WestLand Resources, Inc.
Engineering and Environmental Consultants

November 23, 2015

Ms. Kathleen Tucker
Regulatory Division - Los Angeles District
US Army Corps of Engineers
3636 N Central Ave, Suite 900
Phoenix, AZ 85012-1939

Sent via email: Kathleen.A.Tucker@usace.army.mil

RE: IMPLEMENTATION PLANS FOR THE WHETSTONE RANCH HABITAT MITIGATION AND MONITORING PLAN - CORPS FILE NO. SPL-2003-00826-SDM WESTLAND PROJECT NO. 460.76

Dear Ms. Tucker:

Enclosed please find implementation plans for the US Army Corps of Engineers (Corps) approval in connection with the above referenced project.

We understand Mr. Robert Anderson of Fennemore Craig transmitted the updated restrictive covenant form for this property to Tiffany Troxel for the Corps verification on November 20, 2015.

Should you have any questions or require any additional information, please do not hesitate to contact me or Jim Tress at (520) 206-9585.

Respectfully,
WestLand Resources, Inc.

Diana Shiel
Project Manager

Attachment: Whetstone Ranch Habitat Mitigation Plan – Plan Set dated 11-17-15

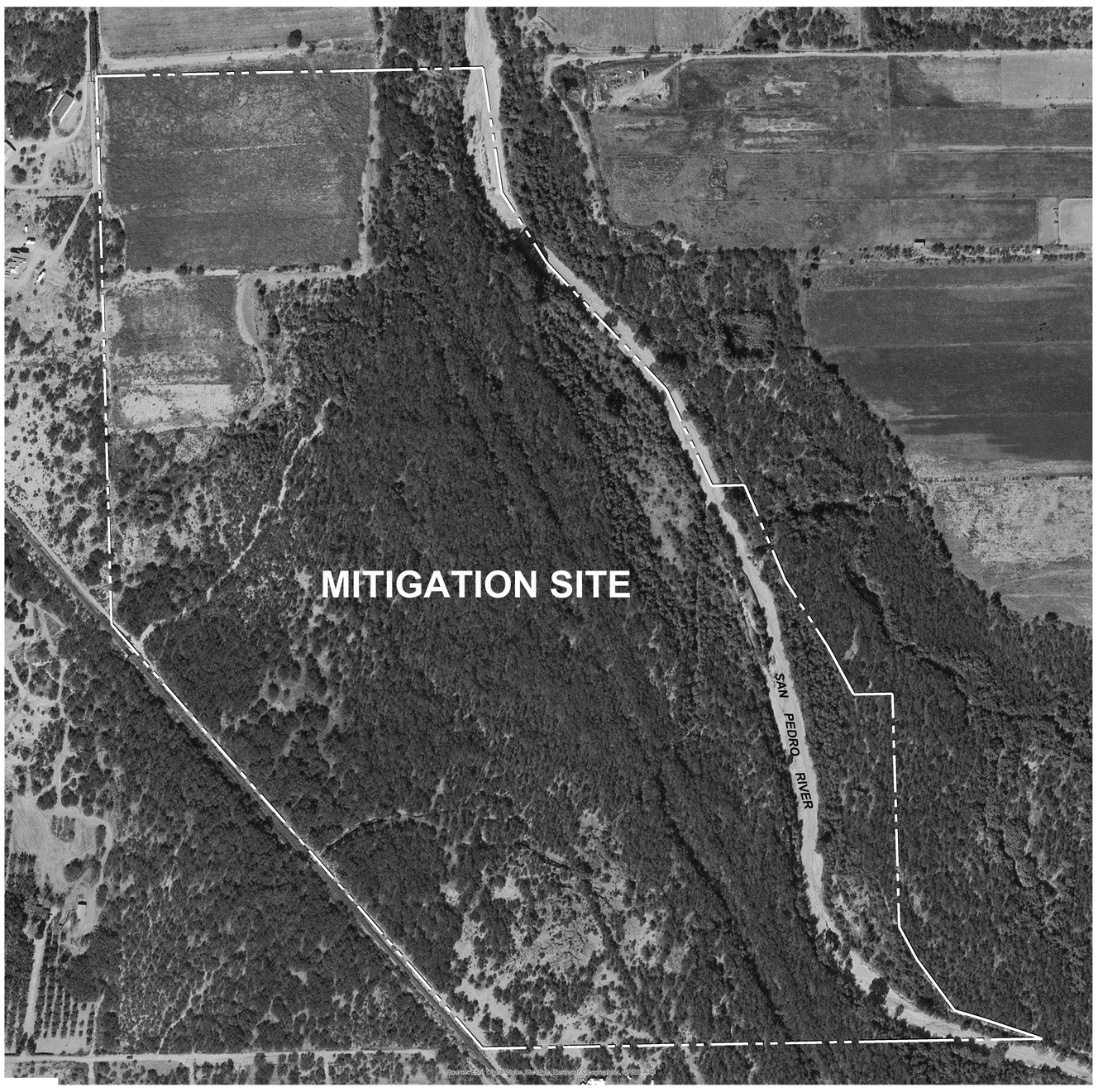
cc: Sallie Diebolt, US Army Corps of Engineers
Mike Reinbold, El Dorado Holdings Inc.
Dennis Krahn, El Dorado Holdings Inc.
Eric Hollensbe, El Dorado Holdings Inc.
Jim Tress, WestLand Resources, Inc.
Bruce Larson, WestLand Resources, Inc.

Q:\Jobs\400's\460.76\ENV\HMMP\K_Tucker Corps Transmittal Letter.docx

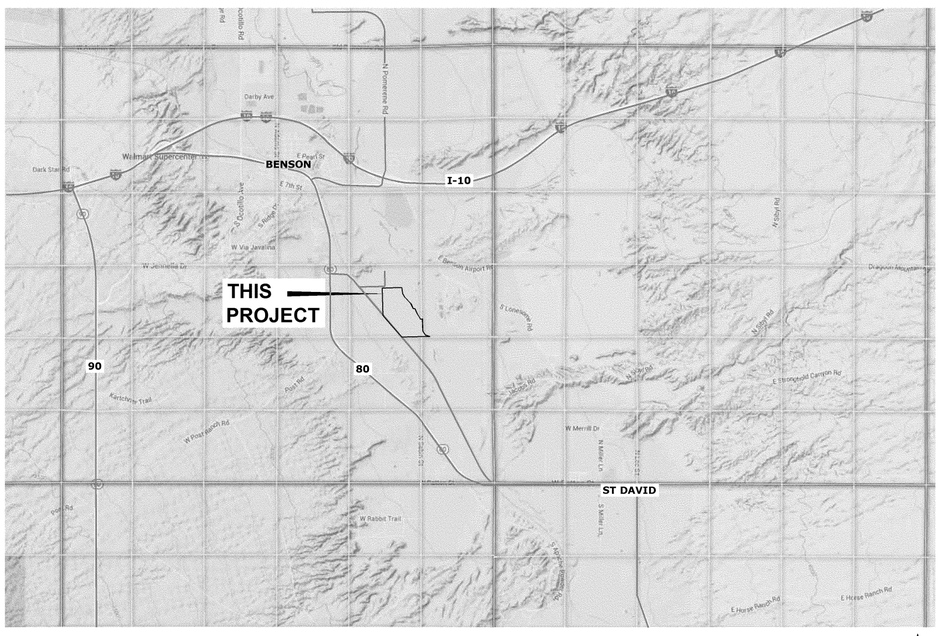
4001 E. Paradise Falls Drive • Tucson, AZ 85712 • 520•206•9585 Fax 520•206•9518
2020 N. Central Avenue • Suite 695 • Phoenix, AZ 85004 • 602•888•7000 Fax 866•457•2838
1750 S. Woodlands Village Blvd. • Suite 150 • Flagstaff, AZ 86001 • 928•225•2218 Fax 866•457•2838

Implementation Plan

Habitat Mitigation & Monitoring Plan - Offsite Mitigation Parcel



200' 0' 200'
SCALE: 1" = 200'
north



LOCATION MAP 1"= Mile

A PORTION OF SECTIONS 23 & 24
T17S – R20E, G.&S.R.M.
COCHISE COUNTY, ARIZONA.

BACKGROUND

This Implementation Plan addresses requirements for the "Offsite Mitigation Parcel" described in the Habitat Mitigation and Monitoring Plan ("the HMMP"; WestLand, November 2005) for the United States Army Corps of Engineers' ("Corps") Clean Water Act ("CWA") Section 404 Permit - Corps File No. 2003-00826-SDM. This CWA Section 404 permit authorized the discharge of dredged and/or fill material into waters of the United States for 8,200 acres within the Villages at Vigneto, formerly Whetstone Ranch. The required work will be performed on a property of approximately 144 acres, of which approximately 22 acres consists of abandoned agricultural land, 115.3 acres is riparian woodland, and 6.7 acres is jurisdictional waters associated with the San Pedro River.

WORK DESCRIBED IN THESE PLANS INCLUDES:

1. INSTALLATION OF NEW BARBED WIRE FENCING.
2. IMPROVEMENTS TO EXISTING NATURAL DRAINAGES IN ORDER TO ARREST ONGOING EROSIONAL HEADCUTTING.
3. RESTORATION OF ABANDONED AGRICULTURAL FIELDS.
4. RESTORATION OF AN EXISTING WETLAND ASSOCIATED WITH AN EXISTING FRESHWATER SPRING.
5. RESTORATION ADJACENT TO THE ACTIVE CHANNEL OF THE SAN PEDRO RIVER.
6. MAINTENANCE OF NEW FENCING & RESTORED AREAS.

THE CONTRACTOR IS ALERTED TO THE APPROVED CWA 404 PERMIT ISSUED BY THE CORPS FOR THIS PROJECT. THIS PERMIT IS CONSIDERED A PART OF THESE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS STATED THEREIN.

