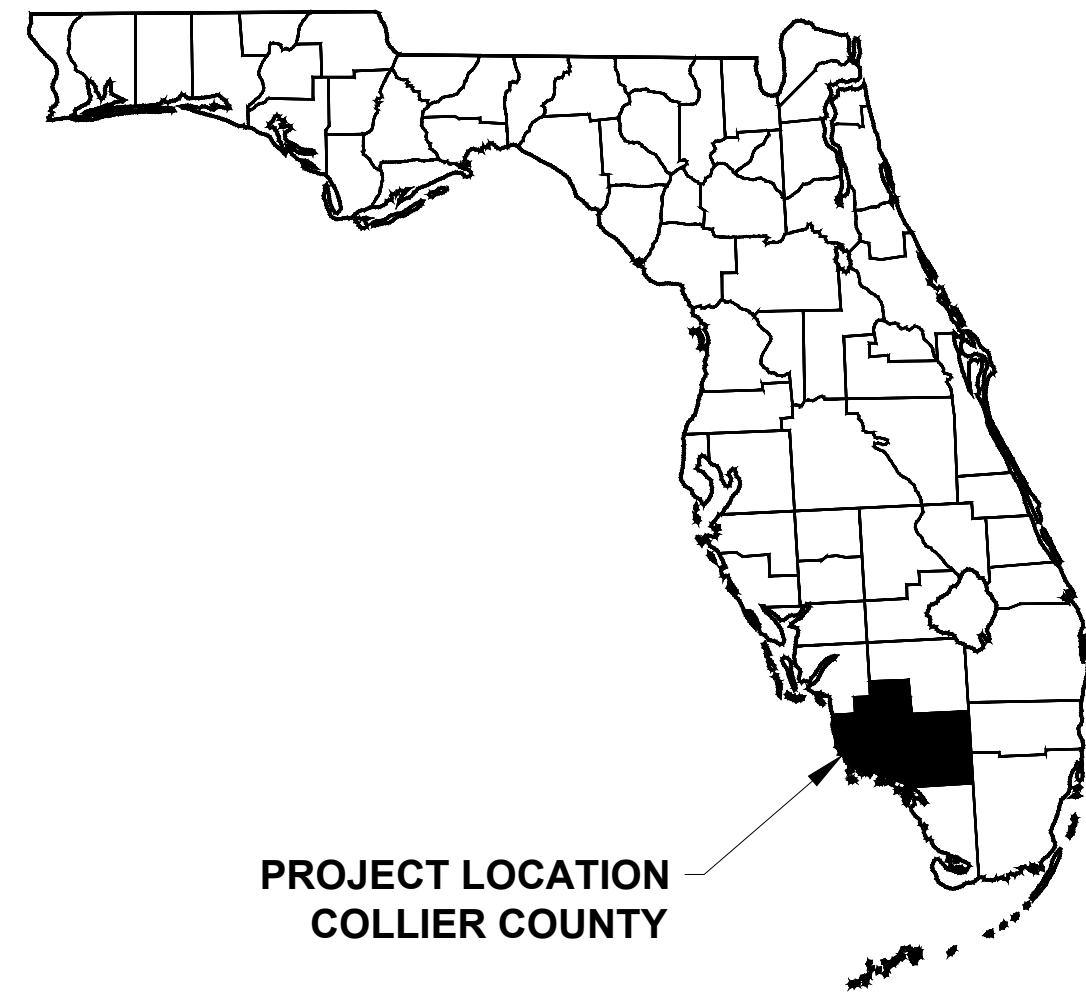


# Attachment A - Construction Plans



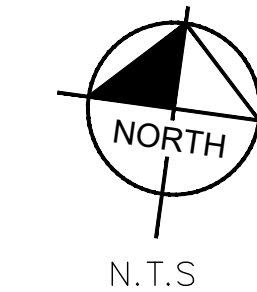
## CONSTRUCTION PLANS FOR CENTRAL AVE MEDIAN LANDSCAPE

CENTRAL AVE,  
NAPLES, FLORIDA 34102

PROJECT  
SITE



SHEET LIST	
SHEET NUMBER	SHEET TITLE
C-0	COVER SHEET
C-1	GENERAL NOTES
TM-1	OVERALL TREE MITIGATION PLAN
TM-2	TREE MITIGATION AND DEMO PLAN
TM-3	TREE MITIGATION AND DEMO PLAN
TM-4	TREE MITIGATION AND DEMO PLAN
TM-5	TREE MITIGATION SPECIFICATIONS
TM-6	TREE MITIGATION TABLES
L-1	OVERALL LANDSCAPE PLAN
L-2	LANDSCAPE PLAN
L-3	LANDSCAPE PLAN
L-4	LANDSCAPE PLAN
L-5	LANDSCAPE SPECIFICATIONS
L-6	LANDSCAPE DETAILS
I-1	OVERALL IRRIGATION PLAN
I-2	IRRIGATION PLAN
I-3	IRRIGATION PLAN
I-4	IRRIGATION PLAN
I-5	IRRIGATION SPECIFICATIONS
I-6	IRRIGATION DETAILS



March 8, 2023  
**Kimley»Horn**

KIMLEY-HORN AND ASSOCIATES, INC.  
1777 MAIN STREET, SUITE 200, SARASOTA, FL 34236  
PHONE: 941-379-7600  
WWW.KIMLEY-HORN.COM CA 00000696

### PROJECT TEAM

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CITY OF NAPLES  
PARK, RECREATION & FACILITIES DEPARTMENT  
280 RIVERSIDE CIRCLE  
NAPLES, FLORIDA 34102  
CONTACT: HEATHER SHIELDS  
TEL: (239) 213-7136

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### CONTACTS

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**COMCAST**  
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**FLORIDA POWER & LIGHT - COLLIER**  
ELECTRIC  
USIC DISPATCH CENTER  
TEL: 800-778-9140

**TECO PEOPLES GAS - FT MYERS**  
GAS  
TEL: 813-743-7807  
CONTACT: ASH MCDANIEL

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WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

JAMES R. PANKONIN, PLA  
FLORIDA LICENSE NUMBER  
6666900

KHA PROJECT  
048320008  
DATE  
MARCH 2023  
SCALE AS SHOWN  
DESIGNED BY KHA  
DRAWN BY MALL  
CHECKED BY JRP DATE: 3/8/2023

COVER SHEET

CENTRAL AVE  
LANDSCAPING  
PREPARED FOR  
CITY OF NAPLES

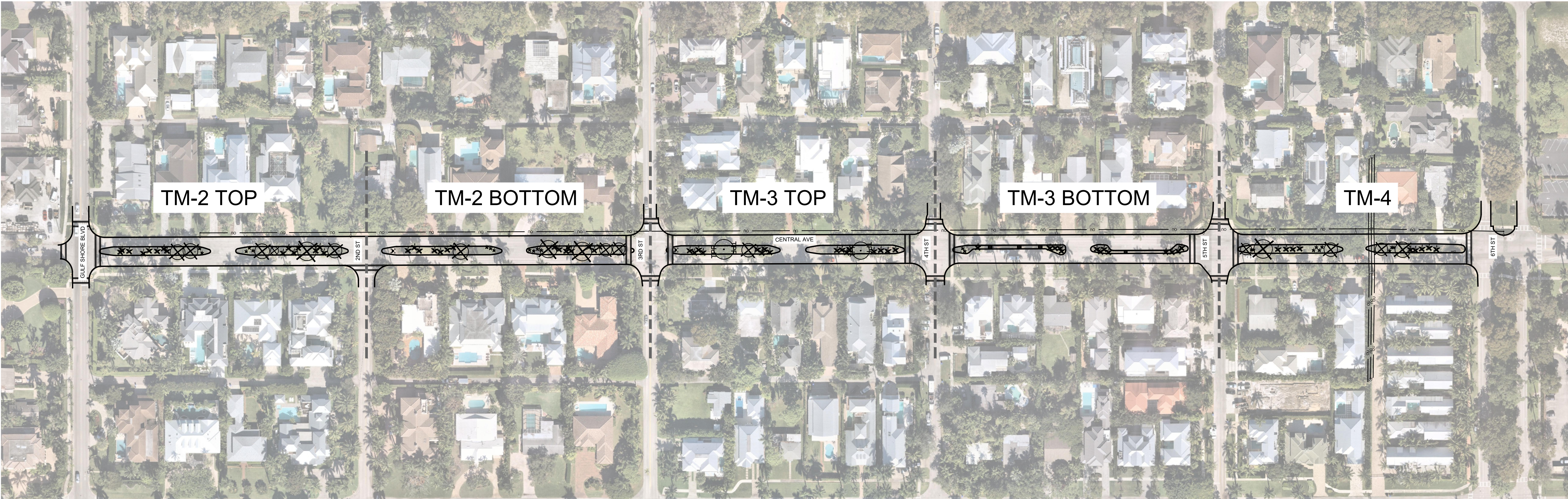
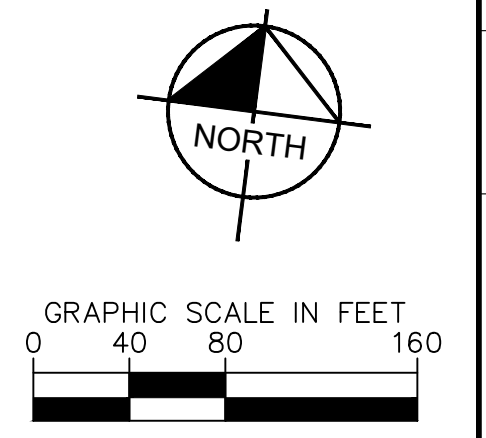
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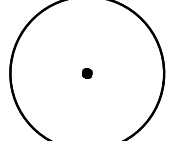
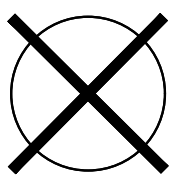




# Attachment A - Construction Plans

Plotted By: Lee, Monica. Sheet Set: 048320008 - CENTRAL AVE. Layout: TM-1. March 08, 2023 05:16:28pm. K:\SAP\_JRC\_048320008 - Central Ave Landscaping\CAD\PlanSheets\TM - TREE MITIGATION PLAN.dwg  
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### TREE MITIGATION KEY

-  TREE TO BE PRESERVED
-  TREE TO BE REMOVED
-  PALM TO BE REMOVED
-  TPF TREE PROTECTION FENCING

No.	REVISIONS	DATE	BY

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 PHONE: 941-579-7800  
 WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

KHA PROJECT: 048320008  
 DATE: MARCH 2023  
 SCALE: AS SHOWN  
 DESIGNED BY: KHA  
 DRAWN BY: MAL  
 CHECKED BY: JRP  
 JRP DATE: 3/8/2023  
 JAMES R. PANKOW, PL  
 FLORIDA LICENSE NUMBER: 6666900

## OVERALL TREE MITIGATION PLAN

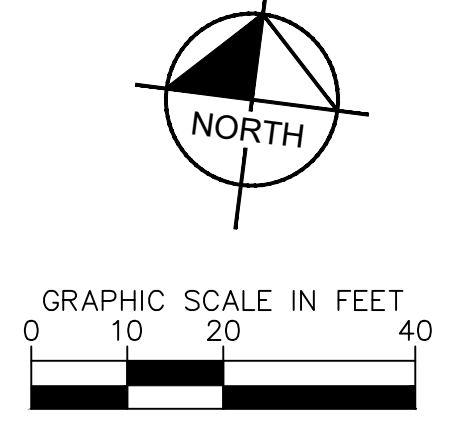
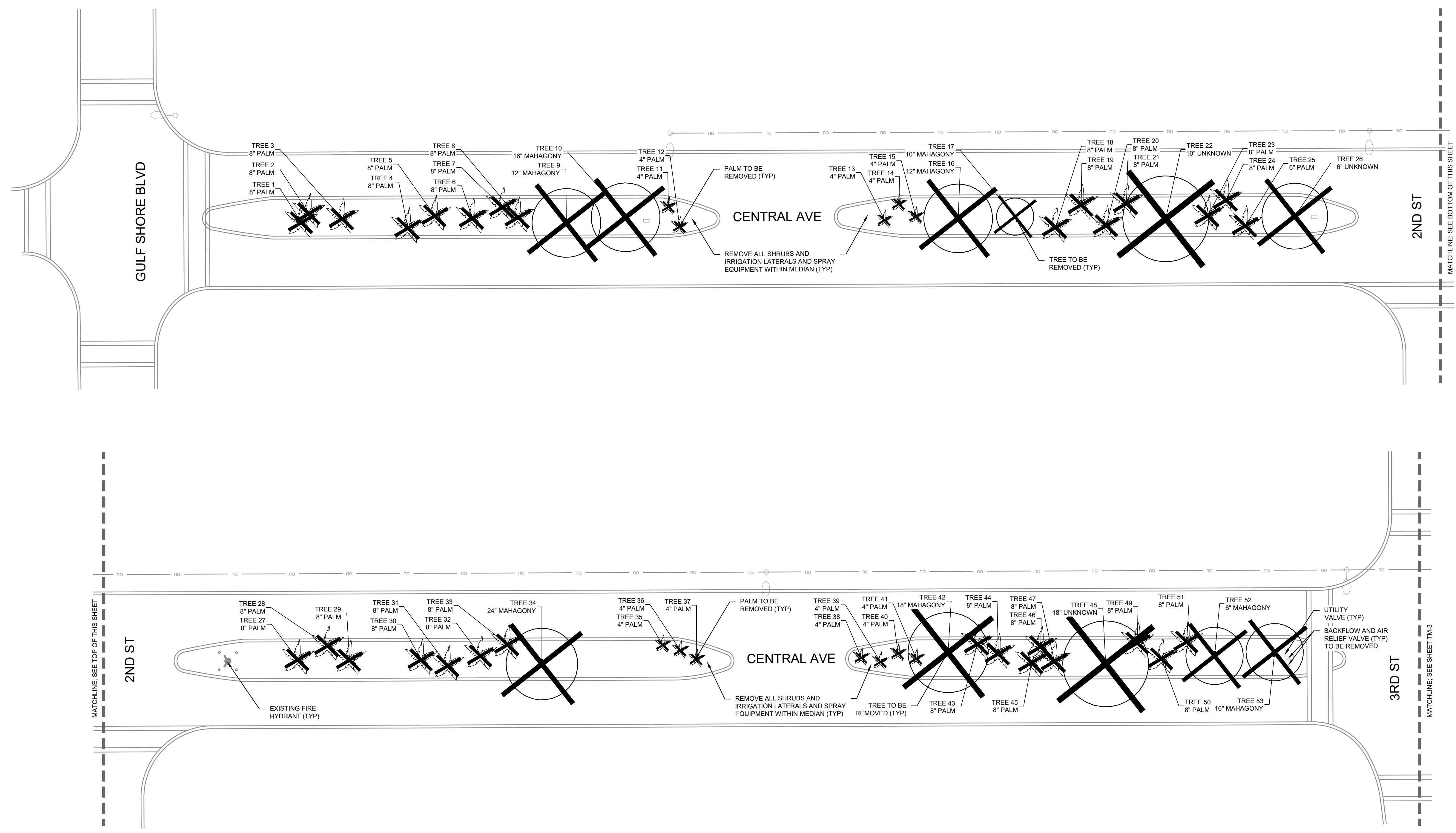
CENTRAL AVE LANDSCAPING  
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 CITY OF NAPLES  
 FLORIDA

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SHEET NUMBER  
**TM-1**

# Attachment A - Construction Plans

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### TREE MITIGATION KEY

- TREE TO BE PRESERVED
- TREE TO BE REMOVED
- PALM TO BE REMOVED
- TREE PROTECTION FENCING

NO.	REVISIONS	DATE	BY

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KHA PROJECT 048320008	JAMES R. PANKOWIN, PLA
DATE MARCH 2023	FLORIDA LICENSE NUMBER 6666900
SCALE AS SHOWN	REGISTERED 3/8/2023
DESIGNED BY KHA	
DRAWN BY MAL	
CHECKED BY JRP	

## TREE MITIGATION AND DEMO PLAN

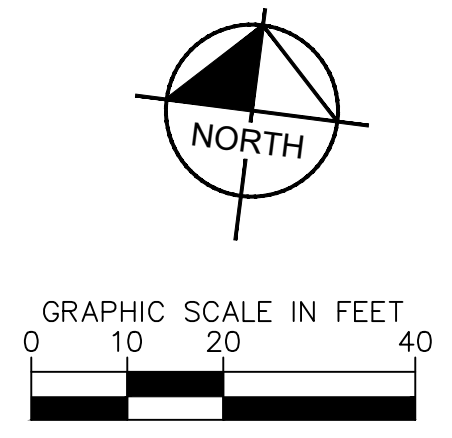
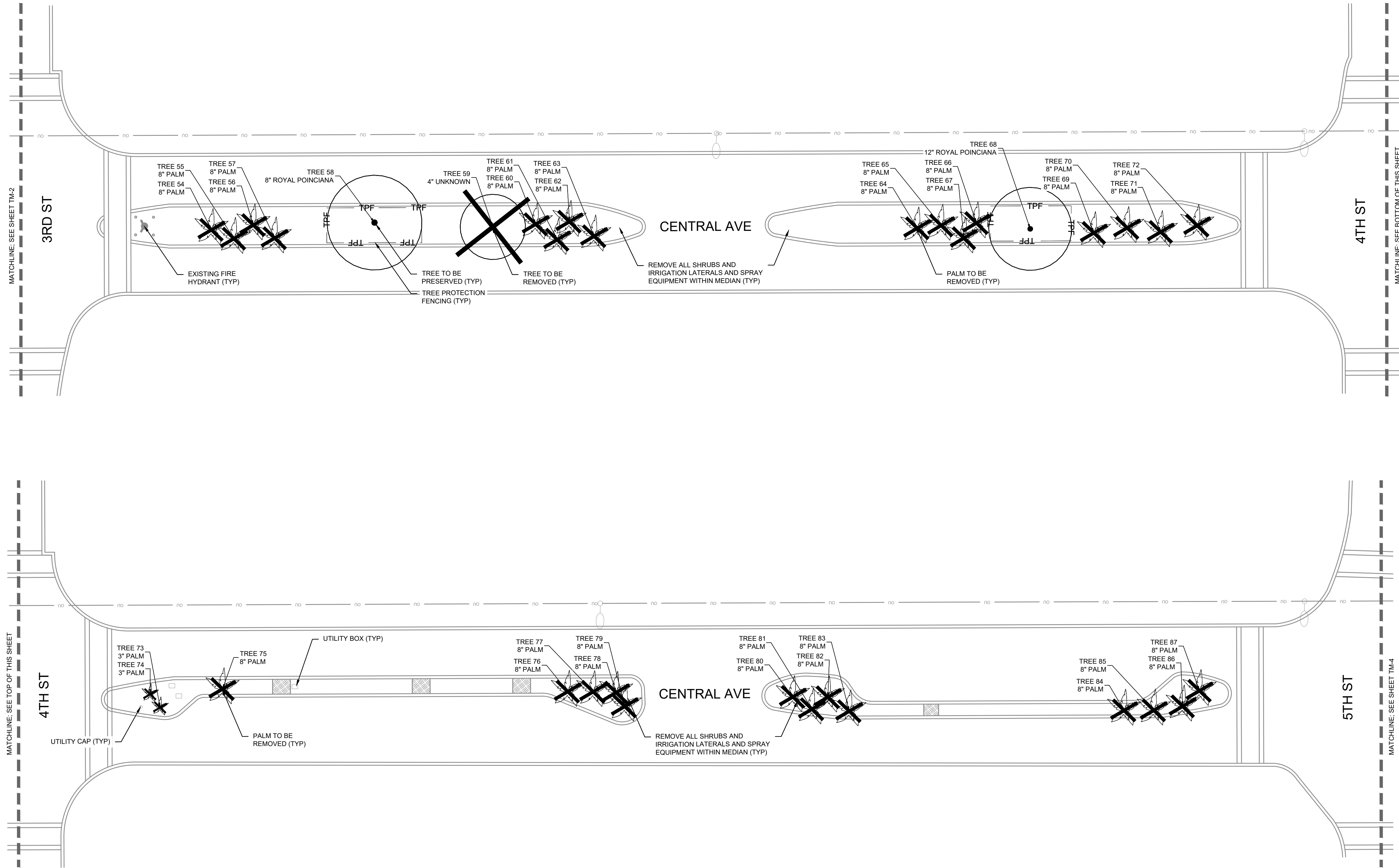
**CENTRAL AVE LANDSCAPING**  
 PREPARED FOR  
**CITY OF NAPLES**  
 CITY OF NAPLES FLORIDA

SHEET NUMBER  
**TM-2**

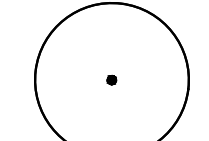


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# Attachment A - Construction Plans

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### TREE MITIGATION KEY

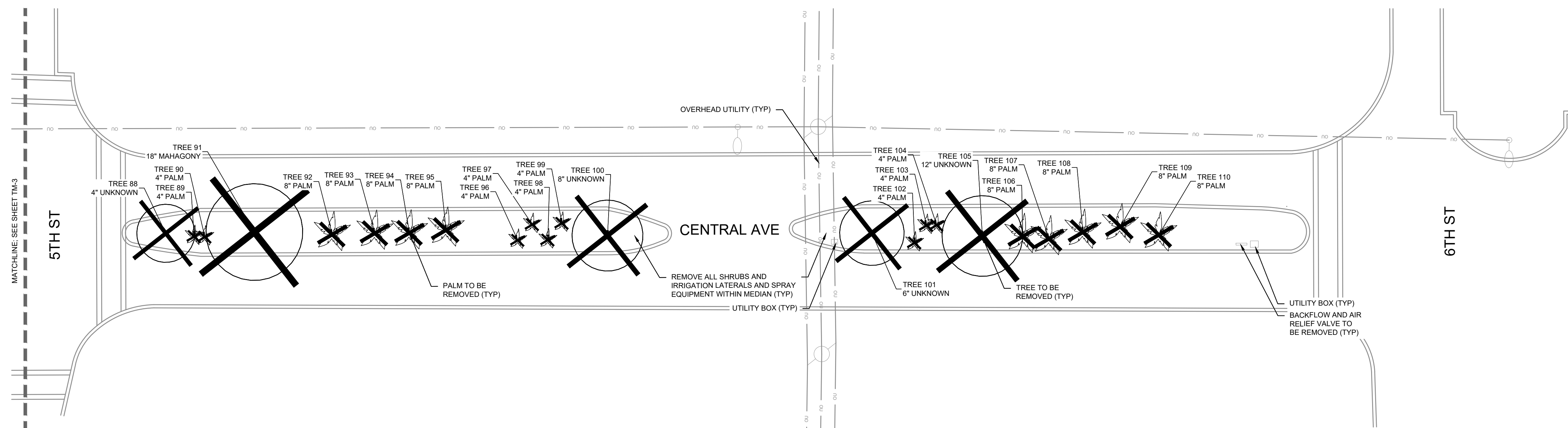
-  TREE TO BE PRESERVED
-  TREE TO BE REMOVED
-  PALM TO BE REMOVED
-  TPF TREE PROTECTION FENCING

