







### DUST CONTROL

1. WATER ALL ACTIVE CONSTRUCTION AREAS AT LEAST TWICE A DAY, OR AS NEEDED TO PREVENT VISIBLE DUST PLUMES FROM BLOWING OFF-SITE.
2. USE TARPAULINS OR OTHER EFFECTIVE COVERS FOR ON-SITE STORAGE PILES AND FOR HAUL TRUCKS THAT TRAVEL ON STREETS.
3. PAVE, APPLY WATER THREE TIMES DAILY (OR AS NECESSARY), OR APPLY NON-TOXIC SOIL STABILIZERS ON ALL UNPAVED PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES.
4. SWEEP ALL PAVED ACCESS ROUTES, PARKING AREAS, AND STAGING AREAS DAILY (PREFERABLY WITH WATER SWEEPERS).
5. SWEEP STREETS DAILY (PREFERABLY WITH WATER SWEEPERS) IF VISIBLE AMOUNTS OF SOIL MATERIAL ARE CARRIED ONTO PUBLIC STREETS.
6. HYDRIOUS OR APPLY NON-TOXIC SOIL STABILIZERS TO INACTIVE CONSTRUCTION AREAS (PREVIOUSLY GRADED AREAS INACTIVE FOR TEN DAYS OR MORE).
7. ENCLOSE, COVER, WATER TWICE DAILY (OR AS NECESSARY), OR APPLY NON-TOXIC SOIL BINDERS TO EXPOSED STOCKPILES (DIRT, SAND, ETC.).
8. LIMIT TRAFFIC SPEEDS ON UNPAVED AREAS TO 15 MPH.
9. INSTALL SANDBAGS OR OTHER EROSION CONTROL MEASURES TO PREVENT SILT RUNOFF TO PUBLIC ROADWAYS (REFER TO EROSION CONTROL PLANS).
10. REPLANT VEGETATION IN DISTURBED AREAS AS QUICKLY AS POSSIBLE.
11. INSTALL WHEEL WASHERS FOR ALL EXITING TRUCKS, OR WASH OFF THE TIRES OR TRACKS OF ALL TRUCKS AND EQUIPMENT LEAVING THE SITE.
12. INSTALL WIND BREAKS, OR PLANT TREES/VEGETATIVE WIND BREAKS AT WINDWARD SIDE(S) OF CONSTRUCTION AREAS.
13. SUSPEND EXCAVATION AND GRADING ACTIVITY WHEN WINDS (INSTANTANEOUS GUSTS) EXCEED 25 MPH.
14. MINIMIZE THE AREA SUBJECT TO EXCAVATION, GRADING AND OTHER CONSTRUCTION ACTIVITY AT ANY ONE TIME.
15. THE PRECEDING ARE ACCEPTABLE MEASURES, FAILURE TO COMPLY SHALL RESULT IN \$500 LIQUIDATED DAMAGES PER VIOLATION PER DAY.

### MITIGATION MEASURE SCHEDULE

MITIGATION MEASURE	DESCRIPTION	IMPLEMENTATION REFERENCE
MEASURE D.3 - ARCHAEOLOGICAL RESOURCES		
D.3	ARCHAEOLOGICAL MITIGATION NOTES	C1.2
MEASURE D.4 - ARCHAEOLOGICAL EXPLORATION PROGRAM		
D.4.a - D.4.d	ARCHAEOLOGICAL EXPLORATION NOTES	C1.2
MEASURE D.6 - UNKNOWN ARCHAEOLOGICAL REMAINS		
D.6	UNKNOWN ARCHAEOLOGICAL NOTES	C1.2
MEASURE F.2 - CONSTRUCTION PM		
F.2.a - F.2.n	DUST CONTROL NOTES	C1.2
MEASURE G.1 - NOISE REDUCTION IN PILE DRIVING		
G.1	PRE-DRILL PILE HOLES	C1.2
MEASURE H.1 - HEAVY EQUIPMENT STORAGE		
H.1.1	STORE HEAVY CONSTRUCTION EQUIPMENT IN THE PROJECT AREA DURING THE BUILDOUT PERIOD	
MEASURE H.7 - CORROSMITY		
H.7	SOILS TESTING FOR CORROSMITY	GEOTECHNICAL INVESTIGATION (GENERAL NOTE 44)
MEASURE K.1 - STORMWATER POLLUTION PREVENTION PROGRAM (SWPPP)		
K.1	SWPPP PLAN	C6.1
K.1.A - K.1.J	SWPPP NOTES - EROSION AND SEDIMENT CONTROL	C6.2

### NOISE REDUCTION IN PILE DRIVING

1. CONTRACTOR SHALL USE NOISE-REDUCING PILE DRIVING TECHNIQUES SUCH AS PRE-DRILLING PILE HOLES (IF FEASIBLE, BASED ON SOILS) TO THE MAXIMUM FEASIBLE DEPTH, INSTALLING INTAKE AND EXHAUST MUFFLERS ON PILEDRIVING EQUIPMENT, VIBRATING PILES INTO PLACE WHEN FEASIBLE, INSTALLING SHROUDS AROUND THE PILEDRIVING HAMMER WHERE FEASIBLE, AND RESTRICTING THE HOURS OF OPERATION.
2. CONTRACTOR SHALL SUBMIT COMPLIANCE PLAN FOR MITIGATION MEASURE ABOVE PRIOR TO PILE DRIVING.
3. PILE DRIVING OR OTHER EXTREME NOISE GENERATING ACTIVITY (80 dBA AT A DISTANCE OF 100 FEET) SHALL BE LIMITED TO 8:00 AM TO 5:00 PM, MONDAY THROUGH FRIDAY. NO PILE DRIVING OR OTHER EXTREME NOISE GENERATING ACTIVITY IS PERMITTED ON SATURDAYS, SUNDAYS OR HOLIDAYS. REQUESTS FOR PILE DRIVING ON SATURDAYS MAY BE CONSIDERED ON A CASE BY CASE BASIS BY THE REDEVELOPMENT AGENCY, WITH APPROVAL AT THE SOLE DISCRETION OF THE AGENCY DIRECTOR.

### ARCHAEOLOGICAL MITIGATION

#### ARCHAEOLOGICAL RESOURCES

1. PROVIDE INFORMATION REGARDING THE ARCHAEOLOGICAL EXPLORATION PROGRAM TO THE SATISFACTION OF DEPARTMENT OF CITY PLANNING.
2. RETAIN THE SERVICES OF AN ARCHAEOLOGIST, BECAUSE OF THE STRONG POSSIBILITY OF ENCOUNTERING THE REMAINS OF CULTURAL OR HISTORIC ARTIFACTS OR FEATURES IN THE AREA DEFINED BY 16TH STREET, ILLINOIS STREET, MARIPOSA STREET AND PENNSYLVANIA AVENUE. THE ENVIRONMENTAL REVIEW OFFICER (ERO) IN CONSULTATION WITH THE PRESIDENT OF THE LANDMARKS PRESERVATION ADVISORY BOARD (LPAB) AND THE ARCHAEOLOGIST SHALL DETERMINE:
  - a. INSTRUCTION PROVIDED BY THE ARCHAEOLOGIST TO ALL EXCAVATION AND FOUNDATION CREWS ON THE PROJECT SITE REGARDING THE POTENTIAL FOR DISCOVERY OF HISTORIC ARCHAEOLOGICAL DEPOSITS AND ARTIFACTS, AND THE PROCEDURES TO BE FOLLOWED IF SUCH MATERIALS ARE UNCOVERED; AND
  - b. PRIOR TO THE COMMENCEMENT OF FOUNDATION EXCAVATION, A PROGRAM OF ARCHAEOLOGICAL TESTING.
3. RETAIN A QUALIFIED HISTORIC ARCHAEOLOGIST TO SUPERVISE A PRE-FOUNDATION EXCAVATION TESTING PROGRAM FOR EACH PHASE OF PROJECT AREA DEVELOPMENT OR EACH CONSTRUCTION SITE, AS APPROPRIATE. USING A SERIES OF MECHANICAL, EXPLORATORY BORINGS OR OTHER TESTING METHODS DETERMINED BY THE ARCHAEOLOGIST TO BE APPROPRIATE, A QUALIFIED HISTORICAL ARCHAEOLOGIST SHALL SUPERVISE THE TESTING WITHIN THE PROJECT BOUNDARY, WHICH IS A SUBSET OF THE AREA DEFINED BY 16TH STREET, ILLINOIS STREET, MARIPOSA STREET AND PENNSYLVANIA AVENUE, TO DETERMINE THE PROBABILITY OF FINDING CULTURAL AND HISTORICAL REMAINS. AT THE COMPLETION OF THE ARCHAEOLOGICAL TESTING PROGRAM, THE ARCHAEOLOGIST SHALL SUBMIT A WRITTEN REPORT FIRST AND DIRECTLY TO THE ERO AND THE PRESIDENT OF THE LPAB, WITH A COPY TO THE PROJECT SPONSOR, WHICH DESCRIBES THE FINDINGS, ASSESSES THEIR SIGNIFICANCE AND PROPOSES APPROPRIATE RECOMMENDATIONS FOR ANY ADDITIONAL PROCEDURES NECESSARY FOR THE MITIGATION OF ADVERSE IMPACTS TO CULTURAL RESOURCES DETERMINED TO BE SIGNIFICANT.
4. RETAIN A CERTIFIED ARCHAEOLOGIST TO SUPERVISE A PROGRAM OF ON-SITE MONITORING DURING SITE EXCAVATION WITHIN THE PROJECT BOUNDARY, WHICH IS A SUBSET OF THE AREA DEFINED BY 16TH STREET, ILLINOIS STREET, MARIPOSA STREET AND PENNSYLVANIA AVENUE, FOLLOWING SITE CLEARANCE AND PRE-EXCAVATION TESTING.
5. THE CERTIFIED ARCHAEOLOGIST SHALL RECORD OBSERVATIONS IN A PERMANENT LOG. SHOULD CULTURAL OR HISTORIC ARTIFACTS BE FOUND FOLLOWING COMMENCEMENT OF EXCAVATION ACTIVITIES, THE ARCHAEOLOGIST SHALL ASSESS THE SIGNIFICANCE OF THE FIND, AND IMMEDIATELY REPORT TO THE ERO AND THE PRESIDENT OF LPAB.
6. UPON RECEIVING THE ADVICE OF THE CONSULTANT AND THE LPAB, THE ERO SHALL RECOMMEND SPECIFIC MITIGATION MEASURES, IF NECESSARY. THE MONITORING PROGRAM, WHETHER OR NOT THERE ARE FINDS OF SIGNIFICANCE, SHALL RESULT IN A WRITTEN REPORT TO BE SUBMITTED FIRST AND DIRECTLY TO THE ERO AND THE PRESIDENT OF THE LPAB, WITH A COPY TO THE PROJECT SPONSOR. SUSPEND EXCAVATION OR CONSTRUCTION ACTIVITIES WHICH MIGHT DAMAGE DISCOVERED CULTURAL RESOURCES FOR A TOTAL MAXIMUM OF FOUR WEEKS OVER THE COURSE OF CONSTRUCTION AT EACH SITE TO PERMIT INSPECTION, RECOMMENDATION AND RETRIEVAL, IF APPROPRIATE.
7. IMPLEMENT AN APPROPRIATE SECURITY PROGRAM TO PREVENT LOOTING OR DESTRUCTION, IF CULTURAL RESOURCES OF POTENTIAL SIGNIFICANCE ARE DISCOVERED. ANY DISCOVERED CULTURAL ARTIFACT ASSESSED AS SIGNIFICANT BY THE ARCHAEOLOGIST UPON CONCURRENCE BY THE ERO AND THE PRESIDENT OF THE LPAB SHALL BE PLACED IN A REPOSITORY DESIGNATED FOR SUCH MATERIALS OR POSSIBLY EXHIBITED BY A PUBLIC DISPLAY, FOLLOWING APPROVAL OF THE ARCHAEOLOGICAL TESTING AND MONITORING PROGRAM REPORTS BY THE ERO AND THE PRESIDENT OF LPAB. A FINAL REPORT SHALL BE SENT TO THE CALIFORNIA ARCHAEOLOGICAL SITE SURVEY OFFICE AT SONOMA STATE UNIVERSITY, THE FOUNDATION FOR SAN FRANCISCO'S ARCHITECTURAL HERITAGE AND THE STATE OFFICE OF HISTORIC PRESERVATION. THE OFFICE OF ENVIRONMENTAL REVIEW MUST RECEIVE THREE FINAL COPIES OF THE FINAL ARCHAEOLOGICAL FINDINGS REPORT. ARCHAEOLOGICAL TESTING SHOULD BE COORDINATED WITH OTHER SITE INVESTIGATIONS FOR GEOTECHNICAL AND TOXIC WASTE PURPOSES.

#### ARCHAEOLOGICAL EXPLORATION PROGRAM

1. DEVELOP ARCHAEOLOGICAL EXPLORATION PROGRAMS, CONSISTENT WITH THE MEASURES LISTED ABOVE, FOR PRE-IDENTIFIED SENSITIVE HISTORIC ARCHAEOLOGICAL AREAS THAT SHALL INCLUDE THE FOLLOWING:
  - a. DEFINE SPECIFIC RESEARCH PARAMETERS AND PREPARE A WRITTEN STUDY PLAN IN CONSULTATION WITH THE ERO AND LPAB PRIOR TO SUBSURFACE EXPLORATION, WITH EMPHASIS ON NATIONAL REGISTER DETERMINATION OF HISTORICAL SIGNIFICANCE AND THE MAXIMUM RETRIEVAL OF ARCHAEOLOGICAL DATA.
  - b. EXAMINE LARGE-SCALE EXPOSURE OF SOIL PROFILES.
  - c. COMPLETE DETAILED FIELD RECORDS, INCLUDING PHOTOGRAPHS AND DRAWINGS, TO DOCUMENT SUBSURFACE SOIL PROFILES, ARCHAEOLOGICAL DEPOSITS AND INTEGRITY OF SUCH DEPOSITS.
  - d. COMPLETE A DETAILED REPORT OF FINDINGS TO DESCRIBE RESEARCH AND EXPLORATION METHODOLOGIES, TESTING RESULTS, ALL ARCHAEOLOGICAL FINDINGS AND RECOMMENDATIONS FOR RESOURCE MANAGEMENT.

#### UNKNOWN ARCHAEOLOGICAL REMAINS

1. THE PROJECT BOUNDARY LIES WITHIN AN AREA DEFINED BY 16TH STREET, ILLINOIS STREET, MARIPOSA STREET AND PENNSYLVANIA AVENUE THAT HAS SENSITIVITY FOR THE PRESENCE OF UNKNOWN ARCHAEOLOGICAL REMAINS. PREHISTORIC CULTURAL DEPOSITS AND UNKNOWN HISTORICAL FEATURES, ARTIFACT CACHES AND DEBRIS AREAS COULD BE LOCATED OR ENCOUNTERED ANYWHERE WITHIN THE AFOREMENTIONED AREA. FOLLOW PROCEDURES FOR INSTRUCTING EXCAVATION CREWS, NOTIFYING THE ERO AND PRESIDENT OF THE LPAB, AND DEVELOPING RECOVERY MEASURES, AS DESCRIBED IN MEASURES LISTED ABOVE. IN ADDITION, IN THE EVENT THAT PREHISTORIC ARCHAEOLOGICAL DEPOSITS ARE DISCOVERED, CONSULT LOCAL NATIVE AMERICAN ORGANIZATIONS. DIALOGUE WITH THE ERO, LPAB AND THE ARCHAEOLOGICAL CONSULTANT SHALL TAKE PLACE IN DEVELOPING ACCEPTABLE ARCHAEOLOGICAL TESTING & EXCAVATION PROCEDURES, PARTICULARLY IN REGARD TO THE DISPOSITION OF CULTURAL MATERIALS AND NATIVE AMERICAN BURIALS.


#### MISC. ARCHAEOLOGICAL NOTES

1. OWNER'S AGENT SHALL BE RESPONSIBLE FOR RETAINING THE SERVICES OF CERTIFIED ARCHAEOLOGISTS TO IMPLEMENT THE PRECEDING MEASURES. CONTRACTOR SHALL COORDINATE HIS WORK AND COOPERATE ACCORDINGLY DURING THE ARCHAEOLOGICAL MITIGATION PROCESS.

### MISSION BAY PARKS

P26

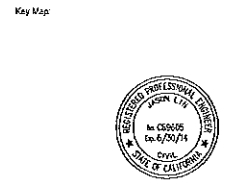
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FOCIL-MB, LLC  
DEVELOPMENT MANAGER:  
  
MISSION BAY DEVELOPMENT GROUP  
410 CHICALA BAYEN STREET SAN FRANCISCO, CA 94111

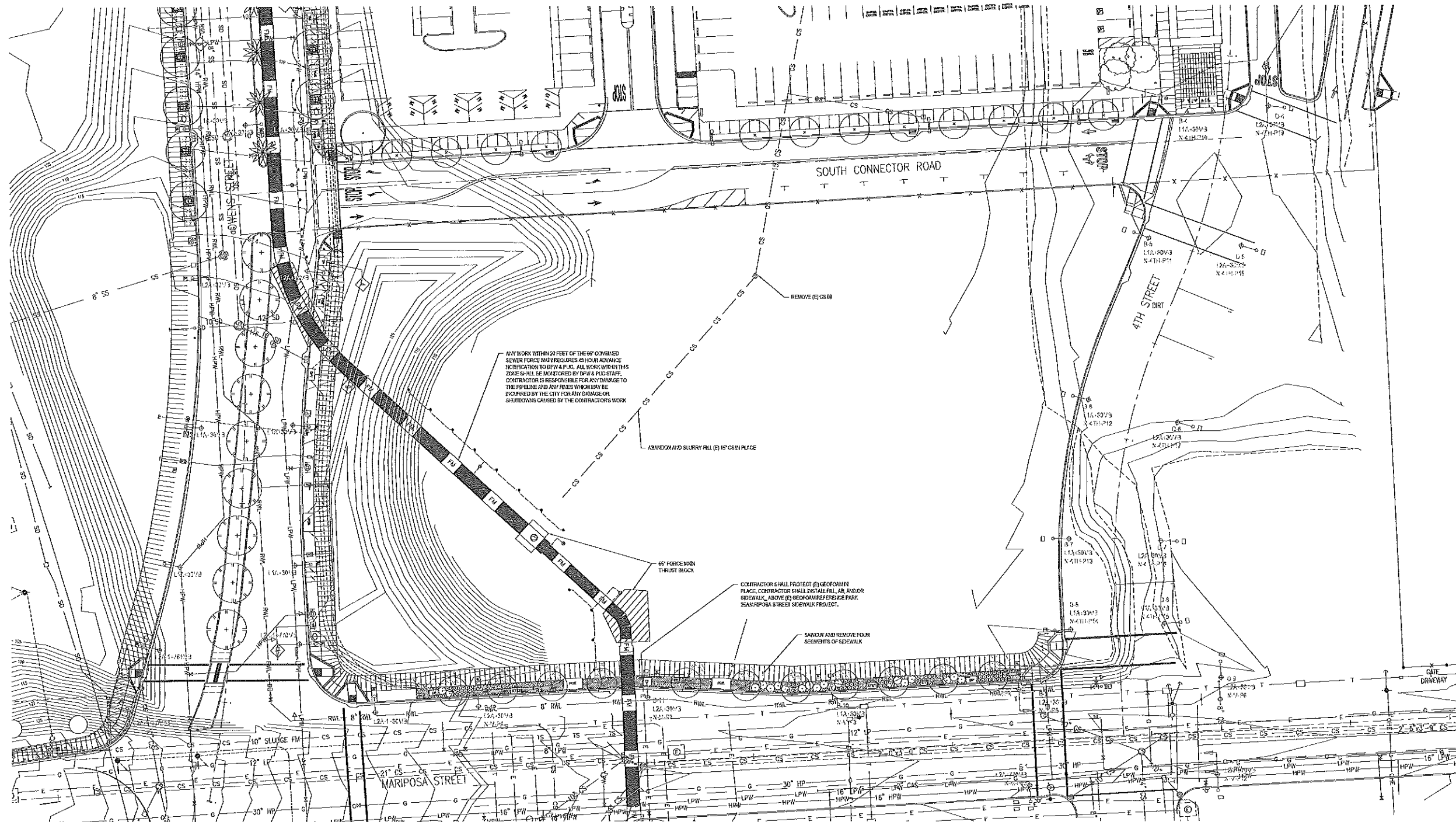
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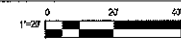
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Job No: S431-08  
Date: 04.01.14  
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Drawing Title:  
MITIGATION MEASURES  
Drawing No:  
C1.2



1 EXISTING CONDITIONS AND DEMOLITION PLAN



**MISSION BAY PARKS**

**P26**

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Key Map

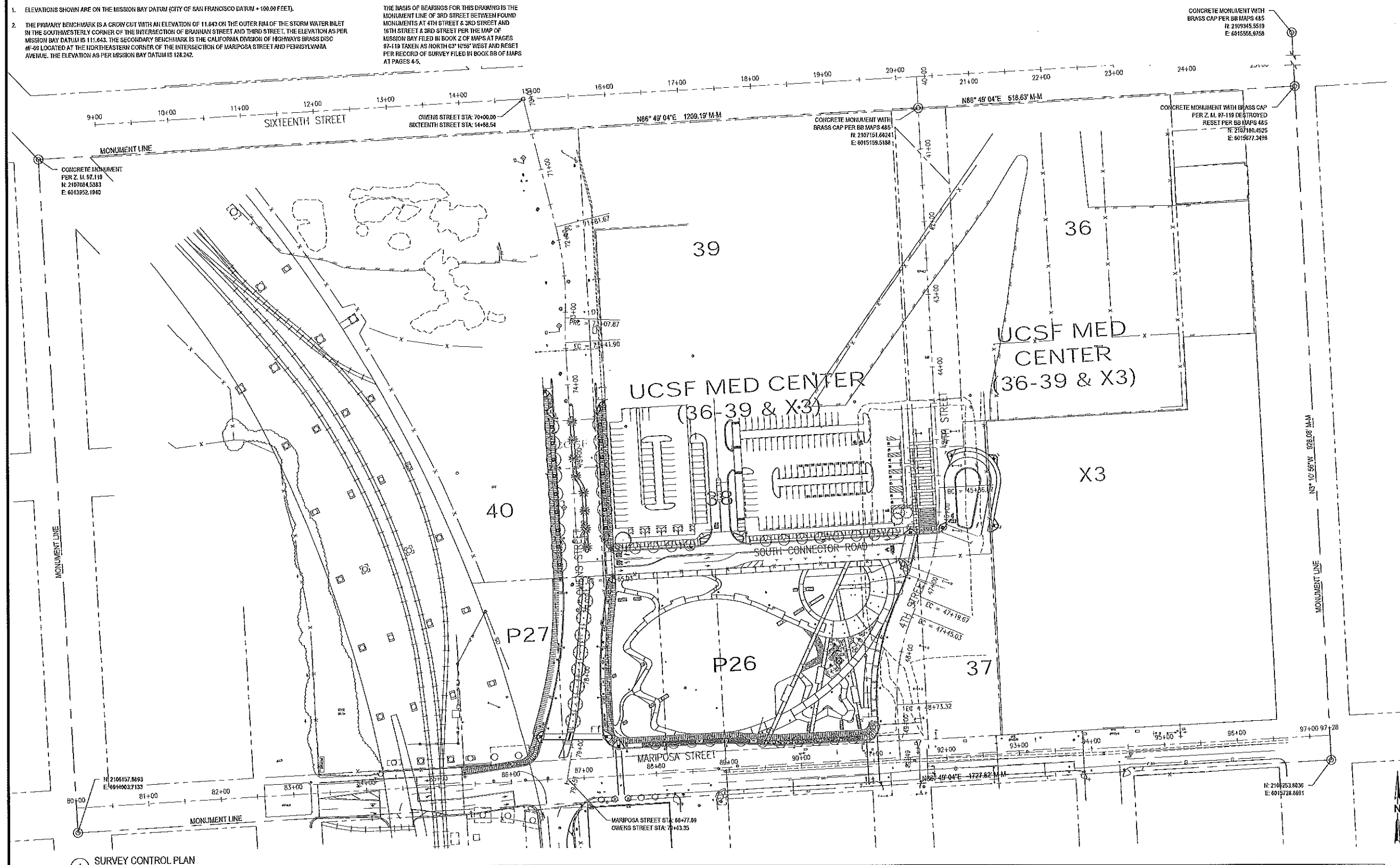
Job No: 5431-08	Drawn By: C. FINDLAY
Date: 04.01.14	Checked By: J. LIN
Scale:	
Drawing Title: <b>EXISTING CONDITIONS AND DEMOLITION PLAN</b>	
Drawing No: <b>C2.1</b>	

**SURVEY NOTES**

- ELEVATIONS SHOWN ARE ON THE MISSION BAY DATUM (CITY OF SAN FRANCISCO DATUM + 100.00 FEET).
- THE PRIMARY BENCHMARK IS A CROWN CUT WITH AN ELEVATION OF 11.643 ON THE OUTER RIM OF THE STORM WATER INLET IN THE SOUTHWESTERLY CORNER OF THE INTERSECTION OF BRAHMAN STREET AND THIRD STREET. THE ELEVATION AS PER MISSION BAY DATUM IS 111.643. THE SECONDARY BENCHMARK IS THE CALIFORNIA DIVISION OF HIGHWAYS BRASS DISC #459 LOCATED AT THE NORTHEASTERN CORNER OF THE INTERSECTION OF MARIPOSA STREET AND PENNSYLVANIA AVENUE. THE ELEVATION AS PER MISSION BAY DATUM IS 128.242.

**BASIS OF BEARINGS**

THE BASIS OF BEARINGS FOR THIS DRAWING IS THE MONUMENT LINE OF 3RD STREET BETWEEN FOUND MONUMENTS AT 4TH STREET & 3RD STREET AND 15TH STREET & 3RD STREET PER THE MAP OF MISSION BAY FILED IN BOOK Z OF MAPS AT PAGES 97-119 TAKEN AS NORTH 03° 10'55" WEST AND RESET PER RECORD OF SURVEY FILED IN BOOK 88 OF MAPS AT PAGES 4-5.



