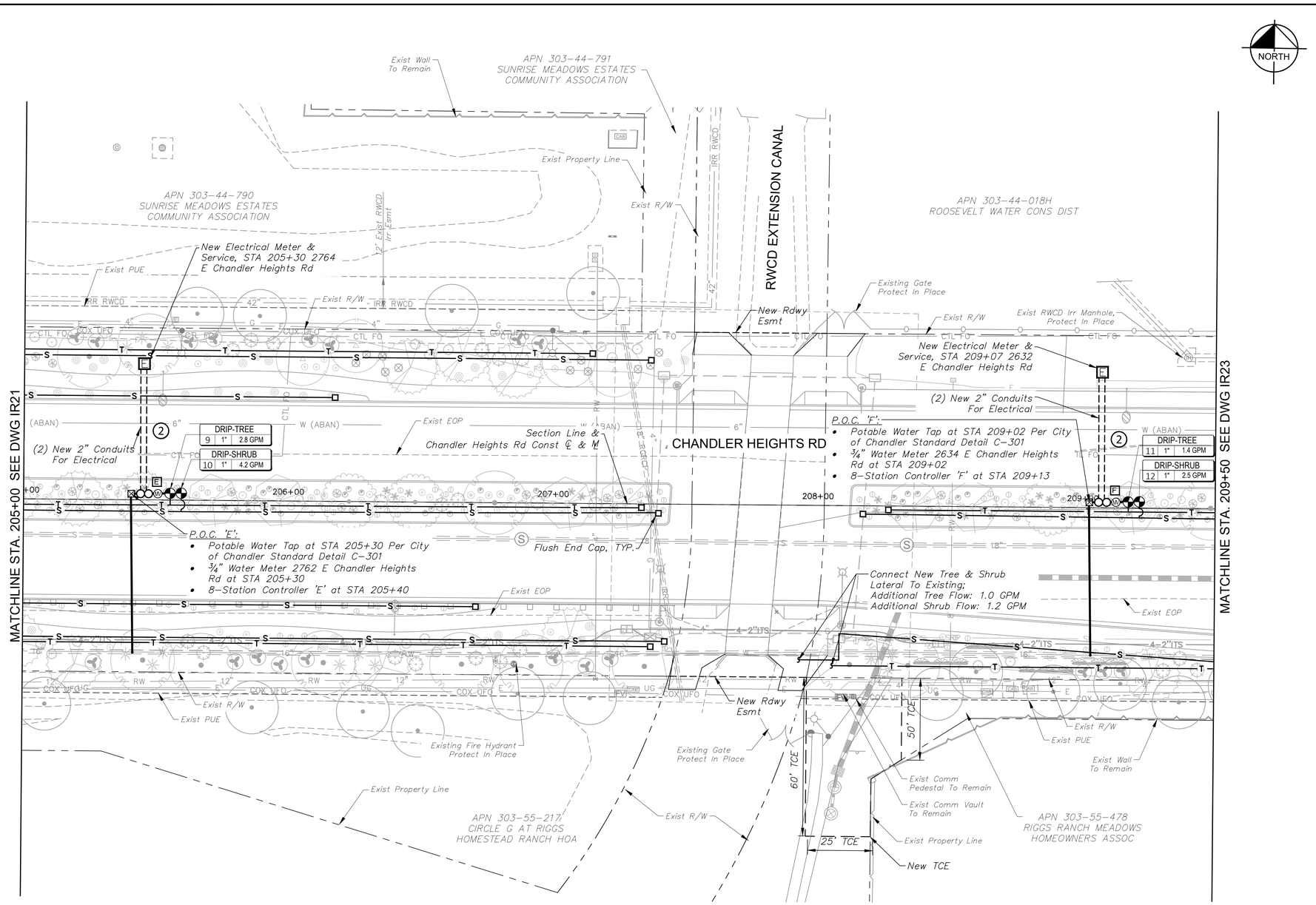
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 200+50 TO STA 205+00

CITY PROJECT NO. ST1614.401
FEDERAL NO. CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG IR21

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR21 September 09, 2021 08:22:56pm K:\PHX_Roadway\191466108-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466108_IR_03.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
⊠	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
○○	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
□	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼" Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X	2" Lateral Sleeve

PIPE SCHEDULE

———	Mainline - 4" Copper Type 'K'
— — —	Mainline - 2" SCH 40 PVC
—— T ——	Tree Lateral - 1" or ¾" Class 200 PVC
—— S ——	Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE

DRIP-SHRUBS | 5.8 GPM | 1" | #

VALVE FLOW — VALVE # — VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
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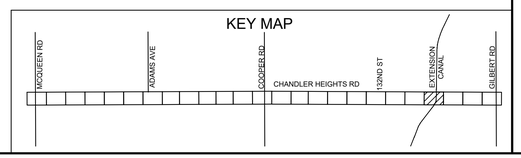
KEY MAP



GRAPHIC SCALE IN FEET
0 10 20 40

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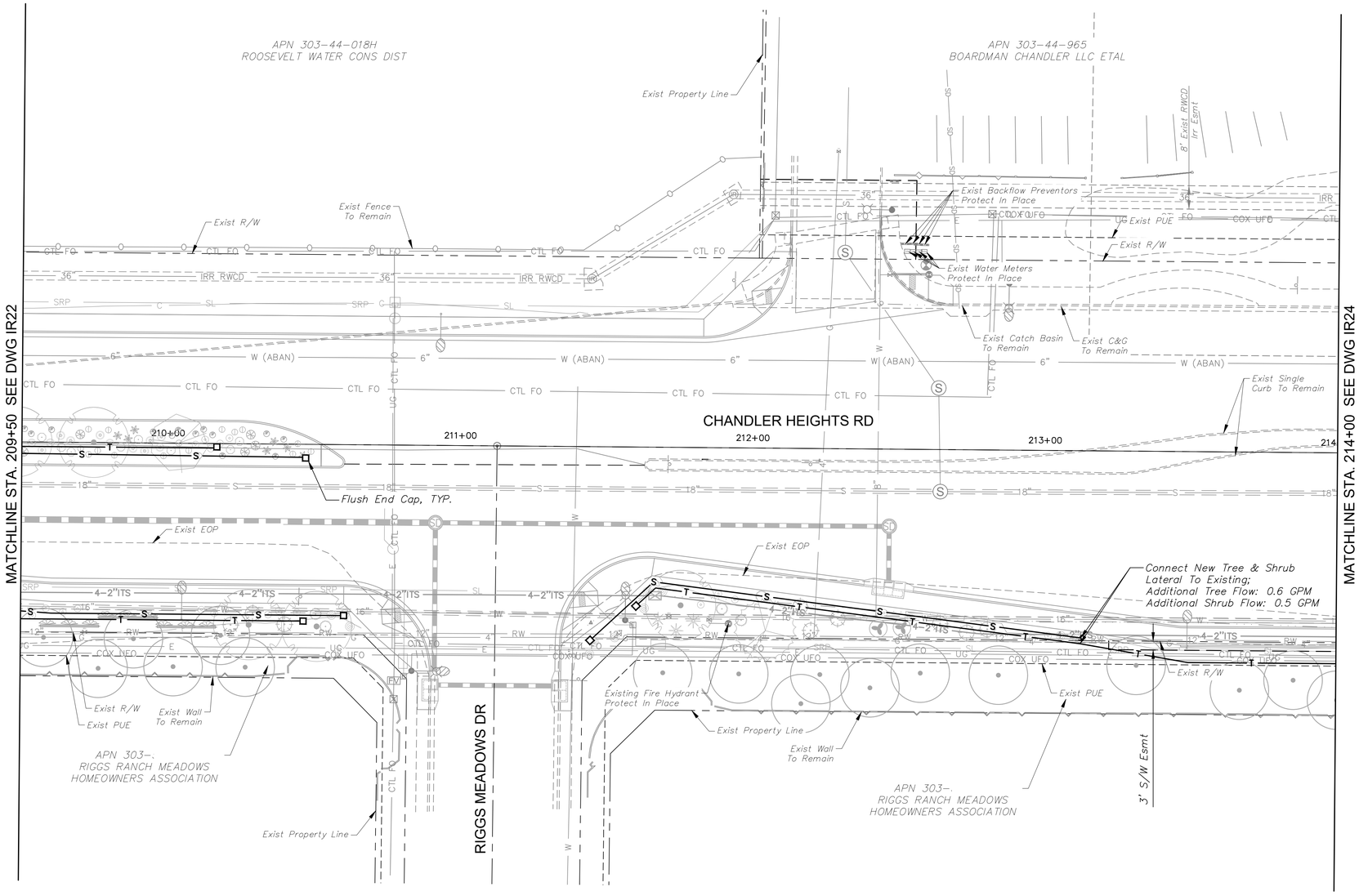
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 205+00 TO STA 209+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR22

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinelo, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR22 September 09, 2021 08:23:15pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_03.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE
DRIP-SHRUBS | 5.8 GPM | 1" | #
VALVE FLOW
VALVE #
VALVE SIZE

IRRIGATION LAYOUT NOTES

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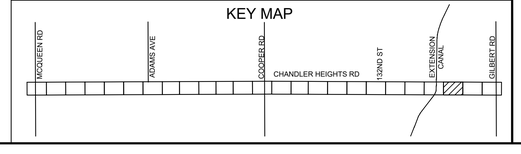
3. CONTRACTOR SHALL MAINTAIN FUNCTIONALITY OF EXISTING SYSTEM OUTSIDE PROJECT LIMITS. COORDINATE WITH THE CITY OF CHANDLER AND ADJACENT PROPERTY OWNERS FOR TIE-INS AND TEMPORARY INTERRUPTIONS TO SERVICE.
4. CONTRACTOR SHALL INSTALL P.O.C. EQUIPMENT IN MEDIAN AT STATIONS AS NOTED WITHIN CENTER OF MEDIAN MAINTAINING A MINIMUM 6' CLEAR DISTANCE FROM BACK OF CURB.

KEY MAP



GRAPHIC SCALE IN FEET
0 10 20 40

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Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

Kimley»Horn
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7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 8/13/21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

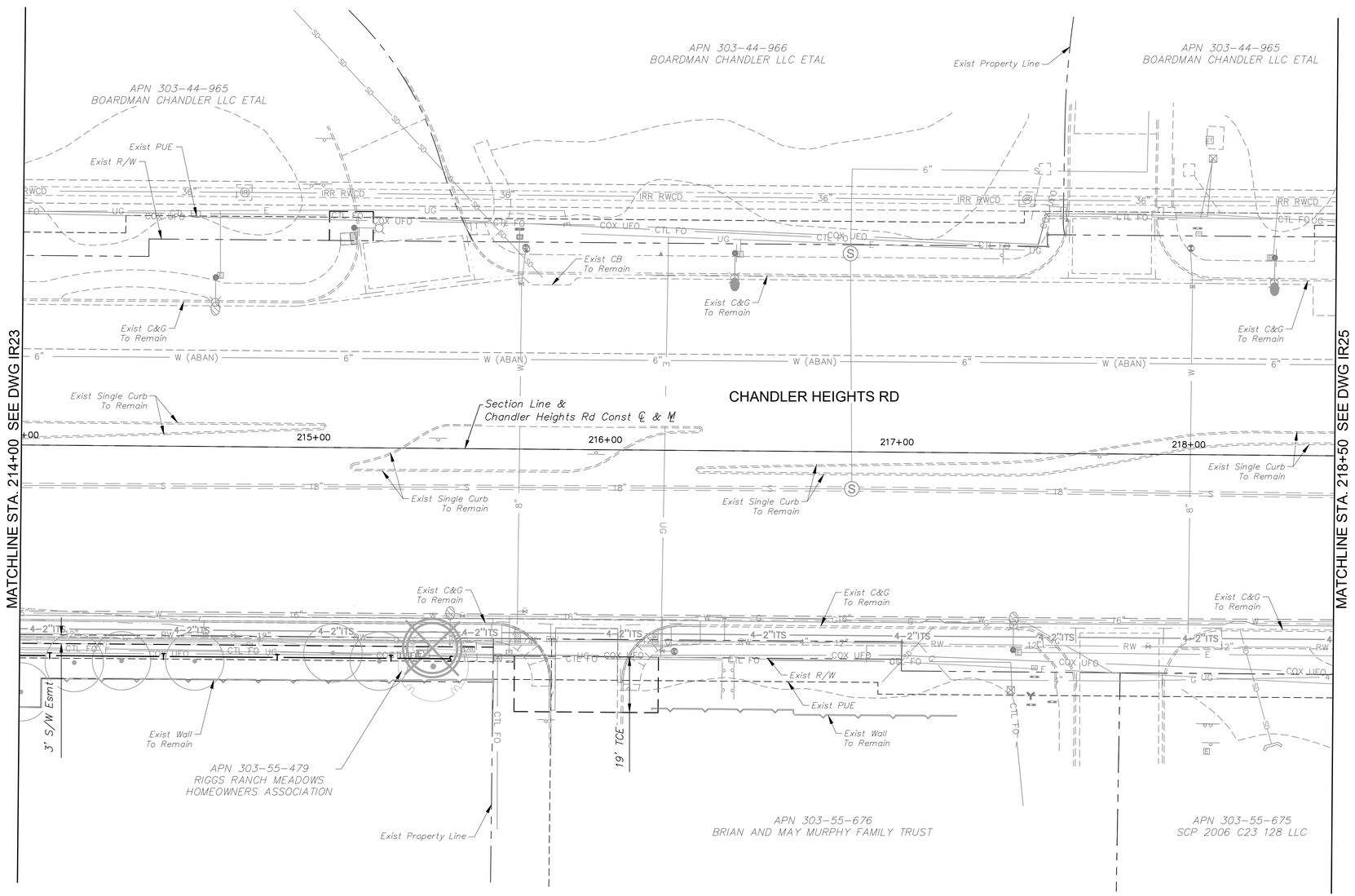
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 209+50 TO STA 214+00

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR23

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR23 September 09, 2021 08:23:30pm K:\PHX Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_03.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
⊠	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X — 2" Lateral Sleeve

PIPE SCHEDULE

- Mainline - 4" Copper Type 'K'
- Mainline - 2" SCH 40 PVC
- T — Tree Lateral - 1" or ¾" Class 200 PVC
- S — Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY

VALVE ZONE

DRIP-SHRUBS | 5.8 GPM | 1" | #

VALVE FLOW — VALVE # — VALVE SIZE

IRRIGATION LAYOUT NOTES

1. IRRIGATION PIPE ROUTING AND EQUIPMENT LOCATIONS ARE DIAGRAMMATIC AND SHALL BE FIELD ADJUSTED TO AVOID CONFLICT WITH AND DISTURBANCE OF EXISTING PLANT MATERIALS AND UTILITY LOCATIONS.
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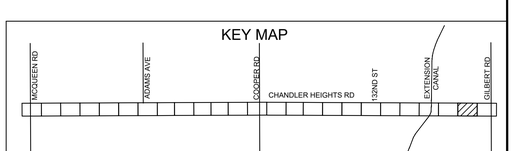
KEY MAP



GRAPHIC SCALE IN FEET 0 10 20 40

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No.	REVISIONS	DATE	BY

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PHONE: 602-944-5500 FAX: 602-944-7423
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REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 50615 ANNE S. DEBOARD Date Signed 08-11-21 ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H): 1"=20'
SCALE (V): N/A
DESIGNED BY: ASD
DRAWN BY: RAS
CHECKED BY: ASD
DATE: 08/2021

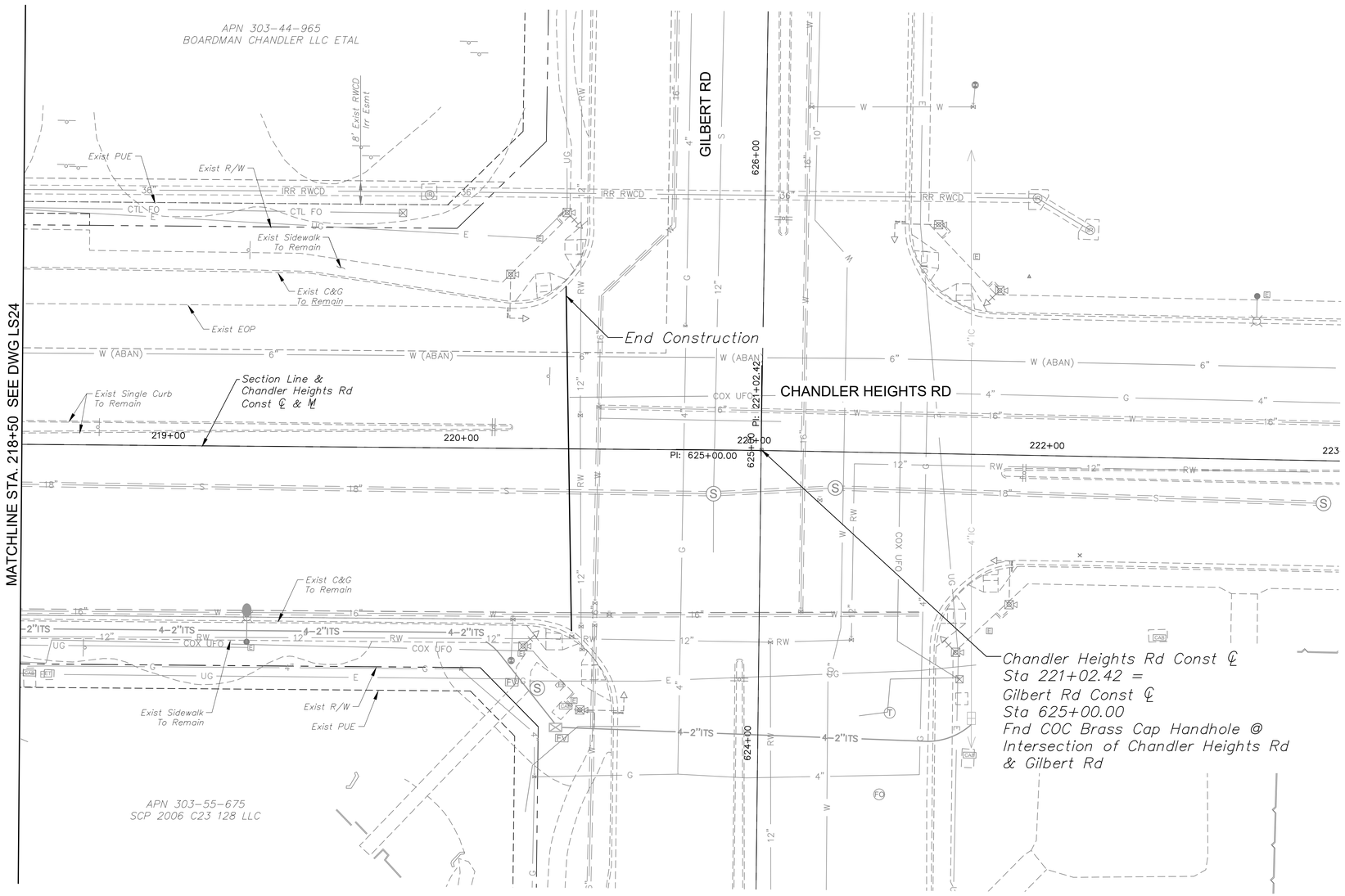
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 214+00 TO STA 218+50

CITY PROJECT NO. ST1614.401
FEDERAL NO. CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG IR24

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR24 September 09, 2021 08:23:45pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_03.dwg



IRRIGATION LEGEND

MATERIALS AND EQUIPMENT

SYM	DESCRIPTION
⊠	Water Meter - 3/4" (Installed by City)
E	Electric Meter Pedestal
○○	Backflow Preventer - 1" FEBCO 825Y
A B C D E F	Controller - 8 Station
	Drip Remote Control Valve Assembly - 1"
MV	Master Valve - 1"
▫	Flush End Cap
Not Shown	Bowsmith Multi-Outlet Emitter ML200 Series* 4-2gpm per Tree; 1-1gpm per Shrub Provide ¼ " Distribution Tubing To Each Plant As Detailed. *Refer To COC Std. Dtl. C-817 For Emitter Schedule
	Irrigation Restoration Area

SLEEVE SCHEDULE

X	2" Lateral Sleeve

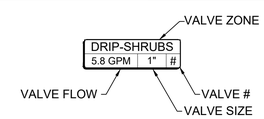
PIPE SCHEDULE

———	Mainline - 4" Copper Type 'K'
— — —	Mainline - 2" SCH 40 PVC
—— T ——	Tree Lateral - 1" or ¾" Class 200 PVC
—— S ——	Shrub Lateral - 1" or ¾" Class 200 PVC

LATERAL PIPE SIZING

GPM FLOW	PIPE SIZE
0 - 8.0	3/4"
8.1 - 13.0	1"

VALVE KEY



IRRIGATION LAYOUT NOTES

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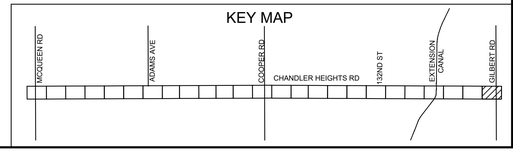

GRAPHIC SCALE IN FEET
0 10 20 40

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DESIGNED BY:	ASD
DRAWN BY:	RAS
CHECKED BY:	ASD
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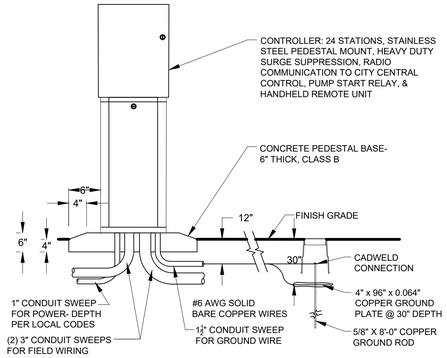
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION PLAN
STA 218+50 TO STA 220+33

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IR25

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

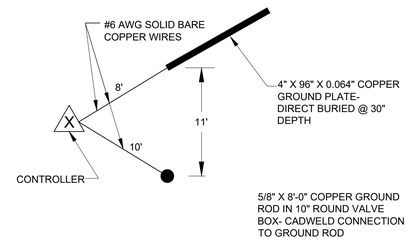
Plotted By:Spinola, Julio Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IR25 September 09, 2021 08:24:00pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_03.dwg



NOTES:
1. SUPPLY (1) REMOTE CONTROL UNIT WITH CONTROLLER.
2. PROVIDE 20 AMP GFI CIRCUIT BREAKER ON POWER SUPPLY.
3. INSTALL SURGE PROTECTION ON HIGH AND LOW VOLTAGE WIRING.
4. LOCATE GROUNDING EQUIPMENT IN TRIANGULAR FORMAT PER DETAIL 2.

1 IRRIGATION CONTROLLER IN PEDESTAL ENCLOSURE

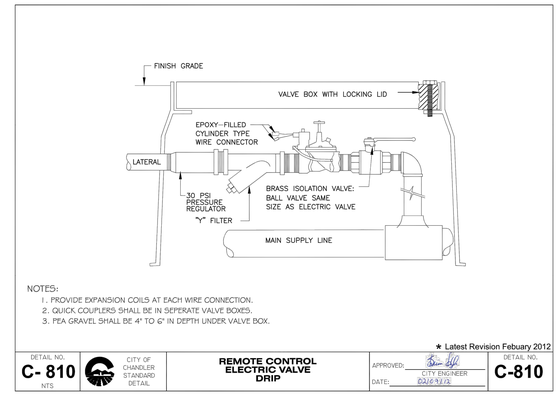
SCALE: N.T.S.



NOTES:
1. CONNECT GROUND WIRE TO GROUND ROD WITH EXOTHERMIC WELD CONNECTION INSIDE 10" ROUND VALVE BOX WITH BOLT DOWN T-COVER EMBOSSED WITH 1" STENCIL LETTERS "GND"

2 CONTROLLER GROUNDING

SCALE: N.T.S.



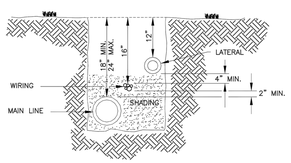
NOTES:
1. PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION.
2. QUICK COUPLERS SHALL BE IN SEPERATE VALVE BOXES.
3. PEA GRAVEL SHALL BE 4" TO 6" IN DEPTH UNDER VALVE BOX.

★ Latest Revision Febuary 2012

DETAIL NO.					DETAIL NO.
C- 810 NTS	CITY OF CHANDLER STANDARD DETAIL	REMOTE CONTROL ELECTRIC VALVE DRIP	APPROVED: CITY ENGINEER DATE: 02/24/12		C-810

3 REMOTE CONTROL ELECTRIC DRIP VALVE

SCALE: N.T.S.



NOTES:
1. ALL PIPE INSTALLATION, TRENCH EXCAVATION, BACKFILLING AND COMPACTION SHALL CONFORM WITH MAG SEC. 440 AND 601.
2. TAPE AND BUNDLE WIRING AT 10 FEET INTERVALS.
3. SHADING SHALL BE DONE WITH NATIVE SOIL.
4. DEPTH DIMENSION MAY VARY WHERE INDICATED ON IRRIGATION PLAN.
5. ALL PIPE INSTALLED UNDER PAVED SURFACES SHALL BE PLACED IN PVC SLEEVING, 2 TIMES THE NOMINAL SIZE OF THE PIPE*.
*ALL IRRIGATION WORK WITHIN THE PUBLIC R.O.W. REQUIRES A SEPARATE PERMIT.

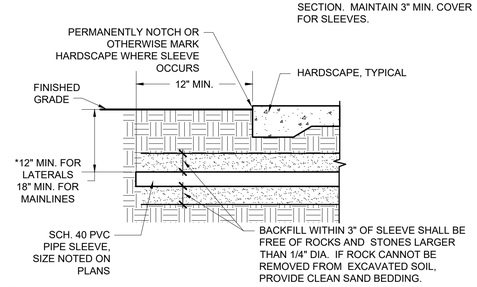
★ Latest Revision Febuary 2012

DETAIL NO.					DETAIL NO.
C- 811 NTS	CITY OF CHANDLER STANDARD DETAIL	IRRIGATION TRENCH	APPROVED: CITY ENGINEER DATE: 02/24/12		C-811

4 TRENCHING

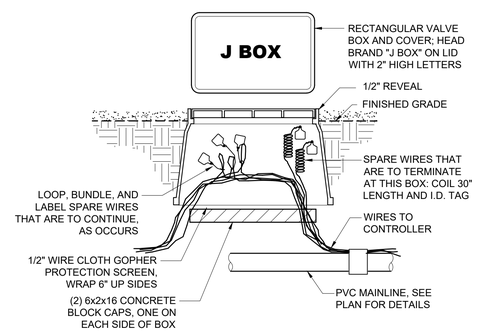
SCALE: N.T.S.

NOTE:
* 18" MIN. FOR LATERALS AND 24" MIN. MAINLINE UNDER ROADWAY. REFER TO PAVEMENT STRUCTURAL SECTION. MAINTAIN 3" MIN. COVER FOR SLEEVES.



5 MAINLINE AND LATERAL PIPE SLEEVING

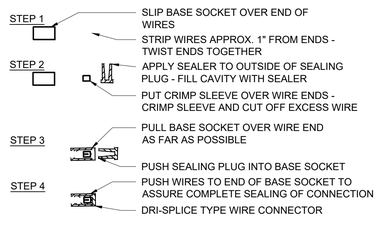
SCALE: N.T.S.



6 IRRIGATION WIRING JUNCTION BOX

SCALE: N.T.S.

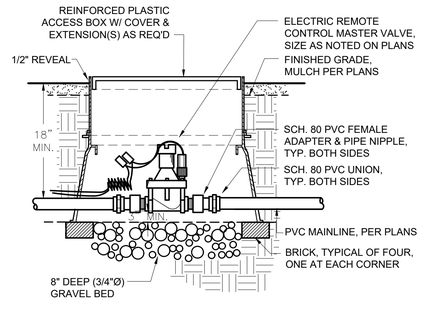
NOTES
1. FOR WIRE SIZES NO. 14, 12, AND 10, ALL CONNECTIONS IN VALVE BOXES ONLY.
2. INSTALL SPEARS DS-100 DRI-SPLICE CONNECTORS WITH DS-300 SEALANT.



7 IRRIGATION WIRE CONNECTION

SCALE: N.T.S.

NOTES:
1. ALL WIRES TO BE INSTALLED PER LOCAL CODE. TAPE AND BUNDLE WIRES EVERY 7'. PROVIDE EXPANSION COIL AT EACH WIRE CONNECTION IN VALVE BOX (WRAP AROUND 1/2" Ø PIPE 15 TIMES).
2. COMPACT SOIL AROUND VALVE BOX TO SAME DENSITY AS ADJACENT UNDISTURBED SOIL.
3. ALL THREADED PVC JOINTS SHALL BE WRAPPED WITH TEFLON TAPE.



8 MASTER VALVE

SCALE: N.T.S.

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SCALE (V):	
DESIGNED BY:	ASD
DRAWN BY:	MCD
CHECKED BY:	ASD
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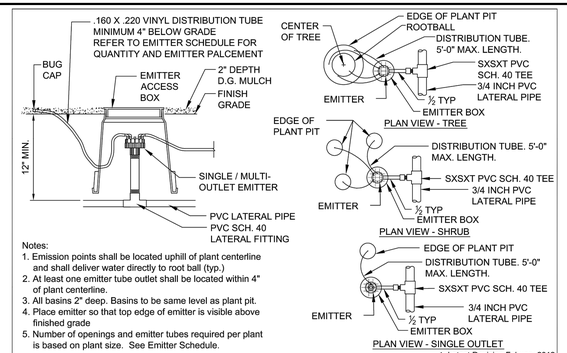
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION DETAILS

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IRD01

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By: Spinolo, Julio Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IRD01 September 09, 2021 08:24:24pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_DTLS.dwg

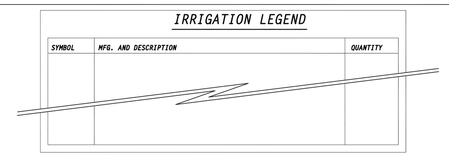


Notes:
1. Emission points shall be located uphill of plant centerline and shall deliver water directly to root ball (typ.)
2. At least one emitter tube outlet shall be located within 4" of plant centerline.
3. All basins 2" deep. Basins to be same level as plant pit.
4. Place emitter so that top edge of emitter is visible above finished grade
5. Number of openings and emitter tubes required per plant is based on plant size. See Emitter Schedule.

DETAIL NO.	CITY OF CHANDLER STANDARD DETAIL		APPROVED: CITY ENGINEER DATE: 02/09/22	DETAIL NO.
C- 808 NTS		EMITTER ACCESS BOX AND EMITTER LAYOUT		C-808

★ Latest Revision Febuary 2012

9 EMITTER ACCESS BOX AND EMITTER LAYOUT
SCALE: N.T.S.



IRRIGATION LEGEND

SYMBOL	MFG. AND DESCRIPTION	QUANTITY

FRICTION LOSS

PRESSURE AT SOURCE		psi
PRESSURE VERIFIED WITH CITY		60 psi
FRICTION LOSS THROUGH: (TO FARTHEST HEAD)		
WATER METER		0.5 psi
VACUUM BREAKER		N/A
MAIN LINE PIPE		0.06 psi
VALVE		2.0 psi
LATERAL LINE PIPE		25.22 psi
TOTAL FRICTION LOSS		27.78 psi
REQUIRED PRESSURE AT HEAD		20.0 psi

(TOTAL FRICTION LOSS)+(REQUIRED P.S.I. AT HEAD) = PRESSURE REQUIRED AT SOURCE 47.78 psi

CALCULATIONS PERFORMED BY Andrew Valestin, PLA 6.27.17
SIGNED DATE

★ Latest Revision Febuary 2012

DETAIL NO.	CITY OF CHANDLER STANDARD DETAIL		APPROVED: CITY ENGINEER DATE: 02/09/22	DETAIL NO.
C- 816 NTS		TYPICAL IRRIGATION LEGEND AND INFORMATION		C-816

10 TYPICAL IRRIGATION LEGEND AND INFORMATION (POC 'A')
SCALE: N.T.S.

A - EMITTER SCHEDULE FOR TREES, SHRUBS, GROUNDCOVERS AND ACCENTS

PLANT SIZE	TYPE OF EMITTER	NUMBER OF EMITTERS	GALLONS PER HOUR PER PLANT
1 GALLON	SINGLE OR MULTI	1	.6 or 1
5 GALLON	SINGLE OR MULTI	1	.6 or 1
15 GALLON	MULTI	4	4
24" BOX	MULTI	4	4
30" BOX	MULTI	6	6
36" BOX	MULTI	6	6
48" BOX	MULTI	6	6

B - BUBBLER SCHEDULE FOR PALMS

TRUNK DIAMETER AT GRADE	NUMBER OF BUBBLERS
12 – 24"	2
25 – 32"	2
33 – 36"	2

C - CACTUS

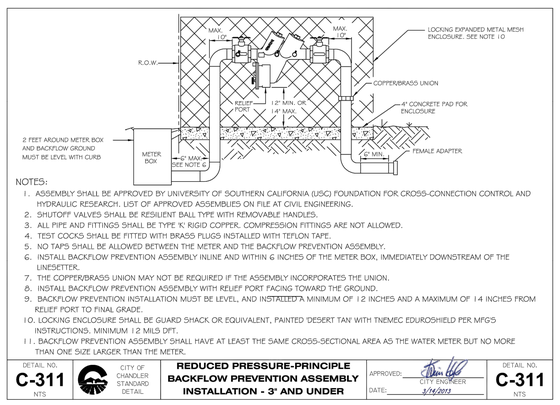
DO NOT PROVIDE IRRIGATION TO CACTUS

NOTES:
1. REFER TO EMITTER AND BUBBLER DETAILS FOR SPECIFICATIONS AND LAYOUT INFORMATION.
2. ADJUST IRRIGATION OPERATING TIMES TO ACCOMMODATE PLANT MATURITY, SOIL TYPE, PLANT EXPOSURE AND SEASONAL REQUIREMENTS.

★ Latest Revision Febuary 2012

DETAIL NO.	CITY OF CHANDLER STANDARD DETAIL		APPROVED: CITY ENGINEER DATE: 02/09/22	DETAIL NO.
C- 817 NTS		EMITTER-BUBBLER SCHEDULE		C-817

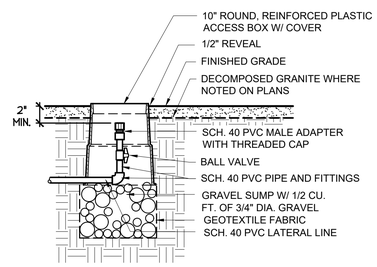
11 EMITTER-BUBBLER SCHEDULE
CITY OF CHANDLER C-817



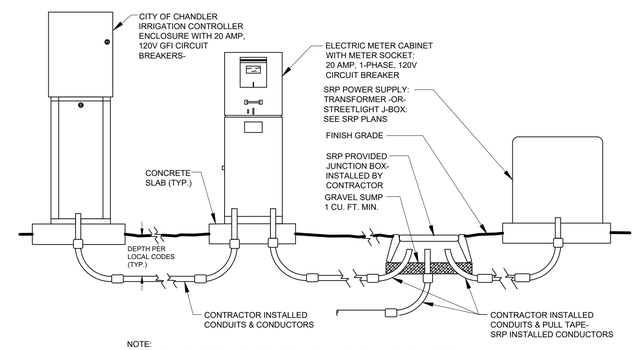
NOTES:
1. ASSEMBLY SHALL BE APPROVED BY UNIVERSITY OF SOUTHERN CALIFORNIA (USC) FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH. LIST OF APPROVED ASSEMBLIES ON FILE AT CIVIL ENGINEERING.
2. SHUTOFF VALVES SHALL BE RESILIENT BALL TYPE WITH REMOVABLE HANDLES.
3. ALL PIPE AND FITTINGS SHALL BE TYPE 'K' RIGID COPPER. COMPRESSION FITTINGS ARE NOT ALLOWED.
4. TEST COCKS SHALL BE FITTED WITH BRASS PLUGS INSTALLED WITH TEFLON TAPE.
5. NO TAPS SHALL BE ALLOWED BETWEEN THE METER AND THE BACKFLOW PREVENTION ASSEMBLY.
6. INSTALL BACKFLOW PREVENTION ASSEMBLY INLINE AND WITHIN 6 INCHES OF THE METER BOX, IMMEDIATELY DOWNSTREAM OF THE LINESETTER.
7. THE COPPER/BRASS UNION MAY NOT BE REQUIRED IF THE ASSEMBLY INCORPORATES THE UNION.
8. INSTALL BACKFLOW PREVENTION ASSEMBLY WITH RELIEF PORT FACING TOWARD THE GROUND.
9. BACKFLOW PREVENTION INSTALLATION MUST BE LEVEL, AND INSTALLED A MINIMUM OF 12 INCHES AND A MAXIMUM OF 14 INCHES FROM RELIEF PORT TO FINAL GRADE.
10. LOCKING ENCLOSURE SHALL BE GUARD SHACK OR EQUIVALENT, PAINTED 'DESERT TAN' WITH TNEMEC EDUROSHIELD PER MFG'S INSTRUCTIONS. MINIMUM 12 MILS DFT.
11. BACKFLOW PREVENTION ASSEMBLY SHALL HAVE AT LEAST THE SAME CROSS-SECTIONAL AREA AS THE WATER METER BUT NO MORE THAN ONE SIZE LARGER THAN THE METER.

DETAIL NO.	CITY OF CHANDLER STANDARD DETAIL		APPROVED: CITY ENGINEER DATE: 3/14/2013	DETAIL NO.
C-311 NTS		REDUCED PRESSURE-PRINCIPLE BACKFLOW PREVENTION ASSEMBLY INSTALLATION - 3" AND UNDER		C-311 NTS

12 BACKFLOW PREVENTER
SCALE: N.T.S.



13 LATERAL FLUSHING END CAP
SCALE: N.T.S.



NOTE:
1. INSTALL ELECTRICAL POWER SUPPLY PER PLANS AND ALL APPLICABLE CODES.

14 ELECTRICAL SERVICE
SCALE: N.T.S.

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

Kimley»Horn
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PHONE: 602-944-5500 FAX: 602-944-7423
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REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 50615 ANNE S. DEBOARD Date Signed 03/09/22 ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	N/A		
SCALE (V):	N/A		
DESIGNED BY:	ASD	DATE:	08/2021
DRAWN BY:	MCD		
CHECKED BY:	ASD		

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
IRRIGATION DETAILS

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
IRD02

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Posted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:IRD02 September 09, 2021 08:24:34pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_IR_DTLS.dwg

EROSION AND SEDIMENT CONTROL PLAN
FOR
CHANDLER HEIGHT RD
ROADWAY IMPROVEMENTS
CHANDLER, ARIZONA

EROSION AND SEDIMENT CONTROL PLAN NOTES:

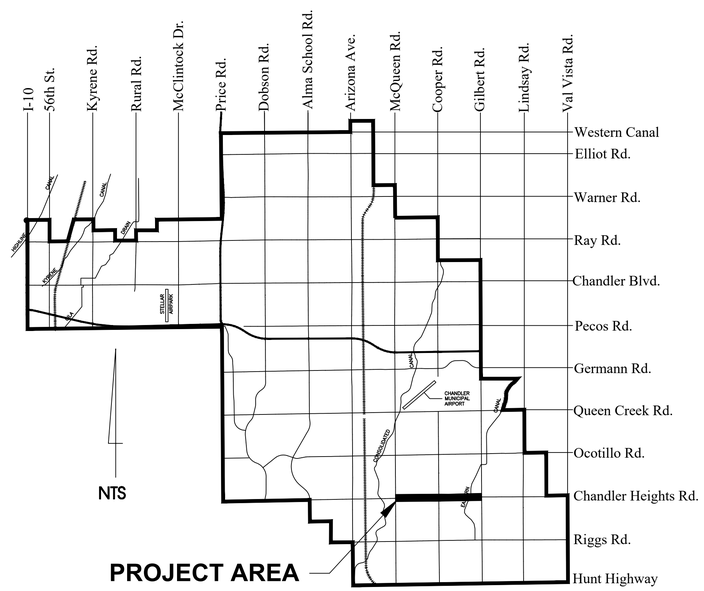
1. The Owner/Operator or Contractor shall notify the City of Chandler Public Works Inspector assigned to the site 24 hours prior to commencing any land development or grading activities. Note: A Notice of Intent (NOI) shall be submitted to and approved by the Arizona Department of Environmental Quality (ADEQ) prior to commencing land development or grading activities.
2. A copy of the approved grading and drainage plan for this project, along with a copy of an approved NOI, the Erosion and Sediment Control Plan (ESCP) and the Storm Water Pollution Prevention Plan (SWPPP) shall be maintained on the site and available for review by representatives of the City of Chandler and the Arizona Department of Environmental Quality. Those elements of the grading and drainage plan pertinent to, or referenced on the ESCP shall be considered a part of the ESCP.
3. The Owner/Operator of Contractor shall post a sign or other notice near the main entrance of the construction site with the following information: AZPDES authorization number for the project or copy of the Notice of Intent, the name and telephone number of a local office or on-site contact person; a description of the type of construction project; and the location of the SWPPP.
4. Details, standards, and specifications for applicable Best Management Practices (BMP's) to be implemented on-site shall be illustrated on the ESCP sheets. Additional details, standards, and specifications for BMP's implemented on-site following final submittal of the ESCP shall be added and maintained within the SWPPP.
5. The Owner/Operator or Contractor shall perform, at a minimum, a visual inspection of the construction site once every fourteen days and also within 24 hours of a rainfall event greater than or equal to a half of an inch or more. The Owner/Operator or Contractor shall prepare an inspection report documenting his/her findings on the conditions of the SWPPP controls and note any location(s) of discharge of sediment or other pollutants from the site, BMP's that require maintenance, additional BMP's needed, corrective actions required and identification of all sources of non-storm water discharges and the associated pollution prevention control measures and identification of evidence of or potential for pollutant discharge from the site.
6. The Owner/Operator or Contractor shall amend the SWPPP as necessary during the course of construction if there are changes at the site that has a significant effect on the discharge of pollutants or if inspections or investigations have determined that the SWPPP is no longer effective at minimizing pollutants in stormwater discharges from the site.
7. The Owner/Operator or Contractor is required to maintain compliance with all requirements outlined in the Arizona Pollutant Discharge Elimination System (AZPDES) Construction General Permit administered by ADEQ.
8. The Owner/Operator or Contractor shall submit a Notice of Termination (NOT) following completion of construction and permanent stabilization as outlined in the Arizona Pollutant Discharge Elimination System (AZPDES) Construction General Permit administered by ADEQ.
9. The Owner/Operator or Contractor shall obtain a Dust Control Permit from the Maricopa County Air Quality Department for all dust generating activities that disturbs 0.10 acre or greater and implement all applicable control measures as outlined in the Maricopa County Air Pollution Control Rule 310.

STANDARD DETAILS, SPECIFICATIONS, BEST MANAGEMENT PRACTICES AND APPLICABLE LAW

Work shall be done in accordance with this plan, the following specifications & details and applicable law.

1. The City of Chandler Code Chapter 45 and City of Chandler Manual on Stormwater Quality Protection.
2. Current edition of the City of Chandler Standard Details and Specifications.
3. City of Chandler Technical Design Manual #3 - Drainage Policies and Standards.
4. Drainage Design Manual for Maricopa County, Arizona - Revised August 2018.
5. Best Management Practices will be followed as outlined in this ESCP and the SWPPP.
6. The following on-site management practices should be considered whenever possible to limit the exposure of the site to erosion, sedimentation, and discharges of pollutants and/or wastes.

   A. Sequence construction activities so that disturbed areas are not exposed for extended periods of time.
   B. Schedule landscaping and other work that permanently stabilizes disturbed areas immediately following land development activities and final contour.
   C. Implement temporary stabilization practices when disturbed areas will be exposed for periods greater than 14 days.
   D. Install and maintain BMP's to control erosion, sedimentation, and discharges of pollutants and/or wastes.



VICINITY MAP

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
213	COVER SHEET
214	ESCP INDEX
215–218	ESCP DETAILS
219–224	ESCP PLAN SHEETS

OWNER/DEVELOPER
City of Chandler Public Works Dept.
215 East Buffalo Street, Suite #201
Chandler, AZ 85225
(480) 782–3440

LANDSCAPE ARCHITECT
Anne S. DeBoard, PLA
Kimley–Horn and Associates, Inc.
7740 N. 16th Street, Suite 300
Phoenix, AZ 85020
(602) 944–5500

SYMBOL	LEGEND	UNITS
	Indicates Contour Line	
	Indicates Proposed Street Improvement	
	Indicates Boundary	
	Indicates Drainage Feature	
W	Indicates Wattle (9")	LF
	Indicates Curb Inlet Guard	EA
	Indicates Rock Mulch (Gradation C)	CY
Not Shown – Located with Curb Inlet Guard	Gravel Bags	EA
Not Shown – Located around Drain Inlets	Indicates Sediment Log (20")	LF
Not Shown – To be Located by Engineer	Construction Entrance (200 SY EA Entramce)	SY

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
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In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

Kimley»Horn

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7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 03/31/21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	RAS
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL
COVER SHEET

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
ECSUM

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By: Marks, Ryan Sheet Set: CHANDLER HEIGHTS RD IMPROVEMENTS Layout: ECSUM 05/31/2021 10:34AM

EROSION AND SEDIMENT CONTROL PLAN INDEX

PART 1 - To Be Completed By Design Engineer

I. PROJECT DESCRIPTION

A. Owner/Operator Name and Address

City of Chandler, Public Works Dept.
215 E. Buffalo Street, Suite 201
Chandler, AZ 85225

B. Project Location/Address:

Chandler Heights Road from McQueen Road to Gilbert Road, a portion of the southeast quarter of Section 24, Township 25, Range 5E.

C. Project Description:

Road improvements including roadway widening, medians and drainage provisions.

II. HYDROLOGIC INFORMATION

A. Project Size:

Length (Mi.) 2.0 Mi.
Area (Ac.) 34.1 Ac.

B. Area to be disturbed (Ac.): 18.5 Ac.

C. Runoff Coefficient:

Existing 0.4 (Undeveloped/Desert Landscape)
0.95 (Pavement)
Developed 0.4 (Undeveloped/Desert Landscape)
0.95 (Pavement)

D. Receiving Water(s): Lower Gila River

III. SOIL STABILIZATION MEASURES

A. All disturbed areas, which will not be paved, will be revegetated and/or landscaped in accordance with the approved plans and specifications.

IV. EROSION/SEDIMENT CONTROL MEASURES

A. Temporary Control Measures Implemented - During Construction Activities:

_____ Silt Fence
_____ Organic Filter Barriers
_____ Sediment Control Berms
_X_ Rock Inlet/Outlet Protection
_X_ Sand Bag Barriers
_____ Sediment Traps
_____ Existing Vegetation
_____ Dust Control
_X_ Stabilized Construction Ingress/Egress
_X_ Storm Drain Inlet Protection
_X_ Other (Describe): SEDIMENT WATTLES

B. Permanent Control Measures Implemented - Post Construction Activities:

_X_ Sediment Basin
_____ Rock/Riprap Lined Channel
_X_ Scuppers/Spillways/Catch Basins
_____ Drywells
_X_ Rock Inlet/Outlet Protection
_X_ Landscape/Ground Cover
_____ Other (Describe): _____

V. SITE INSPECTIONS AND MAINTENANCE

A. Inspection Frequency

___ At least once every 7 days
_X_ Every 14 days and within 24 hours after a rainfall event of 0.5 inches or more.

B. Inspection Report – An inspection report will be completed by the contractor or authorized representative for each site inspection and shall be retained for at least 3 years following permit expiration or termination.

C. Maintenance of SWPPP

The site specific SWPPP must be amended within 15 days when a change in design, construction, operation, or maintenance that may have a significant effect on the discharge of pollutants to the Waters of the United States.

VI. CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

A. This Erosion and Sediment Control Plan Has been prepared in accordance with the most current version of the Arizona Pollutant Discharge Elimination System General Permit for Construction Activities, administered by the Arizona Department of Environmental Quality (ADEQ).

Signature: Anne S. DeBoard
Date: 03/17/2021
Name: Anne S. DeBoard
Title: Landscape Architect, PLA

PART 2 - To Be Completed By Owner/Operator Or Contractor

I. SCHEDULE OF MAJOR ACTIVITIES

A. Project Schedule

Start Date: _____

End Date: _____

B. Sequence of Construction Activities

II. INVENTORY Of POLLUTANTS

A. The following materials and/or substances are Expected to be onsite during construction:

_____ Paints
_____ Concrete
_____ Asphalt
_____ Oil
_____ Fuel
_____ Herbicides/Fertilizers
_____ Other (List): _____

III. POLLUTION CONTROL MEASURES

A. Best Management Practices:

_____ Wind Erosion/Dust Control
_____ Designated Washout Areas
_____ Solid Waste Management
_____ Chemical/Material Storage Area
_____ Stabilized Construction Ingress/Egress
_____ Equipment Maintenance Procedures
_____ Other (Describe): _____

IV. SPILL PREVENTION, RESPONSE AND CLEANUP

A. Spill Prevention:

The best management practices outlined under pollution control measures are designed to prevent and contain spills of hazardous substances.

B. Spill Response and Cleanup:

In the event of any accidental spill or release of hazardous substances or chemicals, The owner/operator shall report such discharges as follows:

1. If an imminent and substantial danger to public health and welfare or to the environment exists, immediately contact emergency assistance (911). if assistance is needed for the removal of hazardous waste, contact the City of Chandler Environmental Management office;
2. For discharges not involving an imminent and substantial danger to public health and welfare or to the environment, contact the City of Chandler Streets Division of the Public Works Department by telephone within 24 hours;
3. Provide a written report to the City of Chandler Environmental Management office, and to the City of Chandler Streets Division of the Public Works Department within 3 business days of the discharge. The written report may be submitted via mail, fax, or in person;
4. Such reporting shall identify the location, source of discharge and pollutant(s), extent of discharge, pollutant(s) discharged and all measures taken to mitigate the discharge. Additionally, if the discharge includes hazardous waste, the report shall detail the method of disposal and disposal facility receiving the waste material. The report shall also identify all best management practices implemented to prevent similar discharges in the future.

V. EROSION AND SEDIMENT CONTROL PLAN PLAN CERTIFICATION

A. I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

B. The owner/operator and/or contractor as defined in the Arizona Pollutant Discharge Elimination System General Permit for Construction Activities, administered by the Arizona Department of Environmental Quality (ADEQ), should sign the Stormwater Pollution Prevention Plan (SWPPP) and maintain the SWPPP on- site at the construction site or other reasonably accessible location during normal business hours.

Signature: _____
Date: _____
Name: _____
Title: _____

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

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PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08/11/21
ARIZONA, U.S.A.
Anne S. DeBoard
Expires 03/31/2022

SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	RAS
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

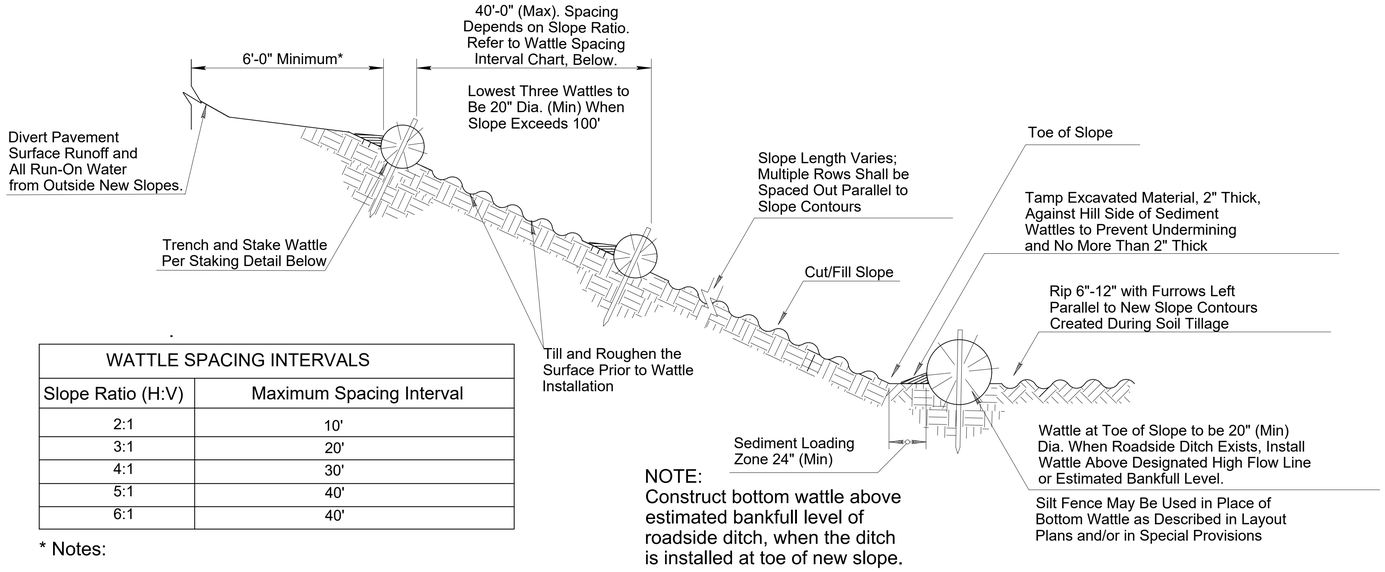
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL
INDEX SHEET

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
ED01

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinolo, Julia Sheet Set:CHANDLERHEIGHTSRDIMPROVEMENTS Sheet:ED01 Date/Time:Tue, Aug 10, 2021 2:19:29 PM Drawing:P:\064660095\Highway\Design\Erosion Control\ED01.dwg



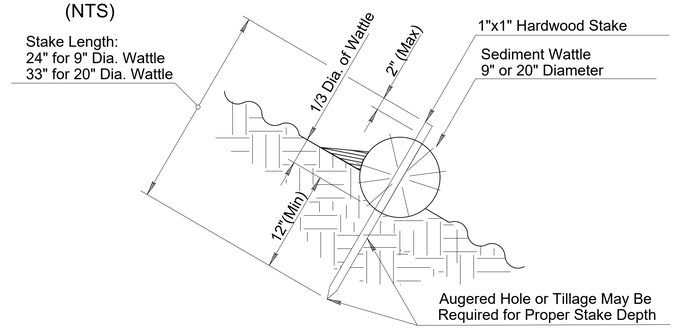
WATTLE SPACING INTERVALS	
Slope Ratio (H:V)	Maximum Spacing Interval
2:1	10'
3:1	20'
4:1	30'
5:1	40'
6:1	40'

* Notes:

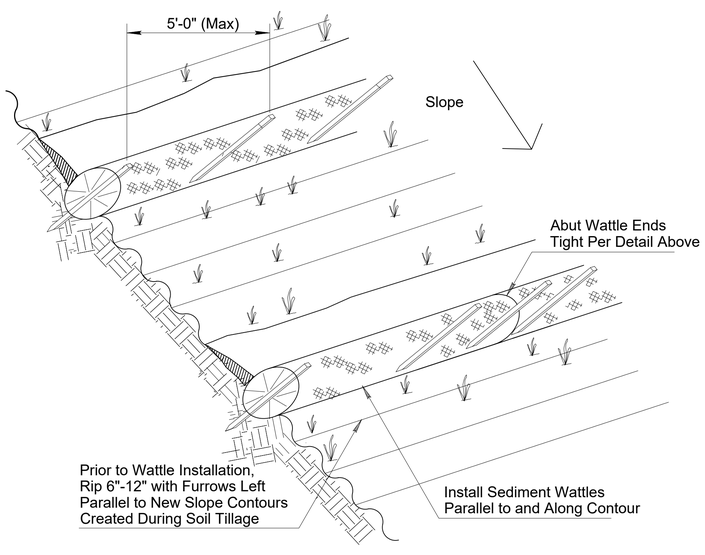
1) Top Row Shall Not be Placed within 6'-0" of Edge of Pavement and 9'-0" from Outside Surface of Barrier.
2) For erosive soils, place rows of wattles closer together.
3) For soils with low erosive potential, place rows of wattles further apart.

NOTE:
Construct bottom wattle above estimated bankfull level of roadside ditch, when the ditch is installed at toe of new slope.

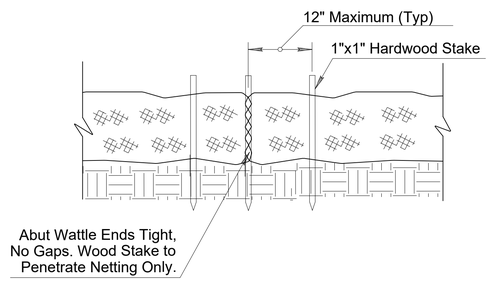
SECTION
(NTS)



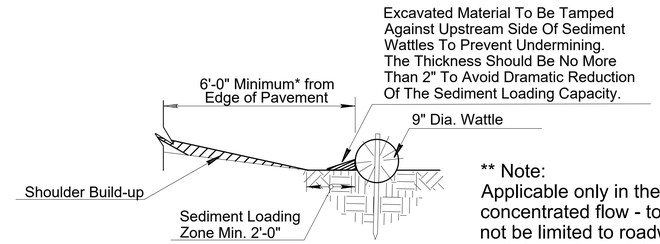
SEDIMENT WATTLE STAKING
DETAIL (NTS)



SEDIMENT WATTLE
LAYOUT (NTS)



SEDIMENT WATTLE
OVERLAP (NTS)



NEW SHOULDER BUILDUP **
PROTECTION SECTION (NTS)

** Note:
Applicable only in the areas of concentrated flow - to include but not be limited to roadway sag spots and drop-off repair locations as per the direction of the Engineer.

NOTES:

1. Install Sediment Wattles as slopes are constructed to grade or as directed by the Engineer. Select, install and maintain in conformance with manufacturers' specifications to meet site conditions for slope protection and in accordance with good engineering practices. No Sediment Wattles shall be installed in urban freeway medians, nor where cable barrier systems are employed.
2. Sediment Wattles shall be in continuous contact with trench bottom and sides. Do not overlap wattle ends on top of each other. A 20" Dia. wattle may be made from 2-3 rolled excelsior or straw blankets.
3. Butt adjoining wattles tightly against each other. Drive the first end stake of the second wattle at an angle toward the first wattle to help abut them tightly.
4. Repair any rills or gullies promptly. Make field adjustments and corrections of Wattle BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
5. Construction of cut slopes 2:1 and steeper in soil and rock materials that can be ripped shall be constructed, whenever possible, by Minibenching. Refer to Slope Minibenching BMP Detail.
6. Loosening surface soil is not required where Minibenches are used. For seeded areas, tillage shall be performed to form minor ridges and furrows parallel to new slope contours and as specified in Section 805 of the Standard Specifications and these special provisions.
7. Divert and direct run-on water from outside of the slopes to the spillways and/or rock riprap/rock mulch. Diversion dikes and/or ditches are necessary on natural undisturbed slopes beyond the top limits of new slopes to divert run-on water.
8. Installation and maintenance of Sediment Wattle BMPs shall not negatively impact traffic safety, nor the designed function of roadway or bridge drainage facilities.
9. Install and maintain Sediment Wattle BMPs to carry the stormwater of at least 2-year, 24-hour events.
10. The Sediment Wattle BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, maintenance, final removal, and disposal of this temporary BMP, as well as returning the area to an acceptable condition as approved by the Engineer.
11. Refer to Standard Specification Section 810-2.06(C) for Sediment Wattle material specifications.
12. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.

DETAIL E1
SEDIMENT WATTLE

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

Kimley»Horn
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7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
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REGISTERED LANDSCAPE ARCHITECT
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SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	RAS
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL
DETAILS

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
ED02

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

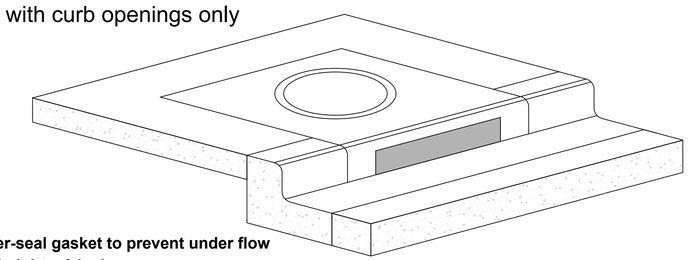
Plotted By:Spinolo, Julia Sheet Set:CHANDLER Heights RD IMPROVEMENTS Sheet:ED02 Date:2021/3/31 Time:8:29:32PM

Curb Inlet Guard – For drainage inlets with curb openings only

Installation Guide

Table 1

Inlet Size	# of CIG Segments
5'	1
10'	2
15'	3
20'	4



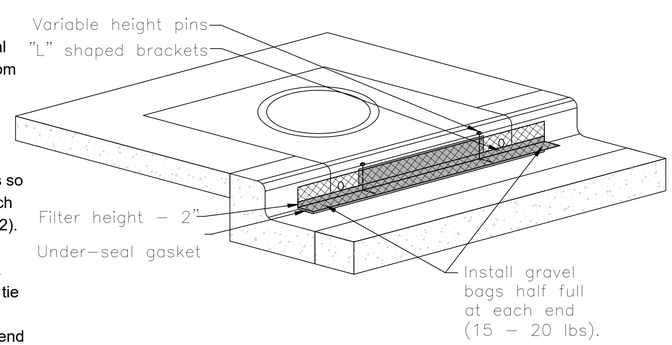
Unprotected drainage inlet

Construction Details

- **Minimum 2 integrated "L" Brackets**
- **Minimum 2 variable-height plans for cunh**
- **Filter height = 2 inches**
- **UV resistant HDPE outer jackets**
- **Under-seal gasket to prevent under flow**
- **CIG height = 8 inches**
- **CIG lenght = 6.25 feet**

Installation Notes

1. **Placement:** Place CIG tightly against drain opening with metal variable height pins at top and horizontal flap pointing away from curb. Position CIG so that water cannot flow behind.
2. **Change height for high openings:** for high curb openings, extend variable height pins upward as needed (Fig 1). Twist to lock.
3. **Interconnecting for long curb openings:** Overlap segments so the bottom gasket provides a continuous seal. One end of each segment has a cut-out in the gasket layer for overlapping (Fig 2). Each 6.25' segment fits a 5 foot opening or smaller. Use 2 segments for 8 to 10 foot opening, 3 for a 15 foot opening, etc. (Table 1). Position gravel bag at overlap (Fig 3). If necessary tie segments together with rebar tie-wire or cable-ties (Fig 4).
4. **Alternative anchor methods: A)** Install gravel bags at each end and at overlaps. Use ½ full bags (15 to 20 lbs) with round rock for low profile and best traffic avoidance. Use clean gravel at drain inlets, not sand. Select bags with long UV resistance and toughness for resistance to traffic. Or where it is not possible to install gravel bags due to traffic proximity, **B)** anchor with concrete anchors, or masonry nails, one at each end or **C)** secure with outdoor caulking around edges.



ERTEC® Curb Inlet Guard™
Protected drainage inlet
or Approved Equal

Fig 1

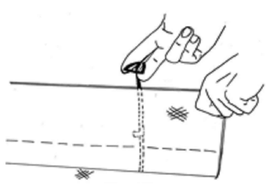


Fig 2

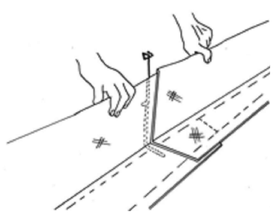


Fig 3

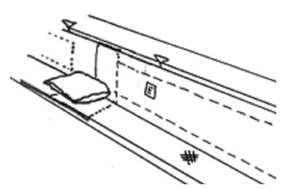
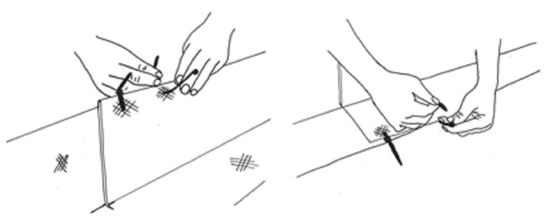


Fig 4



DETAIL **E2**
CURB INLET GUARD

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

Kimley»Horn

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7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08/11/21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	RAS
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

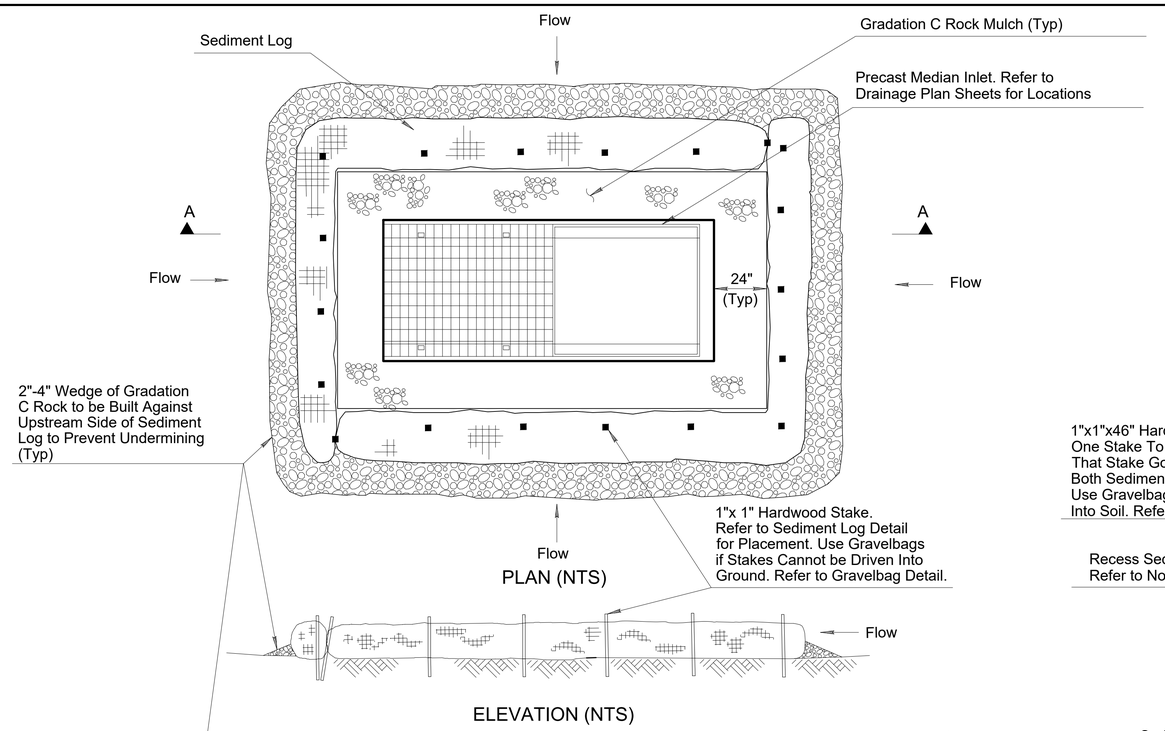
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL
DETAILS

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
ED03

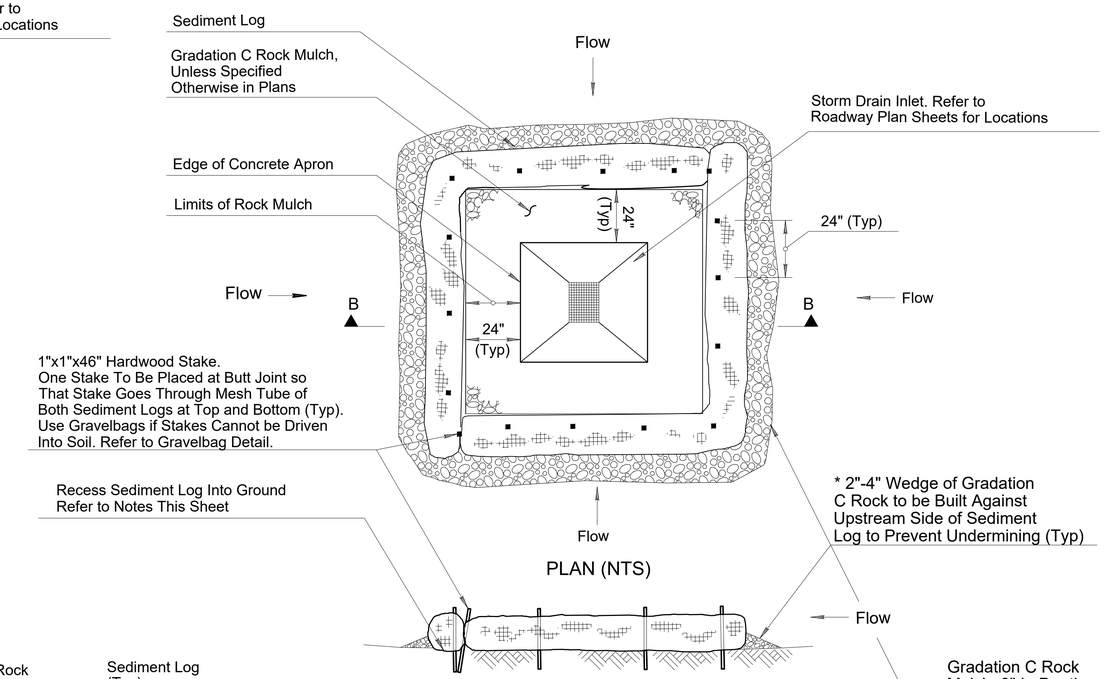
C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinolo, Julio Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:ED03 Date: 2/24/2021 Time: 2:29:43 PM



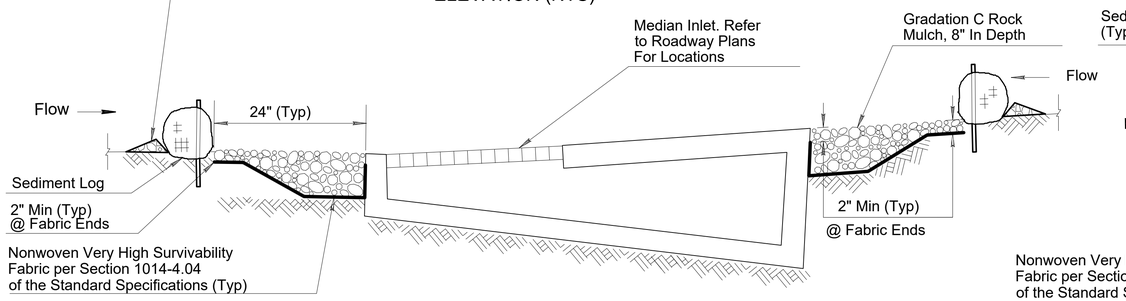
PLAN (NTS)

ELEVATION (NTS)

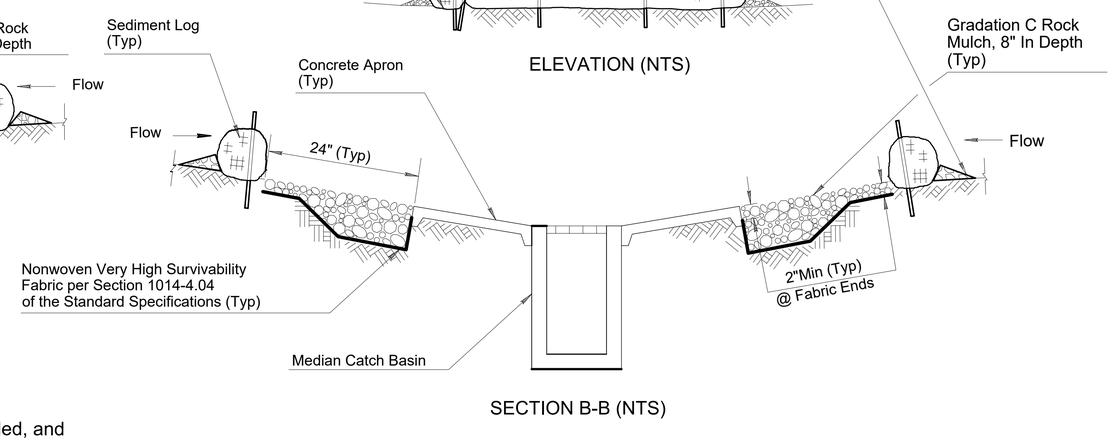


PLAN (NTS)

ELEVATION (NTS)



SECTION A-A (NTS)



SECTION B-B (NTS)

NOTES:

1. Sediment logs shall be located as indicated on plans or as directed by the Engineer. They shall be selected, installed, and maintained per manufacturer's specifications and good engineering practices.Log shall be installed perpendicular to the flow of water. Continuous contact between the bottom of the log and the ground is mandatory.
2. Stake log with 1"x1"x46" Min. hardwood stakes 24" on center. The stake shall be placed through the downstream side only. It is necessary for the stakes to grab one or two inches of netting. Do not drive stake through center of log. The stakes must be driven into the ground 24". Stakes at corners shall be placed in an "X" pattern.
3. Make sure no gaps exist between subgrade and sediment log. Runoff must not pass under sediment log. May require subgrade preparation as directed by Engineer.
4. Repair any rills or gullies promptly.
5. Remove Sediment Log and stakes once construction activities are complete. Dispose of sediment logs and trapped sediment material and fill trench created by sediment log.
6. Refer to Roadway and Drainage Plans and Details for Locations of Inlets and Catch Basins.
7. Make field adjustments and corrections of Inlet Protection BMP immediately if it is causing flooding, erosion, and/or affecting roadway safety.
8. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.
9. * Construct Rock Wedge with angular-shaped Gradation C Rock Mulch as defined in Section 810-2.03 of the Standard Specifications and these special provisions. Natural river-run materials such as rounded river rocks/cobblestones and pebbles are NOT acceptable.