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**811**  
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<b>CENTRAL AVE LANDSCAPING</b> PREPARED FOR <b>CITY OF NAPLES</b>	<b>TREE MITIGATION AND DEMO PLAN</b>	KHA PROJECT 048320008 DATE MARCH 2023 SCALE AS SHOWN DESIGNED BY KHA DRAWN BY MAL CHECKED BY JRP DATE 3/8/2023	JAMES R. PANKOWIN, PLA FLORIDA LICENSE NUMBER 6666900 WWW.KIMLEY-HORN.COM REGISTRY NO. 35106
SHEET NUMBER <b>TM-3</b>	REVISIONS No. _____ DATE _____ BY _____		

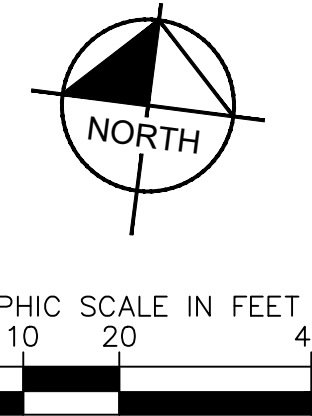
# Attachment A - Construction Plans

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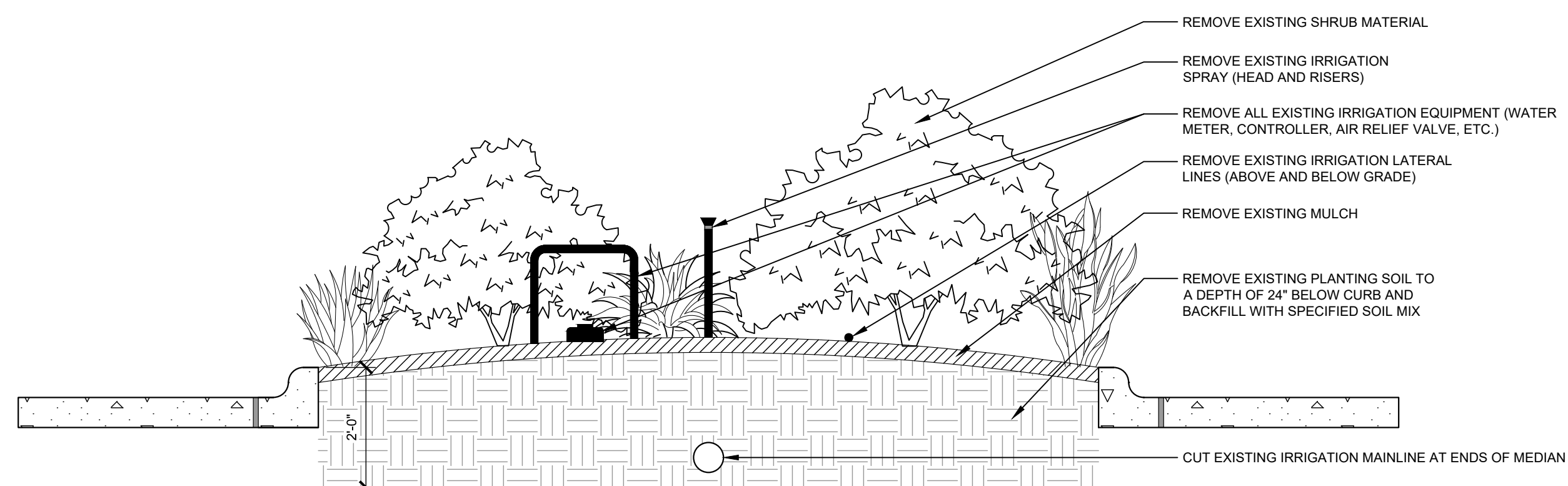


### TREE MITIGATION KEY

-  TREE TO BE PRESERVED
-  TREE TO BE REMOVED
-  PALM TO BE REMOVED
-  TPF TREE PROTECTION FENCING



NOTE: LOCATE AND PROTECT / PRESERVE ALL EXISTING NON-IRRIGATION UTILITIES AND INFRASTRUCTURES.



**1** EXISTING MEDIAN DEMOLITION

1/2" = 1'-0"  
048-320-46


No.	REVISIONS	DATE	BY

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KHA PROJECT 048320008	DATE MARCH 2023	DESIGNED BY KHA	DRAWN BY MAL	CHECKED BY JRP
JAMES R. PANKOWIN, PLA		FLORIDA LICENSE NUMBER 6666900		DATE 3/8/2023

## TREE MITIGATION AND DEMO PLAN

**CENTRAL AVE  
 LANDSCAPING**  
 PREPARED FOR  
**CITY OF NAPLES**  
FLORIDA

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# Attachment A - Construction Plans

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TREE OBSERVATION DATA			
TREE #	SPECIES	DBH	STATUS
1	PALM	8"	REMOVE
2	PALM	8"	REMOVE
3	PALM	8"	REMOVE
4	PALM	8"	REMOVE
5	PALM	8"	REMOVE
6	PALM	8"	REMOVE
7	PALM	8"	REMOVE
8	PALM	8"	REMOVE
9	MAHAGONY	12"	REMOVE
10	MAHAGONY	16"	REMOVE
11	PALM	4"	REMOVE
12	PALM	4"	REMOVE
13	PALM	4"	REMOVE
14	PALM	4"	REMOVE
15	PALM	4"	REMOVE
16	MAHAGONY	12"	REMOVE
17	MAHAGONY	10"	REMOVE
18	PALM	8"	REMOVE
19	PALM	8"	REMOVE
20	PALM	8"	REMOVE
21	PALM	8"	REMOVE
22	UNKNOWN	10"	REMOVE
23	PALM	8"	REMOVE
24	PALM	8"	REMOVE
25	PALM	6"	REMOVE
26	UNKNOWN	6"	REMOVE
27	PALM	8"	REMOVE
28	PALM	8"	REMOVE
29	PALM	8"	REMOVE
30	PALM	8"	REMOVE
31	PALM	8"	REMOVE
32	PALM	8"	REMOVE
33	PALM	8"	REMOVE
34	MAHAGONY	24"	REMOVE
35	PALM	4"	REMOVE
36	PALM	4"	REMOVE
37	PALM	4"	REMOVE
38	PALM	4"	REMOVE
39	PALM	4"	REMOVE
40	PALM	4"	REMOVE
41	PALM	4"	REMOVE
42	MAHAGONY	18"	REMOVE
43	PALM	8"	REMOVE
44	PALM	8"	REMOVE
45	PALM	8"	REMOVE
46	PALM	8"	REMOVE
47	PALM	8"	REMOVE
48	UNKNOWN	18"	REMOVE
49	PALM	8"	REMOVE
50	PALM	8"	REMOVE
51	PALM	8"	REMOVE
52	MAHAGONY	6"	REMOVE
53	MAHAGONY	16"	REMOVE
54	PALM	8"	REMOVE
55	PALM	8"	REMOVE
56	PALM	8"	REMOVE
57	PALM	8"	REMOVE

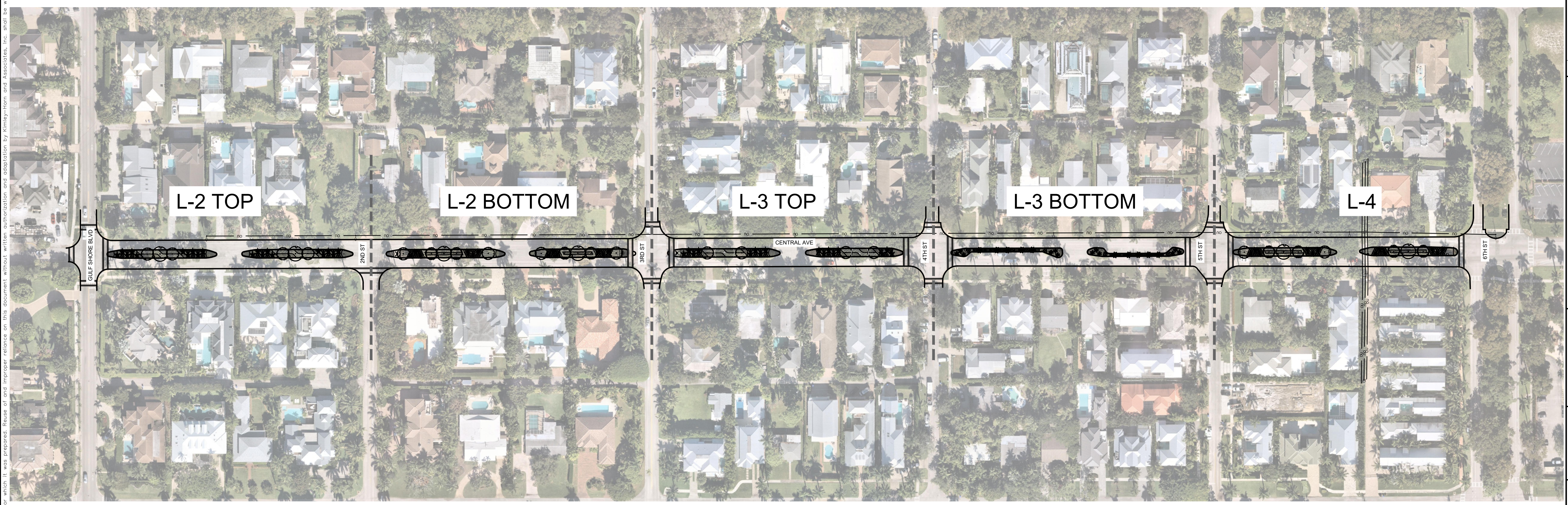
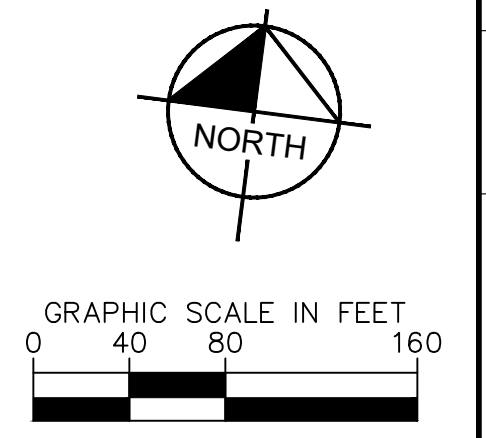
TREE OBSERVATION DATA			
TREE #	SPECIES	DBH	STATUS
58	ROYAL POINCIANA	8"	REMAIN
59	UNKNOWN	4"	REMOVE
60	PALM	8"	REMOVE
61	PALM	8"	REMOVE
62	PALM	8"	REMOVE
63	PALM	8"	REMOVE
64	PALM	8"	REMOVE
65	PALM	8"	REMOVE
66	PALM	8"	REMOVE
67	PALM	8"	REMOVE
68	ROYAL POINCIANA	12"	REMAIN
69	PALM	8"	REMOVE
70	PALM	8"	REMOVE
71	PALM	8"	REMOVE
72	PALM	8"	REMOVE
73	PALM	3"	REMOVE
74	PALM	3"	REMOVE
75	PALM	8"	REMOVE
76	PALM	8"	REMOVE
77	PALM	8"	REMOVE
78	PALM	8"	REMOVE
79	PALM	8"	REMOVE
80	PALM	8"	REMOVE
81	PALM	8"	REMOVE
82	PALM	8"	REMOVE
83	PALM	8"	REMOVE
84	PALM	8"	REMOVE
85	PALM	8"	REMOVE
86	PALM	8"	REMOVE
87	PALM	8"	REMOVE
88	UNKNOWN	4"	REMOVE
89	PALM	4"	REMOVE
90	PALM	4"	REMOVE
91	MAHAGONY	18"	REMOVE
92	PALM	8"	REMOVE
93	PALM	8"	REMOVE
94	PALM	8"	REMOVE
95	PALM	8"	REMOVE
96	PALM	4"	REMOVE
97	PALM	4"	REMOVE
98	PALM	4"	REMOVE
99	PALM	4"	REMOVE
100	UNKNOWN	8"	REMOVE
101	UNKNOWN	6"	REMOVE
102	PALM	4"	REMOVE
103	PALM	4"	REMOVE
104	PALM	4"	REMOVE
105	UNKNOWN	12"	REMOVE
106	PALM	8"	REMOVE
107	PALM	8"	REMOVE
108	PALM	8"	REMOVE
109	PALM	8"	REMOVE
110	PALM	8"	REMOVE

KHA PROJECT 048320008	DATE MARCH 2023	SCALE AS SHOWN	DESIGNED BY KHA	DRAWN BY MAL	CHECKED BY JRP	DATE 3/8/2023
JAMES R. PANKOW, P.L.A. FLORIDA LICENSE NUMBER 6666900						
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TREE MITIGATION TABLES						
CENTRAL AVE LANDSCAPING PREPARED FOR CITY OF NAPLES						
SHEET NUMBER <b>TM-6</b>						





# Attachment A - Construction Plans



## PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	HEIGHT	SPREAD
	AC	34	ARCHONTOPHOENIX CUNNINGHAMIANA	PICCAEEN PALM	FG	SPECIMEN, FAT TRUNK	16' CT	
	CG	14	CAESALPINIA GRANADILLO	BRIDAL VEIL TREE	FG	3.5" CAL, SINGLE LEADER	14' HT MIN	8' - 10'
	LD	12	LIVISTONA DECIPIENS	RIBBON PALM	FG	BOOTED, FULLY REGENERATED, HEAVY TRUNK	10' - 12' CT, 16' - 18' HT O.A.	
	SM	6	SWIETENIA MAHAGONI	MAHOGANY	FG	4" CAL MIN	14' HT MIN	
	SS	36	SABAL PALMETTO	CABBAGE PALMETTO	FG	HEAVY, H.O. FULLY REGENERATED, SLICK	12' CT MIN	
	TT	8	TAMARINDUS INDICA	TAMARIND	200 GAL	SPECIMEN	14' - 18' HT	
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING	
	CB	171	CORDYLINE FRUTICOSA 'BLACK MAGIC'	BLACK MAGIC TI PLANT	7 GAL	36" HT MIN	36" O.C.	
SHRUB AREAS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING	
	IC	104	IXORA COCCINEA	RED IXORA	3 GAL	24" HT MIN	36" O.C.	
	NR	222	NEOREGELIA X 'ROYAL BURGUNDY'	ROYAL BURGUNDY BROMELIAD	3 GAL	10" FULL	30" OC	
	SR2	107	SERENOA REPENS	SAW PALMETTO	7 GAL	30" HT MIN	48" O.C.	
	SV	144	SCHEFFLERA ARBORICOLA 'VARIEGATA'	DWARF VARIEGATED SCHEFFLERA	3 GAL	24" HT MIN	36" O.C.	
	TD	635	TRIPSACUM DACTYLOIDES NANA	DWARF FAKAHATCHEE GRASS	3 GAL	24" FULL	36" O.C.	
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING	
	AG	614	ARACHIS GLABRATA	PERENNIAL PEANUT	1 GAL	12" FULL	12" O.C.	
	FG	945	FICUS MICROCARPA 'GREEN ISLAND'	GREEN ISLAND INDIAN LAUREL FIG	3 GAL	12" FULL	24" O.C.	

NO.	REVISIONS	DATE	BY

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 PHONE: 941-579-7800  
 WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

KHA PROJECT: 048320008  
 DATE: MARCH 2023  
 SCALE: AS SHOWN  
 DESIGNED BY: JRP  
 DRAWN BY: MAL  
 CHECKED BY: JRP  
 JRP DATE: 3/8/2023  
 JRP DATE: 3/8/2023

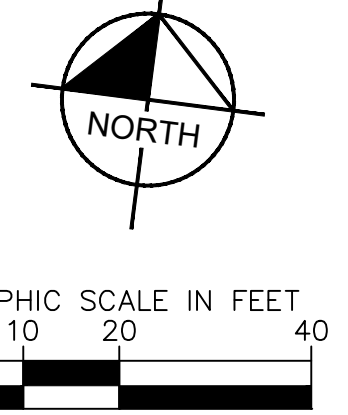
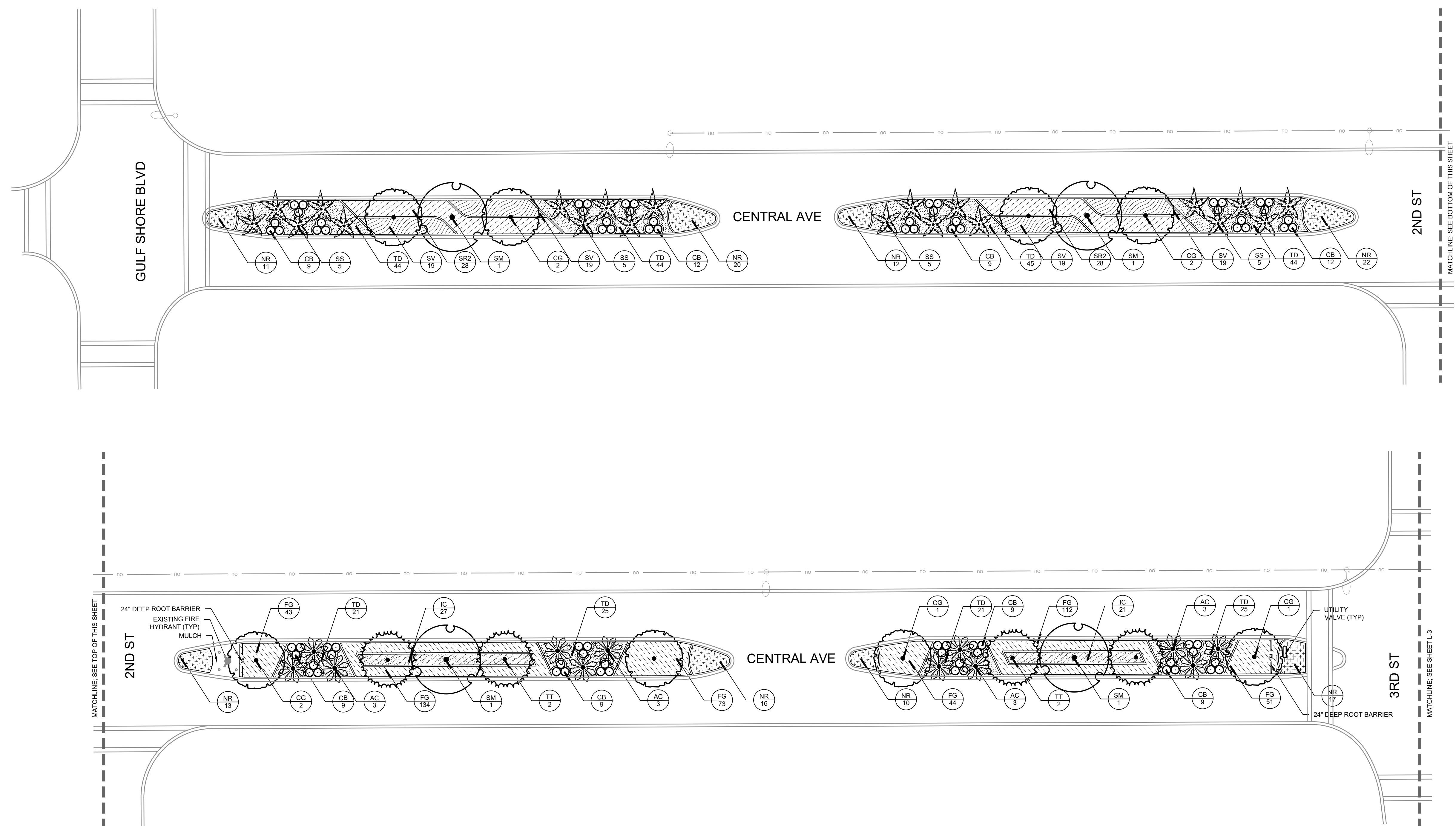
## OVERALL LANDSCAPE PLAN

CENTRAL AVE LANDSCAPING PREPARED FOR CITY OF NAPLES  
 CITY OF NAPLES FLORIDA  
 SHEET NUMBER L-1

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# Attachment A - Construction Plans

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### PLANT SYMBOL KEY

TREES	CODE	COMMON NAME
	AC	PICCABEEN PALM
	CG	BRIDAL VEIL TREE
	LD	RIBBON PALM
	SM	MAHOGANY
	SS	CABBAGE PALMETTO
	TT	TAMARIND

SHRUBS	CODE	COMMON NAME
	CB	BLACK MAGIC TI PLANT

SHRUB AREAS	CODE	COMMON NAME
	IC	RED IXORA
	NR	ROYAL BURGUNDY BROMELIAD
	SR2	SAW PALMETTO
	SV	DWARF VARIEGATED SCHEFFLERA
	TD	DWARF FAKAHATCHEE GRASS

GROUND COVERS	CODE	COMMON NAME
	AG	PERENNIAL PEANUT
	FG	GREEN ISLAND INDIAN LAUREL FIG

NO.	REVISIONS	DATE	BY

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 PHONE: 941-579-7600  
 WWW.KIMLEY-HORN.COM

KHA PROJECT	048320008
DATE	MARCH 2023
SCALE	AS SHOWN
DESIGNED BY	JRP
DRAWN BY	MAL
CHECKED BY	JRP
DATE	3/8/2023

## LANDSCAPE PLAN

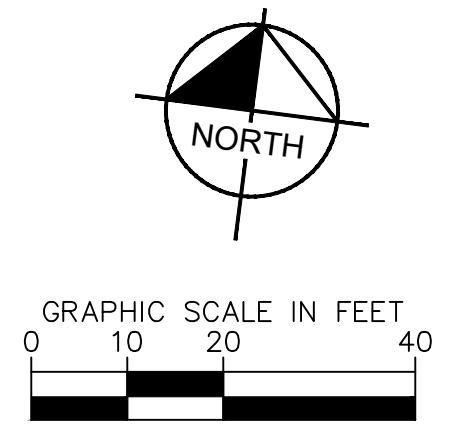
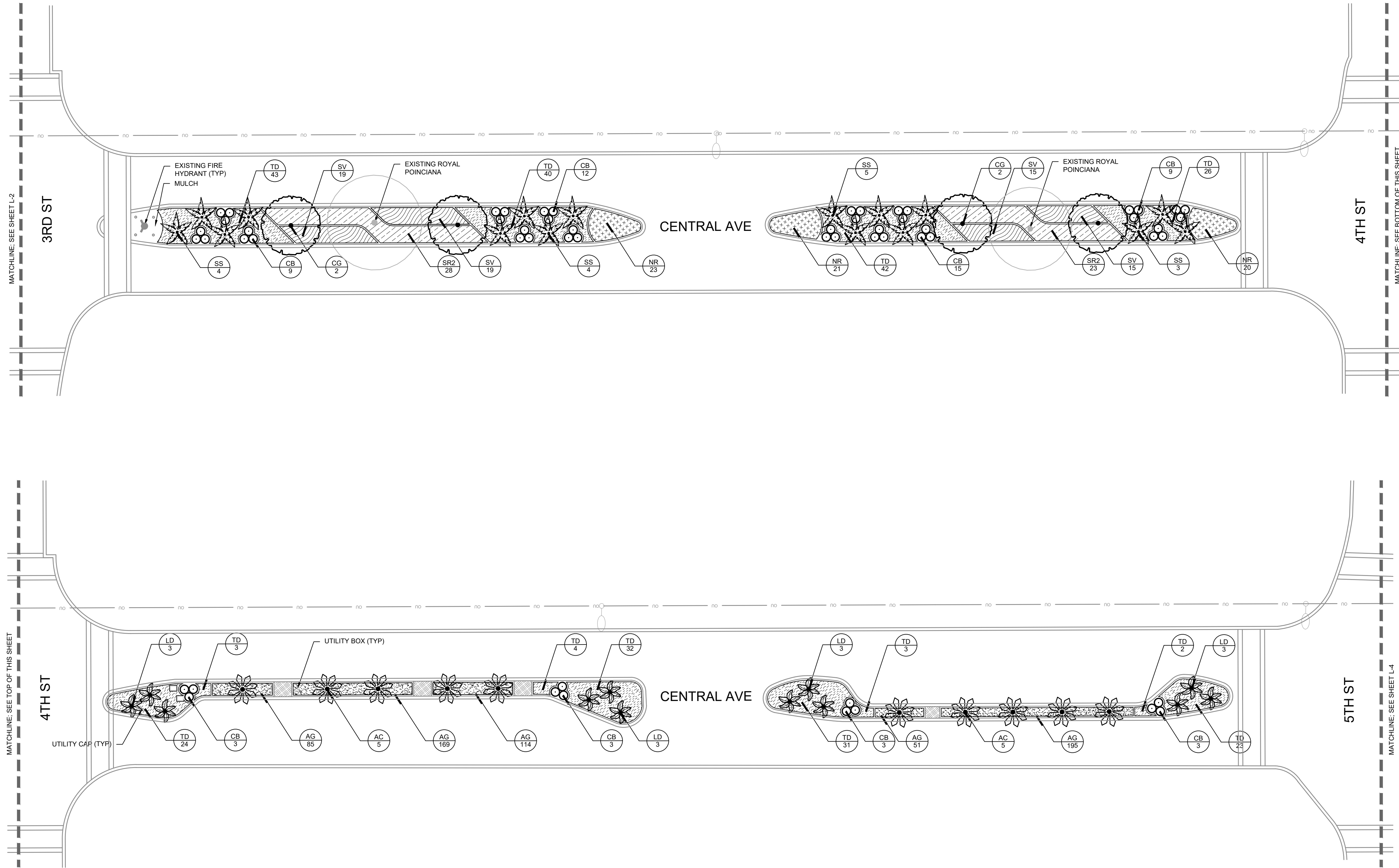
**CENTRAL AVE  
 LANDSCAPING**  
 PREPARED FOR  
**CITY OF NAPLES**  
 FLORIDA

CALL 2 WORKING DAYS BEFORE YOU DIG  
 IT'S THE LAW!  
 DIAL 811  
 Know what's below. Call before you dig.  
 SUNSHINE STATE ONE CALL OF FLORIDA, INC.