SHEET INDEX

SHEET 1	COVER SHEET
SHEET 2	PLANTING & FENCING PLANS
SHEET 3	ARTESIAN SPRING RECLAMATION AREA
SHEET 4	SOUTHWEST CORNER RECLAMATION AREA
SHEET 5	FENCE & PLANTING DETAILS
SHEET 6	EROSION CONTROL PLAN
SHEET 7	EROSION CONTROL DETAILS
SHEET 8	SPECIFICATIONS

WestLand Resources, Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

Two working days before you dig
CALL FOR THE BLUESTAKES
1-800-782-5348
1-800-STAKE IT
Blue Stake Center
CALL COLLECT

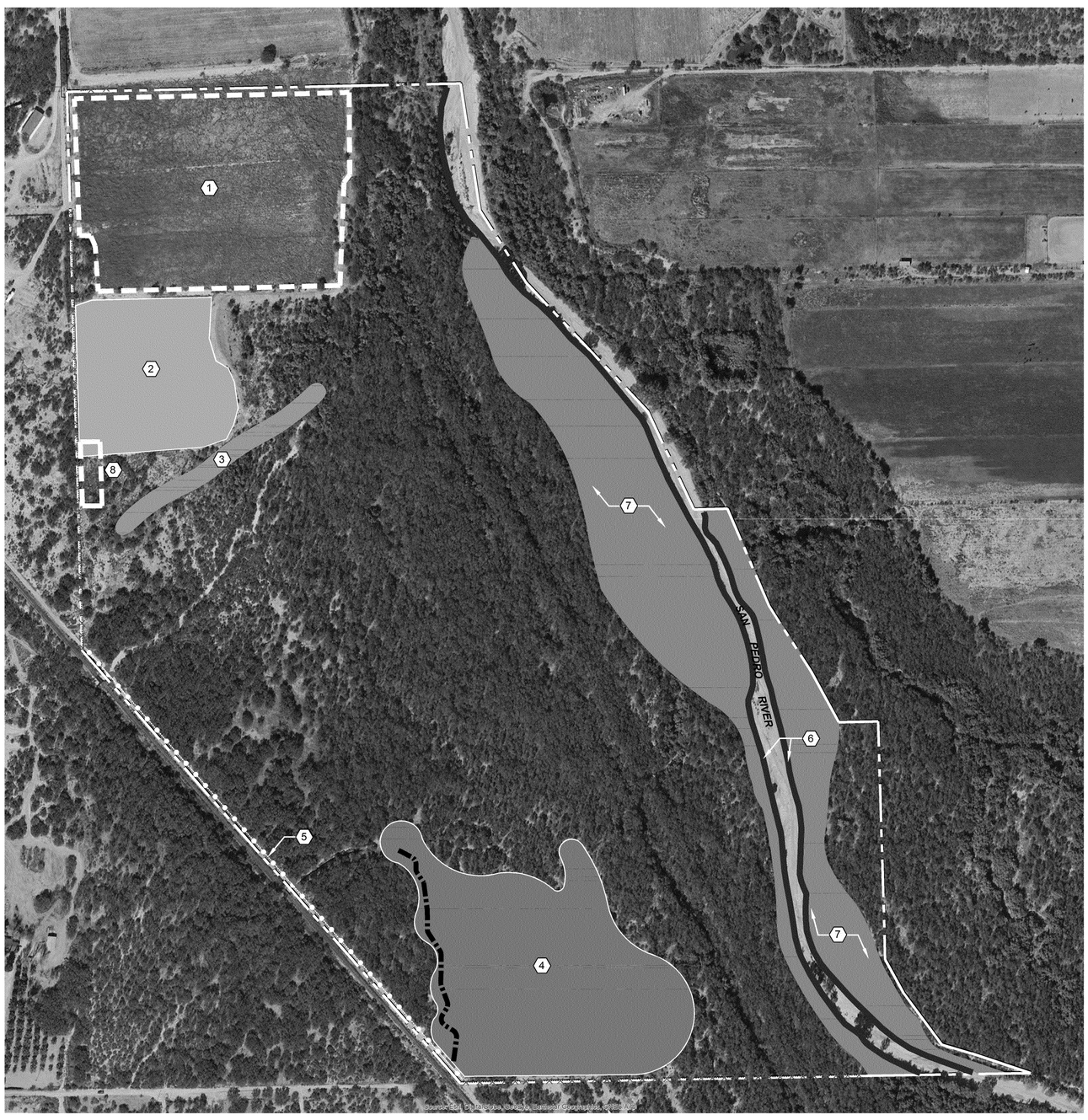
DATE	REVISION	NO.

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
37108
JOHN S. ANDERSON
11/17/15
Date Signed
ARIZONA, U.S.A.
Expires 12-31-2016

Villages at Vigneto
(formerly Whetstone Ranch)
CORPS FILE NO. SPL 2003-00826-SDM
IMPLEMENTATION PLANS FOR THE HMMP
OFFSITE MITIGATION PARCEL
COVER SHEET

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET
JSA, RWS,KAS	JSA,KAS	JSA,RWS	1
DATE 11/17/15	PROJECT NO. 460.76	SCALE:	OF
WESTLAND RESOURCES DRAWING PATH M:\Jobs\400's\460.76\LA\DWG\460.76-Cover.dwg Nov 17, 2015 - 4:00pm			8

ED_00164700002542-00002



200' 0' 200'
SCALE: 1" = 200'
north

LEGEND

- EXISTING PROPERTY LINE
- EXISTING FENCE
- NEW BARBED WIRE FENCE SEE DETAIL 1, SHEET 5
- NEW WIRE GATE SEE DETAIL 3, SHEET 5

KEY NOTES

1. CLEAR FALLOW AGRICULTURAL FIELD (APPROXIMATELY 13.2 ACRES): HERBACEOUS WEEDS TO BE REMOVED USING BOTH HAND TOOLS AND MACHINERY AS APPROVED BY OWNER'S REPRESENTATIVE. WEEDS TO BE LEGALLY DISPOSED OF. EXISTING MESQUITES TO REMAIN UNDISTURBED.

2. RECLAIM FALLOW AGRICULTURAL FIELD (APPROXIMATELY 5.3 ACRES):
   - 2.1. PRIOR TO START OF WORK, CONTRACTOR TO REVIEW WITH OWNER'S REPRESENTATIVE SCHEDULE OF ACTIVITIES WITHIN THIS AREA. INTENT IS TO MINIMIZE CONFLICTS BETWEEN PLANTINGS OF CONTAINER STOCK & SEEDING WORK.
   - 2.2. EXISTING MESQUITES TO REMAIN UNDISTURBED.
   - 2.3. HERBACEOUS WEEDS TO BE REMOVED USING BOTH HAND TOOLS AND MACHINERY AS APPROVED BY OWNER'S REPRESENTATIVE. WEEDS TO BE LEGALLY DISPOSED OF.
   - 2.4. FLAG REPRESENTATIVE SECTION OF FIELD FOR CONTAINER-GROWN PLANT LOCATIONS FOR REVIEW & APPROVAL BY OWNER'S REPRESENTATIVE. FLAGS TO IDENTIFY SPECIES OF PLANT.
   - 2.5. INSTALL CONTAINER-GROWN PLANTS ON SITE. PLANTS TO BE SUPPLIED BY OWNER. CONTRACTOR RESPONSIBLE FOR INSTALLATION SCHEDULE & SHIPMENT OF PLANTS TO SITE. SEE SPECIES LIST A THIS SHEET FOR PLANT SPECIES, CONTAINER SIZES & IRRIGATION SCHEDULE THIS AREA.
   - 2.6. MAINTAIN PLANTS PER SPECIFICATIONS.
   - 2.7. RIP OR TILL RECLAMATION AREA TO A DEPTH OF 6". AVOID DISTURBING NEW & EXISTING NATIVE VEGETATION AS IDENTIFIED BY OWNER'S REPRESENTATIVE. TILL PARALLEL TO THE CONTOUR. LEAVE GRADES IN ROUGHENED CONDITION.
   - 2.8. SEED TILLED AREAS WITH NATIVE SEED MIX. REFER TO SPECIFICATIONS.
   - 2.9. CONTRACTOR TO REVIEW USE OF EQUIPMENT OVER SEEDED AREAS WITH OWNER'S REPRESENTATIVE PRIOR TO START OF MAINTENANCE PERIOD. CONTRACTOR TO MINIMIZE DISTURBANCE TO SEEDED AREAS.

3. ARTESIAN SPRING RECLAMATION AREA. SEE SHEET 3.

4. SOUTHWEST CORNER RECLAMATION AREA. SEE SHEET 4.

5. INSTALL APPROXIMATELY 2,000 LINEAR FEET OF NEW BARBED WIRE FENCE:
   - 5.1. SEE DETAIL 1, SHEET 5.
   - 5.2. LAYOUT OF FENCE TO BE STAKED BY OWNER'S REPRESENTATIVE.
   - 5.3. FOR BID PURPOSES, CONTRACTOR TO ASSUME THAT A 4' WIDE CORRIDOR OF EXISTING VEGETATION TO BE CLEARED FOR INSTALLATION OF NEW FENCE.
   - 5.4. CONTRACTOR TO CONFIRM LIMITS OF CLEARING OF EXISTING VEGETATION PRIOR TO CONSTRUCTION.

6. INSTALL COTTONWOODS:
   - 6.1. MEET WITH OWNER'S REPRESENTATIVE ON SITE TO REVIEW TREE LOCATIONS.
   - 6.2. INSTALL TREES ON SITE. TREES TO BE SUPPLIED BY OWNER. CONTRACTOR RESPONSIBLE FOR INSTALLATION SCHEDULE & SHIPMENT OF TREES TO SITE. TOTAL NUMBER OF TREES TO BE INSTALLED THIS LOCATION = 400 NURSERY-GROWN 5-GALLON. SPECIES TO BE INSTALLED IN THIS AREA = COTTONWOOD (POPULUS FREMONTII). INSTALL AT APPROXIMATELY 15' O.C.
   - 6.3. SEE DETAIL 6, SHEET 5.

