SCALE: 1/16"=1'-0" SCALE: 1/8"=1'-0" SCALE: 1/4"=1'-0" SCALE: 1/2"=1'-0" SCALE: 3/4"=1'-0" SCALE: 1"=1'-0" SCALE: 1-1/2"=1'-0" SCALE: 3"=1'-0"

IF THIS SHEET IS NOT 24" X 36", IT IS A REDUCED PRINT. SCALE ACCORDINGLY

2.04 CHEMICALS

A. THE FOLLOWING BRAND NAMES OF VARIOUS CHEMICALS TO BE USED IN THIS SECTION ARE PROVIDED FOR EASE OF SPECIFYING; EQUALS OR BRANDS WITH SIMILAR CHEMICALS THAT WILL MATCH OR IMPROVE PERFORMANCE MAY BE USED AT THE CONTRACTOR'S DISCRETION. CONTRACTOR SHALL VERIFY USE OF ANY CHEMICALS WITH ENGINEER PRIOR TO APPLICATION:

1. PRE-EMERGENT HERBICIDES - (GRANULAR FORM ONLY) "TREFLAN " OR "RON STAR "

2.05 FERTILIZER

A. FOR BIDDING PURPOSES ONLY, EXACT TYPE TO BE DETERMINED BY SOIL AND PLANT LAB ANALYSIS.

1. 20-10-15 (N-P-K) COMMERCIAL FERTILIZER, UNIFORM PELLET.

2.06 TREE STAKES AND MISCELLANEOUS MATERIALS

A. AS SPECIFIED ON THE PLANS.

2.07 EROSION CONTROL FABRIC *(ONLY IF REQUIRED)*

A. REGULAR TYPE "CURLEX " BLANKETS CONSISTING OF CURLED WOOD EXCELSIOR 80%, 6 INCH OR LONGER FIBER AND EXTRUDED PHOTO DEGRADABLE BLACK PLASTIC NETTING ON TOP, AVAILABLE FROM AMERICAN EXCELSIOR COMPANY, SACRAMENTO BRANCH (800) 882-6555. STAPLES SHALL BE STEEL "U " SHAPED 8 INCH OR LONGER.

2.08 GOPHER BASKETS *(ONLY IF REQUIRED)*

A. SHALL BE 18 GAUGE CHICKEN WIRE 1 INCH MESH.

2.09 WEED MAT *(ONLY IF REQUIRED)*

A. DEWITT PRO-5 WEED BARRIER OR EQUAL.

2.10 MULCH

A. SHREDDED REDWOOD OR FIR BARK AS APPROVED BY THE ENGINEER.

OR

A. SHALL BE CHIPPED WOOD PRODUCT SUCH AS CEDAR OR REDWOOD CHIPS GREATER THAN 1/2 INCH AND LESS THAN 2 INCH IN LENGTH, AND NO MORE THAN 1/2 INCH THICK, AND SHALL CONTAIN LESS THAN 1% FOREIGN MATTER INCLUDING SOIL, WEEDS, SEEDS, ETC. BY DRY WEIGHT.

2.11 HEADERBOARD

A. SHALL BE 1 X 4 AND 2 X 4, BROWN "BEND-A-BOARD " AS MANUFACTURED BY EPIC PLASTICS, (510) 235-9339. SEE DETAILS FOR INSTALLATION AND SIZES.