DETAIL E3

INLET PROTECTION COMBINED BMPS

Call at least two full working days before you begin excavation.
ARIZONA 811
Arizona Blue Stake, Inc.
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In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

Kimley»Horn
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7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08/11/21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	RAS
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL
DETAILS

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
ED04

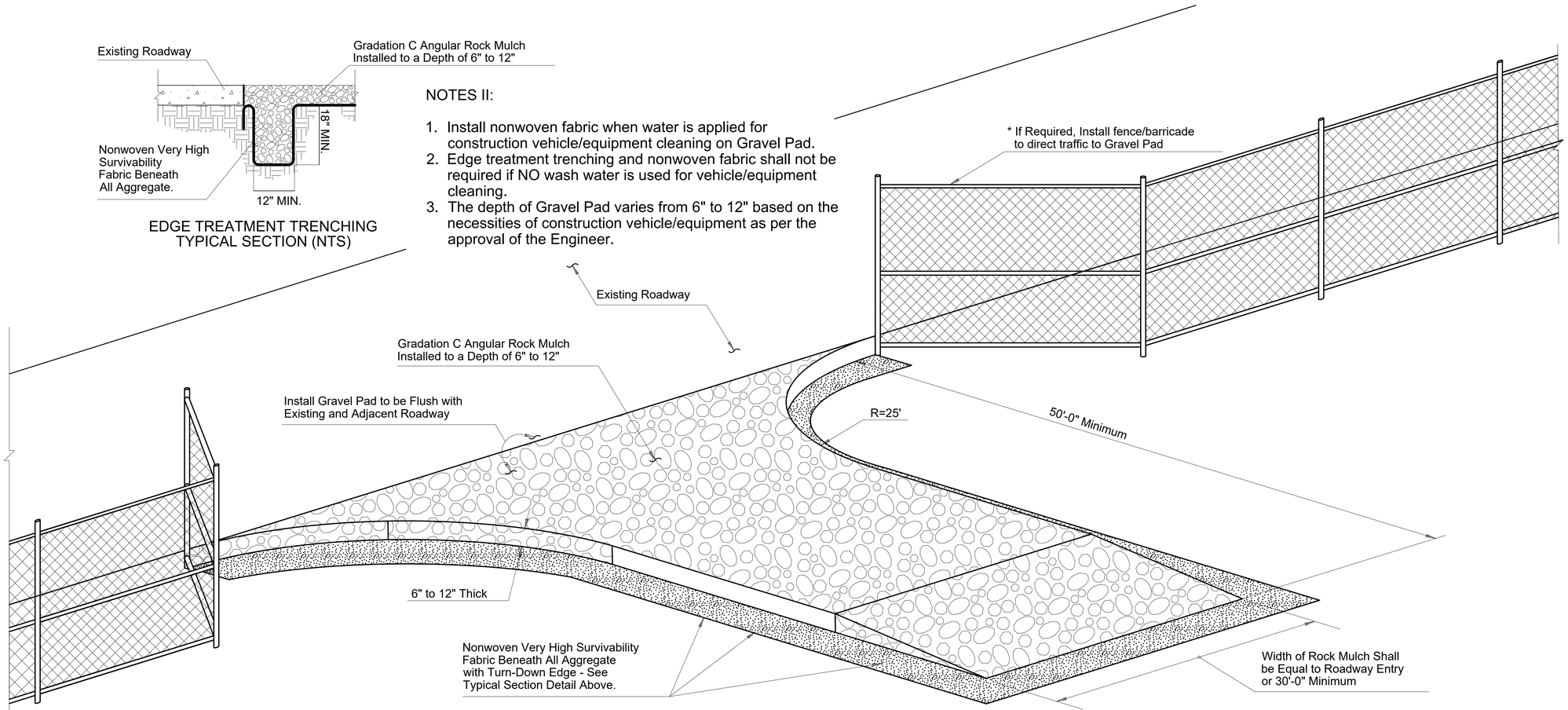
C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Spinola, Julia Sheet Set:CHANDLERHEIGHTSRDIMPROVEMENTS\EDSHEETS\24xSetBlank-Gilbert\XS-EDhtp\Sheet\V24xE6608xA3EDTS.dwg

EDGE TREATMENT TRENCHING
TYPICAL SECTION (NTS)

NOTES II:

1. Install nonwoven fabric when water is applied for construction vehicle/equipment cleaning on Gravel Pad.
2. Edge treatment trenching and nonwoven fabric shall not be required if NO wash water is used for vehicle/equipment cleaning.
3. The depth of Gravel Pad varies from 6" to 12" based on the necessities of construction vehicle/equipment as per the approval of the Engineer.



BIRD'S EYE VIEW (NTS)

NOTES I:

1. Install Stabilized Construction Entrance/Exit Gravel Pad BMP for traffic entering or exiting a construction site where sedimentation, clay, silt or other pollutants can be tracked onto public roads and/or adjacent water bodies, as approved by the Engineer. It may also be applied for construction entrance/exit wind erosion/dust control, as approved by the Engineer.
2. Locate new Construction Entrance(s)/Exit(s) at appropriate project entrance/exit points as determined in field with the approval of the Engineer. Relocate Stabilized Construction Entrance/Exit Gravel Pad BMP as needed as project progresses. Replace Rock Mulch materials in drive paths when dirt or mud accumulates.
3. Nonwoven Very High Survivability Fabric shall conform to the standards of Sub-section 1014-4.04 of the Standard Specifications.
4. Rock Mulch materials shall be fractured/crushed rocks in angular shape and as defined in the Sub-section 810-2.03 of the Standard Specifications. Natural river-run materials, especially rounded natural river rocks are not acceptable.
5. Make field adjustments and corrections of Construction Entrance/Exit Gravel Pad BMP immediately if it is causing flooding and/or affecting roadway safety.
6. When paid separately, the Stabilized Construction Entrance/Exit Gravel Pad BMP's pay/bid item shall include all materials used for this BMP: all ground preparation, furnishing, installing, final removal, and disposal of this temporary BMP, as well as returning the area to an acceptable condition as approved by the Engineer.
7. * Fence/barricade pay/bid item shall not be included as a component of the Stabilized Construction Entrance/Exit Gravel Pad BMP pay/bid item.
8. Make field adjustments and corrections to ensure NO sensitive biological resources (native species / habitats) will be adversely impacted.

DETAIL E4

STABILIZED CONSTRUCTION ENTRANCE/EXIT GRAVEL PAD

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In Maricopa County: (602) 263-1100

No.	REVISIONS	DATE	BY

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REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 10/19/20
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	N/A
SCALE (V):	N/A
DESIGNED BY:	RAS
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL
DETAILS

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
ED05

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

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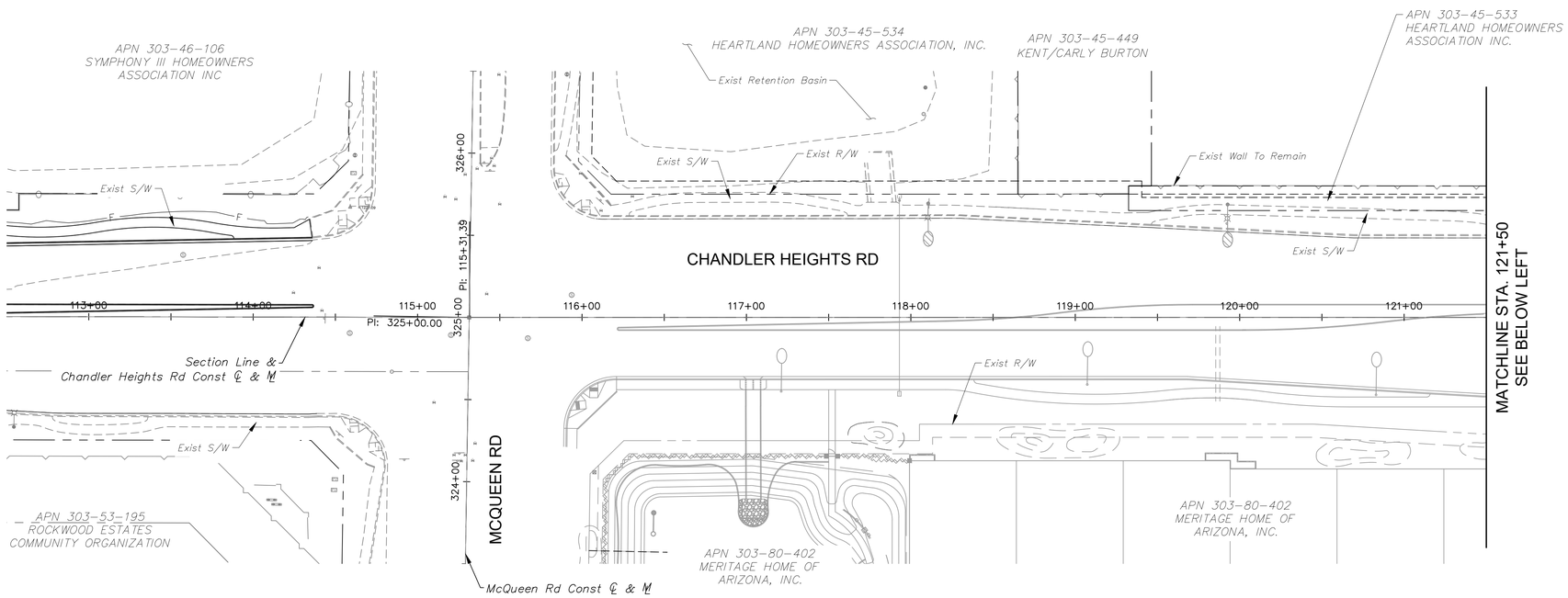
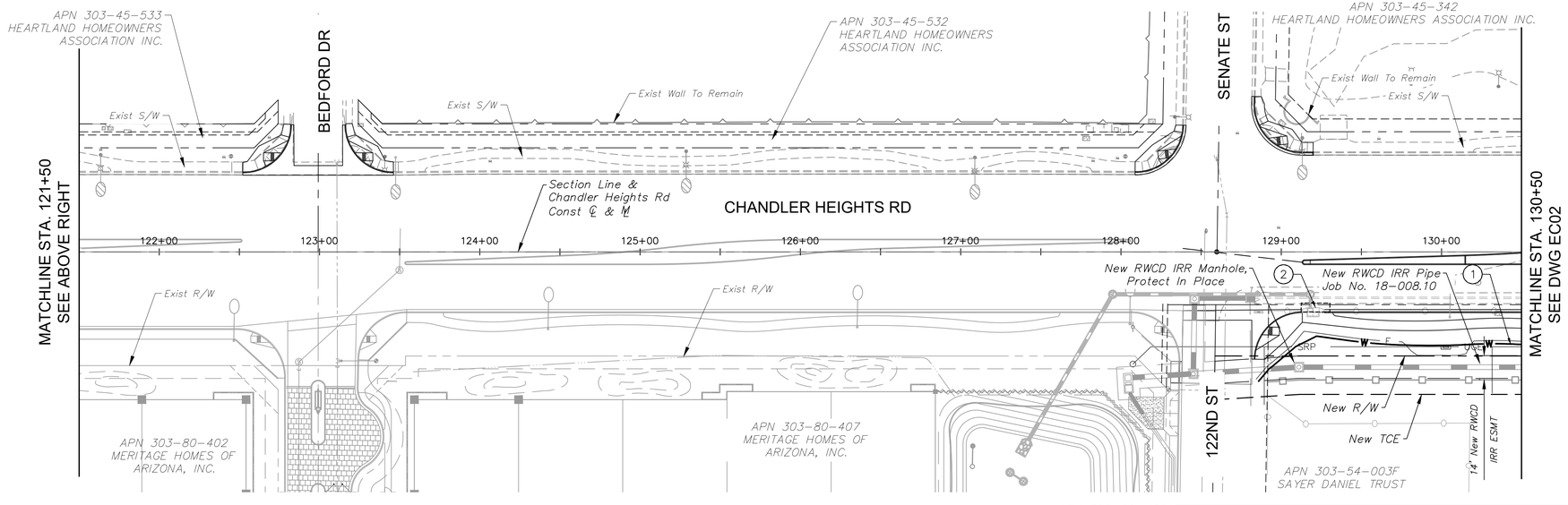




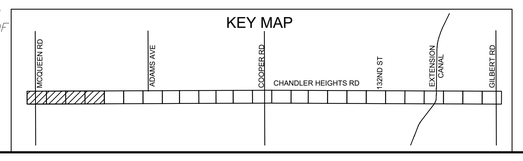
CONSTRUCTION NOTES

	DESCRIPTION
1	Wattle (9"), Detail E1
2	Curb Inlet Guard, Detail E2
3	Inlet Protection, Detail E3
	Construction Entrance (Not Shown), Detail E4

No.	REVISIONS	DATE	BY

LEGEND

- Indicates Proposed Street Improvement
- Indicates R/W
- Indicates Drainage Feature
- Indicates Wattle (9")
- Indicates Curb Inlet Guard
- Indicates Rock Mulch (Gradation C)
- Not Shown — Sediment Log (20")
- Not Shown — Construction Entrance (Rock Mulch)



NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

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REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08/11/21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	RAS
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

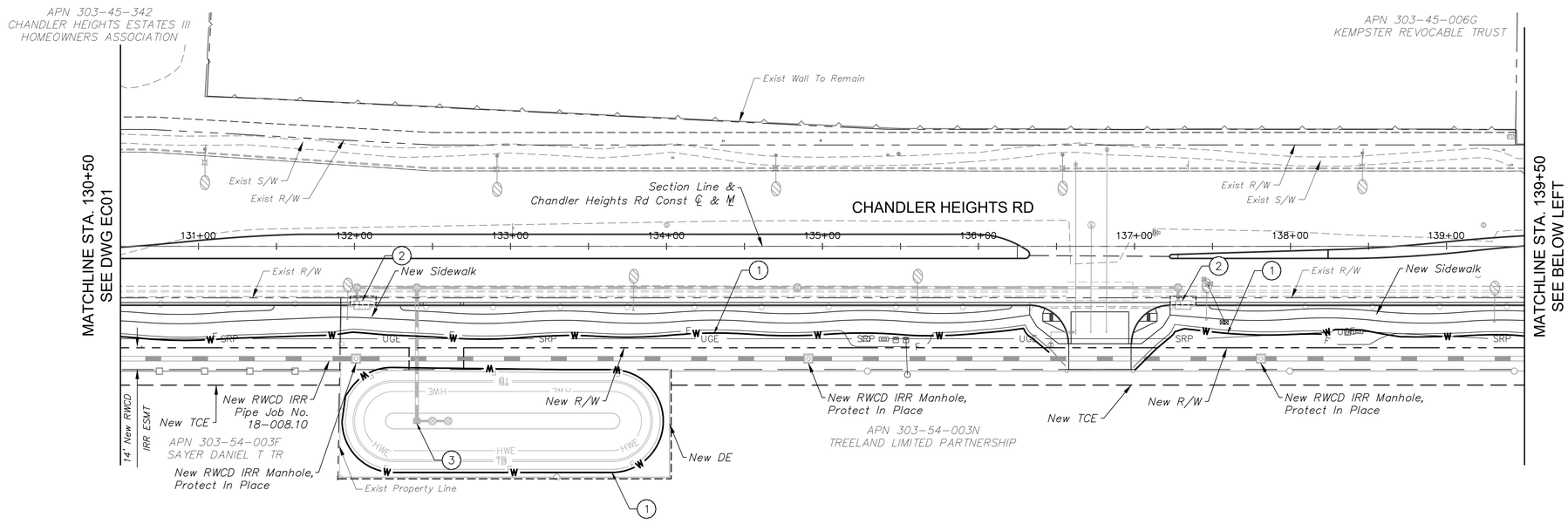
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL PLAN
STA 112+50 TO STA 130+50

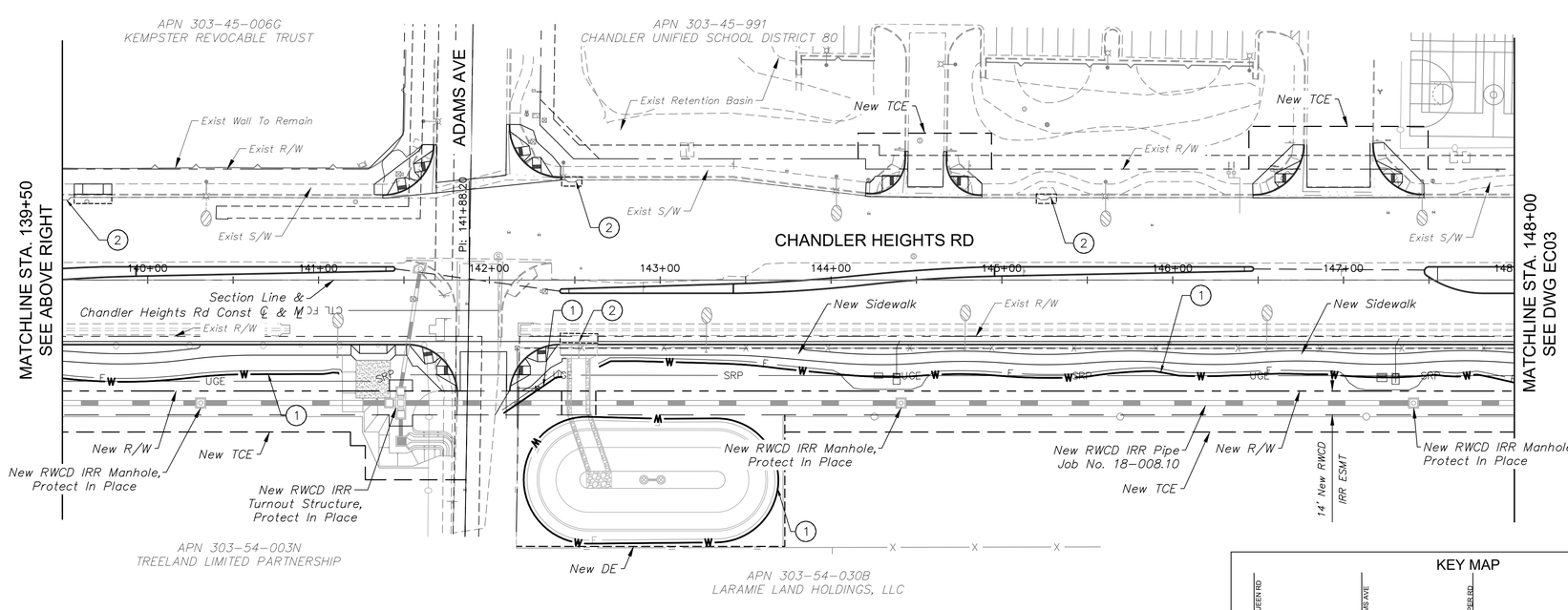
CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
EC01

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Posted By:Spinola, Julio Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:EC01 September 09, 2021 08:27:28am K:\PHX Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_EC_01.dwg





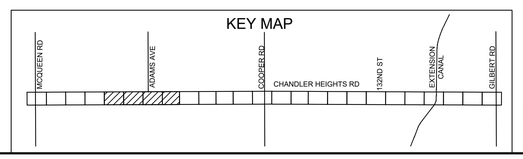
CONSTRUCTION NOTES

	DESCRIPTION
1	Wattle (9"), Detail E1
2	Curb Inlet Guard, Detail E2
3	Inlet Protection, Detail E3
	Construction Entrance (Not Shown), Detail E4

No.	REVISIONS	DATE	BY

LEGEND

	Indicates Proposed Street Improvement
	Indicates R/W
	Indicates Drainage Feature
W	Indicates Wattle (9")
	Indicates Curb Inlet Guard
	Indicates Rock Mulch (Gradation C)
Not Shown	Sediment Log (20")
Not Shown	Construction Entrance (Rock Mulch)



NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

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Arizona Blue Stake, Inc.
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In Maricopa County: (602) 263-1100

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REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08/11/21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H): 1"=20'	
SCALE (V):	N/A
DESIGNED BY:	RAS
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL PLAN
STA 130+50 TO STA 148+00

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
EC02

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

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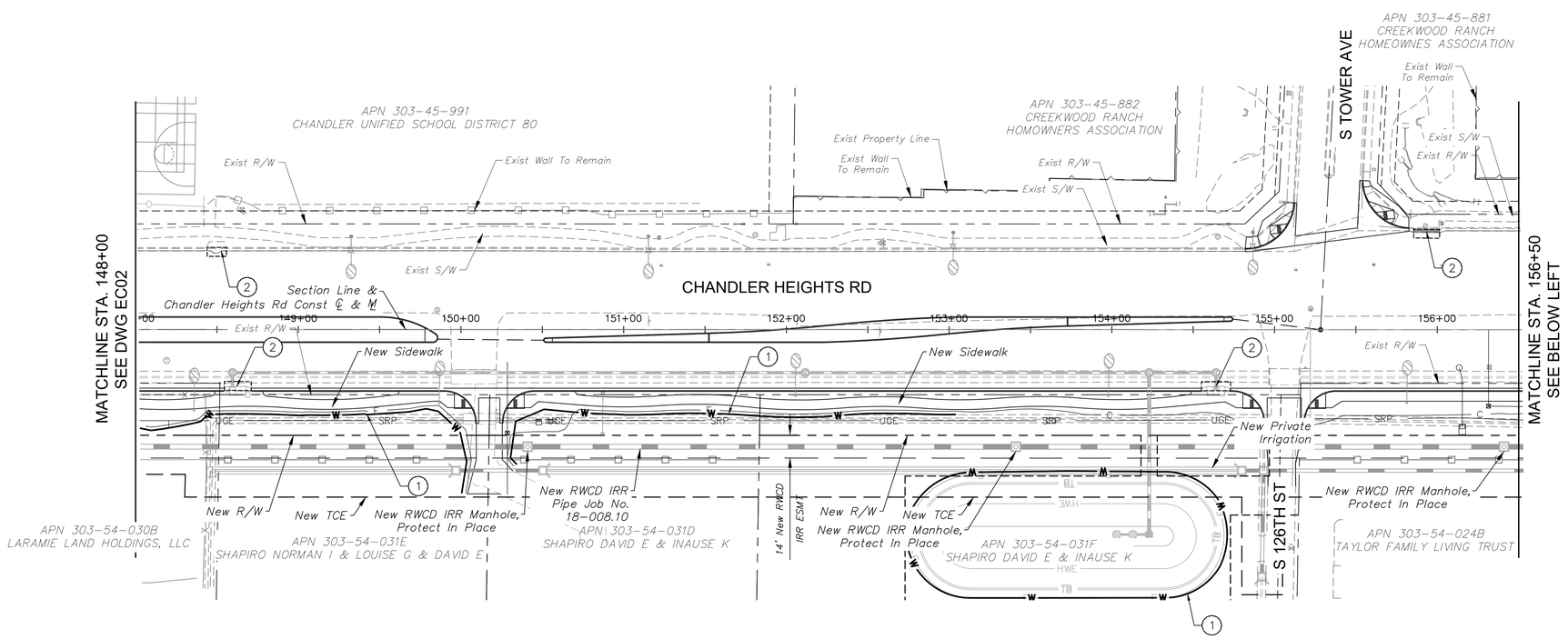

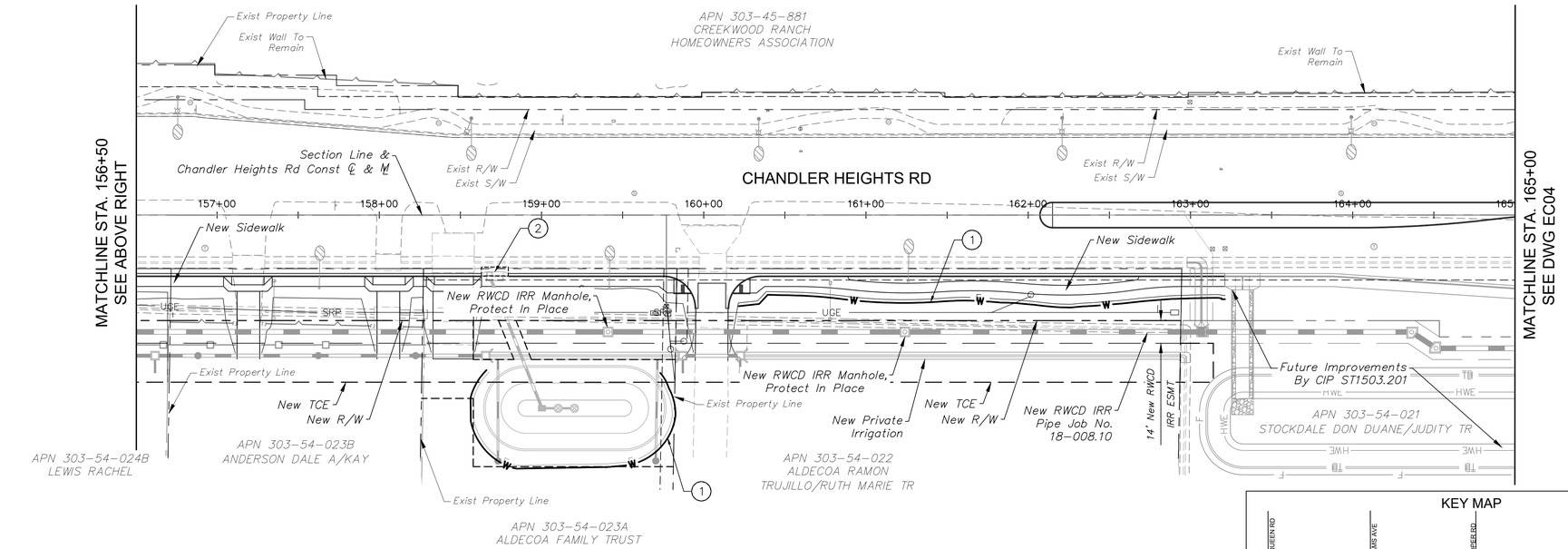

CONSTRUCTION NOTES

	DESCRIPTION
1	Wattle (9"), Detail E1
2	Curb Inlet Guard, Detail E2
3	Inlet Protection, Detail E3
	Construction Entrance (Not Shown), Detail E4

No.	REVISIONS	DATE	BY

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LEGEND

	Indicates Proposed Street Improvement
	Indicates R/W
	Indicates Drainage Feature
W	Indicates Wattle (9")
	Indicates Curb Inlet Guard
	Indicates Rock Mulch (Gradation C)
Not Shown	Sediment Log (20")
Not Shown	Construction Entrance (Rock Mulch)

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 03/31/21
ARIZONA, U.S.A.
Expires 03/31/2022

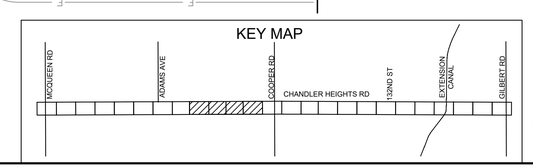
SCALE (H): 1"=20'	DESIGNED BY: RAS	DRAWN BY: RAS	CHECKED BY: ASD
SCALE (V): N/A			DATE: 08/2021

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL PLAN
STA 148+00 TO STA 165+00

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
EC03

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS



NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

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Arizona Blue Stake, Inc.
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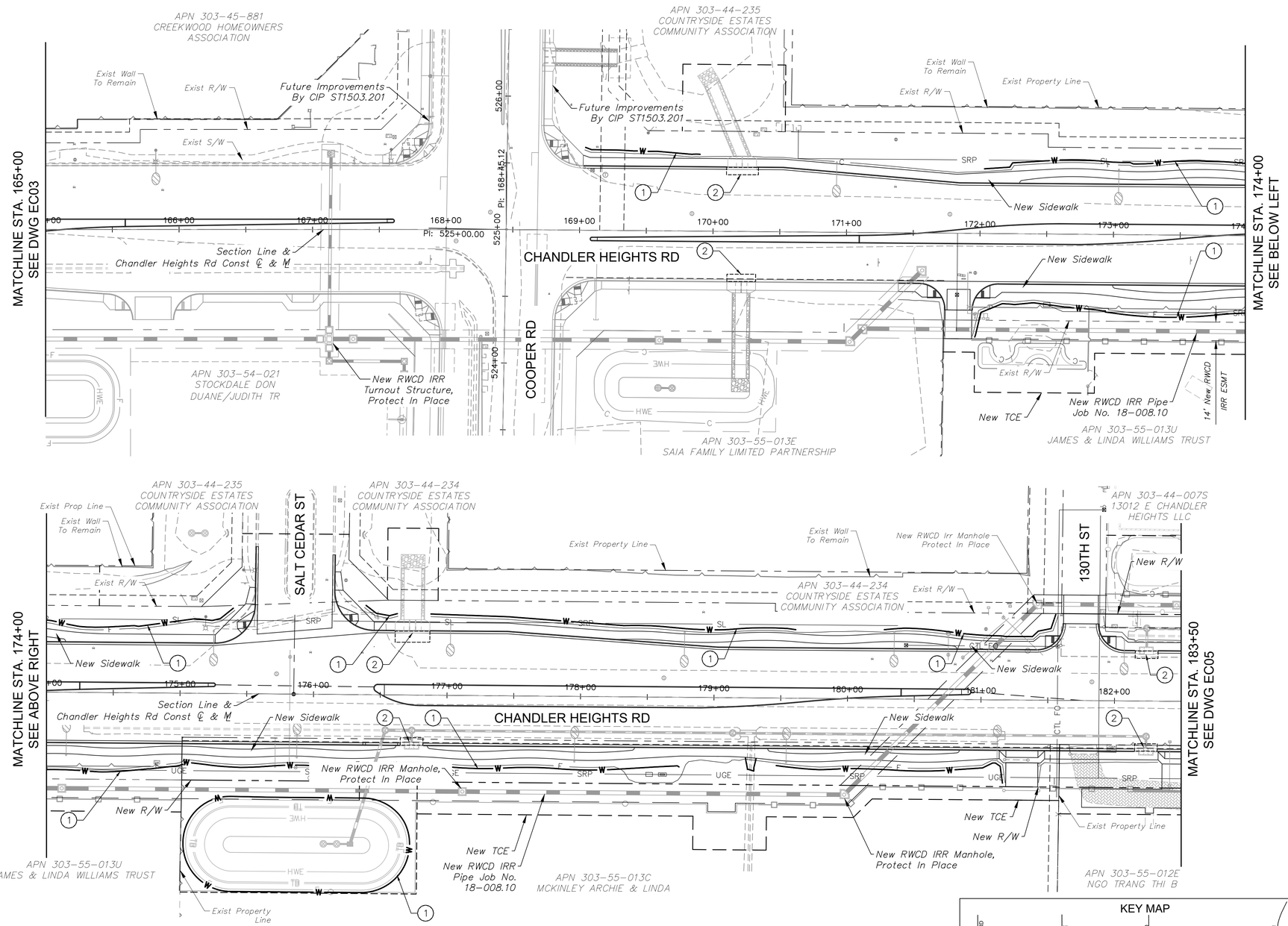
Plotted By:Spinola, Julia Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:EC03 September 09, 2021 08:28:02pm K:\PHX_Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_EC_01.dwg



CONSTRUCTION NOTES

	DESCRIPTION
1	Wattle (9"), Detail E1
2	Curb Inlet Guard, Detail E2
3	Inlet Protection, Detail E3
	Construction Entrance (Not Shown), Detail E4

No.	REVISIONS	DATE	BY

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LEGEND

	Indicates Proposed Street Improvement
	Indicates R/W
	Indicates Drainage Feature
W	Indicates Wattle (9")
	Indicates Curb Inlet Guard
	Indicates Rock Mulch (Gradation C)
Not Shown	Sediment Log (20")
Not Shown	Construction Entrance (Rock Mulch)

REGISTERED LANDSCAPE ARCHITECT CERTIFICATE NO. 50615 ANNE S. DEBOARD Date Signed 08-11-21 ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H): 1"=20'	
SCALE (V):	N/A
DESIGNED BY:	RAS
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

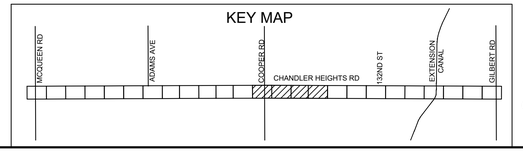
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL PLAN
STA 165+00 TO STA 183+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
EC04

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

KEY MAP



NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

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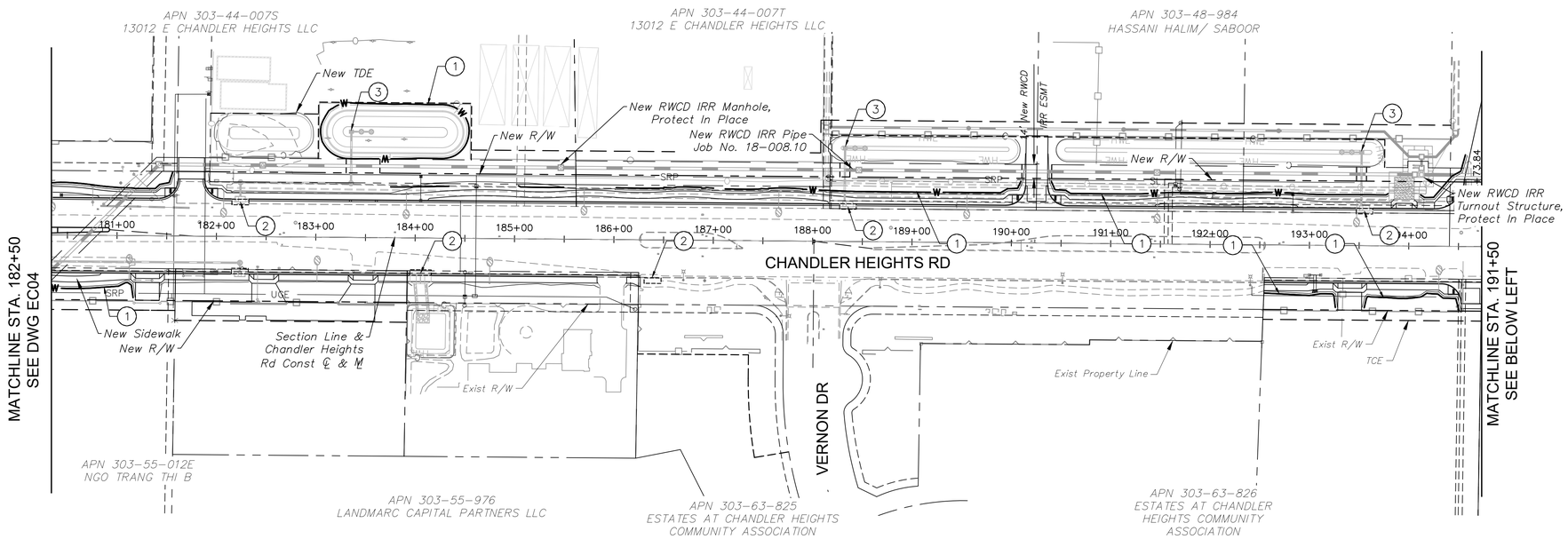
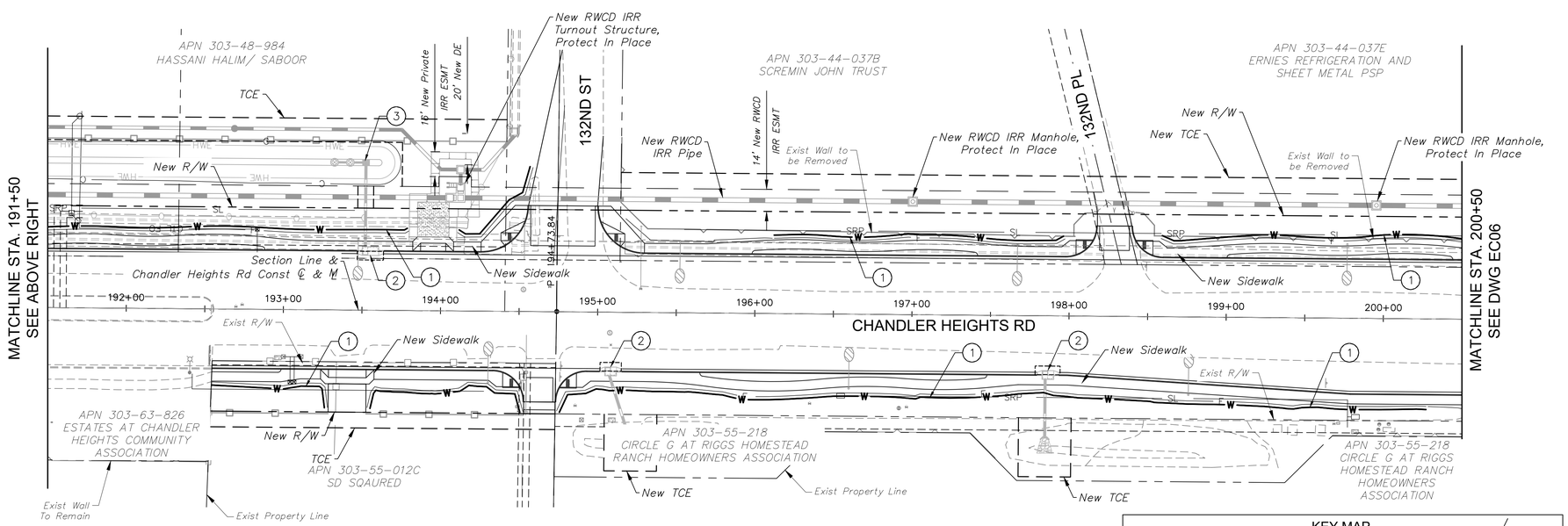
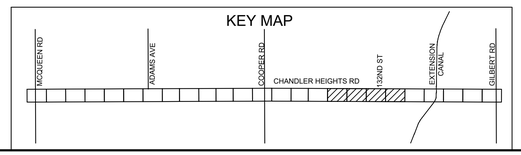
Posted By:Spinolo, Julio Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:EC04 September 09, 2021 08:28:17pm K:\PHX Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_EC_01.dwg







NORTH

GRAPHIC SCALE IN FEET
0 32 64 128

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CONSTRUCTION NOTES

	DESCRIPTION
1	Wattle (9"), Detail E1
2	Curb Inlet Guard, Detail E2
3	Inlet Protection, Detail E3
	Construction Entrance (Not Shown), Detail E4

No.	REVISIONS	DATE	BY

LEGEND

	Indicates Proposed Street Improvement
	Indicates R/W
	Indicates Drainage Feature
W	Indicates Wattle (9")
	Indicates Curb Inlet Guard
	Indicates Rock Mulch (Gradation C)
Not Shown	Sediment Log (20")
Not Shown	Construction Entrance (Rock Mulch)

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7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08/11/21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H):	1"=20'
SCALE (V):	N/A
DESIGNED BY:	RAS
DRAWN BY:	RAS
CHECKED BY:	ASD
DATE:	08/2021

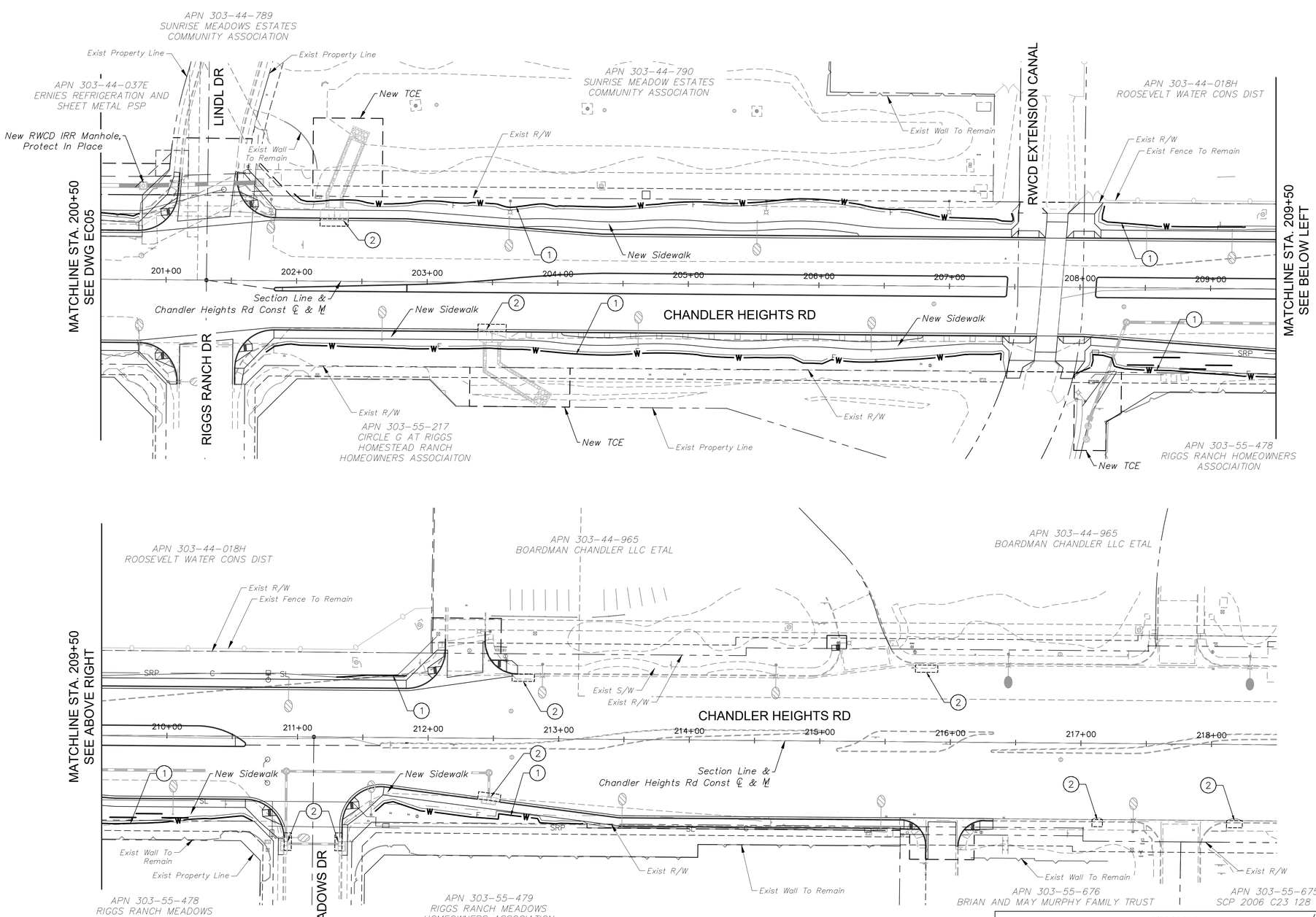
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL PLAN
STA 182+50 TO STA 200+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
EC05

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Posted By:Spinolo, Julio Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:EC05 September 09, 2021 08:28:29pm K:\PHX Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_EC_01.dwg



CONSTRUCTION NOTES

	DESCRIPTION
1	Wattle (9"), Detail E1
2	Curb Inlet Guard, Detail E2
3	Inlet Protection, Detail E3
	Construction Entrance (Not Shown), Detail E4

No.	REVISIONS	DATE	BY

Kimley»Horn
© 2019 KIMLEY-HORN AND ASSOCIATES, INC.
7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
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LEGEND

	Indicates Proposed Street Improvement
	Indicates R/W
	Indicates Drainage Feature
W	Indicates Wattle (9")
	Indicates Curb Inlet Guard
	Indicates Rock Mulch (Gradation C)
Not Shown	Sediment Log (20")
Not Shown	Construction Entrance (Rock Mulch)

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO. 50615
ANNE S. DEBOARD
Date Signed 08/11/21
ARIZONA, U.S.A.
Expires 03/31/2022

SCALE (H): 1"=20'			
SCALE (V): N/A			
DESIGNED BY: RAS	DRAWN BY: RAS	CHECKED BY: ASD	DATE: 08/2021

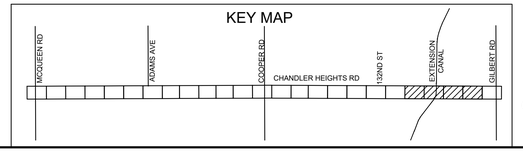
CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
EROSION SEDIMENT CONTROL PLAN
STA 200+50 TO STA 218+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
EC06

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

KEY MAP



NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

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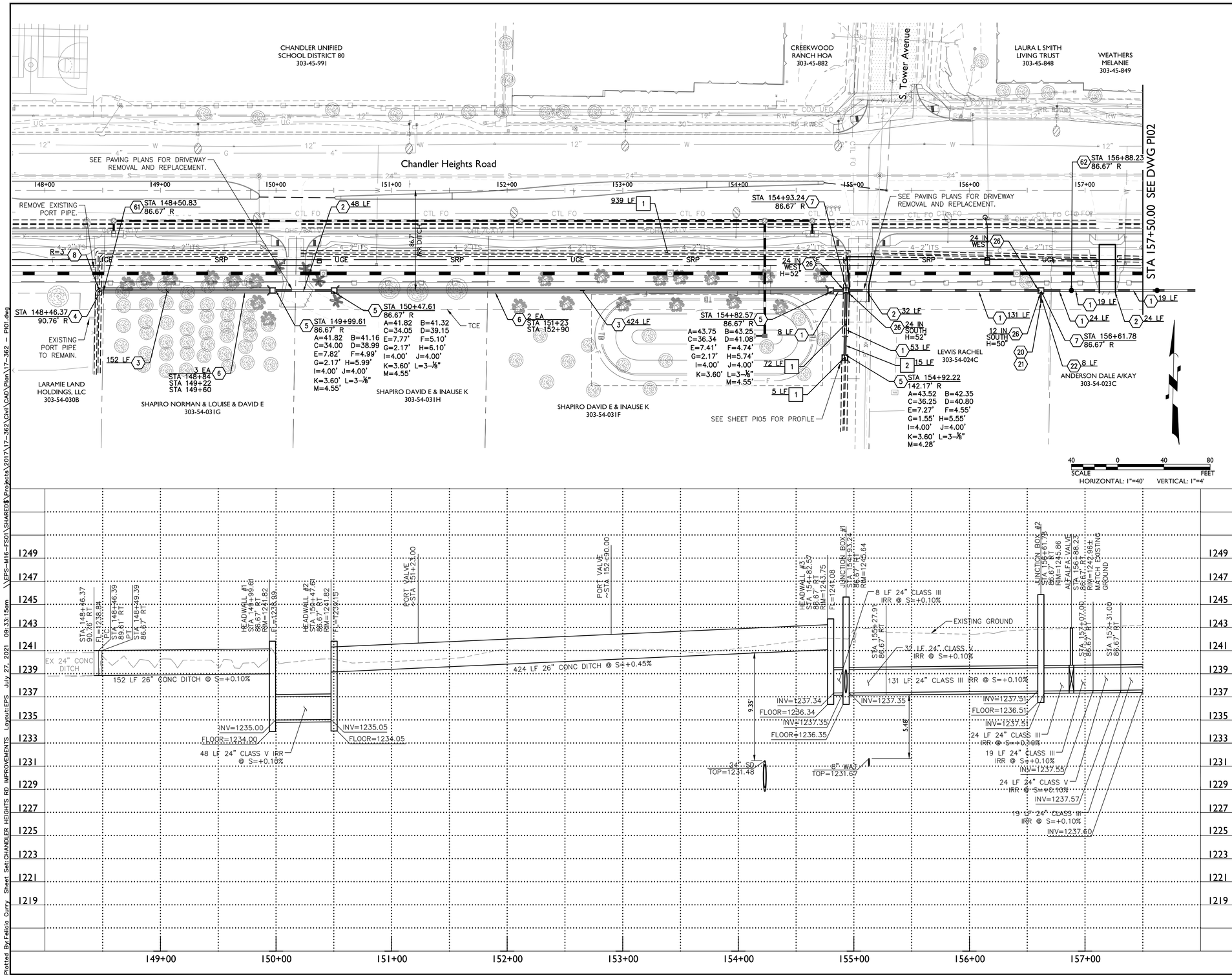
ARIZONA 811
Arizona Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602) 263-1100

Plotted By: Spinolo, Julio Sheet Set: CHANDLER HEIGHTS RD IMPROVEMENTS Layout: EC06 September 09, 2021 08:28:46pm K:\PHX Roadway\191466008-Chandler Heights Rd-McQueen to Gilbert\Cadd\12-Sheets\466008_EC_01.dwg



	IRRIGATION NOTES		
1	24 INCH RGRCP CLASS III	LF	
2	24 INCH RGRCP CLASS V	LF	
3	26 INCH DEEP CONCRETE DITCH	LF	
4	SAWCUT DITCH AT TIE-IN. CONTRACTOR TO TOE-IN UNDER EXISTING DITCH PER DITCH DETAIL ON SHEET PI04	EA	
5	HEADWALL PER MAG STD DTL 502-1	EA	
6	PORT VALVE, PORT VALVE DETAIL AND TYPICAL PORT VALVE LOCATION DETAIL ON SHEET PI04	EA	
7	JUNCTION BOX PER DETAIL ON SHEET PI04	EA	
8	CONCRETE DITCH RADIUS	EA	
20	PIPE COLLAR PER MAG STD DTL 505	EA	
21	CONNECT TO EXISTING PIPE	NPI	
22	12 INCH RGRCP CLASS III	LF	
26	CONTROL GATE: WATERMAN C-10 SIZE PER PLAN.	EA	
61	INSTALL IRRIGATION DITCH GATE. SEE DETAIL ON SHEET PI04	EA	
62	12" IRRIGATION VALVE WITH CONCRETE SCOURING BASIN PER MAG STANDARD DETAIL 506	EA	
	REMOVAL NOTES		
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	LF	
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	LF	

No.	REVISIONS	DATE	BY

EPS GROUP
2045 S. Vineyard Ave, Suite 101
Mesa, AZ 85210
T-480.503.2250 | F-480.503.2258
WWW.EPSGROUPINC.COM

Registered Professional Engineer (Civil) CERTIFICATE NO. 40486 BRUCE J. HALLSTED Date Signed 5-11-21 ARIZONA, U.S.A.

SCALE (H):	1"=40'
SCALE (V):	1"=4'
DESIGNED BY:	FCC
DRAWN BY:	RW
CHECKED BY:	BJH
DATE:	05/2021

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
STA 148+50 TO STA 157+50

CITY PROJECT NO. ST1614.401
FEDERAL NO. CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
PI01

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

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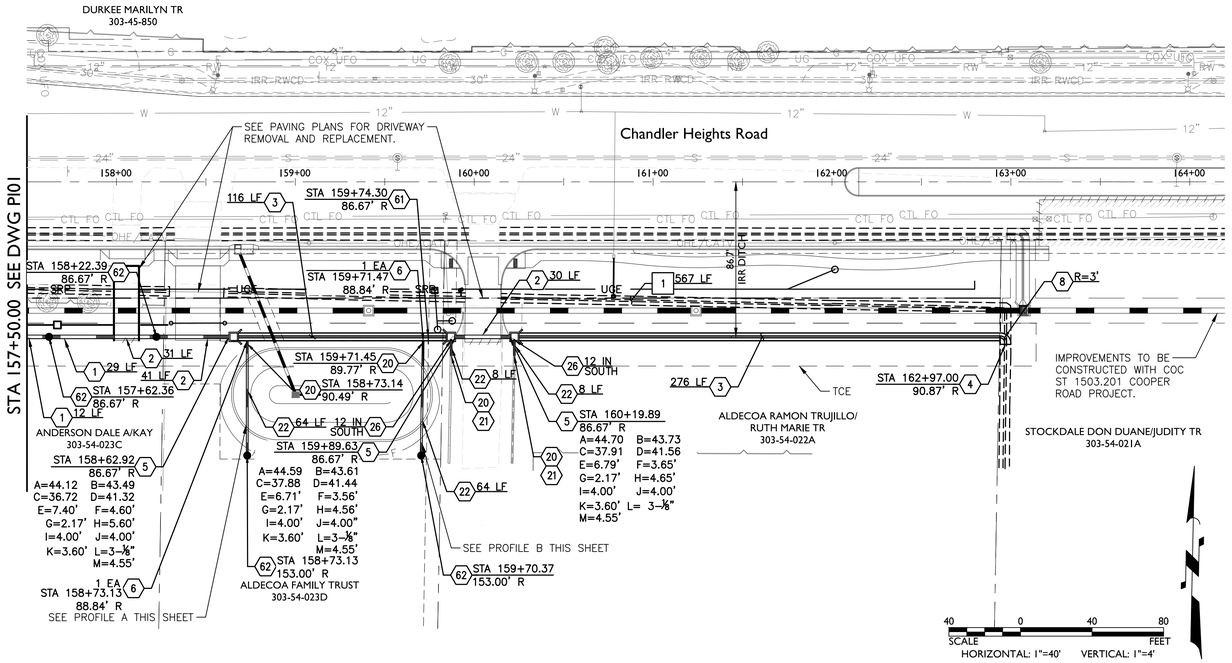
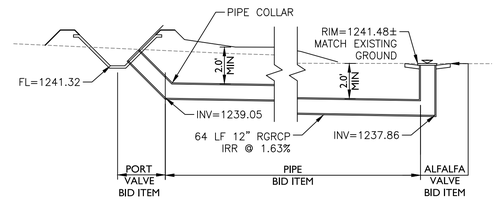
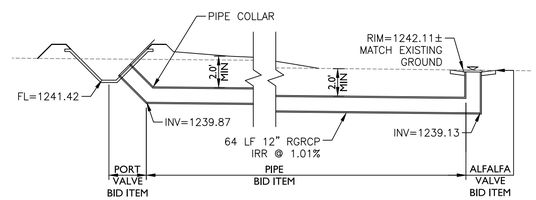




IRRIGATION PROFILE A

LOOKING EAST NTS



IRRIGATION PROFILE B

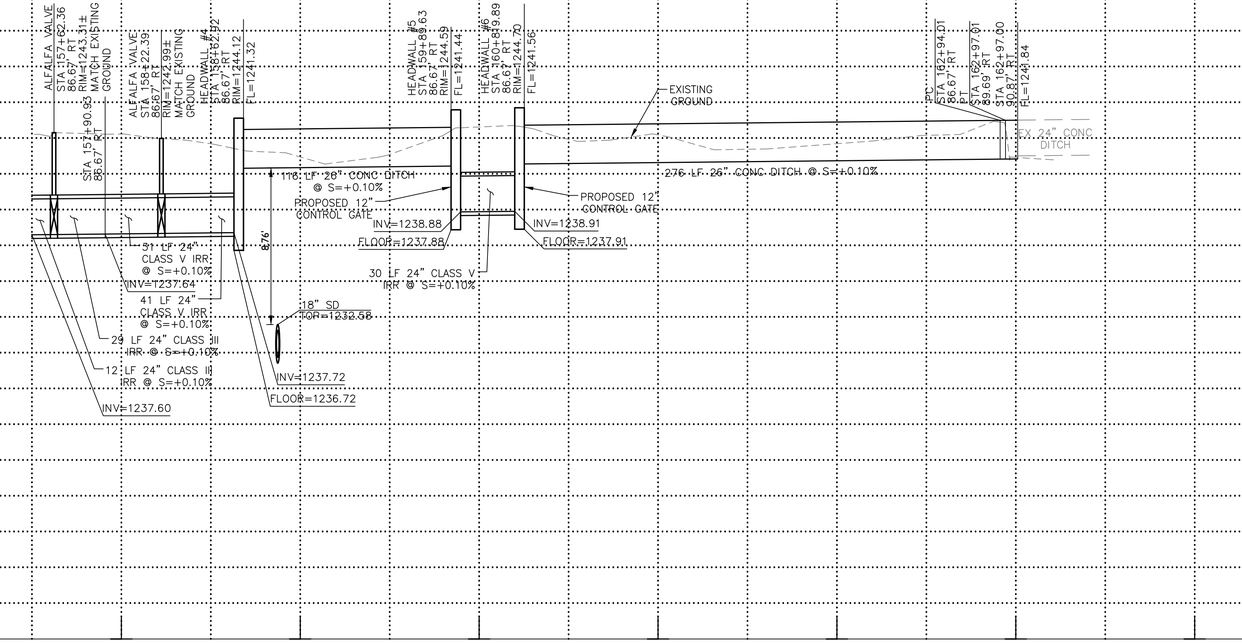
LOOKING EAST NTS

	IRRIGATION NOTES	
1	24 INCH RGRCP CLASS III	LF
2	24 INCH RGRCP CLASS V	LF
3	26 INCH DEEP CONCRETE DITCH	LF
4	SAWCUT DITCH AT TIE-IN. CONTRACTOR TO TOE-IN UNDER EXISTING DITCH PER DITCH DETAIL ON SHEET PI04	EA
5	HEADWALL PER MAG STD DTL 502-1	EA
6	PORT VALVE, PORT VALVE DETAIL AND TYPICAL PORT VALVE LOCATION DETAIL ON SHEET PI04	EA
8	CONCRETE DITCH RADIUS	EA
20	PIPE COLLAR PER MAG STD DTL 505	EA
21	CONNECT TO EXISTING PIPE	NPI
22	12 INCH RGRCP CLASS III	LF
26	CONTROL GATE: WATERMAN C-10 SIZE PER PLAN.	EA
61	INSTALL IRRIGATION DITCH GATE. SEE DETAIL ON SHEET PI04	EA
62	12" IRRIGATION VALVE WITH CONCRETE SCOURING BASIN PER MAG STANDARD DETAIL 506	EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	LF

No.	REVISIONS	DATE	BY

EPS GROUP
2045 S. Vineyard Ave, Suite 101
Mesa, AZ 85210
T:480.503.2250 | F:480.503.2258
WWW.EPSGROUPINC.COM

Registered Professional Engineer (Civil) CERTIFICATE NO. 40486 BRUCE J. HALLSTED Date Signed 5-11-21 ARIZONA U.S.A.



Call at least two full working days before you begin excavation. ARIZONA 811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602) 263-1100

SCALE (H):	1"=40'
SCALE (V):	1"=4'
DESIGNED BY:	FCC
DRAWN BY:	RW
CHECKED BY:	BJH
DATE:	05/2021

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS

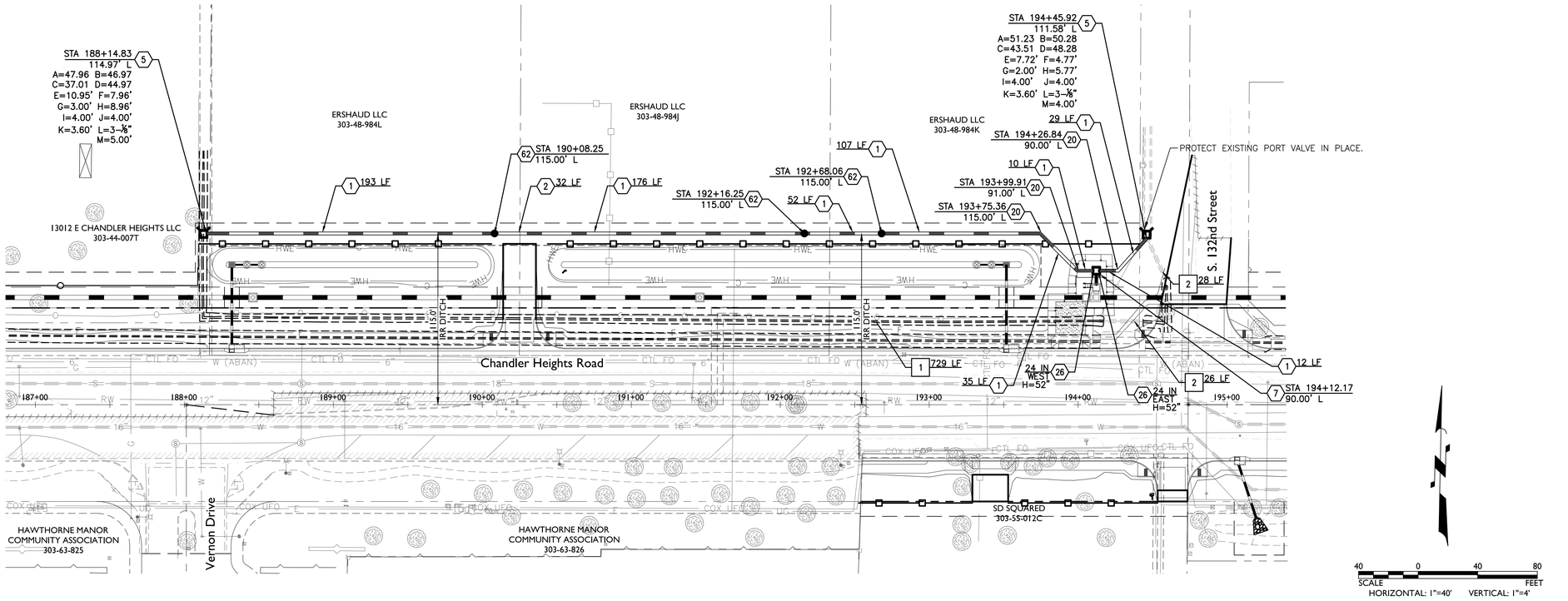
STA 157+50 TO STA 163+00

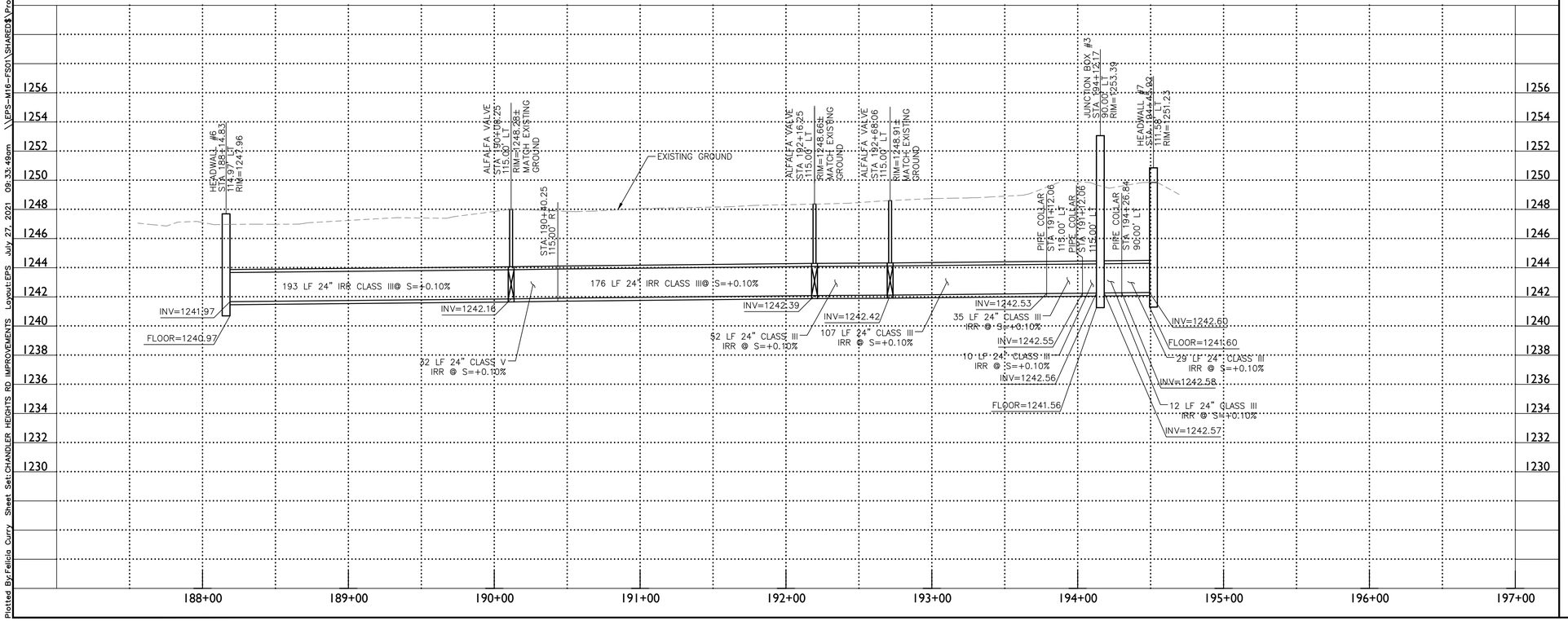
CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
PI02

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Felicia Curry Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:EPS July 27, 2021 09:33:30am \\EPS-MIS-FS01\SHARED$\Projects\2017\17-362\Civil\CAD\Plan\17-362 - PI02.dwg





	IRRIGATION NOTES	
1	24 INCH RGRCP CLASS III	LF
2	24 INCH RGRCP CLASS V	LF
5	HEADWALL PER MAG STD DTL 502-1	EA
7	JUNCTION BOX PER DETAIL ON SHEET PI04	EA
20	PIPE COLLAR PER MAG STD DTL 505	EA
26	CONTROL GATE: WATERMAN C-10 SIZE PER PLAN.	EA
62	12" IRRIGATION VALVE WITH CONCRETE SCOURING BASIN PER MAG STANDARD DETAIL 506	EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	LF
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	LF

No.	REVISIONS	DATE	BY

EPS GROUP
2045 S. Vineyard Ave, Suite 101
Mesa, AZ 85210
T-480.503.2250 | F-480.503.2258
www.epsgroupinc.com

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA, U.S.A.