7. INSTALL MIX OF NATIVE TREES IN THESE AREAS:
   - 7.1. MEET WITH OWNER'S REPRESENTATIVE ON SITE TO REVIEW TREE LOCATIONS. T REES TO BE INSTALLED AMONG EXISTING RIPARIAN VEGETATION.
   - 7.2. INSTALL TREES ON SITE. TREES TO BE SUPPLIED BY OWNER. CONTRACTOR RESPONSIBLE FOR INSTALLATION SCHEDULE & SHIPMENT OF TREES TO SITE. TOTAL NUMBER OF TREES TO BE INSTALLED THIS LOCATION = 1,000 1-GALLON NURSERY-GROWN TREES. SPECIES TO BE INSTALLED IN THIS AREA = MIX OF NATIVE MESQUITE (PROSOPIS JULIFLORA) & NETLEAF HACKBERRY (CELTIS LAEVIGATA VAR. RETICULATA).
   - 7.3. NEW TREES TO BE IRRIGATED USING DRIWATER GELS. SEE DETAIL 5, SHEET 5.

8. REMOVE EXISTING CONSTRUCTED FEATURES:
   - 8.1. MEET WITH OWNER'S REPRESENTATIVE ON SITE TO REVIEW EXISTING CONDITIONS.
   - 8.2. REMOVE CONCRETE SLAB, CONCRETE TROUGH, CORAL & OTHER CONSTRUCTED FEATURES. DISPOSE OF LEGALLY OFFSITE.
   - 8.3. TILL & SEED DISTURBED AREA. SEE SPECIFICATIONS.
   - 8.4. AVOID DISTURBING EXISTING NATIVE VEGETATION AS IDENTIFIED BY OWNER'S REPRESENTATIVE.

SPECIES LIST A

BOTANICAL NAME	COMMON NAME	SIZE	NOTE	QUANTITY THIS AREA
Sporobolus airoides	Alkali Sacaton	1 Gallon	See Detail 5, Sheet 5	575
Sporobolus wrightii	Giant Sacaton	1 Gallon	See Detail 5, Sheet 5	575
Prosopis juliflora	Velvet Mesquite	Tall Pot	See Detail 3, Sheet 5	800
			TOTAL	1,950

Villages at Vigneto
(formerly Whetstone Ranch)
CORPS FILE NO. SPL 2003-00826-SDM
IMPLEMENTATION PLANS FOR THE HMMP
OFFSITE MITIGATION PARCEL
PLANTING AND FENCING PLAN

WestLand Resources, Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

Two working days before you dig CALL FOR THE BLUESTAKES
1-800-782-5348
1-800-STAKE IT
Blue Stake Center
CALL COLLECT

DATE	REVISION	NO.

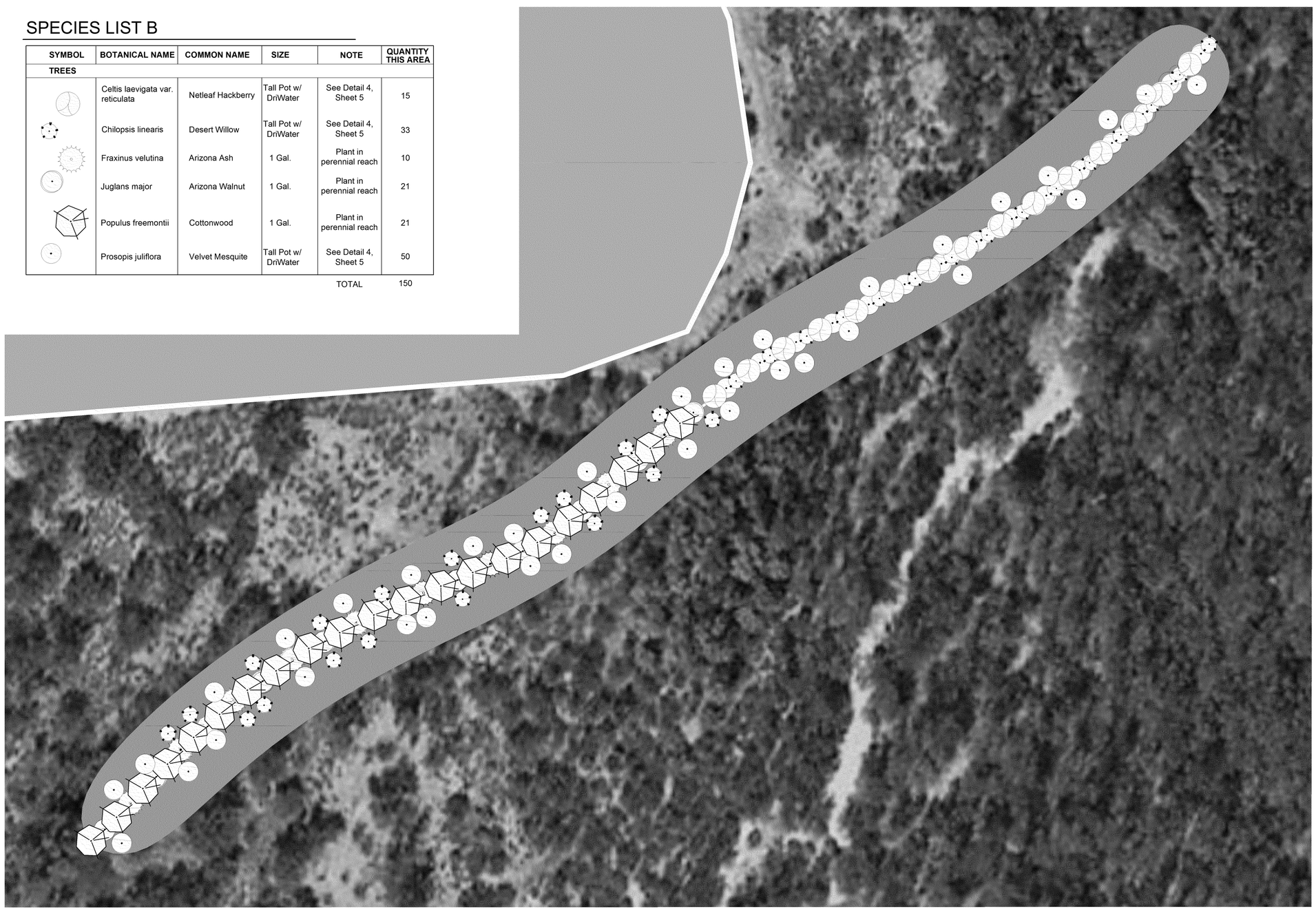
REGISTERED LANDSCAPE ARCHITECT
37106
JOHN S. ANDERSON
12/02/15
Date Signed
ARIZONA, U.S.A.
Expires 12-31-2016

DESIGNED BY:	DRAWN BY:	CHECKED BY:	SHEET
JSA, RWS,KAS	JSA,KAS	JSA,RWS	2
DATE 12/02/15	PROJECT NO. 460.76	SCALE:	OF
WESTLAND RESOURCES DRAWING PATH			8

\\Winfile\cad\Jobs\400's\460.76\LA\DWG\460.76-LS-Sheets.dwg
Dec 02, 2015 - 9:44am

SPECIES LIST B

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	NOTE	QUANTITY THIS AREA
TREES					
	Celtis laevigata var. reticulata	Netleaf Hackberry	Tall Pot w/ DriWater	See Detail 4, Sheet 5	15
	Chilopsis linearis	Desert Willow	Tall Pot w/ DriWater	See Detail 4, Sheet 5	33
	Fraxinus velutina	Arizona Ash	1 Gal.	Plant in perennial reach	10
	Juglans major	Arizona Walnut	1 Gal.	Plant in perennial reach	21
	Populus freemontii	Cottonwood	1 Gal.	Plant in perennial reach	21
	Prosopis juliflora	Velvet Mesquite	Tall Pot w/ DriWater	See Detail 4, Sheet 5	50
				TOTAL	150



LEGEND

ARTESIAN SPRING RECLAMATION AREA
WIDTH = 60'
AREA = APPROXIMATELY 1.1 ACRES

EXISTING ARTESIAN SPRING

EXISTING ARTESIAN SPRING
DRAINAGE CHANNEL CENTER LINE

EXISTING REACH OF PERENNIAL MOISTURE

NOTES

1. CONFIRM LOCATIONS OF EXISTING ARTESIAN SPRING, PERENNIAL MOISTURE REACH & DOWNSTREAM DRAINAGE. REPORT TO OWNER'S REPRESENTATIVE DISCREPANCIES FROM THIS PLAN.
2. STAKE LIMITS OF RECLAMATION AREA FOR REVIEW & APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO DISTURBING SITE.
3. DO NOT DISTURB EXISTING WELLHEAD. COORDINATE WITH OWNER'S REPRESENTATIVE.
4. REMOVE ALL OTHER EXISTING PIPES, CONCRETE & OTHER CONSTRUCTION MATERIALS WITHIN RECLAMATION AREA. DISPOSE OF LEGALLY OFFSITE.
5. CLEAR & GRUB EXISTING TAMARISK WITHIN RECLAMATION AREA & LEGALLY DISPOSE OF.
6. FLAG TREE LOCATIONS FOR REVIEW & APPROVAL BY OWNER'S REPRESENTATIVE. REFER TO PLANT PLAN & SPECIES LIST B THIS SHEET FOR TREE TYPES & LOCATIONS.
7. INSTALL TREES ON SITE. TREES TO BE PROVIDED BY OWNER. CONTRACTOR RESPONSIBLE FOR INSTALLATION SCHEDULE & SHIPMENT OF TREES TO SITE.
8. MAINTAIN TREES PER SPECIFICATIONS.
9. TILL & SEED RECLAMATION AREA. SEE SPECIFICATIONS. AVOID DISTURBING NEW & EXISTING NATIVE VEGETATION AS IDENTIFIED BY OWNER'S REPRESENTATIVE.