1 SURVEY CONTROL PLAN

**MISSION BAY PARKS**

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OWNER:  
FOCIL-MB, LLC

DEVELOPMENT MANAGER:



**MISSION BAY DEVELOPMENT GROUP**

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Date: 04.01.14

Scale:

Drawing Title:

**SURVEY CONTROL PLAN**

Drawing No:

**C2.2**

Drawn By: C. FINDLAY

Checked By: J. LDI



1 GRADING PLAN

**MISSION BAY PARKS**

**P26**

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DEVELOPMENT MANAGER:

**MISSION BAY DEVELOPMENT GROUP**

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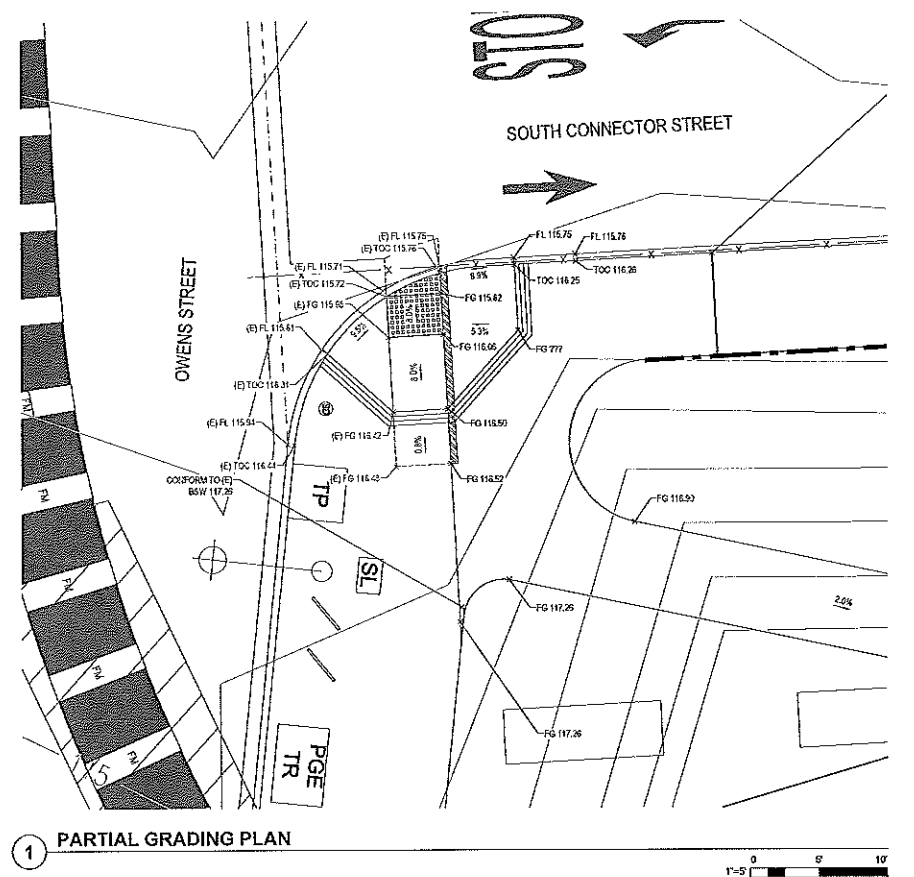
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Key Map

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Drawing No: <b>C3.1</b>	



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DEVELOPMENT MANAGER:

**MISSION BAY DEVELOPMENT GROUP**

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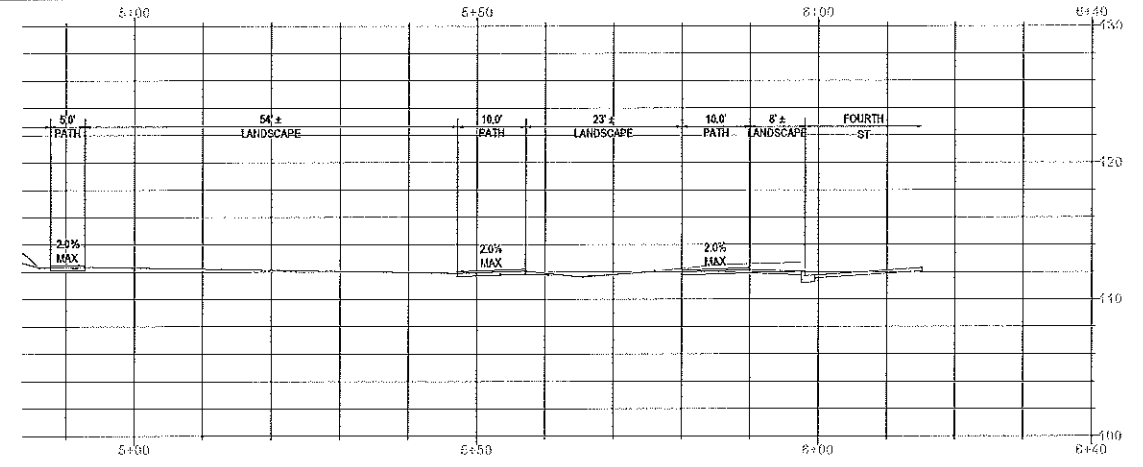
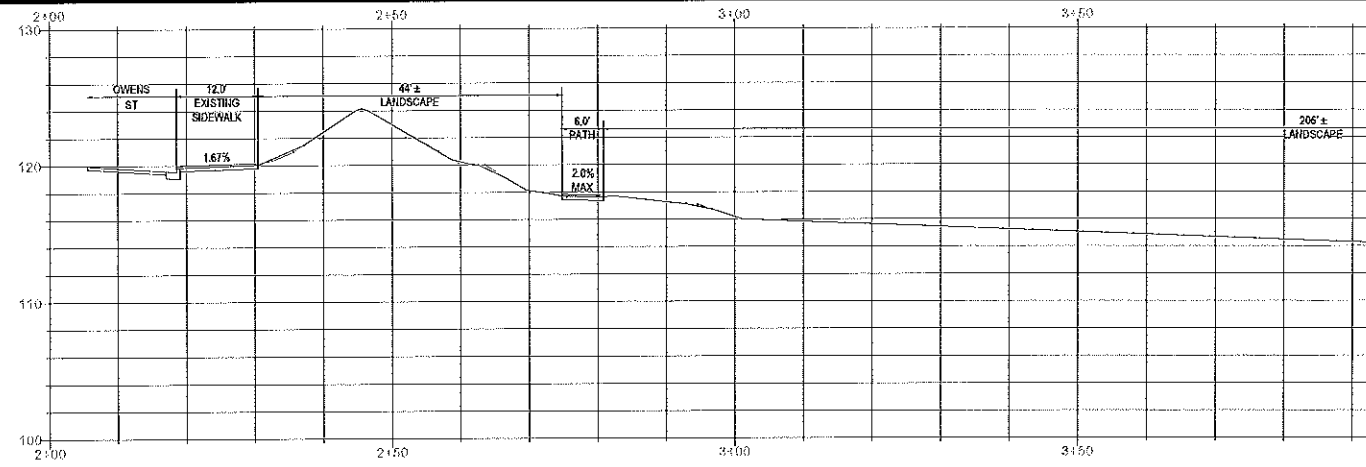
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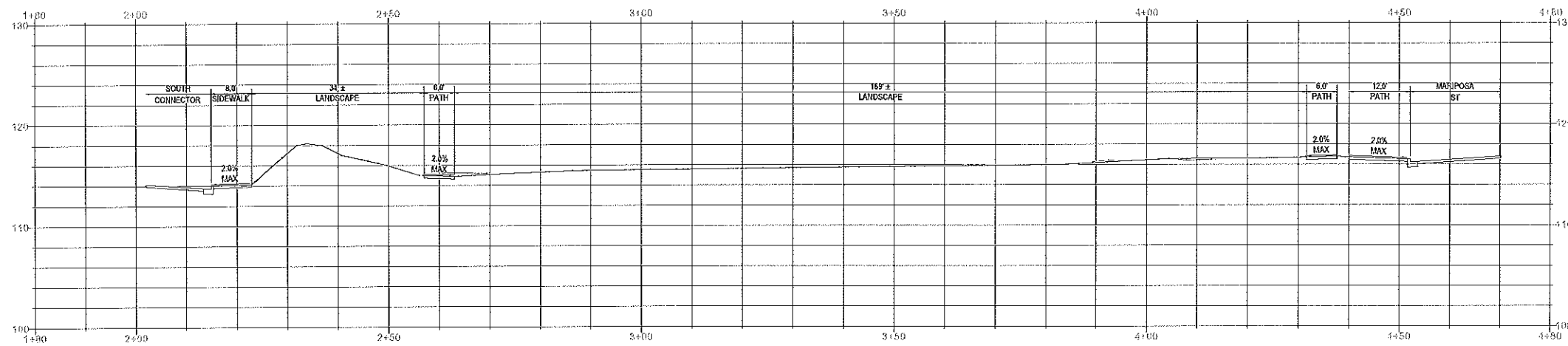
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Drawing No: <b>C3.2</b>	

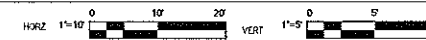
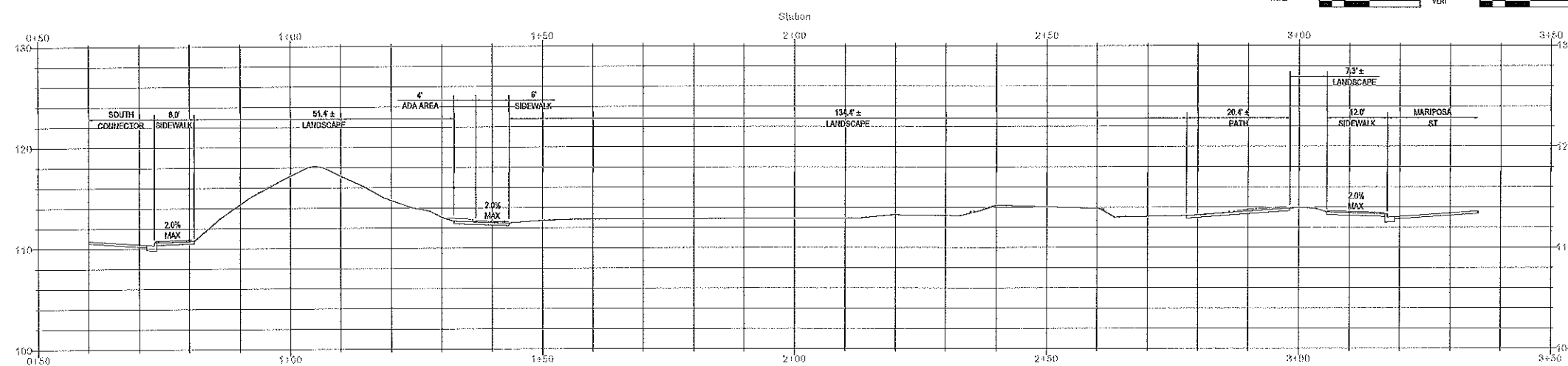




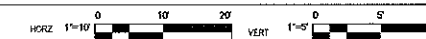
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C3.1



2 GRADING SECTIONS  
C3.1



3 GRADING SECTIONS  
C3.1



**MISSION BAY PARKS**

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Key Map

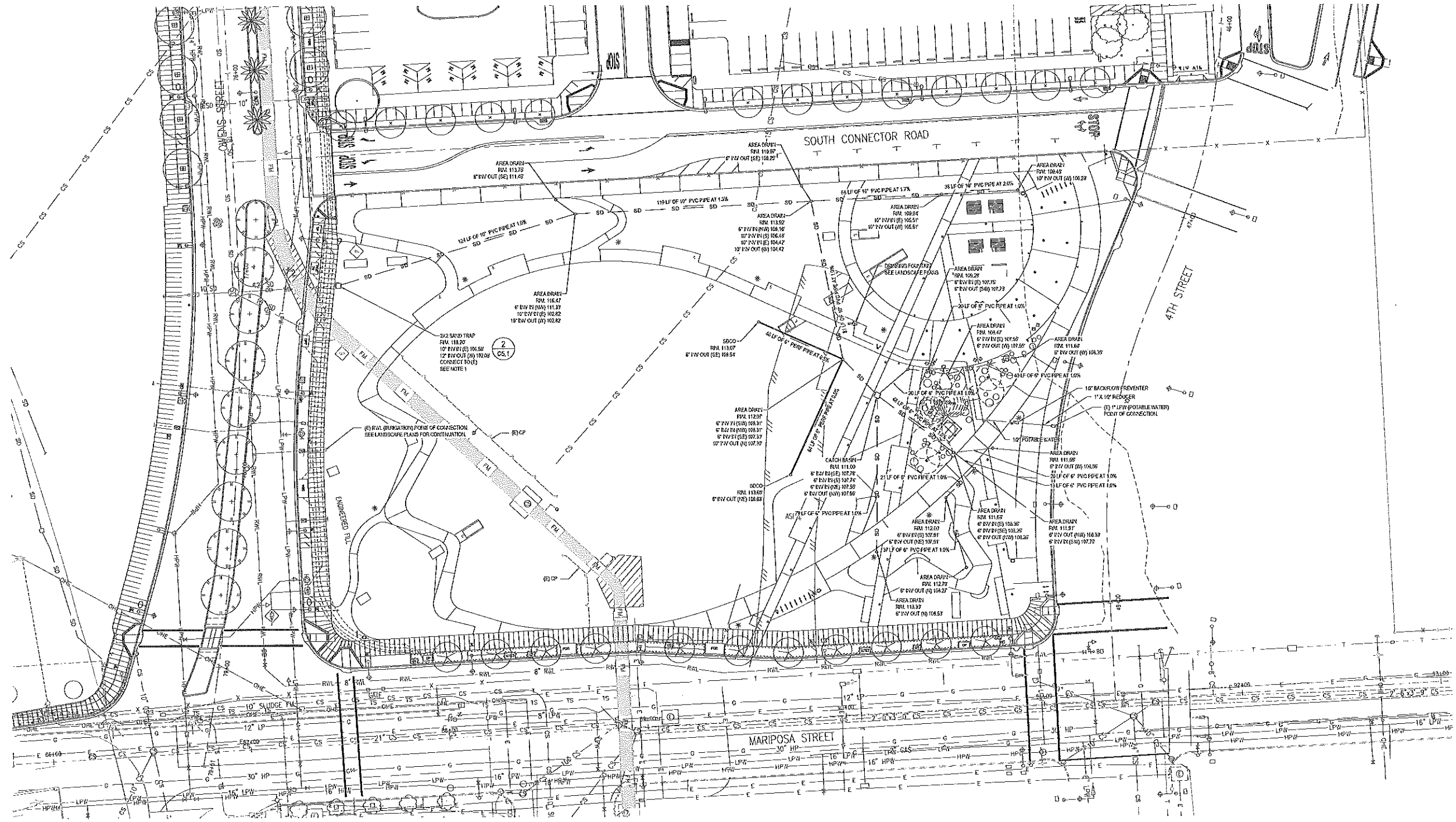


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Date: 04.01.14  
Scale:  
Drawing Title:  
Drawing No:

Drawn By: C. FINDLAY  
Checked By: J. LUN

**GRADING SECTIONS**

**C3.3**



**1 UTILITIES PLAN**

**NOTES**  
 1. FINAL CONNECTION TO THE SD SHALL BE MADE AFTER COMPLETION OF ALL PERMITS. OBTAIN APPROVAL FROM CITY REPRESENTATIVES.

**MISSION BAY PARKS**  
**P26**

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 OWNER:  
 DEVELOPMENT MANAGER:  
**MISSION BAY DEVELOPMENT GROUP**  
 415 CHALMERS STREET SAN FRANCISCO, CA 94115

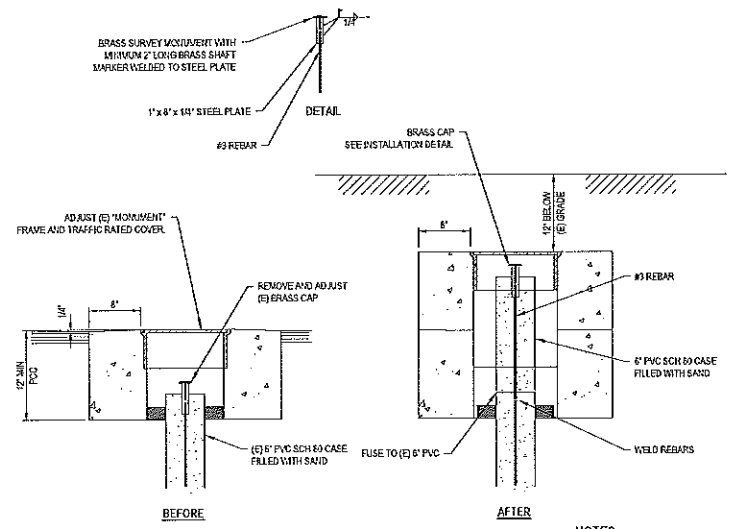
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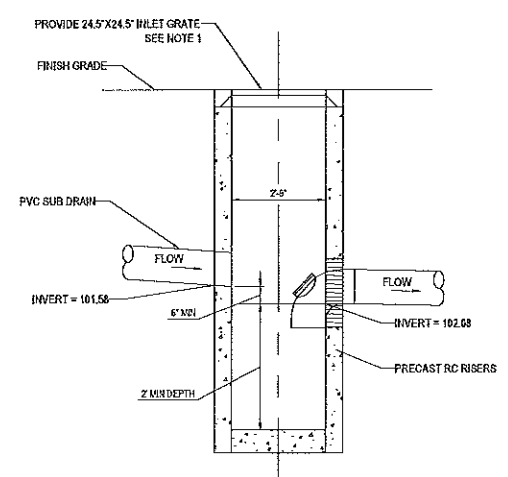


Job No: 5431-08	Drawn By: C. FINDLAY
Date: 04.01.14	Checked By: J. LIN
Drawing Title: <b>UTILITIES PLAN</b>	
Drawing No: <b>C4.1</b>	



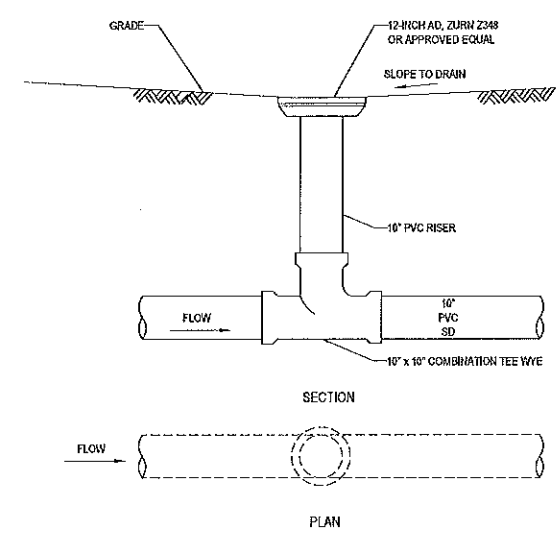
1 MONUMENT BOX DETAIL  
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NOTES:  
CONTRACTOR SHALL SURVEY AND RECORD EXISTING AND ADJUSTED BRASS CAP ELEVATIONS. SUBMIT INFORMATION TO ENGINEER AND MRDG FOR RECORD.

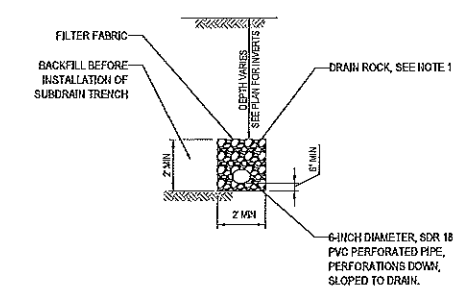


NOTES  
1. GRATE SHALL HAVE MIN OPENING OF 200 SQ INCHES BY DL FOUNDRY & SUPPLY OR APPROVED EQUAL.  
2. CONCRETE CATCH BASIN PER CITY AND COUNTY OF SAN FRANCISCO STANDARD PLAN 87.187  
3. GRATE SHALL BE STAMPED "PRIVATE".

2 SAND TRAP  
C3.1

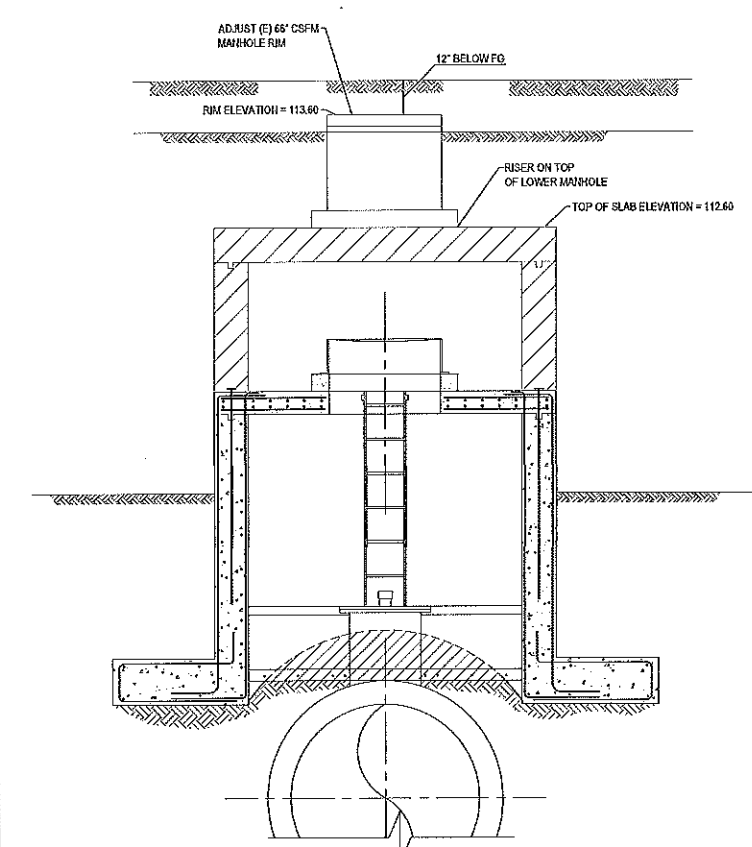


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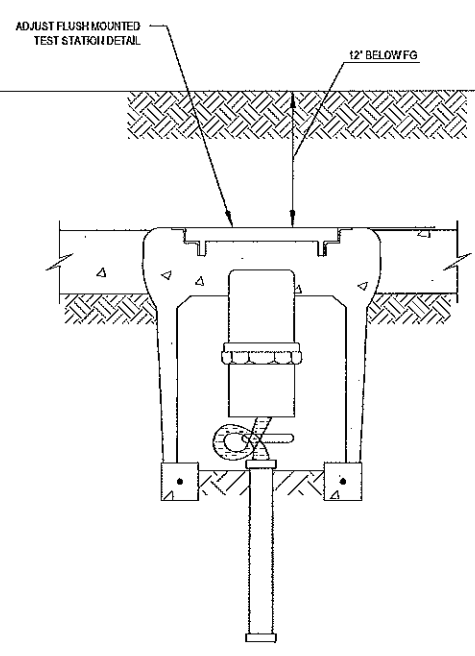


NOTES  
1. DRAIN ROCK SHALL BE 3/4-INCH CLEAN GRAVEL WRAPPED IN FILTER FABRIC (MIRAFI 148H OR APPROVED EQUAL)

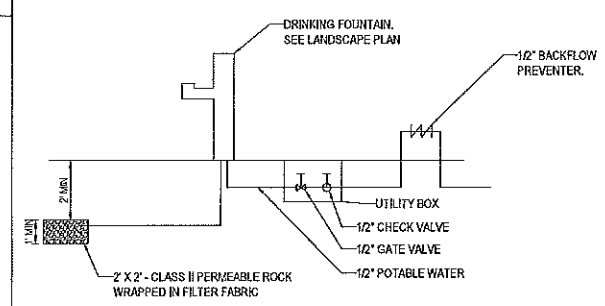
4 PERFORATED PIPE DETAIL  
C3.1



5 66\"/> C3.1



6 FLUSH MOUNTED TEST STATION DETAIL  
C3.1



7 WATER FOUNTAIN SUPPLY AND DRAIN SCHEMATIC  
C4.1

SEE SHEET C4.1 FOR LOCATIONS OF ITEMS DEPICTED IN DETAIL

**MISSION BAY PARKS**

**P26**

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PREPARED FOR:  
OWNER: FOCIL-MB, LLC  
DEVELOPMENT MANAGER:  
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Key Map

Job No. 5431-08	Drawn By: C. FRIDLAY
Date: 04.01.14	Checked By: J. LIN
Scale:	
Drawing Title: <b>CIVIL DETAILS</b>	
Drawing No. <b>C5.1</b>	



# EROSION AND SEDIMENT CONTROL NOTES

1. MINIMIZE DUST DURING DEMOLITION, GRADING, AND CONSTRUCTION BY LIGHTLY SPRAYING EXPOSED SOIL ON A REGULAR BASIS.
2. MINIMIZE WIND AND WATER EROSION ON TEMPORARY SOIL STOCKPILES BY SPRAYING WITH WATER DURING DRY WEATHER AND COVERING WITH PLASTIC SHEETING OR OTHER SIMILAR MATERIAL DURING THE RAINY SEASON (NOVEMBER TO APRIL).
3. MINIMIZE THE AREA AND LENGTH OF TIME DURING WHICH THE SITE IS CLEARED AND GRADED.
4. PREVENT THE RELEASE OF CONSTRUCTION POLLUTANTS SUCH AS GROUT, MORTAR, PAINTS AND SOLVENTS, FUEL AND LUBRICATING OILS, PESTICIDES, AND HERBICIDES BY STORING SUCH MATERIALS IN A BERMED, OR OTHERWISE SECURED, AREA.
5. AS NEEDED, INSTALL FILTER FENCES AROUND THE PERIMETER OF THE CONSTRUCTION SITE TO PREVENT OFF-SITE SEDIMENT DISCHARGE. PRIOR TO GRADING THE BANK SLOPES OF OR A BASIN CHANNEL FOR THE PROPOSED CHANNEL EDGE TREATMENTS, INSTALL SILT OR FILTER FENCES TO SLOW WATER AND REMOVE SEDIMENT. AS NEEDED, PROPERLY TRENCH AND ANCHOR IN THE SILT OR FILTER FENCES SO THAT THEY STAND UP TO THE FORCES OF TIDAL FLUCTUATION AND WAVE ACTION, AND DO NOT ALLOW SEVERE (FLAT) WATER TO ESCAPE UNDERNEATH THEM.
6. FOLLOW DESIGN AND CONSTRUCTION STANDARDS FOUND IN THE MANUAL OF STANDARDS FOR EROSION AND SEDIMENT CONTROL MEASURES FOR PLACEMENT OF RIPRAP AND STONE SIZE.
7. INSTALL AND MAINTAIN SEDIMENT AND OIL AND GREASE TRAPS IN LOCAL STORM WATER INTAKES DURING THE CONSTRUCTION PERIOD, OR OTHERWISE PROPERLY CONTROL OIL AND GREASE DISCHARGES.
8. CLEAN WHEELS AND COVER LOADS OF TRUCKS CARRYING EXCAVATED SOILS BEFORE THEY LEAVE THE CONSTRUCTION SITE.
9. IF THERE IS A HAZARDOUS MATERIAL SPILL PREVENTION, CONTROL, AND CLEANUP PROGRAM FOR THE CONSTRUCTION PERIOD, AS NEEDED, THE PROGRAM SHOULD INCLUDE MEASURES SUCH AS CONSTRUCTION SWALES AND BARRIERS THAT WOULD DIRECT ANY POTENTIAL SPILLS AWAY FROM THE CHANNEL AND THE BAY AND INTO COLLECTIBLE BASINS TO PREVENT THE MOVEMENT OF ANY MATERIALS FROM THE CONSTRUCTION SITE INTO WATER.
10. EROSION AND SEDIMENT CONTROL SHALL BE IN EFFECT AND MAINTAINED BY THE CONTRACTOR ON A YEAR-ROUND BASIS UNTIL ALL DISTURBED AREAS ARE STABILIZED UNLESS OTHERWISE PERMITTED BY CITY REPRESENTATIVES.
11. IF DEWATERING IS REQUIRED, CONTRACTOR SHALL APPLY FOR A WASTEWATER DISCHARGE PERMIT FROM SFPUC WASTEWATER ENTERPRISE COLLECTION SYSTEM DIVISION PRIOR TO ANY DISCHARGE OF CONSTRUCTION WASTEWATER INTO THE CITY'S SEWER SYSTEM.
12. BMPs SHALL BE INSPECTED ON A WEEKLY OR REGULARLY SCHEDULED BASIS, ALONG WITH INSPECTIONS 24 HOURS, DURING AND AFTER A FORECASTED RAIN EVENT.
13. ALL STORM DRAINS AND CATCH BASINS WITHIN AND IN THE IMMEDIATE VICINITY OF THE PROJECT SITE SHALL BE EQUIPPED WITH THE REQUIRED FLET PROTECTION.

## SILT FENCE MATERIALS

1. FILTER FABRIC SHALL BE A PERVIOUS SHEET OF SYNTHETIC POLYMER COMPOSED OF AT LEAST 65% BY WEIGHT ETHYLENE, PROPYLENE, AND ESTER OF VINYLIDENE VALEN, WOVEN OR KNOTTED, AND SHALL CONTAIN STABILIZERS AND/OR INHIBITORS TO RESIST DEGRADATION BY HEAT, WATER AND ULTRAVIOLET LIGHT. THE FABRIC SHALL CONFORM TO THE FOLLOWING CRITERIA:
  - 1.1. THE EQUIVALENT OPENING SIZE (U.S. STANDARD SIEVE) SHALL BE WITHIN THE RANGE 70-100.
  - 1.2. THE TENSILE STRENGTH (ASTM D1682) SHALL BE AT LEAST 120 POUNDS. THE STRENGTH OF FABRIC REQUIRED DEPENDS ON THE WIRE SUPPORT FENCE. THE STRENGTH (LBS) IS THE MINIMUM FOR A 6' X 6' SQUARE WIRE MESH SUPPORT FENCE. IF EXTRA-STRENGTH FABRIC IS USED WITHOUT A SUPPORT FENCE, THE STRENGTH REQUIRED SHALL BE 200 POUNDS PER SQUARE FOOT WITH POSTS SPACED ONE FOOT APART.
1. POSTS FOR SILT FENCES SHALL BE EITHER 4" DIAMETER WOOD OR 1.33 POUNDS PER LINEAR FOOT STEEL WITH A MINIMUM LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM.
2. WIRE FENCE REINFORCEMENT FOR SILT FENCES SHALL BE A MINIMUM OF 42 INCHES IN HEIGHT, SHALL BE A MINIMUM OF 14-GAUGE, AND SHALL HAVE A MAXIMUM MESH SPACING OF 6 INCHES.

## CONSTRUCTION SPECIFICATIONS

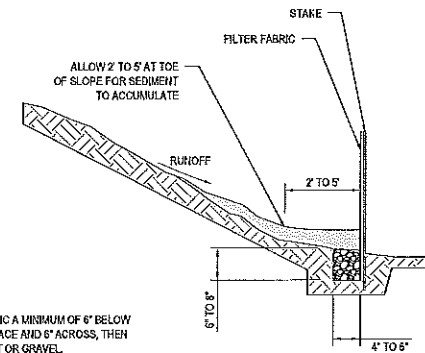
1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 38 INCHES. ON SLOPES, THE FENCE LINE SHALL FOLLOW THE CONTOUR AS CLOSELY AS POSSIBLE. IN SMALL SWALES, THE FENCE LINE SHALL BE CURVED UPSTREAM AT THE SIDES TO DIRECT THE FLOW TOWARD THE MIDDLE OF THE FENCE.
2. IF POSSIBLE, THE FILTER FABRIC SHALL BE CUT FROM A CONTINUOUS ROLL TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPICED ONLY AT A SUPPORT POST, WITH A MINIMUM 6" OVERLAP AND BOTH ENDS SECURELY FASTENED TO THE POST.
3. STEEL POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA-STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, OR WOOD POSTS ARE UTILIZED, POST SPACING SHALL NOT EXCEED 6 FEET.
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES WIDE AND 4 INCHES DEEP ALONG THE LINE OF POST AND UPSLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG. THE WIRE OR WOOD RINGS, THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXCEED MORE THAN 3 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WROD TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL EXTEND INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 38 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
7. WHEN EXTRA-STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WROD DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF NO. 6 ABOVE APPLYING.
8. THE TRENCH SHALL BE BACK FILLED AND THE SOIL COMPACTED OVER THE TOE OF THE FILTER FABRIC.
9. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

## SILT FENCE AND FIBER ROLL FILTER BARRIERS MAINTENANCE

1. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL AND REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE BARRIER'S EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.