SCALE (H):	1"=40'
SCALE (V):	1"=4'
DESIGNED BY:	FCC
DRAWN BY:	RW
CHECKED BY:	BJH
DATE:	05/2021

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
STA 188+00 TO STA 194+50

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
PI03

227 OF 229

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Call at least two full working days before you begin excavation.
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In Maricopa County (602) 263-1100

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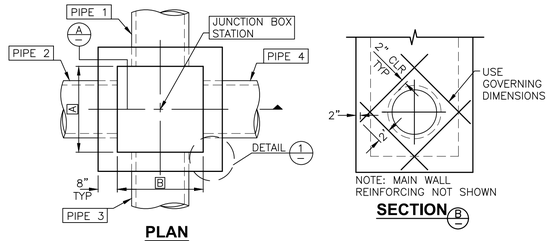
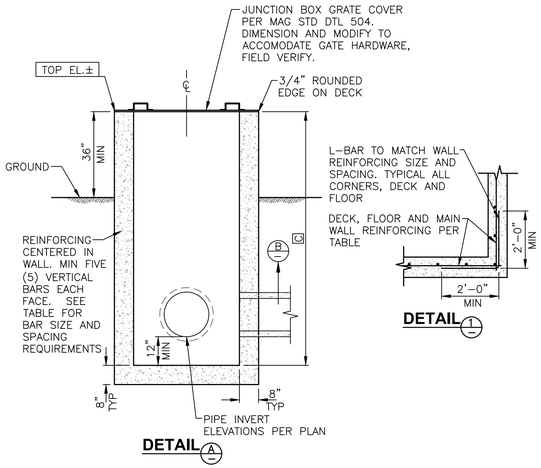


PLAN

SECTION B/2



DETAIL 1

DETAIL A

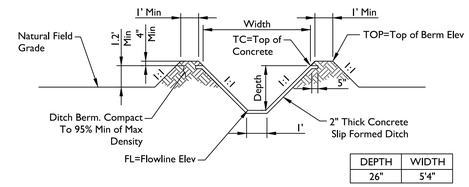
JUNCTION BOX
NTS

MINIMUM REQUIREMENTS		
WALL DIMENSION		REINFORCING STEEL
PIPE DIAMETER	A , B	
30" OR LESS	48"	#4 @ 12" E.W. IF C ≤ 8' OR #5 @ 12" E.W. IF C ≥ 8'
36"	56"	
42"	62"	
48"	68"	
54" OR 60"	80"	
66" OR 72"	92"	
78" OR 84"	106"	

NOTES:

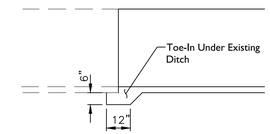
1. STRUCTURAL CONCRETE SHALL BE 3000 PSI @ 28 DAYS.
2. REINFORCING STEEL SHALL COMPLY WITH MAG SPEC 727.
3. SEE PLAN AND PROFILE DRAWING FOR CORRECT ORIENTATION OF JUNCTION BOX.
4. FIELD CUT REBAR AT PIPE.
5. CONCRETE SHALL BE PLACED WITH NO COLD JOINTS. ALL CONCRETE SHALL BE VIBRATED DURING PLACEMENT.
6. DIMENSIONS A AND B SHALL NOT EXCEED 106" AND DIMENSION C SHALL NOT EXCEED 180"
7. JUNCTION BOX BACKFILL SPECIFICATIONS SHALL BE PER ADJACENT TRENCH BACKFILL SPECIFICATIONS EXCEPT TO PROVIDE JETTED AB OR 1/2 SACK SLURRY UP TO THE SPRINGLINE OF PIPE OR AS DIRECTED BY INSPECTOR.

JUNCTION BOX NOTES

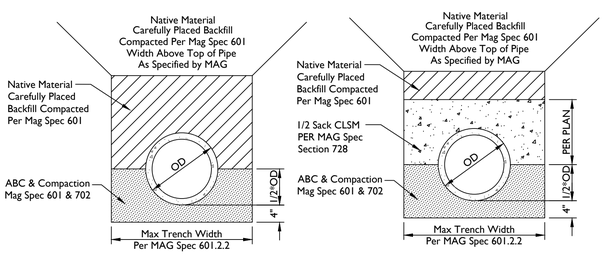


DEPTH	WIDTH
26"	5'4"

PRIVATE IRRIGATION DELIVERY DITCH
LOOKING EAST NTS

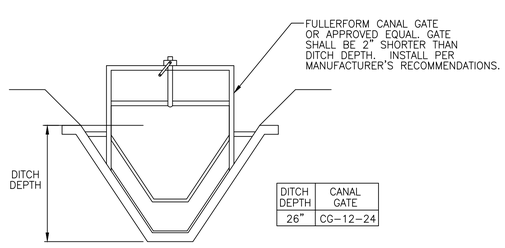


DITCH TIE IN DETAIL PROFILE VIEW



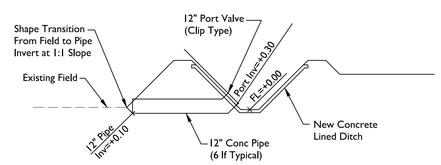
CLASS B **SLURRY**

CONCRETE PIPE BEDDING DETAILS
NTS

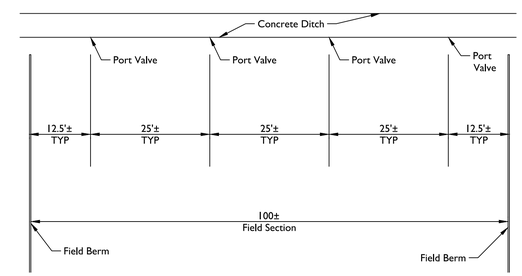


DITCH DEPTH	CANAL GATE
26"	CG-12-24

IRRIGATION DITCH GATE
NTS



PORT VALVE DETAIL
NTS



TYPICAL PORT VALVE LOCATION
NTS

No.	REVISIONS	DATE	BY

EPS GROUP
2045 S. Vineyard Ave, Suite 101
Mesa, AZ 85210
T-480.503.2250 | F-480.503.2258
www.epsgroupinc.com

Registered Professional Engineer (Civil) CERTIFICATE NO. 40486 BRUCE J. HALLSTED Date Signed 5-11-21 ARIZONA, U.S.A.

SCALE (H):	1"=40'
SCALE (V):	1"=4'
DESIGNED BY:	FCC
DRAWN BY:	RW
CHECKED BY:	BJH
DATE:	05/2021

CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
DETAILS

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
PI04

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

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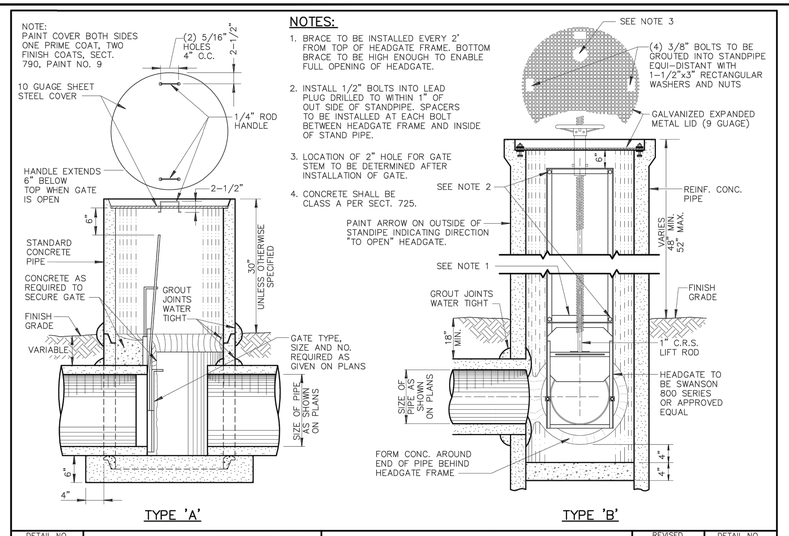
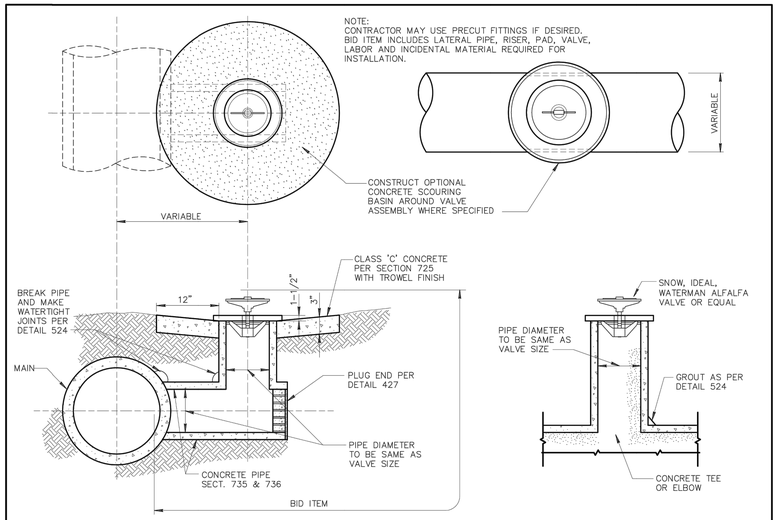


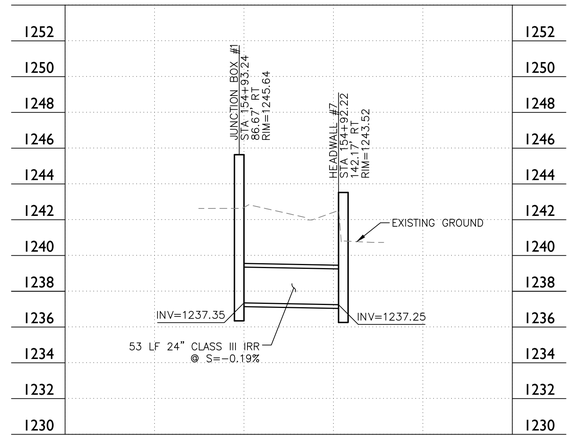
NOTES:

1. BRACE TO BE INSTALLED EVERY 2' FROM TOP OF HEADGATE FRAME. BOTTOM BRACE TO BE HIGH ENOUGH TO ENABLE FULL OPENING OF HEADGATE.
2. INSTALL 1/2" BOLTS INTO LEAD PLUG DRILLED TO WITHIN 1" OF OUT SIDE OF STANDPIPE. SPACERS TO BE INSTALLED AT EACH BOLT BETWEEN HEADGATE FRAME AND INSIDE OF STAND PIPE.
3. LOCATION OF 2" HOLE FOR GATE STEM TO BE DETERMINED AFTER INSTALLATION OF GATE.
4. CONCRETE SHALL BE CLASS A PER SECT. 725.

DETAIL NO.			REVISED	DETAIL NO.
503	MARICOPA ASSOCIATION of GOVERNMENTS STANDARD DETAIL ENGLISH	IRRIGATION STANDPIPE	01-01-1998	503



DETAIL NO.			REVISED	DETAIL NO.
506	MARICOPA ASSOCIATION of GOVERNMENTS STANDARD DETAIL ENGLISH	IRRIGATION VALVE INSTALLATION	01-01-1998	506



PRIVATE IRRIGATION
PROFILE 1
SEE SHEET PI01 FOR NOTES

No.	REVISIONS	DATE	BY

EPS GROUP
2045 S. Vineyard Ave, Suite 101
Mesa, AZ 85210
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Registered Professional Engineer (Civil) CERTIFICATE NO. 40486 BRUCE J. HALLSTED Date Signed 5-11-21 ARIZONA, U.S.A.

SCALE (H):	1"=40'
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CITY OF CHANDLER
CHANDLER HEIGHTS RD IMPROVEMENTS
DETAILS

CITY PROJECT NO.
ST1614.401
FEDERAL NO.
CHN-0(240)D
ADOT NO. T0099 01C

SHEET DWG
PI05

C.O.C. LOG NO. CIV18-0048 CHANDLER HEIGHTS RD IMPROVEMENTS

Plotted By:Felicia Curry Sheet Set:CHANDLER HEIGHTS RD IMPROVEMENTS Layout:EPS July 27, 2021 09:34:06am \\EPS-MIG-FS01\SHARED$\Projects\2017\17-362\Civil\CAD\Plan\17-362 - PI05.dwg

RWCD IRRIGATION FACILITY RELOCATION DESIGN
FOR
LATERAL 17 - CHANDLER HEIGHTS ROAD

LOCATED IN SECTION 24, TOWNSHIP 2 SOUTH, RANGE 5 EAST; SECTION 25, TOWNSHIP 2 SOUTH, RANGE 5 EAST AND SECTION 26, TOWNSHIP 2 SOUTH, RANGE 5 EAST OF THE GILA & SALT RIVER BASE & MERIDIAN, MARICOPA COUNTY, ARIZONA

PREPARED IN COORDINATION WITH IMPROVEMENT PLANS FOR

CHANDLER HEIGHTS ROAD

MCQUEEN ROAD TO GILBERT ROAD
PROJECT NO. ST1614.401
CHANDLER, ARIZONA

ENGINEER
EPS GROUP
1130 N. ALMA SCHOOL, SUITE 120
MESA, AZ 85201
(480) 503-2250
CONTACT: BRUCE HALLSTED, P.E.

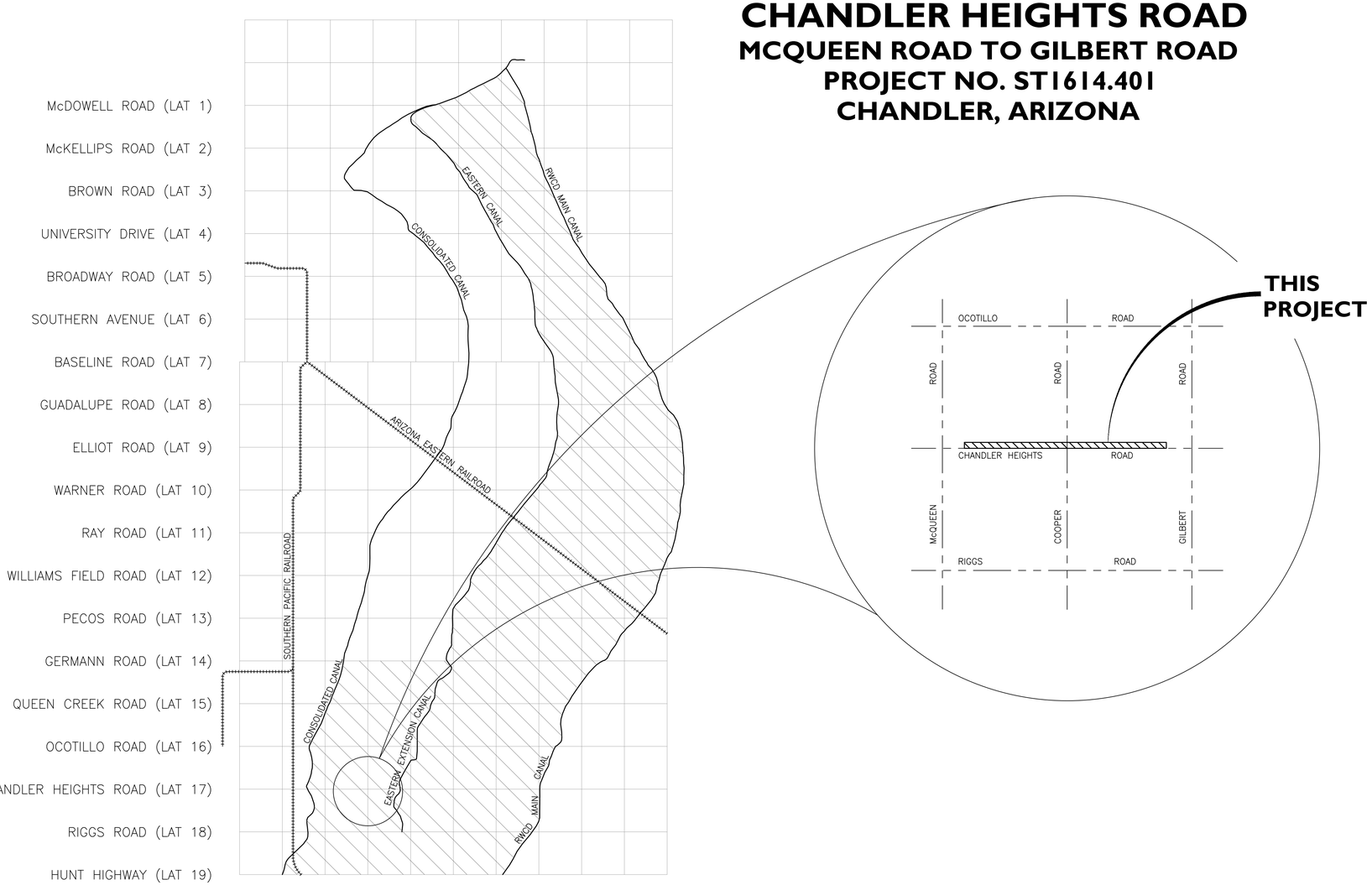
OWNER
RWCD
6937 E ELLIOT RD
MESA, AZ 85212
(480) 988-9581
CONTACT: TABATHA LANGLAND

AGENCY
CITY OF CHANDLER
215 E. BUFFALO STREET
CHANDLER, AZ 85225
(480) 782-3320
CONTACT: ALISA DOLL, P.E.

AGENCY DESIGNER
KIMLEY-HORN & ASSOCIATES INC.
7740 N 16TH STREET, SUITE 300
PHOENIX, AZ 85020
(602) 216-1224
CONTACT: CHRIS WOOLERY, P.E.

COORDINATION LIST

DESCRIPTION	REPRESENTATIVE	PHONE
IRRIGATION – RWCD	TABATHA LANGLAND	480-988-9581
ELECTRIC – SRP DISTRIBUTION	VINCENT SILVESTRO	602-236-2494
ELECTRIC – SRP TRANSMISSION	ELIJAH LUBANDI	602-236-3794
ELECTRIC – SRP LAND	ALEXIS LAURENCE	602-236-3532
TELEPHONE – CENTURY LINK	ANDY ANDRADE	480-768-4574
GAS – SOUTHWEST GAS CORP	GENE FLOREZ	480-730-3841
CABLE TV – COX COMMUNICATIONS	JOSE AGUIRRE	623-328-2998



RWCD SYSTEM MAP

APPROVALS

ROOSEVELT WATER CONSERVATION DISTRICT

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION, PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES; THE SATISFACTORY PERFORMANCE OF HIS WORK. THE DISTRICT'S REVIEW OF THE PLANS IS A VOLUNTARY AND DISCRETIONARY ACTION WHICH IS NOT MANDATED BY STATE STATUTE. THE DISTRICT'S REVIEW OF THE PLANS IS SOLELY FOR THE DISTRICT'S BENEFIT, CONDUCTED WITH ONLY THE DISTRICT'S INTEREST IN MIND, AND SHOULD NOT BE RELIED UPON BY ANY THIRD PARTY. BY REVIEWING THE PLANS THE DISTRICT DOES NOT ASSUME ANY DUTY TO THIRD PARTIES.

ENGINEER: _____ DATE: _____

RWCD: _____ DATE: _____

APPROVALS

THE AUTHORIZED REPRESENTATIVES OF THE FOLLOWING AGENCIES HEREBY ACKNOWLEDGE OR HAVE ACKNOWLEDGED THEY HAVE REVIEWED AND APPROVED THE DESIGN SHOWN BY THESE DRAWINGS. CONSTRUCTION MAY BEGIN AFTER ALL APPROPRIATE PERMITS HAVE BEEN OBTAINED.

APPROVED FOR COMPLIANCE WITH CITY CODE (CHANDLER)

CITY ENGINEER _____ DATE _____

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "AS-BUILT" INFORMATION AS SHOWN HEREON WAS MADE UNDER MY SUPERVISION, OR AS NOTED, AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SIGNATURE _____ DATE _____

SHEET INDEX

DESCRIPTION	SHEET NO	
COVER SHEET	1	CS01
NOTES SHEET	2	CS02
INDEX/ HORIZONTAL CONTROL SHEET	3	CS03
DETAIL SHEETS	4 – 8	DT01 – DT05
IRRIGATION PLAN & PROFILE SHEETS	9 – 28	PP01 – PP20

NOTE:
THE ARIZONA PROMPT PAY LAW WILL BE ALTERED FOR THIS CONTRACT.
NOTICE OF EXTENDED PAYMENT PROVISION:
THE CONSTRUCTION CONTRACT WILL ALLOW THE CONSTRUCTION MANAGER TO MAKE PAYMENT WITHIN 30 DAYS AFTER CERTIFICATION AND APPROVAL OF BILLINGS AND ESTIMATES.
NOTICE OF EXTENDED CERTIFICATION AND APPROVAL PERIOD PROVISIONS:
THE CONSTRUCTION CONTRACT WILL ALLOW THE CONSTRUCTION MANAGER TO CERTIFY AND APPROVE THE BILLINGS AND ESTIMATES WITHIN 30 DAYS AFTER THE BILLINGS AND ESTIMATES ARE RECEIVED FROM THE CONTRACTOR.

EPS GROUP
1130 N. Alma School Rd
Suite 120
Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Project: RWCD Lateral 17
Chandler Heights Road Improvements
Chandler, Arizona

Cover Sheet

Revisions:

Call at least two full working days before you begin excavation.
ARIZONA 811
Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602)263-1100

Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA U.S.A.

Job No. 18-008.10

CS01

Sheet No. 1 of 28

18-008.10 Lateral 17 - Chandler Heights Road Improvements

caguilar May 11, 2021 8:10am S:\Projects\2018\18-008\18-008.10-Lateral-17-ChandlerHeights-McQueen-Gilbert\Civil\CAD_Plan\18-008.10 - CS01.dwg

RWCD GENERAL NOTES

1. GENERAL CONDITIONS:
   A. ALL CONSTRUCTION OF RWCD FACILITIES SHALL CONFORM TO THE LATEST RWCD SPECIFICATIONS (WWW.RWCD.ORG) AND LATEST MAG SPECIFICATIONS.
   B. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM RWCD BEFORE ANY WORK BEGINS THAT IMPACTS RWCD FACILITIES OR ACCESS TO RWCD FACILITIES.
   C. IMPROVEMENT PLANS FOR RWCD FACILITIES SHALL NOT BE APPROVED UNTIL POTHOLE INFORMATION FOR CROSSING OR PARALLEL UTILITIES, OR OTHER CONFLICTS, IS RECEIVED, REVIEWED AND DEEMED ADEQUATE BY RWCD. POTHOLE RESULTS SHALL BE SEALED BY A LAND SURVEYOR OR CIVIL ENGINEER REGISTERED IN ARIZONA AND SHALL BE LOCATED BY PROJECT STATION AND OFFSET. EACH POTHOLE SHALL INCLUDE THE ELEVATIONS OF THE SURFACE AND THE TOP AND BOTTOM OF THE BURIED UTILITY BASED ON THE PROJECT DATUM.
   D. AN APPROVED SET OF PLANS SHALL BE ON THE JOB SITE AT ALL TIMES THAT WORK IS IN PROGRESS. DEVIATION FROM THE PLANS SHALL NOT BE ALLOWED WITHOUT AN APPROVED PLAN REVISION FROM THE ENGINEER.
   E. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE MAG SPECIFICATION 401, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND CURRENT TRAFFIC BARRICADE MANUAL.
   F. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING, IF NECESSARY, AN EXCAVATION AND DIRT MOVING PERMIT FROM THE MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT AND COMPLYING WITH ITS REQUIREMENTS FOR DUST CONTROL.
   G. NO ACTIVITY INVOLVING AN RWCD MANHOLE SHALL OCCUR WITHOUT PRIOR AUTHORIZATION BY RWCD. THIS INCLUDES, BUT IS NOT LIMITED TO, REMOVING THE MANHOLE LID, RIM OR ANY DEVICE HOLDING THE MANHOLE LID OR RIM IN PLACE. CONTACT RWCD'S CONSTRUCTION INSPECTOR AT 480.267.8999 TO COORDINATE.
2. LANDSCAPE NOTES:
   A. TREES TO BE INSTALLED ADJACENT TO ANY RWCD FACILITY SHALL BE PLANTED NO CLOSER THAN 6' FROM THE OUTSIDE EDGE OF ROOT BALL TO THE OUTSIDE EDGE OF RWCD PIPE OR THE OUTSIDE EDGE OF ANY OTHER STRUCTURE, E.G. MANHOLE, DELIVERY STRUCTURE, ETC. RWCD RESERVES THE RIGHT TO MODIFY THIS CONDITION AT ANY TIME PER OUR DISCRETION. CONTACT RWCD'S CONSTRUCTION INSPECTOR AT 480.267.8999 TO COORDINATE.
   B. NO LANDSCAPE SPRINKLERS OR WATER EMITTERS ARE PERMITTED WITHIN 15 FEET OF ANY RWCD DELIVERY STRUCTURE.
   C. THE HOME OWNER'S ASSOCIATION IS RESPONSIBLE TO MAKE REPAIRS TO LANDSCAPING (INCLUDING TREES, GROUND COVER, GRASS, ETC) WHERE IT IS DAMAGED DURING REPAIRS TO RWCD PIPE OR OTHER FACILITIES.
   D. LANDSCAPE BOULDERS SHALL BE KEPT 15' AWAY FROM THE OUTSIDE OF RWCD MANHOLES, TURNOUT STRUCTURES, HEADWALLS, ETC.
   E. LANDSCAPE FACILITIES SHALL ADHERE TO RWCD'S UTILITY CLEARANCE REQUIREMENTS (RWCD DETAIL 41).
   F. LANDSCAPE IRRIGATION MAIN LINES SHALL CROSS UNDER RWCD FACILITIES PER RWCD STANDARD DETAIL 41 AND RWCD GENERAL NOTE SECTION 5. LANDSCAPE IRRIGATION LATERALS (ZONE PIPES DOWNSTREAM OF A CONTROL VALVE) 2" AND SMALLER MAY CROSS OVER THE TOP OF AN RWCD LATERAL PIPE WITH A MINIMUM OF 1' CLEARANCE. LANDSCAPE IRRIGATION LATERAL PIPES THAT ARE OVER 2" IN SIZE, OR THAT DO NOT MEET COVER AND CLEARANCE CRITERIA, SHALL CROSS UNDER THE RWCD LATERAL PER RWCD STANDARD DETAIL 41 AND RWCD GENERAL NOTE SECTION 5.
3. CONSTRUCTION SEQUENCE AND REQUIREMENTS:
   A. ALL CONSTRUCTION ACTIVITIES INVOLVING THE MODIFICATIONS AND/OR REPLACEMENT OF RWCD OWNED FACILITIES SHALL BE BONDED AT A FIGURE APPROVED BY THE GENERAL MANAGER. SUCH BOND SHALL BE MADE TO THE BENEFIT OF RWCD AND WILL NOT BE RELEASED UNTIL SUCH TIMES AS THE GENERAL MANAGER OR OTHER AUTHORIZED INDIVIDUAL HAS APPROVED ALL CONSTRUCTION ACTIVITIES FOR COMPLETENESS AND CORRECTNESS.
   B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING IRRIGATION DRY-UPS. CONTACT THE RWCD WATER DEPARTMENT AT 480.988.9586 TO SCHEDULE A DRY-UP.
   C. THE CONTRACTOR SHALL PROVIDE A COPY OF THE FOLLOWING TO THE RWCD INSPECTOR BEFORE THE PIPE IS INSTALLED.
      1) RESULTS OF D-LOAD TEST ON 1% OF THE PIPE LENGTH FOR EACH DAY OF BATCH PRODUCTION.
      2) A CONCRETE CYLINDER BREAK ON 1% OF THE PIPE LENGTH FOR EACH DAY OF BATCH PRODUCTION.
      3) THE DATE OF PIPE MANUFACTURE AND CLASS OF PIPE SHALL APPEAR ON EVERY LENGTH OF PIPE DELIVERED TO THE JOBSITE. ALL PIPE SHALL HAVE A MINIMUM 14 DAYS OF CURE TIME BEFORE INSTALLATION.
   D. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO EXCAVATION AND AVOID DAMAGE TO SAME. CALL 811 OR 602.263.1100 FOR BLUE STAKE TWO WORKING DAYS PRIOR TO DIGGING. IF AN UNIDENTIFIED UTILITY IS ENCOUNTERED DURING CONSTRUCTION, ALL CONSTRUCTION ACTIVITIES SHALL CEASE UNTIL THE UTILITY IS POTHOLED TO VERIFY RWCD CLEARANCE REQUIREMENTS ARE MET AND A PLAN TO RESOLVE CLEARANCE DEFICIENCIES, SUBMITTED BY THE CONTRACTOR, IS ACCEPTED BY RWCD.
   E. THE CONTRACTOR SHALL ENSURE NO CONSTRUCTION DEBRIS IS ALLOWED TO ENTER ANY RWCD DITCH OR FACILITY DURING CONSTRUCTION.
   F. WHEN RELOCATING AN EXISTING RWCD FACILITY, REMOVAL OF THE EXISTING FACILITY SHALL OCCUR ONLY DURING AN RWCD AUTHORIZED DRY-UP AND/OR AFTER THE NEW FACILITY IS OPERATIONAL.
   G. RWCD STRUCTURES ARE TO BE POURED MONOLITHICALLY. SHOULD IT BE NECESSARY TO CONSTRUCT AN RWCD STRUCTURE USING MULTIPLE CONCRETE POURS, THE CONTRACTOR WILL BE REQUIRED TO USE AN RWCD APPROVED METHOD OF WATER STOP ON EACH STRUCTURE THAT IS TO BE CONSTRUCTED USING MULTIPLE CONCRETE POURS. CONTACT RWCD'S CONSTRUCTION INSPECTOR AT 480.267.8999 TO COORDINATE.
   H. GRINDING AND/OR PATCHING OF NEW DELIVERY STRUCTURES, MANHOLES, HEADWALLS, AND RADIAL GATE STRUCTURES OR ANY CONCRETE STRUCTURE TO CORRECT DEFICIENCIES THAT RESULT FROM IMPROPER GRADE SETTING, OR CONSTRUCTION METHODS, OR BREAKAGE DUE TO ANY CIRCUMSTANCES SHALL NOT BE PERMITTED.
   I. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY EXISTING RWCD FACILITY (HEADWALL, PIPE, DITCH, ACCESS ROADS, ETC.) DAMAGED DURING CONSTRUCTION AS DIRECTED BY THE RWCD INSPECTOR. THE REPAIRED FACILITY SHALL BE AT THE LOCATION, ELEVATION AND GRADES PRIOR TO CONSTRUCTION OR AS DIRECTED.
   J. RWCD MANHOLES ARE TO BE IDENTIFIED AND PROTECTED AT ALL TIMES BEFORE, DURING AND AFTER CONSTRUCTION. THE CONTRACTOR WILL BE REQUIRED TO INSTALL, AT A MINIMUM, TWO (2) 2X4s VERTICALLY ON OPPOSITE SIDES OF EACH MANHOLE TO PROVIDE IDENTIFICATION OF THE MANHOLE. CONTACT RWCD'S CONSTRUCTION INSPECTOR AT 480.267.8999 TO COORDINATE.
4. TRENCH EXCAVATION:
   A. TRENCH EXCAVATION, BACKFILLING AND COMPACTION FOR RWCD FACILITIES SHALL BE PER MAG SPEC SECTION 601, OR AS MODIFIED ON THE PLAN. BACKFILLING SHALL NOT BEGIN ON ANY PIPE UNTIL THE LINE HAS BEEN APPROVED BY RWCD'S INSPECTOR. BACKFILLING SHALL CONSIST OF ABC PLACED IN LIFT DEPTHS PER MAG SPEC 601.4.2. ALL OTHER LIFTS SHALL BE A MAX OF TWO (2) FEET. ABC BACKFILL SHALL EXTEND TO TWELVE (12) INCHES ABOVE THE TOP OF THE PIPE. COMPACTION OF THE BEDDING MATERIAL SHALL BE PER MAG SPEC 601.4.5. THE TRENCH BACKFILL SHALL BE THOROUGHLY COMPACTED TO THE DENSITIES LISTED ON THE PLAN OR AS SPECIFIED IN MAG SPEC 601.4.4, WHICHEVER IS MORE STRINGENT. MECHANICAL COMPACTION FROM THE BOTTOM OF THE TRENCH TO 1' ABOVE THE PIPE SHALL BE ACCOMPLISHED BY HAND OR WALK BEHIND EQUIPMENT SUCH AS A WACKER OR JUMPING JACK STYLE COMPACTOR, OR OTHER, AS APPROVED BY THE RWCD INSPECTOR. CONTRACTOR MAY SUBSTITUTE 1/2 SACK CLSM PER MAG SPEC SECTION 604 FOR BACKFILL UP TO SPRINGLINE. THE RWCD INSPECTOR MAY REQUIRE THE USE OF VIBRATORY EQUIPMENT IN CONJUNCTION WITH THE PLACEMENT OF CLSM MATERIAL.
   B. COMPACTION TESTS SHALL BE PERFORMED AT ALL STRUCTURES AND AT A MINIMUM OF EVERY 300 FEET ALONG THE PIPE AND AT LOCATIONS SPECIFIED BY THE RWCD INSPECTOR. A RESPONSIBLE PARTY FOR COMPACTION TESTING SHALL BE PRESENT DURING BACKFILLING OF ALL RWCD FACILITIES (INSTALLATIONS AND REMOVALS). COPIES OF THE COMPACTION TESTS ARE TO BE SUBMITTED TO THE RWCD INSPECTOR AT THE CONCLUSION OF EACH DAY.
5. UTILITY CROSSINGS:
   A. CALL THE RWCD INSPECTOR AT 480.267.8999 PRIOR TO MAKING THE UTILITY CROSSING. A PERMIT MAY BE REQUIRED FOR EACH UTILITY THAT CROSSES THE RWCD FACILITY.
   B. UTILITIES CROSSING RWCD SHALL MEET THE CLEARANCES SHOWN IN RWCD STANDARD DETAIL 41.
   C. WET UTILITIES (IE, WATER, SEWER, ETC.) CROSSING THE NEW RWCD IRRIGATION PIPE SHALL BE CONSTRUCTED PRIOR TO THE RWCD IRRIGATION PIPE.
   D. THERE SHALL BE NO JOINTS IN THE WET UTILITY LINES FOR A DISTANCE OF 8' EITHER SIDE OF THE CENTER OF THE RWCD IRRIGATION PIPE.
   E. WET UTILITIES SHALL BE BACKFILLED WITH ½ SACK SLURRY FROM THE UTILITY LINE UP TO 6" BELOW THE RWCD IRRIGATION PIPE FOR 7' EITHER SIDE OF THE CENTERLINE OF THE RWCD PIPE.
   F. WHERE PROPOSED WET UTILITY LINES WILL CROSS AN EXISTING RWCD PIPE LATERAL, THE WET UTILITIES SHALL BE INSTALLED VIA HORIZONTAL EARTH AUGER BORE IN A STEEL CASING PIPE, OR IF THE RWCD PIPE IS PLANNED TO BE REMOVED, THE WET UTILITIES SHALL BE INSTALLED AFTER THE NEW RWCD FACILITY IS OPERATIONAL AND THE OLD RWCD PIPE IS REMOVED. A PROFILE OF THE CROSSING SHALL BE PROVIDED AND THE TOP OF CASING PIPE AND OUTSIDE DIAMETER OF THE RWCD IRRIGATION PIPE ELEVATIONS SHALL BE SHOWN ON THE PLANS AND MEET THE CLEARANCES SHOWN IN RWCD DETAIL 41.
   G. WHERE PROPOSED WET UTILITY LINES WILL CROSS AN EXISTING RWCD OPEN DITCH LATERAL AND THE LATERAL WILL BE RELOCATED WITH THE CURRENT PROJECT, THE CONTRACTOR MAY REQUEST A DRY-UP FROM RWCD TO CROSS VIA OPEN CUT. IF A DRY-UP IS NOT AVAILABLE OR IF THE OPEN DITCH LATERAL IS NOT BEING RELOCATED WITH THE CURRENT PROJECT THEN THE PROPOSED WET UTILITY SHALL BE INSTALLED VIA A HORIZONTAL EARTH AUGER BORE IN A STEEL CASING PIPE. A PROFILE OF THE CROSSING SHALL BE PROVIDED AND THE TOP OF CASING PIPE AND OUTSIDE DIAMETER OF THE RWCD IRRIGATION PIPE ELEVATIONS SHALL BE SHOWN ON THE PLANS AND MEET THE CLEARANCES SHOWN IN RWCD DETAIL 41.

RWCD GENERAL NOTES (CONTINUED)

   H. DRY UTILITIES MAY BE INSTALLED VIA OPEN CUT TRENCH ACROSS A PROPOSED RWCD LATERAL, IF INSTALLED BEFORE THE RWCD FACILITY IS CONSTRUCTED. IF A DRY UTILITY WILL CROSS AN EXISTING RWCD PIPE OR DITCH THAT WILL REMAIN, THE DRY UTILITY SHALL BE INSTALLED VIA A BORE. BORE PITS SHALL BE LOCATED OUTSIDE ANY RWCD PROPERTY AND SHALL BE LOCATED A SUFFICIENT DISTANCE AWAY FROM THE RWCD FACILITY SUCH THAT THE RWCD FACILITY IS NOT COMPROMISED DURING EXCAVATION OR BORING.
   I. IF ANY EXISTING UTILITY IS FOUND TO HAVE LESS THAN 2 FT OF CLEARANCE TO THE RWCD FACILITIES, THE CONTRACTOR SHALL CONSULT WITH THE RWCD INSPECTOR AND THE OTHER UTILITY COMPANY FOR EVALUATION OF CLEARANCE AND RELOCATION REQUIREMENTS.
   J. UTILITY CROSSINGS AT THE RWCD MAIN CANAL, EXTENSION CANAL OR DRAIN DITCH SHALL BE INSTALLED BY HORIZONTAL EARTH AUGER BORE. NO BORE PITS SHALL BE ALLOWED WITHIN RWCD PROPERTY. ALL UTILITIES SHALL BE ENCASED IN A STEEL CASING. NO UTILITIES SHALL VARY FROM UTILITY CROSSING REQUIREMENTS WITHOUT WRITTEN APPROVAL FROM RWCD.
   K. ALL OVERHEAD WIRES THAT SUSPEND OVER THE RWCD RIGHT OF WAY SHALL HAVE 25 FEET MINIMUM OVERHEAD CLEARANCE.
6. RWCD INSPECTION:
   A. CALL THE RWCD INSPECTOR AT 480.267.8999 FOR RWCD INSPECTIONS. THE CONTRACTOR SHALL COORDINATE DAILY WITH THE RWCD INSPECTOR RELATIVE TO WORK ONGOING THAT DAY AND UPCOMING WORK THAT REQUIRES INSPECTION WITHIN THE NEXT 48 HOURS.
   B. THE CONTRACTOR SHALL PROVIDE A SAFE TRENCH FOR THE RWCD INSPECTOR TO INSPECT WORK INCLUDING SHORING AND LADDERS.
   C. CONSTRUCTION STAKING LATH SHALL INCLUDE STATIONING CONSISTENT WITH STATIONING SHOWN ON THE APPROVED IRRIGATION PLANS.
   D. MANHOLE AND STRUCTURE RIM ELEVATIONS MUST BE VERIFIED DURING THE CONSTRUCTION BY A "HUB" PLACED BY SURVEYORS.
   E. RWCD MAY REJECT ANY PART OR PORTION OF THE SUBJECT PIPE AT ANY POINT DURING THE INSTALLATION PROCESS AT ITS SOLE DISCRETION. SUCH DETERMINATION WILL BE BASED ON, AMONG OTHER POINTS, CURRENT ASTM STANDARDS FOR THE PIPE.
7. PROJECT ACCEPTANCE:
   A. THE JOB SITE, AT THE COMPLETION OF THE CONSTRUCTION, SHALL BE CLEANED OF ANY DEBRIS OR SPOIL RESULTING FROM THE CONSTRUCTION INCLUDING REMOVAL OF CONSTRUCTION DEBRIS FROM RWCD DITCHES.
   B. THE OWNER/DEVELOPER SHALL ACQUIRE PRIOR AUTHORIZATION FROM THE RWCD WATER DEPARTMENT AND RWCD INSPECTOR PRIOR TO PERFORMING AN AS-BUILT SURVEY. MANHOLE LIDS MUST BE TAKEN OFF BY PIPELINE CONTRACTOR. A NO-FEE DRY-UP IS REQUIRED FOR AS-BUILT SURVEY.
   C. THE OWNER/DEVELOPER SHALL PROVIDE CERTIFIED AS-BUILTS FOR THE LOCATION, ELEVATION AND SIZE OF ALL RWCD FACILITIES FOR RWCD RECORDS PRIOR TO RELEASING THE PROJECT BOND.
8. RWCD GENERAL NOTES:
   A. RWCD'S GENERAL NOTES ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION AT ANY TIME PER OUR DISCRETION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE CONFORMANCE TO THE LATEST RWCD GENERAL NOTES. CONTACT RWCD'S CONSTRUCTION INSPECTOR AT 480.267.8999 TO RECEIVE THE MOST RECENT RWCD GENERAL NOTES.

CITY OF CHANDLER GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT ADOPTED MAG SPECIFICATIONS AND STANDARD DETAILS AS SUPPLEMENTED BY THE CITY OF CHANDLER.
2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION.
3. THE CITY ENGINEER'S OFFICE SHALL BE NOTIFIED 24 HOURS PRIOR TO STARTING EACH PHASE OF CONSTRUCTION (480-782-3320).
4. PROJECT ELEVATIONS ARE BASED UPON NAVD 88 DATUM. THE FOLLOWING BENCHMARK HAS BEEN UTILIZED:

BENCHMARK NUMBER	NGVD 29 ELEVATION	DESCRIPTION	EQUATION	NAVD 88 ELEVATION
49A	1240.36	3" COC BRASS CAP FLUSH LOCATED AT THE INTERSECTION EDGE OF PAVEMENT OF LYNX PLACE AND SOHO LANE; 1100' NORTH OF CHANDLER HEIGHTS RD, 250' WEST OF COOPER ROAD AND 80' SOUTH OF BLUE RIDGE WAY.	1.64	1242.00

5. PRIOR TO ANY CONSTRUCTION IN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR/DEVELOPER SHALL NOTIFY THE LANDSCAPE COMPLIANCE COORDINATOR AT 480-782-3428. ANY CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE RESTORED TO ORIGINAL CONDITIONS USING THE FOLLOWING REQUIREMENTS:
   A. ALL LANDSCAPE IMPACTED BY CONSTRUCTION SHALL BE REPLACED IN KIND AND SIZE, OR AS DETERMINED BY THE CITY;
   B. ALL IRRIGATION SYSTEMS SHALL BE RESTORED TO FULLY FUNCTIONING STATUS. ANY IRRIGATION LOCATED BENEATH ASPHALT OR CONCRETE SHALL BE SLEEVED WITH SCHEDULE 40 PVC TWO NOMINAL SIZES LARGER;
   C. THE AREA OF CONSTRUCTION SHALL BE TREATED WITH PRE-EMERGENT HERBICIDE (I.E. SURFLAN);
   D. GRANITE OF A SIZE AND COLOR TO MATCH EXISTING SHALL BE SPREAD A MINIMUM OF TWO INCHES THICK;
   E. THE STREET DIVISION SHALL BE CONTACTED TO INSPECT ALL WORK BEFORE A CONDITIONAL ACCEPTANCE IS ISSUED;
   F. THE CONTRACTOR/DEVELOPER SHALL MAINTAIN THE AREA FOR NINETY DAYS AFTER CONDITIONAL ACCEPTANCE. AFTER 90 DAYS THE CITY SHALL BE CONTACTED FOR FINAL ACCEPTANCE AND ASSUMPTION OF MAINTENANCE.
6. WORK PERFORMED BY THE CONTRACTOR:
   A. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE CITY ENGINEER AND/OR ALL WORK AND MATERIAL NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
   B. WHENEVER THE INSPECTOR FINDS ANY WORK BEING PERFORMED IN A DANGEROUS OR UNSAFE MANNER, OR CONTRARY TO THE PLANS OR SPECIFICATIONS, OR NOT MEETING THE INTENT OF THE PLANS OR SPECIFICATIONS, THE INSPECTOR WILL ISSUE A STOP WORK ORDER. UPON ISSUANCE OF A STOP WORK ORDER, THE CITED WORK SHALL IMMEDIATELY CEASE. THE STOP WORK ORDER SHALL STATE THE REASON FOR THE ORDER, AND THE CONDITIONS WHICH CITED WORK IS NOT AUTHORIZED TO RESUME UPON WRITTEN ORDER TO RESUME WORK. WHERE AN EMERGENCY EXISTS, THE INSPECTOR SHALL NOT BE REQUIRED TO GIVE A WRITTEN NOTICE PRIOR TO STOPPING THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS AND DELAYS FOR THE WORK RELATED TO THE STOP WORK ORDER.
7. THE CONTRACTOR SHALL UNCOVER ALL EXISTING CITY UTILITY LINES BEING TIED INTO TO VERIFY THEIR TYPE, CONDITION, LOCATION, INVERT, SLOPE, AND ANY OTHER INFORMATION NEEDED TO DETERMINE THAT THE UTILITY CONNECTION WILL FUNCTION AS DESIGNED. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ANY REPAIRS NECESSARY TO THE LATERAL OR MAIN LINES OF THE CITY WATER, RECLAIMED WATER, SANITARY SEWER, AND/OR STORM DRAIN SYSTEM NECESSARY FOR THE CONNECTION TO FUNCTION AS DESIGNED. THE CONTRACTOR SHALL LOCATE OR HAVE LOCATED ALL EXISTING UNDERGROUND PRIVATE UTILITIES (ELECTRIC, TELEPHONE, PIPELINES, ETC.) AND STRUCTURES IN ADVANCE OF CONSTRUCTION AND SHALL ELIMINATE ALL CONFLICTS PRIOR TO START OF CONSTRUCTION. BLUE STAKE TELEPHONE (602) 263-1100.
8. THE CITY OF CHANDLER IS NOT RESPONSIBLE FOR LIABILITY INCURRED DUE TO DELAYS AND/OR DAMAGES TO UTILITIES IN CONJUNCTION WITH THIS CONSTRUCTION. THE CITY WILL NOT PARTICIPATE IN THE COST OF CONSTRUCTION OR UTILITY RELOCATION.
9. NO FINAL ACCEPTANCE SHALL BE ISSUED UNTIL 4 MIL PHOTO MYLAR REPRODUCIBLE "AS-BUILT" PLANS CERTIFIED AND SEALED BY A REGISTERED CIVIL ENGINEER, HAVE BEEN SUBMITTED AND ACCEPTED BY THE CITY ENGINEER.
10. APPLICATIONS FOR STREET CUT PERMITS MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO APPROVAL OF IMPROVEMENT PLANS. ALL PAVEMENT REPLACEMENT SHALL BE IN ACCORDANCE WITH SECTION 336 AND AS MODIFIED BY CITY SUPPLEMENTS.
11. BACKFILLING SHALL NOT BE STARTED UNTIL LINES ARE APPROVED BY THE CITY ENGINEER. ALL BACKFILL SHALL BE HALF-SACK CLSM UNLESS OTHERWISE APPROVED ON THE PLANS. ABC OR NATIVE MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH MAG SECTION 601, TYPE I. BACKFILL PLACEMENT AND SURFACE REPLACEMENT SHALL BE IN ACCORDANCE WITH MAG STD DTL 200 T-TOP WITH 16" MIN DEPTH ABC SHELF.
12. CONSTRUCTION OF CONCRETE OR PAVING ITEMS SHALL NOT COMMENCE UNTIL ALL UNDERGROUND WORK HAS BEEN INSPECTED AND TESTED.
13. DISPOSAL OF AND STOCKPILING OF EXCESS MATERIAL WITHIN THE CHANDLER CITY LIMITS OR PLANNING AREA SHALL BE DONE IN SUCH A WAY THAT WILL NOT CREATE A NUISANCE. THE PLACING OF MATERIAL ON PRIVATE PROPERTY OF ANOTHER REQUIRES WRITTEN AUTHORIZATION. EARTHWORK STOCKPILES ARE NOT TO EXCEED 6 FEET IN HEIGHT. SLOPES ON ALL SIDES OF THE STOCKPILE SHALL NOT EXCEED A 1 TO 2 RATIO OF HEIGHT TO LENGTH. ANY EARTHWORK STOCKPILE, EVEN LESS THAN 6 FEET, MUST BE REMOVED WITHIN 7 DAYS OF CITY NOTIFICATION IF DUST SUPPRESSION EFFORTS FAIL TO MAINTAIN SATISFACTORY AIRBORNE CONTAMINANT CONTROL.
14. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE CHANDLER TRAFFIC BARRICADE MANUAL AND APPROVED TRAFFIC SEQUENCING PLANS AND/OR NOTES.

CITY OF CHANDLER GENERAL NOTES (CONTINUED)

15. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALLAY DUST, AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST-FREE CONDITION AT ALL TIMES THE CONTRACTOR SHALL UTILIZE A PM10-CERTIFIED STREET SWEEPER FOR STREET CLEANING.
16. AN APPROVED SET OF PLANS SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES THAT WORK IS IN PROGRESS. DEVIATION FROM THE PLANS SHALL NOT BE ALLOWED WITHOUT AN APPROVED PLAN REVISION.
17. A MINIMUM HORIZONTAL SEPARATION OF SIX (6) FEET IS REQUIRED BETWEEN SEWER SERVICES AND WATER OR FIRELINE SERVICES. A MINIMUM HORIZONTAL SEPARATION OF SIX (6) FEET IS REQUIRED BETWEEN RECLAIMED WATER SERVICES AND SEWER, WATER, OR FIRELINE SERVICES.
18. SETBACKS FOR UTILITY POLES, STRUCTURES, AND OTHER SIMILAR FACILITIES (NOT INCLUDING LANDSCAPING) GREATER THAN 18 INCHES IN HEIGHT SHALL BE 5.5 FEET FROM THE BACK OF CURB UNLESS APPROVED IN WRITING BY THE CITY ENGINEER. IN CASES WHERE THE FACILITIES ARE ADJACENT TO A DECELERATION LANE, BUS BAY, OR MEDIAN CURB, THE SETBACK CAN BE REDUCED TO 2.5 FEET FROM THE BACK OF CURB.
19. SCREEN WALLS OVER 7', RETAINING WALLS OVER 4' MUST HAVE A BUILDING PERMIT AND BE IN CONFORMANCE WITH CHANDLER BUILDING CODE.
20. ALL UNDERGROUND FACILITIES INSTALLED IN ANY REAL PROPERTY OUTSIDE THE CITY'S RIGHT-OF-WAY SHALL COMPLY WITH THE FOLLOWING MARKING STANDARDS IN ACCORDANCE WITH HOUSE BILL 2256. A YELLOW INSULATED COPPER WIRE OR OTHER APPROVED CONDUCTOR SHALL BE INSTALLED ADJACENT TO UNDERGROUND UTILITIES FOR FIRE LINE PIPING, POTABLE WATER DISTRIBUTION PIPING, SANITARY SEWER LINES, STORMWATER PIPING, RECLAIMED WATER PIPING, GRAVITY FLOW IRRIGATION PIPING AND PRESSURIZED IRRIGATION PIPING LARGER THAN TWO (2) INCHES IN DIAMETER UNLESS THESE FACILITIES CAN BE DETECTED FROM ABOVE GROUND WITH AN ELECTRONIC LOCATING DEVICE. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT EACH END OF THE PIPING. THE TRACER WIRE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL.
21. ANY CONSTRUCTION DETOURS WILL REQUIRE AN ALL-WEATHER SURFACE PER MARICOPA COUNTY AIR QUALITY REQUIREMENTS.
22. THE CONTRACTOR SHALL SUPPLY PUBLIC WORKS INSPECTOR CONSTRUCTION MATERIAL TESTING DOCUMENTATION THROUGHOUT THE PROJECT.
23. ALL SITE IMPROVEMENTS, INCLUDING LANDSCAPE AND SITE CLEANUP, MUST BE COMPLETE PRIOR TO CERTIFICATE OF OCCUPANCY FOR ANY BUILDING WITHIN A PHASE.
24. THE FOLLOWING UTILITY COMPANIES HAVE BEEN IDENTIFIED BY BLUE STAKE COORDINATION AND PROJECT PLANS HAVE BEEN SUBMITTED MOST RECENTLY AS NOTED ON THE COVER SHEET. SRP, CENTURY LINK, SOUTHWEST GAS, COX COMMUNICATIONS

ESTIMATED QUANTITIES

Quantities are for estimating purposes only. Engineer makes no guarantee of accuracy.

1	36 INCH RGRCP CLASS III	5446 LF
2	36 INCH RGRCP CLASS V	1127 LF
3	24 INCH RGRCP CLASS III	16 LF
3A	24 INCH RGRCP CLASS V	70 LF
6	HEADWALL PER MAG STD DTL 502-1 WITH GRATE PER DTL 16 ON SHEET DT05 (RWCD-35)	1 EA
7	RWCD ACCESS ROAD, DTL 11 SHEET DT04	766 SF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	1143 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	5492 LF
10	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A MODIFIED WITH HALF SLACK CLSM PER MAG STD SPEC 728	24 LF
11	4 SIDED MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	11 EA
11A	4 SIDED MANHOLE MODIFIED, DTL 4 SHEET DT01 (RWCD-19)	1 EA
12	4 SIDED PRESSURE MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	11 EA
13	TURNOUT STRUCTURE AND GRATES PER DTLS 6 AND 7 ON SHEETS DT02 AND DT03	1 EA
14	5 SIDED MANHOLE, DTL 5 SHEET DT02 (RWCD-20)	1 EA
15	5 SIDED PRESSURE MANHOLE, DTL 5 SHEET DT02 (RWCD-20)	3 EA
17	SAWCUT EXISTING PIPE FLUSH WITH INSIDE WALL OF NEW STRUCTURE	NPI
19	TURNOUT STRUCTURE AND GRATES PER DTLS 6 AND 9 ON SHEETS DT02 AND DT04	1 EA
20	PIPE COLLAR, DTL 2 SHEET DT01 (RWCD-30)	1 EA
21	24 INCH DEEP CONCRETE DITCH PER DTL 12 SHEET DT04 (RWCD-31)	31 LF
22	SAWCUT DITCH AT TIE-IN. CONTRACTOR TO TOE-IN UNDER EXISTING DITCH PER CONCRETE DITCH DTL 12 SHEET DT04 (RWCD-31)	1 EA
23	CONCRETE DITCH RADIUS, RADIUS PER PLAN	1 EA
26	24" CONTROL GATE: WATERMAN C-10	1 EA
31	TURNOUT STRUCTURE STAIRS, DTL 14 SHEET DT05 (RWCD-29)	1 EA
40	INSTALL PIPE ANGLE POINT SIGN PER DTL 13 DT04	1 EA
45	DIP EXISTING WATER SERVICE PER DTL 16 ON SHEET DT05	6 EA

REMOVAL NOTES

1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	5856 LF
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	971 LF
3	REMOVE EXISTING IRRIGATION STRUCTURE, HEADWALL OR MANHOLE AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99. CONTRACTOR SHALL SALVAGE ALL METAL ITEMS INCLUDING GRATING, MANHOLE LIDS, GATES, ETC. AND DELIVER TO THE RWCD YARD AT 6937 E ELLIOT ROAD, MESA. CONTACT THE RWCD INSPECTOR @ 480-267-8999 TO COORDINATE DELIVERY	17 EA

LEGEND

- PROPOSED CURB, GUTTER, AND SIDEWALK
- EXISTING CURB & GUTTER
- MANHOLE, SANITARY SEWER
- WATER VALVE
- WATER METER
- STREET LIGHT
- TRAFFIC SIGNAL
- TRANSFORMER
- UTILITY POLE
- GAS VALVE
- WATER VALVE
- FIRE HYDRANT
- CATCH BASIN
- CHAIN LINK FENCE
- 4 SIDED MANHOLE
- 5 SIDED MANHOLE
- DELIVERY STRUCTURE
- HEADWALL WITH GRATE
- EXISTING FENCE
- EXISTING CONCRETE LINED DITCH
- EXISTING IRRIGATION PIPE
- NEW IRRIGATION PIPE
- RIGHT OF WAY & PROPERTY LINE
- MONUMENT LINE
- SECTION/MID-SECTION LINE
- S — EXISTING SANITARY SEWER LINE
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- TEL — EXISTING TELEPHONE LINE
- ELEC — EXISTING UNDERGROUND ELECTRIC LINE
- OHE — EXISTING OVERHEAD ELECTRIC LINE
- FO — EXISTING FIBER OPTIC LINE
- TV — EXISTING TELEVISION LINE
- RWL — EXISTING RECLAIMED WATER LINE
- PROPOSED TREE
- 1247.30 — PROPOSED GRADE

EPS GROUP
1130 N. Alma School Rd
Suite 120
Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Project: RWCD Lateral 17
Chandler Heights Road Improvements
Chandler, Arizona

Notes Sheet

Revisions:

Call at least two full working days before you begin excavation. ARIZONA 811. Dial 8-1-1 or 1-800-STAKE-IT (782-5348). In Maricopa County: (602)263-1100

Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil), Certificate No. 40486, BRUCE J. HALLSTED, Arizona, U.S.A.

Job No. 18-008.10

CS02

Sheet No. 2 of 28

18-008.10 Lateral 17 - Chandler Heights Road Improvements

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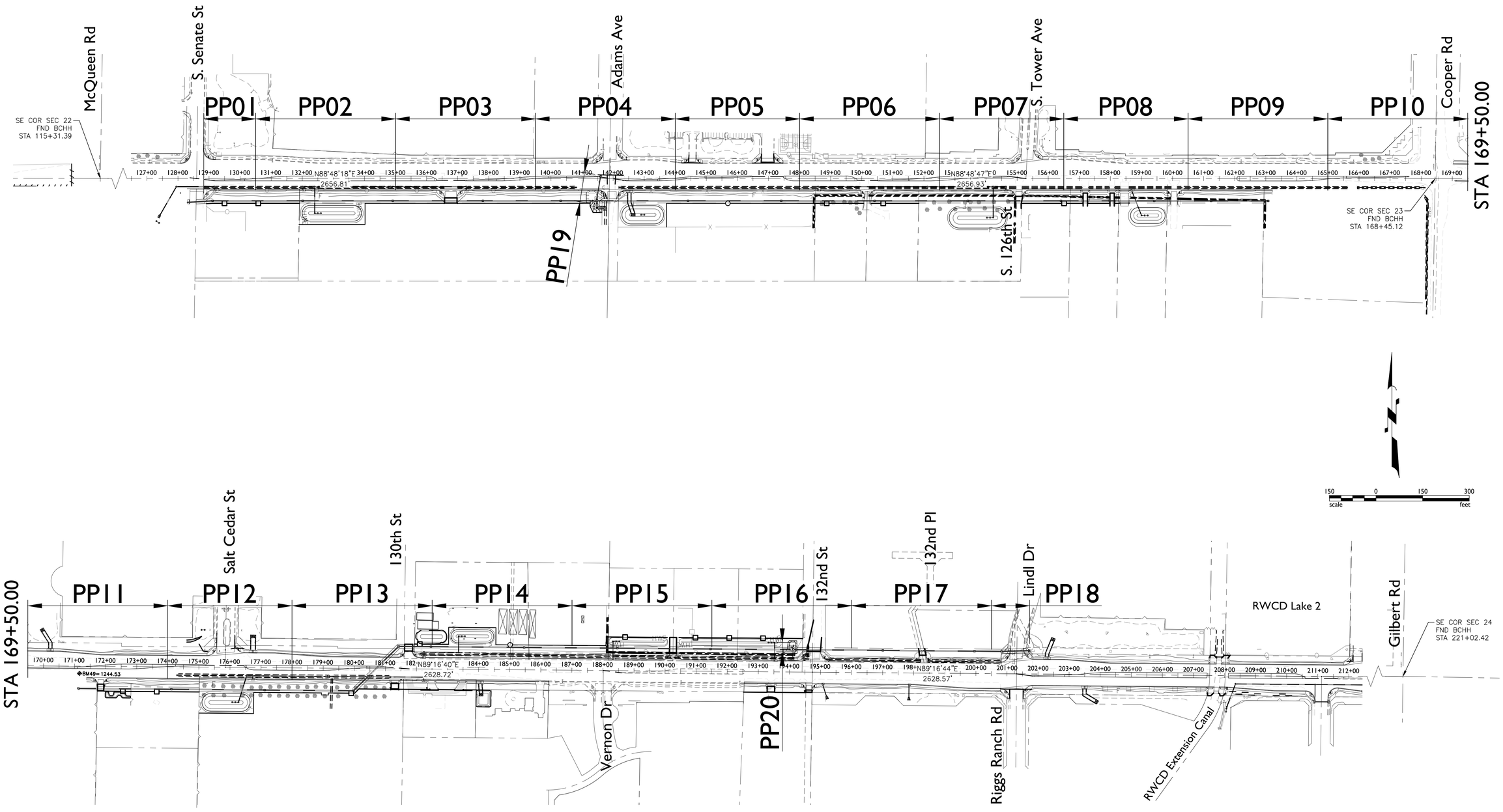
18-008.10 Lateral 17 - Chandler Heights Road Improvements



BENCHMARK

CITY OF CHANDLER BENCHMARK 49A, A 3" CITY OF CHANDLER (COC) BRASS CAP FLUSH LOCATED AT THE INTERSECTION OF LYNX PLACE AND SOHO LANE; 1100' NORTH OF CHANDLER HEIGHTS ROAD, 250' WEST OF COOPER ROAD AND 80' SOUTH OF BLUE RIDGE WAY.
ELEVATION: 1242.00' NAVD-88 DATUM
N: 813666.13
E: 733420.34

EPS GROUP
1130 N. Alma School Rd
Suite 120
Mesa, AZ 85201
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www.epsgroupinc.com

Project: RWCD Lateral 17
Chandler Heights Road Improvements
Chandler, Arizona

Index & Horizontal Control Sheet

Revisions:

Call at least two full working days before you begin excavation.
ARIZONA 811
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602)263-1100

Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA U.S.A.

Job No. 18-008.10

CS03

Sheet No. 3 of 28

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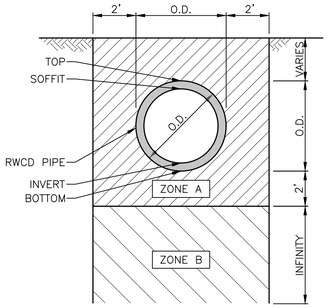


UTILITY CLEARANCE REQUIREMENTS

NTS

NOTES:

ZONE A: NO UTILITIES* PERMITTED WITHIN THIS ZONE.

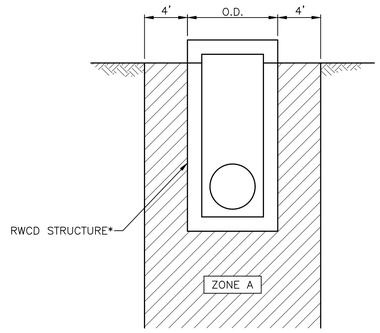
ZONE B: NO LONGITUDINAL UTILITIES PERMITTED WITHIN THIS ZONE. CROSSING UTILITIES PERMITTED WITH CROSSING PERMIT ISSUED BY RWCD. CONTACT RWCD INSPECTOR AT 480.267.8999 FOR CROSSING PERMIT.

O.D. = OUTSIDE DIAMETER OF THE BARREL OF THE PIPE.

CLEARANCE SHALL ACCOUNT FOR PIPE THICKNESS.

PIPE SIZE (IN)	PIPE THICKNESS (IN)
30"	4.5"
36"	5"
42"	5.5"

*UTILITIES INCLUDE ANY WATER LINE, SEWER LINE, RECLAIMED WATER LINE, GAS LINE, ELECTRICAL LINE, LANDSCAPE IRRIGATION LINE, COMMUNICATIONS LINE, ETC.



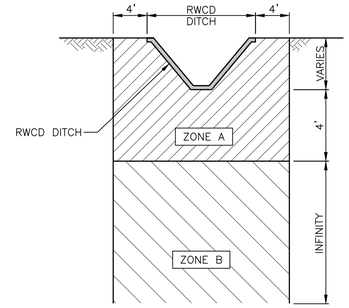
UTILITY CLEARANCE REQUIREMENTS

NTS

NOTES:

ZONE A: NO UTILITIES PERMITTED WITHIN THIS ZONE.

*RWCD STRUCTURE IS DEFINED AS A TURNOUT STRUCTURE, MANHOLE, HEADWALL, ETC.



UTILITY CLEARANCE REQUIREMENTS

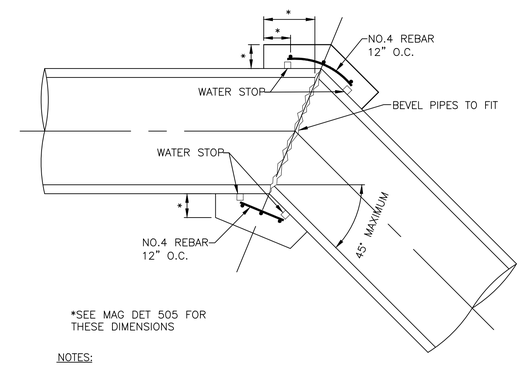
NTS

NOTES:

ZONE A: NO UTILITIES PERMITTED WITHIN THIS ZONE.

ZONE B: NO LONGITUDINAL UTILITIES PERMITTED WITHIN THIS ZONE. CROSSING UTILITIES PERMITTED WITH CROSSING PERMIT ISSUED BY RWCD. CONTACT RWCD INSPECTOR AT 480.267.8999 FOR CROSSING PERMIT.