SHEET NUMBER  
**L-2**

# Attachment A - Construction Plans

Plotted By: Lee, Monica. Sheet Set: 048320008 - CENTRAL AVE. Layout: L-3. March 08, 2023. 08:17:19pm. X:\SAR\_UFG\048320008 - Central Ave Landscaping\CAD\PlanSheets\L-3 - LANDSCAPE PLAN.dwg  
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### PLANT SYMBOL KEY

TREES	
CODE	COMMON NAME
AC	PICCADILEE PALM
CG	BRIDAL VEIL TREE
LD	RIBBON PALM
SM	MAHOGANY
SS	CABBAGE PALMETTO
TT	TAMARIND

SHRUBS	
CODE	COMMON NAME
CB	BLACK MAGIC TI PLANT

SHRUB AREAS	
CODE	COMMON NAME
IC	RED IXORA
NR	ROYAL BURGUNDY BROMELIAD
SR2	SAW PALMETTO
SV	DWARF VARIEGATED SCHEFFLERA
TD	DWARF FAKAHATCHEE GRASS

GROUND COVERS	
CODE	COMMON NAME
AG	PERENNIAL PEANUT
FG	GREEN ISLAND INDIAN LAUREL FIG

NO.	REVISIONS	DATE	BY

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KHA PROJECT	048320008
DATE	MARCH 2023
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CHECKED BY	JRP
DATE	3/8/2023

## LANDSCAPE PLAN

**CENTRAL AVE  
 LANDSCAPING**  
 PREPARED FOR  
**CITY OF NAPLES**  
 FLORIDA

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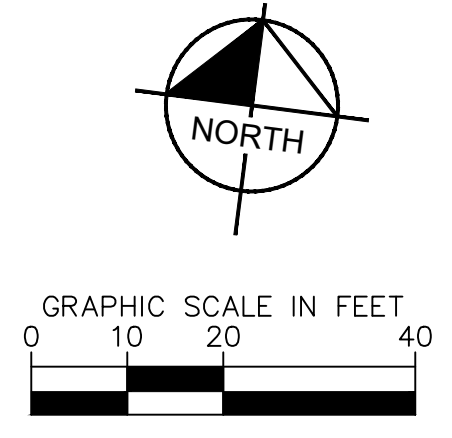
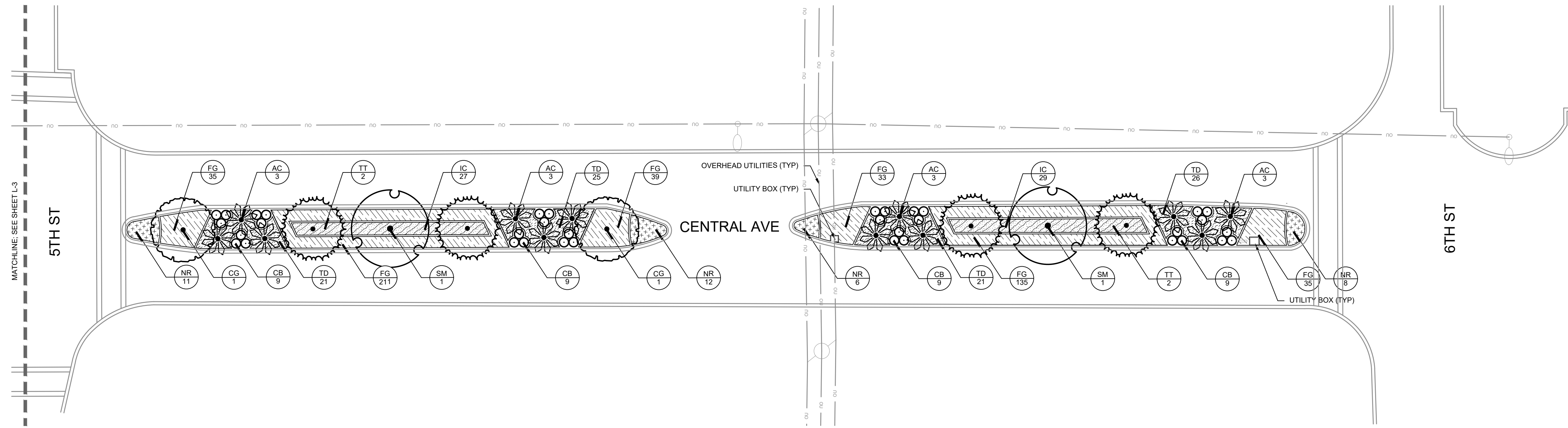
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SUNSHINE STATE ONE CALL OF FLORIDA, INC.

SHEET NUMBER  
**L-3**

# Attachment A - Construction Plans

Plotted By: Liza, Monica. Sheet Set: 048320008 - CENTRAL AVE. Layout: L-4. March 08, 2023. 05:17:24pm. K:\SAR\_LRG\048320008 - Central Ave. Landscape\CAD\PlanSheets\L-4 - LANDSCAPE PLAN.dwg  
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### PLANT SYMBOL KEY

TREES	CODE	COMMON NAME
	AC	PICCABEEN PALM
	CG	BRIDAL VEIL TREE
	LD	RIBBON PALM
	SM	MAHOGANY
	SS	CABBAGE PALMETTO
	TT	TAMARIND
SHRUBS	CODE	COMMON NAME
	CB	BLACK MAGIC TI PLANT
SHRUB AREAS	CODE	COMMON NAME
	IC	RED IKORA
	NR	ROYAL BURGUNDY BROMELIAD
	SR2	SAW PALMETTO
	SV	DWARF VARIEGATED SCHEFFLERA
	TD	DWARF FAKAHATCHEE GRASS
GROUND COVERS	CODE	COMMON NAME
	AG	PERENNIAL PEANUT
	FG	GREEN ISLAND INDIAN LAUREL FIG

NO.	REVISIONS	DATE	BY

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KHA PROJECT 048320008	JAMES R. PANKOWIN, PLA
DATE MARCH 2023	FLORIDA LICENSE NUMBER 6666900
SCALE AS SHOWN	DRAWN BY MAL
DESIGNED BY JRP	CHECKED BY JRP
	DATE 3/8/2023

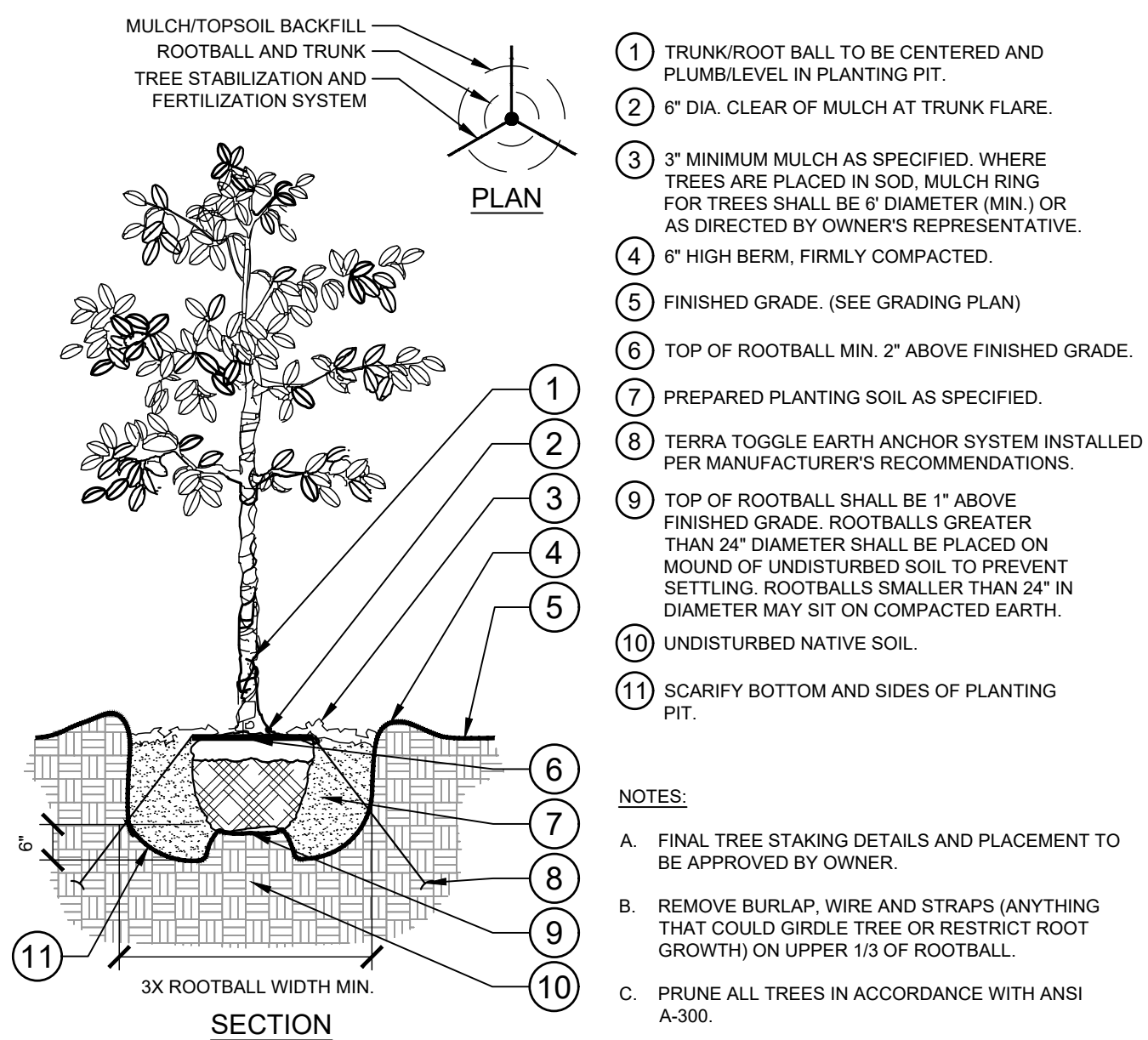
## LANDSCAPE PLAN

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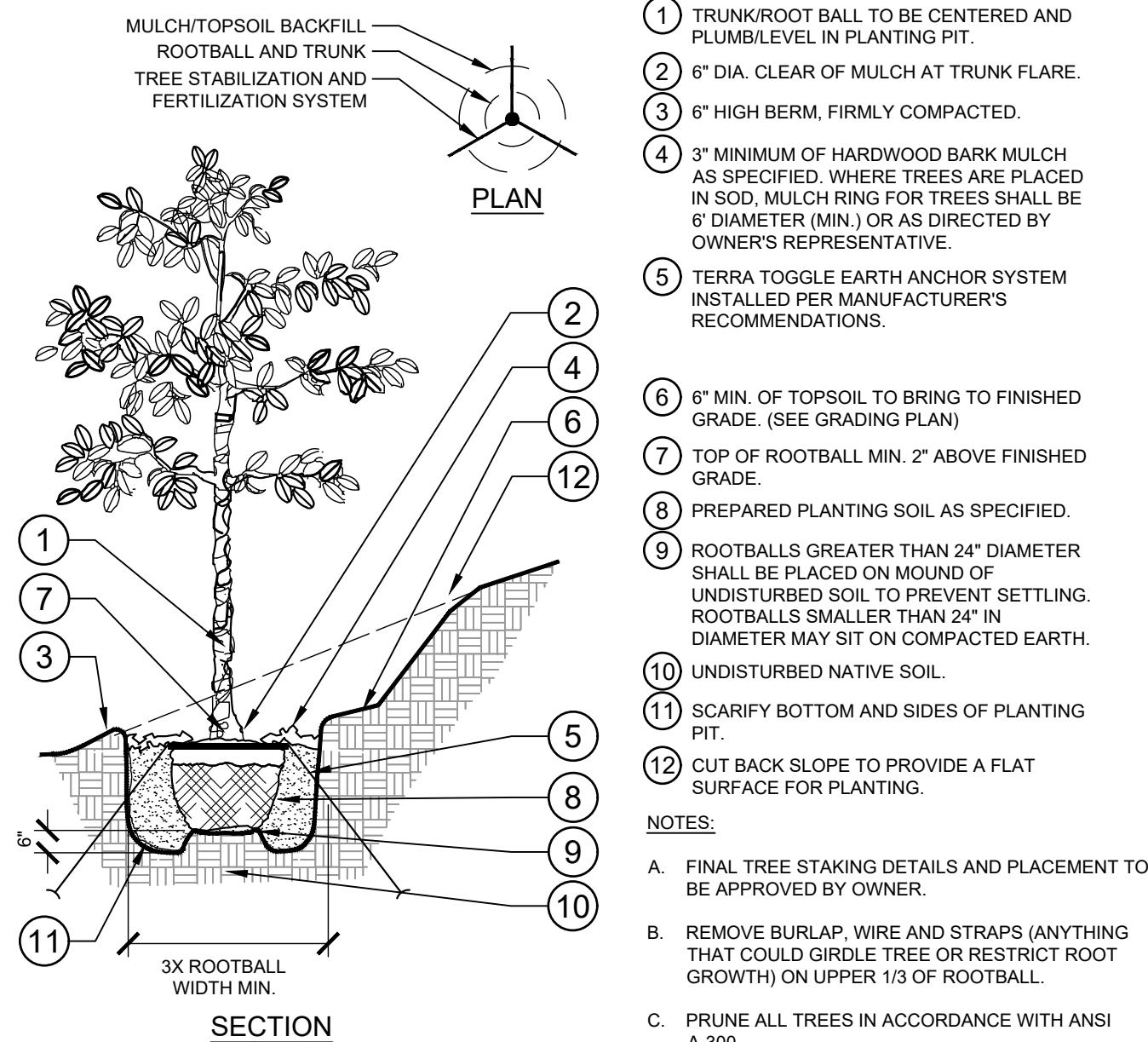


# Attachment A - Construction Plans



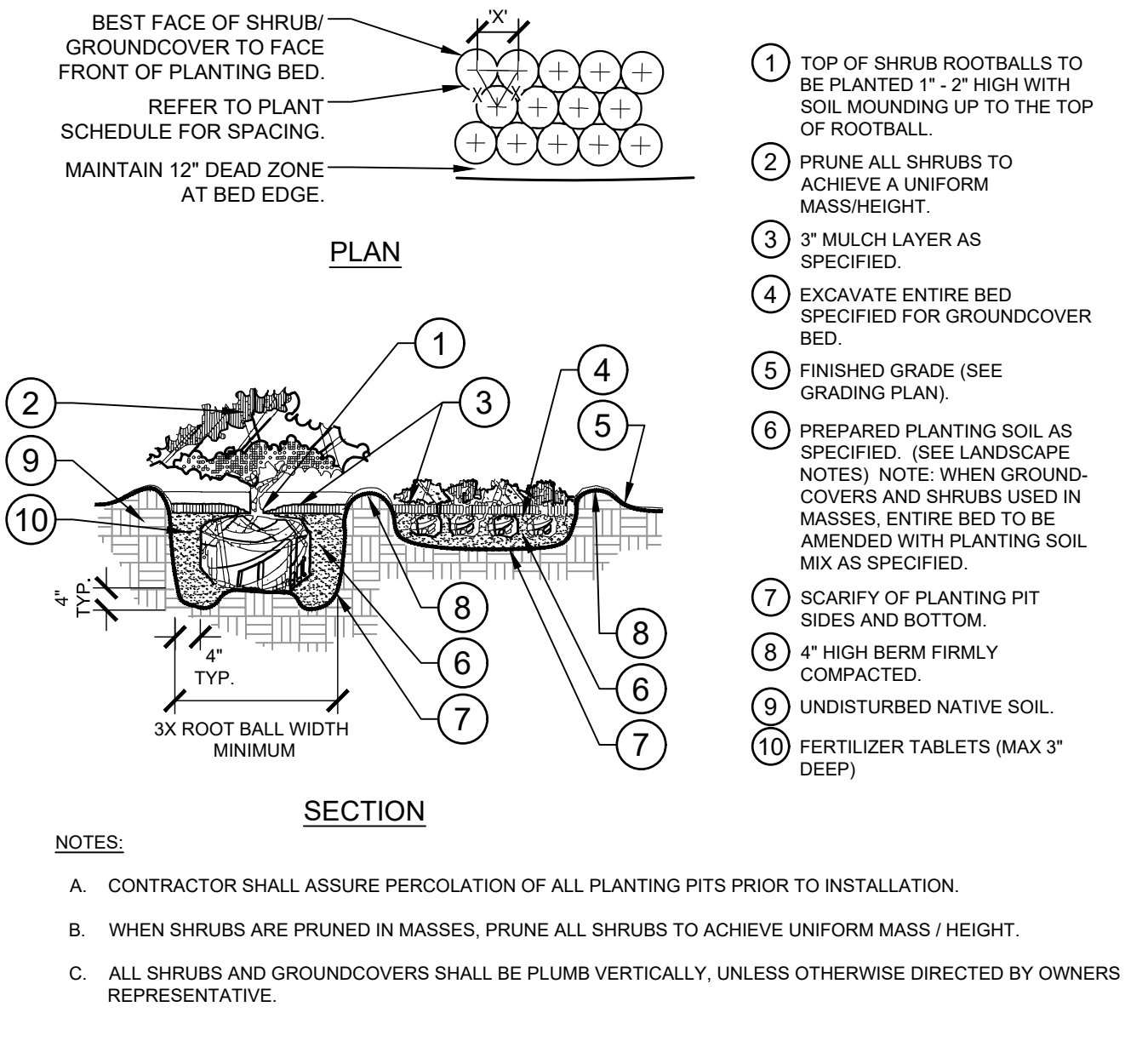
- TRUNK/ROOT BALL TO BE CENTERED AND PLUMB LEVEL IN PLANTING PIT.
  - 6" DIA. CLEAR OF MULCH AT TRUNK FLARE.
  - 3" MINIMUM MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES SHALL BE 6" DIAMETER (MIN.) OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
  - 6" HIGH BERM, FIRMLY COMPACTED.
  - FINISHED GRADE. (SEE GRADING PLAN)
  - TOP OF ROOTBALL MIN. 2" ABOVE FINISHED GRADE.
  - PREPARED PLANTING SOIL AS SPECIFIED.
  - TERRA TOGGLE EARTH ANCHOR SYSTEM INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
  - TOP OF ROOTBALL SHALL BE 1" ABOVE FINISHED GRADE. ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIAMETER MAY SIT ON COMPACTED EARTH.
  - UNDISTURBED NATIVE SOIL.
  - SCARIFY BOTTOM AND SIDES OF PLANTING PIT.
- NOTES:
- FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
  - REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.
  - PRUNE ALL TREES IN ACCORDANCE WITH ANSI A-303.