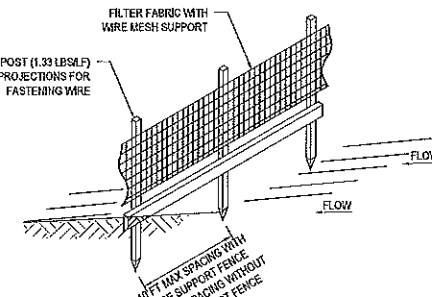
## CONSTRUCTION ENTRANCE DESIGN AND CONSTRUCTION SPECIFICATIONS

1. THE MATERIAL FOR CONSTRUCTION OF THE CONSTRUCTION ENTRANCE PAD SHALL BE 2 TO 3 INCH STONE.
2. THE THICKNESS OF THE PAD SHALL NOT BE LESS THAN 6 INCHES.
3. THE WIDTH OF THE PAD SHALL NOT BE LESS THAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. THE LENGTH OF THE PAD SHALL BE AS REQUIRED, BUT NOT LESS THAN 10 FEET.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND. ALSO REPAIR AND OR LEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.
6. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
7. THE LOCATION OF ENTRANCE WILL BE DETERMINED BY THE FIELD. THE LOCATION SHALL BE COORDINATED WITH ULLA HUSSAIN, SUCCESSOR AGENCY ASSISTANT PROJECT MANAGER FOR MISSION BAY SOUTH, (415) 748-2431.



NOTE:  
KEY IN FILTER FABRIC A MINIMUM OF 6" BELOW THE GROUND SURFACE AND 6" ACROSS, THEN BACKFILL WITH DIRT OR GRAVEL.

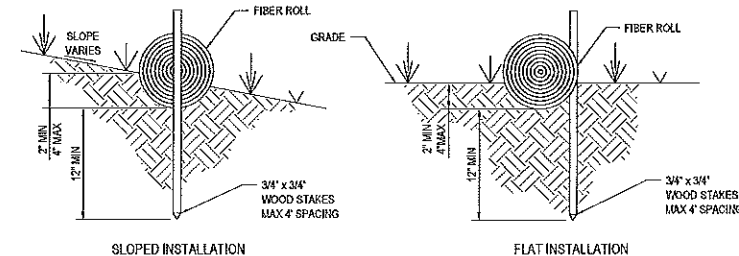
1 SILT FENCE PROFILE  
NOT TO SCALE



2 RECOMMENDED INSTALLATION OF SILT FENCE  
NOT TO SCALE

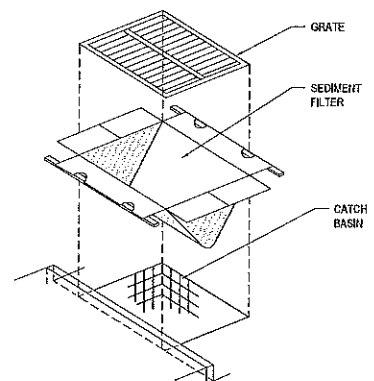
## NOTES

1. FIBER ROLLS ARE WRAPPED IN TUBULAR NETTING SUPPLIED IN 20' X 25' ROLLS.
2. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAPLING OF THE FIBER ROLL IN A TRENCH, 2" TO 4" DEEP, DUG ON CONTOUR. RUIOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND FIBER ROLL.

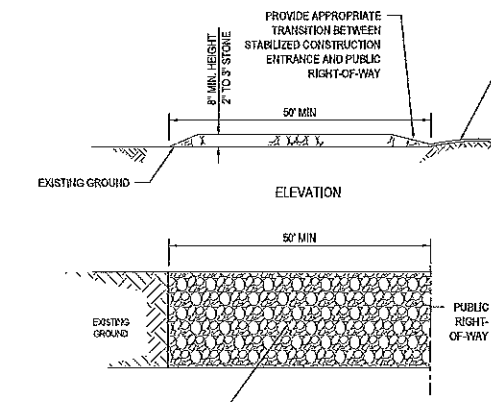


3 FIBER ROLL ENTRENCHMENT DETAIL  
NOT TO SCALE

## 4 INLET FILTER DETAIL - TYPICAL



4 INLET FILTER DETAIL - TYPICAL  
NOT TO SCALE



STABILIZED CONSTRUCTION ENTRANCE PAD IS SHOWN DIAGRAMMATICALLY. SHAPE OF CONSTRUCTION ENTRANCE IS TO MATCH FIELD CONDITIONS. SEE "CONSTRUCTION ENTRANCE" NOTES 3 AND 4.

5 STABILIZED CONSTRUCTION ENTRANCE  
NOT TO SCALE

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**P26**  
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DEVELOPMENT MANAGER:  
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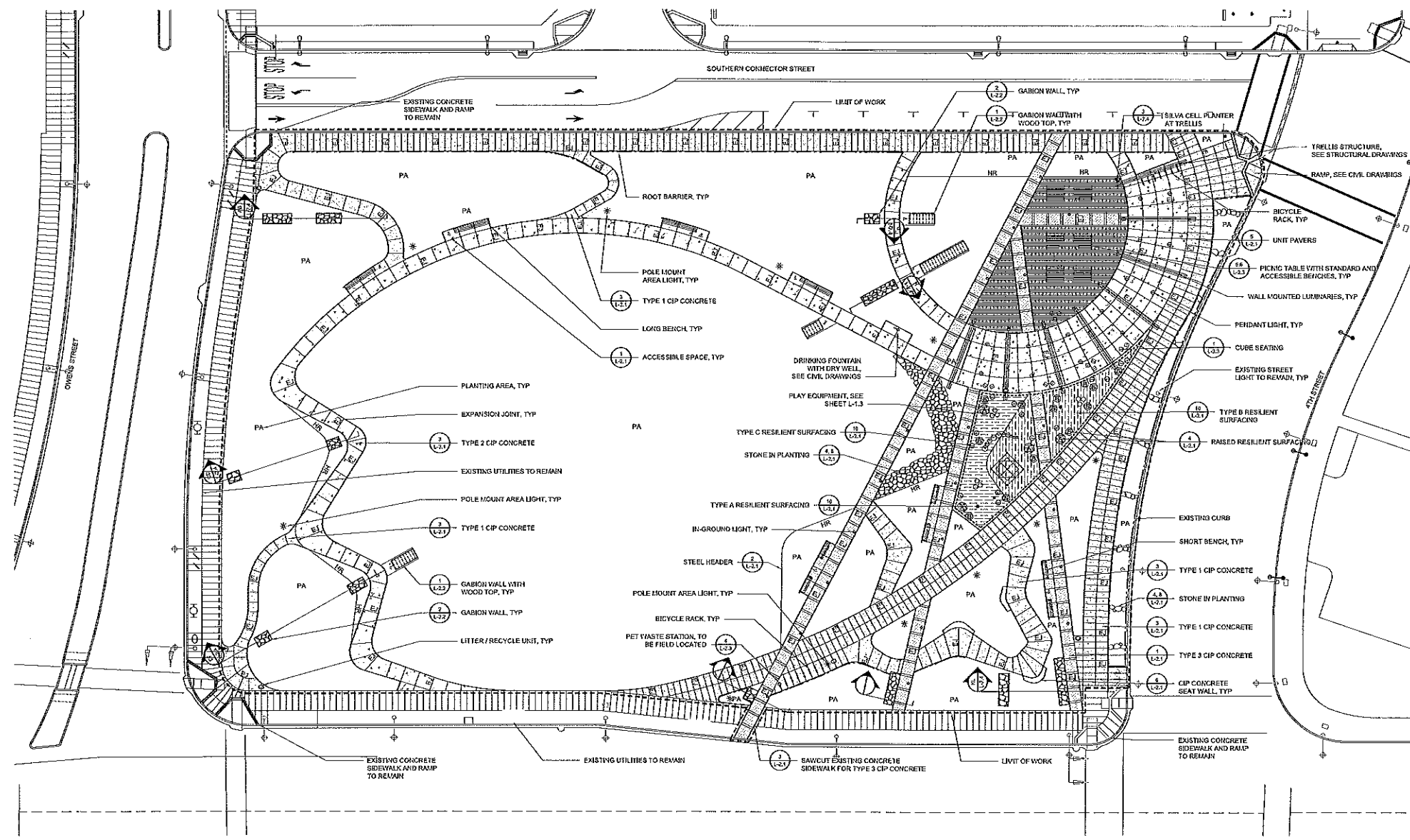
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**EROSION CONTROL DETAILS**  
Drawing No:  
**C6.2**



LAYOUT LEGEND		
SYMBOL	DESCRIPTION	DETAIL REFERENCE
[Symbol]	TYPE 1 STANDARD CAST-IN-PLACE CONCRETE WITH BRUSH FINISH TO MATCH EXISTING ADJACENT SURFACES	SHEET L-2.1 DETAIL 3
[Symbol]	TYPE 2 STANDARD CAST-IN-PLACE CONCRETE WITH EXPOSED AGGREGATE. PROVIDE CHEMICAL SURFACE RETARDER FOR APPLICATION TO REVEAL NATURALLY OCCURRING AGGREGATE	SHEET L-2.1 DETAIL 3
[Symbol]	TYPE 3 EMBOSSED CAST-IN-PLACE CONCRETE WITH INTEGRAL COLOR (CHARCOAL GRAY)	SHEET L-2.1 DETAIL 3
[Symbol]	UNIT PAVERS	SHEET L-2.1 DETAIL 5
[Symbol]	STONE IN PLANTING	SHEET L-2.1 DETAIL 4, 8
[Symbol]	SAW CUT JOINT	SHEET L-2.1 DETAIL 3
[Symbol]	EXPANSION JOINT	SHEET L-2.1 DETAIL 3
[Symbol]	STEEL HEADER	SHEET L-2.1 DETAIL 2
[Symbol]	ROOT BARRIER	

PLAYGROUND SURFACING		
SYMBOL	DESCRIPTION	DETAIL REFERENCE
[Symbol]	TYPE A POURED IN PLACE SYNTHETIC RUBBER SURFACING	SHEET L-2.1 DETAIL 10
[Symbol]	TYPE B POURED IN PLACE SYNTHETIC RUBBER SURFACING	SHEET L-2.1 DETAIL 10
[Symbol]	TYPE C POURED IN PLACE SYNTHETIC RUBBER SURFACING	SHEET L-2.1 DETAIL 10

FURNISHING AND SITE ELEMENTS		
SYMBOL	DESCRIPTION	DETAIL REFERENCE
[Symbol]	PICNIC TABLE WITH STANDARD AND ACCESSIBLE BENCHES	SHEET L-2.3 DETAIL 5, 6
[Symbol]	BICYCLE RACK	SHEET L-2.3 DETAIL 3
[Symbol]	GABION WALL	SHEET L-2.2 DETAIL 2
[Symbol]	GABION WALL WITH WOOD TOP	SHEET L-2.2 DETAIL 1
[Symbol]	CIP CONCRETE SEAT WALL	SHEET L-2.2 DETAIL 6
[Symbol]	LONG AND SHORT BENCH HALF WITH VARIED BACK AND ARM FEATURES	SHEET L-2.3 DETAIL 2
[Symbol]	CUBE SEATING	SHEET L-2.3 DETAIL 1
[Symbol]	LITTER / RECYCLE UNIT	SHEET L-2.3 DETAIL 7

SITE LIGHTING		
SYMBOL	DESCRIPTION	DETAIL REFERENCE
[Symbol]	POLE MOUNT AREA LIGHT, SEE ELECTRICAL DRAWINGS	
[Symbol]	IN GROUND LIGHT, SEE ELECTRICAL DRAWINGS	
[Symbol]	WALL MOUNTED LUMINAIRES AT TRELLIS, SEE ELECTRICAL DRAWINGS	SHEET L-2.4 DETAIL 2
[Symbol]	PENDANT LIGHT AT TRELLIS, SEE ELECTRICAL DRAWINGS	SHEET L-2.4 DETAIL 1

**LAYOUT NOTES**

- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND SCHEDULING LAYOUT WORK WITH OWNER OR OWNER'S REPRESENTATIVE.
- PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL CONTACT UTILITY SERVICES TO VERIFY LOCATION OF UNDERGROUND UTILITIES. CONTRACTOR SHALL ALSO VISIT SITE AND VERIFY ALL FIELD CONDITIONS PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL REPAIR AT OWN EXPENSE, ANY DAMAGE, WHETHER INSIDE OR OUTSIDE THE LIMIT OF CONTRACT LINE, TO UTILITY SYSTEMS, SURFACE PAVEMENTS, FIXTURES OR STRUCTURES THAT ARE NOT SPECIFICALLY INDICATED TO BE REMOVED OR RELOCATED AS PART OF THE PROJECT CONSTRUCTION.
- DIMENSIONS AND ELEVATIONS ON THESE DRAWINGS ARE IN FEET, UNLESS OTHERWISE STATED.
- THE LIMIT OF WORK LINE DEFINES THE LIMITS OF WORK BY CONTRACT. THERE MAY BE INSTANCES WHERE EROSION PROTECTION DEVICES, UTILITY SYSTEMS, AND GRADING OPERATIONS EXTEND BEYOND THE LIMIT OF CONTRACT LINE IN ORDER TO SUCCESSFULLY COMPLETE OPERATIONS AND OR THE ADJACENT ADJACENT SYSTEMS.
- THE CONTRACTOR SHALL EXERCISE PARTICULAR CARE WHILE WORKING IN THE VICINITY OF ACTIVE UTILITY AND DRAINAGE STRUCTURES. IN THE EVENT THAT EXISTING STRUCTURES OR UTILITIES ARE DAMAGED AND THE SERVICES DISRUPTED, THE LINES SHALL BE IMMEDIATELY REPAIRED AND THE SERVICES RESTORED AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE AT NO COST TO THE OWNER.
- THE CONTRACTOR SHALL KEEP DRAINAGE FACILITIES AFFECTED BY CONSTRUCTION OPERATIONS CLEAN AND FULLY OPERATIONAL AT ALL TIMES.
- REFER TO GRADING PLANS AND CIVIL ENGINEER'S DRAWINGS FOR DRAINAGE STRUCTURES AND ELEVATIONS PRIOR TO INSTALLATION OF WALKWAYS, FOOTINGS, AND OTHER STRUCTURES.
- ALL PAVING SHALL HAVE SMOOTH CONTINUOUS SURFACE AND SCORE LINES AS INDICATED ON CONTRACT DRAWINGS PER THE REVIEW & APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE. ALL CONCRETE PAVING SHALL HAVE FINISHED GRADES SMOOTHED TO ELIMINATE Puddling OR STANDING WATER. ALL FINISH SURFACES SHALL MAINTAIN, UNLESS NOTED, A MINIMUM 1% SLOPE AWAY FROM STRUCTURES AND WALLS BEYOND DRAINAGE STRUCTURES. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE OF ANY CONFLICTS IN MAINTAINING DRAINAGE.
- THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, FOR SAFETY PRECAUTIONS, OR PROBLEMS UTILIZED IN CONNECTION WITH THE CONTRACTOR'S FAILURE TO CARRY OUT WORK IN ACCORDANCE WITH CONTRACT DOCUMENTS.
- PRIOR TO THE COMPLETION OF ANY CONCRETE CONSTRUCTION, FORM WORK AND STEEL REINFORCEMENT SHALL BE OBSERVED AND APPROVED BY THE OWNER.
- VERIFY ALL CONDITIONS AT JOB SITE, AND NOTIFY OWNER OF ANY DIMENSIONAL ERRORS, OMISSIONS OR DISCREPANCIES BEFORE BEGINNING WORK.
- CONTRACTOR TO RETAIN ALL NECESSARY PERMITS AND PAY ALL APPLICABLE FEES PRIOR TO CONSTRUCTION.
- ANY EXISTING IRRIGATION LATERALS, HEADS, AND MAINLINES DISTURBED WITHIN CONSTRUCTION LIMIT LINES SHALL BE ADJUSTED TO NEW CONSTRUCTION. AFFECTED IRRIGATION ZONES SHALL BE SHUT OFF WITHIN AREAS OF DISTURBANCE. ALL CONSTRUCTION WITHIN THESE AREAS SHALL BE COMPLETED IN A TIMELY FASHION TO PREVENT EXISTING VEGETATION FROM STRESS, WILT OR DYING. CONTRACTOR SHALL HAND WATER AS REQUIRED TO MAINTAIN HEALTH OF PLANT MATERIAL.
- ELIMINATE SCORE LINES THAT WOULD OCCUR TWO INCHES OR LESS FROM STRUCTURE OR LIMIT OF WORK. SCORE LINES TO BE PERPENDICULAR TO HARDSCAPE EDGE UNLESS OTHERWISE INDICATED. ALL LAYOUT SHALL BE APPROVED BY THE OWNER.
- CONTRACTOR SHALL VERIFY WITH SURVEY ALL REQUIRED DEPTHS, SLOPES, AND CLEARANCES.
- SEE ELECTRICAL PLANS FOR SLEEVE AND LIGHT POLE LOCATIONS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL REVIEW PLANS AND DETAILS TO ASCERTAIN LOCATIONS NECESSARY TO PROVIDE ELECTRICAL CONNECTIONS TO POWER IRRIGATION, LIGHTING, ETC.
- SEE IRRIGATION PLANS FOR SLEEVE LOCATIONS PRIOR TO CONSTRUCTION.
- NO DEVIATIONS FROM THESE PLANS SHALL OCCUR WITHOUT PRIOR APPROVAL OF PROJECT LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
- EXPANSION JOINTS SHALL BE AS LOCATED ON THE PLANS AND WHERE CONCRETE MEETS EXISTING WALLS, BUILDINGS, UTILITY STRUCTURES, OR OTHER HARD SURFACES. EXPANSION JOINTS SHALL BE SEALED TO PREVENT MOISTURE SEEPAGE AFTER CURING. EXPANSION OR HIDDEN EXPANSION JOINTS ON WALKS TO BE A MAXIMUM OF 30" ON CENTER.
- ANY PROPOSED WORK THAT IS INCONSISTENT WITH COMMON, SAFE CONSTRUCTION PRACTICES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCING WITH CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEANUP OF THE SITE AND PROVIDE ADEQUATE SAFETY MEASURES DURING CONSTRUCTION ON A 24 HOUR BASIS.
- ALL HARDWARE SUCH AS NAILS, BOLTS, FASTENERS ETC. SHALL BE HOT DIPPED GALVANIZED.
- ALL VERTICAL SURFACES, UNLESS NOTED OTHERWISE, SHALL RECEIVE A COAT OF GRAFFITI RESISTANT COATING PER SPECIFICATIONS.
- DIMENSIONS INDICATED ON PLANS SHALL PREVAIL OVER PLAN SCALE. DIMENSIONS ARE TO FACES OF, AND PERPENDICULAR TO FACE OF EXISTING CURBS UNLESS SHOWN OTHERWISE. ALL ANGLES AND CONNECTIONS ARE (90) DEGREES UNLESS NOTED OTHERWISE.
- ALL RADII SHALL BE CONSTRUCTED TANGENT TO ADJOINING HARDSCAPE.

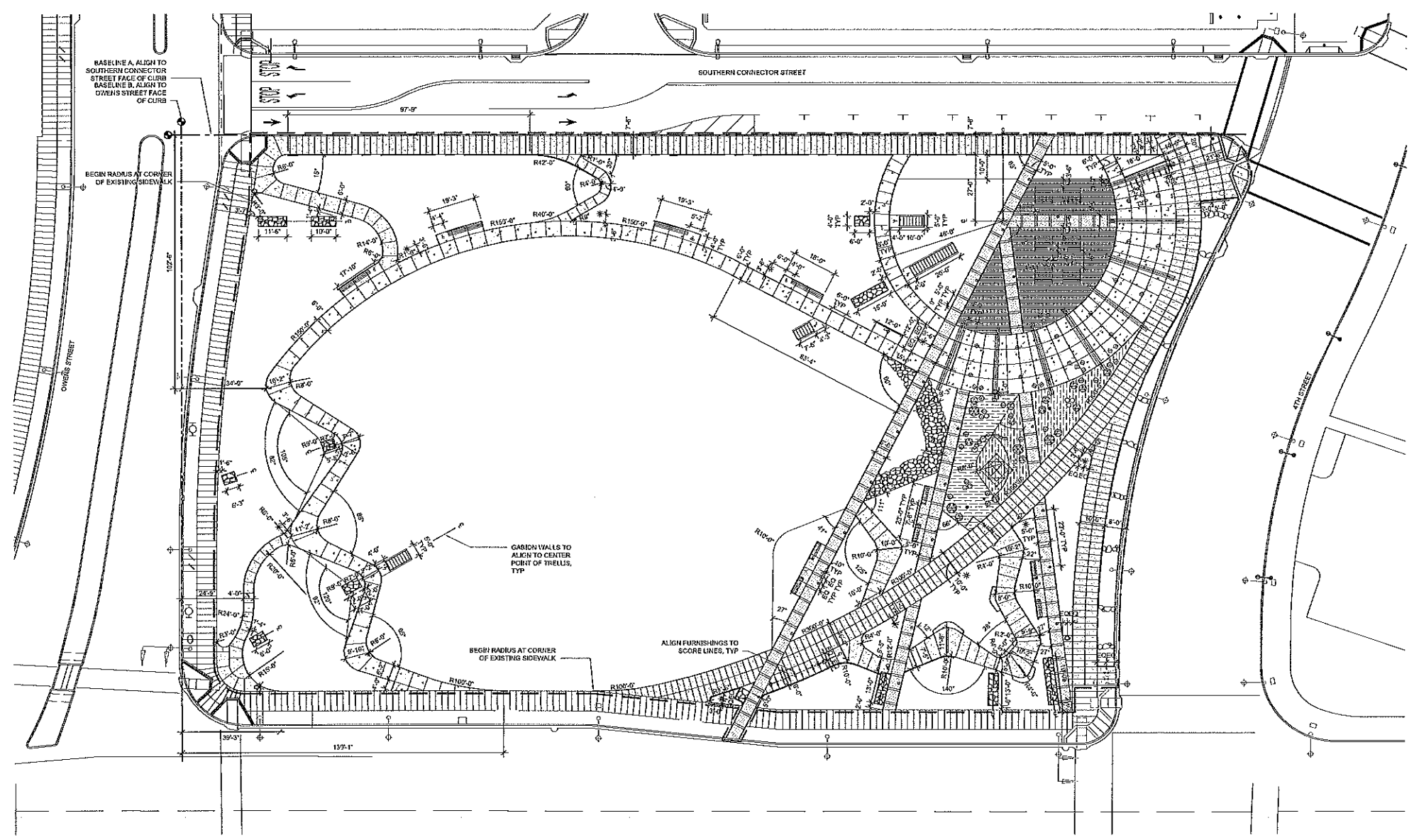
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 SAN FRANCISCO  
 CALIFORNIA  
 STATE OF CALIFORNIA

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 Drawing Title: LAYOUT PLAN  
 Drawing No: L-1.1



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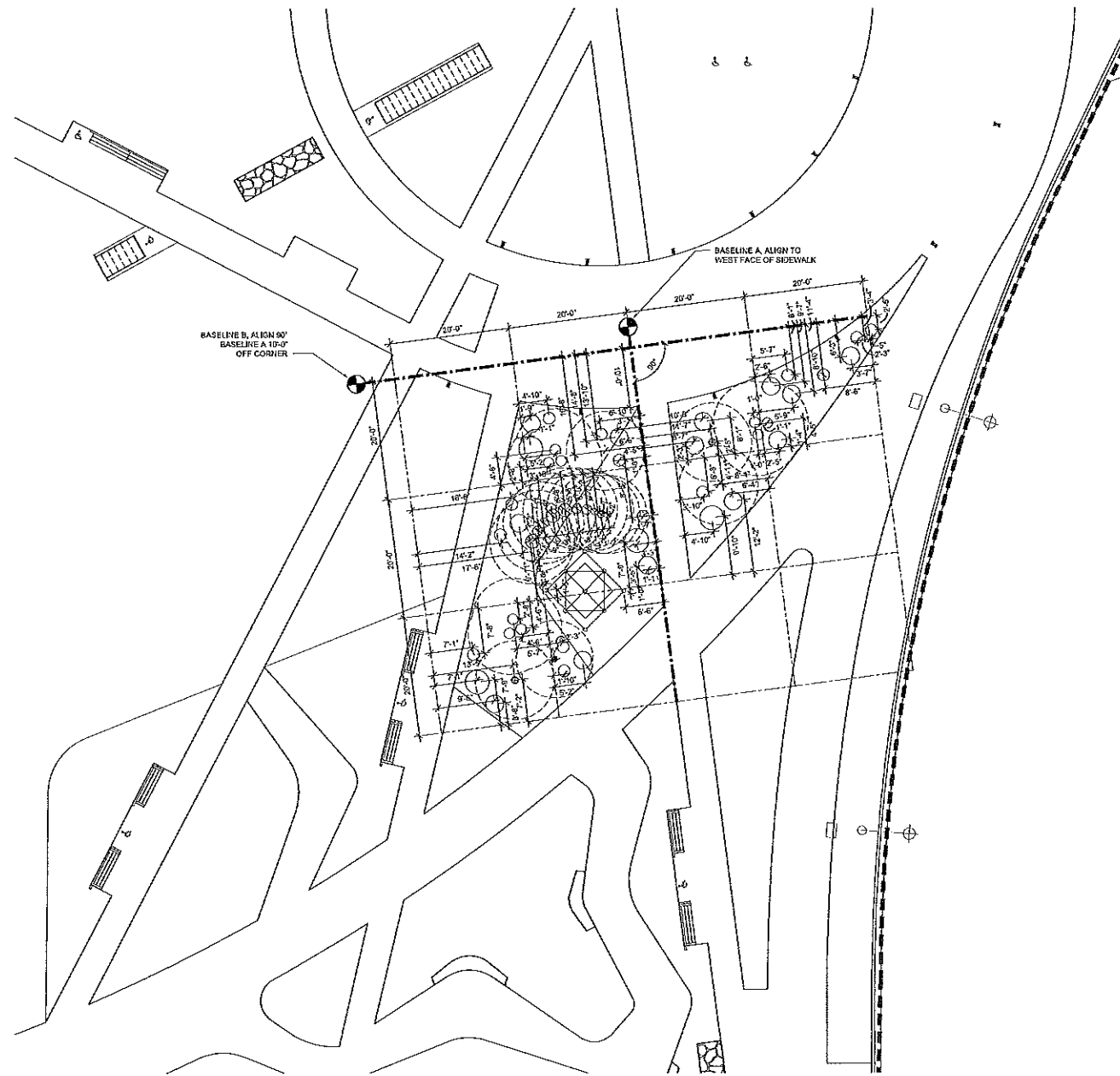
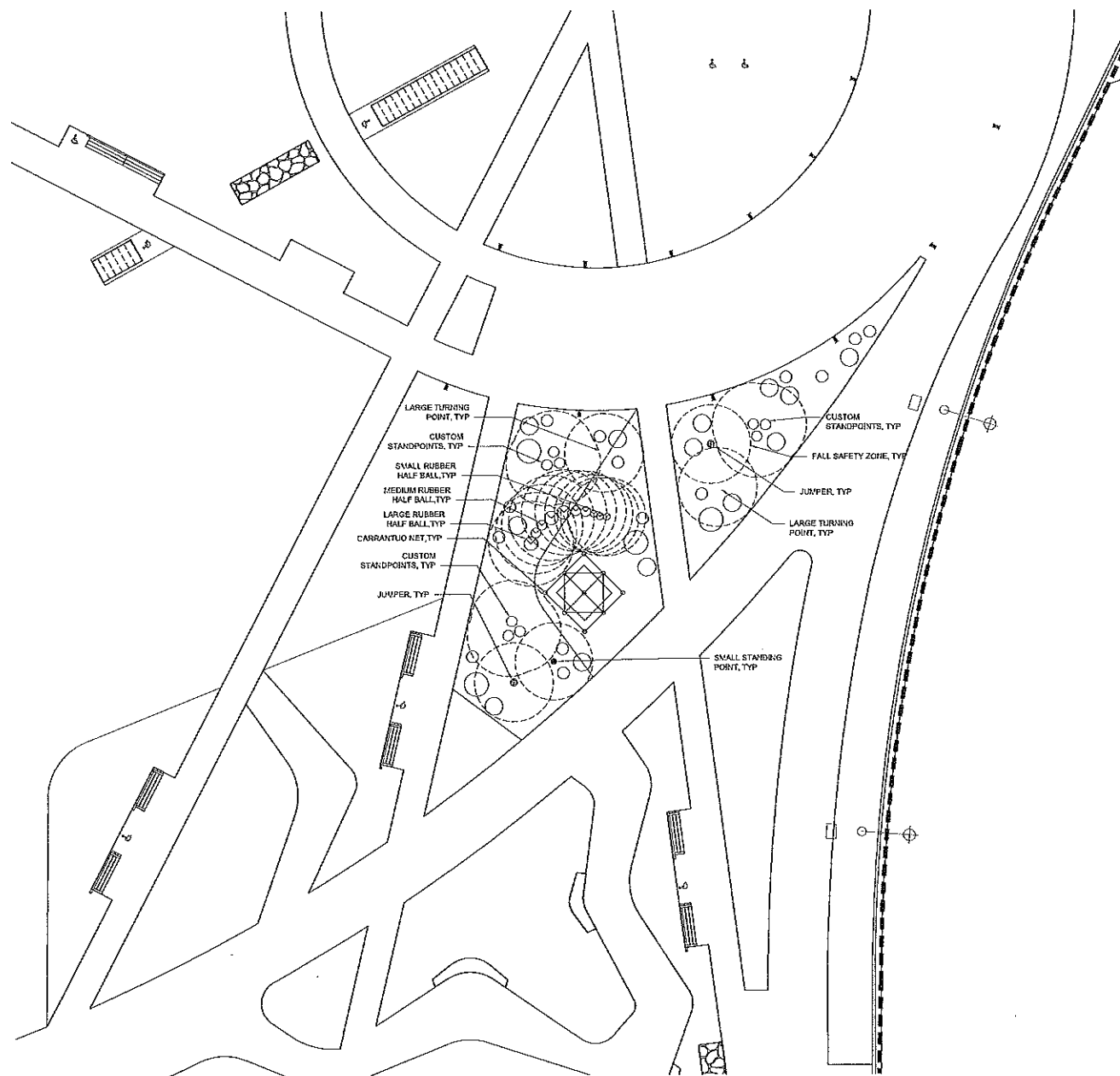


Job No: 5431-08  
Date: 04.01.14  
Scale: 1"=20'-0"

Drawn By: DD, LT  
Checked By: JS, JS

Drawg No: **L-1.2**

**LAYOUT PLAN**



**PLAY EQUIPMENT LAYOUT NOTES**

1. ALL PLAY APPARATUS SHALL BE CONSTRUCTED AND INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS & ACCORDING TO FOOTINGS DETAILED BY ENGINEER REGISTERED IN THE STATE OF CALIFORNIA UNLESS OTHERWISE SPECIFIED ON THE PLANS OR IN THE PROJECT SPECIFICATIONS.
2. ALL NUTS SHALL BE TACK WELDED TO BOLTS. EXCESS LENGTHS OF BOLTS SHALL BE CUT OFF OF ALL APPARATUS STRUCTURES. ALL METAL EDGES SHALL BE GRIND SMOOTH AND FREE OF BURRS.
3. ALL FOOTINGS FOR PLAY ITEMS SHALL BE INSTALLED A MINIMUM OF ONE INCH (1") ABOVE THE FINISH SUB-GRADE AND COVERED WITH SYNTHETIC RUBBER SURFACING. EXPOSED FOOTING WILL NOT BE PERMITTED.
4. PLAY APPARATUS SUPPORT POLES SHALL BE A MINIMUM OF 4' FROM UTILITIES.
5. PLAY AREA BASELINES ASSUME SURROUNDING HARDSCAPE IS CONSTRUCTED EXACTLY PER SHEET L-1.1.