50' 0' 50'
SCALE: 1" = 50'
north

WestLand Resources, Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

Two working days before you dig
CALL FOR THE BLUESTAKES
1-800-782-5348
1-800-STAKE IT
Blue Stake Center
CALL COLLECT

DATE	REVISION	NO.

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
37106
JOHN S. ANDERSON
11/17/15
Date Signed
ARIZONA, U.S.A.
Expires 12-31-2016

Villages at Vigneto (formerly Whetstone Ranch)
CORPS FILE NO. SPL 2003-00826-SDM
IMPLEMENTATION PLANS FOR THE HMMP
OFFSITE MITIGATION PARCEL
ARTESIAN SPRING RECLAMATION AREA

DESIGNED BY: JSA, RWS,KAS	DRAWN BY: JSA,KAS	CHECKED BY: JSA,RWS	SHEET 3 OF 8
DATE 11/17/15	PROJECT NO. 460.76	SCALE:	
WESTLAND RESOURCES DRAWING PATH M:\Jobs\400's\460.76\LA\DWG\460.76-LS-Sheets.dwg Nov 17, 2015 - 4:21pm			

KEY NOTES

1. EXISTING BARBED WIRE FENCE. DO NOT DISTURB.
2. NEW BARBED WIRE FENCE. SEE DETAIL 1, SHEET 5.
3. NEW 15' WIDE BARBED WIRE GATE. SEE DETAIL 3, SHEET 5. LOCATION OF GATE TO BE APPROVED BY OWNERS REPRESENTATIVE.
4. NEW ROCK CHUTE. SEE SHEETS 6 & 7.
5. CONSTRUCTION ACCESS ROUTE. SEE SHEET 6.

NOTES

1. STAKE LIMITS OF RECLAMATION AREA FOR REVIEW & APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO DISTURBING SITE.
2. PRIOR TO START OF WORK, CONTRACTOR TO OBTAIN (3) 1-QUART SOIL SAMPLES FROM THIS AREA. SEE SPECIFICATIONS.
3. PRIOR TO START OF WORK, CONTRACTOR TO REVIEW WITH OWNER'S REPRESENTATIVE SCHEDULE OF ACTIVITIES WITHIN THIS AREA. INTENT IS TO MINIMIZE CONFLICTS BETWEEN PLANTING OF CONTAINER STOCK & SEEDING WORK.
4. REMOVE EXISTING PIPES, CONCRETE & OTHER CONSTRUCTION MATERIALS WITHIN RECLAMATION AREA. DISPOSE OF LEGALLY OFFSITE.
5. CLEAR & GRUB EXISTING TAMARISK WITHIN RECLAMATION AREA & LEGALLY DISPOSE OF. SEE ALSO SHEET 6 FOR VEGETATIVE CLEARING FOR ACCESS ROUTE.
6. FLAG TREE & SHRUB LOCATIONS FOR REVIEW & APPROVAL BY OWNER'S REPRESENTATIVE.
7. INSTALL TREES AND SHRUBS ON SITE. TREES & SHRUBS TO BE PROVIDED BY OWNER. CONTRACTOR RESPONSIBLE FOR INSTALLATION SCHEDULE & SHIPMENT OF TREES & SHRUBS TO SITE. SEE SPECIES LIST C THIS SHEET FOR PLANT SPECIES, CONTAINER SIZES & IRRIGATION SCHEDULE THIS AREA.
8. MAINTAIN TREES & SHRUBS PER SPECIFICATIONS.
9. RIP OR TILL RECLAMATION AREA TO A DEPTH OF 6". AVOID DISTURBING NEW & EXISTING NATIVE VEGETATION AS IDENTIFIED BY OWNER'S REPRESENTATIVE. TILL PARALLEL TO THE CONTOUR. LEAVE GRADES IN ROUGHENED CONDITION.
10. SEED TILLED AREAS WITH NATIVE SEED MIX. REFER TO SPECIFICATIONS.
11. INSTALL STRAW WATTLE AS DIRECTED BY OWNER'S REPRESENTATIVE & AS SHOWN ON DETAIL 1, SHEET 7. TOTAL AMOUNT OF STRAW WATTLES TO BE INSTALLED OVER LIFE OF PROJECT (INCLUDING MAINTENANCE PERIOD) = 5,000 LINEAR FEET MAXIMUM.

SPECIES LIST C

BOTANICAL NAME	COMMON NAME	SIZE	NOTE	QUANTITY THIS AREA
Acacia constricta	White Thorn Acacia	Tall Pot	See Detail 4, Sheet 5	50
Acacia greggii	Cat Claw Acacia	Tall Pot	See Detail 4, Sheet 5	50
Celtis pallida	Desert Hackberry	1 Gallon	See Detail 5, Sheet 5	100
Sporobolus airoides	Alkali Sacaton	1 Gallon	See Detail 5, Sheet 5	100
Sporobolus wrightii	Giant Sacaton	1 Gallon	See Detail 5, Sheet 5	100
Prosopis juliflora	Velvet Mesquite	Tall Pot	See Detail 4, Sheet 5	100
			TOTAL	500

50' 0' 50'
SCALE: 1" = 50'
north

WestLand Resources, Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

Two working days before you dig
CALL FOR THE BLUESTAKES
1-800-782-5348
1-800-STAKE IT
Blue Stake Center
CALL COLLECT

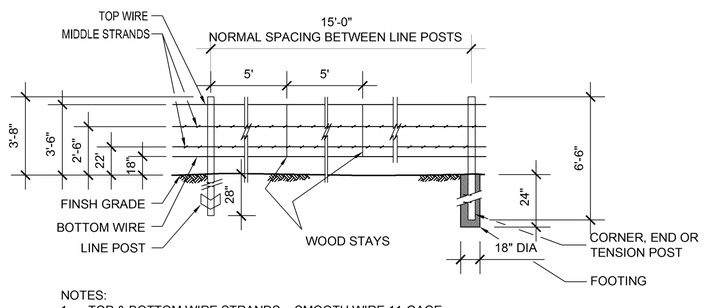
DATE	REVISION	NO.

REGISTERED LANDSCAPE ARCHITECT
CERTIFICATE NO.
37108
JOHN S. ANDERSON
11/17/15
Date Signed
ARIZONA, U.S.A.
Expires 12-31-2016

Villages at Vigneto
(formerly Whetstone Ranch)
CORPS FILE NO. SPL 2003-00826-SDM
IMPLEMENTATION PLANS FOR THE HMMP
OFFSITE MITIGATION PARCEL
SOUTHWEST CORNER RECLAMATION AREA

DESIGNED BY: JSA, RWS,KAS	DRAWN BY: JSA,KAS	CHECKED BY: JSA,RWS	SHEET 4
DATE 11/17/15	PROJECT NO. 460.76	SCALE:	OF 8
WESTLAND RESOURCES DRAWING PATH M:\Jobs\400's\460.76 LA\DWG\460.76-LS-Sheets.dwg Nov 17, 2015 - 4:22pm			

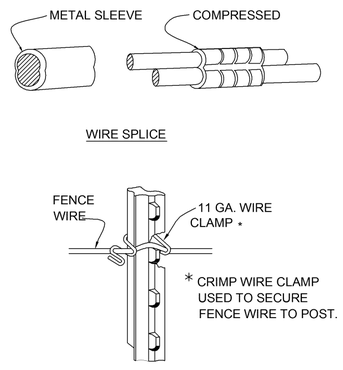
ED_00164700002542-00005



NOTES:
1. TOP & BOTTOM WIRE STRANDS = SMOOTH WIRE 11-GAGE.
2. MIDDLE STRANDS = BARBED WIRE, 2-POINT PATTERN, 12 1/2-GAGE GALVANIZED STEEL WIRE SPACED 5" O.C. CONFORMING TO ASTM A-121.
3. END, CORNER & TENSION POSTS = 3/16" STEEL PIPE. DIAMETER = 3".
4. LINE POST = #133 STUDDED TEE POST.
5. SECURE WIRE TO POSTS USING MINIMUM 12 1/2 GAGE TIE WIRE.
6. MAXIMUM DISTANCE BETWEEN TENSION POSTS = 800'.
7. FOOTINGS SHALL BE CLASS B CONCRETE.

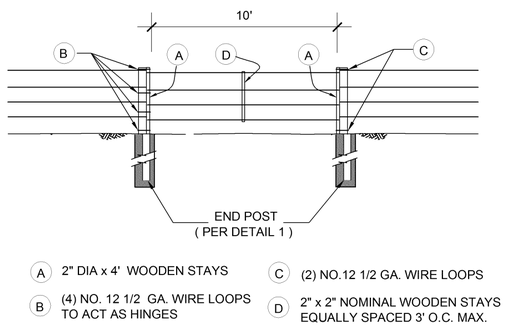
1 BARBED WIRE FENCE WITH METAL POSTS DETAIL

SCALE: N.T.S.



2 WIRE TIES AND SPLICE DETAIL

SCALE: N.T.S.



3 WIRE GATE DETAIL

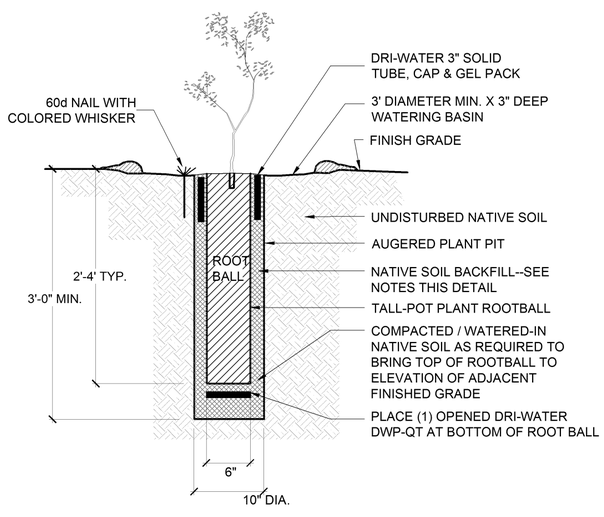
SCALE: N.T.S.