**1 TREE PLANTING**  
L-6 SECTION / PLAN NTS 048-320-01



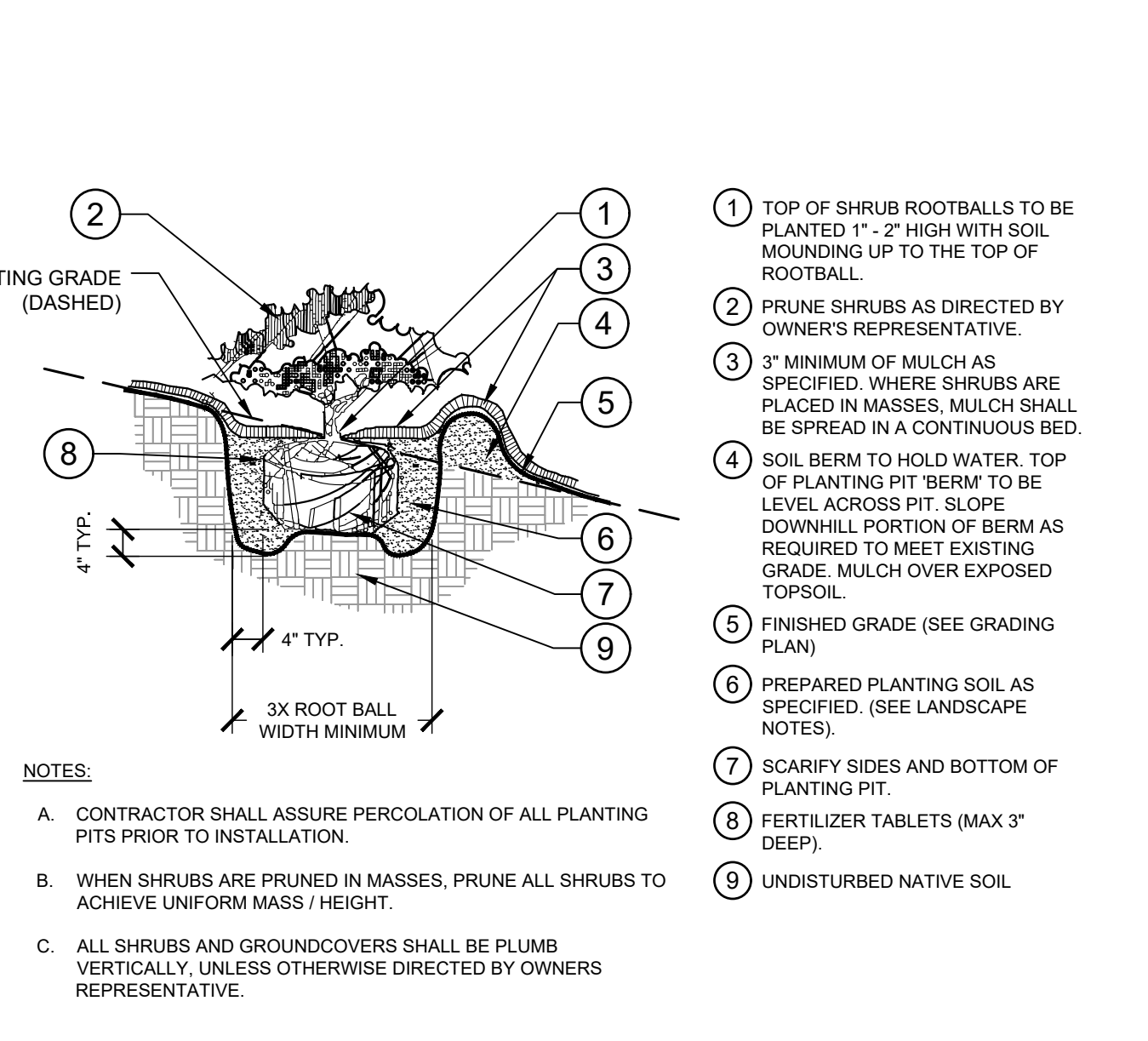
- TRUNK/ROOT BALL TO BE CENTERED AND PLUMB LEVEL IN PLANTING PIT.
  - 6" DIA. CLEAR OF MULCH AT TRUNK FLARE.
  - 6" HIGH BERM, FIRMLY COMPACTED.
  - 3" MINIMUM OF HARDWOOD BARK MULCH AS SPECIFIED. WHERE TREES ARE PLACED IN SOD, MULCH RING FOR TREES SHALL BE 6" DIAMETER (MIN.) OR AS DIRECTED BY OWNER'S REPRESENTATIVE.
  - TERRA TOGGLE EARTH ANCHOR SYSTEM INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
  - 6" MIN. OF TOPSOIL TO BRING TO FINISHED GRADE. (SEE GRADING PLAN)
  - TOP OF ROOTBALL MIN. 2" ABOVE FINISHED GRADE.
  - PREPARED PLANTING SOIL AS SPECIFIED.
  - ROOTBALLS GREATER THAN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING. ROOTBALLS SMALLER THAN 24" IN DIAMETER MAY SIT ON COMPACTED EARTH.
  - UNDISTURBED NATIVE SOIL.
  - SCARIFY BOTTOM AND SIDES OF PLANTING PIT.
  - CUT BACK SLOPE TO PROVIDE A FLAT SURFACE FOR PLANTING.
- NOTES:
- FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
  - REMOVE BURLAP, WIRE AND STRAPS (ANYTHING THAT COULD GIRDLE TREE OR RESTRICT ROOT GROWTH) ON UPPER 1/3 OF ROOTBALL.
  - PRUNE ALL TREES IN ACCORDANCE WITH ANSI A-303.

**2 TREE PLANTING ON A SLOPE**  
L-6 SECTION / PLAN NTS 048-320-02



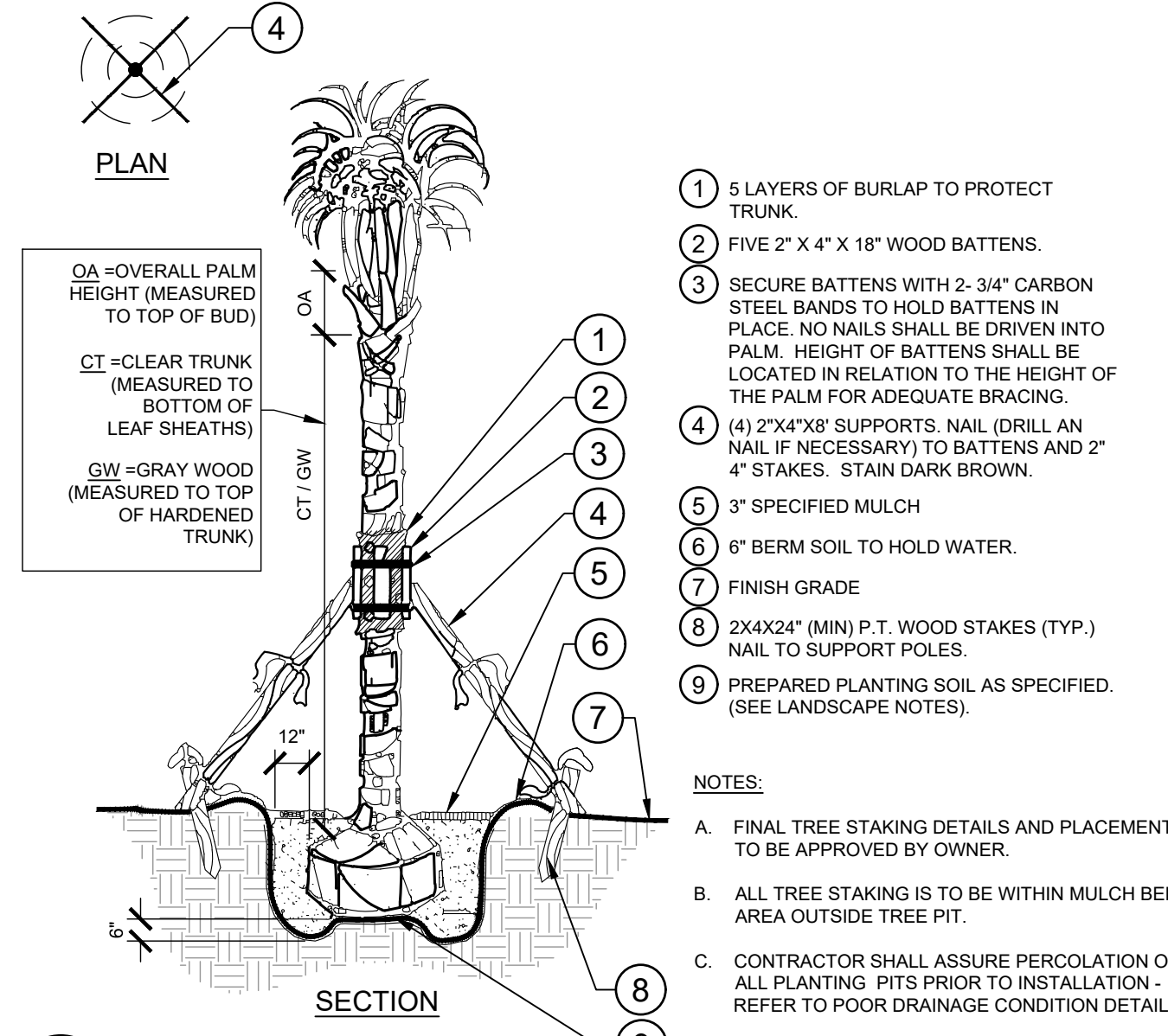
- TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
  - PRUNE ALL SHRUBS TO ACHIEVE A UNIFORM MASS/HEIGHT.
  - MULCH LAYER AS SPECIFIED.
  - EXCAVATE ENTIRE BED SPECIFIED FOR GROUNDCOVER BED.
  - FINISHED GRADE (SEE GRADING PLAN)
  - PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES) NOTE: WHEN GROUND-COVERS AND SHRUBS USED IN MASSES, ENTIRE BED TO BE AMENDED WITH PLANTING SOIL MIX AS SPECIFIED.
  - SCARIFY OF PLANTING PIT SIDES AND BOTTOM.
  - 4" HIGH BERM FIRMLY COMPACTED.
  - UNDISTURBED NATIVE SOIL.
  - FERTILIZER TABLETS (MAX 3" DEEP)
- NOTES:
- CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
  - WHEN SHRUBS ARE PRUNED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS / HEIGHT.
  - ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.

**3 SHRUB/GROUNDCOVER PLANTING**  
L-6 SECTION / PLAN NTS 048-320-03



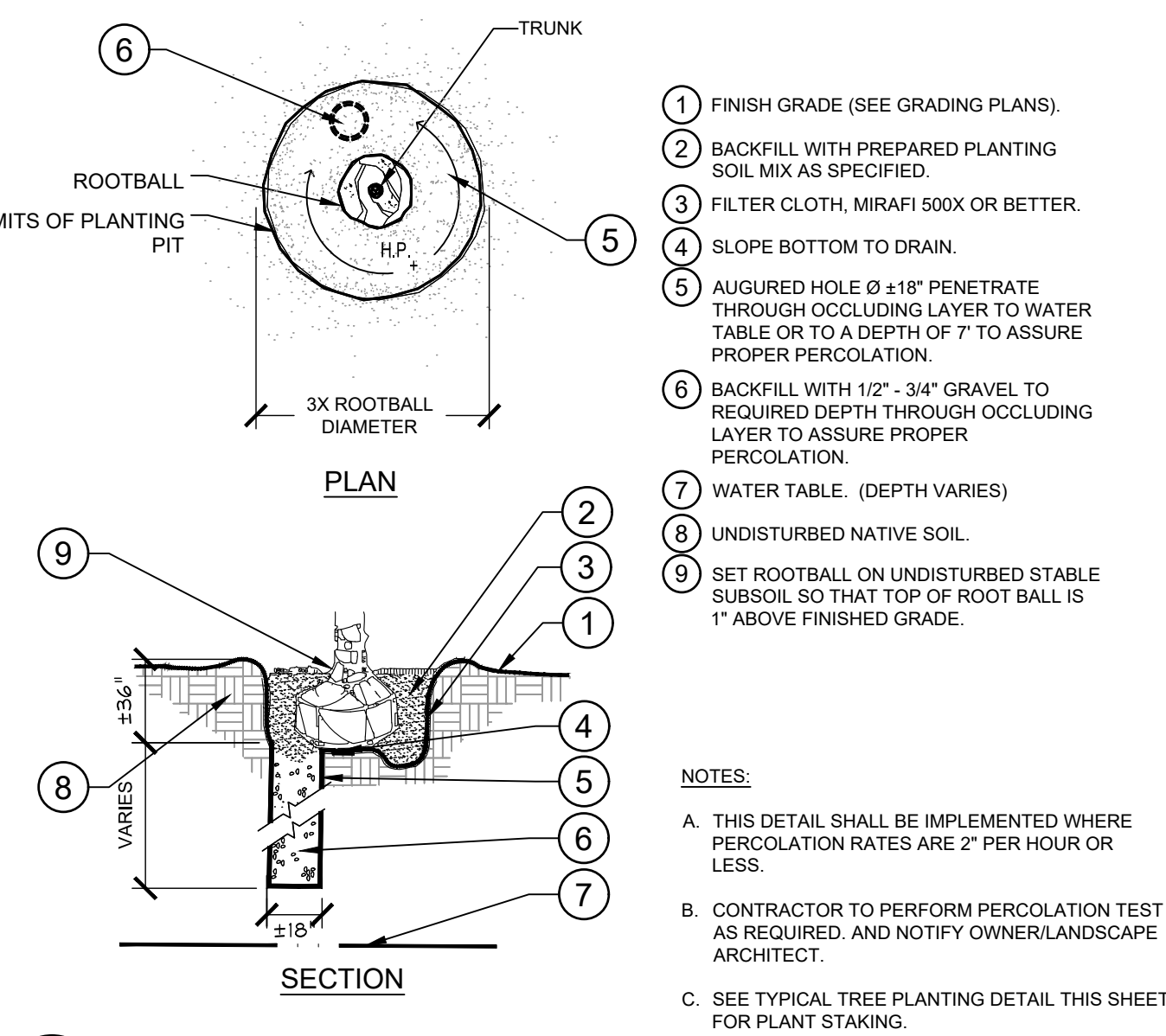
- TOP OF SHRUB ROOTBALLS TO BE PLANTED 1" - 2" HIGH WITH SOIL MOUNDING UP TO THE TOP OF ROOTBALL.
  - PRUNE SHRUBS AS DIRECTED BY OWNER'S REPRESENTATIVE.
  - 3" MINIMUM OF MULCH AS SPECIFIED. WHERE SHRUBS ARE PLACED IN MASSES, MULCH SHALL BE SPREAD IN A CONTINUOUS BED.
  - SOIL BERM TO HOLD WATER. TOP OF PLANTING PIT BERM TO BE LEVEL ACROSS PIT. SLOPE DOWNHILL PORTION OF BERM AS REQUIRED TO MEET EXISTING GRADE. MULCH OVER EXPOSED TOPSOIL.
  - FINISHED GRADE (SEE GRADING PLAN)
  - PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES)
  - SCARIFY SIDES AND BOTTOM OF PLANTING PIT.
  - FERTILIZER TABLETS (MAX 3" DEEP)
  - UNDISTURBED NATIVE SOIL.
- NOTES:
- CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.
  - WHEN SHRUBS ARE PRUNED IN MASSES, PRUNE ALL SHRUBS TO ACHIEVE UNIFORM MASS / HEIGHT.
  - ALL SHRUBS AND GROUNDCOVERS SHALL BE PLUMB VERTICALLY, UNLESS OTHERWISE DIRECTED BY OWNERS REPRESENTATIVE.

**4 SHRUB/GROUNDCOVER PLANTING ON A SLOPE**  
L-6 SECTION NTS 048-320-04



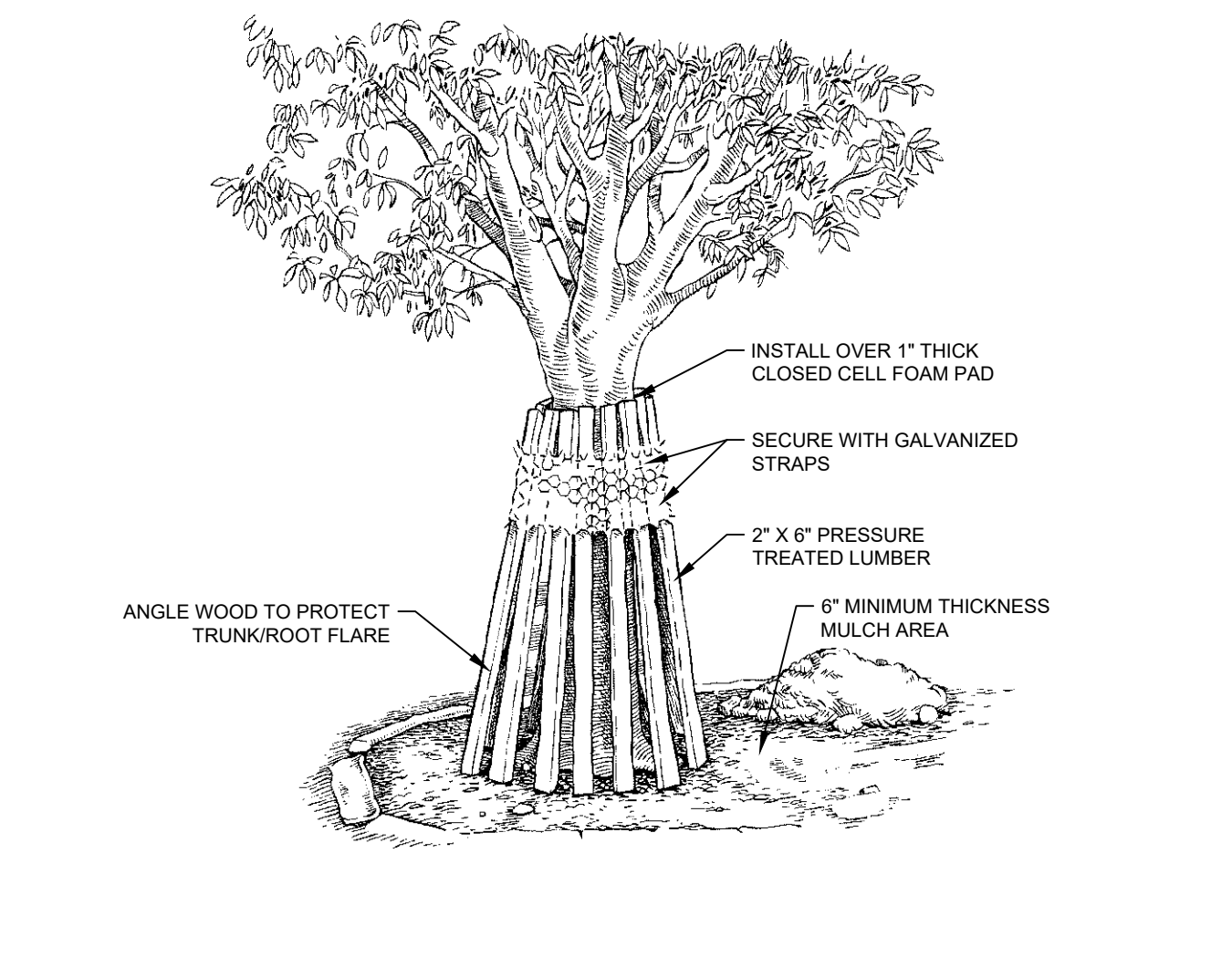
- 5 LAYERS OF BURLAP TO PROTECT TRUNK.
  - FIVE 2" X 4" X 18" WOOD BATTENS.
  - SECURE BATTENS WITH 2-3/4" CARBON STEEL BANDS TO HOLD BATTENS IN PLACE. NO NAILS SHALL BE DRIVEN INTO PALM. HEIGHT OF BATTENS SHALL BE LOCATED IN RELATION TO THE HEIGHT OF THE PALM FOR ADEQUATE BRACING.
  - 2" X 4" X 8" SUPPORTS. NAIL (DRILL AN NAIL IF NECESSARY) TO BATTENS AND 2" 4" STAKES. STAIN DARK BROWN.
  - 3" SPECIFIED MULCH
  - 6" BERM SOIL TO HOLD WATER.
  - FINISH GRADE
  - 2X4X24" (MIN) P.T. WOOD STAKES (TYP.) NAIL TO SUPPORT POLES.
  - PREPARED PLANTING SOIL AS SPECIFIED. (SEE LANDSCAPE NOTES).
- NOTES:
- FINAL TREE STAKING DETAILS AND PLACEMENT TO BE APPROVED BY OWNER.
  - ALL TREE STAKING IS TO BE WITHIN MULCH BED AREA OUTSIDE TREE PIT.
  - CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION. REFER TO POOR DRAINAGE CONDITION DETAIL.

**5 PALM PLANTING**  
L-6 SECTION / PLAN NTS 048-320-11



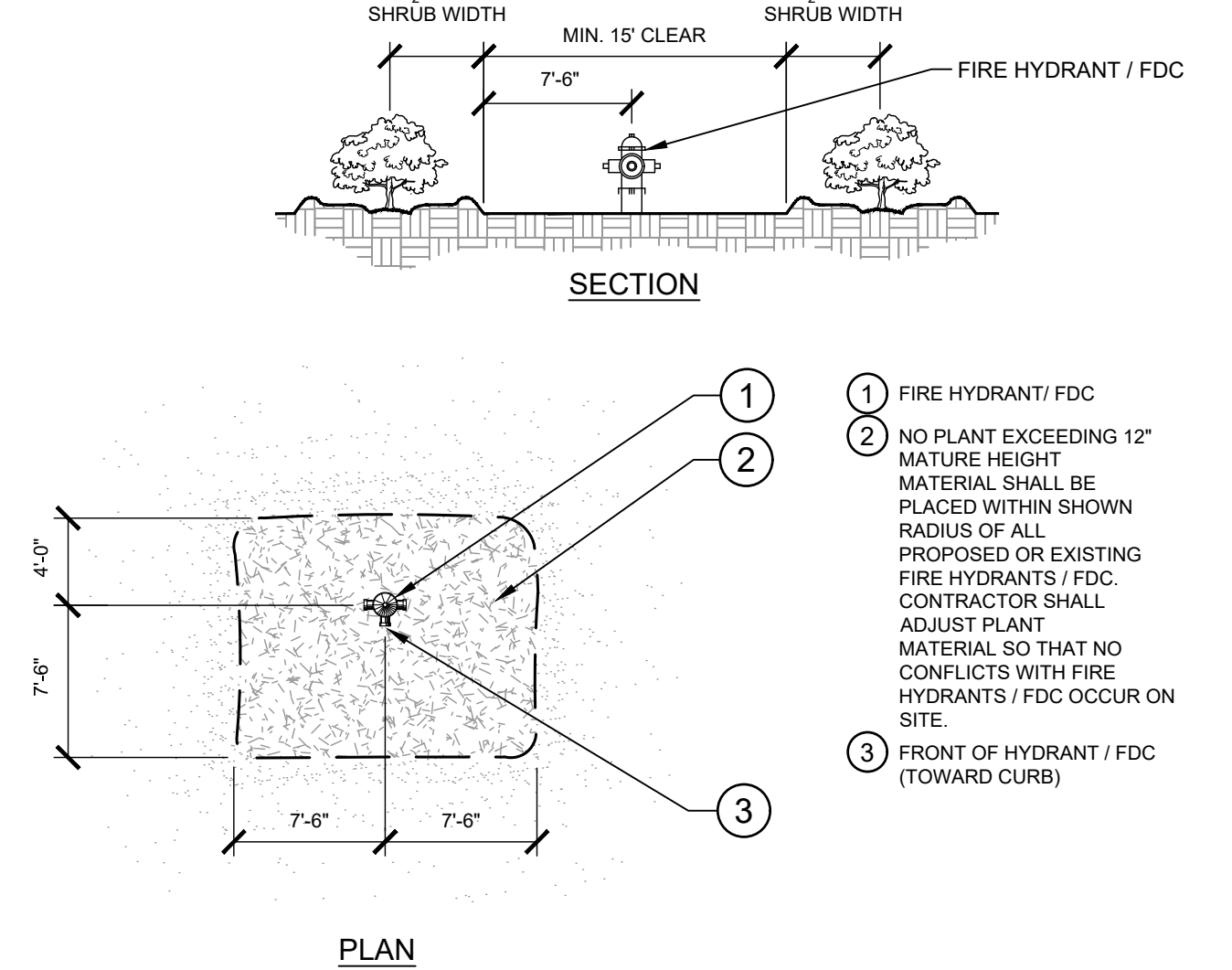
- FINISH GRADE (SEE GRADING PLANS).
  - BACKFILL WITH PREPARED PLANTING SOIL MIX AS SPECIFIED.
  - FILTER CLOTH, MIRAFI 500X OR BETTER.
  - SLOPE BOTTOM TO DRAIN.
  - AUGURED HOLE Ø ±18" PENETRATE THROUGH OCCLUDING LAYER TO WATER TABLE OR TO A DEPTH OF 7' TO ASSURE PROPER PERCOLATION.
  - BACKFILL WITH 1/2" - 3/4" GRAVEL TO REQUIRED DEPTH THROUGH OCCLUDING LAYER TO ASSURE PROPER PERCOLATION.
  - WATER TABLE. (DEPTH VARIES)
  - UNDISTURBED NATIVE SOIL.
  - SET ROOTBALL ON UNDISTURBED STABLE SUBSOIL SO THAT TOP OF ROOT BALL IS 1" ABOVE FINISHED GRADE.
- NOTES:
- THIS DETAIL SHALL BE IMPLEMENTED WHERE PERCOLATION RATES ARE 2" PER HOUR OR LESS.
  - CONTRACTOR TO PERFORM PERCOLATION TEST AS REQUIRED. AND NOTIFY OWNER/LANDSCAPE ARCHITECT.
  - SEE TYPICAL TREE PLANTING DETAIL THIS SHEET FOR PLANT STAKING.