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Rev	Date	Description
	10.25.13	75% Construction Documents
	04.01.14	100% Construction Documents

Stamp:



Job No: 5431-08

Drawn By: DD, LT

Date: 04.01.14

Checked By: J.S. JS

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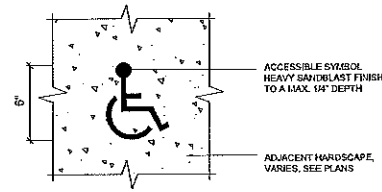
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**PLAY EQUIPMENT LAYOUT ENLARGEMENT PLAN**

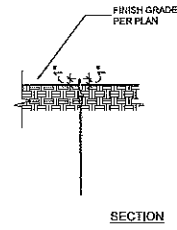
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**L-1.3**

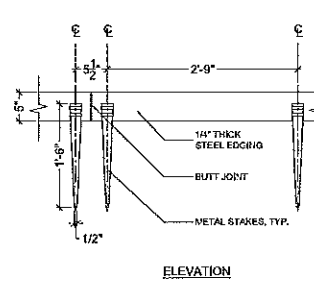




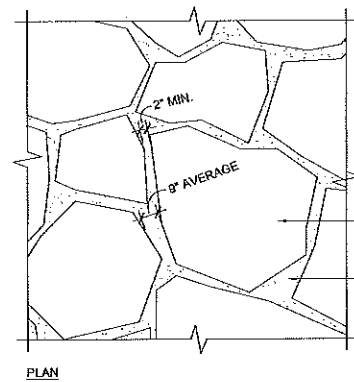
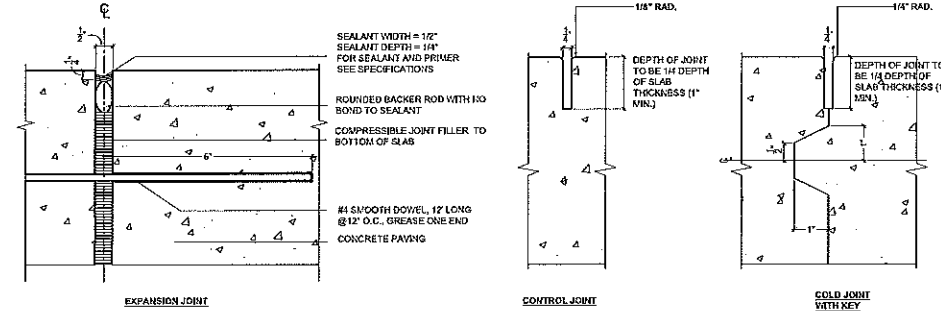
**1 ACCESSIBLE SPACE**  
SCALE: 1"=1'-0"



**2 STEEL HEADER**  
SCALE: 1"=1'-0"

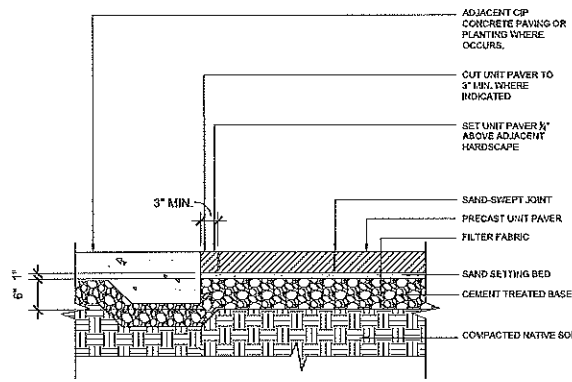


**3 C.I.P. CONCRETE PAVING - TYPICAL JOINTS**  
SCALE: 6"=1'-0"

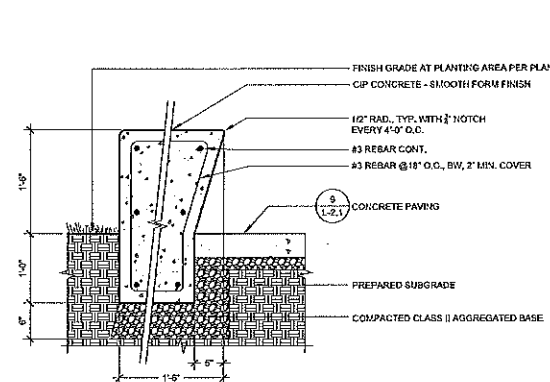


**4 SAND SET STONE IN PLANTING**  
SCALE: 1"=1'-0"

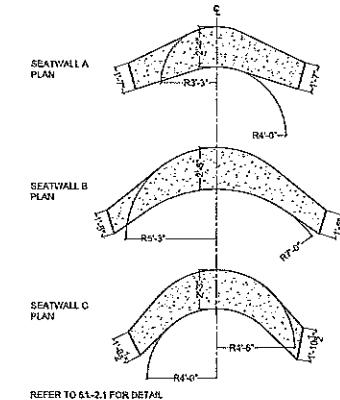
NOTE: THIS PLAN IS DIAGRAMMATIC TO COMMUNICATE THE DESIGN INTENT FOR STONE LAYOUT. ACTUAL LAYOUT WILL BE DETERMINED BY HOCKAP USING SELECTED STONE. NO CUTTING IS INTENDED.



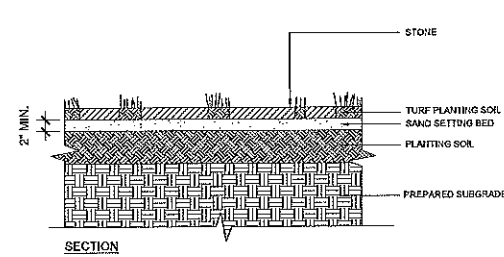
**5 UNIT PAVERS**  
SCALE: 1"=1'-0"



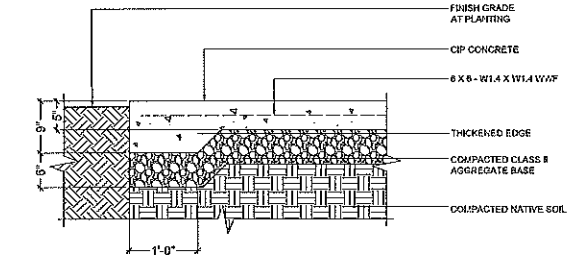
**6 C.I.P. CONCRETE SEATWALL**  
SCALE: 1"=1'-0"



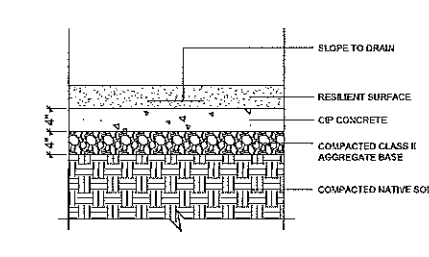
**7 C.I.P. SEATWALL DIMENSION PLAN**  
SCALE: 1/4"=1'-0"



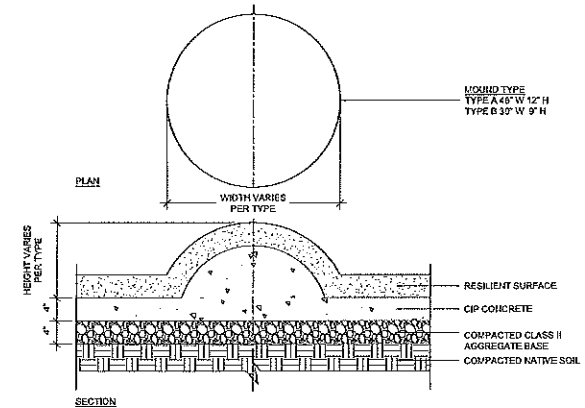
**8 SAND SET STONE IN PLANTING**  
SCALE: 1"=1'-0"



**9 ENHANCED C.I.P. CONC. PAVING**  
SCALE: 1"=1'-0"



**10 RESILIENT PLAYGROUND SURFACING**  
SCALE: 1"=1'-0"



**11 RAISED RESILIENT PLAYGROUND SURFACING**  
SCALE: 1"=1'-0"

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Rev	Date	Description
10.25.13		75% Construction Documents
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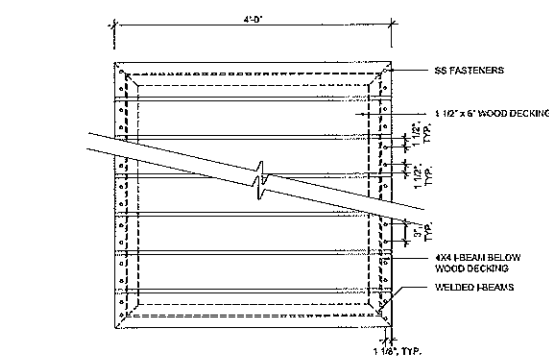
Job No: 5431-06  
Date: 04.01.14  
Scale: 1"=20'-0"

Drawn By: DD, LT  
Checked By: JG, JS

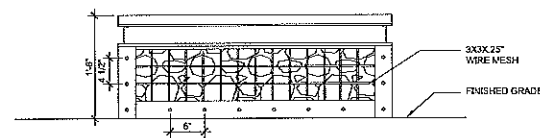
Drawing Title: **CONSTRUCTION DETAILS**

Draw/Pg No: **L-2.1**

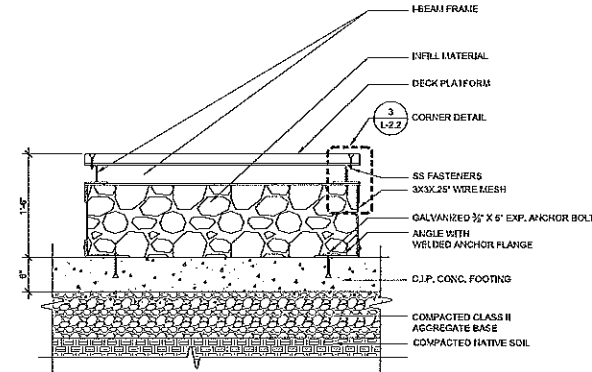
SHEET xx OF xx



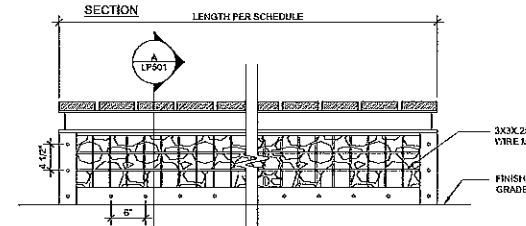
PLAN



END ELEVATION

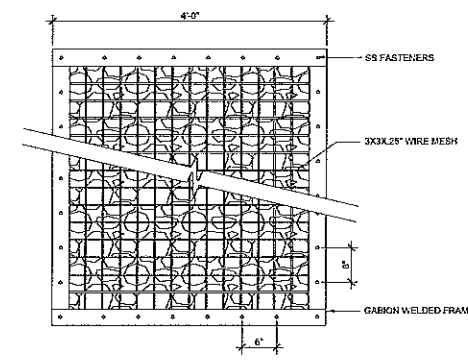


SECTION

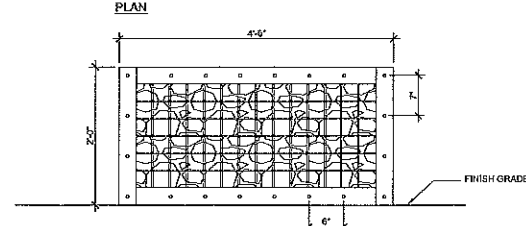


SIDE ELEVATION

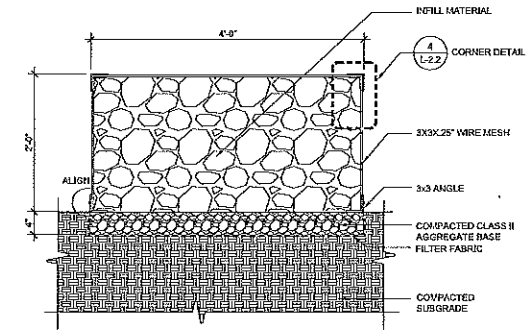
NOTES: HOT DIP GALV. FRAME AFTER FABRICATION. PROVIDE CROSS BEAMS WHEN LENGTH EXCEEDS 10'. PLACE AT MID-POINT.



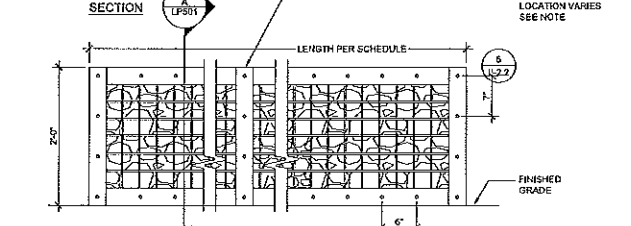
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END ELEVATION



SECTION

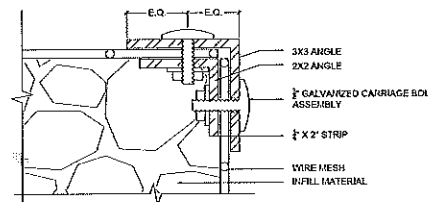


SIDE ELEVATION

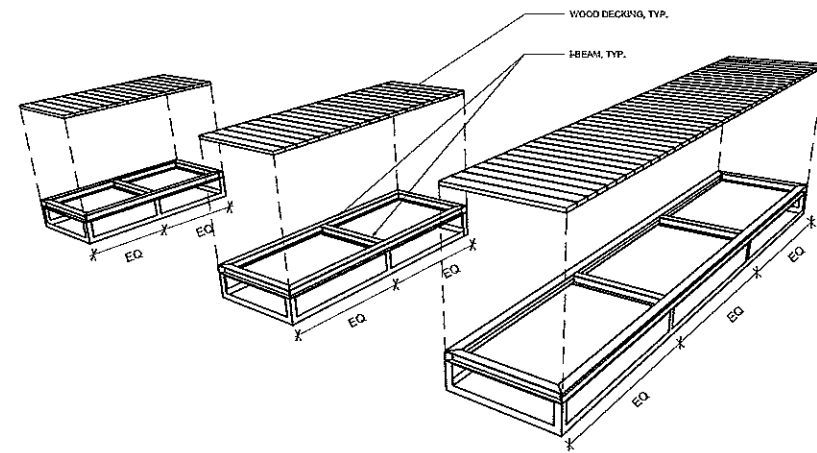
NOTES:  
-HOT DIP GALV. FRAME AFTER FABRICATION.  
-GRIND ALL VISIBLE WELDS SMOOTH, NO FIELD WELDS.  
-PROVIDE VERTICAL ANGLE POST EACH SIDE WHENEVER GABION LENGTH EXCEEDS 10'. PLACE AT MID-POINT.  
-PROVIDE TWO VERTICAL ANGLE POSTS AT EACH SIDE AND WHENEVER GABION LENGTH EXCEEDS 20' LENGTH.  
-TERMINATE MESH AT VERTICAL POST.

**1 GABION WALL WITH DECORATIVE WOOD TOP SURFACE**  
SCALE: 1"=1'-0"

**2 GABION WALL**  
SCALE: 1"=1'-0"

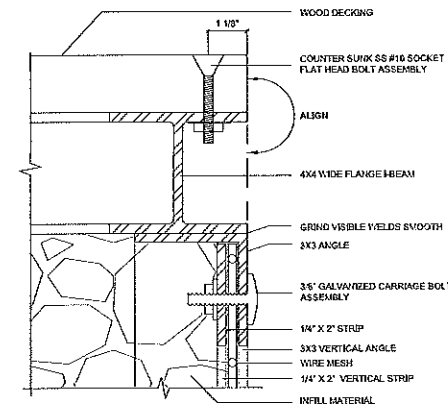


**3 GABION WALL - CORNER DETAIL**  
SCALE: 3/4"=1'-0"



NOTES:  
PROVIDE CROSS I-BEAMS WHENEVER GABION EXCEEDS 8' IN LENGTH. ADD AT RATE OF ONE (1) FOR A LENGTH OF 5' TO 12.5', TWO (2) FOR A LENGTH OF 12.5' TO 25'.

**5 GABION FRAME DIAGRAM**  
SCALE: NTS



**4 GABION WALL WITH DECORATIVE WOOD TOP SURFACE - CORNER DETAIL**  
SCALE: 3/4"=1'-0"

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DEVELOPMENT MANAGER:



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415.464.8837

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Rev	Date	Description
	10.25.13	75% Construction Documents
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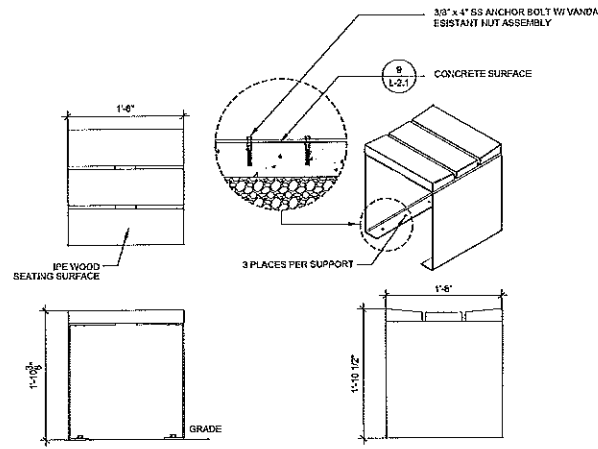


Job No: 5431-08  
Date: 04.01.14  
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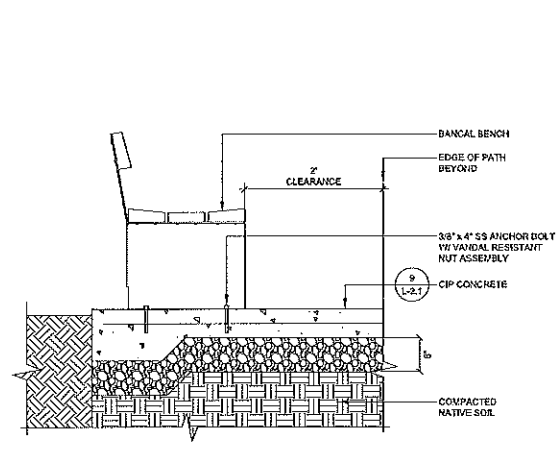
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Checked By: JS, JS  
Drawing Title: **CONSTRUCTION DETAILS**

Drawing No: **L-2.2**

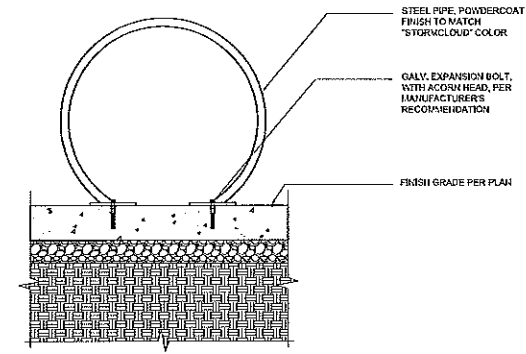
SHEET xx OF xx



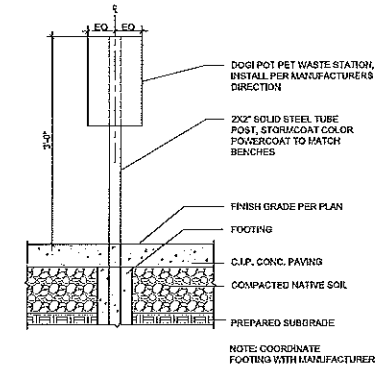
**1 SQUARE BENCH/CUBE SEATING**  
SCALE: 1"=1'-0"



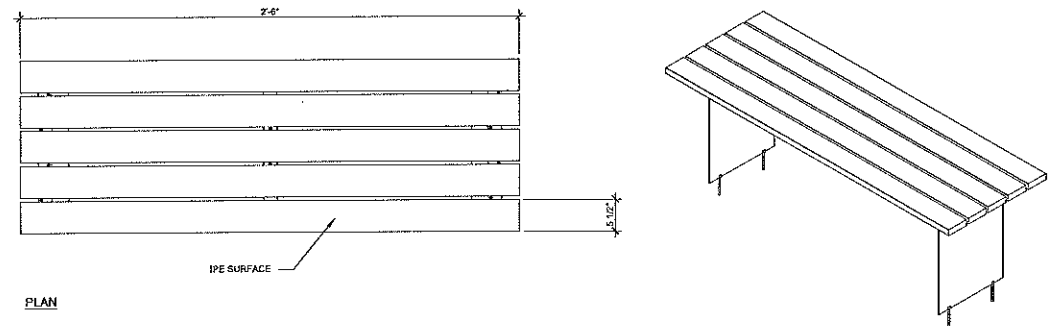
**2 BENCH LONG/SHORT**  
SCALE: 1"=1'-0"



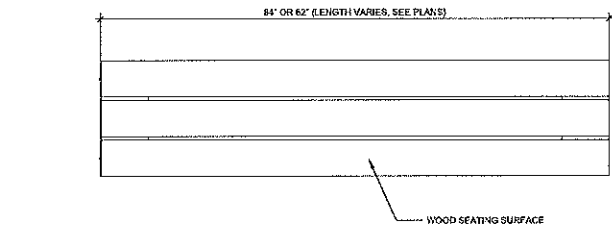
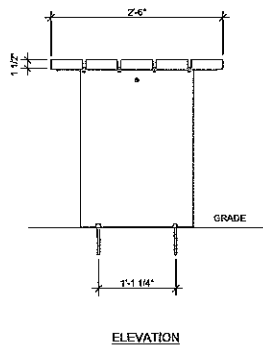
**3 BIKE RACK**  
SCALE: 1"=1'-0"



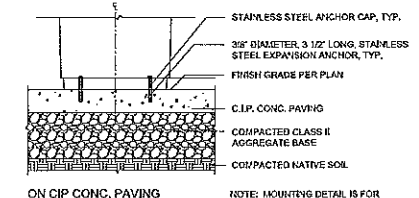
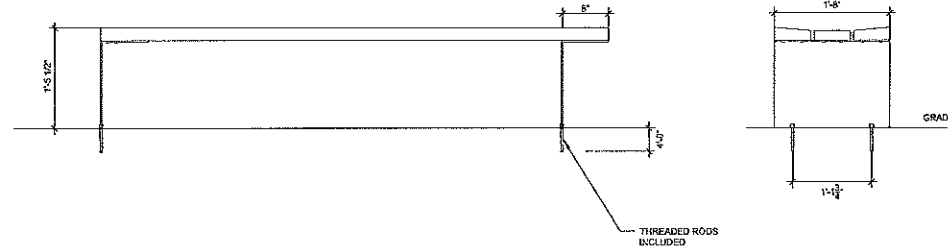
**4 PET WASTE STATION**  
SCALE: 1"=1'-0"



**5 CUSTOM PICNIC TABLE**  
SCALE: 1"=1'-0"



**6 BACKLESS BENCH AT PICNIC TABLE**  
SCALE: 1"=1'-0"



**7 LITTER/RECYCLE UNIT**  
SCALE: 1"=1'-0"

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Rev	Date	Description
	10.25.13	75% Construction Documents
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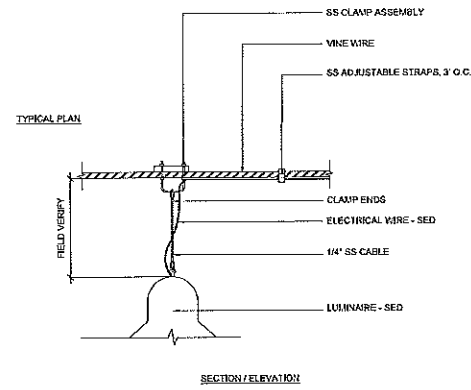
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Date: 04.01.14  
Scale: 1"=20'-0"

Drawn By: DD, LT  
Checked By: JG, JS

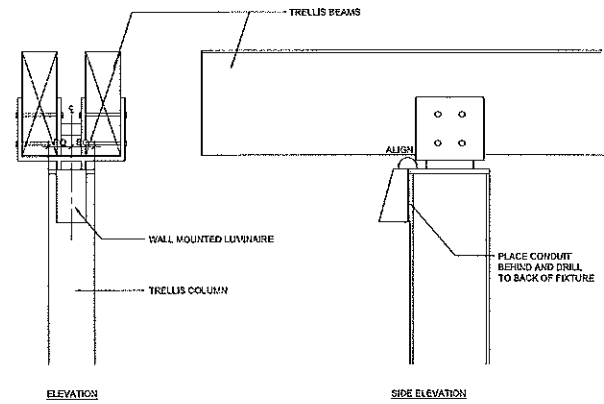
Drawn By: **CONSTRUCTION DETAILS**

Drawing No: **L-2.3**

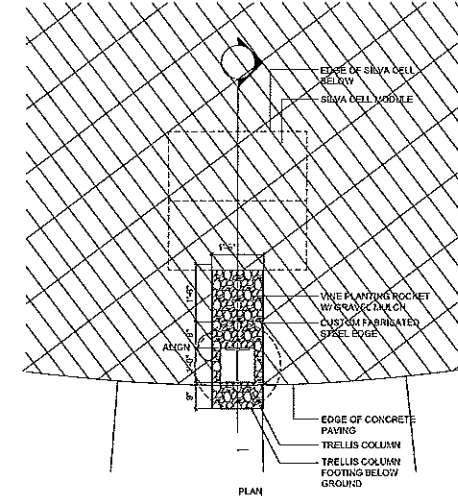
SHEET xx OF xx



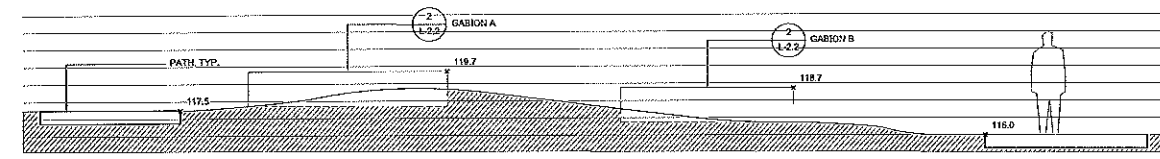
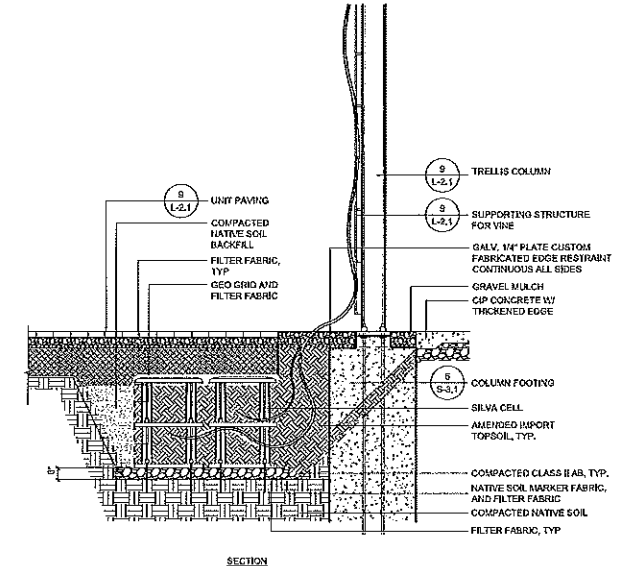
**1 PENDANT LIGHT**  
SCALE: 1"=1'-0"