OR

A. SHALL BE AS SPECIFIED IN THE PLANS.

2.12 ROOT BARRIERS *(ONLY IF REQUIRED)*

A. VESPRO OR DEEP ROOT OR EQUAL - LOCKING PANEL TYPE AT 18 INCH DEPTH

2.13 GRASS PAVERS *(ONLY IF REQUIRED)*

A. SHALL BE THE PRESTO GEOBLOCK, AVAILABLE FROM THE SOIL STABILIZATION PRODUCTS COMPANY INC., (800) 523-9992, <HTTP://WWW.SSPCO.ORG/>

OR

A. SHALL BE GRASSPAVE2 AND GRAVELPAVE2 BY INVISIBLE STRUCTURES, INC., (800)233-1510, HTTP://WWW.INVISIBLESTRUCTURES.COM/

PART III - EXECUTION

3.01 GENERAL

A. PLANT MATERIAL APPROVALS: BEFORE PLANTING OPERATIONS COMMENCE, ALL PLANT MATERIAL SHALL BE REVIEWED BY THE ENGINEER. DEFECTIVE PLANTS SHALL BE REMOVED FROM THE SITE AND ACCEPTABLE MATERIAL SUBSTITUTED IN ITS PLACE. THE REVIEW DOES NOT ACCEPT DEFECTIVE PLANTS WHICH MAY BE INSTALLED.

B. LAYOUT: ONLY THOSE PLANTS TO BE PLANTED IN ANY SINGLE DAY SHOULD BE LAID OUT. LOCATIONS OF ALL PLANTS SHALL BE REVIEWED PRIOR TO PLANTING. PLANTS INSTALLED WITHOUT THIS REVIEW MAY BE TRANSPLANTED/RELOCATED AS DIRECTED BY THE ENGINEER.

C. PROTECTION OF PLANTS: CONTRACTOR SHALL MAINTAIN ALL PLANT MATERIAL IN A HEALTHY GROWING CONDITION PRIOR TO AND DURING PLANTING OPERATION. CONTRACTOR SHALL BE RESPONSIBLE FOR VANDALISM, THEFT, AND DAMAGE TO PLANT MATERIAL UNTIL COMMENCEMENT OF THE MAINTENANCE PERIOD.

D. PRUNING: CONTRACTOR SHALL DO NO PRUNING WITHOUT SPECIFIC AUTHORIZATION OF THE ENGINEER. PLANTS PRUNED WITHOUT AUTHORIZATION SHALL BE REPLACED BY THE CONTRACTOR IF NECESSARY.

3.02 TREE AND SHRUB INSTALLATION

A. PLANT PITS, BACKFILL AND FINISH GRADING: SEE SOIL PREPARATION, SECTION 02920 FOR MATERIALS AND INSTALLATION REQUIREMENTS.

B. BASINS: CONSTRUCT BASINS AS NECESSARY TO WATER PLANTS. REMOVE BASINS FROM ALL PLANTS UNDER A PERMANENT SPRAY IRRIGATION SYSTEM PRIOR TO FINAL INSPECTION AND FINISH GRADE THE PLANTING AREA. BASINS FOR PLANTS TO BE WATERED FROM THE EMITTER SYSTEM SHALL REMAIN IN PLACE. BASIN BOTTOMS SHALL DRAIN TO BERM AWAY FROM PLANT STEMS.

C. STAKING: ALL TREES SHALL BE STAKED AS SHOWN ON THE PLANS. STAKES SHALL BE DRIVEN SECURELY INTO EXISTING SOIL ON THE WINDWARD SIDE OF THE TREE. A MINIMUM OF TWO FIGURE-EIGHT, WIRE AND RUBBER TREE TIES SHALL BE REQUIRED.

3.03 CHEMICALS

A. PESTICIDE: CONTRACTOR SHALL VERIFY COMPATIBILITY, DOSAGE AND OTHER APPLICATION PROCEDURES WITH THE MANUFACTURER. ALL HERBICIDES AND PESTICIDES SHALL BE APPLIED BY A PEST CONTROL OPERATOR LICENSED IN THE STATE OF CALIFORNIA.

B. HERBICIDE: TREAT ALL GROUND COVER AND NON-SEEDED AREAS FOR WEED CONTROL AS RECOMMENDED BY THE MANUFACTURER. SEE LANDSCAPE MAINTENANCE, SECTION 02970 FOR RELATED WORK.