**6 POOR DRAINAGE CONDITION**  
L-6 SECTION / PLAN NTS 048-320-09



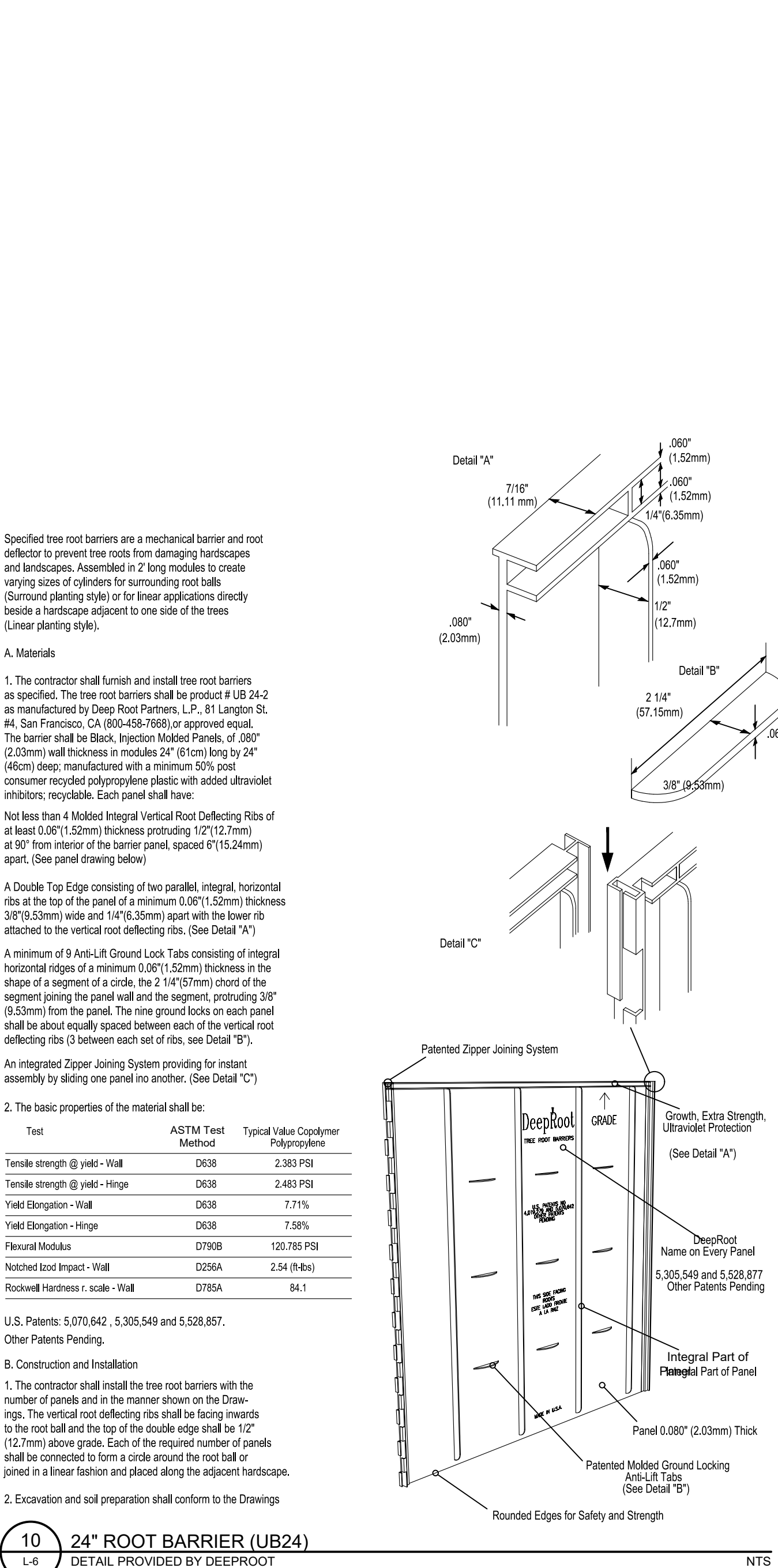
- INSTALL OVER 1" THICK CLOSED CELL FOAM PAD
- SECURE WITH GALVANIZED STRAPS
- 2" X 6" PRESSURE TREATED LUMBER
- 6" MINIMUM THICKNESS MULCH AREA
- ANGLE WOOD TO PROTECT TRUNK/ROOT FLARE

**8 TRUNK PROTECTION**  
L-6 SECTION / PLAN NTS 048-320-14

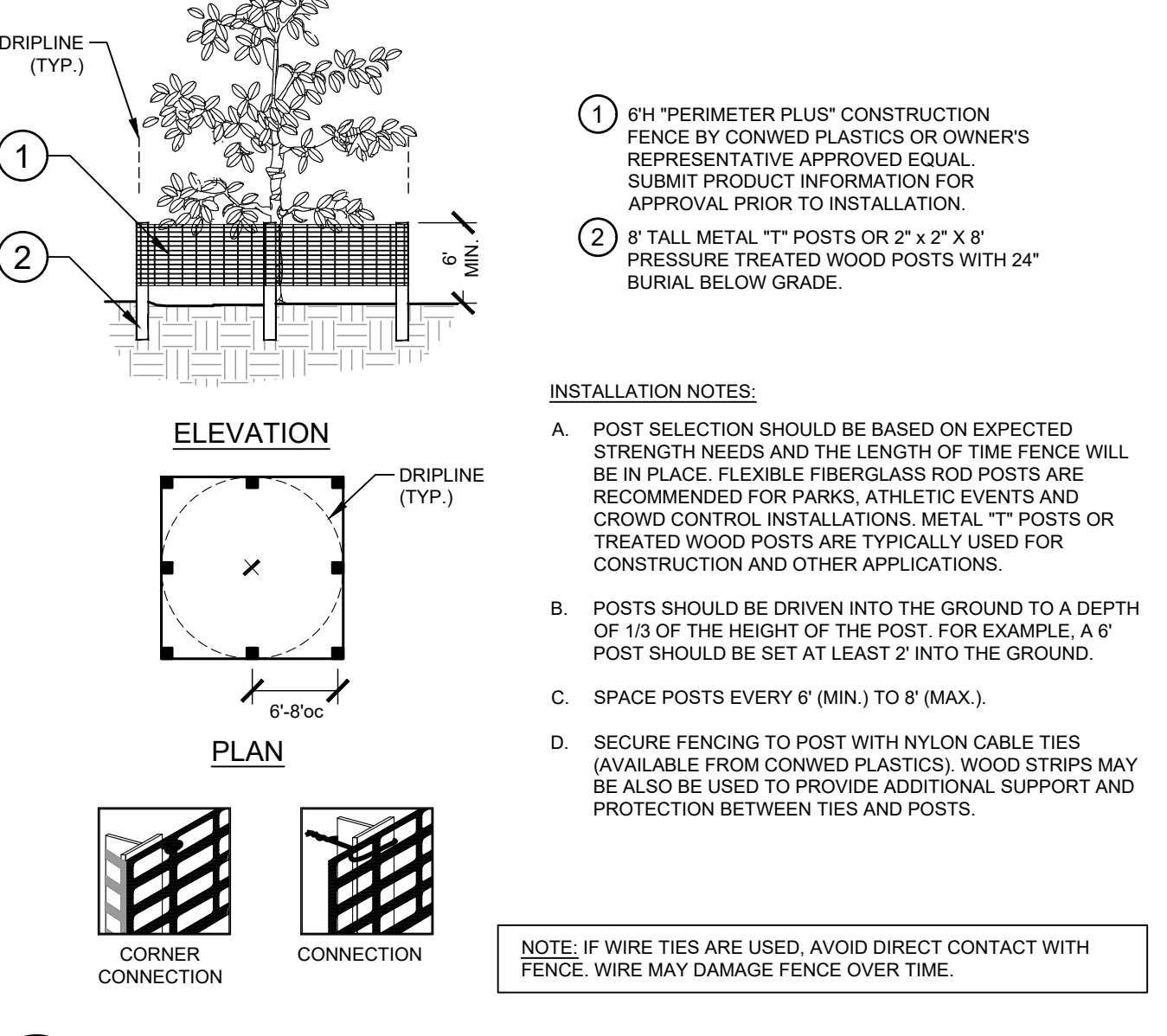


- FIRE HYDRANT / FDC
- NO PLANT EXCEEDING 12" MATURE HEIGHT MATERIAL SHALL BE PLACED WITHIN SHOWN RADIUS OF ALL PROPOSED OR EXISTING FIRE HYDRANTS / FDC. CONTRACTOR SHALL ADJUST PLANT MATERIAL SO THAT NO CONFLICTS WITH FIRE HYDRANTS / FDC OCCUR ON SITE.
- FRONT OF HYDRANT / FDC (TOWARD CURB)

**9 SHRUB PLANTING AT FIRE HYDRANT / FIRE DEPARTMENT CONNECTION**  
L-6 SECTION / PLAN NTS 048-320-20



**10 24" ROOT BARRIER (UB24)**  
L-6 DETAIL PROVIDED BY DEEPTOOL NTS



**7 TREE PROTECTION FENCING**  
L-6 ELEVATION / PLAN NTS 048-320-10



**11 24" ROOT BARRIER (UB24)**  
L-6 DETAIL PROVIDED BY DEEPTOOL NTS

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

REVISIONS: \_\_\_\_\_

NO. \_\_\_\_\_

## Kimley»Horn

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PHONE: 941-579-7800 REGISTRY NO. 35106  
WWW.KIMLEY-HORN.COM

KHA PROJECT 048320008  
DATE MARCH 2023  
SCALE AS SHOWN  
DESIGNED BY KHA  
DRAWN BY MAL  
CHECKED BY JRP DATE: 3/8/2023

### LANDSCAPE DETAILS

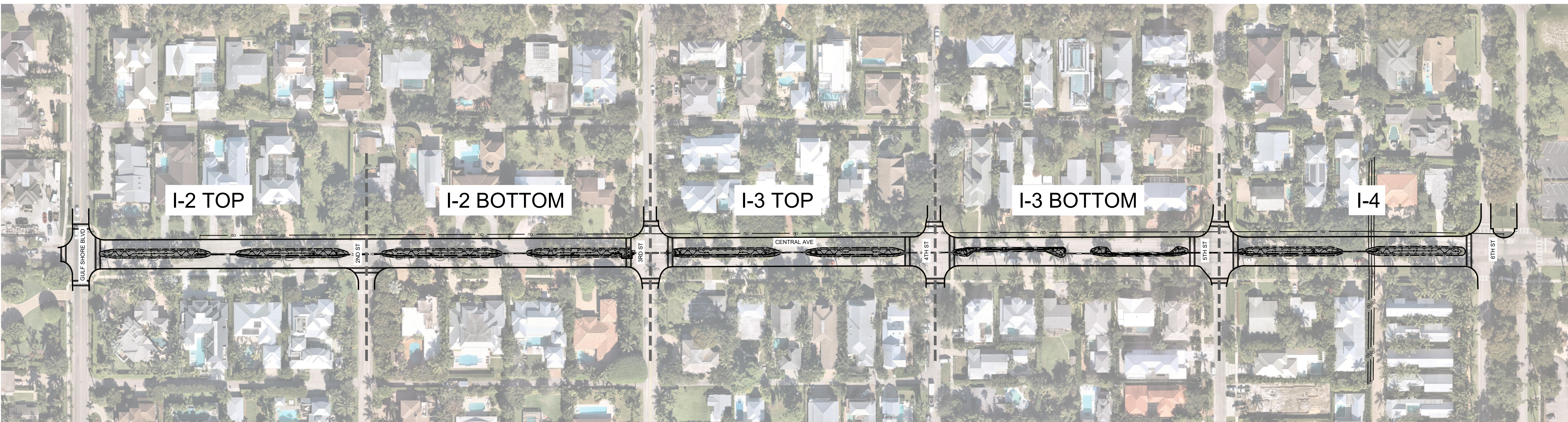
CENTRAL AVE  
LANDSCAPING  
PREPARED FOR  
CITY OF NAPLES

SHEET NUMBER  
**L-6**

Plotted By: Liza, Monica Sheet Set: 048320008 - CENTRAL AVE Layout: L-6 March 08, 2023 05:17:27pm K:\SAR-URG-048-22008 - Central Ave Landscape\CAD\PlanSheets\L-6 - LANDSCAPE PLAN.dwg  
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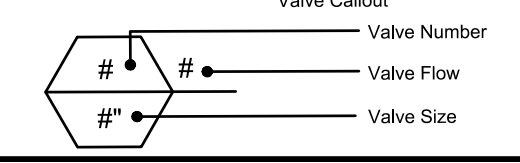
# Attachment A - Construction Plans

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## IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
	RAIN BIRD 1812-NP SQ SERIES SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH NON-POTABLE PURPLE CAP.	14	30
	RAIN BIRD 1812-NP 15 STRIP SERIES SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH NON-POTABLE PURPLE CAP.	20	30
	RAIN BIRD 1812-NP 5 SERIES MPR SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH NON-POTABLE PURPLE CAP.	16	30
	RAIN BIRD 1812-NP 8 SERIES MPR SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH NON-POTABLE PURPLE CAP.	41	30
	RAIN BIRD 1812-NP 10 SERIES MPR SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH NON-POTABLE PURPLE CAP.	24	30
	RAIN BIRD 1812-NP 12 SERIES MPR SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH NON-POTABLE PURPLE CAP.	204	30
	RAIN BIRD 1812-NP ADJ SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. SIDE AND BOTTOM INLET. 1/2IN. NPT FEMALE THREADED INLET. WITH NON-POTABLE PURPLE CAP.	4	30
	RAIN BIRD 1802-NP 1400 FLOOD FLOOD BUBBLER 2IN. POPUP WITH NON-POTABLE PURPLE CAP.	222	20
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	RAIN BIRD PEB-NP-HAN 1IN. 1-1/2IN. 2IN. PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. WITH PURPLE HANDLE FOR NON-POTABLE WATER USE.	16	
	RAIN BIRD PESBR 1" 1IN. 1-1/2IN. 2IN. DURABLE CHLORINE-RESISTANT MASTER VALVES FOR RECLAIMED WATER APPLICATIONS. WITH SCRUBBER MECHANISM TECHNOLOGY, AND PURPLE FLOW CONTROL HANDLE.	1	
	FERCO 825V 1" REDUCED PRESSURE BACKFLOW PREVENTER	1	
	RAIN BIRD ESPLXVM 60 STATION, 2-WIRE CONTROLLER W/ SMART VALVE TECHNOLOGY. (1) ESPLXVM 60-STATION, INDOOR/OUTDOOR, PLASTIC WALL-MOUNT CABINET. SYSTEM REQUIREMENTS: RAIN BIRD LXVM/XXX INTEGRATED VALVE MODULES & 2-WIRE DEVICES. USE PAIGE ELECTRIC CABLE P7072D & RAIN BIRD WC20 DRY SPLICES ONLY. GROUND SYSTEM W/ (X) LXVM/MSD SURGE DEVICE IN RAIN BIRD RAIN BIRD JUNCTION VALVE BOXES. INSTALL PER MANUFACTURERS RECOMMENDATIONS.	1	
	RAIN BIRD RSD-CEX RAIN SENSING DEVICE, CONDUIT MOUNT. WITH THREADED ADAPTER, EXTENSION WIRE.	1	
	RAIN BIRD FS-100-B 1IN. FLOW SENSOR, BRASS MODEL. SUGGESTED OPERATING RANGE 2.0 GPM TO 40.0 GPM. SIZE FOR FLOW NOT ACCORDING TO PIPE SIZE. RAIN BIRD COMPATIBLE CONTROLLERS. ESP-LXVM(P)   LX-D   LX-ME2(P)   ME3, OR CONTROLLERS ACCEPTING CUSTOM K-FACTOR AND OFFSET. INSTALL IN RAIN BIRD VALVE BOX.	1	
	RAIN BIRD FM200B	1	
	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21 PVC CLASS 200 IRRIGATION PIPE. ONLY LATERAL TRANSITION PIPE SIZES 1" AND ABOVE ARE INDICATED ON THE PLAN, WITH ALL OTHERS BEING 3/4" IN SIZE.	5,118 L.F.	
	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21 PVC CLASS 200 IRRIGATION PIPE.	2,010 L.F.	
	PIPE SLEEVE: PVC SCHEDULE 40 TYPICAL PIPE SLEEVE FOR IRRIGATION PIPE. PIPE SLEEVE SIZE SHALL ALLOW FOR IRRIGATION PIPING AND THEIR RELATED COUPLINGS TO EASILY SLIDE THROUGH SLEEVING MATERIAL. EXTEND SLEEVES 18 INCHES BEYOND EDGES OF PAVING FOR CONSTRUCTION.	552.8 L.F.	



## VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	WIRE	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PEB-NP-HAN	1-1/2"	SHRUB SPRAY	38.28	791.7	37.4	38.5	1.82 in/h
2	RAIN BIRD PEB-NP-HAN	1-1/2"	SHRUB SPRAY	38.28	606.9	38.6	39.7	1.79 in/h
3	RAIN BIRD PEB-NP-HAN	1"	BUBBLER	16	570.9	26.3	26.5	1.24 in/h
4	RAIN BIRD PEB-NP-HAN	1-1/2"	SHRUB SPRAY	40.88	416.3	38.1	39.1	1.77 in/h
5	RAIN BIRD PEB-NP-HAN	1-1/2"	SHRUB SPRAY	34.51	184.7	37.6	38.6	1.78 in/h
6	RAIN BIRD PEB-NP-HAN	1"	BUBBLER	16	108.9	26.4	26.5	1.41 in/h
7	RAIN BIRD PEB-NP-HAN	1"	BUBBLER	12	88.3	25.0	25.1	1.21 in/h
8	RAIN BIRD PEB-NP-HAN	1-1/2"	SHRUB SPRAY	37.59	225.6	37.7	38.7	1.8 in/h
9	RAIN BIRD PEB-NP-HAN	1-1/2"	SHRUB SPRAY	33.08	308.8	37.4	38.3	1.77 in/h
10	RAIN BIRD PEB-NP-HAN	1"	SHRUB SPRAY	17.69	552.5	38.2	38.4	1.69 in/h
11	RAIN BIRD PEB-NP-HAN	1"	BUBBLER	5.5	696.5	22.5	22.6	1.05 in/h
12	RAIN BIRD PEB-NP-HAN	1"	SHRUB SPRAY	17.73	770.7	36.6	37.1	1.81 in/h
13	RAIN BIRD PEB-NP-HAN	1"	BUBBLER	5.5	790.2	22.4	22.5	1.04 in/h
14	RAIN BIRD PEB-NP-HAN	1"	BUBBLER	15	1,015	26.1	26.3	1.4 in/h
15	RAIN BIRD PEB-NP-HAN	1-1/2"	SHRUB SPRAY	35.68	1,127	37.4	38.7	1.78 in/h
16	RAIN BIRD PEB-NP-HAN	1-1/2"	SHRUB SPRAY	32.58	1,232	37.5	38.7	1.67 in/h
	Common Wire				2,010			

## CRITICAL ANALYSIS

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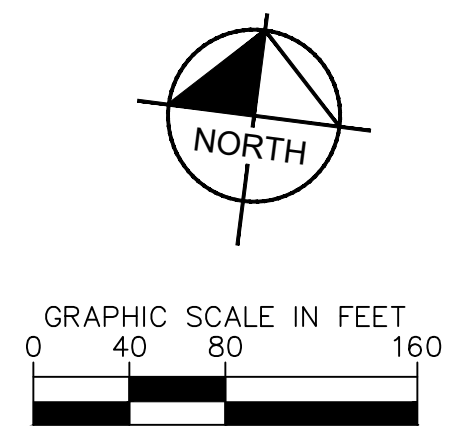
P.O.C. NUMBER: 01  
Water Source Information:

FLOW AVAILABLE  
Water Meter Size: 2"  
Flow Available: 120 GPM

PRESSURE AVAILABLE  
Static Pressure at POC: 45 PSI  
Elevation Change: 5.00 ft  
Service Line Size: 3"  
Length of Service Line: 20 ft  
Pressure Available: 43 PSI

DESIGN ANALYSIS  
Maximum Station Flow: 40.88 GPM  
Flow Available at POC: 120 GPM  
Residual Flow Available: 79.12 GPM

Critical Station: 2  
Design Pressure: 30 PSI  
Friction Loss: 4.66 PSI  
Fittings Loss: 0.47 PSI  
Elevation Loss: 0 PSI  
Loss through Valve: 3.52 PSI  
Pressure Req. at Critical Station: 38.7 PSI  
Loss for Fittings: 0.01 PSI  
Loss for Main Line: 0.13 PSI  
Loss for POC to Valve Elevation: 0 PSI  
Loss for Backflow: 0 PSI  
Loss for Water Meter: 0.88 PSI  
Critical Station Pressure at POC: 38.7 PSI  
Pressure Available: 43 PSI  
Residual Pressure Available: 3.33 PSI



No.	REVISIONS	DATE	BY

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 PHONE: 941-579-7600  
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 REGISTRY NO. 35106

KHA PROJECT 048320008	JAMES R. PANKOWIN, PLA
DATE MARCH 2023	FLORIDA LICENSE NUMBER 6666900
SCALE AS SHOWN	DRAWN BY MAL
CHECKED BY JRP	DATE 3/8/2023