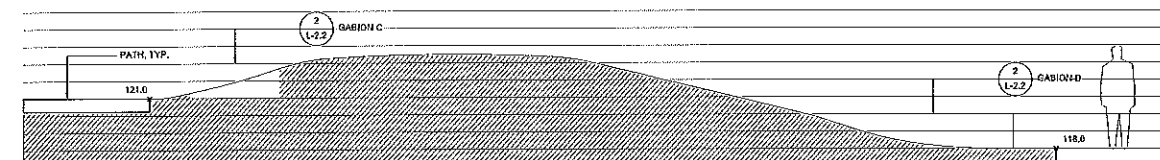
**2 WALL MOUNTED LUMINAIRE AT TRELLIS**  
SCALE: 1"=1'-0"



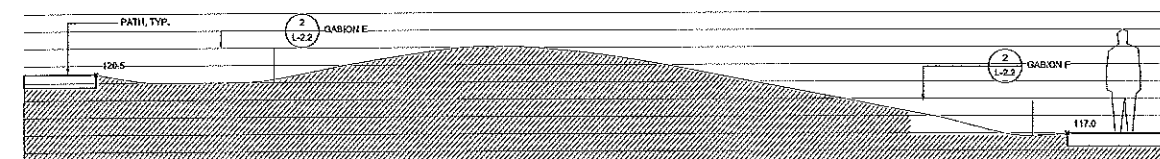
**3 SILVA CELL PLANTER AT TRELLIS**  
SCALE: 1/2"=1'-0"



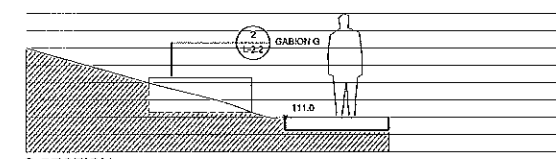
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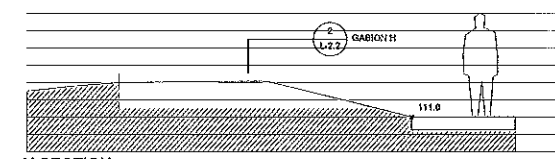
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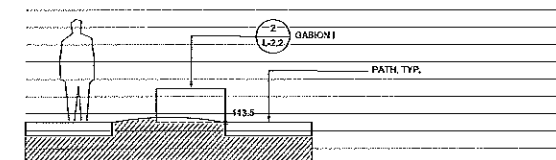
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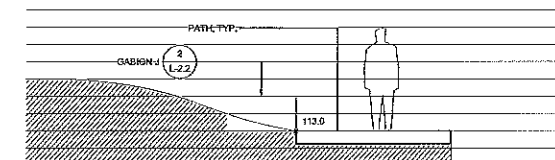
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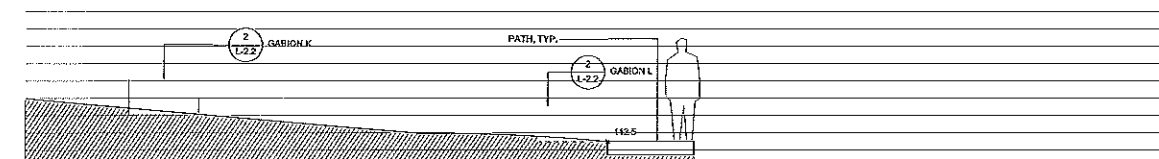
H SECTION



I SECTION



J SECTION



KL SECTION

**5 GABION GRADING**  
SCALE: 1/4"=1'-0"

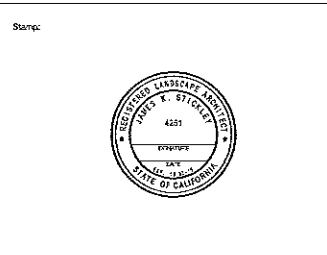
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FOCIL-418, LLC  
DEVELOPMENT MANAGER:  
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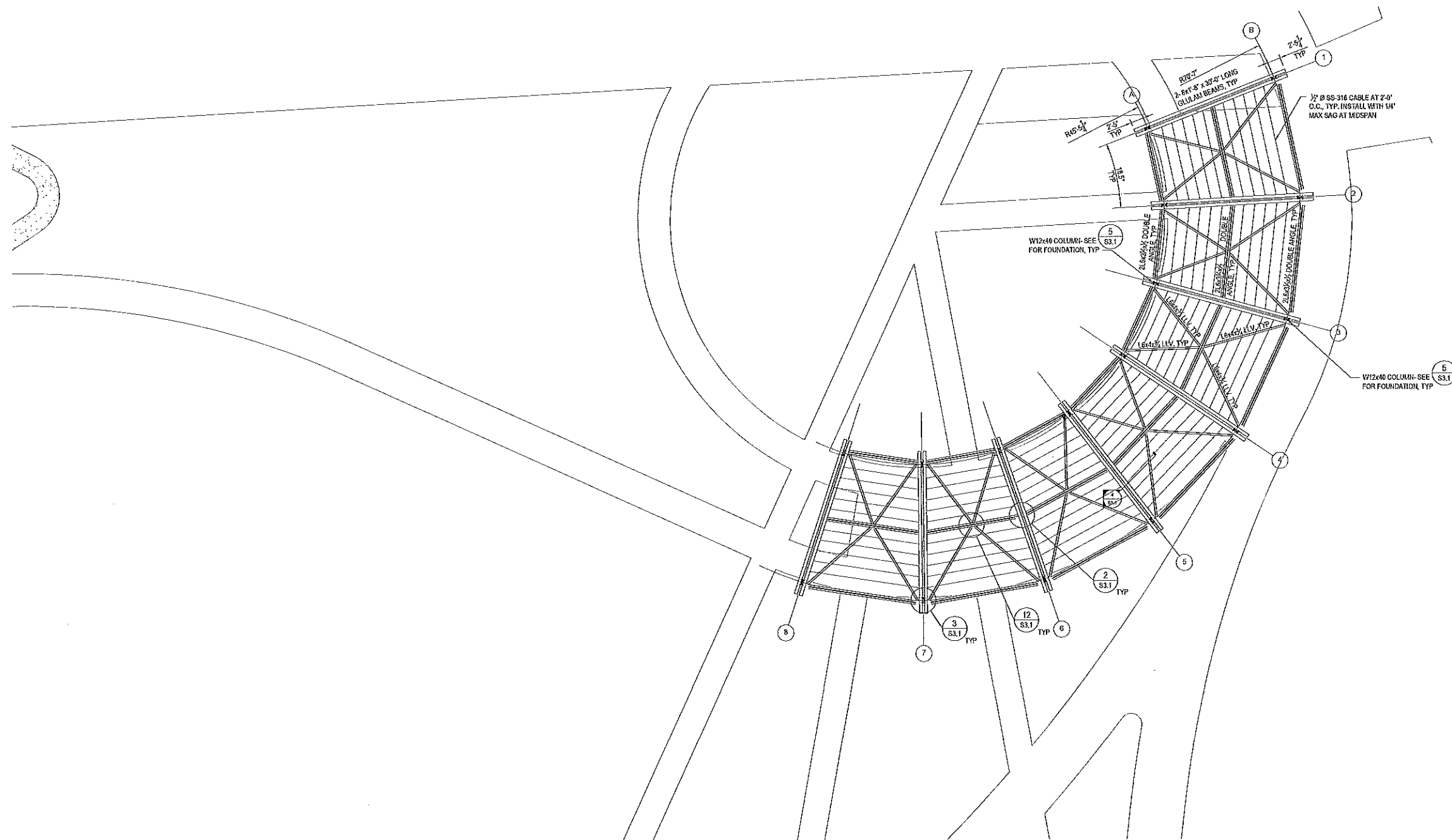
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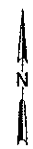
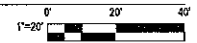


Job No: 6431-08  
Date: 04.01.14  
Scale: 1"=20'-0"  
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Drawing No: **L-2.4**  
SHEET xx OF xx





1 TRELLIS FRAMING PLAN



**MISSION BAY PARKS**

**P26**

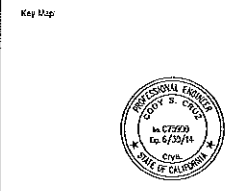
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DEVELOPMENT MANAGER:  
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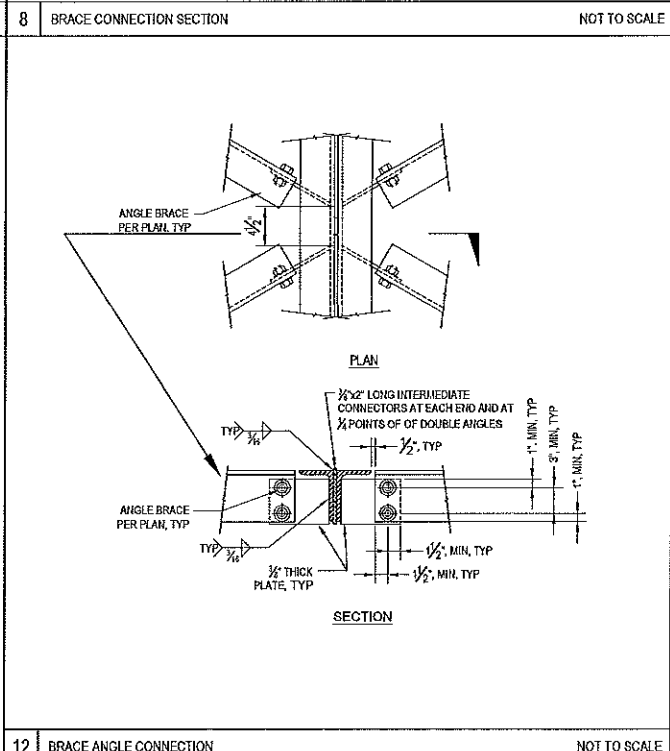
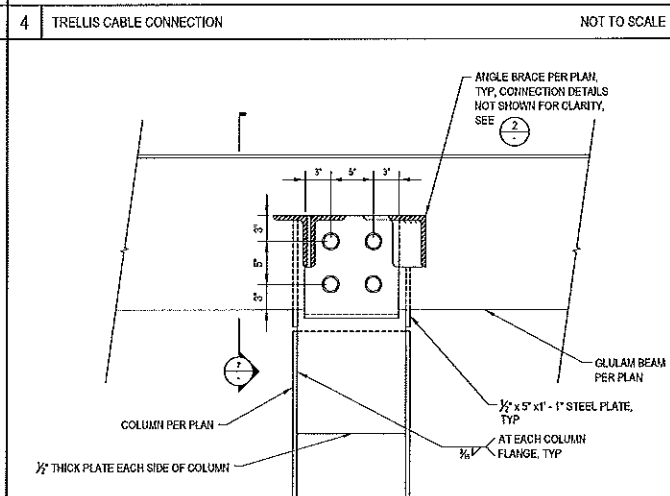
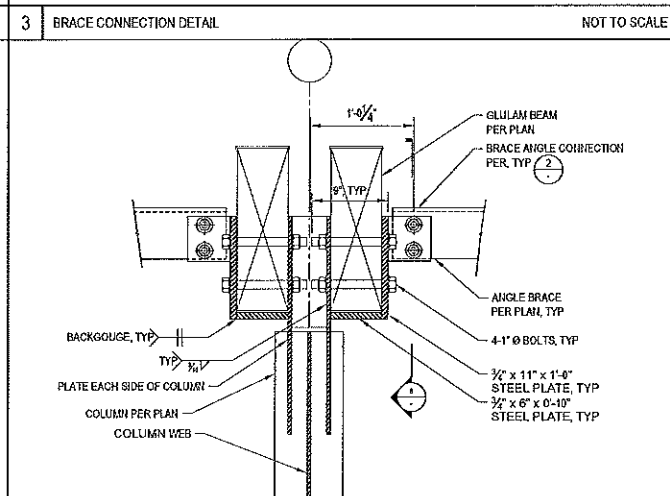
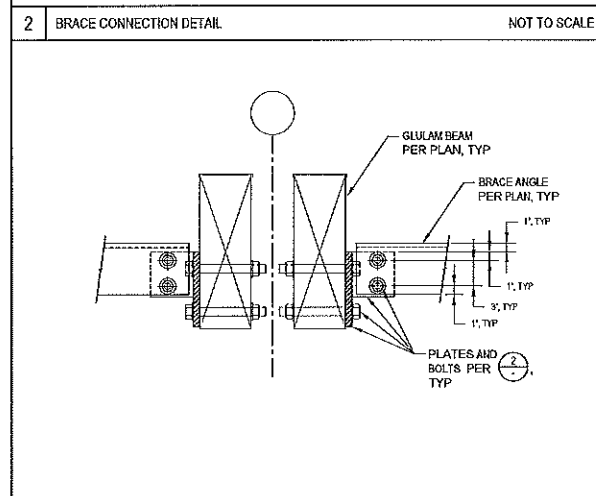
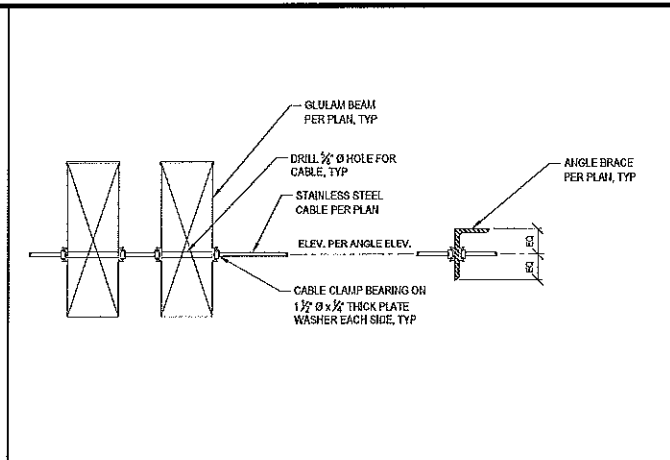
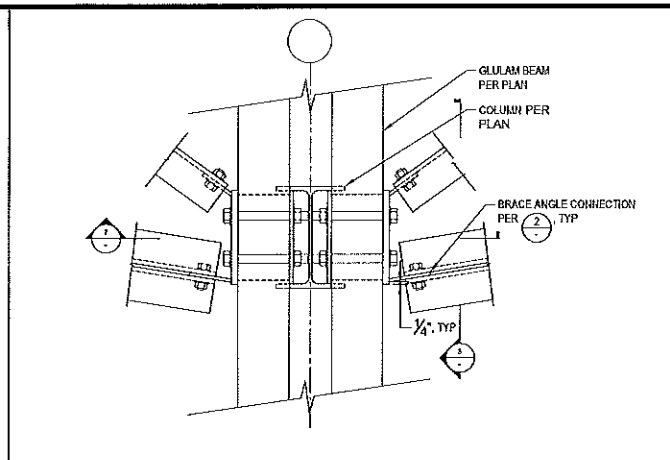
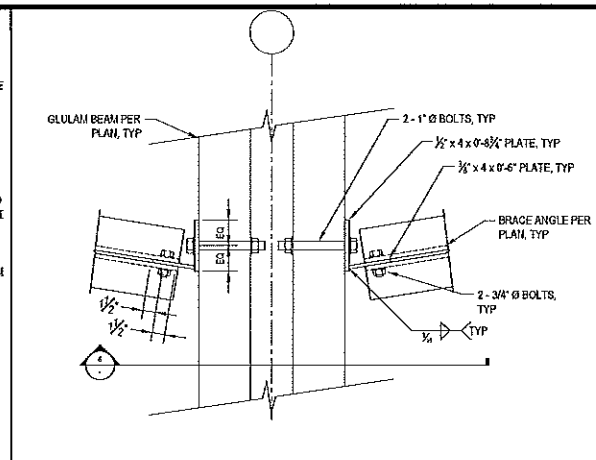
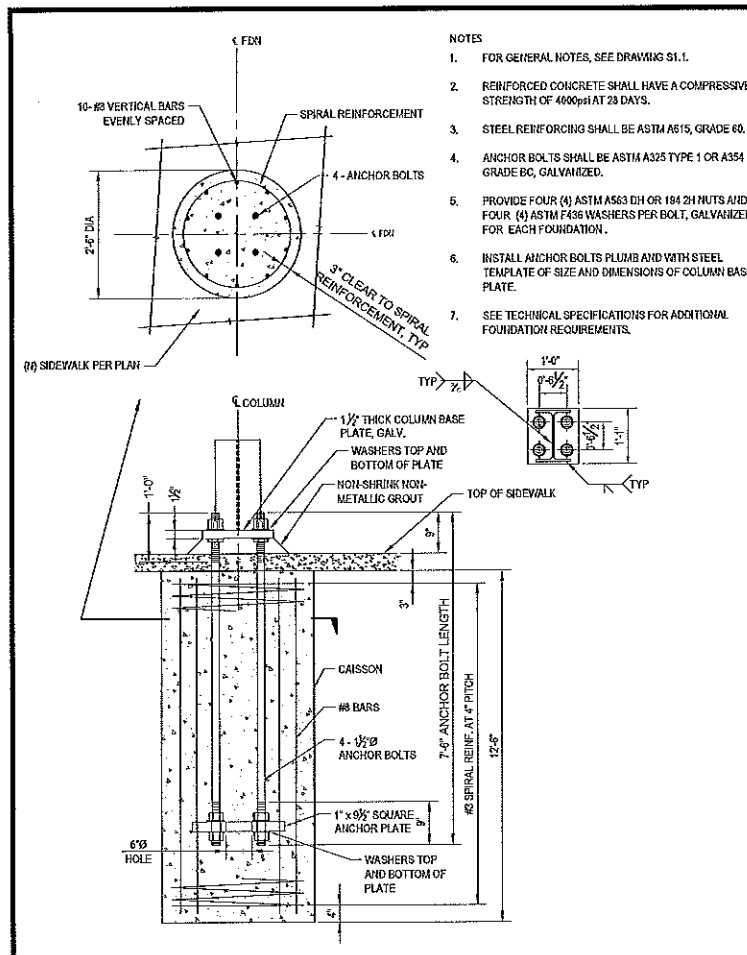
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Rev	Date	Description
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	04.01.14	100% Construction Documents



Job No. 5431-08	Drawn By: C. CRUZ
Date: 04.01.14	Checked By: J. LIN
Drawing Title: <b>TRELLIS FRAMING PLAN</b>	
Drawing No.: <b>S2.1</b>	



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<p>PREPARED FOR: OWNER: DEVELOPMENT MANAGER:</p> <p>MISSION BAY DEVELOPMENT GROUP</p>	<p>PREPARED BY:</p> <p>WRT Planning &amp; Design</p> <p>Wallace Roberts &amp; Todd, Inc.</p>	<p>CONSULTANTS:</p> <p>GHD Inc.</p>	<table border="1"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>10.25.13</td> <td></td> <td>75% Construction Documents</td> </tr> <tr> <td>04.01.14</td> <td></td> <td>100% Construction Documents</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Rev	Date	Description	10.25.13		75% Construction Documents	04.01.14		100% Construction Documents																								
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Key Map

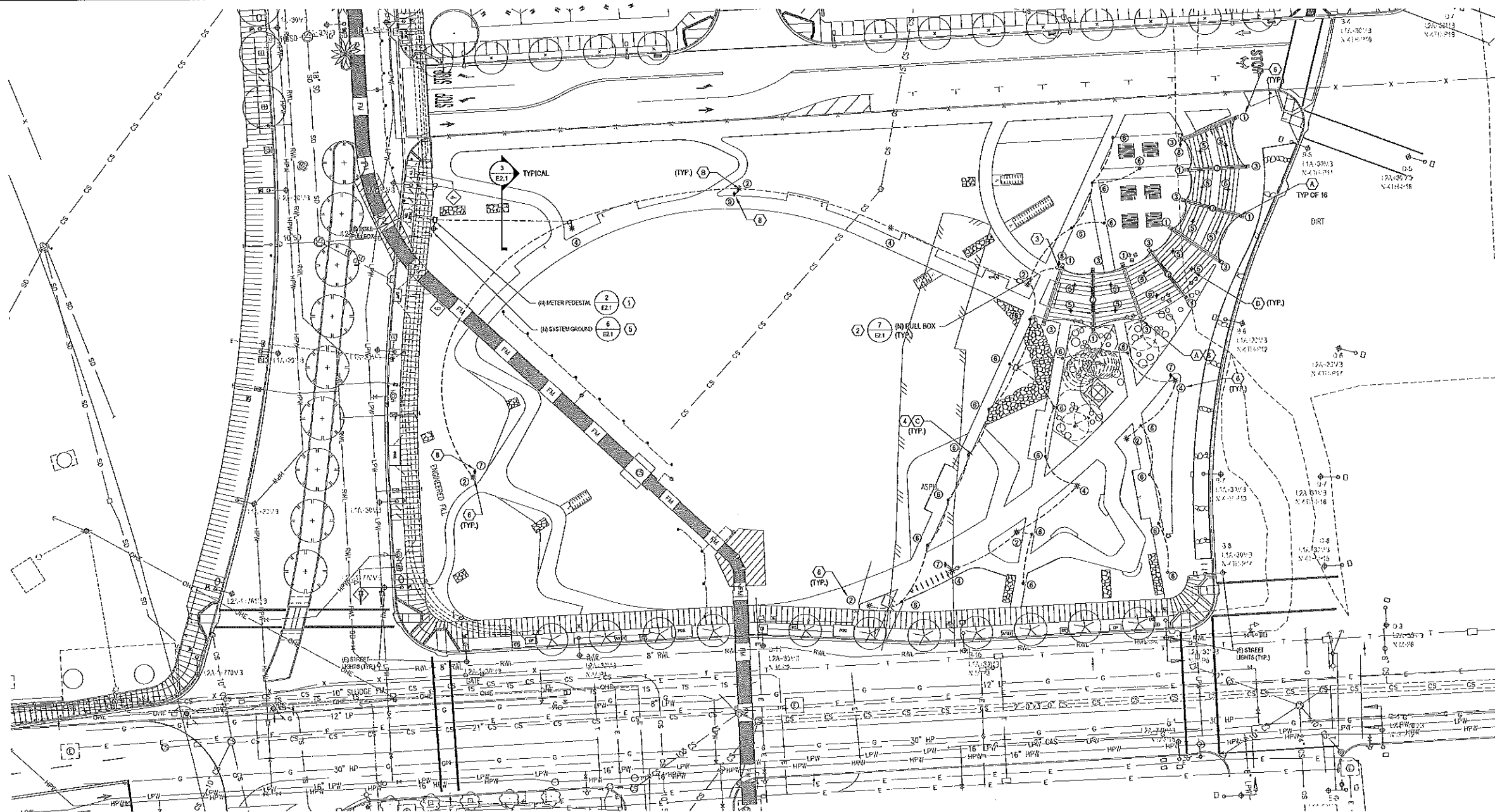
Job No: 5431-08  
Date: 04.01.14  
Scale:

Drawn By: C. CRUE  
Checked By: J. LUN

Structural Engineer  
Professional Engineer  
No. 075902  
Exp. 8/20/14  
State of California

Drawing Title: **STRUCTURAL DETAILS**

Drawing No: **S3.1**



1 ELECTRICAL PLAN

- KEYNOTES**
1. PROVIDE PG&E APPROVED METER PEDESTAL FURNISHED WITH DISTRIBUTION PANELBOARD AND LIGHTING CONTROL PANEL. MOUNT PHOTOCELL ON SOUTH SIDE WALL OF ENCLOSURE.
  2. PROVIDE 12" x 18" x 12" DEEP PULLBOX WITH "LIGHTING" INSCRIPTION ON COVER.
  3. CONDUIT STUB-UP FROM GROUND ALONG THE TRELLIS COLUMN FOR TRELLIS LIGHTING. SEE DETAIL SE2.1
  4. PROVIDE WATERPROOF RECESSED HOUSING FOR IN-GRADE LIGHTING. SEE DETAILS.
  5. CONNECT SERVICE EQUIPMENT TO GROUND ROD WITH MINIMUM #6 AWG BARE COPPER WIRE.
  6. CONNECT EACH DEVICE TO THE INDICATED CIRCUIT NUMBER.
  7. PROVIDE DUPLEX GFCI RECEPTACLE +18" AFG AT BASE OF COLUMN IN CAST STEEL WEATHERPROOF BOX WITH LOCKABLE WEATHERPROOF COVER.
  8. PROVIDE DUPLEX GFCI RECEPTACLE INSIDE POLE BASE PER MISSION BAY STANDARD.

- GENERAL SHEET NOTES**
1. NUMERALS INDICATED WITHIN CIRCLES SIGNIFY CIRCUIT NUMBERS. SEE KEYNOTES AND PANEL SCHEDULE.
  2. ALPHABETIC CHARACTERS WITH HEXAGONS SIGNIFY LIGHTING FIXTURE TYPES. SEE LIGHTING FIXTURE SCHEDULE.
  3. SEE LANDSCAPE ARCHITECTURAL DRAWINGS FOR CONDUIT ROUTING AT TRELLIS AREA.



**MISSION BAY PARKS**  
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PREPARED FOR:  
 OWNER:  
 DEVELOPMENT MANAGER:

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Job No: 5431-08  
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**ELECTRICAL PLAN**  
 Drawing No:  
**E1.1**

Drawn By: T. WADA  
 Checked By: J. LIH



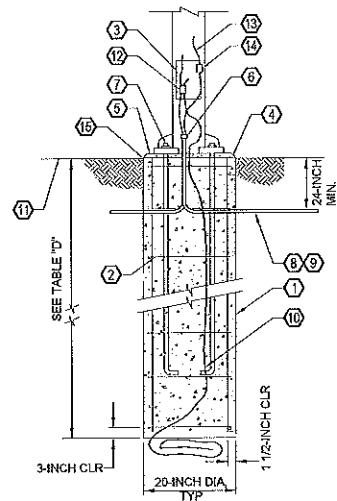
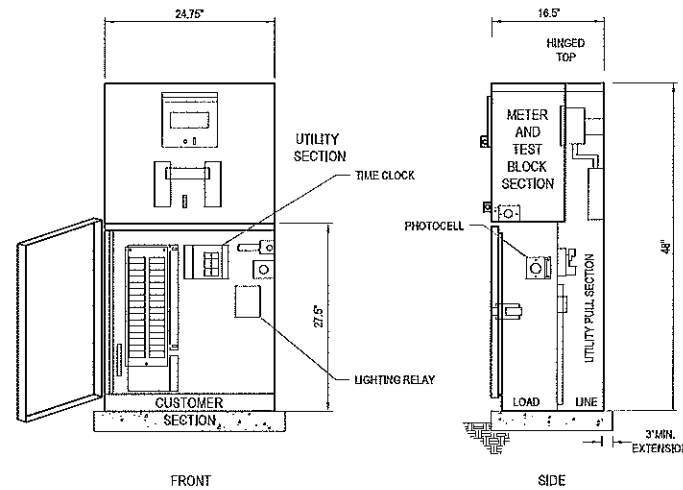


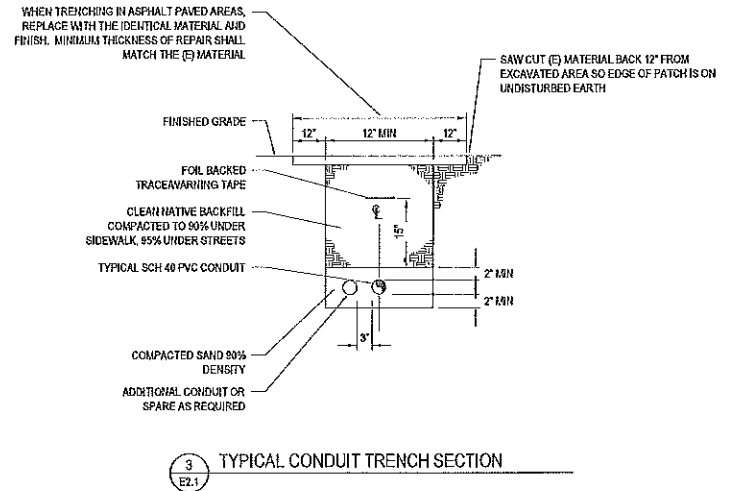
TABLE 'D'	
POLE HEIGHT	POLE BASE DEPTH (MIN)
0 FT - 10 FT	48-INCH
10 FT - 25 FT	60-INCH

1 LIGHT POLE FOUNDATION DETAIL

- KEYNOTES
- POURED IN PLACE ROUND CONCRETE SUPPORT BASE.
  - 4-NO. 6 VERTICAL BARS WITH NO. 3 TIES @ 8-INCH O.C.
  - ACCESS HAND-HOLE.
  - 3/4-INCH - 45° CHAMFER ALL AROUND.
  - GROUT IN ALL AROUND BETWEEN BOTTOM OF POLE BASE FOLLOWING POLE ERECTION AND FINAL LEVELING.
  - STUB CONDUIT UP INTO POLE BASE WIRING CAVITY. (IF RGS TERMINATE WITH GROUNDING BUSBAR.)
  - PROVIDE SUPPORT AND LEVELING NUTS ON TOP AND BOTTOM OF POLE BASE MOUNTING PLATE. MOUNTING PLATE AND MOUNTING BOLTS SHALL BE PER MANUFACTURER'S BOLT PATTERN, LENGTH SHALL BE PER MANUFACTURER'S SPECIFICATIONS.
  - TYPICAL PVC CONDUIT, 3/4-INCH MIN. WITH CONDUCTORS AS INDICATED ON DRAWINGS.
  - TYPICAL INCOMING EXTERIOR BRANCH CIRCUIT CONDUIT AND WIRING FROM U.G. CONDUITS.
  - (1) #14 AWG BARE COPPER GROUND. COIL 30-INCH AT BOTTOM OF FOUNDATION.
  - TOP OF SODDED GRADE, SIDEWALK OR ASPHALT PAVING AS INDICATED ON THE RESPECTIVE AREA SITE PLAN.
  - BOLTED TYPE WIRE GROUND CONNECTOR.
  - WIRING TO LIGHT FIXTURE. CONNECT COMPLETE.
  - WATERPROOF IN-LINE FUSES.