BARBED WIRE FENCE & GATE NOTES:

ALL MATERIAL DIMENSIONS AND WEIGHT ON THIS STANDARD ARE NOMINAL UNLESS OTHERWISE INDICATED.

FENCE WIRE SHALL BE ENDED, DOUBLE WRAPPED AND TIED OFF AT CORNER, END & TENSION POSTS. FENCE TO BE CONTINUED SHALL THEN BE RESTARTED IN LIKE MANNER.

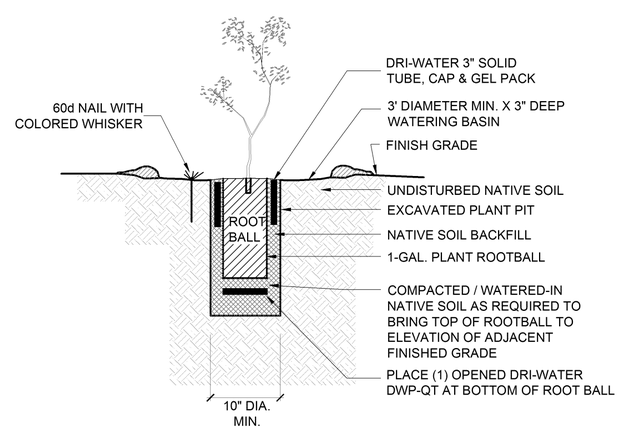
FENCE WIRE SHALL BE PLACED ON EITHER ROAD OR FIELD SIDE OF POSTS DEPENDING ON LOCAL CONDITIONS, I.E. ON CURVES, THE WIRE SHALL BE PLACED ON THE SIDE OF THE POST WHICH WILL RESULT IN THE LEAST TENSION ON FENCE TIES. THIS WILL ALSO APPLY WHERE WIND DRIFT, TUMBLE WEEDS OR OTHER CONDITIONS WOULD EXERT UNUSUAL PRESSURE AGAINST THE WIRE. WHERE POSSIBLE, WIRE SHOULD BE PLACED ON THE LIVESTOCK SIDE OF THE POSTS.



NOTES:
1. EXCAVATED PLANT PITS SHALL BE FILLED WITH WATER AND ALLOWED TO DRAIN TWO TIMES PRIOR TO THE PLANTING OF THE TALL-POT PLANT.
2. PLACE DRI-WATER IN BOTTOM OF PLANT PIT.
3. REMOVE SCREEN FROM BOTTOM OF TALL-POT.
4. PLACE TALL-POT INTO PLANT PIT WHILE STILL IN TALL-POT CONTAINER.
5. LIFT TALL-POT CONTAINER OUT OF PLANT PIT WHILE BACKFILL IS PLACED. PLANTING AND BACKFILL SHALL BE A TWO-MAN OPERATION.
6. INSTALL DRI-WATER TUBE & GEL NEAR TOP OF PLANT PIT. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
7. AFTER BACKFILL IS PLACED, WATER PLANT TO FULL DEPTH OF PLANT PIT.
8. UNDAMAGED TALL-POT CONTAINERS SHALL BE RETURNED TO THE OWNER.
9. INTENT OF WHISKER IS TO ASSIST IN LOCATING PLANT DURING MAINTENANCE PERIOD.

4 TALL POT PLANTING w DRI-WATER IRRIGATION

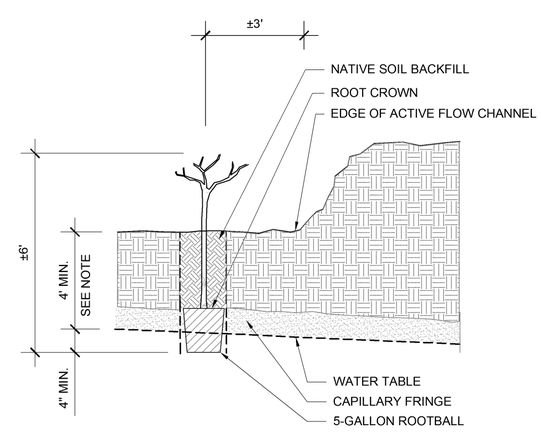
SCALE: N.T.S.



NOTES:
1. EXCAVATED PLANT PITS SHALL BE FILLED WITH WATER AND ALLOWED TO DRAIN TWO TIMES PRIOR TO THE PLANTING OF THE 1-GALLON PLANT.
2. PLACE DRI-WATER IN BOTTOM OF PLANT PIT.
3. INSTALL DRI-WATER TUBE & GEL NEAR TOP OF PLANT PIT. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
4. AFTER ROOTBALL IS PLACED & PLANT PIT IS BACKFILLED, WATER PLANT TO FULL DEPTH OF PLANT PIT.
5. INTENT OF WHISKER IS TO ASSIST IN LOCATING PLANT DURING MAINTENANCE PERIOD.

5 1-GALLON PLANTING w DRI-WATER IRRIGATION

SCALE: N.T.S.



NOTE:
1. CONFIRM DEPTH TO WATER TABLE AT 5 LOCATIONS WITHIN PROPOSED PLANTING AREA WITHIN 2 WEEKS OF CONSTRUCTION. LOCATIONS TO BE APPROVED BY OWNER'S REPRESENTATIVE. DEPTH TO WATER TABLE AT EACH LOCATION TO BE REPORTED TO OWNER'S REPRESENTATIVE.

6 COTTONWOOD DEEP PLANTING INSTALLATION DETAIL

SCALE: N.T.S.

WestLand Resources, Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

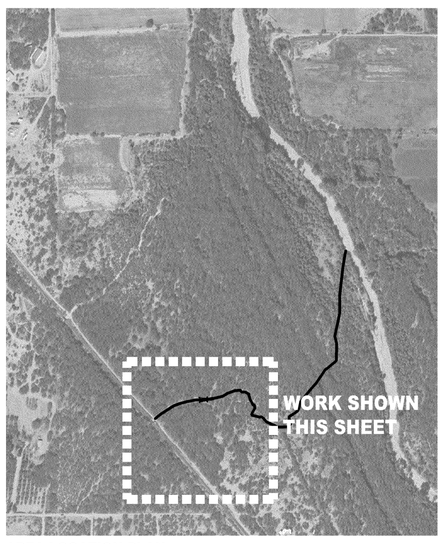
Two working days before you dig CALL FOR THE BLUESTAKES 1-800-782-5348 1-800-STAKE IT Blue Stake Center CALL COLLECT

DATE	REVISION	NO.

REGISTERED LANDSCAPE ARCHITECT 37106 JOHN S. ANDERSON 11/17/15 Date Signed ARIZONA, U.S.A. Expires 12-31-2016

Villages at Vigneto (formerly Whetstone Ranch)
CORPS FILE NO. SPL 2003-00826-SDM
IMPLEMENTATION PLANS FOR THE HMMP OFFSITE MITIGATION PARCEL
FENCE & PLANTING DETAILS

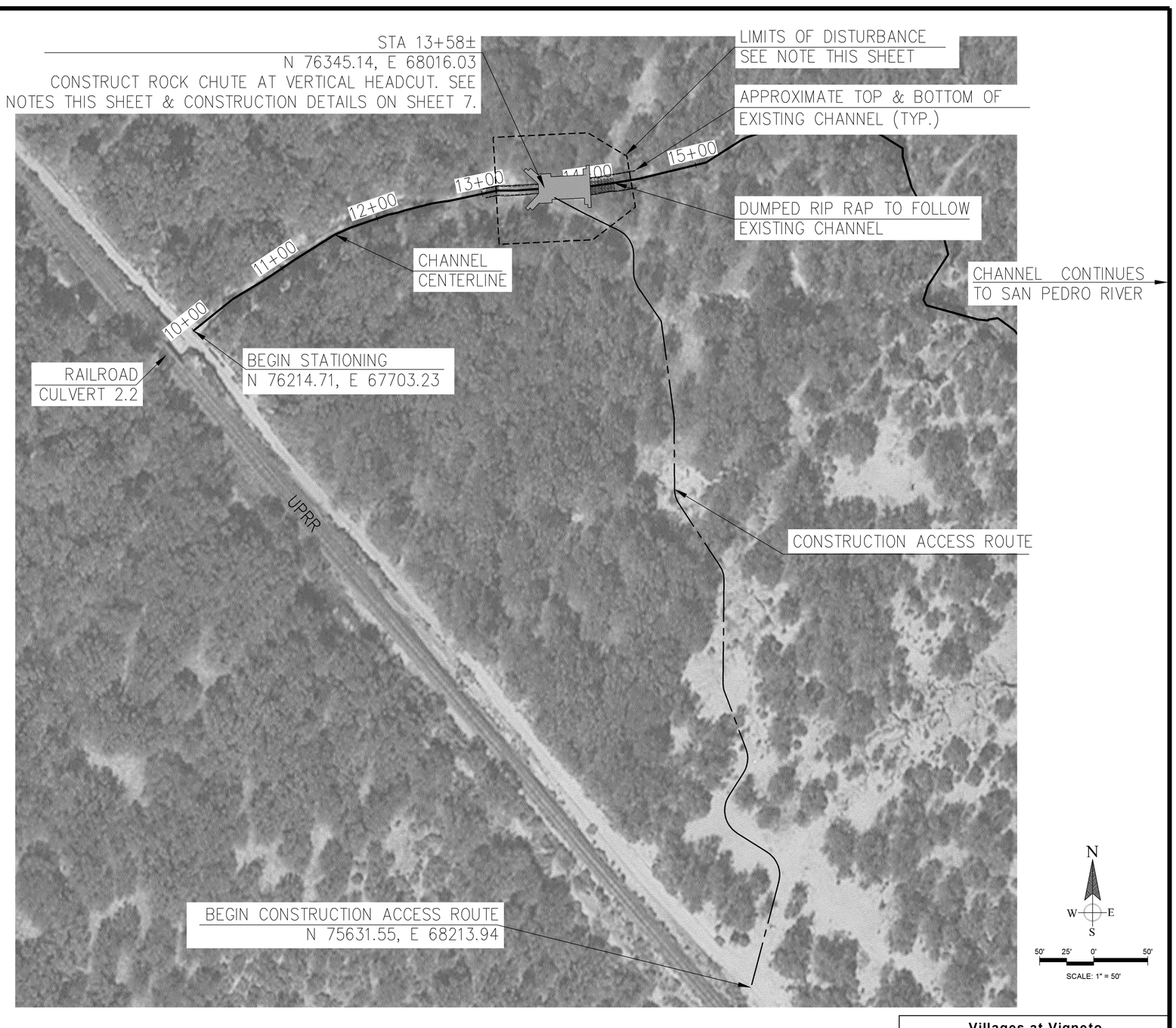
DESIGNED BY: JSA, RWS,KAS	DRAWN BY: JSA,KAS	CHECKED BY: JSA,RWS	SHEET 5
DATE 11/17/15	PROJECT NO. 460.76	SCALE:	OF 8
WESTLAND RESOURCES DRAWING PATH M:\Jobs\400's\460.76\LA\DWG\460.76-LS-DTLs.dwg Nov 17, 2015 - 4:01pm			