DETAIL NO. 1 : UTILITY CLEARANCE REQUIREMENTS (RWCD-41)

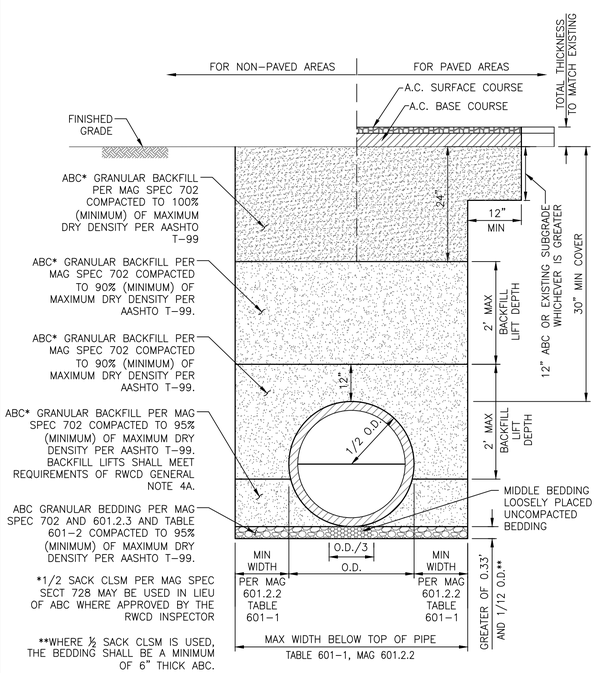


*SEE MAG DET 505 FOR THESE DIMENSIONS

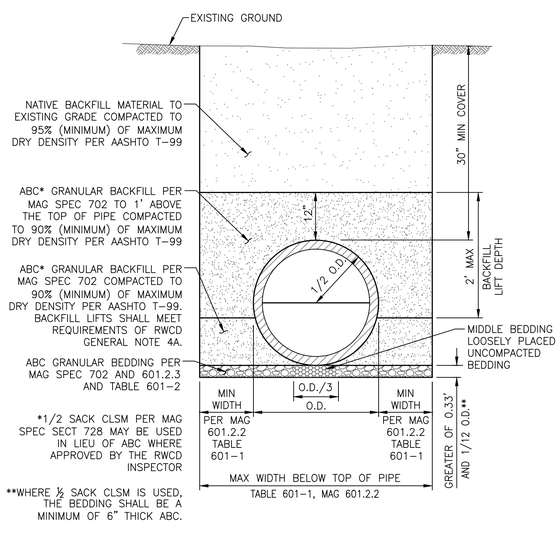
NOTES:

1. UNLESS MODIFIED HEREON, THE CONCRETE COLLAR SHALL BE CONSTRUCTED AS SPECIFIED IN MAG DET 505
2. THE PIPE ENDS SHALL BE SAWCUT TO MATCH THE PIPE DEFLECTION ANGLE
3. WIPE INSIDE OF COLLAR FLUSH AND SMOOTH WITH 3:1 SAND AND CEMENT MIX AND BRUSH SMOOTH
4. CONTRACTOR SHALL PROVIDE SANDBAGS, OR OTHER APPROVED METHOD, TO CONTROL PLACEMENT OF CONCRETE FOR COLLAR
5. ALL CONCRETE FOR THE COLLAR SHALL BE VIBRATED.
6. CONCRETE SHALL BE MAG CLASS A FOR ALL PIPE COLLARS.
7. WATER STOP SHALL BE GREENSTREAK SWELLSTOP ¾"X1", OR APPROVED EQUIVALENT. WATER STOP SHALL BE USED IN CONJUNCTION WITH GREENSTREAK SWELLSTOP PRIMER PER MANUFACTURERS SPECIFICATIONS, OR APPROVED EQUIVALENT. SET A MINIMUM OF 3" INSIDE EDGE OF COLLAR CONCRETE.

DETAIL NO. 2 : PIPE COLLAR (RWCD-30)

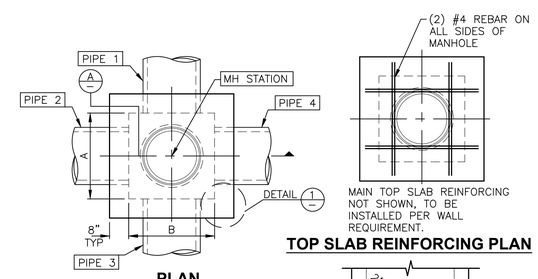


TYPE 'A'



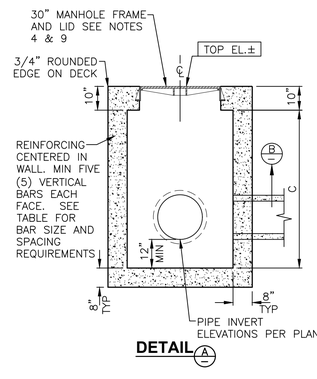
TYPE 'B'

DETAIL NO. 3 : TRENCH DETAILS (RWCD-36)

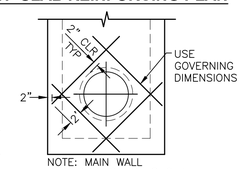


PLAN

TOP SLAB REINFORCING PLAN

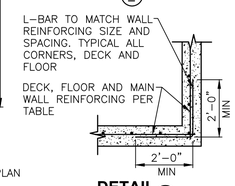


DETAIL A



NOTE: MAIN WALL REINFORCING NOT SHOWN

SECTION B



DETAIL 1

MINIMUM REQUIREMENTS		
WALL DIMENSION		REINFORCING STEEL
PIPE DIAMETER	A , B	
30" OR LESS	48"	#4 @ 12" E.W. IF C ≤ 8' OR #5 @ 12" E.W. IF C ≥ 8'
36"	56"	
42"	62"	
48"	68"	
54" OR 60"	80"	
66" OR 72"	92"	
78" OR 84"	106"	

NOTES:

1. STRUCTURAL CONCRETE SHALL BE 3000 PSI @ 28 DAYS.
2. REINFORCING STEEL SHALL COMPLY WITH MAG SPEC 727.
3. SEE PLAN AND PROFILE DRAWING FOR CORRECT ORIENTATION OF MANHOLE.
4. USE 30" MANHOLE FRAME AND LID PER DEETER 1296B BOLTED AND GASKETED OR APPROVED EQUAL. LID SHALL HAVE RAISED LETTERING 2" IN HEIGHT STATING "RWCD IRRIGATION". FOR PRESSURE MANHOLES, SEE NOTE 9.
5. EXACT ELEVATION OF ROADWAY SURFACE OR SIDEWALK TO BE SET BY LICENSEE'S ENGINEER.
6. FIELD CUT REBAR AT MANHOLE.
7. CONCRETE SHALL BE PLACED WITH NO COLD JOINTS. ALL CONCRETE SHALL BE VIBRATED DURING PLACEMENT.
8. DIMENSIONS A AND B SHALL NOT EXCEED 106" AND DIMENSION C SHALL NOT EXCEED 180"
9. FOR PRESSURE MANHOLES, MAXIMUM HEAD SHALL NOT EXCEED 30" ABOVE RIM ELEVATION. COVER SHALL HAVE 2" LETTERING "RWCD IRR PMH".
10. A SURVEY HUB SHALL BE SET AT ALL MANHOLES PRIOR TO RWCD INSPECTION.
11. MANHOLE BACKFILL SPECIFICATIONS SHALL BE PER ADJACENT TRENCH BACKFILL SPECIFICATIONS EXCEPT TO PROVIDE JETTED AB OR 1/2 SACK SLURRY UP TO THE SPRINGLINE OF PIPE OR AS DIRECTED BY RWCD INSPECTOR.
12. FOR TEMPORARY GRADING PROVIDE 4:1 SLOPES FROM RIM ELEVATION TO EXISTING GRADE BEGINNING 2' FROM THE OUTSIDE EDGE OF THE MANHOLE IN ALL DIRECTIONS.

DESIGN CRITERIA

HS20 HIGHWAY LOADING, 32 KIPS ON REAR AXLE (16 KIPS/WHEEL), WHEEL SPACING 6', 30% IMPACT ONE WHEEL CENTERED ON MANHOLE, OTHER WHEEL ADJACENT TO MANHOLE.

DETAIL NO. 4 : FOUR SIDED MANHOLE (RWCD-19)

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www.epsgroupinc.com

Project:

RWCD Lateral I7
Chandler Heights Road Improvements
Chandler, Arizona

Detail Sheet

Revisions:

Call at least two full working days before you begin excavation.
ARIZONA 811
Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE-IT (782-5348) in Maricopa County: (602)263-1100

Designer: FC
Drawn by: RVV

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA, U.S.A.

Job No.
18-008.10

DT01

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18-008.10 Lateral I7 - Chandler Heights Road Improvements

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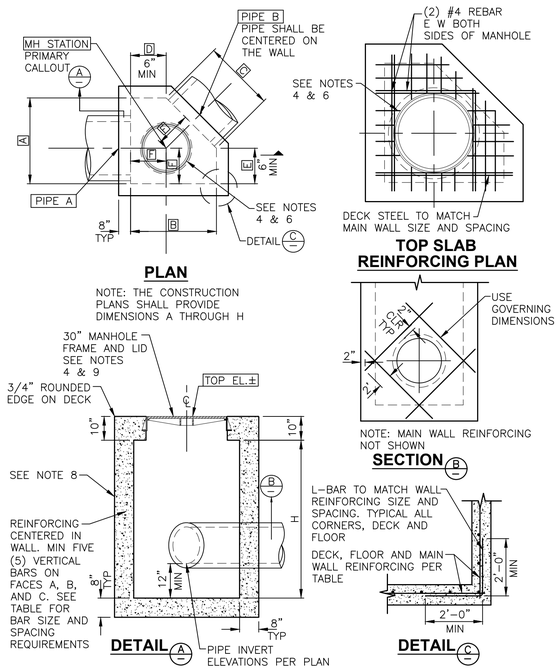


MINIMUM REQUIREMENTS			
WALL DIMENSION			REINFORCING STEEL
PIPE DIAMETER	A , B & C	F	
30" OR LESS	48"	24"	#4 @ 12" E.W. IF H ≤ 8' OR
36"	56"	28"	
42"	62"	31"	
48"	68"	34"	
54" OR 60"	80"	40"	#5 @ 12" E.W. IF H > 8'
66" OR 72"	92"	46"	
78" OR 84"	106"	53"	

NOTES:

1. STRUCTURAL CONCRETE SHALL BE 3000 PSI @ 28 DAYS.
2. REINFORCING STEEL SHALL COMPLY WITH MAG SPEC 727.
3. SEE PLAN AND PROFILE DRAWING FOR CORRECT ORIENTATION OF MANHOLE.
4. USE 30" MANHOLE FRAME AND LID PER DEETER 1296B BOLTED AND GASKETED OR APPROVED EQUAL. LID SHALL HAVE RAISED LETTERING 2" IN HEIGHT STATING "RWCD IRRIGATION". FOR PRESSURE MANHOLES, SEE NOTE 9.
5. EXACT ELEVATION OF ROADWAY SURFACE OR SIDEWALK TO BE SET BY LICENSEE'S ENGINEER.
6. FIELD CUT REBAR AT MANHOLE.
7. CONCRETE SHALL BE PLACED WITH NO COLD JOINTS. ALL CONCRETE SHALL BE VIBRATED DURING PLACEMENT.
8. DIMENSIONS A , B , AND C SHALL NOT EXCEED 106" AND DIMENSION H SHALL NOT EXCEED 180"
9. FOR PRESSURE MANHOLES, MAXIMUM HEAD SHALL NOT EXCEED 30" ABOVE RIM ELEVATION. COVER SHALL HAVE 2" LETTERING "RWCD IRR PMH".
10. A SURVEY HUB SHALL BE SET AT ALL MANHOLES PRIOR TO RWCD INSPECTION.
11. MANHOLE BACKFILL SPECIFICATIONS SHALL BE PER ADJACENT TRENCH BACKFILL SPECIFICATIONS EXCEPT TO PROVIDE JETTED AB OR 1/2 SACK SLURRY UP TO THE SPRINGLINE OF PIPE OR AS DIRECTED BY RWCD INSPECTOR.
12. FOR TEMPORARY GRADING PROVIDE 4:1 SLOPES FROM RIM ELEVATION TO EXISTING GRADE BEGINNING 2' FROM THE OUTSIDE EDGE OF THE MANHOLE IN ALL DIRECTIONS.

DESIGN CRITERIA

HS20 HIGHWAY LOADING, 32 KIPS ON REAR AXLE (16 KIPS/WHEEL), WHEEL SPACING 6', 30% IMPACT ONE WHEEL CENTERED ON MANHOLE, OTHER WHEEL ADJACENT TO MANHOLE.

DETAIL NO. 5 : FIVE SIDED MANHOLE (RWCD-20)

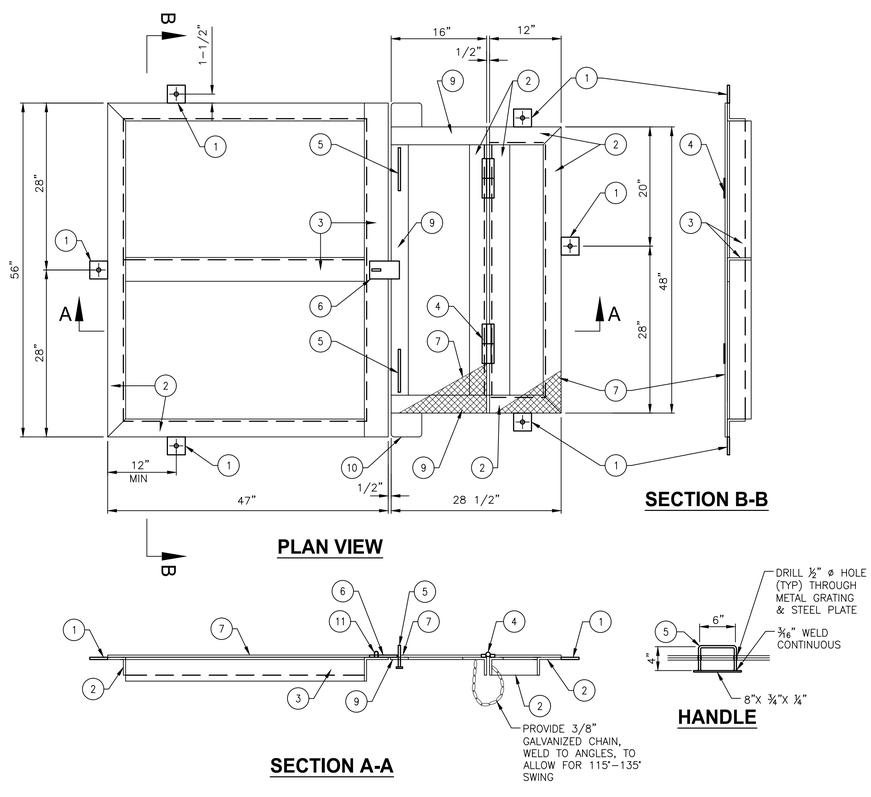
SPECIFICATIONS FOR TURNOUT STRUCTURE COVERS

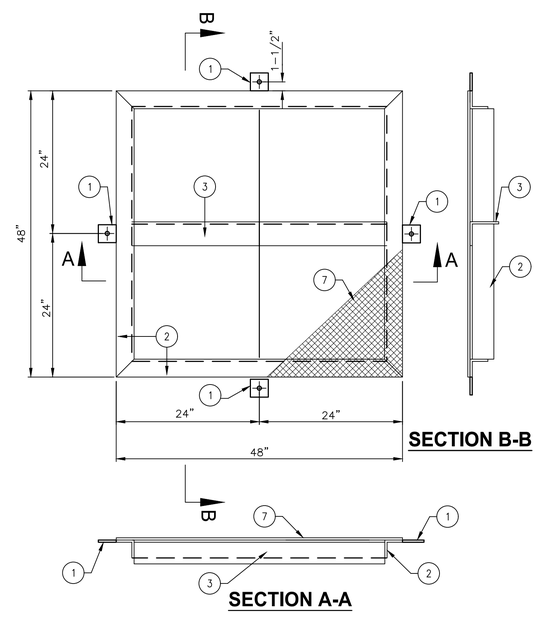
1. 3" X 3" X 3/8" CARBON STEEL PLATE WITH 11/16" HOLE WELDED TO THE ANGLE. ATTACH WITH 5/8" x 3" GALVANIZED ANCHOR BOLT EMBEDDED IN CONCRETE WITH 5/8" FENDER WASHER AND NUT.
2. 3" X 3" X 3/8" ANGLE
3. 4" X 4" X 3/8" ANGLE
4. 3/4" DIAMETER INDUSTRIAL GRADE BARREL HINGE, 6" LONG WELDED TO THE ANGLE SO THAT GRATES CANNOT BE REMOVED.
5. DIAMETER 3/8" HANDLE PER HANDLE DETAIL (SEE TURNOUT STRUCTURE DETAIL ON DESIGN PLANS FOR HANDLE LOCATION)
6. 3" X 5" X 3/8" CARBON STEEL PLATE HASP WELDED TO THE ANGLE. PUNCH SLOT TO RECEIVE STAPLE.
7. 3 LB/FT STEEL EXPANDED METAL GRATING
8. 3" X 5" X 3/8" CARBON STEEL PLATE WITH HASP STAPLE WELDED TO THE ANGLE WHERE REQUIRED FOR TYPE "A" COVER. HASP STAPLE TO BE 3/8" THICK BY 1 1/2" WIDE BY 1 3/4" TALL.
9. 3/8" X 3" CARBON STEEL PLATE
10. 4" X 5-1/8" X 3/8" COVER PLATE WELDED TO SIDE OF ITEM (9). MAINTAIN 51" DIMENSION FROM INSIDE FLANGE TO PLATE EDGE. PROVIDE 1/2" RADIUS ON OUTSIDE CORNERS.
11. HASP STAPLE WELDED TO TOP OF ITEM (3). HASP STAPLE TO BE 3/8" THICK BY 1 1/2" WIDE BY 1 3/4" TALL.

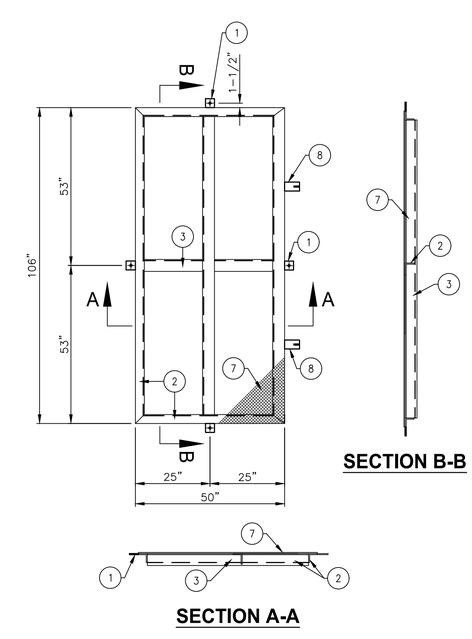
NOTES:

1. ALL WELDING MUST BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF AWS AND AISC CODES.
2. ALL ANGLES, HASPS AND HINGES MUST BE CONNECTED WITH 3/8" FULL STRENGTH WELDING ALONG ENTIRE LENGTH OF THE CONNECTION.
3. EXPANDED METAL GRATING MUST BE WELDED TO THE ANGLE FRAME WITH TACK WELD AT MAXIMUM DISTANCE OF 6" O.C.
4. ALL METAL SURFACES AND WELDED CONNECTIONS MUST BE PAINTED WITH A SHOP PRIME COAT. THE SECOND AND FINISH COATS MUST BE DONE IN ACCORDANCE WITH THE MAG SPECIFICATIONS, SECTIONS 530 AND 790. FINISH COAT MUST BE No.10 ALUMINUM.
5. CONTRACTOR SHALL FIELD VERIFY CONCRETE STRUCTURE DIMENSIONS PRIOR TO STRUCTURE COVER FABRICATION TO ENSURE PROPER FIT.

NOTES FOR STRUCTURE COVER







DETAIL NO. 6 : STRUCTURE COVER (RWCD-14, 15, 16)

EPS GROUP
1130 N. Alma School Rd
Suite 120
Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Project: RWCD Lateral I7 Chandler Heights Road Improvements Chandler, Arizona

Detail Sheet

Revisions:

Call at least two full working days before you begin excavation. ARIZONA 811 Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) in Maricopa County: (602)263-1100

Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil) CERTIFICATE NO. 40486 BRUCE J. HALLSTED Date Signed 5-11-21 ARIZONA, U.S.A.

Job No. 18-008.10

DT02

Sheet No. 5 of 28

18-008.10 Lateral I7 - Chandler Heights Road Improvements

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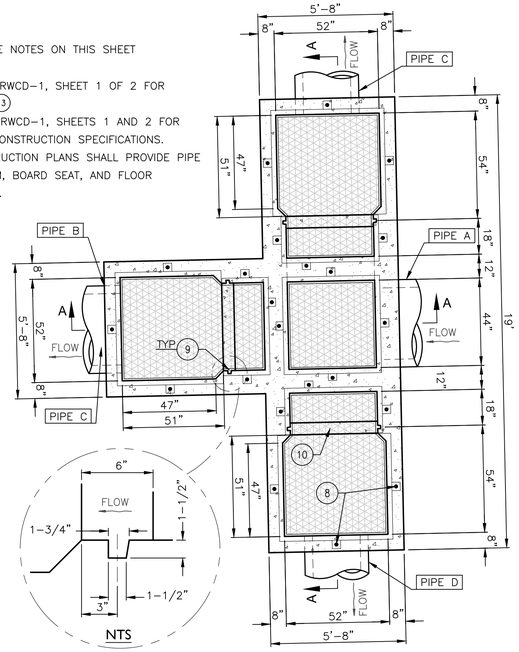
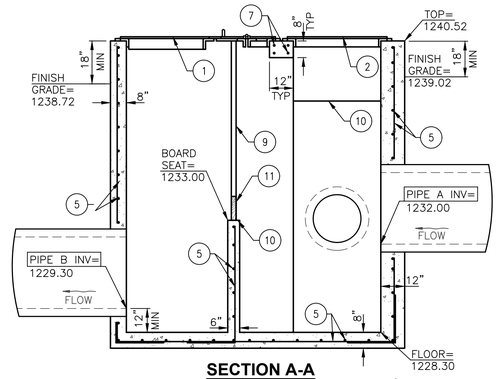
SEE STRUCTURE NOTES ON THIS SHEET

NOTES:

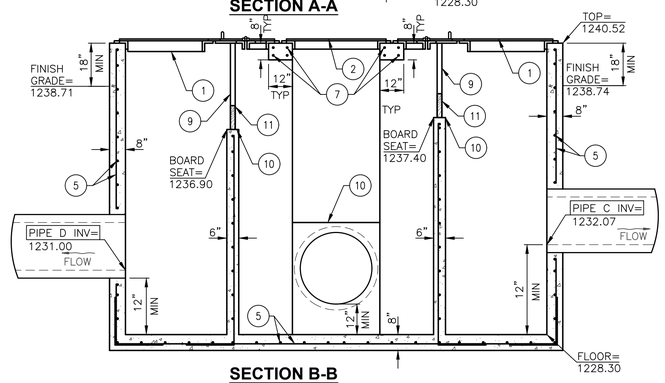
1. SEE DETAIL RWCD–1, SHEET 1 OF 2 FOR (1) → (13)
2. SEE DETAIL RWCD–1, SHEETS 1 AND 2 FOR GENERAL CONSTRUCTION SPECIFICATIONS.
3. THE CONSTRUCTION PLANS SHALL PROVIDE PIPE INVERT, RIM, BOARD SEAT, AND FLOOR ELEVATIONS.



PLAN VIEW



SECTION A-A



SECTION B-B

DETAIL NO. 7 : TURNOUT STRUCTURE #1 (RWCD-07) STA 141+51.00

1. STRUCTURE COVER TYPE "A" (SEE STRUCTURE COVER DETAIL-RWCD 14 AND 15)
2. STRUCTURE COVER TYPE "B" (SEE STRUCTURE COVER DETAIL-RWCD 14 AND 16)
3. STRUCTURE COVER TYPE "C" (SEE STRUCTURE COVER DETAIL-RWCD 14 AND 17)
4. #4 REINFORCEMENT BARS CENTERED IN THE WALL AT 12" O.C.
5. #5 REINFORCEMENT BARS CENTERED IN THE WALL AT 12" O.C.
6. #4 REINFORCEMENT BARS AT 8" O.C. WITH MINIMUM CLEAR COVER OF 2"
7. #4 REINFORCEMENT BARS THROUGH WALKWAY WITH MINIMUM CLEAR COVER OF 2", BENT AND TIED INTO SIDE WALLS, 24" MIN
8. 5/8" x 3" GALVANIZED ANCHOR BOLT EMBEDDED IN CONCRETE WITH 5/8" FENDER WASHER AND NUT (SEE STRUCTURE COVER DETAIL AND TRASH RACK DETAIL TO DETERMINE EXACT LOCATION)
9. 1-1/2" x 1-1/2" x 1-3/4" CHECK BOARD GROOVE. FORM IN CONCRETE, SEE DETAIL FOR ORIENTATION. SHALL BE FORMED WITH WOOD.
10. BOARD SEAT
11. CHECK BOARDS (TO BE SUPPLIED BY OTHERS)
12. TRASH RACK (SEE TRASH RACK DETAIL RWCD-18)
13. HANDLE (SEE STRUCTURE COVER DETAIL RWCD-14)

NOTES:

1. ALL CONCRETE FOR USE IN WORK SHALL CONFORM TO THE REQUIREMENTS OF SECTION 505 AND 725 OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, MARICOPA ASSOCIATION OF GOVERNMENTS, ARIZONA,LATEST EDITION, ACI AND ASTM CODES.
2. ALL REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF SECTION 727 OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, MARICOPA ASSOCIATION OF GOVERNMENTS, ARIZONA, LATEST EDITION, ACI AND ASTM CODES.
3. ALL CORNERS AND WEIR STEEL CONNECTIONS TO WALLS SHALL HAVE 24" x 24" L-BAR TIES AT 12" O.C. VERTICALLY. L-BARS TO BE SAME SIZE AS WALL STEEL.
4. ALL CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
5. ALL REINFORCEMENT SHALL BE GRADE 60 AND SHALL CONFORM WITH ASTM A-615.
6. THE TOP OF THE CONCRETE STRUCTURE SHALL BE MINIMUM 18" ABOVE PROPOSED FINISHED GRADE ELEVATION. THE BOTTOM ELEVATION OF THE STRUCTURE SHALL BE ESTABLISHED BY THE DESIGN.
7. THE PIPE OPENINGS INTO THE STRUCTURE SHALL BE SIZED TO FIT THE PROPOSED PIPE. THE PIPE INVERTS SHALL BE ESTABLISHED BY THE DESIGN.
8. THE BOARD SEAT TOP ELEVATION SHALL BE ESTABLISHED BY THE DESIGN. THE MINIMUM BOARD SEAT TOP ELEVATION SHALL BE DETERMINED AS DESCRIBED IN THE STANDARD SPECIFICATIONS.
9. TURNOUT STRUCTURES OF OTHER CONFIGURATIONS THAN SHOWN ON THE STANDARD DETAILS MAY BE DESIGNED AS A COMBINATION OF STANDARD DETAILS. ALL CHAMBER INSIDE DIMENSIONS SHALL BE AS SHOWN ON STANDARD DETAILS.
10. THE FOLLOWING ELEVATIONS SHALL BE CALLED OUT ON THE PLANS FOR ALL STRUCTURES: STRUCTURE RIM, PIPE INVERTS, BOARD SEATS AND FLOOR ELEVATIONS IN EACH CHAMBER. SEE DETAIL 2 FOR TYPICAL CALL OUT LOCATIONS.
11. TURNOUT STRUCTURE BACKFILL SPECIFICATIONS SHALL BE PER ADJACENT TRENCH BACKFILL SPECIFICATIONS EXCEPT TO PROVIDE JETTED AB OR 1/2 SACK SLURRY UP TO THE SPRINGLINE OF PIPE OR AS DIRECTED BY RWCD INSPECTOR.
12. GRADING AT TURNOUT STRUCTURES SHALL BE 1% AWAY FROM THE STRUCTURE FOR 4 FT ON ALL SIDES OF THE STRUCTURE.
13. ALL ABOVE GROUND SHARP CORNER EDGES OF CONCRETE STRUCTURES SHALL BE CHAMFERED 3/4 INCH. TOP EDGES THAT WILL BE COVERED BY A GRATE DO NOT NEED TO BE CHAMFERED.

NOTES FOR TURNOUT STRUCTURE

EPS GROUP
1130 N. Alma School Rd
Suite 120
Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Project:
RWCD Lateral I7
Chandler Heights Road Improvements
Chandler, Arizona

Detail Sheet

Revisions:

Call at least two full working days before you begin excavation...
ARIZONA 811
Dial 8-1-1 or 1-800-STAKE-IT (752-5348)
In Maricopa County: (602)263-1100

Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA, U.S.A.

Job No.
18-008.10

DT03

Sheet No.
6
of 28

18-008.10 Lateral I7 - Chandler Heights Road Improvements

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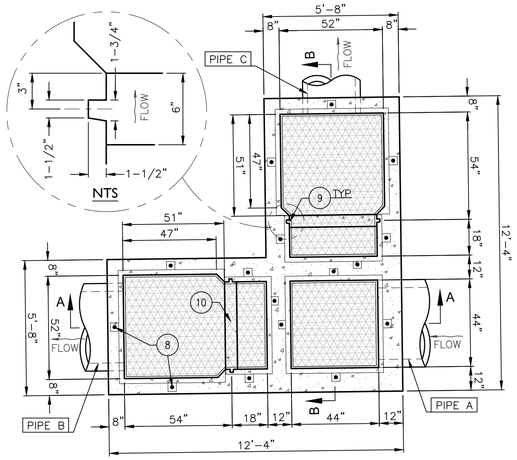
fcurry



PLAN VIEW

SEE STRUCTURE NOTES ON THIS SHEET

NOTES:

1. SEE DETAIL RWCD-1, SHEET 1 OF 2 FOR (1) → (13)
2. SEE DETAIL RWCD-1, SHEETS 1 AND 2 FOR GENERAL CONSTRUCTION SPECIFICATIONS.
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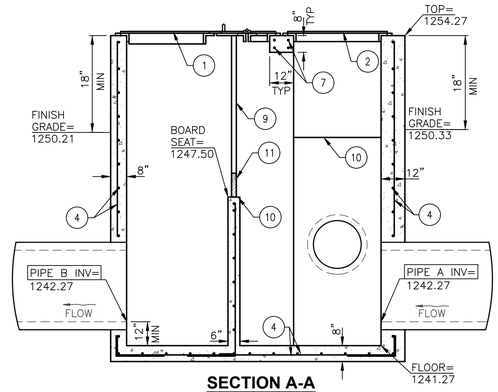
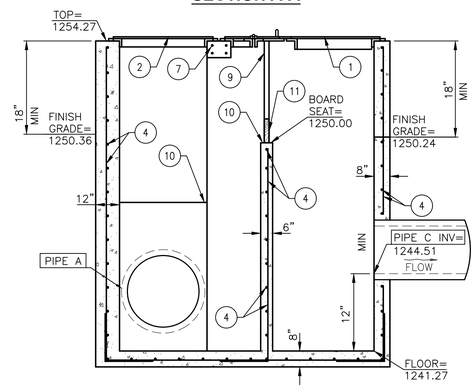


SECTION A-A



SECTION B-B

1. STRUCTURE COVER TYPE "A" (SEE STRUCTURE COVER DETAIL-RWCD 14 AND 15)
2. STRUCTURE COVER TYPE "B" (SEE STRUCTURE COVER DETAIL-RWCD 14 AND 16)
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10. BOARD SEAT
11. CHECK BOARDS (TO BE SUPPLIED BY OTHERS)
12. TRASH RACK (SEE TRASH RACK DETAIL RWCD-18)
13. HANDLE (SEE STRUCTURE COVER DETAIL RWCD-14)

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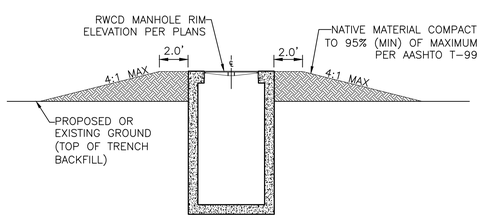
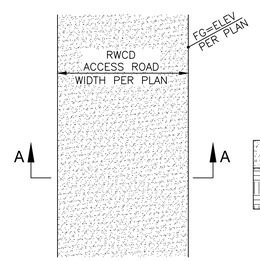
13. ALL ABOVE GROUND SHARP CORNER EDGES OF CONCRETE STRUCTURES SHALL BE CHAMFERED 3/4 INCH. TOP EDGES THAT WILL BE COVERED BY A GRATE DO NOT NEED TO BE CHAMFERED.

DETAIL NO. 9 : TURNOUT STRUCTURE #3 (RWCD-07) STA 194+15.00

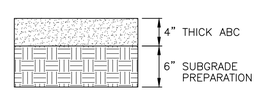
NOTES FOR TURNOUT STRUCTURE



DETAIL NO. 10 : GRADING AT RWCD MANHOLE (TYP ALL MANHOLES)



PLAN VIEW

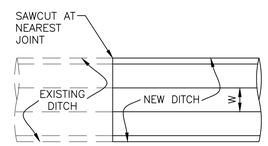


SECTION A-A

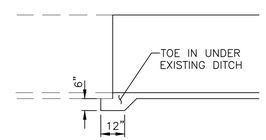
NOTES:

1. RWCD ACCESS ROAD SHALL BE CONSTRUCTED OF AGGREGATE BASE COURSE (ABC) MATERIAL PER MAG SPEC SECTION 702, COMPACTED TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99.
2. SUBGRADE PREPARATION SHALL BE PERFORMED IN ACCORDANCE WITH MAG SPEC SECTION 301. ALL SUBGRADE AREAS UNDER RWCD ACCESS ROADS SHALL BE COMPACTED TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99.
3. ALL RWCD ABC ACCESS ROAD AREAS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE, SURFLAN OR BARRICADE, IN LIQUID FORM, OR APPROVED EQUAL. HERBICIDE SHALL BE APPLIED TO PREPARED SUBGRADE PRIOR TO ABC PLACEMENT.
4. WHERE ADJACENT TO LANDSCAPE AREAS, 2 INCHES OF DECOMPOSED GRANITE MAY BE PLACED ON TOP OF THE RWCD ACCESS ROAD ABC TO MATCH THE SURROUNDING LANDSCAPING. THE ABC THICKNESS SHALL NOT BE REDUCED. THE FINISHED GRADE OF THE ACCESS ROAD (TOP OF DECOMPOSED GRANITE) SHALL ADHERE TO THE GRADES PROVIDED ON THE PLAN.
5. THE REQUIREMENTS AND SPECIFICATIONS IDENTIFIED IN THIS DETAIL SHALL BE ADHERED TO FOR RWCD ACCESS ROAD CONSTRUCTION AND FOR ABC ACCESS AREAS WHERE IDENTIFIED ON THE PLANS. THE ROADWAY WIDTH OR ABC ACCESS AREA DIMENSIONS SHALL BE AS SPECIFIED ON THE PLANS.

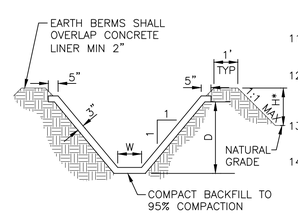
DETAIL NO. 11 : RWCD ACCESS ROAD (RWCD-42)



PLAN VIEW



PROFILE VIEW



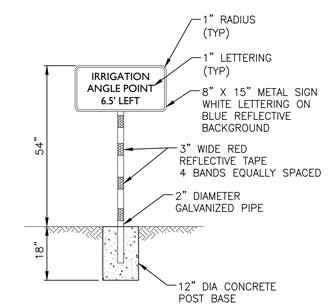
H*-BERM SHALL BE 1' MIN ABOVE ADJACENT GROUND AND DITCH LINER, WHICHEVER IS GREATER.

NOTES:

1. AT TRENCH CROSSINGS OR SHORT LENGTHS OF NEW DITCH, GRADE TO MATCH EXISTING DITCH INVERTS.
2. REMOVAL OF EXISTING DITCH SHALL BE MADE BY SAWCUTTING AT EXISTING CONTROL JOINTS AND REMOVING AN ENTIRE PANEL.
3. USE 3000lb CONCRETE WITH FIBER MESH.
4. CUT IN A CONTRACTION JOINT EVERY 6'.
5. OVERLAP EARTHWORK ON EACH SIDE OF THE LINING.
6. 95% COMPACTION REQUIRED UNDER DITCH LINING, BERM AND UNDER ACCESS ROAD.
7. PROVIDE CURING COMPOUND PER MAG SPEC 726.
8. CONTACT WATER DEPARTMENT FOR DRYUP, 480-988-9581
9. CONTRACTOR SHALL PROVIDE AND MAINTAIN 24HR ACCESS ROAD FOR RWCD VEHICLES.
10. UPON COMPLETION OF THE DITCH AND BEFORE THE DRY-UP PERIOD ENDS, THE RWCD ACCESS ROAD SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION.
11. CONTACT THE RWCD INSPECTOR AT 480-267-8999 BEFORE WORK BEGINS.
12. MAINTAIN A 4' MINIMUM CLEARANCE FROM ANY LATERAL OR PIPELINE (INCLUDING FUTURE PLANS UNDER DESIGN).
13. PROVIDE DITCH LINING WITH A FINE BROOM FINISH.
14. EARTH BERMS SHALL BE COMPLETED WITHIN 48 HOURS OF COMPLETION OF CONCRETE LINER.

	D 18" TO 36"
W	1.0'

DETAIL NO. 12 : RWCD DITCH DETAIL (RWCD-31)



NOTE:

1. BOLT SIGN TO PIPE WITH 1/4" BOLTS AND LOCKING NUT (MIN 2 BOLTS PER SIGN)
2. CONTRACTOR TO ENSURE SIGN IS PLACED IN A CORRECT LOCATION AND FACING DIRECTION TO AGREE WITH SIGN INFORMATION RELATIVE TO THE RWCD PIPE.

DETAIL NO. 13 : PIPE ANGLE SIGN

EPS GROUP
1130 N. Alma School Rd
Suite 120
Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Project: RWCD Lateral I7
Chandler Heights Road Improvements
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Detail Sheet

Revisions:

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Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602)263-1100

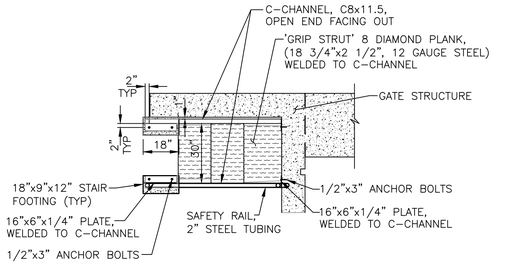
Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA U.S.A.

Job No. 18-008.10

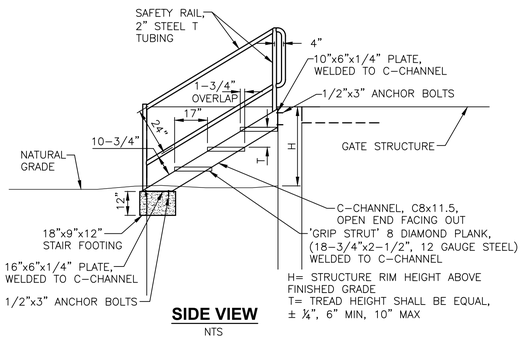
DT04

Sheet No. 7 of 28



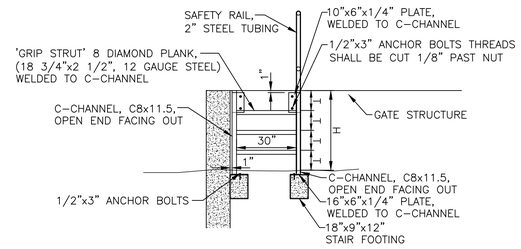
PLAN VIEW

NTS



SIDE VIEW

NTS



FRONT VIEW

NTS

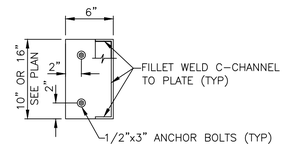


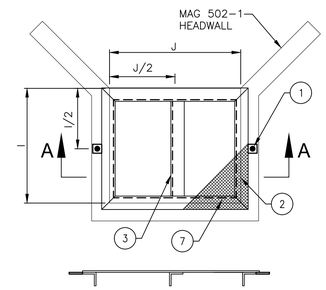
PLATE DETAIL

NTS

NOTES:

1. ALL WELDED CONNECTIONS SHALL BE 3/8" FILLET WELDS ALONG THE ENTIRE LENGTH OF CONNECTION AND MUST BE IN ACCORDANCE WITH AWS AND AISC CODES.
2. ALL METAL SURFACES AND WELDED CONNECTIONS SHALL BE PAINTED WITH ONE COAT ZINC CHROMATE OR RED LEAD PRIMER (INDUSTRIAL QUALITY). THE SECOND COAT SHALL BE NO. 10 ALUMINUM PER MAG SPEC 790.
3. ANCHOR PLATE TO STAIR WITH 2 EA. 1/2" DIA REDHEAD BOLTS EPOXIED 3" INTO CONCRETE.
4. STAIR FOOTING TO BE MIN 2500 PSI CONCRETE.
5. ANCHOR BOLTS SHALL BE CUT TO A MAX HEIGHT OF 1/8" ABOVE THE NUT.

DETAIL NO. 14 : TURNOUT STRUCTURE STAIRS (RWCD-28)



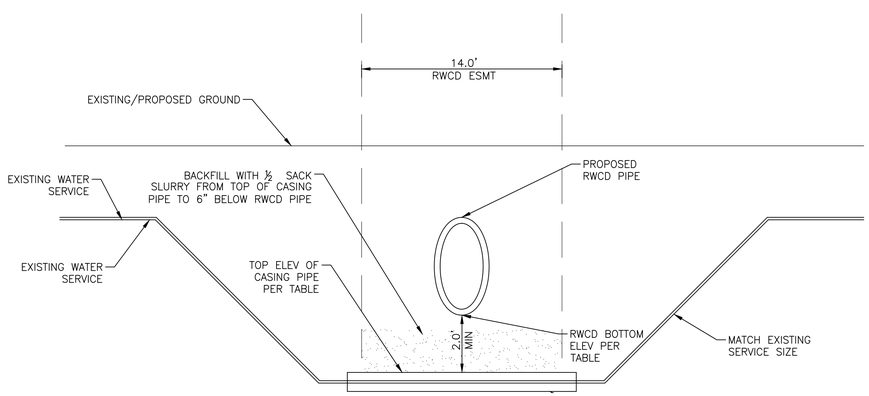
SECTION A-A

1. 3"x3"x3/8" CARBON STEEL PLATE WITH 11/16" HOLE WELDED TO THE ANGLE
2. 3"x3"x3/8" ANGLE
3. 4"x4"x3/8" ANGLE
7. 3 LB/FT STEEL EXPANDED METAL GRATING

NOTES:

1. DIMENSION I AND J VARY. SEE PLAN FOR DIMENSIONS.
2. FIELD VERIFY HEADWALL DIMENSIONS PRIOR TO FABRICATING GRATE COVER.
3. ALL WELDING MUST BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF AWS AND AISC CODES.
4. ALL ANGLES, HASPS AND HINGES MUST BE CONNECTED WITH 3/8" FULL STRENGTH WELDING ALONG ENTIRE LENGTH OF THE CONNECTION.
5. EXPANDED METAL GRATING MUST BE WELDED TO THE ANGLE FRAME WITH TACK WELD AT MAXIMUM DISTANCE OF 6" O.C.
6. ALL METAL SURFACES AND WELDED CONNECTIONS MUST BE PAINTED WITH A SHOP PRIME COAT. THE SECOND AND FINISH COATS MUST BE DONE IN ACCORDANCE WITH THE MAG SPECIFICATIONS, SECTIONS 530 AND 790. FINISH COAT MUST BE No.10 ALUMINUM.

DETAIL NO. 15 : HEADWALL GRATE COVER (RWCD-35)



STATION	RWCD BOTTOM ELEVATION	CASING PIPE TOP ELEVATION
150+86.82	1232.63	1230.63
157+34.64	1234.76	1232.76
160+77.76	1235.72	1233.72
172+00.26	1237.48	1235.48
172+03.21	1237.48	1235.48
172+06.17	1237.48	1235.48

DETAIL NO. 16 : WATER SERVICE CROSSING DETAIL

18-008.10 Lateral 17 - Chandler Heights Road Improvements

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caguilar

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1130 N. Alma School Rd
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Project:
RWCD Lateral 17
Chandler Heights Road Improvements
Chandler, Arizona

Detail Sheet

Revisions:

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ARIZONA 811
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602)263-1100

Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA, U.S.A.

Job No.
18-008.10

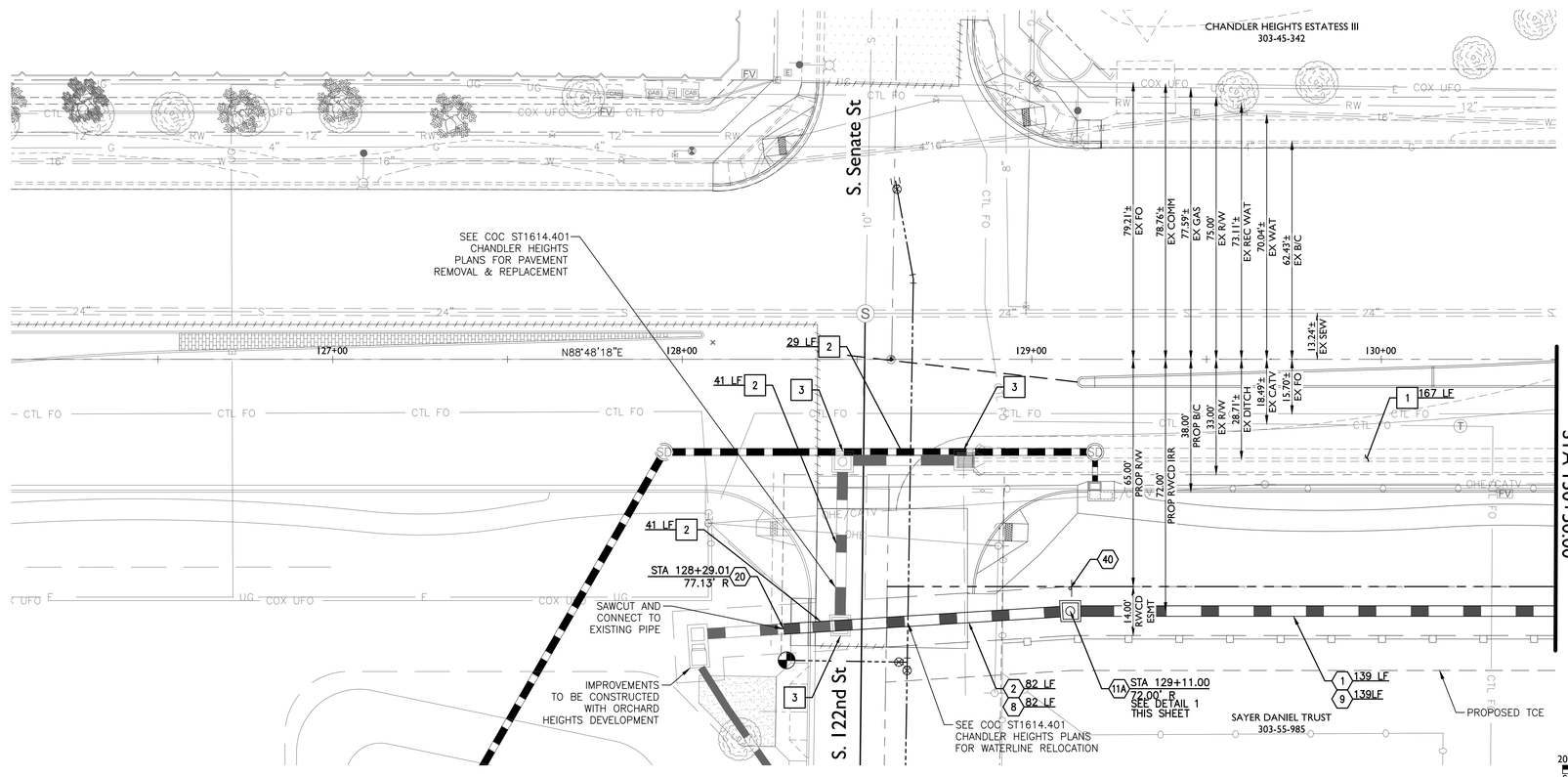
DT05

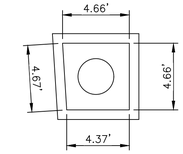
Sheet No.
8
of 28

18-008.10 Lateral 17 - Chandler Heights Road Improvements

Construction Notes

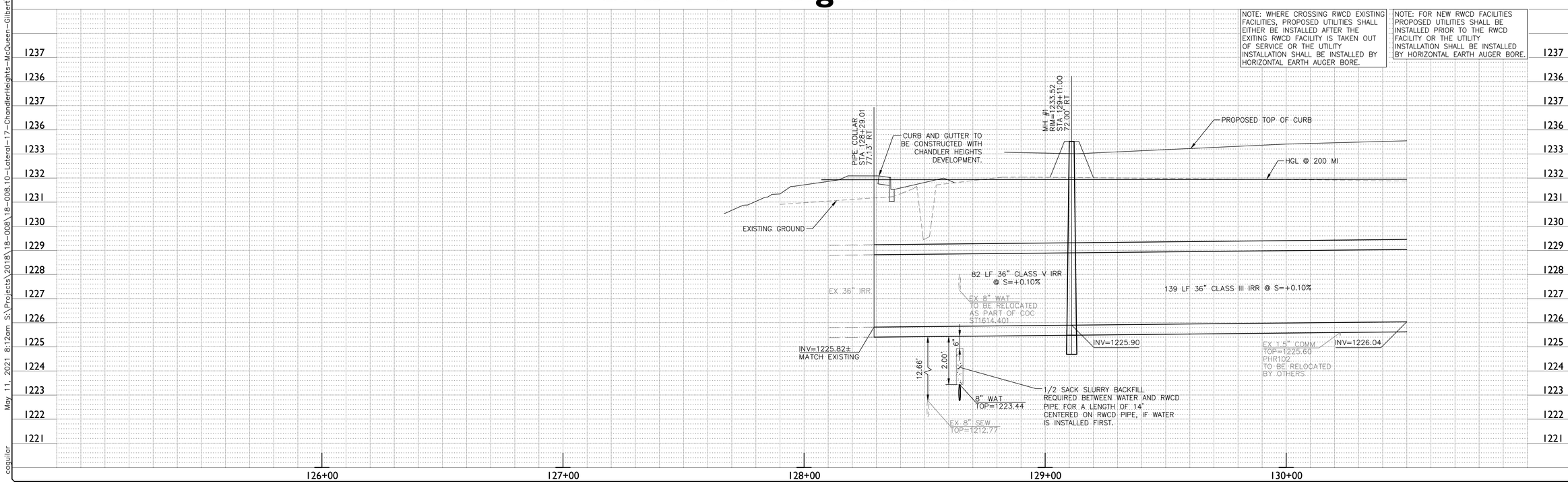
	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	139 LF
2	36 INCH RGRCP CLASS V	82 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	82 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	139 LF
11A	4 SIDED MANHOLE MODIFIED, DTL 4 SHEET DT01 (RWCD-19)	1 EA
20	PIPE COLLAR, DTL 2 SHEET DT01 (RWCD-30)	1 EA
40	INSTALL PIPE ANGLE POINT SIGN PER DTL 13 DT04	1 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	167 LF
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	111 LF
3	REMOVE EXISTING IRRIGATION STRUCTURE, HEADWALL OR MANHOLE AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99. CONTRACTOR SHALL SALVAGE ALL METAL ITEMS INCLUDING GRATING, MANHOLE LIDS, GATES, ETC. AND DELIVER TO THE RWCD YARD AT 6937 E ELLIOT ROAD, MESA. CONTACT THE RWCD INSPECTOR @ 480-267-8999 TO COORDINATE DELIVERY	3 EA





DETAIL 1

Chandler Heights Road



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Irrigation Plan & Profile

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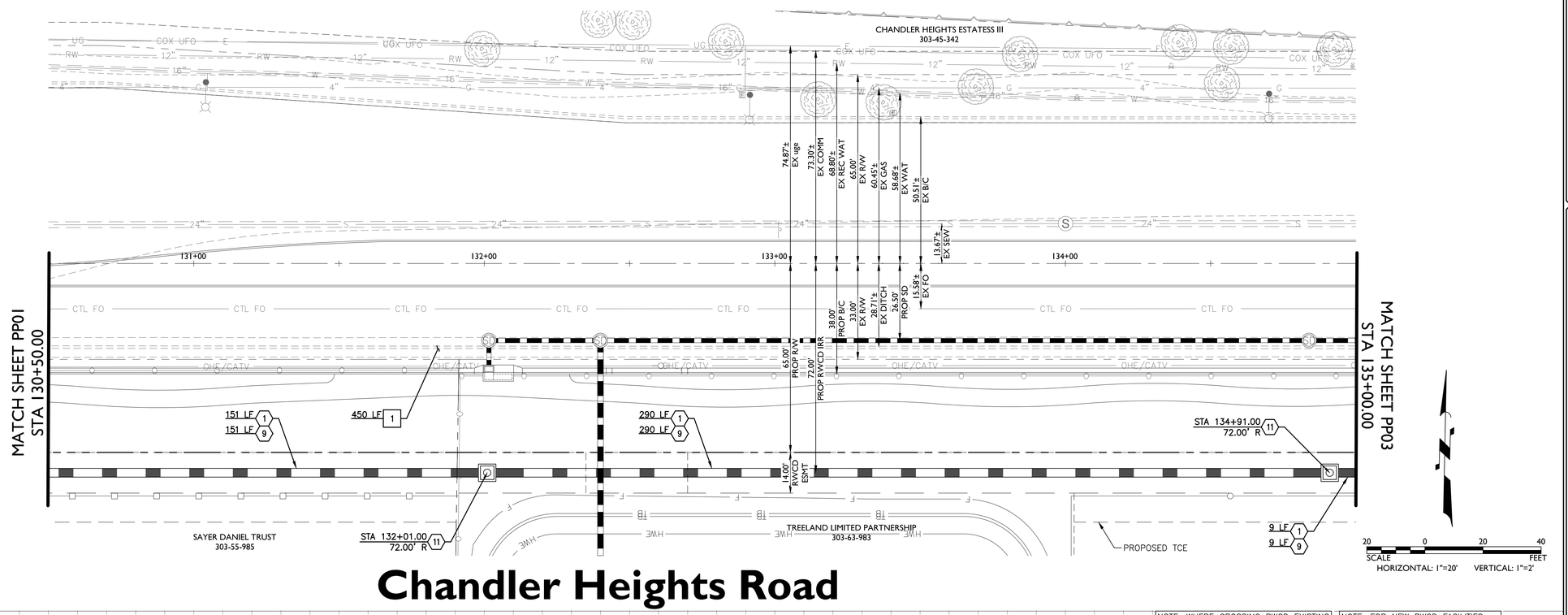
Job No.
18-008.10

PP01

Sheet No.
9
of 28

Construction Notes

IRRIGATION NOTES			REMOVAL NOTES	
1	36 INCH RGRCP CLASS III	450 LF	1 REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL.	450 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	450 LF		
11	4 SIDED MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	2 EA	COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	



Chandler Heights Road

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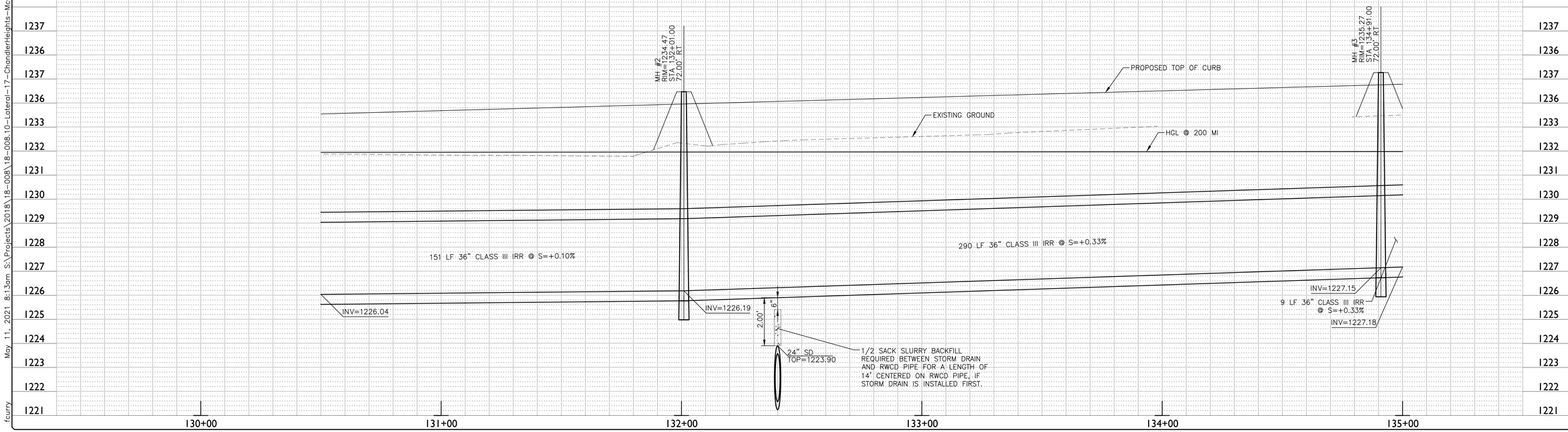

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Job No.
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PP02

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18-008.10 Lateral I7 - Chandler Heights Road Improvements

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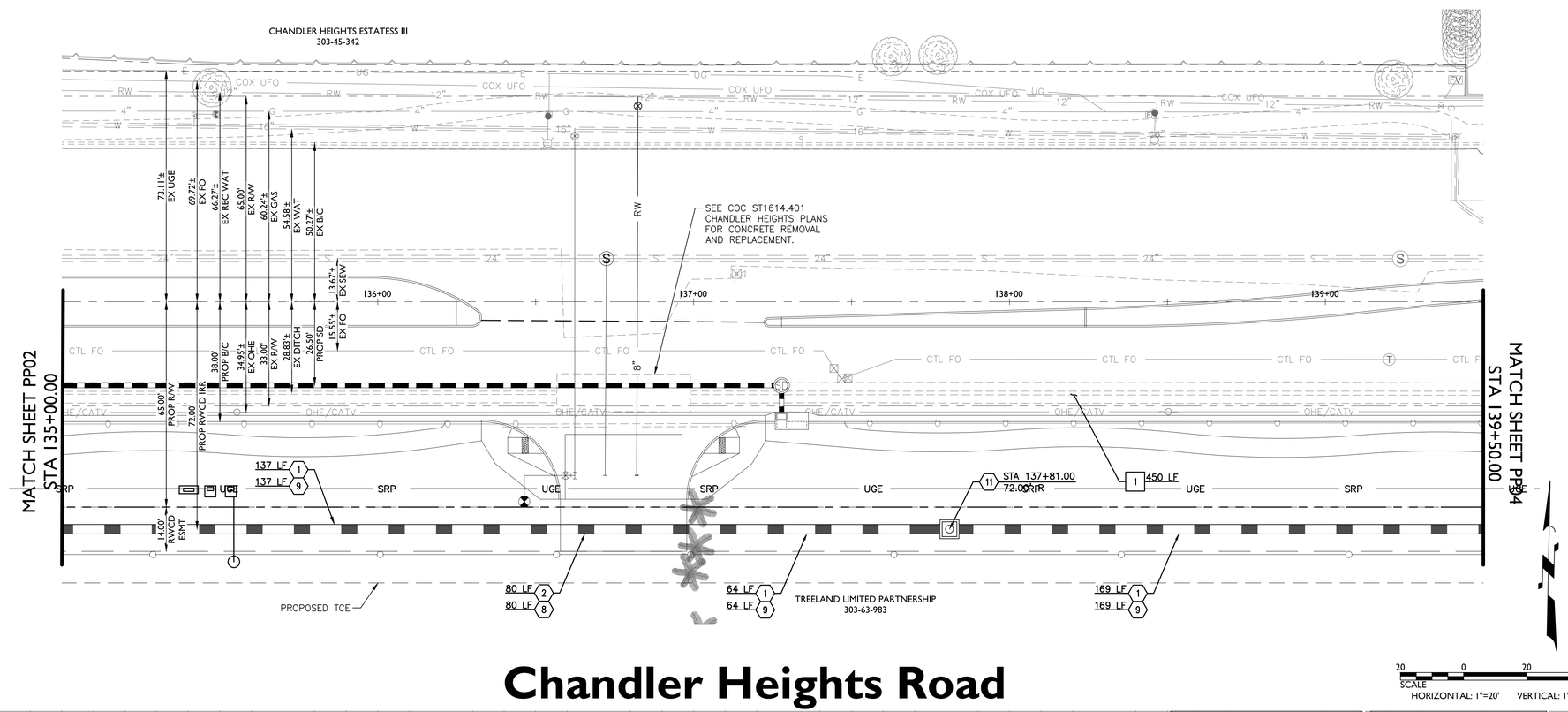
fcurry

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	370 LF
2	36 INCH RGRCP CLASS V	80 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	80 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	370 LF
11	4 SIDED MANHOLE, DTL 4 SHEET DT01 (RWCD–19)	1 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND	450 LF
	DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL.	
	COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T–99	



Chandler Heights Road

SCALE 20 0 20 40 FEET
HORIZONTAL: 1"=20' VERTICAL: 1"=2'

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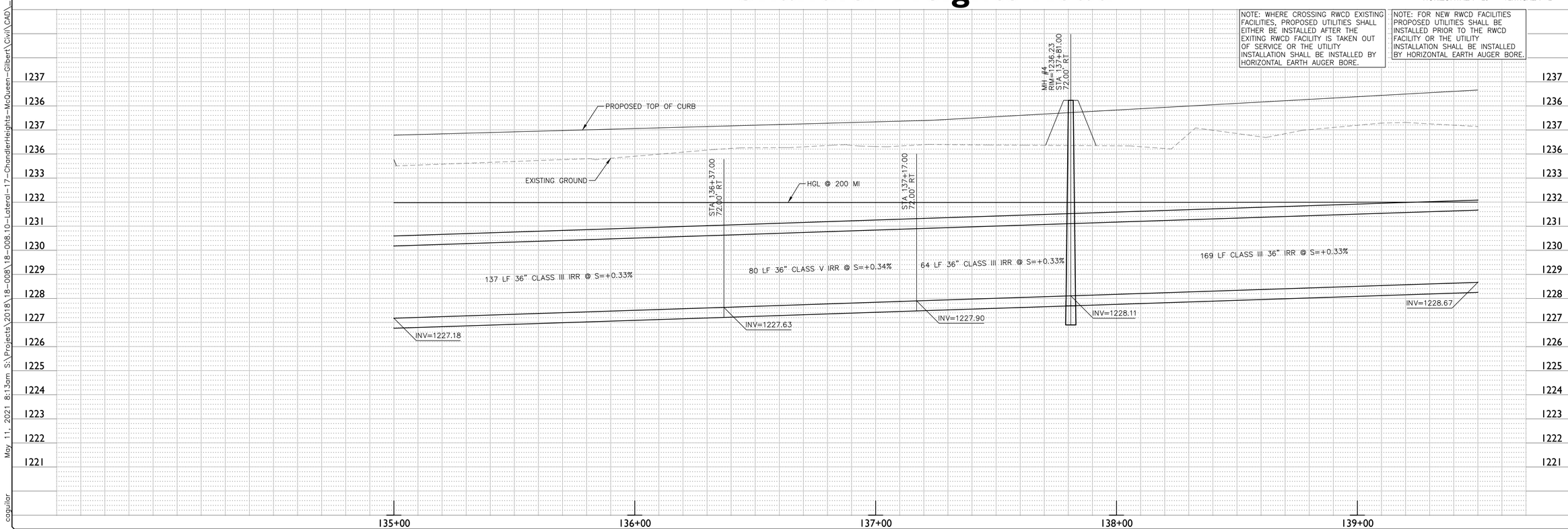

18-008.10 Lateral 17 - Chandler Heights Road Improvements

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Chandler, Arizona

Irrigation Plan & Profile

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Drawn by: RW

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Job No.
18-008.10

PP03

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11
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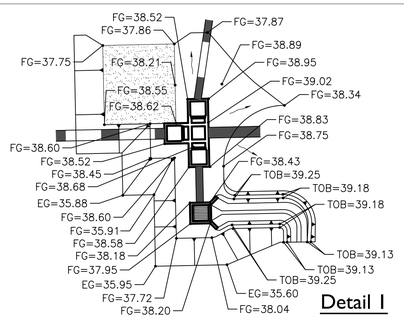
18-008.10 Lateral 17 - Chandler Heights Road Improvements

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	366 LF
2	36 INCH RGRCP CLASS V	72 LF
7	RWCD ACCESS ROAD, DTL 11 SHEET DT04	383 SF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	72 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	342 LF
10	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A MODIFIED WITH HALF SLACK CLSM PER MAG STD SPEC 728	24 LF
11	4 SIDED MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	1 EA
13	TURNOUT STRUCTURE AND GRATES PER DTLS 6 AND 7 ON SHEETS DT02 AND DT03	1 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	315 LF
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	127 LF
3	REMOVE EXISTING IRRIGATION STRUCTURE, HEADWALL OR MANHOLE AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99. CONTRACTOR SHALL SALVAGE ALL METAL ITEMS INCLUDING GRATING, MANHOLE LIDS, GATES, ETC. AND DELIVER TO THE RWCD YARD AT 6937 E ELLIOT ROAD, MESA. CONTACT THE RWCD INSPECTOR @ 480-267-8999 TO COORDINATE DELIVERY	3 EA



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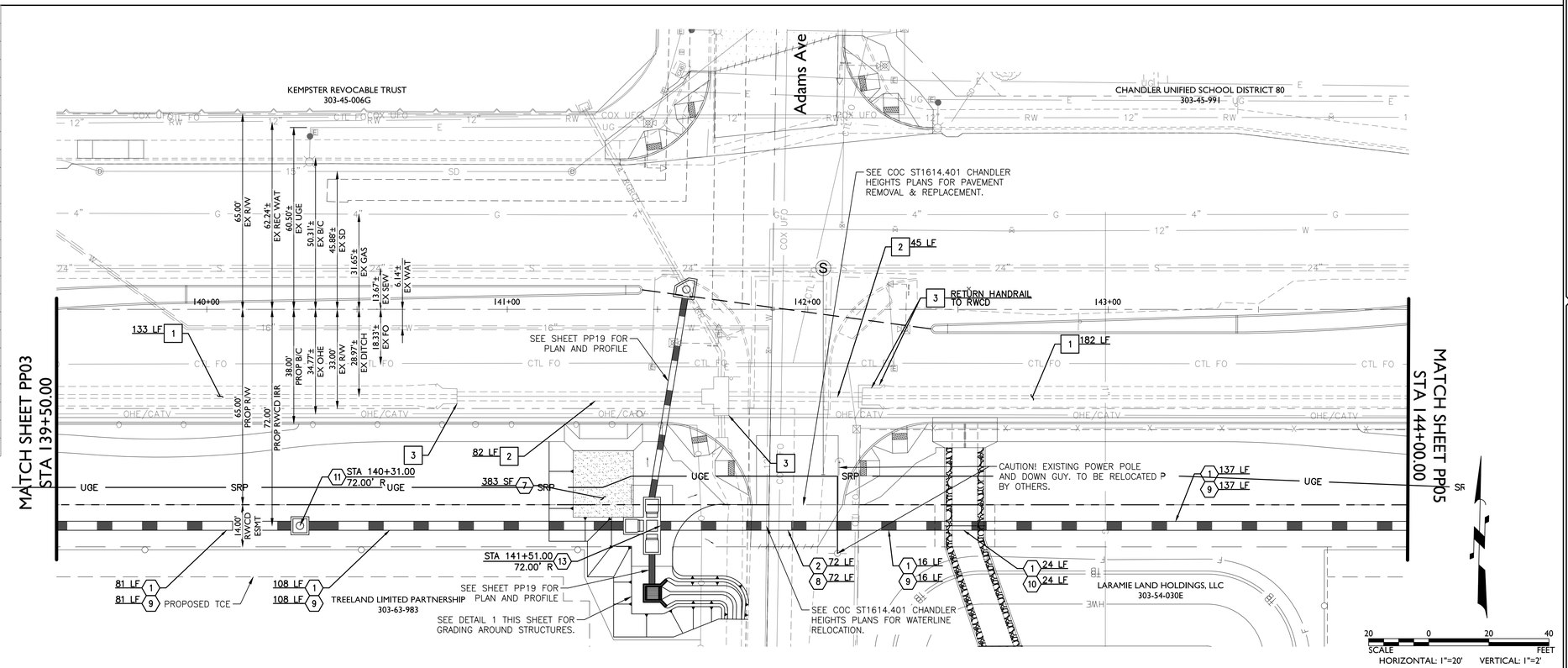

Chandler Heights Road

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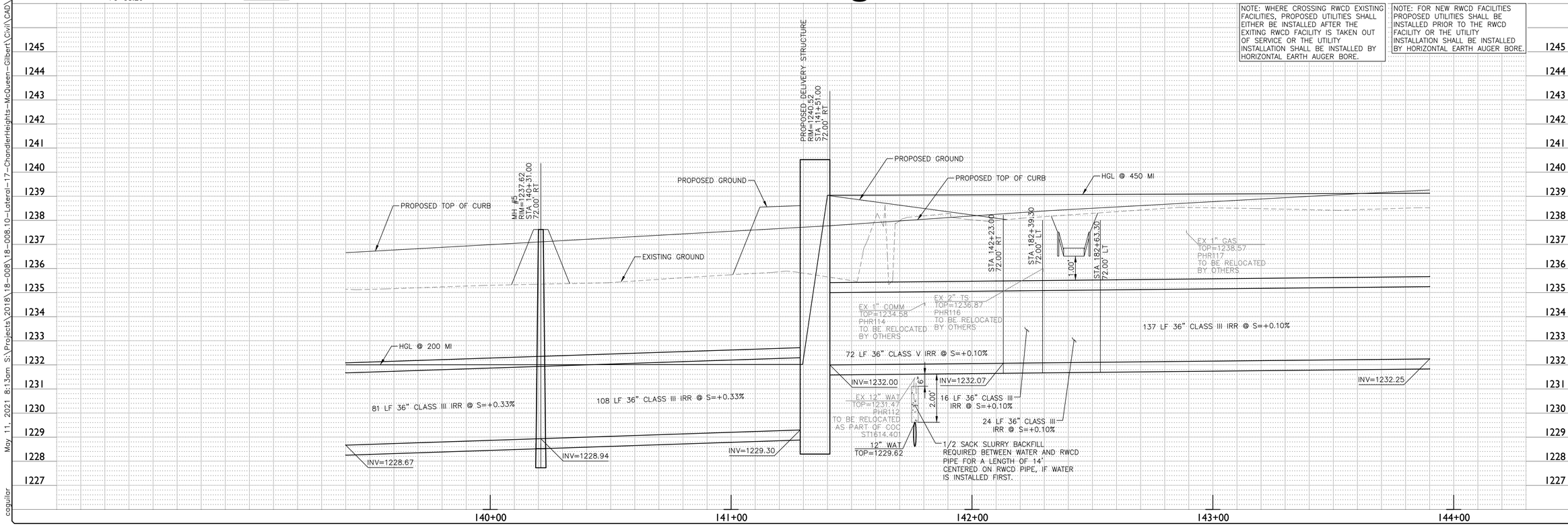

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RWCD Lateral 17
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Chandler, Arizona

Irrigation Plan & Profile

Project:

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Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil) CERTIFICATE NO. 40486 BRUCE J. HALLSTED Date Signed 5-11-21 ARIZONA, U.S.A.