2 METER PEDESTAL ELEVATION



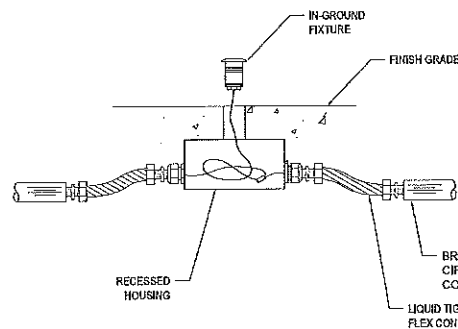
3 TYPICAL CONDUIT TRENCH SECTION NOT TO SCALE

1 LIGHT POLE FOUNDATION DETAIL

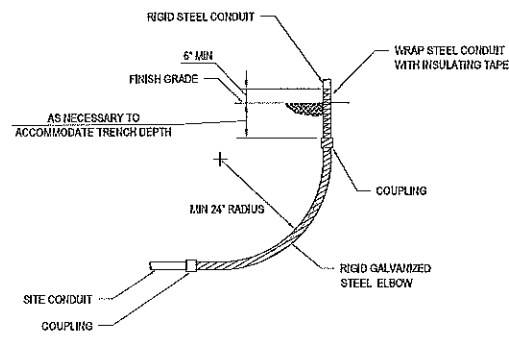
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2 METER PEDESTAL

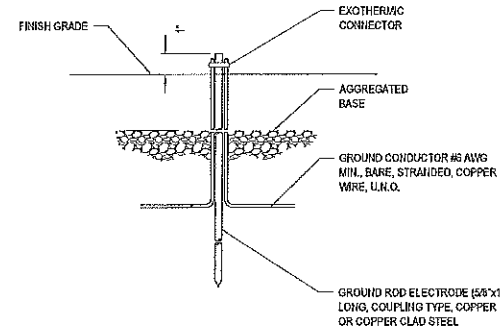
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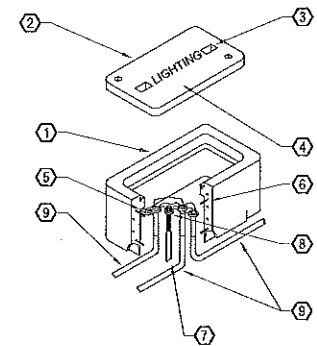
4 IN-GRADE LANDSCAPE LIGHTING



5 CONDUIT STUB-UP



6 GROUND ROD DETAIL



7 LIGHTING PULL BOX DETAIL

- KEYNOTES
- PRECAST CONCRETE PULLBOX. SET COVER FLUSH WITH TOP OF FINISHED PAVING ELEVATION OR 1\"/>
  - FLUSH MOUNTED REINFORCED CONCRETE TRAFFIC COVER, WITH STAINLESS STEEL PENTHEAD SCREWS (2 REQUIRED).
  - LIFTING EYE (2) REQUIRED (TYPICAL).
  - 1\"/>
  - PROVIDE 6\"/>
  - 9 GA. WELDED WIRE FRAME.
  - 5/8\"/>
  - TYPICAL GROUND CONDUCTORS SHALL BE CLAMPED TO GROUND ROD.
  - U.G. PVC CONDUITS AS REQUIRED. PROVIDE WITH BELLENDIS. CONDUITS SHALL TERMINATE MIN 6\"/>

7 LIGHTING PULL BOX DETAIL NOT TO SCALE

4 IN-GRADE LANDSCAPE LIGHTING

NOT TO SCALE

5 CONDUIT STUB-UP

NOT TO SCALE

6 GROUND ROD DETAIL

NOT TO SCALE

7 LIGHTING PULL BOX DETAIL

**MISSION BAY PARKS**  
**P26**

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PREPARED FOR:  
OWNER:  
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DEVELOPMENT MANAGER:  
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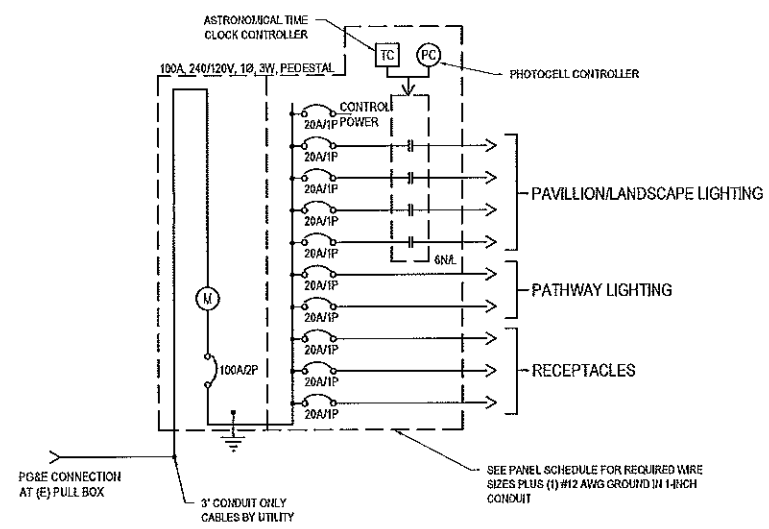
Job No: S431-08  
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**ELECTRICAL DETAILS**  
Drawing No:  
**E2.1**

LIGHTING FIXTURE SCHEDULE						
TAG	SYMBOLS	DESCRIPTION	MANUFACTURER	LAMP QTY & TYPE	FIXTURE INPUT WATTS	MOUNTING
A	•	GRAPHITE COLOR STAINLESS STEEL SHIELDED WALL MOUNTED METAL HALIDE FIXTURE. PROTECTION CLASS IP 64.	BEGA: 3578	(1) MH 35WG8.5	46	MOUNT AT SURFACE
B	*	ARCHITECTURAL POLE MOUNTED DECORATIVE CERAMIC FIXTURE. NATURAL PAINTED ALUMINUM, POWDER COATED FINISH WITH SPUN ALUMINUM TOP SHADE. DUAL ROUND ALUMINUM POLE.	LOUIS POULSEN: PAT-LED 25WLED 3000K 120V 450mA	(1) LED 25 W (FURNISHED)	28	LOUIS POULSEN: DRA 5'-3" 12' TNEML MBG
C	•	STAINLESS STEEL, WHITE HOUSING LED IN-GRADE FIXTURE. PROVIDE WITH RECESSED HOUSING IN GROUND.	ERCO: 33754.023 (RECESSED HOUSING: 33866.023)	LED 0.3W (FURNISHED)	0.3	IN-GROUND
D	⊕	PENDANT MOUNTED ARCHITECTURAL AREA LIGHT HUNG FROM STAINLESS STEEL CABLE	EASTCO: PAGODA	LED 8.5 W (FURNISHED)	8.5	PENDANT

**SHEET GENERAL NOTES**

- NUMERALS INDICATED WITHIN CIRCLES SIGNIFY CIRCUIT NUMBERS. SEE KEYNOTE & A/D PANEL SCHEDULE.
- ALPHABETIC CHARACTERS WITHIN HEXAGONS SIGNIFY LIGHTING FIXTURE TYPES. SEE LIGHTING FIXTURE SCHEDULE.

1 LIGHTING FIXTURESCHEDULE



2 SINGLE LINE DIAGRAM

PANEL SCHEDULE																				
PANEL NAME: PEDESTAL		VOLTAGE: 240/120		REMA RATING: 3R		MOUNTING: PEDESTAL		NOTES:												
MAIN RATING: 150		PHASE: 1		AIC RATING: 10K		LOCATION: SEE PLAN														
BUS RATING: 100		WIRE: 3		DEMAND FACTOR: STD																
CKT NO.	USE	DESCRIPTION	BKR SIZE	CKT KVA	CKT AMPS	WIRE SIZE	WIRE LENGTH (FT)	VOLTAGE DROP %	PHASE	VOLTAGE DROP %	WIRE LENGTH (FT)	WIRE SIZE	CKT AMPS	CKT KVA	BKR SIZE	DESCRIPTION	USE	CKT NO.		
1	L	PAVILLION LIGHTING	20-1	0.37	3.07	10	470	2.40	A	2.41	560	4	9.25	1.11	20-1	PATHWAY LIGHTING	L	2		
3	L	PAVILLION LIGHTING	20-1	0.37	3.07	10	445	2.27	B	2.12	560	4	7.71	0.93	20-1	PATHWAY LIGHTING	L	4		
5	L	PAVILLION LIGHTING	20-1	0.03	0.23	10	440	0.16	A	0.08	500	12	0.05	0.01	20-1	LANDSCAPE LIGHTING	L	6		
7	R	PARK RECEPTACLE	20-1	0.26	3.00	12	300	2.48	B	2.30	400	10	3.00	0.36	20-1	PAVILLION RECEPTACLE	R	8		
9	R	PARK RECEPTACLE	20-1	0.26	3.00	12	300	2.48	A	0.15	25	12	2.03	0.26	20-1	CONTROL POWER	O	10		
11			20-1						B						20-1		O	12		
CONNECTED KVA			DEMAND KVA			DEMAND AMPS			USE LEGEND									VOLTAGE DROP CALCULATION		
PHASE A: 2.1			2.5			20.8			LOAD TYPE									ASSUMED PF		
PHASE B: 2.0			2.3			19.5			H									0.85		
STD DEMAND LOAD BASED ON 125% OF THE LARGEST MOTOR AND 100% OF THE REMAINING MOTORS, 125% OF CONTINUOUS LOADS, 100% OF NONCONTINUOUS LOADS, AND 50% OF RECEPTACLE LOADS BEYOND THE FIRST 10KVA									L									0.80		
									M									0.85		
									R									0.60		
									P									0.65		
									O									0.65		
VOLTAGE DROP IS BASED ON THE IEEE RED BOOK AND 2011 NEC CHAPTER 9 TABLE 9 FORMULA: $V_D = I \cdot (R \cdot \cos \phi + X \cdot \sin \phi) \cdot 10^{-3}$ WITH AN ADDITIONAL MULTIPLIER OF 2 FOR SINGLE PHASE AND 1.732 FOR 3-PHASE LOADS. R AND X VALUES ARE TAKEN FROM 2011 NEC CHAPTER 9 TABLE 9. LENGTHS IN 1000 FT INCREMENTS.																				
ASSUMPTIONS: POWER FACTOR VARIED BY LOAD TYPE; CONDUIT TYPE RGS; WIRE MATERIAL CU																				

3 PANEL SCHEDULE

<p><b>MISSION BAY PARKS</b></p> <p><b>P26</b></p> <p>100% Construction Document Set</p>	<p>PREPARED FOR: OWNER: FOCIL-MB, LLC</p> <p>DEVELOPMENT MANAGER:  MISSION BAY DEVELOPMENT GROUP 410 CHINA BAY STREET SAN FRANCISCO, CA 94134</p>	<p>PREPARED BY:  WRT Planning &amp; Design Wallace Roberts &amp; Todd, Inc. 414 Townsend Street, Suite 4 San Francisco, CA 94107 415.515.4222 fax 415.436.9597</p>	<p>CONSULTANTS:  GHD Inc. 505 Montgomery Street, Suite 2300 San Francisco CA 94111 USA T 415 283 4970 F 415 283 4970 W www.ghd.com</p>	<table border="1"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td></td> <td>10.25.13</td> <td>75% Construction Documents</td> </tr> <tr> <td></td> <td>04.01.14</td> <td>100% Construction Documents</td> </tr> </tbody> </table>	Rev	Date	Description		10.25.13	75% Construction Documents		04.01.14	100% Construction Documents	<p>Key Map</p>	<p>Job No: 5431-08 Date: 04.01.14 Scale:</p> <p>Drawn By: C. FINDLAY Checked By: J. LIN</p> <p>Drawing Title: <b>ELECTRICAL SINGLE-LINE DIAGRAM AND SCHEDULES</b></p> <p>Drawing No: <b>E6.1</b></p>
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**IRRIGATION NOTES**

- THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS MAY BE SHOWN WITHIN PAVED AREAS FOR GRAPHIC CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, CONDUIT, AND OTHER ITEMS WHICH MAY BE REQUIRED. INVESTIGATE THE STRUCTURAL AND FINISHED CONDITION AFFECTING THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES. IN THE EVENT OF FIELD DISCREPANCY WITH CONTRACT DOCUMENTS, PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATIONS. NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING AND STRUCTURES BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR REQUIRED REVISIONS.
- THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.
- IT IS THE RESPONSIBILITY OF THE MAINTENANCE CONTRACTOR AND/OR OWNER TO PROGRAM THE IRRIGATION CONTROLLER(S) TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL, WATER REQUIREMENTS, MOUNDS, SLOPES, SUN, SHADE AND WIND EXPOSURE.
- IT IS THE RESPONSIBILITY OF A LICENSED ELECTRICAL CONTRACTOR TO PROVIDE 120 VOLT A.C. (2.5 AMP DEMAND PER CONTROLLER) ELECTRICAL SERVICE TO THE CONTROLLER LOCATION(S). IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO COORDINATE THE ELECTRICAL SERVICE STUB-OUT TO THE CONTROLLER(S), PROVIDE PROPER GROUNDING PER CONTROLLER MANUFACTURER'S INSTRUCTIONS AND IN ACCORDANCE WITH LOCAL CODES.
- PROVIDE EACH IRRIGATION CONTROLLER WITH ITS OWN INDEPENDENT LOW VOLTAGE COMMON GROUND WIRE.
- INSTALL NEW BATTERIES IN THE IRRIGATION CONTROLLER(S) TO RETAIN PROGRAM IN MEMORY DURING TEMPORARY POWER FAILURES. USE QUANTITY, TYPE AND SIZE REQUIRED AS PER CONTROLLER MANUFACTURER'S INSTRUCTIONS.
- SCHEDULE A MEETING WHICH INCLUDES REPRESENTATIVES OF THE IRRIGATION CONTROLLER MANUFACTURER, THE MAINTENANCE CONTRACTOR, THE OWNER AND THE IRRIGATION CONTRACTOR AT THE SITE FOR INSTRUCTION ON THE PROPER PROGRAMMING AND OPERATION OF THE IRRIGATION CONTROLLER.
- IRRIGATION CONTROL WIRES: SOLID COPPER WITH U.L. APPROVAL FOR DIRECT BURIAL IN GROUND. COMMON GROUND WIRE: SIZE #12-1 WIRE WITH A WHITE INSULATING JACKET. CONTROL WIRE SERVICING REMOTE CONTROL VALVES: SIZE #14-1 WIRE WITH INSULATING JACKET OF COLOR OTHER THAN WHITE. SPLICES SHALL BE MADE WITH 3M-#3570 SEAL PACKS OR APPROVED EQUAL.
- INSTALL TWO SPARE CONTROL WIRES OF A DIFFERENT COLOR ALONG THE ENTIRE MAIN LINE. LOOP 36" EXCESS WIRE INTO EACH SINGLE VALVE BOX AND INTO ONE VALVE BOX IN EACH GROUP OF VALVES.
- SPLICING OF LOW VOLTAGE WIRES IS PERMITTED IN VALVE BOXES ONLY. LEAVE A 36" LONG, 1" DIAMETER COIL OF EXCESS WIRE AT EACH SPLICE AND A 36" LONG EXPANSION LOOP EVERY 100 FEET ALONG WIRE RUN. TAPE WIRES TOGETHER EVERY TEN FEET. DO NOT TAPE WIRES TOGETHER WHERE CONTAINED WITHIN SLEEVING OR CONDUIT.
- INSTALL GREEN PLASTIC VALVE BOXES WITH BOLT DOWN, NON HINGED COVER MARKED "IRRIGATION". BOX BODY SHALL HAVE KNOCK OUTS. ACCEPTABLE VALVE BOX MANUFACTURERS INCLUDE NDS, CARSON OR APPROVED EQUAL.
- INSTALL REMOTE CONTROL VALVE BOXES 12" FROM WALK, CURB, LAWN, HEADER BOARD, BUILDING OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, INSTALL EACH BOX 12" FROM THE WALK, CURB, LAWN, HEADER BOARD, BUILDING OR LANDSCAPE FEATURE, AND INSTALL EACH BOX 12" APART.
- VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS (NOT IN LAWN AREA).
- INSTALL A SCHEDULE 80 PVC BALL VALVE AT EACH REMOTE CONTROL VALVE OR A BRASS GATE VALVE AT REMOTE CONTROL VALVE MANIFOLDS. TO ISOLATE EACH REMOTE CONTROL VALVE FOR EASE OF MAINTENANCE. GATE VALVE SIZE SHALL BE SAME AS THE LARGEST REMOTE CONTROL VALVE IN MANIFOLD.

- FLUSH AND ADJUST IRRIGATION OUTLETS AND NOZZLES FOR OPTIMUM PERFORMANCE AND TO PREVENT OVER SPRAY ONTO WALKS, ROADWAYS, AND/OR BUILDINGS. SELECT THE BEST DEGREE OF THE ARC AND RADIUS TO FIT THE EXISTING SITE CONDITIONS AND THROTTLE THE FLOW OUTLET AT EACH VALVE TO OBTAIN THE OPTIMUM OPERATING PRESSURE FOR EACH CONTROL ZONE.
- SET SPRINKLER HEADS PERPENDICULAR TO FINISH GRADE.
- LOCATE EMITTER OUTLETS ON UPHILL SIDE OF PLANT OR TREE.
- LOCATE BUBBLERS ON UPHILL SIDE OF PLANT OR TREE.
- AT LOCATIONS WHERE LOW SPRINKLER HEAD DRAINAGE WILL CAUSE EROSION AND/OR EXCESS WATER, INSTALL A TORO 570Z SERIES POP-UP BODY WITH INTEGRAL CHECK VALVE. INSTALL A HUNTER HCV SERIES, KBI CV-SERIES, OR APPROVED EQUAL SPRING LOADED CHECK VALVE ON BUBBLER AND EMITTER RISERS WHERE REQUIRED.
- WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, USE CAUTION TO AVOID INJURY TO TREES AND TREE ROOTS. EXCAVATE BY HAND IN AREAS WHERE TWO (2) INCH AND LARGER ROOTS OCCUR. PAINT ROOTS ONE (1) INCH AND LARGER IN DIAMETER WITH TWO COATS OF TREE SEAL, OR EQUAL. BACK FILL TRENCHES ADJACENT TO TREE WITHIN TWENTY-FOUR (24) HOURS. WHERE THIS IS NOT POSSIBLE, SHADE THE SIDE OF THE TRENCH ADJACENT TO THE TREE WITH WET BURLAP OR CANVAS.
- NOTIFY LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.
- THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
- IRRIGATION DEMAND: REFER TO PLANS.
- PIPE SIZING SHOWN ON THE DRAWINGS IS TYPICAL AS CHANGES IN LAYOUT OCCUR DURING STAKING AND CONSTRUCTION THE SIZE MAY NEED TO BE ADJUSTED ACCORDINGLY.
- PIPE THREAD SEALANT COMPOUND SHALL BE RECTOR SEAL #5.
- THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR MINOR CHANGES IN THE IRRIGATION LAYOUT DUE TO OBSTRUCTIONS NOT SHOWN ON THE IRRIGATION DRAWINGS SUCH AS LIGHTS, FIRE HYDRANTS, SIGNS, ELECTRICAL ENCLOSURES, ETC.

**CONTROLLER NOTES**

- PRIOR TO INSTALLATION, CALL MANUFACTURER REPRESENTATIVE (GREGG BLACK, 415.858.9710 OR 888.685.5505) TO NOTIFY THAT CONTROLLER INSTALLATION PROCESS IS BEGINNING.
- INSTALL ETWATER CONTROLLER PER USER MANUAL. (USE 110VAC CIRCUIT TO POWER THE CONTROLLER.)
- DOWNLOAD LANDSCAPE CHECKLIST FROM [WWW.ETWATER.COM/PUBLIC/SUPPORT.HTML](http://WWW.ETWATER.COM/PUBLIC/SUPPORT.HTML)
- PERFORM "MANUAL WATER" ON ALL ZONES TO CONFIRM VALVE WILL ACTIVATE AND TO OBTAIN DATA FOR THE LANDSCAPE CHECKLIST. (IF USING SUBSURFACE IRRIGATION, USE VOLTMETER TO CONFIRM THE CONTROLLER IS SENDING 24VAC TO THE VALVE.)
- PERFORM "TEST DIAL" TO CONFIRM CONTROLLER WILL SUCCESSFULLY CONNECT TO ETWATER SERVERS.
- REGISTER CONTROLLER AT [WWW.ETWATER.COM](http://WWW.ETWATER.COM) USING AN EMAIL ADDRESS FOR THE MOST APPROPRIATE PERSON WHO CAN RESPOND TO A CONTROLLER/LANDSCAPE ISSUE.
- CONFIGURE ZONES, BEING SPECIFIC WITH THE ZONE NAMES, ON THE WEB SITE PER THE DATA IN THE LANDSCAPE CHECKLIST.
- INSPECT CONTROLLER DURING THE NEXT SCHEDULED IRRIGATION EVENT TO ENSURE SCHEDULES ARE BEING EXECUTED. (IF USING SUBSURFACE IRRIGATION, USE VOLTMETER TO CONFIRM THE CONTROLLER IS SENDING 24VAC TO THE VALVE.)
- VISUALLY INSPECT LANDSCAPE FIVE DAYS AFTER INSTALLATION. IF ZONES ARE DETERMINED TO BE TOO WET OR DRY, ADJUST SCHEDULES VIA "WATERING ADJUSTMENTS" FEATURE ON WEB SITE.
- VISUALLY INSPECT LANDSCAPE 10 DAYS AFTER INSTALLATION, AND ADJUST.
- CALL GREGG BLACK TO SET UP A SITE VISIT.
- DIRECT MAINTENANCE CREW OR CREW LEADER TO REPORT LANDSCAPE STATUS TO SITE/CONTROLLER/LANDSCAPE MANAGER AT REGULAR INTERVALS. THE MAINTENANCE CREW IS ALWAYS THE BEST RESOURCE FOR CURRENT LANDSCAPE STATUS.

**WATER USE CALCULATIONS**

1. Hydrozone Table  
2. Maximum Applied Water Use  
3. Estimated Total Water Use

**1. HYDROZONE CALCULATION TABLE**  
ETO = 35.1

HYDROZONE	IRRIGATION TYPE	IRRIGATION EFFICIENCY (IE)	PLANT FACTOR (PF)	AREA (HA)	PF x HA	ETWU
SHRUB-LOW	DRIP	0.9	0.3	11010	3303	79867
SHRUB-MED	DRIP	0.9	0.5	13484.2	6742	163024
TURF-HIGH	SPRAY	0.7	0.7	34582.2	24208	752578
				<b>Total sq. ft:</b>	<b>59076.4</b>	<b>995468</b>

**2. MAXIMUM APPLIED WATER ALLOWANCE (MAWA) = 1,285.621**

**Maximum Applied Water Allowance (MAWA) Gallons Per Year**  
MAWA = (ETO)(0.62)(LA \* 0.7) + (0.3 \* SLA)

ETO = Reference evapotranspiration  
0.7 = ET adjustment factor  
LA = Landscaped Area (square feet)  
0.62 = Conversion factor (gallons per square foot per year)

**3. ESTIMATED TOTAL WATER USE (ETWU) (gallons) = 995,468**

**Estimated Total Water Use (ETWU) Gallons Per Year**  
ETWU = (ETO)(62)(PF)(W/AE)

ETO = Reference evapotranspiration  
PF = Plant factor for hydrozones  
HA = Hydrozone area (square feet)  
0.62 = Conversion factor (gallons per square foot per year)  
IE = Irrigation efficiency (0.90) bubbler/drip

**IRRIGATION LEGEND**

SYMBOL	NUMBER	DESCRIPTION	NOZZLE GPM	OPERATING PSI	OPERATING RADIUS (FEET)
	TR50XTP-6	TORO POP-UP GEAR DRIVEN ROTOR (TURF)	6.5	50	30-40
	TR50XTP-6	TORO POP-UP GEAR DRIVEN ROTOR (TURF)	6.5	50	30-40
	TR50XTP-4.5	TORO POP-UP GEAR DRIVEN ROTOR (TURF)	4.5	50	30-40
	TR50XTP-1.5	TORO POP-UP GEAR DRIVEN ROTOR (TURF)	1.4	40	20-30
	TR50XTP-1.5	TORO POP-UP GEAR DRIVEN ROTOR (TURF)	1.4	40	20-30
	570Z-PRX-6P-COM-0-T-15-F,T,O,H,Q	TORO POP-UP SPRAY SPRINKLER (TURF)	1,781.16,0.58	30	12-15
	570Z-PRX-6P-COM-0-T-12-T,O,H,Q	TORO POP-UP SPRAY SPRINKLER (TURF)	0,490.74,0.37	30	10-12
	570Z-PRX-6P-COM-0-T-10-F,H	TORO POP-UP SPRAY SPRINKLER (TURF)	1,08,0.51	30	8-10
	570Z-PRX-6P-COM-0-T-8-H	TORO POP-UP SPRAY SPRINKLER (TURF)	0.33	30	6-8
	570Z-PRX-6P-COM-0-T-5-H	TORO POP-UP SPRAY SPRINKLER (TURF)	0.13	30	3-5
	570Z-PRX-P-COM-0-T-4X30 SST	TORO POP-UP SPRAY SPRINKLER (TURF)	0.66	30	4 X 30
	FB-25-PC W/570S	TORO BUBBLER (SHRUB)	0.25	30	TRICKLE
	FB-25-PC W/570S	TORO BUBBLER (TREE) (2 PER TREE)	0.5	30	TRICKLE
	CLT-1000-S	KBI BALL VALVE (FLUSH VALVE AT DRIP ZONES)			
	10-F-01	NETAFIM OPERATION INDICATOR			
	220 SERIES	TORO REMOTE CONTROL VALVE			
	220-27-04/T-ALFD10150-L	TORO REMOTE CONTROL VALVE WITH A PRESSURE REGULATOR (SET TO 45 PSI) AND A 1" DISC FILTER			
	220-26-6	TORO MASTER CONTROL VALVE (NORMALLY CLOSED)			
	IR220P-1.5"	DATA INDUSTRIAL FLOW SENSOR			
	33 DNP	RAIN BIRD QUICK COUPLING VALVE			
	975XLSEU-2	WILKENS REDUCED PRESSURE BACK FLOW ASSEMBLY			
	T-113 SERIES	NIBCO GATE VALVE (2.5" AND SMALLER)			
	-	WATER METER-- REFER TO PLANS FOR SIZE			
	205W-32	ET WATER SMART BOX CONTROLLER IN A PEDIESTAL ENCLOSURE. WITH ET WATER WEATHER SERVICE, FLOW SENSING, REMOTE CONTROL, AND CELL COMMUNICATION. CONTACT ET WATER SALES REPRESENTATIVE GREGG BLACK AT (415)858-9710 PRIOR TO INSTALLATION.			
		CONTROLLER AND STATION NUMBER			
		REMOTE CONTROL VALVE SIZE (IN INCHES)			
		CONTROLLER AND STATION NUMBER			
		AREA (SQ. FT.) FLOW (GPM)			
		REMOTE CONTROL VALVE SIZE (IN INCHES)			
		MAIN LINE: 2.5" AND SMALLER: SCHEDULE 40 GALVANIZED STEEL PIPE WITH GALVANIZED FITTINGS, 24" COVER.			
		LATERAL LINE: 3/4" AND LARGER: SCHEDULE 40 PVC PLASTIC PIPE WITH SCHEDULE 40 PVC SOLVENT WELD FITTINGS, 18" COVER, 24" UNDER PAVING.			
		NOTE: ALL PLASTIC PVC PIPE SHALL BE PW PIPE "PW PURPLE PLUS", APACHE "PURPLE PIPE", OR APPROVED EQUAL FOR USE WITH RECYCLED WATER SYSTEMS. GALVANIZED PIPE SHALL BE LABELED WITH PURPLE RECYCLED WARNING TAPE BY CHRISTY.			
		SLEEVING: SCHEDULE 40 PVC PLASTIC PIPE. COVER TO BE AS INDICATED IN SPECIFICATIONS OR AS INDICATED ABOVE FOR PIPE DEPTH OF COVER.			
		DRIP LINE: NETAFIM TECHLINE CV SERIES DRIFLINE, PART # TLCV4-1B. TUBING TO BE INSTALLED 4" BELOW GRADE IN A 18" O.C. GRID ACCORDING TO DETAILS. SEE DETAILS FOR FURTHER INFORMATION.			