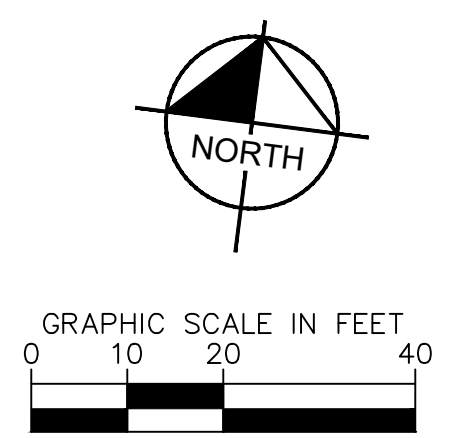
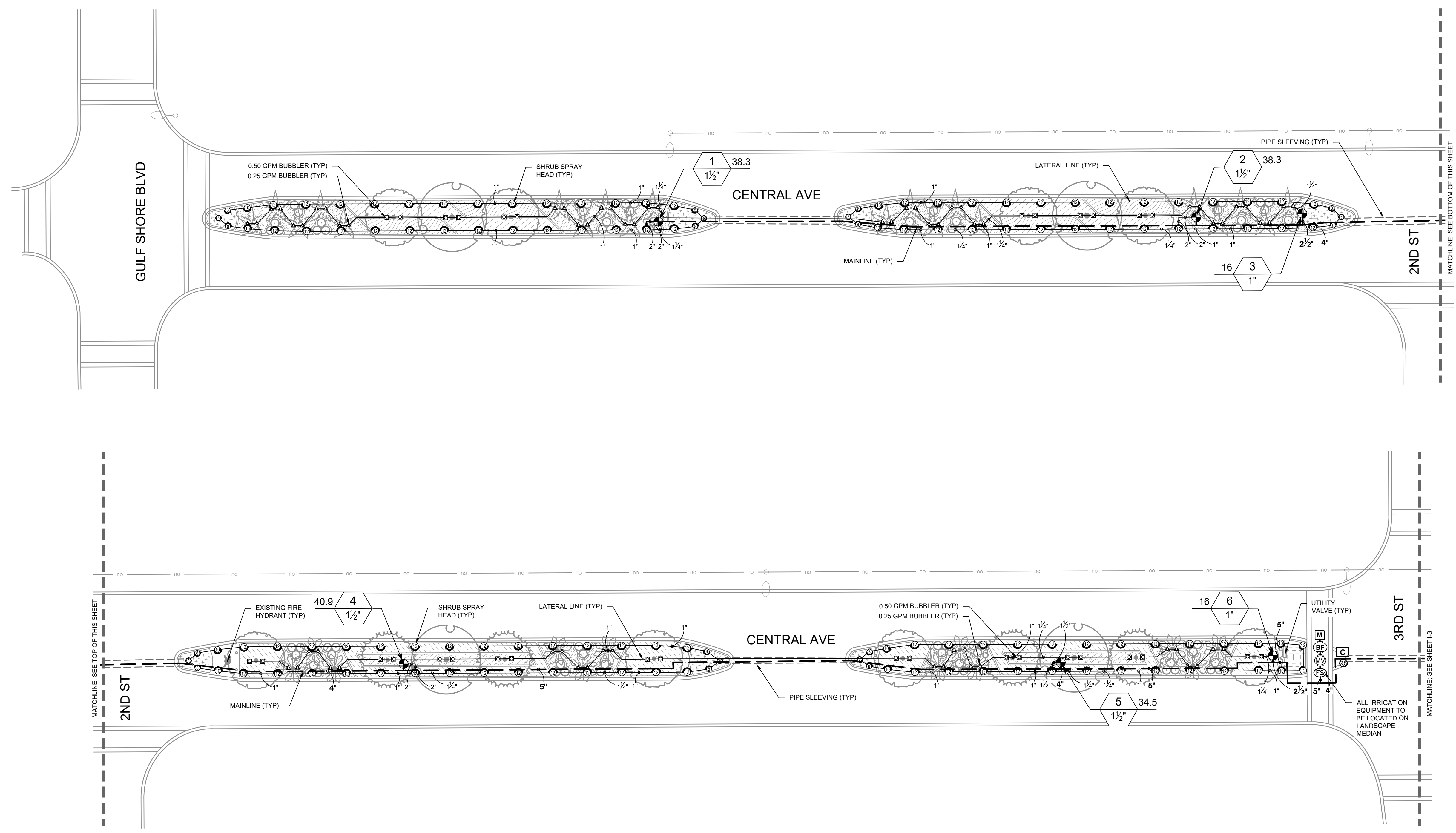
## OVERALL IRRIGATION PLAN

**CENTRAL AVE LANDSCAPING**  
 PREPARED FOR  
**CITY OF NAPLES**  
 FLORIDA  
 CITY OF NAPLES

CALL 2 WORKING DAYS BEFORE YOU DIG  
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 SUNSHINE STATE ONE CALL OF FLORIDA, INC.

# Attachment A - Construction Plans

Plotted By: Lee, Monica. Sheet Set: 048320008 - CENTRAL AVE. Layout: 1-2. March 08, 2023 05:18:23pm. K:\SAP-UFG\048320008 - Central Ave Landscaping\CAD\PlanSheet\1 - IRRIGATION PLAN.dwg  
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SYMBOL	MANUFACTURER/MODEL
	RAIN BIRD 1812-NP SQ SERIES
	RAIN BIRD 1812-NP 15 STRIP SERIES
	RAIN BIRD 1812-NP 5 SERIES MPR
	RAIN BIRD 1812-NP 8 SERIES MPR
	RAIN BIRD 1812-NP 10 SERIES MPR
	RAIN BIRD 1812-NP 12 SERIES MPR
	RAIN BIRD 1812-NP ADJ
	RAIN BIRD 1802-NP-1400 FLOOD
SYMBOL	MANUFACTURER/MODEL
	RAIN BIRD PEB-NP-HAN
	RAIN BIRD PESBR 1"
	RAIN BIRD ESPLXVM
	RAIN BIRD RSD-CEX
	RAIN BIRD FS-100-B
	RAIN BIRD FM200B
IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21	
IRRIGATION MAINLINE: PVC CLASS 200 SDR 21	
PIPE SLEEVE: PVC SCHEDULE 40	
Valve Callout	
Valve Number	
Valve Flow	
Valve Size	

KHA PROJECT  
048320008

DATE  
MARCH 2023

SCALE  
AS SHOWN

DESIGNED BY  
KHA

DRAWN BY  
MAL

CHECKED BY  
JRP

DATE  
3/8/2023

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 PHONE: 941-579-7800  
 WWW.KIMLEY-HORN.COM

JAMES R. PANKOWIN, PLA

FLORIDA LICENSE NUMBER  
6666900

IRRIGATION PLAN

CENTRAL AVE  
LANDSCAPING  
PREPARED FOR  
CITY OF NAPLES

FLORIDA

SHEET NUMBER  
1-2

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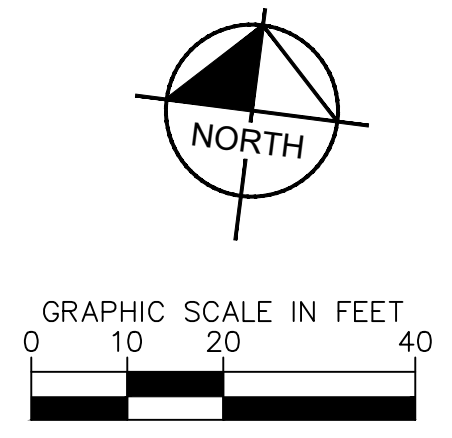
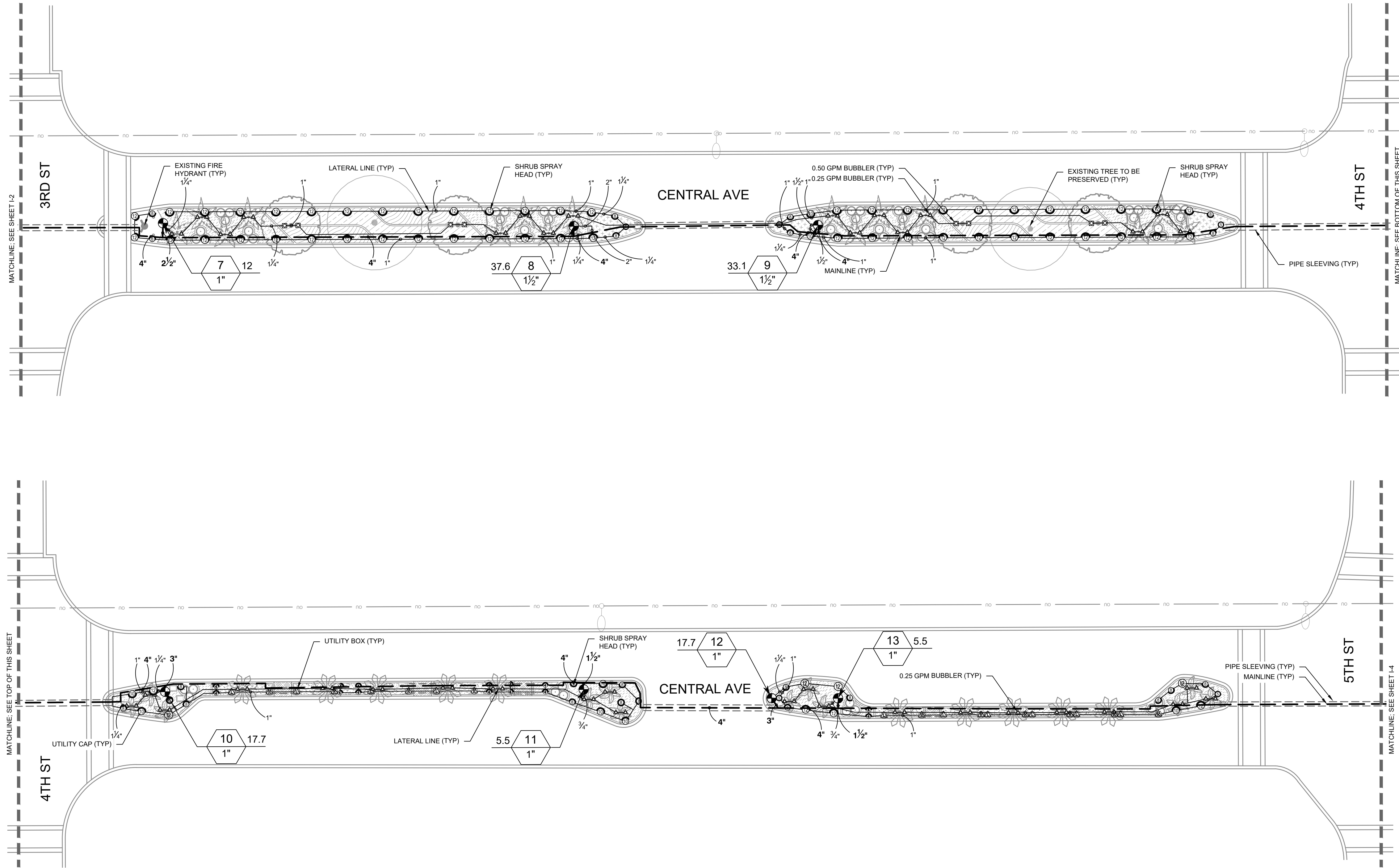
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# Attachment A - Construction Plans

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SYMBOL	MANUFACTURER/MODEL
○ 20 2H ○ 2F ○ 42 4H ○ 4F	RAIN BIRD 1812-NP SQ SERIES
△ EST LOS REC CST SST	RAIN BIRD 1812-NP 15 STRIP SERIES
○ 3 H ○ 3 F	RAIN BIRD 1812-NP 5 SERIES MPR
○ 3 H ○ 3 F	RAIN BIRD 1812-NP 8 SERIES MPR
○ 10 H ○ 10 F	RAIN BIRD 1812-NP 10 SERIES MPR
○ 12 H ○ 12 F	RAIN BIRD 1812-NP 12 SERIES MPR
○ 4 ○ 6 ○ 8 ○ 10	RAIN BIRD 1812-NP ADJ
△ 1401 △ 1402 △ 1404 △ 1408	RAIN BIRD 1802-NP-1400 FLOOD
SYMBOL	MANUFACTURER/MODEL
○	RAIN BIRD PESBR 1"
○	FEBCO 825Y 1"
○	RAIN BIRD ESPLXIVM
○	RAIN BIRD RSD-CEX
○	RAIN BIRD FS-100-B
○	RAIN BIRD FM200B
---	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21
---	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
---	PIPE SLEEVE: PVC SCHEDULE 40
Valve Callout	Valve Number
#	Valve Flow
#"	Valve Size

KHA PROJECT: 048320008  
 DATE: MARCH 2023  
 SCALE: AS SHOWN  
 DESIGNED BY: KHA  
 DRAWN BY: MAL  
 CHECKED BY: JRP  
 DATE: 3/8/2023

## IRRIGATION PLAN

SHEET NUMBER  

### I-3

CENTRAL AVE  
 LANDSCAPING  
 PREPARED FOR  
 CITY OF NAPLES

JAMES R. PANKOWIN, PLA  
 FLORIDA LICENSE NUMBER  
 6666900  
 MAL  
 DATE: 3/8/2023

KIMLEY-HORN AND ASSOCIATES, INC.  
 1777 MAIN STREET, SUITE 200, SARASOTA, FL 34236  
 PHONE: 941-579-7600  
 WWW.KIMLEY-HORN.COM  
 REGISTRY NO. 35106

CITY OF NAPLES

FLORIDA

REVISIONS

DATE

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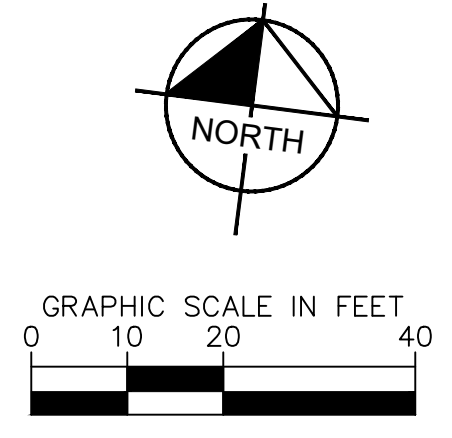
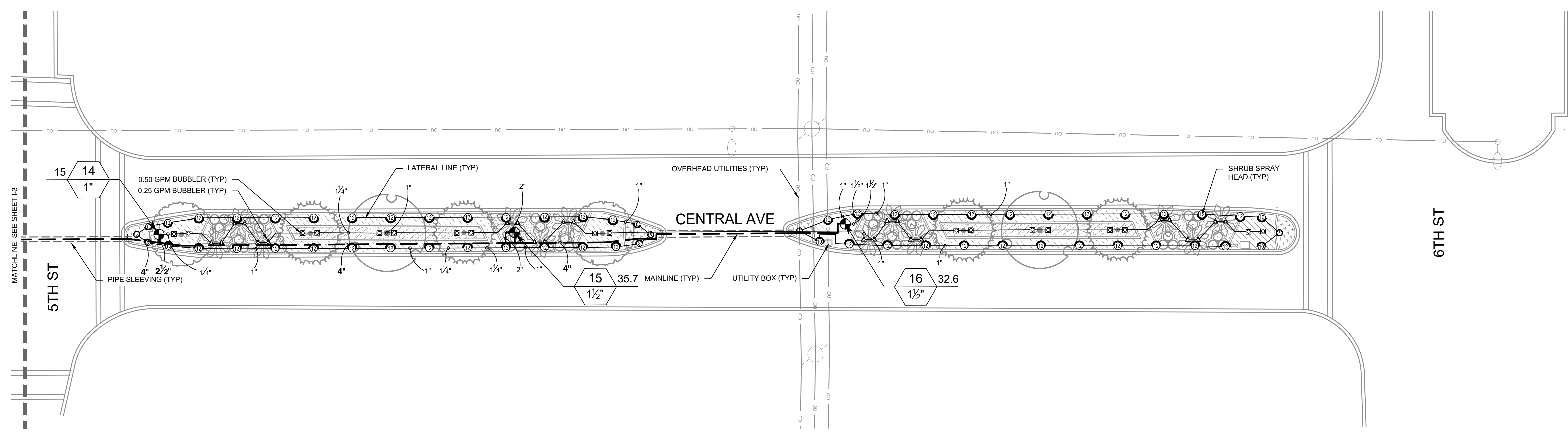
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# Attachment A - Construction Plans

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SYMBOL	MANUFACTURER/MODEL
○ 2Q 2H 2F 4Q 4H 4F	RAIN BIRD 1812-NP SQ SERIES
△ EST LCS RCS CST SST	RAIN BIRD 1812-NP 15 STRIP SERIES
① ② ③ ④	RAIN BIRD 1812-NP 5 SERIES MPR
⑤ ⑥ ⑦ ⑧	RAIN BIRD 1812-NP 8 SERIES MPR
⑨ ⑩ ⑪ ⑫	RAIN BIRD 1812-NP 10 SERIES MPR
⑬ ⑭ ⑮ ⑯	RAIN BIRD 1812-NP 12 SERIES MPR
⑰ ⑱ ⑲ ⑳	RAIN BIRD 1812-NP ADJ
⑳ ㉑ ㉒ ㉓ ㉔ ㉕	RAIN BIRD 1802-NP-1400 FLOOD
1401 1402 1404 1408	RAIN BIRD PEB-NP-HAN
Ⓜ	RAIN BIRD PESBR 1"
Ⓝ	FEBCO 825Y 1"
Ⓒ	RAIN BIRD ESPLX1VM
Ⓓ	RAIN BIRD RSD-CEX
Ⓔ	RAIN BIRD FS-100-B
Ⓜ	RAIN BIRD FM200B
---	IRRIGATION LATERAL LINE: PVC CLASS 200 SDR 21
----	IRRIGATION MAINLINE: PVC CLASS 200 SDR 21
-----	PIPE SLEEVE: PVC SCHEDULE 40
#	Valve Callout
#	Valve Number
#	Valve Flow
#	Valve Size

NO.	REVISIONS	DATE	BY

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KHA PROJECT	048320008
DATE	MARCH 2023
SCALE	AS SHOWN
DESIGNED BY	KHA
DRAWN BY	MAL
CHECKED BY	JRP
DATE	3/8/2023

JAMES R. PANKOWIN, PLA  
FLORIDA LICENSE NUMBER: 6666900

## IRRIGATION PLAN

CENTRAL AVE LANDSCAPING PREPARED FOR CITY OF NAPLES FLORIDA

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SHEET NUMBER  
**1-4**

# Attachment A - Construction Plans

## IRRIGATION SPECIFICATIONS

### 1. SCOPE OF WORK

- 1.1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THESE PLANS.
- 1.2. INSTALL THE IRRIGATION SYSTEM TO PROVIDE 100% UNIFORM COVERAGE INCLUDING ANY CHANGES MADE IN THE LAYOUT DUE TO FIELD CONDITIONS. ALL FIELD CHANGES SHALL BE IN ACCORDANCE WITH THESE PLANS. ANY SYSTEMS THAT REQUIRE FIELD ADJUSTMENT TO PROVIDE FULL AND UNIFORM COVERAGE SHALL BE MADE PRIOR TO FINAL ACCEPTANCE AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST.
- 1.3. SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF OPERATIONS ON-SITE. SEND COPIES OF THE PERMIT(S) TO THE OWNER'S REPRESENTATIVE. FOR WORK LOCATED IN THE R.O.W., CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE AGENCY HAVING JURISDICTION.
- 1.4. WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS.

### 2. PROTECTION OF EXISTING AND PROPOSED SITE ELEMENTS

- 2.1. ALL EXISTING SITE ITEMS, ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM THE CONTRACTOR'S WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.
- 2.2. MAINTAIN ALL NECESSARY BMP DEVICES THROUGHOUT THE DURATION OF ALL CONSTRUCTION ACTIVITIES.
- 2.3. WHERE APPLICABLE, SUBMIT A DETAILED PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THE APPROPRIATE REGULATORY AGENCY STANDARDS UNLESS THE WORK REQUIRES NOTHING MORE THAN A DIRECT APPLICATION OF FDOT STANDARD PLANS FOR ROAD AND BRIDGE CONSTRUCTION, INDEX 102-600.
- 2.4. LOCATE ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO CONSTRUCTION ACTIVITIES. THE INFORMATION AND DATA SHOWN WITH RESPECT TO UTILITIES IS APPROXIMATE. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA. LOCATING ALL UTILITIES PRIOR TO CONSTRUCTION, THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE RESULTING FROM THE WORK. THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. NOTIFY THE LANDSCAPE ARCHITECT IN WRITING WHEN ANY CONFLICT BETWEEN UTILITIES AND THESE PLANS EXIST PRIOR TO INSTALLATION.

### 3. SUBMITTALS

- 3.1. SUBMIT FULL AND COMPLETE SHOP DRAWINGS OF ALL IRRIGATION EQUIPMENT AS SHOWN ON THESE PLANS TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION.
- 3.2. SUBMIT PRODUCT DATA SHEETS FOR ALL IRRIGATION EQUIPMENT TO BE INSTALLED TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION. THE IRRIGATION SYSTEM, AS SHOWN ON THESE PLANS, HAS BEEN DESIGNED AND CALCULATED WITH THE EQUIPMENT AS SPECIFIED. SUBMIT ANY REQUEST FOR PRODUCT SUBSTITUTION(S) IN WRITING. IF APPROVED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY MODIFICATION(S) AS A RESULT OF PRODUCT SUBSTITUTIONS TO THE IRRIGATION SYSTEM IN THE SHOP DRAWINGS TO MEET THE DESIGN INTENT OF THESE PLANS.

### 4. EQUIPMENT LIST

- 4.1. ALL QUANTITIES ARE PROVIDED FOR CONVENIENCE ONLY. CONFIRM ALL QUANTITIES PER PLAN PRIOR TO BIDDING AND CONSTRUCTION.

### 5. POINT OF CONNECTION

- 5.1. FIELD VERIFY ALL POINT OF CONNECTION SOURCE INFORMATION INCLUDING STATIC PSI AND GPM AVAILABLE PRIOR TO CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE IN WRITING IF DISCREPANCIES BETWEEN THE FLOW AND PRESSURE AS LISTED IN THE CRITICAL ANALYSIS AND THE FIELD CONDITIONS EXIST.
- 5.2. COORDINATE INSTALLATION OF ANY METERS AND BACKFLOW ASSEMBLIES WITH THE AGENCY HAVING JURISDICTION AND OWNER'S REPRESENTATIVE.

### 6. MAINLINE INSTALLATION

- 6.1. INSTALL ALL MAINLINES AND LATERALS UNDER PAVEMENT WITHIN SLEEVES. WHERE VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES, CONTAIN WIRES WITHIN A SEPARATE, SMALLER CONDUIT.
- 6.2. INSTALL COLOR CODED METAL DETECTABLE MARKING TAPE WHICH CLEARLY NOTES: "CAUTION: IRRIGATION LINE BURIED BELOW" ABOVE THE FULL LENGTH OF THE IRRIGATION MAINLINE.
- 6.3. WHERE MAINLINE RUNS PARALLEL TO PAVEMENT OR CURBING, OFFSET THE MAINLINE 24" FROM THE EDGE OF PAVEMENT OR CURB.
- 6.4. PERFORM HYDROSTATIC PRESSURE TESTING AS FOLLOWS:
  - 6.4.1. AFTER FLUSHING, AND THE INSTALLATION OF VALVES CONDUCT THE FOLLOWING TESTS IN THE SEQUENCE LISTED BELOW. FURNISH ALL EQUIPMENT, MATERIALS AND LABOR NECESSARY TO PERFORM THE TESTS. CONDUCT ALL TESTS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE. NOTIFY THE OWNER'S REPRESENTATIVE FORTY-EIGHT (48) HOURS IN ADVANCE OF TESTING.
  - 6.4.2. PERFORM WATER PRESSURE TESTS ON ALL PRESSURE MAIN LINES BEFORE ANY COUPLINGS, FITTINGS, VALVES AND THE LIKE ARE CONCEALED.
  - 6.4.3. IMMEDIATELY PRIOR TO TESTING, PURGE ALL IRRIGATION LINES OF ALL ENTRAPPED AIR OR DEBRIS BY ADJUSTING CONTROL VALVES AND INSTALLING TEMPORARY CAPS FORCING WATER AND DEBRIS TO BE DISCHARGED FROM A SINGLE OUTLET.
  - 6.4.4. TEST ALL PRESSURE MAIN LINE AT 150 PSI FOR A MINIMUM OF FOUR (4) HOURS WITH AN ALLOWABLE LOSS OF 5 PSI. PRESSURE AND GAUGES SHALL BE READ IN PSI, AND CALIBRATED SUCH THAT ACCURATE DETERMINATION OF POTENTIAL PRESSURE LOSS CAN BE ASCERTAINED.
  - 6.4.5. RE-TEST AS REQUIRED UNTIL THE SYSTEM MEETS THE REQUIREMENTS. REPAIR ANY LEAKS, WHICH OCCUR DURING TEST PERIOD, IMMEDIATELY FOLLOWING THE TEST.
  - 6.4.6. PROVIDE DOCUMENTATION STATING THE WEATHER CONDITIONS, DATE, THE START TIME AND INITIAL WATER PRESSURE READINGS, THE FINISH TIME AND FINAL WATER PRESSURE READINGS AND THE TYPE OF EQUIPMENT USED TO PERFORM THE TEST. THE DOCUMENTATION MUST BE SIGNED BY A WITNESS ACCEPTABLE TO THE OWNER, VERIFYING ALL OF THE ABOVE-MENTIONED CONDITIONS.
  - 6.4.7. SUBMIT A WRITTEN REPORT OF THE PRESSURE TESTING RESULTS WITH THE OTHER ABOVE REQUIRED INFORMATION TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.