Job No.
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PP04

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12
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18-008.10 Lateral 17 - Chandler Heights Road Improvements

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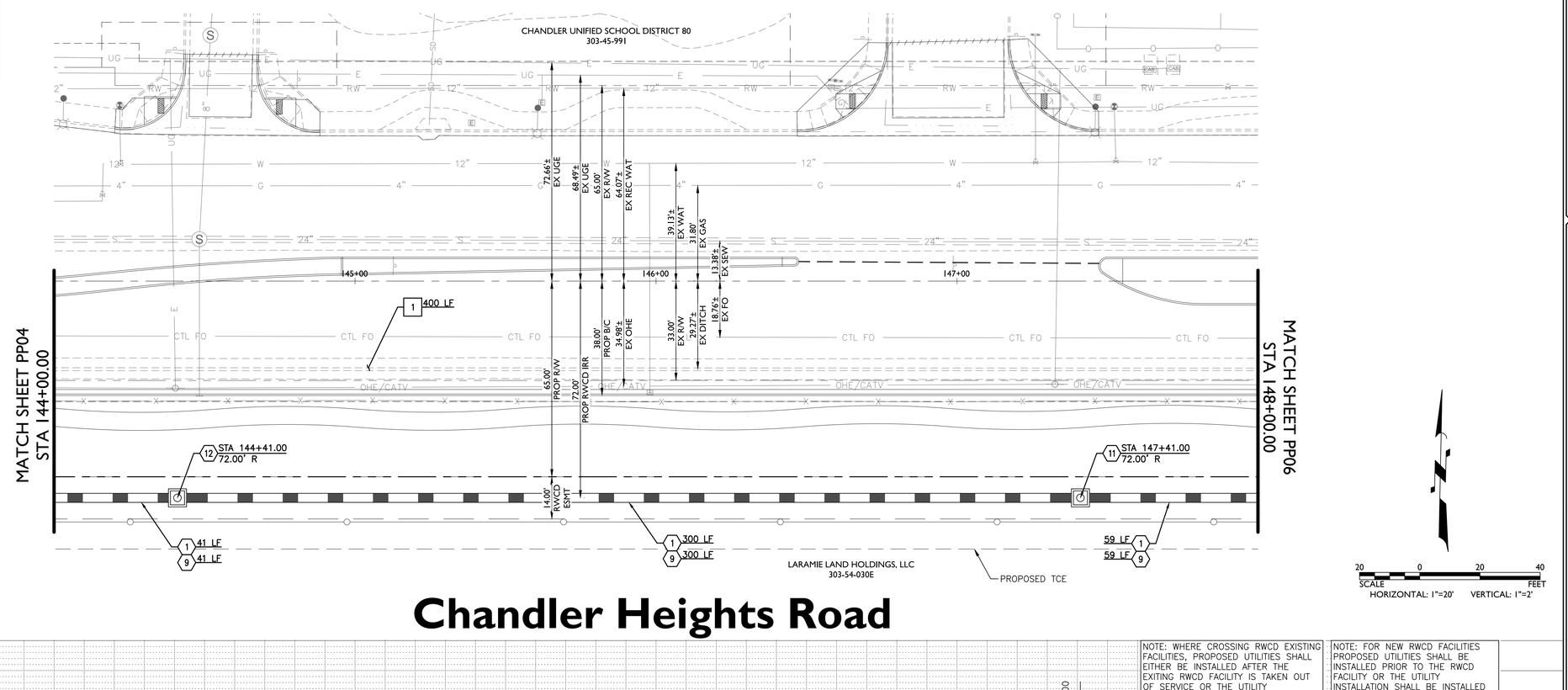
Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	400 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	400 LF
11	4 SIDED MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	1 EA
12	4 SIDED PRESSURE MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	1 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	400 LF



Chandler Heights Road

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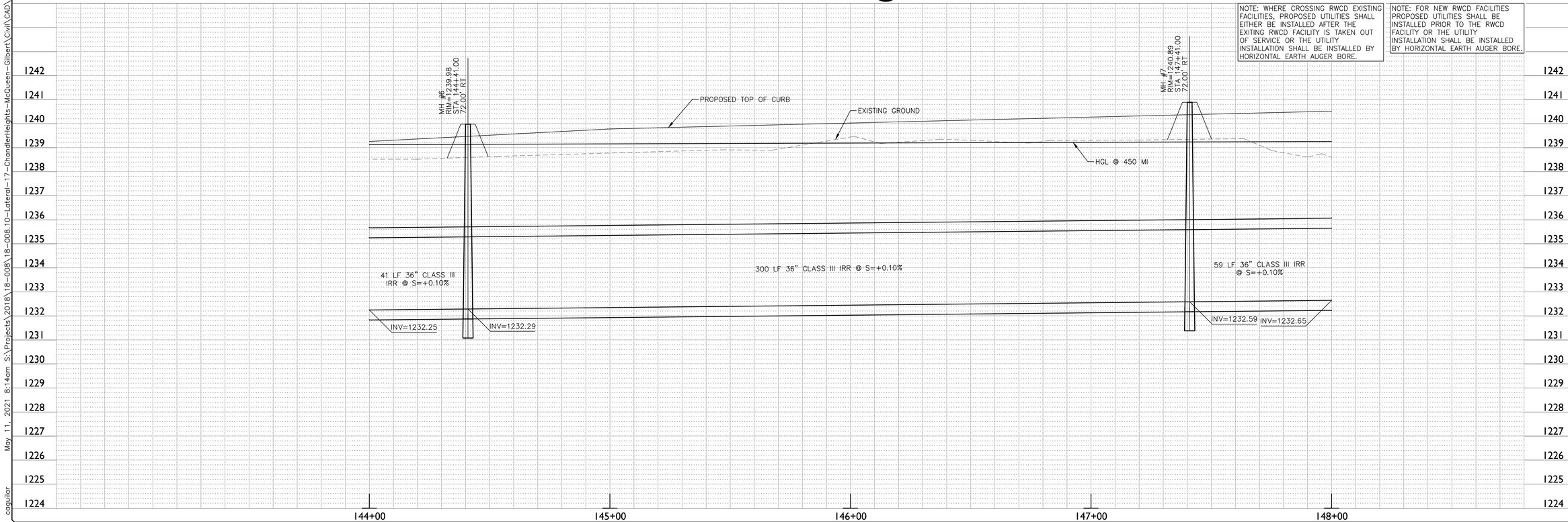

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Chandler, Arizona

Irrigation Plan & Profile

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Drawn by: RW

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Job No.
18-008.10

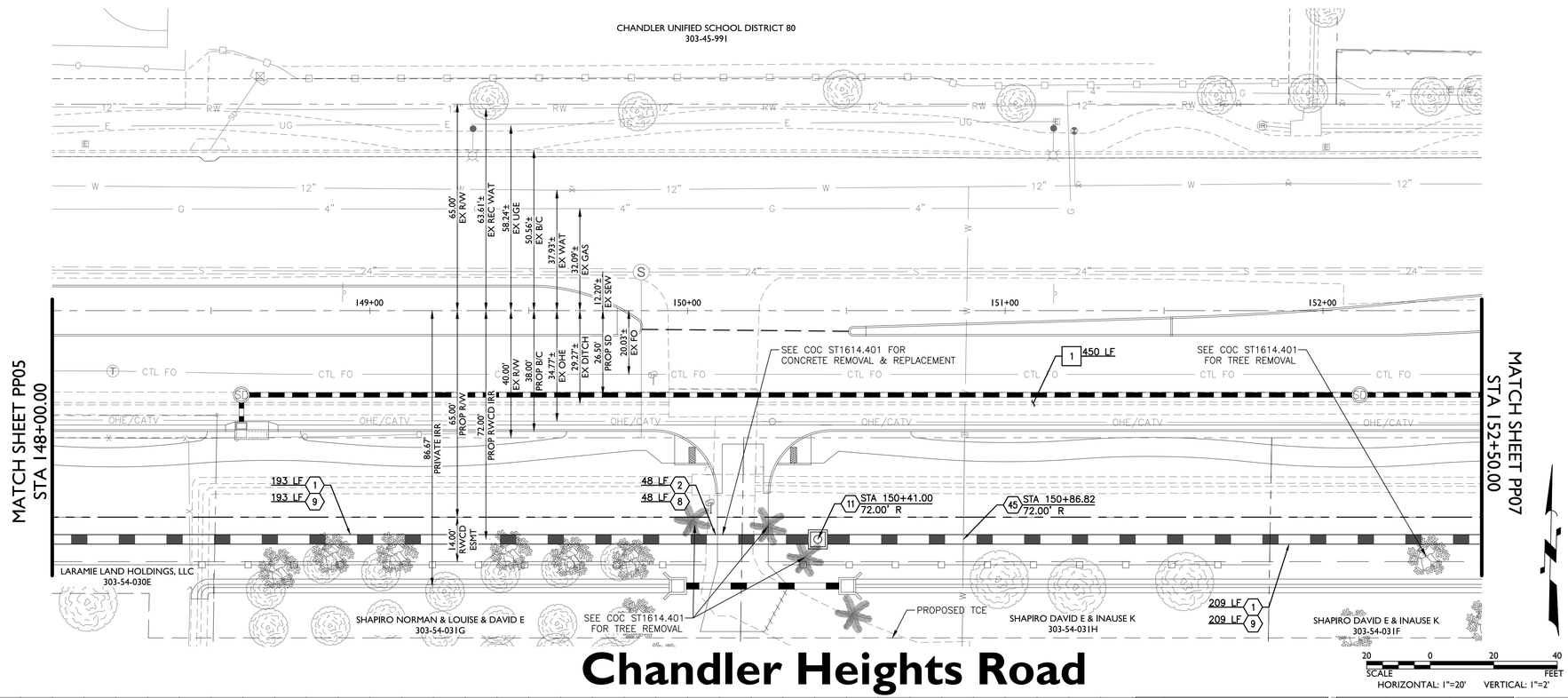
PP05

Sheet No.
13
of 28

18-008.10 Lateral 17 - Chandler Heights Road Improvements

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	402 LF
2	36 INCH RGRCP CLASS V	48 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	48 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	402 LF
11	4 SIDED MANHOLE, DTL 4 SHEET DT01 (RWCD–19)	1 EA
45	DIP EXISTING WATER SERVICE PER DTL 16 ON SHEET DT05	1 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T–99	450 LF



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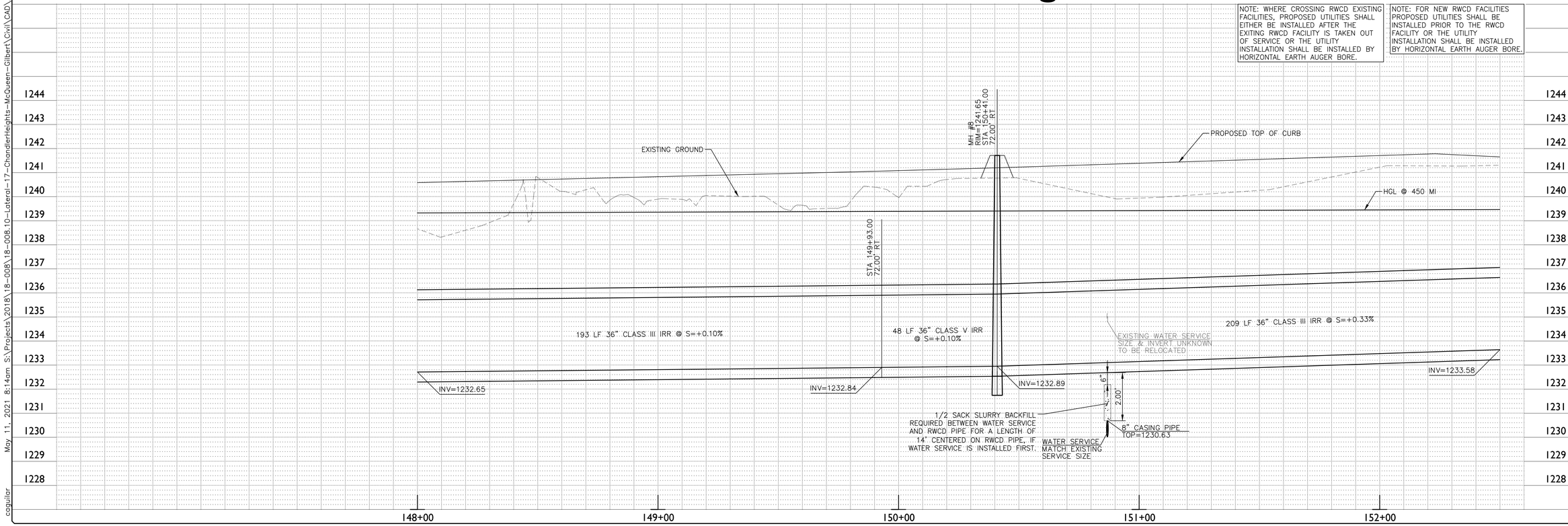

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PP06

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14
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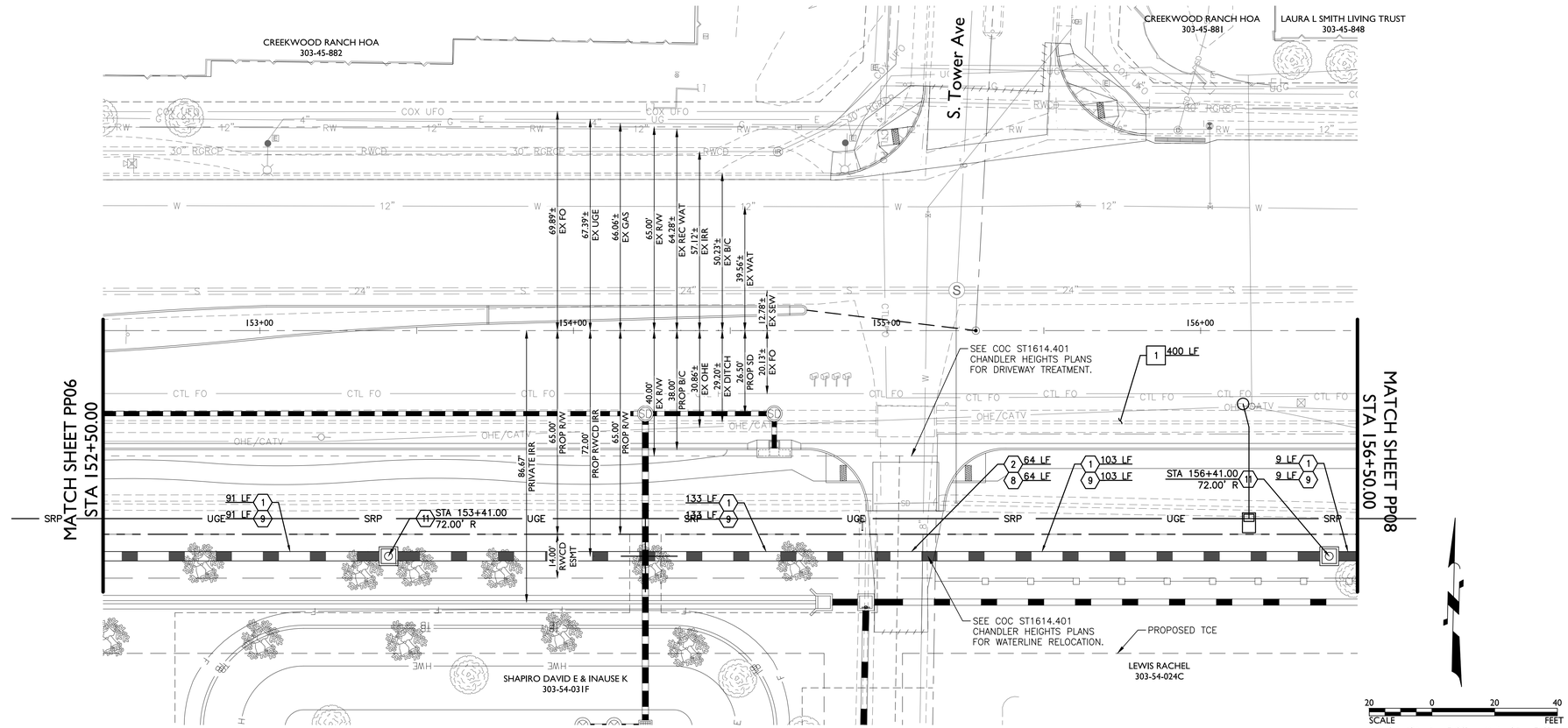
18-008.10 Lateral 17 - Chandler Heights Road Improvements

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	336 LF
2	36 INCH RGRCP CLASS V	64 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	64 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	336 LF
11	4 SIDED MANHOLE, DTL 4 SHEET DT01 (RWCD–19)	2 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T–99	400 LF



Chandler Heights Road

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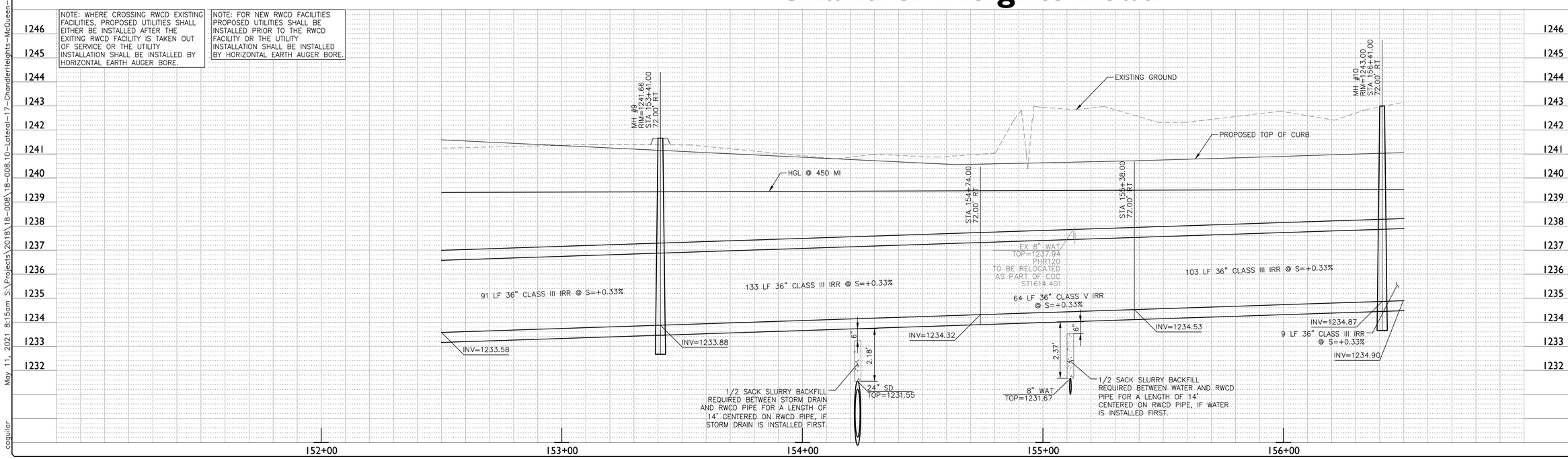

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18-008.10

PP07

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15
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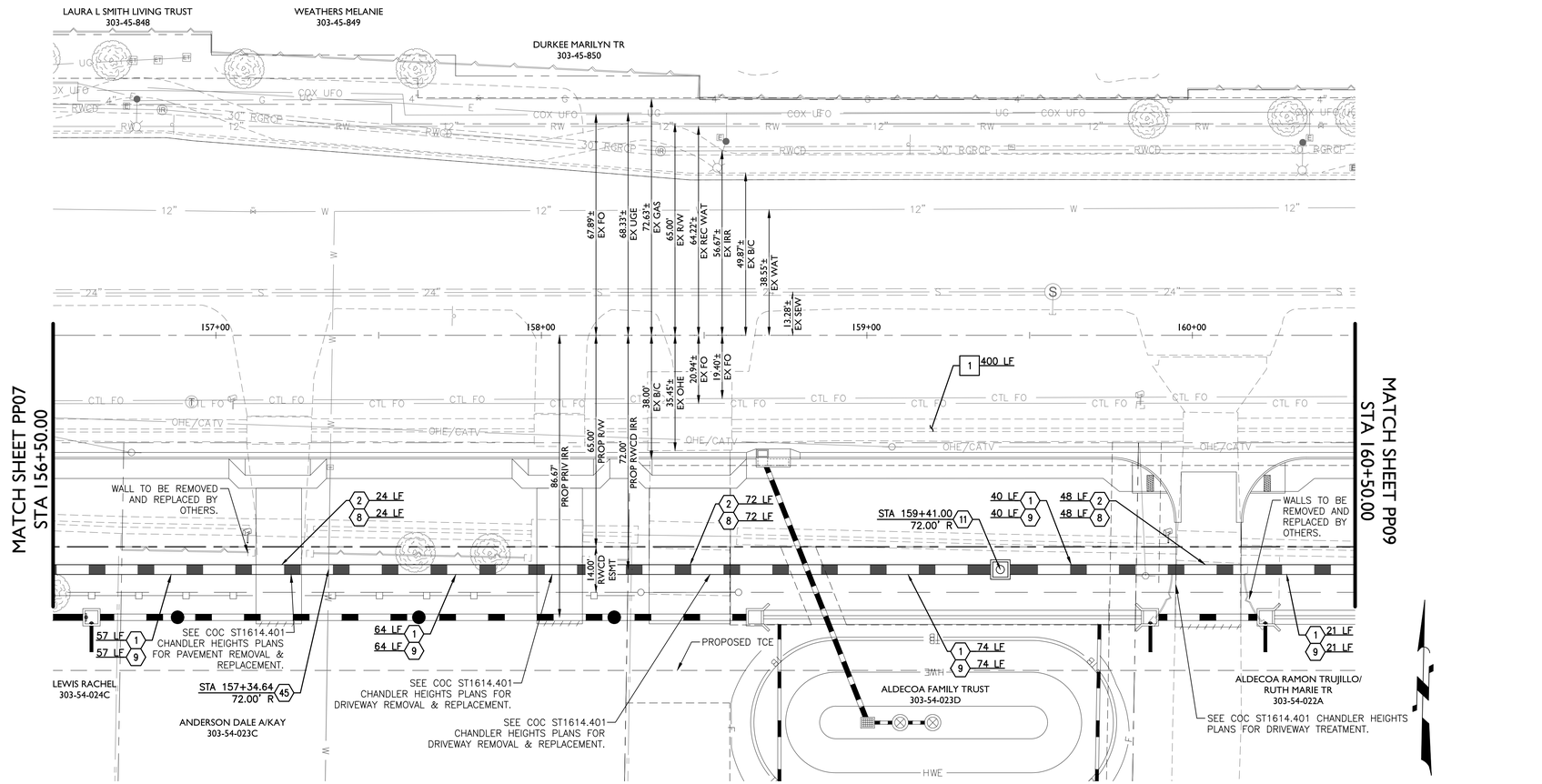
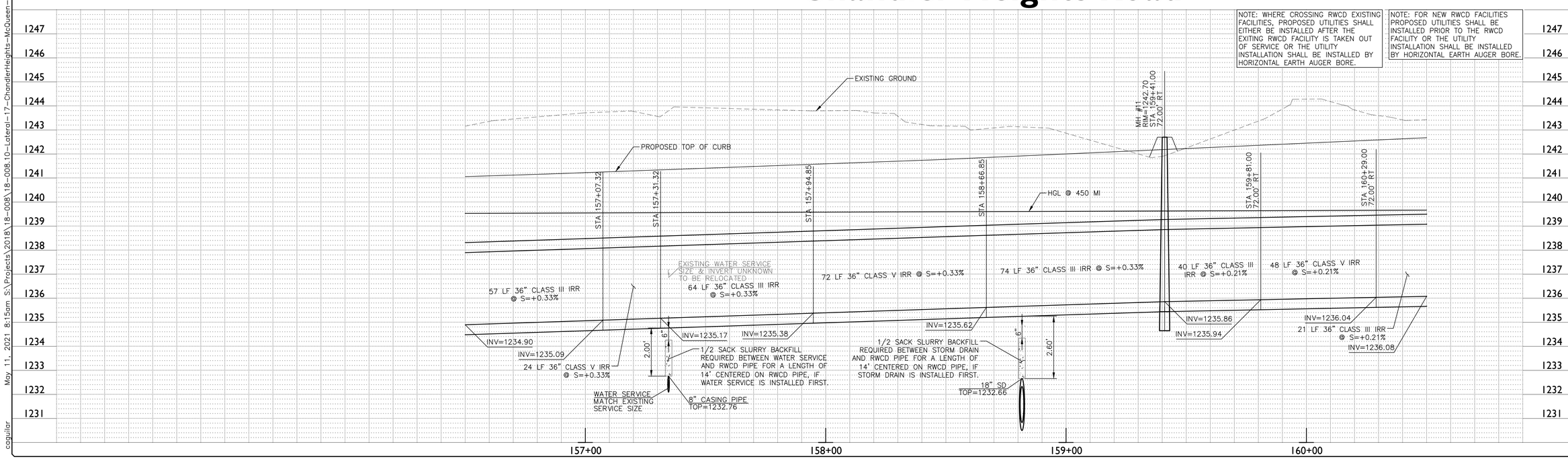
18-008.10 Lateral 17 - Chandler Heights Road Improvements

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	256 LF
2	36 INCH RGRCP CLASS V	144 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	144 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	256 LF
11	4 SIDED MANHOLE, DTL 4 SHEET DT01 (RWCD–19)	1 EA
45	DIP EXISTING WATER SERVICE PER DTL 16 ON SHEET DT05	1 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND	400 LF
	DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL.	
	COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T–99	



Chandler Heights Road



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Project:
RWCD Lateral 17
Chandler Heights Road Improvements
Chandler, Arizona

Irrigation Plan & Profile

Revisions:

Call at least two full working days before you begin excavation.
ARIZONA 811
Dial 8-1-1 or 1-800-STAKE-IT (782-5348) in Maricopa County: (602)263-1100

Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA, U.S.A.

Job No.
18-008.10

PP08

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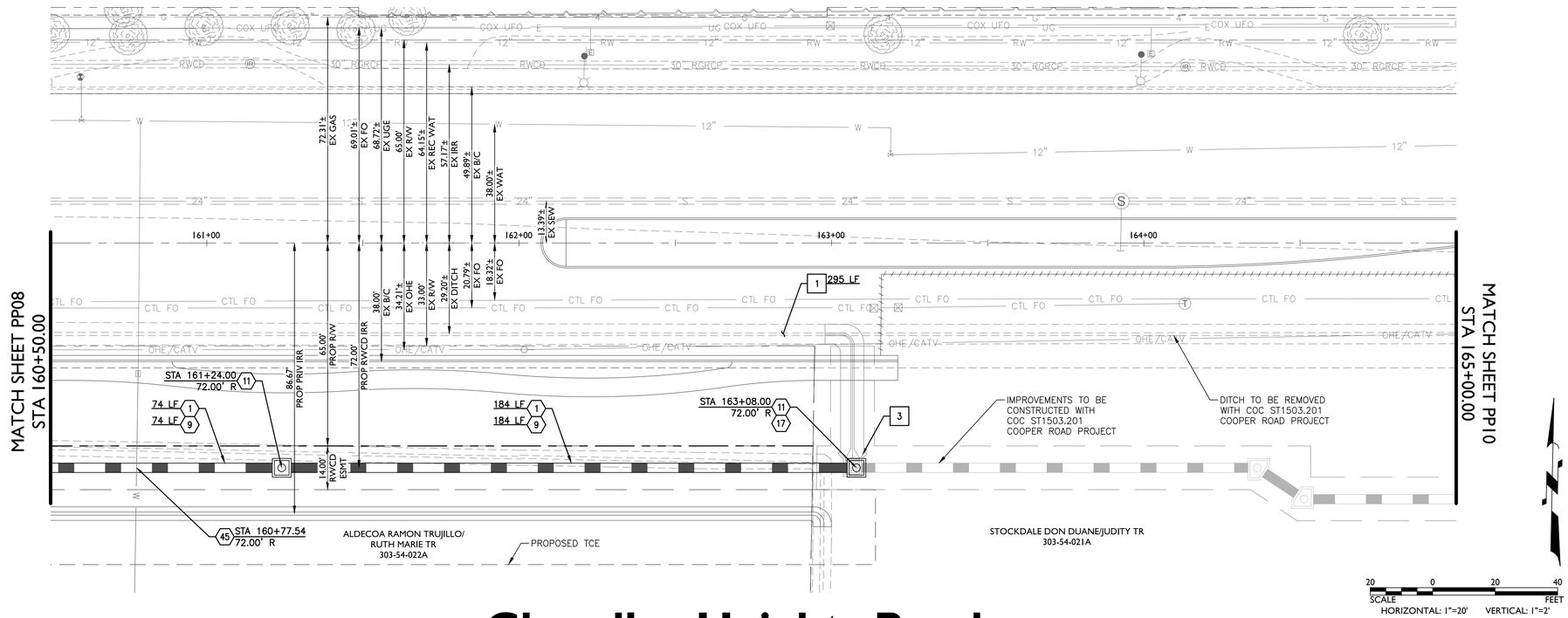
cagullar

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	258 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	258 LF
11	4 SIDED MANHOLE, DTL 4 SHEET DT01 (RWCD–19)	2 EA
17	SAWCUT EXISTING PIPE FLUSH WITH INSIDE WALL OF NEW STRUCTURE	NPI
45	DIP EXISTING WATER SERVICE PER DTL 16 ON SHEET DT05	1 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T–99	295 LF
3	REMOVE EXISTING IRRIGATION STRUCTURE, HEADWALL OR MANHOLE AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T–99. CONTRACTOR SHALL SALVAGE ALL METAL ITEMS INCLUDING GRATING, MANHOLE LIDS, GATES, ETC. AND DELIVER TO THE RWCD YARD AT 6937 E ELLIOT ROAD, MESA. CONTACT THE RWCD INSPECTOR @ 480–267–8999 TO COORDINATE DELIVERY	1 EA



Chandler Heights Road

NOTE: WHERE CROSSING RWCD EXISTING FACILITIES, PROPOSED UTILITIES SHALL EITHER BE INSTALLED AFTER THE EXITING RWCD FACILITY IS TAKEN OUT OF SERVICE OR THE UTILITY INSTALLATION SHALL BE INSTALLED BY HORIZONTAL EARTH AUGER BORE.

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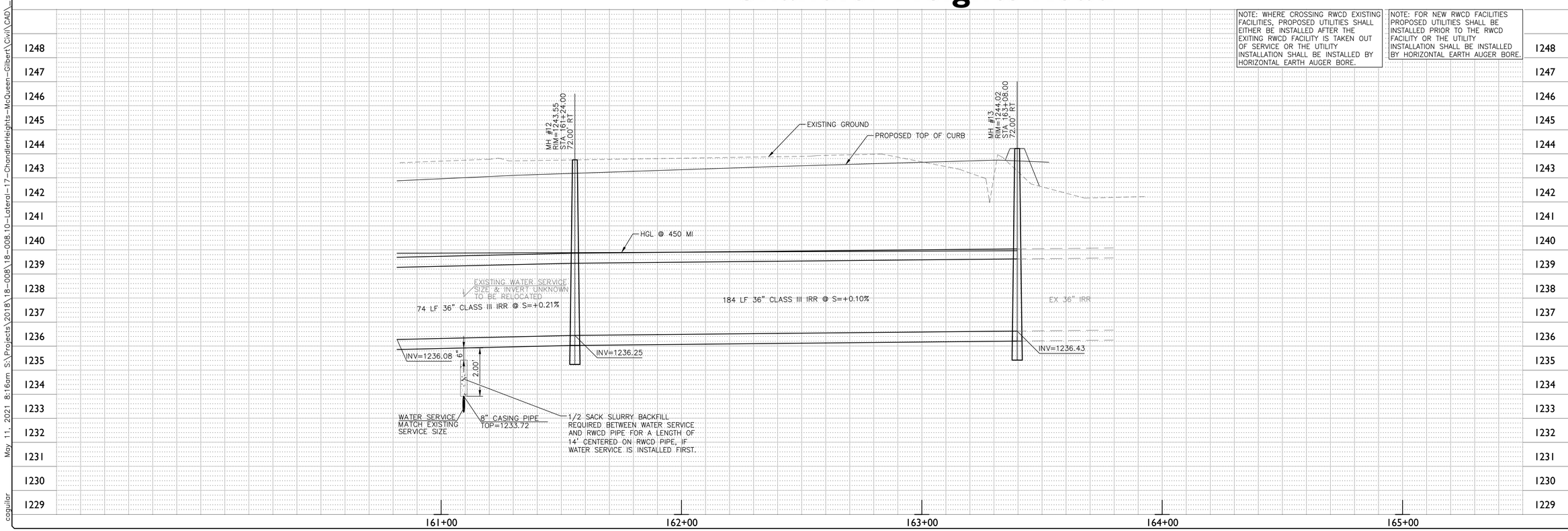

18-008.10 Lateral 17 - Chandler Heights Road Improvements

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EPS GROUP
1130 N. Alma School Rd
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Project:
RWCD Lateral 17
Chandler Heights Road Improvements
Chandler, Arizona

Irrigation Plan & Profile

Revisions:

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ARIZONA811
Arizona Blue Stake, Inc.
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In Maricopa County: (602)263-1100

Designer: FC
Drawn by: RW

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Job No.
18-008.10

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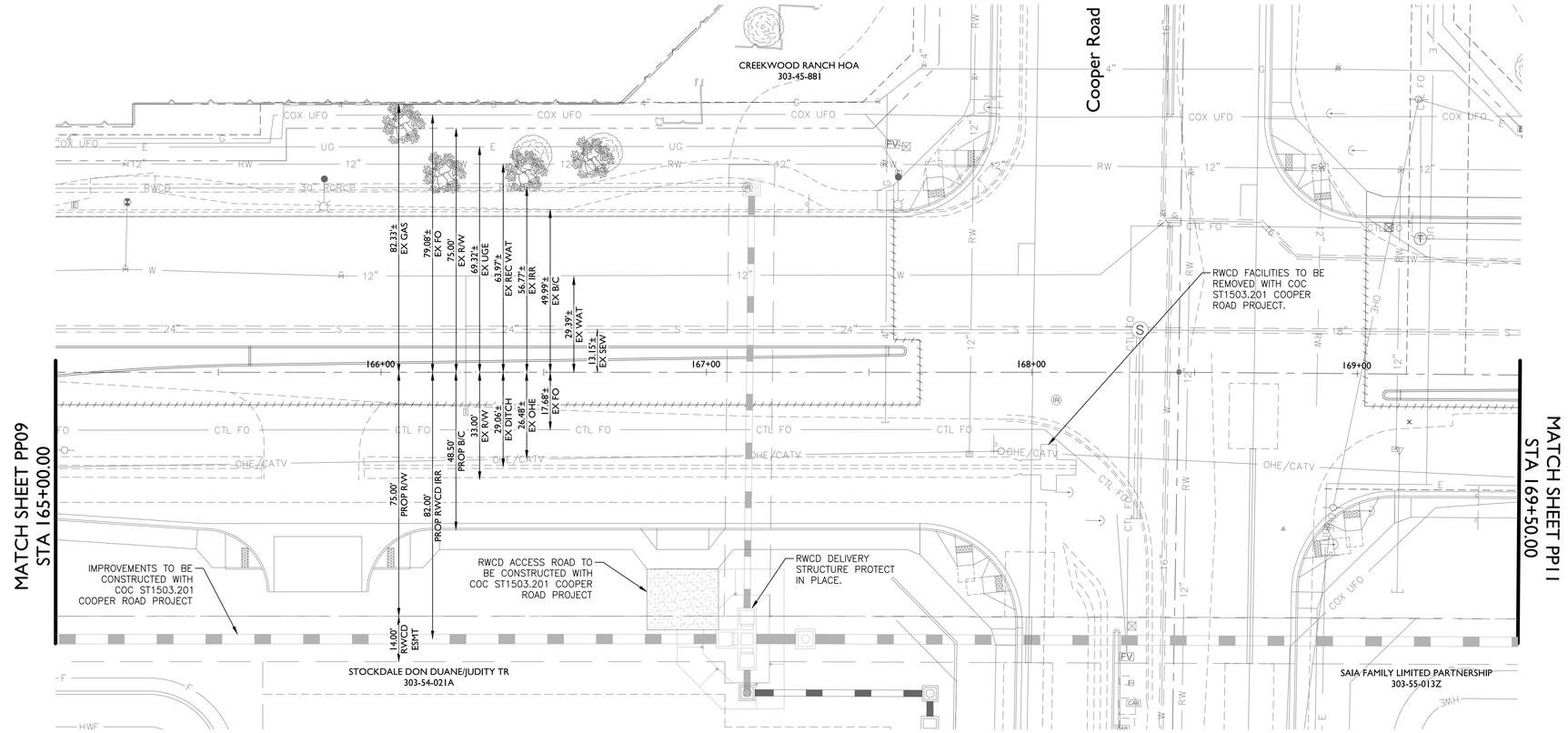

Chandler Heights Road

20 0 20 40
SCALE FEET
HORIZONTAL: 1"=20' VERTICAL: 1"=2'

1247 1246 1245 1244 1243 1242 1241 1240 1239 1238 1237 1236 1235 1234 1233 1232 1231

165+00 166+00 167+00 168+00 169+00

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Project:
RWCD Lateral I7
Chandler Heights Road Improvements
Chandler, Arizona

Irrigation Plan & Profile

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Job No.
18-008.10

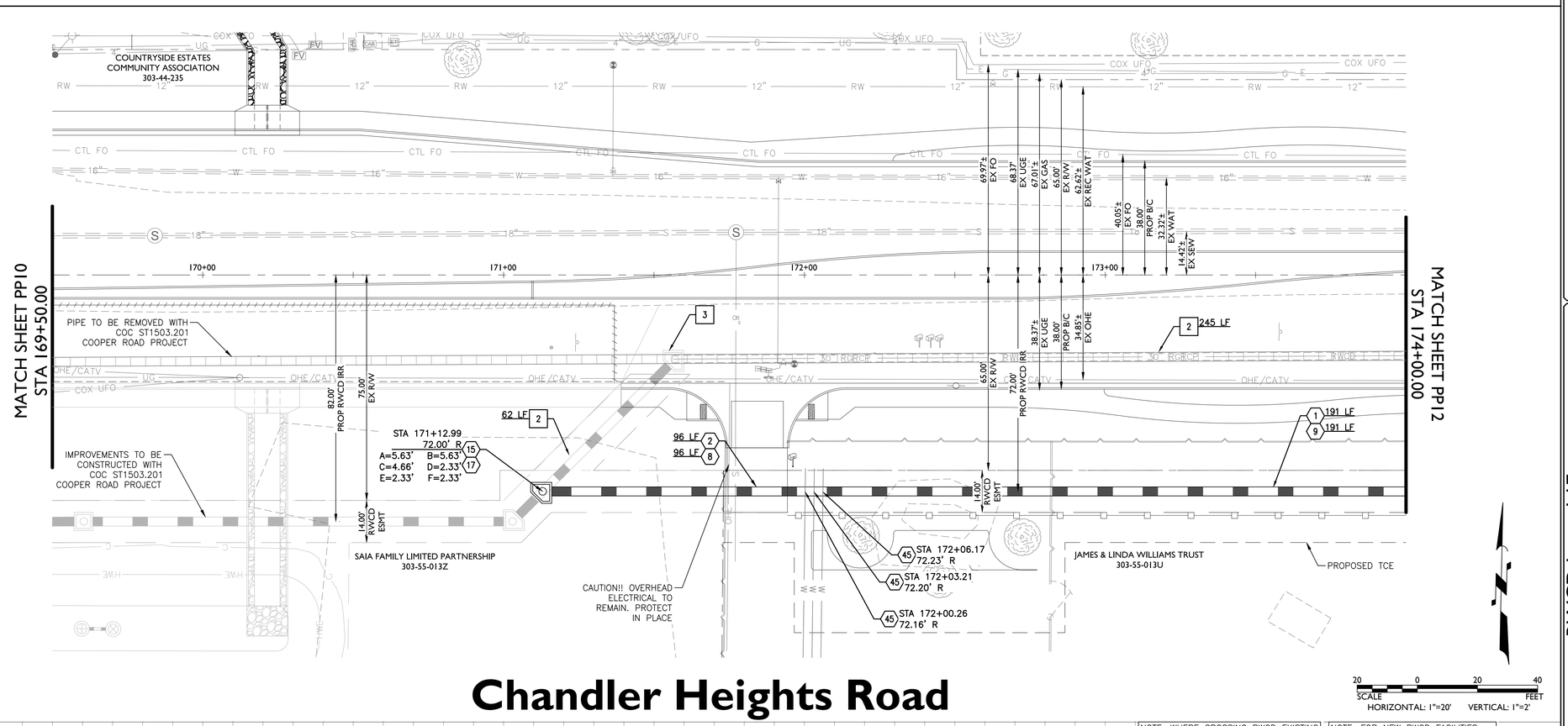
PP10

Sheet No.
18
of 28

18-008.10 Lateral 17 - Chandler Heights Road Improvements

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	191 LF
2	36 INCH RGRCP CLASS V	96 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	96 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	191 LF
15	5 SIDED PRESSURE MANHOLE, DTL 5 SHEET DT02 (RWCD–20)	1 EA
17	SAWCUT EXISTING PIPE FLUSH WITH INSIDE WALL OF NEW STRUCTURE	NPI
45	DIP EXISTING WATER SERVICE PER DTL 16 ON SHEET DT05	3 EA
	REMOVAL NOTES	
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T–99	307 LF
3	REMOVE EXISTING IRRIGATION STRUCTURE, HEADWALL OR MANHOLE AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T–99. CONTRACTOR SHALL SALVAGE ALL METAL ITEMS INCLUDING GRATING, MANHOLE LIDS, GATES, ETC. AND DELIVER TO THE RWCD YARD AT 6937 E ELLIOT ROAD, MESA. CONTACT THE RWCD INSPECTOR @ 480–267–8999 TO COORDINATE DELIVERY	1 EA



Chandler Heights Road

SCALE HORIZONTAL: 1"=20' VERTICAL: 1"=2'

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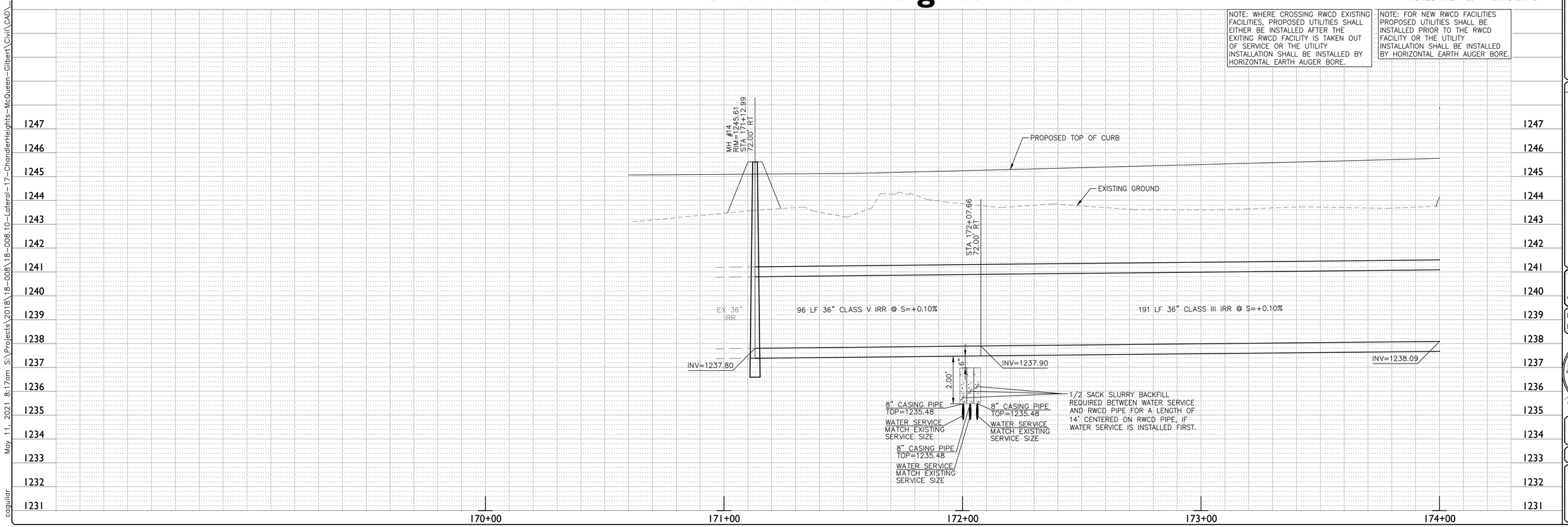

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Project:
RWCD Lateral 17
Chandler Heights Road Improvements
Chandler, Arizona

Irrigation Plan & Profile

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Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil) CERTIFICATE NO. 40486 BRUCE J. HALLSTED Date Signed 5-11-21 ARIZONA, U.S.A.

Job No. 18-008.10

PP11

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18-008.10 Lateral 17 - Chandler Heights Road Improvements

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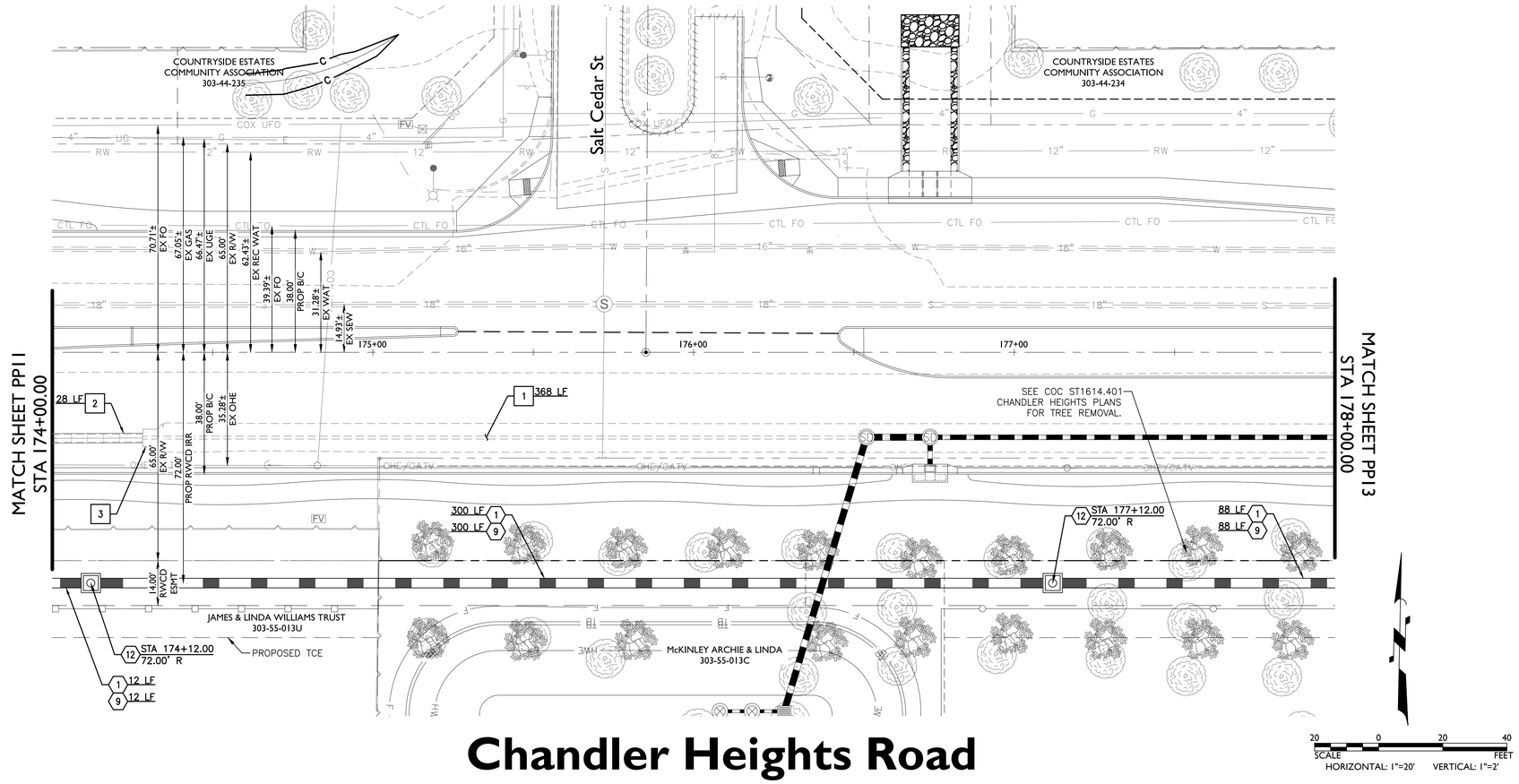
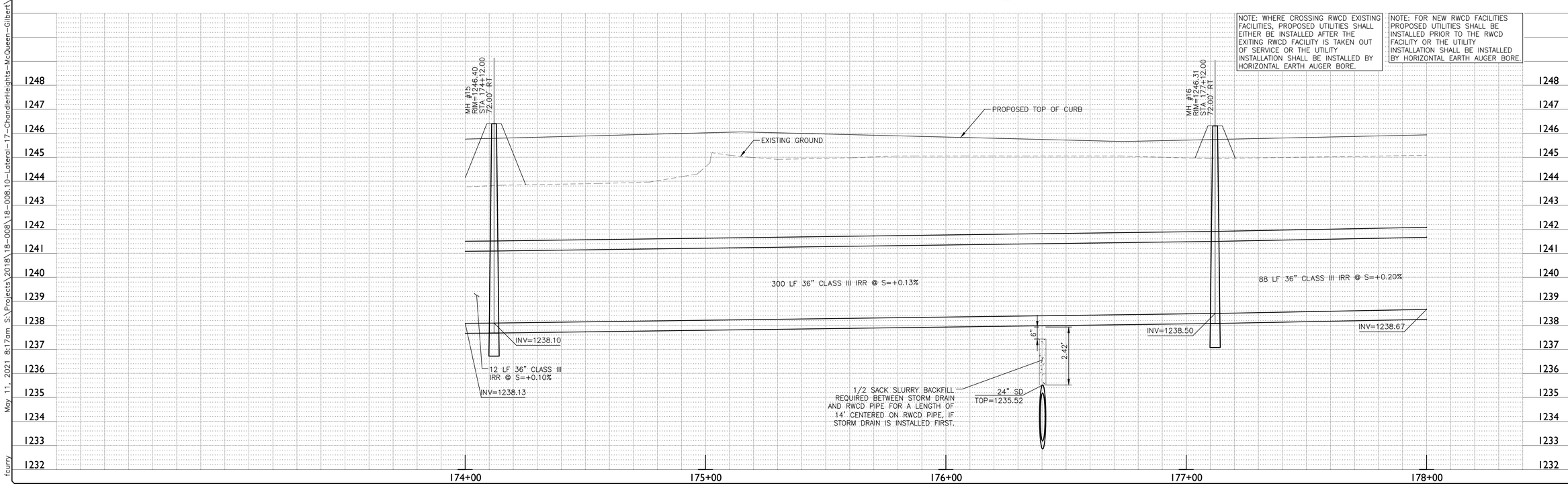
Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	400 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	400 LF
12	4 SIDED PRESSURE MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	2 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	368 LF
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	28 LF
3	REMOVE EXISTING IRRIGATION STRUCTURE, HEADWALL OR MANHOLE AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99. CONTRACTOR SHALL SALVAGE ALL METAL ITEMS INCLUDING GRATING, MANHOLE LIDS, GATES, ETC. AND DELIVER TO THE RWCD YARD AT 6937 E ELLIOT ROAD, MESA. CONTACT THE RWCD INSPECTOR @ 480-267-8999 TO COORDINATE DELIVERY	1 EA



Chandler Heights Road



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Chandler Heights Road Improvements
Chandler, Arizona

Irrigation Plan & Profile

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ARIZONA 811
Blue Stake, Inc.
Dial 8-1-1 or 1-800-STAKE IT (782-5348)
In Maricopa County: (602)263-1100

Designer: FC
Drawn by: RVV

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA U.S.A.

Job No.
18-008.10

PP12

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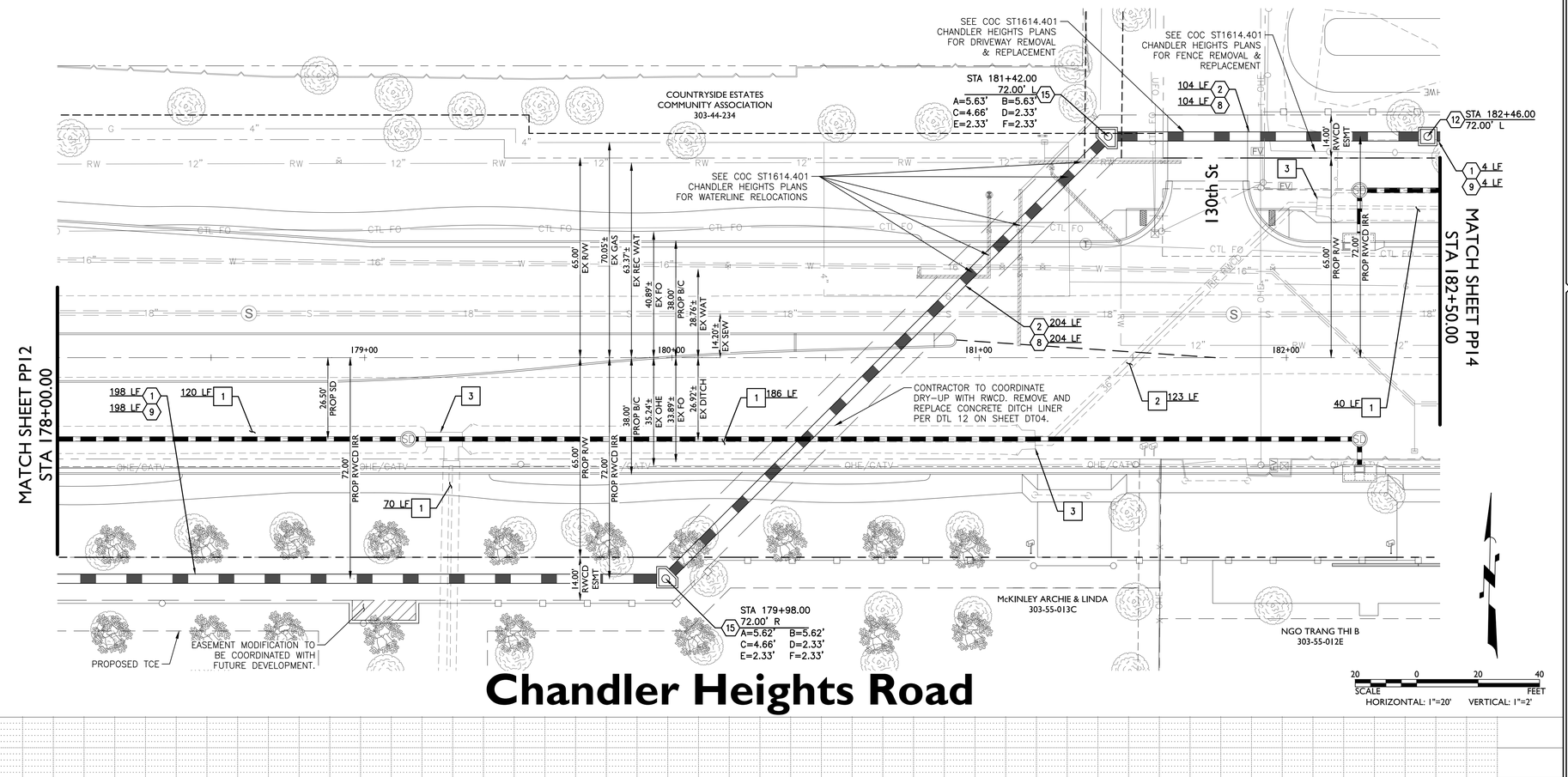
of 28

18-008.10 Lateral 17 - Chandler Heights Road Improvements

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	202 LF
2	36 INCH RGRCP CLASS V	308 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	308 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	202 LF
12	4 SIDED PRESSURE MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	1 EA
15	5 SIDED PRESSURE MANHOLE, DTL 5 SHEET DT02 (RWCD-20)	2 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	416 LF
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	123 LF
3	REMOVE EXISTING IRRIGATION STRUCTURE, HEADWALL OR MANHOLE AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99. CONTRACTOR SHALL SALVAGE ALL METAL ITEMS INCLUDING GRATING, MANHOLE LIDS, GATES, ETC. AND DELIVER TO THE RWCD YARD AT 6937 E ELLIOT ROAD, MESA. CONTACT THE RWCD INSPECTOR @ 480-267-8999 TO COORDINATE DELIVERY	3 EA



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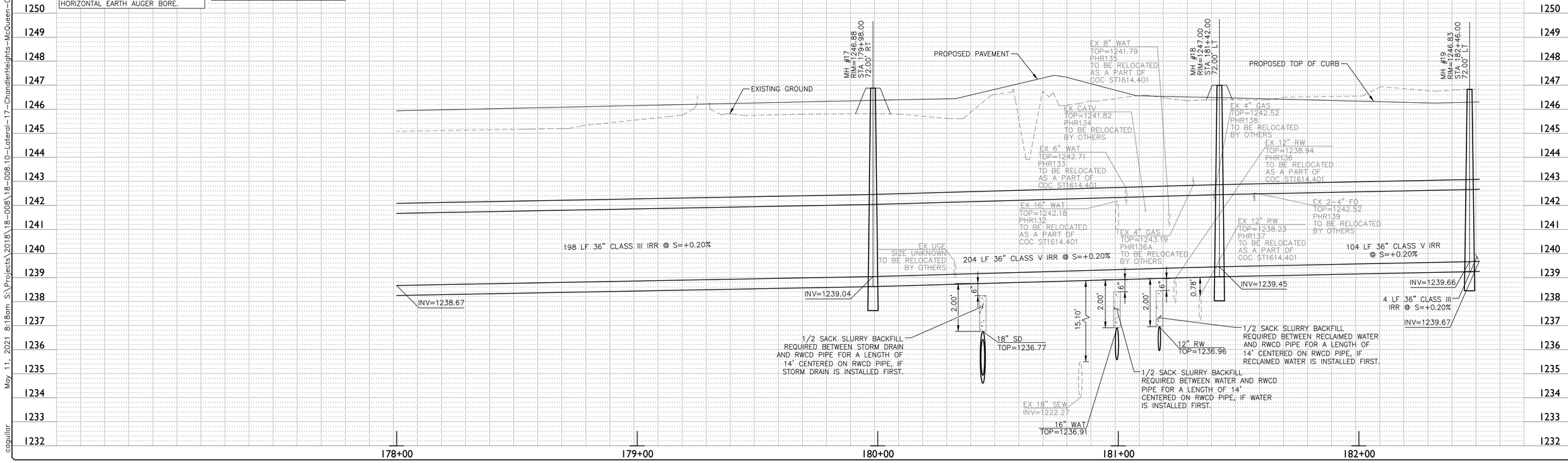

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Chandler Heights Road Improvements
Chandler, Arizona

Irrigation Plan & Profile

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CERTIFICATE NO. 40486
BRUCE J. HALLSTED
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ARIZONA, U.S.A.

Job No.
18-008.10

PP13

Sheet No.
21
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18-008.10 Lateral 17 - Chandler Heights Road Improvements

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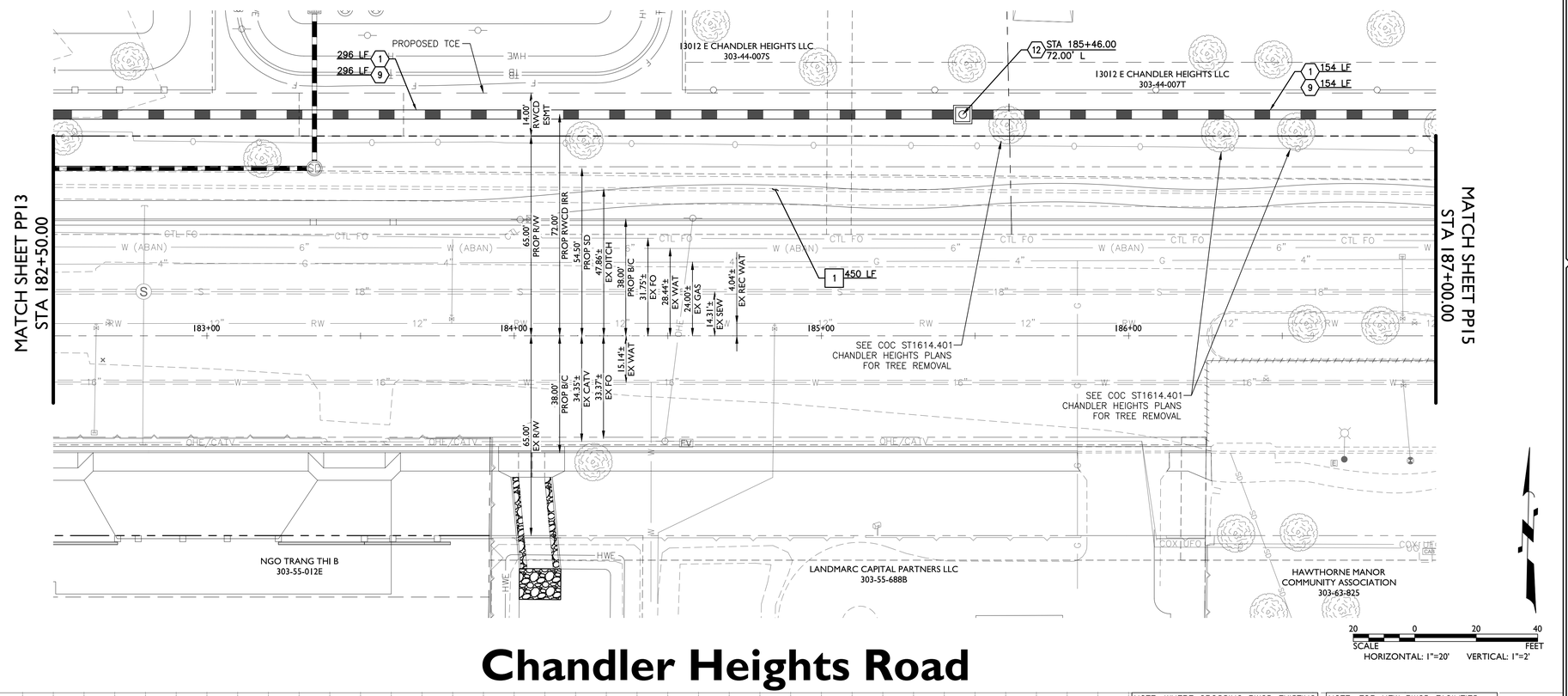
Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	450 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	450 LF
12	4 SIDED PRESSURE MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	1 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND	450 LF
	DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL.	
	COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	



Chandler Heights Road

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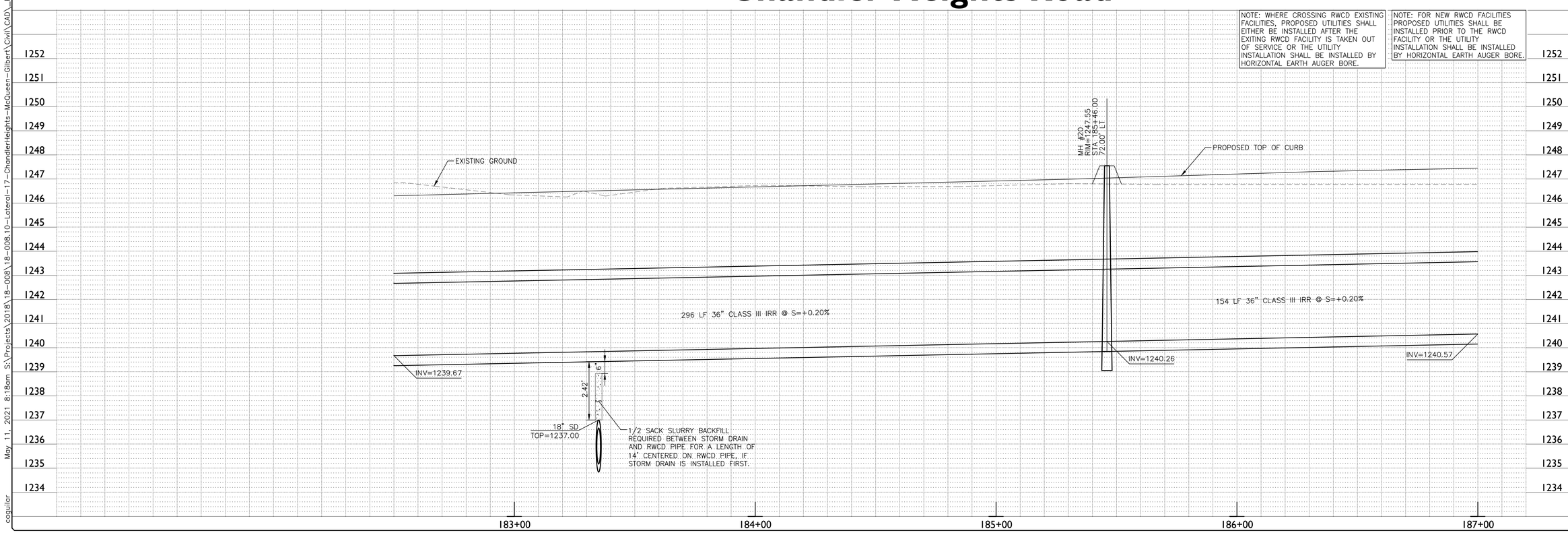

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Irrigation Plan & Profile

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ARIZONA, U.S.A.