<p><b>MISSION BAY PARKS</b> <b>P26</b> <b>100% Construction Document Set</b></p>		<p>PREPARED FOR: OWNER: FOCIL-MB, LLC DEVELOPMENT MANAGER:</p>	<p>PREPARED BY: MISSION BAY DEVELOPMENT GROUP</p>	<p>CONSULTANTS: <b>Russell D. Mitchell Associates, Inc.</b> 2760 Camino Diablo Walnut Creek, CA 94597 tel 925.939.3985 • fax 925.932.5671 www.rdmirrigation.com</p>	Rev	Date	Description	Stamp: 	Job No: 5431-08	Drawn By: DD, LT
					10.25.13	76% Construction Documents	04.01.14		100% Construction Documents	Date: 04.01.14
<p>Scale: N/A</p> <p>Drawing Title: <b>IRRIGATION NOTES AND LEGEND</b></p> <p>Drawing No: <b>I-1.1</b></p> <p>SHEET xx OF xx</p>										

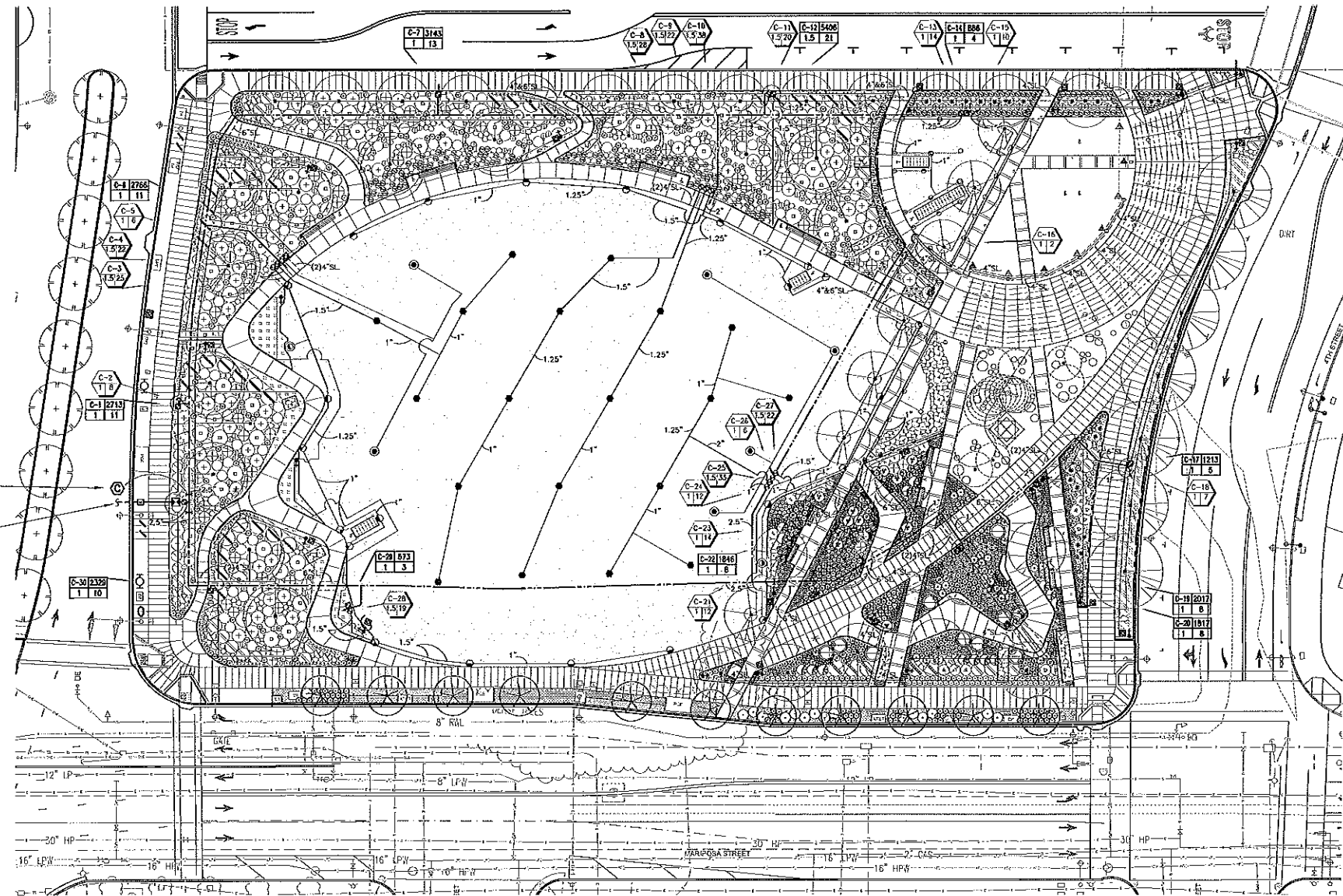
IRRIGATION CONTROLLER "C" MOUNT ON PEDESTAL AT THIS LOCATION AS DETAILED AND AS DIRECTED BY ARCHITECT. CONNECT TO 120 VOLT A.C. ELECTRICAL SERVICE INSTALLED AT THIS LOCATION UNDER ELECTRICAL CONTRACT. IRRIGATION CONTRACTOR SHALL COORDINATE LOCATION OF ELECTRICAL SERVICE PRIOR TO CONSTRUCTION.

1.5" WATER METER WITH 2" SERVICE LINE FOR IRRIGATION TO BE PROVIDED BY UTILITY CONTRACTOR. MAXIMUM IRRIGATION DEMAND: 38 GPM AT A MINIMUM 75 PSI STATIC PRESSURE AT WATER METER LOCATION.

NOTES:

- ONE BUBBLER SYMBOL IS SHOWN AT TREES FOR GRAPHIC CLARITY ONLY. INSTALL TWO BUBBLERS AT EACH TREE AS DETAILED.
- IRRIGATION EQUIPMENT MAY BE SHOWN WITHIN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN PLANTED AREAS. IRRIGATION PIPE AND WIRE CROSSING BENEATH HARDSCAPE SURFACES SHALL BE CONTAINED WITHIN SLEEVING OR SCHEDULE 40 PVC CONDUIT. SLEEVING SIZE SHALL BE A MINIMUM OF TWO TIMES THE AGGREGATE DIAMETER OF ALL PIPES CONTAINED WITHIN SLEEVE. PROVIDE VERTICAL SWEEP FOR ALL ELECTRICAL CONDUIT ON EACH SIDE OF HARDSCAPE AND TERMINATE ENDS AT 12" MINIMUM DEPTH AND 12" FROM HARDSCAPE SURFACE.
- UN-SIZED LATERAL LINE PIPING LOCATED DOWN STREAM OF 1" PIPING SHALL BE 3/4" IN SIZE (TYPICAL).
- SIZING OF LATERAL PIPE SHALL BE AS FOLLOWS:
 

1/2"	0-6 GPM
3/4"	7-12 GPM
1"	13-20 GPM
1.25"	21-32 GPM
1.5"	33-50 GPM



MISSION BAY PARKS

P26

100% Construction Document Set

PREPARED FOR:

OWNER:  
FOCE-MB, LLC

DEVELOPMENT MANAGER:



MISSION BAY DEVELOPMENT GROUP

410 CHINA BASH STREET SAN FRANCISCO CA 94109  
PHONE 415-555-6600 WWW.MBDEVGROUP.COM

PREPARED BY:



Planning & Design

Wallace Roberts & Todd, Inc.  
444 Townsend Street, Suite 4  
San Francisco, CA 94107  
tel 415.436.5837 fax 415.436.5837

CONSULTANTS:

Russell D. Mitchell Associates, Inc.

2760 Camino Diablo  
Walnut Creek, CA 94597  
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www.rmairrigation.com

Rev	Date	Description
	10.25.13	75% Construction Documents
	04.01.14	100% Construction Documents

Stamp:



Job No: 5431-08

Date: 04.01.14

Scale: 1"=20'00"

Drawing Title:

IRRIGATION PLAN

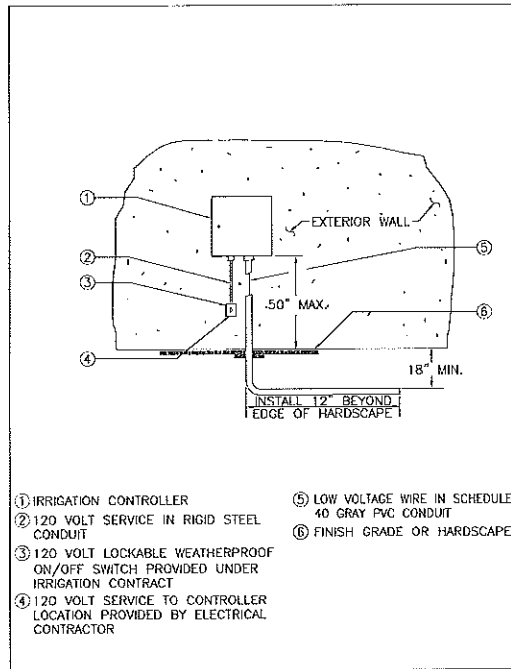
Drawing No:

I-1.2

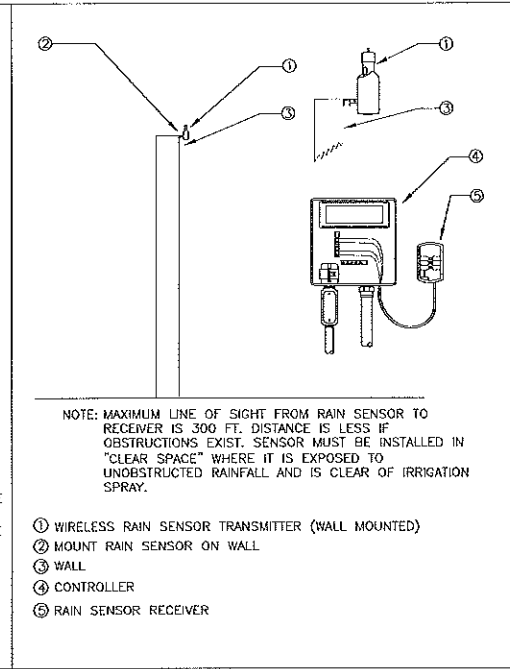
SHEET xx OF xx

Drawn By: DD, LT

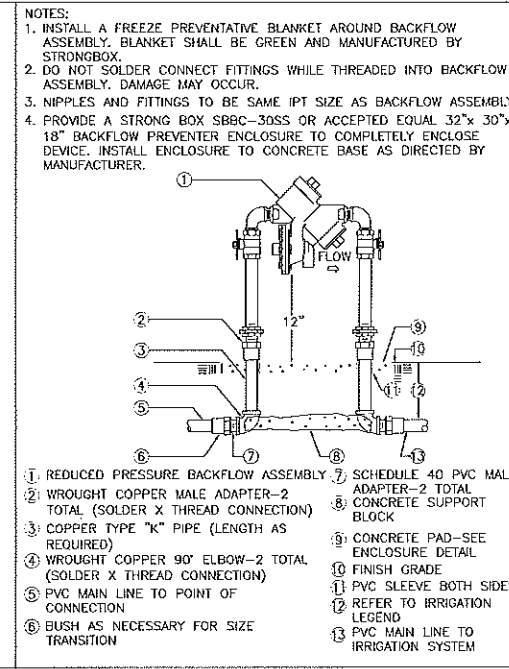
Checked By: JS, JS



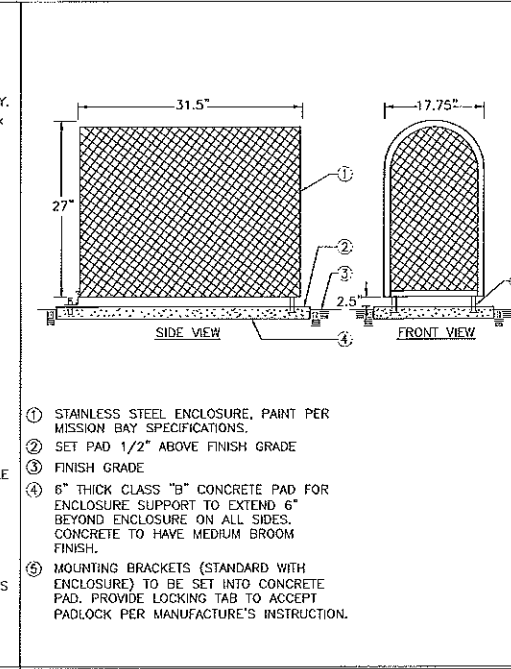
**1 EXTERIOR MOUNTED CONTROLLER**  
SCALE: NONE  
DET: EXT-CONT



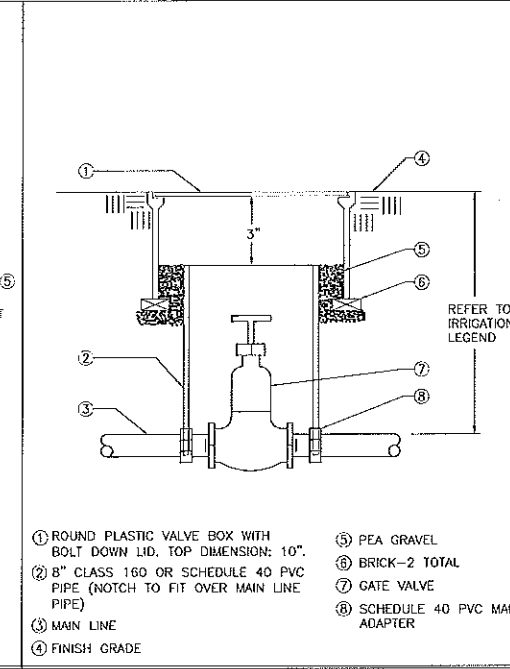
**2 WIRELESS RAIN SENSOR-WALL MOUNT**  
SCALE: NONE  
DET: RAINSEN-2



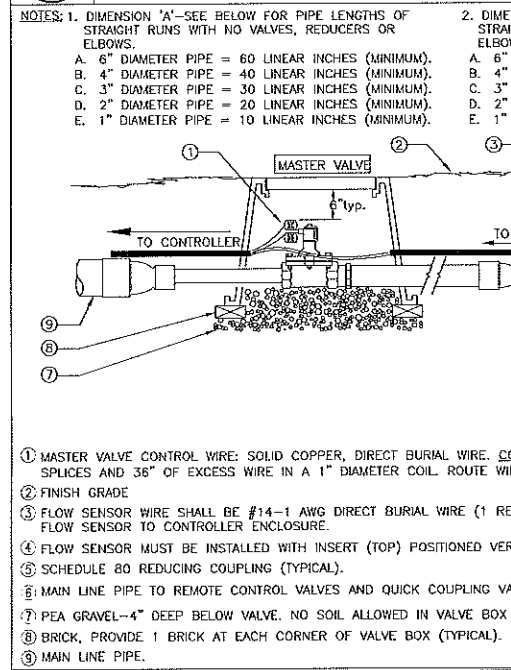
**3 REDUCED PRESSURE BACKFLOW ASSEMBLY**  
SCALE: NONE  
DET: RPB-1



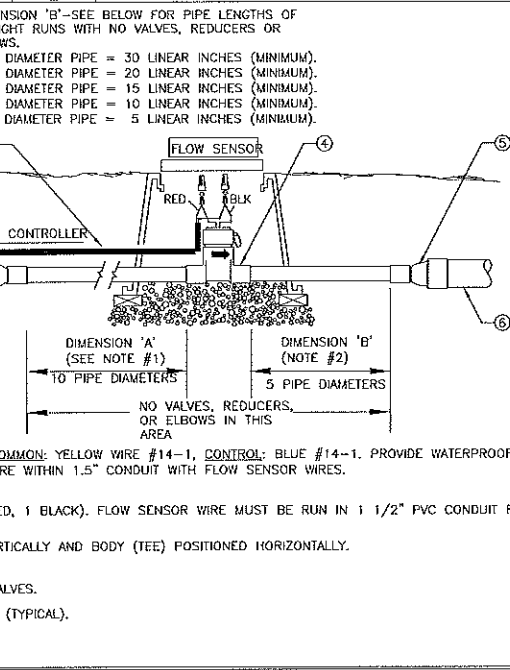
**4 BACKFLOW PREVENTER ENCLOSURE**  
SCALE: NONE  
DET: ENC-SMOOTH



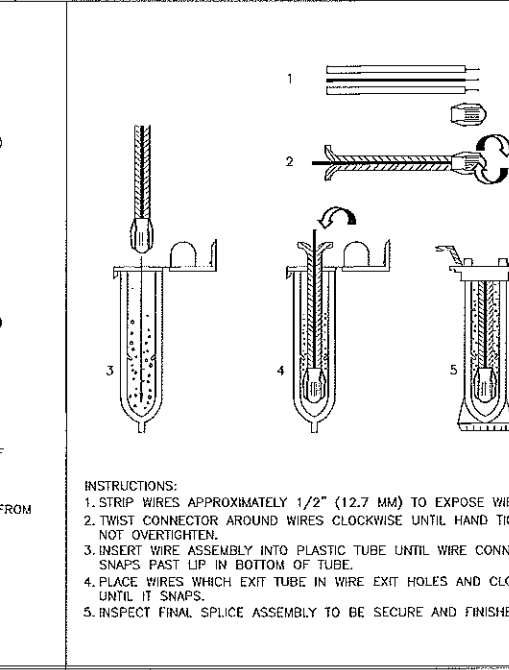
**5 GATE VALVE - 2 1/2" AND SMALLER**  
SCALE: NONE  
DET: GVD



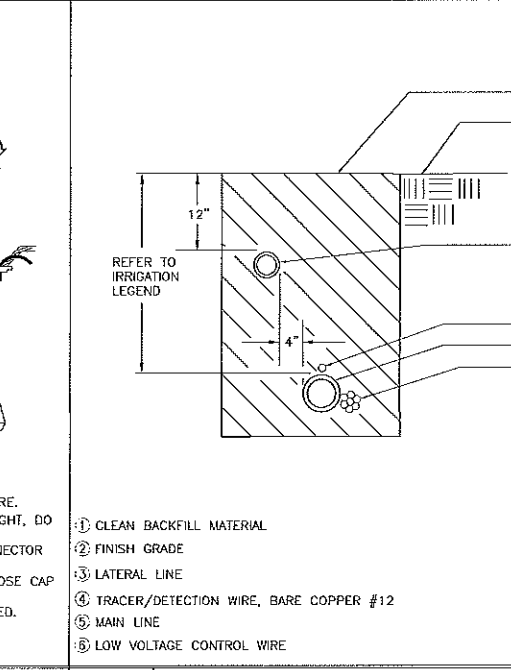
**6 FLOW SENSOR & MASTER VALVE INSTALLATION**



**7 WEATHERPROOF SPLICE ASSEMBLY**  
SCALE: NONE  
DET: WIRE-SPL



**8 TRENCHING**  
SCALE: NONE  
DET: TRENCH



**9 VALVE BOX INSTALLATION**  
SCALE: NONE  
DET: VALVE-B1

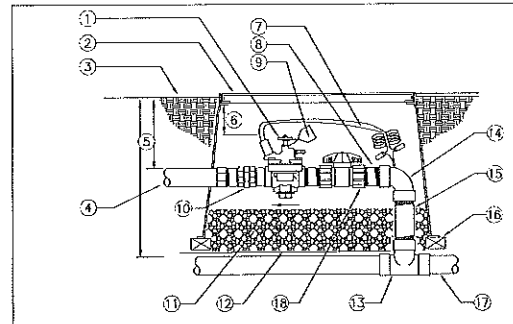
**MISSION BAY PARKS**  
**P26**  
100% Construction Document Set

PREPARED FOR: OWNER: FOCIL-MB, LLC  
DEVELOPMENT MANAGER: MBDG  
PREPARED BY: WRT Planning & Design  
CONSULTANTS: Wallace Roberts & Todd, Inc.  
2760 Camino Diablo  
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www.rmatirrigation.com

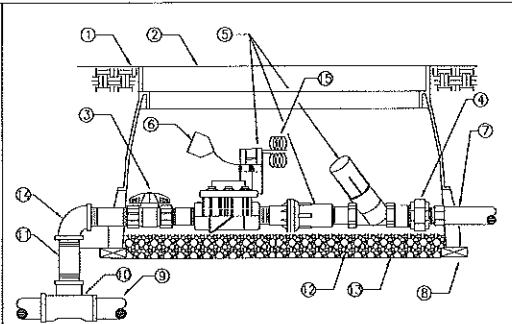
Rev	Date	Description
10.25.13		75% Construction Documents
04.01.14		100% Construction Documents

Stamp: PROFESSIONAL LANDSCAPE ARCHITECT  
4361  
STATE OF CALIFORNIA

Job No: 5431-08  
Date: 04.01.14  
Scale: NDB&E-0  
Drawing Title: IRRIGATION DETAILS  
Drawing No: I-1.3  
SHEET xx OF xx

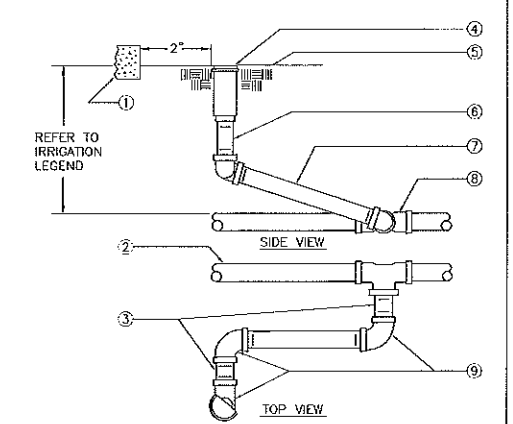


- 1 REMOTE CONTROL VALVE WITH FLOW CONTROL AND MANUAL BLEED (PRESSURE REGULATOR WHERE SHOWN ON PLANS)
- 2 RECTANGULAR CONCRETE VALVE BOX. ONE VALVE PER BOX— NO EXCEPTIONS. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL.
- 3 FINISH GRADE
- 4 PVC LATERAL LINE
- 5 REFER TO IRRIGATION LEGEND
- 6 3" MIN 6" MAX
- 7 VALVE CONTROL WIRE— PROVIDE 3M-DBY SEAL PACKS AT ALL SPLICES AND 36" OF EXCESS UF WIRE IN A 1" DIAMETER COIL
- 8 SCHEDULE 80 PVC NIPPLE (4 TOTAL)
- 9 VALVE I.D. TAG (CONTROLLER AND STATION NUMBER).
- 10 SCHEDULE 80 PVC THREADED UNION
- 11 PEA GRAVEL— 4" DEEP BELOW VALVE (NO SOIL IN VALVE BOX)
- 12 22 GAUGE 1" SQUARE WIRE MESH
- 13 UPC APPROVED SCHEDULE 40 PVC TEE
- 14 SCHEDULE 80 PVC 90° ELBOW (XT)
- 15 SCHEDULE 40 GALVANIZED NIPPLE— LENGTH AS REQUIRED.
- 16 BRICK—1 EACH CORNER
- 17 MAIN LINE
- 18 SPEARS TU2000 SCHEDULE 80 PVC UNION BALL VALVE (ONE PER VALVE)

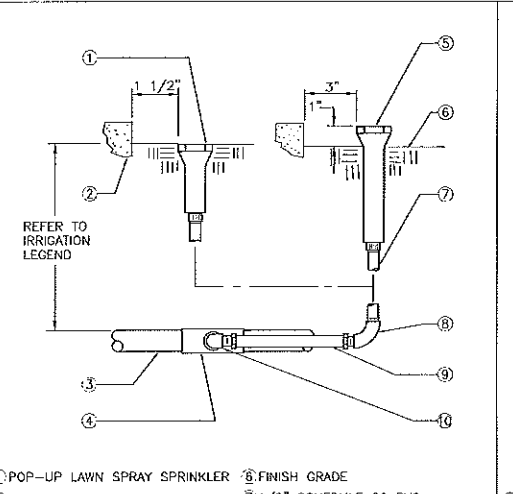


- 1 FINISH GRADE
- 2 RECTANGULAR CONCRETE VALVE. ONE VALVE PER BOX— NO EXCEPTIONS. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL.
- 3 SPEARS TU2000 SCHEDULE 80 PVC UNION BALL VALVE (ONE PER VALVE)
- 4 SCHEDULE 80 PVC THREADED UNION
- 5 TORO DRIP ZONE KIT, REFER TO LEGEND.
- 6 VALVE I.D. TAG (CONTROLLER AND STATION NUMBER).
- 7 PVC LATERAL LINE
- 8 BRICK—1 EACH CORNER
- 9 PVC MAIN LINE
- 10 UPC APPROVED SCHEDULE 40 PVC TEE
- 11 SCHEDULE 40 GALVANIZED NIPPLE—LENGTH AS REQUIRED.
- 12 PEA GRAVEL— 4" DEEP BELOW VALVE (NO SOIL IN VALVE BOX)
- 13 22 GAUGE 1" SQUARE WIRE MESH
- 14 SCHEDULE 80 PVC 90° ELBOW (SXT)
- 15 VALVE CONTROL WIRE— PROVIDE 3M-DBY SEAL PACKS AT ALL SPLICES AND 36" OF EXCESS UF WIRE IN A 1" DIAMETER COIL

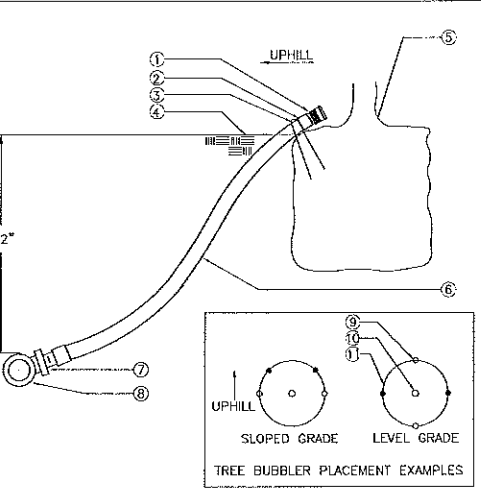
NOTE: 1. SET SPRINKLER 1" ABOVE FINISH GRADE AT TIME OF INSTALLATION— LOWER TO FINISH GRADE WHEN TURF IS WELL ESTABLISHED.  
2. NIPPLES AND FITTINGS TO BE SAME IPT SIZE AS ROTARY SPRINKLER IPT INLET THREAD SIZE.



- 1 WALL, WALK, CURB OR HEADER
- 2 PVC LATERAL LINE
- 3 3" LONG SCHEDULE 80 PVC THREADED NIPPLE
- 4 POP-UP ROTARY SPRINKLER
- 5 FINISH GRADE
- 6 SCHEDULE 80 PVC THREADED NIPPLE (LENGTH AS REQUIRED)
- 7 10" LONG SCHEDULE 80 PVC THREADED NIPPLE
- 8 UPC APPROVED SCHEDULE 40 PVC TEE OR ELBOW
- 9 SCHEDULE 80 PVC THREADED 90° ELL



- 1 POP-UP LAWN SPRAY SPRINKLER
- 2 WALL, WALK, CURB OR BUILDING
- 3 PVC LATERAL LINE
- 4 UPC APPROVED SCHEDULE 40 PVC TEE OR ELBOW
- 5 POP-UP SHRUB SPRAY SPRINKLER OR BUBBLER
- 6 FINISH GRADE
- 7 1/2" SCHEDULE 80 PVC THREADED NIPPLE (LENGTH AS REQUIRED - TYPICAL)
- 8 1/2" SCHEDULE 40 PVC THREADED 90° ELL
- 9 COBRA CONNECTOR MODEL CC-600 (1/2"x6")
- 10 1/2" SCHEDULE 40 PVC STREET ELL



- 1 BUBBLER (TO BE INSTALLED ON TOP OF ROOTBALL)
- 2 1/2" SCH. 40 SPEARS BLACK MALE ADAPTER
- 3 6" STEEL STAPLE
- 4 FINISH GRADE
- 5 TREE OR SHRUB ROOTBALL
- 6 1/2" IPS FLEXIBLE PVC
- 7 PVC TEE (SST), ELBOW (ST) OR FEMALE ADAPTER
- 8 PVC LATERAL LINE
- 9 TREE STAKES
- 10 TREE OR SHRUB
- 11 EDGE OF ROOTBALL (TYPICAL)

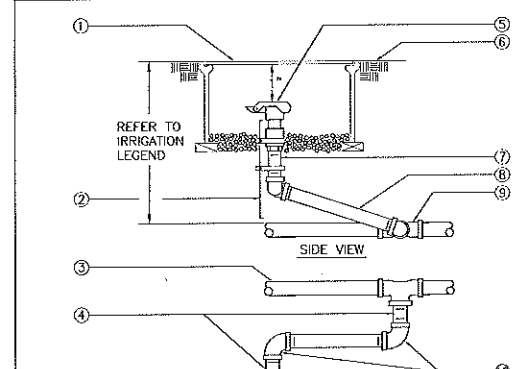
1 REMOTE CONTROL VALVE  
SCALE: NONE  
DET: RCV-LN-BV

2 REMOTE CONTROL VALVE (DRIPZONE)  
SCALE: NONE  
DET: RCV-FILTER3

3 POP-UP LAWN ROTARY SPRINKLER RISER  
SCALE: NONE  
DET: LAROTARY

4 POP-UP SPRAY SPRINKLER RISER  
SCALE: NONE  
DET: SH/LW-POPSP

5 TREE AND SHRUB BUBBLER  
SCALE: NONE  
DET: TREE-SBUB



- NOTE: NIPPLES AND FITTINGS TO BE SAME SIZE AS VALVE IPT INLET THREAD SIZE
- 1 ROUND PLASTIC VALVE BOX WITH BOLT DOWN LID. TOP DIMENSION: 10".
  - 2 1 1/4" x 1 1/4" x 3/16" ANGLE IRON 30" LONG W/2 STAINLESS STEEL STRAPS (ONE AROUND QCV)
  - 3 PVC MAIN LINE
  - 4 3" LONG SCHEDULE 80 PVC THREADED NIPPLE
  - 5 QUICK COUPLING VALVE
  - 6 FINISH GRADE
  - 7 SCHEDULE 80 PVC THREADED NIPPLE
  - 8 10" LONG SCHEDULE 80 PVC THREADED NIPPLE
  - 9 UPC APPROVED SCHEDULE 40 PVC TEE OR ELBOW
  - 10 SCHEDULE 80 PVC THREADED 90° ELL

6 QUICK COUPLING VALVE  
SCALE: NONE  
DET: QUICK-C2

**MISSION BAY PARKS**  
**P26**  
100% Construction Document Set

PREPARED FOR: OWNER: FOCIL-MB, LLC  
DEVELOPMENT MANAGER: MIBDC

PREPARED BY: WALLACE ROBERTS & TODD, INC.