AREA LOCATION PLAN

NOTES:

1. WIDTH OF CONSTRUCTION ACCESS ROUTE = 16'.
2. CONSTRUCTION ACCESS ROUTE & LIMITS OF CLEARING TO BE STAKED FOR REVIEW & APPROVAL BY OWNERS REPRESENTATIVE PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO STAKE LIMITS OF DISTURBANCE ASSOCIATED WITH ROCK CHUTE FOR REVIEW & APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. MAXIMUM ALLOWABLE LIMIT OF DISTURBANCE = 30' FROM EDGE OF CONSTRUCTED IMPROVEMENTS. EXISTING TREES TO BE PRUNED OR CUT ONLY AS APPROVED.
4. CONTRACTOR TO LEGALLY DISPOSE OF ALL CLEARED VEGETATION.
5. CONTRACTOR TO STAKE LAYOUT OF ROCK CHUTE FOR REVIEW & APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO REPLACE AND COMPACT DISTURBED SOILS TO PRE-CONSTRUCTION GRADE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
7. CONTRACTOR TO HAUL EXCESS EXCAVATED MATERIAL GENERATED BY CONSTRUCTION OF ROCK CHUTE TO SOUTHWEST CORNER RECLAMATION AREA--SEE SHEET 4. MATERIAL TO BE SPREAD AROUND SITE & BLENDED INTO EXISTING GRADES TO FORM A SMOOTH & EVEN FINISH. AVOID DAMAGE TO EXISTING NATIVE VEGETATION.
8. FOLLOWING CONSTRUCTION OF ROCK CHUTE, RESTORE DISTURBED GRADES TO ORIGINAL CONDITION. RIP OR TILL DISTURBED SOILS TO A DEPTH OF 6". SEED TILLED SOILS WITH NATIVE SEED MIX. REFER TO SPECIFICATIONS.



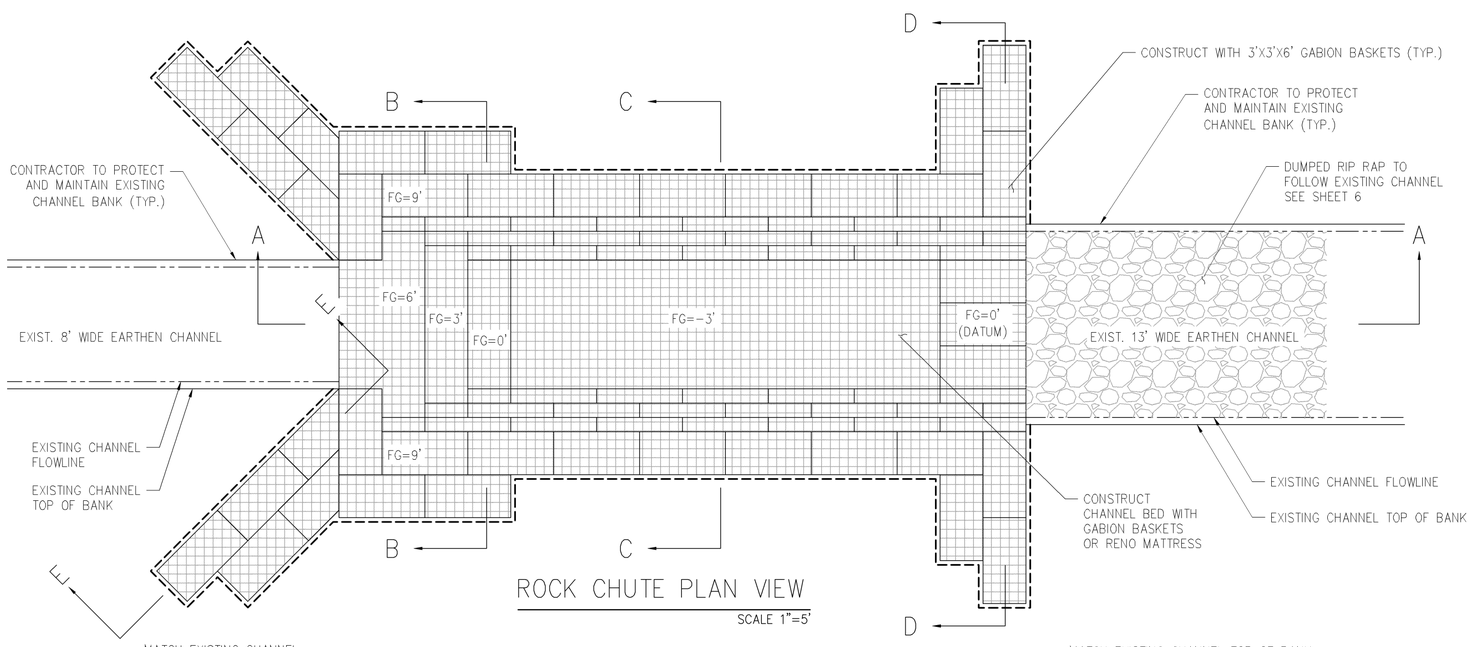
Villages at Vigneto
(formerly Whetstone Ranch)
CORPS FILE NO. SPL 2003-00826-SDM
IMPLEMENTATION PLANS FOR THE HMMP
OFFSITE MITIGATION PARCEL
EROSION CONTROL PLAN

DESIGNED BY: LRH	DRAWN BY: LRH	CHECKED BY: EDC/MC	SHEET 6 OF 8
DATE 11/17/15	PROJECT NO. 460.76	SCALE:	
WESTLAND RESOURCES DRAWING PATH M:\Jobs\400's\460.76\LA\DWG\460.76-ECP-Sheets.dwg Nov 17, 2015 - 4:17pm			

WestLand Resources, Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

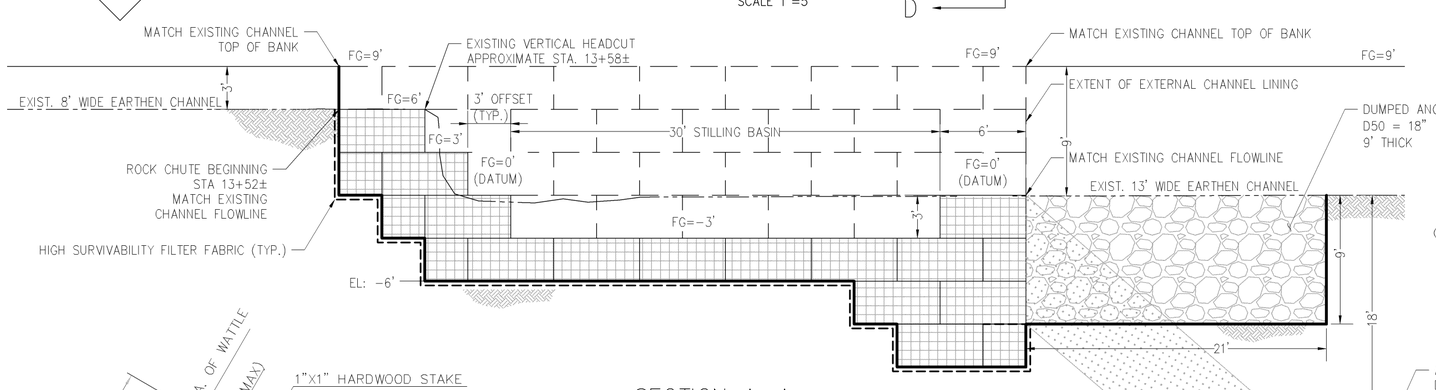
Two working days before you dig
CALL FOR THE BLUESTAKES
1-800-782-5348
1-800-STAKE IT
Blue Stake Center
CALL COLLECT

DATE	REVISION	NO.