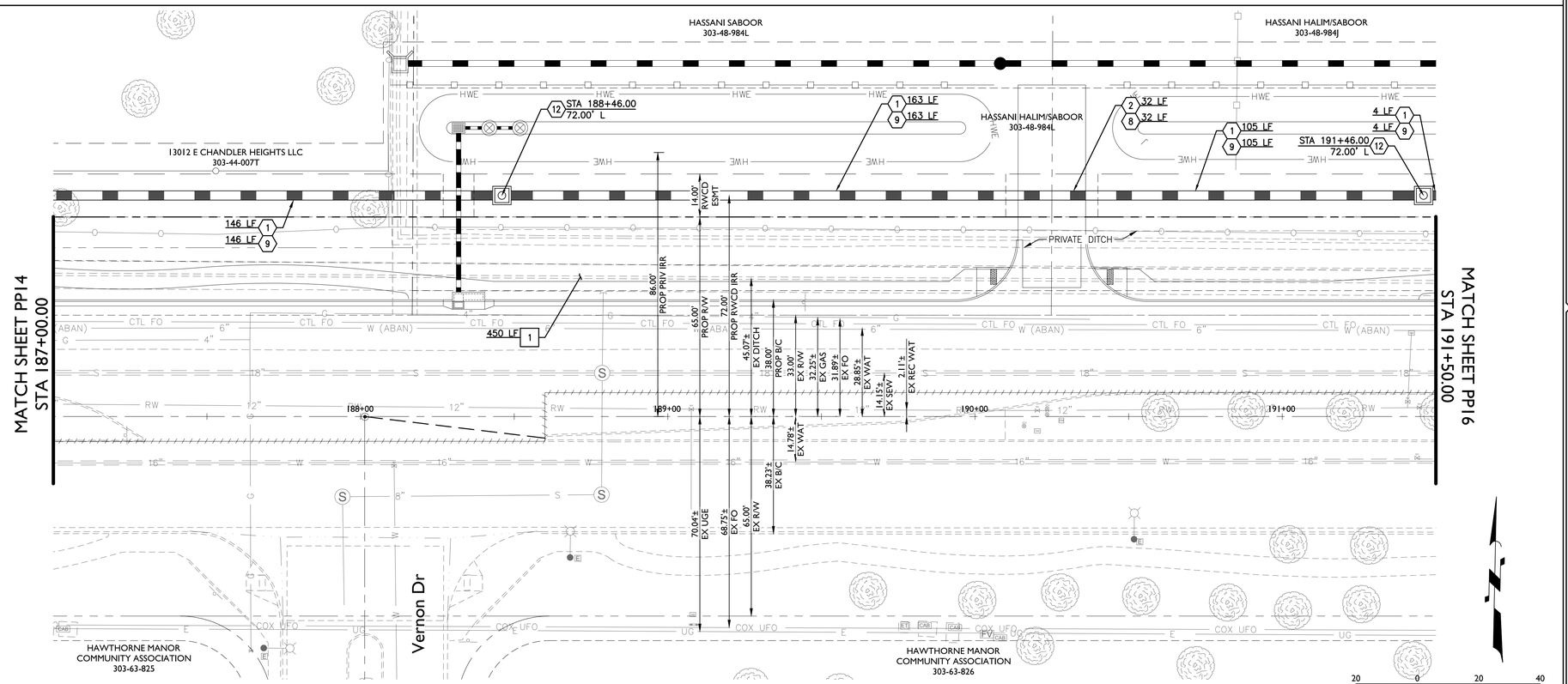
Job No.
18-008.10

PP14

Sheet No.
22
of 28

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	418 LF
2	36 INCH RGRCP CLASS V	32 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	32 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	418 LF
12	4 SIDED PRESSURE MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	2 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	450 LF



Chandler Heights Road

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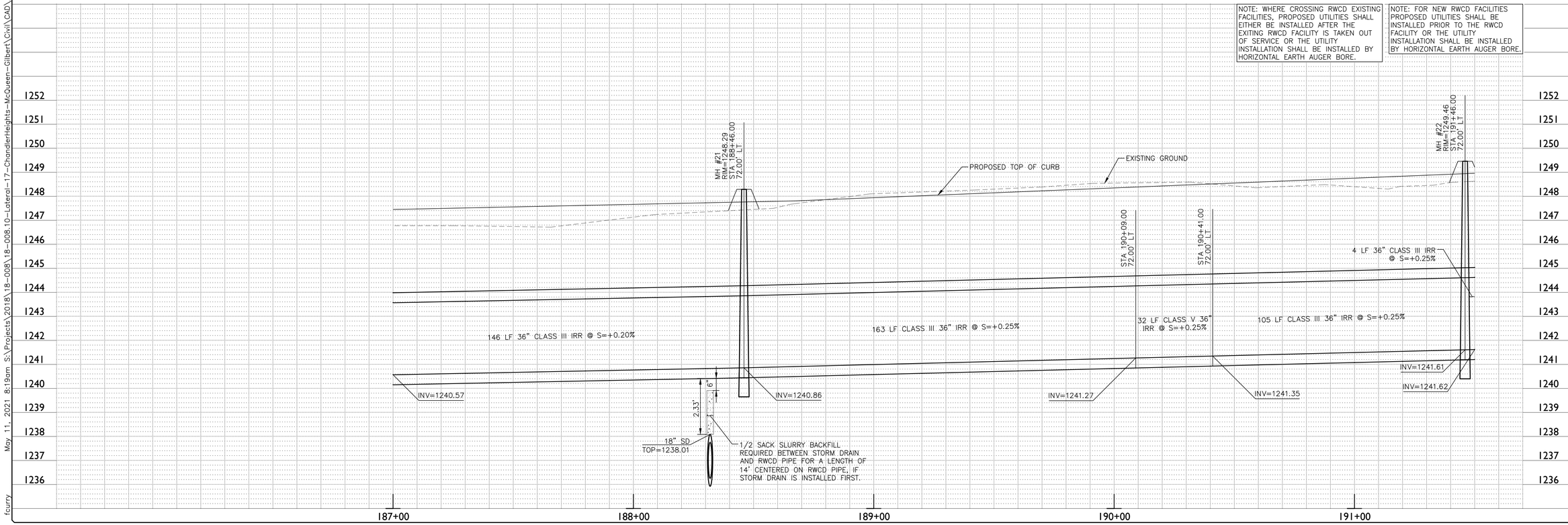

18-008.10 Lateral 17 - Chandler Heights Road Improvements

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ARIZONA, U.S.A.

Job No.
18-008.10

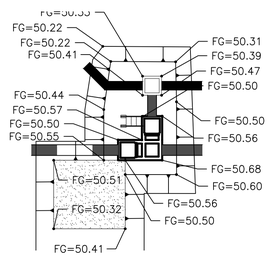
PP15

Sheet No.
23
of 28

18-008.10 Lateral 17 - Chandler Heights Road Improvements

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	366 LF
2	36 INCH RGRCP CLASS V	72 LF
7	RWCD ACCESS ROAD, DTL 11 SHEET DT04	383 SF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	72 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	366 LF
19	TURNOUT STRUCTURE AND GRATES PER DTLS 6 AND 9 ON SHEETS DT02 AND DT04	1 EA
26	24" CONTROL GATE: WATERMAN C-10	1 EA
31	TURNOUT STRUCTURE STAIRS, DTL 14 SHEET DT05 (RWCD-29)	1 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	386 LF
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	55 LF
3	REMOVE EXISTING IRRIGATION STRUCTURE, HEADWALL OR MANHOLE AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99. CONTRACTOR SHALL SALVAGE ALL METAL ITEMS INCLUDING GRATING, MANHOLE LIDS, GATES, ETC. AND DELIVER TO THE RWCD YARD AT 6937 E ELLIOT ROAD, MESA. CONTACT THE RWCD INSPECTOR @ 480-267-8999 TO COORDINATE DELIVERY	3 EA



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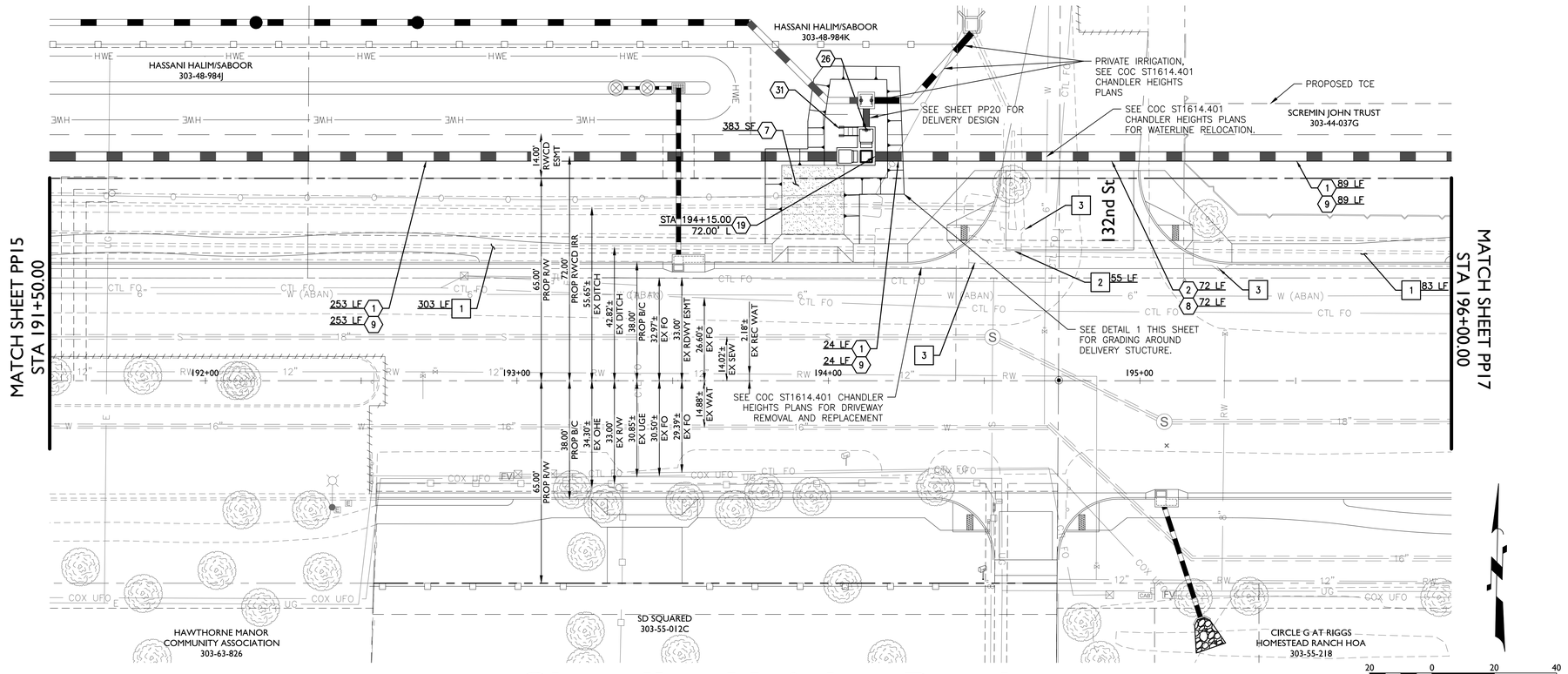

Chandler Heights Road

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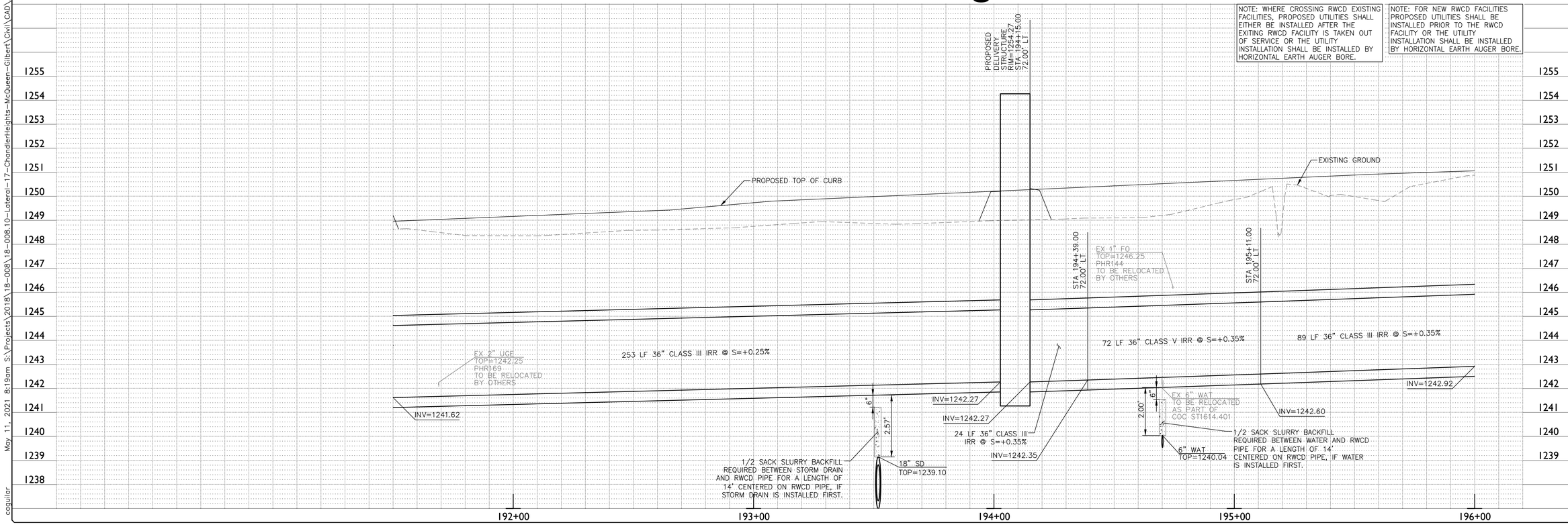

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Chandler, Arizona

Irrigation Plan & Profile

Project:

Revisions:

Call at least two full working days before you begin excavation. ARIZONA811 Arizona Blue Stake, Inc. Dial 8-1-1 or 1-800-STAKE-IT (782-5348) In Maricopa County: (602)263-1159

Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil) CERTIFICATE NO. 40486 BRUCE J. HALLSTED Date Signed 5-11-21 ARIZONA U.S.A.

Job No. 18-008.10

PP16

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18-008.10 Lateral 17 - Chandler Heights Road Improvements

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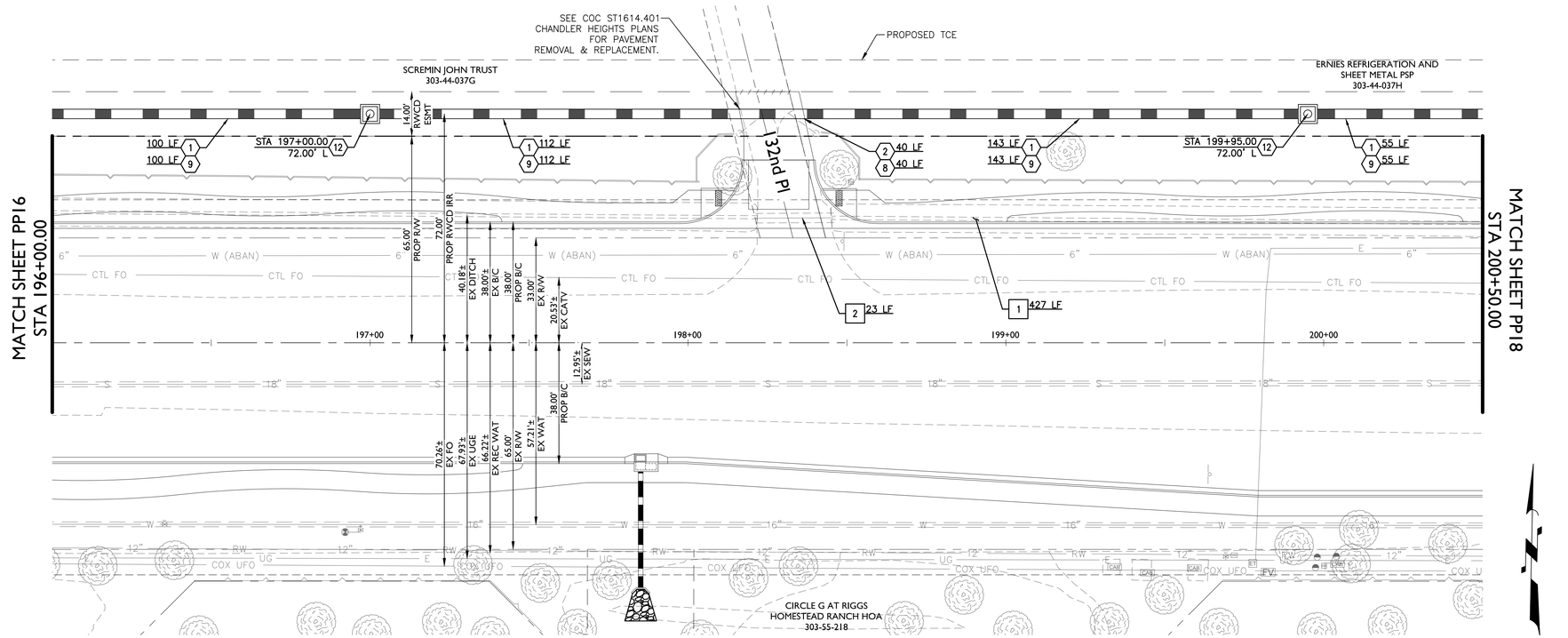
cagulor

Construction Notes

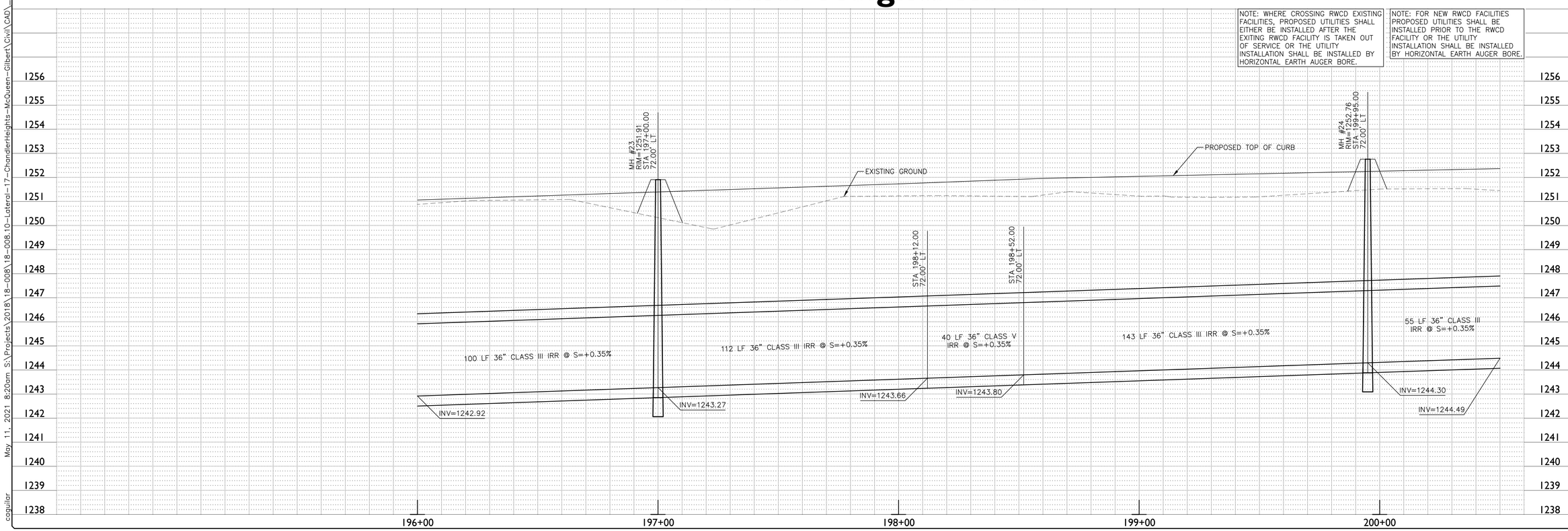
	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	410 LF
2	36 INCH RGRCP CLASS V	40 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	40 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	410 LF
12	4 SIDED PRESSURE MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	2 EA
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	427 LF
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	23 LF



Chandler Heights Road

NOTE: WHERE CROSSING RWCD EXISTING FACILITIES, PROPOSED UTILITIES SHALL EITHER BE INSTALLED AFTER THE EXITING RWCD FACILITY IS TAKEN OUT OF SERVICE OR THE UTILITY INSTALLATION SHALL BE INSTALLED BY HORIZONTAL EARTH AUGER BORE.

NOTE: FOR NEW RWCD FACILITIES PROPOSED UTILITIES SHALL BE INSTALLED PRIOR TO THE RWCD FACILITY OR THE UTILITY INSTALLATION SHALL BE INSTALLED BY HORIZONTAL EARTH AUGER BORE.



EPS GROUP
1130 N. Alma School Rd
Suite 120
Mesa, AZ 85201
T:480.503.2250 | F:480.503.2258
www.epsgroupinc.com

Project:

RWCD Lateral 17
Chandler Heights Road Improvements
Chandler, Arizona

Irrigation Plan & Profile

Revisions:

Call at least two full working days before you begin excavation.
ARIZONA 811
Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602)263-1100

Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA, U.S.A.

Job No.
18-008.10

PP17

Sheet No.
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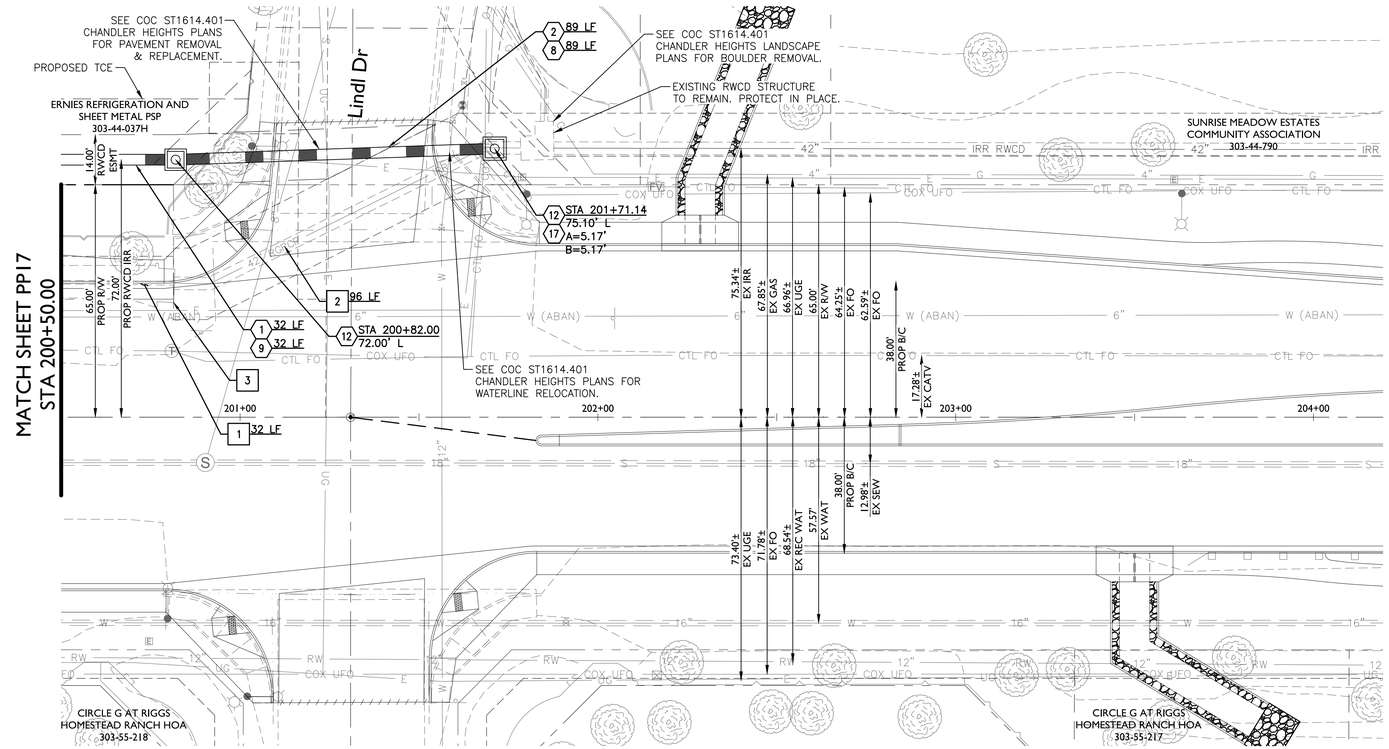
of 28

18-008.10 Lateral 17 - Chandler Heights Road Improvements

Construction Notes

	IRRIGATION NOTES	
1	36 INCH RGRCP CLASS III	32 LF
2	36 INCH RGRCP CLASS V	89 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	89 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	32 LF
12	4 SIDED PRESSURE MANHOLE, DTL 4 SHEET DT01 (RWCD-19)	2 EA
17	SAWCUT EXISTING PIPE FLUSH WITH INSIDE WALL OF NEW STRUCTURE	NPI
	REMOVAL NOTES	
1	REMOVE EXISTING CONCRETE IRRIGATION DITCH, HAULOFF AND	32 LF
	DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL.	
	COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF	96 LF
	PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO	
	95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	
3	REMOVE EXISTING IRRIGATION STRUCTURE, HEADWALL OR MANHOLE	1 EA
	AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE	
	MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO	
	T-99. CONTRACTOR SHALL SALVAGE ALL METAL ITEMS INCLUDING	
	GRATING, MANHOLE LIDS, GATES, ETC. AND DELIVER TO THE RWCD	
	YARD AT 6937 E ELLIOT ROAD, MESA. CONTACT THE RWCD INSPECTOR	
	@ 480-267-8999 TO COORDINATE DELIVERY	

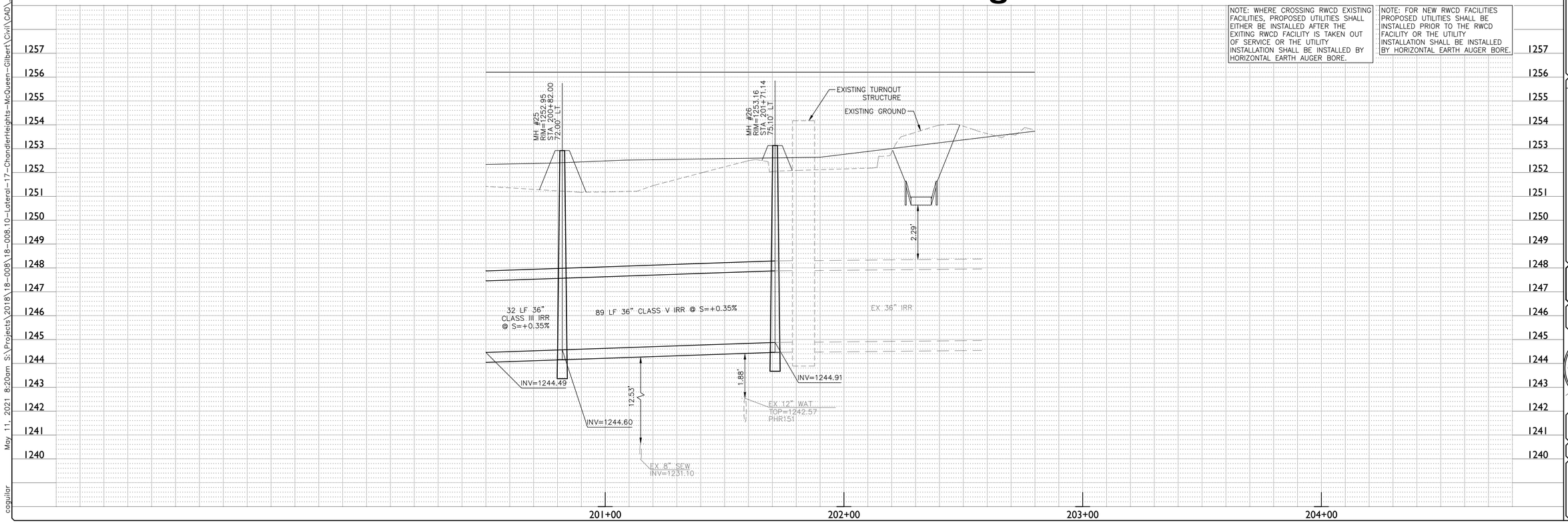


20 0 20 40
SCALE FEET
HORIZONTAL: 1"=20' VERTICAL: 1"=2'

Chandler Heights Road

NOTE: WHERE CROSSING RWCD EXISTING FACILITIES, PROPOSED UTILITIES SHALL EITHER BE INSTALLED AFTER THE EXITING RWCD FACILITY IS TAKEN OUT OF SERVICE OR THE UTILITY INSTALLATION SHALL BE INSTALLED BY HORIZONTAL EARTH AUGER BORE.

NOTE: FOR NEW RWCD FACILITIES PROPOSED UTILITIES SHALL BE INSTALLED PRIOR TO THE RWCD FACILITY OR THE UTILITY INSTALLATION SHALL BE INSTALLED BY HORIZONTAL EARTH AUGER BORE.



EPS GROUP
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Project:
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BRUCE J. HALLSTED
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ARIZONA U.S.A.

Job No.
18-008.10

PP18

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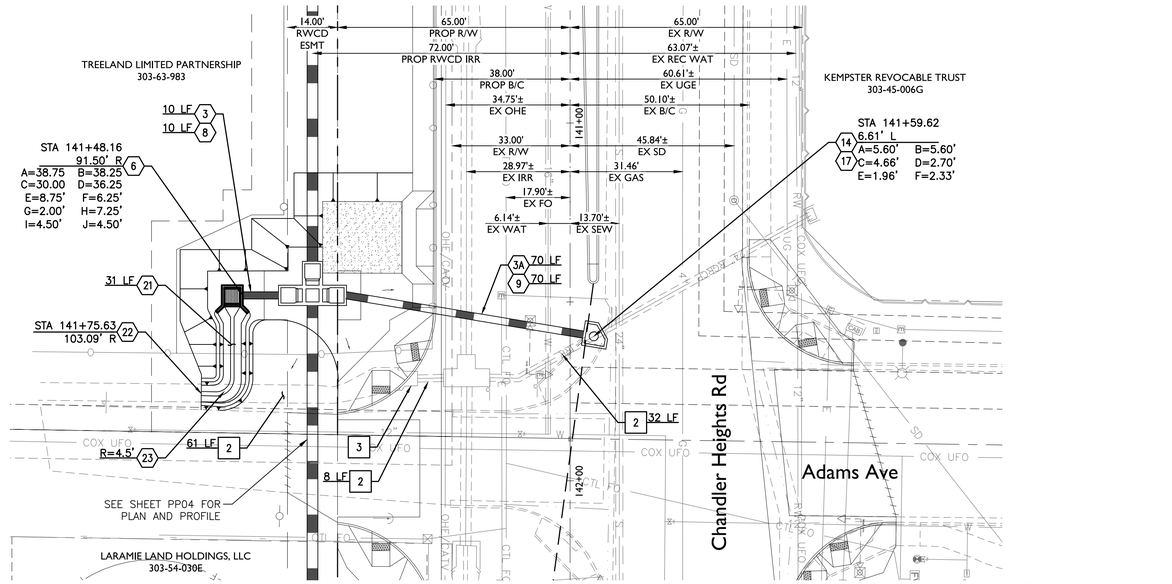
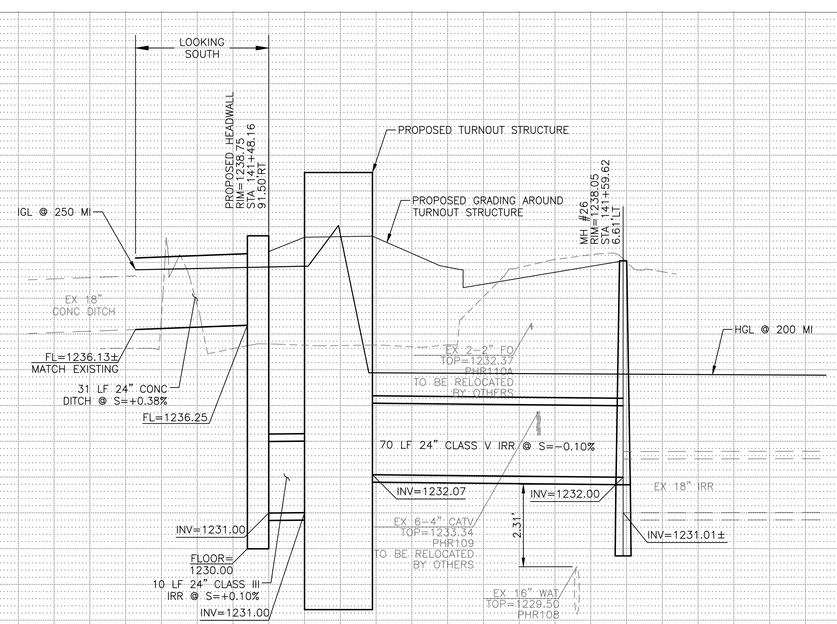
18-008.10 Lateral 17 - Chandler Heights Road Improvements

Construction Notes

	IRRIGATION NOTES	
3	24 INCH RGRCP CLASS III	10 LF
3A	24 INCH RGRCP CLASS V	70 LF
6	HEADWALL PER MAG STD DTL 502-1 WITH GRATE PER DTL 16 ON SHEET DT05 (RWCD-35)	1 EA
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	10 LF
9	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE B	70 LF
14	5 SIDED MANHOLE, DTL 5 SHEET DT02 (RWCD-20)	1 EA
17	SAWCUT EXISTING PIPE FLUSH WITH INSIDE WALL OF NEW STRUCTURE	NPI
21	24 INCH DEEP CONCRETE DITCH PER DTL 12 SHEET DT04 (RWCD-31)	31 LF
22	SAWCUT DITCH AT TIE-IN. CONTRACTOR TO TOE-IN UNDER EXISTING DITCH PER CONCRETE DITCH DTL 12 SHEET DT04 (RWCD-31)	1 EA
23	CONCRETE DITCH RADIUS, RADIUS PER PLAN	1 EA
	REMOVAL NOTES	
2	REMOVE EXISTING IRRIGATION PIPE, HAULOFF AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99	101 LF
3	REMOVE EXISTING IRRIGATION STRUCTURE, HEADWALL OR MANHOLE AND DISPOSE OF PROPERLY. BACKFILL WITH CLEAN NATIVE MATERIAL. COMPACT TO 95% (MIN) OF MAXIMUM DENSITY PER AASHTO T-99. CONTRACTOR SHALL SALVAGE ALL METAL ITEMS INCLUDING GRATING, MANHOLE LIDS, GATES, ETC. AND DELIVER TO THE RWCD YARD AT 6937 E ELLIOT ROAD, MESA. CONTACT THE RWCD INSPECTOR @ 480-267-8999 TO COORDINATE DELIVERY	1 EA





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Project:
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Chandler Heights Road Improvements
Chandler, Arizona

Irrigation Plan & Profile

Revisions:

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of 28

18-008.10 Lateral 17 - Chandler Heights Road Improvements

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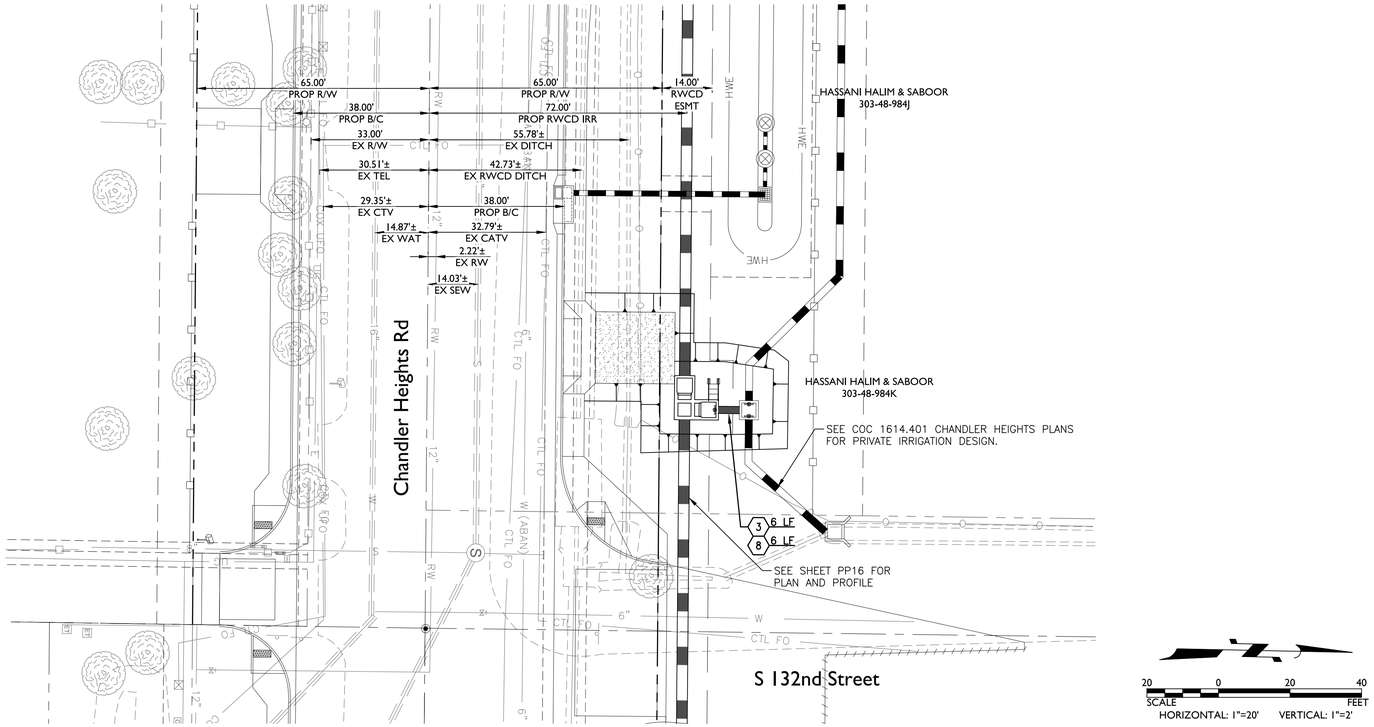
Construction Notes

IRRIGATION NOTES		
3	24 INCH RGRCP CLASS III	6 LF
8	TRENCH BACKFILL, DTL 3 SHEET DT01, TYPE A	6 LF



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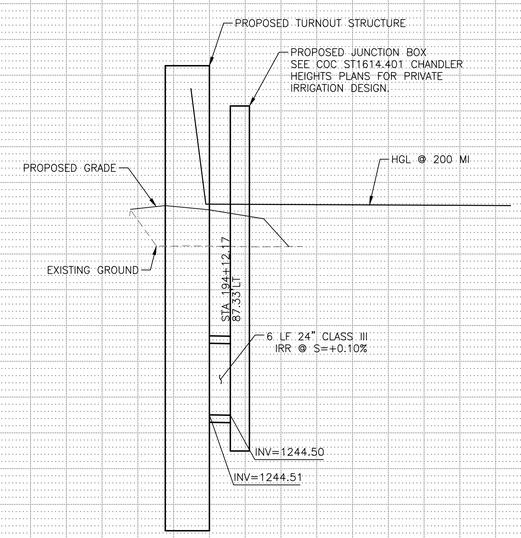

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Project:

RWCD Lateral I7
Chandler Heights Road Improvements
Chandler, Arizona

Irrigation Plan & Profile

Revisions:

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Dial 8-1-1 or 1-800-STAKE-IT (782-5348)
In Maricopa County: (602)263-1100

Designer: FC
Drawn by: RW

Registered Professional Engineer (Civil)
CERTIFICATE NO. 40486
BRUCE J. HALLSTED
Date Signed 5-11-21
ARIZONA U.S.A.

Job No.
18-008.10

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Sheet No.
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of 28

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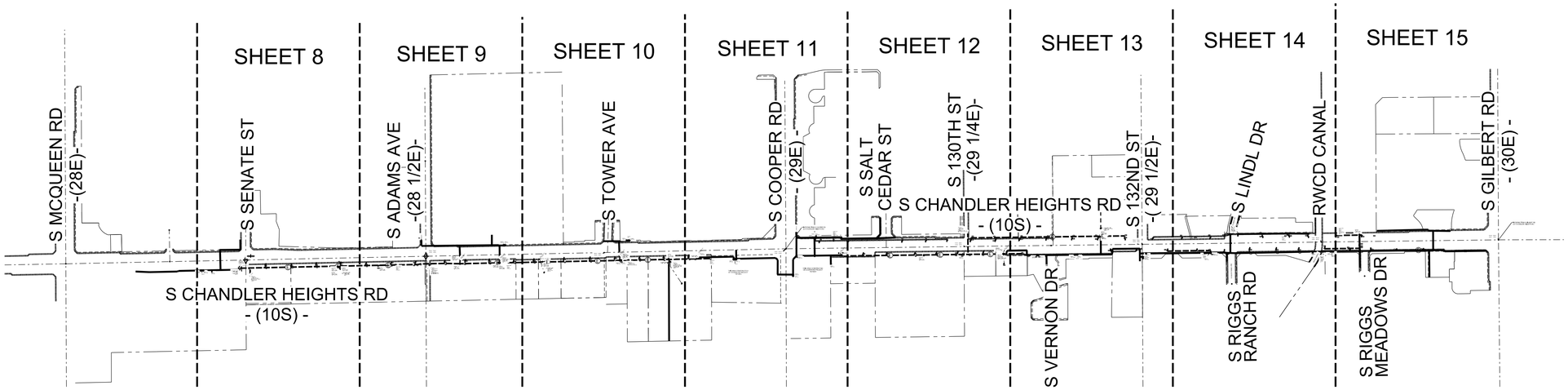
- SHEET 1 - COVER SHEET
- SHEETS 2 & 3 - SCHEMATIC
- SHEETS 4 TO 7 - CONDUIT ONE-LINE
- SHEETS 8 TO 15 - MAINLINE
- SHEET 16 - DETAILS, RWCD NOTES
- SHEET 17 - PROFILES

CUS UE BA CHANDLER HEIGHTS RD IMPROV CONVERSION
MCQUEEN RD TO GILBERT RD
CITY PROJECT NO. ST1614.401
SRP JOB# T3041444

N
NTS



THIS PROJECT REQUIRES BUY AMERICA COMPLIANCE

CONTRACT CIVIL/CONDUIT CREW:

OBTAIN THESE SRP STANDARD DETAILS NEEDED TO CORRECTLY CONSTRUCT THIS JOB. THEY CAN BE FOUND UNDER "UNDERGROUND DISTRIBUTION CONTRUCTION STANDARDS" AT:

https://srpnet.com/menu/electricbiz/specs.aspx

- 8513E112.DGN - GROUND ROD ASSEMBLY
- 8513E135.DGN - TRENCHING
- 8513E123.DGN - 9' x 9' MANHOLE, CABLE RACKING
- 8513E356.DGN - 2/0 BARE COPPER NEUTRALS MANHOLE CONNECTIONS
- 8513E168.DGN - 750 MCM FEEDER PULLING ENCLOSURE
- 8513E1.DGN - CONDUIT ELBOW REINFORCEMENT DETAILS
- 8513E196.DGN - DIRECT BURIED CONDUIT
- 8513E500.DGN - CABLE END MOISTURE SEAL
- 8513E111.DGN - GUARD POST
- 8513E189.DGN - FEEDER RISER POLE MOUNTED DISCONNECTS
- 8513E12.DGN - SPOOL-DUCT OR PVC TO SPOOL-DUCT JOINT
- 8513E174.DGN - SPOOLED DUCT AND CONDUIT STUB-OUTS
- 8513E102.DGN - 5' x 3' x 3' PULL BOX FLUSH MOUNT (LOAD BEARING)

RWCD CONSTRUCTION NOTES

1. NOTIFY RWCD INSPECTOR 24 HOURS PRIOR TO DOING ANY CONSTRUCTION - 480-267-8999.
2. CLOSE AND LOCK ALL GATES UPON ENTERING AND LEAVING RWCD RIGHT OF WAY.
3. DO NOT BLOCK OR IMPEDE TRAVEL ON THE ACCESS RD FOR RWCD PERSONNEL - IF YOU MUST DO THIS, COORDINATE WITH INSPECTOR.
4. WHERE CROSSING PROPOSED RWCD FACILITIES, PROPOSED UTILITIES SHALL EITHER BE INSTALLED PRIOR TO THE RWCD FACILITY INSTALLATION OR THE UTILITY INSTALLATION SHALL BE BY HORIZONTAL EARTH AUGER BORE.
5. WHERE CROSSING EXISTING RWCD FACILITIES, PROPOSED UTILITIES SHALL EITHER BE INSTALLED AFTER THE EXISTING RWCD FACILITY IS TAKEN OUT OF SERVICE OR THE UTILITY INSTALLATION SHALL BE BY HORIZONTAL EARTH AUGER.

GENERAL NOTES:

1. CUSTOMER TO PROVIDE TRENCH, CONDUIT, J-BOXES, BLUE TOP AT THE EQUIPMENT LOCATIONS AND THE STAKING OF STREETLIGHT LOCATIONS.
2. ALL STREET LIGHT LOCATIONS TO BE STAKED BY CONTRACTOR PER CITY OF CHANDLER APPROVED STREET LIGHT PLANS. SRP J-BOX TO BE LOCATED WITHIN 15' OF STREET LIGHT LOCATIONS.
3. STREET LIGHT LOCATIONS ARE SHOWN FOR REFERENCE ONLY. CUSTOMER IS RESPONSIBLE FOR STAKING STREET LIGHT LOCATIONS PER THE APPROVED STREET LIGHT PLANS.
4. STREETLIGHT CONDUIT TO BE INSTALLED ON THIS JOB. STREETLIGHT J-BOXES, CONDUCTOR, & MOLE ASSEMBLIES TO BE INSTALLED ON T3135404.

Civil Engineering Utility Company Notes (Supplemental Conditions of Approval)

Chandler · Arizona
Where Value Adds The Difference

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT M.A.G. STANDARD SPECIFICATIONS AND DETAILS AS SUPPLEMENTED BY THE CITY OF CHANDLER.
2. THE CITY ENGINEER'S OFFICE SHALL BE NOTIFIED VIA EMAIL A MINIMUM OF 24 HOURS PRIOR TO STARTING EACH PHASE OF CONSTRUCTION TO PERMIT.NOTIFICATION@CHANDLERAZ.GOV. IF SUBCONTRACTORS ARE EMPLOYED, THEY SHALL BE IDENTIFIED AT THIS TIME. EMERGENCY WORK PERFORMED AFTER NORMAL WORK HOURS SHALL BE REPORTED TO THE POLICE DISPATCHER AT (480) 782-4132.
3. ALL STREET CROSSINGS SHALL BE BORED USING HORIZONTAL DIRECTIONAL DRILLING (H.D.D.) IN ACCORDANCE WITH M.A.G. SECTION 608 AND CITY OF CHANDLER SUPPLEMENTAL SPECIFICATIONS UNLESS APPROVAL TO OPEN CUT HAS BEEN RECEIVED FROM THE CITY ENGINEER AND SUCH APPROVAL HAS BEEN NOTED ON THE PERMIT. ALL PAVEMENT REPLACEMENT SHALL BE IN ACCORDANCE WITH M.A.G. STANDARD DETAIL 200, "T" TOP, WITH FULL DEPTH ABC BACKFILL.
4. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE CHANDLER TRAFFIC BARRICADE MANUAL. TRAFFIC RESTRICTIONS ARE NOT PERMITTED ON ARTERIALS AND MAJOR COLLECTORS PRIOR TO 8:30 A.M. OR AFTER 4 P.M.
5. RESTRICTIONS IN ALLEYS WILL BE COORDINATED IN ADVANCE WITH THE SOLID WASTE SERVICES DIVISION (480) 782-3510.
6. PERMITS ARE REQUIRED FOR ALL WORK IN CITY RIGHTS-OF-WAY. A COPY OF THE PERMIT AND APPROVED PLAN SHALL BE AVAILABLE AT THE JOB SITE. FAILURE TO SECURE PERMITS PRIOR TO STARTING CONSTRUCTION WILL RESULT IN THE ASSESSMENT OF PENALTY FEES.
7. ALL WORK IN THE RIGHT-OF-WAY SHALL BE COMPACTION TESTED AND RESULTS KEPT ON FILE FOR A MINIMUM OF ONE YEAR.
8. ANY DAMAGE TO IRRIGATION SYSTEMS WITHIN THE CITY RIGHT-OF-WAY SHALL BE REPAIRED, WITHIN 48 HOURS OF SAID DAMAGE, TO PREVENT LOSS OF LANDSCAPE MATERIAL.
9. WHEN TRENCHING IN ALLEYS, ALL TRENCH SPOIL SHALL BE REMOVED FROM THE AREA AND ALL TRENCH BACKFILL SHALL BE AGGREGATE BASE IN CONFORMANCE WITH M.A.G. SECTION 702.2 AND INSTALLED PER SECTION 601.4.4, BACKFILL TYPE I (PER TABLE 601-2). A MINIMUM OF 24" DEPTH OF COVER SHALL BE MAINTAINED BY ALL UNDERGROUND FACILITIES INSTALLED IN THE ALLEY AND THE ALLEY SURFACE OVER AND ADJACENT TO THE TRENCH SHALL BE NEAT AND CLEAN OF ALL SPOIL.

   EXCEPTION: IF A TRENCH IS 24" WIDE OR WIDER, NATIVE MATERIAL MAY BE USED AS BACKFILL TO WITHIN 6" OF FINISHED GRADE AND INSTALLED PER MAG SECTION 601.4.4, BACKFILL TYPE I (PER TABLE 601-2). THE TOP 6" OF THE TRENCH BACKFILL SHALL BE COMPLETED WITH AGGREGATE BASE. ALL TRENCH SPOILS ADJACENT TO THE TRENCH SHALL BE REMOVED FROM THE AREA AND THE ALLEY LEFT IN A NEAT AND CLEAN CONDITION.
10. WHEN CONTRACTORS OR UTILITY COMPANIES CALL IN FOR BLUESTAKING OR CONSTRUCTION AREAS, "SEMI-PERMANENT", OR APPROVED ALTERNATE 3-6 MONTH DURATION BLUE-STAKE PAINT SHALL BE SPECIFIED. IN ADDITION, "STAKE CHASERS" WILL BE SPECIFIED FOR MARKING ACROSS LANDSCAPED YARDS/AREAS.

    UTILITY COMPANIES OR CONTRACTORS FOR UTILITY COMPANIES THAT EMPLOY INDISCRIMINATE/EXCESSIVE BLUE-STAKE MARKING ACROSS RESIDENTIAL/BUSINESS DRIVEWAYS OR YARDS WILL BE RESPONSIBLE FOR RESTORING RIGHT-OF-WAY, UTILITY EASEMENT, AND/OR ADJOINING PROPERTY OWNERS AREA TO ITS ORIGINAL UNMARKED CONDITION.

    EXCEPTION: FOR LONG DURATION CONSTRUCTION PROJECTS ON MAJOR ARTERIALS OR MAJOR STREETS, OR CERTAIN SPECIALTY TYPE CONSTRUCTION PROJECTS, THE CONTRACTOR/UTILITY COMPANY MAY ASK THE CITY ENGINEER FOR APPROVAL TO USE LONGER DURATION BLUE-STAKE PAINT. IN ADDITION, IF THE REMOVAL OF "STAKE CHASERS" OCCURS OR IS EXPECTED TO RESULT, THE CONTRACTOR/UTILITY COMPANY MAY ASK THE CITY ENGINEER FOR APPROVAL TO USE BLUE-STAKE PAINT MARKING ACROSS LANDSCAPED AREAS.
11. UTILITY CLEARANCE REQUIREMENTS: ANY AND ALL MORE STRINGENT SEPARATION REQUIREMENTS REQUIRED BY FEDERAL, STATE, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

    A SIX-FOOT MINIMUM HORIZONTAL SEPARATION FROM THE EXTERIOR WALL OF ANY UNDERGROUND DRY UTILITY SHALL BE PROVIDED TO THE EXTERIOR WALL OF WATER AND SEWER MAINS. ALL FIRE LINES, REGARDLESS OF SIZE (INCLUDING HYDRANTS AND OTHER FIRE SERVICE CONNECTIONS) ARE CONSIDERED MAINS.

    A THREE-FOOT MINIMUM HORIZONTAL SEPARATION FROM THE EXTERIOR WALL OF ANY UNDERGROUND DRY UTILITY SHALL BE PROVIDED TO THE EXTERIOR WALL OF WATER AND SEWER SERVICES. REFER TO M.A.G. SECTION 608 AND CITY OF CHANDLER SUPPLEMENTAL SPECIFICATIONS FOR HORIZONTAL DIRECTIONAL DRILLING (H.D.D.) CLEARANCE REQUIRMENTS.

    A TWO-FOOT MINIMUM VERTICAL SEPARATION FROM THE EXTERIOR WALL OF ANY UNDERGROUND DRY UTILITY SHALL BE PROVIDED TO THE EXTERIOR WALL OF ANY WET UTILITIES.

    FOR ADDITIONAL INFORMATION REGARDING STANDARD UTILITY LOCATIONS REFER TO THE CITY OF CHANDLER STANDARD DETAILS AND SPECIFICATIONS, STREET SERIES, C-200 – C-259.

    DEPTH REQUIREMENTS SHALL BE IN ACCORDANCE WITH CITY OF CHANDLER MINIMUM COVER REQUIREMENTS OR AT THE DISCRETION OF THE CITY ENGINEER.

Mailing Address:
P.O. Box 4008, MS 403
Chandler, Arizona 85244-4008

Transportation and Development Department
Engineering Division
Utilities Section
215 E. Buffalo St., Chandler Arizona

Telephone: (480) 782-3000
www.chandleraz.gov
Form No: UDM-019Civil
Rev: 3-16-16

NOTICE

THIS JOB ORDER INVOLVES OVERHEAD, UNDERGROUND AND / OR SERVICES

OVERHEAD# T3041667
OH RELOC#
UG STREETLIGHT# T3135404
UNDERGROUND# T3041444

CONTACTS:

DESIGN CONSULTANT: DAVID CALDERON
OFFICE:(602)236-4191
MOBILE:(480)221-4841
PROJECT LEADER: VINCE SILVESTRO
MOBILE:(602)809-9494
INSPECTIONS:
OFFICE:(602)236-0436
CONSTRUCTION CONSULTANT: JOE CORDEIRO
MOBILE:(602)402-0858

PROJECT NOTES

SRP ELECTRIC SERVICE SPECIFICATIONS ARE AVAILABLE ON-LINE AT: HTTP://WWW.SRPNET.COM/ELECTRIC/BUSINESS/SPECS

APPROVALS

ROOSEVELT WATER CONSERVATION DISTRICT

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION, PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES; THE SATISFACTORY PERFORMANCE OF HIS WORK. THE DISTRICT'S REVIEW OF THE PLANS IS A VOLUNTARY AND DISCRETIONARY ACTION WHICH IS NOT MANDATED BY STATE STATUTE. THE DISTRICT'S REVIEW OF THE PLANS IS SOLELY FOR THE DISTRICT'S BENEFIT, CONDUCTED WITH ONLY THE DISTRICT'S INTEREST IN MIND, AND SHOULD NOT BE RELIED UPON BY ANY THIRD PARTY. BY REVIEWING THE PLANS THE DISTRICT DOES NOT ASSUME ANY DUTY TO THIRD PARTIES.

ENGINEER: _____ DATE: _____

RWCD: _____ DATE: _____

GRAPHIC SYMBOLS

- PROPOSED UNDERGROUND TRENCH/BORE
- UNDERGROUND SECONDARY CONDUCTOR
- UNDERGROUND SERVICE CONDUCTOR
- UNDERGROUND STREETLIGHT CONDUCTOR
- EXISTING UNDERGROUND TRENCH/BORE
- CONDUIT DUCT BANK CONFIGURATION
- INDICATES ABANDONMENT
- A — A MATCHLINES

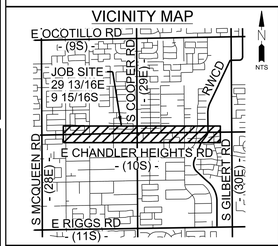
(SHADED SYMBOL INDICATES EXISTING FACILITY)

- A OPEN BAR INDICATES PROPOSED FACILITIES
- NO BAR INDICATES EXISTING FACILITIES
- PROPOSED SINGLE-PHASE TRANSFORMER
- PROPOSED THREE-PHASE TRANSFORMER
- F PROPOSED FUSING ENCLOSURE
- S PROPOSED SWITCHING ENCLOSURE
- S4 PROPOSED 4-WAY SWITCH ENCLOSURE
- P PROPOSED 1 PHASE PULLING ENCLOSURE
- P3 PROPOSED 3 PHASE/FEEDER PULLING ENCLOSURE
- T3 PROPOSED 4/0 PRIMARY TAP ENCLOSURE

TYPICAL SRP ABBREVIATIONS
C = CONSTRUCT
R = REMOVE
T = TRANSFER
A = ABANDON
F/SW = FRONT OF SIDEWALK
B/SW = BACK OF SIDEWALK
B/C = BACK OF CURB
E/P = EDGE OF PAVEMENT
R/W = RIGHT OF WAY

- C PROPOSED CAPACITOR BANK
- PROPOSED MANHOLE
- PROPOSED RISER
- PROPOSED J-BOX
- SERVICE ENTRANCE SECTION
- PB PROPOSED PULLBOX
- SPLICE POINT
- PROPOSED STREET LIGHT
- INDICATES REMOVAL
- EM ELECTRONIC MARKER
- 00 WORK POINT NUMBER

VICINITY MAP



FIELD INSTALLATION STAMP

SURVEY AND PERMIT INFORMATION

- ☐ SRP SURVEY TO STAKE FOR LOCATION AND TIE FOR EASEMENTS. CUSTOMER CONTROL POINTS REQUIRED: YES☐ NO☐
- ☐ CUSTOMER'S SURVEY TO STAKE FOR LOCATION/CONSTRUCTION AND TIE FOR EASEMENTS. CUSTOMER'S SURVEYOR MUST ATTEND PRE-CON MEETING.
- ☐ SRP SURVEY TO STAKE FOR LOCATION, NO EASEMENT REQUIRED.
- ☐ 3RD PARTY EASEMENT REQUIRED.
- ☐ NO SURVEY REQUIRED.
- ☐ PERMIT REQUIRED: CITY OF _____ COUNTY _____ OTHER _____ PERMIT NO._____
- ☐ NO PERMIT REQ.

REV	REVISED BY	DATE	REVISION DESCRIPTION
4			
3			
2			
1			
0	DXCALDER	10/08/2021	UPDATED COPY OF PLANS TO CUSTOMER

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
ADDRESS/LOCATION CHANDLER HEIGHTS RD FROM MCQUEEN TO GILBERT
CONTACT CITY OF CHANDLER - DENNIS AUST PHONE 480-782-3315
BILLING ACCT NO. _____
FIS JO _____ MAP 1/4SE S 24T 2SR 5E
40 ACRE YE-24-16 COORDS 29 13/16E 9 15/16S
AMP WO T3041444 AMP VERSION _____
COST CENTER 22660
ROUTING CODE DD1.5CSI+0

Contact Arizona 811 at least two full working days before you begin excavation
Call 811 or click Arizona811.com

SHEET NUMBER 1 OF 17

SCHEMATIC

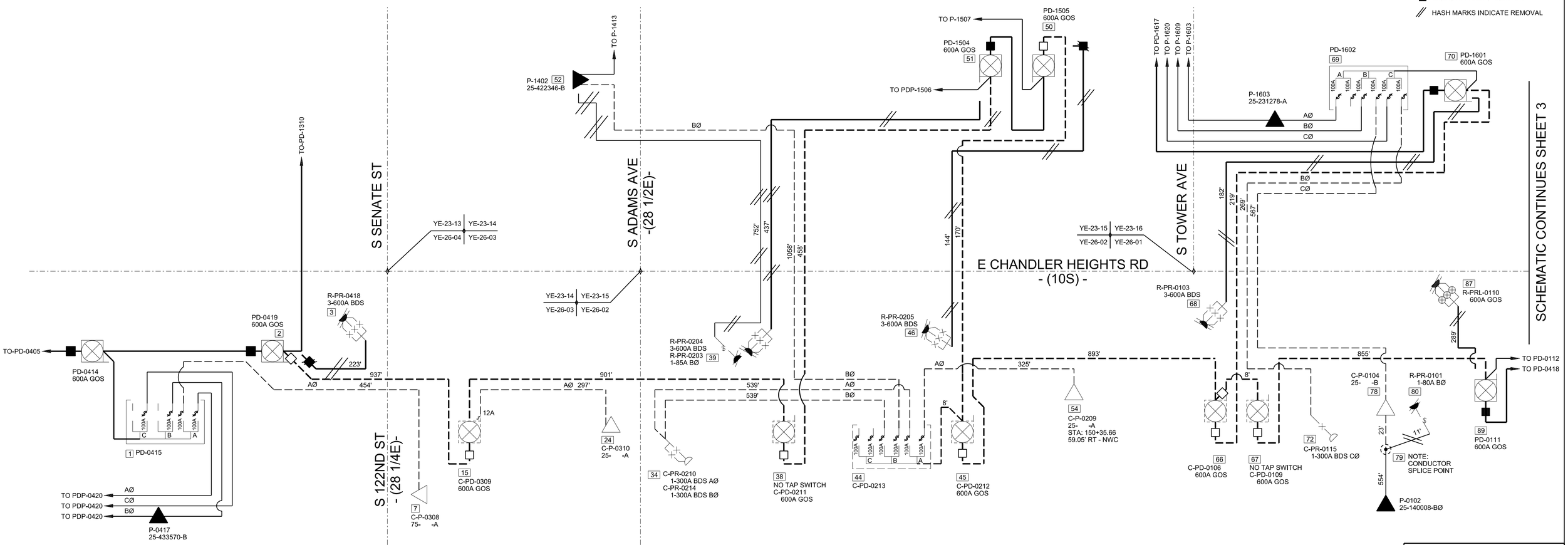
YE-23-11 YE-23-09
YE-26-03 YE-26-01
YE-24-11 YE-24-09
YE-25-03 YE-25-01

SCALE: N.T.S.

CONDUCTORS ARE AS FOLLOWS UNLESS NOTED OTHERWISE ON SKETCH

C-3UA750K
E-3UA750K
C-3UA40K
E-3UA40K
C-1UA2K
E-1UA2K

PROPOSED FAULT INDICATOR
EXISTING FAULT INDICATOR
HASH MARKS INDICATE REMOVAL



FIELD INSTALLATION STAMP

CONTACTS:

DESIGN CONSULTANT:
DAVID CALDERON
OFFICE:(602)236-4191
MOBILE:(480)221-4841

PROJECT LEADER:
VINCE SILVESTRO
MOBILE:(602)809-9494

INSPECTIONS:
OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

NATURAL GAS YES _ NO _

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
ADDRESS/LOCATION CHANDLER HEIGHTS RD FROM MCQUEEN TO GILBERT
CONTACT CITY OF CHANDLER - DENNIS AUST PHONE 480-782-3315
BILLING ACCT NO.
FIS JO MAP 1/4SE S 24T 2SR 5E
40 ACRE YE-24-16 COORDS 29 13/16E 9 15/16S
AMP WO T3041444 AMP VERSION

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COST CENTER 22660
ROUTING CODE DD1.5CSI+0

SHEET NUMBER 2 OF 17

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SCHEMATIC

YE-23-11 YE-23-09
YE-26-03 YE-26-01
YE-24-11 YE-24-09
YE-25-03 YE-25-01

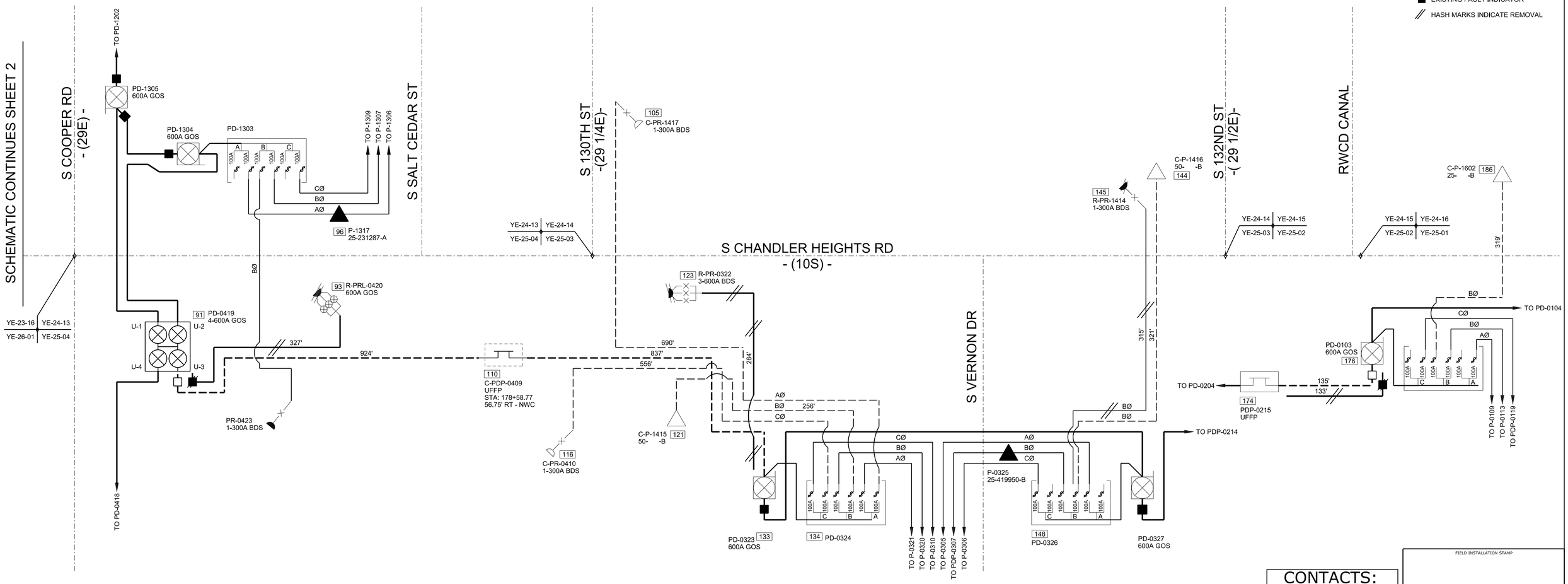
N

SCALE: N.T.S.

CONDUCTORS ARE AS FOLLOWS UNLESS NOTED OTHERWISE ON SKETCH

- C-3UA750K
- E-3UA750K
- C-3UA40K
- E-3UA40K
- C-1UA2K
- E-1UA2K

☐ PROPOSED FAULT INDICATOR
■ EXISTING FAULT INDICATOR
// HASH MARKS INDICATE REMOVAL



FIELD INSTALLATION STAMP

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MOBILE:(480)221-4841

PROJECT LEADER:
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INSPECTIONS:
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CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

NATURAL GAS YES ☐ NO ☐

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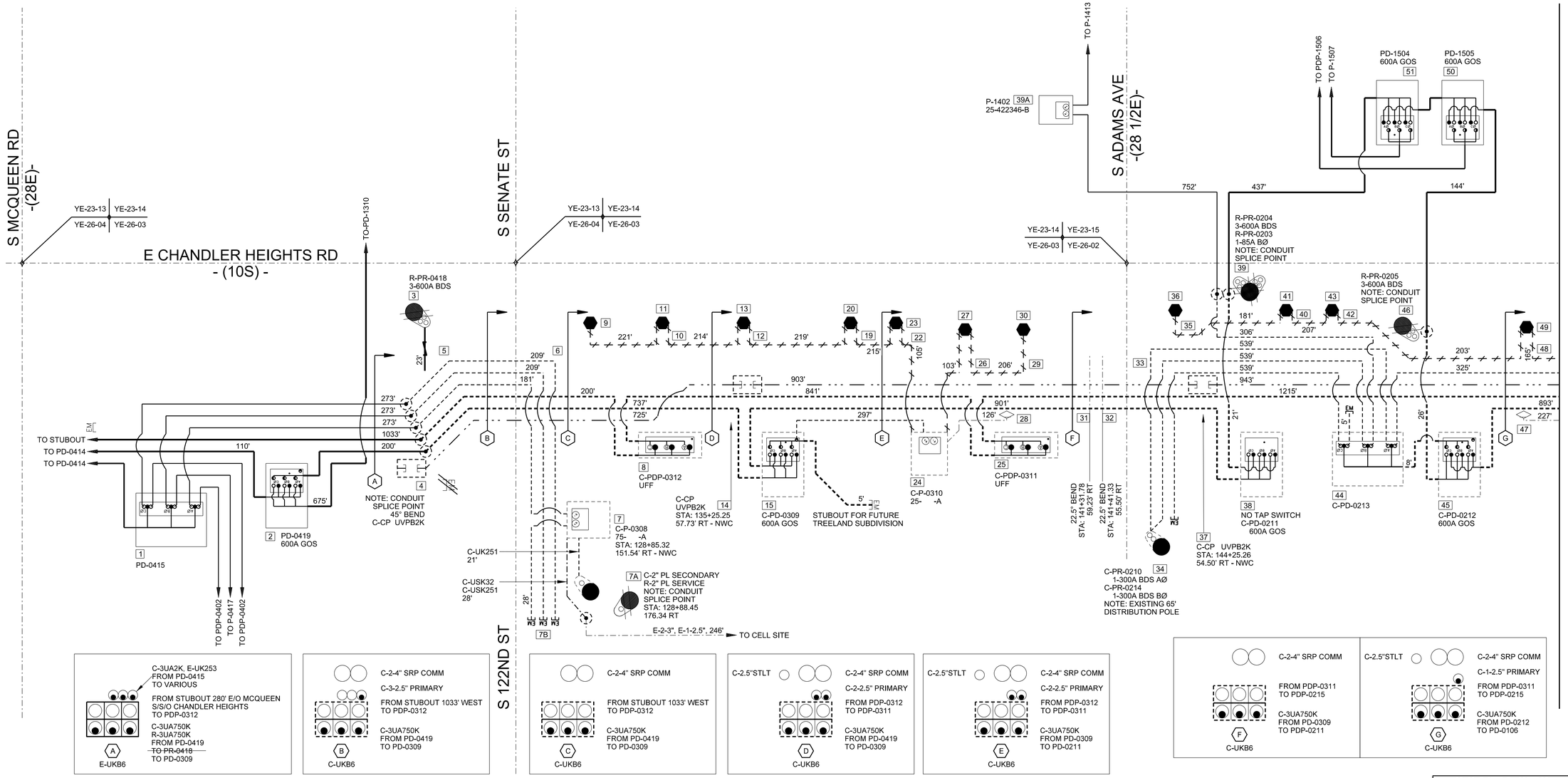
SHEET NUMBER 3 OF 17

CONDUIT ONE-LINE



SCALE: N.T.S.