3.04 SEED INSTALLATION

A. GRADE ALL SEED BEDS, THOROUGHLY REMOVING ALL RIDGES AND DEPRESSIONS, AND MAKING ALL AREAS INTO SMOOTH, CONTINUOUS, FIRM PLANES THAT ENSURE PROPER DRAINAGE. REMOVE ALL SOIL LUMPS, ROCKS, STICKS, AND OTHER DELETERIOUS MATERIAL.

B. SOW SEED AT THE RATE SPECIFIED BELOW. SOW BY THE CROSS CUT METHOD BY APPLYING THE BLUE GRASS MIX IN THE LONG DIRECTION OF THE LAWN, AND TURNING AND APPLYING THE RYE GRASS MIX IN THE SHORT DIRECTION. IMMEDIATELY AFTER SEEDING, RAKE THE SEED INTO THE SOIL FOLLOWING THE SAME CROSS CUT METHOD MENTIONED ABOVE. RAKING DEPTHS SHALL BE PER SEED SUPPLIERS RECOMMENDATIONS.

1. SEED APPLICATION RATES:
BLUE GRASS MIX 4 LBS/1000 SF
RYE GRASS MIX 8 LBS/1000 SF

C. AFTER THE SEED HAS BEEN PROPERLY COVERED, THE SEEDBED SHALL BE IMMEDIATELY COMPACTED BY MEANS OF AN APPROVED LAWN ROLLER, WEIGHING 40 TO 65 POUNDS PER FOOT OF WIDTH FOR CLAY SOIL (OR ANY SOILS HAVING A TENDENCY TO PACK), AND WEIGHTING 150 TO 200 POUNDS PER FOOT OF WIDTH FOR SANDY OR LIGHT SOILS.

D. THOROUGHLY WATER SEEDBED AFTER ROLLING TO KEEP SEED MOIST THROUGHOUT THE GERMINATION PERIOD.

E. AFTER SEEDING, PROTECT ALL LAWN AREAS BY ERECTING SNOW FENCING 36 INCH HIGH AT LAWN EDGES TO PREVENT TRAMPLING.

F. MANUALLY SOW SEED IN ALL AREAS SHOWN TO RECEIVE WILDFLOWER MIX ON THE DRAWING. SEED SHALL BE EVENLY DISTRIBUTED OVER ALL SEEDING AREAS. SEEDS SHALL BE SOWN BETWEEN OCTOBER 15TH AND NOVEMBER 30TH, OR AFTER THE FIRST WINTER RAINS, WHICH EVER IS LATER.

OR

3.04 DRILL SEED

A. SEEDING SHALL BE ACCOMPLISHED BY A DRILL OR SLIT SEEDER. SEED SHALL BE APPLIED SEPARATELY AT A TOTAL MIXTURE OF 10 LBS. PER 1,000 SF.

B. SLIT OR DRILL SEED BLUE GRASS IN TWO DIRECTIONS-NORTH/SOUTH; EAST/WEST AT A TOTAL RATE OF 2 LBS./1,000 SF (1 LB. PER 1,000 SF EACH DIRECTION). WAIT FOR GERMINATION AND GRASS TO BREAK THE SURFACE PRIOR TO SEEDING RYE GRASS. UPON COMPLETION OF SLIT/DRILL SEEDING. DRAG THE FIELD TO BREAK UP CLUMPS.

C. ONCE BLUE HAS GERMINATED, BROADCAST RYE GRASS IN TWO DIRECTIONS DIAGONALLY TO THE BLUE GRASS, OR IN NORTHWEST/ SOUTHWEST, NORTHEAST/ SOUTHEAST DIRECTIONS. BROADCAST SF THE TOTAL RATE OF 8 LBS PER 1000 SF, OR 4 LBS EACH DIRECTION PER 1000 SF.