### 7. IRRIGATION VALVES AND WIRING

- 7.1. LOCATE ALL VALVES, SPLICES WITHIN CONTROL LINES, QUICK COUPLERS, AND HOSE BIBBS WITHIN VALVE BOXES. PROVIDE PURPLE VALVE BOX LIDS FOR SYSTEMS UTILIZING A NON-POTABLE WATER SOURCE.
- 7.2. NUMBER THE TOP OF ALL VALVE BOX LIDS WITH MINIMUM 1" HEIGHT BLACK LETTERS TO CORRESPOND TO THE VALVE DESIGNATIONS.
- 7.3. WHEN POSSIBLE, LOCATE ALL VALVES IN PLANTING BEDS A MINIMUM OF 24" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
- 7.4. SEPARATE IRRIGATION ZONES FOR HIGH AND LOW WATER USE REQUIREMENTS AND OPERATED ON DIFFERENT WATERING CYCLES. AT NO TIME SHALL MULTIPLE IRRIGATION HEAD TYPES BE LOCATED ON THE SAME VALVE UNLESS NOTED OTHERWISE.
- 7.5. INSTALL ALL DRIP ZONES WITH A FLUSH VALVE AND AIR RELIEF VALVE. IN THE EVENT THAT A DRIP ZONE HAS MORE THAN ONE HIGH OR LOW POINT, MORE THAN ONE AIR RELIEF VALVE OR FLUSH VALVE WILL BE REQUIRED FOR THAT ZONE.
- 7.6. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR ALL WIRING FOR CONNECTION OF THE VALVES TO THE CONTROLLER. ALL WIRE RUNS SHALL BE CONTINUOUS WITH SPLICING OCCURRING IN VALVE BOXES ONLY. WIRE CONNECTIONS SHALL BE MADE USING DBRY-6 CONNECTIONS OR APPROVED EQUAL.
- 7.7. INSTALL VALVE CONTROL WIRING IN THE SAME TRENCH AS THE MAINLINE WHERE PRACTICAL.

- 7.8. FOR NON TWO-WIRE SYSTEMS, RUN TWO (2) SPARE VALVE CONTROL WIRES FROM THE CONTROLLER ALONG THE ENTIRE MAINLINE TO LAST REMOTE CONTROLLED VALVE ON EACH AND EVERY LEG OF MAINLINE.

### 8. PIPES AND SLEEVING

- 8.1. DO NOT INSTALL IRRIGATION SYSTEM THROUGH PRESERVED PLANT COMMUNITIES, DRILINE OF EXISTING TREES, OR WITHIN WETLANDS UNLESS SPECIFICALLY NOTED OTHERWISE.
- 8.2. LOCATE ALL IRRIGATION LINES WITHIN LANDSCAPED AREAS WHENEVER POSSIBLE. ALL LINES UNDER PAVEMENT MUST BE SLEEVED.
- 8.3. SIZE ALL PIPE SLEEVES TWO PIPE SIZES GREATER THAN THE PIPE / CUMULATIVE SUM OF THE PIPES IT CARRIES.
- 8.4. SLEEVES UNDER EXISTING PAVEMENT MUST BE DIRECTIONAL BORE UNLESS APPROVED BY OWNER IN WRITING.
- 8.5. SOLVENT CEMENTS SHALL COMPLY WITH ASTM D2564.

### 9. CONTROLLER AND SENSORS

- 9.1. COORDINATE WITH OWNER'S REPRESENTATIVE FOR FINAL CONTROLLER AND RAIN SENSOR LOCATIONS. THE CONTROLLER SHALL BE PLACED IN A LOCKING CABINET APPROPRIATE FOR ITS LOCATION. (INDOOR VS. OUTDOOR USE)
- 9.2. LOCATE THE AUTOMATIC RAIN SENSOR SHUTOFF DEVICE IN AN AREA THAT IS UNOBSTRUCTED BY TREES, ROOF OVERHANGS, OR ANY OTHER OVERHEAD OBJECT. THE SENSOR SHALL NOT BE PLACED WITHIN THE SPRAY ZONE OF ANY SPRINKLER HEAD, INCLUDING OFF-SITE IRRIGATION. CONTRACTOR SHALL LOCATE SENSOR WITHIN CLOSE PROXIMITY TO THE IRRIGATION CONTROLLER.

### 10. CLEANUP

- 10.1. UPON COMPLETION OF ALL WORK AND BEFORE FINAL ACCEPTANCE, REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.

### 11. AS-BUILT IRRIGATION PLANS

- 11.1. PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER'S REPRESENTATIVE PRIOR TO FINAL ACCEPTANCE OF WORK. INCLUDE THE FOLLOWING ON THE AS-BUILT DRAWINGS AT A MINIMUM:
  - CONTROLLER LOCATION
  - CONNECTION ASSEMBLY
  - MAINLINE ROUTING
  - PIPE SLEEVING
  - VALVE(S)
  - COLORIZED ZONING DIAGRAM
- 11.2. LOCATE ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR WHETHER INSTALLED BY THE IRRIGATION CONTRACTOR OR NOT ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF THE SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS.

### 12. FINAL INSPECTION AND ACCEPTANCE OF WORK

- 12.1. MINIMIZE IRRIGATION OVERTHROW TO IMPERVIOUS AND NATURAL AREAS THROUGH FIELD ADJUSTMENTS TO INDIVIDUAL HEADS.
- 12.2. PROGRAM CONTROLLER TO IRRIGATE ALL ZONES WITHIN APPLICABLE WATERING WINDOWS AND PROVIDE WATERING SCHEDULE TO OWNER'S REPRESENTATIVE.
- 12.3. EQUIPMENT TO BE FURNISHED TO OWNER PRIOR TO ACCEPTANCE OF WORK:
  - TWO (2) SETS OF KEYS FOR EACH AUTOMATIC CONTROLLER.
  - TWO (2) 48 INCH TEE WRENCHES FOR OPERATING GATE VALVES (WHEN INSTALLED AS PART OF WORK).
  - THREE (3) SETS OF SPECIAL TOOLS REQUIRED FOR REMOVING, DISASSEMBLING AND ADJUSTING EACH TYPE OF - SPRINKLER AND VALVE SUPPLIED ON THIS PROJECT.
  - FIVE (5) EXTRA SPRINKLER HEADS, NOZZLES, SHRUB ADAPTERS, NOZZLE FILTER SCREENS, FOR EACH TYPE USED ON THE PROJECT.
  - TWO (2) QUICK COUPLER KEYS TO MATCH MANUFACTURER TYPE OF QUICK COUPLER.
- 12.4. UPON COMPLETION OF ALL WORK, A FINAL INSPECTION SHALL BE PERFORMED BY THE OWNER AND/OR OWNER'S REPRESENTATIVE. THE IRRIGATION SYSTEM, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT SHALL BE INSPECTED FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. ANY ITEMS FOUND TO NOT BE IN COMPLIANCE SHALL BE CORRECTED AT NO COST TO THE OWNER.

### 13. WARRANTY

- 13.1. THE CONTRACTOR SHALL WARRANTEE ALL WORKMANSHIP AND MATERIALS FOR A PERIOD OF 1 YEAR FOLLOWING THE ACCEPTANCE OF THE WORK.
- 13.2. ANY PART OF THE IRRIGATION WORK THAT FAILS OR IS DEFECTIVE SHALL BE REPLACED OR RECONSTRUCTED AT NO COST TO THE OWNER INCLUDING BUT NOT LIMITED TO: RESTORING GRADES THAT HAVE SETTLED IN TRENCHES AND EXCAVATIONS RELATED TO THE WORK. RECONSTRUCTION SHALL INCLUDE ANY PLANTINGS, SOIL, MULCH OR OTHER PARTS OF THE CONSTRUCTED LANDSCAPE THAT MAY BE DAMAGED DURING THE REPAIR OR THAT RESULTS FROM SOIL SETTLEMENT.
- 13.3. THE DATE OF ACCEPTANCE OF THE WORK AND START OF THE GUARANTEE PERIOD SHALL BE DETERMINED BY THE OWNER, UPON THE FINDING THAT THE ENTIRE IRRIGATION SYSTEM IS INSTALLED AS DESIGNED AND SPECIFIED, AND FOUND TO BE OPERATING CORRECTLY, SUPPLYING WATER EVENLY TO ALL PLANTING AND/OR LAWN AREAS.
- 13.4. NEITHER THE FINAL ACCEPTANCE NOR ANY PROVISION IN THE CONTRACT DOCUMENTS SHALL RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR FAULTY MATERIALS OR WORKMANSHIP. REMEDY ANY DEFECTS WITHIN A PERIOD OF 7 DAYS (S) FROM THE DATE OF NOTIFICATION OF A DEFECT.

### 14. ABBREVIATIONS

- GPM - GALLONS PER MINUTE
- GPH - GALLONS PER HOUR
- PSI - POUNDS PER SQUARE INCH

### LATERAL PIPE SIZING REQUIREMENTS

MAXIMUM FLOW	MINIMUM PIPE SIZE
10 GPM	3/4"
16 GPM	1"
26 GPM	1-1/4"
35 GPM	1-1/2"
55 GPM	2"
80 GPM	2-1/2"
120 GPM	3"

PIPE SIZES ILLUSTRATED IN THE ABOVE CHART ARE MINIMUM ACCEPTABLE SIZES. PIPE SIZES INDICATED ON PLAN ARE FOR CONVENIENCE ONLY. FIELD SIZE ALL LATERAL PIPING TO KEEP ALL FRICTION LOSS VELOCITIES BELOW 5.0 FPS.

Plotted By: Lela, Monica. Sheet Set: 048320008 - CENTRAL AVE. Layout: L-5. March 08, 2023 05:18:32pm. K:\SAR-UFG\048320008 - Central Ave Landscaping\CAD\PlanSheet\ - IRRIGATION PLAN.dwg  
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**Kimley»Horn**

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 1777 MAIN STREET, SUITE 200, SARASOTA, FL 34236  
 PHONE: 941-579-7800  
 WWW.KIMLEY-HORN.COM REGISTRY NO. 35106

KHA PROJECT  
 048320008  
 DATE  
 MARCH 2023  
 SCALE AS SHOWN  
 DESIGNED BY KHA  
 DRAWN BY MAL  
 CHECKED BY JRP  
 DATE: 3/8/2023

JAMES R. PANKOW, P.E.  
 FLORIDA LICENSE NUMBER  
 6666900

IRRIGATION  
 SPECIFICATIONS

CENTRAL AVE  
 LANDSCAPING  
 PREPARED FOR  
 CITY OF NAPLES

FLORIDA  
 CITY OF NAPLES

CALL 2 WORKING DAYS BEFORE YOU DIG

811

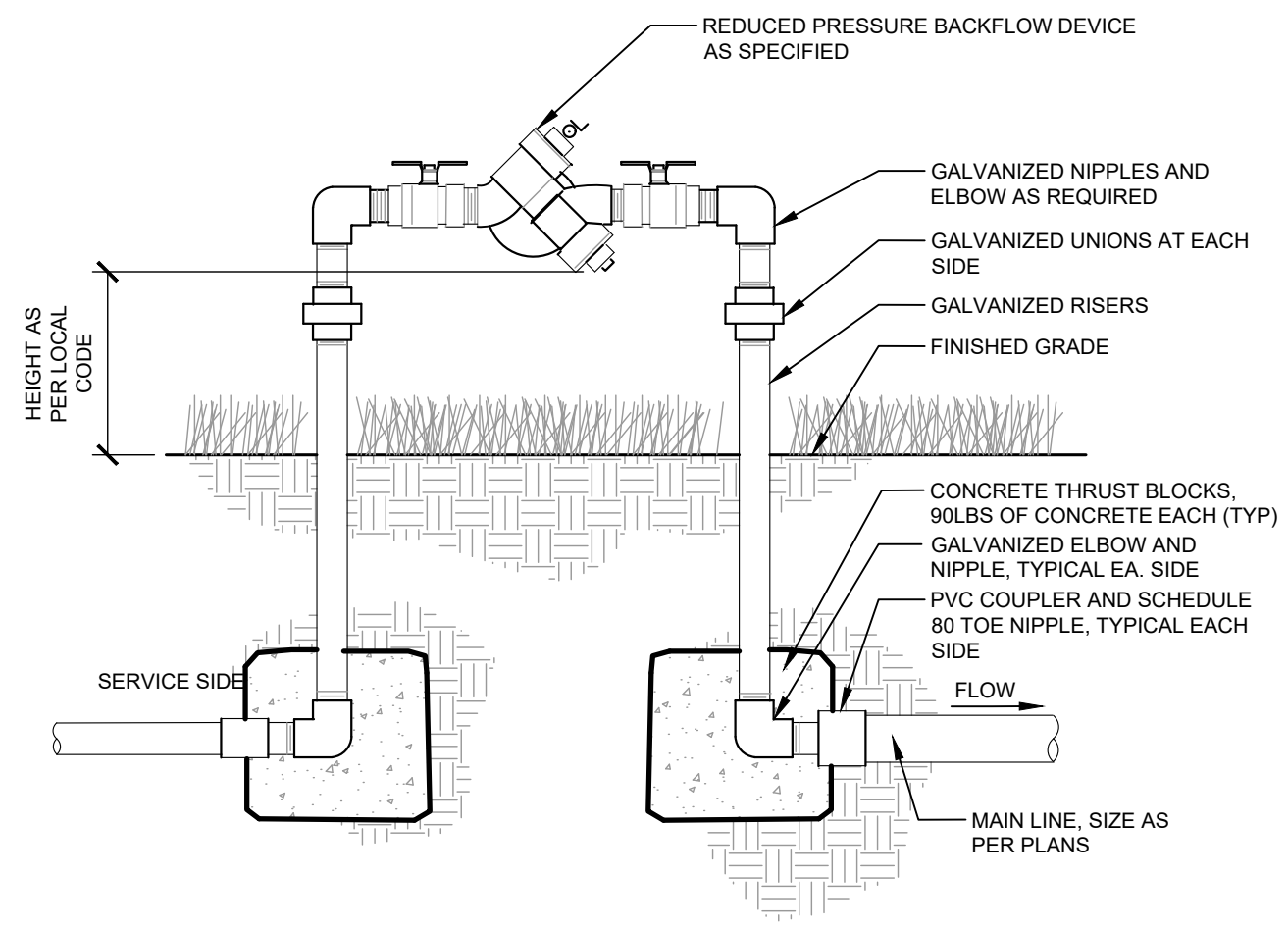
IT'S THE LAW!  
 DIAL 811

Know what's below.  
 Call before you dig.

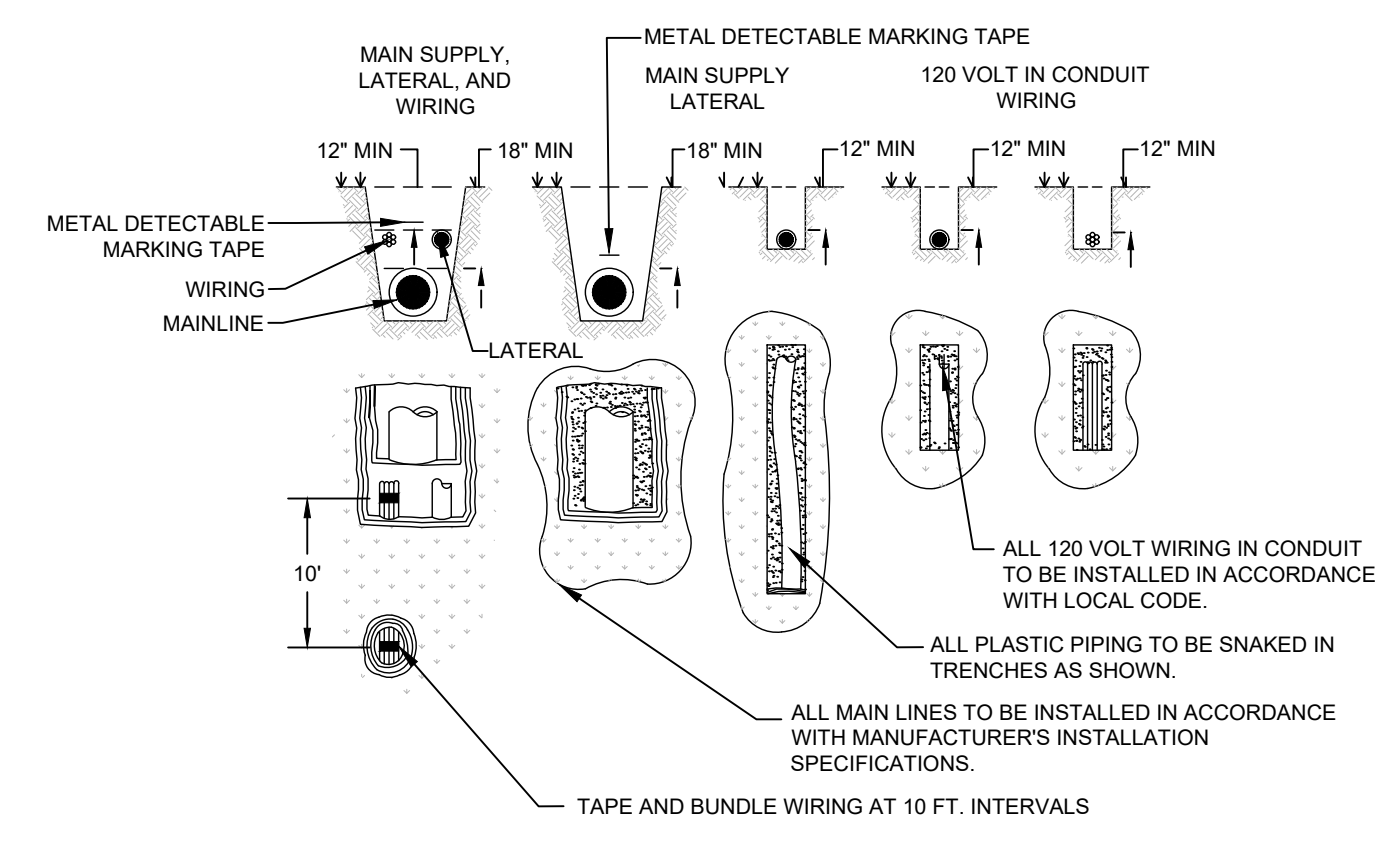
SUNSHINE STATE ONE CALL OF FLORIDA, INC.