CONDUITS ARE AS FOLLOWS
UNLESS NOTED OTHERWISE ON SKETCH

- C-UK33 (C-3-3")
- C-UK31 (C-1-3")
- C-UK251 (C-1-2.5")
- C-UK251L (C-1-2.5" STREETLIGHT)
- C-UK42K (C-2-4" SRP COMMUNICATION)
- E-UK33 (E-3-3")
- E-UK251 (E-1-2.5")
- E-UK251L (E-1-2.5" STREETLIGHT)
- // HASH MARKS INDICATE ABANDON

NOTES:
-INSTALL A UBGRD GROUND ROD IN ALL NEW EQUIPMENT AND A UBGRDJ GROUND IN ALL EXISTING EQUIPMENT WITHOUT A GROUND IN IT.
-VERTICAL ELBOWS REQUIRE CONCRETE ENCASEMENT.

FIELD INSTALLATION STAMP

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CONSTRUCTION CONSULTANT:
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MOBILE:(602)402-0858

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
ADDRESS/LOCATION CHANDLER HEIGHTS RD FROM MCQUEEN TO GILBERT
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BILLING ACCT NO.
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40 ACRE YE-24-16 COORDS 29 13/16E 9 15/16S
AMP WO T3041444 AMP VERSION

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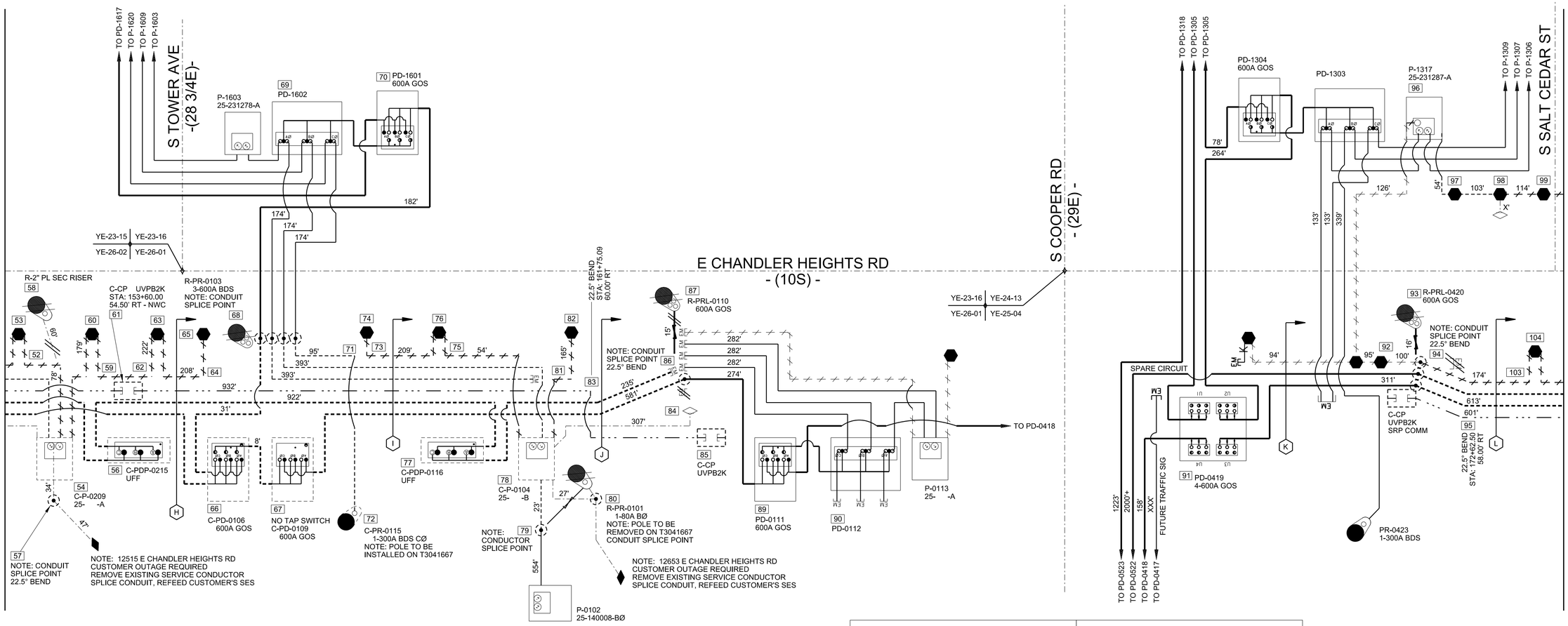
COST CENTER 22660
ROUTING CODE DD1.5CSI+0

SHEET NUMBER 4 OF 17

CONDUIT ONE-LINE



C-2.5"STLT ○ ○○ C-2-4" SRP COMM FROM PDP-0215 TO PDP-0116 C-3UA750K FROM PD-0212 TO PD-0106 H C-UKB6	C-2.5"STLT ○ ○○ C-2-4" SRP COMM C-2-2.5" PRIMARY FROM PDP-0215 TO PDP-0116 C-3UA750K FROM PD-0109 TO PD-0111 I C-UKB6	C-2.5" SERVICE ○ ○○ C-2-4" SRP COMM FROM PDP-0116 TO STUB OUT C-3UA750K FROM PD-0109 TO PD-0111 J C-UKB6

E-2.5"STLT ○ SPARE CONDUIT CIRCUIT FROM PDP-0419 ~~TO STUB OUT STA:172+50.43~~ TO STUB OUT STA:186+21.94 70.00' RT C-3UA750K R-3UA750K FROM PD-0419 ~~TO PRL-0420~~ TO PDP-0409 K E-UKB6	C-2.5"STLT ○ ○○ C-2-4" SRP COMM SPARE CONDUIT CIRCUIT FROM PDP-0419 TO STUB OUT STA:186+21.94 70.00' RT C-3UA750K FROM PD-0419 TO PDP-0409 L C-UKB6

SCALE: N.T.S.

CONDUITS ARE AS FOLLOWS
UNLESS NOTED OTHERWISE ON SKETCH

- C-UK33 (C-3-3")
- C-UK31 (C-1-3")
- C-UK251 (C-1-2.5")
- C-UK251L (C-1-2.5" STREETLIGHT)
- C-UK42K (C-2-4" SRP COMMUNICATION)
- E-UK33 (E-3-3")
- E-UK251 (E-1-2.5")
- E-UK251L (E-1-2.5" STREETLIGHT)
- // HASH MARKS INDICATE ABANDON

NOTES:
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FIELD INSTALLATION STAMP

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MOBILE:(602)809-9494

INSPECTIONS:
OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
ADDRESS/LOCATION CHANDLER HEIGHTS RD FROM MCQUEEN TO GILBERT
CONTACT CITY OF CHANDLER - DENNIS AUST PHONE 480-782-3315
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FIS JO MAP 1/4SE S 24T 2SR 5E
40 ACRE YE-24-16 COORDS 29 13/16E 9 15/16S
AMP WO T3041444 AMP VERSION

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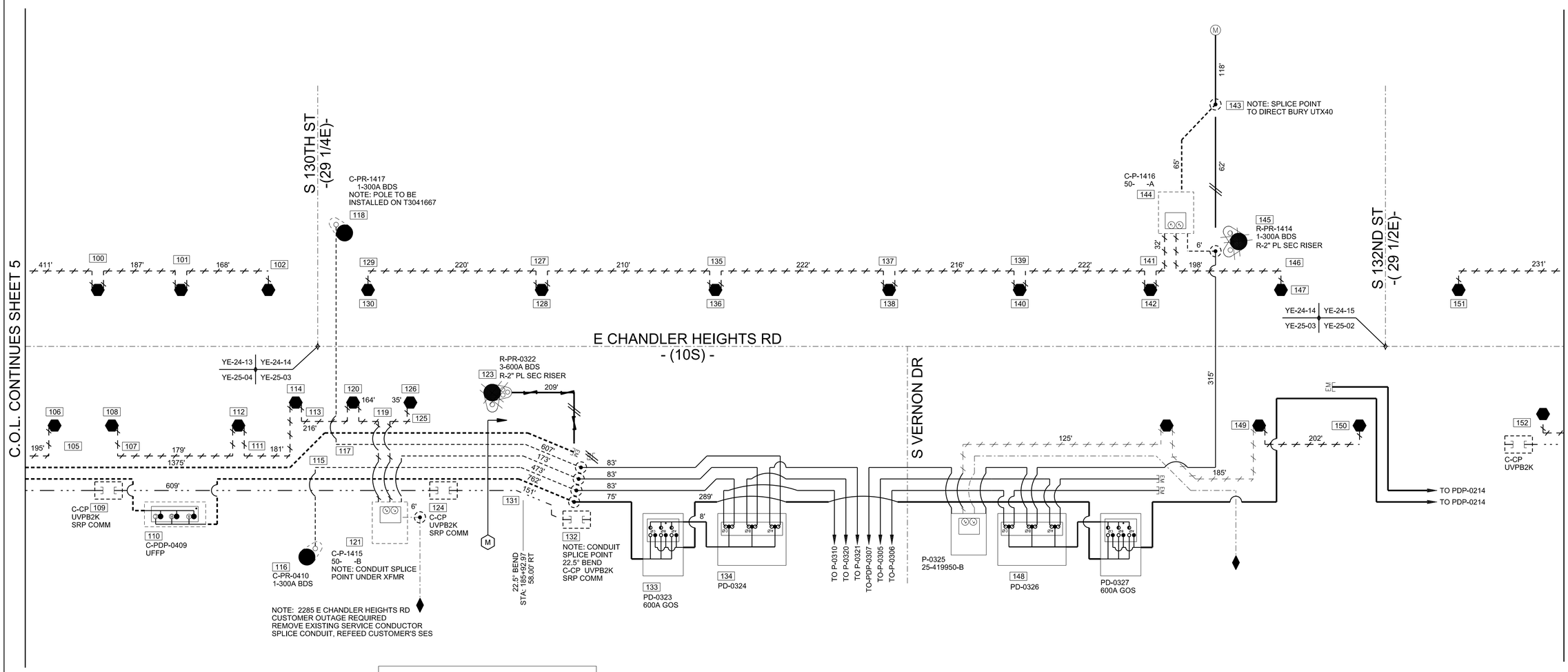
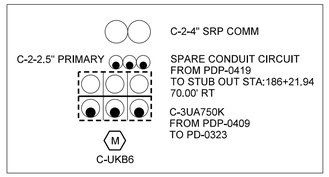
ROUTING CODE DD1.5CSI+0

SHEET NUMBER 5 OF 17

CONDUIT ONE-LINE





SCALE: N.T.S.

CONDUITS ARE AS FOLLOWS
UNLESS NOTED OTHERWISE ON SKETCH

- C-UK33 (C-3-3")
- C-UK31 (C-1-3")
- C-UK251 (C-1-2.5")
- C-UK251L (C-1-2.5" STREETLIGHT)
- C-UK42K (C-2-4" SRP COMMUNICATION)
- E-UK33 (E-3-3")
- E-UK251 (E-1-2.5")
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- // HASH MARKS INDICATE ABANDON

NOTES:
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FIELD INSTALLATION STAMP

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INSPECTIONS:
OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
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AMP WO T3041444 AMP VERSION

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SHEET NUMBER 6 OF 17

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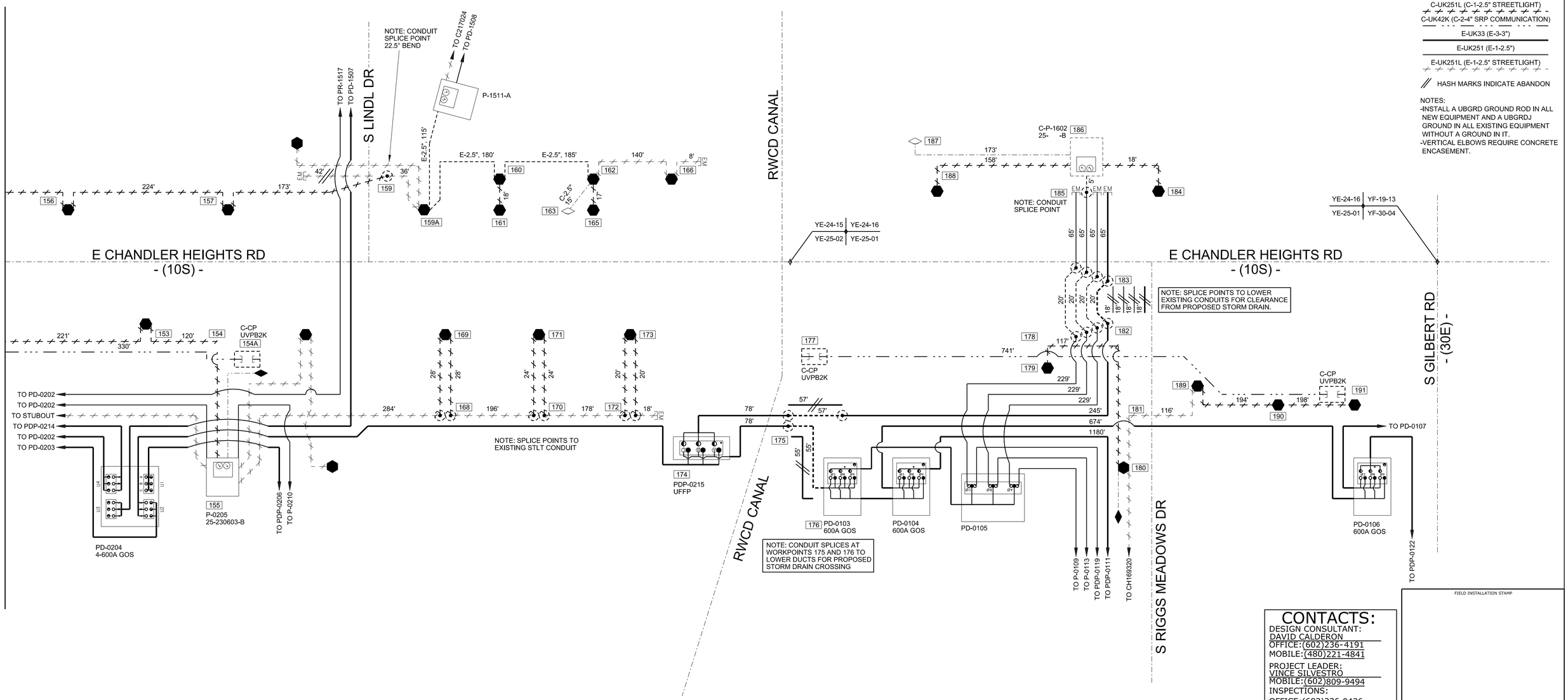
CONDUIT ONE-LINE



CONDUIT ONE-LINE

N

SCALE: N.T.S.

CONDUITS ARE AS FOLLOWS UNLESS NOTED OTHERWISE ON SKETCH

- C-UK33 (C-3-3")
- C-UK31 (C-1-3")
- C-UK251 (C-1-2.5")
- C-UK251L (C-1-2.5" STREETLIGHT)
- C-UK42K (C-2-4" SRP COMMUNICATION)
- E-UK33 (E-3-3")
- E-UK251 (E-1-2.5")
- E-UK251L (E-1-2.5" STREETLIGHT)
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FIELD INSTALLATION STAMP

CONTACTS:

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MOBILE:(602)809-9494

INSPECTIONS:
OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
ADDRESS/LOCATION CHANDLER HEIGHTS RD FROM MCQUEEN TO GILBERT
CONTACT CITY OF CHANDLER - DENNIS AUST PHONE 480-782-3315
BILLING ACCT NO.
FIS JO MAP 1/4SE S 24T 2SR 5E
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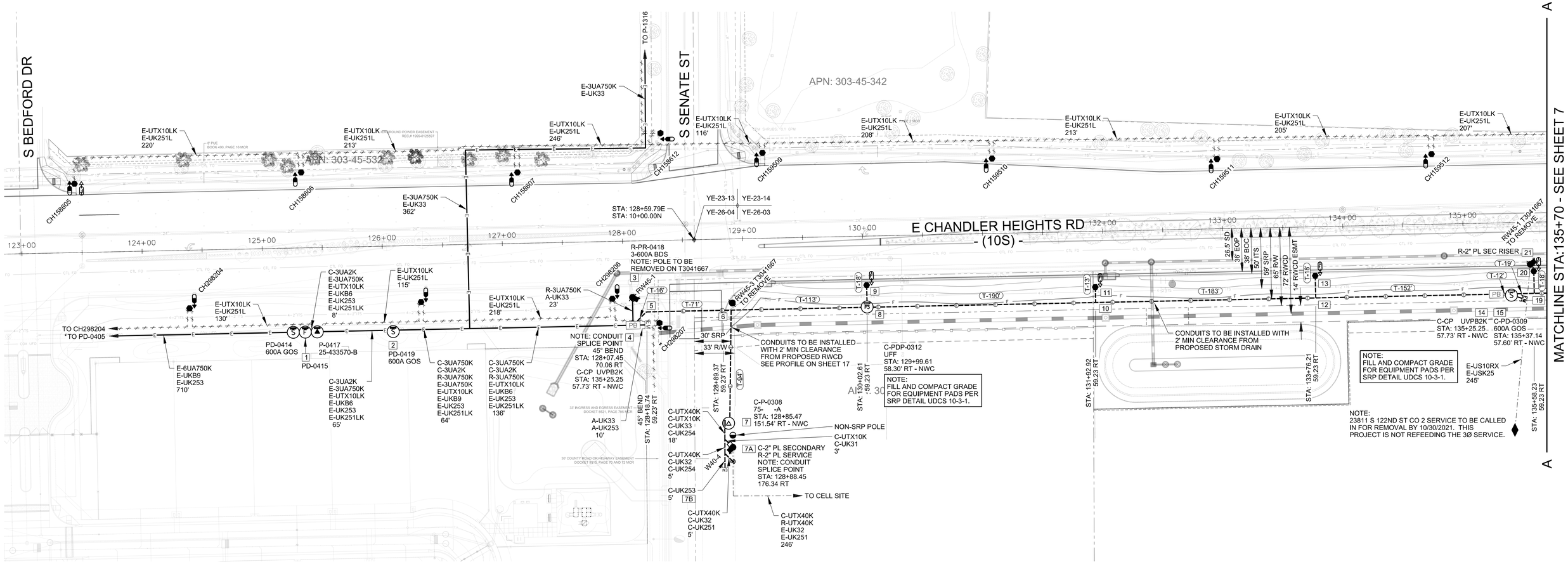

FIELD INSTALLATION STAMP

CONTACTS:

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DAVID CALDERON
OFFICE:(602)236-4191
MOBILE:(480)221-4841

PROJECT LEADER:
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MOBILE:(602)809-9494

INSPECTIONS:
OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

NATURAL GAS YES _ NO _

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
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SHEET NUMBER 8 OF 17

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SALT RIVER PROJECT PROPRIETARY

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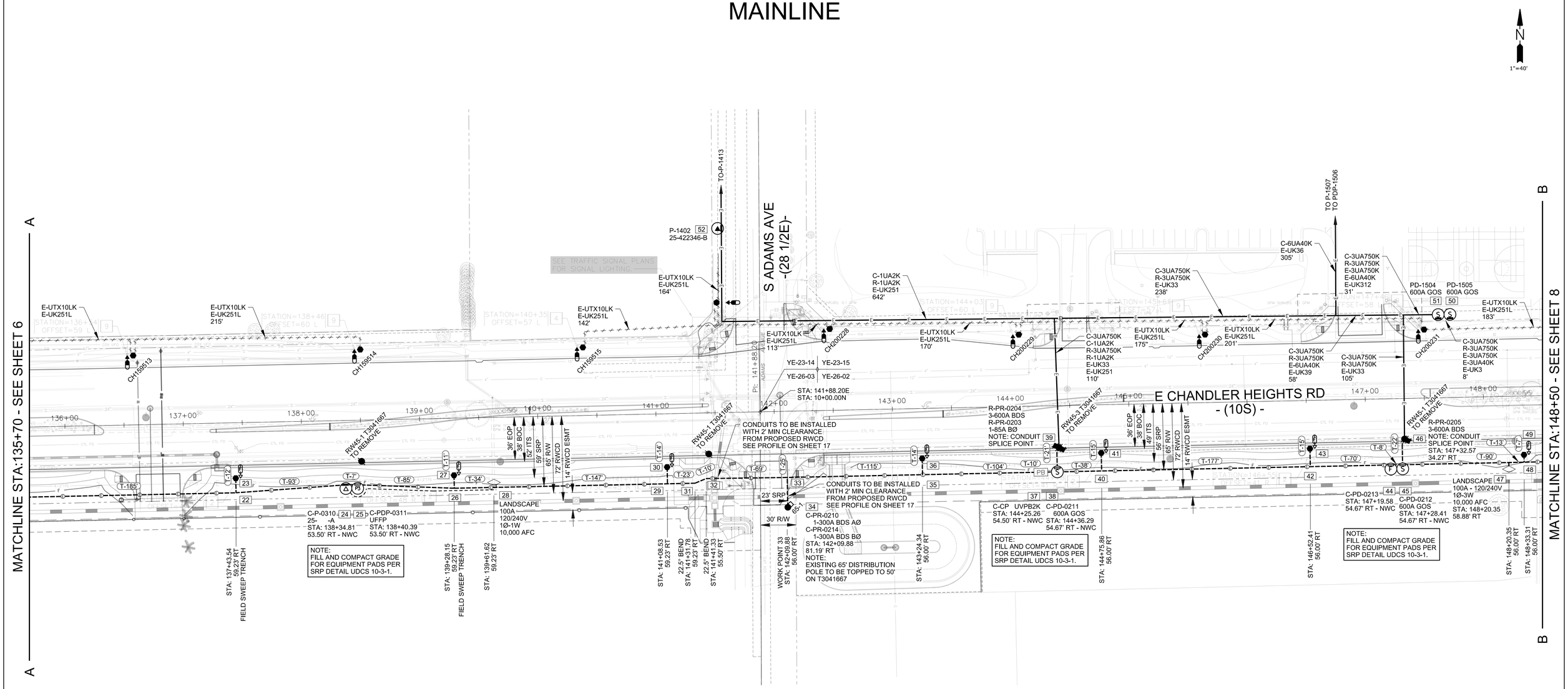

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JOE CORDEIRO
MOBILE:(602)402-0858

FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
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SHEET NUMBER 9 OF 17

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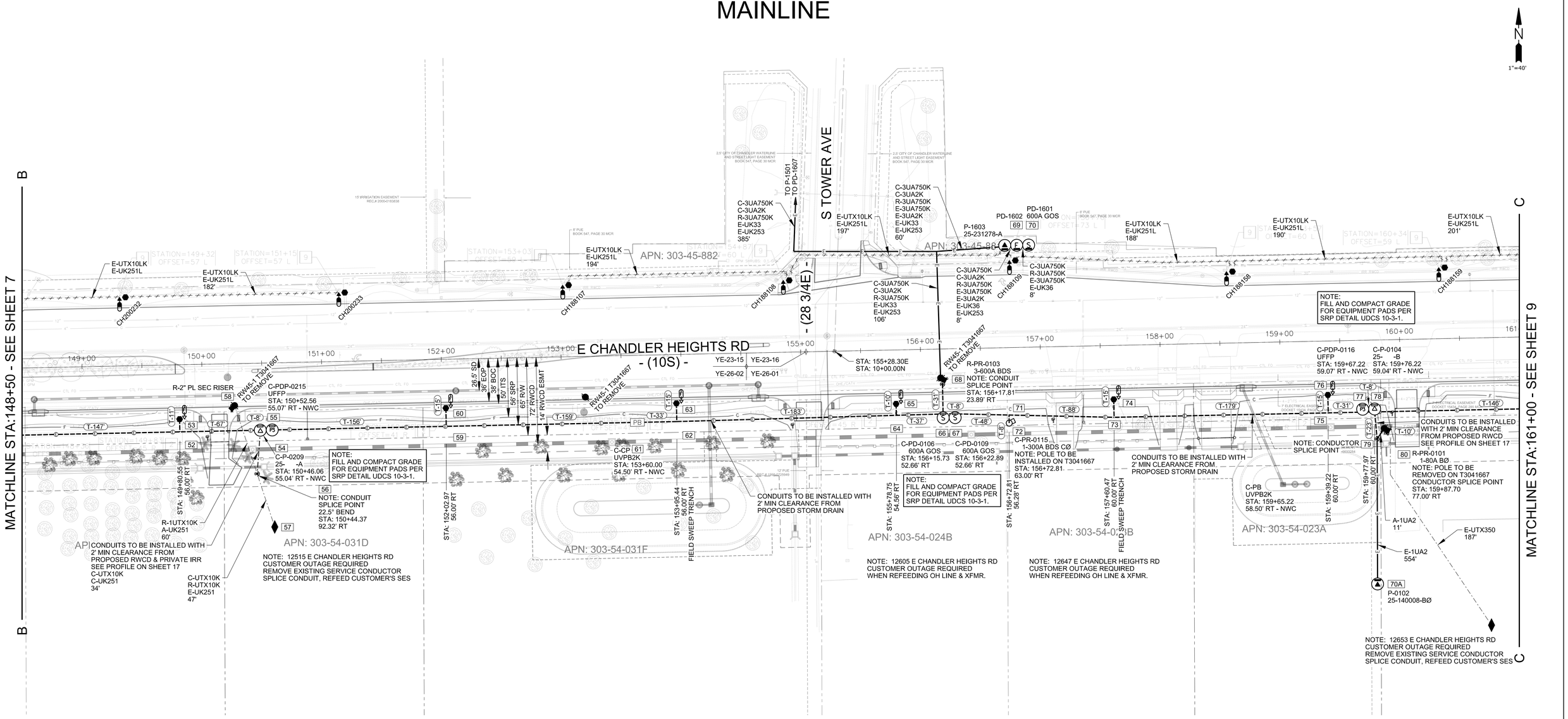

CONTACTS:

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FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

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COST CENTER 22660
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SHEET NUMBER 10 OF 17

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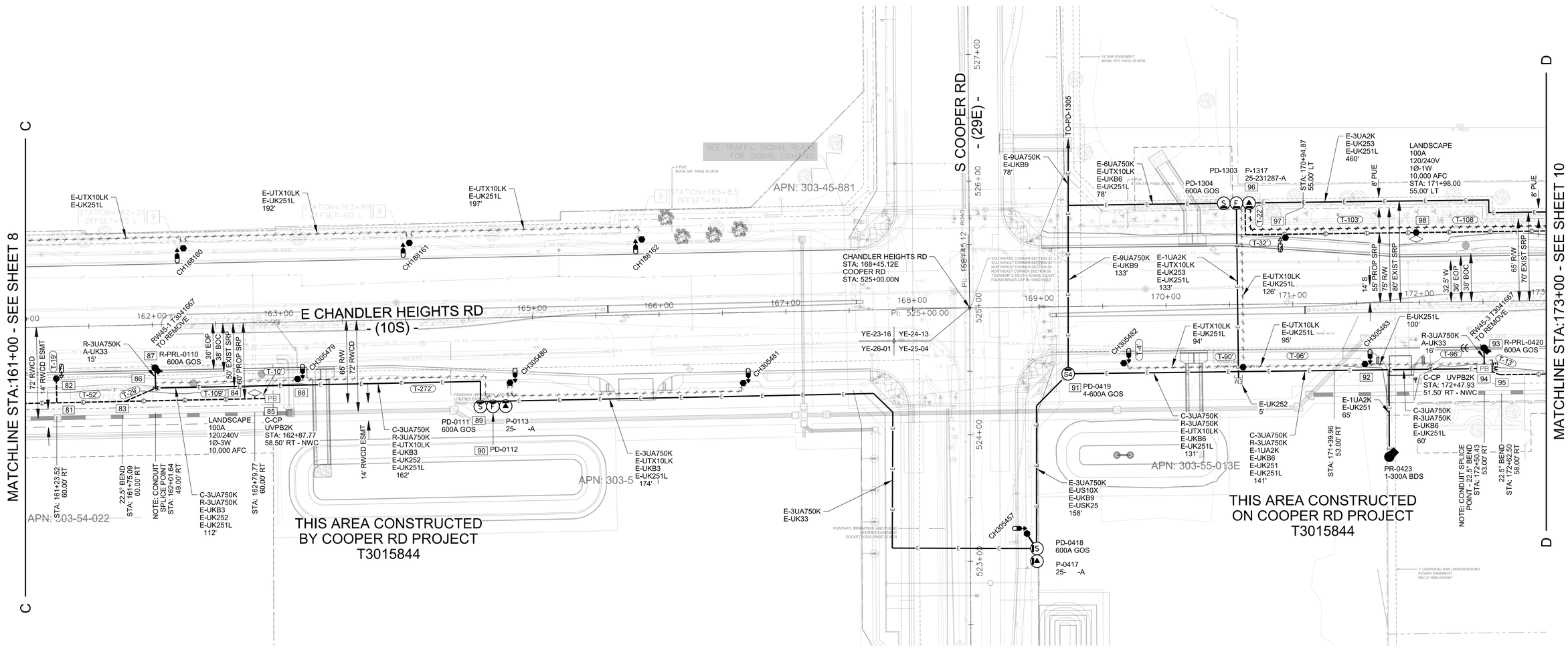

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MOBILE:(602)402-0858

FIELD INSTALLATION STAMP

NATURAL GAS YES _ NO _

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
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SHEET NUMBER 11 OF 17

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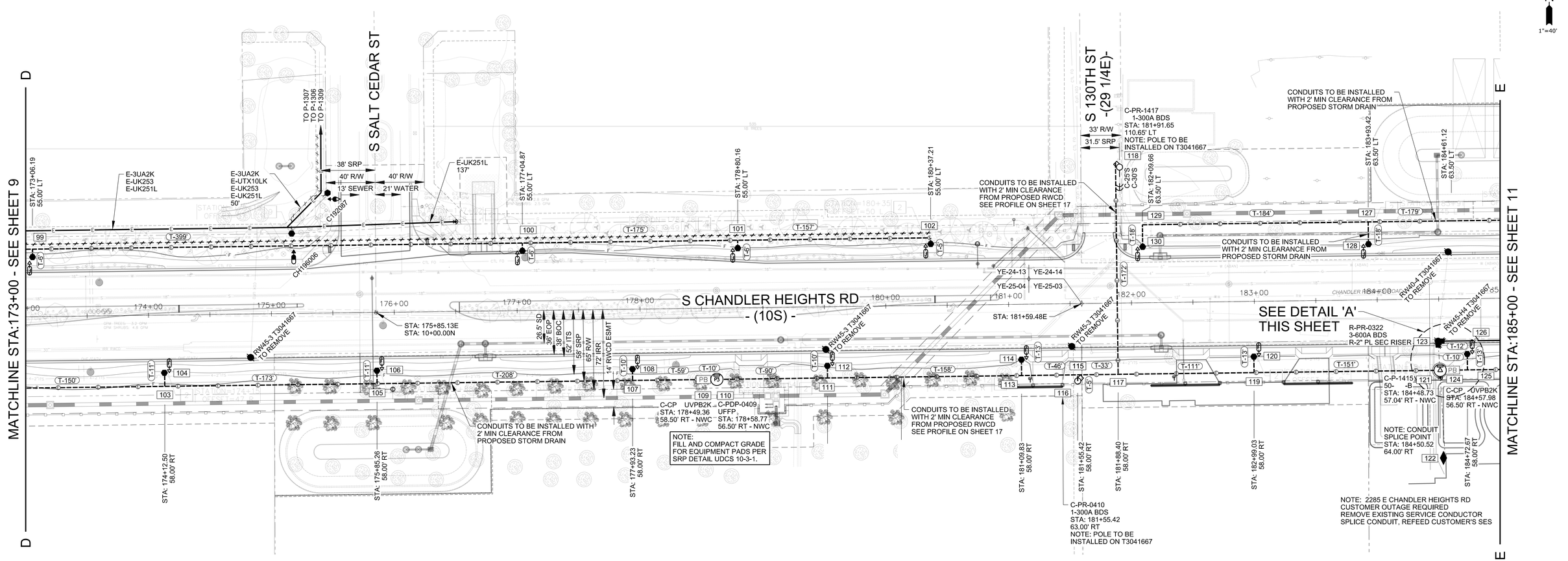
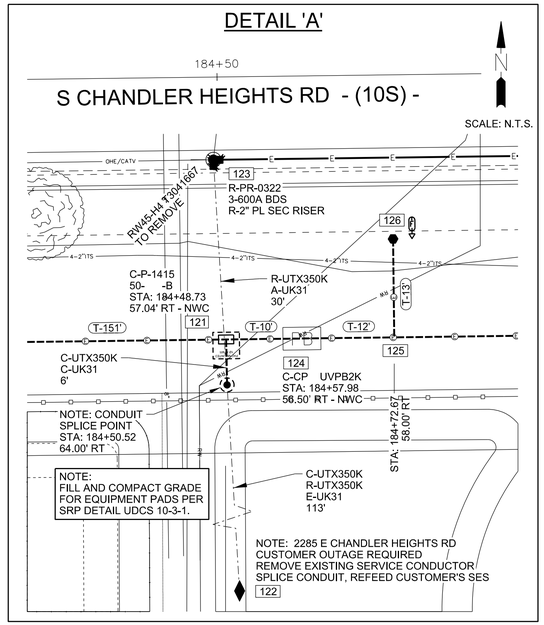


DETAIL 'A'



FIELD INSTALLATION STAMP

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CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

NATURAL GAS YES _ NO _

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
ADDRESS/LOCATION CHANDLER HEIGHTS RD FROM MCQUEEN TO GILBERT
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BILLING ACCT NO.
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COST CENTER 22660
ROUTING CODE DD1.5CSI+0

SHEET NUMBER 12 OF 17

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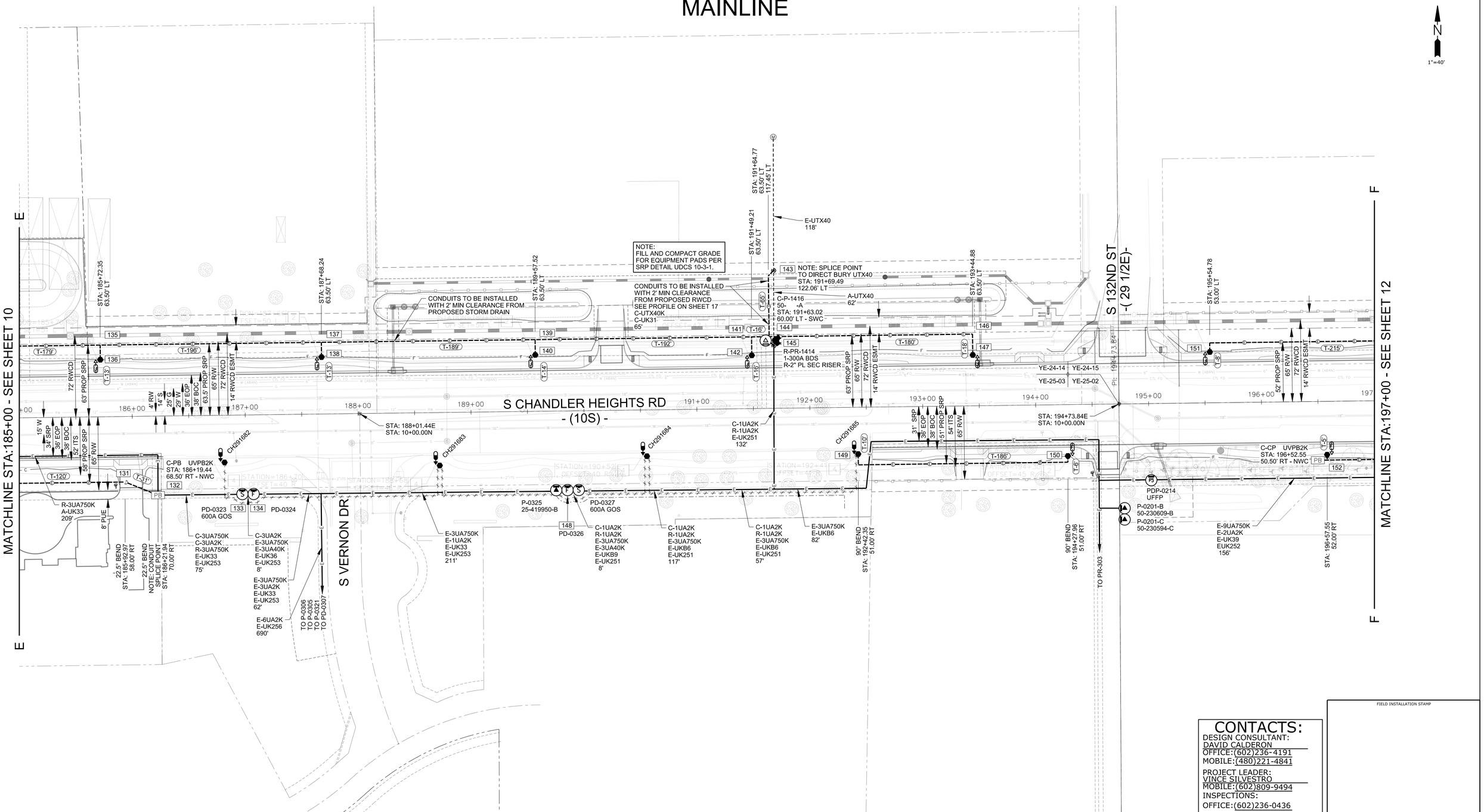

CONTACTS:

DESIGN CONSULTANT:
DAVID CALDERON
OFFICE:(602)236-4191
MOBILE:(480)221-4841

PROJECT LEADER:
VINCE SILVESTRO
MOBILE:(602)809-9494

INSPECTIONS:
OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
ADDRESS/LOCATION CHANDLER HEIGHTS RD FROM MCQUEEN TO GILBERT
CONTACT CITY OF CHANDLER - DENNIS AUST PHONE 480-782-3315
BILLING ACCT NO.
FIS JO MAP 1/4SE S 24T 2SR 5E
40 ACRE YE-24-16 COORDS 29 13/16E 9 15/16S
AMP WO T3041444 AMP VERSION

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA BLUE STAKE, INC.
Call 811 or click ArizonaBlueStake.com

COST CENTER 22660
ROUTING CODE DD1.5CSI+0

SHEET NUMBER 13 OF 17

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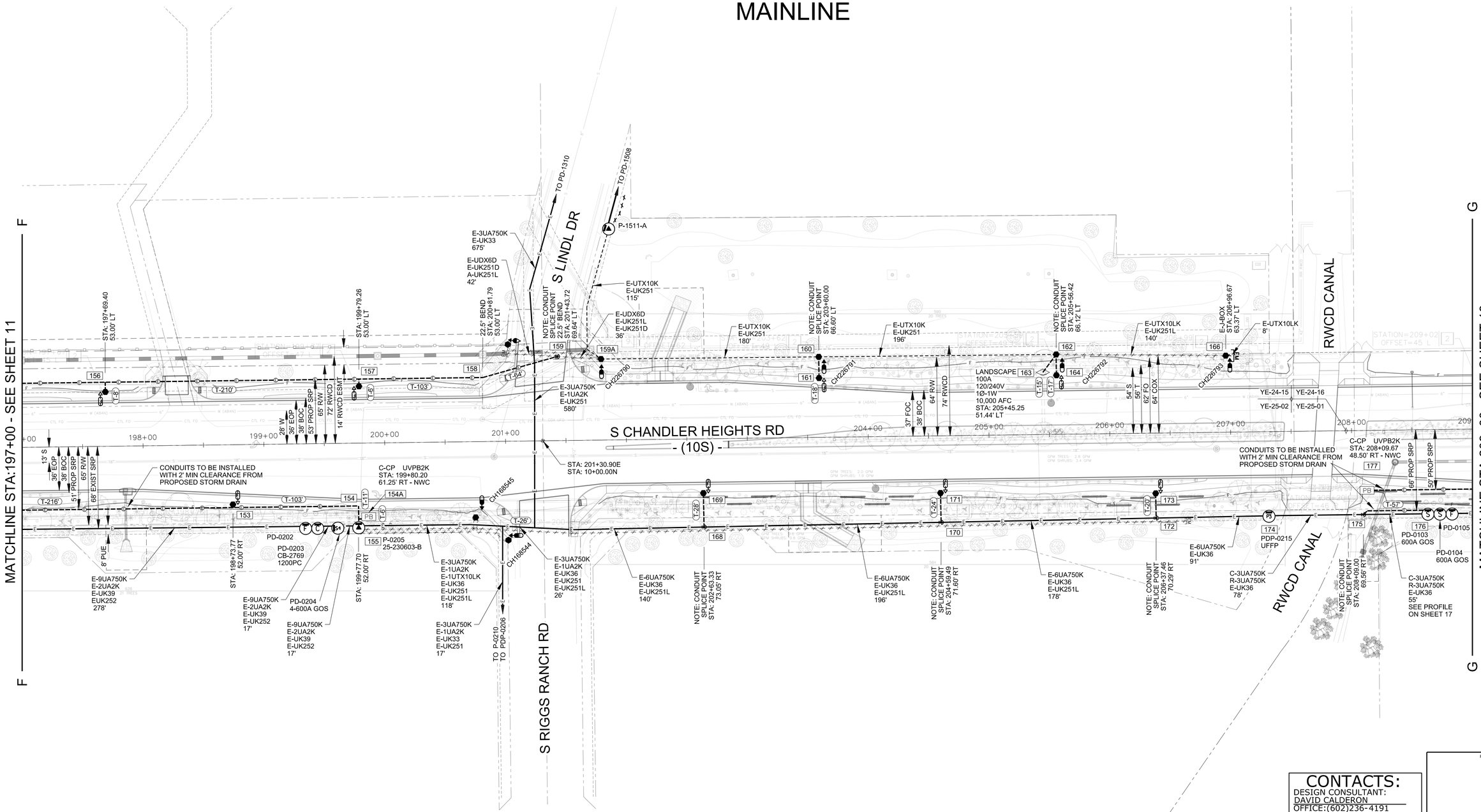

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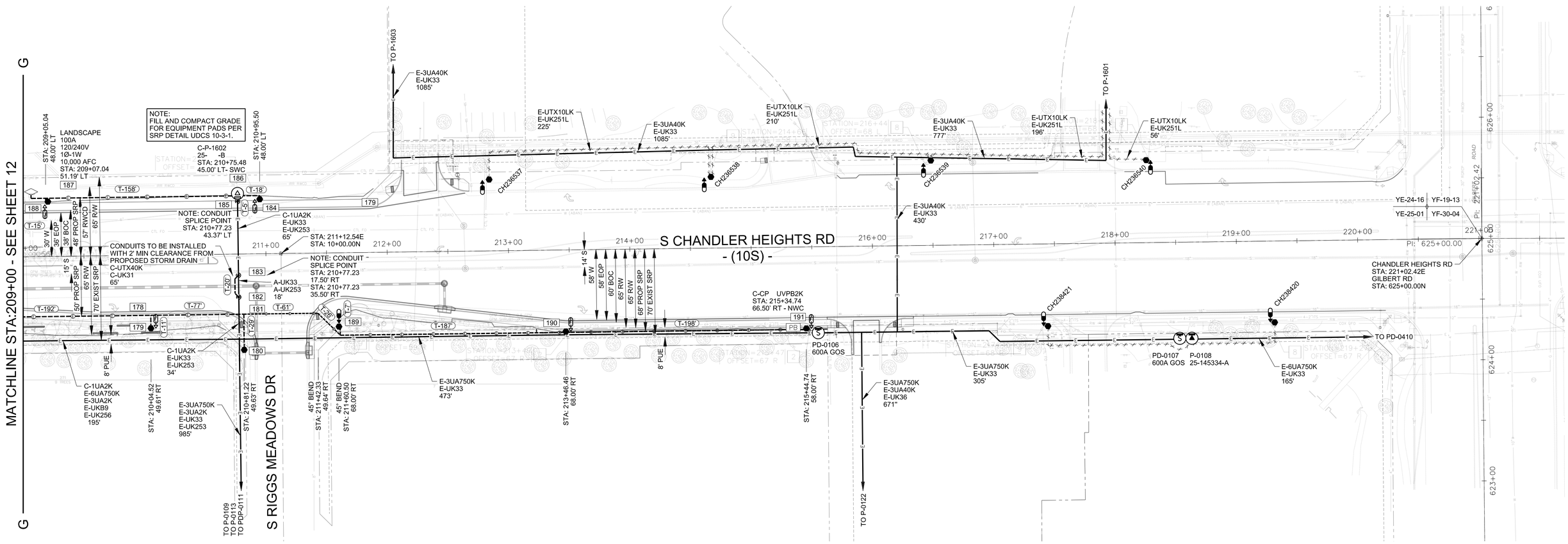

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FIELD INSTALLATION STAMP

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SHEET NUMBER 15 OF 17

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SALT RIVER PROJECT PROPRIETARY

ROOSEVELT WATER CONSERVATION DISTRICT
GENERAL NOTES

1. GENERAL CONDITIONS:
   A. ALL CONSTRUCTION OF RWCD FACILITIES SHALL CONFORM TO THE LATEST RWCD SPECIFICATIONS (WWW.RWCD.ORG) AND LATEST MAG SPECIFICATIONS.
   B. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM RWCD BEFORE ANY WORK BEGINS THAT IMPACTS RWCD FACILITIES OR ACCESS TO RWCD FACILITIES.
   C. IMPROVEMENT PLANS FOR RWCD FACILITIES SHALL NOT BE APPROVED UNTIL POTHOLE INFORMATION FOR CROSSING OR PARALLEL UTILITIES, OR OTHER CONFLICTS, IS RECEIVED, REVIEWED AND DEEMED ADEQUATE BY RWCD. POTHOLE RESULTS SHALL BE SEALED BY A LAND SURVEYOR OR CIVIL ENGINEER REGISTERED IN ARIZONA AND SHALL BE LOCATED BY PROJECT STATION AND OFFSET. EACH POTHOLE SHALL INCLUDE THE ELEVATIONS OF THE SURFACE AND THE TOP AND BOTTOM OF THE BURIED UTILITY BASED ON THE PROJECT DATUM.
   D. AN APPROVED SET OF PLANS SHALL BE ON THE JOB SITE AT ALL TIMES THAT WORK IS IN PROGRESS. DEVIATION FROM THE PLANS SHALL NOT BE ALLOWED WITHOUT AN APPROVED PLAN REVISION FROM THE ENGINEER.
   E. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE MAG SPECIFICATION 401, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND CURRENT TRAFFIC BARRICADE MANUAL.
   F. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING, IF NECESSARY, AN EXCAVATION AND DIRT MOVING PERMIT FROM THE MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT AND COMPLYING WITH ITS REQUIREMENTS FOR DUST CONTROL.
   G. NO ACTIVITY INVOLVING AN RWCD MANHOLE SHALL OCCUR WITHOUT PRIOR AUTHORIZATION BY RWCD. THIS INCLUDES, BUT IS NOT LIMITED TO, REMOVING THE MANHOLE LID, RIM OR ANY DEVICE HOLDING THE MANHOLE LID OR RIM IN PLACE. CONTACT RWCD'S CONSTRUCTION INSPECTOR AT 480.267.8999 TO COORDINATE.

2. LANDSCAPE NOTES:
   A. TREES TO BE INSTALLED ADJACENT TO ANY RWCD FACILITY SHALL BE PLANTED NO CLOSER THAN 6' FROM THE OUTSIDE EDGE OF ROOT BALL TO THE OUTSIDE EDGE OF RWCD PIPE OR THE OUTSIDE EDGE OF ANY OTHER STRUCTURE, E.G. MANHOLE, DELIVERY STRUCTURE, ETC. RWCD RESERVES THE RIGHT TO MODIFY THIS CONDITION AT ANY TIME PER OUR DISCRETION. CONTACT RWCD'S CONSTRUCTION INSPECTOR AT 480.267.8999 TO COORDINATE.
   B. NO LANDSCAPE SPRINKLERS OR WATER EMITTERS ARE PERMITTED WITHIN 15 FEET OF ANY RWCD DELIVERY STRUCTURE.
   C. THE HOME OWNER'S ASSOCIATION IS RESPONSIBLE TO MAKE REPAIRS TO LANDSCAPING (INCLUDING TREES, GROUND COVER, GRASS, ETC) WHERE IT IS DAMAGED DURING REPAIRS TO RWCD PIPE OR OTHER FACILITIES.
   D. LANDSCAPE BOULDERS SHALL BE KEPT 15' AWAY FROM THE OUTSIDE OF RWCD MANHOLES, TURNOUT STRUCTURES, HEADWALLS, ETC.
   E. LANDSCAPE FACILITIES SHALL ADHERE TO RWCD'S UTILITY CLEARANCE REQUIREMENTS (RWCD DETAIL 41).
   F. LANDSCAPE IRRIGATION MAIN LINES SHALL CROSS UNDER RWCD FACILITIES PER RWCD STANDARD DETAIL 41 AND RWCD GENERAL NOTE SECTION 5. LANDSCAPE IRRIGATION LATERALS (ZONE PIPES DOWNSTREAM OF A CONTROL VALVE) 2" AND SMALLER MAY CROSS OVER THE TOP OF AN RWCD LATERAL PIPE WITH A MINIMUM OF 1' CLEARANCE. LANDSCAPE IRRIGATION LATERAL PIPES THAT ARE OVER 2" IN SIZE, OR THAT DO NOT MEET COVER AND CLEARANCE CRITERIA, SHALL CROSS UNDER THE RWCD LATERAL PER RWCD STANDARD DETAIL 41 AND RWCD GENERAL NOTE 5.

3. CONSTRUCTION SEQUENCE AND REQUIREMENTS:
   A. ALL CONSTRUCTION ACTIVITIES INVOLVING THE MODIFICATIONS AND/OR REPLACEMENT OF RWCD OWNED FACILITIES SHALL BE BONDED AT A FIGURE APPROVED BY THE GENERAL MANAGER. SUCH BOND SHALL BE MADE TO THE BENEFIT OF RWCD AND WILL NOT BE RELEASED UNTIL SUCH TIMES AS THE GENERAL MANAGER OR OTHER AUTHORIZED INDIVIDUAL HAS APPROVED ALL CONSTRUCTION ACTIVITIES FOR COMPLETENESS AND CORRECTNESS.
   B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING IRRIGATION DRY-UPS. CONTACT THE RWCD WATER DEPARTMENT AT 480.988.9586 TO SCHEDULE A DRY-UP.
   C. THE CONTRACTOR SHALL PROVIDE A COPY OF THE FOLLOWING TO THE RWCD INSPECTOR BEFORE THE PIPE IS INSTALLED.
      1) RESULTS OF D-LOAD TEST ON 1% OF THE PIPE LENGTH FOR EACH DAY OF BATCH PRODUCTION.
      2) A CONCRETE CYLINDER BREAK ON 1% OF THE PIPE LENGTH FOR EACH DAY OF BATCH PRODUCTION.
      3) THE DATE OF PIPE MANUFACTURE AND CLASS OF PIPE SHALL APPEAR ON EVERY LENGTH OF PIPE DELIVERED TO THE JOBSITE. ALL PIPE SHALL HAVE A MINIMUM 14 DAYS OF CURE TIME BEFORE INSTALLATION.
   D. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO EXCAVATION AND AVOID DAMAGE TO SAME. CALL 811 OR 602.263.1100 FOR BLUE STAKE TWO WORKING DAYS PRIOR TO DIGGING. IF AN UNIDENTIFIED UTILITY IS ENCOUNTERED DURING CONSTRUCTION, ALL CONSTRUCTION ACTIVITIES SHALL CEASE UNTIL THE UTILITY IS POTHOLED TO VERIFY RWCD CLEARANCE REQUIREMENTS ARE MET AND A PLAN TO RESOLVE CLEARANCE DEFICIENCIES, SUBMITTED BY THE CONTRACTOR, IS ACCEPTED BY RWCD.

LAST UPDATED: 01/30/19

ROOSEVELT WATER CONSERVATION DISTRICT		
RWCD GENERAL NOTES		
SHEET 1 OF 3	MINIMUM REQUIREMENTS AND NOTES	GEN NOTE

   E. THE CONTRACTOR SHALL ENSURE NO CONSTRUCTION DEBRIS IS ALLOWED TO ENTER ANY RWCD DITCH OR FACILITY DURING CONSTRUCTION.
   F. WHEN RELOCATING AN EXISTING RWCD FACILITY, REMOVAL OF THE EXISTING FACILITY SHALL OCCUR ONLY DURING AN RWCD AUTHORIZED DRY-UP AND/OR AFTER THE NEW FACILITY IS OPERATIONAL.
   G. RWCD STRUCTURES ARE TO BE POURED MONOLITHICALLY. SHOULD IT BE NECESSARY TO CONSTRUCT AN RWCD STRUCTURE USING MULTIPLE CONCRETE POURS, THE CONTRACTOR WILL BE REQUIRED TO USE AN RWCD APPROVED METHOD OF WATER STOP ON EACH STRUCTURE THAT IS TO BE CONSTRUCTED USING MULTIPLE CONCRETE POURS. CONTACT RWCD'S CONSTRUCTION INSPECTOR AT 480.267.8999 TO COORDINATE.
   H. GRINDING AND/OR PATCHING OF NEW DELIVERY STRUCTURES, MANHOLES, HEADWALLS, AND RADIAL GATE STRUCTURES OR ANY CONCRETE STRUCTURE TO CORRECT DEFICIENCIES THAT RESULT FROM IMPROPER GRADE SETTING, OR CONSTRUCTION METHODS, OR BREAKAGE DUE TO ANY CIRCUMSTANCES SHALL NOT BE PERMITTED.
   I. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY EXISTING RWCD FACILITY (HEADWALL, PIPE, DITCH,ACCESS ROADS, ETC.) DAMAGED DURING CONSTRUCTION AS DIRECTED BY THE RWCD INSPECTOR. THE REPAIRED FACILITY SHALL BE AT THE LOCATION, EVELATION AND GRADES PRIOR TO CONSTRUCTION OR AS DIRECTED.
   J. RWCD MANHOLES ARE TO BE IDENTIFIED AND PROTECTED AT ALL TIMES BEFORE, DURING AND AFTER CONSTRUCTION. THE CONTRACTOR WILL BE REQUIRED TO INSTALL AT A MINIMUM, TWO (2) 2X4s VERTICALLY ON OPPISTE SIDES OF EACH MANHOLE TO PROVIDE IDENTIFICATION OF THE MANHOLE. CONTACT RWCD'S CONSTRUCTION INSPECTOR AT 480.267.8999 TO COORDINATE.

4. TRENCH EXCAVATION:
   A. TRENCH EXCAVATION, BACKFILLING AND COMPACTION FOR RWCD FACILITIES SHALL BE PER MAG SPEC SECTION 601, OR AS MODIFIED ON THE PLAN. BACKFILLING SHALL NOT BEGIN ON ANY PIPE UNTIL THE LINE HAS BEEN APPROVED BY RWCD'S INSPECTOR. BACKFILLING SHALL CONSIST OF ABC PLACED IN LIFT DEPTHS PER MAG SPEC 601.4.2. ALL OTHER LIFTS SHALL BE A MAX OF TWO (2) FEET. ABC BACKFILL SHALL EXTEND TO TWELVE (12) INCHES ABOVE THE TOP OF THE PIPE. COMPACTION OF THE BEDDING MATERIAL SHALL BE PER MAG SPEC 601.4.5. THE TRENCH BACKFILL SHALL BE THOROUGHLY COMPACTED TO THE DENSITIES ON THE PLAN OR AS SPECIFIED IN MAG SPEC 601.4.4, WHICHEVER IS MORE STRINGENT. MECHANICAL COMPACTION FROM THE BOTTOM OF THE TRENCH TO 1' ABOVE THE PIPE SHALL BE ACCOMPLISHED BY HAND OR WALK BEHIND EQUIPMENT SUCH AS A WACKER OR JUMPING JACK STYLE COMPACTOR, OR OTHER, AS APPROVED BY THE RWCD INSPECTOR. CONTRACTOR MAY SUBSTITUTE 1/2 SACK CLSM PER MAG SPEC SECTION 604 FOR BACKFILL UP TO SPRINGLINE. THE RWCD INSPECTOR MAY REQUIRE THE USE OF VIBRATORY EQUIPMENT IN CONJUNCTION WITH THE PLACEMENT OF CLSM MATERIAL.
   B. COMPACTION TESTS SHALL BE PERFORMED AT ALL STRUCTURES AND AT A MINIMUM OF EVERY 300 FEET ALONG THE PIPE AND AT LOCATIONS SPECIFIED BY THE RWCD INSPECTOR. A RESPONSIBLE PARTY FOR COMPACTION TESTING SHALL BE PRESENT DURING BACKFILLING OF ALL RWCD FACILITIES (INSTALLATIONS AND REMOVALS). COPIES OF THE COMPACTION TESTS ARE TO BE SUBMITTED TO THE RWCD INSPECTOR AT THE CONCLUSION OF EACH DAY.

5. UTILITY CROSSINGS:
   A. CALL THE RWCD INSPECTOR AT 480.267.8999 PRIOR TO MAKING THE UTILITY CROSSING. A PERMIT MAY BE REQUIRED FOR EACH UTILITY THAT CROSSES RWCD FACILITY.
   B. UTILITIES CROSSING RWCD SHALL MEET THE CLEARANCES SHOWN IN RWCD STANDARD DETAIL 41.
   C. WET UTILITIES (IE, WATER, SEWER, ETC.) CROSSING THE NEW RWCD IRRIGATION PIPE SHALL BE CONSTRUCTED PRIOR TO THE RWCD IRRIGATION PIPE.
   D. THERE SHALL BE NO JOINTS IN THE WET UTILITY LINES FOR A DISTANCE OF 8' EITHER SIDE OF THE CENTER OF THE RWCD IRRIGATION PIPE.
   E. WET UTILITIES SHALL BE BACKFILLED WITH 1/2 SACK SLURRY FROM THE UTILITY LINEUP TO 6" BELOW THE RWCD IRRIGATION PIPE FOR 7' EITHER SIDE OF THE CENTERLINE OF THE RWCD PIPE.
   F. WHERE PROPOSED WET UTILITY LINES WILL CROSS AN EXISTING RWCD PIPE LATERAL, THE WET UTILITIES SHALL BE INSTALLED VIA HORIZONTAL EARTH AUGER BORE IN A STEEL CASING PIPE, OR IF THE RWCD PIPE IS PLANNED TO BE REMOVED, THE WET UTILITIES SHALL BE INSTALLED AFTER THE NEW RWCD FACILITY IS OPERATIONAL AND THE OLD RWCD PIPE IS REMOVED. A PROFILE OF THE IRRIGATION PIPE ELEVATIONS SHALL BE SHOWN ON THE PLANS AND MEET THE CLEARANCES SHOWN IN RWCD DETAIL 41.

LAST UPDATED: 01/30/19

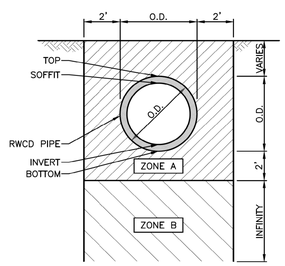
ROOSEVELT WATER CONSERVATION DISTRICT		
RWCD GENERAL NOTES		
SHEET 2 OF 3	MINIMUM REQUIREMENTS AND NOTES	GEN NOTE

   G. WHERE PROPOSED WET UTILITY LINES WILL CROSS AN EXISTING RWCD OPEN DITCH LATERAL AND THE LATERAL WILL BE RELOCATED WITH THE CURRENT PROJECT, THE CONTRACTOR MAY REQUEST A DRY-UP FROM RWCD TO CROSS VIA OPEN CUT. IF A DRY-UP IS NOT AVAILABLE OR IF THE OPEN DITCH LATERAL IS NOT BEING RELOCATED WITH THE CURRENT PROJECT THEN THE PROPOSED WET UTILITY SHALL BE INSTALLED VIA A HORIZONTAL EARTH AUGER BORE IN A STEEL CASING PIPE. A PROFILE OF THE CROSSING SHALL BE PROVIDED AND THE TOP OF CASING PIPE AND OUTSIDE DIAMETER OF THE RWCD IRRIGATION PIPE ELEVATIONS SHALL BE SHOWN ON THE PLANS AND MEET THE CLEARANCES SHOWN IN RWCD DETAIL 41.
   H. DRY UTILITIES MAY BE INSTALLED VIA OPEN CUT TRENCH ACROSS A PROPOSED RWCD LATERAL, IF INSTALLED BEFORE THE RWCD FACILITY IS CONSTRUCTED. IF A DRY UTILITY WILL CROSS AN EXISTING RWCD PIPE OR DITCH THAT WILL REMAIN, THE DRY UTILITY SHALL BE INSTALLED VIA A BORE. BORE PITS SHALL BE LOCATED OUTSIDE ANY RWCD PROPERTY AND SHALL BE LOCATED A SUFFICIENT DISTANCE AWAY FROM THE RWCD FACILITY SUCH THAT THE RWCD FACILITY IS NOT COMPROMISED DURING EXCAVATION OR BORING.
   I. IF ANY EXISTING UTILITY IS FOUND TO HAVE LESS THAN 2 FT OF CLEARANCE TO THE RWCD FACILITIES, THE CONTRACTOR SHALL CONSULT WITH THE RWCD INSPECTOR AND THE OTHER UTILITY COMPANY FOR EVALUATION OF CLEARANCE AND RELOCATION REQUIREMENTS.
   J. UTILITY CROSSINGS AT THE RWCD MAIN CANAL, EXTENSION CANAL OR DRAIN DITCH SHALL BE INSTALLED BY HORIZONTAL EARTH AUGER BORE. NO BORE PITS SHALL BE ALLOWED WITHIN RWCD PROPERTY. ALL UTILITIES SHALL BE ENCASED IN A STEEL CASING. NO UTILITIES SHALL VARY FROM UTILITY CROSSING REQUIREMENTS WITHOUT WRITTEN APPROVAL FROM RWCD.
   K. ALL OVERHEAD WIRES THAT SUSPEND OVER THE RWCD RIGHT OF WAY SHALL HAVE 25 FEET MINIMUM OVERHEAD CLEARANCE

6. RWCD INSPECTION:
   A. CALL THE RWCD INSPECTOR AT 480.267.8999 FOR RWCD INSPECTIONS. THE CONTRACTOR SHALL COORDINATE DAILY WITH THE RWCD INSPECTOR RELATIVE TO WORK ONGOING THAT DAY AND UPCOMING WORK THAT REQUIRES INSPECTION WITHIN THE NEXT 48 HOURS.
   B. THE CONTRACTOR SHALL PROVIDE A SAFE TRENCH FOR THE RWCD INSPECTOR TO INSPECT WORK INCLUDING SHORING AND LADDERS.
   C. CONSTRUCTION STAKING LATH SHALL INCLUDE STATIONING CONSISTENT WITH STATIONING SHOWN ON THE APPROVED IRRIGATION PLANS.
   D. MANHOLE AND STRUCTURE RIM ELEVATIONS MUST BE VERIFIED DURING THE CONSTRUCTION BY A "HUB" PLACED BY SURVEYORS.
   E. RWCD MAY REJECT ANY PART OR PORTION OF THE SUBJECT PIPE AT ANY POINT DURING THE INSTALLATION PROCESS AT ITS SOLE DISCRETION. SUCH DETERMINATION WILL BE BASED ON, AMONG OTHER POINTS, CURRENT ASTM STANDARDS FOR THE PIPE.
7. PROJECT ACCEPTANCE:
   A. THE JOB SITE, AT THE COMPLETION OF THE CONSTRUCTION, SHALL BE CLEANED OF ANY DEBRIS OR SPOIL RESULTING FROM THE CONSTRUCTION INCLUDING REMOVAL OF CONSTRUCTION DEBRIS FROM RWCD DITCHES.
   B. THE OWNER/DEVELOPER SHALL ACQUIRE PRIOR AUTHORIZATION FROM THE RWCD WATER DEPARTMENT AND RWCD INSPECTOR PRIOR TO PERFORMING AN AS-BUILT SURVEY. MANHOLE LIDS MUST BE TAKEN OFF BY PIPELINE CONTRACTOR. A NO-FEE DRY-UP IS REQUIRED FOR AS-BUILT SURVEY.
   C. THE OWNER/DEVELOPER SHALL PROVIDE CERTIFIED AS-BUILTS FOR THE LOCATION, ELEVATION AND SIZE OF ALL RWCD FACILITIES FOR RWCD RECORDS PRIOR TO RELEASING THE PROJECT BOND.
8. RWCD GENERAL NOTES:
   A. RWCD'S GENERAL NOTES ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION AT ANY TIME PER OUR DISCRETION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE CONFORMANCE TO THE LATEST RWCD GENERAL NOTES. CONTACT RWCD'S CONSTRUCTION INSPECTOR AT 480.267.8999 TO RECEIVE THE MOST RECENT RWCD GENERAL NOTES.

LAST UPDATED: 01/30/19

ROOSEVELT WATER CONSERVATION DISTRICT		
RWCD GENERAL NOTES		
SHEET 3 OF 3	MINIMUM REQUIREMENTS AND NOTES	GEN NOTE



UTILITY CLEARANCE REQUIREMENTS
NTS

NOTES:

ZONE A: NO UTILITIES* PERMITTED WITHIN THIS ZONE.

ZONE B: NO LONGITUDINAL UTILITIES PERMITTED WITHIN THIS ZONE. CROSSING UTILITIES PERMITTED WITH CROSSING PERMIT ISSUED BY RWCD. CONTACT RWCD INSPECTOR AT 480.267.8999 FOR CROSSING PERMIT.

O.D. = OUTSIDE DIAMETER OF THE BARREL OF THE PIPE.

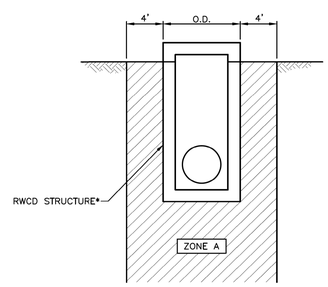
CLEARANCE SHALL ACCOUNT FOR PIPE THICKNESS.

PIPE SIZE (IN)	PIPE THICKNESS (IN)
30"	4.5"
36"	5"
42"	5.5"

*UTILITIES INCLUDE ANY WATER LINE, SEWER LINE, RECLAIMED WATER LINE, GAS LINE, ELECTRICAL LINE, LANDSCAPE IRRIGATION LINE, COMMUNICATIONS LINE, ETC.

LAST UPDATED: 01/30/19

ROOSEVELT WATER CONSERVATION DISTRICT		
UTILITY CLEARANCE REQUIREMENTS		
SHEET 1 OF 3	MINIMUM REQUIREMENTS AND NOTES	RWCD-41



UTILITY CLEARANCE REQUIREMENTS
NTS

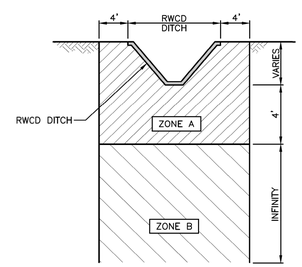
NOTES:

ZONE A: NO UTILITIES PERMITTED WITHIN THIS ZONE.

*RWCD STRUCTURE IS DEFINED AS A TURNOUT STRUCTURE, MANHOLE, HEADWALL, ETC.