OR

3.04 SOD INSTALLATION

A. FINISH GRADE TO SMOOTH, EVEN SURFACE, ALLOWING FOR SOD THICKNESS AT PAVEMENT AND OTHER STRUCTURES TO LEAVE THE SOD FLUSH TO THE FINISH GRADE OF ADJACENT SURFACES. THE SOIL SURFACE SHALL BE SUFFICIENTLY FIRM TO RESIST IMPRESSIONS OVER 1/4 INCH DEEP, AND SHALL BE LIGHTLY ROLLED UNTIL MEETING THIS FIRMNESS. THE TOP SIX TO EIGHT INCHES OF SOIL SHALL BE WATERED UNTIL THIS ZONE HAS AN OPTIMUM MOISTURE CONTENT FOR ROOT GROWTH.

B. SOD SHALL BE LAID IN ROWS WITH STAGGERED ENDS NEATLY AND TIGHTLY BUTTED ON ALL EDGES. HARVESTING NETTING SHALL BE REMOVED UPON INSTALLATION. SOD SHALL BE PROTECTED FROM WIND AND SUN EXPOSURE DURING STORAGE, WITH A MAXIMUM STORAGE PERIOD OF TWENTY-FOUR HOURS. NO OVERLAP, GAPS, RIPPLES, OR OTHER UNEVEN PLACEMENT WILL BE ACCEPTED. CONTRACTOR SHALL LIGHTLY ROLL SOD AFTER INSTALLATION TO INSURE OPTIMUM CONTACT WITH THE SOIL. TRIMMING AND CUTTING AROUND STRUCTURES SHALL BE COMPLETED WITH SHARP TOOLS AND CAREFULLY FITTED SO THE FINAL APPEARANCE IS A SOLID, CONTINUOUS TURF.

C. THE FOOTBALL FIELD SOD SHALL BE ALLOWED TO GROW FOR A MINIMUM OF TWO WEEKS BEFORE ROLLING. ROLLING SHALL OCCUR WITH A SMALL ASPHALT ROLLER. 3-5 TONS. ROLL BOTH IN LENGTH AND WIDTH.

D. AFTER SOD INSTALLATION, PROTECT ALL LAWN AREAS BY ERECTING SNOW FENCING 36 INCH HIGH AT LAWN EDGES TO PREVENT TRAMPLING.

3.05 FERTILIZER

A. FOR BIDDING PURPOSES ONLY, EXACT RATES TO BE DETERMINED FROM SOIL AND PLANT LAB ANALYSIS.

1. APPLY COMMERCIAL FERTILIZER AT 5 POUNDS PER 1,000 SQUARE FEET TO ALL LAWN AND PLANTING AREAS, 30 DAYS AFTER PLANTING. RE-APPLICATION SHALL BE SCHEDULED AT 45 DAY INTERVALS UNTIL COMPLETION OF LANDSCAPE MAINTENANCE.

3.06 GOPHER BASKETS *(ONLY IF REQUIRED)*

A. BASKET SHALL BE A MINIMUM OF 1 INCH WIDER THAN ROOT BALL. THE TOP OF THE BASKET SHALL BE FLUSH TO THE ROOT BALL TOP.

3.07 HEADERBOARD

A. INSTALL PER MANUFACTURER'S INSTRUCTIONS. USE A COURSE SAW CARBIDE TIP BLADE. ALLOW FOR EXPANSION AT ALL JOINTS. LAP BOARDS BY 2 INCH AND LEAVE A 1/4 INCH GAP FOR 1 X 4'S AND A 1/2 INCH - 3/4 INCH FOR 2 X 4'S. USE COARSE FILES ONLY TO SMOOTH CUT ENDS. INSTALL WITH RING SHANK NAILS ONLY OR COARSE DECK SCREWS, ALL HOT DIPPED GALVANIZED.