CONSULTANTS: RUSSELL D. MITCHELL ASSOCIATES, INC.

Rev	Date	Description
	10.25.13	75% Construction Documents
	04.01.14	100% Construction Documents

Stamp: PROFESSIONAL LANDSCAPE ARCHITECT  
4951  
STATE OF CALIFORNIA

Job No: 5431-08  
Date: 04.01.14  
Scale: NONE-0"

Drawn By: DD, LT  
Checked By: JG, JS

**IRRIGATION DETAILS**

Sheet No: I-1.4  
SHEET xx OF xx



PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING/NOTES
<b>TREES</b>				
	<i>ACER RUBRUM</i> "OCTOBER GLORY"	RED MAPLE	48" BOX OR 3" INCH CALIPER	PER PLAN / SELECT SPECIMENS WITH MATCHING FORM
	<i>AESCULUS CALIFORNICA</i>	CALIFORNIA BUCKEYE	36" BOX	PER PLAN / SELECT SPECIMENS WITH SIMILAR FORM
	<i>CERIS OCCIDENTALIS</i>	WESTERN REDBUD	24" BOX	PER PLAN / SELECT SPECIMENS WITH BRANCHING AT 5' OR LESS
	<i>CERIS OCCIDENTALIS</i> "MULTI TRUNK"	WESTERN REDBUD (MULTI-TRUNK)	24" BOX	PER PLAN / SELECT SPECIMENS WITH 3 TO 5 TRUNKS, USE DUCKBILL STAKING SYSTEM
	<i>SOPHORA JAPONICA</i>	SCHOLAR TREE	48" BOX OR 3" INCH CALIPER	PER PLAN
	<i>QUERCUS AGROBOLIA</i>	COASTIVE OAK	36" BOX	PER PLAN / SELECT FOR NATURAL FORM AND CHARACTER
	<i>QUERCUS SERRA</i>	CORK OAK	36" BOX	PER PLAN / SELECT TO MATCH OWNERS STREET EXAMPLES

PLANTING NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID UTILITIES.
- CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE AUTHORIZED CITY ENGINEER. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.
- SEE SPECIFICATIONS FOR PLANTING REQUIREMENTS, MATERIALS, EXECUTION, AND MAINTENANCE.
- SEE DETAILS AND SPECIFICATIONS FOR PLANTING STAKING METHOD AND BACKFILL REQUIREMENTS.
- IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTRACTOR SHALL CONTACT CITY ENGINEER FOR RESOLUTION. FAILURE TO NAME SUCH CONFLICTS KNOWN WILL RESULT IN CONTRACTOR'S LIABILITY FOR MATERIALS RELOCATION.
- GROUND COVERS SHALL BE SPACED PER DETAILS.
- TREE LOCATIONS MAY BE ADJUSTED BY THE FIELD TO SUIT SPECIFIC SITE REQUIREMENTS AS DIRECTED BY CITY ENGINEER. STAKE ALL TREE PLANTING LOCATIONS FOR APPROVAL PER SPECIFICATION.
- ALL WORK TO BE PERFORMED BY LICENSED (C27) CONTRACTORS AND EXPERIENCED WORKERS, BY CONSTRUCTION MANAGER PRIOR TO PLANTING.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES AND LANDSCAPING THAT IS DESIGNATED TO REMAIN PER SPECIFICATION. THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCING, BARRICADES OR OTHER SUITABLE GUARDS OUTSIDE DRIP LINE (OUTER PERIMETER OF BRANCHES) TO PROTECT FROM DAMAGE TREES AND OTHER PLANTS THAT ARE TO REMAIN. DO NOT STORE CONSTRUCTION MATERIALS WITHIN DRIP LINES OF TREES TO REMAIN. DO NOT PERMIT VEHICLES WITHIN DRIP LINE. RESTRICT FOOT TRAFFIC WITHIN DRIP LINE TO AVOID EXCESSIVE SOIL COMPACTION. ALL BARRICADES AND PROTECTIVE FENCING SHALL BE PUT IN PLACE PRIOR TO COMMENCEMENT OF ANY OTHER CONSTRUCTION ACTIVITY.
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- DO NOT INSTALL LAMN WITHIN 2' OF BASE OF TREE. PROVIDE MULCH TO A DEPTH OF 2"

PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY.
<b>SHRUBS</b>					
<b>NATIVE COASTAL SCRUB &amp; PRAIRIE</b>					
	<i>ARTEMISIA CALIFORNICA</i>	CALIFORNIA SAGEBRUSH	5 gal	PER PLAN	152
	<i>BACCHARIS P. THURBERGII</i>	COTONE BRUSH	5 gal	PER PLAN	58
	<i>BROdiaea pulchella</i>	WILD HYACINTH	1 gal	PER PLAN	163
	<i>Ceanothus 'YANKEE POINT'</i>	YANKEE POINT CEANOTHUS	5 gal	PER PLAN	36
	<i>EPHEDRA AFRICANA</i>	CALIFORNIA FRISKIA	1 gal	PER PLAN	58
	<i>IPS DOUGLASSIANA 'JOY'</i>	DOUGLASS IRIS	1 gal	PER PLAN	335
	<i>LUPINUS ALBAFRONS</i>	SILVER LUPINE	5 gal	PER PLAN	107
	<i>LUPINUS VARICOLOR</i>	YELLOW LUPINE	5 gal	PER PLAN	97
	<i>ATUNIA BERGIA ANGENS</i>	DEER GRASS	5 gal	PER PLAN	10
	<i>VERBENA GLAUCA 'DE LA ROMA'</i>	DE LA ROMA VERBENA	1 gal	PER PLAN	228
	<i>SALVA BRITANICA</i>	HONEYCREEP SAGE	1 gal	PER PLAN	60
<b>SHRUBS</b>					
<b>URBAN APPROPRIATE NATIVE/ DROUGHT TOLERANT</b>					
	<i>CAREX PACSA</i>	SEDE	1 gal	PER PLAN	210
	<i>Ceanothus COVCHA</i>	CALIFORNIA MOUNTAIN LILAC	5 gal	PER PLAN	5
	<i>Ceanothus 'HEARTS DESIRE'</i>	HEARTS DESIRE CALIFORNIA LILAC	5 gal	PER PLAN	32
	<i>ERIGACON ELAUCUS 'BOUNTIFUL'</i>	SEASIDE DADY	1 gal	PER PLAN	245
	<i>ERIGACON LATHOLUUM</i>	COAST BUCKWHEAT	1 gal	PER PLAN	42
	<i>HETEROTHECA SESUOIDERA BOLANDERII</i>	GOLDEN ASTER	1 gal	PER PLAN	12
	<i>IPS DOUGLASSIANA 'JOY'</i>	DOUGLASS IRIS	1 gal	PER PLAN	335
	<i>LOMANOIA COY. 'SEASCAP'</i>	SEASCAP MAT PUSH	1 gal	PER PLAN	127
	<i>LUPINUS ALBAFRONS</i>	SILVER LUPINE	1 gal	PER PLAN	SEE ABOVE
	<i>LUPINUS FORBOSUS</i>	SUMMER LUPINE	1 gal	PER PLAN	5
	<i>LUPINUS VARICOLOR</i>	VARI-COLOR LUPINE	1 gal	PER PLAN	8
	<i>SALVA MEXICANA</i>	MEXICAN SAGE	5 gal	PER PLAN	18
	<i>SANTOLINA CHAMAECYPARISUS</i>	GRAY LAVENDER COTTON	1 gal	PER PLAN	20
	<i>VERBENA EDWARDSIENSIS</i>	PURPLETOP VERVAIN	1 gal	PER PLAN	47
<b>URBAN GARDEN / BOTANICAL PLANTING</b>					
	<i>ACHILLEA MILLEFOLIUM</i>	YARROW	1 gal	PER PLAN	
	<i>ACHILLEA FILIPENDULA</i>	YERBA COSTA COLIMON YARROW	1 gal	PER PLAN	31
	<i>ALSTROERIA AUREA</i>	LILY OF THE INCAS	1 gal	PER PLAN	72
	<i>JARVIAA HAKUTIA 'SILVA'</i>	WHITE SEA THISTLE	4"	PER PLAN	148
	<i>COREOPSIS LANCEOLATA</i>	LANCELEAF COREOPSIS	1 gal	PER PLAN	215
	<i>ERIGACON LANCEOLATUM</i>	SUNFLOWER	1 gal	PER PLAN	11
	<i>FRAGARIA CHILDENSIS</i>	SAND STRAWBERRY	1 gal	PER PLAN	33
	<i>HEBE 'PATTY'S PURPLE'</i>	PATTY'S PURPLE	5 gal	PER PLAN	28
	<i>HEMEROCALLIS 'BETTY WOODS'</i>	BETTY WOODS DAY LILY	1 gal	PER PLAN	40
	<i>HETEROCALLIS 'VEVEBA ORANGE CRUSH'</i>	VEVEBA ORANGE CRUSH DAY LILY	1 gal	PER PLAN	135
	<i>HEUCHERA 'PAVANA'</i>	ISLAND ALUM ROOT	1 gal	PER PLAN	120
	<i>IPS DOUGLASSIANA 'PACIFIC COAST INFERIOR PURPLE'</i>	IPS 'PACIFIC COAST INFERIOR' PURPLE	1 gal	PER PLAN	69
	<i>LANTANA 'LANTANENSIS'</i>	PURPLE TRAILING LANTANA	5 gal	PER PLAN	17
	<i>LEUCOPHYLLON CHRYSEUM 'SNOW MUFFIN'</i>	LEUCOPHYLLON SNOW MUFFIN	5 gal	PER PLAN	11
	<i>LUPINUS ALBAFRONS</i>	SILVER LUPINE	5 gal	PER PLAN	SEE ABOVE
	<i>SALVA 'BEE'S BUSS'</i>	BEE'S BUSS SALVA	5 gal	PER PLAN	10
	<i>SALVA 'CELESTINE'</i>	BLUE SAGE	5 gal	PER PLAN	20
	<i>SALVA 'MEXICANA'</i>	MEXICAN SAGE	5 gal	PER PLAN	
	<i>SECLERIA AUTUMNALIS</i>	AUTUMN MOOR GRASS	1 gal	PER PLAN	311
	<i>STIPA GIGANTEA</i>	GRASS FEATHER GRASS	5 gal	PER PLAN	21
	<i>WESTRICHIA FRUTICOSA 'SMOKEY'</i>	COAST ROSEMARY	5 gal	PER PLAN	14
<b>VINE</b>					
	<i>CLEMENS MONTANA</i>	ANEMONE CLEMATIS	5 gal	PER PLAN	4
	<i>PASSIFLORA ALTA 'RUBY GLOW'</i>	PASSION VINE	5 gal	PER PLAN	4
<b>GROUND COVER</b>					
		MISSION BAY STANDARD	500		
		TICK TOCK FESCUE	500		
		CAREX PANZA	500		
		THYMUS PRAE-COX ARCTICUS	CREeping THyme	4' PCT	15' O.C.

SEED NOTE

1. PROVIDE AND HAND SEED 2 LBS OF ESCHSCHOLZIA CALIFORNICA / CALIFORNIA POPPY DURING DEC-JAN MONTHS. LOCATED PER FIELD DIRECTION OF LANDSCAPE ARCHITECT.

BULB NOTE

1. CONTRACTOR TO PROVIDE AND INSTALL BULBS AS FOLLOWS: 20 DARLIA, 30 ALLIUM, 103 NARCISSUS, 50 CROCUS. LOCATE PER FIELD DIRECTION OF LANDSCAPE ARCHITECT.

ANNUAL NOTE

1. CONTRACTOR TO PROVIDE AND INSTALL \$1000 VALUE OF 4" POT ANNUALS. SPECIES TO BE SELECTED BY LANDSCAPE ARCHITECT FROM ANNUALS, RICHMOND, CA. PLANTS SHALL BE FIELD LOCATED BY LANDSCAPE ARCHITECT IN GARDEN AREAS. IF PLANTS ARE NOT AVAILABLE BY PROJECT OPENING, PLANTING SHALL OCCUR IN MARCH OR APRIL.

**MISSION BAY PARKS**  
**P26**  
100% Construction Document Set

PREPARED FOR:

OWNER:  
FOCIL-MB, LLC

DEVELOPMENT MANAGER:



**MISSION BAY DEVELOPMENT GROUP**

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CONSULTANTS:

Rev	Date	Description
	10.25.13	75% Construction Documents
	04.01.14	100% Construction Documents

DATE:



Job No: 5431-08

Date: 04.01.14

Scale: 1"=20'-0"

Drawing Title:

**PLANTING PLAN**

Drawing No:

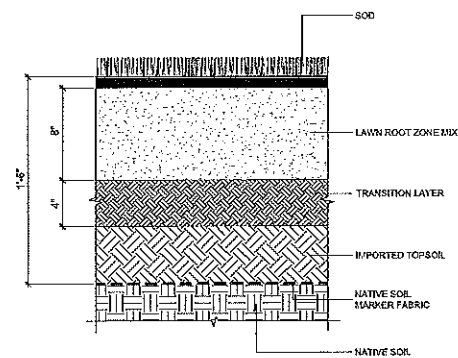
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Drawn By: DD, LT

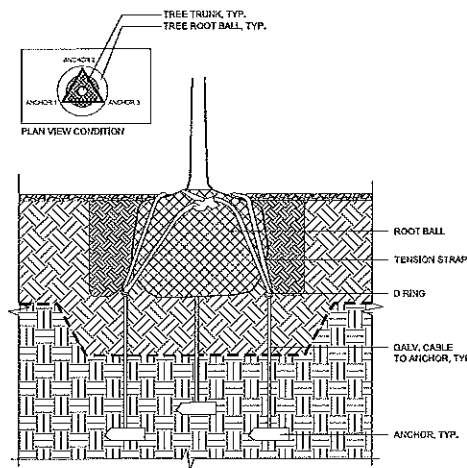
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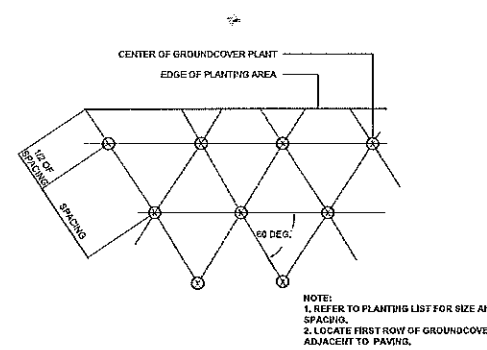




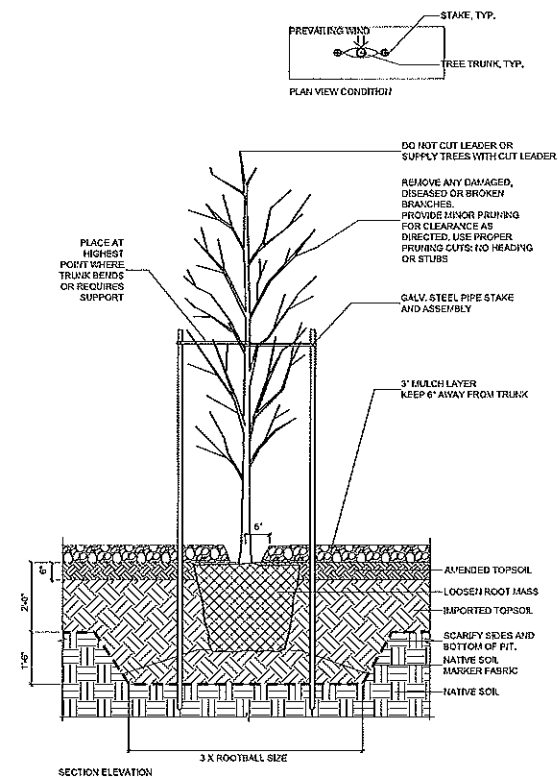
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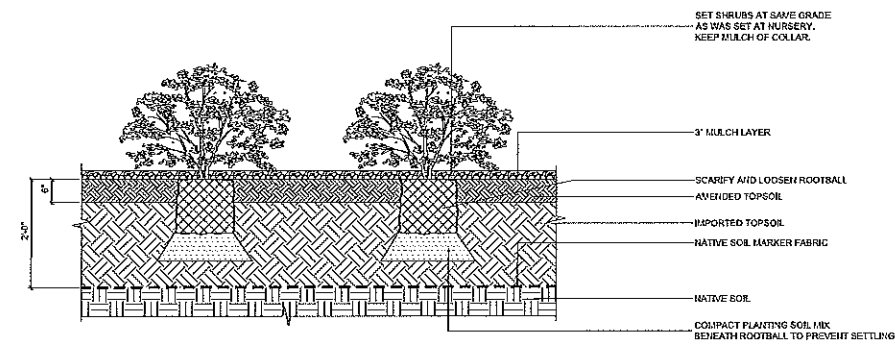
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**3 GROUNDCOVER**  
SCALE: 1/8\"/>



**1 TREE PLANTING**  
SCALE: 1/8\"/>



**4 SHRUB BED PLANTING**  
SCALE: 1/8\"/>

**MISSION BAY PARKS**

P26

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PREPARED FOR:  
OWNER:  
FOCIL-MB, LLC

DEVELOPMENT MANAGER:



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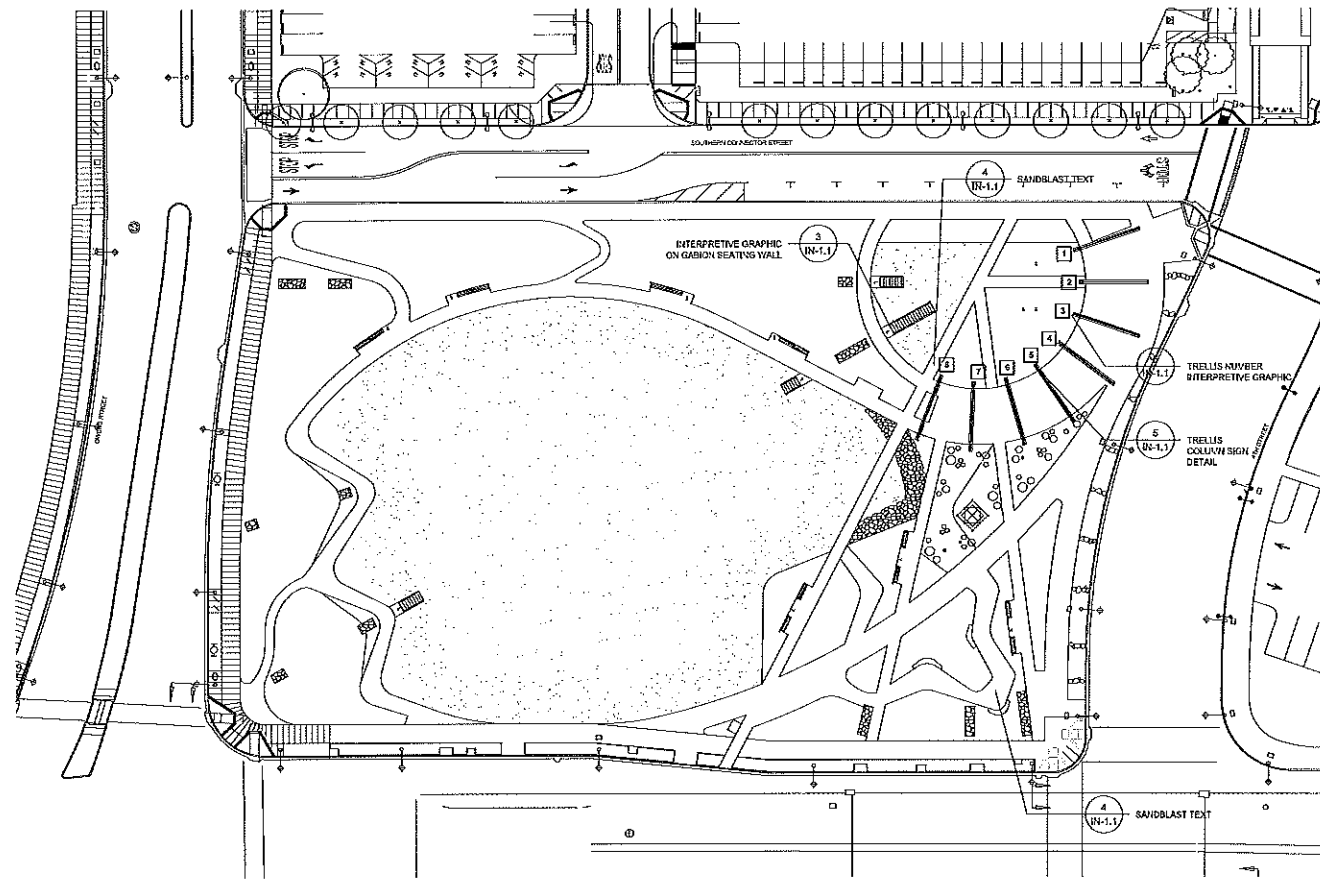
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	10.25.13	75% Construction Documents
	04.01.14	100% Construction Documents

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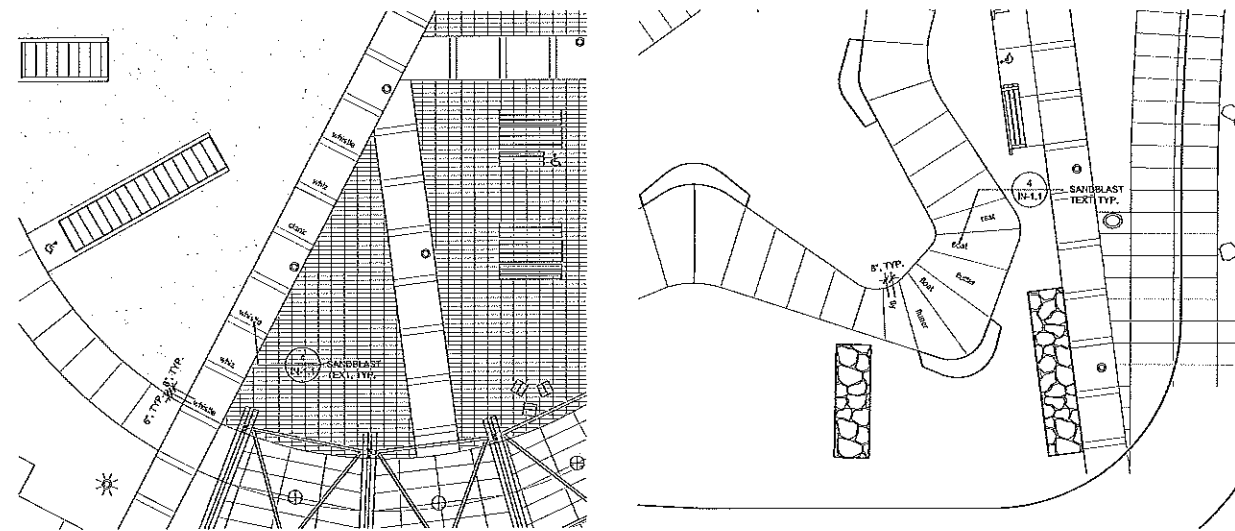


Job No: 5431-08  
Date: 04.01.14  
Scale:  
Drawing Title: **PLANTING DETAILS**  
Drawing No: **P-2.1**

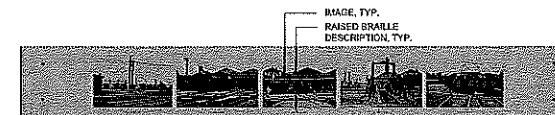
Drawn By: DD, LT  
Checked By: JG, JS



**1 INTERPRETIVE ELEMENT PLAN KEY**  
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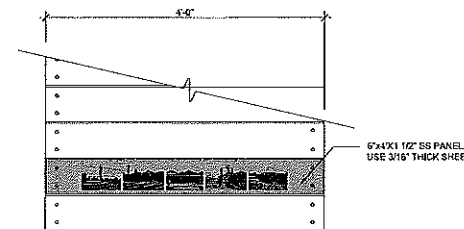


**2 SANDBLAST TEXT INTERPRETIVE GRAPHIC**  
SCALE: 1"=40'-0"

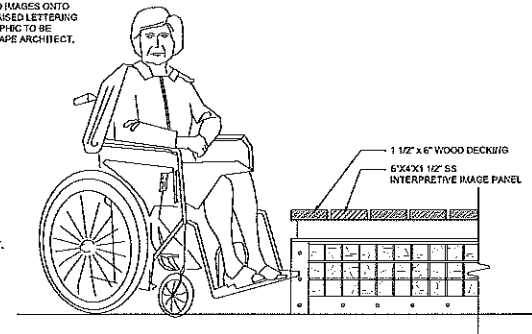


**PANEL ENLARGEMENT PLAN**

NOTE:  
LASER ETCH TEXT AND IMAGES ONTO SURFACE. PROVIDE RAISED LETTERING IN BRaille. FINAL GRAPHIC TO BE PROVIDED BY LANDSCAPE ARCHITECT.

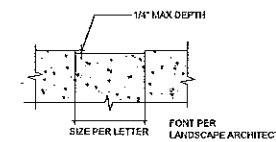


**PLAN**

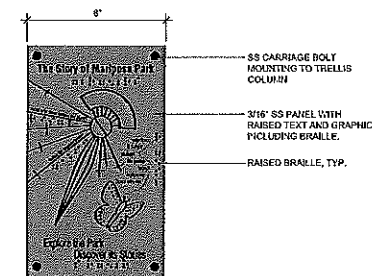


**SIDE ELEVATION**

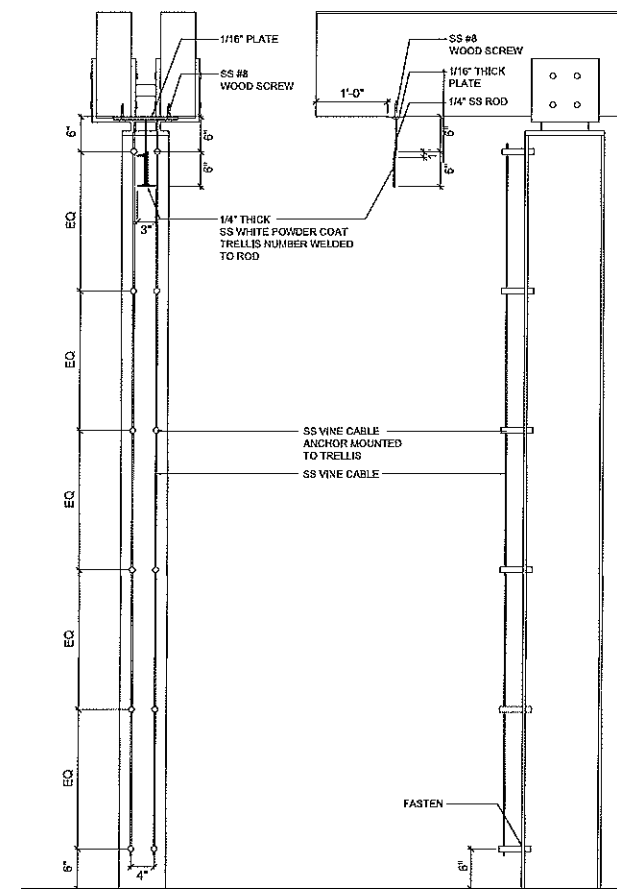
**3 INTERPRETIVE GRAPHIC ON GABION SEATING WALL WITH DECORATIVE WOOD TOP SURFACE**  
SCALE: 1"=1'-0"



**4 SANDBLAST TEXT**  
SCALE: 1"=1'-0"



**5 TRELLIS COLUMN SIGN DETAIL**  
SCALE: 3"=1'-0"



**6 TRELLIS NUMBER INTERPRETIVE GRAPHIC**  
SCALE: 1"=1'-0"

**MISSION BAY PARKS**

**P26**

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PREPARED FOR:  
OWNER:  
FOCL-MB, LLC

DEVELOPMENT MANAGER:



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CONSULTANTS:

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	10.25.13	75% Construction Documents
	04.01.14	100% Construction Documents

Stamp:



Job No: 5431-08  
Date: 04.01.14  
Scale: 1"=20'-0"

Drawing Title:

**INTERPRETIVE ELEMENTS**

Drawing No:

**IN-1.1**

Drawn By: DD, LT  
Checked By: JG, JS