ROCK CHUTE PLAN VIEW

SCALE 1"=5'

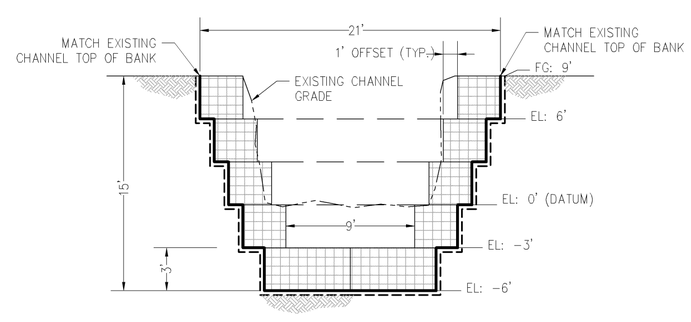


SECTION A–A

SCALE 1"=5'

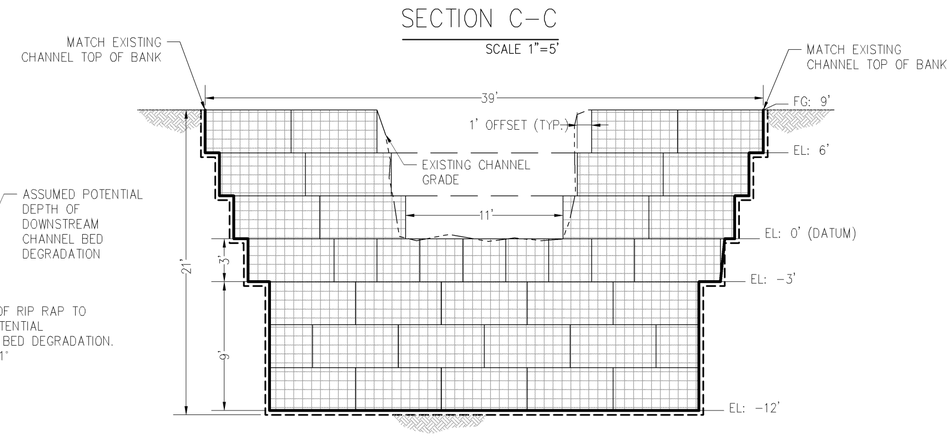
SECTION B–B

SCALE 1"=5'



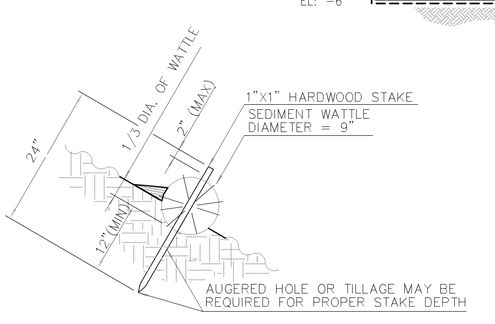
SECTION C–C

SCALE 1"=5'

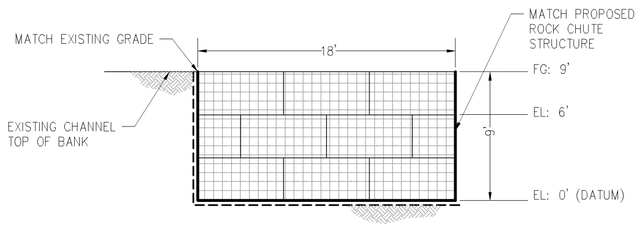


SECTION D–D

SCALE 1"=5'

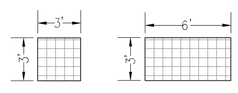


SEDIMENT WATTLE STAKING DETAIL



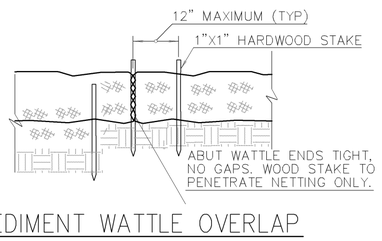
SECTION E–E

SCALE 1"=5'



GABION TYPICAL DETAILS

SCALE 1"=5'



SEDIMENT WATTLE OVERLAP

1 **SEDIMENT WATTLE**

SCALE: N.T.S.

NOTE:
ALL EXISTING CHANNEL DIMENSIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION BY CONTRACTOR PRIOR TO CONSTRUCTION.

WestLand Resources, Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712 (520) 206-9585

Two working days before you dig CALL FOR THE BLUESTAKES 1-800-782-5348 1-800-STAKE IT Blue Stake Center CALL COLLECT

DATE	REVISION	NO.

Villages at Vigneto (formerly Whetstone Ranch)

CORPS FILE NO. SPL 2003-00826-SDM

IMPLEMENTATION PLANS FOR THE HMMP OFFSITE MITIGATION PARCEL

EROSION CONTROL DETAILS

DESIGNED BY: LRH	DRAWN BY: LRH	CHECKED BY: EDC/MC	SHEET 7
DATE 11/17/15	PROJECT NO. 460.76	SCALE:	OF 8
WESTLAND RESOURCES DRAWING PATH M:\Jobs\400's\460.76\A-DWG\460.76-ECP-DTLs.dwg Nov 17, 2015 - 3:57pm			

GENERAL NOTES

1. The Contractor is required to visit the proposed site and familiarize him/her self with existing site conditions prior to submitting a bid for the project.
2. Contractor shall demonstrate several successful projects with plants and project site conditions similar to this project.
3. The work shown on these plans will be performed in phases as directed by the Owner or the Owner's Representative.
4. Pre-construction conference: prior to commencing work on the project, the Contractor shall arrange an on-site conference with the Owner or the Owner's Representative. The Owner or Owner's Representative will present to the Contractor the proposed schedule for phases of work. The Contractor will present proposed equipment and methods for accomplishing work and proposed sequence of activities to complete work. No material or equipment shall be ordered and work shall not begin until the proposed schedule, equipment and sequence of activities has been approved, in writing, by the Owner's Representative.
11. The Owner's Representative will stake the property lines prior to the start of work.
12. The Contractor shall be responsible for the care, maintenance, repair or replacement of existing improvements in the work area which are removed or damaged during the course of construction. All repair, replacement, or cleanup shall be done to the satisfaction of the Owner.
13. Prior to cutting into the soil the Contractor shall locate all underground utilities and take proper precaution not to disturb them. Any damage to underground utilities or structures shall be repaired at the Contractor's expense.
14. Contractor shall comply with all applicable occupational safety and health administration regulations.
15. Contractor shall obtain local permits required by governmental agencies.
16. Contractor shall prepare a Storm Water Protection Plan.
17. If unanticipated conditions are encountered during the course of the construction and are beyond the scope of the design, the Contractor shall immediately notify the Owner's Representative. The Owner's Representative shall submit the necessary revised or supplemental plans for review and approval.
18. A copy of this plan shall be kept in an easily accessible location on the site at all times during construction.
19. Contractor shall remove all construction debris, damaged fencing & vegetation from the project site and legally dispose of these materials off site.
20. The Contractor shall operate in a manner compliant with all applicable regulations of the town, county, state and federal government.
21. The Contractor shall be responsible for maintaining and protecting all planted areas, including the care and protection of trees, shrubs and plants specified in these plans. Such care and protection shall include, but not be limited to, the watering of stock; removal of construction trash and debris; eradicating and removing all weeds and undesirable vegetation; repairing weather damage or damage caused by the public; furnishing and applying sprays, dust and/or cages to combat vandalism, disease, insects and pests; and taking all precautions necessary to prevent damage from cold, frost, sunburn or other hazards.

PLANTING & IRRIGATION

1. Unless otherwise specified in the project documents, all plant material shall be provided by the Owner.
2. Prior to installation of new plant material, the Contractor shall be responsible for obtaining soil samples as directed in project plans for submittal to Crop Production Services for horticultural analysis. Contractor shall submit results of soils analysis to Owner's Representative.
3. Prior to delivery of any plant material to the project site, the Contractor shall schedule a pre-constrution conference with the Owner's Representative as discussed under General Notes. At that conference, the Contractor shall coordinate with the Owner's Representative the proposed schedule for the delivery of plant material.
4. The Contractor shall arrange for pickup of plant material from the nurseries and for delivery to the project site. The nurseries will not warranty the plants provided. The Contractor has the option to refuse selected plants from the nurseries due to ill health or poor form or other reasons. Stock shall be sound, healthy, and vigorous; free from insect pests, sun scald, excessive bark abrasions and other objectionable disfigurements. They shall have normal, well-developed branch systems and vigorous, fibrous root systems. Any plants found to be unsuitable in growth or condition or which are not true to name shall be removed and replaced with acceptable plants.Once the plants are accepted by the Contractor, the Contractor bears responsibility for the survival and health of those plants and shall replace any that fail.
5. Prior to shipping, all plants shall be handled, prepared and packed for shipment with care and skill, in accordance with recognized standard practice for the kind of plant involved. The root systems of all plants shall not be permitted to dry out at any time. While in transit, plants shall be protected at all times against freezing temperatures, the sun, the wind and other adverse weather conditions. Plants shall be transported in closed vehicles. During transportation, plants shall receive adequate ventilation to prevent "sweating." Plants delivered in a wilted condition will be rejected.
6. Plants transported to the site shall be planted as soon as possible. During any interim storage period, they shall not be exposed to excessive sun or drying winds. Any stock that, in the opinion of the Owner's Representative, has deteriorated due to exposure or has been damaged during transporting will be removed and replaced at the Contractor's expense.
7. All container plants accepted by the Contractor shall conform to the applicable requirements specified in the current edition of "American Standard for Nursery Stock" as approved by the American National Standards Institute, Inc., and sponsored by the American Association of Nurserymen, Inc., subject to variations in size and measurement when specified on the project plans or in the Special Provisions.
8. All plants accepted by the Contractor shall be true to type and species shown on the project plans and at least one plant in each group of plants of the same species delivered to the project shall be tagged with a weatherproof label stating both the botanical and common name of the plants in that group.
9. All plants accepted by the Contractor shall comply with Federal and State laws requiring inspection for diseases and infestations. All rejected plants shall be removed from the project immediately upon rejection by the Owner's Representative.
10. Prior to installation of plant material, areas to be planted shall be graded to the lines and grades designated on the project plans and as approved by the Owner's Representative. Subject to the Owner's Representative approval, minor relocations may be accomplished at this time to avoid unsuitable conditions, such as utilities, rocky areas, poor soil, etc.
11. The Contractor shall stake out the locations of plants for review and approval by the Owner's Representative prior to any plant pit excavation as noted on the project plans.
12. All containers shall be opened and removed in such a manner that the roots of the plant are not damaged. The backfill will be thoroughly settled by tamping and watering and as shown on project plans so that all voids are filled.
13. Irrigation as shown on project plans and shall be installed concurrently with planting operations.
14. The Contractor shall maintain and be responsible for all plant material on a continuous basis as installations are completed during the course of work and prior to Substantial Completion. Maintenance will include maintenance of Dri-Water gels, protection from trespass, weeding of invasive species (especially tamarisk), and removal of trash. At the Artesian Spring Reclamation Area (Sheet 3), the Contractor is responsible for protection of plants from herbivores (rodents, rabbits, deer, etc.); sprays and/ or wire cages may be required to prevent damage. At all other areas, Contractor shall closely monitor new plants for damage caused by herbivores and shall immediately advise the Owner's Representative if such damage occurs.
15. The Contractor shall remove and replace, at no additional cost to the Owner, all dead plants and all plants that show signs of failure to grow or which are injured or damaged so as to render them unsuitable for the purpose intended, as determined by the Owner's Representative.
16. Following installation of plant material in each planting area, the Contractor shall schedule an inspection by the Owner's Representative to review for conformance with the project plans for that area.
17. Following approval of all installed plant material, the Owner's Representative shall issue Substantial Completion to the Contractor in writing. Once Substantial Completion has been issued, the Landscape Maintenance Period begins.