3.08 ROOT BARRIER *(ONLY IF REQUIRED)*

A. INSTALL AROUND TREES WITHIN 5' OF CURBS, WALKS OR PAVEMENTS. INSTALL PER MANUFACTURER'S INSTRUCTIONS, AND AS SHOWN IN THE DETAIL IN THE PLANS. IRRIGATION LINES SHALL NOT PENETRATE ROOT BARRIER.

3.09 WEED MAT *(ONLY IF REQUIRED)*

A. INSTALL WEED MAT TO ALL SHRUB AND GROUND COVER AREAS PER MANUFACTURER'S INSTRUCTIONS. WEED MAT SHALL THOROUGHLY COVER THE SOIL AREA OF THE SHRUB AND/OR GROUND COVER PLANTING AREAS. OVERLAP AND STAPLE AS DIRECTED BY INSTRUCTIONS.

3.10 MULCH

A. INSTALL 2 INCH MULCH TO ALL SHRUB AND GROUND COVER AREAS. SEE FINISH GRADING IN SOIL PREPARATION, SECTION 02920.

3.11 MAINTENANCE

A. SEE LANDSCAPE MAINTENANCE, SECTION 02970

3.12 CLEAN UP

A. AFTER COMPLETION OF ALL OPERATIONS, CONTRACTOR SHALL REMOVE ALL TRASH, EXCESS SOIL AND OTHER DEBRIS. ALL WALKS, WALLS, AND PAVEMENT SHALL BE SWEPT AND WASHED CLEAN. LEAVE THE ENTIRE AREA IN A NEAT, ORDERLY CONDITION.

3.13 PAYMENT

A. THE UNIT PRICES PAID FOR EACH BID ITEM MEASURED SHALL BE PAID FOR BY UNIT PRICE AND SHALL BE CONSIDERED FULL COMPENSATION FOR DOING ALL THE WORK INVOLVED IN PLANTING PLANT MATERIAL AND INSTALLING MULCH, AND NOT SEPARATE PAYMENT SHALL BE MADE.

B. PAYMENT FOR ROOT BARRIERS SHALL BE INCLUDED IN THE UNIT PRICES PAID FOR THE 15 GALLON AND 24 INCH BOX TREES RESPECTIVELY.

END OF SECTION

LANDSCAPE MAINTENANCE - SECTION 02970

PART I - GENERAL

1.01 RELATED DOCUMENTS

A. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION-1 SPECIFICATION SECTIONS, APPLY TO THE WORK OF THIS SECTION.

1.02 DESCRIPTION OF WORK

A. EXTENT: WORK IN THIS SECTION INCLUDES THE GROWING AND MAINTENANCE OPERATIONS NECESSARY TO ESTABLISH THE LAWNS, AND OTHER PLANTINGS, PROVIDE PEST AND DISEASE CONTROL, TO MAINTAIN THE IRRIGATION SYSTEM AND RELATED CONSTRUCTION ELEMENTS.

B. RELATED WORK:

1. LANDSCAPE IRRIGATION
2. LANDSCAPE PLANTING

1.03 QUALITY ASSURANCE

A. REVIEWS:

1. SUBSTANTIAL COMPLETION: AT THE TIME ALL MAJOR PLANTING, INCLUDING GROUNDCOVER, AND THE IRRIGATION SYSTEM IS INSTALLED, THE ENGINEER WILL REVIEW FOR A FINAL CHECKLIST OF MINOR ITEMS TO BE COMPLETED. ONCE COMPLETED, THE MAINTENANCE PERIOD SHALL COMMENCE WITH APPROVAL OF ENGINEER.

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LICENSED LANDSCAPE ARCHITECT STATE OF CALIFORNIA
NOT FOR CONSTRUCTION

Agency Approvals:

Revisions

No.	Description	Date

M B A R I

MOSS LANDING FACILITIES
SANDHOLDT ROAD
MOSS LANDING CA. 95039

MARS SHORE STATION

Drawn by: SK
Checked: MB
Approved:

Project No. 06.044
Drawing No.
Date: 8/04/06

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