SHEET NUMBER  
 I-5

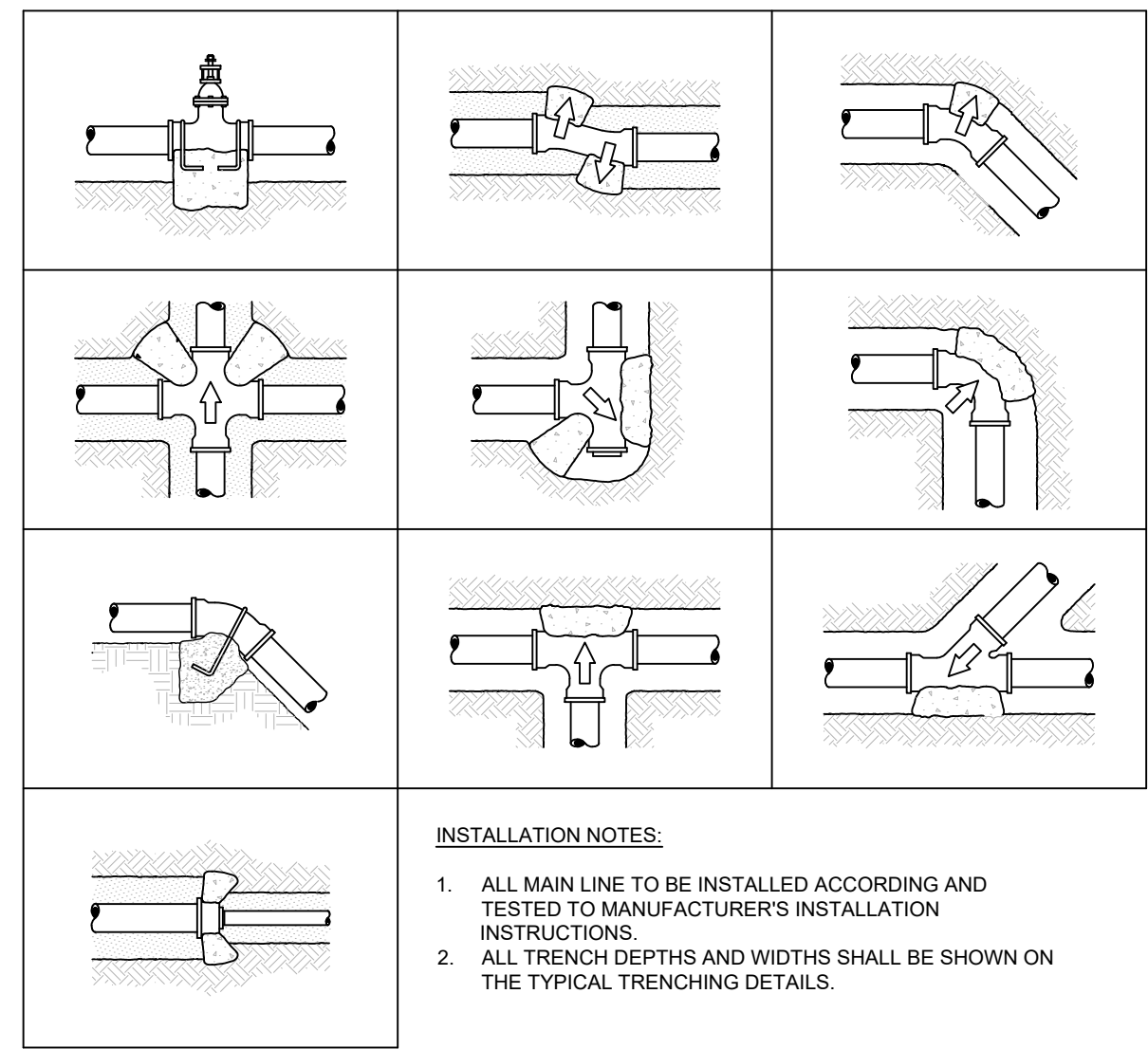
# Attachment A - Construction Plans



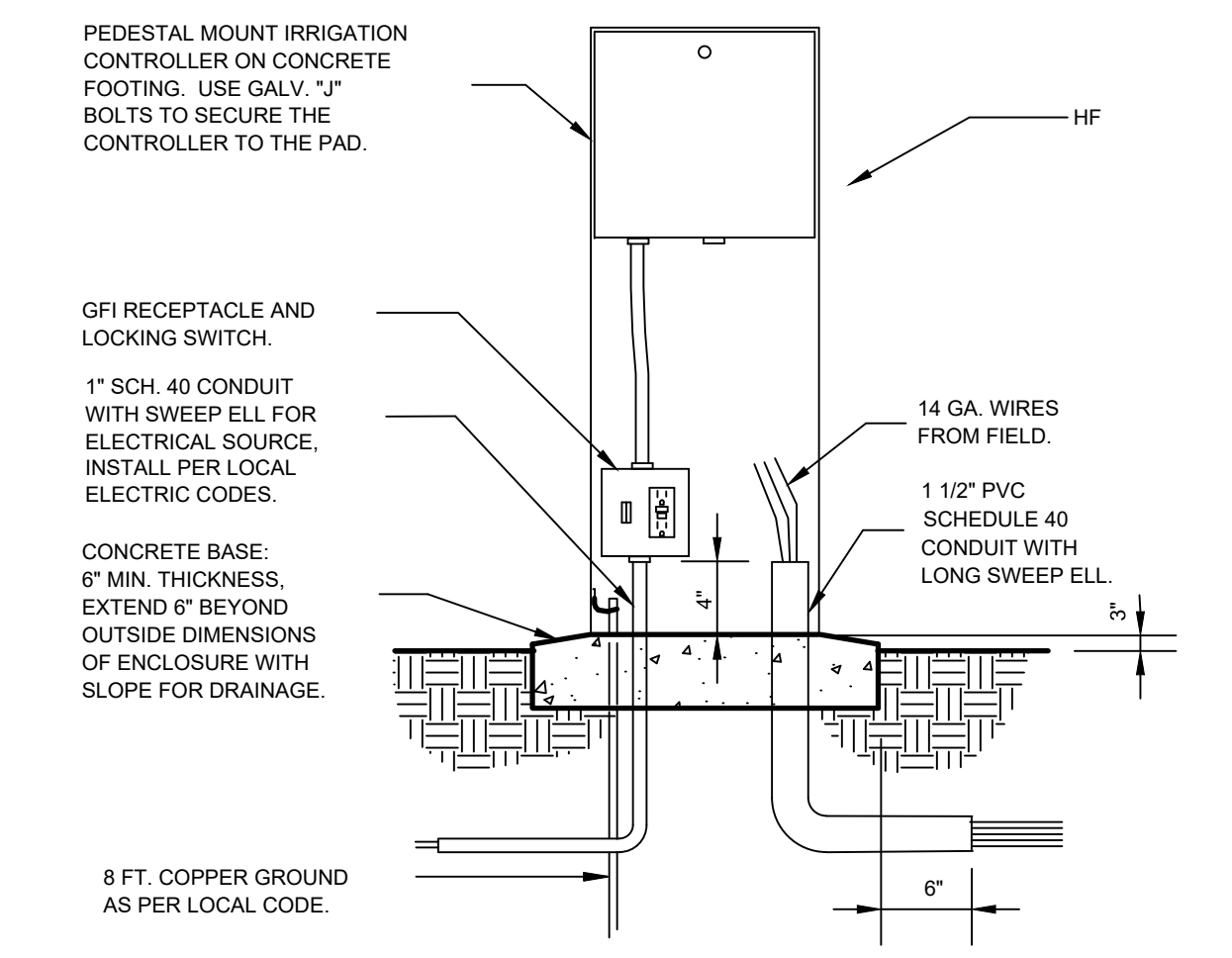
**1** BACKFLOW PREVENTER  
SECTION NTS



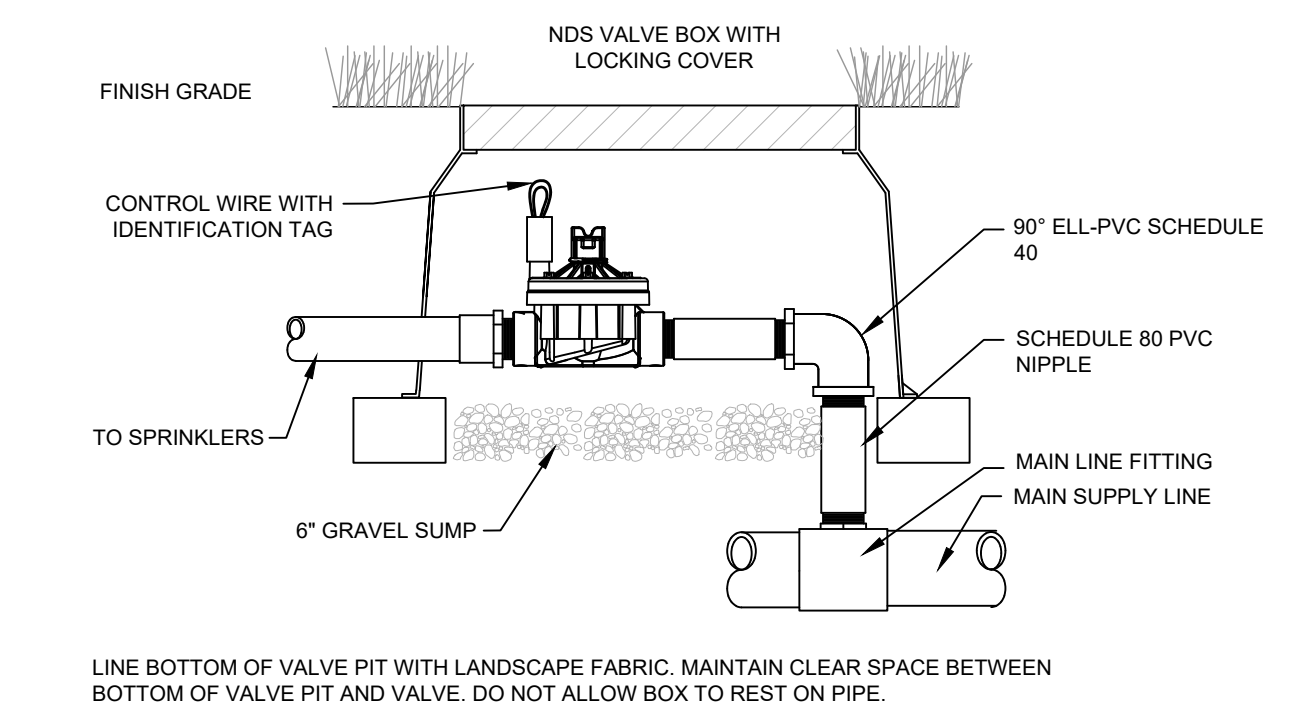
**2** TYPICAL TRENCHING  
SECTION NTS



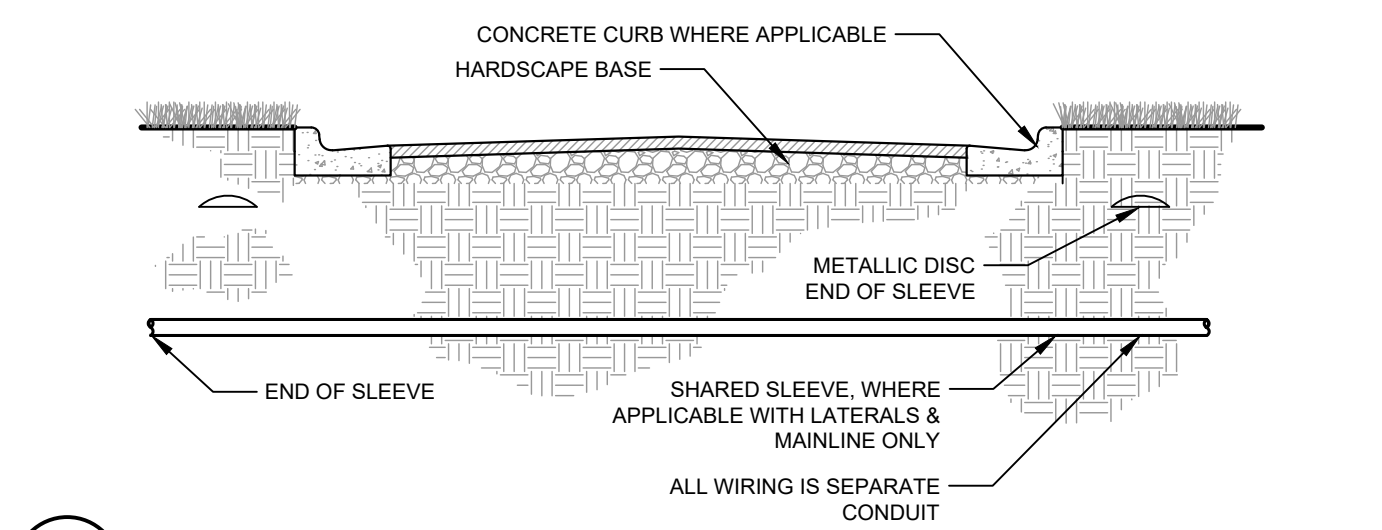
**3** TYPICAL THRUST BLOCK  
SECTION NTS



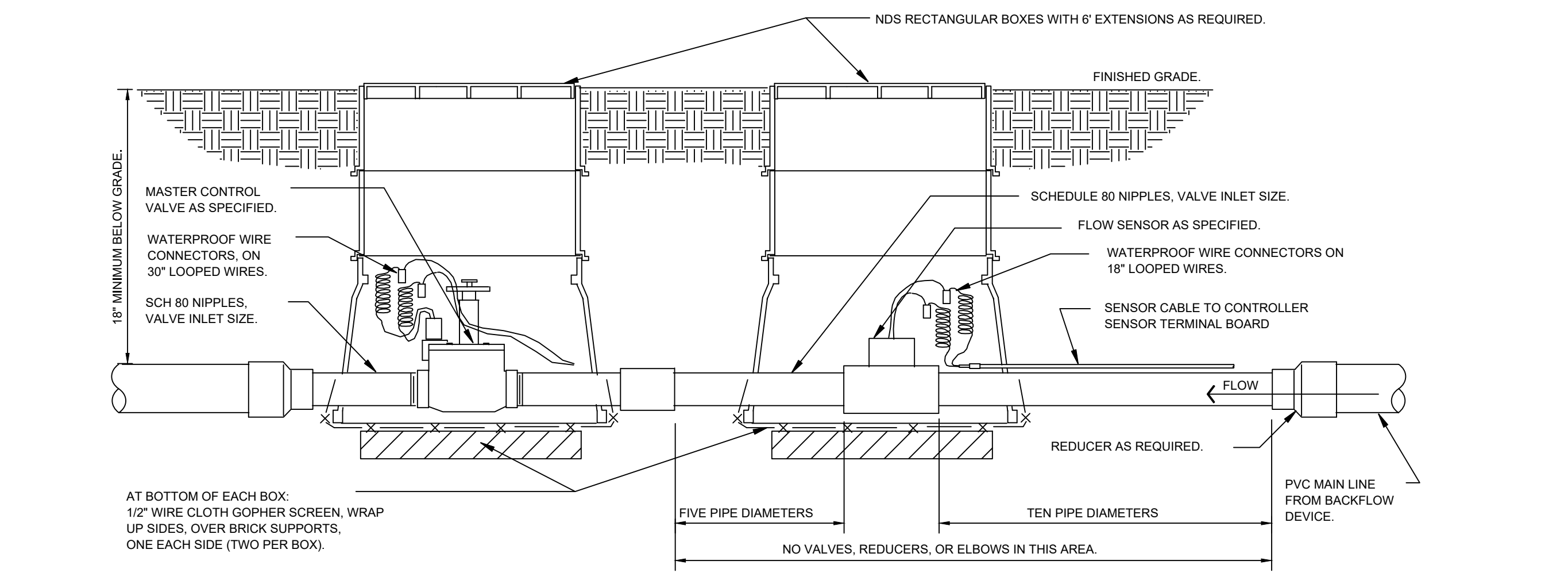
**4** IRRIGATION CONTROLLER - PEDESTAL MOUNT  
SECTION NTS



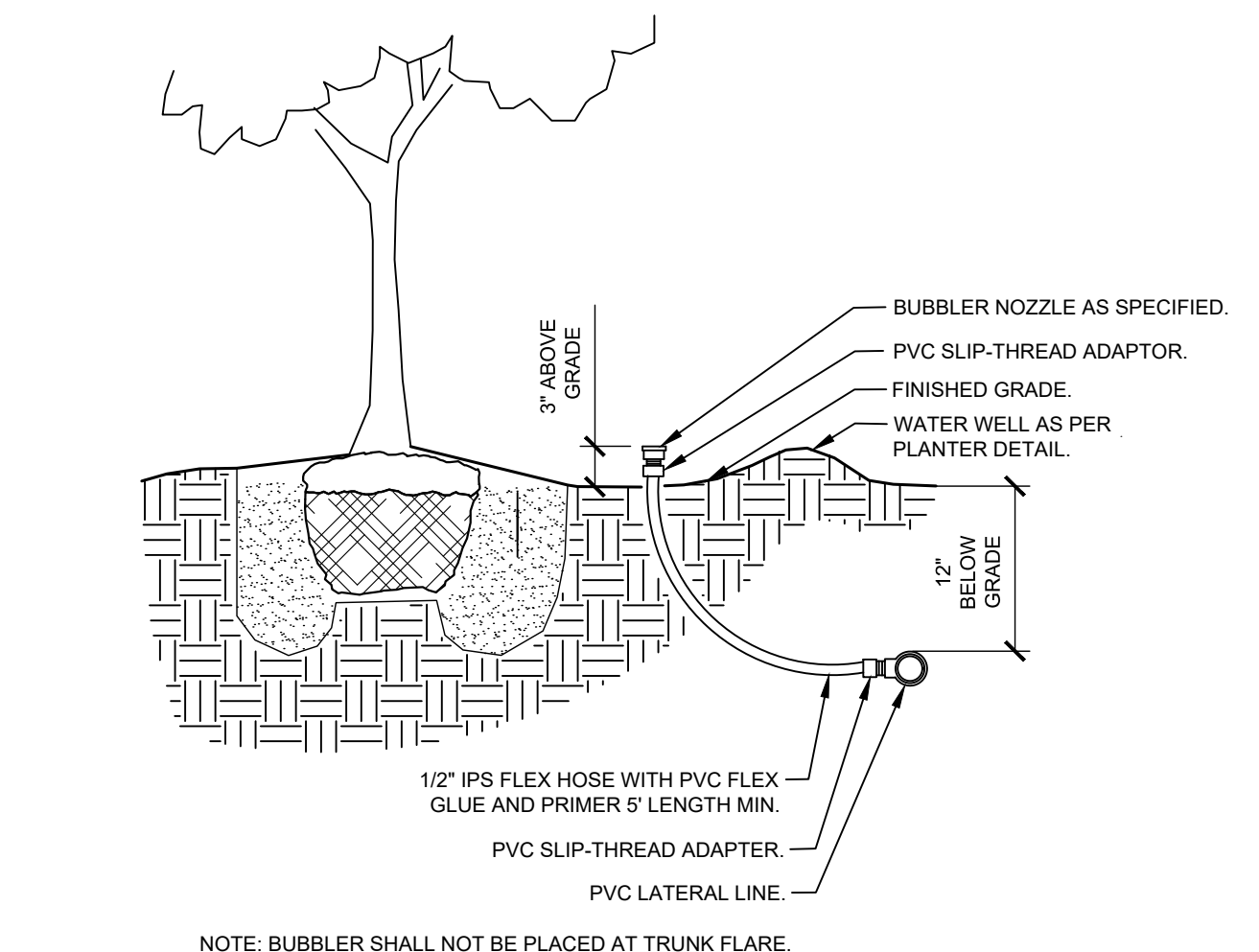
**5** TYPICAL CONTROL VALVE  
SECTION NTS



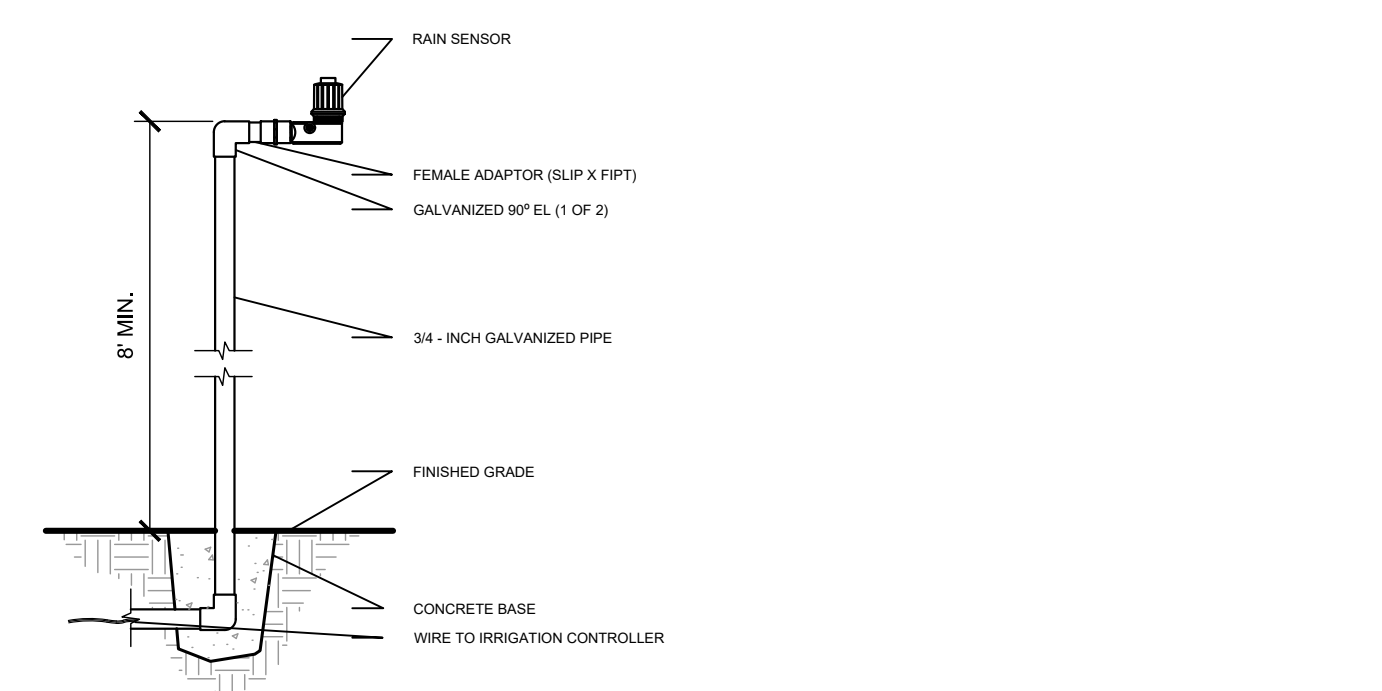
**6** TYPICAL SLEEVING  
SECTION NTS



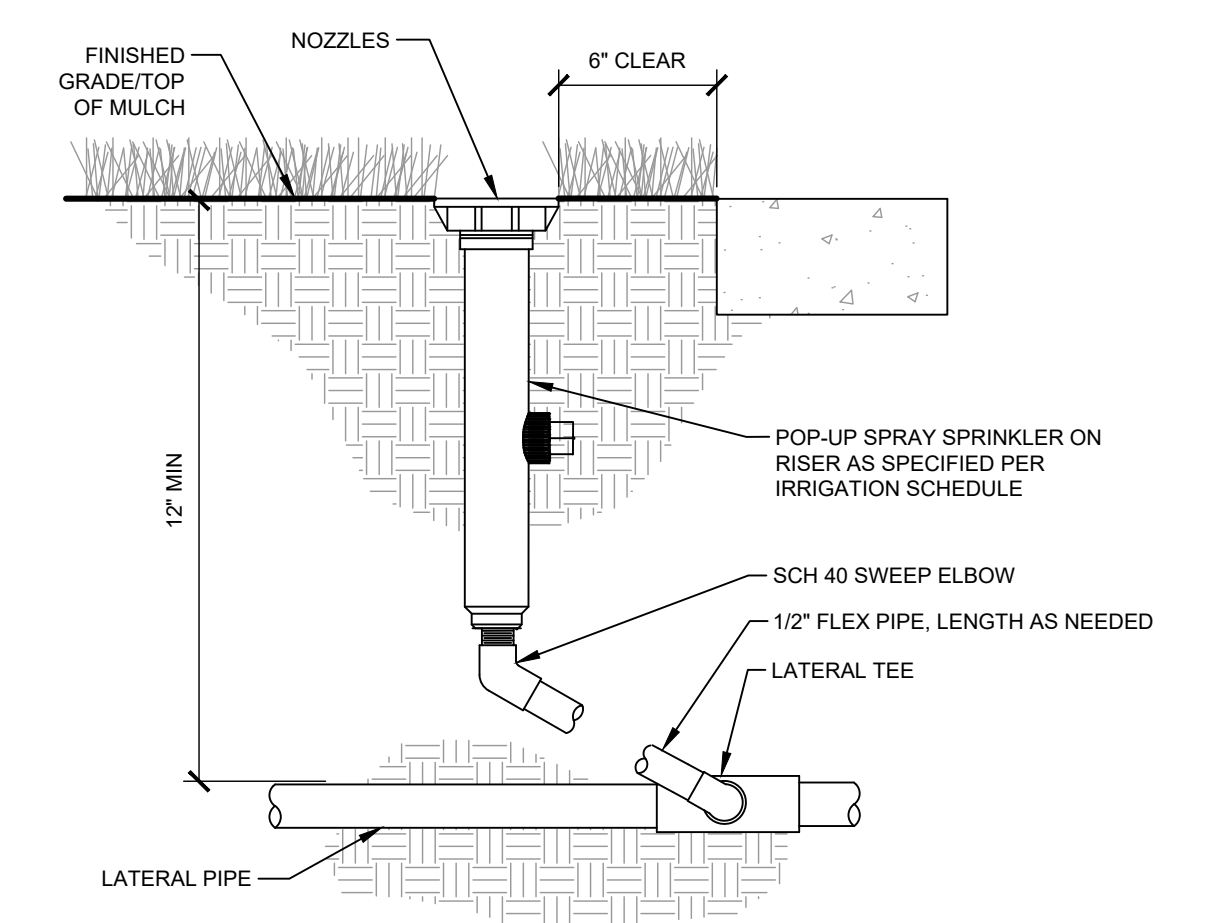
**7** MASTER CONTROL VALVE / FLOW SENSOR ASSEMBLY  
SECTION NTS



**8** TYPICAL BUBBLER  
SECTION NTS



**9** RAIN SENSOR - POLE MOUNT  
SECTION NTS



**10** TYPICAL SPRAY / ROTAR HEAD  
SECTION NTS

NO.	REVISIONS	DATE	BY

**Kimley»Horn**  
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