APPLICATION OF NATIVE SEED

Native seed shall be applied as a Hydroseed Mix described in Section 805 of the PAG Standard Specifications, including the requirement that all soils to be seeded are to be ripped or tilled to a depth of 6" parallel with the contours, with the following exceptions:

805-2.02: The seed mix shall be as follows:

SEED MIX:

Species	Common Name	Rate, PLS lbs/acre
Grasses		
Aristida purpurea	Purple three awn	1.0
Bothriochloa barbinodes	Cane beardgrass	0.5
Bouteloua curtipendula var. 'Vaughns'	Side oats grama	2.0
Bouteloua rothrockii	Rothrock's grama	0.5
Digitaria californica	Arizona cottontop	0.5
Heteropogon contortus	Tanglehead	0.5
Sporobolus cryptandrus	Sand dropseed	0.25
Sporobolus contractus	Spike dropseed	0.25
Wildflowers(forbs		
Baileya multiradiata	Desert marigold	1.0
Dyssodia spp.	Fetid marigold	0.25
Cassia couesii	Desert senna	1.0
Escholtzia Mexicana	Mexican gold poppy	2.0
Kallstroemia grandiflora	Summer poppy	0.5
Lesquerella gordoni	Bladder pod	1.0
Lupinus sparsiflorus	Desert lupine	1.0
Penstemon parryi	Parry's penstemon	0.5
Phacelia crenulata	Arizona bluebells	1.0
Plantago insularis	Indian wheat	2.0
Salvia columbaria	Desert chia	0.25
Sphaeralcea ambigua	Desert globemallow	0.5
Shrubs		
Ambrosia deltoides	Triangle leaf bursage	3.0
Ambrosia dumosa	White bursage	3.0
Atriplex canescens	Four wing saltbush	0.5
Atriplex polycarpa	Desert saltbush	0.25
Calliandra eriophylla	Fairy duster	0.5
Encelia farinosa	Brittle bush	0.5
Eriogonum facsiculatum var. 'polifolium'	Arizona Flat top buckwheat	0.5
Larrea tridentata	Creosote bush	4.0
Trees(woody species)		
Acacia constricta	White thorn acacia	0.5
Acacia greggii	Cat claw acacia	2.0
Cercidium microphyllum	Foothills palo verde	3.0
Prosopis velutina	Velvet mesquite	0.25

The slurry mix and soil amendments shall be applied per (C) Un-irrigated areas.
805-3.02 Classes of Seeding: Seed shall be applied as described in Class II.

LANDSCAPE MAINTENANCE

1. The Landscape Maintenance Period will begin immediately following issuance of Substantial Completion by the Owner's Representative in writing. The Landscape Maintenance Period shall last for 12 months.
2. Contractor to submit maintenance schedule to Owner's Representative for approval. Contractor shall visit site at least once per month during Maintenance Period.
3. Except were noted otherwise in these Specifications, the Contractor shall warrant that 80% of all installed nursery-grown plants will be alive and in good health at the conclusion of the Maintenance Period except for abuse or damage by others.
4. The Contractor shall warrant that 80% of the Deep Planted Cottonwoods as described in Key Note 5, Sheet 2 will be alive and in good health 30 days after installation is complete.
5. The Contractor shall replace DriWater gels as necessary for new plant health.
6. At the conclusion of the Maintenance Period, the Contractor will remove DriWater sleeves from the field and turn over to the Owner at a location determined by the Owner.
7. The Contractor shall repair damage to slopes caused by erosion.
8. The Contractor shall weed and provide insect control during Maintenance Period.
9. The control of weeds/invasive species shall be accomplished either with herbicides or by manual methods. Known weeds and/or invasive species are Tamarisk, Russian Thistle, Arizona Thistle, Camelthorn and Halogeton. The types of herbicides to be used and the methods of application shall conform to Environmental Protection Agency requirements and labeling instructions. The Contractor shall keep a record of all applications; the type of herbicides used, such as pre- or post-emergent; the rate and method of applications; and the date and location of such applications. A copy of this record shall be submitted to the Owner's Representative after each application. The Contractor shall notify the Owner's Representative and obtain prior approval for the use of any chemicals for weed control or eradication.
10. The Contractor shall use the Best Management Practices (BMP's) for weed control as outlined in the US Department of Agriculture - Forest Service Guide to Noxious Weed Prevention Practices. The Contractor shall refer to federal and state weed lists for identification. The Guide uses the term "weed" to include all plants defined as "noxious weeds" by U.S. Forest Service policy. Noxious weeds generally possess one or more of the following characteristics: aggressive and difficult to manage, poisonous, toxic, parasitic, a carrier or host of serious insects or disease, and being native or new to or not common to the United States or parts thereof.
11. Any person or persons applying pesticides will be considered as doing so for hire and shall be required to be licensed in accordance with the requirements of Title 3, Chapter 2, Arizona Revised Statutes, Article 6, Section 3-377. The Contractor shall notify the Owner's Representative and obtain prior approval for the use of any chemicals for pesticides.
12. The Landscape Maintenance Period may be extended if the project is not being adequately maintained in the opinion of the Owner's Representative. At the end of this period, all plant material shall be in a healthy growing condition.
13. The Contractor shall request in writing, a final inspection at the completion of the Maintenance Period. If the Owner's Representative determines the work is satisfactory, the Maintenance Period will end on the date of the final inspection. If the work is unsatisfactory, the Maintenance Period will be extended at the Contractor's expense, until such time as all corrections are made and the work is inspected and approved by the Owner's Representative. Retention will not be released until final inspection is made and approval issued by the Owner's Representative.

BARBED WIRE FENCE NOTES:

ALL MATERIAL DIMENSIONS AND WEIGHT ON THIS STANDARD ARE NOMINAL UNLESS OTHERWISE INDICATED.

FENCE WIRE SHALL BE ENDED, DOUBLE WRAPPED AND TIED OFF AT END POSTS, ANGLE POSTS AND LINE BRACE POSTS. FENCE TO BE CONTINUED SHALL THEN BE RESTARTED IN LIKE MANNER.

FENCE WIRE SHALL BE PLACED ON THE SIDE OF THE POST WHICH WILL RESULT IN THE LEAST TENSION ON FENCE TIES. THIS WILL ALSO APPLY WHERE WIND DRIFT, TUMBLE WEEDS OR OTHER CONDITIONS WOULD EXERT UNUSUAL PRESSURE AGAINST THE WIRE. WHERE POSSIBLE, WIRE SHOULD BE PLACED ON THE LIVESTOCK SIDE OF THE POSTS.

METAL POSTS:
ALL POSTS AND BRACES SHALL BE OF THE TYPES AND WEIGHTS SHOWN.

FOOTINGS OR BASES:
CONCRETE SHALL BE CLASS B.
CONCRETE WITH LIGHTWEIGHT AGGREGATES CONFORMING TO AASHTO M 195 (ASTM C 330) WILL BE PERMITTED.

END, CORNER AND LINE BRACE POSTS
TYPE- 3" GALVANIZED STEEL PIPE
LENGTH- 6' 6" MINIMUM
WEIGHT - 16 LBS/LINEAR FOOT ± 5%
LENGTH - 6'-6" MINIMUM

WestLand Resources, Inc.
Engineering and Environmental Consultants
4001 E. Paradise Falls Drive
Tucson, Az 85712
(520) 206-9585

Two working days before you dig
CALL FOR THE BLUESTAKES
1-800-782-5348
1-800-STAKE IT
Blue Stake Center
CALL COLLECT

DATE	REVISION	NO.

REGISTERED LANDSCAPE ARCHITECT
37106
JOHN S. ANDERSON
11/17/15
Expires 12-31-2016

Villages at Vigneto
(formerly Whetstone Ranch)
CORPS FILE NO. SPL 2003-00826-SDM
IMPLEMENTATION PLANS FOR THE HMMP
OFFSITE MITIGATION PARCEL
SPECIFICATIONS

DESIGNED BY: JSA, RWS,KAS	DRAWN BY: JSA,KAS	CHECKED BY: JSA,RWS	SHEET 8 OF 8
DATE 11/17/15	PROJECT NO. 460,76	SCALE:	
WESTLAND RESOURCES DRAWING PATH M:\Jobs\400's\460.76 LA\DWG\460.76-Specs.dwg Nov 17, 2015 - 4:23pm			