LAST UPDATED: 03/06/2013

ROOSEVELT WATER CONSERVATION DISTRICT		
UTILITY CLEARANCE REQUIREMENTS		
SHEET 2 OF 3	MINIMUM REQUIREMENTS AND NOTES	RWCD-41



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LAST UPDATED: 01/30/19

ROOSEVELT WATER CONSERVATION DISTRICT		
UTILITY CLEARANCE REQUIREMENTS		
SHEET 3 OF 3	MINIMUM REQUIREMENTS AND NOTES	RWCD-41

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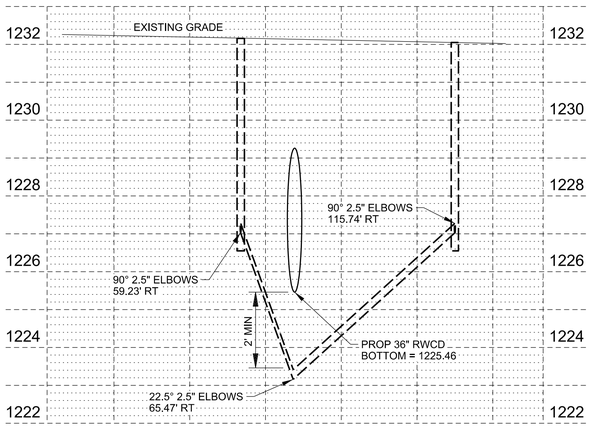
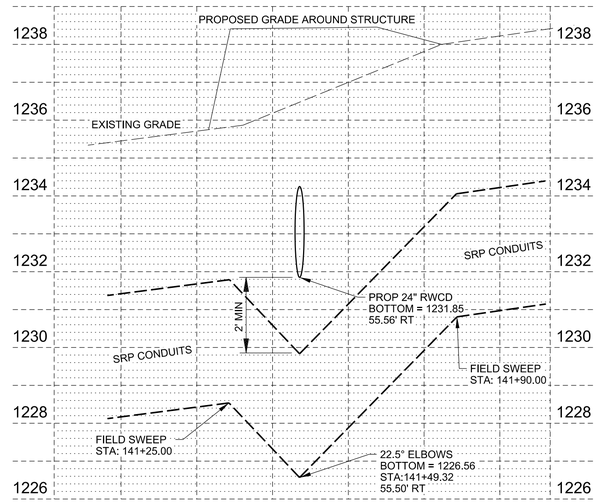
SHEET NUMBER 16 OF 17

SALT RIVER PROJECT PROPRIETARY

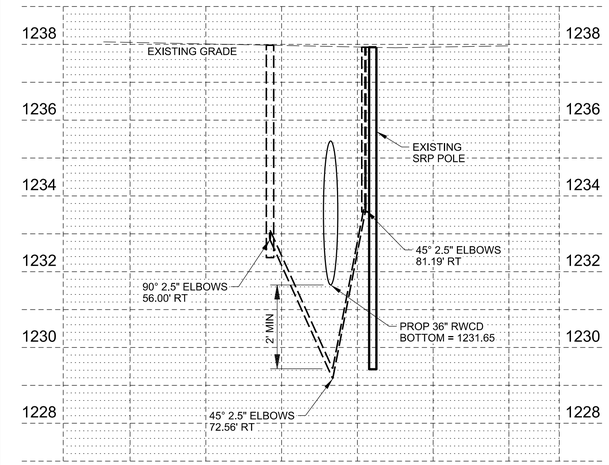
PROFILE RWCD CROSSING - LOOKING EAST
STA: 128+18.74



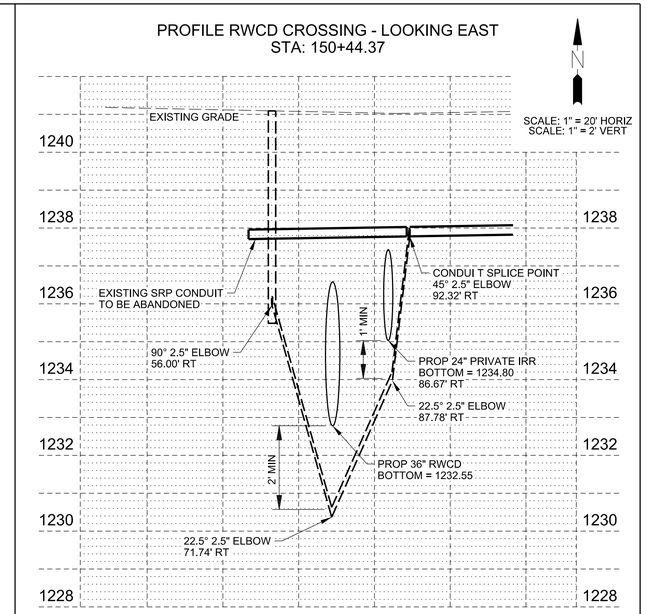
PROFILE RWCD CROSSING - LOOKING NORTH
STA: 141+49.32



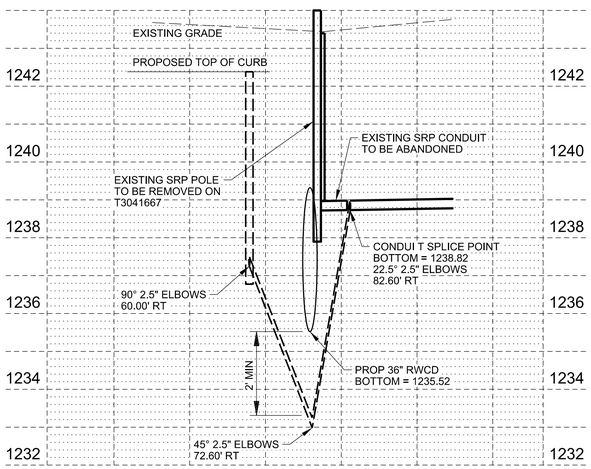
PROFILE RWCD CROSSING - LOOKING EAST
STA: 142+09.88



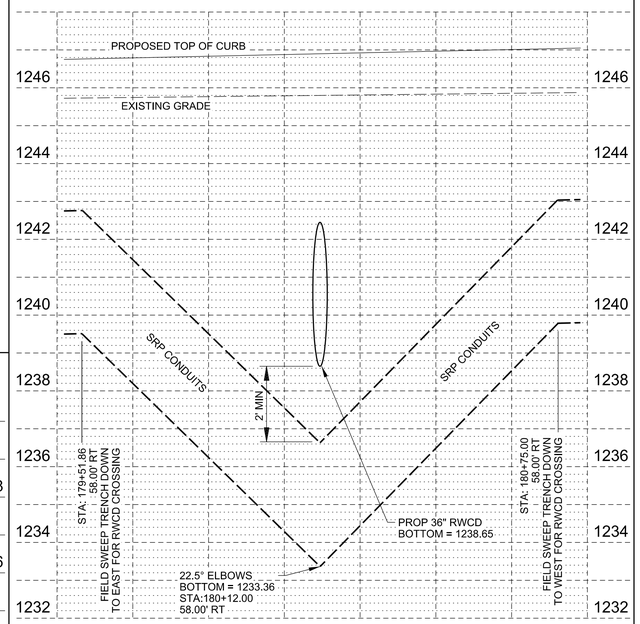
PROFILE RWCD CROSSING - LOOKING EAST
STA: 150+44.37



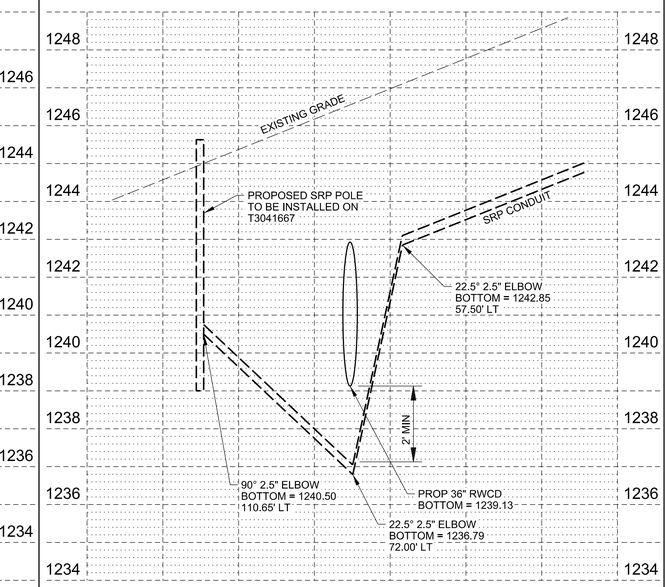
PROFILE RWCD CROSSING - LOOKING EAST
STA: 159+78.82



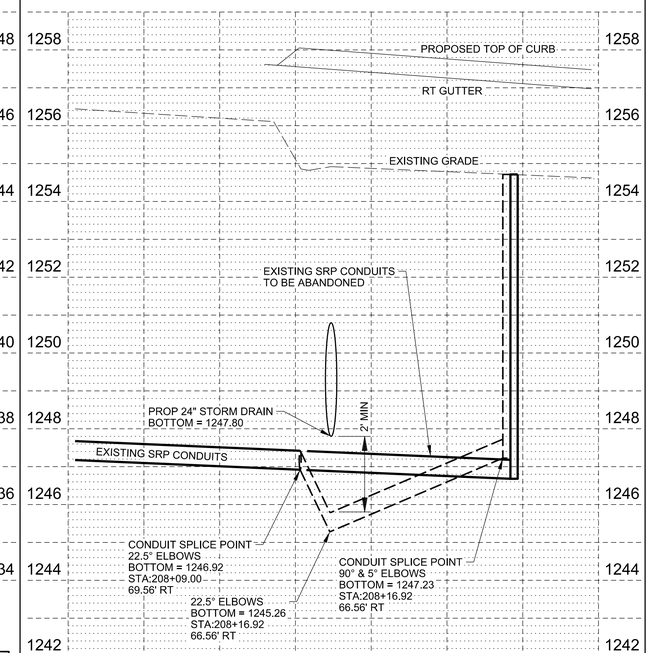
PROFILE RWCD CROSSING - LOOKING NORTH
AT STA: 180+12.00



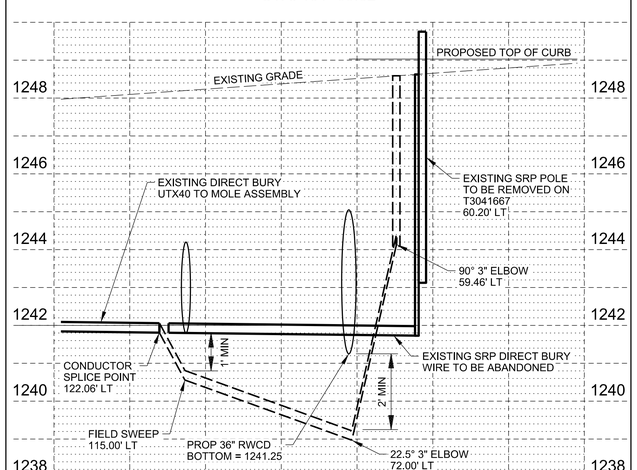
PROFILE RWCD CROSSING - LOOKING EAST
AT STA: 181+88.40



PROFILE STORM DRAIN CROSSING - LOOKING NORTH
AT STA: 208+17.17



PROFILE RWCD CROSSING - LOOKING EAST
STA: 191+63.02



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INSPECTIONS:
OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT CNV
ADDRESS/LOCATION CHANDLER HEIGHTS RD FROM MCQUEEN TO GILBERT
CONTACT CITY OF CHANDLER - DENNIS AUST PHONE 480-782-3315
BILLING ACCT NO.
FIS JO MAP 1/4SE S 24T 2SR 5E
40 ACRE YE-24-16 COORDS 29 13/16E 9 15/16S
AMP WO T3041444 AMP VERSION

Contact Arizona 811 at least two full working days before you begin excavation
Call 811 or click Arizona811.com

COST CENTER 22660
ROUTING CODE DD1.5CSI+0

SHEET NUMBER 17 OF 17

INDEX

- SHEET 1 - COVER SHEET
- SHEETS 2 TO 9 - MAINLINE
- SHEET 10 - SRP DETAILS

CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT ST/LT
MCQUEEN RD TO GILBERT RD
CITY PROJECT NO. ST1614.401
SRP JOB# T3135404

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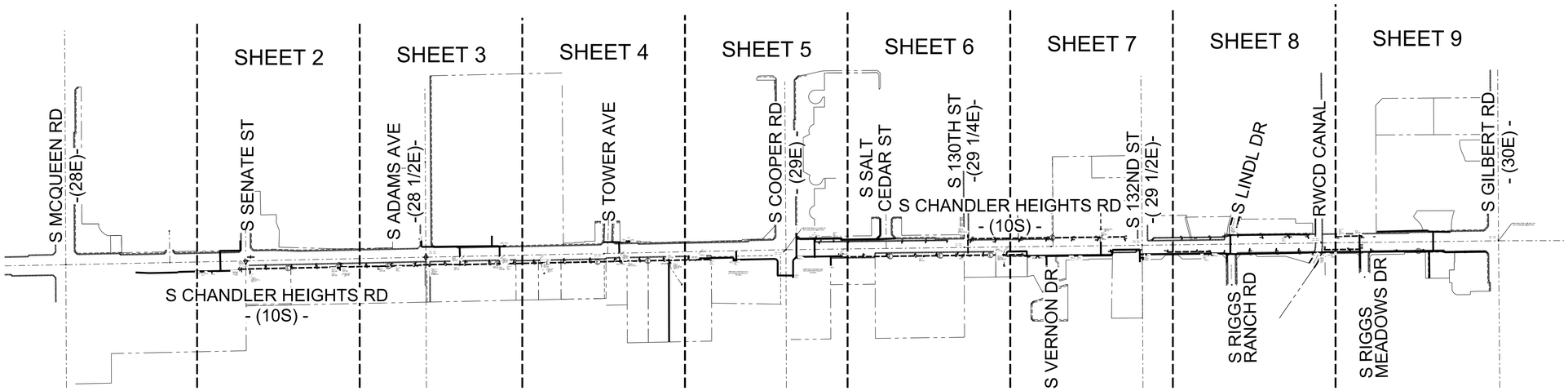

THIS PROJECT REQUIRES BUY AMERICA COMPLIANCE

CONTRACT CIVIL/CONDUIT CREW:

OBTAIN THESE SRP STANDARD DETAILS NEEDED TO CORRECTLY CONSTRUCT THIS JOB. THEY CAN BE FOUND UNDER "UNDERGROUND DISTRIBUTION CONTRUCTION STANDARDS" AT:

https://srpnet.com/menu/electricbiz/specs.aspx

- 8513E112.DGN - GROUND ROD ASSEMBLY
- 8513E135.DGN - TRENCHING
- 8513E123.DGN - 9' x 9' MANHOLE, CABLE RACKING
- 8513E356.DGN - 2/0 BARE COPPER NEUTRALS MANHOLE CONNECTIONS
- 8513E168.DGN - 750 MCM FEEDER PULLING ENCLOSURE
- 8513E1.DGN - CONDUIT ELBOW REINFORCEMENT DETAILS
- 8513E196.DGN - DIRECT BURIED CONDUIT
- 8513E500.DGN - CABLE END MOISTURE SEAL
- 8513E111.DGN - GUARD POST
- 8513E189.DGN - FEEDER RISER POLE MOUNTED DISCONNECTS
- 8513E12.DGN - SPOOL-DUCT OR PVC TO SPOOL-DUCT JOINT
- 8513E174.DGN - SPOOLED DUCT AND CONDUIT STUB-OUTS
- 8513E102.DGN - 5' x 3' x 3' PULL BOX FLUSH MOUNT (LOAD BEARING)

GENERAL NOTES:

1. CUSTOMER TO PROVIDE TRENCH, CONDUIT, J-BOXES, BLUE TOP AT THE EQUIPMENT LOCATIONS AND THE STAKING OF STREETLIGHT LOCATIONS.
2. ALL STREET LIGHT LOCATIONS TO BE STAKED BY CONTRACTOR PER CITY OF CHANDLER APPROVED STREET LIGHT PLANS. SRP J-BOX TO BE LOCATED WITHIN 15' OF STREET LIGHT LOCATIONS.
3. STREET LIGHT LOCATIONS ARE SHOWN FOR REFERENCE ONLY. CUSTOMER IS RESPONSIBLE FOR STAKING STREET LIGHT LOCATIONS PER THE APPROVED STREET LIGHT PLANS.
4. STREETLIGHT CONDUIT TO BE INSTALLED ON T3041444. THIS JOB TO INSTALL STREETLIGHT J-BOXES, CONDUCTOR, & MOLE ASSEMBLIES.

Civil Engineering Utility Company Notes (Supplemental Conditions of Approval)

Chandler · Arizona
Where Value Adds The Difference

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT M.A.G. STANDARD SPECIFICATIONS AND DETAILS AS SUPPLEMENTED BY THE CITY OF CHANDLER.
2. THE CITY ENGINEER'S OFFICE SHALL BE NOTIFIED VIA EMAIL A MINIMUM OF 24 HOURS PRIOR TO STARTING EACH PHASE OF CONSTRUCTION TO PERMIT.NOTIFICATION@CHANDLERAZ.GOV. IF SUBCONTRACTORS ARE EMPLOYED, THEY SHALL BE IDENTIFIED AT THIS TIME. EMERGENCY WORK PERFORMED AFTER NORMAL WORK HOURS SHALL BE REPORTED TO THE POLICE DISPATCHER AT (480) 782-4132.
3. ALL STREET CROSSINGS SHALL BE BORED USING HORIZONTAL DIRECTIONAL DRILLING (H.D.D.) IN ACCORDANCE WITH M.A.G. SECTION 608 AND CITY OF CHANDLER SUPPLEMENTAL SPECIFICATIONS UNLESS APPROVAL TO OPEN CUT HAS BEEN RECEIVED FROM THE CITY ENGINEER AND SUCH APPROVAL HAS BEEN NOTED ON THE PERMIT. ALL PAVEMENT REPLACEMENT SHALL BE IN ACCORDANCE WITH M.A.G. STANDARD DETAIL 200, "T" TOP, WITH FULL DEPTH ABC BACKFILL.
4. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE CHANDLER TRAFFIC BARRICADE MANUAL. TRAFFIC RESTRICTIONS ARE NOT PERMITTED ON ARTERIALS AND MAJOR COLLECTORS PRIOR TO 8:30 A.M. OR AFTER 4 P.M.
5. RESTRICTIONS IN ALLEYS WILL BE COORDINATED IN ADVANCE WITH THE SOLID WASTE SERVICES DIVISION (480) 782-3510.
6. PERMITS ARE REQUIRED FOR ALL WORK IN CITY RIGHTS-OF-WAY. A COPY OF THE PERMIT AND APPROVED PLAN SHALL BE AVAILABLE AT THE JOB SITE. FAILURE TO SECURE PERMITS PRIOR TO STARTING CONSTRUCTION WILL RESULT IN THE ASSESSMENT OF PENALTY FEES.
7. ALL WORK IN THE RIGHT-OF-WAY SHALL BE COMPACTION TESTED AND RESULTS KEPT ON FILE FOR A MINIMUM OF ONE YEAR.
8. ANY DAMAGE TO IRRIGATION SYSTEMS WITHIN THE CITY RIGHT-OF-WAY SHALL BE REPAIRED, WITHIN 48 HOURS OF SAID DAMAGE, TO PREVENT LOSS OF LANDSCAPE MATERIAL.
9. WHEN TRENCHING IN ALLEYS, ALL TRENCH SPOIL SHALL BE REMOVED FROM THE AREA AND ALL TRENCH BACKFILL SHALL BE AGGREGATE BASE IN CONFORMANCE WITH M.A.G. SECTION 702.2 AND INSTALLED PER SECTION 601.4.4, BACKFILL TYPE I (PER TABLE 601-2). A MINIMUM OF 24" DEPTH OF COVER SHALL BE MAINTAINED BY ALL UNDERGROUND FACILITIES INSTALLED IN THE ALLEY AND THE ALLEY SURFACE OVER AND ADJACENT TO THE TRENCH SHALL BE NEAT AND CLEAN OF ALL SPOIL.

   EXCEPTION: IF A TRENCH IS 24" WIDE OR WIDER, NATIVE MATERIAL MAY BE USED AS BACKFILL TO WITHIN 6" OF FINISHED GRADE AND INSTALLED PER MAG SECTION 601.4.4, BACKFILL TYPE I (PER TABLE 601-2). THE TOP 6" OF THE TRENCH BACKFILL SHALL BE COMPLETED WITH AGGREGATE BASE. ALL TRENCH SPOILS ADJACENT TO THE TRENCH SHALL BE REMOVED FROM THE AREA AND THE ALLEY LEFT IN A NEAT AND CLEAN CONDITION.
10. WHEN CONTRACTORS OR UTILITY COMPANIES CALL IN FOR BLUESTAKING OR CONSTRUCTION AREAS, "SEMI-PERMANENT", OR APPROVED ALTERNATE 3-6 MONTH DURATION BLUE-STAKE PAINT SHALL BE SPECIFIED. IN ADDITION, "STAKE CHASERS" WILL BE SPECIFIED FOR MARKING ACROSS LANDSCAPED YARDS/AREAS.

    UTILITY COMPANIES OR CONTRACTORS FOR UTILITY COMPANIES THAT EMPLOY INDISCRIMINATE/EXCESSIVE BLUE-STAKE MARKING ACROSS RESIDENTIAL/BUSINESS DRIVEWAYS OR YARDS WILL BE RESPONSIBLE FOR RESTORING RIGHT-OF-WAY, UTILITY EASEMENT, AND/OR ADJOINING PROPERTY OWNERS AREA TO ITS ORIGINAL UNMARKED CONDITION.

    EXCEPTION: FOR LONG DURATION CONSTRUCTION PROJECTS ON MAJOR ARTERIALS OR MAJOR STREETS, OR CERTAIN SPECIALTY TYPE CONSTRUCTION PROJECTS, THE CONTRACTOR/UTILITY COMPANY MAY ASK THE CITY ENGINEER FOR APPROVAL TO USE LONGER DURATION BLUE-STAKE PAINT. IN ADDITION, IF THE REMOVAL OF "STAKE CHASERS" OCCURS OR IS EXPECTED TO RESULT, THE CONTRACTOR/UTILITY COMPANY MAY ASK THE CITY ENGINEER FOR APPROVAL TO USE BLUE-STAKE PAINT MARKING ACROSS LANDSCAPED AREAS.
11. UTILITY CLEARANCE REQUIREMENTS: ANY AND ALL MORE STRINGENT SEPARATION REQUIREMENTS REQUIRED BY FEDERAL, STATE, OR LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

    A SIX-FOOT MINIMUM HORIZONTAL SEPARATION FROM THE EXTERIOR WALL OF ANY UNDERGROUND DRY UTILITY SHALL BE PROVIDED TO THE EXTERIOR WALL OF WATER AND SEWER MAINS. ALL FIRE LINES, REGARDLESS OF SIZE (INCLUDING HYDRANTS AND OTHER FIRE SERVICE CONNECTIONS) ARE CONSIDERED MAINS.

    A THREE-FOOT MINIMUM HORIZONTAL SEPARATION FROM THE EXTERIOR WALL OF ANY UNDERGROUND DRY UTILITY SHALL BE PROVIDED TO THE EXTERIOR WALL OF WATER AND SEWER SERVICES. REFER TO M.A.G. SECTION 608 AND CITY OF CHANDLER SUPPLEMENTAL SPECIFICATIONS FOR HORIZONTAL DIRECTIONAL DRILLING (H.D.D.) CLEARANCE REQUIRMENTS.

    A TWO-FOOT MINIMUM VERTICAL SEPARATION FROM THE EXTERIOR WALL OF ANY UNDERGROUND DRY UTILITY SHALL BE PROVIDED TO THE EXTERIOR WALL OF ANY WET UTILITIES.

    FOR ADDITIONAL INFORMATION REGARDING STANDARD UTILITY LOCATIONS REFER TO THE CITY OF CHANDLER STANDARD DETAILS AND SPECIFICATIONS, STREET SERIES, C-200 – C-259.

    DEPTH REQUIREMENTS SHALL BE IN ACCORDANCE WITH CITY OF CHANDLER MINIMUM COVER REQUIREMENTS OR AT THE DISCRETION OF THE CITY ENGINEER.

Mailing Address:
P.O. Box 4008, MS 403
Chandler, Arizona 85244-4008

Transportation and Development Department
Engineering Division
Utilities Section
215 E. Buffalo St., Chandler Arizona

Telephone: (480) 782-3000
www.chandleraz.gov

Form No: UDM-019Civil
Rev: 3-16-16

NOTICE

THIS JOB ORDER INVOLVES OVERHEAD, UNDERGROUND AND / OR SERVICES

OVERHEAD# T3041667
OH RELOC#
UG STREETLIGHT# T3135404
UNDERGROUND# T3041444

CONTACTS:

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MOBILE:(480)221-4841

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VINCE SILVESTRO
MOBILE:(602)809-9494

INSPECTIONS:
OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

PROJECT NOTES

SRP ELECTRIC SERVICE SPECIFICATIONS ARE AVAILABLE ON-LINE AT: HTTP://WWW.SRPNET.COM/ELECTRIC/BUSINESS/SPECS

GRAPHIC SYMBOLS

- PROPOSED UNDERGROUND TRENCH/BORE
- UNDERGROUND SECONDARY CONDUCTOR
- UNDERGROUND SERVICE CONDUCTOR
- UNDERGROUND STREETLIGHT CONDUCTOR
- EXISTING UNDERGROUND TRENCH/BORE
- CONDUIT DUCT BANK CONFIGURATION
- INDICATES ABANDONMENT
- A—A MATCHLINES

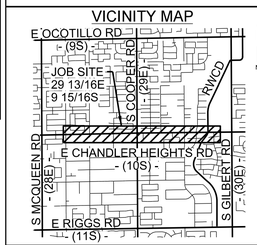
(SHADED SYMBOL INDICATES EXISTING FACILITY)

- A OPEN BAR INDICATES PROPOSED FACILITIES
- NO BAR INDICATES EXISTING FACILITIES
- PROPOSED SINGLE-PHASE TRANSFORMER
- PROPOSED THREE-PHASE TRANSFORMER
- F PROPOSED FUSING ENCLOSURE
- S PROPOSED SWITCHING ENCLOSURE
- S4 PROPOSED 4-WAY SWITCH ENCLOSURE
- P PROPOSED 1 PHASE PULLING ENCLOSURE
- P3 PROPOSED 3 PHASE/FEEDER PULLING ENCLOSURE
- T3 PROPOSED 4/0 PRIMARY TAP ENCLOSURE

TYPICAL SRP ABBREVIATIONS
C = CONSTRUCT
R = REMOVE
T = TRANSFER
A = ABANDON
F/SW = FRONT OF SIDEWALK
B/SW = BACK OF SIDEWALK
B/C = BACK OF CURB
E/P = EDGE OF PAVEMENT
R/W = RIGHT OF WAY

- C PROPOSED CAPACITOR BANK
- PROPOSED MANHOLE
- PROPOSED RISER
- PROPOSED J-BOX
- SERVICE ENTRANCE SECTION
- PB PROPOSED PULLBOX
- SPLICE POINT
- PROPOSED STREET LIGHT
- INDICATES REMOVAL
- EM ELECTRONIC MARKER
- 00 WORK POINT NUMBER

VICINITY MAP



FIELD INSTALLATION STAMP

SURVEY AND PERMIT INFORMATION

- ☐ SRP SURVEY TO STAKE FOR LOCATION AND TIE FOR EASEMENTS. CUSTOMER CONTROL POINTS REQUIRED: YES☐ NO☐
- ☐ CUSTOMER'S SURVEY TO STAKE FOR LOCATION/CONSTRUCTION AND TIE FOR EASEMENTS. CUSTOMER'S SURVEYOR MUST ATTEND PRE-CON MEETING.
- ☐ SRP SURVEY TO STAKE FOR LOCATION, NO EASEMENT REQUIRED.
- ☐ 3RD PARTY EASEMENT REQUIRED.
- ☐ NO SURVEY REQUIRED.
- ☐ PERMIT REQUIRED: CITY OF_____ COUNTY_____ OTHER_____ PERMIT NO._____
- ☐ NO PERMIT REQ.

REV	REVISED BY	DATE	REVISION DESCRIPTION
4			
3			
2			
1			
0	DXCALDER	09/29/2021	PLANS TO CUSTOMER

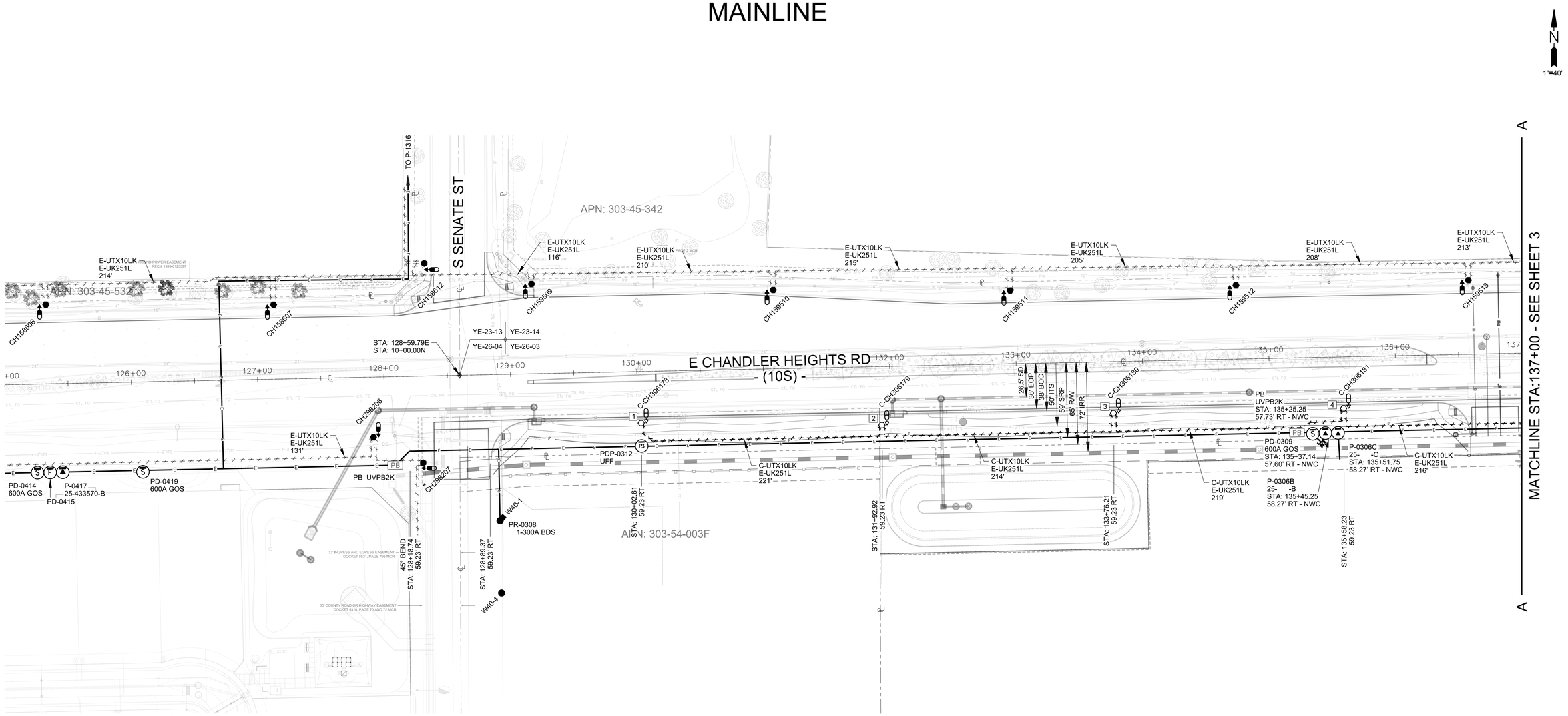
NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT ST/LT
ADDRESS/LOCATION CHANDLER HEIGHTS RD:MCQUEEN-GILBERT, CHANDLER
CONTACT CITY OF CHANDLER - DENNIS AUST PHONE 480-782-3315
BILLING ACCT NO. _____
FIS JO _____ MAP 1/4SE S 24T 2SR 5E
40 ACRE YE-24-16 COORDS 29 13/16E 9 15/16S
AMP WO T3135404 AMP VERSION _____
COST CENTER 22660
ROUTING CODE DD1.5CSI+0

Contact Arizona 811 at least two full working days before you begin excavation
Call 811 or click Arizona811.com

SHEET NUMBER 1 OF 10

MAINLINE



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INSPECTIONS:
OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

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BILLING ACCT NO.
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COST CENTER 22660
ROUTING CODE DD1.5CSI+0

SHEET NUMBER 2 OF 10

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SALT RIVER PROJECT PROPRIETARY

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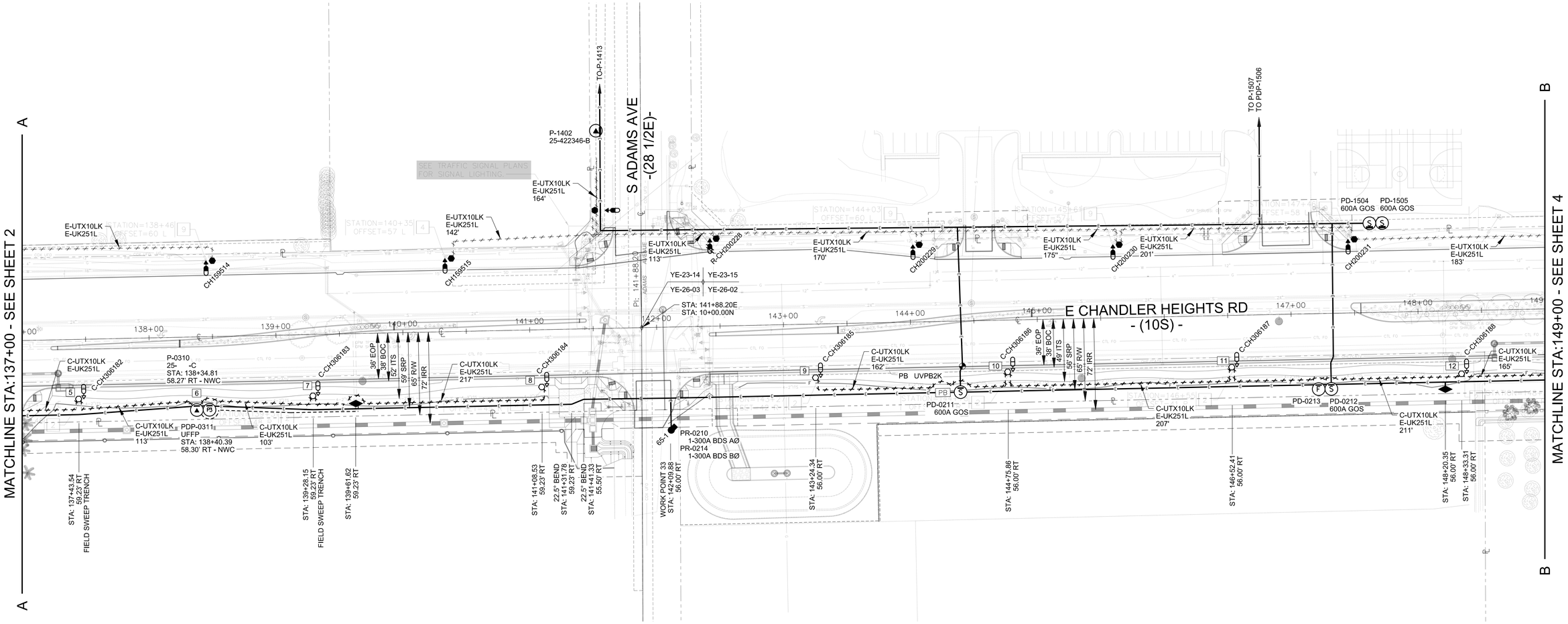

FIELD INSTALLATION STAMP

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OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT ST/
ADDRESS/LOCATION CHANDLER HEIGHTS RD:MCQUEEN-GILBERT, CHANDLER
CONTACT CITY OF CHANDLER - DENNIS AUST PHONE 480-782-3315
BILLING ACCT NO.
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SHEET NUMBER 3 OF 10

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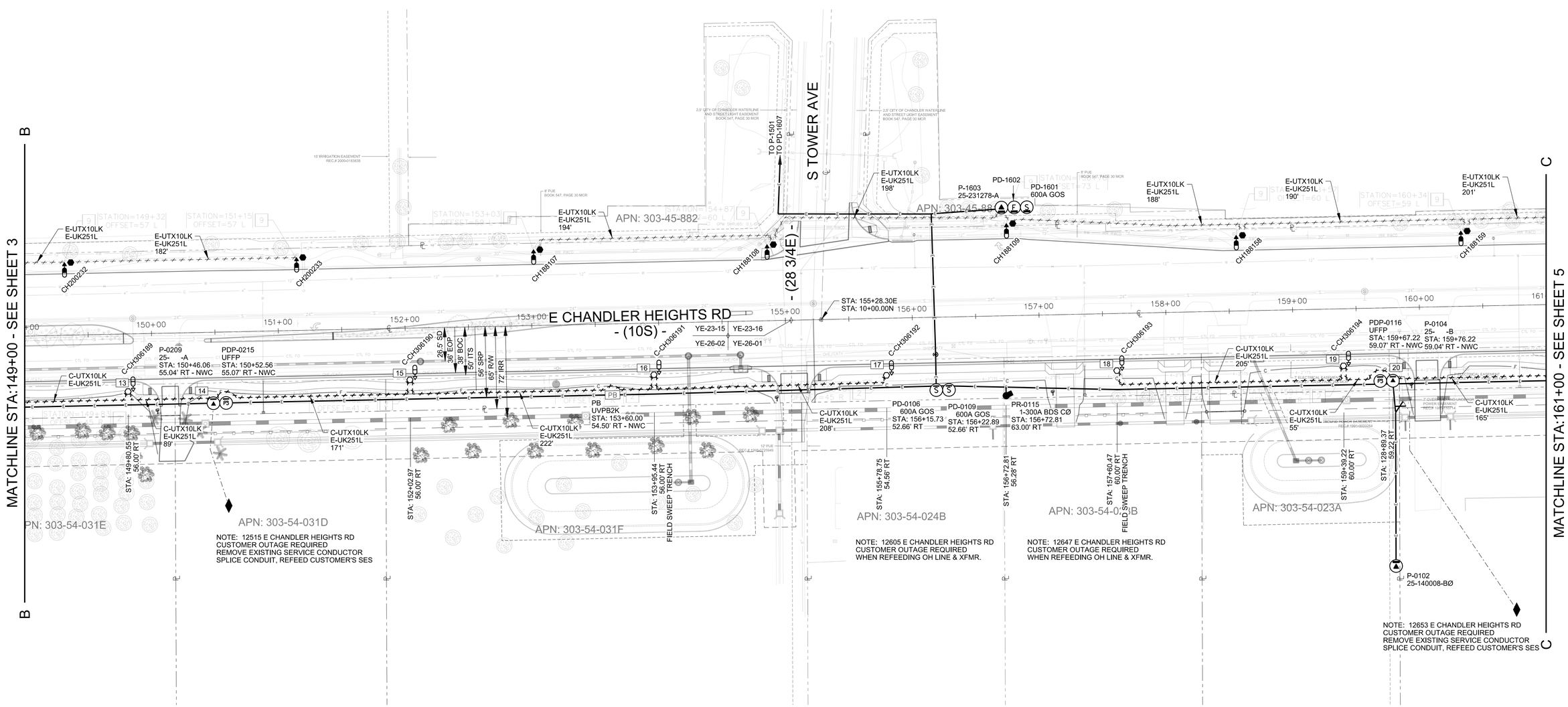

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FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

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ADDRESS/LOCATION CHANDLER HEIGHTS RD:MCQUEEN-GILBERT, CHANDLER
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COST CENTER 22660
ROUTING CODE DD1.5CSI+0

SHEET NUMBER 4 OF 10

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SALT RIVER PROJECT PROPRIETARY

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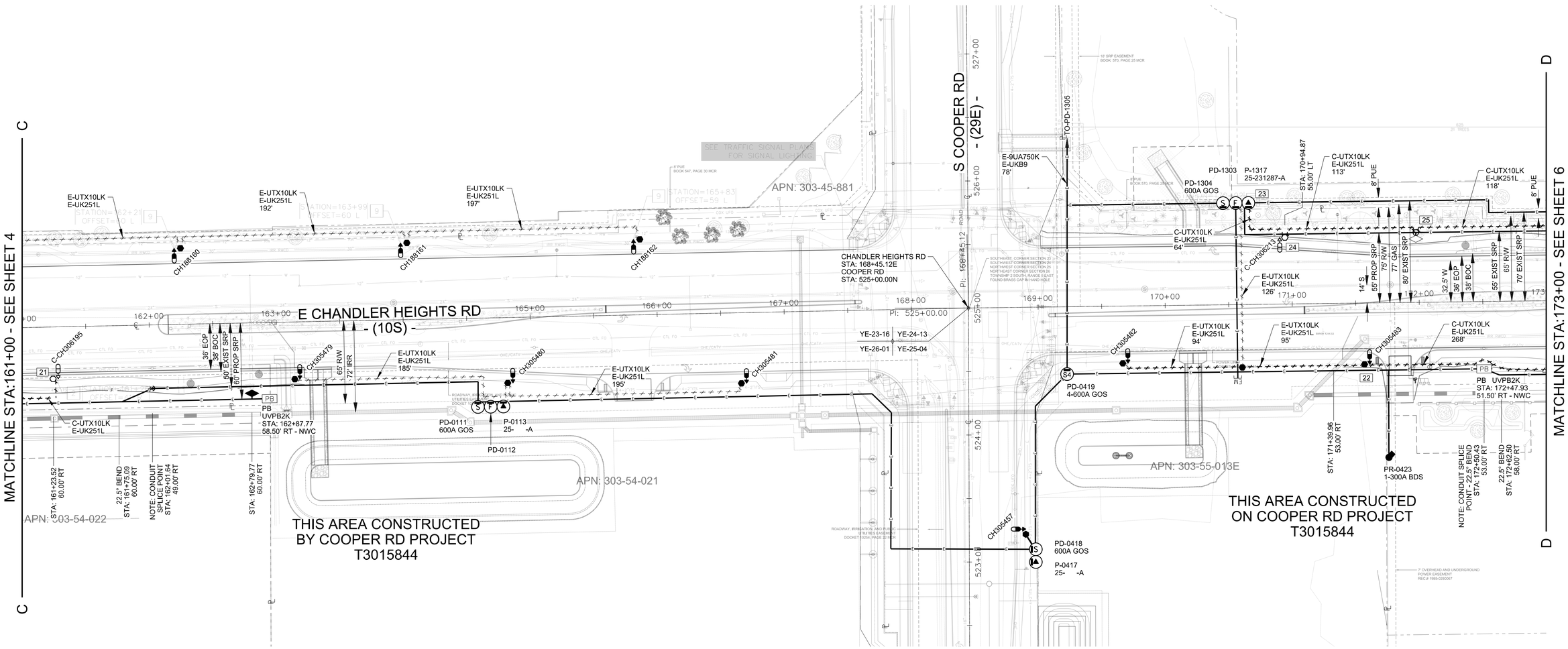

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FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT ST/RT
ADDRESS/LOCATION CHANDLER HEIGHTS RD:MCQUEEN-GILBERT, CHANDLER
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SHEET NUMBER 5 OF 10

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SALT RIVER PROJECT PROPRIETARY

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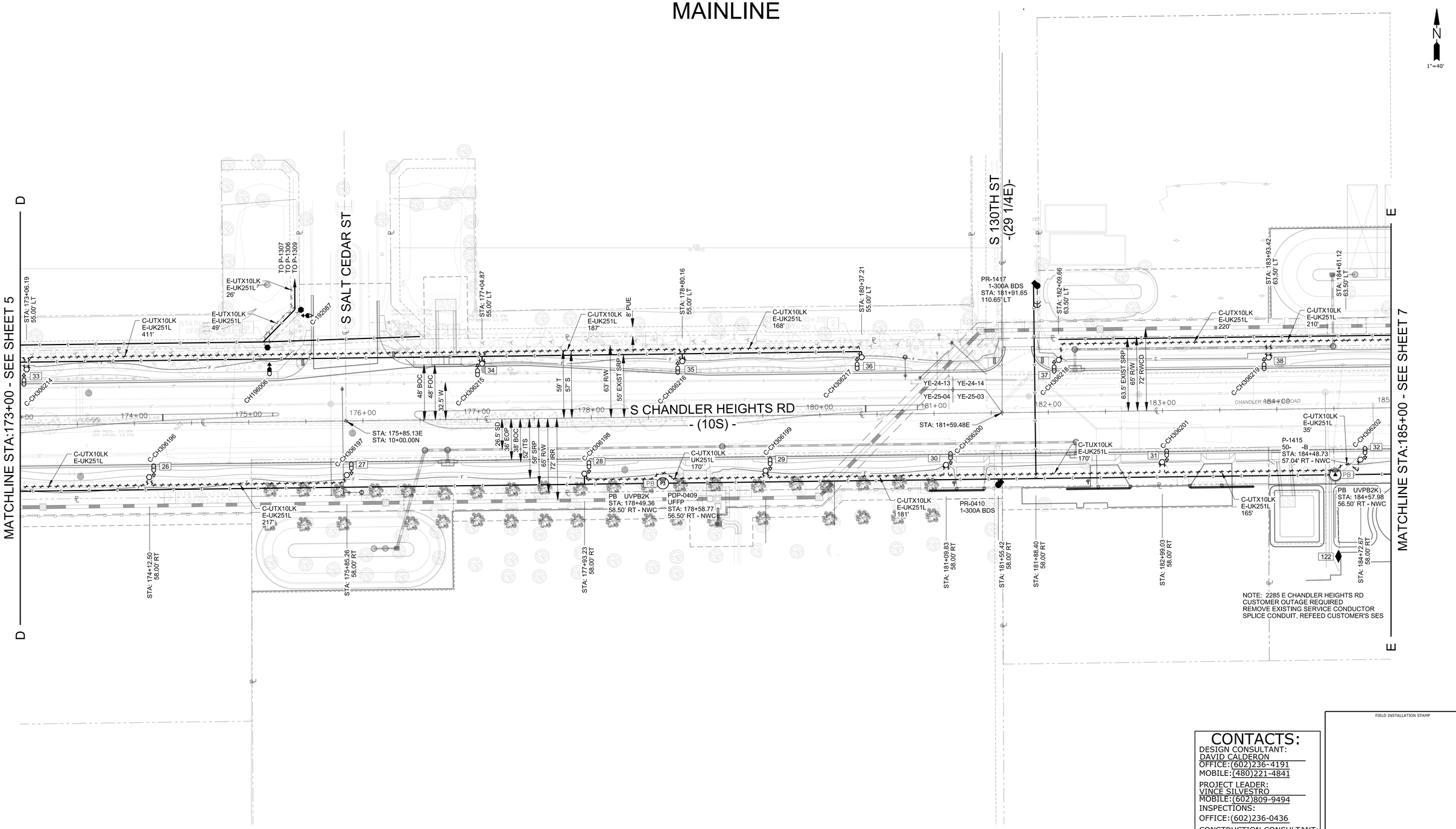

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FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

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SHEET NUMBER 6 OF 10

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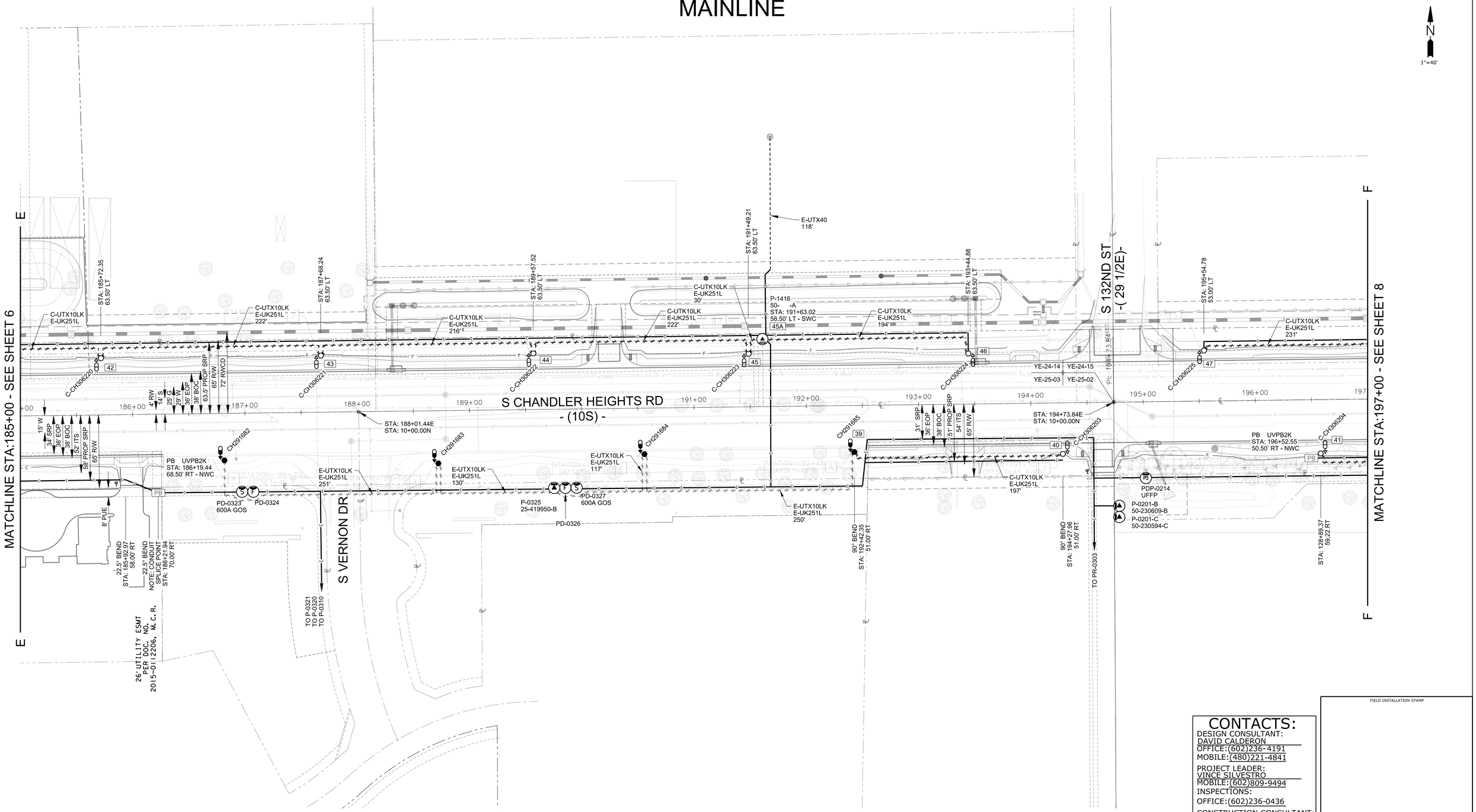

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MOBILE:(602)402-0858

FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT ST/
ADDRESS/LOCATION CHANDLER HEIGHTS RD:MCQUEEN-GILBERT, CHANDLER
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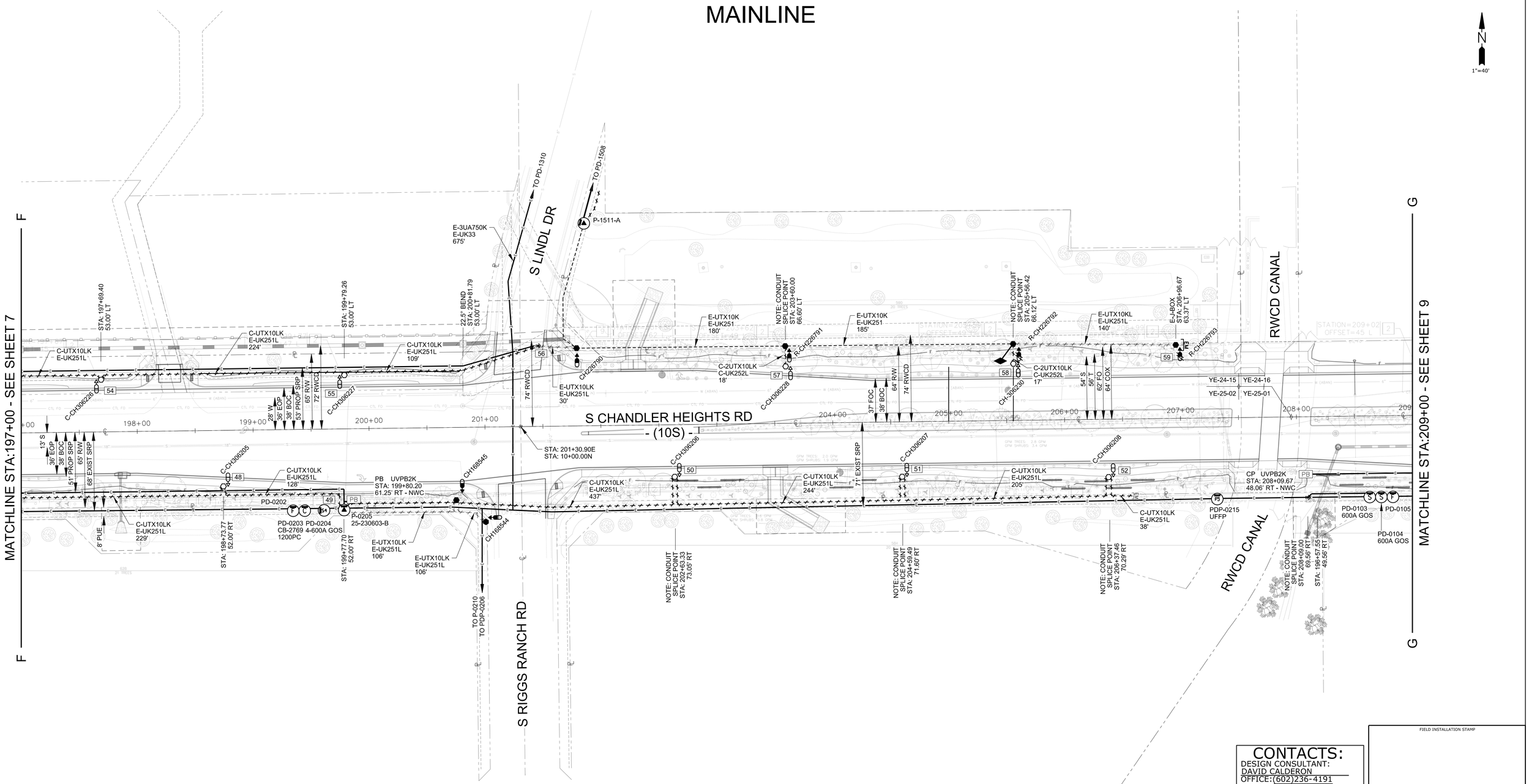
SHEET NUMBER 7 OF 10

MAINLINE



CONTACTS:

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MOBILE:(480)221-4841

PROJECT LEADER:
VINCE SILVESTRO
MOBILE:(602)809-9494

INSPECTIONS:
OFFICE:(602)236-0436

CONSTRUCTION CONSULTANT:
JOE CORDEIRO
MOBILE:(602)402-0858

FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

JOB NAME CUS UE BA CHANDLER HEIGHTS RD IMPRV:MCQUEEN-GILBERT ST/LT
ADDRESS/LOCATION CHANDLER HEIGHTS RD:MCQUEEN-GILBERT, CHANDLER
CONTACT CITY OF CHANDLER - DENNIS AUST PHONE 480-782-3315
BILLING ACCT NO.
FIS JO MAP 1/4SE S 24T 2SR 5E
40 ACRE YE-24-16 COORDS 29 13/16E 9 15/16S
AMP WO T3135404 AMP VERSION

Contact Arizona 811 at least two full working days before you begin excavation
Call 811 or click Arizona811.com

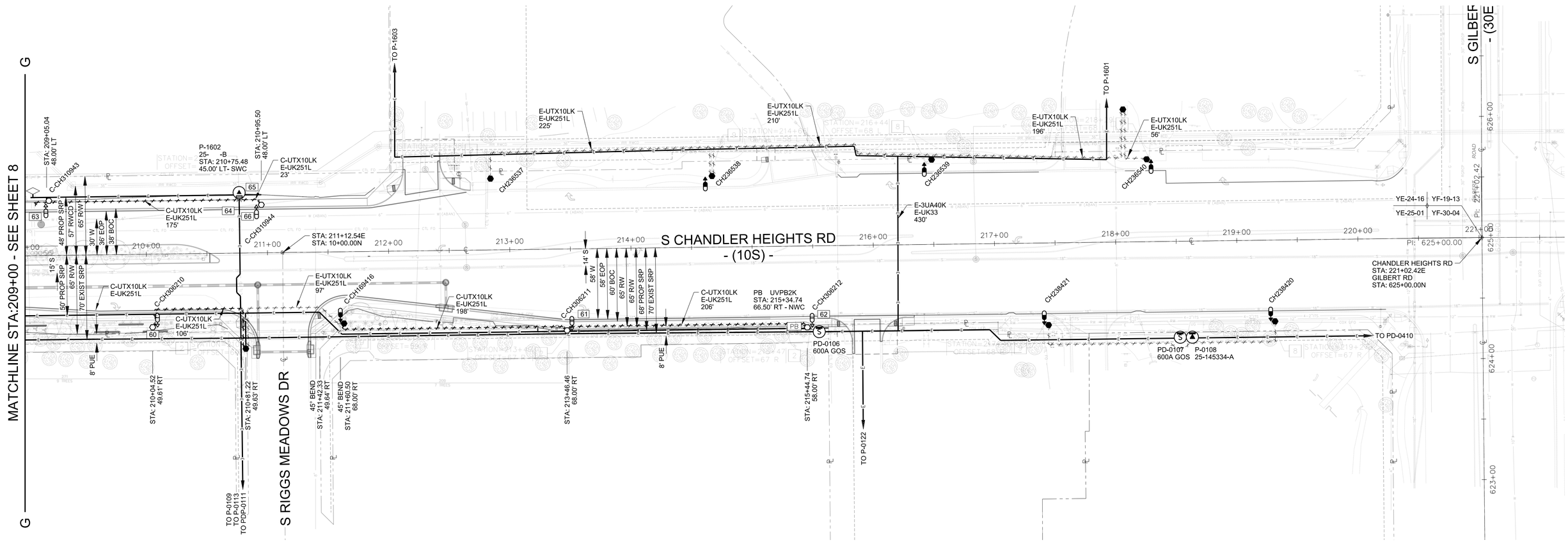
COST CENTER 22660
ROUTING CODE DD1.5CSI+0

SHEET NUMBER 8 OF 10

First Page 22x34.JD2 01-23-2019

SALT RIVER PROJECT PROPRIETARY

MAINLINE



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FIELD INSTALLATION STAMP

NATURAL GAS YES ☐ NO ☐

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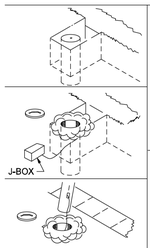
SHEET NUMBER 9 OF 10

First Page 22x34.JD2 01-23-2019

SALT RIVER PROJECT PROPRIETARY

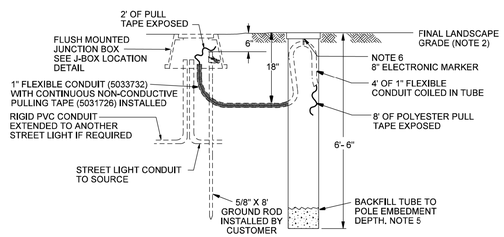


SONOTUBE INSTALLATION

1. Dig hole for tube in street light stub-out trench.
2. Install tube flush to final landscape grade.
3. As the tube is being installed, the flexible duct from the j-box should be inserted into the tube through the cable entrance hole. Do not make sharp bends in this duct. Coil 4' of flexible duct inside (shown below).
4. Compact the tube backfill by tamping the earth firm.
5. Backfill the inside of the tube with native soil to pole embedment depth.
6. Secure the electronic marker to the lid with the tie provided and place lid on the tube.
7. SRP locator will mark the lid location through blue stake notice.

POLE INSTALLATION IN TUBE

8. Light installer digs down to lid, removes lid, pulls duct from tube,
9. End of duct is inserted through light pole cable access hole and pushed up to hand hole as light pole is lowered into tube.
10. The pole has a 3/4" red tape band to mark the final landscape grade embedment depth. This tape should be at final landscape grade.
11. Pole is held securely vertical in center of tube while backfilling with pole set foam.
12. If the pole is fiberglass, place the collar around the base. The collar should lay flat on the ground at final landscape grade. Remove excess sonotube to achieve this.



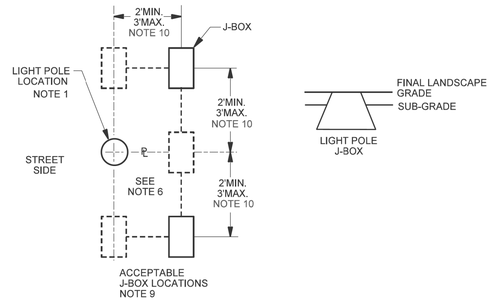
Electric Service Specifications

SRP® PROPRIETARY MATERIAL

COMMERCIAL - TYPES OF SERVICE
LIGHT POLE INSTALLATION TUBE

ISSUE DATE: 11/29/04
REV. DATE: 09/23/2013
APPROVAL: W.LARAMIE

4-10 | 8509E159.DGN



NOTES

1. CUSTOMER TO STAKE LIGHT LOCATION PER APPROVED MUNICIPAL PLAN.
2. GRADE STAKE TO BE WITHIN 2 FEET OF J-BOX LOCATION. CUSTOMER TO STAKE J-BOX LOCATION. AVOID CONFLICT WITH SIDEWALK, LANDSCAPING, ETC.
3. GROUND ROD TO BE INSTALLED FOR EACH STREET LIGHT LOCATION PER STANDARDS ON PAGE 9-1-1.
4. SEE SONOTUBE INSTALLATION DETAIL, PAGE 9-1-1, IF APPLICABLE.
5. #6 BARE COPPER GROUND WIRE TO BE ATTACHED FROM GROUNDING LUG ON STREET LIGHT POLE TO GROUND ROD IN J-BOX.
6. J-BOX MAY BE POSITIONED BEHIND THE POLE, EXCEPT IN THE CITIES OF CHANDLER AND GILBERT.
7. IF POLE IS IN PROXIMITY OF METALLIC APPARATUS SEE CONSTRUCTION STANDARDS SECTION, LIGHT POLES IN PROXIMITY OF METALLIC APPARATUS, BONDING. ALSO SEE SECTION 3 "ELECTRIC SERVICE REQUIREMENTS NOTE 6".
8. FOR PEDESTAL MOUNTED POLES THE J-BOX IS LOCATED ABOVE THE WATER LINE. SEE POLE PLACEMENT, WATER RETENTION BASIN.
9. SOME CLEARANCE RESTRICTIONS APPLY TO J-BOX LOCATIONS NEAR TRANSFORMERS, SEE DESIGN AMD MISCELLANEOUS, CLEAR AREA FOR CUSTOMER EQUIPMENT, ADJACENT TO TRANSFORMER.
10. FOR MUNICIPAL OWNED STREETLIGHT RELOCATIONS, THE DISTANCE FROM J-BOX TO STREETLIGHT MAY BE INCREASED UP TO 15'.

Outdoor Lighting Standards

SRP® PROPRIETARY MATERIAL

REV. ADDED NOTE 10

DESIGN AND MISCELLANEOUS
STREETLIGHT POLE
J-BOX LOCATION DETAILS

ISSUE DATE: 11/19/01
REV. DATE: 5/18/20
APPROVAL: J. Luera

3-11-1 | 8518E90.DGN

RADIAL LIGHT

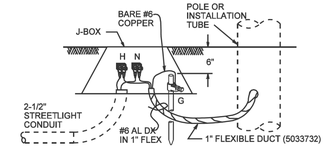
SOURCE CABLE DOES NOT HAVE GROUND CONDUCTOR (#6 DX)

H = 120V
N = NEUTRAL
G = GROUND ROD

ULR6D FLEX DUCT

ULR6DG CONTRACTOR

NOTE 2



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ULS6D FLEX DUCT

ULS6DG CONTRACTOR

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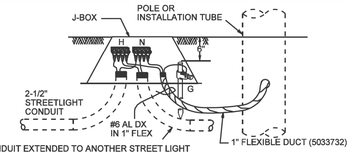


2 1/2" CONDUIT EXTENDED TO ANOTHER STREET LIGHT

RADIAL LIGHT

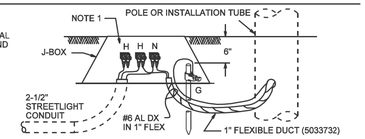
SOURCE CABLE DOES NOT HAVE GROUND CONDUCTOR (1/0 TX)

H = 120V
N = NEUTRAL
G = GROUND ROD

ULR10 FLEX DUCT

ULR10G CONTRACTOR

NOTE 2



SERIES LIGHTS

SOURCE CABLE DOES NOT HAVE GROUND CONDUCTOR (1/0 TX)

H = 120V
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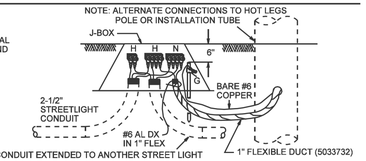
ULS10 FLEX DUCT

ULS10G CONTRACTOR

NOTE 2



2 1/2" CONDUIT EXTENDED TO ANOTHER STREET LIGHT

NOTE 1) SECOND (UNUSED) HOT LEG OF 1/0 AL TX MUST BE INSULATED WITH MOLE ASSEMBLY.

NOTE 2) IF POLE IS PLACED WITHIN 6 FEET OF ANY ABOVE GROUND METALLIC POWER OR COMMUMICATIONS APPARATUS SEE DESIGN AND MISCELLANEOUS SECTION, "NON-MUNICIPAL LUMINAIRE POLE PLACEMENT", AND CONSTRUCTION STANDARDS SECTION "LIGHT POLES IN PROXIMITY OF METALLIC APPARATUS, BONDING".

Outdoor Lighting Standards

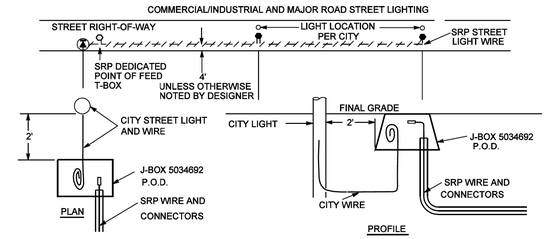
SRP® PROPRIETARY MATERIAL

CONSTRUCTION STANDARDS
J-BOX CONNECTIONS

ISSUE DATE: 01/12/00
REV. DATE: 11/01/13
APPROVAL:W.LARAMIE

6-6-1 | 8518E128.DGN

SECTION 3: DESIGN AND MISCELLANEOUS



NOTES:

1. FOR CITY OWNED AND INSTALLED STREET LIGHTS TO BE SERVED BY SRP UNDERGROUND WIRE, THE POINT OF DELIVERY (P.O.D.) WILL BE AN SRP APPROVED JUNCTION BOX INSTALLED BY THE CITY. THE CITY IS TO PROVIDE THE LOCATION OF THE LIGHTS; HOWEVER, LIGHT POLES AND JUNCTION BOXES ARE NOT TO BE INSTALLED WITHIN PUBLIC RIGHT OF WAYS.
2. A 3 FT. PIGTAIL OF STREET LIGHT WIRE FROM THE CITY'S LIGHT POLE, VIA FLEXIBLE CONDUIT, IS TO BE INSERTED INTO THE JUNCTION BOX BY THE CITY. THE CITY MAY INCLUDE THEIR OWN IN-LINE FUSE IN THE JUNCTION BOX. SRP IS TO MAKE THE ELECTRICAL CONNECTION IN THE JUNCTION BOX (PHASE & NEUTRAL ONLY) (CHANDLER AND TEMPE HAVE AGREEMENTS TO CONNECT.)
3. THE CITY IS TO PROVIDE APPROPRIATE POLE GROUNDING IF METAL POLES ARE USED.
4. THE CITY MUST PROVIDE AND INSTALL AN SRP APPROVED JUNCTION BOX AS THE SRP DEDICATED POINT OF FEED. REFER TOTHE ELECTRIC SERVICE STANDARDS FOR MINIMUM FAULT CURRENT DISTANCE REQUIREMENTS.

Outdoor Lighting Standards

SRP® PROPRIETARY MATERIAL

DESIGN AND MISCELLANEOUS
CITY OWNED STREET LIGHTS
POINT OF DELIVERY DETAIL

ISSUE DATE: 10/25/88
REV. DATE: 01/12/16
APPROVAL:N.SABBAH

3-8-1 | 8513E81.DGN

FIELD INSTALLATION STAMP

CONTACTS:

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NATURAL GAS YES ☐ NO ☐

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COST CENTER 22660
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SHEET NUMBER 10 OF 10

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